

## Engineering Technician III

**DEPARTMENT:** Public Works  
**DIVISION:** Engineering  
**SUPERVISOR:** Engineering Manager  
**FLSA STATUS:** Non-Exempt (overtime eligible)  
**UNION:** Yes  
**CONFIDENTIAL:** No



### **POSITION SUMMARY**

Performs technical and complex sub-professional engineering related work in the areas of street, water, sewer, storm drainage, and other public works projects and programs. Assists senior Engineering staff and acts as a Project Manager under the supervision of the Engineer Manager in application of principles, methods, and techniques of civil engineering.

### **SUPERVISION RECEIVED**

Engineering Manager

### **SUPERVISION EXERCISED**

None.

**ESSENTIAL DUTIES AND RESPONSIBILITIES** include the following, but are not limited to:

- Performs a variety of high-level drafting and design work
- Prepare plans, specifications, reports, and cost estimates for public improvements such as streets, storm drains, sewers, water works, traffic signals/controls, and other public projects
- Make calculations for engineering/surveying and other related work
- Assist project engineer in performing survey work and obtaining field data for preparation and planning of proposed projects
- Provide design, construction or consultant contract administration and management or inspection of capital improvement, repair, and maintenance projects
- Establish schedules and methods of providing construction inspection services
- Prepare, review and maintain various data, reports, documents, and project files, such as, but not limited to, inspection logs, daily construction logs, change order requests, quantities and material estimates, progress reports, site plans, subdivision improvement plans, development agreements, real property documents, submittals and as-built drawings
- Review improvement plans, maps, specifications, cost estimates, and other work for accuracy, presentation, and conformance with established engineering practices, City Standards, General Plans, and Specific Plans
- Determine and oversee field material testing of samples of materials routinely used in construction projects.
- Prepare data for as-built utilizing GPS equipment, recording changes, dimensions, etc.

- Research and compiles contract documents, contracts, bid reviews, and preliminary bid analysis for contract awards; prepares reports.
- Oversees surveys for engineering projects and activities; locates, measures, and records field data of existing facilities; field stakes and marks proposed construction projects; operates survey equipment.
- Coordinate, develops and maintains data layers and spatial data structures using Geographic Information Systems (GIS) and AutoCAD tools and relational databases; develops and maintains relational databases; creates, and maintains maps, drawings, spreadsheets, data files, and other documentation using AutoCAD; converts AutoCAD mapping and data to GIS and vice-versa; provides GIS application support; trains and assists system users.
- Provides expert guidance and information to staff, managers, architects, engineers, inspectors, developers, contractors, utility companies, the general public, and/or outside agencies; acts as a representative on committees, interagency task forces, and special projects as assigned.
- May acts as project coordinator for assigned projects for various municipal public works street, water, sewer, and storm drainage construction projects.
- Conducts field surveys for horizontal/vertical locations, topography, construction staking and other related survey work acting as a survey party chief
- Performs onsite inspections of project sites to determine conformance with design specifications and to ensure that construction and repair of transportation, water, wastewater, and storm drainage systems meet control requirements
- Performs other duties as assigned as it pertains to this job and the department/division.

#### **MINIMUM QUALIFICATIONS**

- Graduation from a high school or GED, supplemented by two years of technical school or college course training in drafting, computer-aided design (CAD), engineering
- Minimum of seven years of increasingly complex sub-professional engineering comparable experience

#### **KNOWLEDGE, SKILLS & ABILITIES:**

- Considerable knowledge of civil engineering and surveying principles, practices, and methods as applicable to a municipal setting; knowledge of design, construction, inspection, and maintenance of public works facilities; and reasonable knowledge of applicable City policies, laws, and regulations affecting division activities
- Skill in arriving at cost estimates on complex projects, some skill in operating the listed tools and equipment, and some skill in basic drafting, surveying, and flagging
- Ability to prepare, organize and maintain engineering field and office data, reports, and systems; ability to effectively communicate complex technical information orally and in writing to contractors, developers, property owners, employees, consultants, other governmental agency representatives, city officials and the general public; and ability to coordinate and plan multiple long-range and short-range projects simultaneously
- Techniques for preparing designs, plans, specifications, estimates, reports, and recommendations related to public works

- Mathematics including algebra, geometry, and trigonometry
- Engineering methods and techniques used in the development, management, and execution of public works projects and private developments impacting public works infrastructure
- Knowledge of AutoCAD Civil 3D and ESRI GIS software
- Basic field surveying principles
- Basic soil mechanics/testing
- Practices, methods, materials, equipment used in construction safety
- Organized, good written and verbal communication skills, attention to detail, good attendance, sound problem-solving skills, and general computer knowledge
- Effective written and oral communication skills
- Applicable laws and regulatory codes relevant to assigned area of responsibility
- Methods, materials, and techniques used in the construction of public works projects
- Understand engineering plans, specifications, and other technical documents
- Analyze problems, identify alternative solutions, assess consequences of proposed actions, and implement recommendations
- Operate a variety of electronic surveying, automated drafting, and mapping equipment
- Operate office equipment and technology tools including personal computers, laptop computers and printers, and presentation equipment
- Prepare, understand, and interpret engineering construction plans, specifications, and other contract documents

### **SPECIAL REQUIREMENTS**

- Must possess a valid State driver's license or ability to obtain prior to employment.
- Must be physically capable of moving about on construction work sites, climbing ladders, and safely negotiating sites under adverse field conditions.

### **TOOLS AND EQUIPMENT USED**

Personal computer, including word processing, spreadsheet, and data base and computer-aided- design software; standard drafting tools; surveying equipment, electronic distance measuring devices; motor vehicle; phone; mobile radio

### **PHYSICAL DEMANDS AND WORKING CONDITIONS**

The physical demands 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 these essential job functions.

1. **Physical Demands:** While performing the duties of this job, the employee is occasionally required to stand or sit; walk, use hands to finger, handle, feel or operate objects, tools, or controls; and reach with hands and arms. The employee is occasionally required to climb or balance; stoop, kneel, crouch, or crawl; talk or hear. The employee must occasionally push, pull, lift and/or move up to 20 pounds.

2. **Vision:** Vision sufficient to read small print, computer screens and other printed documents. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth vision, depth perception and the ability to adjust focus.
  
3. **Mobility:** Incumbents require sufficient mobility to work in an office setting and operate office equipment. Some outdoor work is required to inspect various developments and construction sites. Hand-eye coordination is necessary to operate computers and various pieces of office equipment.
  
4. **Environment:** Normal office setting with some travel for meetings or inspections. The noise level in the work environment is usually quiet in the office and moderate to very loud in the field.
  
5. **Working Conditions:**
  - a. Position has normal business hours. Occasional attendance at evening meetings required.
  - b. Adverse working conditions include exposure to seasonal weather changes including working in inclement weather.
  
6. **Resource Accountability:**
  - a. Records maintained include accountability for files relating to projects such as: improvement agreements, security documents, engineering plans, specifications related to developments, as built drawings, and program records.
  - b. Responsibility for the proper care of City equipment.

**EMPLOYEE ACKNOWLEDGEMENT**

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.

**ACKNOWLEDGEMENT**

I acknowledge that I have received a copy of the Engineering Technician III job description. I understand that it is my responsibility to adhere to the guidelines of the expectations, hours of work and essential duties outlined within this job description.

Employee Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Manager Signature: \_\_\_\_\_

Date: \_\_\_\_\_