

CITY OF SIMI VALLEY

ENGINEERING TECHNICIAN SENIOR 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 (Engineering Technician) or direction (Senior Engineering Technician), participates in a variety of technical civil engineering work involving both field and office support of engineering projects; compiles data and prepares engineering sketches, exhibits, plans and maps, cost estimates and bid specifications; collaborates and confers with developers, architects and engineers; and provides support to professional engineering staff.

This is a broad classification with individual positions assigned to specific functional areas; duties and assignments may overlap depending on the operational needs of the department and staffing levels.

DISTINGUISHING CHARACTERISTICS

Engineering Technician – This is the full journey level class within the Engineering Technician series. Employees within this class perform the full range of duties as assigned. Positions at this level receive only occasional instruction or assistance as new or unusual situations arise, and are fully aware of the operating procedures and policies of the work unit. This class is distinguished from the Senior Engineering Technician in that the latter performs the most complex technical engineering functions. Advancement to the Senior level is based on demonstrated proficiency in performing the assigned functions and is at the discretion of higher level supervisory or management staff.

Senior Engineering Technician – This is the advanced journey level class in the Engineering Technician series. Positions at this level are distinguished from other classes within the series by the level of responsibility assumed and the complexity of duties assigned. Employees perform the most difficult and responsible types of duties assigned to classes within this series including preparation of the most complex exhibits, plans, engineering calculations and cost estimates. Employees at this level are required to be fully trained in all the procedures related to assigned area of responsibility. Positions in this class series are flexibly staffed and positions at the Senior Engineering Technician level are normally filled by advancement from the Engineering Technician level.

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. Provide routine to complex technical staff assistance on engineering projects; conduct research to determine available data; prepare preliminary designs and plans; review with professional engineering staff.
2. Collaborate and confer with developers, architects, engineers, contractors and the general public; provide information and assistance; interpret and explain laws, codes and regulations related to development activities.
3. Maintain official maps, drawings and master plans; research and reference material for public and staff use.

Engineering Technician/Senior Engineering Technician (Continued)

4. Perform map and improvement plan reviews and research project design requirements.
5. Prepare exhibits, maps, construction plans, specifications and as-built plans.
6. Perform technical engineering functions related to traffic, including reviewing and approving traffic control plans, taking traffic counts and conducting traffic studies.
7. Prepare conditions of approval for development projects; review and comment on the progress of development projects.
8. Provide responsible technical assistance to professional engineering staff on special projects, as assigned.
9. Perform field investigations and gather data for the preparation of the design phase of in-house projects.
10. Perform field surveying including topographic survey, lay-out and grade staking.
11. Perform engineering calculations, prepare materials and cost estimates and review calculations of others.
12. Prepare technical drawings and final plans for signature and registered civil engineering stamp.
13. Participate in the reproduction of plans and the preparation, filing and retrieval of engineering maps, documents and records.
14. Respond to inquiries from contractors, utility companies, consultants and the general public regarding City construction projects.
15. Assist engineers in the preparation of bid specifications and construction design specifications for capital improvement projects; prepare exhibits and reports as required.
16. Assist in administering less complex engineering projects; process approval of contractor payments; draft resolutions and ordinances.
17. Prepare and review various reports for a variety of engineering activities.
18. Produce and plot maps, charts and related graphics for presentations.
19. Research project files for staff and the general public; provide information on improvements, status of land divisions, easements, fees and agreements.
20. Perform a variety of related office or field tasks to gather, analyze and record data; prepare a variety of memos, letters and other correspondence related to plan reviews.
21. Conduct field inspections and surveys, as necessary.
22. Perform plan checking including reviewing and finalizing material take offs and quality assurance; ensure compliance with local, state, and federal rules and regulations.
23. Prepare and arrange as-built plans, record drawings, and file.

24. Provide information and assistance to contractors, developers, engineers, and the general public on engineering services and activities; respond to general inquiries; research maps and records; ensure issues are resolved in a timely and efficient manner.
25. As assigned, prepare and update maps consistent with project improvements; utilize specialized geographic information systems (GIS) software to generate, create, update and maintain mapping systems and files.
26. As assigned, set-up, modify, update, and maintain CAD standards; perform CAD design and drafting; set-up and troubleshoot CAD computer stations for the configuration of CAD programs and file sharing, plotting, and third party programs; train staff in the use of AutoCAD and related software as necessary.
27. Assist in maintaining the city website for engineering services in order to provide information to the community about city services, codes, and regulations.
28. Attend meetings and seminars related to engineering as assigned.
29. Perform 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:

Principles of civil engineering and design.

Drafting techniques, terminology, methods and instruments including computer aided design (CAD) technology.

Materials, methods, and techniques of modern construction.

Engineering maps and records.

Construction plans and specifications.

Survey principles and practices.

Soils analysis.

Construction technology and building inspection.

Customer service methods and techniques.

Techniques for development and maintenance of data archives and map libraries.

Basic water treatment concepts.

Basic spatial analysis techniques, terminology, methods, and instruments including geographic information systems (GIS) technology.

Technical report writing techniques.

Office procedures, methods, and equipment including computers and applicable software applications.

Applicable laws, regulations, codes, department policies, governing assigned technical engineering duties.

Ability to:

Perform technical support for engineering designs.

Analyze and compile technical and statistical information and prepare reports.

Respond to difficult and sensitive public inquiries.

Perform technical civil engineering plan reviews.

Operate still and video cameras for accurately recording field conditions and gathering data.

Review the work of lower level engineering technicians.

Interpret and apply state and local policies, procedures, laws, codes, and regulations.

Understand and interpret engineering plans and specifications.

Maintain accurate engineering records.
Perform routine to complex civil engineering drafting work.
Perform technical research related to computer mapping, database descriptions, and geographic information systems.
Prepare and determine plans and estimates involving the scope, time and resources needed to complete a variety of projects.
Prepare and maintain accurate engineering records.
Read and create plans and maps.
Prepare clear and concise reports.
Quality finished ink drawings.
Use algebraic formulas, trigonometry tables and statistical mathematics to accomplish technical engineering work.
Read blueprints, interpret standard drawings and specifications, survey notes, maps and reports.
Operate office equipment including computers and supporting software applications.
Work independently in the absence of supervision.
Adapt to changing technologies and learn functionality of new equipment and systems.
Communicate clearly and concisely, both orally and in writing.
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:*

Engineering Technician

Education/Training:

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

Experience:

Two years of increasingly responsible technical engineering experience.

License or Certificate:

Possession of, or ability to obtain, an appropriate, valid driver's license.

Senior Engineering Technician

Education/Training:

Equivalent to completion of the twelfth grade supplemented by two years of college level course work in engineering, drafting or related area.

Experience:

Three years of increasingly responsible technical engineering experience at a level comparable to an Engineering Technician with the City.

License or Certificate:

Possession of, or ability to obtain, an appropriate, valid 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: Office and field environment; work with computers; exposure to noise and poisonous gases and liquids.

Physical: Sufficient physical ability to perform moderate lifting and carrying; sit, stand or walk for prolonged periods of time; climb ladders and slopes; operate motorized vehicles.

Vision: See in the normal visual range with or without correction; vision sufficient to read computer screens and printed documents and to operate equipment.

Hearing: Hear in the normal audio range with or without correction.

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Johnson & Associates

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