

TEXAS FREIGHT NETWORK TECHNOLOGY AND OPERATIONS PLAN



Strategy

BINATIONAL TRAFFIC OPERATIONS CENTER

Freight Technology Area	Traffic Management
Owner	TxDOT Divisions, U.S. Customs and Border Protection (CBP), Mexican
Key Stakeholders	TxDOT Districts, Traffic Management Centers (TMCs), Texas Department of Public Safety (TxDPS), U.S. CBP, Mexican Customs, Trucking Industry Groups, International Border Crossing Agencies
End-Users	TMCs, TxDPS, U.S. CBP, Mexican Customs, Truckers, Trucking Companies/ Dispatchers, International Border Crossing Agencies

Motivation

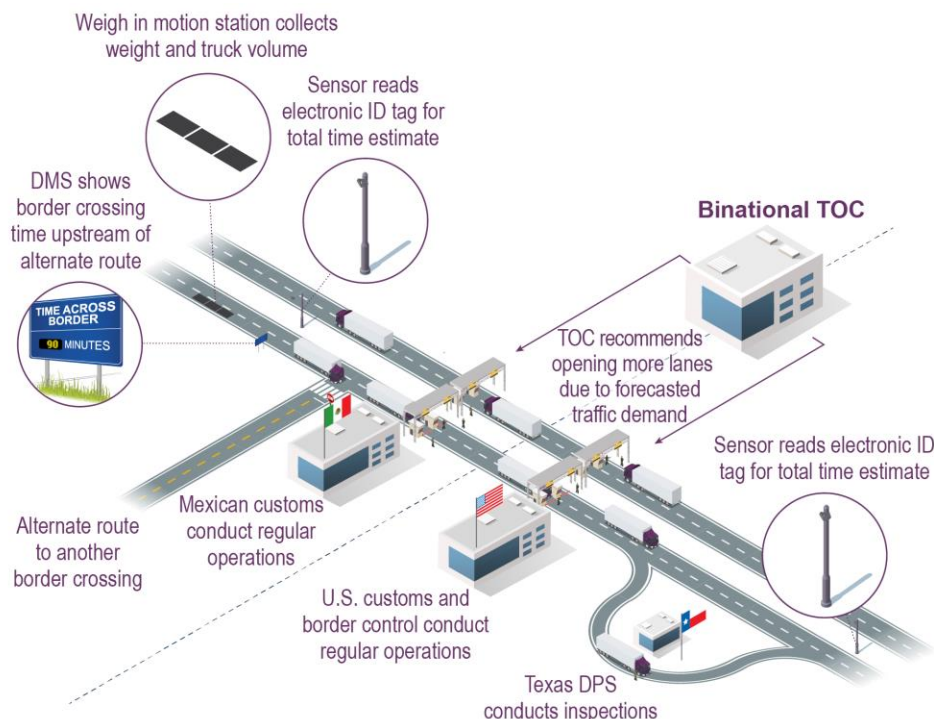
At international borders, multiple agencies operate to serve various mobility, safety, and security needs. Due to jurisdictional differences, a comprehensive freight operation across the border can be challenging due to lack of coordination between participating agencies in both Mexico and the US. The occurrence of real-time incidents can result in issues spread across multiple jurisdictions with no strategy to address the issues.

Strategy Description

Implement a binational border Traffic Operations Center (TOC) that works in collaboration with U.S. CBP and Mexican Customs to monitor all commercial motor vehicle (CMV) traffic operations at the border with a goal of reducing delays and improving mobility while preserving security. This TOC would support interagency staff to help collaborate on roadway traffic operations, and potentially explore opportunities to assist with improving rail efficiency.

Contribution to 2018 Texas Freight Mobility Plan Goals

- ✓ Mobility and Reliability
- ✓ Asset Preservation and Utilization
- ✓ Economic Competitiveness



Strategy Scope

- Implement a TOC to collaborate on international border crossing operations for the state of Texas and respective Mexican border states. This TOC could create opportunities for representatives from all associated agencies to work in the same space (virtual or physical) and better collaborate.
- Provide strategic messaging and traffic management strategies for all facets of border operations. Coordinate traffic operations with border customs to help traffic flow smoothly (e.g., conversations in this facility would inform U.S. CBP to open certain strategic border gates when a nearby TxDPS weigh station is also being utilized to help improve traffic flow from the border to the weigh station).
- Establish operational protocols, District maintenance agreements, and stakeholder acceptance for collaborative use of ITS assets by multiple stakeholders.
- Adjust border operational strategies to serve freight-specific needs based on peak truck times (e.g., actively manage ports of entry to maximize truck processing capacity, such as diverting other types of traffic to alternative non-freight entry points).
- Publish strategic truck route and parking information at advanced locations (e.g., request real-time messaging on dynamic message signs in an adjacent TxDOT District that is managed by a TMC).

Examples of User Needs Addressed*

- Need for a binational border TMC or TOC to improve freight operations between the U.S. and Mexico.
- Need for more advanced notice of waiting times at border crossings and ports to provide awareness to drivers.
- Need for automated border inspections using WIMs and queue detection devices to improve efficiency.
- Need for efficient border crossings and expedited customs to improve border freight exchange.

Potential Benefits*

Safety	Mobility	Vehicle Operating Costs	Benefit/Cost Range
<ul style="list-style-type: none"> • 69% reduction in secondary crashes 	<ul style="list-style-type: none"> • 29% reduction in average incident time 	<ul style="list-style-type: none"> • Up to 5 million gallons reduction in fuel consumption 	<ul style="list-style-type: none"> • 6:1

Cost Estimates*

Sample Capital Cost	Sample Annual O&M Cost
<ul style="list-style-type: none"> • High Deployment (Physical TOC): \$8.4M • Medium Deployment (Virtual TOC): \$395K • Low Deployment (Data Sharing): \$395K 	<ul style="list-style-type: none"> • High Deployment (Physical TOC): \$5.5M • Medium Deployment (Virtual TOC): \$2.1M • Low Deployment (Data Sharing): \$526K

Timescale for Implementation

Near-Term (0-2 years)	Medium-Term (2-5 years)	Long-Term (5-7 years)
✓ Plan	✓ Deliver	✓ Operate and Maintain

Freight Modes Covered: Highways Railroads Border Crossings

* The full list of user needs and supporting sources for benefits and costs can be found in the FNTOP Strategies and Conceptual Framework Report.