

SNOHOMISH COUNTY JOB DESCRIPTION

ENGINEER I – DESIGN

Spec No. 3028

BASIC FUNCTION

To perform entry-level professional engineering assignments in design, which require the application of basic engineering principles and methods. Assists Engineers II, III or IV, or manages smaller projects or project components.

STATEMENT OF ESSENTIAL JOB DUTIES

1. Conducts or directs the preparation of studies and preliminary field surveys in preparation for design and construction of public works facilities such as roadways, bridges, surface water facilities, solid waste sites, county parks or community facilities.
2. Coordinates design projects, with other divisions of Public Works, other county departments or outside agencies.
3. Provides project management of public works projects, including preparing or overseeing the preparation of specifications, cost and quantity estimates, the design of projects such as road and bridge improvements, and the oversight of the construction process.
4. Performs site inspections of construction work to verify quality of installations and coordinate timely and quality completion for acceptance.
5. Conducts periodic inspections of existing bridge structures for condition; prepares appropriate inspection and documentation reports; prepares load rating calculations from this inspection data and makes recommendations to superiors for bridge maintenance or new construction techniques; may also assist in preparation of Annual Bridge Report.
6. Serves as office engineer responsible for project administration, preparation of plans, specifications and estimates, field engineering design changes, and document review.
7. Prepares design reports and design memos for various road and bridge projects.
8. Reviews studies and environmental impact statements as submitted.
9. Assists other engineers in researching, analyzing and resolving engineering problems on county construction projects.
10. Attends public meetings and formal public hearings on proposed county construction projects; prepares or supervises the preparation of maps, exhibits, drawings, charts and graphs and provides technical testimony as required.
11. Coordinates and reviews the work of other engineering staff as it relates to assigned construction projects; provides training in related work as required.

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STATEMENT OF ESSENTIAL JOB DUTIES (Continued)

12. Prepares and reviews technical reports to engineering assignments.
13. Organizes, coordinates and conducts pre-construction conferences of contractors, utilities and county staff to plan project schedules.
14. Analyzes drainage, habitat, and water quality problems; develops, drafts, and designs solutions that can be successfully and cost-effectively implemented.

STATEMENT OF OTHER JOB DUTIES

15. Performs related duties as required.

MINIMUM QUALIFICATIONS

A Bachelor of Science degree in civil or related engineering field; OR a combination of four years of education and experience in the fundamental knowledge of engineering theory and practice, gained under the direct supervision of a professional engineer. The criteria for appropriate education and work experience is further defined in WAC 196-12-020 as being in a position of making independent judgments and decisions in the following areas:

- a. Formulating conclusions and recommendations;
- b. Identifying design and /or project objectives;
- c. Identifying alternatives
- d. Solving engineering problems.

Any experience gained without the supervision of a professional engineer would not be counted. Must pass job related tests.

SPECIAL REQUIREMENTS

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

KNOWLEDGE AND ABILITIES

Knowledge of:

- principles, practices and techniques of engineering related to area of assignment
- engineering mathematics as applied to area of assignment
- surveying principles and practices
- engineering plans, specifications and drafting procedures applied to area of assignment

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KNOWLEDGE AND ABILITIES (Continued)

Ability to:

- perform hydraulic and hydrologic studies; utilize various roadway and bridge engineering software
- interpret and assess field data used for the maintenance and design of construction projects
- prepare engineering plans, specifications and estimates, maps, documents and legal descriptions
- perform AutoCAD and Land Desktop assignments
- inspect and appraise the condition of public works structures
- use and care for instruments and equipment employed in the area of assignment
- understand and execute oral and written instructions
- establish and maintain effective working relations as necessitated by work assignments
- plan, schedule and coordinate work assignments

SUPERVISION

Assignments are generally broad in scope with opportunity for the use of experience, initiative, and independent judgment in solving most problems, although assistance from professional superiors is available when especially difficult problems are encountered. Work is periodically evaluated by a professional supervisor.

WORKING CONDITIONS

Work is performed in an office environment or in the field in all kinds of weather conditions.

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: January 1993
Previous Spec No. 420429
EEO Category: 2 - Professionals
Pay Grade: 240 - Classified Pay Plan
Workers Comp: 1501 Hazardous