

ASSISTANT ENGINEER

Department: Public Works Department FLSA Status: Exempt

Reports To: Public Works Director/City Engineer Unit: 1, Full-time Position

SUMMARY OF JOB PURPOSE

This is the entry-level class in the Engineer series. Employees at this level are not expected to perform with the same independence of direction and judgment on matters allocated to the Associate Civil Engineer. Since this class is typically an entry level class, employees may have limited related work experience. Employees work under immediate supervision while learning job tasks and are not required to possess a Certificate of Registration as a Professional Engineer. Employees at this level receive occasional instruction or assistance as new or unusual situations arise and are fully aware of the operating procedures and policies within the work unit. This class is distinguished from the Associate Civil Engineer in that the latter performs highly complex professional civil engineering duties requiring a high level of skill and independent judgment and exercises direct supervision over professional staff.

SUPERVISION RECEIVED AND EXERCISED

The Assistant Engineer receives direct supervision from the City Engineer and/or upper level management of the professional engineering staff, and may exercise technical and functional supervision of the Engineering Technician I and II positions.

ESSENTIAL FUNCTIONS (include but are not limited to listed tasks)

- 1. Inspect materials and workmanship on Public Works projects to ensure conformance with established plans and specifications.
- 2. Prepare engineering design and related drawings using standard engineering software applications such as AutoCAD Civil 3D; prepare specifications and estimates in connection with the construction and maintenance of a variety of engineering projects, including streets, sewers, water mains, storm drainage, sidewalks, curbs, gutters, parking lots, water and wastewater treatment plant rehabilitation.
- 3. Review improvement and subdivision plans for compliance with code requirements; conduct field inspections and surveys; measure existing lines, grades, profiles, cross-sections, and location of existing structures.
- 4. Answer questions and provide information to the public concerning engineering activities, water and sewer line locations, drainage facilities, grading requirements, street addresses, encroachment permits, and street requirements.

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- 5. Coordinate the assignment of street address numbers and maintain address maps.
- 6. Maintain map and drawing index of City drawings.
- 7. Draft improvement plans and perform other related duties.
- 8. Prepare and review bid packages; analyze bids received and make recommendations for award of contracts; administer contracts and change orders.
- Perform professional and technical engineering work relative to assigned area of responsibility such as design, construction, land development, transportation and traffic planning, surveying and mapping, water and wastewater engineering, and storm control and flood control engineering.
- 10. Research project design requirements; perform calculations and prepare estimates of time and material costs.
- 11. Administer design and construction contracts, coordinate and review the work of outside consultants, review and recommend payments and billing for contracted services related to assigned projects, negotiate prices and schedules as necessary, perform as resident engineer on construction projects as assigned.
- 12. Participate in the plan check, review, processing, and permitting of plans for private developments affecting City roads, drains and related public works facilities; assure compliance with appropriate codes, ordinances, rules and regulations.
- 13. Participate in environmental review of proposed land development projects; represent the Department at various public hearings and meetings; set conditions of approval.
- 14. Review proposed land development relative to impact on City transportation system; identify and formulate short and long term roadway needs, including traffic forecasting; gather and analyze a variety of data related to roadway conditions and traffic; evaluate funding mechanisms and develop traffic impact fee systems.
- 15. Perform traffic engineering services relative to existing and proposed roads including signing and striping needs, and review traffic studies.
- 16. Conduct engineering studies related to hydrologic and hydraulic engineering, including flood routing analyses, storage, and retention, and methods of storm runoff collection; conduct erosion control analyses and administer erosion control programs.
- 17. Coordinate engineering activities with other City departments, divisions, and sections and with outside agencies.

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- 18. Interface with and respond to the public in a variety of settings, including public meetings, in the office or in the field, and by telephone or through written correspondence; prepare technical and engineering reports and studies and visual presentations.
- 19. Performs related duties as assigned.

