

## ASSOCIATE ELECTRICAL ENGINEER

### DEFINITION

Prepares electrical engineering drawings, specifications, and cost estimates for buildings and grounds, and supervises lower-level employees as assigned.

### TYPICAL DUTIES

- Determines the most suitable type of electrical installations and computes sizes and capacities of equipment for large projects.
- Prepares preliminary designs and layout sketches for personnel assigned to projects that involve major alterations to electrical systems.
- Prepares specifications, cost estimates, and material lists for projects and reviews those prepared by others.
- Reviews and checks working drawings for conformity to sound engineering practice, District design standards, and applicable codes and ordinances.
- Coordinates the work of projects with personnel in other A/E Technical Support units and checks finished work for conflicts with other engineering and architectural features.
- Checks information on file and visits project sites to analyze conditions and study electrical engineering problems.
- Confers with personnel in other branches and divisions, the Division of the State Architect (DSA), other public agencies, and utility companies concerning details of electrical engineering projects.
- Confers with commissioned electrical engineers and manufacturers' representatives concerning the District requirements for electrical systems and their installation.
- Checks and approves factory shop drawings and lists of electrical equipment submitted by contractors for conformance to contract plans and specifications.
- Represents the District on assigned projects in negotiations with contractors relative to change orders, contract time extensions, and payment requests and in verifying final compliance with construction plans.
- Determines design and performance characteristics of electrical equipment and assists in preparing and revising District guides for electrical engineering designs.
- May provide liaison activities with appropriate utility companies for the review and approval of permits related to major building projects.
- Performs related duties as assigned.

### DISTINGUISHING CHARACTERISTICS AMONG RELATED CLASSES

An Associate Electrical Engineer performs and supervises electrical engineering design work for structures and provides technical advice to engineering personnel.

The Supervising Electrical Engineer supervises the personnel and activities of the Electrical Engineering Unit, assists in the selection and directs the activities of commissioned electrical engineers, and represents District interests relative to electrical engineering concerns.

An Electrical Engineering Designer drafts the electrical engineering phases of school building projects, assists in the design of larger projects, and designs smaller projects. Direction is received from a supervisor during design, and work is checked upon completion.

## SUPERVISION

General supervision is received from the Supervising Electrical Engineer. Supervision is exercised over lower-level employees as assigned.

## CLASS QUALIFICATIONS

### Knowledge of:

Terminology, symbols, and sources of electrical engineering drafting and design information pertaining to building construction  
Electrical engineering customs and practices in expressing ideas, designs, and data in drawings  
National, State, and local codes pertaining to electrical engineering features of building construction  
Design principles, mathematics, and construction industry practices relative to electrical engineering problems  
Electrical design standards  
Recognized computer-aided design software system such as AutoCAD  
Microsoft Windows operating systems  
Microsoft Word, Excel, and Outlook  
Principles of supervision

### Ability to:

Analyze electrical engineering problems and formulate solutions  
Make accurate calculations in determining size and capacity of electrical equipment  
Interpret architectural and engineering plans and specifications  
Identify problems in designs prepared by others  
Communicate effectively, both orally and in writing  
Establish and maintain rapport with public officials, commissioned architects and engineers, and District personnel

### 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 bachelor's degree in electrical engineering.

### Experience:

Three years of electrical engineering design experience on commercial, government, or school buildings that included the use of a recognized computer aided design software system,

or

A valid Certificate of Registration as a Professional Engineer in Electrical Engineering issued by the California State Board of Registration of Civil and Professional Engineers.

Special:

A valid California Driver License  
Use of an automobile

This class description is not a complete statement of essential functions, responsibilities, or requirements. Requirements are representative of the minimum level of knowledge, skill, and abilities. Management retains the discretion to add or change typical duties of a position at any time.

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LKD