JUNIOR ENGINEER

Definition:

Under direct or general supervision performs entry level civil engineering tasks to include simple design work for streets, storm drains, sanitary sewers and other public works; performs a variety of basic engineering work to include the preparation of engineering drawings, plans and maps and performs related work as required.

Essential Duties and Responsibilities:

The responsibilities and essential duties performed on a frequent and recurring basis by an incumbent include the following:

Performs a variety of entry level engineering tasks to include simple design work for public works projects to include design calculations and determination of right-of-way requirements.

Prepares engineering drawings, plans, maps and specifications.

Computes material quantities required and prepares cost estimates.

Responds to routine telephone and public counter inquiries from a variety of individuals and assists in resolving routine problems encountered in project design.

Coordinates assigned activities with consultants, engineers, developers, contractors, staff in other City departments and outside agencies.

Investigates engineering problems, prepares engineering studies, makes recommendations, writes reports and maintains a variety of related records.

Reviews designs submitted by contractors or private developers for consistency with codes, ordinances and related requirements.

Participates in field inspections and performs field and office computations related to survey work.

Operates a personal computer and uses applicable software.

Lifts and moves boxes of records weighing 30 pounds or less.

Drives a vehicle on City business.

Other Duties and Responsibilities:

Performs other projects/tasks as assigned.

Class Characteristics:

Junior Engineer is a single incumbent entry level class in the Engineering Department with duties of a less complex nature than higher level engineering classes. The Junior Engineer initially receives direct supervision. As experience increases, more tasks are expected to be performed independently and the incumbent will receive general supervision.

Contacts and Relationships:

The Junior Engineer establishes and maintains contact with staff in the Engineering Department and staff in other City departments. Contact with consultants, contractors, vendors and the public will occur during the course of some work assignments.

Qualification Guidelines:

The knowledge and abilities which are required to perform the duties and responsibilities of this class are as follows:

Knowledge of:

Basic civil engineering principles and practices.

Principles and practices of surveying.

Basic engineering mathematics.

Basic engineering construction techniques.

Use and properties of engineering construction materials.

English usage, spelling, grammar and punctuation.

Computer applications as they relate to area assigned.

AND

Ability to:

Make basic engineering design computations.

Check, design and prepare simple engineering plans and studies.

Understand and interpret engineering construction plans, specifications and related documents.

Perform engineering related research and solve engineering problems.

Learn to coordinate construction project phases and prepare progress reports.

Learn and apply applicable laws, rules and regulations.

Communicate effectively orally and in writing.

Understand and carry out oral and written instructions and work in accordance with established policies and procedures.

Establish and maintain effective relationships with those contacted in the course of work.

Operate a personal computer and use applicable software.

Meet the public with courtesy and tact.

A typical way to obtain the knowledge and abilities is as follows:

Education:

Bachelors Degree in Engineering or a closely related field from an accredited college or university or possession of a State of California Engineering in Training Certificate.

AND

Experience: None.

Special Requirements Include:

Valid and appropriate California Drivers License and acceptable driving record at time of appointment and throughout employment in this position.

Must be able to work a flexible schedule to accommodate City needs.

Other: Some engineering office/drafting experience is preferred but not required.

Physical Tasks and Working Conditions Include the Following:

Work is performed indoors in an office environment and on-site in the field. When work is performed outdoors, there is exposure to the elements. An incumbent uses a computer, keyboard and related equipment, drives a vehicle on City business, sits for extended periods of time, stands, walks, reaches, bends, twists, kneels, crouches, and may grasp, lift and carry boxes of records. In the field an incumbent may walk on slippery/uneven surfaces and slopes and be exposed to construction materials and dust. An incumbent must be able to meet the physical requirements of the class and have mobility, balance, coordination, vision, hearing and dexterity levels appropriate to the duties to be performed.

Fair Labor Standards Act Designation: Exempt.

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