

SOUTH PLACER MUNICIPAL UTILITY DISTRICT
JOB DESCRIPTION

ENGINEERING TECHNICIAN I/II

DEPARTMENT: Technical Services SUPERVISOR: Technical Services Manager

POSITION DESCRIPTION

Position of Engineering Technician I/II at South Placer Municipal Utility District (SPMUD) performs a variety of tasks of sub-professional engineering, office, design assistance and drafting work, including plan checking; assisting in environmental and civil technical support work; perform engineering support work using Geographic Information Systems (GIS), computer aided design (CAD), surveying equipment, and global position satellite (GPS) systems; drafting; technical writing; public outreach; and records keeping.

DISTINGUISHING CHARACTERISTICS:

Engineering Technician I is the entry level in the series. The incumbents work under supervision and carry out a variety of assignments and/or assisting higher level technicians or professional staff in the conduct of more difficult assignments. Incumbents are expected to demonstrate increased proficiency during this period. As assigned responsibilities and breadth of knowledge increase with increased experience, incumbents may reasonably expect to be promoted to the class of Engineering Technician II.

Engineering Technician II is the journey level in the series. Incumbents perform difficult field or office research and administrative tasks, and perform a variety of complex, technical work involving GIS mapping and CAD design & drafting assignments similar to those often assigned to beginning level professional engineers. Incumbents perform all the duties of the Engineering Technician I with little or no supervision. Specialty assignments include interpreting and applying engineering principles and techniques to the resolution of problems.

NOTES:

1. The level at which initial appointments are made to the class of Engineering Technician and advancement from Level I to Level II are at the discretion of the General Manager, provided the minimum qualifications are met.

2. Position of Engineering Technician I/II may perform a combination of duties requiring performance of a variety of engineering technician skills such as GIS mapping, AutoCAD drawing, drafting, calculation, basic design, technical writing, survey, plan review, map review, contract compliance, and administrative support duties.

EXAMPLES OF DUTIES, KNOWLEDGE, AND ABILITIES:

The following examples of duties focus on primary assignments and also illustrate general duties associated with most assignments.

Positions in the series are expected to utilize a variety of automated equipment and engineering related standard applications software including GIS mapping, CAD, GPS, data entry/retrieval/manipulation, report generation, and other functions requiring knowledge and skills needed to employ such automated equipment as tools to fulfill job requirements. Assignment of a position to the Engineer Technician II level is characterized by performance of the most complex and difficult duties.

NOTE: The following duties are typical of those performed by employees in this series; however, employees may perform other related duties. Not all duties listed are necessarily performed by each individual in this series.

DUTIES:

1. Read and interpret maps and engineering drawings of sewer facilities.
2. Reviews subdivision and improvement plans for conformity with District standards, construction specifications, and validates calculations and quantity estimates.
3. Participate as a team member in various group projects and sub-committees.
4. Maintain, update, and revise a variety of records, databases, files, maps and other resource materials including the compilation of statistics and data for regular use by District staff and for periodic reports and tabulations.
5. Create map products for internal and external use.
6. Understand and manipulate digital land base data in GIS environment (i.e., GPS points, aerial photos, parcel lines, street centerlines, etc.).
7. Enter and manage data through database front end and through raw tables.
8. Originate and revise GIS maps and data to produce web maps that illustrate the District's sewer collection system, aboveground facilities, easements, and right-of-way.
9. Assist the public by providing pertinent District information including research of records, location of sewer lines, and easements.
10. Conduct field surveys, using various types of surveying equipment (e.g., GPS, total station, level), to determine elevations, locations, and other sewer characteristics for additions and revisions to the collection system mapping and databases.
11. Work with other employees to collect information to analyze existing facilities to determine necessary requirements for additions and improvements to the sewer system.
12. Draft detailed drawings of sewer structures and installations, topographical profiles, maps, cross sections, specifications, and cost estimates used in planning and construction of District facilities and structures using computer assisted drawing.
13. Calculate and prepare fees for proposed projects.
14. Prepare charts, graphs and other display materials for a variety of reports, presentations, and supporting documentation.
15. Prepare and reviews maps, right-of-way easements, and property descriptions.
16. Prepare technical memorandums and reports to communicate the results of calculations, research, and/or analysis to audiences within the District and to the public.
17. Prepare standard operating procedures (SOPs) to establish and document District business practices.

KNOWLEDGE OF:

- Sewer system components and facilities;
- Mapping and geo-processing operations of local government using GIS products (i.e., ArcGIS for Desktop and ArcGIS Server);
- Microsoft Word, Microsoft Excel, Microsoft Access, Microsoft SQL Server, and Adobe Acrobat Professional;
- CCTV inspection software, computerized maintenance management software, and other engineering-related software;
- Engineering, drafting, design, and mathematical techniques;
- Principles of fluid hydraulics related to sewer;
- Principles and practices of sewer design and construction, and District improvement standards as they are applied to map and plan checking for conformance to established requirements and standards, including parcel and subdivision criteria;
- Specialized engineering support principles and practices utilizing conventional or computer-aided design and drafting techniques applicable to plans, schematics, sketches, and other materials utilized for the construction of District facilities and structures;
- Regulations related to sewer collection systems, including, but not limited to, the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, WQO No. 2006-0003.
- Sewer construction principles, practices, methodologies, and techniques;
- Contract administration, fee, and permit requirements;

Construction condition requirements.

ABILITY TO:

- Prepare analyses and reports utilizing provided equipment and software;
- Follow through and complete assigned engineering support work as directed by higher level staff;
- Work with outside consultants in the operation of the GIS program for the District;
- Continuously improve skills and abilities;
- Maintain records and prepare reports to maintain control of District databases;
- Calculate of District fees.
- Prepare fee letters and will-serve letters.
- Work at a computer for long periods of time, with extreme attention to detail;
- Learn and utilize the GPS equipment provided by the District.
- Independently perform specialized assignments requiring extensive knowledge of GIS, GPS, and sub-professional engineering work;
- Represent the District in meetings and conferences with outside consultants, contractors, and other public agencies;
- Work with all departments to accomplish the District's goals.

MINIMUM QUALIFICATIONS:

Any combination of experience and education or training that is likely to provide the required knowledge and abilities for classes in this series. Typical ways to obtain the knowledge and abilities would be:

Engineering Technician I

Two years of sub-professional engineering experience, preferably with sewer facilities or public works.

Engineering Technician II

Either:

1. Three years of full-time experience in the class of Engineering Technician I at SPMUD.

or

2. Five years of sub-professional engineering experience preferably with sewer facilities work, including two years of experience comparable to the Engineering Technician I in SPMUD.

Education Substitution for all classes in this series.

Education Substitution Criteria:

Completion of coursework in engineering or related field at an accredited college or university may be substituted for up to one year of the required experience. Related education substitutions for the required experience are computed on the basis of 3 semester units or 4.5 quarter units = 1 work month.

SPECIAL REQUIREMENTS:

License Requirements:

Positions require a valid California Driver's License, Class C or higher at the time of appointment.

Engineering Technician I

Position requires possession of a C.W.E.A. Grade I certification in Collection Systems within 24 months of hire.

Engineering Technician II

Position requires possession of a C.W.E.A. Grade II certification in Collection Systems within 24 months of hire.

Note: Failure to maintain the appropriate valid California Driver's License or C.W.E.A. certification constitutes cause for termination from the class in accordance with Civil Service Rule 11.4.

Background Check:

Applicants for positions are subject to a criminal history record check in accordance with SPMUD Personnel Policies.

Probationary Period and Class History Information:

Engineering Technician Level II --Six (6) months

Engineering Technician Level I --Six (6) months