THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

SENIOR ENGINEERING TECHNICIAN

Group-Section: Various	**FLSA Status:** Non-Exempt **Bargaining Unit:** AFSCME	**Salary Grade:** 53 **Job #:** XA23A

JOB SUMMARY

This is the advanced journey level position performing Senior Engineering Technician job duties.

DISTINGUISHING CHARACTERISTICS

Positions at this level are recognized as technical specialist using initiative and resourcefulness in deviating from traditional methods or researching trends and patterns to develop new methods, criteria, or proposed new policies. Decisions regarding what needs to be done includes interpreting data, planning of the work, or refining the methods and techniques to be used. The work involves formulating projects; assessing program effectiveness; or analyzing variety of unusual conditions, problems, or questions. The work product or service may affect activities, or the operation of other organizations.

OVERSIGHT

Supervision Received: The supervisor sets the overall objectives and resources available. The employee and supervisor, in consultation, develop the deadlines, projects, and work to be done. At this level, the employee, having developed expertise in the line of work, is responsible for planning and carrying out the assignment; resolving most of the conflicts that arise; coordinating the work with others as necessary; and interpreting policy on own initiative in terms of established objectives. In some assignments, the employee also determines the approach to be taken and the methodology to be used. The employee keeps the supervisor informed of progress, potentially controversial matters, or far-reaching implications. Completed work is reviewed only from an overall standpoint in terms of feasibility, compatibility with other work, or effectiveness in meeting requirements or expected results.

Supervision Given: Acts as a lead. Coordinates and reviews work assignments of employees performing the same general work as the lead on a day-to-day basis. Responsibilities may involve solving problems and providing instructions on work procedures.

JOB DUTIES

GENERAL

1. Plans and assigns work to staff, expedites progress and verifies accuracy and quality.

2. Leads and trains; may develop technical training materials for area of responsibility.

3. Conducts and directs analyses and investigations of technical issues, prepares reports and makes recommendations.

4. Conducts and directs technical studies, tests, inspections, and research for area of responsibility.

5. Conducts and directs the preparation and review of estimates, plans, submittals, design criteria, and specifications.

6. Develops, prepares, and delivers presentations.

7. Represents Metropolitan within area of responsibility to obtain or convey information and resolve issues.

8. Develops, negotiates and administers contracts and agreements; oversees the work of vendors, consultants and contractors.

9. Acts as Project Manager; plans, coordinates, and conducts projects within area of responsibility, including monitoring scope, quality, budget, and schedule.

10. Oversees, develops, and maintains databases within area of responsibility.

11. Oversees the development and updates of standards, procedures, guidelines, and manuals.

12. . May provide emergency response within area of responsibility.

13. May act as resident inspector within area of responsibility.

14. Performs other related Engineering Technician job duties as required.

CORROSION

1. Oversees and performs infrastructure condition assessments and implements protection measures.

2. Oversees and performs testing, evaluation and analysis in the areas of materials performance, selection, and metallurgy for infrastructure reliability.

MAINTENANCE MANAGEMENT

1. Oversees and develops plans, conducts cost-benefit analysis, and implements standard maintenance processes, strategies, and metrics for maintenance decisions.

2. Oversees the maintenance, modification, and testing of the Computerized Maintenance Management System.

3. Oversees, establishes and recommends standard frequency dates or maintenance intervals.

CONTROL SYSTEMS

1. Leads and performs the evaluation, testing, installation, and upgrades of Supervisory Control and Data Acquisition system.

2. Leads and performs plant startup for Supervisory Control and Data Acquisition instrumentation and control.

3. Leads and performs development, support and maintenance of Supervisory Control and Data Acquisition system software and hardware, database, graphics, and applications.

4. Leads and performs real-time Automatic Process Control/Programmable Logic Controller development, support and maintenance.

5. Researches Supervisory Control and Data Acquisition technologies; recommends systems and improvements.

6. Leads and conducts factory acceptance testing and integration of new systems and hardware and software upgrades.

7. Receives, reviews, and implements Supervisory Control and Data Acquisition change requests. Follows up on change requests to ensure quality control standards are being met.

8. Leads and performs Supervisory Control and Data Acquisition system administration, security, and network support and maintenance.

