



TDOT Engineering Technician IV

AGENCY OVERVIEW AND PROGRAM FOCUS

Transportation is so basic that many of us overlook its overwhelming importance in our daily lives. Practically everything used in our homes, offices, or schools across Tennessee – from furniture to food items to clothing – requires a large and complex transportation network. The Tennessee Department of Transportation provides citizens of Tennessee and travelers with one of the best transportation systems in the country. TDOT is a multimodal agency with responsibilities in building and maintaining roads, aviation, public transit, waterways, railroads, cycling and walking. Our involvement ranges from airport improvements to funding transit buses to planning for river ports.

SUMMARY

This is the senior level in the Engineering Technician series for TDOT. This position is primarily responsible for driving the transportation operation functions within the department. This includes contract development and implementation, interpretation and implementation of federal and state statutes, interpretation and implementation of department policy and procedures, surveying, materials sampling and testing, construction inspection, contract documentation of daily activities, interaction with internal and external customers, as well as the processing of permits requiring the ability to interpret and apply technical skill sets. In addition, the TDOT Engineering Technician IV follows the direction of the Supervisor to perform senior-level functions with complete responsibility for the most complex equipment operations and coordination of transportation technician activities. Employees in this class may be assigned to a headquarters specific office or a specific geographic area within a region or work in a region-wide assignment.

RESPONSIBILITIES

NOTE: The job responsibilities listed are typical examples of the work performed by positions in this job classification. Not all duties assigned to every position are included, nor is it expected that all positions will be assigned every duty.

- Prioritizes and incorporates safe practices into daily activities
- Leads crews or teams on assignments and/or trains employees, including effective communication through active listening, and providing verbal and written instructions
- Reads, interprets, and applies federal and state statutes and department policies related to transportation activities including construction, materials acceptance, and environmental compliance
- Assists internal and external customers in identifying, documenting, and resolving highly complex issues
- Serves as a mentor in supporting career development and training, as well as cultivating communication and leadership skills of others at TDOT



- Provides acquired knowledge to project teams with respect to project design elements that resulted in change orders, schedule delays, and construction quality issues on previously constructed projects
- Reads, interprets, and applies contract documents, legal documents, and project design plans as part of daily activities
- Ensures TDOT's Quality Assurance process is followed for all work items
- Documents project work activities per TDOT policies, specifications, and guidelines for progress reporting and use with contractor payments
- Performs testing, including pertinent calculations, to meet the appropriate ASTM, AASHTO, and departmental specifications in the areas of soil, asphalt, concrete, density, field measurements, and manufactured products
- Safely and effectively operates light duty vehicles, equipment used to remove snow and ice from highways and bridges, and heavy equipment necessary to conduct soil boring operations
- Implements work zone traffic control per the MUTCD and TDOT's policies, specifications, and guidelines
- Operates survey equipment to set line, grade, and project reference.
- Operates computer equipment
- Performs other job responsibilities as assigned

QUALIFICATIONS

Education and Experience:

Education equivalent to graduation from high school and four (4) years of relevant transportation operations experience and completion of the Engineering Technician Proficiency Program levels I through III

Or

Education equivalent to graduation from high school and four (4) years of relevant transportation operations experience including at least one (1) year of experience with leading crews or teams on assignments and/or training employees, including effective communication through active listening, and providing verbal and written instructions

Substitution of Education for Experience:

An associate degree in a related field of study may substitute for 2 years of experience in the related field as outlined in the position description.

Relevant transportation operations experience should be full-time work in a combination of the following areas:

- Transportation-related construction and quality control inspections
- Materials and testing
- Surveying
- Transportation project operations and documentation



- Transportation Systems Management and Operation (i.e., Freeway, Intelligent Transportation Systems (ITS), EMS, Freight, TIMs, Integrated Corridor Management (ICM) systems, and Active Transportation and Demand Management)

Necessary Special Qualifications

- Possess and maintain a Class D driver's license valid to operate vehicles in the State of Tennessee
- Some positions within this classification may require candidates to possess and maintain, or obtain at their own expense and within eleven months of hire, a Class A Commercial Driver's License with an N endorsement (Code 52 restriction is allowable) that is valid in the State of Tennessee

Knowledge, Skills, Abilities, Competencies

- Knowledgeable of the Tennessee Manual on Uniform Traffic Control Devices (MUTCD)
- Knowledgeable in transportation operations safety procedures
- Knowledgeable in administering contracts
- Skilled in report and form writing
- Skilled in applicable hand and power tools, equipment, and mechanical devices of the trade
- Skilled in the use of light and heavy equipment
- Ability to communicate effectively using both verbal and written instructions
- Ability to use computers and applicable programs, applications, and systems
- Ability to recognize and take precaution for potential hazards
- Ability to lead teams - maintaining effective work relationships with individuals and groups, both internal and external
- Ability to provide tailored instruction and teaching methods that accommodate the differing learning styles of others
- Ability to analyze a process and offer actionable feedback on how to improve the process for effectiveness, quality, and efficiency
- Ability to use objective thinking, focus on relevant details, and weigh the outcomes of different options to make decisions in resolving issues.
- Ability to read, interpret, and apply information from a variety of formats including statutes, policies, procedures, specifications, and construction drawings
- Knowledge and ability in reviewing and enforcing traffic control and work zone traffic safety plans
- Knowledge and ability in reviewing and enforcing compliance of work site safety plans for field and laboratory facilities



Conditions of Employment

- Must pass a drug test prior to employment for commercial driver and safety impact positions. Commercial drivers and safety impact employees will be subject to additional drug and alcohol testing during employment.
- Incorporating overtime, weekends, and night shifts into their schedules as work schedules dictate, including on-call rotation
- Extended durations outdoors in extreme weather conditions
- Working in and around construction and vehicular traffic
- Walking on uneven terrain
- Climbing ladders and construction scaffolding
- Carrying equipment and samples in excess of 25 pounds
- Driving long distances are required as part of daily duties
- Performing work in which personal protective equipment will be required to be worn