



Engineer I #01970

City of Virginia Beach – Job Description

Date of Last Revision: 11-21-2019

FLSA Status: Exempt

Pay Plan: Administrative

Grade: 11

City of Virginia Beach Organizational Mission & Values

The City of Virginia Beach exists to enhance the economic, educational, social and physical quality of the community and provide sustainable municipal services which are valued by its citizens. The City of Virginia Beach organization is based upon a belief in the democratic process of government. This belief provides meaningful ways for citizens, reflecting the diversity of our City, to contribute to the development of public policy. This process is enhanced by organizational values which guide member performance within the Virginia Beach Quality Service System. These Values define our desired organizational culture. We value quality customer service; teamwork; leadership and learning; integrity; commitment; and inclusion and diversity.

Class Summary

Perform a variety of engineering duties which may include any combination of: project management, basic engineering design for municipal projects, review of designs for municipal projects and review and approval of designs for private developments within the corporate limits of the city and related work as required, such as: commercial and residential site plan review, subdivision plan review, highway plan review, storm drainage design, and water and sanitary sewer design for city operations.

Representative Work Functions and Responsibilities

Prepare and review specifications, plans, estimates, and reports involving the construction, maintenance, and operation of a variety of development, highway, and utility construction projects to assure compliance with city standards (may include buildings, arterial highways, bridges, bulkheads, pump stations, water systems, sanitary sewer systems, and storm drainage systems); and review construction development plans prepared by consultants for conformity with city specifications and policies and to coordinate with adjacent developments, roads and utilities.

Serve as engineer-in-charge of water, road, sewer, maintenance or similar projects to assure timely coordination of the project; and coordinate the work of draftsmen, CAD technicians and/or inspectors to ensure quality of the work effort.

Conduct field investigations.

Prepare reports and maintain project documentation records.

Perform engineering or hydrologic studies to assure adequate drainage in the city.

Does limited engineering design work and administer contracts to assure plans meet city standards.

Prepare written comments and recommend approval of plans for documentation of files; and prepare written comments for city boards and commissions to assure compliance with special needs of the city.

Meet with developers, consultants, contractors and the public to resolve problems and explain city policies and procedures in a firm but tactful manner.

Perform other job duties requiring skills, knowledge and physical requirements as demanded by those

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duties described or less. Individual assignments will be determined by the supervisor based on then current workloads and department needs.

Performance Standards

Maintain effective working relationships with division and department staff, city officials, contractors, developers, and the general public; resolve citizen problems in a courteous and timely fashion; and accurately and thoroughly review plans, contract documents, files, and field conditions. Manage contracts for timely completion within budget.

Minimum Qualifications

Requires a Bachelor's degree from an Accreditation Board for Engineering and Technology (ABET) approved engineering or engineering technology program, or an Associate's Degree with six (6) years of progressive experience of engineering level work.

Special Requirements

All employees may be expected to work hours in excess of their normally scheduled hours in response to short-term department needs and/or City-wide emergencies.

Knowledge-Skills-Abilities Required to Perform Satisfactorily

A. Knowledge

1. Knowledge of modern procedures, principles, and practices of engineering as currently gained through an accredited school of engineering such as hydrological analysis, soil analysis and stabilization, pavement design, writing technical reports, structural analysis, traffic engineering practices, concrete, steel, and wood construction and design techniques, highway design and construction, retaining wall design and construction, bridge design and construction, water and sanitary sewer design and construction, storm water drainage design and construction and building systems design and construction.
2. Knowledge of modern design standards as applicable to a variety of municipal construction or maintenance projects; including as a minimum City of Virginia Beach Design Standards and Specifications, ACI Concrete Design Codes, AISC Steel Design Manual, SCS Flood Routing Procedure, Asphalt Institute method of pavement design, VDOT Highway Design Standards and Specifications, State Erosion Control Manuals, VDOT Pavement Design Methods, VDOT drainage design criteria.
3. Knowledge of city ordinances as they pertain to design standards and local engineering practices including the site plan, subdivision, zoning, erosion control and flood plain ordinances. Knowledge of various city policies, procedures, and standards.
4. Knowledge of surveying techniques and principles such as closure, horizontal and vertical curves, super elevation, plan table, cross sectioning, topographic surveys, etc.
5. Knowledge and expertise in operating computer engineering and/or maintenance management systems.

