

## ASSISTANT MECHANICAL ENGINEER

### DEFINITION

Prepares mechanical engineering designs, drawings, specifications, and cost estimates for mechanical equipment and features used in structures.

### TYPICAL DUTIES

Prepares plans and specifications in connection with new mechanical systems for new or existing plants, including heating, ventilating, air-conditioning, refrigeration, plumbing, water, and sewer installations.

Prepares detailed drawings for the installation of mechanical equipment for plumbing, air handling, control, and other systems.

Prepares material lists and preliminary cost estimates for mechanical systems.

Reviews contractors shop drawings and equipment lists for conformance to contract documents and recommends approval or disapproval.

Advises personnel in other branches and divisions in connection with alteration and rehabilitation of mechanical systems and equipment.

Confers with personnel of other public agencies and utility companies concerning details of mechanical engineering projects.

Computes utility equipment and service requirements and prepares and issues orders for new service and meters on construction projects.

Visits project sites to obtain design data.

Recommends approval of payments to utility companies for mechanical installations.

Revises mechanical engineering design guides.

Reviews the work of commissioned architects and engineers.

May prepare layout sketches for Mechanical Engineering Designers and review working drawings.

Performs related duties as assigned.

### DISTINGUISHING CHARACTERISTICS AMONG RELATED CLASSES

An Assistant Mechanical Engineer performs mechanical engineering design work for structures under the supervision of a higher-level mechanical engineer, and assists in the review of the work of commissioned architects and engineers.

An Associate Mechanical Engineer performs and supervises mechanical engineering design work for District structures and provides technical advice to engineering personnel.

An Engineering Aide performs routine tracing, drafting, and lettering; makes algebraic, geometric, and trigonometric computations; and assists technical personnel by performing subprofessional duties related to engineering work.

### SUPERVISION

General supervision is received from the Supervising Mechanical Engineer or an Associate Mechanical Engineer. No supervision is exercised.

## CLASS QUALIFICATIONS

### Knowledge of:

- Terminology, symbols, and sources of mechanical engineering drafting and design information pertaining to building construction
- Mechanical engineering customs and practices in expressing ideas, designs, and data in drawings
- Architectural customs and practices and the relation of mechanical engineering to the planning of school structures
- State and local codes pertaining to mechanical engineering features of building construction

### Ability to:

- Analyze mechanical engineering problems and formulate solutions
- Make accurate calculations in determining sizes and capacities of mechanical equipment
- Prepare neat and accurate drawings and tracings of more than average difficulty
- Use drawing instruments and do free-hand lettering
- Prepare estimates and specifications
- Identify problems in designs prepared by others

### Special Physical Requirement:

- Agility to climb ladders and scaffolds, walk on roofs, and move safely in partially completed buildings and crawl spaces

## ENTRANCE QUALIFICATIONS

### Education:

Graduation from a recognized college or university with a major in mechanical engineering that included completion of at least one course in a recognized, major computer-aided design software system,

or

Possession of an Engineer-in-Training Certificate issued by the State Board of Registration for Civil and Professional Engineers and successful completion of at least one course in a recognized, major computer-aided design software system,

or

Two years of mechanical engineering experience above the drafting technician level, in addition to that required below, related to the construction or alteration of large commercial, government, or school structures that included the use of at least one course in a recognized, major computer-aided design software system.

### Experience:

One year of mechanical engineering experience.

Special:

A valid California Driver License.  
May require the use of an automobile.  
Exempt from FLSA.