### Agenda

1. Activities Since Last Meeting (November-December 2019)
2. Preliminary Table of Contents for Final Report
3. Introduction (Chapter 1)
4. Goals, Objectives, and Institutions (Chapter 2)
5. Existing Conditions: The Texas-Mexico Border Today (Chapter 3)
6. Binational Multimodal Transportation Network Designation (Chapter 4)
7. Needs Assessment and System Performance (Chapter 5)
8. Next Steps
Activities Since Last Meeting (November-December 2019)

- **BTAC Meetings**
  - January 2020
  - April 2020

- Binational and multimodal corridor identification, designation, and needs assessment
  - Cross-border commodity flow summaries
  - Value of trade and by mode

- Forecasting movement of people and goods

- Economic importance of the Texas-Mexico border
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## Preliminary Table of Contents for Final Report

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Texas-Mexico Border Transportation Master Plan

Chapter 1: Introduction
## Introduction Overview

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<tr>
<th>Chapter Purpose</th>
<th>Key Messages</th>
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<tbody>
<tr>
<td>▪ Provide background information on the importance of the Texas-Mexico border</td>
<td>▪ Texas-Mexico border connects people and commerce throughout U.S. and Mexico</td>
<td>▪ Mexico is the third-largest trading partner of the U.S.</td>
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<td>▪ Provide purpose of the BTMP</td>
<td>▪ Blueprint for binational policy, program, and projects</td>
<td>▪ The Texas-Mexico border facilitates a large amount of U.S.-Mexico trade and people crossings</td>
</tr>
<tr>
<td>▪ Show BTMP development process</td>
<td>▪ Identify transportation issues, needs, challenges, opportunities, and strategies</td>
<td>▪ Border transportation infrastructure connects U.S.-Mexico-Canada</td>
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<tr>
<td>▪ Provide BTMP Final Report content</td>
<td>▪ Underpinned by data-driven analysis and binational stakeholder input</td>
<td>▪ BTMP is a blueprint to meet future challenges and opportunities</td>
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- Texas-Mexico border connects people and commerce throughout U.S. and Mexico
- Blueprint for binational policy, program, and projects
- Identify transportation issues, needs, challenges, opportunities, and strategies
- Underpinned by data-driven analysis and binational stakeholder input
- Mexico is the third-largest trading partner of the U.S.
- The Texas-Mexico border facilitates a large amount of U.S.-Mexico trade and people crossings
- Border transportation infrastructure connects U.S.-Mexico-Canada
- BTMP is a blueprint to meet future challenges and opportunities
Background (1.1): Overarching U.S.-Mexico Relationship

- **U.S.-Mexico share 1,954 miles** of common border
  - It is the most frequently crossed international boundary in the world
- **U.S.-Mexico trade has tripled** between 1994 and 2017
  - Increased from $166 billion to $556 billion
- **U.S.-Mexico relationship goes beyond trade** and entails extensive commercial, cultural, and educational ties
- **NAFTA liberalized trade** between the U.S. and Mexico
  - USMCA will replace NAFTA (1994) and is anticipated to encourage investment in infrastructure, facilities, and operations along the U.S.-Mexico border
Background (1.1): Relevance of the Texas-Mexico Border

- Texas plays a vital role in the U.S.-Mexico relationship
  - Texas-Mexico share 1,254 miles (64%) of common border

- Trade
  - 70% of the $556.3 billion traded between the U.S. and Mexico in 2017 occurred through the Texas-Mexico border
  - Texas-Mexico trade value increased by 224%, from $59.7 billion to $187.5 billion between 1995 and 2017
  - Texas traded with Mexico more than three times the amount Texas traded with China, the state’s second-largest trading partner
Background (1.1): Relevance of the Texas-Mexico Border

**Economy**
- U.S.-Mexico trade supports more than **5 million jobs** across the U.S.
- Texas-Mexico trade supports more than **382,000 jobs**
- Border region **employment grew 86%** from 1.5 million in 1990 to 2.8 million jobs in 2017
  - 97% growth in Mexico from 830,000 to 1.6 million
  - 73% growth in Texas from 660,000 to 1.1 million

**Population**
- Border region **population grew 70%** from 4.4 million in 1990 to 7.3 million in 2017
  - 69% growth in Mexico from 2.6 million to 4.3 million
  - 65% growth in Texas from 1.8 million to 3.0 million
  - Border region outpaced national trends in the U.S. (31% growth) and in Mexico (59%)
Background (1.1): Relevance of the Texas-Mexico Border

### Infrastructure

- Out of 49 border crossings on the U.S.-Mexico border, **29 are along the Texas-Mexico border**
  - 28 process passenger vehicle movements
  - 24 process pedestrian movements
  - 14 process commercial movements (World Trade Bridge in Laredo is exclusively commercial)
  - 6 rail crossings
  - Some cover multiple modes (rail, pipeline, aviation, and maritime)

