



## MAINTENANCE ELECTRICIAN

*Class specifications are only intended to present a descriptive summary of the range of duties and responsibilities associated with specified positions. Therefore, specifications may not include all duties performed by individuals within a classification. In addition, specifications are intended to outline the minimum qualifications necessary for entry into the class and do not necessarily convey the qualifications of incumbents within the position.*

### DEFINITION

The Maintenance Electrician works under the general direction of the Public Works Division Managers to perform a variety of complex and journey level skilled tasks related with the maintenance, alteration, and repair of electrical systems; and perform journey level skilled electrical work on street lights, pump stations, and related SCADA systems; buildings, and other municipal facilities. This position is characterized by the ability to perform the most complex and skilled electrical control service functions and to provide technical and job related guidance to others in a variety of City departments.

### ESSENTIAL DUTIES *(Include, but are not limited to the following)*

Perform electrical maintenance for pump stations; repair, service, and maintain power, alarms, and communications; perform necessary construction work related to electrical maintenance; repair and replace defective parts. Performs common preventive maintenance by inspecting equipment, checking voltage and amperage, tightening and cleaning equipment and locating potential problems. Performs common preventive and corrective maintenance by isolating power, grounding wires, troubleshooting problems, making repairs, restoring power and checking for proper operations. Performs common electrical and instrumentation circuit installation for additions or modifications by bending and installing conduit, pulling wire, wiring in circuit as shown on blueprints and testing system for proper installation. Maintains and repairs electrical and instrumentation equipment facilities such as motors, generators, switchgears, and control equipment. Tests, adjusts, modifies and maintains analogs, digital and logic circuitry, microprocessor controlled devices, elements and components such as programmable logic controllers, process control equipment, telemetering devices, recorders, sensors, and controllers on water and or wastewater process instruments and devices. Generate power at pump stations during outages by connecting and operating emergency generator to pump stations. Perform weekly light check of City owned streetlights as scheduled. Inspects installation of pump station facilities and SCADA systems by contractors. Complete daily work reports, timecards, and other related correspondence with effective command of the English language. Provides technical support to SCADA advanced operators on issues related to electrical aspects such as; pumps, controls, levels, etc. to the SCADA system. This may include reading and understanding basic ladder logic programming for PLC's. Troubleshoots for SCADA control, and SCADA radio problems. Perform emergency and routine USA markings as needed. Performs other duties as assigned.

## **OTHER DUTIES**

Investigates and resolves complaints, and purchases materials and equipment. Attends and participates in meetings with management, staff, and contractors. Performs emergency streetlight work. When available, responds to emergency calls during other than normal work hours. Assists Engineering personnel in planning, construction and inspection of electrical systems and components.

**KNOWLEDGE/ABILITIES/SKILLS** *(The following are a representative sample of the knowledge/abilities and skills necessary to perform essential duties of the position.)*

**Knowledge of:** practices, methods, tools, materials, and equipment used in electrical maintenance and repair. Must have knowledge of provisions of local and national electrical codes applicable to installations, maintenance, and repair work. Understand basic computerized word processing and spreadsheet software. Must have basic understanding of ladder logic programming for controls.

**Ability to:** to read and interpret specifications, sketches, diagrams, and blueprints, maintain records; locate and correct defects in electrical power lines and equipment; safely and efficiently work with electricity and electrical equipment; learn the geography of the city, direct activities of subordinates; perform manual labor; analyze situations and adopt effective courses of action. Must have the ability of operate a computer keyboard using word processing, spreadsheet software, email, Internet, and technical software such as Wonderware.

**Skills to:** safely and efficiently operate aerial lift trucks, generators and various types of calibration and analytical tools. Must have sufficient skill to de-energize and re-energize electrical equipment such as streetlights, pumps etc. for repair or replacement. Must have skill to locate underground utilities by using block maps and conductive/inductive locators and perform basic and 3-phase wiring using proper Lockout / Tagout procedures.

**QUALIFICATIONS** *(The following are minimal qualifications necessary for entry into the classification)*

## **LICENSES**

Must possess a valid Class "C" California Driver's License. Must obtain and maintain an IMSA Roadway Lighting Technician Level I and a CWEA Electrical Instrumentation Technology Grade 1 within 24 months of appointment. An Electrician Journeyman card or current California C10 Electrical Contractor License is highly desirable. Possession of a California State Water Resources Control Board Distribution Operator Grade D2 is desirable.

## **EDUCATION AND EXPERIENCE**

Must possess sufficient education, training and experience to perform the above duties efficiently. Typically, this is obtained through four or more years of full-time experience in electrical maintenance and the repair of electrical and electronic systems, and the completion of standard high school course or equivalent, supplemented by courses in electricity and electronics, plus sufficient education to be able to read instructions, follow directions, and write reports in English.

## **SPECIAL REQUIREMENTS**

Ability to perform manual labor and engage in heavy physical exertion including bending, crouching, stooping, squatting, standing and walking for long periods of time; climb into confined spaces; climb ladders; lift up to 50 pounds, twist upper body. Safely deal with high voltage electricity and remain calm in emergency situations. Work weekends and evenings as scheduled; work outdoors during extreme weather conditions. Read and understand English; including the ability to communicate instructions to employees and answer questions from citizens; establish and maintain cooperative working relationships with those contacted in the course of work; and sufficient vision, hearing (hear and differentiate between normal and abnormal pump noises), and stamina to perform the above job duties.

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AFSCME 829 Maintenance Unit  
NON-EXEMPT  
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