**Forecasting Senior Technical Specialist**
Planning Division – Forecasting and Data Visualization Section
Nashville, TN
$75,204 annually

## Job Overview

The Forecasting Senior Technical Specialist serves as the subject matter expert in developing travel demand models and travel forecasting tools to estimate the demand for transportation solutions that optimize financial investments and meet the state's sustainable and resilient mobility needs. This position is responsible for analyzing current and future travel patterns, anticipating future needs, and supporting informed decision-making in transportation planning, analysis, and environmental impact.

The Forecasting Senior Technical Specialist position requires frequent collaboration with TDOT Divisions and Regions, Metropolitan Planning Organizations (MPO), Rural Planning Organizations (RPO), and other State and Federal agencies. This position must effectively articulate travel demand modeling and forecasting concepts through training, mentoring, and collaborating as part of a matrix organization.

## Essential Job Responsibilities

Develop the Tennessee Statewide Travel Demand Model (TSM) by collecting socioeconomic, transportation network, and travel behavior data; developing a modeling structure that includes trip generation, trip distribution, mode choice, and trip assignment; calibrating and validating the model; and performing scenario analysis and forecasting to anticipate changes. This also includes maintenance of the model and applying the Tennessee Statewide Travel Demand Model (TSM) to accomplish and support transportation planning activities and to prioritize projects and programs.

Provide project-specific current and future traffic volumes, levels of service, capacity analysis, travel time data, and other traffic data to TDOT Divisions and Regions for use in preparing environmental documents, conceptual designs, geometric designs, pavement designs, and other required traffic analysis and design processes.

Provide technical support to MPOs and RPOs and assistance with maintaining regional travel demand models. As requested, develop travel demand models for MPOs that allow MPO travel demand models to work seamlessly with the TSM.

Develop and maintain TDOT's mobile emissions model (currently MOVES5) to estimate future air quality and emissions compliance. Acquire traffic data and provide the data to MPOs and TDOT Divisions and Regions. Produce technical reports and

applications using travel behavior data.

Assist the Division Director, Manager, and Team Lead in the development and delivery of travel demand modeling and traffic forecasting training and technical guidance that addresses acquired knowledge and risk management, inspiring new program and project processes, procedures and technologies, and developing skills. Provide expertise, training, and mentoring to TDOT staff and local agencies regarding travel demand modeling and traffic forecasting issues and considerations.

Provide exceptional customer service to both internal and external customers by exercising effective listening skills and providing prompt responses. Serve as a TDOT liaison in teaming with MPOs, RPOs, other local governments, and industry for travel demand modeling and traffic forecasting-related issues.

Promote and encourage the pursuit of excellence in alignment with TDOT's visions. Assist with the development and execution of quality management procedures for travel demand modeling and traffic forecasting activities to ensure a high level of quality, achievement, and implementation. Consistently work to improve processes that support quality deliverables.

Remain current with national and regional applicable travel demand modeling and traffic forecasting initiatives and trends. Assist in developing, maintaining, and updating TDOT's policies, methods, procedures, and guidelines for the efficient and effective management of travel demand modeling and traffic forecasting activities in conformance and compliance with federal and state requirements and TDOT policies.

## Qualifications

- Bachelor's degree
- 3 years of demonstrated competency in State and Regional Transportation Planning, Geographic Information Systems (GIS), Statistics or Mathematics, Data or Computer Science, or a related field

## OR

- Master's degree
- 2 years of demonstrated competency in State and Regional Transportation Planning, Geographic Information Systems (GIS), Statistics or Mathematics, Data or Computer Science, or a related field

## Ideal Candidate

The Forecasting Senior Technical Specialist is highly analytical, detail-oriented, and equipped with advanced data analysis and modeling skills. They have a deep understanding of data structures, tools, and techniques, enabling them to extract valuable insights and drive data-driven strategies. They possess excellent communication and interpersonal skills and coordinate effectively with multiple stakeholders. Their ability to convey complex technical concepts in an accessible manner ensures alignment across teams and fosters collaborative problem-solving. They are committed to fostering informed decision-making and thrive in a dynamic environment. The Forecasting Senior Technical Specialist balances technical precision with the ability to address complex challenges through innovative solutions.