- Binational transportation system serving the Texas-Mexico border is **essential to the efficient flow of people and goods**

*Including Santa Teresa, New Mexico border crossing because it is within the El Paso MPO’s planning area boundary*
Background (1.1): Relevance of the Texas-Mexico Border

- **People movement**
  - U.S.-Mexico border experienced a **9% decline** in northbound people crossings between 1996 and 2017 from 208 million to 188 million
  - Texas-Mexico border recorded a **37% decline** in northbound people crossings in the same period, from 137 million down to 86 million
    * This is driven mainly by the reduction in personal vehicle crossings
  - **More than 45%** of the U.S.-Mexico personal crossings in 2017 occurred through the Texas-Mexico border
    * 34 million cars, more than 17 million pedestrians, and more than 86,000 passenger buses crossed the Texas-Mexico border in 2017
Background (1.1): Relevance of the Texas-Mexico Border

**Goods movement**

- Northbound truck crossings **increased by 93%** from 2.2 million in 1996 to 4.2 million in 2017
- Northbound railcar moves **increased by 285%** from 251,769 in 1996 to 970,406 in 2017
- In 2017, **over $390 billion** in goods were traded across the Texas-Mexico border
  - $187.5 billion (or 48%) was direct trade between Texas and Mexico
  - $202.5 billion passed through Texas border crossings with origins or destinations in other U.S. states and Canadian provinces
Background (1.1): Challenges of the Texas-Mexico Border

- **Addition of nearly 0.8 million residents** in the border region between 2015 and 2030
  - 0.5 million growth on Mexico side, 0.3 million growth on the Texas side between 2015 and 2030
  - Growth increases cross-border travel demand in border region
  - Adds pressure to the port of entry (POE) facilities and connecting transportation corridors
  - Growth will lead to increasing congestion across the transportation system
    - Including border crossings, highways, airports, pipelines, maritime, and rail connections
- **Improving capacity and operations** of the binational, multimodal infrastructure is critical
  - BTMP will identify solutions to alleviate traffic congestion, facilitate international trade, reduce environmental impacts, and improve quality of life for residents in the border region
Purpose of the Border Transportation Master Plan (1.2)

- Builds on the long-standing coordination and collaboration relationship between Texas and Mexico
- Comprehensive, multimodal, binational long-range plan
  - Identifies current and future transportation needs, challenges, and opportunities
  - Identifies and designates a binational and multimodal transportation system
  - Assesses the economic importance of cross-border movement of people and trade and the economic impact of border delays and congestion
  - Outlines policy, program, and project investment strategies and planning activities to address the needs
  - Outlines a comprehensive action plan for implementing recommendations in the short-, medium-, and long-term

Serves as a blueprint for binational policy, program, and project action plan to address current and future cross-border transportation needs and challenges
Development was informed by input from a wide variety of binational stakeholder groups

Key groups that participated in the development of the plan include:

- Border Trade Advisory Committee (BTAC)
- Binational Regional Steering Committees (BNRSCs)
- Texas Department of Transportation Internal Border Task Force
- Private sector through stakeholder workshops
- General public through public meetings
# BTMP Final Draft Report Chapters (1.4)

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<th>No.</th>
<th>Chapter Name</th>
<th>Chapter Overview</th>
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<td>Introduction</td>
<td>Purpose and development of BTMP; organization of report</td>
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<tr>
<td>2</td>
<td>Goals, Objectives, and Institutions</td>
<td>Mission and vision; goals and objectives of the BTMP; institutions and overview of planning and implementation processes</td>
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<td>3</td>
<td>Existing Conditions: The Texas-Mexico Border Today</td>
<td>Trends and current conditions on population, employment, income, education, movement of goods and people, and supply chains</td>
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<td>4</td>
<td>Binational Multimodal Transportation Network Designation</td>
<td>BTMP regions; spheres of influence; criteria and process for multimodal corridor designations; final multimodal transportation network</td>
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<td>5</td>
<td>Needs Assessment and System Performance</td>
<td>Overview of current issues and needs; strengths, weaknesses, opportunities and threats; key elements of the multimodal networks and performance</td>
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<td>6</td>
<td>Future Forecasts for the Border Region</td>
<td>Future scenario and forecast for the movement of people and goods</td>
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<td>7</td>
<td>Economic Importance of the Border</td>
<td>Economic profiles; key supply chains; economic impact of border delays</td>
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<tr>
<td>8</td>
<td>Identification of Future Needs and Strategies</td>
<td>Future performance of the binational transportation system; economic impacts of future border conditions; identification of future needs; strategies</td>
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<td>9</td>
<td>Stakeholder Engagement</td>
<td>Purpose; organization; membership; engagement summary</td>
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<td>10</td>
<td>Recommendations</td>
<td>Prioritization process; project, policy and program recommendations; impacts on performance and economic impacts of recommendations</td>
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<tr>
<td>11</td>
<td>Implementation Plan</td>
<td>Implementation framework; availability of funds; implementation plan for projects, policies and programs</td>
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BNRSC Feedback

