

CITY OF IRWINDALE

ASSOCIATE 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.*

SUMMARY DESCRIPTION

Under direction, performs a variety of professional level engineering work of average difficulty on diversified civil engineering projects; serves as project manager on assigned projects; reviews plans, designs, and specifications of public works projects and recommends changes for compliance; and responds to questions and inquiries from the general public, developers, contractors, engineering professionals, and City staff regarding engineering and development projects.

REPRESENTATIVE DUTIES

The following duties are typical for this classification. Incumbents may not perform all of the listed duties and/or may be required to perform additional or different duties from those set forth below to address business needs and changing business practices.

1. Performs a full range of professional level engineering duties in support of the City's public works engineering projects, services, and activities including design and construction programs for City streets, storm drains, sewer lines, traffic, and related capital improvement programs.
2. Performs plan check, review, and processing of plans for projects affecting City streets, sewers, drains, and related public works facilities; reviews engineering design and construction plans, drawings, specifications, contract documents, cost estimates, engineering calculations, and related documents prepared by consulting engineers and contractors for compliance with professional and City standards and practices; coordinates reviews with other departments and agencies.
3. Prepares designs and specifications for assigned projects; develops engineering drawings, construction plans, specifications, contract documents, bid documents, calculations, and cost estimates for proposed projects; researches project design requirements; prepares estimates of time and material costs.
4. Serves as project engineer on construction projects; administers contracts for assigned engineering projects; conducts site inspections during and at completion of project; monitors construction progress and changes to scope of work; discusses and recommends change orders; reviews and processes requests for contract and final payments; prepares project close-out documents.
5. Investigates field conditions related to public improvements and traffic safety operations; investigates field problems affecting property owners, contractors, and maintenance operations; works with public or private contractors on public improvements.
6. Maintains accurate records of projects, budgets, or field observations required for the delivery of civil engineering services for the City.
7. Prepares special engineering studies and reports.
8. Performs survey, mapping, and data collection; evaluates data and prepares recommendations.
9. Performs a variety of traffic engineering studies; reviews development plans and makes recommendations regarding compliance of traffic control plans with regional standards and practices; monitors traffic patterns and analyzes traffic accident reports; makes recommendations regarding required public improvements and their compliance with regional standards and practices.

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10. Provides assistance to contractors, engineers, and the general public on engineering policies and procedures; reviews submitted plans, drawings, and specifications for compliance with engineering and City codes and standards.
11. Provides supervision and training to assigned staff.
12. Coordinates public works activities with other City departments, divisions, and outside agencies.
13. Attends and participates in professional group meetings; stays abreast of new trends and innovations in the field of civil engineering design and construction management.
14. Performs related duties as required.

QUALIFICATIONS

The following generally describes the knowledge and ability required to enter the job and/or be learned within a short period of time in order to successfully perform the assigned duties.

Knowledge of:

Operations, services, and activities of a municipal engineering design and construction program.
Modern and complex principles and practices of civil engineering.
Principles and practices of traffic engineering.
Structural, street, and highway design principles.
Scientific and mathematical principles as applied to civil engineering work.
Principles and practices of project management and administration.
Methods and techniques of contract negotiations and administration.
Principles and practices of project budget preparation and control.
Methods, materials, and techniques used in civil engineering projects including those used in the design and construction of development projects.
Methods and techniques of engineering plan review and analysis.
Methods and techniques of conducting site and field investigation.
Principles and practices of field surveying.
Drafting methods, techniques, and equipment including those used in computer aided drafting.
Engineering maps and records.
Recent developments, current literature, and sources of information related to innovations and trends in civil and traffic engineering design and development.
Principles and practices of business correspondence and technical report preparation.
Modern office procedures, methods, and equipment including computers and supporting word processing, spreadsheet applications, and specialized engineering software programs.
Principles and practices of geographic information systems programs.
Occupational health and safety standards.
Basic principles of supervision, training and performance evaluation.
Pertinent federal, state, and local codes, laws, and regulations.

Ability to:

Perform the full range of professional level engineering duties involved in the design, development, and construction management of a variety of construction/capital improvement projects.
Serve as project engineer on assigned design and construction projects.
Prepare, review, interpret, analyze, and modify engineering plans, drawings, specifications, contract documents, and engineering reports for conformance to professional standards and approved budgets.
Collect, assimilate, and evaluate data and prepare recommendations related to civil engineering projects.
Perform complex engineering computations and calculations.

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Prepare bid documents, contract documents, specifications, cost estimates and engineering drawings.
Inspect public works projects for conformance with plans and specifications.
Interpret, apply, and ensure compliance with pertinent federal, state, and local laws, codes, and regulations.
Interpret, explain and enforce department policies and procedures.
Oversee the work of assigned staff, professional consultants, and contractors.
Respond to questions and inquiries from a variety of sources regarding engineering and development projects.
Prepare clear and concise administrative and technical reports.
Conduct analytical traffic studies accurately and reliably.
Use and care for engineering, surveying, and drafting instruments and equipment.
Work independently in the absence of supervision.
Understand and follow oral and written instructions.
Communicate clearly and concisely, both orally and in writing.
Establish and maintain effective working relationships with those contacted in the course of work.

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

Education/Training:

A Bachelor's degree from an accredited college or university with major course work in civil engineering or related field.

Experience:

Three years of increasingly responsible professional engineering experience.

License or Certificate:

Possession of an appropriate, valid driver's license.

Possession of a valid Certificate of Registration as an Engineer-In-Training from the State of California.

PHYSICAL DEMANDS AND WORKING ENVIRONMENT

The conditions 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: Standard office setting with some travel to conduct site investigations; occasional exposure to outside weather conditions.

Physical: Primary functions require sufficient physical ability to work in an office setting; stand or sit for prolonged periods of time; operate office equipment including use of a computer keyboard; ability to verbally communicate to exchange information; ability to operate a vehicle to travel to various locations and meetings.

Vision: See in the normal visual range with or without correction.

Hearing: Hear in the normal audio range with or without correction.