

Who we are:

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. The Department of Transportation has approximately 3,500 employees with four statewide region facilities in Knoxville, Chattanooga, Nashville, and Jackson. TDOT Aeronautics is located near the John C. Tune Airport in Nashville, TN.



Roadway Design Transportation Engineering Specialist 3 & 4

Region Preconstruction – Roadway Design

\$80,784 - \$88,860 annually

Job Overview

The Roadway Design Transportation Engineering Specialist 3 & 4 supports Project Teams, technical Divisions, and Region Operations through the application of Department specifications, policies, technical guidance, and procedures into the design of roadway-related assets. This position collaborates with technical disciplines and Project Teams to prioritize safety and cohesiveness for roadway design elements in support of TDOT's project delivery process.

The Roadway Design Transportation Engineering Specialist 3 and 4 continuously evaluates performance indicators to implement acquired knowledge into the design of roadway elements, mitigating the Department's risk and increasing performance as part of fulfilling TDOT's strategic vision.

The Roadway Design Transportation Engineering Specialist 3 & 4 collaborates with both internal and external stakeholders, including Project Teams, TDOT Divisions, Regions, and contractors to facilitate the transformation of critical project control activities into a quality deliverable that aligns with the goals of the Asset Management Division. This position must effectively articulate roadway concepts through training, mentoring, and collaborating as part of a matrix organization.

Essential Job Responsibilities of the Transportation Engineering Specialists 3 and 4 include:

Serve as a resource for Project Teams by applying the Project Delivery Network (PDN) to defining the scope of work related to roadway design elements; completing roadway plans and all roadway-related deliverables through all Stages of the PDN process and in alignment with the project's scope, schedule, and budget; and ensuring all pay items and associated costs are accurately accounted for in the project estimate related to roadway elements.

Integrate Quality Management into all deliverables for the purpose of proactively addressing plan errors, avoiding ROW delays, and minimizing change orders. Address and resolve all comments obtained from Quality Control reviews.

Provide designs for roadway elements using engineering software, including vertical and horizontal geometrics, open channel flow designs for flows less than 500 cfs, closed stormwater systems, erosion protection and sediment control, signing and pavement marking, address permit assessments, collaborate and create permit

sketches, and traffic control; make determinations regarding project footprints in coordination with TDOT Environment and Right-of-Way Divisions.

Assist in ensuring design decisions are focused on safety and risk mitigation by presenting potential context-sensitive design concepts and implementing strategies that improve road safety, including the collaboration of roadway safety features with HQ and Region Traffic Design, the development of work zone impact management strategies, implementation of Highway Safety Access Manual, and traffic control concepts based on input from Region Traffic Operations, and the implementation of acquired knowledge.

Provide exceptional customer service to project stakeholders by facilitating the sharing of acquired knowledge with Project Teams, providing prompt assistance for roadway concerns, exercising effective listening skills, and communicating effectively.

Remain current and engaged on roadway design related elements, changes to specifications, and innovative construction practices. Research national best practices to optimize designs, methodologies, and safety considerations.

Collaborate with the Project Manager and Project Teams to mitigate potential areas of risk with respect to roadway design elements, Asset Management, Region Construction, Region Maintenance, and Region Utilities throughout the project delivery process. Identify potential design and construction constraints concerning the provisions listed within applicable right of way and environmental documents, when applicable. Identify potential utility conflicts based on best available information. Monitor the effectiveness of implemented risk mitigation strategies and provide additional recommendations, as needed.

Additional Job Responsibilities for the Transportation Engineering Specialist 4 include:

Coordinate with the TDOT Technical Training Director and assist in the development and presentation of training that addresses roadway elements, including acquired knowledge, risk management, TDOT performance metrics, governing rules and processes, reporting procedures, and emerging technologies related to roadway design for the purpose of improving team performance, creating a stronger understanding of the roadway elements, inspiring new ideas, and developing skills.

Collaborate and coordinate with the Region Transportation Engineer, Region Construction, Region Operations, and Region Environmental for current active site visits to determine and provide innovative alternatives for current Preconstruction Project Teams prior to the Functional Design Submittal.

Assist Project Teams by evaluating complex roadway designs to determine potential incompatibilities with other technical discipline requirements. Break down complex issues, including the identification of causes and their cause-and-effect relationships.

Support consultant procurement efforts by reviewing Scope of Services documents related to roadway design services. Assist in ensuring scopes accurately reflect project needs, design requirements, and Department expectations for submittals and coordination.

Compile the design documents, including plans, Special Provisions Order Sheets, and the estimate for all quality reviews of a project, incorporating all other deliverables required by the Roadway Design checklist, and coordinating any cost estimate changes with the Project Manager, if needed.

Perform quality control reviews of roadway design-related elements, focusing on proactively addressing plan errors and mitigating constructability issues. Provide recommendations, when applicable, in response to identified risks related to the proposed design. Verify the proposed design complies with the goals of Asset Management, the Scope of Work, applicable TDOT standards, federal and state policies and guidelines, and all other project-specific requirements.

Qualifications

The Transportation Engineering Specialist 1 and 2 are part of the Graduate Transportation Engineer (GTE) Program.

Transportation Engineering Specialist 3:

- Bachelor's Degree in Engineering
- 2 Years of demonstrated competency in developing and/or constructing transportation projects

OR

- Master's Degree in Engineering
- 1 year of demonstrated competency in developing and/or constructing transportation projects

Transportation Engineering Specialist 4:

- Bachelor's Degree in Engineering
- 3 years of demonstrated competency in developing and/or constructing transportation projects

OR

- Master's Degree in Engineering
- 2 years of demonstrated competency in developing and/or constructing transportation projects

Ideal Candidate

The Roadway Design Transportation Engineering Specialist 3 & 4 is a skilled and collaborative professional who is passionate about creating safe, efficient, and high-quality roadway designs. They are detail-oriented, able to balance multiple priorities, and committed to improving project outcomes. With strong problem-solving abilities, they assess challenges, apply best practices, and find solutions that enhance roadway design and project performance. The Roadway Design Transportation Engineering Specialist 3 & 4 communicates effectively, making complex concepts understandable through training, mentoring, and teamwork with both internal and external stakeholders. Their ability to adapt, collaborate, and ensure project quality makes them a valuable contributor to TDOT's mission.