***JOB PURPOSE***

Performs specialized technical and engineering support and consultation in a variety of telecommunication areas including the architecture, planning, design, development, installation, operation/maintenance and documentation of SMUD’s telecommunication and telephone technologies infrastructure to ensure telecommunications networks and systems are reliable, accessible, and meet the needs of business units.

***NATURE AND SCOPE***

Serves as a technical or functional expert or consultant providing expertise and/or direction in one or more areas of a professional discipline and assumes responsibility for resolving complex problems and overseeing complex projects. May also serve in a Lead role and assist in planning, coordinating, prioritizing, monitoring and evaluating the work results in assigned area and in selecting, training, motivating, evaluating and developing lower-level personnel.

***ESSENTIAL FUNCTIONS***

*Work may include, but is not limited to, the following: (NOTE: While in general all the functions and requirements listed are essential, individual positions and/or locations may not require all duties be performed.)*

1. Monitors, controls and safeguards SMUD’s power systems infrastructure by offering technical and engineering expertise in areas such as planning, designing, developing, installing and maintaining telecommunications/telephone systems/networks; plans new telecommunication/telephone systems/networks and modifications to existing systems.
2. Establishes design standards; defines system requirements; installs and integrates systems; recommends operation and maintenance procedures; creates and maintains system documentation; provides technical and engineering consultation and solutions.
3. Plans, designs, develops and coordinates expansions, modifications, and additions to SMUD’s telecommunication and data network systems by identifying design criteria to accommodate immediate needs; integrates future capability needs when feasible; evaluates available technologies; specifies equipment and systems; coordinates purchases; develops criteria for testing, maintaining and operating equipment and systems; provides expert technical direction for work being performed.
4. Determines current and long-range capability of telecommunications systems by analyzing loadings, performance levels, responsiveness to operational and transient conditions, duplications, state of the art systems, and economics.
5. Responds to telecommunication information requirements of management and the Board with clear and accurate written reports and verbal presentations concerning such matters as telecommunication systems alternatives, economics, capabilities, functional descriptions, and regulatory agency restrictions.
6. Represents SMUD in highly complex negotiation of telecommunication matters with regulatory and service entities including FCC, State and local regulators and emergency services, telephone, cable TV and other communication carriers, equipment vendors and contractors; coordinates signal and data links with other utilities, power producers and joint bodies.
7. Ensures compliance with regulatory codes and industry standards by maintaining knowledge of requirements and incorporating in design and construction.
8. Provides expert technical and engineering telecommunication system support for SMUD’s telephone data networking system on a SMUD-wide basis by evaluating and resolving user problems, responding to user needs requests, providing training, and providing emergency support to operate systems as required.
9. Ensures reliability of critical telecommunications networks by defining, testing, maintenance and operating criteria, incorporating backup and contingent system and state of the art improvements.
10. Functions as a multi-discipline technical expert by providing in-depth consultation for SMUD’s telecommunications systems the major areas of telephone and data communications, emergency preparedness communication, interactive voice response, computer telephony integration and other telephony related systems.
11. Performs related duties as required.

***MINIMUM QUALIFICATIONS***

***Knowledge of:***

Advanced theory and engineering design principles; operational characteristics of a variety of telecommunications systems and specialized technology including microwave radio, two way UHFNHF radio, power line carrier, broad band coaxial cable, video, telephony, Interactive Voice Response (IVR) system, Computer Telephony Integration (CTI) systems, wiring systems and fiber optics; complex telecommunications operating procedures and equipment requirements; complex data processing systems and communications; complex computer programming concepts and techniques; complex computer and network operating systems; advanced computer based control and data acquisition systems; principles and concepts of data management; electrical standards, codes, and ordinances; maintenance practices and testing methods; methods and techniques for planning, organizing and overseeing work activities; methods and techniques for training staff; procedures and practices for cost control and project scheduling; procedures and practices for monitoring and managing projects; electrical safety; SMUD policies and procedures; office procedures, methods, and equipment including computers and applicable software applications such as word processing, spreadsheets, and databases; English usage, spelling, grammar, and punctuation.

***Skill to:***

Perform the most complex engineering design and testing tasks; prepare reports on specialized telecommunications subjects; read, understand and develop documents and drawings covering telecommunication systems; maintain good public relations with manufacturers, contractors, and government agencies; identify and assess training needs for staff; provide on-the-job training; plan, organize, prioritize and schedule projects; compile and prepare technical, statistical and/or analytical reports and presentations; operate office equipment including computers and supporting word processing, spreadsheet, and database applications; communicate effectively both orally and in writing internally/externally; establish and maintain effective working relationships with those contacted in the course of work internally/externally.

***Education:***

High school diploma or equivalent.

***Experience:***

7 to 10 years of progressively responsible relevant work experience in planning, designing, documenting, installing and supporting telecommunication/telephone networks and systems.

***LICENSES AND/OR CERTIFICATIONS***

B.S.E.E. from an accredited university is required.

Registration as a Professional Electrical Engineer in the State of California is desired.

***PHYSICAL CHARACTERISTICS***

Applicants must be able to perform the essential job functions with or without a reasonable accommodation.