

LEGEND:

Additions

~~Deletions~~

Approved October, 2013

Proposed September, 2018

CITY OF SANTA CLARA, CALIFORNIA
ENGINEERING AIDE
(ELECTRIC)
(460A)

EDUCATION AND EXPERIENCE

Minimum Qualifications:

- *Graduation from an accredited junior college with an Associate of Arts degree or higher in engineering or its equivalent, including satisfactory completion of college level courses in writing, mathematics, engineering and related courses; and* ~~Equivalent to graduation from high school including satisfactory completion of courses in algebra, geometry, and trigonometry~~
- One (1) year working with geographic information system (GIS) tools and systems *or one (1) year working with computer-aided drafting (AUTOCAD).*

Desirable Qualifications:

- One year (1) experience working with computer-aided drafting (AUTOCAD) *and one year (1) experience working with geographic information system (GIS).*
- Completion *of courses in GIS and AUTOCAD.* ~~in courses in mechanical drawing~~

Possible Substitutions:

- Three (3) years of work experience performing mapping/drafting activities of electric utility facilities, involving the use of CAD and GIS systems and tools may substitute for the required education and experience.

LICENSE

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

DISTINGUISHING CHARACTERISTICS

The Engineering Aide (Electric) is the entry level classification in the paraprofessional Engineering Aide series. An incumbent in this classification performs routine technical office and field work in support of various engineering projects in the Electric Utility Department. Specific responsibilities will vary according to assignment. The Engineering Aide (Electric) is distinguished from the Senior Engineering Aide by its focus on routine paraprofessional engineering duties and the performance of duties under more immediate supervision.

TYPICAL DUTIES

Duties may include, but are not limited to, the following:

ENGINEERING AIDE - ELECTRIC (continued)

Under general supervision:

- Participates in field survey activities such as assisting with measuring and recording distances and elevation using Global Positioning System (GPS) equipment
- Prepares maps and drawings using geographic information system (GIS) tools to place symbols and apply color codes for the identification of facilities
- Receives, reviews, provides comments, files, and returns maps, documents, and plans *using AUTOCAD*
- Performs scaling and dimensioning to verify the accuracy of maps and plans
- Assists in conducting field inventory of existing primary and secondary conductors, transformers, switches, poles, pole attachments, manholes, and conduit locations
- Draws and updates electrical schematic diagrams, panel wiring diagrams, substation layout drawings *using AUTOCAD*, and organizes associated documentation
- Prepares scaled and dimensioned plans, *using AUTOCAD* based on sketches prepared by engineering/estimating personnel
- Operates a computer and standard office plotting/copying equipment
- Conducts records research including job files, property ownership, easement and right-of-way records
- Maintains records of equipment databases, log books, and map inventories
- Operates passenger vehicles requiring Class C driver's license
- Orders office drafting supplies, manages outside reproduction services, and coordinates vendor services for office drafting equipment maintenance
- Performs other related duties as assigned

KNOWLEDGE, SKILLS, AND ABILITIES

Knowledge of:

- General principles of algebra, geometry, trigonometry, and mechanical drawing
- Principles and practices of engineering drafting and basic graphic design
- Standard personal computer hardware and software, including word processing, spreadsheet, and database programs
- Document control, retrieval, and filing systems

Ability to:

- Prepare neat and accurate drawings, diagrams, dimensions, representations, and schematics using GIS and CAD tools
- Select and use appropriate drafting, and duplicating equipment and materials
- Read, interpret and apply engineering terminology and symbols
- Retrieve, file, and code drawings and diagrams and prepare brief reports
- Maintain organized and complete records
- Utilize ESRI Geographic Information Systems (GIS)
- *Utilize AutoDesk AutoCAD software applications*
- Communicate effectively, both orally and in writing
- Understand and comprehend oral and written directions and instructions
- Effectively handle multiple priorities, organize workload, and meet strict deadlines

ENGINEERING AIDE - ELECTRIC (continued)

- Establish and maintain effective working relationships with those contacted in the course of work, including the general public
- Work in a team based environment and achieve common goals
- Deal tactfully and courteously with others
- Walk, sit, or stand for extended periods of time
- Perform moderate physical labor including bending, stooping, crawling, climbing, and lifting as necessary to perform assigned duties

SUPERVISION RECEIVED

Works under the general supervision of a Senior Engineering Aide, engineer, or other supervisor as assigned.

SUPERVISION EXERCISED

None

OTHER REQUIREMENTS

- Employees are required to pass initial and periodic comprehensive background checks, which may include fingerprinting, to meet Federal, State and/or industry security requirements.
- Must be able to perform all the essential functions of the job assignment.

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