

JUNIOR ENGINEER
ASSISTANT ENGINEER
ASSOCIATE ENGINEER (PE)

DEFINITION

To perform professional engineering work in the investigation, planning, design, construction, and maintenance/operation of a variety of public works facilities, systems, projects and/or private development projects.

DISTINGUISHING CHARACTERICS

Junior Engineer - This is the trainee level in the professional engineering series. Positions in this class possess the applicable educational background required of classes in the professional engineering series, yet typically lack practical professional engineering experience. Incumbents learn and perform less complex office and field engineering work in preparation for advancement to the Assistant Engineer level. Assignments are generally limited in scope and are performed within a procedural framework established by higher level staff. Employees work under immediate supervision while learning job tasks.

Assistant Engineer – This is the entry level in the professional engineering series. This class is distinguished from the Junior Engineer by the performance of the more routine tasks and duties assigned to positions within this class. Employees at this level are not expected to perform with the same level of independence of direction and judgment on matters allocated to the Associate Engineer. Since this class is typically used as a training class, employees have only limited or no directly related professional engineering work experience. Employees work under general supervision while learning job tasks.

Associate Engineer (PE) - This is the journey level class within the professional engineering series. This class is distinguished from the Assistant Engineer by assignment of the full range of professional engineering duties. 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 within the work unit. Incumbents may exercise direct supervision over technical engineering staff.

This class is distinguished from that of the Senior Engineer in that the latter is an advanced journey level class responsible for complex and difficult engineering projects and programs and exercises direct supervision over professional engineering staff.

SUPERVISION RECEIVED AND EXERCISED

Junior Engineer

Junior Engineer/Assistant Engineer/Associate Engineer (PE)

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Receives immediate supervision from higher level engineering staff.

Assistant Engineer

Receives general supervision from higher level engineering staff.

Associate Engineer (PE)

Receives direction from higher level engineering staff.

May exercise direct supervision over technical engineering staff, as assigned

EXAMPLES OF ESSENTIAL DUTIES - Duties may include, but are not limited to, the following:

Participate in or prepare plans and specifications for the design, construction, and maintenance/operation of a variety of public works facilities and projects, including water and wastewater utility, solid waste, street, storm drain, storm water management and traffic/transportation systems; ensure conformance to City standards and practices.

Research project design requirements and perform routine calculations; conduct plan checks to ensure contractor and/or enforce compliance with City and various environmental regulatory standards; prepare time and material cost estimates, especially as related to existing or anticipated project budgets.

May delegate routine research, design, and drafting tasks to technical staff; review completed work and assist in identifying solutions for solving routine problems; research publications and industry information sources as needed.

Survey, map, and collect data related to area of assignment, as appropriate; perform field inspections, including survey work as necessary, to investigate and resolve routine field problems affecting property owners, contractors and maintenance operations; prepare estimates and feasibility reports for new or modified services and structures.

Participate in or review and process private development plans as related to streets, storm drains, traffic/transportation, water/wastewater utilities, solid waste systems, and related public works facilities and systems; ensure that such plans comply with City standards and requirements.

Participate in or prepare engineering studies and reports; participate in coordinating public works-related activities with other City departments, divisions, and sections, outside agencies, citizens, consultants, and developers; provide staff support to a variety of City boards, commissions, and committees as assigned.

If assigned to traffic/transportation systems, participate in or initiate and complete traffic studies; evaluate signal sight distance, signage and striping; review and update traffic signals Improvement

Standards; take corrective measures as warranted; design and bid minor signal improvement projects; generate and manage annual signal service agreements.

Build and maintain positive working relationships with co-workers, other City employees, and the public using principles of good customer service.

Perform related duties as assigned.

MINIMUM QUALIFICATIONS

Junior Engineer

Knowledge of:

Principles and practices of professional engineering as applied to a variety of public works, utilities, building/facilities construction, traffic, water quality, and/or private development projects.

Basic methods, materials, and techniques used in the design, construction, and maintenance/operation of public works and utilities programs and activities.

Basic surveying, drafting, computer-aided design and modeling techniques and technology.

Current developments and trends related to professional public works engineering.

Modern office procedures, methods and computer equipment, including use and application of word processing, spreadsheet, graphics, and database programs.

English usage, spelling, punctuation, and grammar.

Principles and practices of work safety.

Ability to:

Perform professional engineering computations and learn to check, design, and prepare engineering plans, studies, profiles, and maps.

On a continuous basis, know and understand all aspects of the job; intermittently analyze work papers, reports and special projects; identify and interpret technical and numerical information; observe and problem solve operational and technical policy and procedures.

On a continuous basis, sit at desk for long periods of time; intermittently bend, squat, climb, kneel or twist while performing field work; intermittently twist to reach equipment surrounding desk; perform simple grasping and fine manipulation; use telephone, and

write or use keyboard to communicate through written means; and lift or carry weight of 10 pounds or less.

Use and care for engineering surveying instruments and computer equipment.