1. Did we frame Chapter 1 appropriately?
2. Are there any other information points that you would like us to include in Chapter 1?
Goals, Objectives, and Institutions

Chapter 2
### Goals, Objectives, and Institutions Overview

#### Chapter Purpose
- Present BTMP vision and mission
- Present BTMP goals and objectives
- Identify the institutions and agencies that partner along the Texas-Mexico border and their roles

#### Key Messages
- Goals and objectives developed through consensus
- Joint management and collaborative efforts between binational partners allow border to function effectively

#### Support Messages
- Goals and objectives are a starting point for project prioritization
- Different processes are used to facilitate the movement of people and goods
**Vision**
To collaboratively foster integrated and efficient binational transportation mobility of people and goods across the Texas-Mexico border and to promote economic development that benefits the binational Texas-Mexico border region and the United States and Mexico.

**Mission**
To develop and implement a trade, economic development, and transportation strategy and public policy that facilitates United States-Mexico border trade and cross-border movement of people, creates efficient corridors, and enhances the connections in the binational border region, within the United States and Mexican states that form the Texas-Mexico border region, and between the two nations that share this border.

See Handout 1
Alignment of BTMP Goals and Objectives with Existing Plans in the U.S. and Mexico (2.2)

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<th>Cross-Border Resiliency</th>
<th>Sustainable Funding</th>
<th>Asset Preservation</th>
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<td>Optimize System Performance</td>
<td>Increase System Resiliency</td>
<td>Foster Stewardship</td>
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<td>Foster Understanding</td>
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<td>Safety and Security</td>
<td>Multimodal Connectivity</td>
<td>Build Resilient Infrastructure</td>
<td>Sustainable Funding</td>
<td>Preserve our Assets</td>
<td>Focus on the Customer</td>
<td>Bilateral Cooperation</td>
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<td>Focus on Safety</td>
<td>Multimodal Connectivity</td>
<td>Infrastructure Investments</td>
<td>Maintain State of Good Repair</td>
<td>Partner with Stakeholders</td>
<td>Promote Participation</td>
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<td>Promote Regional Connectivity</td>
<td>Multimodal Connectivity</td>
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<td>Preventive Maintenance</td>
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Legend: U.S. and Mexico Planning Documents

| Texas Transportation Plan 2040 | Previous U.S.-Mexico BTMPs | TxDOT Strategic Plan 2019-2023 | Texas Freight Mobility Plan 2018 | Texas-Mexico Border Strategic Blueprint | Mexican State Development Plans | Mexican Regional Development Plans | Customer Service | Stewardship |
U.S.-Mexico share multidimensional border

Different approaches are used to manage the border
- Prior to 9/11, Mexico primarily took a hands-off approach
- After 9/11, both countries have increased their collaboration

Establishment of high-level forums and mechanisms
Federal agencies who play a role in policy-making that impacts the border

- Binational relations
  - U.S. Department of State and the Secretaría de Relaciones Exteriores (SRE)

- Domestic policy initiatives
  - U.S. Department of Transportation and SCT

State and local agencies who play a role in policy-making that impacts the border

- U.S.: Texas State Legislature, Texas Transportation Commission, the Texas Department of Transportation, the Railroad Commission of Texas, Texas Secretary of State

- Mexico: Mexican Congress of States responsible for statewide policy issues (including those related to the border) with the help of state agencies
U.S.-Mexico Joint Working Committee on Transportation Planning (JWC)
- Cooperate on land transportation planning and the facilitation of cross-border movements

U.S.-Mexico Binational Bridges and Border Crossings Group (BBBXG)
- Discuss operational matters for existing and proposed international bridges and border crossings and related infrastructure
- Exchange technical information on policy issues

Presidential permits are a key piece in planning of border infrastructure
- U.S. federal presidential permit process: Follows Executive Order 13867 of April 10, 2019
- Texas permit process: approval from the Texas Transportation Commission through TxDOT
## U.S.-Mexico and Texas-Mexico Border Planning Processes (2.3)

### U.S. Planning Process

**Federal**
- Guidance by USDOT on transportation planning process
  - FAST Act
- Statewide planning requirements
- Metropolitan planning requirements

**Texas**
- Texas Transportation Plan (TTP) 2040
- TxDOT Strategic Plan
- Statewide Transportation Improvement Program (STIP)
- Texas-Mexico Border Transportation Master Plan
- Texas Freight Mobility Plan 2018
- Metropolitan Transportation Plans

### Mexico Planning Process

#### “General Planning Law” (1985)
- Norms and principles (including National Development Plan)
- Basis for integration and functioning (National System of Democratic Planning)
- Basis of participation and coordination

