CIVIL ENGINEER

JC: EF200
PB: 6
FLSA: Exempt

BU: 92 (NR)
Created: April 2005
Updated: 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, performs a variety of professional civil engineering duties in the preparation of engineering design, plans and specifications for the District's trackage, access roads, parking lots, drainage and other system facilities; evaluates and reviews design and field engineering changes during construction; ensures work quality and adherence to specifications; and performs related duties as assigned.

CLASS CHARACTERISTICS

This is the full journey level class within the Civil Engineering series. Classifications at this level receive only occasional instruction or assistance as new or unusual situations arise and are fully aware of the operating procedures and policies of the work unit. This classification is distinguished from the Senior Civil Engineer in that the latter possesses a specialized technical or functional expertise within the area of assignment or may exercise lead supervision over assigned lower level staff.

REPORTS TO

Manager of Civil Engineering or designee.

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

1. Performs a variety of professional civil engineering duties in the design, development and maintenance of the District's trackage, access roads, parking lots, drainage and other system facilities.

2. Prepares engineering drawings, sketches, equipment specifications, calculations and analyses for new or proposed projects; develops design details.

3. Prepares preliminary engineering design cost estimates and other information for management and project board review.

4. Reviews approved project criteria for existing facilities; compiles, researches and analyzes data for modifications or extensions to existing facilities.

5. Assists in the establishment of schedules and methods for providing design support during construction; prepares construction and installation cost estimates.

6. Monitors project work procedures to ensure compliance with established policies and procedures; evaluates proposed changes to approved plans and specifications.

7. Prepares a variety of drawings, reports and correspondence on assigned construction projects including field and design engineering changes, cost estimates, as-built drawings and related documentation.

8. Provides engineering design support to other divisions, District departments and outside agencies, and during construction projects.

9. As assigned, reviews construction in progress; performs a variety of field-testing duties; submits reports.

10. Utilizes a variety of engineering software programs and applications including CADD.

11. Attends and participates in professional group meetings; stays abreast of new trends and innovations in the field of civil engineering.

QUALIFICATIONS

Knowledge of:

- Operations, services and activities of a comprehensive civil engineering design program
- Principles and practices of civil engineering design
- Materials and construction methods utilized in civil engineering projects
- Methods and techniques of field measuring and testing related to civil engineering construction
- Terminology, methods, practices, and techniques used in technical engineering report preparation
- Advanced mathematical principles
- Construction methods and practices
- Current office procedures, methods, and equipment including computers
- Specialized computer programs or systems utilized in engineering project design including CADD
- Related building codes, regulations and provisions
- Related Federal, State and local laws, codes and regulations

Skill/Ability in:

- Performing a variety of professional civil engineering duties
- Applying principles and practices of civil engineering in assigned projects
- Interpreting and explaining District policies and procedures
- Preparing engineering designs, specifications and plans
- As assigned, conducting field tests
- Performing accurate engineering calculations
- Preparing clear and concise reports
- Understanding and following oral and written instructions
- Communicating clearly and concisely, both orally and in writing

- Establishing and maintaining effective working relationships with those contacted in the course work

MINIMUM QUALIFICATIONS

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

Experience:
Two (2) years of (full-time verifiable) professional experience in civil engineering or related experience.

License or Certificate:
Registration as a professional engineer in the State of California.

Other Requirements:
Must be physically able to conduct field inspections and testing as assigned.
Must possess a valid California driver's license and have a satisfactory driving record.

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; exposure to computer screens; field environment; construction site environment; exposure to noise, dust, grease, fumes, gases, heat, cold, and inclement weather conditions when conducting field inspections and investigations.

Physical Conditions:
Requires maintaining physical condition necessary for walking, standing or sitting for prolonged periods of time.

BART EEO-1 Job Group: 3000 - Engineers
Census Code: 1360 - Civil Engineers
Safety Sensitive: N