



# CIVIL ENGINEERING TECHNICIAN III

## JOB DESCRIPTION

<b>Department:</b> Public Works	<b>Division:</b> Engineering
<b>Work Location:</b> Urbana Public Works Department	<b>Percent Time:</b> 100%
<b>Job Type:</b> Civil Service	<b>FLSA Status:</b> Non-exempt
<b>Reports To:</b> City Engineer	<b>Union:</b> Non-Union

## JOB SUMMARY

Under the direction of the City Engineer, the Civil Engineering Technician performs various engineering tasks and duties as assigned. Involved in the planning and implementation of municipal infrastructure improvement projects and maintenance programs; managing the City's regulatory programs; maintaining the City's compliance with state and federal regulations; conducting field investigations and inspections; collecting field data utilizing surveying techniques and instruments; monitoring construction work; and assessing condition of infrastructure.

## **Defining Characteristics**

This is the advanced journey level within the Civil Engineering Technician classifications. Technicians of this level are expected to have a breadth of knowledge and experience to successfully complete projects with considerable independence. Duties involve interpreting engineering guidelines; coordinating various activities; assisting with the preparation of technical reports; and performing detailed reviews of engineering related projects. Technicians of this level may provide leadership and guidance to lower-level Civil Engineering Technicians and Engineering part-time personnel. Positions in this level are typically filled by advancement from Civil Engineering Technician II, or when filled by a person from the outside with prior experience.

## ESSENTIAL FUNCTIONS

- Perform a range of engineering related tasks requiring independent analysis and formulations of solutions to problems
- Perform measurements and calculations accurately
- Assist with planning and implementation of capital improvement projects and maintenance programs

- Assist with managing the City's regulatory programs, such as Utility / Right-of-Way Permits, Erosion Control Permits, and Development Review
- Assist with maintaining the City's compliance with state and federal regulations, such as National Bridge Inspections Standards (NBIS), National Pollutant Discharge Elimination System (NPDES) Permits, and others that may be identified in the future
- Assist with maintaining and updating data for the City's infrastructure assets
- Collect field data, such as existing topographical data, utilizing surveying techniques and instruments
- Monitor construction of contract work to ensure work is performed in compliance with contract plans and specifications and required quality is obtained
- Assist with design and development of construction plans, specifications, and contract documents
- Prepare exhibits, graphics, and special illustrations and attends public information meetings in conjunction with various City projects
- Coordinate contract work on concurrent projects with other departments and agencies; assists with the preparation of news releases, letters, and any other communication tools distributed to property owners, residents and necessary public or private agencies to effectively and efficiently communicate with impacted parties on any project
- Draft plans for various contract projects from preliminary design stage through final "record" drawing stage
- Provide technical support to various City departments
- Handle requests for information, service or complaints over the phone, via electronic or regular mail and in person, or makes referrals to appropriate staff on behalf of the City of Urbana
- Ensure that the City vehicle and other equipment to which he/she is assigned is maintained in clean, proper running condition; reporting to supervisor or other appropriate person when vehicle or other equipment is in need of repair
- Provide leadership, guidance and supervision to lower-level Civil Engineering Technicians and Engineering part-time personnel
- Perform other activities as assigned.

*This job description reflects the general concept and intent of the classification and should not be construed as a detailed statement of all of the job requirements that may be inherent in the position.*

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## **JOB REQUIREMENTS**

### **Education & Experience**

*Any combination of education and experience that would likely provide the required knowledge and abilities is qualifying. Typical ways the knowledge and abilities would be attained are:*

- Associate's degree in Civil Engineering Technology or related field from an accredited post-secondary program.
- Four (4) years of experience in Civil Engineering Technician II position or eight (8) years of equivalent experience in municipal, county, state, or federal engineering, engineering consulting, construction management, or related field. A bachelor's degree in Civil Engineering or a closely related field is preferred and may substitute for two (2) years of the experience requirement.