B. Skills

1. Skill in the use of drafting instruments, programmable calculators and computer programs.
2. Skill in effectively administering city contracts including dealing with utility agencies for coordinating projects and keeping on schedule, dealing fairly and firmly with contractors in the City's best interest; researching and understanding the background of contracts, payments, agreements, etc.
3. Skill in effective methods of public relations and maintaining effective working relations such as pointing out design errors in a tactful manner to other engineers and consultants, resolving disagreements with other engineers diplomatically, discussing problems and special interests with the public in a patient, understanding but firm manner, properly conducting public

This description is intended to indicate the kinds of tasks and levels of work difficulty that will be required of positions that will be given this title and shall not be construed as declaring what the specific duties and responsibilities of any particular position shall be. It is not intended to limit or in any way modify the right of any supervisor to assign, direct, and control the work of employees under his or her supervision. The use of a particular expression or illustration describing duties shall not be held to exclude other duties not mentioned that are of similar kind or level of difficulty.

- workshops in a manner which effectively communicates city goals and needs to the citizenry.
4. Skill in effective oral and written communication.
- C. Abilities
1. Ability to prepare technical engineering designs of minimum complexity and to interpret plans and specifications prepared by others in review of designs for site and subdivision plans, highway plans, drainage or water and sewer plans, etc.
 2. Ability to conduct basic investigations, recommend solutions, and prepare engineering reports on drainage complaints, highway improvements, etc.
 3. Ability to communicate instructions to technical and clerical assistants for typing of engineering letters and reports, file research, engineering technician design work, etc.

Working Conditions

The below stated working conditions are intended to provide a general overview of the environmental conditions inherent in the job setting, as well as the physical, mental, and sensory requirements necessary to perform the essential functions of positions in the noted job title. A more detailed description will be made available at the position (PCN) level.

NOTE: Per HR Policy 6.19, Americans with Disabilities, the City follows the requirements of the Americans with Disabilities Act (ADA) in all hiring and employment decisions. The City shall not discriminate on the basis of disability in its hiring and employment practices. The City shall make reasonable accommodations for the known physical or mental limitations of a qualified applicant or employee with a disability upon request unless the accommodation would cause an undue hardship on the operation of the City's business.

Physical Requirements: *Physical refers to the requirement for physical exertion and coordination of limb and body movement.*

Requires light to medium work that involves frequent walking, standing, sitting, kneeling, squatting, stooping, and climbing, with occasional lifting, gripping, and pushing and raising objects and exerting up to 50 pounds of force as well as routine keyboard operations

Mental Requirements: *Mental refers to the degree that the job involves cognitive activities, and use of mental processes*

Performs professional level work requiring the application of scientific, engineering, legal, or managerial methods in the solution of technical, administrative, or legal problems; applies extensive understanding of operating policies and procedures to solve complex problems or coordinates sub-professional work in these disciplines; requires continuous, detailed/close attention for accurate results, and frequent exposure to unusual pressures in the office and field environment.

Environmental Conditions: *Environmental refers to job conditions inherent to the job setting, including those that may lead to injury or health hazards even though precautions have been taken.*

The job may risk exposure to extreme heat and/or cold, wet or humid conditions, extreme noise levels, fumes, odors, vehicular traffic, moving machinery, electrical shock, variable lighting, and toxic or caustic chemicals.

Sensory Requirements: *Sensory refers to hearing, sight, touch, taste, and smell required by the job.*

The job requires normal visual acuity, field of vision, hearing, speaking, color perception, normal sense of smell, and depth perception.

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