#### National Development Plan
- Describes programs that need to be developed including:
  - Sectorial plans (for key federal agencies)
  - Institutional (for quasi-governmental agencies)

#### Other Plans
- Sectorial Plan for Transportation and Communications by SCT
- Infrastructure Modernization Plan (IMP) by Aduanas
# Institutions and Agencies Involved in Texas-Mexico Border (2.3)

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<td>Secretaría de Hacienda y Crédito Público</td>
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<td>General Services Administration</td>
<td>Secretaría de Relaciones Exteriores</td>
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<td>Department of Transportation</td>
<td>Secretaría de Comunicaciones y Transportes</td>
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<td>Department of State</td>
<td>Secretaría de Bienestar</td>
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<td>Department of Agriculture</td>
<td>Instituto Nacional de Estadística y Geografía</td>
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<tr>
<td>Army Corps of Engineers</td>
<td>Secretaría de Energía</td>
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<td>International Boundary and Water Commission</td>
<td>Comisión Internacional de Límites y Aguas (CILA)</td>
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<td>Texas State Government– Representatives and Senators</td>
<td>Secretaría de Economía</td>
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<td>New Mexico State Government– Representatives and Senators</td>
<td>Secretaría de Agricultura y Desarrollo Rural</td>
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<td>Texas Department of Transportation</td>
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<td>New Mexico Department of Transportation</td>
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<td>Texas Department of Public Safety</td>
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<tr>
<td>New Mexico State Government– Representatives and Senators</td>
<td>Secretaría de Obras Públicas de Tamaulipas</td>
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<td>Texas Department of Transportation</td>
<td>Secretaría de Economía y Turismo de Tamaulipas</td>
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<tr>
<td>New Mexico Department of Transportation</td>
<td>Secretaría de Desarrollo Urbano y Medio Ambiente de Tamaulipas</td>
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<td>Secretaría de Obras Públicas y Transporte de Coahuila (SOPT)</td>
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<td>New Mexico Department of Public Safety</td>
<td>Corporación para el Desarrollo de la Zona Fronteriza de Nuevo León (CODEFRONT)</td>
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<td>New Mexico Border Authority</td>
<td>Secretaría de Comunicaciones y Obras Públicas Chihuahua</td>
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<td>Secretaria de Economía y Turismo Coahuila</td>
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<td>Secretaria de Innovación y Desarrollo Económico de Chihuahua</td>
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<td>Secretaría de Economía y Trabajo de Nuevo León</td>
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<td>Secretaría de Desarrollo Sustentable de Nuevo León</td>
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## Institutions and Agencies Involved in Texas-Mexico Border (2.3)

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### Overview of Management, Program, and Project Implementation along the Texas-Mexico Border (2.3)

#### Primary Responsibilities

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<th>Rail Infrastructure</th>
<th>Seaport Infrastructure</th>
<th>Airport Infrastructure</th>
<th>Pipeline Infrastructure</th>
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<td><strong>U.S.</strong></td>
<td>CBP</td>
<td>GSA and other parties</td>
<td>TxDOT and local agencies</td>
<td>Private sector</td>
<td>Port authorities and navigation districts</td>
<td>Municipal or county governments</td>
<td>Private sector</td>
</tr>
<tr>
<td><strong>Mexico</strong></td>
<td>Aduanas</td>
<td>INDAABIN and other parties</td>
<td>SCT, state and local agencies</td>
<td>SCT</td>
<td>SCT and other parties (APIs)</td>
<td>Private sector and small SCT role</td>
<td>SENER and small private sector role</td>
</tr>
</tbody>
</table>
### Funding Considerations

<table>
<thead>
<tr>
<th>U.S.</th>
<th>Border Management and Operations</th>
<th>Border Infrastructure and Support Facilities</th>
<th>Transportation Infrastructure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Budget appropriations to CBP and other agencies</td>
<td>Budget appropriations to GSA and CBP (some third party contributions)</td>
<td>Funded based on ownership of facility</td>
</tr>
<tr>
<td>Mexico</td>
<td>Budget appropriations to Aduanas &amp; other agencies</td>
<td>Budget appropriations to INDAABIN and Aduanas (some third party contributions)</td>
<td>Primarily funded through SCT, with some state, local and private sector contribution</td>
</tr>
</tbody>
</table>
BNRSC Feedback

1. Did we frame Chapter 2 appropriately?
2. Is there any other information that needs to be included in Chapter 2?
Existing Conditions: The Texas-Mexico Border Today

