I. DESCRIPTION OF WORK

Positions in this banded class are responsible for consultation, investigation, evaluation and planning, design, design review and approval, and/or determination of environmental and safety impacts of work processes and products (buildings, utilities, systems, sites, mapping, or infrastructures); provide project management oversight, which may include supervision of lower level staff; oversee or review environmental, infrastructure and geomatic projects; and manage implementation of projects/plans according to codes and regulations, which may include approval authority. Work assignments may involve unique factors and be lacking in precedence on which to base decisions and may be technically complex as evidenced by a high number of variables and inter-related considerations. Work is often performed independently requiring professional knowledge of complex and/or detailed technical procedures. Work may require considerable public contact to explain standards and regulations, or appearance before a regulatory/judicial body, provide consultation and technical assistance, and may require negotiation to determine the feasibility of project implementation or continuation. Work may require professional licensure or other certifications. Work performed includes exercising judgment and decision-making that directly impacts life, health, safety and/or the environment.

II. ROLE DESCRIPTIONS BY COMPETENCY LEVEL

Contributing	Journey	Advanced
Positions at this level perform engineering or geomatics work of a limited to moderate degree of complexity. Positions may review/evaluate/prepare plans, specifications, calculations, and/or other engineering documents, provide recommendations to higher-level engineers for action; conduct inspections/audits/investigations; provide consultation; and may analyze or design projects of limited complexity and scope. Work at this level may require contact with private consultants, industry-specific owners and operators, local governmental officials and others for the purpose of explaining standards, gaining compliance to standards and providing technical assistance. Work is performed under the supervision of a higher-level engineer or manager.	Positions at this level perfomr engineering or geomatics work of a moderate to high degree of complexity. Positions may be responsible for analysis, design, design review and approval, and/or determination of environmental and safety impacts of work processes and products. They provide project management oversight, which may include supervisory responsibilities; oversee environmental and infrastructure projects; and manage implementation of projects/plans according to codes and regulations, which may include approval authority. More complex assignments are usually lacking in precedence on which to base decisions, and are more critical and technically complex. Work at this level is generally performed independently. Work may require considerable public contact to explain standards and regulations, provide consultation and technical assistance, and may require negotiation to determine the feasibility of project implementation or continuation.	Positions at this level perform engineering or geomatics work of a high degree of complexity, which may include supervisory responsibilities or functioning as the technical expert in the area of assignment. Positions at this level are accountable/responsible for independently planning and managing large and complex projects and/or programs and reviewing completed tasks and overall accomplishments for technical accuracy and adherence to previously established goals, including approval authority on complex actions. Positions ensure that standards for quality and quantity are met, reviewing work, budget and schedule oversight. Work requires considerable contact with other engineers, professionals, industry-specific owners and operators, local governmental officials and others. Positions represent the agency/university as an expert.

III. COMPETENCIES

Competency	Definition
Knowledge - Professional	Possession of a designated level of technical engineering skill or knowledge and the ability to keep up with current developments and trends in areas of expertise. May be acquired through academic, apprenticeship or on-the-job training or a combination of these. Possession of knowledge of statutes/codes/regulations, including program procedures, methods and practices and their application to specific situations, usually acquired on the job or in lower-level positions in the same or similar career path.
Program/Project Management	Ability to coordinate and administer programs, activities and protocols. Ability to manage resources, monitor activities and assess environmental risk, safety, and quality control associated with the program.
Engineering Review, Decision Making & Analysis	Knowledge of and ability to use effective approaches for choosing a course of action or developing appropriate solutions and/or reaching conclusions. Ability to make decisions and take action consistent with available facts, constraints, and anticipated consequences. Ability to identify issues, obtain relevant information, relate and compare data from different sources, and identify alternate solutions.
Communication	Ability to communicate, in written and oral form, detailed and technical engineering information, guidelines and standards/statutes/codes/regulations to various audiences to ensure that they understand the information and the message, and to seek compliance. Ability to deliver presentations suited to the characteristics and needs of the audience such as negotiating solutions among different parties, or providing expert testimony.
Engineering Design and Analysis	Ability to identify, develop, and analyze engineering designs and/or specifications; ability to plan and modify methods. Ability to identify and plan for resources. Ability to approve engineering designs and/or program/project specifications of other engineers/design professionals to meet desired compliance with engineering principles, standards, statutes, codes, regulations and design. Ability to monitor and ensure program/project meets specification and design. Ability to negotiate design changes.
Leadership	Ability to coordinate, facilitate, and participate in a collaborative approach to the completion of tasks or assignments.

