

## **CITY OF ORINDA**

### **ASSISTANT ENGINEER ASSOCIATE ENGINEER**

#### **DEFINITION**

Under general supervision (Assistant Engineer) or direction (Associate Engineer), to perform professional and technical engineering work in assigned area of responsibility including design, capital projects, field operations, and construction services; and to provide technical staff assistance to higher level engineering staff.

#### **DISTINGUISHING CHARACTERISTICS**

**Assistant Engineer**--This is the entry level in the professional Engineer class series. Positions at this level usually perform most of the duties required of the positions at the Associate Engineer level, but are not expected to function at the same skill level and usually exercise less independent discretion and judgment in matters related to work procedures and methods. Assignments require the application of fundamental engineering principles. Work is usually supervised while in progress and fits an established structure or pattern. Exceptions or changes in procedures are explained in detail as they arise. Since this class is often used as a training class, employees may have only limited or no directly related work experience.

**Associate Engineer**--This is the full journey level in the professional Engineer class series and is the first level of registered engineer. Positions at this level are distinguished from the Assistant Engineer level by the performance of the full range of duties as assigned, including responsibility for the application of professional knowledge and skills to various civil engineering problems and projects. Responsibilities include managing assigned programs such as the Storm Water Program and the review of complex project engineering plans and reports with opportunity for working independently and exercising judgment and initiative. Positions 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. Positions in this class series are flexibly staffed and positions at the Associate Engineer level are normally filled by advancement from the Assistant Engineer level with three years of experience and successful performance reviews and the attainment of professional engineering registration. When filled from the outside, the employee is required to have prior related experience, which allows the employee to meet the qualification standards for the Associate Engineer level.

#### **SUPERVISION EXERCISED**

##### **Assistant Engineer**

May exercise technical and functional supervision over lower level staff.

## Associate Engineer

May exercise technical and functional supervision over lower level staff.

### EXAMPLES OF IMPORTANT AND ESSENTIAL DUTIES

Determine the scope of engineering projects; prepare requests for proposals and contracts for consulting services; develop plans, maps, specifications, plats, diagrams, and other contract documents for a variety of engineering projects such as roads, structures, and hydraulics; make technical engineering decisions and establish technical criteria and standards; calculate the quantity, quality, and cost of materials used for various projects.

Review plans of consulting engineers and private contractors; review plans related to structures such as streets, sidewalks, gutters and other off-site construction; check plans for conformance with regulations regarding line, grade, size, elevation, and location of structures.

Serve as project manager on assigned major engineering and construction projects ensuring conformance with contract provisions; assist in the construction inspection of assigned projects; ensure conformance with contract plans and specifications; make recommendations on approval of progress payments and change orders; prepare progress reports on projects under construction; maintain project files, including plans, contract documents, records of changes, and field notes.

Serve as a program manager over assigned program areas such as the Storm Water Program; reviews related storm water plans; develops project improvement plans; coordinate with other City departments to ensure compliance with N.P.D.E.S. requirements and regulations; review plans for Regional Water Quality Board permits; prepare program documentation and annual reports.

Review drainage plans for single-family residence and larger developments; review engineering calculations; coordinates inspection activities.

Research records, maps, and other sources to obtain typical engineering data, including location of sewer stubs, water mains and hydrants, easements, and zoning district designations or special property assessments.

Develop, maintain, and implement a pavement management system.

Maintain the engineering library and infrastructure records.

Investigate field problems affecting property owners, contractors, and maintenance operations; provide information to the public; respond to citizen inquires and complaints.

Process final parcel and tract maps, bonds, and deeds required for projects.

Coordinate assigned activities with consultants, engineers, developers, contractors, other City departments and divisions, and with outside agencies.

### **EXAMPLES OF IMPORTANT AND ESSENTIAL DUTIES**

Prepare preliminary design and cost estimate on capital improvement projects, including roadway, drainage, parks, water, sewer, and buildings.

