

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.



Engineering Concepts Senior Transportation Engineer

Project Management Division – Engineering Concepts and Statewide Programs
Section
Nashville, TN
\$104,292 annually

Job Overview

The Engineering Concepts Senior Transportation Engineer provides expertise in engineering concept development and evaluation for the Engineering Concepts and Statewide Programs Section. This position collaborates with TDOT Divisions, Project Teams, FHWA, and external stakeholders to evaluate engineering concepts as early planning activities for projects ranging in complexity from simple to highly complex. The Engineering Concepts Senior Transportation Engineer implements acquired knowledge of TDOT policy and standards, focusing on ensuring early discipline involvement and early resource identification, assisting in flagging potential risks, and coordinating the development of accurate cost estimates for the use in evaluating engineering concept projects.

The Engineering Concepts Senior Transportation Engineer ensures Department policies, technical guidance, engineering concept standards, and procedures, are incorporated into engineering concept deliverables and assists in implementing the TDOT Quality Management Guidelines. The Senior Transportation Engineer must be able to assess the input and needs from stakeholders, exercise engineering judgment in the development of engineering concepts, and meet policy and design standards while balancing risks, impacts, cost, and the project need or purpose.

Essential Job Responsibilities

Strengthen Project Teams as part of a matrix organization by providing technical expertise and support related to engineering concepts as early project activities in support of legislative projects, potential economic development projects, interstate connector projects, and TDOT and local government bridge replacement projects for projects that range in complexity and risk from simple to highly complex; coordinate with TDOT Regions, Divisions, and stakeholders to ensure early involvement in the development of engineering concepts; define critical goals and target outcomes for engineering concept projects; establish project design criteria, develop potential alternatives, prepare designs for applicable alternatives, apply context-sensitive design strategies; coordinate design review with TDOT Regions, Divisions, and stakeholders to ensure constructability, mitigate maintenance concerns, and confirm project needs are adequately addressed; revise and finalize engineering concepts designs; develop/coordinate project cost estimates; assist with risk assessments; prepare concept reports documenting evaluation and recommendations; coordinate with TDOT Regions, Divisions, and stakeholders to finalize documentation; and as

applicable, coordinate and develop all required analysis and documentation for interstate access requests in compliance with TDOT and FHWA requirements.

Verify compliance with TDOT Quality Management Guidelines with respect to all engineering concepts work products to ensure the accuracy of project controls/design criteria, designs, cost estimates, analysis, and documentation; to ensure consistency with TDOT standards and policy; to ensure consistency with FHWA requirements (as applicable); to proactively address constructability and maintenance concerns; and to mitigate potential risk.

Routinely collaborate with HQ disciplines, Asset Management, Regions, and Quality Teams to identify and document knowledge on industry best practices to avoid past errors and ensure TDOT project successes. Assist with modifications to all applicable policies, procedures, design standards, specifications, and special provisions.

Collaborate with the TDOT Technical Training Director and assist in the development of training that addresses acquired knowledge, including technical elements and emerging technologies for the purpose of improving team performance, creating a stronger understanding of transportation design elements as they relate to the transportation industry, inspiring new ideas, and developing skills as technology and analysis/design software evolves.

Remain current and engaged on revisions to the Project Delivery Network (PDN), Federal and State regulations, standards, and guidelines related to transportation and analysis elements; adopt new technologies and best practices that drive Tennessee's transportation projects forward; and assist in implementing policies and procedures related to transportation and engineering concepts. Maintain awareness of engineering concept-related industry trends and national best practices by participating in AASHTO, industry associations, and national committees.

Provide exceptional customer service to both internal and external customers, including mentoring and technical guidance engineering concepts elements, coordinating with other disciplines as part of a matrix organization, coordinating with stakeholders, exercising effective listening skills, providing prompt responses, maintaining complete and accurate documentation, and communicating effectively.

Assist in the development of a Consultant Acquisition Plan (CAP) for engineering concept services and assist in the oversight of external partners by serving on technical review committees, including assisting with RFP development, attending project-specific marketing meetings, assisting with determining scoring criteria, assisting with project information sessions when applicable, serving as a scorer as part of the consultant acquisition process, and attending de-briefs for consultants where usable feedback must be provided.

Assist in ensuring engineering concept deliverables are consistent, predictable, and repeatable to maintain consistently high levels of achievement, mitigate risk, and establish a track record of success through the implementation of policy, standards, and acquired knowledge.

Qualifications

- Bachelor's Degree in Civil Engineering
- Licensed Professional Engineer (PE)
- 6 years of demonstrated competency in transportation engineering

Ideal Candidate

The Engineering Concepts Senior Transportation Engineer is an exceptional project team member who excels in collaboration and communication and seamlessly engages with project teams, leadership, consultants, and external stakeholders. They have an understanding of the many different disciplines involved in transportation projects and

demonstrate a deep understanding of engineering principles, standards, and regulations related to transportation infrastructure, resulting in their ability to implement innovative designs and strategies. The Engineering Concepts Senior Transportation Engineer is a detail-oriented problem solver with initiative and tenacity, skillfully navigating challenges and providing innovative solutions that contribute to TDOT's overall success.