



PRINCIPAL ENGINEER

JC: EF502
PB: 8
FLSA: Exempt

BU: 95 (NR)
Created: July 2003
Revised: 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 general supervision, manages and administers professional engineering duties such as 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; and performs related duties as assigned.

CLASS CHARACTERISTICS

This is the highest level in the 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 Senior Civil Engineer in the latter possess a specialized, technical or functional expertise within the area of assignment or may exercise lead supervision over assigned lower level staff. This classification is distinguished from the Senior Engineer in the latter possess 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 Engineering Programs or designee.

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

1. Establishes schedules and methods for providing project administration services; oversees the inspection and verification of quantities of materials; ensures adherence to specifications; identifies resource needs; monitors progress of large-scale construction projects; allocates resources accordingly.
2. 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.
3. Recommends and assists in the implementation of goals and objectives; implements approved policies and procedures.

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4. 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.
5. Participates in the selection of contracted staff; provides or coordinates staff training; works with employees to correct deficiencies; implements discipline procedures.
6. Participates in the preparation and administration of assigned program budget; submits budget recommendations; monitors expenditures.
7. Prepares analytical and statistical reports on assigned project operations and activities.
8. 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.
9. Coordinates with outside agencies on areas of work within their jurisdiction; administers control of required documentation for construction contracts.
10. 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.
11. May prioritize, assign, supervise, and review the work of staff responsible for performing a variety of professional engineering, design or construction project duties; may serve as resident engineer on assigned construction project.
12. 12. Attends and participates in professional group meetings; stays abreast of new trends and innovations in the field of engineering design and construction.
13. Participates in the resolution of construction contract claim issues.

QUALIFICATIONS

Knowledge of:

- Principles and practices of engineering design or construction contract management
- Operations, services and activities of a comprehensive engineering design or construction program
- Principles and practices of project scheduling and management
- Principles, practices, methods and techniques of construction contract management
- Principles and practices of engineering cost estimating
- 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
- Principles of supervision, training and performance evaluation
- Current office procedures, methods, and equipment including computers

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- 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
- Interpreting and preparing revisions to engineering plans, drawings, and specifications
- Conducting and overseeing field inspections, measurements, and testing
- Selecting, supervising, training and evaluating staff
- 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:

Possession of a bachelor's degree in engineering or a closely related field from an accredited college or university.

Experience:

The equivalent of five (5) years of (full-time) professional verifiable experience in engineering project administration or related experience.

License or Certificate:

Registration as a professional engineer in the State of California.

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