Prepare and send out RFP's to engineering firms; evaluate proposals; interview and select consultant for assigned projects; review and plan check construction plans and specifications; conduct pre-bid meeting and prepare staff report for City Council action to award the project to the successful contractor; conduct pre-construction meeting and manage project through construction.

Prepare agenda reports and correspondence related to engineering projects.

Review and process property boundary adjustment requests from property owners; check plats, land descriptions, and survey information.

Review and process parcel maps, final maps, and record of survey maps, including boundary traverse information and offers for off-site dedication.

Process right-of-way permits for miscellaneous construction within City rights-of-way or easements, including calculation of fees and deposits.

Update computer database throughout the year.

Design and prepare drawings and engineering specifications for streetlights, traffic mitigation, street, water, sewer, storm drain, traffic signal, and other public works construction projects.

Provide technical and professional engineering support services relative to assigned area of responsibility; prepare difficult special engineering studies and reports; perform special assignments on engineering problems as necessary.

Recommend engineering conditions and mitigation measures for major construction projects.

Coordinate the review of funding applications and analysis of engineering fee structures.

Prepare maps, deeds, and legal descriptions.

### **OTHER JOB RELATED DUTIES**

Perform related duties and responsibilities as assigned.

## **JOB RELATED AND ESSENTIAL QUALIFICATIONS**

### **Assistant Engineer**

#### **Knowledge of:**

Principles and practices of civil engineering, including the design, construction, and maintenance requirements of public works projects.

Modern developments, current literature and sources of information regarding engineering.

Computer aided design and drafting software.

Principles and practices of data collection and report preparation.

Capital Improvement Program budgeting and funding practices.

Engineering plan types, review practices, and permit filing and approval procedures.

Pertinent Federal, State, and local laws, codes, and regulations.

Subdivision engineering and plan review practices.

General design, layout, and construction practices for public improvements such as streets, storm drains, grading, and landscaping.

Principles of engineering mathematics, stress analysis, properties, strength, and uses of construction materials.

Safe driving principles and practices.

#### **Skill to:**

Operate modern office equipment, including computer equipment and software.

Operate a CADD computer station.

Operate a motor vehicle safely.

#### **Ability to:**

Conduct engineering studies and prepare reports with recommendations.

Read, interpret, and apply a wide variety of technical information from manuals, drawings, specifications, layouts, blueprints, and schematics.

Perform technical research and solve engineering problems.

Prepare, understand, and interpret engineering construction plans, specifications, and other contract documents.

Analyze engineering plans and specifications to ensure compliance with City standards and governmental requirements.

Communicate clearly and concisely, both orally and in writing.

Establish, maintain, and foster positive and harmonious working relationships with those contacted in the course of work.

**Minimum Qualifications:**

**Experience:**

Two years of increasingly responsible experience in professional civil engineering.

**Training:**

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

**License or Certificate:**

Possession of, or ability to obtain, an appropriate, valid driver's license.

Possession of certification as an Engineer-In-Training is desirable.

**Special Requirements:**

*Essential duties require the following physical skills and work environment:*

Ability to work in a standard office environment; ability to conduct field inspections and travel to different sites and locations.

**Associate Engineer**

In addition to the qualifications for Assistant Engineer:

**Knowledge of:**

Pertinent Federal, State, and local laws, codes, and regulations pertaining to storm water management.

Storm water system engineering and plan review practices.

**Ability to:**

Interpret and apply polices, procedures, laws, codes, and regulations pertaining to storm water management programs and functions.

Analyze and compile technical and statistical information and prepare detailed technical reports and recommendations.

Check storm water improvement plans for conformance with N.P.D.E.S. requirements and suggest changes to achieve compliance.

Interpret storm water and other program mandates to the general public.

**Minimum Qualifications:**

**Experience:**

Three years of increasingly responsible experience in professional civil engineering.

**Training:**

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

**License or Certificate:**

Possession of, or ability to obtain, an appropriate, valid driver's license.

Possession of a certificate of registration as a Civil Engineer issued by the California State Board of Registration for Civil and Professional Engineers.

Effective Date:

July 2007 ?