



## JOB DESCRIPTION

### Associate Electrical Engineer

Date Prepared: March 2014

Class Code: 8130

**SUMMARY:** Under basic supervision, performs routine electrical engineering work in support of the City's electrical engineering division and maintenance and construction projects.

**ESSENTIAL FUNCTIONS:** -- *Essential functions, as defined under the Americans with Disabilities Act, may include any of the following representative duties, knowledge, and skills. This is not a comprehensive listing of all functions and duties performed by incumbents of this class; employees may be assigned duties which are not listed below; reasonable accommodations will be made as required. The job description does not constitute an employment agreement and is subject to change at any time by the employer. Essential duties and responsibilities may include, but are not limited to, the following:*

- Conducts and reports on the results of a variety of electrical studies including load flow, short circuit analysis, Arc flash, energy conservation measures and code NEC compliance using ETAP.
- Analyzes and updates protection, substation, and distribution systems; analyzes and generates fault/outage report; conducts protection studies, analyzes results, and recommends changes for improved reliability and safety; issues work orders.
- Prepares project progress reports for management.
- Prepares specifications for engineering packages/projects for purchase of a variety of materials and equipment including high voltage circuit breaker, transformers, and related.
- Creates, issues, and/or modifies Relay SEL-Settings.
- Reviews switching programs and updates the City's circuit maps.
- Reviews project work orders and updates inventory maps
- Builds and updates the City's GIS database for asset management.
- Tracks and reviews inventory inspection to comply with GO 165.
- Prepares meeting notes and topics for contractor meetings.
- Participates in City's Substation Oil Containment Project; designs, develops, and implements oil containment for all City substations and customer substations in order to comply with EPA requirement and the Spill Prevention, Control and Countermeasure Plan.
- Attends and participates in JPA meetings; performs JPA related work tasks including pole replacements, generating all JPA forms, finalizing, invoicing and authorization for attachment for power and communications.
- Attends and participates in other meetings as assigned.
- Supports the relationship between the City of Vernon and the general public by demonstrating courteous and cooperative behavior when interacting with visitors and City staff; maintains confidentiality of work-related issues and City information; performs other duties as required or assigned.

## **MINIMUM QUALIFICATIONS:**

### **Education, Training and Experience Guidelines:**

Bachelor's Degree in Electrical Engineering AND four years of experience in electric utility construction project management.

### **Knowledge of:**

- City policies and procedures.
- Customer service and public relations methods and practices.
- Electrical engineering methods, practices, and computations for project planning, designs, technical plans, specifications, estimates, and reports for public electric utility and infrastructure improvement projects.
- Methods, material, and techniques used in substation and protective relaying systems and SEL relays.
- Overhead and underground utility distribution systems.
- Principles and practices of government project management and methods of evaluating construction contract compliance.
- Principles and practices of record keeping and records management.
- Standard and specialized computer software including: ETAP electrical engineer software for power systems. AutoCAD map 2013, GIS and assets management systems, and PLC and SCADA systems
- State and federal codes and regulations governing public utilities projects.

### **Skill in:**

- Administering contracts and managing construction projects.
- Collecting and analyzing data and information to draw logical conclusions and make effective recommendations.
- Communicating effectively both verbally and in writing.
- Establishing and maintaining cooperative working relationships with co-workers, contractors, property owners, other City personnel, and the public.
- Interpreting and applying state and federal statutes, codes, rules, and regulations.
- Making complex engineering computation and to check and design engineering plans and studies.
- Operating a personal computer utilizing standard and specialized software.
- Supervising and coordinating the work of engineering personnel and contractors.
- Working effectively with others to develop solutions for problems.

### **LICENSE AND CERTIFICATION REQUIREMENTS:**

A valid California State Driver's License and certification as an Engineer-in-Training.

### **PHYSICAL DEMANDS AND WORKING ENVIRONMENT:**

Work is performed in a standard office environment and in internal and external environments and construction sites throughout the City with possibility of exposure to hazardous materials.