Chapter 3
### Current Conditions at the Texas-Mexico Border Overview

<table>
<thead>
<tr>
<th>Chapter Purpose</th>
<th>Key Messages</th>
<th>Support Messages</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Identify the trends and current conditions of the Texas-Mexico border</td>
<td>• The border region population and employment is growing</td>
<td>• Residents are becoming more educated</td>
</tr>
<tr>
<td>• Provide high-level socioeconomic and cross-border movements</td>
<td>• Less people are crossing the border</td>
<td>• Personal vehicle crossings have declined</td>
</tr>
<tr>
<td>• Guide preliminary identification of issues and needs</td>
<td>• Trade continues to grow</td>
<td>• Trade across the border continues to increase</td>
</tr>
<tr>
<td></td>
<td>• Border facilitates 12 key supply chains within North America</td>
<td>• Most truck and rail movement occurs northbound</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Most air, vessel, and pipeline movement moves southbound</td>
</tr>
</tbody>
</table>

- Residents are becoming more educated
- Personal vehicle crossings have declined
- Trade across the border continues to increase
- Most truck and rail movement occurs northbound
- Most air, vessel, and pipeline movement moves southbound
Current Conditions: Population at the Border (3.1) – Laredo/Coahuila/Nuevo León/Tamaulipas Region

Population Trends (Laredo/Coahuila/Nuevo Leon/Tamaulipas)

<table>
<thead>
<tr>
<th>Year</th>
<th>Texas Border Region</th>
<th>Mexico Border Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>670,315</td>
<td>304,201</td>
</tr>
<tr>
<td>1995</td>
<td>304,201</td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>491,978</td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>1.13M</td>
<td></td>
</tr>
</tbody>
</table>

Current Conditions: Employment at the Border (3.2) – Laredo/Coahuila/Nuevo León/Tamaulipas Region

International Trade-Related Employment by Industry as a proportion of total employment (US Border Counties in Laredo/Coahuila/Nuevo Leon/Tamaulipas Region)

Current Conditions: Income at the Border (3.3) – Laredo/Coahuila/Nuevo León/Tamaulipas Region

Current Conditions: Education at the Border (3.4) – Laredo/Coahuila/Nuevo León/Tamaulipas Region

Laredo Texas Border Counties Education Trends


Less Than HS Graduate  | HS Graduate  | Some College  | Associate Degree  | Bachelor Degree  | Advanced Degree  |
---                   |    52%     |    34%      |        19%         |             14%    |              5%  |
                      |   19%      |   27%       |           14%       |             17%    |              6%  |
                      |   14%      |   17%       |           11%       |             11%    |              4%  |
                      |   5%       |   6%        |           5%        |             3%     |              7%  |
                      |   7%       |   4%        |           3%        |             6%     |              11% |
Current Conditions: Movement of People at the Border (3.5) – Laredo/Coahuila/Nuevo León/Tamaulipas Region


- 1996: 94.9%
- 2000: 94.9%
- 2005: 94.9%
- 2010: 94.9%
- 2015: 95.7%
- 2017: 95.7%


- 1996: 92.9%
- 2000: 92.9%
- 2005: 92.9%
- 2010: 92.9%
- 2015: 86.0%
- 2017: 86.0%


- 1996: 80.0%
- 2000: 78.0%
- 2005: 76.0%
- 2010: 74.0%
- 2015: 73.7%
- 2017: 73.7%

Source: Bureau of Transportation Statistics Border Crossing/Entry Data (2017), Northbound

- Bus Passengers
- Pedestrians
- Personal Vehicle Passengers
Current Conditions: Movement of Goods at the Border (3.6) – Laredo/Coahuila/Nuevo León/Tamaulipas Region

Texas-Mexico Cross-Border Trade by Mode (2017) – Del Rio POE, Eagle Pass POE, Laredo POE

- **Truck**
  - Total: $180.8 billion
  - Northbound, $78.2 billion (32%)
  - Southbound, $163.6 billion (68%)

- **Rail**
  - Total: $62.5 billion
  - Northbound, $22.8 billion (36%)
  - Southbound, $39.8 billion (64%)

- **Air**
  - Total: $241.8 million
  - Northbound: $78.2 million (23.4%)
  - Southbound: $163.6 million (76.6%)

- **Pipeline**
  - Total: $385.8 million
  - Northbound: $0.6 million (0.2%)
  - Southbound: $385.2 million (99.8%)

Source: Bureau of Transportation Statistics Transborder Freight Data (2017)
Goods Moving Northbound and Southbound 2017 (Billions of Dollars) – Del Rio POE, Eagle Pass POE, Laredo POE

- **Northbound (MX to US)**
  - Foodstuffs, $7B
  - Electricity, $6B
  - Machinery, $20B
  - High Tech, $28B
  - Motor Vehicles, $52B
  - Manufactured Goods, $133.8B

- **Southbound (US to MX)**
  - Foodstuffs, $7B
  - Metals, $10B
  - Plastics and Rubbers, $11B
  - Machinery, $19B
  - High Tech, $19B
  - Motor Vehicles, $15B
  - Manufactured Goods, $8B
  - Total: $99.3B

Source: Bureau of Transportation Statistics Transborder Freight Data, U.S. Census Bureau Trade Online, FAF v4
BNRSC Feedback

