

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.



Statewide Transportation Engineer – Hydraulics

Engineering Division – Hydraulics Section

Nashville, TN

\$115,008 annually

Job Overview

The Statewide Hydraulics Transportation Engineer is a statewide transportation engineer position that will oversee and assist all aspects of TDOT Regions hydraulics engineering and design work. This position serves as part of a Project Team directly responsible for delivering projects for all phases of the Project Delivery Network (PDN) in accordance with the project's scope, budget, and risk, and the TDOT Strategic Plan. These projects will range in complexity and risk from simple to highly complex. This 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 recommendations that increase the safety, performance, sustainability, and efficient delivery of TDOT's transportation system.

The Statewide Hydraulics Transportation Engineer ensures Department policies, technical guidance, procedures, software, and systems are incorporated into the project delivery process. This position will be responsible for overseeing hydraulic review of all projects that come through local programs, including the statewide bridge grant program. Assists in implementing the Quality Assurance Program as part of the Engineering Division's activities to reduce errors, delays, and contractor claims. The Statewide Hydraulics Engineer assists with monitoring and managing the hydraulics engineering and design related scope, schedule, and budgets of all projects. This position works with the Project Management Division 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 as the hydraulics engineering and design Subject Matter Expert (SME) that supports transportation design elements; assist in developing the project vision in alignment with department Asset Management objectives and funding allocation; assist in defining critical hydraulics related goals and intended outcomes for the scope, permitting, schedule, budget, and quality in coordination with the Project Manager; assist in implementing innovative concepts; proactively assess hydraulics related risk factors; and, for Project Teams associated with Alternative Delivery Contracts, assist in forecasting the hydraulics related implications of implementing Alternative Technical Concepts related to Request for Proposals (RFPs), project cost, and construction timing. Assist in

optimizing the Project Team's ability to mitigate risk and address unanticipated challenges while meeting the project's scope, schedule, and budget.

Integrate Quality Management into all hydraulics engineering and design deliverables in compliance with Asset Management's business objectives and in alignment with the PDN for the purpose of reducing plan errors, construction delays, and contractor claims; assist Project Teams by providing reviews as part of TDOT's Quality Assurance Program.

Manage and take ownership of change, communicate effectively, remain transparent, and hold yourself accountable to develop, maintain, and grow TDOT's work zone estimating capabilities, data, software, and systems.

Routinely identify, document, and effectively collaborate with the Structures Section on acquired knowledge that includes maximizing project successes, acknowledging national best practices, and avoiding past errors.

Assist in the development of the hydraulics engineering and design components of Consultant Acquisition Plans (CAP) and assist in the oversight of external partners by serving on selection committees for professional engineering services. Provide support in the development of the Request for Proposal (RFP), attending project-specific marketing meetings, determining scoring criteria, participating in project information sessions, serving as a scorer as part of the consultant acquisition process, and attending de-briefs with consultants. Conduct independent hydraulics related reviews of the engineer's cost estimate at project milestones during pre-construction activities.

Remain current on national best practices related to the hydraulics engineering and design. Participate as assigned in regional/national working groups and training opportunities related to hydraulics engineering and design.

Provide exceptional customer service to internal and external customers, exercising effective listening skills, providing prompt responses, maintaining complete and accurate documentation, coordinating with other disciplines as part of a matrix organization, and communicating effectively.

Assist in the development and delivery of hydraulics training, mentoring, and technical guidance to TDOT staff and external stakeholders that addresses acquired knowledge, risk management, technical design elements, and emerging technologies related to hydraulics for the purpose of improving team performance, creating a stronger understanding of the transportation industry, inspiring new ideas, and developing skills.

Assist in ensuring all hydraulics engineering and design products are consistent, predictable, and repeatable to provide consistently high levels of achievement, mitigation of risk, and an established track record of success. Ensure alignment and compliance with Division and Section Metrics and Performance goals.

Qualifications

- Bachelor's degree in civil engineering with an emphasis in hydraulics/hydrology preferred
- Licensed Professional Engineer (PE)
- 12 years of demonstrated competency in a transportation or water resources engineering related field

Ideal Candidate

The Statewide Transportation Hydraulics Engineer is an invaluable asset to the team, bringing a wealth of technical expertise and knowledge. With strong mathematical, analytical, design, and engineering skills, coupled with excellent communication and collaboration abilities, this individual is an excellent team player. The Statewide Transportation

Hydraulics Engineer works closely with the team, mentoring and coaching them on how to find creative and innovative ways to solve problems. Moreover, they work alongside their team to identify potential issues and prevent them from becoming problems.