

## City of Fort Worth, Texas Job Description

<b>Classification Title</b>	Instrumentation Electrical Apprentice II		
<b>Job Code:</b>	TC5810	<b>Job Family:</b>	Technical/Para Professional
<b>Pay Grade</b>	506	<b>Date Reviewed:</b>	3/28/2023
<b>FLSA Status</b>	Nonexempt	<b>Date Revised:</b>	

### GENERAL SUMMARY

Receives training and mentorship related to the Instrumentation and Electrical Technical position. Participates in on-the-job learning and performs tasks (with direction, oversight, and shadowing) related to the installation, maintenance and repair of pneumatic, electrical, hydraulic system as related to water and wastewater treatment/system.

### ESSENTIAL DUTIES & RESPONSIBILITIES

*The intent of this job description is to provide a representative summary of the major duties and responsibilities performed by incumbents of this job. Incumbents may be requested to perform job-related tasks other than those specifically presented in this description.*

1. Learns and understands tasks associated with the installation, maintenance, and repair of: pneumatic control systems, programmable logic control systems, water flow monitoring equipment, digital and analog computer control loops, & water process instrumentation.
2. Acquires on the job training while performing tasks associated with design, ordering, and installing electrical components within water productions and wastewater treatment plants, pump stations, lift stations, and customer city metering sites.
3. Gains knowledge in the performance of circuitry analysis, test data interpretation, and implementing methods for improvement.
4. Receives training and coaching on conducting evaluations on reliability and performance of installed equipment.
5. Gains training insight while performing preventative maintenance in assigned area, as well as the tools utilized in the performance of work.
6. Performs other duties as required.
7. Adheres to assigned work schedule as outlined in the Department and City attendance policies and procedures; ensures all behaviors comply with the City's Personnel Rules and Regulations.

### KNOWLEDGE, SKILLS & ABILITIES

- **Knowledge of:**
  - Fundamentals and operations of electrical components and electrical theory

- Understanding of Water/Wastewater treatment process with associated equipment and machinery
  - Methods and techniques of calibration.
  - Basic understanding of instrumentation and control systems.
  - Basic understanding of the purchasing process and contracts and systems in place.
  - Basic understanding in the methods of circuitry analysis and test data interpretation.
- **Skill in:**
    - Operating various hand, power, pneumatic, hydraulic and precision tools.
    - Observation, following procedures and step-by-step instructions.
    - Multitasking.
    - Time Management.
    - Basic mathematical functions (addition, subtraction, multiplication, division).
    - Performing analytical tasks.
    - Communicating with others.
- **Ability to:**
    - Communicate clearly and effectively, both orally and in writing.
    - Follow written and verbal instructions.
    - Identify and differentiate between color-coded electrical and electronic components.
    - Utilize appropriate tools in performing instrumentation repair and installation.
    - Test and diagnose complex motor controls, water process instrumentation, and electrical systems.
    - Aggregate and interpret data from multiple sources.
    - Establish and maintain effective working relationships.

## **MINIMUM JOB REQUIREMENTS**

High school diploma/GED and 1 year of experience in the I/E Apprentice Program.

## **WORKING CONDITIONS**

*The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.*

Depending on assignment, positions in this class typically require touching, talking, hearing, seeing, grasping, standing, stooping, kneeling, crouching, reaching, walking, repetitive motions, climbing, balancing, pushing, pulling and lifting; depending on assignment. Incumbents may be exposed to moving mechanical parts, odors, dusts, poor ventilation, chemicals, oils, extreme temperatures, inadequate lighting, intense noises, gases, vibrations, chemicals, oils and workspace restrictions.

## **PHYSICAL DEMANDS**

*The physical demands described here 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.*

Heavy Work – Depending on assignment, positions in this class typically exerting up to 50 pounds of force occasionally, up to 20 pounds of force frequently, and/or up to 20 pounds of force constantly having to move objects.