

## 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.



### **Senior Transportation Engineer – Hydraulics** Engineering Division – Hydraulics Section Nashville, TN \$104,292 annually

#### **Job Overview**

The Hydraulic Engineer is a senior transportation engineer position that will support TDOT's hydraulics engineering program and provide support to Project Teams 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 Transportation Hydraulics Engineer role requires collaboration with multiple TDOT divisions, project team members, contractors, 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. This position provides engineering functions in the specialized area of hydraulics engineering and design and assists in the design and preparation of preliminary and final plans, proposal material, and cost estimating for the hydraulics engineering of design and construction.

The Senior Transportation Hydraulics Engineer ensures Department policies, technical guidance, and procedures related to TDOT's Hydraulic program are implemented. The position assists in administering and managing software and websites to ensure they are current and accurate for incorporation into the project delivery process. This position assists in implementing the Quality Assurance Program as part of the construction division's activities. This position must effectively articulate technical engineering concepts through training, mentoring, and collaborating as part of a matrix organization. The Senior Hydraulic Engineer will assist with ensuring all applicable documentation and data is collected and stored to assist with timely and accurate invoicing and project close-outs.

#### **Essential Job Responsibilities**

Coordinate resources and assist Project Managers as the Hydraulic Subject Matter Expert (SME) in the management of external partners together with the Professional Services Division, including the hydraulics related negotiation of contracts, review of consultant invoicing, development of scopes, management of contract tasks, compliance monitoring, and completion of consultant grading. Integrate Quality Management into all Hydraulic products, systems, and deliverables.

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

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

Serve on Project Teams as part of a matrix organization by providing Hydraulic SME and reviews, assisting in developing proposal contract documents for project lettings, and contributing to bid reviews and bid analysis for alternative delivery projects.

Provide exceptional customer service to both internal and external customers, exercising effective listening skills, providing prompt responses, maintaining complete and accurate documentation, and communicating effectively.

Remain current on hydraulic engineering and design related industry trends and national best practices by participating in AASHTO, industry associations, and other appropriate committees.

Routinely identify, document, and effectively collaborate with appropriate TDOT and external stakeholders on acquired knowledge that includes maximizing project successes, acknowledging national best practices, and avoiding past errors. Assist with modifications to all applicable policies, procedures, design standards, specifications, and special provisions.

Assist in ensuring hydraulic engineering and design deliverables are consistent, predictable, and repeatable to provide consistently high levels of achievement, mitigation of risk, and an established track record of success. Assist as needed on various reviews and tasks within the unit. Research information to stay up to date on hydraulics issues, drafting standards, and computer applications and software programs. Attend training that is relevant to the position as requested by the supervisor. Assist with modifications to all applicable policies, procedures, hydraulics design standards, specifications, and special provisions.

### **Qualifications**

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

### **Ideal Candidate**

The Senior Transportation Hydraulics Engineer possesses a combination of technical expertise and exceptional collaborative skills. They excel in communication and collaboration, bringing their extensive technical knowledge in all things water-related to the table. The Senior Transportation Hydraulics Engineer shares their experience and attention to detail with their team, ensuring that learning and growth are continuous, and that quality and safety are always maintained. They are a dedicated team player, adept at solving complex problems and coaching their teammates to enhance their knowledge and skills.