Note: Not all competencies apply to every position/employee; evaluate only those that apply. Competency statements are progressive.

IV. COMPETENCY STATEMENTS BY LEVEL

Knowledge – Professional

Possession of a designated level of technical engineering skill or knowledge and the ability to keep up with current developments and trends in areas of expertise. May be acquired through academic, apprenticeship or on-the-job training or a combination of these. Possession of knowledge of statutes/codes/regulations, including program procedures, methods and practices and their application to specific situations, usually acquired on the job or in lower-level positions in the same or similar career path.

Contributing	Journey	Advanced
Ability to understand and apply the basic engineering concepts, practices, and theories involved in the design/development/review/permitting, construction, maintenance, operations, or repair of, projects/sites and their potential environmental and safety impacts.	Thorough knowledge and understanding of concepts, practices, and theories used in the engineering specialty area and the ability to use it in practice. May require the general knowledge to oversee compliance regarding multiple specialties. Working level understanding of the organizational and business objectives of section/specialty.	Expert level of knowledge and understanding of engineering concepts, practices, and theories used in the engineering specialty area and the ability to use it in practice. Thorough knowledge of internal organizational structure, business needs/objectives, budget, planning, legal/public relations considerations, and/or other related factors.

Program/Project Management

Ability to coordinate and administer programs, activities and protocols. Ability to manage resources, monitor activities and assess environmental risk, safety, and quality control associated with the program.

Contributing	Journey	Advanced
Ability to prepare/review small or less complex engineering/technical plans and/or data for completeness, compatibility, compliance with engineering principles, standards, codes and design needs; ability to make recommendations to higher level engineers or managers on project concerns/issues. Ability to ensure sufficient coverage/resources for proposed program/project, under the guidance of a higher-level engineer or manager. Ability to monitor, inspect, and/or manage small or less complex programs/ projects for completeness, compatibility, compliance with engineering principles and design needs and standards. May require the ability to monitor budgets and/or schedules.	Ability to evaluate and approve moderately complex program/project specifications for completeness, compatibility, compliance with engineering principles, standards, codes and design needs; ability to perform inspections/audits to ensure that proper procedures are followed. Ability to manage moderately complex programs/projects for completeness, compatibility, and compliance with engineering principles and design needs and standards. Ability to identify and resolve project/program changes. Ability to develop, communicate and defend moderately complex programs/projects. Ability to ensure program/project stay within budget and/or schedule.	Ability to make final approval for complex or a broad variety/scope of program/project specifications for completeness, compatibility, compliance with engineering principles, standards, codes, and design needs. Ability to research alternatives and designs or analyze special details for non-standard items of work for programs/projects. Ability to determine program/project priorities, processes and procedures. Ability to manage complex or broad variety/scope of programs/projects for completeness, compatibility, compliance with engineering principles and design needs and standards; ability to resolve/approve major project/program changes. Ability to develop, communicate and defend complex or novel programs/projects. Ability to approve program/project budget and/or schedule.

Engineering Review, Decision Making & Analysis

Knowledge of and ability to use effective approaches for choosing a course of action or developing appropriate solutions and/or reaching conclusions. Ability to make decisions and take action consistent with available facts, constraints, and anticipated consequences. Ability to identify issues, obtain relevant information, relate and compare data from different sources, and identify alternate solutions.

Contributing	Journey	Advanced
Ability to make decisions on routine engineering matters or other areas requiring technical engineering knowledge. (Decisions are subject to review.) May require ability to make recommendations to approve routine engineering/technical designs and/or program/project specifications of other engineers to meet desired compliance with engineering principles, standards, codes, designs and statutes.	Ability to make recommendations and may require ability to make decisions on non-routine engineering and/or program matters or other areas requiring technical engineering expertise. May require ability to make final decisions. Ability to provide technical analysis. May require ability to serve as a mentor/resource to lower level employees in the area of assignment. May require ability to approve moderately complex engineering/technical designs and/or program/project specifications of other engineers to meet desired compliance with engineering principles, standards, codes, designs and statutes. May require ability to address conflicting design constraints.	Ability to independently make final recommendations and may require ability to make decisions that require specialized engineering and/or program knowledge. (Decisions may not be technically reviewed.) Ability to collaborate with others in finding solutions to controversial or sensitive matters that establish precedents. Ability to serve as technical expert in the area of assignment and may require ability to represent the agency/university as an expert. Ability to approve complex or novel engineering/technical designs and/or program/project specifications of other engineers to meet desired compliance with engineering principles, standards, codes, designs and statutes. Ability to address conflicting design constraints.

