

ASSISTANT ENGINEER

DEFINITION

Under direct supervision, the Assistant Engineer performs various professional field and office engineering work related to the planning, design, construction and maintenance of City capital improvement projects, City infrastructure, and daily department operations; confer with developers, contractors, and representatives of other agencies regarding facility and infrastructure development; administer professional services and construction contracts; provide professional assistance to the Public Works Director, Senior Engineer/Associate Engineer, and others in areas of expertise; prepare plans and specifications; perform a variety of studies and prepare/present staff reports; and perform related work as required.

SUPERVISION RECEIVED AND EXERCISED

The Assistant Engineer receives direct supervision from the Public Works Director or Senior Civil Engineer

CLASS CHARACTERISTICS

The Assistant Engineer is an entry-level class in the professional engineer series. Under direct supervision, incumbents perform the more routine professional engineering tasks and duties assigned to positions within the series. With experience, this class performs more diversified and difficult engineering functions.

EXAMPLES OF DUTIES

Depending upon assignment, duties may include, but are not limited to, the following:

- Performs responsible computer aided and technical drafting work; Graphic Information Systems.
- Researches and drafts assessment maps, street, sewer, and water improvement maps, prepares sketches showing details or office standards.
- Draws to scale projects such as park and playground areas, community centers, tennis and basketball courts, and other recreational structures or facilities.
- Secures information from applicable sources, books and file maps and notes, reduces and plots field notes on topography, location, and cross section surveys.
- Functions as a contract administrator on assigned capital improvement projects.
- Performs field survey work and site visits to compare conditions to drawings.
- Responds to inquiries from consultants, outside agencies and the general public regarding technical questions and related issues.
- Responds to requests for graphic displays from staff in other City departments.

- Works collaboratively with other technicians and staff implementing and maintaining the City's GIS system.
- Determine the scope of engineering projects; prepare requests for proposals and contracts for consulting services; develop plans, specifications and other contract documents for a variety of engineering projects; make technical engineering decisions and assist with development of technical criteria and standards, calculate the quantity, quality, and cost of materials used for various projects.
- Review plans and calculations of consulting engineers and private contractors for conformance with regulations, specifications, and/or conditions of approval.
- Manage City service contracts, including contract development, coordination, and review of services and processing of invoices.
- Respond verbally and in writing to citizen inquiries and complaints; investigate field problems, including but not limited to grading, encroachment permits, right-of-way, property line information, utility information, slope stability, stormwater and groundwater issues, improvement plan check and payment processes.
- Attend and participate in professional group meetings; represent the division and report back from assigned committees and meetings; stay abreast of new trends and innovations in the fields of City Engineering and Public Works.
- Performs related duties as required.

QUALIFICATIONS

Knowledge of:

- Basic knowledge of terminology, methods, practices, and techniques of engineering, architectural or planning drafting, Geographic Information Systems (GIS) systems and maintenance, and research of City infrastructure documentation.
- Drafting and design nomenclature and symbols.
- Knowledge of mathematics and trigonometry as applied drafting and planning.
- Basic knowledge of software programs used in computer aided drafting.
- Methods, materials and techniques employed in public works and parks construction and maintenance.
- Modern developments, current literature and sources of information regarding engineering.
- Computer operation and Computer Aided Design (CAD) techniques.
- Principles and practices of civil engineering as applied to the design, construction, and inspection of public works.

Ability to:

- Understand and follow oral and written instructions.
- Effectively utilize drafting instruments and computers.
- Use survey equipment and land survey nomenclature and symbols.
- Read and understand basic diagrams and maps.
- Make technical computations.
- Establish and maintain effective working relationships with others.
- Reduce, interpret, and apply field notes in the performance of complex drafting duties.

- Interpret and apply Federal, State and local policies, laws and regulations.
- Assist in developing and administering contracts for professional services and construction.
- Prepare maps and engineering drawings, design computations, plans, and studies.
- Read plans, drawings, and sketches and perform basic plan checking activities.
- Interpret, apply and explain complex laws, codes, regulations, and policies.
- Analyze problems, identify alternative solutions, project consequences of proposed actions and implement recommendations in support of goals.
- Calculate figures and amounts such as discounts, interest, commissions, proportions, and percentages.
- Apply concepts of basic algebra.
- Respond tactfully, clearly, concisely, and appropriately to inquiries from the public, press, or other agencies on sensitive issues in area of responsibility.

EDUCATION AND EXPERIENCE

Any combination of training and experience that would provide the required knowledge, skills, and abilities is qualifying. A typical way to obtain the required qualifications would be:

Possession of an Engineer-In-Training Certification from the California Board for Professional Engineers, Land Surveyors, and Geologists and one year of engineering-related work experience.

OR

Three years or more of postsecondary education (college-level) engineering education and one year of engineering-related work experience and the ability to pass the National Council of Examiners for Engineering and Surveying (NCEES) Fundamentals of Engineering Exam within 12 months of hire.

LICENSES AND CERTIFICATIONS:

- The ability to convey oneself to and from geographical locations frequently and timely, or possession of a valid CA driver's license.
- AutoCAD® or ArcGIS® experience is desired.

PHYSICAL DEMANDS

Must possess mobility to work in a standard office setting and use standard office equipment, including a computer, to inspect development sites, including traversing uneven terrain, climbing ladders, stairs, and other temporary or construction access points, to operate a motor vehicle, and to visit various City and meeting sites; vision to read printed materials and a computer screen; and hearing and speech to communicate in person, before groups, and over the telephone. This is primarily a sedentary office classification although standing in work areas and walking between work areas and to conduct inspections may be required. Finger dexterity is needed to access, enter, and retrieve data using a computer keyboard or calculator and to operate standard office equipment. Positions in this classification occasionally bend, stoop, kneel, reach, push, and pull

drawers open and closed to retrieve and file information. Employees must possess the ability to lift, carry, push, and pull materials and objects weighing up to 25 pounds.

ENVIRONMENTAL ELEMENTS

Employees work in an office environment with moderate noise levels, controlled temperature conditions, and no direct exposure to hazardous physical substances. Employees may work in the field and occasionally be exposed to loud noise levels, cold and hot temperatures, inclement weather conditions, road hazards, vibration, mechanical and/or electrical hazards, and hazardous physical substances and fumes. Employees may interact with upset staff and/or public and private representatives in interpreting and enforcing departmental policies and procedures.