



THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

PRINCIPAL ENGINEER (Engineering Technical Specialist)

Group-Section: Engineering & Various Groups

FLSA Status: Exempt

Bargaining Unit: MAPA

Salary Grade: 064

Job #: 115

JOB SUMMARY

Positions within this job are highest-level technical experts within an engineering specialty. Principal Engineers within this classification provide technical expertise for a major functional area or specialized fields; are responsible for the most complex technical assignments for Metropolitan in the area of its core business initiatives; and provide final approval of work within their technical expertise or functional specialty.

OVERSIGHT

Supervision Received: Receives direction from a Team Manager or above.

Supervision Given: May exercise technical and/or functional direction over assigned staff.

JOB DUTIES

1. Provides highest level technical expertise, review, and approval for specialized fields of work for the Engineering Services Section (e.g. basic engineering disciplines such as civil, electrical, mechanical, structural, and other highly specialized areas); and reviews work within area of responsibility for effectiveness, design, constructability, thoroughness, and adherence to technical standards, codes, and Metropolitan and engineering standards and procedures.
2. Maintains and improves standards (e.g., design, specifications, etc.); and works closely with team and unit managers in developing and revising standards.
3. Acts as a project manager within area of responsibility; acts as a lead on studies or activities; coordinates assignments with other parts of the organization; makes recommendations regarding project methodology by assisting in developing project scope, criteria, and staff assignments; establishes project schedules and budgets; monitors project progress; and attends construction contractor and consultant meetings to resolve problems.
4. Manages and directs the construction phase of large multi-project capital investment and infrastructure refurbishment construction projects and programs; establishes project and program goals; drafts scopes of work; drafts and negotiates agreements including consulting agreements; managing project teams including inspection and testing; and mitigating potential construction delays or cost overruns.
5. Directs and provides technical guidance to senior and resident engineers. Responsible for technical direction and audits the effectiveness of individual project construction contract administration and quality assurance programs.

6. Assists Technical Control Team Manager with quality assurance and quality control activities, including checking, serving on specifications Change Control Board, and resolving technical issues; and provides leadership and technical guidance within area of expertise.
7. Coaches, trains, and mentors employees on technical issues.
8. Performs feasibility and conceptual studies, detailed studies, evaluations, assessments, and/or designs within discipline area; and provides technical input on project planning, design, studies, evaluations, and other documents.
9. Provides member agency support; provides technical assistance to engineering project staff, resident engineers, staff from other groups, and outside agencies; and participates in technical steering committees and special planning studies.
10. Manages professional services and consultants; prepares scope of work in requests for proposal; evaluates and selects consultants for professional services; prepares and negotiates agreement with consultants; administers and tracks consultant performance; and audits work for compliance and approves contracted work.
11. Performs other related duties as required.

EMPLOYMENT STANDARDS

MINIMUM QUALIFICATIONS

Education and Experience: Bachelor's degree from an accredited college or university in engineering or a related field and ten years of increasingly responsible experience, of which two years must have been at the Senior Engineer level; or an Advanced degree from an accredited college or university in engineering or a related field and eight years of increasingly responsible experience, of which two years must have been at the Senior Engineer level.

Required Knowledge of: Principles of engineering design and standards of practice within discipline area of responsibility; construction management; project management; construction techniques; budgetary concepts and procedures; engineering economics; administrative practices; federal, state, and local laws related to design and construction; value engineering; and Metropolitan facilities.

Required Skills and Abilities to: Resolve the most complex engineering problems; design and construct water treatment plants and distribution systems; plan and organize the work of a project team; encourage and facilitate cooperation; train and mentor staff; exercise considerable judgment and discretion; effectively communicate orally and in writing on complex administrative and technical topics; use business, project management, and engineering applications; determine training needs of staff; and resolve issues in a positive and proactive manner.

CERTIFICATES, LICENSES, AND REGISTRATIONS REQUIREMENTS

Certificates

- None

Job Title: Principal Engineer (Engineering Technical Specialist)

Job Code: 115

Adopted: 04/27/05

Effective: 03/17/25

Revised: 03/17/25

Supersedes:

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Licenses

- Valid California Class C Driver License
- License in good standing as a California Professional Engineer

Registrations

- None

PHYSICAL DEMANDS/WORK ENVIRONMENT

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 essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

Physical Demands: Light. While performing duties as a construction manager or resident in charge of construction, the employee regularly stands, walks, sits, uses hands for simple grasping or manipulation of office equipment and field equipment. The employee occasionally walks, reaches above the shoulders, and bends to accomplish routine office activities and occasionally climbs, balances, stoops, kneels, bends, twists, pushes or pulls during field inspections, and lifts and/or moves up to 20 pounds of equipment. Close and distant vision is required.

Work Environment: Primarily an indoor work environment typical of an office setting. The work environment may include some exposure to outside elements. May travel to various sites requiring overnight stay. On construction sites working out of a construction field office, and active construction projects where exposure to heat, cold, noise, dust are common. Some exposure to heights or confined spaces may be required. May require overnight travel.

Vision Requirements: No special vision requirements.