

MECHANICAL ENGINEER

DEFINITION

Performs mechanical engineering planning and design, provides technical direction to District personnel, commissioned architects, and consulting mechanical engineers on matters related to mechanical design and certifies design plans.

TYPICAL DUTIES

Advises, consults with, and gives technical direction to commissioned architects, engineers, and their consulting mechanical engineers on District policies and guides for the design of heating, ventilating, air-conditioning, plumbing, piping, refrigeration, fire-sprinkler, and other mechanical systems in the construction of new buildings and the major alteration of existing structures. Provides technical direction to personnel of the Mechanical Engineering Unit in the preparation of mechanical designs, specifications, and cost estimates. Assesses existing mechanical infrastructure at District sites, prepares technical reports on conditions, and recommends design solutions for deficiencies to outline scope for critical repairs and major alterations. Reviews drawings and specifications created internally or submitted by commissioned or consulting mechanical engineers for conformance to District policies and guides, and for possible conflict with other architectural and engineering features, and requests necessary revisions. Submits recommendations for commissioning of mechanical engineers by the District, evaluates engineers' proposals on scope of work and fees, reviews engineers' completed work, and recommends payment or non-payment of partial and final fees. Prepares and maintains the mechanical engineering standards and specifications to ensure conformance to building codes and safety requirements and to improve the quality and economy of construction, maintenance, and operation. Advises contractors, commissioned architects and engineers, and District construction inspectors on mechanical engineering problems encountered during construction. Conducts research and makes reports on mechanical systems and equipment, installation methods, and related costs. Confers with and advises District personnel, utility company officials, manufacturers' representatives, and officials of other public agencies on matters pertaining to District mechanical engineering guides. May professionally certify drawings, specifications, and mechanical designs for assigned District and commissioned projects, as needed. Performs the more difficult mechanical engineering work of the unit. Performs related duties as assigned.

DISTINGUISHING CHARACTERISTICS AMONG RELATED CLASSES

A Mechanical Engineer performs mechanical engineering planning and design work; provides technical direction to District personnel, commissioned architects, and consulting engineers; and may sign plans and specifications as a registered engineer.

The Supervising Mechanical Engineer supervises the activities and personnel of the Mechanical Engineering Unit, selects and directs the activities of commissioned mechanical engineers, and represents District interests relative to mechanical engineering concerns; and serves as the

Engineer of Record for District mechanical engineering work.

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

SUPERVISION

General supervision is received from the Supervising Mechanical Engineer. Supervision may be exercised over District mechanical engineering personnel. Technical direction is provided to commissioned architects and their consulting mechanical engineers on matters related to mechanical engineering design.

CLASS QUALIFICATIONS

Knowledge of:

- Principles and standard practices of mechanical engineering as they relate to Heating, Ventilation, Air Conditioning, and Refrigeration, plumbing, and fire sprinkler design, including energy conservation applications
- State and local codes pertaining to mechanical engineering features of building construction, including energy conservation regulations
- Relationship of mechanical engineering to the other engineering and architectural features of buildings, including cost and operation comparisons
- Capabilities of a recognized computer-aided design software system
- Principles of supervision
- AutoCAD or other recognized major computer-aided design software system

Ability to:

- Provide technical review and advice tactfully and effectively
- Effectively utilize AutoCAD software to create and update mechanical engineering plans and designs
- Comprehend plans and specifications and edit the work of others
- Write clear and concise reports and technical descriptions
- Work effectively with commissioned architects and engineers, District personnel, and representatives of public agencies and utility companies

Special Physical Requirement:

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

ENTRANCE QUALIFICATIONS

Special:

- A valid license as a Professional Engineer in Mechanical Engineering issued by the California Board for Professional Engineers, Land Surveyors, and Geologists.
- A valid driver's license to legally operate a motor vehicle in the State of California and the use of a motor vehicle, or the ability to utilize an alternative method of transportation.

This class description is not a complete statement of essential functions, responsibilities or requirements. Entrance requirements are representative of the minimum level of knowledge, skill and/or abilities. To the extent permitted by law, management retains the discretion to add or to change typical duties of a position at any time, as long as such addition or change is reasonably related to existing duties.

Revised
05-08-25
MHO