

**CLASS SPECIFICATION**  
**Senior Telecommunications Technician**

**GENERAL PURPOSE**

Under general supervision, performs a variety of highly skilled, complex technical duties involved in the installation, troubleshooting, maintenance, testing and repair of telecommunications systems and equipment to ensure effective, reliable and customer-focused service; and performs related duties as assigned.

**DISTINGUISHING CHARACTERISTICS**

Senior Telecommunications Technician is the advanced journey-level technical class in the telecommunication class series. The incumbent performs the full range of telecommunications installation, troubleshooting and maintenance duties. Assignments vary, seldom require detailed instructions, and require sound judgment and initiative. An incumbent is also responsible for providing technical guidance, project leadership and training for lower-level staff and consultants.

Senior Telecommunications Technician is distinguished from Telecommunications Specialist in that an incumbent in the latter class assists in performing telecommunication systems engineering and performs the more complex telecommunications maintenance and administration functions.

**ESSENTIAL DUTIES AND RESPONSIBILITIES**

The duties listed below are intended only as illustrations of the various types of work that may be performed. The omission of specific statements of duties does not exclude them from the position if the work is similar, related or a logical assignment to this class.

1. Participates in the day-to-day design, installation, administration, maintenance, modification, troubleshooting, testing, repair and support of state-of-the-art telecommunication systems, infrastructure and equipment; installs line and network cards, circuit packs and related PBX equipment; assists with changes in network trunking, switch configuration, PBX upgrades and other system installations; installs single line telephones, facsimile machines, digital phone sets, conference speaker telephones, paging systems and associated equipment and hardware; installs, tests and maintains microwave and laser backbone; makes recommendations for network circuitry and switch room space and facilities; builds telecommunications infrastructure moves, additions and changes.
2. Builds, installs, certifies and tests a variety of telecommunications network cabling infrastructure, including hybrid, fiber optic, copper, horizontal and coaxial cable; conducts site surveys and needs analyses; reviews blueprints and as-builts; using appropriate industry standards, constructs and installs indoor and outdoor telecommunications cable plant facilities, riser and horizontal wiring and cabling systems, including wire, cable, fiber optics, terminal blocks, patch panels, jacks, MDFs and IDFs; determines required materials, supplies and time for wiring and cabling installation projects and provides to supervisor for use in preparing cost estimates and cost/benefit analyses; oversees or conducts testing of installed and terminated wire to ensure proper connectivity and transmission in

accordance with applicable standards; ensures all required labeling and documentation is accurate and complete.

3. Analyzes, diagnoses, troubleshoots and repairs a variety of telecommunications network and cabling problems; provides support and works with end users, technology and telecommunications staff and vendors to diagnose and resolve repair issues; performs preventative maintenance on switches, voicemail systems, UPS power systems, multiplexers, backbone communications systems, station hardware and equipment rooms; replaces worn parts and equipment; monitors and maintains environmental and safety systems for equipment rooms; works with other department staff to coordinate voice, video and data-related efforts.
4. Prepares and maintains systems documentation and records of work requested and performed; reconciles service requests and work orders with work performed to ensure customer needs and requirements are met, resources are efficiently used and customer billing information is correct; updates as-built drawings, facilities management documents and cable plant records to reflect installations, changes or deletions; maintains inventory of telecommunications equipment.
5. Provides training and assists end users with the proper maintenance and use of equipment.

#### **OTHER DUTIES**

1. Serves on committees and task forces as required.
2. May provide help desk support as needed.

#### **QUALIFICATIONS**

##### **Knowledge of:**

1. Principles and theories of electricity, electronics and computer hardware/software design as they relate to installation and maintenance of telecommunication systems and equipment.
2. Test equipment, tools and materials used in construction, installation, troubleshooting, maintenance and repair of telecommunications systems and equipment.
3. Troubleshooting system faults and repairing of various types of telecommunications equipment and systems.
4. Federal, state and local rules, regulations and guidelines applicable to telecommunications systems.
5. Current voice communication technologies including PBX, IVR, voicemail, call accounting, outbound dialer, computer-telephony integration and similar products, and related scripting and programming practices and procedures.
6. Safe work methods and practices.

**Ability to:**

1. Use equipment, tools, media and other materials in constructing, servicing, installing and repairing telecommunications systems, facilities and equipment.
2. Locate and trace trouble in all types of telecommunications systems and equipment.
3. Adapt established practices, procedures and principles of electrical and electronic circuitry to particular problems, conditions and service needs.
4. Understand and work from communications plans, blueprints, schematic diagrams, sketches, drawings and oral and written instructions.
5. Prepare diagrams and sketches.
6. Communicate clearly and effectively, both orally and in writing.
7. Prepare clear, concise and accurate records and reports.
8. Maintain effective working relationships with City management, staff, vendors and others encountered in the course of work.

**Education, Training and Experience:**

A typical way of obtaining the knowledge, skills and abilities outlined above is graduation from high school or G.E.D. equivalent; technical school or college-level courses in electronics, telecommunication systems or a closely related field; and five years of experience in the installation, maintenance and repair of telecommunications systems and equipment; or an equivalent combination of training and experience.

**Licenses; Certificates; Special Requirements:**

Current, valid certification in Tower Climbing Safety, RF-Safety Awareness, CPR and BICSI.

Current, valid certification or licensing in limited energy or low voltage and working in confined spaces.

Training and knowledge of the following hardware from one or more of the following manufacturers: NEC, Adtran, Harris, Kentrox, Motorola, Kenwood, Cisco, Avaya, Lucent or a related manufacturer.

A valid California driver's license and the ability to maintain insurability under the City's vehicle insurance policy.

**PHYSICAL AND MENTAL DEMANDS**

The physical and mental demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this class. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

### **Physical Demands**

While performing the duties of this job, the employee is regularly required to sit; talk or hear, both in person and by telephone; use hands to finger, handle and feel computers and standard business equipment; and reach with hands and arms. The employee is frequently required to stand and walk; stoop, kneel, crouch and crawl; and climb and balance in high precarious places.

Specific vision abilities required by this job include close vision and the ability to adjust focus.

### **Mental Demands**

While performing the duties of this class, the incumbent is regularly required to use written and oral communication skills; read and interpret complex data, information and documents; analyze and solve complex problems; use math/mathematical reasoning; perform highly detailed work under changing, intensive deadlines, on multiple concurrent tasks; work with constant interruptions, and interact with City management, staff, vendors and others encountered in the course of work.

### **WORK ENVIRONMENT**

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this class. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

The employee regularly works in confined workspaces and outside weather conditions. The employee frequently works near moving mechanical parts, is exposed to wet and/or humid conditions and vibration, and works in high, precarious places. The employee is regularly exposed to fumes or airborne particles, toxic or caustic chemicals, radiation and risk of electrical shock. The noise level in the work environment is frequently loud.