

**MAJOR FUNCTION**

This is semiprofessional engineering work in the designing of public works or electric utility facilities and other related construction, alteration, and major repair projects. Work involves the responsibility for the planning, designing, and preparation of construction specifications and cost estimates for projects. Work includes the review of designs, plans, and specifications prepared by consulting engineers. Supervision may be exercised over lower-level technical personnel. Administrative and professional direction is received from a Civil Engineer or Electric Utility Engineer. Considerable independent judgment is exercised in planning work details and making technical decisions. Work is reviewed through conferences, inspection and analysis of reports.

**ESSENTIAL AND OTHER IMPORTANT JOB DUTIES****Essential Duties**

**Public Works:** Designs complex roadways, stormwater and drainage facilities, parking lots, water, sewer, and other related public works projects from field data. Performs design calculations, develops material needs and cost estimates; prepares bids for projects to be let on contract. Provide technical assistance and additional design details to address problems that arise during construction. Assisting with preparation of permit submittals to appropriate agencies. Performs related work as required.

**Electric Utility:** Responsible for all aspects of assigned electric distribution and lighting projects. Prepares detailed design drawings, maintains accurate records, and ensures that system modifications are properly recorded in the Geographic Information System (GIS) database. Reviews and responds to customer requests for information, service, and construction. Identifies material needs and develops cost estimates for assigned projects. Coordinates work with internal and external parties. Provides technical assistance and interpretation of design plans for construction crews. Develops and recommends new and revised standards, specifications, materials, rules, and regulations. Ensures proper project close-out by verifying that assigned projects were constructed in accordance with approved standards and that all applicable administrative documentation is accurate and complete. Trains and provides guidance to the activities of other electric design technicians. Performs related work as required.

**Other Important Duties**

**Public Works:** Assist consultants and the general public with engineering related information requests. Assists with training and providing technical support to engineering technicians. Performs related work as required.

**Electric Utility:** Responds under emergency conditions, serving on a response team as assigned. Performs related work as required.

**DESIRABLE QUALIFICATIONS****Knowledge, Abilities and Skills**

**Public Works:** Thorough knowledge of the principles, practices, techniques, and instruments of civil engineering as they relate to engineering design or land surveying. Thorough knowledge of mathematics through trigonometry and plain geometry. Considerable knowledge of concepts and terminology, principles and techniques of stormwater management and master drainage planning. Ability to follow complex oral and written instructions and to give clear and understandable instructions. Ability to use independent judgment without detailed instructions from supervisor. Ability to prepare and interpret legal descriptions. Ability to compute and draw contour lines. Ability to compute all elements of and execute field survey dealing with circular curve situations, including compound and reverse curves. Ability to communicate effectively, both orally and in writing. Skill in performing CADD design and drafting with microcomputers. Skill in hydrologic and hydraulic

computations. Skill in application of various stormwater runoff models. Skill in the use of microcomputers and the programs and applications necessary for successful job performance.

Electric Utility: Knowledge of mathematics, fundamental sciences or engineering theory. Knowledge of and ability to comprehend all types of electric distribution systems, technical problem solving, design standards, and materials construction. Knowledge of GIS system, computers, Computer Aided Design (CAD), spreadsheets, databases, and measuring equipment. Demonstrated knowledge of OSHA and NEC rules and regulations. Knowledge of basic budgetary and accounting procedures and practices. Ability to communicate effectively and maintain working relationships with customers, contractors, developers, co-workers, and the general public. Ability to prepare accurate job estimates. Ability to coordinate activities in relation to other utilities' and customers' need. Ability to do surveying for electrical overhead and underground facilities. Ability to understand and follow complex oral and written instructions. Ability to keep coherent records and make reports. Ability to work from service manuals and drawings.

#### Minimum Training and Experience

Public Works: Possession of an associate's degree in civil engineering, civil engineering technology, or drafting and design and six years of technical experience in the area of engineering to which the position is assigned; or an equivalent combination of training and experience.

Electric Utility: Possession of an associate's degree in math, science, or engineering technology and six years of electric utility experience in engineering, operation, design tasks or maintenance; or Possession of a high school diploma or an equivalent recognized certificate and eight years of the aforementioned experience; or an equivalent combination of education and experience.

#### Necessary Special Requirement

At the department director's discretion, must possess a valid Class E State driver's license at the time of appointment.

Electric Utility: All successful candidates will be required to complete a personnel risk assessment consisting of an identity verification and seven-year criminal history screening (minimum) and maintain satisfactory clearance for continued employment.

Established: 06-08-94

Revised: 10-31-01

10-03-03\*

07-06-09\*

04-12-13