



## UNION JOB DESCRIPTION

**TITLE: Communications Technician**

### DEFINITION:

Installs, repairs and maintains communication and miscellaneous electronic equipment for the District. Work may be performed in any of the following areas: Radio, Microwave, Telephone, Supervisory Control and Data Acquisition (SCADA), Fiber Optics, Radio Frequency Interference (RFI), Data Communications and miscellaneous electronics.

### DISTINGUISHING CHARACTERISTICS:

This position is a step progression position with time requirements and with more responsibility assigned as experience is gained. Progression to the next level of Communication Technician does not require a bid, but is contingent upon a satisfactory job performance evaluation and meeting the necessary time requirements. The District will provide necessary training in conjunction with WAC 45. This is a bid classification subject to CBA articles 6.2.5 and 6.2.7 where the District will select the successful candidate based on ability and personal qualifications.

### BASIC RESPONSIBILITIES:

Installs, maintain and tests various systems, detects and troubleshoots problems, documents drawing changes and upgrades, and follows and/or creates appropriate safety procedures.

### RADIO:

1. Installs and maintains VHF and UHF radio equipment using schematic diagrams, installation drawings and basic technical skills. Equipment typically includes: base stations, communications consoles, voting receivers, vehicular and portable radios, monitor receivers, selective calling encoders/decoders, cellular phones, tower mounted antennas and associated wiring.
2. Installs, repairs, maintains and optimizes a Wide Area Coverage 900 MHz Trunked Digital Path Simulcast Radio System with integrated stand-alone trunked sites and telephone interconnect switch.

### MICROWAVE:

1. Installs, repairs and maintains analog and digital microwave systems including transmitters, receivers, repeaters, antennas, multiplexers, signaling and interface with common equipment and associated wiring.

### TELEPHONE:

1. Installs, maintains and troubleshoots software configured/controlled Private Branch Exchange (PBX) telephone switches that are networked via Integrated Services Digital Network (ISDN), Voice Mail, Networked Automatic Call Distribution (ACD), and Call Detail Reporting (CDR). Associated devices include attendant consoles, digital and analog phones, terminals, printers, modems, reader boards, electronic key systems, Off-Premises Extension (OPX) circuits, enhanced 911 emergency call processing and reporting system, digital voice recorders and public address systems. Installations require both inside and outside cable plant terminations and splices including protection, isolation and signaling equipment.

### SCADA:

1. Installs, repairs and maintains master station communications subsystems and work stations including various peripheral devices and remote terminal units (RTUs).
2. Installs, repairs and maintains a wide variety of multipoint communications circuits utilizing isolators, data bridges, leased circuits, District owned cable, T1 multiplexers, analog and digital microwave, fiber optics or MAS radio system.

**BASIC RESPONSIBILITIES:** (continued)

**FIBER OPTICS:**

1. Installs, tests, repairs and maintains fiber optic cable and terminal equipment such as Lucent Technologies DDM2000 OC-3 SONET multiplexer using state-of-the-art equipment. This includes pre-installation and post installation quality tests, terminating and splicing, fault isolation and restoration and terminal equipment trouble-shooting and repair.
2. Identifies and works with single and multimode fibers.
3. Installs connectors and tests using light source meter or optical time domain reflectometer.
4. Performs mechanical and fusion splices including proper encapsulation.
5. Assist in stringing and supporting fiber in new installations as requested.

**RFI:**

1. Serves as a customer service technician using available detection equipment such as the RCUV 50-800 MHz Radar Engineers Model 239 RFI Locator, hot stick sniffer - Radar Engineers Model 247 and Ultra Sonic Receiver to locate sources of RFI.
2. Recommends steps to mitigate RFI.
3. Works with Servicemen and Line crews to eliminate RFI sources in the transmission and distribution systems.

**MISCELLANEOUS ELECTRONICS:**

1. Repairs various pieces of District owned equipment containing electronic equipment. Equipment typically includes: signboards, closed circuit video systems, strobe lights, fault locators, security and audio systems.

**DATA COMMUNICATIONS:**

1. Installs, repairs and maintains a variety of data communications equipment. Equipment typically includes: software configured/controlled digital multiplexers and Digital Cross-Connect Systems (DCSs), local area networks (10Base-T and Ethernet), data modems, line drivers, digital interface devices, teleprinters, data circuits, video terminals and printers.

**OTHER RESPONSIBILITIES:**

1. Performs associated duties as assigned.

**MINIMUM QUALIFICATIONS:**

Knowledge of:

- General electronic theory
- Tools, materials and equipment of the trade.
- Electronic test equipment and other specialized devices used in the repair, installation and maintenance of communications systems.
- Circuit analysis and design.
- Methods, equipment and materials used in the service and installation of electronic equipment.
- Computer related software and computer peripherals.
- Occupational hazards and safety regulations of the trade.

Ability to:

- Install and maintain communication transmission lines, antennas and microwave dishes on towers up to and in excess of 300 feet.
- Distinguish all colors used to identify conductors in multiple pair communications cables.
- Operate a variety of specialized tools and equipment associated with the trade.
- Lift and carry 50 pounds.
- Interpret and apply related rules, codes, policies and procedures.
- Read and interpret schematic, wiring and digital drawings.
- Identify and isolate electrical and/or electronic problems and equipment malfunctions.

## MINIMUM QUALIFICATIONS: (Continued)

### Ability to:

- Work at heights from antenna towers, platforms and trucks.
- Analyze and resolve related problems.
- Work independently.

### Education/Experience:

- High School diploma or equivalent.
- **Level I** - Entry level position. Fundamental knowledge of electronics. At least one (1) year experience in communications based electronics. Must possess a basic understanding of at least two (2) of the primary Communication Technician disciplines as listed under Basic Responsibilities.
- **Level II** – Intermediate knowledge of electronics. At least three (3) years experience in communications based electronics. Must possess a basic understanding of at least four (4) of the primary Communication Technician disciplines and demonstrated ability to perform at least two (2) of these disciplines as listed under Basic Responsibilities.
- **Level III** - One (1) year experience as a Level II Technician with positive performance evaluations and possession of valid FCC General Radio Operator license

### **OR**

- Exceeds the qualifications of a Level II. Possession of valid FCC General Radio Operator license. An interview panel of technicians, engineers and management determines whether the applicant possess the qualifications of Level III.
- **Level IV** - Two (2) years experience as a Level III Technician with positive performance evaluations.
- **Level V** - Two (2) years experience as a Level IV Technician with positive performance evaluations.

### License , Certification and/or Testing:

- Successful completion of an interview process.
- Valid Washington State Driver's License.
- Valid FCC General Radio Operator license is encouraged but not required for initial entry as a Level I or II Technician. It must be obtained to qualify as a Level III or higher Technician.

## WORKING CONDITIONS:

Work is performed in both an indoor and outdoor environment. Position requires driving to meetings, job sites, etc. Individual may be exposed to adverse weather conditions. Position may require, lifting and carrying up to 50 pounds, climbing structures in excess of 300 feet and working in confined areas. Individual may work in areas near high voltage equipment and around equipment generating loud noises.