

Engineering Technician

*Class specifications are intended to present a descriptive list of the range of duties performed by employees in the class. Specifications are **not** intended to reflect all duties performed within the job.*

SUMMARY DESCRIPTION

Under general supervision of the City Engineer, performs a variety of technical office and field engineering work in support of the Public Works Department's engineering services, activities, and functions including design, drafting, survey, inspection, building permit issuance, plan review, and other difficult technical engineering work; prepares maps, plans, and drawings; provides information and assistance to contractors, developers, engineers, and the general public on the City's engineering services and activities; maintains a variety of files; and performs a variety of technical tasks relative to assigned area of responsibility.

IDENTIFYING CHARACTERISTICS

The Engineering Technician is the advanced working level, technical engineering position in the City's public works and city engineering operation. Incumbents independently perform assignments requiring considerable knowledge of municipal project design, surveying, public works project construction inspection, and building plans review. Incumbents in this classification perform duties of a nature not requiring a professional civil engineering registration.

REPRESENTATIVE DUTIES

The following duties are typical for this classification. Incumbents may not perform all of the listed duties and/or may be required to perform additional or different duties from those set forth below to address business needs and changing business practices.

1. Performs a variety of paraprofessional office and field engineering work in support of the Public Works Department's engineering services, activities, and functions.
2. Provides phone and counter support; answers questions and provides technical information and assistance to contractors, developers, engineers, and the general public on the City's engineering services and activities; investigates and follows up on complaints from the public.
3. Reviews, processes, and issues a variety of permits including oversized load transportation permits and City property encroachment permits.
4. Prepare designs and related drawings and specifications for the construction or reconstruction of public works projects including: roadways, water, wastewater and storm drains, building and parking lots, and grading and excavations.
5. Reviews a variety of engineering plans to assure compliance with City codes, ordinances, standards, and specifications.
6. Relieves and/or assists higher level engineering staff in performing a variety of engineering duties including tending to various service requests.
7. Issues addresses to newly developed properties as necessary; maintains City address file.
8. Prepares or assists in the preparation of project estimates, contract documents, proposals, and general and special provisions.

9. Collects, compiles, tabulates, and analyzes field data; prepares summaries and reports based upon data collected and analyzed.
10. Performs calculations for grading, alignments, and profiles.
11. Prepares and maintains the City base maps for area, zoning, and general plans; reviews parcel maps for accuracy and compliance with mapping requirements.
12. Prepares legal descriptions for road rights-of-way, assessment studies, and other special purposes.
13. Performs construction inspection on assigned public works projects; ensures work performed complies with project plans, specifications, standards, and contracts; refers issues to higher level engineering staff as required.
14. Monitors work progress and completion of projects in accordance with approved plans and specifications; issues stop work orders to contractors in permit violation or City code violation; recommends approval of payment.
15. Prepares master street plan and primary road design for future development.
16. Provides technical support to a variety of engineering studies including traffic surveys, traffic flow studies, and accident investigations; researches, collects, interprets, and records data.
17. Surveys, sign surveys, and completes all required state and federal survey forms for road conditions, bridges, and traffic census.
18. Processes a variety of applications including water and wastewater connection applications.
19. Maintains engineering files, records and maps; records necessary documents with the County.
20. Performs related duties as required.

QUALIFICATIONS

The following generally describes the knowledge and ability required to enter the job and/or be learned within a short period of time in order to successfully perform the assigned duties.

Knowledge of:

1. Operations, services, and activities of a municipal engineering program.
2. Methods and techniques of researching, compiling, interpreting, and presenting statistics and data.
3. Mathematical principles as applied to engineering work.
4. Methods and techniques of conducting site inspections.
5. Engineering maps and records.
6. Methods and techniques of developing maps.

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7. Principles of construction inspection, including the strengths and properties of construction materials.
8. Principles and applications of engineering mathematics.
9. Basic civil engineering practices and principles applicable to public works designs and specifications.
10. Survey techniques and calculations.
11. Drafting techniques, data gathering, and summary methods for engineering studies.
12. Traffic engineering data gathering methods.
13. Principles and practices of record keeping.
14. Modern office procedures, methods, and computer equipment including personal computer hardware and software applications.
15. Computer aided drafting principles and techniques.
16. Pertinent federal, state, and local laws, codes, and regulations.

Ability to:

1. Perform a variety of difficult and complex technical engineering work.
2. Perform construction inspections, identify problems, note discrepancies, and develop problem solutions.
3. Prepare or assist in the preparation of engineering designs, plans, and specifications.
4. Make accurate engineering computations and drawings.
5. Prepare maps and layouts from notes and sketches.
6. Prepare project cost estimates.
7. Prepare technical engineering reports and maintain records.
8. Gather, compile, and analyze data for a variety of studies.
9. Communicate in a professional manner with other employees, members of the public, contractors, and representatives of other public agencies.
10. Communicate clearly and concisely, both orally and in writing.
11. Establish and maintain effective working relationships with those contacted in the course of work.

Education and Experience Guidelines - Any combination of education and experience that would likely provide the required knowledge and abilities is qualifying. A typical way to obtain the knowledge and abilities would be:

Education/Training:

Equivalent to the completion of the twelfth grade, supplemented by the completion of college level course work in engineering or a related field.

Experience:

Two years of increasingly responsible paraprofessional engineering work experience.

License or Certificate:

Possession of, or ability to obtain by date of appointment, an appropriate driver's license.

PHYSICAL DEMANDS AND WORKING ENVIRONMENT

The conditions herein are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential job functions.

Environment:

Work is performed primarily in a standard office environment with some travel to different sites; occasional exposure to outside weather conditions; work and/or walk on various types of surfaces including slippery or uneven surfaces and rough terrain.

Physical:

Primary functions require sufficient physical ability and mobility to work in an office setting and in a field environment; walk, stand, and sit for prolonged periods of time; occasionally stoop, bend, kneel, crouch, crawl, climb, reach, and twist; push, pull, lift, and/or carry moderate amounts of weights; operate assigned equipment and vehicles; and to verbally communicate to exchange information.

Vision:

See in the normal visual range with or without correction.

Hearing:

Hear in the normal audio range with or without correction.