

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.



Senior Quality Transportation Engineer

Traffic Design Division – Production Support Section, Quality
\$107,388 annually

Job Overview

The Senior Quality Transportation Engineer will manage all aspects of TDOT's quality processes and systems as part of a Project Team and is directly responsible for delivering projects for all phases of the Project Delivery Network (PDN) in accordance with the project's scope, budget, and risk. These projects will range in complexity and risk from simple to highly complex. The Senior Quality Transportation Engineer will provide innovation, leadership, guidance, and support to produce quality deliverables for all sections in the Traffic Design Division including development and application of manuals, training, signing, striping, lighting, signals, traffic forecasting and modeling, ITS, and Traffic Services. The quality role requires collaboration with multiple TDOT Divisions, project team members, contractors, consultants, and other external stakeholders. It requires critical thinking and engineering judgment to problem solve and make well-informed decisions that increase the safety, performance, sustainability, and efficient delivery of TDOT's transportation system.

The Senior Quality Transportation Engineer ensures Department policies, technical guidance, procedures, software, and systems are current and accurate for incorporation into the project delivery process. This position implements the Quality Assurance Program as part of the Headquarters Traffic Design Division's activities. This position must effectively articulate quality concepts through training, mentoring, and collaborating as part of a matrix organization. The Senior Quality Transportation Engineer will support and assist with the Region Quality Teams and the Regional Traffic Engineering Teams for predevelopment and delivery to ensure that design packages are complete and ready for advertisement and letting. The Senior Quality Transportation Engineer assists with monitoring and managing the scope, schedule, and budgets to make the required adjustments as necessary to ensure that the work completed is in alignment with the Department's Asset Management and Strategic goals.

Essential Job Responsibilities

Serve on Project Teams as part of a matrix organization by providing technical expertise related to transportation design elements; preserve the project vision in alignment with Asset Management objectives and quality program requirements; define critical goals and intended outcomes for quality in coordination with the Project Manager; confirm design strategies; evaluate innovative concepts; proactively assess risk factors and assign quality team members; and, for Project Teams associated with Alternative Delivery Contracts, evaluate the cause and effect of implementing Alternative Technical Concepts related to the Request for Proposal

(RFPs), project quality, and life-cycle implications. Optimize the Project Team's ability to mitigate risk and address unanticipated challenges while meeting TDOT's quality requirements.

Ensure the integration of Quality Management into all deliverables is in compliance with Asset Management's business objectives and align with the PDN. Focus on reducing plan errors, right-of-way delays, construction delays, and contractor claims; assist Project Teams by providing reviews as part of TDOT's Quality Assurance Program. Ensure project cost estimates and schedules are considered early in the project development process and are developed based upon actual project context rather than solely on historical factors. Ensure Traffic Design products, processes, and procedures are implemented consistently across projects and Regions.

Assist in developing the quality aspects of a Consultant Acquisition Plan (CAP) and help oversee external partners. Serve on selection committees for professional engineering services as part of the Brooks Act; assist with quality provisions during RFP development, attend project-specific marketing meetings, assist with determining scoring criteria, assist with project information sessions, when applicable, serve as a scorer as part of the consultant acquisition process, and attend de-briefs for consultants where usable quality feedback must be provided.

Routinely collaborate with the Production Support Section, HQ and Asset Management to identify and document knowledge on industry best practices to avoid past errors and ensure TDOT project successes. Brief leadership with metrics associated with quality program reviews. Assist with modifications to applicable policies, procedures, design quality standards, specifications, and special provisions.

Remain current on revisions to design codes, standards, guidelines, AASHTO, and national best practices related to transportation design components, including trends and technologies; review the design and analysis of design components for complex projects; and assist with Risk Assessments.

Provide exceptional customer service to both internal and external customers; mentor and provide technical guidance; coordinate with other disciplines as part of a matrix organization, exercise effective listening skills, provide prompt responses, maintain complete and accurate documentation, and communicate effectively.

Assist in the development of training that addresses asset management objectives, risk management, technical design elements, and emerging technologies related to quality in transportation for the purpose of improving team performance, creating a stronger understanding of the transportation industry, inspiring new ideas, and developing skills.

Assist in ensuring Production Quality Support deliverables are consistent, predictable, and repeatable to provide consistently high levels of achievement, mitigation of risk, and an established track record of success.

Qualifications

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

Necessary Special Qualifications

- Licensed Professional Engineer (PE)

Ideal Candidate

The Senior Quality Transportation Engineer demonstrates a deep understanding of engineering principles, standards, and regulations related to transportation infrastructure. They possess strong analytical skills, attention to detail, and the ability to assess complex design documents and identify potential issues or deficiencies. The Senior Quality Transportation Engineer is committed to quality, has excellent communication and interpersonal skills, and can effectively explain complex concepts to and collaborate with cross-functional teams and stakeholders. The Senior Quality Transportation Engineer is passionate about maintaining the highest standards of quality and innovation. They are a detail-oriented problem solver with initiative and tenacity, skillfully navigating challenges and providing innovative solutions that contribute to the overall success of TDOT.

General Work Conditions

Yes / No

Is this position generally performed in an office environment?

Will work for this position be frequently performed in a field environment and may sometimes require working in inclement weather, working in a construction site, being exposed to heavy construction equipment, and doing extensive walking?

Is this position a combination of office and field environment?

Is an alternative work schedule including work from home eligible for this position? If yes, how many days will it be work from home and how many days in office?

-Days from home: up to 2 days

-Days from office: up to 3 days

Is this position required to work under exposure to inclement weather and environmental conditions?

Will this position require travel including overnight?

Physical Requirements		<i>Select the frequency of each physical activity. The activity must be related to the position and consistent with business necessity.</i>			
Physical Activity Required	None	Occasional (less than 1/3)	Frequent (1/3 to 2/3)	Regular (more than 2/3)	
Standing	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Walking	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Bending	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Reaching/stretching overhead	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Crouching or stooping	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Balancing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Pushing or pulling	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Repetitive use of hands/arms	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Repetitive use of legs	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Grasping	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Lifting – check the frequency for each weight range below. If the job doesn't require any lifting activities, check "None" on each line below.					
Up to 20 pounds	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
21 - 50 pounds	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
51 – 75 pounds	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Carrying - check the frequency for each weight range below. If the job doesn't require any carrying activities, check "None" on each line below.					
Up to 20 pounds	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
21 - 50 pounds	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
51 - 75 pounds	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Eye/hand coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Speaking	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Hearing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Seeing (with correction)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Close vision	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Distance vision - ability to see objects clearly from a distance, usually from 20 feet or more.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color vision/perception - ability to distinguish colors.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Peripheral vision - what is seen on the side by the eye when looking straight ahead.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Depth perception - ability to judge the distance of objects and the spatial relationship of objects at different distances.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Position Description Team Members	<i>Provide a list of SMEs who helped develop the position description. Include name and work area.</i>
Andy Barlow	TDOT, Traffic Design Director
Steve Cook	RIC
Jennifer Pihl	RIC
Lauren LeJeune	RIC