

PROVO CITY CLASSIFICATION SPECIFICATION	
Title: Systems Electrical Engineer I	Job Code: 2712
Date: November 18, 2018	EEO Code: PR
FLSA Designation: Non-Exempt	Civil Service Status: Covered (UC)

DEFINITION: This is entry-level professional engineering work responsible to coordinate, plan, design, estimate, and prepare specifications for building electrical distribution/transmission systems.

CLASSIFICATION STANDARDS: Positions allocated to this classification are responsible to an assigned supervisor and perform all assignments under general direction. This work is distinguished by its emphasis on basic electrical systems analysis and operating efficiency, project support, planning, evaluation, budgeting, design, and construction management. *Note: Employees of this class are eligible for advancement to the next level in this career series as directed by policy.*

ESSENTIAL DUTIES: Perform system electrical engineering functions, including system analysis, planning, budgeting, engineering design, construction management, start-up, and troubleshooting; assist in strategic planning for the department and suggest projects to improve and maintain system integrity, reliability, and cost effectiveness; assist in preparing specifications for the design of electrical system projects, and the associated equipment and construction services; engineer and design routing and layout of medium-size electrical transmission and distribution lines, substations, and related facilities; coordinate small projects with department construction and maintenance crews, other utilities, private contractors, and developers; coordinate joint use issues; assist in maintaining construction and reliability standards; perform field testing of operations and customer support for power quality and environmental issues; provide field inventory, project inspections, and general construction management support.

Provide engineering design for assigned department capital improvement projects (CIP) to ensure compliance with Energy Department project specifications and plans; assist in coordinating outside consultant work schedules with the City's for maximum efficiency and project cost effectiveness; maintain full project cost accountability and reports project status on a regular basis; ensure that as-build field sketches of projects are secured and corrections or additions are made to the permanent electrical maps, records, and drawings upon project completion.

Perform and evaluate electrical system analyses and studies (both computer-based and manual) including load flow, short circuit, and load forecasting; assist in providing protective relay and fuse coordination engineering, reviewing, and upgrading as required; coordinate relay calibration and maintenance with the electrical maintenance supervisor; review and maintain electrical system model and coordinate regular upgrading of city-wide information base; suggest system operating procedures, and monitor effectiveness of procedures as implemented; assist other staff members as needed; perform other related duties as required.

MINIMUM REQUIREMENTS: Bachelor's Degree in Electrical Engineering or closely related field **OR** an equivalent combination of job-related education/experience [substituting each one (1) year of post-secondary education/training for six (6) months of experience].

License(s)/Certifications: A valid, lawful Driver's License is required. Must obtain Fundamentals of Engineering (FE) certificate within one (1) year of hire.

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SELECTION FACTORS: *Knowledge of:* electrical power theory and application to power system analysis and design; standard utility practices, the National Electrical Code, and the National Electrical Safety Code; related laws, codes, rules, and regulations governing functions of the position; project planning, budgeting, engineering, design, and management; protective relay theory and application, relay testing skills, and system coordination; policies and procedures established for the work system; the operations, functions, and terminology common to the work; basic English composition, spelling, and grammar. *Skill in:* conducting and evaluating electrical systems analyses and studies, both manually and by computer; power/utility applications, including engineering, transmission design, distribution, substations, generation, and control; advanced engineering computations; interpersonal relations as applied to contact with contractors, outside agencies, and public officials. *Ability to:* prepare and present complex reports in written and oral form; explain technical and engineering plans to non-technical officials and the public; plan and manage projects; prepare cost estimates; perform field analysis and engineering research; quickly and accurately perform work; exercise independent judgment while evaluating situations and in making determinations; develop and maintain effective working relationships with the public, coworkers, and superiors; perform duties in a manner that demonstrates respect, integrity, courtesy, and kindness towards fellow workers, customers, and the general public; work effectively on individual and team projects; demonstrate a high level of commitment to the principles of positive customer service; deal with the public in a pleasant, courteous, and calm manner in all circumstances; communicate effectively both verbally and in writing; organize assigned work and develop effective work methods; prepare clear, concise, accurate, and informative reports.

TOOLS AND EQUIPMENT USED: Computer-based mapping/electrical system analysis workstation, various engineering analysis software, printers, plotters, scanners, various meters, thermal imagers, power analyzers, survey equipment, telephone, radios, and a motor vehicle.

PHYSICAL DEMANDS: Requires viewing computer screen for long periods; frequent walking over undeveloped ground; and physical strength and agility for lifting, bending, and stooping.

ENVIRONMENTAL FACTORS: Some or potential exposure to adverse weather conditions in all seasons; fumes, chemicals, energized electrical equipment, and construction traffic and noise. Position may also require exposure to high-stress situations or environments, including contact with the public in confrontational or uncomfortable circumstances. *Note: Employees of this class may be subject to on-call status. RESIDENCY: Employees of this class may be subject to Provo City residency requirements as demanded by the position.*



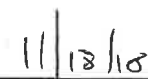
 Department Director



 Date



 Mayor/Chief Administrative Officer



 Date

NOTE: The above statements describe the general nature and level of work being performed by the person(s) assigned to this classification. They are not intended to be an exhaustive list of all duties, responsibilities, and skills required of personnel so classified. Class specifications are not intended to and do not imply or create any employment, compensation, or contract rights to any person or persons. Management reserves the right to add, change, or delete any and all provisions of this classification at any time as needed without notice. Reasonable accommodations may be made for otherwise qualified