



**Code: 5693**

Family: Technical Engineering

Service: Operation and Construction

Group: Engineering, Designing, and Structural

Series: Civil Engineering

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## **CLASS TITLE: CHIEF WATER ENGINEER**

### **CHARACTERISTICS OF THE CLASS**

Under general direction, functions as an executive level manager, reporting directly to the Deputy Commissioner of the Bureau of Engineering Services. Functions as the lead Engineer and second-in-charge of the bureau by directing the planning, design, implementation and administration of the water main capital improvement program, regional coordination of engineering projects, special engineering projects, and performs related duties as required

### **ESSENTIAL DUTIES**

- Manages and directs division units (e.g., inspections, capital projects, water main planning and operations, water main design, water main construction, reimbursable fund, special projects, or regional coordination) within the water engineering group to ensure the overall implementation of the capital improvement program and maintenance of the municipal water distribution system
- Manages professional engineers involved in the review and preparation of designs, plans, specifications, layouts and other construction documentation
- Reviews, approves, and stamps final design plans for water main replacement and construction projects
- Assists in the development of the strategic direction of the division to ensure that objectives and performance measures are consistent with departmental, City and service expectations
- Plans and directs the budgeting and program management of the water main capital improvement program and facilities capital improvement projects
- May oversee regional coordination of engineering projects to maintain consistency.
- May oversee special projects that require engineering design and construction management.
- Compiles engineering and financial data on the existing water main system and new capital projects to assist the department in obtaining funding from various sources (e.g., bonds, loans and grants) for planned water main infrastructure improvements
- Implements financial controls to monitor the disbursement of project funds to contractors and engineering consultants
- Develops and monitors performance indicators on the capital improvement program
- Supervises the preparation of financial and engineering reports, detailing the progress of all work within the division to management
- Provides oversight to staff engaged in contract administration activities (e.g., reviewing and evaluating contract proposals, finalizing contracts for submission to Department of Procurement Services and monitoring contracts for compliance)
- Represents the department at various technical and civil organizations to discuss water main planning and improvement projects
- Selects, supervises, trains and evaluates the performance of assigned unit managers, supervisors and staff
- Attends meetings with other City departments, elected officials and outside agencies; explains and justifies Department programs, policies and activities; and negotiates and resolves sensitive, significant and controversial issues

**NOTE:** *The list of essential duties is not intended to be inclusive; there may be other duties that are essential to particular positions within the class.*

## **MINIMUM QUALIFICATIONS**

### **Education, Training, and Experience**

- Graduation from an accredited college or university with a Bachelor's degree in Engineering, PLUS six (6) years of supervisory experience in the planning, design, and construction management of engineering projects, **OR**
- Graduation from an accredited college or university with a Master's degree or higher in Engineering, PLUS five (5) years of supervisory experience in the planning, design, and construction management of engineering projects

### **Licensure, Certification, or Other Qualifications**

- Registration as a Professional Engineer (R.P.E.). At the time of employment, positions must have obtained Registration as a Professional Engineer (R.P.E.) in the State of Illinois.

## **WORKING CONDITIONS**

- General office environment
- Exposure to outdoor weather conditions

## **EQUIPMENT**

- Standard office equipment (e.g., telephone, printer, photocopier, fax machine, calculator)
- Computers and peripheral equipment (e.g., personal computer, computer terminals, hand-held computer, scanners)
- Applicable safety equipment

## **PHYSICAL REQUIREMENTS**

- Ability to inspect construction sites

## **KNOWLEDGE, SKILLS, ABILITIES, AND OTHER WORK REQUIREMENTS**

### **Knowledge**

Comprehensive knowledge of:

- \*engineering design, construction and maintenance principles and practices
- \*engineering science and technology
- \*water main and water facility design, construction and maintenance
- \*procurement of engineering and construction services and contract preparations and processes
- \*water main design and construction techniques, current trends, regulations, standards and applicable equipment
- \*management and supervisory methods, practices and principles
- \*project and program planning techniques, practices and principles
- \*advanced mathematical principles
- \*policy development and implementation methods and procedures