1. Did we frame Chapter 3 appropriately?
2. Do the findings in Chapter 3 match what you observe/experience at the border?
Binational Multimodal Transportation Network Designation

Chapter 4
### Designation Process for Binational Multimodal Transportation Corridors Overview

<table>
<thead>
<tr>
<th>Chapter Purpose</th>
<th>Key Messages</th>
<th>Support Messages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summarize the binational multimodal transportation network designation process for:</td>
<td>Three border regions were identified, consistent with previous efforts</td>
<td>Designed multimodal corridors based on 10-mile buffers linking all modes</td>
</tr>
<tr>
<td>- Texas and local regions</td>
<td>- 5-sphere planning analysis structure</td>
<td>- Multimodal connections identified for the 29 border crossings</td>
</tr>
<tr>
<td>- Mexico’s four border states</td>
<td>- Developed designation criteria</td>
<td>- Designated corridors will be used to identify needs and solution strategies</td>
</tr>
<tr>
<td>- U.S. and Mexico</td>
<td>- 11 multimodal transportation corridors are designated</td>
<td></td>
</tr>
</tbody>
</table>
Three border regions have been identified for the BTMP:

**El Paso/Santa Teresa/Chihuahua Region**

**Laredo/Coahuila/Nuevo León/Tamaulipas Region**

**Rio Grande Valley/Tamaulipas Region**
Spheres of Influence

Spheres present the transportation system and analysis at different levels of detail based on proximity to the Texas-Mexico border. The planning spheres used to develop the BTMP include:

- **Sphere 1**: 60 miles (100 km) north and south of the border, including the 1 mile and 60-mile transportation system analysis detail from the border
- **Sphere 2**: Approximately 100 miles (160 km) north and south of the border, including key population and goods production centers in the border states
- **Sphere 3**: Five border states (Texas, Chihuahua, Coahuila, Nuevo León, and Tamaulipas)
- **Sphere 4**: U.S. and Mexico
- **Sphere 5**: U.S., Mexico, and Canada (NAFTA/USMCA)
Criteria and Process to Identify and Designate Multimodal Corridors: Foundation, Defined International Roadways
Criteria and Process to Identify and Designate Multimodal Corridors: Sphere 1 Binational Multimodal Network
Criteria and Process to Identify and Designate Multimodal Corridors: Sphere 1 Binational Multimodal Network—Border Region

Laredo/Coahuila/Nuevo León/Tamaulipas
Criteria and Process to Identify and Designate Multimodal Corridors: Sphere 2 Binational Multimodal Network
Criteria and Process to Identify and Designate Multimodal Corridors: Sphere 3 Binational Multimodal Network

- Represents the binational multimodal transportation network for all modes, including designated corridor operations in the planning spheres
- Supports later technical analysis to identify
  - Needs
  - Solutions and strategies
- Supports detailed network analysis in Spheres 1 and 2, representing the three border regions
- Focuses Sphere 3 analysis on designated multimodal corridors
BNRSC Feedback

1. Did we frame Chapter 4 appropriately?
2. Is there any other information that needs to be included in Chapter 4?
Needs Assessment and System Performance
Primer to Chapter 5
### Needs Assessment and System Performance Overview

<table>
<thead>
<tr>
<th>Chapter Purpose</th>
<th>Key Messages</th>
<th>Support Messages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide overview of issues and needs for binational transportation system</td>
<td>Long wait times and capacity constraints are key issues</td>
<td>Concentration of demand along key corridors and urban areas</td>
</tr>
<tr>
<td>Identify strengths, weaknesses, opportunities and threats at the border</td>
<td>Strong cooperation exists between U.S. and Mexican agencies</td>
<td>ITS developments could solve several issues</td>
</tr>
<tr>
<td>Define key elements of the multimodal networks and performance</td>
<td>Lack of communication about crossing conditions to users is prevalent</td>
<td>Lack of funding continues to be a threat</td>
</tr>
</tbody>
</table>
Issues at the Texas-Mexico Border: Freight Mobility

Key issues:

- Corridors and routes to/from the border crossings are impeded by urban growth and have various modes mixed into the same lanes
- Excessive wait times to cross the border (average 20-25 minutes)

Additional issues:

- Few cross-border locations support passage of hazardous materials via truck
- Some corridors and connector routes are inefficient and/or not well-maintained
- The network of overweight & oversize routes needs periodic review due to changing needs
Texas-Mexico Border Wait Times

- Stakeholder input:
  - Stakeholders noted long border wait times

- Findings:
  - Northbound border wait times have increased since 2003 across all border crossings
  - Passenger vehicle wait times have generally increased
  - Wait times vary across each border crossing and lane type

Source: U.S. CBP Northbound Hourly Border Wait Times, 2020 includes January and February only
### Texas-Mexico Border Wait Times: Laredo/Coahuila/Nuevo León/Tamaulipas Region (2017)

