PRINCIPAL ELECTRONICS AND COMMUNICATIONS ENGINEER

JC: 000253
PB: 8
FLSA: Exempt

BU: 95 (NR)
Created: June 2019

*Class specifications are intended to present a descriptive list of the range of duties performed by employees in the class. Specifications are **not** intended to reflect all duties performed within the job.*

DEFINITION

Under supervision, manages and administers the District's electronic and communications engineering projects; performs related duties as assigned.

CLASS CHARACTERISTICS

This is the highest level of the professional Electronics and Communications Engineer series. Classifications at this level perform the highly and technical work and have a full understanding of the operating procedures and policies of the work unit. This classification is distinguished from the Project Manager in that the latter manages major engineering construction or equipment acquisition projects from conceptual planning through completion throughout the District.

REPORTS TO

Deputy Director, Group Manager, Engineering Manager or designee.

EXAMPLES OF DUTIES - *Duties may include, but are not limited to, the following:*

1. Develops and integrates electrical/electronic systems (e.g., fare collection systems) for station modernization projects and the BART Extensions. Reviews design submittals for systems projects.

2. Plans and coordinates integration, installation and testing of AFC systems for station modernization and BART extension projects.

3. Participates in the development of policies and procedures; monitors work activities to ensure compliance with established policies and procedures; makes recommendations for changes and improvements to existing standards and procedures.

4. Develops, prepares, and modifies technical specifications for AFC and related systems for contracts and engineering change orders.

5. Recommends and assists in the implementation of goals and objectives; implements approved policies and procedures.

6. Represents the District with full authority to enforce contract requirements; evaluates proposed contract changes; prepares independent engineering cost estimates of revised project scopes; inspects construction at substantial and final completion stages.

7. Participates in the selection of contracted staff; provides or coordinates staff training; works with employees to correct deficiencies; implements discipline procedures.

8. Participates in the preparation and administration of assigned program budget; submits budget recommendations; monitors expenditures.

9. Prepares analytical and statistical reports on assigned project operations and activities.

10. Initiates and evaluates design and field engineering changes during construction; recommends approval of and submits contractor's progress payment applications; recommends retention levels as appropriate.

11. Coordinates with outside agencies on areas of work within their jurisdiction; administers control of required documentation for construction contracts.

12. Prepares or reviews a variety of reports and correspondence on assigned construction projects including Inspector's Daily Reports, monthly and final completion reports, contract modifications and field or design engineering changes.

13. Prioritizes, assigns, supervises, and reviews the work of staff responsible for performing a variety of professional engineering, design or construction project duties.

14. Attends and participates in professional group meetings; stays abreast of new trends and innovations in the field of engineering design and construction.

15. Reviews and updates As-Built drawings for stations and BART extensions projects.

QUALIFICATIONS

Knowledge of:

- Principles and practices of engineering design or construction contract management and contract specifications
- Operations, services and activities of a comprehensive engineering design or construction program
- Operational characteristics of electronic computer systems and their sub-components
- Operations, services, and activities of the BART Automatic Fare Collection (AFC) system
- Principles and practices of project scheduling and management
- Principles, practices, methods and techniques of construction contract management
- Principles and practices of engineering cost estimating
- Network, electronic, and control systems
- Technical standards for fare media
- AFC and related systems
- Methods and techniques of field measuring and testing
- Methods and techniques of conducting facility or construction site inspection

- Contract administration and management
- Materials and equipment used in engineering and construction projects
- Existing BART drawings and the level of detailed information required by BART
- Current office procedures, methods, and equipment including computers
- Specialized computer programs or systems utilized in construction engineering project design including CADD
- Related building codes, regulations and provisions
- Related Federal, State and local laws, codes and regulations

Skill/Ability in:

- Directing and coordinating various District engineering design and construction projects
- Preparing design and construction cost estimates
- Negotiating, managing and administering contracts
- Preparing clear and concise reports
- Developing and monitoring work plans
- Interpreting and preparing revisions to engineering plans, drawings, and specifications
- Conducting and overseeing field inspections, measurements, and testing
- Communicating clearly and concisely, both orally and in writing
- Establishing and maintaining effective working relationships with those contacted in the course of work

MINIMUM QUALIFICATIONS

Education:
Bachelor's degree in Engineering or a related field from an accredited college or university.

Experience:
Five (5) to seven (7) years of electrical engineering, project management, or related experience.

Substitution:
Additional professional experience as outlined above may be substituted for the education on a year-for-year basis. A college degree is preferred.

WORKING CONDITIONS

Environmental Conditions:
Office environment; field environment; travel from site to site; construction site environment; exposure to noise, dust, grease, smoke, fumes, gases, heat, cold, and inclement weather conditions.

Physical Conditions:
May require maintaining physical condition necessary for walking, standing or sitting for prolonged periods of time; Must possess sufficient mobility to perform field inspections and investigations.

BART EEO-1 Job Group: 3000 – Engineers
Census Code: 1530 – Miscellaneous Engineers
Safety Sensitive: No