JUNIOR ENGINEER
ASSISTANT ENGINEER
ASSOCIATE CIVIL 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 supervision (Junior Engineer), general supervision (Assistant Engineer), or direction (Associate Civil Engineer), performs professional engineering work in the design, construction and maintenance of public works projects; plans and coordinates a major public works program; and assists in supervision of engineering division activities.

DISTINGUISHING CHARACTERISTICS

Junior Engineer - This is the entry level class in the Engineer series. This class is distinguished from the Assistant Engineer by the performance of the more routine tasks and duties assigned to employees within the series. Since this class is typically used as a training class, employees may have only limited or no directly related work experience. Incumbents perform office or field engineering projects of easy to average difficulty, including routine professional and non-professional assignments. Advancement to the Assistant Engineer level is based on demonstrated proficiency in performing the full range of assigned duties, possession of required certifications, and is at the discretion of higher level supervisory or management staff.

Assistant Engineer - This is the second level class in the Engineer series. This class is distinguished from the Associate Civil Engineer by the performance of the more routine tasks and duties not requiring a Professional Engineer certification. Employees work independently, receiving only occasional instruction or assistance. Incumbents are responsible for a variety of office or field projects of average difficulty and are expected to direct them to completion. Advancement to the Associate Civil Engineer level is based on demonstration of sound engineering judgment, possession of a Professional Engineer certification, and requires considerable knowledge of civil engineering practice including land development, traffic engineering and the planning, design, construction and maintenance of a wide variety of civil engineering projects. Advancement to the Associate Civil Engineer level is at the discretion of management staff.

Associate Civil Engineer - This is the full journey level class in the Engineer series. Employees within this class are distinguished from the Assistant Engineer by the performance of the full range of duties as assigned including the performance of duties requiring a Professional Engineer certification. Employees at this level receive only occasional instruction or assistance as new or unusual situations arise, and are fully aware of the operating procedures and policies of the work unit.

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. Perform responsible engineering work in connection with municipal public works projects; plan, schedule and coordinate work on major or complex engineering projects.

2. Prepare engineering plans, specifications, and costs for the construction of streets, storm drains, parks, signals, buildings and other capital improvement projects.

3. Prepare engineering reports concerning traffic related complaints and problems.

4. Review a variety of construction plans, maps, reports, applications, and various development and construction agreements.

5. Provide information and respond to questions from the public, contractors, developers, and other City departments.

6. Determine design procedures; interpret the application of design criteria.

7. Prepare grant funding applications for various projects; process and track grant applications and funds.

8. Check plans and specification for accuracy and completeness of design.

9. Prepare preliminary and final project cost estimates.

10. Provide project management for construction projects to ensure contractor compliance with project specifications, time, and budget parameters; provide engineering information to contractors, developers, engineers and the public.

11. Review and approve payments for consultants, vendors, and contractors.

12. Resolve disputes between the City and contractors concerning plans, specifications and extra work.

13. Prepare staff reports, and make presentations to the City Council, commissions and other groups, as necessary.

14. Coordinate engineering work with other City divisions, consultants, developers and property owners.

15. May perform field survey work.

16. May supervise subordinate staff.

17. Perform 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:

- Principles and practices of civil engineering and its application to municipal public works and construction.
- Land development, including planning and analysis of engineering systems needed for the use of land including streets, highways, sewage, water facility, storm drain, grading, land use and utilities.

- Public works contract administration including the process of contract preparation, contractor selection, administration of contract work, change orders, disputes, claims, equal opportunity and closing of contracts.
- Field and construction survey techniques.
- Design and drafting methods and equipment.
- Civil engineering applied to estimates, studies, technical reports, design, plans, specifications and professional recommendations for a variety of engineering activities.
- Construction including survey, inspection and public works contract administration procedures, and engineering materials and methods.
- Principles of supervision, training, and performance evaluation.
- Pertinent federal, state, and local codes, laws, and regulations.

Ability to:

- Prepare and review plans, specifications, cost estimates and engineering reports.
- Make accurate engineering computations and drawings.
- Coordinate engineering activities with activities of other divisions and outside organizations.
- Write clear, concise and accurate technical and non-technical reports, correspondence and memoranda; prepare reports, agreements and accurate records.
- Take coaching, instruction, and feedback with a cooperative and positive attitude.
- Deal tactfully with the public, high level staff or other public and private agencies, contractors, private engineers, governmental officials and other City employees.
- Explain complicated technical matters in non-technical terms.
- Select, train, and evaluate staff.
- 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

Junior Engineer

Education/Training:

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

Experience:

No experience is required.

License or Certificate:

Possession of an appropriate, valid driver's license.

Assistant Engineer

Education/Training:

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

Experience:

Two years of increasingly responsible and professional engineering experience in

plan checking, design, construction, or contract management comparable to that of a Junior Engineer with the City of Antioch.

License or Certificate:

Possession of an appropriate, valid driver's license.

Possession of registration as an Engineer-In-Training.

Associate Civil Engineer

Education/Training:

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

Experience:

Two years of increasingly responsible and professional engineering experience comparable to that of an Assistant Engineer with the City of Antioch.

License or Certificate:

Possession of an appropriate, valid driver's license.

Possession of registration as a Professional Engineer in 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 the essential job functions.

Environment: Work is performed primarily in a standard office setting with occasional exposure to an outdoor field setting and travel from site to site.

Physical: Primary functions require sufficient physical ability and mobility to work in an office and outdoor field setting; to stand or sit for prolonged periods of time; to occasionally stoop, bend, kneel, crouch, reach, and twist; to lift, carry, push, and/or pull light to moderate amounts of weight; to operate office equipment requiring repetitive hand movement and fine coordination including use of a computer keyboard; and to verbally communicate to exchange information.

FLSA: Exempt

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This class specification identifies the essential functions typically assigned to positions in this class. Other duties not described may be assigned to employees in order to meet changing business needs or staffing levels but will be reasonably related to an employee's position and qualifications. Other duties outside of an individual's skill level may also be assigned on a short term basis in order to provide job enrichment opportunities or to address emergency situations.