- \*applicable local, state and federal regulations and requirements

Considerable knowledge of:

- \*information technology and applicable computer software packages and applications
- \*applicable department and City programs, services, organizations, and resources

Knowledge of applicable City and department ordinances, policies, procedures, rules, regulations, and ordinances

### **Skills**

- \*ACTIVE LEARNING - Understand the implications of new information for both current and future problem-solving and decision-making
- \*ACTIVE LISTENING - Give full attention to what other people are saying, take time to understand the points being made, ask questions as appropriate, and not interrupt at inappropriate times
- \*CRITICAL THINKING - Use logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions, or approaches to problems
- \*MATHEMATICS - Use mathematics to solve problems
- \*SCIENCE – Use scientific rules and methods to solve problems
- \*COMPLEX PROBLEM SOLVING – Identify complex problems and review related information to develop and evaluate options and implement solutions
- \*MONITORING - Monitor and assess performance of one's self, other individuals, or organizations to make improvements or take corrective action
- \*MANAGEMENT OF FINANCIAL RESOURCES - Determine how money will be spent to get the work done and account for these expenditures
- \*MANAGEMENT OF MATERIAL RESOURCES - Obtain and see to the appropriate use of equipment, facilities, and materials needed to do certain work
- \*MANAGEMENT OF PERSONNEL RESOURCES - Motivate, develop, and direct people as they work and identify the best people for the job
- \*TIME MANAGEMENT - Manage one's own time and the time of others
- \*COORDINATION WITH OTHERS - Adjust actions in relation to others' actions
- \*INSTRUCTING - Teach others how to do something
- \*JUDGEMENT AND DECISION MAKING - Consider the relative costs and benefits of potential actions to choose the most appropriate one
- \*OPERATIONS ANALYSIS - Analyze needs and product requirements to create a design
- \*TECHNOLOGY DESIGN - Generate or adapt equipment and technology to serve user needs

### **Abilities**

- COMPREHEND ORAL INFORMATION - Listen to and understand information and ideas presented through spoken words and sentences
- SPEAK - Communicate information and ideas in speaking so others will understand
- COMPREHEND WRITTEN INFORMATION - Read and understand information and ideas presented in writing
- WRITE - Communicate information and ideas in writing so others will understand

- REASON TO SOLVE PROBLEMS - Apply general rules to specific problems to produce answers that make sense
- REASON MATHEMATICALLY - Choose the right mathematical methods or formulas to solve a problem
- MAKE SENSE OF INFORMATION - Quickly make sense of, combine, and organize information into meaningful patterns
- ORGANIZE INFORMATION – Arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations)
- REACH CONCLUSIONS - Combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events)

**Other Work Requirements**

- LEADERSHIP - Demonstrate willingness to lead, take charge, and offer opinions and direction
- COOPERATION - Be pleasant with others on the job and display a good-natured, cooperative attitude
- SELF-CONTROL - Maintain composure, keep emotions in check even in very difficult situations, control anger, and avoid aggressive behavior
- ADAPTABILITY/FLEXIBILITY - Be open to change (positive or negative) and to considerable variety in the workplace
- DEPENDABILITY - Demonstrate reliability, responsibility, and dependability and fulfill obligations
- INNOVATION – Think creatively about alternatives to come up with new ideas for and answers to work-related problems
- ATTENTION TO DETAIL - Pay careful attention to detail and thoroughness in completing work tasks

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All employees of the City of Chicago must demonstrate commitment to and compliance with applicable state and federal laws, and City ordinances and rules; the City's Ethics standards; and other City policies and procedures.

The City of Chicago will consider equivalent foreign degrees, accreditations, and credentials in evaluating qualifications.

\* May be required at entry.

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City of Chicago  
Department of Human Resources  
May, 2021; April, 2025