

**CITY OF GLENDORA
ENGINEERING AIDE
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.*

DEFINITION

Under general supervision, performs technical and sub-professional engineering work related to the drafting of plans for public works facilities and conduct of surveys; assists in planning, designing and maintaining the City's traffic circulation system; performs related duties as required.

CLASS CHARACTERISTICS

Engineering Aide: Incumbents of this class perform a variety of routine and moderately complex drafting, office and field engineering work. Employees in this class normally work under close and continuous supervision performing routine or closely related duties according to established procedures. While a variety of tasks may be assigned, each step usually fits a pattern which has been established and explained before work is started. Generally, work is observed and reviewed both during its performance and upon completion. Changes in procedure or exceptions to rules are explained in detail as they arise. Engineering Aide's are normally considered to be in a training status and, as assigned responsibilities and breadth of knowledge increase with experience, may reasonably expect promotion to the next higher class of Engineering Technician. The progression of an Engineering Aide to Engineering Technician requires an evaluation of employee skill and performance levels by management. However, due to their nature, some positions may be permanently allocated to the Engineering Aide class.

Engineering Technician: This class is normally filled by advancement from the lower class of Engineering Aide, or, when filled from the outside, requires prior sub-professional engineering experience. An Engineering Technician works under general supervision and, within a framework of established procedures, is expected to perform a wide variety of sub-professional engineering duties with only occasional instruction or assistance. Adequate performance at this level requires a knowledge of departmental procedures and precedents, and the ability to choose among alternatives in solving problems. An Engineering Technician is expected to work productively even in the absence of a supervisor. Work is normally reviewed only on completion and for overall results.

ESSENTIAL JOB FUNCTIONS

These functions may not be present in all positions in this class. When a position is to be filled, the essential functions will be noted in the announcement of position availability. Letters in parenthesis at the end of each function statement represent the abilities required to perform that function.

1. Performs a variety of work involved in the preparation of construction drawings and related maps, reflecting topography, drainage, rights-of-way, structures, utility lines,

roadways, construction symbols, and related information; tabulates and plots field data; uses a variety of drafting tools and equipment. (a b c d e f g h k l m n s)

2. Assists in the preparation of plans related to the construction and maintenance of a variety of projects in accordance with City, state, and federal guidelines; assists in the preparation of quantities calculations and materials costs. (a b c d e f g k l m n)
3. Conducts field surveys, including surveys of property; performs surveys as party chief, rodman, chainman, or notekeeper, and operates a variety of survey equipment; measures distance and establishes relative elevations; prepares related drawings from field notes. (a b c d e f g h i k l n m q s)
4. Conducts traffic studies which may include observing traffic patterns, taking traffic counts, radar speed surveys and turning movements; oversees the operation and maintenance of traffic signals; serves as a member and prepares agenda items for the Traffic Safety Committee; designs traffic related projects; analyzes high accident locations and makes recommendations. (a b c d f h k l m n p s)
5. Processes permit applications; reviews improvement plans; determines conditions for approval; calculates fees; completes necessary paperwork; issues permits for transportation, street, sewer and drainage projects.(a b c d e f g k m o)
6. Inspects materials and workmanship on public works projects and assesses conformance with plans and specifications. (a b c f i j k l m n o s)
7. Responds to inquiries and provides information regarding property descriptions, location, and property surveys. (a c i j k l m o)
8. Keeps accurate records; prepares technical reports; makes presentations and/or represents the City in a variety of meetings with the public. (a b c i j k l m o r)
9. Provides software training and support to colleagues as necessary. (a b d i o r)

REQUISITE ABILITIES

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

- a. Communicate clearly and concisely, both orally and in writing.
- b. Keep accurate records.
- c. Analyze data and information and draw logical conclusions.
- d. Read figures quickly and accurately and make mathematical computations.
- e. Use and care for drafting instruments.
- f. Make mathematical engineering calculations.
- g. Perform sub-professional engineering drafting work.
- h. Read, interpret, and apply field notes to perform drafting assignments.

- i. Communicate effectively with a variety of personnel and establish/maintain effective working relationships.
- j. Explain and apply policies and procedures.
- k. Interpret and apply rules, regulations, legislation and policies.
- l. Understand and follow verbal and written directions.
- m. Work independently.
- n. Operate a computer and use a variety of computer software.
- o. Oversee projects.
- p. Conduct traffic studies.
- q. Conduct field surveys.
- r. Make presentations.
- s. Safely operate vehicles.

MARGINAL FUNCTIONS

These are position functions which may be changed, deleted or reassigned to accommodate an individual with a disability.

QUALIFICATIONS GUIDELINES

Education and/or Experience 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:

Engineering Aide: High school graduation or equivalent and one year of drafting experience.

Engineering Technician: An Associate's degree or equivalent with major work in drafting, civil engineering or a closely related field; and two years of progressively responsible sub-professional engineering experience. Two years of progressively responsible experience in municipal traffic engineering may be required for some assignments.

Knowledge and Skill Levels

Working knowledge of the fundamentals of civil engineering computations; nomenclature, symbols, methods, practices, techniques, and instruments used in engineering mapping; surveying equipment, principles, problems, techniques, and practices; mathematics as applied to the computation of distances, angles, areas, and traverses, including algebra, geometry, and trigonometry. Skill in the use of drafting tools and the operation of Computer Assisted Drafting computer programs.

Special Requirements

Possession of or ability to obtain a Class C California driver's license and a satisfactory driving record.

Possession of a recent or ability to obtain an Engineering in Training Certificate is desirable.

Possession of or ability to obtain a Radar Operator Certificate may be required for some assignments.

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 setting with some travel to conduct site investigations, subject to noise from office equipment operation; frequent interruptions and contact in person and on the telephone with a variety of City staff and others, occasional exposure to outside weather conditions; noise, dust, working and/or walking on various types of surfaces including slippery or uneven surfaces and rough terrain. At least minimal environmental controls are in place to assure health and comfort.

Physical: Primary functions require sufficient physical ability and mobility to work in an office setting; to stand or sit for prolonged periods of time; to occasionally stoop, bend, kneel, crouch, reach, and twist; to lift, carry, push, and/or pull light to moderate amounts of weight; to operate office equipment requiring repetitive hand movement and fine coordination including use of a computer keyboard; 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.