ITS and Fiber Deployment Plan

Andy Barlow, P.E.
Traffic Design Division

Stantec
BARGE
DESIGN SOLUTIONS

EPIC
Empowering People, Influencing Culture

TN TDOT
Department of
Transportation

IPD
Integrated Program Delivery

TDOT's TSMO Program Plan (2022)

VISION

Support and promote a TSMO Program in Tennessee that becomes fully integrated into both state and local agency practices.

MISSION

To preserve and optimize the safety, efficiency, and reliability of Tennessee's transportation system for all road users by leveraging data-driven, operational, and technology-based strategies and applications.

GOALS

Safety
Reduce the frequency and severity of crashes on the transportation system through TSMO focused planning, design and management.

Reliability
Improve travel-time reliability by managing transportation network delays and enhancing real-time traveler information.

Efficiency
Operate and maintain a coordinated multi-modal transportation system that provides seamless mobility to users.

Workforce
Support and advance TSMO education, training needs, and resource depositories for TDOT and local partners.
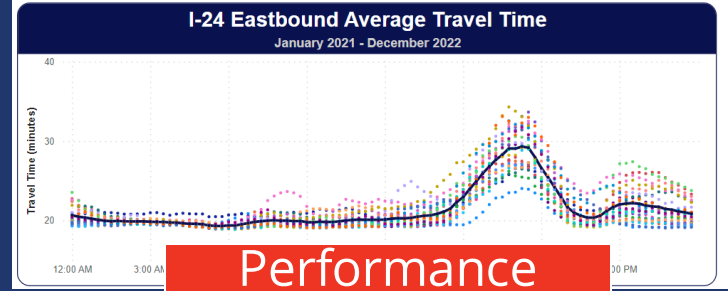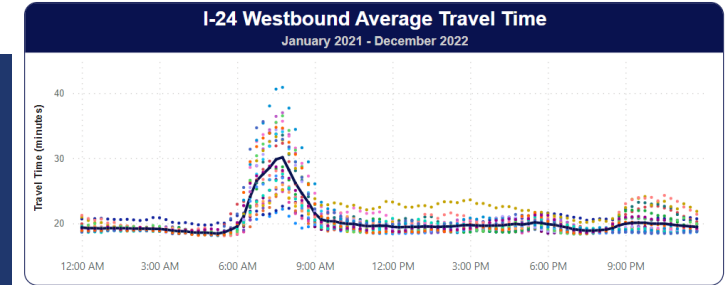
TSMO Plan Action Items

- Develop ITS deployment plan
    - Identify gaps and needs
    - List of projects
    - Prioritize capabilities
- Develop statewide fiber network deployment plan
    - Bridge communication gaps
    - Interconnect TMC's

TMC Operations

HELP Operations

Performance Measurement

I-24 Westbound Average Travel Time
January 2021 - December 2022

I-24 Eastbound Average Travel Time
January 2021 - December 2022

Begin with the end in mind

Areas of Opportunity

Detection Devices

Communications

Traveler Information Devices

Software

Integrated Corridor Management

Integrated Traffic Signals
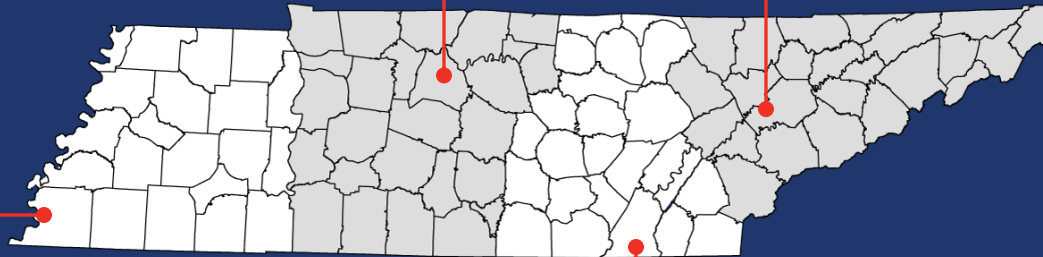
Connected Vehicles

In-Vehicle Messaging

Power Generation

Stakeholder Engagement

- 4 In-Person Region Meetings
  - Scheduled last week of November
- 1 HQ In-Person Meeting
- 1 HQ Virtual Meeting
- 4 Virtual Region Meetings

