


Research Project Name: Texas State University’s National Summer Transportation Institute (TXST -NSTI)	
Improving the Durability and Extending the Life of Transportation Infrastructure	
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Project Partners: Federal Highway Administration, Texas Department of Transportation, Texas State University Ingram School of Engineering	
Research Project Funding (Amounts and Source): Federal: \$50,000 Match: \$40,000 (TXST), \$240,000 (TxDOT)	
Project Start Date: 7/1/2025	Project End Date: 7/21/2026
Project Description: Texas State University (TXST) organizes the National Summer Transportation Institute (NSTI) program to introduce the broad field of transportation to a diverse group of 20 motivated high school students. These students are introduced to concepts associated with the application of high technology to transportation engineering and transportation infrastructure. The two-week residential program includes well-designed daytime and evening activities for the students to have a real experience of college life. The curriculum focuses on a different mode (highway, air, rail, water, or transit) of transportation with an associated theme each day. Contents and activities related to planning, design, construction, operations, and management of transportation systems and infrastructure are considered. Throughout the program, related transportation careers are highlighted. The Coastal Research and Education Actions for Transportation Equity (CREATE) Center, the TXST, and the NSTI collaborates with the Federal Highway Administration (FHWA), the Texas Department of Transportation (TxDOT), Austin Capital Metro to provide guest lectures, field trips, laboratory tours, and/or investigations.	
US DOT Priorities: Every year, TXST hosts a National Summer Transportation Institute (NSTI) program on its main campus in San Marcos. The primary objective of the NSTI program is to introduce the broad field of transportation to a diverse group (mostly minority) of about 20 motivated high school students in Texas. These students will be introduced to concepts associated with the application of technologies to transportation and transportation infrastructure and systems. Figure 1 shows the students on a field trip to Austin Capital Metro.	
	
<i>Figure 1: 2023 NSTI Field Trip</i>	



Project Requirements Form USDOT
CREATE UTC Contract Number 69A3552348330
Center Lead: Texas State University

Outputs: We are collecting quantitative survey data to measure the impact of the camp on increasing student interest in pursuing engineering. We also seek to measure students awareness of careers in transportation. Where possible, we track matriculation into engineering programs. Lastly, we engage parents and caregivers through a full day session at the end of the camp where we highlight the accomplishments of their students. Parental support is a well-established indicator of students success in STEM.

Outcomes/Impacts: NSTI aims to engage high school students in realistic university experiences with an emphasis on transportation engineering. Through hands on activities, field trips, and lectures from civil engineering faculty, the anticipated outcome is to attract more students to select engineering as a major. As there is a gap in the number of transportation engineers nationwide, the impact is to broaden the pipeline of transportation professionals.

Final Research Report: URL to final Report will be provided upon completion.