

Job Descriptions

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Class Title: ENGINEERING TECHNICIAN III

Bargaining Unit: Public Service Unit

Class Code: 003812

Salary: \$28.69 - \$35.24 Hourly
\$2,295.20 - \$2,819.20 Biweekly
\$4,972.93 - \$6,108.27 Monthly
\$59,675.20 - \$73,299.20 Annually

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Benefits

CLASSIFICATION PURPOSE AND DISTINGUISHING CHARACTERISTICS

To perform technical and engineering work required for the enforcement, investigation, inspection, design, construction, and maintenance of engineering projects and records in office, laboratory, or field settings; and to perform related work as required.

Engineering Technician is a technical class series that provides paraprofessional engineering support to engineers, surveyors, or program managers. Positions in this class are allocated to a variety of departments; however, they are primarily found in the Department of Public Works, General Services, and Planning and Development Services.

This is the highest level class in the Engineering Technician series. Under general supervision, incumbents are technical supervisors over subordinate engineering technicians and/or perform the most difficult paraprofessional technical engineering work under the direction of professional engineers.

The complete Engineering Technician series includes the following:

Engineering Technician I (Class No. 003814)
Engineering Technician II (Class No. 003813)
Engineering Technician III (Class No. 003812)

EXAMPLES OF DUTIES

The examples of functions listed in this class specification are representative but not necessarily exhaustive or descriptive of any one position in the class. Management is not precluded from assigning other related functions not listed herein if such functions are a logical assignment for the position. Reasonable accommodations may be made to enable an individual with a qualified disability to perform the essential functions of a job, on a case-by-

case basis.

Essential Functions (General):

1. Acts as resident engineer inspector at the site of a moderately difficult construction project or as assistant on a large complex project.
2. Performs comprehensive inspections of construction operations involving procedures and methods of construction in the planning, layout, and construction phases.
3. Prepares estimates for payments to contractors.
4. Prepares technical and engineering reports in connection with building construction projects.
5. Performs field and laboratory tests involving inspection, classification of materials, and structural elements for conformance to specific plans and specifications.
6. Conducts statistical surveys of traffic use.
7. Forecasts future needs and facilities.
8. Prepares, reviews, and checks ordinary designs, plans, drawings, and cost estimates for a variety of construction, reconstruction, and maintenance projects.
9. Assists in the analyses of difficult engineering calculations, drawings, specifications, and estimates in connection with structural design for the construction of roads, streets, highways, transportation and sanitation systems, and other public works improvement construction projects.
10. Prepares and checks right-of-way plans and maps, legal descriptions, deeds and exhibits for all phases of acquisition, sale or lease of real property.
11. Researches title and easement information.
12. Testifies in court on condemnation or enforcement matters.
13. Reviews and authorizes grading plans for permit applications.
14. Inspects surface mining operations for compliance in accordance with laws, regulations, and ordinances.
15. Performs engineering and surveying calculations.
16. Investigates land improvement projects, drainage, and sewer systems.
17. Assists in the preparation of contracts, contract plans, and specifications employing varying techniques and equipment.
18. Issues road and sewer related permits.
19. Performs field inspections of construction projects for adherence to standards.
20. Issues violation notices, stop work orders, and citations related to enforcement.
21. Examines, checks, and analyzes grading plans, subdivision maps, parcel maps, and records of surveys to insure completeness and accuracy in accordance with laws, regulations, and ordinances.
22. Provides responsive, high quality service to County employees, representatives of outside agencies and members of the public by providing accurate, complete and up-to-date information, in a courteous, efficient and timely manner.
23. May be required to perform the functions of the lower level classes in this series.

SURVEYING OPTION

In addition to the general essential functions listed above:

24. Oversees the activities of field crews engaged in establishing grades, property lines, and elevations.
25. Serves as chief to small survey crews performing routine land surveying work.
26. Supervises field parties in traffic engineering studies.
27. Operates surveying instruments in the field to determine exact location of points,

- elevations, lines and areas.
28. Assists in the performance of land, topographic, and control surveys.
 29. Prepares field notes, plots, sketches, maps, plans, legal descriptions, and street light layouts from filed notes or other reference material.
 30. Performs surveying calculations.
 31. Performs research and maintains surveying correspondence and legal records.
 32. Examines, checks, analyzes, and interprets subdivision maps, parcel maps, and records of surveys to ensure completeness and accuracy in accordance with laws, regulations, and ordinances.

