TITLE: **SCADA System Specialist**
STATUS: **Union/Non-exempt**
GRADE: **Grade 16**

JOB SUMMARY:
Incumbent will engineer, develop, maintain, and perform integration tasks as needed to the District's SCADA network including computers, instrumentation, controls, communications, security and power distribution systems.

REPORTING RELATIONSHIPS:
This position reports to the SCADA/Electrical Manager. This position may take direction and training from the SCADA System Lead.

ESSENTIAL DUTIES include the following.
- Design panel layouts and wiring diagrams for MCC's, RTU's and Control Panels;
- Design and develop PLC/OIT and SCADA HIM programs;
- Configure and maintain desktop & server PC hardware and software;
- Design and integrate wired and wireless Ethernet and Serial data networks;
- Perform radio site surveys and analysis;
- Oversee the construction of instrumentation and control systems;
- Ability to identify, maintain, troubleshoot and modify the SCADA system and its components;
- Calibrate and document process instrumentation;
- Modify and build Control, RTU and Motor control panels;
- Update drawings to reflect as-built conditions;
- Assemble and maintain network cables including Fiber Optic, Coaxial, Ethernet, and Serial cables;
- Perform I/O loop testing and wire tracing identification;
- Measure voltage, resistance, and current of electrical circuits;
- Clean and organize assigned working areas and tools;
- Acquire material quotes and place orders from vendors as directed;
- Represent the District at project design and construction meetings as needed;
- Respond to duty after normally schedule work hours as required; and
- Performs other duties as required or assigned.

MINIMUM QUALIFICATIONS:

Knowledge of:
- Industrial networking and Industrial Control Systems, SCADA systems, and associated protocols such as Profinet, Common Industrial Protocol (CIP), BACNet, or ModBus TCP
- Network security techniques and protocols including methodologies to provide selective isolation of network segments and firewall deployments
- Current technology related to the communication between PLCs, SCADA software, and a database server;
- PLC/OIT and SCADA HIM program development;
- Basic mathematics through first level calculus (proportional, integral, derivative calculations);
- Electronic/electrical circuits and instrumentation test equipment; and
- PID control loops.

Skill in:

- Using electrical and electronic test equipment;
- Computers including;
    - Computer maintenance of the SCADA system and instrumentation, including programming;
    - Knowledge of the SCADA software and ability to program and troubleshoot;
    - Troubleshooting network based communication issues;
    - Ability to maintain the SCADA computer systems, including hard drives, communication cards and other systems;
    - Reviewing SCADA and instrumentation design drawings;
    - Configuring network components including routers, switches, firewalls and other communication equipment;
- Safe operation of power tools, test equipment and hand tools;
- Effectively troubleshoot equipment using limited documentation;
- Working in harsh environments during emergency situations;
- Applying codes and guidelines in the design, installation and maintenance of all district instrumentation & control and SCADA system;
- Working safely around electrical, mechanical and environmental hazards; and
- Communication, both written and oral, and interpersonal skills as applied to interaction with coworkers, supervisors, the general public, etc. sufficient to exchange or convey information and to receive work direction.

Experience/Education:

Any equivalent combination of education and experience that provides the applicant with the knowledge, skills and abilities required to perform the job. A typical way to obtain the knowledge and abilities would be five years with programming and coordinating SCADA software packages, PLC platforms, Microsoft Operating systems, OPC, SQL, and OLE clients and servers and two years of higher education in Instrumentation and Industrial Automation or a related field.

Licensing Requirements:

Possess and maintain a Valid Washington State Driver's License with acceptable driving record, and a CPR/First Aid Card. An (06) Limited Energy Systems electrical license or higher electrical licensing level is desirable. Ability to earn advance certification in networking (such as CCNA or CCNP) and/or security (CompTIA or CISSP) within two year of appointment is required.

WORKING CONDITIONS:

Duties are performed in an office environment sitting at a desk or computer terminal. Duties require visual inspection of construction drawings and projects. Duties are also performed in the field with exposure to varying weather conditions and temperatures, confined spaces, mechanical parts, electrical currents, fumes, odors, grease and chemicals, inadequate lighting, intense noise and travel.

PHYSICAL REQUIREMENTS:

This position typically requires climbing, balancing, stooping, kneeling, crouching, crawling, reaching, standing, walking, pushing, pulling, lifting, finger dexterity, grasping, feeling, talking, hearing, seeing and repetitive motions.

Heavy Work: Exerting in excess of 75 pounds of force occasionally, and/or up to 50 pounds of force frequently, and/or up to 20 pounds of force constantly to move objects.

This job description does not constitute an employment agreement and may be changed or amended at any time to meet the needs of the District.