

## PROJECT ENGINEER

*Class specifications are intended to present a descriptive list of the range of duties performed by employees in the class. Specifications are **not** intended to reflect all duties performed within the job.*

### **JOB OBJECTIVES**

To perform professional level duties and responsibilities in support of the City's civil and electrical engineering and construction projects; to prepare and review drawings, plans, specifications, contracts, legal descriptions, and other technical documentation for capital improvement and electric distribution construction projects within the City; to serve as project manager on assigned engineering and construction projects; and to perform a variety of duties relative to assigned areas of responsibility.

### **SUPERVISION RECEIVED AND EXERCISED**

Receives direction from higher level management or supervisory staff.

May exercise technical and functional supervision over technical or clerical staff.

### **ESSENTIAL JOB FUNCTIONS**

*The following tasks are typical for positions in this classification. Any single position may not perform all of these tasks and/or may perform similar related tasks not listed here:*

1. Perform professional level duties and responsibilities in support of the City's civil and electrical engineering and construction projects; ensure compliance with current accepted civil and electrical engineering standards and codes, as well as project specifications and mandated requirements.
2. Review submittals, construction drawings, engineering plans, specifications and professional reports for compliance with engineering and construction standards and integration into existing electric distribution system; negotiate, review and draft change orders.
3. Design and draft complex capital improvement projects using computer programs and software applications; calculate project cost estimates and quantities of materials needed; calculate relocation requirements; calculate and prepare engineer's estimate for the project; compile and prepare project documents, specifications and copies.
4. As assigned, serve as project manager for engineering design and construction projects; develop scope of work; serve as liaison with City staff, developers, engineers, consultants, the general public and external agencies on proposed development projects; develop project schedules and timelines; assign work tasks; monitor project budget.
5. Prepare bid documents, contract documents, specifications, cost estimates and engineering drawings for assigned projects; attend pre-construction meetings; coordinate meetings and construction activities with contractors, local utility companies, public agencies and various City departments.
6. Oversee construction administration for assigned projects; conduct site inspections to ensure compliance with applicable engineering standards; monitor construction progress and changes to scope of work; negotiate, prepare and approve change orders; review "as-built" drawings; review and process requests for contract and final payments.
7. Conduct studies to determine the feasibility or impact of current and proposed engineering projects; research, compile, analyze, evaluate and present economic, demographic, engineering and environmental concepts, statistics and data; research applicable statutes, laws and regulations; prepare and present written and oral reports, graphs, tables and other technical documentation.

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8. Maintain computer generated mapping system (G.I.S.) and existing hand-drawn maps; create new maps as needed.
9. Perform field survey duties; operate survey equipment and devices to measure distances, angles and elevations; maintain accurate and legible field notes of survey work including lines, angles, distances, benchmarks and mathematical calculations.
10. Provide information and assistance to City staff, developers, engineers, architects, consultants, property owners, the general public and external agencies on proposed construction projects; conduct meetings to interpret, explain and communicate the City's engineering requirements, guidelines, standards and regulations.
11. Review construction plans of private and public developments; perform field and site inspections during and after construction to ensure project is in compliance with approved plans.
12. Direct the work of lower level technical engineering staff as assigned; review work to ensure compliance with project specifications and professional standards; prepare and conduct annual performance appraisal for assigned staff.
13. Attend and participate in professional group meetings; stay abreast of new trends and innovations in the field of civil and electrical engineering.
14. Perform related duties and responsibilities as required.

**QUALIFICATIONS**

**Knowledge of:**

Operations, services and activities of a comprehensive civil or electrical engineering and construction program.  
Principles and practices of civil or electrical engineering.  
Civil or electrical engineering design and construction concepts, principles, practices and standards.  
Principles and practices of project management.  
Principles and practices of surveying.  
Principles and practices of contract administration.  
Methods and techniques of performing construction site inspections and assessments.  
Industry engineering development standards and specifications.  
Advanced mathematical concepts as they relate to engineering work.  
Principles and practices of project budget and control.  
Recent developments, current literature and information related to innovations and trends in civil or electrical engineering.  
Principles, practices, methods and techniques of conducting engineering research  
Environmental laws and regulations.  
Principles and practices of business correspondence and technical report preparation.  
Methods and techniques of conducting public and committee presentations.  
Modern office procedures, methods and equipment including computers and supporting word processing and spreadsheet applications.  
Federal, State and Local laws, codes, standards and regulations.

**Ability to:**

Perform professional engineering in the design, development and construction management of a variety of civil and electrical engineering projects.  
Prepare clear and concise technical and administrative reports.

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Prepare, review, interpret and analyze engineering plans, drawings, specifications, contract documents and engineering reports for conformance to professional standards, contract obligations and approved budgets.

Interpret and explain engineering projects to the business community and the general public.

Perform accurate and complex mathematical calculations.

Conduct site inspections and monitor project progress.

Serve as project manager on assigned design and construction projects.

Prepare and negotiate fees and change orders.

Operate office equipment including computers and specialized word processing, spreadsheets or engineering applications.

Communicate clearly and concisely, both orally and in writing.

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

**Education and Experience Guidelines**

*Any combination of experience and training that would likely provide the required knowledge and abilities is qualifying. A typical way to obtain the knowledge and abilities would be:*

**Education:**

Equivalent to a Bachelor's degree from an accredited college or university major course work in civil or electrical engineering or a related field.

**Experience:**

Three years of increasingly responsible professional level engineering program experience.

**PHYSICAL DEMANDS AND WORKING CONDITIONS**

*The physical demands herein are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform these essential job functions.*

**Environment:** Normal office setting with some travel to attend meetings or conduct site investigations.

**Mobility:** Incumbents require sufficient mobility to work in an office setting and operate office equipment.

**Vision:** Vision sufficient to read small print, computer screens and other printed documents.