

JUNIOR ENGINEER

JC: EF400
PB: 3
FLSA: Exempt

BU: 92 (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 close supervision, performs a variety of entry-level professional engineering duties including modification of engineering specifications, preliminary cost estimates, creation of engineering drawings, and various calculations/analysis; provides expertise on critical safety decisions ensuring appropriate code and industry standards are utilized through the design process; assists with critical engineering decisions using various engineering principals; performs related duties as required.

CLASS CHARACTERISTICS

This is the professional entry level classification in the engineering series. Positions at this level work perform entry level tasks and duties and is typically used as a training level classification for incumbents with limited or no directly related work experience. This classification is distinguished from the Civil and Structural Engineer in the latter is the full journey level in the engineering series.

REPORTS TO

Engineering Manager or designee.

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

1. Performs a variety of entry level professional engineering duties including engineering specifications, computer systems applications, preliminary cost estimates, engineering drawings, calculations and analyses.
2. Conducts field inspections and investigations.
3. Creates customized details which address the unique design challenges of each individual project.
4. Assists in designing computer hardware and software modifications.
5. Assists in designing and specifying special testing and service equipment to troubleshoot and maintain transit vehicles.
6. Modifies and compiles all relevant specifications for the project using BFS specifications as the

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baseline.

7. Assists in preparing engineering designs, specification costs and quantity estimates for engineering construction projects.
8. Analyzes and resolves computer systems malfunctions.
9. Assists in the establishment of schedules and methods for train control support positions.
10. Conducts special studies and prepares a variety of reports and correspondence.

QUALIFICATIONS

Knowledge of:

- Basic principles and practices of the engineering discipline
- Appropriate sources of engineering information
- Material costs
- Computer applications as applied to the solution of engineering problems
- Engineering materials, equipment and methods

Skill/Ability in:

- Apply basic engineering principles and practices to the solution of engineering problems
- Conduct engineering studies and evaluations and write clear and concise reports
- Analyze technical problems, including those involving computer hardware and software
- Learn engineering division procedures and applicable laws, codes and regulations
- Interpret and prepare drawings and specifications
- Analyzing drawings and identifying assets
- Learn to prepare construction and/or installation cost estimates
- Keep accurate records
- Establish and maintain effective working relationships with those contacted in the course of the work

MINIMUM QUALIFICATIONS

Education:

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

Substitution:

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; exposure to computer screens.

Physical Conditions:

May require maintaining physical condition necessary for walking, standing or sitting for prolonged

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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