#### Commercial (COV) standard border crossing peak wait times

<table>
<thead>
<tr>
<th>Location</th>
<th>Wait Time (Minutes)</th>
<th>U.S. CBP Northbound 50th percentile</th>
<th>90th percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Del Rio</td>
<td>27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eagle Pass Bridge II</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colombia Solidarity</td>
<td>50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>World Trade Bridge</td>
<td>60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weslaco-Progreso</td>
<td>20</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Del Rio: 27 minutes
- Eagle Pass Bridge II: 20 minutes
- Colombia Solidarity: 50 minutes
- World Trade Bridge: 60 minutes
- Weslaco-Progreso: 20 minutes
Issues at the Texas-Mexico Border: Freight Mobility

Key issues:

- Large percentage of freight movement concentrated at small number of crossings; top 6 truck crossings = 98% of truck freight
- Most truck crossing locations have limited hours of operation
- Rail bridges are all single rail line; takes an average of 90 minutes for a train to cross

Additional issues:

- Two oldest rail bridges support more than 75% of rail traffic
- Laredo rail bridge is 100 years old
- Acute truck parking shortage across entire region
- Rail traffic impedes roadway mobility in certain locations
Needs at the Texas-Mexico Border: Freight Mobility

Key needs:
- Current and readily-available information on cross-border wait times
- Joint customs inspections for both trucks and rail to reduce total crossing time
- Increased use of technology to conduct non-intrusive inspections
- More cross-border capacity for trucks to cross

Needs for Laredo/Coahuila/Nuevo León/Tamaulipas Border Region:
- Trucks need more and better parking areas while waiting to pick-up and/or delivery trailers
- Border crossing hours of operation are too limited
- Need to develop a truck hazardous material route network
- Need more focus on education and training for using more advanced technology equipment, and more efficient processes
Issues at the Texas-Mexico Border: People Mobility

Key issues:
- Pedestrian traffic coexisting with cars and truck traffic at border crossings
- Excessive wait times to cross the border: passenger vehicles average 30-40 minutes; pedestrians average 5-25 minutes

Additional issues:
- Shortage of border crossings and lanes equipped with SENTRI
- Lack of dedicated bicycle lanes
- Lacking informative signage to key destinations
- Pedestrian walkways on most border crossings are narrow
- Once across the border, there is little/no connectivity to public transportation on either side
- General shortage of drop-off and pick-up areas for pedestrians on both sides of the border
Texas-Mexico Border Wait Times: Laredo/Coahuila/Nuevo León/Tamaulipas Region (2017)

Passenger (POV) standard border crossing peak wait times

- Del Río Ciudad Acuña: 75
- Eagle Pass Bridge I: 45
- Eagle Pass Bridge II: 64
- Laredo Bridge II: 130
- Colombia Solidarity: 140

U.S. CBP Northbound 50th percentile

90th percentile
Texas-Mexico Border Wait Times: Laredo/Coahuila/Nuevo León/Tamaulipas Region (2017)

Pedestrian (PED) standard border crossing peak wait times

<table>
<thead>
<tr>
<th>Wait Times</th>
<th>Laredo Bridge I</th>
<th>Laredo Bridge II</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. CBP Northbound 50th percentile</td>
<td>55</td>
<td>116</td>
</tr>
<tr>
<td>90th percentile</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Texas-Mexico Border Transportation Master Plan
Needs at the Texas-Mexico Border: People Mobility

Key needs:

- Pedestrian border crossings need to be key nodes for incorporation into urban plans for transit, bike/pedestrian, and multimodal people mobility
- Employ technology, i.e. biometric facial recognition technology to improve throughput and decrease crossing times
- Need accurate & real-time information on wait times and other incidents

Needs for Laredo/Coahuila/Nuevo León/Tamaulipas Border Region:

- Need to address safety in the movement of people around the border area, in particular in Mexico
Strengths, Weaknesses, Opportunities and Threats Analysis of the Binational Border: Overview

- **STRENGTHS**
  - Border crossing elements or areas working well, providing advantages

- **WEAKNESSES**
  - Border crossing elements or areas needing improvement

- **OPPORTUNITIES**
  - Factors contributing to ways to improve elements or areas of the border crossings

- **THREATS**
  - Problems, issues, and risks impacting the elements, areas, or operations of the border crossings
SWOT Analysis of the Binational Border: Multimodal Analysis of the Border Region

- Evaluates **range of variables** that influence, hinder, or support transportation needs, goals, and objectives of the BTMP
  - Needs analysis focused on assessing the capacity of the border crossings and transportation system to facilitate the movement of people and goods

- Evaluates **all 29 border crossings/border regions** and supporting network:
  - Border crossing infrastructure assets
  - Auto
  - Truck and Highway Freight
  - Freight Rail
  - Pedestrian
  - Aviation
  - Pipeline
### SWOT Analysis of the Binational Border: Borderwide Findings

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Programs that expedite movement of people and goods at different locations along the border</td>
<td>Urban border crossings located in downtown areas adjacent to residential areas</td>
<td>Forecasted increase in border movements are coupled with strong infrastructure and expected improvements</td>
<td>Lack of funding to pay for improvements</td>
</tr>
<tr>
<td>Cooperation between U.S. and Mexican agencies on border-crossing operations</td>
<td>Lack of reliable, timely communication of border crossing conditions with users</td>
<td>Availability of Intelligent Transportation Systems (ITS) solutions to expedite future border movements</td>
<td>Measures to improve efficiency at the border may take time to implement</td>
</tr>
</tbody>
</table>
Border Crossing Infrastructure: Bridge Ratings
Texas-Mexico border crossings are linked to main and direct highway trade routes

Five border crossings have segregated northbound truck lane approaches and others have dedicated FAST lanes

Some border counties and cities in the U.S. allow heavy-weight trucks from Mexico on designated routes

Existing cooperation between U.S. and Mexican agencies reduce truck delay
  - Pre-inspection facility
  - Santa Teresa international export/import livestock crossing
  - Integrated border safety inspection facilities

See Handout 2
Truck and Highway Freight Strengths

Connection to major trade routes: Sphere 1

Free and secure trade lane (FAST): Sphere 3

Segregated truck lanes: Sphere 3

See Handout 2
Preliminary Findings: Truck and Highway Freight Weaknesses

- Not all border crossings serving trucks can accommodate hazardous materials
- Truck trade patterns can strain border crossing facilities, especially during peak seasons
- Crossings on the Texas-Mexico border are not open 24 hours per day for trucks
- Laredo/Coahuila/Nuevo León/Tamaulipas border region has heavily-congested truck routes
- Border regions send more cargo into other parts of the U.S. than they receive

See Handout 2
Truck and Highway Freight Weaknesses

Border Crossing - Hazardous Material

Hazardous Material
Border Crossing
International Corridor
Emerging International Corridor
Regional Corridor
Local Corridor

United States

Texas-Mexico Border Transportation Master Plan April 22, 2020

Commercial Trucks

0
200,000
400,000
600,000
800,000
1,000,000
1,200,000
1,400,000
1,600,000
1,800,000
2,000,000

Very Large
Large
Medium
Small

Truck and Highway Freight Weaknesses

El Paso Border Region
Laredo Border Region
RGV Border Region

See Handout 2
## Truck and Highway Freight Opportunities and Threats

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Identify</th>
<th>Deploy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Improve</strong></td>
<td><strong>Identify</strong></td>
<td><strong>Deploy</strong></td>
</tr>
<tr>
<td>▪ Truck load efficiency</td>
<td>▪ Opportunities for pre-inspection</td>
<td>▪ ITS solutions</td>
</tr>
<tr>
<td>▪ Efficiency and options for goods movement</td>
<td>▪ Opportunities for joint customs operations</td>
<td>▪ Vehicle booking systems</td>
</tr>
<tr>
<td>▪ Border crossing hours to increase capacity</td>
<td>▪ Incentive programs to replace older trucks</td>
<td></td>
</tr>
<tr>
<td>▪ FAST program with more users</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Non-invasive screening measures</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Threats</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Strains at border crossing during peak season</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Increasing truck volumes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Lack of funding and physical space for installations of new technology</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

See Handout 2
BNRSC Feedback

1. Did we frame Chapter 5 appropriately?
2. Is there any other information that needs to be included in Chapter 5?
## Study Tasks/Three Month Look-Ahead

<table>
<thead>
<tr>
<th>Data Collection (Task 4)</th>
<th>Corridor Analysis (Task 5)</th>
<th>Forecasting (Task 6)</th>
<th>Economic Analysis (Task 7)</th>
<th>Recommendations &amp; Investment Plan (Task 8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge Clearinghouse</td>
<td>Refinements to high-level project prioritization framework</td>
<td>Validate key drivers for future scenarios</td>
<td>Assess economic importance of trade through the border</td>
<td>Identify policies, programs &amp; projects from existing plans and stakeholders</td>
</tr>
<tr>
<td>Provide data to all other tasks</td>
<td>Report future performance metrics of designated corridors</td>
<td>Develop future scenarios</td>
<td>Assess economic impact of wait times at the border</td>
<td>Identify funding sources</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Develop forecasts</td>
<td>Assess economic impact of BTMP recommendations</td>
<td>Finalize project prioritization process</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Next BNRSC Meetings
- **August 2020**

### Next BTAC Meeting
- **June 2020**

### Next BTAC Meeting Content
- Chapter 4: Binational Multimodal Transportation Network Designation
- Chapter 5: Needs Assessment and System Performance
- Chapter 6: Future Forecasts for the Border Region
- Chapter 7: Economic Importance of the Border
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