Learn modern office procedures and computer equipment and software such as AutoCAD, GPS, GIS, ArcView, ArcInfo and software related to specific department operations.

Learn and understand City standards and regulations and engineering policies and procedures.

Learn applicable laws and regulations related to area of assignment.

Learn to prepare accurate cost estimates and make related recommendations.

Learn to analyze and prepare technical reports.

Learn to obtain information through interview, to handle multiple assignments, to work with interruption, and to deal firmly and courteously with citizens, developers, consultants, and contractors.

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

Prepare clear, complete, accurate, timely and concise written correspondence and reports.

Communicate clearly and concisely, both orally and in writing.

Experience and Training

Experience:

No professional experience is required; one year of technical engineering experience is desirable.

Training:

A Bachelor's degree, at the time of appointment, from an accredited college or university, preferably with major course work in civil, environmental engineering or a closely related field.

License or Certificate

Possession of a valid California driver's license by date of appointment.

Assistant Engineer

In addition to the qualifications for the Junior Engineer:

Knowledge of:

Pertinent local, State, federal rules, regulations and laws related to area of engineering assignment.

Methods, materials, and techniques used in the area of engineering assignment.

Ability to:

Check engineering plans and specifications; prepare and check engineering reports and studies.

Interpret and explain City policies, procedures, regulations and engineering policies and procedures.

Obtain information through interview, to handle multiple assignments, to work with interruption, and to deal firmly and courteously with citizens, developers, consultants, and contractors.

Experience and Training

Experience:

One year of responsible professional engineering work similar to that of a Junior Engineer with the City of Roseville.

Training:

A Bachelor's degree from an accredited college or university, preferably with major course work in civil, environmental engineering or a closely related field;

License or Certificate

Possession of a valid California driver's license by date of appointment.

Associate Engineer (PE)

Knowledge of:

Principles and practices of professional engineering as applied to a variety of public works, utilities, building/facilities construction, water quality, traffic and/or private development projects. Methods, materials, and techniques used in the design, construction, and maintenance/operation of public works and utilities programs and activities.

Budgeting techniques and capital project management.

Pertinent local, State, federal rules, regulations and laws related to area of engineering assignment, including those specific to City policies and practices.

Computer-aided design and modeling techniques and technology.

Modern office procedures and computer equipment and software such as AutoCAD, GPS, GIS, ArcView, ArcInfo and software related to specific department operations.

Supervision, training, and evaluation of staff.

English usage, spelling, punctuation, and grammar.

Principles and practices of work safety.

Ability to:

Perform the full range of professional public works engineering duties with only occasional instruction or assistance as new or unusual situations arise.

On a continuous basis, know and understand all aspects of the job; intermittently analyze work papers, reports and special projects; identify and interpret technical and numerical information; observe and problem solve operational and technical policy and procedures.

On a continuous basis, sit at desk for long periods of time; intermittently bend, squat, climb, kneel or twist while performing field work; intermittently twist to reach equipment surrounding desk; perform simple grasping and fine manipulation; use telephone, and write or use keyboard to communicate through written means; and lift or carry weight of 10 pounds or less.

Control a project from conception to completion with limited direction; plan and oversee permit acquisitions; lead the evaluations of consultants and contractors; manage contracts; manage funding and expenses throughout the project.

Plan, oversee permit acquisitions,

Demonstrate command of the City's design and construction standards and industry best practices.

Perform complicated plan reviews and communicate directly and independently with applicants to resolve issues.

Exercise independent judgement in resolving complex engineering issues during plan review or in the field, designing solutions as needed, and coordinate with inspection staff to resolve field conflicts.

Demonstrate thorough understanding of topside and underground improvement construction means and methods.

Interpret and apply City standards and regulations and engineering policies and procedures as well as applicable laws and regulations related to area of engineering assignment.

Prepare accurate estimates of costs, schedules, personnel/materials and other resources related to engineering project responsibilities; make recommendations related to existing or anticipated project budgets.

Work effectively with a variety of internal and external customers to accomplish goals and objectives; deal firmly and courteously with citizens, developers, consultants, and contractors.

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

Prepare concise and understandable written reports, studies, and other written materials, including requests for qualifications/proposals

Prepare and present oral presentations to a variety of internal and external customers.

Select, train, review, and evaluate technical engineering staff, as assigned.

Experience and Training

Experience:

Two years of responsible professional engineering work similar to that of an Assistant Engineer with the City of Roseville.

Training:

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

License or Certificate

Possession of a valid California driver's license by date of appointment.

Possession of a current certificate of registration as a Professional Civil Engineer or a Professional Traffic Engineer in California by date of appointment.

01-29-20	
12-21-19	Junior Engineer/Assistant Engineer/Associate Engineer (PE)
08-24-18	
04-15-06	Junior Engineer/Assistant Engineer
10/20/03	
12-23-98	
06-27-95	
01-26-90	Assistant Engineer I/II
10-01-88	
07-01-79	
10-30-73	Assistant Civil Engineer
-67	
-65	
-64	Assistant Engineer