

Approved September, 2007
Proposed March 2019

CITY OF SANTA CLARA, CALIFORNIA
SENIOR ELECTRICAL ESTIMATOR
(726)

EDUCATION AND EXPERIENCE

Minimum Requirements:

- ~~Any combination of education and experience equivalent to five (5) years of progressively responsible experience in the design of overhead and underground electric utility transmission and distribution systems~~ Any combination of education and experience equivalent to five (5) years of progressively responsible experience in the design of overhead and underground electric utility transmission and distribution systems.
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- Experience in ~~operating, and the ability to operate~~ Computer Aided Drafting and Design (CADD) programs.

Possible Substitutions:

- ~~An associate degree in engineering or a related field from an accredited college or university may be substituted for two (2) years of the required design experience.~~
- ~~A bachelor's degree in engineering or related field from an accredited college or university may be substituted for four (4) years of the required design experience.~~ An associate degree in engineering or a related field from an accredited college or university may be substituted for two (2) years of the required design experience
- A bachelor's degree in engineering or related field from an accredited college or university may be substituted for four (4) years of experience in the design of overhead and underground electric utility transmission and distribution systems
- ~~Experience as a journey lineworker may be substituted for the required design experience on a year for year basis.~~

Desirable Qualification:

- Overhead 60kV and 115kV transmission line design experience
- ~~ESRI-based GIS applications experience.~~

LICENSE

Possession of an appropriate, valid California Class C driver's license is required at time of appointment and for the duration of employment.

DISTINGUISHING CHARACTERISTICS

Under general direction, organizes, reviews and performs a variety of sub-professional engineering office and field work. This class is distinguished from Electrical Estimator in that it performs the more complex phases of cost estimating, has lead responsibility in planning, design and review of special and major development projects, and has responsibility for the development and implementation of estimating and construction standards. This position is

SENIOR ELECTRICAL ESTIMATOR (continued)

expected to work independently with limited direct supervision and to provide training and assistance to lower level positions.

TYPICAL DUTIES

~~Each position in this classification may not include all of the duties listed below, nor do the examples cover all duties that may be performed.~~ Duties include, but are not limited to the following:

Under general supervision:

- Prepares detailed plans and specifications of electric utility distribution plant construction, maintenance or removal, such as underground residential/commercial developments, overhead and underground main feeder systems and transformer, capacitor, switching equipment installations or replacement.
- Prepares plans for transmission line extensions and reconstruction of existing transmission line facilities.
- Designs street lighting systems and prepares construction drawings.
- Prepares detailed sketches of work to be performed, including special instructions for installing materials and location of poles, anchors, guys, conduit systems, vaults, service boxes, transformers, etc.
- Determines proper cable and wire sizes, transformer sizes and combinations for given loads on the distribution system.
- Prepares cost, time, and material estimates for the construction, repair, rearrangement, and maintenance of overhead and underground utility facilities including transmission, distribution, street lighting, and metering, in accordance with the Public Utilities Commission (PUC) General Orders and City construction standards.
- Coordinates layout of subdivisions with other utilities.
- Conducts field surveys of project sites to determine the location of electric and other facilities and the impact of proposed changes.
- Determines easement requirements and initiates easement requests.
- Reviews and comments on building and public improvement plans.
- Assists in the development of material and construction standards.
- Works with developers, consultants, contractors, property owners, and other utilities on construction activities and proposed additions and changes to the City's electric utility system.
- Communicates in writing with developers, consultants, contractors, property owners, and other utilities regarding construction responsibilities and costs.
- Provides technical direction and training for other department and division personnel.
- Provides customer information to the utility billing division.
- Responds to questions and concerns from the public regarding the electric utility's activities/system and provides information related to electric utility methods and standards.
- Prepares routine correspondence.
- Maintains appropriate records of electric system facilities.
- May act as Principal Electrical Estimator in his/her absence; and
- Performs other related work as assigned.

