



# Electrical/Instrumentation Technician I

<b>Department/Group:</b>	<b>Division 3 – E/I Branch</b>	<b>Travel Required:</b>	<b>Sometimes</b>
<b>Location:</b>	<b>Wellfield - Sanford</b>	<b>Position Type</b>	<b>Full Time</b>
<b>Reports to:</b>	<b>Electrical/Instrumentation Foreman</b>	<b>Grade Level:</b>	<b>Non-Exempt -- 9</b>

## JOB SUMMARY:

Under general supervision, performs installation, maintenance and repair of Authority electrical systems, motors, SCADA systems and other electronic control systems related to the operation of pumping water from the John C. Williams Wellfield.

## ESSENTIAL JOB FUNCTIONS:

The duties and responsibilities listed below are intended to provide a representative list of the various types of work that may be performed. Specifications are not intended to reflect all duties performed within the job class. The omission of specific duties does not exclude them from the position if the work is similar, related or logical assignment to this class.

- Installs, troubleshoots problems, maintains and repairs SCADA system communication to production wells and pumping plants
- Tests, troubleshoots, calibrates, repairs, and performs preventative maintenance on a variety of electrical and instrumentation systems, components, and equipment associated with the operation of the production wells, pumping stations, etc.
- Designs and develops complex Programmable Logic Controller (PLC) programs to accommodate additions or upgrades to the production wells and pumping plants; configure, diagnose, install, maintain, troubleshoot and repair PLC hardware and software programs, and radio hardware and software
- Wires and tests new well motors; monitoring currents and voltages to ensure specifications are met
- Installs and maintains surge protection systems on wells and pumping plants
- Works with electrical contractors on main electrical lines and transformer installation
- Inspects and tests equipment and electrical devices for proper operation, control and safety
- Updates and maintains service reports at each location
- Maintains high voltage (4160 volts) to low voltage (12 volts) circuitry
- Assists in and/or conducts the inspection, installation of, maintenance and adjustments of cathodic protection systems to ensure proper level of operation
- Operates assigned vehicle skillfully and safely; inspects and fuels vehicle; reports the need for repairs and service; observe safe driving practices; operates and maintains a wide variety of hand and power tools and equipment related to work assignments
- May order parts, materials, and supplies required for electrical and other repairs
- Subject to after-hour call out for emergency work
- Assists other departments with pipe leaks, repairs or special projects, automotive electrical and air problems, motor overhauls, and generator engine maintenance
- Assists with the installation, maintenance and repair of Authority electrical systems, motors, SCADA systems and other control systems along the distribution system
- Observes safe work practices and safety methods
- Establishes and maintains cooperative working relationships with co-workers and outside agencies

**KNOWLEDGE, SKILLS AND ABILITIES:**

## Knowledge of:

- Practices, theories, methods, techniques, tools, and equipment used in the design, installation, testing, calibration, maintenance, and repair of electrical, process, and instrument controls and SCADA systems, equipment and devices common to water systems
- Use and operation of measuring and testing devices, hand tools and equipment of the trade
- Workplace safety procedures, codes and other regulations applicable to Authority operation, maintenance and construction activities
- Electrical and electronic shop procedures, practices, and mathematics
- SCADA configuration, diagnosis, and support
- Security systems and heating and air conditioning units

## Ability to:

- Install, test, diagnose, calibrate, and repair a wide variety of electrical and instrumentation devices, motor control systems, machinery, and equipment common to water distribution systems
- Use diagnostic instruments to test calibrate, and repair complex electrical and SCADA equipment
- Read and interpret wiring diagrams, specifications, and manuals
- Exercise independent judgement and initiative within established guidelines
- Make estimates of labor and materials
- Keep records and make reports

**EDUCATION AND EXPERIENCE:**

Any combination of education or experience that would likely provide the necessary knowledge and abilities is qualifying. A typical way to obtain these knowledge and abilities would be:

- Graduation from high school or equivalent
- Two-year certification in Instrumentation and Electrical Technology and/or five years experience

**LICENSES, CERTIFICATES AND/OR SPECIAL REQUIREMENTS:**

- A valid Texas driver's licenses and the ability to maintain insurability under the Authority's Vehicle Insurance Policy

**PHYSICAL DEMANDS AND WORK ENVIRONMENT**

The physical demands and work environment described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Employees may be required to wear and/or use personal protective and other safety equipment. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, employees are regularly required to use hands to finger, handle, feel, or operate objects, tools, or controls; reach with hands and arms; drive; stand; talk or hear; walk or sit; climb or balance; and kneel and crouch. The employee frequently is required to stoop or crawl. The employee must regularly lift and/or move up to 25 pounds, frequently lift and/or move up to 50 pounds, and occasionally lift and/or move up to 100 pounds and climb ladders and tanks up to 200 feet. Specific vision abilities required by this job include close, distance, color, and peripheral vision; depth perception; and the ability to adjust focus.

Environment: Employee regularly: works outdoors, exposed to sun, temperatures above 90 degrees and below 40 degrees, and other weather conditions; exposed to potential electrical shock and hazardous materials. Employee frequently: exposed to unusually loud sounds. Employee occasionally: exposed to fumes and odors; works in confined or cramped positions; gets part of body and/or clothing wet; works on wet or slippery surfaces. Some work done at a height of more than 12 feet above ground; some skin exposure to oil or grease.