CONTRACTS

1. Oversees, monitors, reviews, evaluates, negotiates, and makes recommendations regarding contractor schedules, change orders, working days, claims, and disputes.

2. Leads and performs the evaluation of monthly progress payment requests and preparation of pay estimates including withholding of funds.

POWER SUPPORT

1. Evaluates and develops maintenance programs. Recommends and provides directions required for maintenance implementation.

2. Develops maintenance programs and troubleshoots emergency generators, high voltage electrical systems, and power plants.

WSO PROPERTY RIGHTS

1. Reviews and makes recommendations on proposed use of right of ways and property for impacts resulting from leases, easements, licenses, developments and encroachments.

EMPLOYMENT STANDARDS

MINIMUM QUALIFICATIONS

Education and Experience: High school diploma or general education development test (GED), and two years of accredited college or university in engineering and eight years of relevant experience, two years of which must have been at the Engineering Technician III level.

General Required Knowledge of: Practical application of engineering science and technology; arithmetic, algebra, geometry, trigonometry, and their applications; applicable federal, state and local laws, codes, and regulations; design principles and techniques; project management; construction means and methods; facility planning; technical research, analysis and report preparation; applicable safety practices; and current office technology and equipment.

Corrosion Required Knowledge of: Corrosion science; corrosion control methods including coatings, material selection and cathodic protection; waterworks corrosion issues and control methods.

Maintenance Management Required Knowledge of: Mechanical, electrical and instrumentation maintenance practices; computerized maintenance management systems; maintenance planning practices; cost-benefit value analyses.

Control Systems Required Knowledge of: None

Contracts Required Knowledge of: Construction management and administration; cost estimating procedures; value engineering; quality assurance and quality control.

Power Support Required Knowledge of: Electrical theory and design; emergency generators, high voltage electrical systems, and power plants; high voltage switching.

WSO Property Rights Required Knowledge of: None

General Required Skills and Abilities to: Prepare and deliver presentations; perform calculations; apply safe work practices; plan and organize work; manage projects; negotiate; develop plans, specifications, drawings, and models; use independent judgment and exercise discretion; problem solve; prioritize and multi-task; communicate clearly and concisely, both verbally and in writing; establish and maintain effective working relationships with those contacted in the course of work; work independently and in a team environment; lead and train; and operate current office equipment including computers and supporting applications.

Corrosion Required Skills and Ability to: Inspect, test, and assess infrastructure and equipment to determine corrosion condition using standard methods and techniques; design, test and implement appropriate corrosion control methods.

Maintenance Management Required Skills and Ability to: Develop and implement maintenance plans and processes; analyze systems and processes.

Control Systems Required Skills and Ability to: None

Contracts Required Skills and Ability to: Prepare cost estimates and schedules; use project management software.

Power Support Required Skills and Ability to: Apply electrical theory and design; test, troubleshoot and analyze electrical systems; develop and implement maintenance processes and plans.

WSO Property Rights Required Skills and Ability to: None

CERTIFICATIONS, LICENSES, AND REGISTRATION REQUIREMENTS
Employees in this position may be required to obtain and maintain the following certifications, licensing and registrations:

Certificates
- None

Licenses
- Valid California Class C Driver License that allows you to drive in the course of your employment

Registrations
- None

PHYSICAL DEMANDS, WORK ENVIRONMENT, AND VISION REQUIREMENTS

The physical demands and work environment characteristics described here are representative of those that must be met or may be encountered by an employee to successfully perform the job duties of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the job duties.

Physical Demands: The work requires some physical exertion such as long periods of standing; walking over rough, uneven, or rocky surfaces; recurring bending, crouching, stooping, stretching, reaching, or similar activities; recurring lifting of moderately heavy items such as personal computers and record boxes. The work may require specific, but common, physical characteristics and abilities such as above-average agility and dexterity.

Work Environment: The work environment involves high risks with exposure to potentially dangerous situations or unusual environmental stress that require a range of safety and other precautions, e.g., irritant chemicals, electrically energized equipment including high voltage systems, working at great heights under extreme outdoor weather conditions, or similar situations where conditions cannot be controlled.

Vision Requirements: No special vision requirements.