City of Alameda
Code No. 7321
Approved by CSB April 1, 2026

UTILITY SYSTEMS ANALYST

DEFINITION

Under general direction from the Chief Technology Utility Officer, performs specialized information system support functions through the management of network and telecommunications infrastructure, fiber systems, cybersecurity, SCADA-related systems, and business continuity operations; maintains 24/7 reliability; performs other tasks as required.

DISTINGUISHING FEATURES

Utility Systems Analyst is distinguished from the Utility Network Analyst in that it focuses on the planning, design, implementation, security, and maintenance of telecommunications and network infrastructure, including cybersecurity risk management and operational technology systems. This position has primary responsibility for telecommunications systems reliability, fiber infrastructure, cybersecurity integration, and critical infrastructure continuity.

EXAMPLES OF DUTIES

The following list of duties is intended only to describe the various types of work that may be performed and the level of technical complexity of the assignment(s) and is not intended to be an all-inclusive list of duties. The omission of a specific duty statement does not exclude it from the position if the work is consistent with the concept of the classification or is similar or closely related to another duty statement.

Reasonable accommodations may be made to enable individuals with disabilities to perform these essential functions.

Essential Duties

1. Plans, designs, implements, supports, and maintains network and telecommunications infrastructure including fiber optic systems, structured cabling, network equipment, and related systems.

2. Manages and maintains facility telephone and telecommunications systems including radio, cellular, cloud-based, VoIP, and landline services.

3. Administer and support video surveillance and electronic access control systems.

4. Provide primary technical administration and advanced troubleshooting for telecommunications and network infrastructure systems.

5. Ensures business continuity and system reliability for critical telecommunications, fiber network systems, and Supervisory Control and Data Acquisition (SCADA) systems.

6. Maintain system performance, redundancy, and disaster recovery readiness.

7. Implement and maintain cybersecurity measures across telecommunications and network systems; identifies vulnerabilities, mitigates threats, and strengthens the overall security posture of infrastructure systems.

8. Ensure appropriate controls for web traffic analysis, reporting, and accessibility compliance.

9. Manage technical web projects from concept through deployment, including requirements gathering, scope definition, QA, and resource planning.

10. Support and integrate in-house systems and third-party applications.

11. Serve as primary liaison with third-party content providers and web vendors.

12. Manage contracts related to system development, maintenance, upgrades, and telecommunications services.

13. Coordinate with service providers to ensure compliance with service-level agreements (SLAs).

14. Receive, log, track, and resolve telecommunications and website-related support requests.

15. Provide technical instruction, training, and ongoing support to staff.

16. Maintain system documentation, inventories, control logs, and technical records.

17. Research and recommend system enhancements and new technology solutions.

18. Stay current on emerging trends and best practices in telecommunications, cybersecurity, SCADA, and networking.

Other Duties

19. Performs related duties as assigned.

WORKING CONDITIONS

- Work is performed in an office or station environment.
- Occasional exposure to wet or humid conditions; extreme cold or extreme heat.
- Occasional exposure to fumes or airborne particles, and vibration.
- Noise level is usually moderate, ambient office sounds such as speaking, working office equipment, and software.
- Frequent public and customer interaction which may include interacting with upset customers, staff, and the public in interpreting and enforcing departmental policies and procedures.

PHYSICAL DEMANDS

- Sitting or standing for extended periods of time.
- Dexterity of hands and fingers to operate objects, controls, and/or tools such as but not limited to a computer, computer keyboard, and standard office equipment.
- Vision abilities or ability to interpret, read, and maintain various documents, such as files and reports, in electronic and non-electronic formats.
- Reach with hands and arms; repetitive movements of hands or wrist; climb or balance; stoop, crouch, squat, crawl, walk; twist and bend from the waist.
- Hearing and speaking to present and exchange information and communicate in person and by telephone with governing bodies, stakeholders, and relevant departments and partners.

EMPLOYMENT STANDARDS

Education/Experience

Any combination of education and experience likely to provide the required knowledge and abilities is qualifying. A typical way to obtain the knowledge and abilities would be:

Education:
Graduation from an accredited four-year college or university with major course work in information systems, computer science, or a closely related field.

Experience:
Four years experience in an information technology environment in the administration, installation, setup, troubleshooting, maintenance, and analysis of networks, computers and peripheral equipment equivalent to systems development.

Knowledge
Knowledge of network infrastructure design and administration; fiber optic systems; structured cabling; telecommunications systems; cybersecurity principles and risk management practices; SCADA systems and operational technology environments; network security architecture; firewall configuration; business continuity and disaster recovery planning; ; voice communications equipment and services including modems, cabling plans, and coaxial and fiber optic cables; basic electronics methods, techniques, parts, tools, and materials used in the maintenance and repair of a wide variety of electronic and communications systems including automated metering infrastructure/intelligence, telephone, voice mail, fax, and related microcomputer systems.

Abilities
Ability to work independently and coordinate with multiple parties, e.g., contractors, vendors, staff, and end users; install, configure, trouble-shoot, and maintain a variety of computers, networks and peripheral equipment; train and provide technical support to users; read and interpret documents such as operating and maintenance instructions and technical procedure manuals; prepare reports and establish and maintain accurate records; define problems, collect data, establish facts and draw valid conclusions; interpret an extensive variety of technical instructions in diagram form and work effectively with abstract and concrete variables; schedule and perform work to meet established time lines; maintain level of knowledge required for satisfactory job performance; design, implement, secure, and maintain telecommunications and network infrastructure systems; assess cybersecurity risks and implement mitigation strategies; support business continuity for critical infrastructure systems including SCADA; manage vendors and contractors for infrastructure-related services; ; implement tools, technologies and processes to support the web and telecommunications applications; direct, coordinate and manage design projects; communicate clearly and concisely, both orally and in writing; and establish and maintain effective working relationships with those contacted in the course of work; perform related duties as required.

Special Requirements
Willingness and/or ability to work outside regularly scheduled hours to meet operational needs.