

Texas Connected Freight Corridors (TCFC)

2022 ITS Texas Annual Meeting

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30 September 2022









Project Timeline

Phase 1: High Level Design and Planning

April 2019 to March 2020

Phase 2: Detailed Design and Testing

April 2020 to March 2023

Phase 3: Operation and Self- Evaluation

April 2023 to March 2024

Stakeholders: Private Sector





TxDOT Districts

Austin, Bryan, Dallas, Fort Worth, Houston, Laredo, San Antonio, Waco, Yoakum

Regional Agencies

North Central Texas Council of Governments, Houston TranStar, City of Austin, City of San Antonio, Department of Public Safety (DPS)



PRIVATE SECTOR

Active Industry Partners

HEB, Crete Carrier, TuSimple, Kodiak Robotics, PepsiCo, Coca-Cola

Industry Affiliates

Fleets: Ford

Telematics: GeoTab, Omnitracs, PeopleNet, Drivewyze

Other: Volvo, Peterbilt, Daimler, Texas Trucking Association, AllianceTexas

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Project Corridors



Connected Vehicle Equipment

- Procuring and deploying equipment from multiple vendors
 - 86 Roadside Units (RSUs)
 - 91 Onboard Units (OBUs)
 - Mix of cellular vehicle-to-everything (C-V2X) and dual-mode (C-V2X and dedicated short-range communication [DSRC])
- Experiencing significant equipment delivery delays





SIEMENS

Connected Vehicle Applications



Traffic Management Center



Work Zone Warning, Wrong Way Driver, Queue Warning, Traveler Information

Basic Safety Messages





Roadside Units

Connected Vehicle Data Framework

- Leverage third-party solutions to distribute and collect road vehicle data
- Supplement to traditional CV infrastructure
 - Support data distribution beyond equipped roadway



Security Credential Management System (SCMS)

- Ensure data integrity and authenticity
 - Digital message signing and verification
 - Identity certificates
- Ensure privacy
 - Pseudonym certificates
- Identify and mitigate misbehaving and/or malicious actors
 - Certificate revocation list
- TxDOT working on procurement document for statewide SCMS services



Source: USDOT

Stakeholder Training

- Held August 3rd at SwRI Campus
- Participants:
 - TxDOT and local agency staff
 - TMC operators
 - Freight partner staff
- Breakout Sessions:
 - Lonestar updates and TMC operations
 - Infrastructure equipment installation and operation
 - Vehicle equipment installation and operation
 - Third-party data integration



System Deployment and Integration Testing

- 86 RSUs deployed in project corridors spanning 9 TxDOT Districts
 - RSUs deployed in Districts with non-24/7 TMCs will be "managed" by their accompanying 24/7 District TMC
- 91 OBUs deployed in partner and TxDOT fleet vehicles



System Deployment and Integration Testing



System Deployment and Integration Testing





REALIMON

GALVESTON

PORT ARTHUR

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Connecting You With Texas

For more info, please visit https://www.txdot.gov/inside-txdot/division/traffic/freight-corridors.html

DALLAS

BRYAN

CORPUS

BROWNSVILLE

HOUSTON

KILLEEN

AUSTIN

LAREDO

SAN ANTONIO