

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

## **Research Project Name:**

TXST National Summer Transportation Institute

Improving the Durability and Extending the Life of Transportation Infrastructure

**Principal Investigator**(s) (Include Contact info and ORCID):

Xiaohua Luo, x 133@txstate.edu, ORCID 0000-0002-0686-450X

Feng Wang, f\_w34@txstate.edu, ORCID 0000-0002-1528-9711

Yihong Yuan, yuan@txstate.edu, ORCID 0000-0001-6266-9744

**Project Partners**: Federal Highway Administration, Texas Department of Transportation

**Research Project Funding:** 

Federal: \$17,065 Match: \$71,242 (TxDOT & TXST)

Project Start Date: 6/01/2023 Project End Date: 07/30/2025

## **Project Description:**

The Texas State University (TXST) organizes the National Summer Transportation Institute (NSTI) program to introduce the broad field of transportation to a diverse group of 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, TXST, and the NSTI collaborates with the Federal Highway Administration (FHWA), the Texas Department of Transportation (TxDOT), and 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 approximately 20 motivated high school students in Texas, though we are looking to grow the program to a larger audience each year. These students are introduced to concepts associated with the application of technologies to transportation and transportation infrastructure and systems.

**Outcomes/Impacts**: Impacts for this project are growing the transportation workforce, notably with most participants from underserved communities in engineering.

**Outputs**: The NSTI program has led to partnerships with the Texas Department of Transportation, the Federal Highway Administration, and Austin Capital Metro. The outputs are in workforce development and noting participant pathways to transportation majors.

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