Communication

Ability to communicate, in written and oral form, detailed and technical engineering information, guidelines and standards/statutes/codes/regulations to various audiences to ensure that they understand the information and the message, and to seek compliance. Ability to deliver presentations suited to the characteristics and needs of the audience such as negotiating solutions among different parties, or providing expert testimony.

Contributing	Journey	Advanced
Ability to express basic engineering concepts and related facts in a clear, concise and organized manner. Ability to write clear, concise and organized documents and reports addressing basic engineering concepts and facts. Ability to present detailed technical information, guidelines and standards to seek compliance and/or approval. Ability to assist in consultation and gather information in response to an inquiry.	Ability to express moderately complex engineering concepts and related facts in a clear, concise and organized manner. Ability to modify delivery, language or content to account for the characteristics and needs of the audience. Ability to write clear, concise and organized documents and reports addressing moderately complex engineering concepts and facts. Ability to develop and negotiate positions in moderately complex engineering situations. May require ability to provide expert testimony. Ability to provide consultation to clients or others related to the specific program/project. Develop and/or create informational products.	Ability to explain novel or complex engineering concepts and related facts in a clear, concise and organized manner. Ability to modify delivery, language or content to account for the characteristics and needs of audience. Ability to write clear, concise and organized documents, and reports addressing novel or complex engineering concepts and facts such as standards/practices/codes/regulations. Ability to draft/develop standards, rules, and legislation. Ability to develop and negotiate positions in complex or novel engineering situations. Ability to provide expert testimony. Ability to provide consultation as an expert involving complex or broad/scope work project/program.

Engineering Design and Analysis

Ability to identify, develop, and analyze engineering designs and/or specifications; ability to plan and modify methods. Ability to identify and plan for resources. Ability to approve engineering designs and/or program/project specifications of other engineers/design professionals to meet desired compliance with engineering principles, standards, statutes, codes, regulations and design. Ability to monitor and ensure program/project meets specification and design. Ability to negotiate design changes.

Contributing	Journey	Advanced
Ability to apply mathematical, physical, and engineering sciences to routine services or creative work as consultation, investigation, evaluation, planning, and design of engineering/geomatic projects. Ability to plan methods and resources.	Ability apply mathematical, physical, and engineering sciences to moderately complex services or creative work as consultation, investigation, evaluation, planning, and design of engineering/geomatic projects. Ability to plan methods and resources. May require ability to approve design changes. Ability to research, collect, and/or analyze information/data which contributes to making engineering decisions. Ability to monitor and ensure projects meet specifications and/or design standards.	Ability to apply mathematical, physical, and engineering sciences to the most complex services or creative work as consultation, investigation, evaluation, planning, and design of engineering/geomatic projects. Ability to plan methods and resources. Ability to approve design changes. Ability to research, collect, and/or analyze information/data which contributes to making engineering decisions. Ability to monitor and ensure projects meet specifications and/or design standards.

Leadership

Ability to coordinate, facilitate, and participate in a collaborative approach to the completion of tasks or assignments.

Contributing	Journey	Advanced
Ability to serve as a member on a program/project team and helps develop project solutions. May require ability to serve as a team leader. Ability to promote program goals and objectives.	Ability to develop and manage program/project plan. Ability to provide consultation on issues and requests from clients. Ability to consult with higher-level professionals to discuss alternative solutions. May require ability to supervise staff. Ability to develop and implement short-term strategies consistent with agency/university goals.	Ability to provide program/project leadership in planning and organizing the work of others. Ability work collaboratively to manage issues. Ability to evaluate and recommend resource needs. Ability to consult with senior level decision-makers on an on-going basis. May require ability to supervise staff. Ability to participate in the development of long-range strategic goals. Ability to build client support of work group objectives.

V. MINIMUM TRAINING & EXPERIENCE

Bachelor's degree in the engineering discipline related to the area of assignment; or equivalent combination of training and experience Some positions may require licensure by the North Carolina Board of Examiners for Engineers and Surveyors. All degrees must be received from appropriately accredited institutions.

Note: This is a generalized representation of positions in this class and is not intended to identify essential work functions per ADA. Examples of competencies are primarily those of the majority of positions in this class, but may not be applicable to all positions.