

Class Specification

Title:	Principal Engineer
Job Code:	679250
Bargaining Unit(s)/Grade:	AFSCME Gr 33/ Non Represented Grade 10
FLSA Status:	Exempt
Safety Sensitive:	No
Competency Model:	Individual Contributor
Career Family:	Engineering/Construction

Summary

Performs professional engineering work of considerable difficulty requiring multi-disciplined technical engineering capabilities in the planning and design of construction projects, capital improvements and industrial waste/pollution prevention engineering and technical projects. Incumbents in this job class complete the largest and most complex engineering projects and function either as an advanced specialists by independently completing assignments which involve multi-disciplined technical engineering duties but do not involve providing work direction to other staff; or as project managers for the largest, most complex projects with responsibility for providing work direction to senior engineers, engineers and related technical and administrative staff.

Areas of Assignments may include:

Transportation Engineering
 Civil Engineering
 Electrical Engineering
 Environmental Engineering

The Principal Level is the advanced specialist/project manager class in this class series. It differs from Senior Engineer in that it references positions that function as either (a) specialists responsible for advanced, non-managerial technical duties; or (b) project managers responsible for leading the most complex projects. Advancement to this class is dependent on position responsibilities.

Essential Responsibilities*

In addition to regular attendance, the following responsibilities are typical of the duties performed by incumbents in this job class. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential duties of the position.

Responsibilities common to all positions

- Develops project plans of large, complex, often multi-disciplinary projects requiring substantial coordination with internal user groups, the general public, regulatory agencies, and state and local.
- Conducts research, develops and recommends policy and procedure on a variety of regulatory subjects. Prepare operations procedures.
- Develops project budgets and schedules; monitors costs and progress; anticipates potential problem areas; identifies and implements measures to keep the projects within budget and on schedule. Recommends revisions to the project budgets, as necessary.
- Oversees/prepares in-house designs (drawings and specifications) and monitors projects during facility planning, installation/construction and commissioning phases.
- Represents the Council with regulatory agencies, local interests, neighborhood groups, city, metropolitan, county, state, and federal governmental units, industrial user groups and other interested parties. Conducts necessary communications and interactions with groups
- Responds to internal/external requests related to monitoring, wastewater operations, permit requirements and regulations and special discharges.
- Performs field evaluation, monitoring, and facility inspection. Prepares reports to ensure compliance with established plans specs, contract documents, and other technical documents.

- Develops scope of services and other non-standard provisions of RFPs and consultant contracts. Participates in contract negotiations and the evaluation of proposals. Negotiates change order pricing with contract on behalf of the Council.
- Reviews local comprehensive plans, watershed plans and environmental review documents for technical accuracy and relationship to Council projections, policies and plans.
- Prepares necessary reports, presentations and communicate results. Plans, attend and speak at public hearing and meetings.
- Evaluates mechanical equipment, products and systems for use in MCES and Transit project.
- Defines business processes to ensure interface with database management systems.
- Work direction/lead work responsibilities: Provides leadership in facilitating the activities of the project team. Works with the team and other responsible staff to establish project goals and priorities. Provides leadership in contractor/consultant/vendor contracts and services.
- Other related duties as assigned

Construction Management

- Performs all responsibilities inherent in the planning and execution of assigned projects from an owner's or government agency's perspective. Develops project execution plans, confirms funding, administers and controls design, construction and start up of completed facilities.
- Recommends approaches to matters of policy, precedent, and substantial public impact to management.
- Provides internal consultation in specialized field and assists in the review of consultant prepared designs (drawings and specifications), and monitors projects during installation/construction and commissioning phases.

Industrial Waste/Pollution Prevention

- Administers, monitors and evaluates the industrial waste discharge program including permit issuance, compliance and enforcement monitoring, special discharge requests, for approximately 800 industrial users working to reduce the amount of pollution entering the wastewater collection system. Responds to and investigates spills, illegal discharge reports and treatment plant and collection system problems. Manages non-compliance issues and assists companies develop compliance schedules, implements equipment and practices to achieve compliance.
- Coordinates and administers specific MCES programs such as Septage management program, leachate/contaminated groundwater acceptance program and dental mercury reduction program.

Interceptor Right of Way

- Leads third party ROW and facility impacts.
- Provides overall management and coordination of fee title land rights acquisitions for new MCES facilities. Coordinates with MC Legal department. Secures services of consultants to provide technical evaluation, appraisal, monetary offer, title search, negotiation and condemnation activities.
- Processes easement encroachment requests. Evaluates impacts of proposed activities and when appropriate issues encroachment agreements
- Evaluates third party impacts to the interceptor system. Where necessary, negotiates cooperative agreements when existing facilities are impacted and require relocation
- Coordinates the work necessary to secure approvals and necessary permits and/or agreements when new facilities are proposed to be placed in railroad ROW, highway ROW, or other utility easements
- Prepares and files annual ROW registration documentation with the counties and municipalities
- Coordinates the activities for existing ROW inspection and ROW access maintenance to ensure adequate access is maintained and that easement rights are not forfeited
- Coordinates MCES capital improvement program with planned highway improvements of the counties and the MN Department of Transportation (MnDot) to ensure timely identification of interceptor improvements and needed improvements programming.

Non Essential Responsibilities

- Assists with development of financial and management of funding.

Qualifications

Education	Bachelor's degree in engineering
Experience	Eight years of related professional level engineering experience, including experience with project management, methods and /techniques.
License Requirements	Professional Engineer with the Minnesota State Board of Registration. A valid driver's license may be required depending on assignment.

Knowledge, Skills and Abilities Required:

Technical	Knowledge of and engineering principals in areas of functional responsibility. Ability to apply diverse knowledge of engineering principles within broad assignments making independent engineering decisions and using advanced engineering techniques and procedures. Requires professional judgement and independent evaluation, selection, adaptation and modification of standard engineering techniques, procedures and criteria. Knowledge of tools and techniques for planning projects.
Computer	Word, Excel and email and various database project tracking software packages. Computer applications related to the work including basic GIS and AutoCad concepts and applications.
Language	Level 5. Ability to read, analyze and interpret common technical journals, financial reports and legal documents. Ability to respond to common inquiries or complains from customers. Ability to write speeches and articles in a prescribed technique or style. Ability to effectively present information to top management, public groups or Council members.
Math	Level 5. Ability to prepare civil construction cost estimates. Ability to interpret and apply advanced mathematical and quantitative methods and procedures typically acquired through advanced professional training.
Human Relations	Level 3. Requires the skill and persuasion in dealings with others both inside and outside of the department. Interactions with others generally require influencing, instructing and negotiating with individuals to gain their understanding, cooperation and action. Interactions may involve efforts to persuade and negotiate with other representatives or officials outside of the organization, but does not have the authority to act on behalf of the organization in matters where there are legitimate differences of opinion. Promotes an equitable, positive and respectful work environment that values cultural and diversity among all employees.

Work Environment

Work is performed in a standard office setting. May be required to attend meetings after normal business hours. Requires conducting field inspections and off site duties as required. Confined space entry at industry and various facilities is required. Position has exposure to working near moving parts, fumes airborne particles, outdoor weather conditions and vibration. Some positions may require travel between primary work site to other sites.

Physical Requirements

Regularly required to sit for long periods, stand/walk occasionally, speak, hear normal conversation and telephone ring tones, operate a computer and other office equipment, reach with hands/arms frequently below chest height and occasionally overhead, must occasionally lift/carry/push/pull up to 10 pounds, must have adequate close vision for reading and computer work.

* The job responsibilities listed are typical of the positions included in the job classification; however, not all duties are necessarily performed by each specific position.