KNOWLEDGE, SKILLS AND ABILITIES

Knowledge of:

- Principles of supervision
- Legal documents and maps used in the course of work including the identification of transfers of ownership of real property, rights-of-way, and property lines
- Modern drafting methods and tools
- Condemnation proceedings
- Administrative requirements related to the public works field, such as contracts, permits, and records
- Construction projects such as roads, parks, airports, and utility lines
- Trigonometry, geometry, and fundamentals of mathematics to perform engineering calculations
- Engineering and surveying terminology
- Fundamentals of engineering and land surveying in field and office settings
- Methods, materials, and equipment used in public works construction and surveying
- Reading and interpreting general engineering plans, legal descriptions, and maps
- County customer service objectives and strategies

Skills and Abilities to:

- Assign, train, direct, review, and evaluate the work of subordinates
- Perform the most difficult paraprofessional engineering work
- Prioritize requests, work, and schedules to meet deadlines and effectively utilize project resources
- Read and interpret fundamental engineering details, plans, maps, legal descriptions, estimates, and computations
- Extract engineering data from various sources including computers
- Process or compute data using specified formulas and procedures including computer applications
- Develop and prepare technical reports
- Maintain written computer records and logs
- Communicate effectively in English, both written and orally
- Establish effective working relationships with management, employees, employee representatives and the public representing diverse cultures and backgrounds
- Treat County employees, representatives of outside agencies and members of the public with courtesy and respect
- Exercise appropriate judgment in answering questions and releasing information; analyze

and project consequences of decisions and/or recommendations

Desirable Traits

Leadership, Communicates Effectively, Knowledge Worker, Holds Self and Others Accountable, Problem Solving and Innovation, Demonstrates Ethical Behavior, Leverages Resources (Coaches and Develops), Drives to Excel, Maximizes Team Effectiveness, Supportive of Change

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Education and/or Experience

Education, training, and/or experience, that demonstrate possession of the knowledge, skills, and abilities listed above. Examples of qualifying education/experience:

- 57. Four (4) years paraprofessional engineering or surveying experience performing one or more of the following: construction inspection; materials testing; field surveying; traffic data collection and analysis; drafting and statistical computations for design and public works projects; subdivision, parcel map and records of survey checking; and/or real property engineering involving legal descriptions, drafting and research; OR,
- 58. Four (4) years of college level course work in engineering or surveying; OR,
- 59. Any combination of education and experience described above which equals four (4) years; OR,
- 60. One (1) year as an Engineering Technician II in the County of San Diego.

Note:

Thirty (30) college semester units from an accredited U.S. college or university, or a certified foreign studies equivalency in engineering is considered equivalent to one (1) year of work experience.

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REQUIRED LICENSES, CERTIFICATIONS OR REGISTRATIONS

License

A valid California Class C driver’s license, which must be maintained throughout employment in this class, is required at time of appointment, or the ability to arrange necessary and timely transportation for field travel. Employees in this class may be required to use their own vehicle.

Certification/Registration

None Required.

SPECIAL NOTES

Working Conditions

Office environment; exposure to computer screens. May interact with confrontational or angry customers. Exposure to noise such as surface mining equipment, when conducting field inspections.

Field environment: will be driving to conduct field surveys throughout San Diego County. Work

locations may be in remote terrain, which may require the use of four-wheel drive vehicle and walking significant distances while carrying moderate loads. Will be working under extreme weather conditions at times (high heat, low temperatures, snow, rainfall and flooding).

Essential Physical Characteristics

The physical characteristics described here are representative of those that must be met by an employee to successfully perform the essential functions of this classification. Reasonable accommodations may be made to enable an individual with a qualified disability to perform the essential functions of a job, on a case-by-case basis.

Continuous upward and downward flexion of the neck. Frequent: sitting, repetitive use of hands to operate computers, printers and copiers. Occasional: walking on uneven terrain during field inspections, traversing steep terrain while carrying moderate load, standing, bending and twisting of neck, bending and twisting of waist, squatting, simple grasping, and reaching above and below shoulder level; may perform physical labor using shovel, sledge hammer and machete while clearing the line of sight. Incumbents may be required to lift and transport objects weighing up to 50 lbs. On occasion staff may be required to assist in the lifting and transporting of objects weighing up to 70 lbs.

Background Investigation

Must have a reputation for honesty and trustworthiness. Misdemeanor and/or felony convictions may be disqualifying depending on type, number, severity, and recency. Prior to appointment, candidates will be subject to a background investigation.

PROBATIONARY PERIOD AND CLASS HISTORY

Incumbents appointed to permanent positions in this class shall serve a probationary period of 6 months.

New: September 6, 1968 - Engineering Technician III
Revised: February 23, 2000
Revised: June 8, 2004
Revised: June 2005
Revised: October 7, 2008 (Surveying Option)
Revised: February 27, 2009
Revised: January 14, 2013

Engineering Technician III (Class No. 003812)

Union Code: PS

Variable Entry: Y