

CITY OF SIMI VALLEY

PLANT ELECTRICIAN

Class specifications are intended to present a descriptive list of the range of duties performed by employees in the class. Specifications are not intended to reflect all duties performed within the job.

SUMMARY DESCRIPTION

Under direction, participates in the maintenance, troubleshooting, replacement, repair, and testing of energized equipment and circuits; installs electrical conduit systems, feeders, branch circuits, panel boards, transformers, disconnects, variable frequency drives, and other related electrical equipment and systems according to national and local electrical codes; and, examines various electrical systems and makes recommendations for new equipment, repairs, and modifications.

DISTINGUISHING CHARACTERISTICS

This is a journey-level class requiring well-rounded experience in the electrical trades. Employees perform a wide range of duties, which may include the layout, installation, maintenance, and repair of power generation and distribution equipment up to 480 volts.

REPRESENTATIVE DUTIES

The following duties are typical for this classification. Incumbents may not perform all of the listed duties and/or may be required to perform additional or different duties from those set forth below to address business needs and changing business practices.

1. Troubleshoot and repair 110 through 480-voltage alternating current equipment.
2. Obtain measurements and readings using electrical and mechanical testing instruments, including digital multi meters, meggers, amp meters, ohm meters, and phase rotation meters.
3. Perform a variety of other maintenance tasks, such as electrical preventative maintenance, tag-out/lock-out, bearing replacement, disconnecting and removing motors, and responding to emergencies.
4. Coordinate maintenance work with other sections, contractors, and engineers; estimate time, materials, and equipment required for repairs; examine various electrical systems and make recommendations for new equipment, repairs, and modifications.
5. Maintain records of maintenance and repair work; prepare reports, documentation, and correspondence.
6. Perform pipe bending and installation of electrical conduit, equipment, feeders, branch circuits, motors, and lighting.
7. Draw and read electrical and mechanical schematics, blueprints, and/or diagrams.
8. Install, maintain, test, and repair plant lighting and electrical equipment.
9. Test and maintain electric motors, variable frequency drives, alarms, and control systems to ensure proper working condition.
10. Program variable frequency drives and other control equipment.
11. Inspect electrical installations to determine maintenance requirements and procedures.

12. Maintain inventory of and organize electrical parts; account for and dispose of electrical waste.
13. Assist staff with information regarding electrical systems within the plant and off-site locations.
14. Assist with concrete cutting and laying.
15. Participate in an electrical safety program.
16. Perform annual maintenance of motor control centers.
17. Perform other related duties as required.

QUALIFICATIONS

The following generally describes the knowledge and ability required to enter the job and/or be learned within a short period of time in order to successfully perform the assigned duties.

Knowledge of:

Fundamentals of electricity and electronics as related to the installation, maintenance, and repair of electrical equipment, electronic solid state devices, circuits, wiring, and equipment in industrial stations and plants.

Applicable safety procedures for working on, or in proximity to, open energized conductors and equipment, including CPR, first aid, and pertinent provisions of the California Electrical Safety Orders.

California Electrical Code, National Electrical Code, and the National Electrical Safety Code.

Tools and protective equipment and their use for work on, in or proximity to, energized conductors and equipment up to 480 volts.

Tag-out/lock-out procedures.

Arc Flash Hazard procedures and NFPA 70E codes and regulations for electrical safety in the work place.

Wire pulling techniques.

Layout and installation of electrical equipment, panels, and devices.

Ability to:

Obtain measurements and readings using electrical and mechanical testing instruments.

Perform a variety of maintenance tasks, including preventative maintenance, tag-out/lock-out, and disconnecting and removing motors.

Prepare time, work, and material reports and estimate time and materials required for electrical installations and maintenance.

Manage and inspect the work of contractors.

Analyze problems and develop effective solutions.

Adapt to changing technologies and learn functionality of new equipment and systems.

Read, utilize, comprehend, and apply the National Electrical Code, the California Electrical Code, and other applicable procedures to electrical installations both on and offsite.

Perform wire-pulling techniques from manual to mechanical.

Operate a computer and related software.

Read, interpret, and draw mechanical and electrical schematics.

Work effectively alone and unassisted or as a member of a crew.

Education and Experience Guidelines - Any combination of education and experience that would likely provide the required knowledge and abilities is qualifying. A typical way to obtain the knowledge and abilities would be:

Education/Training:

Equivalent to the completion of the twelfth grade supplemented by specialized training in the electrical trades.

Experience:

Three years of experience as a journey-level electrician, including the installation and repair of electrical systems and equipment. Experience in electrical maintenance and repair of wastewater treatment or water plant equipment or other related commercial equipment is highly desirable.

License or Certificate:

Possession of, or ability to obtain, an appropriate, valid driver's license.

Certification as a general electrician is desirable.

The conditions herein are representative of those that must be met 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 job functions.

Environment: Wastewater treatment plant environment; exposure to noise, dust, grease, smoke, fumes, gases, oils, toxic chemicals, and inclement weather conditions; work with water or in confined spaces.

Physical: Sufficient physical ability to perform moderate to heavy lifting and carrying; reaching, kneeling, crawling, climbing; standing for prolonged periods of time.

Vision: See in the normal visual range with or without correction; vision sufficient to read computer screens and printed documents and to operate equipment.

Hearing: Hear in the normal audio range with or without correction.

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