

**CLASS SPECIFICATION**  
**COMMUNICATIONS ENGINEER II**

**PAY GRADE: 58**  
**CLASS CODE: 30003024**  
**EFFECTIVE: December 13, 2018**

**CLASSIFICATION SUMMARY**

Reports to Communications Systems Administrator or other supervisory-level position. Under minimal supervision, responsible for performing and overseeing professional communications engineering duties for the City's communication networks facilities and equipment.

Responsibilities include: researching, planning, designing, installing, modifying, testing, and providing technical support and maintenance to a variety of complex communications systems, networks, equipment and facilities.

**DISTINGUISHING CHARACTERISTICS**

Communications Engineer II is the highest of two classifications within the Communications Engineer series.

Communications Engineer II is distinguished from Communications Engineer I in that the former requires advanced journey-level professional communications engineering knowledge and provides lead responsibilities on communication systems projects.

Communications Engineer II is distinguished from Communications Systems Administrator in that the former performs professional and technical engineering functions in the planning, design, acquisition, installation, maintenance, and repair of radio and video communications systems, networks, facilities, equipment, and related programs, while the latter oversees and manages planning, design, acquisition, installation, maintenance, and repair of radio and video communications systems, networks, facilities, equipment, and related programs.

**ESSENTIAL FUNCTIONS**

Depending on the assignment, the incumbent may perform a combination of some or all of the following duties, and perform related duties as assigned.

General Duties:

1. Perform advanced communications engineering duties in the planning, development, design, acquisition, modification, implementation, support and/or maintenance of data networks, communication systems, and facilities.
2. Design, develop, and implement large-scale LAN/WAN-based data network installations, involving power supply, physical facilities and lay out design, design of electrical/communications closets, standards for media and conduit, bandwidth and transmission protocol specifications, and related requirements.
3. Develop, implement, support, and/or maintain and repair large and complex, communications systems and facilities.

4. Confer with and advise communications systems users regarding current and future needs and requirements; participate in studies to evaluate alternative systems; define operating requirements for communication systems; participate in the preparation of cost and service comparisons for alternate communication systems and equipment; monitor system development and installation of equipment and operating systems; evaluate system performance and consult with software and communications specialists to ensure the kinds and levels of service specified in communication systems requirements.
5. Participate in the development of short- and long-range plans and programs for the efficient utilization of existing communications and telemetry systems; develop planning documentation to translate approved communications requirements into funded programs and projects.
6. Provide technical advice, assistance, and oversight to subordinate communications engineers and technical staff.
7. Conduct research and prepare a variety of special and recurring studies and reports; develop recommendations to improve the operations of communications systems, equipment and facilities; coordinate activities with other Bureaus/Offices and outside agencies/companies; forecast users' current and future communications systems requirements; research and monitor developments in techniques, equipment, supplies, and material used in voice and data communication systems.

### **SUPERVISION RECEIVED AND EXERCISED**

The work of this classification is performed under minimal supervision by a Communications Systems Administrator or other supervisory-level position.

This classification has no supervisory responsibilities, but leads staff on assigned programs, projects, and functions.

### **KNOWLEDGE/SKILLS/ABILITIES REQUIRED**

1. Thorough knowledge of radio systems, paging and alarm systems, microwave systems, and cable systems.
2. Knowledge of principals, theories, concepts, methods, techniques, operational requirements, standards, tools, materials, and equipment used in the design, development, construction, installation, troubleshooting, maintenance, and repair of all types of communication systems, equipment, and facilities.
3. Knowledge of operational and performance characteristics of communications equipment, automated control and network management systems, transmission media, and the relationships among component parts of voice and data communications systems.
4. Knowledge of principles and theories of electricity, electronics, and computer hardware design as they relate to the design, operation, installation, and maintenance of voice and data communications systems and facilities.
5. Knowledge of federal, state, and local rules, regulations, and guidelines pertaining to the development, construction, installation, and operation of voice and data communications systems.
6. Ability to understand, evaluate, and translate the needs of communications users into system requirements.
7. Ability to plan, develop, design, evaluate, recommend, select, and implement complex radio communications systems.
8. Ability to prepare clear and concise records, reports, correspondence, and other written materials.
9. Ability to exercise independent judgment and initiative within policy guidelines.
10. Ability to establish and maintain effective relationships with those encountered in the course of work, including public utilities and other agencies and businesses.

### **MINIMUM QUALIFICATIONS REQUIRED**

Any combination of education and experience that is equivalent to the following minimum qualifications is acceptable.

**Education/Training:** Bachelor's degree from an accredited college or university, in electrical engineering, computer engineering, electronics, or related field;

AND

**Experience:** Five (5) years of progressively responsible experience as a communications engineer in a large, communications-intensive organization.

**Special Requirements and/or Qualifications:**

None.

**Preferred Qualifications:**

A valid state driver's license.

Bargaining Unit: Non-represented

FLSA Status: Exempt

HISTORY

Revision Dates: