Contents

Chapter 1 Introduction to the Laredo (LRD) Region ................................................................. 1-5
  1.1 Laredo/Coahuila/Nuevo León/Tamaulipas Regional Overview ........................................ 1-5

Chapter 2 Laredo Region Goals, Objectives & Institutions ....................................................... 2-1
  2.1 Regional Efforts ................................................................................................................ 2-2
  2.2 Institutions and Agencies Involved in the Movement of People and Goods across the Texas-Mexico Border .............................................................................. 2-2

Chapter 3 Laredo Region Past and Present Conditions ............................................................... 3-1
  3.1 Socioeconomic Conditions ............................................................................................. 3-1
  3.2 History of the Regional Infrastructure and Investment ..................................................... 3-1
  3.3 Highway and Roadway Network ...................................................................................... 3-3
  3.4 Freight Rail Network ...................................................................................................... 3-10
  3.5 Aviation Systems ............................................................................................................. 3-12
  3.6 Pipeline Networks ........................................................................................................... 3-12
  3.7 Maritime Systems ............................................................................................................ 3-12
  3.8 Free Trade Zones ........................................................................................................... 3-12
  3.9 System Performance ...................................................................................................... 3-13

Chapter 4 Laredo Region Multimodal Transportation Network ............................................... 4-1
  4.1 Designate Border Crossings by Movement of People and Goods .................................... 4-1
  4.2 Designate Multimodal Corridors .................................................................................... 4-3

Chapter 5 Needs Assessment in the Laredo Region .................................................................. 5-1
  5.1 Mobility and Reliability Needs ....................................................................................... 5-1
  5.2 Safety and Security Issues and Needs ............................................................................. 5-6
  5.3 Asset Preservation Issues and Needs ............................................................................... 5-11
  5.4 Summary of Findings ..................................................................................................... 5-15

Chapter 6 Future Forecasts for the Laredo Region .................................................................... 6-1
  6.1 Income ......................................................................................................................... 6-1
  6.2 Forecasts of Northbound Border Crossing Movements ................................................ 6-1
  6.3 Forecasts of Roadway Corridor Movements ................................................................... 6-7
  6.4 Forecasts of System Performance .................................................................................. 6-7

Chapter 7 Economic Importance of the Laredo Region ............................................................ 7-1
  7.1 Economic Impacts from Movement of Goods across the Border ...................................... 7-1
  7.2 Economic Impacts from Movement of People across the Border ................................... 7-5
  7.3 Economic Costs of Border Crossing Times on Movement of Goods ............................ 7-7
  7.4 Economic Costs of Border Crossing Times on Movement of People ............................ 7-9
  7.5 Economic Costs of Highway Congestion ..................................................................... 7-11
Chapter 8  Process to Identify and Evaluate Strategies to Address Current and Future Needs in the Laredo Region .................................................................8-1
  8.1 Review of Existing Plans ......................................................................8-1
  8.2 Stakeholder Input to Strategy Identification ...........................................8-1
Chapter 9  Laredo Region Stakeholder Engagement ........................................9-1
  9.1 Stakeholder Engagement and Public Involvement Framework ...............9-1
  9.2 Stakeholder Engagement Outreach ........................................................9-3
  9.3 Outreach, Education, and Communication Materials .............................9-5
  9.4 Participation Results ............................................................................9-5
Chapter 10 Laredo Region Recommendations ...............................................10-1
  10.1 Policy Recommendations ....................................................................10-1
  10.2 Program Recommendations ................................................................10-2
  10.3 Regional Projects ...............................................................................10-3
Chapter 11 Laredo Region Implementation Plan ............................................11-1
  11.1 Implementation Plan for Policies ..........................................................11-1
  11.2 Implementation Plan for Programs .......................................................11-2
  11.3 Implementation Plan for Projects .........................................................11-3
  11.4 Summary and Call for Action ...............................................................11-8

Tables

Table 3.2-1. Owners/Operators of Border Crossings in Laredo/Coahuila/Nuevo León/Tamaulipas Region .................................................................3-2
Table 3.3-1. Laredo/Coahuila/Nuevo León/Tamaulipas Region Transit Services .................................................................3-8
Table 4.1-1. People Movement Border Crossing Designations ..........................4-2
Table 5.1-1. Operational and Physical Capacity Issues by Rail Border Crossing ...........................................................................................................5-6
Table 8.2-1. Stakeholder Input on Weights for the BTMP Goals ........................8-2
Table 9.2-1. BNRSC Meeting Outreach Summary ...........................................9-4
Table 10.3-1. Recommended Projects for Border Crossings and Corridors ........10-3
Table 10.3-2. Total Number of Projects and Costs by Category .........................10-4
Table 10.3-3. Laredo/Coahuila/Nuevo León/Tamaulipas Region Projects by Impact and Country ..................................................................................................................10-5
Table 10.3-4. Projects by Funding Status ..........................................................10-5
Table 11.2-1. Programs by Timeframe and BTMP Goal ....................................11-3
Table 11.3-1. Border Crossing Projects in the Laredo/Coahuila/Nuevo León/Tamaulipas Region by Timeframe, Funding Status and Country .........................................................11-3
Table 11.3-2. Corridor Projects in the Laredo/Coahuila/Nuevo León/Tamaulipas Region by Implementation Timeframe, Funding Status and Country .........................................................11-4
Table 11.3-3. Northbound Border Crossing Times by Year, Scenario and Crossing Type – Laredo Region .........................................................................................................................11-5
Table 11.3-4. Northbound Border Crossing Times by Year, Scenario and Crossing Type – Laredo Region .........................................................................................................................11-6
Table 11.3-5. Regional Impact of Employment Impacts in Job-Years, 2050 (Scenario 1) .......... 11-8
Table 11.3-6. Regional Impact of Labor Income in Billions of 2019 $, 2050 (Scenario 1) .......... 11-8
Table 11.3-7. Regional Impact of Employment Impacts in Job-Years, 2050 (Scenario 2) .......... 11-8
Table 11.3-8. Regional Impact of Labor Income in Billions of 2019 $, 2050 (Scenario 2) .......... 11-8

Figures

Figure 1.1-1. Laredo, Coahuila/Nuevo León/Tamaulipas Regional Map ............................................. 1-5
Figure 2.0-1.1-1. BTMP Goals ............................................................................................................. 2-1
Figure 3.2-1. Laredo/Coahuila/Nuevo León/Tamaulipas Region Border Crossing Funding (1994–2019) .................................................................................................................... 3-3
Figure 3.3-1. Movement of Goods by Commercial Motor Vehicle (CMV) ........................................... 3-4
Figure 3.3-2. Laredo/Coahuila/Nuevo León/Tamaulipas Region Northbound CMV by Border Crossing (2008–2019) ......................................................................................................................... 3-5
Figure 3.3-3. Laredo/Coahuila/Nuevo León/Tamaulipas Region Southbound CMV by Border Crossing (1990–2019) ......................................................................................................................... 3-5
Figure 3.3-4. Movement of People ........................................................................................................ 3-6
Figure 3.3-5. Laredo/Coahuila/Nuevo León/Tamaulipas Region Northbound POV by Border Crossing (2008–2019) ......................................................................................................................... 3-6
Figure 3.3-6. Laredo/Coahuila/Nuevo León/Tamaulipas Region Southbound POV by Border Crossing (1990–2019) ......................................................................................................................... 3-6
Figure 3.3-7. Laredo/Coahuila/Nuevo León/Tamaulipas Region Northbound Pedestrians by Border Crossing (2008–2019) ................................................................................................................. 3-7
Figure 3.3-8. Laredo/Coahuila/Nuevo León/Tamaulipas Region Southbound Pedestrians by Border Crossing (1990–2019) ................................................................................................................. 3-7
Figure 3.3-9. Laredo/Coahuila/Nuevo León/Tamaulipas Region Northbound Buses by Border Crossing (2008–2018) ......................................................................................................................... 3-9
Figure 3.4-1. Texas-Mexico Rail Network in the LRD and RGV Regions ........................................ 3-11
Figure 3.9-1. Laredo/Coahuila/Nuevo León/Tamaulipas Region Northbound Crossing Time Distribution by Border Crossing – CMV (2019) ........................................................................................................ 3-14
Figure 3.9-2. Laredo/Coahuila/Nuevo León/Tamaulipas Region Southbound Crossing Time Distribution by Border Crossing – CMV (2019) .................................................................................. 3-15
Figure 3.9-3. Laredo/Coahuila/Nuevo León/Tamaulipas Region Northbound 50th Percentile Border Crossing Times by Border Crossing – CMV (2019) ................................................................. 3-16
Figure 3.9-4. Laredo/Coahuila/Nuevo León/Tamaulipas Region Northbound 90th Percentile Border Crossing Times by Border Crossing – CMV (2019) ................................................................. 3-16
Figure 3.9-5. Laredo/Coahuila/Nuevo León/Tamaulipas Region Southbound 50th Percentile Border Crossing Times by Border Crossing – CMV (2019) ................................................................. 3-16
Figure 3.9-6. Laredo/Coahuila/Nuevo León/Tamaulipas Region Southbound 90th Percentile Border Crossing Times by Border Crossing – CMV (2019) ................................................................. 3-16
Figure 3.9-7. Laredo/Coahuila/Nuevo León/Tamaulipas Region Northbound Crossing Time Distribution by Border Crossing – POV (2019) .................................................................................. 3-18
Figure 3.9-8. Laredo/Coahuila/Nuevo León/Tamaulipas Region – Southbound Crossing Time Distribution by Border Crossing (POV) ......................................................................................... 3-18
Figure 3.9-9. Laredo/Coahuila/Nuevo León/Tamaulipas Region Northbound 50th Percentile Border Crossing Times by Border Crossing – POV (2019) ................................................................. 3-20
Figure 3.9-10. Laredo/Coahuila/Nuevo León/Tamaulipas Region Northbound 90th Percentile Border Crossing Times by Border Crossing – POV (2019) ........................................... 3-20
Figure 3.9-11. Laredo/Coahuila/Nuevo León/Tamaulipas Region Southbound 50th Percentile Border Crossing Times by Border Crossing – POV (2019) ........................................... 3-20
Figure 3.9-12. Laredo/Coahuila/Nuevo León/Tamaulipas Region Southbound 90th Percentile Border Crossing Times by Border Crossing – POV (2019) ........................................... 3-20
Figure 4.1-1. Designation of Border Crossings for CMV ............................................................................ 4-3
Figure 4.1-2. Designation of Border Crossings for POV ............................................................................ 4-3
Figure 4.2-1. Sphere 1 Texas-Mexico Multimodal Transportation Network Linked with Corridor Designations: Laredo/Coahuila/Nuevo León/Tamaulipas Region ........................................ 4-4
Figure 5.1-1. Border Crossings Open More Than 20 Hours per Day ................................................................ 5-1
Figure 5.1-2. Very Large CMV Crossings – Average Utilization Rates (2014–2018, 2050) ......................... 5-4
Figure 5.1-3. Laredo/Coahuila/Nuevo León/ Tamaulipas – Congestion (2018) ........................................... 5-4
Figure 5.1-4. Laredo/Coahuila/Nuevo León/ Tamaulipas – Congestion (2050) ........................................... 5-4
Figure 5.2-1. Roadway Crash Density, Laredo/Coahuila/Nuevo León/Tamaulipas Region (2015–2019) .......................................................... 5-8
Figure 5.2-2. Laredo Region At-grade Rail Crossing Incidents in Texas (2007–2017) ........................................ 5-10
Figure 5.3-1. Laredo/Coahuila/Nuevo León/Tamaulipas Region Pavement Conditions (2018).... 5-12
Figure 5.3-2. Laredo/Coahuila/Nuevo León/Tamaulipas Region Pavement Conditions (2020)........ 5-14
Figure 6.2-1. Northbound POV Movements by POE (2019 and 2050) ................................................. 6-1
Figure 6.2-2. Northbound Bicycle and Pedestrian Movements by POE (2019 and 2050) ......................... 6-2
Figure 6.2-3. Northbound Bus Movements by POE (2019 and 2050)...................................................... 6-3
Figure 6.2-4. Total CMV Tonnage by POE (2019 and 2050) ................................................................. 6-4
Figure 6.2-5. Total CMV Trade Value by POE (2019 and 2050) ............................................................. 6-4
Figure 6.2-6. CMV Movements by POE (2019 and 2050) ................................................................. 6-4
Figure 6.2-7. CMV Movements by Border Crossing (2019 and 2050) .................................................. 6-5
Figure 6.2-8. Total Rail Tonnage by POE (2019 and 2050) ................................................................. 6-6
Figure 6.2-9. Total Rail Trade Value by POE (2019 and 2050) ............................................................. 6-6
Figure 6.2-10. Rail Car Movements by POE (2019 and 2050) ............................................................ 6-6
Figure 6.4-1. Very Large Crossing Average Crossing Times – Commercial (2019 and 2050) ............... 6-9
Figure 6.4-2. Very Large Crossing 90th Percentile Crossing Times – Commercial (2019 and 2050) .......... 6-9
Figure 7.1-1. Impact of Movement of Goods on GDP by CMV Border Crossing (2019 and 2050) .......................................................... 7-2
Figure 7.1-2. Impact of Movement of Goods on GDP by Rail Crossing (2019 and 2050) ......................... 7-4
Figure 7.2-1. Impact of Movement of People on GDP by Border Crossing (2019 and 2050) ................. 7-6
Figure 7.3-1. Impact of Delays to Movement of Goods on GDP by Border Crossing (2019 and 2050) ........................................................................ 7-8
Figure 7.4-1. Impact of Delays to Movement of People on GDP by Border Crossing, 2019 and 2050 ........................................................................ 7-10
Figure 9.1-1. Stakeholder and Public Engagement Framework ................................................................. 9-2
Figure 9.4-1. Total Number of U.S. and Mexico Stakeholders who Attended a BTMP Meeting in the Laredo Region ........................................................................ 9-6
Figure 11.2-1. Total Programs by Implementation Timeframe ............................................................... 11-2
Chapter 1  Introduction to the Laredo (LRD) Region

The Texas-Mexico Border Transportation Master Plan (BTMP) is a comprehensive, multimodal, long-range plan for the Texas-Mexico border region and identifies transportation issues, needs, challenges, opportunities, and strategies in the short-, medium-, and long-term for moving people and goods efficiently and safely across the Texas-Mexico border, the border regions, and beyond, now and in the future. It outlines transportation policy, program, and project strategies that support Texas-Mexico, state, regional, and local economic competitiveness.

The development of the BTMP comprised of four phases: (1) data collection, (2) multimodal corridor designation and needs assessment, (3) forecast and economic analysis, and (4) identification of strategies and preliminary recommendations.

The BTMP covers the Texas-Mexico border that spans 1,254 miles following the Rio Grande River from El Paso to the Gulf of Mexico. The Texas-Mexico border is divided into three regions: El Paso/Santa Teresa/Chihuahua, Laredo/Coahuila/Nuevo León/Tamaulipas, and Rio Grande Valley/Tamaulipas.

The BTMP Final Report takes a holistic approach to border planning, developing one plan for the entire Texas-Mexico border, with the understanding that the border is not a monolith and that each border region is distinct and has unique geographic, trade, economic, and population characteristics.

The purpose of this regional summary is to specifically discuss the Laredo/Coahuila/Nuevo León/Tamaulipas Region.

1.1  Laredo/Coahuila/Nuevo León/Tamaulipas Regional Overview

- **South Texas Location:** Located on the South Texas Plains, the Laredo Region encompasses eight counties: Dimmit, Duval, Kinney, La Salle, Maverick, Val Verde, Webb, and Zavala.

- **Trade Gateway:** Within the Laredo region, there are eight border crossings processing pedestrian and vehicle traffic, five that process commercial traffic, and three rail border crossings. The Laredo/Coahuila/Nuevo León/Tamaulipas region features the largest movement of goods in terms of value and is primarily a long-haul trade gateway.

- **Laredo Port of Entry:** The Laredo Port of Entry, located in this region, processes the highest value of commercial goods across all ports of entry in the U.S. This is highlighted by the World Trade Bridge, the largest and only dedicated commercial crossing on the Texas-Mexico border. Colombia-Solidarity Bridge is also included in this port of entry but is underutilized due to lack of direct connections between Monterrey and Colombia.

- **Supply Chains:** The top supply chains moved through the border crossings in this region by value are Motor Vehicles, High Tech, and Machinery.

- **Motor Vehicles:** Vehicle parts and components move across the border in both directions. Due to high border delays northbound across the Laredo border, transfer companies are hired to queue at the border which creates added costs to cross-border supply chains and especially for motor vehicles.
- **Economic Impact of Border Crossings:** The annual contribution to the GDP in the U.S. and Mexico resulting from the movement of people and goods through the border crossings in this region was $217.4B in 2019 and is expected to grow to $607.8B in 2050.

- **Connectivity:** Congestion occurs on east-west connections between the Brownsville seaport and land border crossings. With continued increases in commercial vehicle movements, the current corridors could require upgrading to higher standards to meet traffic demands.

- **Asset Conditions:** All border crossings are in good or fair conditions. However, 18% of regional roadways within one-mile of the border in this region have deteriorated to poor conditions and require rehabilitation and preventative maintenance. There are also domestic bridges on the Texas side of the border rated in poor conditions especially concentrated on I-35 and I-35 connectors. Four bridge structures also have low vertical clearance in this region.

- **Freight Rail:** The Laredo Texas-Mexican Railway International Bridge is a single-track bridge owned and operated by Kansas City Southern (KCS) and Kansas City Southern Mexico. The bridge is the busiest rail border crossing in North America and suffers from congestion. The rail network also impacts roadway traffic with 14 different highway/rail crossings in Laredo. In August 2020, KCS obtained a presidential permit to build a second rail bridge at Laredo. This region also has a Unified Cargo Processing facility at the railroad border crossing – allowing U.S. and Mexico joint inspections using advanced technologies.

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The Laredo Region’s population, employment and income has grown since 1990 and is expected to continue to increase through 2050.

**POPULATION:** The Laredo/Coahuilla/Nuevo Leon/Tamaulipas (LRD) Region’s population increased 70% from 974.5K in 1990 to 1.66M in 2019 and is forecast to increase 18% to 1.96M residents in 2050.

**EMPLOYMENT:** Employment on the Texas side of the LRD region grew by 67% from 108K in 1990 to 181K in 2019 and is forecast to increase by 96% to 354K in 2050.
The Laredo Region’s multimodal transportation network consists of the key routes and corridors used for the cross-border movement of people and goods.

The Laredo/Coahuila/Nuevo León/Tamaulipas Region consists of three Ports-of-Entry (POEs):

- Del Rio POE
- Del Rio POE
- Del Rio POE

There are 7 roadway border crossings along the U.S.-Mexico border in the Laredo region:

- Del Rio-Ciudad Acuña International Bridge (Del Rio, TX)
- Eagle Pass Bridge 1 (Eagle Pass, TX)
- Camino Real International Bridge (Eagle Pass, TX)
- Laredo-Colombia Solidarity Bridge (Laredo, TX)
- World Trade Bridge (Laredo, TX)
- Gateway to the Americas Bridge (Laredo, TX)
- Juarez-Lincoln Bridge (Laredo, TX)

There are 2 rail crossings, Eagle Pass Rail Bridge and Laredo Rail Bridge, and one vehicular dam crossing, Lake Amistad Dam Crossing, but there are no ferries located within this region.

The Laredo/Coahuila/Nuevo León/Tamaulipas Region has 4 key corridors:

- 3 Texas-Mexico corridors with north-south movement, the I-27/FH57, the I-35/FH85, and the I-69 (Laredo) corridors primarily serve north-south movement across the Texas-Mexico border in the LRD region to connect with the wider U.S. and Mexico.

---

**INCOME:** Household income on the Texas side of the LRD region increased 35% from $31K in 1990 to $42K in 2018 and is projected to grow by 37% to $57K in 2050. Incomes in Mexico border states also grew between 2010 and 2015. Mexico wage distribution is reported for the years 2010 and 2015 as it is available once every five years beginning in 2010 and cannot be extrapolated to 2050 due to its dependency on minimum wage levels. Texas wages are measured based on median household income and thus were obtained for the BTMP baseline year of 2019 and can be forecast up through 2050.

Note: the POE names reflect the U.S. Customs and Border Protection [CBP] classification and naming convention. A port of entry (POE) refers to any place designated by law at which a U.S. CBP officer is authorized to accept entries of merchandise to collect duties, and to enforce the various provisions of the customs and navigation laws. A POE is comprised of one or more border crossings, based on the aggregation made by U.S. CBP.
1 Texas-Mexico corridor east-west movement, the I-10 corridor primarily serve east-west movement across the LRD region that do not physically cross the Texas-Mexico border, but provide vital connections to and from other Texas-Mexico corridors that primarily run north and south. These corridors highlight the integration, connectivity, and accessibility of the different transportation modes, including corridors, airports, and rail facilities in the U.S. and Mexico, to the Texas-Mexico border. Identification of the corridors also serve as a starting point for developing strategies that will lead to the more efficient and safe movement of people and goods.

The economic impact of cross-border goods movement across the Laredo Region reaches the entire U.S. and Mexico.

In 2019, movements of people and goods through the Laredo Region generated over 3.91M jobs and more than $217B GDP in both countries. By 2050, the economic impact of cross-border trade in the LRD region will increase to over 10.9M jobs and $604.5B in GDP.

The binational multimodal transportation serving the Laredo region is essential to the safe and efficient flow of people and goods (as presented in Figure 1.1-1). Driven by sustained trade growth and a trade war with China, in March 2019 and again in February 2020, the Port of Laredo overtook the Port of Los Angeles as the top international trade gateway in the U.S.\(^2\) As trade between Texas and Mexico has expanded, the Laredo region has played an important role in that growth. Over $261 billion or nearly 58% of trade between the U.S. and Mexico passed through the Laredo region (in 2019).

Further discussed in Chapter 6, among various movements for rail, passenger and commercial vehicles, and bicycle and pedestrians, increased movement of people and goods is projected to 2050. The infrastructure to support the growth of all these movements is important to benefit the region’s communities and its economies.

\(^2\) Analysis of U.S. Census Trade Data by WorldCity, as reported by FreightWaves.
The following sections discuss the importance of the Laredo/Coahuila/Nuevo León/Tamaulipas Region and the transportation issues, needs, challenges, opportunities, and strategies for moving people and goods through this region.
Chapter 2  Laredo Region Goals, Objectives & Institutions

This chapter provides a brief outline of the goals and objectives of the BTMP. It also provides an overview of the institutions and agencies that facilitate the safe and efficient movement of people and goods across the Texas-Mexico border. These institutions and agencies are responsible for setting policies and managing, operating, planning, implementing, and overseeing binational collaboration and cooperation across the Texas-Mexico border. They played a key role in the development of the BTMP. They are also integral in implementing and achieving the goals, objectives, and recommendations of the BTMP.

The BTMP goals and objectives serve as the foundation for identifying needs and for evaluating policies, programs, and projects.

The goals and objectives of the BTMP (Figure 2.0-1.1-1) provide strategic direction on how to identify and address the multimodal transportation system and infrastructure needs of the Texas-Mexico border region. Specifically:

▪ The goals represent aspirational areas on which the BTMP should focus.
▪ The objectives represent specific, measurable priorities for the BTMP.

More detailed discussion of the goals and objectives are included in the BTMP Final Report.

A key role in the development of the BTMP is the institutions and agencies that are integral in implementing and achieving the goals, objectives, and recommendations of the BTMP. These entities include local, state and federal agencies, binational groups, organizations and stakeholders to facilitate the movement of people and goods across the Texas-Mexico border through planning and collaboration across the border. Detailed discussion of the processes and activities to make the border work effectively is included in the BTMP Final Report. For each region, a Binational Regional Steering Committee was established to provide regional and local binational perspective and expertise. This stakeholder engagement and other public involvement activities are further discussed in Chapter 9.
2.1 Regional Efforts

Mechanisms are needed for local, state, and federal agencies and other border stakeholders to come together to discuss policies, strategies, procedures, and protocols to address the ever-changing issues that personnel at the border crossings face day to day.

2.2 Institutions and Agencies Involved in the Movement of People and Goods across the Texas-Mexico Border

The planning, development, financing, management, and operation of transportation at and along the U.S. and Texas-Mexico border is a complex undertaking that involves close bilateral collaboration, cooperation, and communication among more than 50 binational public-sector agencies and numerous private-sector stakeholders.

The institutions and agencies that are key to the cross-border movement of people and goods between Texas and Mexico can be categorized in the following groups:

- Federal Agencies (19 in the U.S. and 22 in Mexico),
- State Agencies (28 in the U.S. and 18 in Mexico),
- Local Agencies (4 broad categories in the U.S. and 2 broad categories in Mexico),
- private sector (8 broad categories in the U.S. and 7 broad categories in Mexico) and
- Community Groups/Associations/Other Stakeholders (7 in the U.S. and 21 in Mexico).

The list of institutions and agencies is presented in Tables 2.3-3 through 2.3-7 in Chapter 2 of the BTMP Final Report.
Chapter 3  Laredo Region Past and Present Conditions

This chapter presents the history and current conditions of the Laredo/Coahuila/Nuevo León/Tamaulipas Region – including socioeconomics, transportation infrastructure, and system performance as a basis for the development of the BTMP.

The data used in this chapter are 2019 values, unless otherwise noted. The BTMP analysis uses the baseline year of 2019 for technical analysis due to data availability for multiple metrics. Earlier years are used when 2019 data are unavailable. Historical data is provided back to 1990 or earliest year available, based on data source.

3.1  Socioeconomic Conditions

Laredo-Coahuila/Nuevo León/Tamaulipas Region experienced increases in population, employment, household income and educational attainment since 1990.

Between 1990 and 2018, the Laredo Region experienced the highest increases in higher education attainment.

On the Texas side, they saw a rise in 7,524 Graduate or Professional degrees from 1990 to 2018. On the Mexico side, they saw an increase in Universidad by 77,763 from 1990 to 2015.

3.2  History of the Regional Infrastructure and Investment

Although trade is growing, border crossing investments have not kept pace. Table 3.2-1 lists information on the border crossings within the region including owner and operators, construction year and last year of improvements to the facility.
## Table 3.2.1. Owners/Operators of Border Crossings in Laredo/Coahuila/Nuevo León/Tamaulipas Region

<table>
<thead>
<tr>
<th>Border Crossing</th>
<th>Construction Year and Updates</th>
<th>Location (City)</th>
<th>Owner</th>
<th>Operator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Del Rio – Ciudad Acuña</td>
<td>1987</td>
<td>Del Rio, TX; Ciudad Acuña, Coah.</td>
<td>U.S. – City of Del Rio; Mexico – Government of Mexico</td>
<td>U.S. – City of Del Rio; Mexico – CAPUFE</td>
</tr>
<tr>
<td>Lake Amistad Dam</td>
<td>1969</td>
<td>Del Rio, TX; Ciudad Acuña, Coah.</td>
<td>U.S. – IBWC (U.S. Section); Mexico – IBWC (Mexican Section)</td>
<td>U.S. – CBP; Mexico – Aduanas de Mexico</td>
</tr>
<tr>
<td>Eagle Pass I</td>
<td>1927</td>
<td>Eagle Pass, TX; Piedras Negras, Coah.</td>
<td>U.S. – City of Eagle Pass; Mexico – Government of Mexico</td>
<td>U.S. – City of Eagle Pass; Mexico – CAPUFE</td>
</tr>
<tr>
<td>World Trade Bridge</td>
<td>2000</td>
<td>Laredo, TX; Nuevo Laredo, Tamps.</td>
<td>U.S. – City of Laredo; Mexico – Government of Mexico</td>
<td>U.S. – City of Laredo; Mexico – CAPUFE</td>
</tr>
<tr>
<td>Laredo-Colombia Solidarity</td>
<td>1991</td>
<td>Laredo, TX; Colombia, NL</td>
<td>U.S. – City of Laredo; Mexico – Government of Mexico</td>
<td>U.S. – City of Laredo; Mexico – CODEFRONT</td>
</tr>
<tr>
<td>Gateway to the Americas</td>
<td>1956</td>
<td>Laredo, TX; Nuevo Laredo, Tamps.</td>
<td>U.S. – City of Laredo; Mexico – Government of Mexico</td>
<td>U.S. – City of Laredo; Mexico – CAPUFE</td>
</tr>
</tbody>
</table>

---

Funding for border crossing infrastructure has not kept pace with cross-border trade growth.

The Laredo/Coahuila/Nuevo León/Tamaulipas Region obtained $125.2 million in investments for border crossing infrastructure from 1994–2019 on two initial bridge construction projects.

- **Camino Real International Bridge** was constructed in 1999 for $30 million.
- **World Trade Bridge** was built in 2000 for $95.2 million.

![Figure 3.2-1. Laredo/Coahuila/Nuevo León/Tamaulipas Region Border Crossing Funding (1994–2019)²](image)

### 3.3 Highway and Roadway Network

The highway system is the primary conduit for people and goods movement. In the Laredo/Coahuila/Nuevo León/Tamaulipas Region of the Texas-Mexico border, the highway network facilitates daily life for millions of residents and sustains local and global trade. The highway and roadway network and the vehicle border crossings are critical to facilitating the safe, efficient, and reliable movement of people and goods.

#### 3.3.1 Roadway Capacity

- On the Texas side, border-wide lane miles increased 15 percent between 2006 and 2018, adding 1,466 lane miles.

#### 3.3.2 Vehicle-miles Traveled

- Between 2005 and 2018, the Texas side of the region experienced the most growth in passenger VMT between 2005 and 2018, increasing 44 percent with 3.7 million added VMT.
- Between 2005 and 2018, the region experienced the most growth in commercial VMT between 2005 and 2018, increasing by 51 percent, or 1.1 million VMT.

---

Cross-border CMV Trade

- Between 2006 and 2019, trade increased by $86 billion, or 79 percent, in the region.
- The CMV trade value at the Laredo POE grew by 83 percent, by $82.6 billion, from $99.5 billion to $182.2 billion in 2019 adjusted dollars.
Cross-border CMV Movements

**Northbound**
- Between 1996 and 2019,\(^5\) in the Laredo/Coahuila/Nuevo León/Tamaulipas Region, the number of northbound CMV crossings increased by 135 percent, or 1.5 million crossings.
- The World Trade Bridge in Laredo experienced the largest absolute growth with over 790,000 added northbound CMV crossings, from 2008 to 2019, while crossings at Camino Real International located in Eagle Pass, increased by almost 80 percent, with 77,841 additional crossings.

**Southbound**
- Between 2001 and 2019, World Trade Bridge grew 86 percent, from 1.1 million crossings to 2.1 million crossings.

---
## Border Transportation Master Plan | Laredo/Coahuila/Nuevo León/Tamaulipas Regional Summary

### Figure 3.3-4. Movement of People

#### Number of Northbound Cross-Border People Movement by Mode in the LRD Region - 1996-2050

<table>
<thead>
<tr>
<th>Mode</th>
<th>1996</th>
<th>2010</th>
<th>2050</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEL RIO POE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bus</td>
<td>7.1K</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>Bike/Ped</td>
<td>27/0.6K</td>
<td>236.9K</td>
<td>214.1K</td>
</tr>
<tr>
<td>POV</td>
<td>1.8M</td>
<td>1.6M</td>
<td>1.8M</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mode</th>
<th>1996</th>
<th>2010</th>
<th>2050</th>
</tr>
</thead>
<tbody>
<tr>
<td>EAGLE PASS POE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bus</td>
<td>4.5K</td>
<td>3.3K</td>
<td>2.6K</td>
</tr>
<tr>
<td>Bike/Ped</td>
<td>456.7K</td>
<td>861.6K</td>
<td>1.1M</td>
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<tr>
<td>POV</td>
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<td>2.9M</td>
<td>3.8M</td>
</tr>
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</table>

<table>
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<tr>
<th>Mode</th>
<th>1996</th>
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<th>2050</th>
</tr>
</thead>
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<tr>
<td>LAREDO POE</td>
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<tr>
<td>Bus</td>
<td>25.6K</td>
<td>38.6K</td>
<td>39.4K</td>
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<tr>
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<tr>
<td>POV</td>
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<td>5.1M</td>
<td>6.6M</td>
</tr>
</tbody>
</table>

### Passenger Vehicles (POV)

#### Figure 3.3-5. Laredo/Coahuila/Nuevo León/Tamaulipas Region Northbound POV by Border Crossing (2008-2019)

<table>
<thead>
<tr>
<th>Year</th>
<th>Lake Amistad Dam Crossing</th>
<th>Del Rio-Ciudad Acuña Intl.</th>
<th>Eagle Pass I</th>
<th>Camino Real Intl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>0.0</td>
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</table>

#### Figure 3.3-6. Laredo/Coahuila/Nuevo León/Tamaulipas Region Southbound POV by Border Crossing (1990–2019)

<table>
<thead>
<tr>
<th>Year</th>
<th>Del Rio-Ciudad Acuña Intl.</th>
<th>Laredo-Colombia Solidarity</th>
<th>Gateway to the Americas</th>
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</thead>
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<tr>
<td>2019</td>
<td>14.5</td>
<td>14.5</td>
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</tr>
</tbody>
</table>
Northbound

- The Laredo/Coahuila/Nuevo León/Tamaulipas Region experienced a 14 percent decline in northbound POV movement – a decrease of 1.6 million POVs.
- Northbound POV crossings between 2008 and 2019 declined at most border crossings in the Laredo/Coahuila/Nuevo León/Tamaulipas Region.\(^7\)
- The Laredo/Coahuila/Nuevo León/Tamaulipas Region experienced declines in northbound POV volumes at most border crossings between 2008 and 2019. The largest declines occurred at the Juárez-Lincoln Bridge, which experienced a 41 percent decline, or 1.8 million fewer POVs.
- Meanwhile, crossings at Gateway to the Americas increased 76 percent from 1.2 million to 2.1 million.

Southbound

- Since 2001, southbound POV crossings declined by 26 percent, or 533,304, at Gateway to the Americas and by 10 percent, or 543,242, at Juárez-Lincoln. During the same time, Laredo-Coolumbia Solidarity grew by 38 percent.\(^9\)

Bike and Pedestrians

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\(^9\) Due to limited data reporting of southbound volumes, southbound POV volumes are only reported here by individual border crossing. Additionally, years of available southbound data vary by border crossing.


Northbound

- Northbound bike and pedestrian movements across the Texas-Mexico border increased between 1996 and 2002 but have since then decreased to levels similar to the late 1990s. Between 1996 and 2019, northbound bike and pedestrian movements increased in the Laredo/Coahuila/Nuevo León/Tamaulipas Region by 10 percent with 445,825 added crossings.

- In the Laredo/Coahuila/Nuevo León/Tamaulipas Region, pedestrian crossings increased by 307 percent at Del Rio–Ciudad Acuña International with 178,700 added crossings, and by 302 percent at Camino Real International with 173,215 added crossings. Meanwhile, crossings at the region’s largest northbound pedestrian crossing, Gateway to the Americas, declined by 26 percent from 3.8 million to 2.8 million.

Southbound

- Between 2001 and 2018, southbound pedestrian volumes decreased at Gateway to the Americas by 23 percent, or 963,880 crossings.\(^\text{12}\)

Buses

Table 3.3-1 provides current transit services for the Laredo/Coahuila/Nuevo León/Tamaulipas Region.

\begin{table}[h]
\centering
\begin{tabular}{|l|l|l|}
\hline
Name & Type & Coverage \\
\hline
El Metro & Fixed route, paratransit & City of Laredo and El Águila \\
Greyhound (Valley Transit Company and Americanos USA) & Private intercity & Laredo non-stop connections to San Antonio, Austin, Dallas, Houston, and McAllen \\
El Lift Paratransit Service & Paratransit & City of Laredo \\
El Águila Rural Transit & Fixed route, paratransit, demand response & Rural Webb County connections to Laredo’s fixed route system \\
Transporte Urbano de Nuevo Laredo (TUNL) & Fixed route & Municipio of Nuevo Laredo \\
Turimex Internacional (Grupo Senda) & Private intercity & Various \\
Tornado Bus Co. & Private intercity & Various, Texas and Southeast U.S. destinations with daily connections to Mexico via Sistema Estrella Blanca Bus Lines \\
El Expresso Bus Company & Private intercity & Various \\
El Conejo & Private intercity & Various \\
Omnibus Express & Private intercity & Various \\
\hline
\end{tabular}
\caption{Laredo/Coahuila/Nuevo León/Tamaulipas Region Transit Services\(^\text{13}\)}
\end{table}

\(^{12}\) Due to limited data reporting of southbound volumes, southbound POV volumes are only reported here by individual border crossing. Additionally, years of available southbound data vary by border crossing.

\(^{13}\) Laredo MTP 2045, Greyhound Mexico, Estrella Blanca, Grupo Senda, ODM, Transporte Urbano de Nuevo Laredo.
### Table 3.3-1. Laredo/Coahuila/Nuevo León/Tamaulipas Region Transit Services

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grupo IAMSA/ETN/Turistar</td>
<td>Private intercity</td>
<td>Northern Mexico from Aguas Calientes, Guadalajara, León, Monterrey, Puebla, Querétaro, Salamanca, Saltillo, San Luis Potosí, Tepotzotlán, Matamoros, Reynosa, to Nuevo Laredo</td>
</tr>
<tr>
<td>Ómnibus de México/Noreste</td>
<td>Private intercity</td>
<td>Various throughout Mexico to Ciudad Juárez, Ojinaga, Piedras Negras, Nuevo Laredo, Reynosa, Matamoros</td>
</tr>
<tr>
<td>Senda/Del Norte</td>
<td>Private intercity</td>
<td>Various throughout Northern Mexico and Southeast U.S. including Ciudad Juárez, Ciudad Acuña, Piedras Negras, Nuevo Laredo, Reynosa, Matamoros</td>
</tr>
<tr>
<td>Grupo Estrella Blanca/</td>
<td>Private intercity</td>
<td>Various throughout Mexico including Ciudad Juárez, Ojinaga, Ciudad Acuña, Piedras Negras, Nuevo Laredo, Reynosa, Matamoros</td>
</tr>
<tr>
<td>Transportes Frontera</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Figure 3.3-9. Laredo/Coahuila/Nuevo León/Tamaulipas Region Northbound Buses by Border Crossing (2008–2018)**

- Northbound buses crossing the border increased by 4,847 crossings, or 13 percent, in the Laredo/Coahuila/Nuevo León/Tamaulipas Region.
- In the Laredo/Coahuila/Nuevo León/Tamaulipas Region, northbound bus crossings at Camino Real International increased by 1,000 bus crossings, a growth of 66 percent.
- Juarez-Lincoln processed 36,392 buses southbound in 2019, with crossings increasing by 2,537, or 7.5 percent, over 2004.
- Southbound bus crossings grew by 23 percent, or 805 crossings, at Camino Real International between 2000 and 2018.
- Over the last few years, southbound pedestrian volumes at Laredo-Colombia Solidarity increased from 40 crossings in 2016 to over 2,100 crossings in 2019.
3.4 Freight Rail Network

There are two existing rail crossings in the Laredo region – Eagle Pass and Laredo. The Eagle Pass rail crossing connects Ferromex’s network in Mexico with Union Pacific Railroad’s network in the U.S. BNSF also has trackage rights on the Union Pacific network. The Laredo rail crossing, known as the Texas Mexican Railway International Bridge, connects Kansas City Southern Mexico and Kansas City Southern U.S. and is the busiest rail border crossing in North America. Kansas City Southern on the U.S. side also interchanges with Union Pacific. In August 2020, the Trump Administration approved a permit for a second Kansas City Southern rail bridge span parallel to the existing Laredo rail bridge, which would bring this region up to three rail crossings. The region experienced an increase of 351% or 623,447 northbound rail car crossings between 1996 and 2019.

Texas-Mexico border trade by rail rose 59 percent, or $27.9 billion, between 2006 and 2019, driven mainly by northbound increases, which grew by 81 percent, or $22 billion. Southbound cargo movements increased by 30 percent, or $5.8 billion, in the same time period.

The Laredo/Coahuila/Nuevo León/Tamaulipas has 944 rail track miles.\(^\text{14}\)

\(^{14}\) BTS 2020 GIS layers.
Cross-border Rail Trade

- The value of trade conveyed by rail at the Laredo POE increased by 38.5 percent, or $12.3 billion, between 2006 and 2019, despite a 41 percent decrease after the Great Recession in 2009.
Meanwhile, at the Eagle Pass POE, the value of cross-border rail trade grew by 154 percent, or $13 billion.

Northbound Rail Cars

In the Laredo/Coahuila/Nuevo León/Tamaulipas Region, the number of northbound rail cars increased by 351 percent, or 623,447 between 1996 and 2019. The Laredo POE processes the most northbound rail cars crossing the border.

3.5 Aviation Systems

Aviation networks are important to the overall Texas-Mexico border system for imports and exports. Airports in this region include the Laredo and Nuevo Laredo International Airports that provide binational customs operations. The aviation system enables business and personal travel and cargo movement on numerous U.S. and Mexican carriers.

3.6 Pipeline Networks

Pipeline networks are important to the overall Texas-Mexico border system for imports and exports. Import and export pipeline terminals along the border are most concentrated along the Gulf of Mexico near seaports.

3.7 Maritime Systems

Maritime trade between Texas and Mexico seaports rose 111 percent southbound and declined 63 percent northbound. The maritime system includes thirteen Mexico seaports and eight Texas seaports that support maritime trade between Mexico and Texas. None are located within the Laredo/Coahuila/Nuevo León/Tamaulipas Region.

3.8 Free Trade Zones

Two of the eight U.S. free trade zones also known in the U.S as foreign trade zones are in this region and are at Eagle Pass and Laredo. These trade zones exempt foreign merchandise from the usual formal CBP entry procedures and payments of duties until it enters CBP territory for domestic consumption.

Three of the six strategic fiscal areas, an equivalent area to foreign trade zones in Mexico, are in this region and allow the introduction of goods into the premise without taxes or compensatory fees.

- Strategic fiscal areas allow the introduction of goods into the premise without taxes or compensatory fees and are subject to different custom regulations than U.S. foreign trade zones. Mexico has also designated a “Northern Border Free Zone” spanning the U.S.-Mexico border which offers reduced income tax and value added tax, reduced gasoline, natural gas, and electricity prices, and increased minimum wages. The Free Zone currently includes municipios in Coahuila, Nuevo León and Tamaulipas and has extended through 2024.

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15 Based on Transearch analysis 2015 and supplemented by stakeholder comments.
3.9 System Performance

This section assesses system performance for roadway and rail from past to present through the three BTMP performance goals: Mobility and Reliability, Safety and Security, and Asset Preservation.

3.9.1 Mobility and Reliability

The Mobility and Reliability goal of the BTMP is to reduce congestion and improve system efficiency and performance on the Texas-Mexico transportation system. This can be accomplished by improving cross-border travel time reliability and improving the capacity of the system to accommodate future growth. Mobility and reliability are measured based on border and roadway delays.

Border Delay – Total Crossing Times

Total crossing times are used to measure border delays for POV and CMV lanes across all 28 Texas-Mexico vehicle crossings and the Santa Teresa crossing in 2019. Total crossing times were developed using a combination of Texas A&M Transportation Institute (TTI) Border Crossing Information System (BCIS) data and INRIX 2019 Global Positioning System (GPS) probe data from vehicles.

Texas A&M Transportation Institute’s (TTI) Border Crossing Information System (BCIS) automatically collects crossing time data at eight northbound CMV crossings \(^{16}\) and three POV crossings \(^{17}\) between Mexico and the U.S. INRIX 2019 data was developed to estimate crossing times for the remaining (non-BCIS) crossings.

CMV Crossing Times

CMV Crossing Time Distributions

In the Laredo/Coahuila/Nuevo León/Tamaulipas Region, northbound crossing times usually remain under 30 minutes and almost always remain under an hour. Southbound crossing times for CMVs rarely exceed 30 minutes.

The BCIS data source tracks total border crossing times for Camino Real International, Laredo-Colombia Solidarity, and World Trade Bridge northbound movements. For southbound movements at all border crossings, and the remaining northbound movements where there are data gaps, the BTMP uses GPS/LBS data to illustrate border crossing times. Some key findings are:

- Northbound CMV crossing times rarely exceed 30 minutes at Camino Real International.
- Over 96 percent of the time, northbound CMV crossings remain under half an hour at Laredo-Colombia Solidarity.
- While northbound CMV crossing times typically remain under 90 minutes at Del Rio–Ciudad Acuña International, total crossing time could exceed 90 minutes.

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\(^{16}\) Santa Teresa, Bridge of the Americas, Ysleta-Zaragoza, Camino Real International, Laredo-Colombia Solidarity, World Trade Bridge, Pharr-Reynosa International Bridge on the Rise, Veterans International at Los Tomates.

\(^{17}\) Paso del Norte (northbound only), Good Neighbor (northbound only), Ysleta-Zaragoza (northbound and southbound).
- Over 96 percent of the time, CMV crossing times remain under an hour at World Trade Bridge, most of which do not exceed 30 minutes. In worst cases, crossing times may exceed 120 minutes.
- Southbound CMV crossing times rarely exceed 30 minutes in the Laredo/Coahuila/Nuevo León/Tamaulipas Region.

**Figure 3.9-1. Laredo/Coahuila/Nuevo León/Tamaulipas Region Northbound Crossing Time Distribution by Border Crossing – CMV (2019)**

- Del Rio-Ciudad Acuña Intl. (INRIX): 74% < 30 minutes, 24% 30-60 minutes, 1% 60-90 minutes, 0.01% > 120 minutes
- Camino Real Intl. (BCIS): 99.9% < 30 minutes, 0.1% 30-60 minutes
- Laredo-Colombia Solidarity (BCIS): 97% < 30 minutes, 3% 60-90 minutes, 0.1% > 120 minutes
- World Trade (BCIS): 76% < 30 minutes, 21% 30-60 minutes, 3% 60-90 minutes, 0.4% 90-120 minutes, 0.1% > 120 minutes

INRIX 2019; TTI BCIS 2019.
CMV Crossing Times – by Time of Day

- CMV crossing times are highest during the early afternoon in 2019.
- The 90th percentile crossing times for northbound CMVs reached approximately 60 minutes in the Laredo/Coahuila/Nuevo León/Tamaulipas Region.
- For southbound CMVs, 90th percentile crossing times remained under 16 minutes.

The 90th percentile border crossing measure highlights the typical maximum border crossing time, in which 90% of border crossings are lower than this value. This measure filters out the highest 10% outlier border crossing times.

In the Laredo/Coahuila/Nuevo León/Tamaulipas Region, the BCIS data source tracks total border crossing times for Camino Real International, Laredo-Colombia Solidarity, and World Trade bridge northbound movements. For southbound movements at all border crossings, and the remaining northbound movements where there are data gaps, the BTMP uses GPS/LBS data to illustrate border crossing times.

- Typical northbound CMV crossing times at Del Rio–Ciudad Acuña International reach 44 minutes in the evening, while highest expected crossing times exceed an hour.
- At World Trade Bridge, northbound CMV crossing times are highest in the early afternoon, with typical crossing times at 39 minutes and highest expected crossing times reaching 69 minutes.

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19 INRIX 2019.
- 90th percentile northbound CMV crossing times reach 15 minutes at Camino Real International and 30 minutes at Laredo-Colombia Solidarity.
- Across all border crossings in the Laredo/Coahuila/Nuevo León/Tamaulipas Region, typical and highest expected northbound CMV crossing times exceed southbound crossing times.

Figure 3.9-3. Laredo/Coahuila/Nuevo León/Tamaulipas Region Northbound 50th Percentile Border Crossing Times by Border Crossing – CMV (2019)\textsuperscript{20}

Figure 3.9-4. Laredo/Coahuila/Nuevo León/Tamaulipas Region Northbound 90th Percentile Border Crossing Times by Border Crossing – CMV (2019)\textsuperscript{21}

Figure 3.9-5. Laredo/Coahuila/Nuevo León/Tamaulipas Region Southbound 50th Percentile Border Crossing Times by Border Crossing – CMV (2019)\textsuperscript{22}

Figure 3.9-6. Laredo/Coahuila/Nuevo León/Tamaulipas Region Southbound 90th Percentile Border Crossing Times by Border Crossing – CMV (2019)\textsuperscript{23}

\textsuperscript{20} INRIX 2019, TTI BCIS 2019.
\textsuperscript{21} INRIX 2019, TTI BCIS 2019.
\textsuperscript{22} INRIX 2019, TTI BCIS 2019.
\textsuperscript{23} INRIX 2019, TTI BCIS 2019.
POV Crossing Times

**POV Crossing Times – Distributions**

- In the Laredo/Coahuila/Nuevo León/Tamaulipas Region, almost all northbound crossing times remain under an hour, but approximately 5 percent exceed 60 minutes.
- Southbound crossing times for POVs rarely exceed 30 minutes.

In the Laredo/Coahuila/Nuevo León/Tamaulipas Region, the BCIS data source is unavailable for all POV movements. Instead, the BTMP uses GPS/LBS data to illustrate border crossing times.

- Northbound POV crossing times remain under half an hour at Camino Real International and Laredo-Colombia Solidarity.
- Northbound POV crossing times at Gateway to the Americas fall between 30 and 60 minutes.
- Over 90 percent of the time, northbound POV crossings at Lake Amistad Dam remain under 30 minutes. Those crossing times that exceed 30 minutes can reach up to 90 minutes.
- Northbound POV total crossing times rarely exceed one hour at Del Rio–Ciudad Acuña International and Eagle Pass I.
- Two thirds of northbound POV crossing times remain under 30 minutes at Juárez-Lincoln. However, one in ten crossings has a crossing time that exceeds 60 minutes, with the possibility of reaching 120 minutes.
- Except for Eagle Pass I, southbound POV crossing times do not exceed 30 minutes in the Laredo/Coahuila/Nuevo León/Tamaulipas Region.
Figure 3.9-7. Laredo/Coahuila/Nuevo León/Tamaulipas Region Northbound Crossing Time Distribution by Border Crossing – POV (2019)\textsuperscript{24}

![Northbound Crossing Time Distribution](figure.png)

- Lake Amistad Dam (INRIX): 95% < 30 minutes, 3% 30-60 minutes, 2% 60-90 minutes
- Del Rio-Ciudad Acuña Intl. (INRIX): 67% < 30 minutes, 32% 60-90 minutes
- Eagle Pass I (INRIX): 43% < 30 minutes, 57% 60-90 minutes
- Camino Real Intl. (INRIX): 100% < 30 minutes
- Laredo-Colombia Solidarity (INRIX): 100% < 30 minutes
- Gateway to the Americas (INRIX): 100% < 30 minutes
- Juarez-Lincoln (INRIX): 67% < 30 minutes, 24% 60-90 minutes, 9% 90-120 minutes

Figure 3.9-8. Laredo/Coahuila/Nuevo León/Tamaulipas Region – Southbound Crossing Time Distribution by Border Crossing (POV)\textsuperscript{25}

![Southbound Crossing Time Distribution](figure.png)

- Lake Amistad Dam (INRIX): 100% < 30 minutes
- Del Rio-Ciudad Acuña Intl. (INRIX): 100% < 30 minutes
- Eagle Pass I (INRIX): 99.9% < 30 minutes
- Camino Real Intl. (INRIX): 100% < 30 minutes
- Laredo-Colombia Solidarity (INRIX): 100% < 30 minutes
- Gateway to the Americas (INRIX): 100% < 30 minutes
- Juarez-Lincoln (INRIX): 100% < 30 minutes

\textsuperscript{24} INRIX 2019.
\textsuperscript{25} INRIX 2019.
POV Crossing Times – by Time of Day

- For northbound POVs, 90th percentile crossing times reached 59 minutes in the Laredo/Coahuila/Nuevo León/Tamaulipas Region.
- For southbound POVs, 90th percentile crossing times remained under 28 minutes.

In the Laredo/Coahuila/Nuevo León/Tamaulipas Region, the BCIS data source is unavailable for all POV movements. Instead, the BTMP uses GPS/LBS data to illustrate border crossing times. Due to limited data reporting, some border crossing times are shown as points on the following graphs.

- Typical northbound POV crossing times can exceed half an hour at Del Rio–Ciudad Acuña International, Eagle Pass, and Juárez-Lincoln. The 90th percentile crossing times at Del Rio–Ciudad Acuña International can reach 53 minutes. Meanwhile, highest expected northbound POV crossing times exceed 40 minutes throughout most of the day at Eagle Pass and Juárez-Lincoln, reaching up to 56 and 69 minutes, respectively.
- Crossing times at Gateway to the Americas reach 46 minutes.
- Lake Amistad Dam sees steady typical northbound crossing times—between 18 and 25 minutes. However, 90th percentile crossing times can exceed an hour at 3 p.m.
- Typical northbound crossing times remain below 15 minutes and highest expected northbound crossing times remain below 20 minutes at Camino Real International and Laredo-Colombia Solidarity border crossings.
- Across all border crossings in the Laredo/Coahuila/Nuevo León/Tamaulipas Region, typical and highest expected northbound crossing times exceed southbound crossing times.
Figure 3.9-9. Laredo/Coahuila/Nuevo León/Tamaulipas Region Northbound 50th Percentile Border Crossing Times by Border Crossing – POV (2019)\textsuperscript{26}

Figure 3.9-10. Laredo/Coahuila/Nuevo León/Tamaulipas Region Northbound 90th Percentile Border Crossing Times by Border Crossing – POV (2019)\textsuperscript{27}

Figure 3.9-11. Laredo/Coahuila/Nuevo León/Tamaulipas Region Southbound 50th Percentile Border Crossing Times by Border Crossing – POV (2019)\textsuperscript{28}

Figure 3.9-12. Laredo/Coahuila/Nuevo León/Tamaulipas Region Southbound 90th Percentile Border Crossing Times by Border Crossing – POV (2019)\textsuperscript{29}

\textsuperscript{26} INRIX 2019.
\textsuperscript{27} INRIX 2019.
\textsuperscript{28} INRIX 2019.
\textsuperscript{29} INRIX 2019.
Bike/Pedestrian Crossing Times

Total border crossing times are unavailable for bikes/pedestrians. However, border crossing volumes indicate bike/pedestrian crossing times are lower than POV crossing times. This has led to increased share of people crossing on foot rather than through POVs.30

Roadway Delay (Congestion)

- The Laredo/Coahuila/Nuevo León/Tamaulipas Region’s most congested corridors are north-south I-35 (in Laredo) and MEX 85 (in Nuevo Laredo). I-27 and I-69 in Laredo, along with its connecting corridors, also experiences congestion.

Detailed congestion information and maps can be found in Chapter 5.

Chapter 4  Laredo Region Multimodal Transportation Network

The purpose of this chapter is to present the designation of the Texas-Mexico multimodal transportation network serving the Texas-Mexico border. This designation is created as a foundation to identify the multimodal transportation network needs (Chapter 5), develop the process to identify and evaluate strategies to address the current and future needs (Chapter 8), and identify the potential recommended solutions to address those needs (Chapter 10 and Chapter 11).

4.1   Designate Border Crossings by Movement of People and Goods

The process of designating the Texas-Mexico multimodal transportation network started by identifying each of the vehicular border crossings by size. The process also differentiates the type of movement—people or goods. People movements represented passenger vehicles (POVs), pedestrians and bicyclists, and bus riders, and goods movement represented commercial vehicles (CMVs). Stakeholder inputs were used to categorize, refine, and finalize the border crossing designations.

Table 4.1-1 shows the people and goods movement border crossing designations. The small (S), medium (M), large (L), and very large (VL) designations by border crossing, type of movement (people movement and goods movement), and mode and systems (CMV, POV, pedestrian, and bus rider movements) were presented to stakeholders for refinement and finalization.

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31 The border crossing designations were created using data on movements for the year 2017 and were presented to binational stakeholders for validation. A similar designation of border crossings results when crossing volumes for the year 2019 are used.
Table 4.1-1. People Movement Border Crossing Designations

<table>
<thead>
<tr>
<th>Border Crossing</th>
<th>Location (City)</th>
<th>POV</th>
<th>People Movement</th>
<th>Bus</th>
<th>Goods Movement: CMV</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>pedestrian &amp; bicycle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lake Amistad Dam Crossing</td>
<td>Del Rio, TX, Ciudad Acuña, Coah.</td>
<td>S</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Del Rio-Ciudad Acuña International Eagle Pass I</td>
<td>Del Rio, TX, Ciudad Acuña, Coah. Eagle Pass, TX, Piedras Negras, Coah.</td>
<td>M</td>
<td>M</td>
<td>n/a</td>
<td>M</td>
</tr>
<tr>
<td>Camino Real International</td>
<td>Eagle Pass, TX, Piedras Negras, Coah.</td>
<td>M</td>
<td>M</td>
<td>M</td>
<td>M</td>
</tr>
<tr>
<td>Laredo-Colombia Solidarity</td>
<td>Laredo, TX, Colombia, NL</td>
<td>S</td>
<td>S</td>
<td>S</td>
<td>M</td>
</tr>
<tr>
<td>World Trade Bridge</td>
<td>Laredo, TX, Nuevo Laredo, Tamps.</td>
<td>n/a</td>
<td>M</td>
<td>n/a</td>
<td>VL</td>
</tr>
<tr>
<td>Gateway to the Americas</td>
<td>Laredo, TX, Nuevo Laredo, Tamps.</td>
<td>M</td>
<td>L</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Juárez-Lincoln</td>
<td>Laredo, TX, Nuevo Laredo, Tamps.</td>
<td>L</td>
<td>M</td>
<td>L</td>
<td>n/a</td>
</tr>
</tbody>
</table>

The border crossing designations for POV movements are shown in Figure 4.1-1 along with the designation of small, medium or large border crossings for CMV movements shown in Figure 4.1-2.
4.2  Designate Multimodal Corridors

U.S. and Mexican national and state sources were used to designate multimodal corridors in Texas and Mexico. Stakeholder inputs were used to identify, refine, and finalize this roadway corridor designation process. The Texas-Mexico multimodal transportation network designation includes the integration of the vehicle border crossings with the corridor designations and the multimodal transportation networks. Figure 4.2-1 shows the designated Texas-Mexico multimodal transportation network for Sphere 1 for the region.
Figure 4.2-1. Sphere 1 Texas-Mexico Multimodal Transportation Network Linked with Corridor Designations:
Laredo/Coahuila/Nuevo León/Tamaulipas Region
Chapter 5 Needs Assessment in the Laredo Region

This chapter summarizes current and future issues and needs of the Texas-Mexico multimodal transportation network designated in Chapter 4 and sets the stage for identifying the strategies and recommendations of the Texas-Mexico Border Transportation Master Plan (BTMP).

5.1 Mobility and Reliability Needs

Border crossing delays, roadway congestion, single-track rail infrastructure, and occupied rail crossings hinder the mobility and reliability of the borderwide transportation system.

These issues result from the growth in population, trade, and people movement that has outpaced the rate of infrastructure investment. This section outlines mobility and reliability issues impacting the border, highways, rail, and the multimodal transportation system. For each category, both operational efficiency and system capacity issues and needs are presented.

5.1.1 Border Crossing Delays

Many CMV border crossings also need longer hours of operation, as limited hours of operation increase delays by concentrating cross-border travel demand during certain hours of the day. Half of the POV crossings—but no CMV crossings—operate more than 20 hours per day.

Figure 5.1-1. Border Crossings Open More Than 20 Hours per Day

<table>
<thead>
<tr>
<th>Laredo/Coahuila/Nuevo León/Tamaulipas Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lake Amistad Dam Crossing</td>
</tr>
<tr>
<td>Del Rio-Ciudad Acuña Intl.</td>
</tr>
<tr>
<td>Eagle Pass I</td>
</tr>
<tr>
<td>Camino Real Intl.</td>
</tr>
<tr>
<td>Laredo-Colombia Solidarity</td>
</tr>
<tr>
<td>World Trade Bridge</td>
</tr>
<tr>
<td>Gateway to the Americas</td>
</tr>
<tr>
<td>Juárez-Lincoln</td>
</tr>
</tbody>
</table>

Type

POV  X  X  X  X
CMV

Existing capacity can also be unevenly distributed between POV and CMV uses. This exacerbates border delays at certain crossings.

Most border crossings cannot operate at full capacity due to current staffing levels and the number of lanes that can be open at any given time.
**Northbound highway border crossing utilization rates**\(^{32}\) for the movement of goods (CMV) and the movement of people (POVs and bicyclists/pedestrians) are shown in the following sections.

- Utilization rates under 30 percent are considered underutilized and over 80 percent are considered overutilized, while 100 percent indicates that demand is higher than capacity.
- Average utilization rates over the last 5 years and the hypothetical 2050 utilization rates are illustrated in the following sections.
- 2050 forecast utilization rates are based on mid-level forecasts and do not incorporate any border crossing projects that are currently not funded.

**Movement of People—POVs:**

Northbound POVs declined 23 percent between 1996 and 2019 due in part to long wait times.\(^{33}\) Many border crossings of all sizes need operational improvements or more physical capacity to meet POV needs.

**Small crossings:** Laredo-Colombia Solidarity is underutilized at 49 percent and is expected to remain the same by 2050.

**Medium crossings:** Three crossings are currently overutilized and require operational improvements: Del Rio–Ciudad Acuña International – 128 percent, Eagle Pass I – 149 percent, and Camino Real International – 107 percent. All three of these crossings are expected to increase by 2050 with Eagle Pass I to increase the most at 218 percent by 2050. Although Gateway to the Americas is currently underutilized at 64 percent operational capacity, it is expected to increase to 148 percent by 2050.

**Large crossings:** The one large crossing in this region is overutilized – over 80 percent volume-to-operational capacity – and require operational improvements: Juárez-Lincoln – 96 percent. The crossing is projected to decrease by 2050 to 84 percent.

**Movement of People—Bike/Pedestrian Crossings:**

Between 1996 and 2019, northbound bike/pedestrian movements increased by 18 percent from 16.9 million to 20 million.

To meet the needs of the growing border population, bike/pedestrian crossings will require

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\(^{32}\) Utilization rates are reported as (1) volume-to-total capacity based on physical infrastructure, throughput assumptions from the CBP Business Transformation Initiatives report, and commercial throughput assumptions based on analysis of wait times; and (2) volumes-to-operational capacity based on the annual average number of lanes open during normal hours of operation for each border crossing from CBP’s border crossing volumes dataset 2014–2018.

operational improvements, and many also require additional physical capacity.\textsuperscript{34}

One large crossing, Gateway to the Americas, is substantially overutilized with over 270 percent volume-to-operational capacity and require operational improvements. The crossing is anticipated to decrease by 2050; however, it will still be expected to be overutilized with 170 percent volume-to-operational capacity.

**Movement of Goods—CMVs:**

Under NAFTA, cross-border U.S.-Mexico trade between 1994 and 2019 tripled from $173 billion to $615 billion,\textsuperscript{35} yet only a third of border crossings have received any investments during this time. This has led to overutilization of border crossings—especially medium and large CMV crossings.

The operational and physical capacity needs vary by crossing type and size.

**Medium crossings** are fully or close to fully utilized, based on inspection staffing levels and the number of lanes open, and require operational improvements. Three medium crossings are overutilized with over 80 percent volume-to-operational capacity and require operational improvements: Del Río-Ciudad Acuña International with 133 percent, Camino Real International with 201 percent, and Laredo-Colombia Solidarity with 133 percent.

Camino Real International requires both operational improvements and additional physical capacity with a utilization projection of 714 percent volume-to-operational capacity by 2050.

World Trade Bridge is the only **very large CMV crossing** and has a utilization rate of 145 percent as shown in **Figure 5.1-2**. The bridge requires both operational improvements and additional physical capacity to accommodate continued trade growth.

\begin{table}[h]
\centering
\begin{tabular}{|c|c|}
\hline
\textbf{Border Crossing Sizes} & \textbf{Annual Northbound Volumes} \\
\hline
\textbf{SMALL} & Under 75,000 \\
\textbf{MEDIUM} & 75,000 - 500,000 \\
\textbf{LARGE} & 500,000 - 1,500,000 \\
\textbf{VERY LARGE} & 1,500,000+ \\
\hline
\end{tabular}
\caption{Commercial Vehicle (CMV) Sizes}
\end{table}

\textsuperscript{34} Some data for small crossings are unavailable.

\textsuperscript{35} Adjusted to 2019 dollars.
5.1.2 Roadway Delays (Congestion)

The Laredo/Coahuila/Nuevo León/Tamaulipas Region’s top congestion issues are within the urban areas near the border crossings. I-35/MEX 85 and Loop 20 are the top congested corridors and roads.

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36 TxDOT Congestion Data (2018).
37 TxDOT SAM 2050 congestion.
The current top congested segments in the Laredo/Coahuila/Nuevo León/Tamaulipas Region are all near the border crossings due to long border delays, the configuration of border crossings near urban centers, and site-specific design issues.

CMV parking is needed near and at the border to accommodate unexpected delays from congestion or construction, as well as staging needs.

Unlike the automated process to enter the U.S., drivers wishing to re-enter Mexico must wait for paperwork to be processed, which can take several hours. This holding pattern requires drivers to find CMV staging near the border. In some cases, a driver might need long-term CMV parking if the required paperwork is not received before a POE facility closes or if the driver arrives after it has closed.

5.1.3 Connectivity

Like the roadway system, the demand on the Texas-Mexico multimodal transportation network has outpaced capacity, and in many cases, needs improved connection to the roadway system and other modes.

The Laredo/Coahuila/Nuevo León/Tamaulipas Region is also connected to the rail intermodal facilities in Texas and Mexico. Rail connections in the Laredo Region include the Eagle Pass (UP, BNSF) and Laredo (KCS) Rail Bridges.

5.1.4 Rail Border Crossings

U.S. and Mexican rail policies also constrain cross-border rail movements. For example, rail crews are currently required to switch at the border due to different U.S. and Mexico requirements for certifying locomotive engineers and conductors.

- In Laredo, crews delivering trains to the rail yard must be driven by a van to the border to pick up another train. Traffic congestion during the journey and any delays at the rail yard can result in crew changes that take between 2 and 3 hours.\(^{38}\)

Additionally, U.S.-Mexico policies on maintenance inspections are different. Mechanical and brake inspections of railcars performed in Mexico currently do not satisfy U.S. rail safety regulations.

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Table 5.1-1 lists operational and physical capacity issues by rail border crossing.

<table>
<thead>
<tr>
<th>Border Crossing</th>
<th>Operational and Physical Capacity Issues</th>
</tr>
</thead>
</table>
| Eagle Pass Bridge (UP and BNSF Railway) | ▪ Congestion between the BNSF and UP sidings at Eagle Pass and need for CBP border security staffing at Eagle Pass.  
▪ Limited train speeds and limited freight capacity due to need for improved infrastructure and expanded track. |
| Laredo Texas Mexican Railway International Bridge (Kansas City Southern Railroad [KCS]) | ▪ Congested rail traffic flow across the border at Laredo. |

5.1.5 Occupied Highway/Rail Crossings

Highway/rail crossings are an issue particularly in Laredo/Nuevo Laredo where high-volume rail lines traverse dense urban areas, resulting in congestion and safety issues.

A single stopped train can occupy all highway/rail crossings from the border to 2 miles north of the border. The Laredo Texas Mexican Railway International Bridge (KCS) has the following issue:

▪ Congestion in downtown Laredo due to 14 different highway/rail crossings in the region leading up to the Texas Mexican Railway International Bridge operated by Texas Mexican Railway (KCS).

5.2 Safety and Security Issues and Needs

Borderwide safety and security issues contribute to higher rates of roadway and rail crashes, incidents, injuries, and fatalities, especially near the border where the frequency and severity of crashes and incidents are higher.

5.2.1 Border Crossing Safety

Physical separation between people and goods movement is needed at several border crossings that handle multiple modes.

The Laredo/Coahuila/Nuevo León/Tamaulipas Region has the following border crossing safety issues:

▪ Laredo-Colombia Solidarity, which also processes hazardous materials, is a higher-volume CMV crossing that needs a separate CMV lane to allow separated CMV and POV traffic.

▪ The region's two border rail crossings, located in urban areas, cause complex challenges to the expansion of rail facility solutions for mitigating highway/rail conflicts.

▪ Border crossings in the region need enhanced capacity to handle hazardous materials.

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5.2.2 Roadway Safety


- **Active highway/arterial speed** harmonization on regional roads (I-10, I-35, US 83, and I-69) is needed to reduce CMV/auto conflicts.

- **Higher POV crash rate**: the POV crash rate in the region is higher than the statewide crash rate at 309 crashes per 100 million VMT, compared to the statewide crash rate of 258 crashes per 100 million VMT between 2015 and 2019.

- **Lower CMV crash rate**: the CMV crash rate in this region is 125 crashes per 100 million VMT, lower than the statewide CMV crash rate of 145 crashes per 100 million VMT between 2015 and 2019.

- **Bike/pedestrian crash percentages**: bike/pedestrian crash percentages are lower than statewide percentages at 1.3 percent of total crashes, compared to 1.5 percent statewide between 2015 and 2019.
Figure 5.2-1. Roadway Crash Density, Laredo/Coahuila/Nuevo León/Tamaulipas Region (2015–2019)\(^{40}\)

\(^{40}\) Automated Crash Data Extract Files, TxDOT (2015–2019).
5.2.3 Rail Safety

Rail incidents occur at areas of highway/rail conflicts often due to at-grade crossings, particularly urban areas.

The Laredo/Coahuila/Nuevo León/Tamaulipas Region has the following rail safety issues:

- Between San Antonio and Laredo, clusters of hot spots occur at intersections where at-grade rail crossings run closely parallel to (less than 100 feet from) intersections with major I-35 frontage roads.
- The two rail border crossings are in urban areas and make it difficult to expand rail facility solutions to mitigate highway/rail conflicts.
Figure 5.2-2. Laredo Region At-grade Rail Crossing Incidents in Texas (2007–2017)\textsuperscript{41}

\textsuperscript{41} FRA Rail Grade Crossing Data (2007–2017).
5.3 Asset Preservation Issues and Needs

Asset preservation issues include pavement conditions, bridge conditions, border crossing conditions, and border inspection facility conditions. Although these assets are, on average, in fair condition,42 systematic preventive maintenance is needed to prevent deterioration.

5.3.1 Pavement Conditions

Poor pavement conditions as a percent of road length within the region are summarized below:

- 11 percent of I-27/FH 57
- 4 percent of I-35/FH 85
- 3 percent of Laredo I-69
- 10 percent of regional roadways
- 18 percent of regional roads 1 mile from the border

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42 TxDOT Pavement Conditions Data (2018); TxDOT 2018 Report on Texas Bridges; TxDOT Bridge Conditions Data (June 2020); National Bridge Inventory, FHWA, TxDOT; GAO Report to Congressional Requesters, “Border Infrastructure: Actions Needed to Improve Information on Facilities and Capital Planning at Land Border Crossings,” July 2019; Class I railroad interviews.
Figure 5.3-1. Laredo/Coahuila/Nuevo León/Tamaulipas Region Pavement Conditions (2018).°

43 TxDOT Pavement Conditions Data (2018).
5.3.2 Bridge Conditions

On average, 94 percent of the bridges in the Laredo/Coahuila/Nuevo León/Tamaulipas Region are in good or better condition. For the region, 54 bridges are functionally obsolete, 2 are structurally deficient and 811 bridges are in good or better condition.

- Poorer conditions such as structurally deficient or functionally obsolete are concentrated on I-35 and I-35 connectors.
- The four bridge structures, none of which are downtown, that have low vertical clearance in the LRD region are:
  - FM1572 - 13' under a railroad approximately 4 miles west of US90
  - FM469 - 14' under IH35 in Millet
  - IH35 - 14' under a railroad approximately 1 mile north of N.US83 in Webb
  - FM1472 - 14' under IH35

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44 Good or better structure: A good or better structure meets current federal and Texas requirements. It is not structurally deficient, functionally obsolete, or substandard for load only. Desirable change in good or better structures from year to year is reflected by positive numbers, showing an increase in sufficient structures (from TxDOT, Report on Texas Bridges, 2018).
5.3.3 Border Crossing Conditions

In contrast to Texas pavements and bridges, border crossings have no consistent asset management funding sources to ensure adequate maintenance over time.

- More than two-thirds of border crossings are in fair condition and could deteriorate to poor conditions without a formalized asset maintenance funding program to systematically repair and rehabilitate crossings over time.
- The Del Rio-Ciudad Acuña International Bridge is the only bridge in good condition within the region.

**Most U.S. Customs and Border Protection (CBP) border inspection facilities are in good or fair condition.**

- Three CBP border inspection facilities in the Laredo Region have not had facility condition assessments conducted by CBP and the U.S. Government Accountability Office (GAO).

### 5.3.4 Rail Crossings

**All rail crossings are currently in good serviceable condition.**

Annual inspections and reports indicate whether a rail crossing is safe for current traffic and can safely support the loadings in both weight and mass.

Rail intermodal facility conditions are unavailable. However, these facilities also require maintenance over time to ensure they can sufficiently facilitate CMV/rail movements.

### 5.4 Summary of Findings

Border crossings serve a confluence of pedestrians, bikes, buses, POVs, CMVs, and trains that support everyday life in the border region, across the state, and throughout the North American tri-national economy. In this environment of activity, there is an opportunity for improvement.

- Three POV crossings (Del Rio–Ciudad Acuña International, Eagle Pass I, and Camino Real International) are currently overutilized and projected to increase by 2050. Operational improvements would be needed at these crossings to meet future demand of POVs.

- Camino Real International Bridge is projected to have the highest CMV crossing utilization rate of 714 percent by 2050 and would require both operational improvements and additional physical capacity.

- Laredo-Colombia Solidarity, which also processes hazardous materials, is a higher-volume CMV crossing that needs a separate CMV lane to allow separated CMV and POV traffic.

- The POV crash rate in the region is higher than the statewide crash rate at 309 crashes per 100 million vehicle miles traveled (VMT), compared to the statewide crash rate of 258 crashes per 100 million VMT between 2015 and 2019.

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45 Condition based on facility condition index (0-10% good, 10-20% fair, 20-30% poor, and 30-100% critical). The facility condition index is a ratio of the costs to correct the facility deficiencies divided by the total replacement cost of the facility (from GAO Report to Congressional Requesters, “Border Infrastructure: Actions Needed to Improve Information on Facilities and Capital Planning at Land Border Crossings,” July 2019, p.30).


47 Class I railroad interviews.
Chapter 6  Future Forecasts for the Laredo Region

This chapter discusses forecasts of future conditions in 2050, including the movement of people and goods, border crossings and multimodal transportation infrastructure, and system performance. These forecasts are inputs to assessing the economic impacts of future conditions along the border (Chapter 7), identifying and evaluating strategies to address current and future needs along the Texas-Mexico border region (Chapter 8), developing recommendations (Chapter 10), and creating an implementation plan (Chapter 11).

6.1  Income

The Laredo/ Coahuila/Nuevo León/Tamaulipas Region is expected to experience income growth from approximately $42,400 in 2019 to $57,000 in 2050.

6.2  Forecasts of Northbound Border Crossing Movements

6.2.1  Forecasts of Northbound Texas-Mexico Cross-border Movement of People, 2019–2050

Forecasts of Northbound Texas-Mexico Cross-border Movement of People by POVs

The Laredo POE is forecast to have 13 million northbound POV movements in 2050, a 25 percent increase from 2019 POV movements of 10.4 million.

The region overall is anticipated to increase from 9.6 million to 12.3 million in northbound POV movements from 2019 to 2050, a 28 percent increase. The other POEs in the region include the Del Rio and Eagle Pass POEs which are projected to increase 500,000 (16 percent) and 1.6 million (27 percent) POV movements respectively from 2019 to 2050.
Three border crossings in this region are forecast to have over 2 million POV movements in 2050: Juarez-Lincoln (3.5 million), Gateway to the Americas (2.8 million) and Camino Real International (2.2 million).

**Forecasts of Northbound Texas-Mexico Cross-border Movement of Bicycles and Pedestrians**

The Laredo POE has projected 4.2 million northbound bicycle and pedestrian movements in 2050.

![Figure 6.2-2. Northbound Bicycle and Pedestrian Movements by POE (2019 and 2050)](image)

The Laredo/Coahuila/Nuevo León/Tamaulipas Region is forecast to increase by 15 percent from 4.8 million in 2019 to 5.5 million in 2050 for these movements.

At the border crossings, the Gateway to the Americas border crossing is projected to have the second highest bicycle and pedestrian movements with 3.1 million in 2050, an increase of 11 percent from 2.8 million in 2019.

**Forecasts of Northbound Texas-Mexico Cross-border Movement of People by Buses, 2019–2050**

Bus movements are forecast to remain stable out to 2050. The Laredo/Coahuila/Nuevo León/Tamaulipas Region is projected to have a minor increase of 0.2 percent from 41,900 in 2019 to 42,000 in 2050. Bus movements include both local cross-border and longer haul cross-border movements.

The Laredo POE is projected to have the highest increase in northbound bus movements among POEs with approximately 2 percent from 38,600 in 2019 to 39,400 in 2050.
6.2.2 Forecasts of Goods Movement by Mode, 2019–2050

Cross-border CMV Trade

Almost half of the value of goods is forecast to move through the Laredo/Coahuila/Nuevo León/Tamaulipas Border Region.

The Laredo Region is projected to have the highest projected CMV tonnage and trade value among the border regions in 2050. The CMV tonnage would increase by 221 percent from 41.7 million in 2019 to 133.7 million in 2050. The region would increase the CMV trade value from $195.8 billion in 2019 to $599.5 billion in 2050, an increase of over 200 percent.

Laredo POE is anticipated to have the highest total CMV tonnage in 2050, an increase of 200 percent from 2019 to 2050 from 39 million in 2019 to 117 million in 2050.

The Laredo POE leads all the POEs with the total CMV trade value projected to be $510 billion in 2050, 178 percent increase from $183 billion in 2019.
Forecasts of Cross-border CMV Movements

More than half of all CMV movements cross the Texas-Mexico border through the Laredo/Coahuila/Nuevo León/Tamaulipas Region.

The CMV movement in the Laredo Region is projected to increase from 2.6 million in 2019 to 7.1 million in 2050; this 172 percent increase is the highest growth compared to the other border regions.

The Laredo POE is forecast to have the highest CMV movement, surpassing 6 million movements in 2050. The other POEs in the region are forecast to increase CMV movements by at least 200,000 from 2019 to 2050.

The World Trade Bridge is anticipated to process the largest number of CMVs among all border crossings with 5.1 million movements in 2050. This represents 42 percent of total CMV movements across the Texas-Mexico border. The Laredo-Colombia Solidarity border crossings is also forecast to have at least 1 million annual movements in 2050.
Forecasts of Cross-border Rail Movements, 2019–2050

- Most of goods movement by rail in terms of both tonnage and value moves through the Laredo/Coahuila/Nuevo León/Tamaulipas Region.
- By 2050, the Eagle Pass Rail Bridge is forecast to have more goods by tonnage moving through than any other rail crossing. However, the Laredo Rail Bridge is forecast to have the most goods by value at $112.8 billion. This is because Laredo is a hub for high-value and low-tonnage supply chains such as motor vehicles, whereas Eagle Pass will experience growth in high-tonnage and low-value supply chains such as foodstuffs and vegetable products.

The Laredo and Eagle Pass POEs hold the highest projected rail tonnage and trade value in 2050.

Laredo POE is forecast to nearly double rail tonnage from 22.2 million in 2019 to 43.7 million in 2050 whereas Eagle Pass POE is forecast to nearly triple rail tonnage from 15 million in 2019 to 45.6 million in 2050.

Overall, the Laredo Region’s total rail tonnage is forecast to more than double from 37.2 million in 2019 to 89.2 million in 2050. The total rail trade value for the region is also projected to have a 158 percent increase from $65.7 billion in 2019 to $169.7 billion in 2050.
Forecast of Cross-border Rail Car Movements

The Laredo/Coahuila/Nuevo León/Tamaulipas Region and specifically the Laredo Rail Bridge and Eagle Pass Rail Bridge account for more than 80 percent of the rail car movements in 2050.

The Laredo POE (Laredo Texas Mexican Railway International Bridge) rail car movements are projected to increase 147 percent from 464,400 in 2019 to 1,149,100 in 2050. The Eagle Pass POE (Eagle Pass Rail Bridges) is projected to increase 180 percent from 336,500 rail car movements in 2019 to 943,700 in 2050.

48 The Presidio-Ojinaga International Rail Bridge is currently closed and is scheduled to reopen in 2021.
6.3 Forecasts of Roadway Corridor Movements

6.3.1 Roadway Vehicle-miles Traveled

Vehicle-miles traveled (VMT) is forecast to grow in all the border regions from 2018 to 2050. The Laredo/Coahuila/Nuevo León/Tamaulipas Region will experience a 100 percent increase in VMT on the Texas side.

6.4 Forecasts of System Performance

6.4.1 Border Crossings

Forecasts of POV Crossing Times

The crossing times at most of the border crossings in the region are forecast to increase, highlighting the need for future improvements.

Large Crossings (Juarez-Lincoln)

- Average crossing time was 25 minutes for the large crossing in the region, Juarez-Lincoln Bridge, in 2019.
- By 2050, the one large crossing in the region (Juarez-Lincoln) is forecast to experience an increase in average crossing times, with an average of 80 minutes, or over one hour.
- The Juarez-Lincoln Bridge is forecast to have a 236 percent change in 90th percentile crossing times, with an increase of 137 minutes, or over 2 hours.

Medium Crossings (Del Rio – Ciudad Acuna International, Eagle Pass I, Camino Real International and Gateway to the Americas)

- All the medium crossings (Del Rio – Ciudad Acuna International, Eagle Pass I, Camino Real International and Gateway to the Americas) in the region are forecast to experience large increases in crossing times by 2050.
- The average crossing times at the region’s border crossings ranged as low as 6 minutes at Camino Real International Bridge to 43 minutes at Gateway to the Americas Bridge in 2019. The highest crossing time was projected for Gateway to the Americas Bridge with 155 minutes in 2050, an increase of 260 percent from 2019.
- The 90th percentile crossing times in 2019 were similar, with ranges from 8 minutes at Camino Real International to 50 minutes at Eagle Pass I. The highest crossing time was projected for Eagle Pass I at 195 minutes, but crossing times are projected to increase to over 2 hours at all four medium border crossings in the region by 2050. Camino Real International and Gateway of the Americas and Eagle Pass are projected to have crossing times of over 3 hours.

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49 Personal vehicle border crossings leveraged 2019 crossing times from INRIX. Fort Hancock–El Porvenir Bridge used 2019 CBP wait times due to unavailable data from INRIX.

50 Note that these forecasts are unconstrained. The forecast border crossing times in 2050 assume current (2019) processing levels observed at the individual border crossings, with no operational or capacity improvements between now and the year of the forecast. These future forecasts would change if improvements are implemented at border crossings between now and 2050.
Small Crossings (Laredo-Colombia Solidarity)

- The one small crossing in the region is the Laredo-Colombia Solidarity Bridge. This crossing is not forecast to experience crossing time increases from 2019 to 2050. In 2019, the average crossing time is 10 minutes and 17 minutes for the 90th percentile crossing time.

Forecasts of CMV Crossing Times\(^{51}\)

The almost tripling of CMV movements by 2050 will strain the border processing capabilities at border crossings. CMV crossing times\(^{52}\), both average and 90th percentile\(^{53}\), are forecast to increase dramatically by 2050.\(^{54}\) For many of the larger crossings, the average crossing times will be 3 to 9 hours in 2050. No crossings in this region are considered in the large and small categories.

Very Large Crossing (World Trade Bridge)

- The World Trade Bridge is the only very large crossing.
- The 2019 crossing time at the World Trade Bridge averaged 30 minutes with the 90th percentile reaching 53 minutes.
- The World Trade Bridge shows an increase in CMV crossing times between 2019 and 2050, with average crossing time increasing by 497 minutes (1,655 percent cumulative growth) to 527 minutes, and 90th percentile crossing time by 877 minutes, which is a 1,655 percent cumulative growth to 930 minutes or 15.5 hours.
- The average crossing time at the World Trade Bridge is forecast to exceed 8 hours in 2050.

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\(^{51}\) The following commercial border crossings leveraged 2019 crossing times from BCIS: Bridge of the Americas; Ysleta – Zaragoza Bridge; Pharr – Reynosa International Bridge on the Rise; Veterans International Bridge at Los Tomates; Laredo – Colombia Solidarity Bridge; World Trade Bridge; Camino Real International Bridge and Santa Teresa/San Jerónimo. The remaining commercial border crossings used 2019 crossing times from INRIX.

\(^{52}\) The analysis of commercial crossing times is organized by the size of border crossing. Future crossing times are forecast using a queuing model and the unconstrained demand forecast. The queuing model determines how crossing times might change as a result of higher future traffic volumes without any improvements at each crossing. That is to say, the forecast 2050 crossing times assume that operating hours, staffing levels, traffic patterns, and the number of lanes remain at 2019 levels.

\(^{53}\) 90th percentile crossing times reflect a crossing time that is met or exceeded 10 percent of the time.

\(^{54}\) The forecast border crossing times in 2050 assume current (2019) processing levels observed at the individual border crossings, with no operational or capacity improvements between now and the year of the forecast. These future forecasts would change if improvements are implemented at border crossings between now and 2050.
6.4.2 Forecast Highway Corridor Congestion

Highway congestion is summarized in Chapter 5. The BTMP has 11 designated international multimodal corridors—six provide north-south connectivity and five provide east-west connectivity. Among these corridors, east-west corridors have the highest percentage of congestion. Currently, congestion occurs mainly near border crossings and urbanized areas.

The Laredo/Coahuila/Nuevo León/Tamaulipas Region’s top congestion issues are within the urban areas near the border crossings. I-35/MEX 85 and Loop 20 are the top congested corridors and roads.
## Chapter 7 Economic Importance of the Laredo Region

This chapter describes the economic importance of the Laredo/Coahuila/Nuevo León/Tamaulipas region now and in the future by identifying the impacts to the regional economy from the movement of people and goods through the Texas-Mexico border and costs of congestion and delays at the border. The chapter builds on the past and present of the border in the region as presented in Chapter 3 and the unconstrained mid-case forecasts of the movement of people and goods presented in Chapter 6. The information presented provides the economic context for policymakers to make informed decisions about transportation investments, policies, and programs for meeting objectives and promoting future growth and prosperity. All monetary values (present and future) are shown in 2019 dollars.

### 7.1 Economic Impacts from Movement of Goods across the Border

#### 7.1.1 Current and Future Movement of Goods by CMV Border Crossings

A significant portion of the total GDP impact in the U.S. and Mexico due to goods movement by CMV across the border, or $122 billion ($73 billion to the U.S., $49 billion to Mexico), comes through one very large crossing: the World Trade Bridge.

Approximately 57 percent of $285 billion GDP impacts flow through the Laredo/Coahuila/Nuevo León/Tamaulipas Region.

The share of binational GDP impacts through the Laredo/Coahuila/Nuevo León/Tamaulipas Region is forecast to decline from approximately 59 percent in 2019 to 48 percent in 2050. This reflects growth in high-technology exports from Mexico.

Goods movement by CMV across the border through the World Trade Bridge is forecast to contribute $338 billion in GDP in 2050 ($221.2 billion to the U.S., $117.0 billion to Mexico). This reflects an annual growth rate of 3.2 percent (168 percent cumulative growth) from a $122.2 billion impact on GDP in 2019.

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**LAREDO/COAHUILA/NUEVO LEÓN/TAMAULIPAS REGION**

**$163.7 BILLION**

**CONTRIBUTION TO GDP IN 2019**

- **U.S. SIDE:** $97.0 BILLION
  - **MEXICO SIDE:** $66.7 BILLION

- **U.S. SIDE SUPPORTS**
  - **825 THOUSAND JOBS**

- **MEXICO SIDE SUPPORTS**
  - **2.3 MILLION JOBS**

---

**LAREDO/COAHUILA/NUEVO LEÓN/TAMAULIPAS REGION**

**$493.1 BILLION**

**CONTRIBUTION TO GDP IN 2050**

- **U.S. SIDE:** $328.3 BILLION
  - **MEXICO SIDE:** $164.8 BILLION

- **U.S. SIDE SUPPORTS**
  - **2.8 MILLION JOBS**

- **MEXICO SIDE SUPPORTS**
  - **6.0 MILLION JOBS**

---

Economic Importance of the Laredo Region
7.1.2 **Current and Future Movement of Goods by Rail**

- Goods movement by rail across the border annually contributes $7.6 billion to Texas GDP and $7.3 billion to the Mexican border states of Chihuahua, Coahuila, Nuevo León, and Tamaulipas in 2019.
- Over 88 percent of binational GDP impacts (in both directions) flow through the Laredo/Coahuila/Nuevo León/Tamaulipas Region in 2019.
- Most of the trade by rail will pass through three rail crossings in 2019 including two within the Laredo region: Laredo Texas Mexican Railway International Bridge contributes $35.8 billion in GDP ($20.9 billion in the U.S., and $14.9 billion in Mexico). Eagle Pass Bridge contributes $15.2 billion in GDP ($5.3 billion in the U.S. and $10.0 billion in Mexico).
LAREDO/COAHUILA/NUEVO LEÓN/TAMAULIPAS REGION

$51.0 BILLION CONTRIBUTION TO GDP IN 2019

U.S. SIDE: $26.1 BILLION
MEXICO SIDE: $24.9 BILLION

U.S. SIDE SUPPORTS 224 THOUSAND JOBS
MEXICO SIDE SUPPORTS 583 THOUSAND JOBS

LAREDO/COAHUILA/NUEVO LEÓN/TAMAULIPAS REGION

$111.4 BILLION CONTRIBUTION TO GDP IN 2050

U.S. SIDE: $64.6 BILLION
MEXICO SIDE: $46.8 BILLION

U.S. SIDE SUPPORTS 565 THOUSAND JOBS
MEXICO SIDE SUPPORTS 1.6 MILLION JOBS
Figure 7.1-2. Impact of Movement of Goods on GDP by Rail Crossing (2019 and 2050)
7.2 Economic Impacts from Movement of People across the Border

LAREDO/COAHUILA/NUEVO LEÓN/TAMAULIPAS REGION

$2.7 BILLION CONTRIBUTION TO GDP IN 2019

U.S. SIDE: $1.9 BILLION
MEXICO SIDE: $0.8 BILLION

U.S. SIDE SUPPORTS 39 THOUSAND JOBS
MEXICO SIDE SUPPORTS 26 THOUSAND JOBS

LAREDO/COAHUILA/NUEVO LEÓN/TAMAULIPAS REGION

$3.3 BILLION CONTRIBUTION TO GDP IN 2050

U.S. SIDE: $2.3 BILLION
MEXICO SIDE: $1.0 BILLION

U.S. SIDE SUPPORTS 50 THOUSAND JOBS
MEXICO SIDE SUPPORTS 33 THOUSAND JOBS
Figure 7.2-1. Impact of Movement of People on GDP by Border Crossing (2019 and 2050)

<table>
<thead>
<tr>
<th>Border Crossing</th>
<th>2019 (M)</th>
<th>2050 (M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lake Amistad Dam Crossing</td>
<td>$19.9 M</td>
<td>$267.7 M</td>
</tr>
<tr>
<td>Del Rio Ciudad Acuña Int'l</td>
<td>$8.4 M</td>
<td>$239.5 M</td>
</tr>
<tr>
<td>Eagle Pass I</td>
<td>$114.1 M</td>
<td>$286.2 M</td>
</tr>
<tr>
<td>Camino Real Int'l</td>
<td>$102.8 M</td>
<td>$121.9 M</td>
</tr>
<tr>
<td>Laredo-Columbia Solidarity</td>
<td>$55.0 M</td>
<td>$23.4 M</td>
</tr>
<tr>
<td>World Trade</td>
<td>$22.3 M</td>
<td>$1.5 M</td>
</tr>
<tr>
<td>Gateway to the Americas</td>
<td>$9.5 M</td>
<td>$212.6 M</td>
</tr>
<tr>
<td>Juarez-Lincoln</td>
<td>$114.1 M</td>
<td>$211.6 M</td>
</tr>
<tr>
<td>Eagle Pass II</td>
<td>$22.3 M</td>
<td>$212.6 M</td>
</tr>
<tr>
<td>Camino Real Int'l</td>
<td>$114.1 M</td>
<td>$211.6 M</td>
</tr>
<tr>
<td>Laredo-Columbia Solidarity</td>
<td>$22.3 M</td>
<td>$212.6 M</td>
</tr>
<tr>
<td>World Trade</td>
<td>$9.5 M</td>
<td>$212.6 M</td>
</tr>
<tr>
<td>Gateway to the Americas</td>
<td>$22.3 M</td>
<td>$212.6 M</td>
</tr>
<tr>
<td>Juarez-Lincoln</td>
<td>$114.1 M</td>
<td>$211.6 M</td>
</tr>
</tbody>
</table>
- The Laredo/Coahuila/Nuevo León/Tamaulipas Region receives an annual GDP contribution of $2.7 billion.
- The Laredo/Coahuila/Nuevo León/Tamaulipas Region is forecast to have a $3.3 billion annual binational GDP impact.

### 7.3 Economic Costs of Border Crossing Times on Movement of Goods

Between 2003 and 2019, there was a significant increase on CMV wait times at the Texas-Mexico border: 58 percent increase (over 14 minutes) in the Laredo/Coahuila/Nuevo León/Tamaulipas Region.

In the Laredo/Coahuila/Nuevo León/Tamaulipas Region, 90th percentile wait times doubled at Del Rio–Ciudad Acuña International and Laredo-Colombia Solidarity Bridge from 2003 to 2019.

#### 7.3.1 Border Delays to the Movement of Goods in 2019 and 2050

- Delays to goods movement at the World Trade Bridge, the one very large crossing, results in an estimated $422.3 million impact on GDP ($197.9 million to the U.S., $224.4 million to Mexico).
- Demand and delays at the World Trade Bridge are forecast to experience the estimated impact on GDP to move from $422.3 million in 2019 to $28.0 billion ($16.8 billion on the U.S., $11.2 billion on Mexico) in 2050. This is 6,522 percent growth (14.5 percent annually). The impact of delays on World Trade Bridge are forecast to exceed the impacts from the delays on Pharr-Reynosa International crossing, which will experience an estimated $25.7 billion impact on GDP ($16.6 billion to the U.S., $9.1 billion to Mexico) in 2050 compared to $594.1 million on GDP in 2019, a cumulative increase of 4,225 percent (12.9 percent annually).
Figure 7.3-1. Impact of Delays to Movement of Goods on GDP by Border Crossing (2019 and 2050)

Delay estimated as the difference between the total crossing time and the minimum crossing time (10th percentile crossing time in 2019).

Productivity losses estimated at $42.46 per hour, which takes into account driver wages, benefits, fuel costs, CMV lease or purchase payments, repair and maintenance, CMV insurance premiums, permits, and licenses. The value reflects a weighted average of U.S. and Mexican values based on income and population. Estimate does not include other productivity losses such as spoilage and goods safety stock. Based on American Transportation Research Institute, An Analysis of the Operational Costs of Trucking: 2019 Update.
7.4 Economic Costs of Border Crossing Times on Movement of People

7.4.1 Current and Future Delays to People

The number of people crossing the border is forecast to grow from 86.3 million in 2019 to 112.4 million in 2050. With an additional 26.1 million people crossing the border in 2050 and increased pressure on border infrastructure, the lost opportunities to local economies due to POV, pedestrian, bicycle, and bus delays will increase.

Without future improvements at the Texas-Mexico border, forecasts of the future movement of people indicate increased impact on GDP, employment, and labor income for border communities from future delays.
Figure 7.4-1. Impact of Delays to Movement of People on GDP by Border Crossing, 2019 and 2050

- Lake Amistad Dam Crossing
- Del Rio-Ciudad Acuña Intl.
- Eagle Pass I
- Camino Real Intl.
- Laredo-Colombia Solidarity
- World Trade
- Gateway to the Americas
- Juarez-Lincoln

Texas Border Region
Mexico Border Region

Economic Importance of the Laredo Region
7.5 Economic Costs of Highway Congestion

7.5.1 Current and Future Economic Costs of Highway Congestion

The largest concentration of CMV delays on main north-south corridors were on I-35/FH 85 in the Laredo region. As with CMVs, north-south POV delays were highest along I-69W in Laredo. Congestion I-69W near Laredo is forecast to worsen significantly by 2050, so that this corridor is forecast to have the highest CMV delays, instead of I-35/FH 85. The delays on I-69W is forecast to account for more than 90 percent of all POV delays in 2050.

7.5.2 Costs of Highway Congestion within 100 miles of the Border

Highway congestion on major corridors within just 100 miles of the border lowered GDP by $1.8 million in the U.S. and $0.9 million in Mexico in 2019. More than three-fourths of the time spent in congestion was experienced by POVs. Congestion delays are expected to increase by 749 percent between 2019 and 2050.

Congestion along major corridors close to the border can increase the cost of goods and reduce personal trip spending. The economic impacts of the resulting lower demand for goods and services are felt in both countries.

- From 2019 to 2050, congestion is forecast to worsen the most along I-69W around Laredo.
Chapter 8  Process to Identify and Evaluate Strategies to Address Current and Future Needs in the Laredo Region

The purpose of this chapter is to outline the framework and the process to identify and evaluate strategies to address the current and future needs of moving people and goods across the Texas-Mexico border and the border region. The needs assessment presented in Chapter 5, combined with the 2050 forecasts presented in Chapter 6 and the economic analysis presented in Chapter 7, form the foundation for the Texas-Mexico Border Transportation Master Plan (BTMP) strategies identification.

8.1  Review of Existing Plans

Over 200 documents related to mobility, transportation, and economic development were collected and analyzed from across all three border regions as well as the U.S. and Mexico. The documents were reviewed to inform the identification of policy, program, and project elements related to the BTMP goals and objectives, as well as to the issues and needs identified in Chapter 5.

8.2  Stakeholder Input to Strategy Identification

As presented in Chapter 1, the development of the BTMP comprised four phases: (1) data collection, (2) multimodal corridor designation and needs assessment, (3) forecast and economic analysis, and (4) identification of strategies and preliminary recommendations. Stakeholder input was a key element throughout.

The BTMP process included multiple opportunities for binational stakeholders to provide input on all types of strategies to address current and future needs that include: policies, programs, and projects. To develop a comprehensive borderwide projects list, projects and project timeframes were collected from project sponsors and stakeholders and refined through workshops, meetings and presentations described further in Chapter 9. Finally, to provide additional input into their priorities, stakeholders were also asked to weigh the BTMP goals to indicate which they believed were most important to supporting the movement of people and goods in the border region.

Stakeholders, BTAC and BNRSC members were asked to rank goals. BTAC members were asked to weight those goals borderwide, while BNRSC members were asked to weight the goals by importance for their own region. Members were asked to weight the goals in July and August 2020 to determine whether priorities had changed. The weights from the borderwide stakeholders plus the three regions were then averaged for a total border average weight and shown in Table 8.2-1. The average weights in the table were used as one factor in the process of evaluating both programs and policies. The Laredo Region stakeholders weighted the mobility and reliability category the highest among the BTMP Goals at 24.2 percent followed by economic competitiveness and safety and security at 17.2 percent. The region’s ranking is similar to the overall ranking and average weights from the entire border regions.
Table 8.2-1. Stakeholder Input on Weights for the BTMP Goals

<table>
<thead>
<tr>
<th>BTMP Goals</th>
<th>BTAC Weights</th>
<th>Laredo/Coahuila/Nuevo León/Tamaulipas</th>
<th>Total Border Average Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobility and Reliability</td>
<td>26.7%</td>
<td>24.2%</td>
<td>23.0%</td>
</tr>
<tr>
<td>Economic Competitiveness</td>
<td>18.8%</td>
<td>17.2%</td>
<td>17.8%</td>
</tr>
<tr>
<td>Safety and Security</td>
<td>10.9%</td>
<td>17.2%</td>
<td>13.0%</td>
</tr>
<tr>
<td>Connectivity</td>
<td>10.9%</td>
<td>11.1%</td>
<td>11.3%</td>
</tr>
<tr>
<td>Cross-border Resiliency</td>
<td>8.9%</td>
<td>9.1%</td>
<td>10.6%</td>
</tr>
<tr>
<td>Asset Preservation</td>
<td>5.0%</td>
<td>6.1%</td>
<td>6.0%</td>
</tr>
<tr>
<td>Sustainable Funding</td>
<td>6.9%</td>
<td>6.1%</td>
<td>7.8%</td>
</tr>
<tr>
<td>Customer Service</td>
<td>7.9%</td>
<td>7.1%</td>
<td>7.0%</td>
</tr>
<tr>
<td>Stewardship and Sustainability</td>
<td>3.0%</td>
<td>2.0%</td>
<td>3.5%</td>
</tr>
</tbody>
</table>
Chapter 9 Laredo Region Stakeholder Engagement

This chapter outlines the extensive binational stakeholder engagement, public outreach, and activities that supported and guided the development of the Texas-Mexico Border Transportation Master Plan (BTMP). A robust binational and bilingual engagement and outreach was performed in many different formats to provide opportunities for input and feedback for all stakeholders in the three Texas-Mexico border regions—El Paso/Santa Teresa/Chihuahua, Laredo/Coahuila/Nuevo León/Tamaulipas, and Rio Grande Valley/Tamaulipas.

- **Binational stakeholder** input shaped every aspect of the BTMP.
- The **BTMP stakeholder engagement strategies** facilitated binational coordination and collaboration between Texas and Mexico to identify transportation issues, needs, challenges, opportunities, and strategies of moving people and goods across the border, the border region, and beyond.
- A **robust stakeholder engagement framework** allowed an opportunity for a broad range of stakeholders to contribute to the plan.

To meet these goals, TxDOT created new stakeholder committees, as well as leveraged several stakeholder bodies that were already in existence including:

- Border Trade Advisory Committee (BTAC)
- United States–Mexico Joint Working Committee on Transportation Planning (JWC)
- Binational Bridges and Border Crossings Group (BBBXG)
- Three Binational Regional Steering Committees (BNRSCs) including one for the Laredo/Coahuila/Nuevo León/Tamaulipas Region

Nearly 2,800 individuals from the U.S. and Mexico were involved in the stakeholder engagement process.

### 9.1 Stakeholder Engagement and Public Involvement Framework

A comprehensive Texas-Mexico stakeholder engagement framework provided a far-reaching opportunity for both nations to participate in the BTMP development process.
Figure 9.1-1. Stakeholder and Public Engagement Framework

TEXAS-MEXICO BORDER TRANSPORTATION MASTER PLAN

U.S. & Mexico Binational Federal & State Agencies and Committees (Including JWC and BBBXG)

PUBLIC MEETINGS

INDUSTRY & LARGE EMPLOYER FOCUS GROUPS

TxDOT Internal Border Task Force

STAKEHOLDER LISTENING SESSIONS

STAKEHOLDER INTERVIEWS

EL PASO-SANTA TERESA-CHIHUAHUA
Binational Regional Steering Committee

LAREDO-COAHUILA-NUEVO LEÓN-TAMAULIPAS
Binational Regional Steering Committee

RIO GRANDE VALLEY-TAMAULIPAS
Binational Regional Steering Committee
9.2 Stakeholder Engagement Outreach

The development of the BTMP was data-driven and relied on extensive consultation, engagement, and consensus-building with binational public and private stakeholders. Leadership from the TxDOT Laredo District was included along with other TxDOT border districts, TxDOT divisions and internal Border Task Force to support the overall development of the BTMP and contribute to the implementation of the plan recommendations.

TxDOT also collaborated with U.S. and Mexico federal and state agencies and committees on the BTMP, including the JWC and BBBXG. These two binational groups provide an ongoing framework for the U.S.-Mexico border transportation planning process and guide border transportation management and investment decisions.

9.2.1 Binational Regional Steering Committees

Three Binational Regional Steering Committees (BNRSCs) were established to provide input and guide the development of the BTMP.

A Laredo/Coahuila/Nuevo León/Tamaulipas Region BNRSC was established to provide input and guide the development of the BTMP. The BNRSC group for the Laredo/Coahuila/Nuevo León/Tamaulipas Region included a total of 108 members including 51 U.S. members and 57 Mexico members. Table 9.2-1 provides a summary of dates and locations of BNRSC meetings.
Table 9.2.1. BNRSC Meeting Outreach Summary

<table>
<thead>
<tr>
<th>BTMP Development Phase</th>
<th>BNRSC Meeting Dates, Locations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Collection</td>
<td>April 30, 2019 – El Paso</td>
</tr>
<tr>
<td>Multimodal Corridor Designation and Needs Assessment</td>
<td>June 5, 2019 – El Paso</td>
</tr>
<tr>
<td></td>
<td>November 12, 2019 – Ciudad Juárez, Chihuahua</td>
</tr>
<tr>
<td>Forecast and Economic Analysis</td>
<td>April 21, 2020 – Virtual meeting</td>
</tr>
<tr>
<td>Identification of Strategies and Recommendations</td>
<td>July 2, 2020 – Virtual meeting</td>
</tr>
<tr>
<td></td>
<td>July 28, 2020 – Virtual meeting</td>
</tr>
<tr>
<td></td>
<td>August 17, 2020 – Virtual meeting</td>
</tr>
<tr>
<td></td>
<td>September 23, 2020 – Virtual meeting</td>
</tr>
<tr>
<td>Approvals</td>
<td>November 4, 2020 – Virtual meeting</td>
</tr>
<tr>
<td></td>
<td>November 30-December 2, 2020 – Virtual meeting</td>
</tr>
<tr>
<td></td>
<td>March 17, 2021 – Virtual meeting</td>
</tr>
</tbody>
</table>

The number of U.S. and Mexico stakeholders who attended a BTMP meeting in the Laredo/Coahuila/Nuevo León/Tamaulipas Region is presented in Figure 9.4-1.

9.2.2 Private Sector Stakeholder Workshops/Interviews

Two stakeholder workshops were held in the Laredo/Coahuila/Nuevo León/Tamaulipas Region to allow for opportunities to participate in addition to several virtual workshops. The workshops were held on April 30 and November 13, 2019.

9.2.3 Public Meetings

Two public meetings were held in Laredo and one public meeting was held virtually for the region to present the final draft BTMP with the public so they could share their feedback on April 29, 2019, November 12, 2019 and February 10, 2021.

9.2.4 U.S. & Mexico Binational Coordination

U.S. and Mexico coordination focused on building and strengthening relationships and allowed for the exchange of information and data relevant to the BTMP. A series of monthly conference calls hosted by TxDOT with SCT and FHWA effectively facilitated the BTMP planning process and provide cross-border consistency in planning between both countries.
Regular engagement with Mexican officials—such as SRE, SCT, SAT, and local officials in the four border states—was performed to keep them updated on the status of the BTMP, as well as meeting with other binational stakeholders. Engagement with officials on the U.S. side included the Texas Secretary of State who chaired the BTAC, New Mexico Department of Transportation, GSA and the CBP.

9.3 Outreach, Education, and Communication Materials

Stakeholders were kept informed on the BTMP development process with easily accessible, meaningful, and accurate information made available through email updates, flyers, website postings, phone calls, and presentations. All materials were provided in both English and Spanish. The project team coordinated with TxDOT leaders at district and division levels, as well as Public Information Officers (PIOs), to disseminate information. Activities include online tools, speaking engagements, fact sheets, newsletters, media outreach such as social media, Twitter regional PIO accounts (@TxDOTELP) and Facebook updates posted on TxDOT’s main page (www.facebook.com/TxDOT).

9.4 Participation Results

The final count of stakeholder participation and attendance at BTMP meetings and events throughout the development of the BTMP exceeded that experienced on the previous regional border master plans, amassing 5,675 total meeting participants—1,543 individuals from Mexico and 4,132 individuals from the U.S. Many of the regional meetings were attended by the same stakeholders, proving their dedication and commitment to the BTMP planning process. The final database included 2,779 individuals. Figure 9.4-1 shows the number of people who attended a BTMP meeting in the Laredo Region.
Total Number of U.S. and Mexico Stakeholders who Attended a BTMP Meeting: Laredo/Coahuila/Nuevo León/Tamaulipas Region

- **347** Total Participants
- **238** Participants in BNRSC Meetings
- **152** Participants in Public Meetings
- **100** Participants in Stakeholder Workshops/Interviews
- **36** Participants

*Stakeholder meeting attendance through round 10.*
Chapter 10 Laredo Region Recommendations

The purpose of this chapter is to provide the results of the identification and evaluation of strategies that address the current and future needs of the Texas-Mexico border region.

The strategies outlined in this chapter fall into three distinct categories: policies, programs, and projects. Together they form the recommendations of the BTMP.

- Policies are broad recommendations that set the direction of agencies involved in border planning and provide the foundation for decisions. The BTMP recommends 22 policies to advance borderwide transportation goals.
- Programs are a collection of implementable initiatives to achieve a policy objective and consist of actions that are repeatable across multiple platforms or locations. The BTMP recommends 153 programs to address Texas-Mexico transportation infrastructure needs.
- Projects are targeted, regionally-specific actions undertaken to achieve a policy objective. The BTMP recommends 661 projects at a cost of $37.4 billion.

The three types of strategies are interdependent and work holistically to address issues and needs.

10.1 Policy Recommendations

Policies are broad recommendations that set the direction of agencies and provide the foundation for decisions. Policies provide the foundation for programs and projects, can be applied borderwide and not specific to any particular border region, and are critical for border crossings and corridors.

This section presents 22 policy recommendations that support the development of comprehensive strategies that align with BTMP goals and objectives. Policies are organized as they relate to border crossings and corridors in the Texas-Mexico multimodal transportation network, or as being applicable to both, systemwide. Of the 22 recommended policies, five are specific to border crossings, eight are specific to corridors, and nine apply systemwide.

A critical component of each policy strategy is that, to be successful, it must be undertaken by federal, state, regional, and local public and private stakeholders on a binational level. Entities at all levels, and on both sides of the border, must actively engage to maximize the effectiveness of each policy.

The policy recommendations are related to broad categories of needs including Texas-Mexico coordination, collaboration and cooperation, safety and security, economic competitiveness, data collection, harmonization, sharing and analysis, operational efficiency, system capacity and first and last-mile connections. The full list of policies and their alignment with the BTMP goals is provided on sections 10.2.1 through 10.2.10 in Chapter 10 of the Final Report.
### 10.2 Program Recommendations

The BTMP recommends 153 programs to address Texas-Mexico transportation infrastructure needs in support of the recommended policies described in the previous section. To show the breadth and variety of recommended programs, this section provides a brief description of an illustrative group of programs not specific to any particular border region. An entire list of the recommended programs appears in Appendix 10A.

The appendix contains the following information:

- A brief description of the program
- Links between the specific program, BTMP goals, and a policy
- Information on the impact of the program in achieving the connected goals (high, medium, or low)
- The timeframe in which it can be accomplished (short-term, mid-term, or long-term)

Programs are a collection of initiatives to achieve a policy objective and consist of actions that are repeatable across multiple platforms or locations.

Programs include those specific to border crossings and those specific to corridors, or as being applicable to both, systemwide. Programs apply to multiple locations and, therefore, are not identified by specific border crossing or corridor. Programs in the context of the border region involve undertakings such as:

- The study or methodical consideration of new concepts or actions in a region heavily impacted by cross-border traffic.
- New or enhanced processes or procedures within border crossings or on nearby corridors, such as enhanced inspections or credential checks.
- Operational improvements, such as increased staffing levels and hours of operation at border crossings, and traffic management in connecting corridors.
- The development, maintenance and sharing of data within various levels of government in the border region.
- Ongoing responsiveness to policy recommendations that result in sustainable improvements in the border region as policies or priorities change in one or both countries.
- A higher and more sustained level of collaborative binational discussion and decision-making, and joint implementation whenever possible.

A high-level summary of the 153 programs identified during this process is presented below. This summary organized programs as they relate to border crossings and corridors in the Texas-Mexico multimodal transportation network, or as being applicable to both, systemwide. The full list of
programs in Appendix 10A, include the alignment with goals and a recommended tier – high, medium or low – that indicates the magnitude of impact that successful implementation of the program would have on addressing the goal(s).

The evaluation criteria for determining the impact of programs are described in detail in Chapter 8. Criteria include the program’s effectiveness in addressing the needs of the region, the number of goals the program addresses, whether a similar program has been successful elsewhere, and the number of factors that might complicate implementation, such as legal impediments.

### 10.3 Regional Projects

Recommended projects are targeted actions that complement the recommended programs and are often location-specific, compared to the broader applicability of programs. Together, recommended programs and projects support the directional objectives set forth by the recommended policies.

Table 10.3-1 shows the breakdown of these projects between border crossing projects and corridor projects. The following sections summarize recommended projects and overall costs for the region.

This border region has a total of 143 projects with an estimated cost of $12.8 billion, or 34 percent of the total border region projects. This region’s projects include the following:

- 113 projects on the Texas (U.S.) side of the border with an estimated cost of $10.8 billion.
- 30 projects on the Mexico side of the border with an estimated cost of $2.0 billion.

On the Texas (U.S.) side, these projects include large capital projects such as improvements to I-35, and improvements to State Loop (SL) 20, and SH 97. The Mexico side includes projects such as the Nuevo Laredo International Bridge and the Gloria to Colombia Roadway improvements.

Of the 143 projects included in this region:

- 24 are border crossing-related projects with an estimated cost of $1.4 billion.
- 119 are corridor-related projects with an estimated cost of $11.4 billion.
Because the Laredo/Coahuila/Nuevo León/Tamaulipas Region has unique needs and issues, the overall project makeup results in a portfolio of projects that addresses the unique issues and priorities for the region. The number of projects by category is shown in Table 10.3-2.

- The Laredo/Coahuila/Nuevo León/Tamaulipas Region has the highest number of projects in the mobility and reliability category (70 projects) followed by 42 connectivity projects as the second highest category for projects which account for approximately 69 and 15 percent of the project costs respectively.

The Laredo/Coahuila/Nuevo León/Tamaulipas Region has a total of 143 projects that include:

- **113 Texas (U.S.) projects**
- **30 Mexico projects**

### System Modes

The TxDOT On-System Roadways category had the highest number of projects and costs. The Laredo/Coahuila/Nuevo León/Tamaulipas Region’s second highest system/mode category for projects is the Border Crossing-General and for project costs is Airport. The following is a breakdown of the top three system/modes.

- The Laredo/Coahuila/Nuevo León/Tamaulipas Region has:
  - TxDOT on-system roadways (77 projects at $8.9 billion)
  - Border Crossing - General (15 projects at $0.9 billion)
  - Airport (7 projects at $1.0 billion)

### Projects by Impact

Table 10.3-3 summarizes projects by impact category. This information highlights the distribution of projects and cost by country.

- **73 High Impact projects** resulting in **$6.6 billion or 52 percent** of the region’s project cost.
- **67 Medium Impact projects** resulting in **$6.1 billion or 47 percent** of the region’s project cost.
- **3 Low Impact projects** resulting in less than **$0.1 billion or less than 1 percent** of the region’s project cost.
Project Funding Status

The project funding status is summarized below and shown in Table 10.3-4.

- The Laredo/Coahuila/Nuevo León/Tamaulipas Region has the smallest share of total project costs classified as fully funded, with 6 percent of the total project cost in the region.

### Table 10.3-4. Projects by Funding Status

<table>
<thead>
<tr>
<th>FUNDING STATUS</th>
<th>PROJECTS</th>
<th>COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fully Funded</td>
<td>31</td>
<td>$0.8B</td>
</tr>
<tr>
<td>Partially Funded</td>
<td>8</td>
<td>$0.7B</td>
</tr>
<tr>
<td>Unfunded</td>
<td>104</td>
<td>$11.3B</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>143</strong></td>
<td><strong>$12.8B</strong></td>
</tr>
</tbody>
</table>
# Chapter 11 Laredo Region Implementation Plan

The BTMP is a comprehensive, multimodal, long-range plan with a 2050-time horizon that identifies transportation issues, needs, challenges, opportunities, and strategies. To deliver a blueprint for strategies that can be used now and in the future, this chapter provides a comprehensive Implementation Plan for strategies in the short, medium, and long terms for the Laredo Region.

In response to the BTMP's long-term horizon, identifying issues and needs, both now and in the future, the Implementation Plan provides the timeframe for implementing policy, program, and project strategies. The plan gives decision-makers a path forward, laying out short-term actions in 1 to 4 years—2021 through 2024, as well as enabling preparation for future medium-term actions in 5 to 10 years—2025-2030, and long-term improvements in 11+ years—2031-2050.

<table>
<thead>
<tr>
<th>SHORT TERM</th>
<th>MEDIUM TERM</th>
<th>LONG TERM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-4 YEARS</td>
<td>5-10 YEARS</td>
<td>11+ YEARS</td>
</tr>
<tr>
<td>(2021-2024)</td>
<td>(2025-2030)</td>
<td>(2031-2050)</td>
</tr>
</tbody>
</table>

The Implementation Plan comprises the policy, program, and project priorities developed throughout the BTMP process and evaluated in Chapter 10. Policy, program, and project strategies are not exclusive, but complement one another and work holistically to support the goals of the BTMP.

## 11.1 Implementation Plan for Policies

As stated in Chapter 8, all 22 recommended policies are strategic in nature and provide the underlying foundation for the programs and projects, regardless of timeframe. Policies, therefore, were not placed into the short-, medium-, and long-term timeframes. Policies can be implemented immediately and throughout the implementation timeframe, as decision-makers and responsible parties come to an agreement.

Policies are linked to BTMP goals and where goals were further defined by specific solutions. Policies are categorized by those applicable

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57 Policy and program recommendations are not specific to any particular border region; however project recommendations are regionally specific.
to border crossings, corridors, or systemwide—both border crossings and corridors. The implementation plan for policies is discussed in more detail in Chapter 11 of the Final Report.

### 11.2 Implementation Plan for Programs

Programs are a collection of implementable initiatives to achieve a policy direction and consist of actions that are repeatable across multiple platforms or locations. Programs are organized by those applicable to border crossings, by those applicable to corridors, or as being applicable to both (systemwide). Programs are not identified by specific border crossing or corridor location, as they apply to multiple locations.

The suggested programs, across all timeframes, categories and goals, represent a broad variety of approaches: process improvements, studies and research, expanding use of technologies, creating new Texas-Mexico working groups, and developing new educational programs, among others.

Chapter 10 recommended 153 programs for the BTMP. Figure 11.2-1 summarizes the programs by implementation timeframe. The criteria used to determine the timeframe for each program is described in Chapter 8.

About 60 percent of the programs will be underway in the medium term, and most of the remaining programs are expected in the short term. Only a handful are considered long-term programs. About 42 percent of the programs (65 programs) are applicable systemwide, and the remainder is divided between those applicable to border crossings and those that apply to corridors.

#### Figure 11.2-1. Total Programs by Implementation Timeframe

<table>
<thead>
<tr>
<th></th>
<th>Short Term</th>
<th>Medium Term</th>
<th>Long Term</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Border Crossing</td>
<td>18</td>
<td>30</td>
<td>4</td>
<td>52</td>
</tr>
<tr>
<td>Corridor</td>
<td>14</td>
<td>20</td>
<td>2</td>
<td>36</td>
</tr>
<tr>
<td>Systemwide</td>
<td>23</td>
<td>42</td>
<td>0</td>
<td>65</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>55</strong></td>
<td><strong>92</strong></td>
<td><strong>6</strong></td>
<td><strong>153</strong></td>
</tr>
</tbody>
</table>

Programs are connected to the BTMP goals and represent one of the primary means of achieving the goals.

Table 11.2-1 summarizes the programs by timeframe and goal. More than one-third of all the programs (57 programs) are in the Mobility and Reliability goal, and, of these, over half (34 programs), are expected in the medium term, while 20 are expected in the short term, and only 3 in the long term. For most of the goals, a small majority of programs are in the medium term. For two goals, Funding and Customer Service, a majority of goals are in the short term. A complete list of
recommended programs categorized by short-, medium-, and long-term timeframes is provided in Appendix 10A.

<table>
<thead>
<tr>
<th>Programs by Timeframe and BTMP Goal</th>
<th>MOBILITY AND RELIABILITY</th>
<th>ECONOMIC COMPETITIVENESS</th>
<th>SAFETY</th>
<th>CONNECTIVITY</th>
<th>RESILIENCY</th>
<th>FUNDING</th>
<th>ASSET PRESERVATION</th>
<th>CUSTOMER SERVICE</th>
<th>DATA COLLECTION, SHARING, HARMONIZATION, AND ANALYSIS</th>
<th>STEWARDSHIP</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short</td>
<td>20</td>
<td>5</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>6</td>
<td>4</td>
<td>7</td>
<td>1</td>
<td>4</td>
<td>55</td>
</tr>
<tr>
<td>Medium</td>
<td>34</td>
<td>14</td>
<td>5</td>
<td>12</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>12</td>
<td>92</td>
</tr>
<tr>
<td>Long</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>TOTAL</td>
<td>57</td>
<td>19</td>
<td>9</td>
<td>15</td>
<td>8</td>
<td>10</td>
<td>8</td>
<td>3</td>
<td>16</td>
<td>16</td>
<td>153</td>
</tr>
</tbody>
</table>

### 11.3 Implementation Plan for Projects

16 of the 24 projects are unfunded with an estimated cost of $1.3 billion. Approximately $0.5 billion of the unfunded costs were identified for seven medium-impact projects in Texas (U.S.) across all time periods. An additional $0.8 billion of unfunded costs are for three high impact, short-term projects in Texas (U.S.), four high impact, long-term projects in Mexico, and one high impact, short-term project in Mexico.

There are 16 unfunded projects representing more than $1.3 billion in the Laredo/Coahuila/Nuevo León/Tamaulipas Region. There are four funded short-term projects for a total of $27 million, as shown in Table 11.3-1.

On the Texas (U.S.) side of the region, there are ten unfunded border crossing projects, requiring an estimated $814 million.

There are three short-term, high impact, and eight medium-term, high impact projects in Texas (U.S.) with an estimated total of $339.5 million.

The impact tier of the Texas (U.S.) projects by timeframe is:

- Short term (6 projects): Three high impact and three medium impact projects.

<table>
<thead>
<tr>
<th>Texas (U.S.)</th>
<th>Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Project Cost</strong></td>
<td><strong>Total Project Cost</strong></td>
</tr>
<tr>
<td>$0.9B</td>
<td>$0.5B</td>
</tr>
<tr>
<td><strong>Unfunded</strong></td>
<td><strong>Unfunded</strong></td>
</tr>
<tr>
<td>$0.8B</td>
<td>$0.5B</td>
</tr>
</tbody>
</table>
- Medium term (10 projects): Eight high impact and two medium impact projects.
- Long term (2 projects): Two medium impact projects.

In Mexico, all six projects were identified as high impact across the three timeframes. One is designated in the short-term ($303 million).

Table 11.3.1. Border Crossing Projects in the Laredo/Coahuila/Nuevo León/Tamaulipas Region by Timeframe, Funding Status and Country

<table>
<thead>
<tr>
<th>TIMEFRAME</th>
<th>FULLY FUNDED</th>
<th>PARTIALLY FUNDED</th>
<th>UNFUNDED</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PROJECTS</td>
<td>COST</td>
<td>PROJECTS</td>
<td>COST</td>
</tr>
<tr>
<td>Short</td>
<td>4</td>
<td>&lt;$0.1B</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Medium</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Long</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>TOTAL</td>
<td>4</td>
<td>&lt;$0.1B</td>
<td>4</td>
<td>&lt;$0.1B</td>
</tr>
</tbody>
</table>

In Mexico, the unfunded projects and costs are concentrated in the short term ($1.1 billion).

In both countries combined, $9.9 billion of project costs in the region are unfunded, as shown in Table 11.3.2. On the Texas (U.S.) side of the region, there are 64 unfunded projects costing an estimated $8.4 billion. Fully and partially funded projects are all high and medium impact projects. There are three low impact projects identified in the short- and long-term timeframes, one project in each timeframe. All low impact projects are unfunded.

On the Texas (U.S.) side, nine of ten short-term, high impact corridor projects are fully funded ($0.3 billion).

The unfunded amounts for the Texas (U.S.) side of the region include 18 high impact projects ($3.5 billion) and 64 projects ($8.4 billion) across all timeframes. There were three unfunded low impact projects ($50 million) in the short, medium, and long timeframes.

The summary of impact tier by timeframe includes:
- Short term (21 projects): 10 high impact, 10 medium impact, and one low impact project.
- Medium term (26 projects): 6 high impact, 19 medium impact, and one low impact project.
- Long term (48 projects): 16 high impact, 31 medium impact, and one low impact project.
In Mexico, all 24 projects are unfunded with an estimated cost of $1.5 billion. Within the $1.5 billion, there are three high impact, short-term projects ($1.1 billion), one high impact, medium-term project ($60 million) and 20 high impact, long-term projects ($0.4 billion).

Table 11.3-2. Corridor Projects in the Laredo/Coahuila/Nuevo León/Tamaulipas Region by Implementation Timeframe, Funding Status and Country

<table>
<thead>
<tr>
<th>Timeframe</th>
<th>Fully Funded</th>
<th>Partially Funded</th>
<th>Unfunded</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Projects</td>
<td>Cost</td>
<td>Projects</td>
<td>Cost</td>
</tr>
<tr>
<td>Short</td>
<td>18</td>
<td>$0.6B</td>
<td>9</td>
<td>$0.2B</td>
</tr>
<tr>
<td>Medium</td>
<td>9</td>
<td>$0.2B</td>
<td>4</td>
<td>$0.7B</td>
</tr>
<tr>
<td>Long</td>
<td>48</td>
<td>$7.2B</td>
<td>64</td>
<td>$8.4B</td>
</tr>
<tr>
<td>TOTAL</td>
<td>27</td>
<td>$0.8B</td>
<td>0</td>
<td>$0.0B</td>
</tr>
</tbody>
</table>

11.3.1 Impact of Implementing Recommended Border Crossing Projects

Fully implementing all the border crossing projects identified in the BTMP would reduce future northbound crossing times compared to a “do nothing” scenario. These reductions in northbound crossing times would reduce delays in the future and therefore impact the future cost of missed opportunities to the economies of Texas, U.S., and Mexico. The BTMP defined two alternative future scenarios for the implementation of project recommendations:

- the first scenario corresponds to the implementation of projects at existing border crossings
- the second scenario corresponds to the implementation of projects at existing border crossings plus the construction of new border crossings.

The BTMP produced a high-level estimation of the impacts that these implementation scenarios would have on 2050 border northbound crossing times and quantified the corresponding cost of missed opportunities for the economies of Texas, U.S. and Mexico compared to a “do nothing” scenario.

11.3.2 Future Border Forecasts by Scenario

The two scenarios described and analyzed are defined based on the 193 border crossing projects identified by stakeholders as BTMP project recommendations. Scenario 1 considers improvements to existing border crossings, including investments to expand capacity and improve efficiency. Scenario 2 includes the improvements in Scenario 1, plus the construction of new border crossings along the Texas-Mexico border.

11.3.3 Future Border Crossing Forecasts for Scenario 1

The Laredo border region has 24 border crossing projects identified, for a total cost of $1.4 billion. Table 11.3-3 shows the historical and future total crossing times.
### Table 11.3-3. Northbound Border Crossing Times by Year, Scenario and Crossing Type – Laredo Region

<table>
<thead>
<tr>
<th>Crossing Type</th>
<th>2019</th>
<th>Crossing Times</th>
<th>2050</th>
<th>Crossing Times</th>
<th>Total Change</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Crossing Times (hours)</td>
<td>“Do Nothing”</td>
<td>Scenario 1 (hours)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>POV</td>
<td>4,206,423</td>
<td>22,525,883</td>
<td>16,335,341</td>
<td>-6,190,542</td>
<td>-27</td>
<td></td>
</tr>
<tr>
<td>CMV</td>
<td>1,140,472</td>
<td>59,628,463</td>
<td>34,989,811</td>
<td>-24,638,652</td>
<td>-41</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>5,346,895</td>
<td>82,154,347</td>
<td>51,325,152</td>
<td>-30,829,194</td>
<td>-38</td>
<td></td>
</tr>
</tbody>
</table>

#### 11.3.4 Future Border Crossing Forecasts for Scenario 2

Table 11.3-4 presents future border crossing times under Scenario 2. Future border crossing times in the Laredo Region are reduced by 35 percent under Scenario 2 compared to Scenario 1.

<table>
<thead>
<tr>
<th>Crossing Type</th>
<th>2019</th>
<th>Crossing Times</th>
<th>2050</th>
<th>Crossing Times</th>
<th>Total Change</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Crossing Times (hours)</td>
<td>“Do Nothing”</td>
<td>Scenario 2 (hours)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>POV</td>
<td>4,206,423</td>
<td>22,525,883</td>
<td>10,486,407</td>
<td>-12,039,476</td>
<td>-53</td>
<td></td>
</tr>
<tr>
<td>CMV</td>
<td>1,140,472</td>
<td>59,628,463</td>
<td>22,967,342</td>
<td>-36,661,122</td>
<td>-61</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>5,346,895</td>
<td>82,154,347</td>
<td>33,453,749</td>
<td>-48,700,597</td>
<td>-59</td>
<td></td>
</tr>
</tbody>
</table>

#### 11.3.5 Infrastructure Improvements at Existing Border Crossings

Based on information provided by stakeholders, the following border crossings have future planned infrastructure investments. This list includes a combination of expanded lanes and new bridge spans to process additional vehicles types at existing crossings which include the following modeled capacity changes:

**Passenger Vehicles**
- Del Rio – Ciudad Juárez International Bridge (assuming one additional northbound lane in the future)
- Anzalduas International Bridge (assuming four additional lanes in the future, two of which are northbound)

**Commercial Vehicles**
- Bridge of the Americas (assuming one additional northbound lane in the future)
- Del Rio – Ciudad Acuña International Bridge (assuming two additional lanes in the future, one of which is northbound)
- World Trade Bridge (existing 16 lanes, assuming five additional northbound lanes in the future)

**Efficiency Improvements in Processing Time**

Based on information provided by stakeholders, the following Border Crossings will implement efficiency improvements in processing time at existing border crossings.

**POV**

- Gateway International Bridge
- Camino Real International Bridge

**11.3.6 New Border Crossings**

Based on information provided by stakeholders, the following presents new border crossings considered under Scenario 2 Improvements to Existing Crossings Plus New Border Crossings:

**Passenger Vehicles**

- Acuna II International Bridge. Assuming equivalent effect as adding lanes at Del Rio – Ciudad Acuña International Bridge (assuming one additional northbound lane in the future)
- Piedras Negras. Assuming equivalent effect as adding lanes at Eagle Pass Bridge I (assuming one additional northbound lane in the future)
- Laredo 4/5 International Bridge. Assuming equivalent effect as adding lanes at Gateway to the Americas Bridge (assuming eight additional lanes in the future, four of which is northbound)

**Commercial Vehicles**

- Acuna II International Bridge. Assuming equivalent effect as Del Rio – Ciudad Acuña International Bridge (assuming additional two lanes in the future, one of which is northbound)
- New border crossing at Piedras Negras with Eagle Pass. Assuming equivalent effect as adding lanes at Camino Real International Bridge (assuming two additional lanes in the future, one of which is northbound)
- Laredo 4/5 International Bridge. Assuming equivalent effect as adding lanes at World Trade Bridge (assuming fourteen additional lanes in the future, seven of which is northbound)

**11.3.7 Economic Impacts at the Regional Level**

The impacts from Scenario 1 and 2 on employment and labor income are presented in the following tables.
### Table 11.3-5. Regional Impact of Employment Impacts in Job-Years, 2050 (Scenario 1)

<table>
<thead>
<tr>
<th>Region</th>
<th>U.S.</th>
<th>Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Movement of</td>
<td>Total</td>
</tr>
<tr>
<td></td>
<td>Goods</td>
<td>People</td>
</tr>
<tr>
<td>Laredo/Coahuila/Nuevo León/Tamaulipas Region</td>
<td>71,637</td>
<td>2,777</td>
</tr>
</tbody>
</table>

### Table 11.3-6. Regional Impact of Labor Income in Billions of 2019 $, 2050 (Scenario 1)

<table>
<thead>
<tr>
<th>Region</th>
<th>U.S.</th>
<th>Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Movement of</td>
<td>Total</td>
</tr>
<tr>
<td></td>
<td>Goods</td>
<td>People</td>
</tr>
<tr>
<td>Laredo/Coahuila/Nuevo León/Tamaulipas Region</td>
<td>$4.7</td>
<td>$0.1</td>
</tr>
</tbody>
</table>

### Table 11.3-7. Regional Impact of Employment Impacts in Job-Years, 2050 (Scenario 2)

<table>
<thead>
<tr>
<th>Region</th>
<th>U.S.</th>
<th>Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Movement of</td>
<td>Total</td>
</tr>
<tr>
<td></td>
<td>Goods</td>
<td>People</td>
</tr>
<tr>
<td>Laredo/Coahuila/Nuevo León/Tamaulipas Region</td>
<td>117,917</td>
<td>5,935</td>
</tr>
</tbody>
</table>

### Table 11.3-8. Regional Impact of Labor Income in Billions of 2019 $, 2050 (Scenario 2)

<table>
<thead>
<tr>
<th>Region</th>
<th>U.S.</th>
<th>Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Movement of</td>
<td>Total</td>
</tr>
<tr>
<td></td>
<td>Goods</td>
<td>People</td>
</tr>
<tr>
<td>Laredo/Coahuila/Nuevo León/Tamaulipas Region</td>
<td>$7.7</td>
<td>$0.2</td>
</tr>
</tbody>
</table>

### 11.4 Summary and Call for Action

The BTMP was an ambitious undertaking to plan for the future of the 1,254-mile Texas-Mexico region including the Laredo/Coahuila/Nuevo León/Tamaulipas Region. This region along with the entire Texas-Mexico border is an increasingly critical gateway for the economies of U.S. and Mexico.

The vision of the BTMP, as presented in **Chapter 2**, was to collaboratively foster integrated and efficient transportation mobility of people and goods across the Texas-Mexico border and to promote economic development that benefits the Texas-Mexico border region, the U.S., and Mexico.

The nine goals, also introduced in **Chapter 2**, provide strategic direction regarding how to identify and address the multimodal transportation system and infrastructure needs of the border region.
The BTMP uses a data-driven approach to explore the economics of the border region, to look at the region’s past and projections for the future, and to identify issues and needs today and tomorrow.

In the most-likely future scenario, the combination of strong economic growth and the U.S.-Mexico-Canada Agreement results in a tripling of the value of trade between the U.S. and Mexico by 2050. Without a coordinated effort to address this growth, the region will see increased congestion as the growth strains the transportation system. Left unaddressed, the rapid development could ultimately result in a loss of economic opportunity due to congestion and delays.

To address these needs, the BTMP identifies strategic solutions that work holistically to address the identified issues. Together, they comprise the plan’s recommendations. The strategies are linked to the BTMP goals and examined by their geographic reach (country and region), by category of infrastructure they impact (border crossing, corridor, or both), and by the availability and timing of funding.

Finally, the strategies were sorted by their level of impact on the needs—high, medium, or low—in Chapter 10, and by their implementation timeframe—short, medium, and long—in Chapter 11.

The BTMP serves as a blueprint for binational partnerships and decision-making regarding investment strategies to address cross-border multimodal transportation system challenges and to facilitate cross-border movement of people and goods.

Ideas for future actions as part of the BTMP implementation include an annual plan to map out the coming year’s priorities, an annual report to share progress and suggest improvements for the future, and a regional planning summit in the Laredo/Coahuila/Nuevo León/Tamaulipas Region to provide accountability for future projects. Finally, an advocacy plan to keep the border at the forefront for local, state, and federal decision-makers in both the U.S. and Mexico is a critical part of the region’s future success.

It is suggested that policies be reviewed at least every 5 years, or during updates of the BTMP, to determine ongoing relevance.

The Texas-Mexico Border Transportation Master Plan has produced an unprecedented level of information and ideas. Regional stakeholders in both countries now have an opportunity to exercise that collaborative spirit with renewed energy and purpose.

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58 The BTMP builds upon the three previous border master plans (BMPs) developed between 2012 and 2013 for El Paso/Santa Teresa/Chihuahua, Laredo/Coahuila/Nuevo León/Tamaulipas, and Rio Grande Valley/Tamaulipas. As such, these BMPs laid the groundwork for the BTMP.