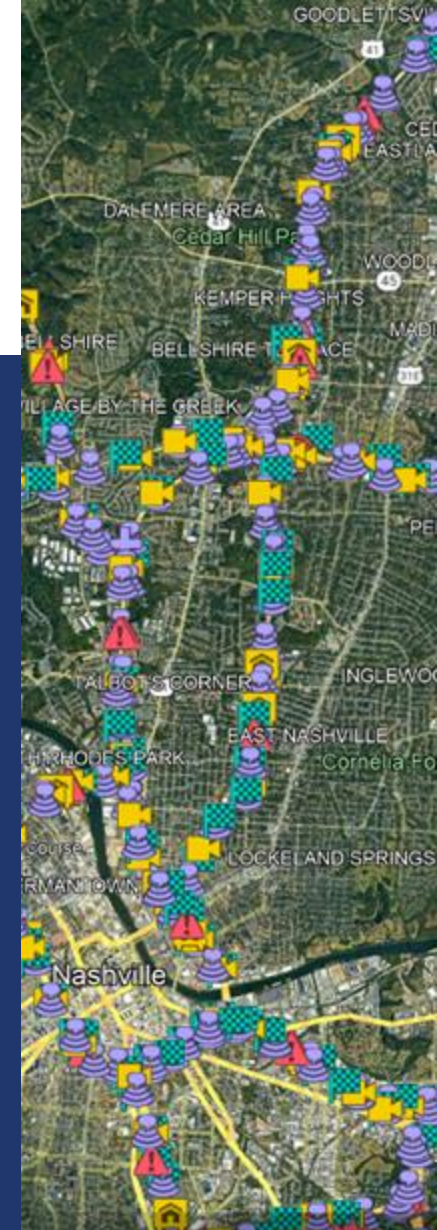Region 3 Nashville

Region 1 Knoxville

Region 4 (TMC) Memphis

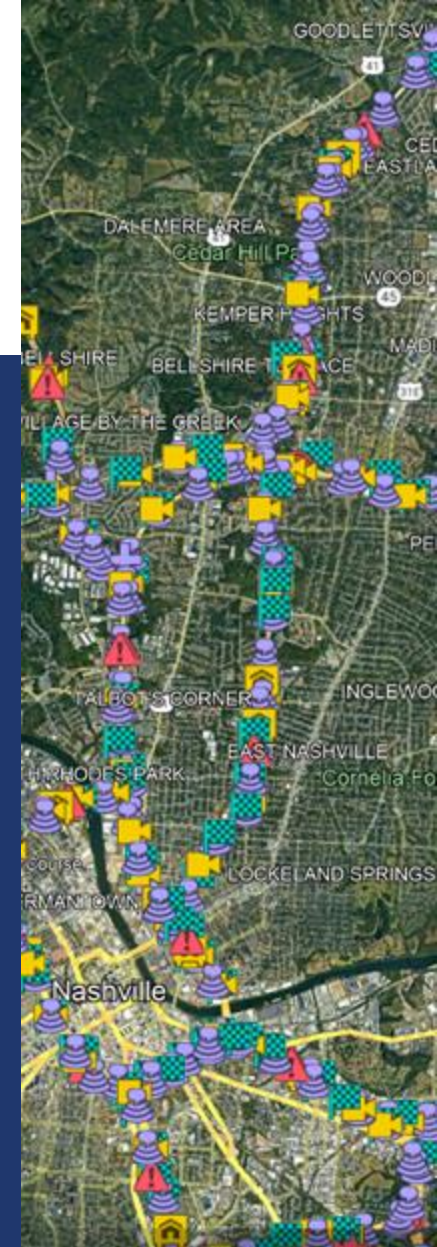Region 2 Chattanooga

ITS and Fiber Deployment Plan

Deliverables

- GIS Maps of Proposed Deployments
- Draft Deployment Plan
- Final Deployment Plan

ITS and Fiber Deployment Plan

Tasks

- High Level Safety Analysis
- Review Existing Deployment KMZs
- Develop Schema for GIS Maps
- Project Identification
- Project Prioritization
- Cost Benefit Analysis

Statewide Architecture Addendum

- Prepare Addendum to current Statewide ITS Architecture
- Include new projects and service packages
- Update, update, update

Stantec

Tennessee Statewide Intelligent
Transportation Systems Architecture

FINAL
REVISED

August 6, 2019

Prepared for:
Tennessee Department of Transportation

TN TDOT
Department of
Transportation

Prepared by:
Stantec Consulting Services Inc.

EPIC
Empowering People, Influencing Culture

IPD
Integrated Program Delivery

Questions?