

## **SNOHOMISH COUNTY JOB DESCRIPTION**

### **TELECOMMUNICATIONS PBX ENGINEER**

Spec No. 3161

#### **BASIC FUNCTION**

To provide engineering assistance to support both the day-to-day installation and maintenance of various telecommunications equipment and data services, as well as project coordination.

#### **STATEMENT OF ESSENTIAL JOB DUTIES**

1. Recommends, designs and implements networked communications data/voice systems and circuits.
2. Provides recommendations and analysis to management concerning the addition or deletion of facilities or equipment to obtain the most cost effective voice/data network.
3. Provides consultation on special data/telephone communication services and projects; ensures proper channel allocation of voice/data network.
4. Monitors existing telecommunications network, utilizing various performance and capacity analysis disciplines; provides advice on the best use of resources, cost effectiveness and implementation.
5. Reviews drawings and specifications for new construction and major renovation projects and ensures compliance with telecommunications specifications.
6. Performs site surveys, when necessary, to write orders or to estimate new job costs.
7. Provides coordination necessary to effect installation of communications transport media (fiber, copper and coax) throughout the organization as well as associated data equipment as appropriate.
8. Performs inspections of work done by contractors to ensure adherence to appropriate specifications.
9. Assists in the timely resolution of system and network problems.
10. Performs monthly inspections of each switch room facility which includes monitoring battery plant and recording appropriate readings; ensures that all support systems (security, environmental, fire, etc.) are fully operational and that area is free of fire hazards; provides management reports of results effecting or recommending appropriate corrective action.
11. Assists in the monitoring and development of installation and maintenance procedures.
12. Provides back-up to other technical staff as needed.

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### **MINIMUM QUALIFICATIONS**

An Associates Degree computer science or a related field and seven (7) years related experience in installation and maintenance of telecommunications equipment including PBX and electronic key systems; specific vendor certification and training in the operation and maintenance of county campus telecommunication systems. Must pass job related tests.

### **SPECIAL REQUIREMENTS**

A valid Washington State Driver's License is required.

Employee must be able to distinguish standard wire color-coding.

Possession or ability to obtain a valid First Aid Card within first 90 days of employment is required.

Candidates for employment must successfully pass a criminal background investigation, which includes fingerprinting.

### **KNOWLEDGE AND ABILITIES**

Knowledge of:

- fiber-optic technologies;
- data communications transport and associated software and hardware;
- switched public and private network facilities;
- operation and interpretation of telecommunications and electronic testing equipment; system capabilities of PBX, key systems and peripheral equipment functions and operations;
- cable and wire distribution systems for outside plant and in-building systems;
- the use of cable splicing tools, equipment, and materials;
- tools, materials, and techniques to accomplish preventative maintenance, electronic equipment diagnosis, troubleshooting and fault isolation;
- appropriate communication and electric codes;
- twisted pair, fiber and coaxial installation methods and color coding conventions;
- installation techniques;
- scheduling and project management techniques;
- category 5, category 3, coaxial wiring, all category 5 and 3 connectors;
- splicing all types of black sheath cable and all types of protectors;
- cable and equipment inventory management;
- contract administration.

Ability to:

- splice PIC type cable;
- work independently with minimal supervision;

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#### **KNOWLEDGE AND ABILITIES** (continued)

- exercise good judgment as to when to act independent and when to refer situations to higher authority;

#### Ability to:

- independently analyze and resolve operational problems;
- diagnose/analyze problems by using telecommunication test equipment, PBX diagnostic functions and troubleshooting techniques;
- test and verify proper operation of installed circuit/equipment;
- repair and verify proper operation of installed circuit/equipment;
- read, understand and apply technical manuals and procedures, equipment schematics as well as building and underground prints;
- identify and distinguish color coded wiring; splice cable, install circuits, cross connects, equipment, etc.;
- determine cable/wire and equipment to accomplish services;
- interconnect circuit to PBX or at local telephone company demarcation; work under pressure and meet deadlines; effectively function as a team member;
- complete repair tickets showing completed work, maintain equipment inventory;
- maintain required records and prepare necessary reports.

#### **PHYSICAL EFFORT**

The work involves a variety of manual labor tasks such as visual concentration, standing, climbing ladders, and occasional climbing into or out of manholes. Employee must be able to lift objects weighing in excess of fifty (50) pounds.

#### **SUPERVISION**

The employee reports to and receives administrative and technical direction from a department manager as assigned. The employee operates under general guidelines and is expected to perform daily and routine tasks with a minimum of supervision. Initiative with vendors, technicians and staff and decision making are encouraged. The work will be reviewed through periodic meetings and status reports and by evaluation of results obtained.

#### **WORKING CONDITIONS**

The work is performed in the typical telecommunications field work environment. Employees are exposed to a variety of hazards such as electrical power lines, cramped or confined spaces, working in or near construction sites, dust, fumes, grease and inclement weather. Employees are required to work evening, holidays and weekends as necessary. It may be necessary to travel over a weekend in the performance of assigned duties.

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Snohomish County is an Equal Employment Opportunity (EEO) employer.  
Accommodations for individuals with disabilities are provided upon request.

[EEO policy and ADA notice](#)

Class Established: December 1995  
Previous Spec No. 430420  
Revised: October 1999. March 2001.  
EEO Category: 6 – Administrative Support  
Pay Grade: 241 – Classified Pay Plan  
Workers Comp: 1501 Hazardous