

Electrical Engineering Associate (7525)

Task List

1. Organizes and reviews plans, designs, specifications, estimates, studies, schedules, contracts and reports necessary for the construction, maintenance and operation of electrical and electronic equipment for City facilities such as airports, harbors, treatment plants, generating stations, transmission lines, converter stations, pumping plants, electric receiving and distributing stations, and the Energy Control Center.
2. Investigates the design features of a variety of electrical equipment and materials to determine their degree of compatibility with existing systems and to assist in determining equipment performance and safety by reviewing the published data and appropriate application specifications.
3. Analyzes bids by comparing costs, reviewing the scope of the work, and determining the resources needed to complete the work in order to make recommendations for awards for material and service contracts to external vendors and other various City departments.
4. Performs field investigations and quality-control activities by monitoring construction and manufacturing activities to ensure compliance with plans and specifications.
5. Performs, directs, or assists in the inspection, maintenance and repair of electrical equipment, sewage and water pumping and treatment plants and electrically-driven rotating equipment and prepares written reports pertaining to such inspection and maintenance or repair activities through City facilities.
6. Trains a group of employees engaged in preparing and reviewing electrical engineering plans, designs, specifications and operating studies and reports for the construction, maintenance and operation of distribution or communication systems and related equipment by acting in a lead capacity and demonstrating how these activities are performed and communicating necessary steps to take to ensure the work is performed correctly.
7. Collects customer electrical usage data, including power production and supply, demand growth, and efficiency affecting electrical usage, to analyze the data and make recommendations to management on whether or not there are current issues with power supply to meet the growth of demand.
8. Utilizes and maintains computer programs such as, Computer-Aided Design (CAD), Microsoft Office Suite, and electrical systems analysis software applications to plan, control, and implement construction, maintenance and operation activities.

9. Performs or directs the testing, calibrating, setting, and modifying of a variety of electrical equipment, such as test instruments, including meters, instrument transformers and other electrical instruments or systems to ensure their proper working order and to ensure that such equipment and systems conform to specifications.
10. Coordinates contract and regulatory activities with various governmental and regulatory agencies such as, the Air Quality Manage District (AQMD), California Public Utilities Commission (CPUC), California Energy Commission (CEC), Federal Energy Regulatory Commission (FERC) and Air Resources Board (ARB), and prepares and presents conservation initiative reports specific to such agencies.
11. Analyzes and evaluates the feasibility of alternative resources, such as, wind, solar, geothermal, and small hydroelectric power to develop resource plans for sustainability and energy efficiency for various City Departments.
12. Coordinates building permit requests and ensures plan compliance with the appropriate City codes and regulations, such as the National Electrical Code, California Public Utility Commission (CPUC) and State of California Title 24 regulations with representatives of other applicable City Departments to ensure that plans comply with the City of Los Angeles Electrical Code.
13. Arranges and negotiates contracts such as, power purchase agreements, consultant selection, and maintenance service agreements with representatives of other utilities and customers in order to obtain relative services provided to the City.
14. Utilizes Electrical Engineering software, such as Electrical Transient Analysis Program (ETAP), AVEVA, or Auto Computer Aided Design (AutoCAD) to perform electrical engineering analysis and calculations, such as, steady state, load flow power system analysis, root cause analysis, failure mode effect analysis, coordination, fault analysis and arc flash analysis relating to the transmission and distribution system to achieve power system reliability and safety.
15. Participates in technical committee work, and meets with contractors, manufacturers, and representatives of other agencies and City departments to discuss and resolve project related issues, such as plan approval, equipment installations, and technical specifications.
16. Meets with public and professionals, such as, engineers, consultants and architects to assist in the design and review of plans and specifications for code and standards compliance, such as the National Electrical Code, California Public Utility Commission (CPUC) and State of California Title 24.