

SNOHOMISH COUNTY JOB DESCRIPTION

ENGINEERING TECHNICIAN V - SURVEY

Spec No. 3276

BASIC FUNCTION

To perform advanced technical field and/or office surveying operations in support of public design and construction projects.

STATEMENT OF ESSENTIAL JOB DUTIES

1. Makes and records accurate field survey observations, operates and maintains precise technical surveying instruments, including computers, Global Positioning Systems (GPS), and other technical equipment, in accordance with sound surveying principals, practices and procedures, in the performance of horizontal and vertical control, topographic, construction, right-of-way, as-built, Public Land Survey System (PLSS), and other surveys, in support of county design and construction projects.
2. Performs complex survey computations to calculate and stake accurate locations of design improvements and county Right-of-Way for Public Works design and construction projects.
3. Computes and delineates the relationships between physical monumentation and the legal boundaries of county roads, bridges, structures, rights-of-way and other county properties as reviewed by the County Surveyor; reads and interprets legal descriptions to compute and establish property boundary lines.
4. Performs analysis of control measurements; computes and translates values between horizontal and vertical datums using the Washington State Plane Coordinate System.
5. Reviews and checks design/construction and right-of-way plans for quality, accuracy, and compliance with County adopted standards, policies, and procedures.

STATEMENT OF OTHER JOB DUTIES

6. Performs other duties as assigned.

WHEN ASSIGNED TO THE OFFICE

1. Operates Computer Aided Drafting (CAD) station utilizing AutoCAD Civil software to perform advanced level drafting and technical calculations to research, calculate, develop, design and draft right-of-way plans, records of survey, site plans, survey control base maps and topographic delineation worksheets for Public Works and other county design and construction projects.
2. Develops and maintains complex CAD and other databases; reviews and coordinates data with in house customers, consultants and other agencies via electronic file transfers.

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ENGINEERING TECHNICIAN V - SURVEY

Spec No. 3276

WHEN ASSIGNED TO THE OFFICE (Continued)

3. Utilizes Point cloud data from scanning and LiDAR as well as digital imagery to aid in the preparation of topographic maps and information exhibits.

WHEN ASSIGNED TO THE FIELD

1. Establishes, maintains, recovers survey control monumentation and Public Land Survey System (PLSS) corners, makes and records field observations, and performs computations utilizing Total Stations, Robotic Total Stations, data collectors, field laptop computers, and Global Positioning Systems (GPS) equipment. Work is done in support of Public Works design and construction projects.
2. Establishes and maintains safe work zones in the performance of all field survey operations.

MINIMUM QUALIFICATIONS

Graduation from a two (2) year accredited program in civil engineering, engineering technology, Land Surveying / Geomatics; AND three (3) years of field or office experience in surveying to support road design and other public works projects; OR, a four (4) year degree in civil engineering or related field; AND one (1) year of experience in land surveying; OR, any equivalent combination of education and experience which provides the knowledge and abilities necessary to perform the work. Must pass job related tests.

SPECIAL REQUIREMENTS

A valid Washington State Driver's License is required for employment.

PREFERRED QUALIFICATIONS

Use of AutoCAD drafting software AND/ OR graphic based surveying software is preferred.

KNOWLEDGE AND ABILITIES

Knowledge of:

- surveying principals, practice, rules, regulations, guidelines and procedures
- computer aided drafting software
- geometry, algebra, and trigonometry; reading and interpreting surveying and engineering maps, plans, and standards
- computer data and file management
- creating clear concise graphic displays and exhibits for meetings and reports
- electronic data transfers via the internet and/or the County's network

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ENGINEERING TECHNICIAN V - SURVEY

Spec No. 3276

KNOWLEDGE AND ABILITIES (Continued)

- County, State, and Federal survey and safety standards

Ability to:

- communicate effectively with surveyors, engineers, contractors, developers, and the general public
- research and gather facts to present options
- adapt to changing priorities and technology
- learn new computer software and revisions to software
- prepare clear and concise written reports
- work independently or in a team environment
- treat others with tact, diplomacy, and respect

SUPERVISION

Employees report to a supervisor or surveying lead as assigned. Work is reviewed in progress or upon completion for accuracy and adherence to division surveying and engineering standards.

WORKING CONDITIONS

Field work is done typically in an outdoor environment involving inclement, weather or in a van or a construction office.

Field working conditions will require the following:

- ability to hike over rough steep terrain while carrying equipment up to 50 lbs.
- ability to cut brush with a machete or brush hook for up to 6 hours per day.
- ability to operate a jack-hammer for several hours per day.
- ability to use a sledge hammer for several hours per day.
- ability to do repeated bending, kneeling or standing for several hours per day.
- ability to lift up to 60 lbs.

Office work is performed in an office environment at a computerized work station. Working conditions will require the following:

- sitting at a desk or table and requires repeated hand, wrist, and finger movement to operate the CAD station.

The distinction between this classification and the Engineering Technician IV-Survey is that employees of this classification perform advanced level technical field surveying or computer aided drafting/computing.

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ENGINEERING TECHNICIAN V - SURVEY

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Snohomish County is an Equal Employment Opportunity (EEO) employer.
Accommodations for individuals with disabilities are provided upon request.

[EEO policy and ADA notice](#)

Class Established: December 1999 as Engineering Technician V - Survey
Revised and Retitled: November 2008, August 2009; November 2009, April 2010, June 2010
Revised: June 2013, November 2016, June 2017
EEO Category: 3 - Technicians
Pay Grade: 239 - Classified Pay Plan
Workers Comp: 1501 Hazardous