The Texas A&M Transportation Institute (TTI) is an agency of the State of Texas and member of The Texas A&M University System. For 70 years, TTI has addressed complex transportation challenges and opportunities with innovation, objectivity and unmatched technical expertise. Our staff delivers excellence, value and thought leadership to ensure our research sponsors achieve their goals.

TTI has a breadth and depth of programs, facilities and capabilities unsurpassed by any other higher-education-affiliated transportation research organization in the United States. The Institute’s research and development program has resulted in significant breakthroughs across all facets of transportation. The Institute’s innovative strategies and products have saved the state of Texas and the United States billions of dollars and thousands of lives.

TTI staff come from more than 38 different countries and are known for their credibility and technical expertise. Many are recognized national and international leaders in their fields. The Institute also plays a key role in educating the next generation of transportation professionals. Over 40 TTI researchers hold joint academic appointments at Texas A&M University.

With expertise in engineering, planning, economics, policy, public engagement, landscape architecture, environmental sciences, data sciences, social sciences and more, TTI researchers are thought leaders in their fields. They produce practical, implementable products and strategies, and ensure that our sponsors have the research-based results they need to make informed decisions.
Focus Areas

Mobility
Mobility analysts at TTI examine problems associated with congestion and access to transportation, develop innovative solutions, and measure the effectiveness of the outcomes. TTI prepares the definitive national study documenting congestion costs and trends in almost 500 U.S. urban areas. The Institute also provides expertise in metropolitan, urban, and rural bus and passenger-rail transit planning and operations.

Safety
The Institute’s safety innovations can be found throughout Texas and around the world. Major advancements have occurred in the design of roadside safety devices such as guardrails, crash cushions and sign supports. TTI is leading other significant advancements in traffic signals and signs, distracted-driving and crash analysis, bicycle and pedestrian safety, and safety in energy-sector locations, just to name a few.

Human Interaction
Roadway users play a critical role in the safety of our nation’s roadways. TTI’s Human Factors Program examines human limitations and capabilities, and works to optimize the user-vehicle and user-roadway interfaces to improve safety. The Behavioral Research Program examines roadway user attitudes and actions to help identify methods to promote safer behavior.

Infrastructure
TTI is finding innovative and cost-effective ways to improve and rehabilitate roadway infrastructure. Researchers have expertise in nondestructive pavement testing techniques, accelerated construction, asset management and connected infrastructure to accommodate connected and automated vehicles. TTI experts also develop transformative solutions to improve bridges and enhance infrastructure resiliency.

Freight
TTI is exploring innovative solutions that support increased freight efficiency in multiple transportation modes, facilitate freight transfer and operation, enhance freight mobility, improve air quality, and reduce border wait times. TTI advises sponsors on new freight technologies and operational strategies and how to anticipate the effects of such changes on public and private infrastructure, vehicles and their operators, policies and regulations, carriers and shippers, and economic development and transportation planning.

Security
The Institute has successfully developed standards, new technologies and cost-effective devices to help keep our country and citizens safe from terrorists. TTI designs, analyzes, tests and evaluates anti-ram safety barriers, gates and bollards to provide physical security of both critical homeland infrastructure and overseas embassies. Clients have included the U.S. Department of State, Bureau of Diplomatic Security, U.S. Army Corps of Engineers and private-sector companies.
Environment
TTI focuses on transportation-related air quality, sustainability, energy, extreme weather issues, and sediment and erosion control through its environmental research programs and facilities. TTI also studies and tests vehicle electrification. The Center for Advancing Research in Transportation Emissions, Energy, and Health focuses on the interaction of transportation and human health.

Economics
TTI has extensive expertise in transportation economics and finance research, working closely with public agencies and private-sector companies to evaluate the economic impacts of the transportation network and explore options for financing our transportation system. TTI-developed tools and data analyses allow decision makers to prioritize projects based on robust benefit-cost analyses.

Connected Transportation
TTI is developing and testing innovative applications for advancing automated and connected transportation. TTI's connected transportation initiative includes a testing facility at TTI's Proving Ground and a variety of urban test beds, including a connected freight corridor. TTI is a leading member of the Texas AV Proving Ground Partnership and a partner in the Safe-D University Transportation Center, which seeks to maximize the safety benefits of disruptive technologies.

Workforce Development
TTI employs more than 200 students in its research laboratories and offices. Over 40 Texas A&M University faculty regularly work on TTI research projects. TTI experts also provide training on transportation topics. Many of TTI's researchers are recognized national and international leaders in their fields, including about 80 who lead or serve on Transportation Research Board committees.

Policy
TTI’s policy research addresses specific research studies of state and national interest, bringing together engineering, finance, economic, technology, policy, data and public engagement experts from within TTI, the broader Texas A&M System, other institutions of higher education and the private sector. Institute researchers are often asked to offer objective and credible information on a wide range of transportation topics and emerging issues.

Planning and Operations
TTI’s experts in transportation planning and operations support multimodal state and local transportation agencies with transit plans, travel modeling and forecasting, public engagement strategies, and more. Traffic operations and roadway safety experts conduct research in roadway design and safety, signs and markings, work zone safety, connected transportation, traveler information, utility engineering, and transportation system management.
TTI researchers have access to more than 300 full-scale laboratories and field-testing devices.