**Preferred Attributes**

- Familiarity with ArcGIS
- Familiarity with Granite XP Sewer Televising Software

**Knowledge of**

- Standard practices, procedures, materials, tools, and equipment used in the maintenance, repair, rehabilitation and construction of municipal infrastructure projects
- Engineering drafting techniques and tools
- Field survey instruments and techniques
- Mathematics through trigonometry
- Microsoft Office applications, including Word, Excel, Access, PowerPoint and Outlook
- AutoCAD or Microstation

**Ability to**

- Operate equipment, such as a theodolite, level, metal detector, computer, scientific calculator, plotter and mobile radio
- Layout construction projects, including sewers, new pavements, sidewalks and bridges/structures
- Obtain concrete samples for measurement of air entrainment and slump and cylinder testing; inspect manholes; drill cores; measure quantities; and calculate construction quantities and costs
- Make quick and intelligent field judgments required during construction inspection
- Stand for long periods of time while inspecting construction projects
- Perform AutoCAD drafting and use computer spreadsheet and word processing software
- Measure and calculate construction quantities and costs
- Read figures quickly and accurately and make mathematical calculations
- Follow oral and written instructions
- Perform moderately complex technical tasks which are broad in scope and require application of fundamental concepts

- Observe, compare, or monitor objects and data to determine compliance with prescribed operating or safety standards
- Use graphic instructions, such as blue prints, schematic drawings, layouts, or other visual aids
- Communicate clearly and concisely, both orally and in writing, applying strong verbal and written skills for the preparation of technical and administrative reports and the presentation of recommendations
- Learn and interpret City policies and procedures, along with other standard policies and
- Determine which work processes and methods are most appropriate to accomplish technical assignments
- Learn to manage work of paraprofessional staff
- Learn to apply practical technical expertise toward the completion of projects
- Interpret and apply City policies and procedures, along with other standard policies and procedures from other regulating agencies
- Refer highly sensitive issues to higher levels

#### **Licenses, Certifications, and Memberships Required**

- Must possess a valid Illinois driver's license or have the ability to obtain one within fifteen (15) days of employment and have the ability to operate a motor vehicle.
- Possession of at least two (2) of the following certifications (or the ability to obtain within one year of employment or promotion) is preferred:
  - NASSCO Cured-In-Place Pipeline Certification
  - NASSCO Manhole Rehabilitation Certification
  - National Bridge Inspector System (NBIS) Inspector
  - Certified Professional in Erosion and Sediment Control (CPESC)
  - IDOT Hot Mix Asphalt Level II Technician Certification
  - IDOT Portland Concrete Cement Level II Technician Certification

#### **Supplemental Information**

##### **Supervision received**

- Works under the direction of the City Engineer; establishes procedures for attaining specific goals and objectives and is assigned responsibility for establishing the methods to attain them. Generally in charge of an area of work, but does not have the authority for approving policy.

##### **Level and complexity of supervision exercised**

- This position may supervise lower-level Civil Engineering Technicians and Engineering part-time personnel.

### **Security Level**

- Level MVR: essential functions require frequent use of City vehicles

### **Physical Demands and Working Conditions**

- Physical Demands: ability to lift and carry fifty (50) pounds; sit, stand and/or walk for extended periods and ability to walk on uneven terrain at construction sites and other surfaces; manual dexterity and eye-hand coordination needed to use a variety of office equipment such as computers, telephones, calculators, copiers, and topographic surveying equipment. Position requires visual acuity sufficient to read computer screens and printed documents and visually inspect work in progress and hearing in the normal audio range with or without correction.
- Working Conditions: Work generally occurs in both an office and field environment. A typical work schedule: Monday - Friday, 7:00 a.m. - 4:00 p.m. with flexibility depending upon the needs of the department. May be required to work in excess of 40 hours a week and/or work irregular hours, particularly during construction projects or emergency situations. Job requires outside work in all weather conditions, winter and summer as well as inside office work. Work occurs around traffic, in and around heavy equipment in construction zones, and around potentially hazardous fumes and caustic compounds. Incumbents may be subjected to dusts, fumes, extreme temperatures, inadequate lighting, and intense noises.

### **Job Dimensions**

- General guidelines for work exist, but employee is increasingly responsible for determining the approach for performing the work.
- At the advanced journey level, employee performs technical or trades-based work that requires a solid understanding of basic algebra and statistics at the advanced para-professional level. Work complexity and independence increase relative to demonstrated proficiency and expertise. At advanced levels, employee performs work that encompasses advanced technical, scientific, legal, or mathematical concepts. Work directly contributes to the implementation of specific policies, programs, or initiatives of the organization.

*The physical demands and work environment described herein are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.*

*The duties listed above are intended only as illustrations of the various types of work that may be performed. The omission of specific statements of duties does not exclude them from the position if the work is similar, related or a logical assignment to the position.*

*The job description does not constitute an employment agreement between the employer and employee and is subject to change by the employer as the needs of the employer and requirements of the job change.*

**Class Specification History**

New classification added: 02/10/2016.

General Revisions: 05/25/2022

*For HR/Finance Use*

<b>Title Code</b>	<b>Pay Grade</b>
	241
<b>EEO Category</b>	
3-Technician	