

ASSOCIATE ENGINEERING SPECIALIST

NATURE OF WORK

This is technical work in connection with the Right-of-Way branch of the engineering office.

Work involves various phases of the design, construction and record-keeping work necessary to plan, construct and record engineering-related projects. Work responsibilities may include one or more of the following: locate work utilizing locating equipment; the performance of skilled drafting work, either manual or computer aided, in the preparation and review of complex and varied engineering drawings and plans; trainee level survey work as an instrument person; beginning level work in construction inspection and construction material sample testing. Direct supervision is received from a technical or administrative superior depending on the nature of the work being performed to assure conformance with instructions, quality and accuracy.

EXAMPLES OF WORK PERFORMED

Locates and marks underground utility appurtenances; provides contractors with accurate location of public water mains and customer water services; utilizes electronic locating equipment designed for locating underground pipes; records and documents construction locates.

Loads new additions and projects to the City area in electronic graphic engineering records; builds new additions into graphic records; identifies errors and/or omissions; uses geometric and trigonometric functions in constructing and labeling elements.

Maintains log of modifications to each electronic record file system in both written and electronic media; reviews periodically to ensure integrity of electronic records.

Maintains cross-reference indexes in multiple formats; maintains drawing number assignment indexes; checks new microfilm for quality and completeness; assists others with retrieval of records.

Collects, summarizes, verifies and analyzes engineering data and as constructed plans for all public infrastructures using manual or electronic media.

Provides existing infrastructure data, policies and requirements.

Inspects sidewalks, driveway approaches, and street cut repairs in the public right-of-way to ensure they meet City standard specifications; serves as primary contact with contractors performing repair and construction of public and private infrastructure located in the public right-of-way.

Performs trainee level work as an instrument person, working toward the ability to perform in the capacity of experienced rodperson or chainperson.

Operates level or transit in performing routine location, topographic, cross section and related engineering/land survey work; transfers data to computer base.

Performs related work as required.

DESIRABLE KNOWLEDGE, ABILITIES AND SKILLS

Knowledge of current engineering principles and practices, as well as familiarity with materials and equipment used.

Knowledge of spreadsheet, word processing, database, plan review, permitting, and e-mail software.

Knowledge of construction principles and practices, materials used, and tools and equipment common to the construction industry.

Knowledge of collection, summarization, verification and analysis of engineering data using manual or electronic media, e.g. manual/mechanical counts.

Knowledge of mathematics and science as applied to standard engineering and drafting duties.

Knowledge of electrical and electronic troubleshooting and repair.

Knowledge of AASHTO and ASTM test procedures.

Knowledge of City, State and Federal roadway design standards.

Some knowledge of soil, concrete and asphalt testing.

Ability to understand and follow oral and written instructions.

Ability to perform precise survey work and reduce field notes.

Ability to establish and maintain effective working relationships with co-workers and the general public.

Ability to understand engineering documents.

Ability to communicate effectively both orally and in writing.

Ability to document field changes to construction plans.

DESIRABLE TRAINING AND EXPERIENCE

Graduation from a senior high school or equivalent supplemented by college-level coursework in drafting or other civil engineering field, the electrical or electronic field; and drafting, surveying and/or related engineering work.

MINIMUM QUALIFICATIONS

Graduation from a senior high school or equivalent plus coursework and/or some experience in drafting or other civil engineering field, the electrical or electronic field; and some experience with drafting, surveying and/or related engineering work; or any equivalent combination of training and experience that provides the desirable knowledge, abilities and skills.

NECESSARY SPECIAL REQUIREMENTS

Possession of a valid drivers license when operating a vehicle may be necessary to the satisfactory performance of assigned duties for some positions within this classification.

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