



ENGINEERING TECHNICIAN 3

Department: Planning and Public Works
Job Class #: 909500
Pay Range: Engineering/Technical 07

FLSA: Non-Exempt
Represented: Yes

Classification descriptions are intended to present a descriptive list of the range of duties performed by employees in this class and are not intended to reflect all duties performed within the job.

GENERAL FUNCTION: This is work performing complex technical work in the fields of civil engineering, surveying or inspection. An employee in this class possesses technical expertise in a variety of engineering related disciplines and performs significant but standardized engineering functions requiring some independent decision making. Incumbents make calculations, record data, keep records, and inspect materials and projects based upon established routine or in accordance with general instructions. Employees work independently or may lead a small group of lower level engineering technicians and have the authority to make decisions within pre-established standards on non-policy issues. Supervision is by an employee of a higher classification.

The Engineering Technician 3 is distinguished from the Engineering Technician 2 classification by its application of highly specialized technical knowledge. Employees in this classification generally possess the resources to independently respond to problems and questions regarding a limited area of expertise, and frequently lend assistance to employees performing similar or related duties.

ESSENTIAL FUNCTIONS:

- Inputs engineering calculations and information into calculators and computer systems utilizing coordinate geometry and computer aided drafting programs to produce final drawings and calculations.
- Writes technical reports, or letters to support an engineering task or job function; records information for future use in an engineering function or job.
- Provides technical information and explains policies and procedures to the public, other staff or groups in person, on the telephone or in writing.
- Performs difficult engineering calculations, drafting, and mapmaking to support a major engineering task or job function; prepares "as built" drawings for approval by civil engineers.
- Conducts on-site inspections or performs the inspection of materials and projects for contract compliance; prepares inspection reports for routine projects.
- Prepares or reviews routine plans, specifications or engineering reports for conformance to pre-established Pierce County standards.
- Operates a computer-aided design drafting system and develops computer applications as required to complete assigned tasks.
- Prepares preliminary estimates of materials, quantities, and costs for construction and maintenance projects.
- Develops and maintains project files and other records.
- Prepares and checks the preparation of monthly cost and progress estimates, other engineering data, and final reports upon the completion of projects; maintains construction diary.
- Interprets plans and specifications for the purpose of construction staking.
- Interprets plans and specifications to ensure compliance with project documents as inspector-in-charge of routine engineering projects.
- Interprets and writes real property and right-of-way descriptions.
- Occasionally provides testimony at public meetings, Hearings Examiner, board, or council on projects or cases being reviewed by the department.

ENGINEERING TECHNICIAN 3

Classification Description – Pierce County

Page 2

- Operates transit, E.D.M. and total station equipment, level and data collection equipment. Enters data into field books.
- Computes traverses and operates computer equipment to balance horizontal and vertical survey, and prepares appropriate final maps.
- Acts as head or party chief of survey crew.

OTHER JOB FUNCTIONS:

- Prepares hard copy maps, plans, and topographic information, detailed court maps and other related maps.
- As leader of a team or crew, assigns and reviews the work of one or more technicians engaged in the routine preparation of maps, plans, profiles, and other related data or construction inspection; assists and trains other employees in an area of specialization.
- Confers with contractors or consultants on methods of procedure and general conformance of construction contracts and specifications.
- Reviews complex structural plans, checks REBAR lists and spacing and quantity information.
- Checks material quality by completing materials testing, or monitors materials testing; reviews reports and analyzes tests and inspections records in order to determine suitability of materials; recommends alternative materials when necessary.
- Participates in pavement management by directing the collection of data; by organizing and analyzing the data; and, by preparing reports and making recommendations based on the data.
- Performs other related duties as assigned.

KNOWLEDGE, SKILLS, AND ABILITIES

Knowledge of:

- Higher-level mathematics including algebra, trigonometry and calculus.
- Physics, statistics and dynamics.
- Construction materials and testing procedures.
- Drafting equipment and symbols, including computer-aided drafting.
- Terminology, principles and practices, and equipment used in surveying, drafting, and civil engineering, including computer programming.
- Applicable state and federal laws, ordinances and regulations.

Ability to:

- Create complex or difficult drawings based on records or data, and copy or trace from other drawings.
- Create and develop files alphabetically, numerically, or by other predetermined classifications.
- Use a personal computer, or computer-aided design programs, and calculator.
- Understand and execute moderately complex oral and written instructions.
- Establish and maintain effective working relations with co-workers, contractors and the public.
- Interpret and apply engineering codes, statutes and standards to the planning, review, design and construction of engineering projects.
- Plan, review, and coordinate the work of others.
- Analyze technical information and to develop logical solutions or alternatives to problems.
- Utilize electronic survey equipment.
- Make field measurements and complete calculations using computers or calculators.
- Work outdoors in all types of weather conditions.
- Bend, stoop, climb, work at heights, and walk on uneven terrain.
- Physically perform the essential job functions.
- Meet the travel requirements of the position.

ENGINEERING TECHNICIAN 3
Classification Description – Pierce County
Page 3

MINIMUM REQUIREMENTS TO APPLY: Two years of college or post-high school technical training and two or more years of progressively responsible related experience. Additional experience may substitute equally for the recruiting requirements. Satisfactory physical condition, as evidenced by a County-approved physical examination, may be required prior to appointment to the position. A valid Washington State driver's license may be required when travel is required of the position.