STATE OF CALIFORNIA *Class Code: 3688*
Judicial Branch August 2003
Judicial Council of California

MECHANICAL, ELECTRICAL, PLUMBING (MEP) ENGINEER

DEFINITION
Under direction, performs engineering planning and design in the areas of mechanical, electrical, and/or plumbing systems for judicial branch facilities; performs related work as assigned.

CLASS CHARACTERISTICS
MEP Engineer is a single-level professional classification responsible for planning and design in the areas of mechanical, electrical, and plumbing (MEP) systems including developing polices, standards, inspection procedures, and evaluation tools for MEP matters involving judicial branch facilities. Incumbents may prepare and will review drawings, specifications, and cost estimates for the mechanical, electrical, and/or plumbing systems in the facilities of the judicial branch.

EXAMPLES OF DUTIES *(illustrative only)*
- Develops policies for MEP review and standards for capital projects including analysis of the existing court facilities, facility database, and master plan information.
- Develops best practices and maintenance management measures including the review and update of standards on a routine basis.
- Develops and implements a process for periodic inspection and evaluation of judicial branch facilities.
- Conducts engineering and feasibility and economic studies and prepares reports on findings.
- Develops standards for design and technical specifications for judicial branch projects.
- Investigates new MEP design concepts and technical developments of systems for applicability to engineering problems.
- Reviews plans and specifications for constructibility and program adherence.
- Manages and oversees the work of subordinate staff, contract architects or engineers, and contractors for compliance with the requirements of Federal, State and local agencies regarding fire, public health and safety.
- Reviews contract documents, advises staff inspectors on construction projects; prepares change orders and request for information responses as required for public safety and compliance with contract documents.
- Generates and compiles statistical information necessary for budgeting of facilities, equipment and manpower.
- Reviews completed projects, designs or studies for policy and budgetary compliance; may perform technical review of designs.
- Develops and maintains a cost estimating database for judiciary facilities regarding MEP systems.

- May prepare plans, details, specifications, and cost estimates in such specialties as plumbing; heating; ventilating; air conditioning; and general piping systems for non-complex projects or those of limited scope
- Provides technical advice to staff designers, craft supervisors, inspectors, and contracting service providers, regarding installation and maintenance of MEP systems.
- May oversee a comprehensive engineering project, with responsibility for insuring that the project is completed on schedule and within budget and for acting as a liaison between the judiciary and other governmental agencies.
- Acts in liaison with other agencies exercising tact and diplomacy where the interests of private, city or county agencies, and those of the Judiciary are adverse to each other in order to reach an amicable compromise.
- May interview manufacturers' representatives regarding mechanical equipment, and makes field inspections and inspections at manufacturing plants prior to acceptance of specially fabricated equipment.

WORKING CONDITIONS

- Work occasional evening and weekend hours.
- Required to travel statewide as necessary.
- May be required to travel out-of-state on a very limited basis.

QUALIFICATIONS

Knowledge of:

- Terminology, symbols, and sources of mechanical, electrical, and/or plumbing engineering drafting and design information pertaining to building construction.
- Mechanical, electrical, and/or plumbing engineering customs and practices in expressing ideas, designs, and data in drawings.
- State and local codes pertaining to mechanical, electrical, and/or plumbing engineering features of building construction, including energy conservation regulations.
- Design principles, mathematics, and construction industry practice for the solution of mechanical, electrical, and/or plumbing engineering problems.
- Methods and procedures used in planning and estimating job projects.
- Terminology, phrases, and conditions used in contracts and specifications.
- Testing and inspection methods for mechanical, electrical, and/or plumbing systems.

Ability to:

- Interpret architectural and engineering plans and specifications.
- Develop programs and systems for statewide application regarding mechanical, electrical, and/or plumbing aspects for design, construction, and facility management
- Analyze mechanical, electrical, and/or plumbing engineering problems and formulate solutions.
- Write clear and concise reports and technical descriptions.
- Develop techniques for defining project costs.
- Compile and analyze data from surveys, studies, and inventories.

- Identify problems in designs prepared by others.
- Plan, manage, and deliver multiple projects.
- Organize own work, set priorities, and meet critical deadlines.
- Plan, organize, review, and evaluate the work of consultants, contractors, and others.
- Operate personal computers and use specified computer applications, such as word processing, spreadsheet, and project management software.
- Prepare and deliver effective oral presentations.
- Prepare a variety of effective written materials.
- Establish and maintain effective working relationships with those contacted in the course of the work.
- Use tact and discretion in dealing with those contacted in the course of the work.

Licenses and Certificates:
A valid Certificate of Registration as a Professional Engineer issued by the California State Board of Registration of Civil and Professional Engineers in either Mechanical, Electrical or Plumbing specialties.

Education and Experience:
Graduation with a Bachelor's degree from an accredited college with a degree in mechanical, electrical, or other appropriate engineering discipline is required. Five years of professional engineering experience as an engineer in charge of important engineering works including their direction, planning, and design. This experience should include involvement with mechanical, electrical, and/or plumbing system design and analysis for large commercial or governmental building projects. The required experience needs to include at least one year, or responsibility for a minimum of one significant assignment, that demonstrates ability to develop and implement a programmatic system for organizational management of mechanical, electrical, or plumbing systems in facilities or construction.

Possession of a directly related postgraduate degree may substitute for one year of the required experience.