



# TDOT Senior Technical Specialist

## 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.

This classification is within the Tennessee Department of Transportation. The responsibilities of TDOT are to plan, develop, preserve, and maintain the state highway system and assist local governments in developing their highway systems. Specific responsibilities include highway data collection; planning; public outreach; program development; environmental field studies, analysis, compliance documentation, and permitting; regulatory agency consultation; scheduling; design; right-of-way acquisition; estimates; aerial surveying; construction; maintenance; traffic engineering; materials; and geological testing.

## SUMMARY

As part of TDOT's infrastructure for all modes of transportation, Senior Technical Specialists are responsible for professional transportation planning and public outreach work; collecting and analyzing data and information; developing technical reports, grants, and contracts; and consulting with regulatory agencies.

Senior Technical Specialists are actively engaged in the development, analysis, interpretation, and administration of contracts and grants, and may also be tasked with leading financial plan development, compliance and quality reviews, and auditing functions. Employees in this classification series will be highly proficient in the use of computers, data analytic tools, highly technical field equipment, materials sampling and testing, technical drawing development, and report writing.

A Senior Technical Specialist is an advanced level. They are expected to use sound judgment and decision-making skills to provide direct oversight and to work independently on highly complex duties. The Senior Technical Specialist will be expected to work both independently and, in a team, setting, performing expert skill-level technical duties. This position will assist with office and field/laboratory training and mentor junior staff, with all unusual issues being reported to a supervisory level.



## RESPONSIBILITIES

**NOTE:** The position responsibilities listed are representative of the work performed by positions within the Technical Specialist classification series. The responsibilities listed are not all-inclusive for every position, nor is it expected that all positions will be assigned every responsibility.

The essential duties of a Senior Technical Specialist include:

- Read, interpret, and apply statutes, regulations, policies, plans, specifications, standards, grant language requirements, contract requirements, and funding applications
- Perform financial reporting and documentation activities to ensure compliance with contract requirements
- Research and perform analysis of data sets and prepare reports on the investigation, assessment, and development of recommendations conducted to solve transportation planning, environmental, modeling, design, construction, and material testing issues
- Use advanced computer software applications and technical field/laboratory equipment to analyze, model, design, and report numeric and technical engineering and financial data sets
- Negotiate complex agreements with other governmental agencies, consultants, contractors, and external stakeholders related to resolving impacts to the successful development and implementation of grants, contracts, projects, and programs
- Lead the development, processing, and monitoring of federal and state funding obligations by funding type for transportation funding projects and programs across TDOT
- Lead the consultation, processing, and monitoring of federal and state regulatory requirements
- Leading consultant prequalification, selection, invoice processing, and performance assessments
- Lead geodetic data collection and data analysis for horizontal, vertical, and longitudinal control using conventional survey equipment, drones, lidar, and three-dimensional data analytic software
- Lead field surveys, conduct field sampling and testing, document activities using pictures and videos, identify, measure, and record information, that defines characteristics and components needed to clearly identify issues or potential risks and make recommendations to mitigate these issues/risks
- Analyze, test, and develop recommendations on products, including those that are new technologies, to determine if they meet department standards
- Review, process, and ensure compliance of transportation grant applications from local government agencies for projects and programs that qualify for federal and state funding
- Coordinate and communicate with external stakeholders, local government agencies, regulators, contractors, and consultants to address complex issues involving projects, grants, prequalification, contracts, compliance, and invoice processing
- Interpret, communicate, train, and enforce OSHA safety regulations and standards across all employee classifications, work locations and facility types within TDOT
- Train and mentor other employees within the discipline

- Provide feedback to Regions, local government partners, consulting and regulatory agencies, consultants, contractors, and legislators to resolve highly complex projects and program issues
- Prepare reports, charts, and graphs used in the presentation of data using technical writing skills
- Work to plan, develop, and assemble transportation infrastructure survey deliverables and supporting documents with the latest computer technology
- Responsible for the completion of applicable project deliverables in the planning, design, and construction phase, and for the identification of issues that might impact critical path work items on complex projects
- Operate light-duty vehicles

## QUALIFICATIONS

### **Education and Experience:**

Bachelor's degree and 3 years of demonstrated competency in a related field as may be outlined in the position description.

OR

Master's degree and 2 years of demonstrated competency in a related field as may be outlined in the position description.

### **Necessary Special Qualifications for Senior Technical Specialist**

*Some positions in these classifications may have additional requirements such as:*

- Professional licenses and/or certifications
- Possess and maintain a Class D driver's license valid for use in operating vehicles in the State of Tennessee

*Any necessary special qualifications will be denoted in the position description.*

### **Knowledge, Skills, Abilities, and Competencies**

The required KSACs for TDOT Senior Technical Specialist include:

- Skilled in communicating effectively, while interacting with internal and external stakeholders in a professional and courteous manner
- Skilled in the application of engineering principles
- Skilled in the application of transportation finance principles
- Skilled in the application of state and federal regulations to transportation projects
- Skilled in technical report writing
- Skilled in the development of contract principles and applications
- Skilled in the ability to maintain effective work relationships with individuals and groups, both internal and external in a professional and courteous manner

- Skilled in the ability to manage time and prioritize work items to ensure project assignments are completed
- Ability to manage time to ensure assignments are completed
- Ability to use critical thinking to problem solve and make informed decisions
- Ability to follow, provide, and support verbal and written instructions
- Ability to conduct work with precision and a high degree of accuracy
- Ability to work in project teams
- Ability to resolve conflicts, coach, and mentor others, and support a culture of accountability, collaboration, and accomplishment
- Ability to analyze a process and offer actionable feedback for use in improving the effectiveness, quality, and efficiency of the existing process

#### **Conditions of Employment**

- Incorporating overtime, weekends, and night shifts into their schedules as work schedules dictate
- 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 as required to perform daily duties
- Performing work in which personal protective equipment will be required to be worn
- Sitting for extended periods while driving or working on computers
- Standing for extended periods while working outdoors or in a laboratory setting

#### **Where are these positions used:**

State Traffic – Modeling and Forecasting

State ROW – ODA/Junkyard

State Utilities

State Asset Management

Professional Services

Program Development

M&T – Geotech

State Health and Safety

#### **Potential areas that may use this classification series:**

Local Programs

Planning

Multi-Modal

Program Administration



Environment – HQ and Region

Region Utilities

Region Geodetics