SENIOR ELECTRICAL ESTIMATOR (continued)

KNOWLEDGE, SKILLS, AND ABILITIES

Knowledge of:

- Fundamentals of engineering methods, materials and equipment used in construction and maintenance of overhead and underground electrical distribution and transmission facilities.
- Pertinent laws, rules, regulations, codes and safety orders.
- Theory and principles of electricity as applied to circuits and wiring systems.
- Environmental and safety practices, procedures and standards.
- Principles of cost estimating.
- Basic principles and practices of project planning and scheduling.
- Basic principles of supervision and personnel administration
- Mathematics commonly used in electrical systems' calculations and estimating, including algebra, geometry and trigonometry.
- Computer Aided Design and Drafting tools (e.g., AutoCAD) and techniques.

Ability to:

- Interpret pertinent laws, rules, regulations, codes and safety orders.
- Read, interpret, and work from plans, diagrams, and sketches.
- Plan and lay out installation of new electrical facilities.
- Prepare electrical plans and specifications, and to make accurate estimates of time, costs, and quantities for construction, installation, transmission, distribution, and maintenance of electric transmission and distribution facilities.
- Effectively handle multiple priorities, organize workload, and meet strict deadlines.
- Plan, review and help coordinate other employees' project processes.
- Review plans for conformance to rules and regulations.
- Make mathematical calculations commonly used in electrical estimating.
- Prepare drawings utilizing ~~both conventional drafting and~~ computer aided drafting techniques.
- Demonstrate proficient computer skills.
- Make field observations and transfer the information to design drawings.
- Negotiate easements and right-of-way.
- Work cooperatively with those contacted in the course of work, including the general public and City employees.
- Work in a team-based environment to achieve common goals.
- Communicate clearly and effectively, both orally and in writing.
- Understand and carry out oral and written instructions.
- Prepare and maintain accurate records, files and reports.
- Prepare routine correspondence.
- Perform work indoors and outdoors throughout the year.
- Walk or stand for extended periods of time.
- Bend, stoop, reach, carry, crawl, climb, and lift as necessary to perform assigned duties.
- Lift ~~50-175~~ pounds, ~~with assistance, once or twice a week.~~

SUPERVISION RECEIVED

Works under the general supervision of Senior Electric Utility Engineer, Principal Electrical Estimator, or other assigned supervisor.

SENIOR ELECTRICAL ESTIMATOR (continued)

SUPERVISION EXERCISED

May supervise the work of sub-professional engineering personnel as assigned.

SPECIAL CONDITIONS

May work unusual hours in emergency situations, or while acting as supervisor, or at other than the regular job site.

OTHER REQUIREMENTS

Must be able to perform all of the essential functions of the job assignment.

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Possible Substitutions:

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SENIOR ELECTRICAL ESTIMATOR (continued)

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- Coordinates layout of subdivisions with other utilities
- Conducts field surveys of project sites to determine the location of electric and other facilities and the impact of proposed changes
- Determines easement requirements and initiates easement requests
- Reviews and comments on building and public improvement plans
- Assists in the development of material and construction standards
- Works with developers, consultants, contractors, property owners, and other utilities on construction activities and proposed additions and changes to the City's electric utility system
- Communicates in writing with developers, consultants, contractors, property owners, and other utilities regarding construction responsibilities and costs
- Provides technical direction and training for other department and division personnel
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SENIOR ELECTRICAL ESTIMATOR (continued)

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- Prepare electrical plans and specifications, and to make accurate estimates of time, costs, and quantities for construction, installation, transmission, distribution, and maintenance of electric transmission and distribution facilities
- Effectively handle multiple priorities, organize workload, and meet strict deadlines
- Plan, review and help coordinate other employees' project processes
- Review plans for conformance to rules and regulations
- Make mathematical calculations commonly used in electrical estimating
- Prepare drawings utilizing computer aided drafting techniques
- Demonstrate proficient computer skills
- Make field observations and transfer the information to design drawings
- Negotiate easements and right-of-way
- Work cooperatively with those contacted in the course of work, including the general public and City employees
- Work in a team-based environment to achieve common goals
- Communicate clearly and effectively, both orally and in writing
- Understand and carry out oral and written instructions
- Prepare and maintain accurate records, files and reports
- Prepare routine correspondence
- Perform work indoors and outdoors throughout the year
- Walk or stand for extended periods of time
- Bend, stoop, reach, carry, crawl, climb, and lift as necessary to perform assigned duties
- Lift 50 pounds

SUPERVISION RECEIVED

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