KNOWLEDGE, SKILLS AND ABILITIES:

Knowledge of:

- 1. Principles and practices of civil engineering as applied to the planning, design, construction, and inspection of public works facilities.
- 2. Methods, materials, tools and equipment used in engineering construction.
- 3. Civil engineering design and drafting methods and equipment, including basic computer-aided-design (AutoCAD Civil 3D) techniques and technology.
- 4. Strengths, properties and uses of engineering construction testing materials.
- 5. Basic surveying and the principles of algebra, geometry and trigonometry and their application to engineering.
- 6. Technical report preparation and graphic presentation.
- 7. Computer software applications, including word processing, spreadsheets, graphics, databases, and project scheduling and management.
- 8. English usage, spelling, punctuation and grammar.
- 9. Modern office procedures, methods, and computer equipment.
- 10. Occupational hazards and standard safety practices.

Ability to:

- 1. Perform professional engineering work not requiring registration as a Civil Engineer.
- 2. 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 situations and technical policies and procedures; explain regulations and procedures to consultants, contractors, developers, the general public, representatives of other public agencies and other City staff.
- 3. Prepare and check engineering plans and specifications; prepare and check engineering reports and studies.

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- 4. Learn and understand City engineering policies and procedures.
- 5. Learn applicable laws and regulatory codes applicable to areas of assigned responsibility, including design, construction, land development, transportation and traffic planning, surveying and mapping, water and wastewater operations, and storm control and flood control engineering.
- 6. Learn to prepare accurate cost estimates and/or budgets, project schedules, and personnel resources needed for project completion/program accomplishment.
- 7. Learn to prepare effective technical reports with recommendations and findings.
- 8. Work with various cultural and ethnic groups in a tactful and efficient manner.
- 9. Analyze situations quickly and objectively and determine proper course of action.
- 10. Use a computer, calculator, telephone, manual and computer aided drafting equipment, and basic surveying equipment.
- 11. Establish and maintain effective working relationships with those contacted in the course of work.
- 12. Communicate clearly and concisely, both orally and in writing.
- 13. Prepare detailed plans and specifications; perform technical research and prepare detailed analyses.
- 14. Work independently and as part of a team.
- 15. Make sound decisions within established guidelines.
- Follow written and oral instructions.
- 17. Observe safety principles and work in a safe manner.

QUALIFICATIONS

To perform this job successfully, the incumbent must be able to perform each of the essential duties satisfactorily. Reasonable accommodations may be made to enable incumbents with disabilities to perform the essential functions. The requirements listed are representative of the knowledge, skill and/or ability required.

PHYSICAL REQUIREMENTS

- 1. Must be free from any physical, emotional or mental condition which might adversely affect the ability to perform essential job duties.
- 2. While performing necessary field duties, must be capable of moving about safely while maintaining body equilibrium to prevent falling on narrow, uneven and slippery surfaces.

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- 3. Must have a clear field of vision and adequate hearing while working around various types of construction equipment. May infrequently be required to climb a ladder.
- 4. Must be able to sit at a confined work station for extended periods or work at a drafting table for extended periods while performing essential duties.
- 5. On a continuous basis, sit at a desk and in meetings for long periods of time. Intermittently twist to reach equipment surrounding desk, perform simple grasping and fine manipulation, use telephone and communicate through written means.
- 6. May be required to lift and move as much as 35 pounds.

EDUCATION AND EXPERIENCE

A typical way to obtain the knowledge and skills is:

1. Graduation from accredited college or university with a degree in civil engineering or mechanical engineering.

CERTIFICATES, LICENSES AND REGISTRATIONS

- Possession of a valid class "C" California Driver's License.
- Possession of an EIT Certificate issued by the California State Board of Registration for Professional Engineers or ability to obtain an EIT Certificate within two years of employment. Progressive experience with responsible engineering work of at least four (4) years may be considered equivalent to the EIT certificate.

WORKING ENVIRONMENT

While performing the duties of this job the incumbent is regularly exposed to outside elements of wet and/or humid conditions, rain, snow, heat, moving mechanical parts, fumes or airborne particles, and toxic or caustic chemicals. The incumbent is occasionally exposed to risk of electrical shock and vibration, and steady level of loud noise.

GENERAL

The City reserves the right to revise or change classification duties and responsibilities as the need arises. This description does not constitute a written or implied contract of employment.

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I have read and understand the contents of this job description, and I have received a copy of this job description for my records.

Print Name:	
Signature:	Date:
Adopted: Revised:	

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