



Associate Engineer

Department:	Public Works - Engineering	Pay Grade:	NR-33
Bargaining Unit:	Non-Represented	FLSA Status:	Exempt
Revised Date:	January 16, 2018	Reports To:	Varies

POSITION PURPOSE: Under general direction, performs entry to mid-level civil engineering work in the planning, analysis, design, construction, operation and management of public works projects.

ESSENTIAL FUNCTIONS AND RESPONSIBILITIES:

*The following duties **ARE NOT** intended to serve as a comprehensive list of all duties performed by all employees in this classification, only a representative summary of the primary duties and responsibilities. Incumbent(s) may not be required to perform all duties listed and may be required to perform additional, position-specific duties.*

- Be able to perform the following fundamental principles of civil engineering design:
 - a. Hydraulic analyses of piped sewer and storm systems.
 - b. Hydraulic analyses of channeled systems.
 - c. Pressure analyses of potable water systems.
 - d. Drainage basin delineation and associated hydrologic analyses.
 - e. Cut/fill calculations in grading and roadway design.
 - f. Sight distance calculations for roadway design.
 - g. Buoyancy calculations for construction in high groundwater locations.
 - h. Basic retaining wall design.
 - i. Basic road design.
- Prepares and interprets design drawings, specifications and cost estimates for various Public Works and Utilities projects.
- Manages public works projects of smaller scope.
- Coordinates project improvements with City Departments, private utilities, other public agencies and citizens.
- Makes recommendations for, prepares and secures, necessary easements for project construction.
- Assists with/Conducts engineering studies and provides recommendations relating to present activities and future projects
- Collects, interprets and analyzes data, provides recommendations and confers with supervisors regarding the feasibility of design.
- Independently performs a variety of routine and complex inspections on public works construction projects; assures safety, work quality, and compliance with approved plans, drawings and specifications, permits, standards and codes, including environmental protection laws.

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- Prepares daily inspection reports, calculates and prepares field notes records of contractor quantities and materials installed in the field.
- Assists with contract administration on large public works construction projects.
- Independently performs contract administration on public works construction projects of smaller scope.
- Researches new methods, products and materials related to Public Works projects and makes recommendations to supervisors for their implementation.
- Uses AutoCAD, Civil 3D, WWHM, HEC-RAS and related engineering and graphics software to prepare detailed design drawings.
- Performs related work as required and other duties as assigned.

Required Knowledge of:

- Engineering mathematics, standards, practices and principles in design and construction.
- Engineering calculators and modeling programs.
- Basic hydraulics including weirs, flumes, and open ditches.
- Interpersonal skills using tact, patience and courtesy.
- Basic construction techniques and operation and maintenance principles of Public Works infrastructure.
- Basic knowledge in field inspection techniques of Public Works facilities.
- Property owners' rights and privileges.
- Record-keeping and retrieval techniques.
- Personal computers and software (AutoCAD, ArcGIS, Civil 3D, MS Word and Excel, databases and asset management).
- Drafting practices and standards, including operating AutoCAD and Civil 3D to develop project drawings.
- Interpersonal skills using tact, patience, and courtesy.
- Modern office procedures, methods, and equipment including computers and computer applications sufficient to perform assigned duties.
- English usage, spelling, grammar and punctuation.
- Principles of business letter writing.

Required Skill in:

- Working with residents, business owners and contractors on a wide range of Capital Project related issues including enforcement of City requirements.
- Organizing and interpreting large amounts of data related to inspections and design.
- Using personal computers, productivity software such as Microsoft Office, ArcGIS.
- Using personal computers, with design software such as AutoCAD to develop project drawings.
- Using field survey and GPS equipment and other field equipment as assigned.
- Effectively applying City code, local, state and federal laws relating to assigned work.
- Effectively reading and understanding engineered plans and specifications.
- Communicating effectively both orally and in writing using correct English.
- Preparing and delivering oral presentations in an effective manner.
- Accurately maintaining records and preparing correspondence, professional reports and presentations of data.

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- Prioritizing and scheduling work appropriately.
- Consistently meeting schedules and timelines.
- Establishing and maintaining cooperative and effective working relationships with others.

MINIMUM QUALIFICATIONS:

Education and Experience:

Bachelor's Degree in Civil Engineering or related field preferred.

An equivalent combination of education, training, and experience which allows the incumbent to successfully perform the essential functions of the position may also be considered.

Required Licenses or Certifications:

- Valid Washington State Driver's License and a driving record acceptable to the City's insurance carrier.
- A criminal background check is required following a verbal offer of employment. Criminal history is not an automatic employment disqualifier. Results are reviewed on a case-by-case basis.

WORKING CONDITIONS:

Environment:

- Indoor and outdoor work environment.
- Driving a vehicle to conduct work.

Physical Abilities:

- Walking or otherwise moving over rough terrain.
- Sitting, standing or otherwise remaining in a stationary position for extended periods of time.
- Hearing, speaking or otherwise communicating to exchange information in person or on the phone.
- Operating various equipment and tools.
- Reaching overhead, above the shoulders and horizontally, bending at the waist, gripping, kneeling or crouching, stooping, crouching, reaching, pushing, pulling and twisting or otherwise positioning oneself to accomplish tasks.
- Ascending/descending, ladders and inclines.
- Working at heights, working on a high ladder and working in a confined space.
- Working in a noisy work area, working in direct sunlight, working in outside temperature extremes and working in dampness.
- Performing heavy physical labor, including lifting/carrying or otherwise moving or transporting 50-100 pounds.
- Operating a passenger vehicle, heavy truck, heavy equipment and rotating machinery.
- Reading and understanding printed and electronic messages and related materials.
- Hearing voice conversations and hearing alarms.
- Possessing close vision, far vision, side vision, depth perception, night vision and color vision.
- Wearing appropriate personal protective equipment as required by City Policy.

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Hazards:

- Working around and with machinery having moving parts.
- Adverse weather conditions.
- Exposure to smoke, noxious odors, toxic fumes and chemicals, epoxy chemicals, poison oak or ivy, dust or pollen, insect stings solvents, oil and ink.

Incumbent Signature: _____

Date: _____

Department Head: _____

Date: _____