



**Code: 6145**

Family: Operational Engineering  
Service: Operation and Construction  
Group: Engineering, Designing, and Structural  
Series: Sub-Professional Engineering

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## **CLASS TITLE: ENGINEERING TECHNICIAN VI**

### **CHARACTERISTICS OF THE CLASS**

Under direction, this class is supervisory in nature overseeing a staff of para-professional engineering and support personnel and/or coordinates a major para-professional engineering program including performing specialized and/or complex para-professional engineering duties, and performs related duties as required.

This class is the supervisory level in the Engineering Technician series. Positions in the class series are allocated across various City departments in support of engineering work which may include but are not limited to projects involving the design, maintenance, and construction of water mains or sewers, roads, bridges, street maintenance, traffic engineering and/or traffic control.

### **ESSENTIAL DUTIES**

- Directs field engineering and construction personnel in conducting project surveys and major repairs of City infrastructure
- Supervises the construction of various projects including oversight of work crews (e.g., highways, sewers, viaducts, public way, bridges, traffic installations and management) to ensure compliance with City requirements and engineering specifications and standards
- Coordinates a para-professional engineering program acting as the main point of contact; reviewing and approving vendor/contractor payments; and ensuring work is conducted according to program requirements (e.g., Aldermanic menu projects, Private Drain Program)
- Assists in the development of unit work standards, procedures, and policies
- Acts as a resident engineer at a large complex construction project or as assistant resident engineer on a major construction project dependent upon area of assignment
- Assigns work orders and field inspections/investigations to staff; monitors work in progress and ensures staff compliance with established work safety rules, practices, and requirements
- Approves time off requests; monitors performance and conducts performance evaluations; and initiates and enforces disciplinary actions
- Conducts field inspections to review the work of staff and contractors ensuring compliance with established guidelines
- Conducts field surveys for private construction and in-house projects to determine scope and feasibility of improvements; verify established grade elevations and base lines; approve the design and reviews new structures; and obtain information necessary for preparation of construction plans
- Supervises complex/specialized investigations or inspections of construction sites or structures in response to citizen complaints, work orders, permits and/or certification requests (e.g., street resurfacing, sewer and water main maintenance, concrete and asphalt placements, electrical projects)
- Utilizes drafting and design software programs (e.g., Computer Aided Design) and Geographic Information System (GIS) mapping technology to prepare and/or review plans, maps, schematics and drawings

- Oversees the study and review of major traffic control changes and patterns for incident operations for special events and public way construction activities and provides recommendations to ensure safe traffic control patterns
- Prepares staff productivity reports
- Monitors and authorizes expenditures for engineering and construction phases of projects
- Supervises and prepares detailed para-professional engineering, contract specifications, and project drawings
- Prepares complex mathematical calculations for construction projects
- Utilizes specialized technology to monitor the functioning of water pipes (e.g., aquaphone/audio phone, sound level meter, correlator) and performs fire flow and pitometer testing
- Meets with area residents and business representatives to discuss concerns and problems
- Coordinates activities between general contractor, utilities, and City departments
- Supervises the construction and installation of street lighting equipment with other City agencies, contractors, or utilities
- Supervises and trains subordinate personnel in standard engineering practices and procedures
- Represents department on technical matters with the other City departments, contractors, and outside agencies
- Provides technical information at hearings and legal proceedings, as required
- Participates in the selection of consultants for construction project, as required

**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

- Six years of paraprofessional engineering experience; or an equivalent combination of education, training, and experience

### Licensure, Certification, or Other Qualifications

- Some positions may require a valid State of Illinois driver's license
- Some positions may require the permanent use of an automobile that is properly insured including a clause specifically insuring the City of Chicago from accident liability

## WORKING CONDITIONS

- General office environment
- Exposure to outdoor weather conditions
- Exposure to hazardous conditions (e.g., construction sites)
- May perform in cramped or confined locations

## 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)
- Two-way radio

- Digital and surveillance camera
- Measuring tools (e.g., tape measure, measuring wheel, ruler, range pole)
- Equipment (e.g., sound sensor device, pressure gauge, dye, surveillance equipment, hoses)
- Personal protective equipment (e.g., hard hat, shoes, glasses, gloves, vest, pads)
- Safety devices or equipment (e.g., cones, barricades, ropes)

### **PHYSICAL REQUIREMENTS**

- Some positions may require moderate lifting (up to 50 lbs)
- Ability to stand and walk for extended or continuous periods of time
- Ability to move one's hands and arms to grasp or manipulate objects

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

#### **Knowledge**

Comprehensive knowledge of:

- \*engineering design and construction principles, methods, practices, and procedures
- \*applicable testing and inspecting principles, methods, practices, and procedures
- \*surveying principles, methods, practices, and procedures
- \*use of engineering drafting equipment and surveying instruments
- \*mathematical principles and applications
- \*safety principles, methods, practices, and procedures

Advanced knowledge of:

- \*specialized engineering principles, methods, practices and procedures applicable to area of assigned responsibility
- \*automated design and computer-aided drafting software
- \*interpreting blueprints, design plans, and specifications
- \*applicable federal, state, and local laws, regulations, and guidelines

Moderate knowledge of:

- supervisory methods, practices, and procedures

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

Other knowledge as required for successful performance in the Engineering Technician V class

#### **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

- \*MONITORING - Monitor and assess performance of one's self, other individuals, or organizations to make improvements or take corrective action
- \*MANAGEMENT OF MATERIAL RESOURCES - Obtain and see to the appropriate use of equipment, facilities, and materials needed to do certain work
- \*COMPLEX PROBLEM SOLVING – Identify complex problems and review related information to develop and evaluate options and implement solutions
- \*MANAGEMENT OF PERSONNEL RESOURCES - Motivate, develop, and direct people as they work and identify the best people for the job
- \*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

Other skills as required for successful performance in the Engineering Technician V class

### **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
- RECOGNIZE PROBLEMS - Tell when something is wrong or is likely to go wrong
- WRITE - Communicate information and ideas in writing so others will understand
- REASON MATHEMATICALLY - Choose the right mathematical methods or formulas to solve a problem

Other abilities as required for successful performance in the Engineering Technician V class

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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  
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