

SENIOR ENGINEERDEFINITION

Under direction, performs complex engineering work and supervises technical and professional staff within an assigned engineering section.

ESSENTIAL FUNCTIONS INCLUDE BUT ARE NOT LIMITED TO

Serves as section leader or project manager for a wide variety of public works projects that may include streets, storm drains, sanitary sewers, water production and supply systems, landscaping and irrigation systems, parking lots and structures, street improvements, street and area lighting, public buildings and structures, and other municipal infrastructure projects. Supervises, trains, evaluates and disciplines assigned staff. Supervises and/or assists in the checking of improvement plans and engineering calculations prepared by subordinate staff. Directs and monitors consultant's work; oversees preparation of plans, specifications, engineering calculations and cost estimates for municipal infrastructure and other Public Works projects. Assists in or performs contract administration, specialized studies, surveys, inspections, preparation of change orders, and preparation of reports on all phases of projects including work progress, financial status, progress payments, design details and calculations. Uses modern computer software applications to prepare reports, estimates, agreements, written requests to City Council with recommendations, technical analyses, Requests for Proposals, and other documents. Responds to requests from the general public for information related to a variety of matters of departmental operations. Represents the City at public meetings. Performs other functions as assigned. Depending on assignment, additional essential functions include, but are not limited to:

Construction Engineering Section: evaluates and recommends construction bid awards. Monitors contractor compliance with laws and regulations governing the payment of prevailing wages, the City's Disadvantaged Business Enterprise procedures, and construction progress. Inspects Public Works projects and permit work. Reviews and approves shop drawings, progress payments, and construction schedules. Reviews and recommends construction change orders.

Design Engineering Section: oversees the work of consultants working on the preparation and processing of appraisals, title searches, legal descriptions, deeds, appraisal reports, property acquisitions and relocations. Prepares and manages leases and rental agreements for City-owned property. Coordinates right of way acquisition and relocation with State and Federal agencies. Provides information and makes recommendations on the acquisition of property and sale of surplus City property to various committees, Commissions and the City Council.

Traffic Engineering Section: performs traffic engineering work, including channelization, signal and Intelligent Transportation Systems (ITS), design, operation and maintenance. Responds to requests from the general public for a variety of concerns, such as traffic flow, traffic safety, signal operations, neighborhood traffic problems, construction, right-of-way, and future street layout.

Assists in the development of conditions of approval for tentative tract maps, parcel maps, variances and conditional use permits. Conducts and supervises traffic engineering studies and investigations; coordinates with Risk Management and the City Attorney's Office regarding traffic-related claims and litigation. May be assigned to traffic control design, signal operations or traffic investigations and planning; is rotated at manager's discretion.

Development Engineering Section: Analyzes development projects for consistency with Subdivision Map Act, the Santa Ana Municipal code and the California Environmental Quality Act. Determines development conditions. Prepares and reviews legal descriptions and deeds for development projects.

Water Resources Division: manages daily water production and supply activities, including local water production, water supply facilities, treatment, reservoirs, water sales and active service connections. Assumes a leading role in the professional engineering responsibilities related to water production systems for citywide demands.

DISTINGUISHING FEATURES OF THE CLASS

This is the project lead/supervisory level classification in the professional civil engineering series. Employees in this class perform complex professional engineering work, exercising independent judgment in planning work details for themselves and their subordinates. Supervision is exercised by employees of this class over professional and sub-professional engineering employees. Supervision is normally received by periodic guidance during the progress of work and by final review upon completion. The Senior Engineer classification is distinguished from the journey-level class of Assistant Engineer II in terms of its project lead/supervisory responsibilities. This class is distinguished from the experienced journey-level class of Senior Assistant Engineer in that the latter requires exceptional expertise in one or more areas. This class is distinguished from the higher-level classification of Principal Civil Engineer in that the latter supervises the day-to-day operations of an assigned Section within the Public Works Agency.

RECOMMENDED MINIMUM QUALIFICATIONS

Graduation from an accredited four-year college or university with a degree in engineering with major course work in Civil Engineering. Three years of professional civil/traffic/development engineering experience, or any equivalent combination of training and experience which results in the following knowledge and abilities.

DESIRABLE KNOWLEDGE, SKILLS AND ABILITIES

Knowledge of: the principles, practices and methods of civil engineering particularly as they apply to project management, project design, strength of materials, materials testing, stress analysis, surveying and photogrammetry, hydraulics and hydrology, land use and subdivisions, construction management, construction inspection, traffic engineering, quantity and cost estimating, traffic engineering and contract administration; related laws and regulations such as the California Environmental Quality Act and the Subdivision Map Act; principles and practices of effective

supervision.

Ability to: maintain project schedules and budgets on several projects concurrently; prepare bid packages, Requests for Proposals, accurate plans, specifications, cost estimates and engineering reports with recommendations; make accurate engineering computations and drawings; understand and carry out complex technical directions; express ideas clearly and concisely, both orally and in writing; maintain effective working relationships with coworkers, contractors and the general public; effectively supervise others in the implementation of complex engineering projects from conceptualization through design, construction and construction engineering to the completion of as-built plans and record drawings.

Skill in: the use of personal computers and current office software applications such as Microsoft Word, Access, Outlook, PowerPoint and Excel to produce status reports, databases and presentations; the use of a networked (Windows NT) environment for facilities management applications.

SPECIAL ADDITIONAL REQUIREMENTS

If assigned to the Water Resources Division, must possess and retain a valid California State Department of Health Services Water Distribution Certificate (WDC) - Grade 5 as a condition of employment.

If assigned to Construction Engineering, must have a working knowledge of the Standard Specifications for Public Works Construction, the State of California Department of Transportation Standard Specifications, and the Public Works Construction Cost Data.

SPECIAL MINIMUM REQUIREMENT

Must possess and retain a valid California Class C driver's license.

DESIRABLE CHARACTERISTICS

The Senior Engineer has strong organizational skills and must be able to set appropriate priorities. This self-starter is action-oriented, is prepared and willing to take reasonable risks, and assumes responsibility for the work of the section. This individual is perceptive, creative, innovative and visionary. As a supervisor, the Senior Engineer trains and acts as a resources person to assigned engineering staff.

NOTE:

This classification was formerly titled Associate Engineer, established per Resolution No. 58-281, effective 11-1-58. The class spec for Associate Engineer was revised and approved in 4/94.

Classification title changed effective 2/19/02 from Associate Engineer to either Senior Engineer, Senior Civil Engineer or Senior Traffic Engineer, depending on which engineering registration the incumbent holds. The Senior Engineer classification title is used if incumbent does not have an engineering registration. Classification spec revised 4/02 to reflect title change.

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Revised: 4/02; 10/03; 3/05; 05/05
ADA Approved: 10/03; 3/05; 05/05

ORGANIZATIONAL RELATIONSHIPS OF SENIOR ENGINEERS:

