



Texas-Mexico Border Transportation Master Plan

78th Meeting Joint Advisory Committee (JAC) for the
Improvement of Air Quality in the Ciudad Juárez, Chihuahua/El
Paso, Texas/Doña Ana County, New México Air Basin

Importance of the Texas-Mexico Border



- Texas plays a vital role in the U.S.-Mexico relationship
- U.S.-Mexico share 1,954 miles of common border, of which Texas-Mexico **share 1,254 miles (or 64%)**
 - Texas-Mexico border **connects people and facilitates trade** between the two countries
- **U.S.-Mexico trade has tripled** between 1994 and 2019, increasing from \$173 billion to \$615 billion
- Texas-Mexico trade value **increased by 267%** from \$58 billion in 1994 to \$213 billion in 2019
- **68% of trade** between the two countries passes through the Texas-Mexico border



Importance 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 97% from 1.5 million jobs in 1990 to 2.9 million jobs in 2019**

■ Population

- Border region **population grew 70% from 4.4 million in 1990 to 7.4 million in 2019**
- Border region outpaced national trends in the U.S. (32% growth) and in Mexico (54%)

■ Infrastructure

- Out of 49 border crossings along 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
 - 6 rail crossings, several cover multiple modes

Employment

97%

INCREASE



Population

70%

INCREASE



** Including Santa Teresa, New Mexico border crossing because it is within the El Paso MPO's planning area boundary*

Border Transportation Master Plan Purpose & Overview



- Builds on the long-standing coordination and collaboration relationship between Texas and Mexico
- Comprehensive, multimodal, and binational long-range plan
- **Serves as a blueprint for binational policy, programs, and projects** to address current and future cross-border transportation needs and challenges



Goals and Objectives Alignment with Existing Plans in the U.S. and Mexico



Mobility and Reliability	Economic Competitiveness	Safety and Security	Connectivity	Cross-Border Resiliency	Sustainable Funding	Asset Preservation	Customer Service	Stewardship
Mobility and Reliability	Optimize System Performance	Safety	Multimodal Connectivity	Foster Consistency	Sustainable Funding	Asset Preservation	Customer Service	Stewardship
Optimize System Performance	Economic Competitiveness	Promote Safety	Optimize System Performance	Increase System Resiliency	Foster Stewardship	Asset Preservation	Foster Understanding	Foster Understanding
Mobility and Reliability	Economic Competitiveness	Safety and Security	Multimodal Connectivity	Build Resilient Infrastructure	Sustainable Funding	Preserve our Assets	Focus on the Customer	Foster Stewardship
Mobility and Reliability	Promote Economic Development	Focus on Safety	Multimodal Connectivity		Infrastructure Investments	Maintain State of Good Repair	Partner with Stakeholders	Bilateral Cooperation
Mobility and Reliability			Promote Regional Connectivity		Industry Investments	Preventive Maintenance	Bilateral Cooperation	Promote Participation
Promote Sustainable Mobility							Promote Participation	Stewardship
							Customer Service	

Legend: U.S. and Mexico Planning Documents

Texas Transportation Plan 2040	Previous U.S.-Mexico BMPs	TxDOT Strategic Plan 2019-2023	Texas Freight Mobility Plan 2018	Texas-Mexico Border Strategic Blueprint	Mexican State Development Plans	Mexican Regional Development Plans
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- Continued growth of population, trade, and personal travel demand has outpaced investments in borderwide multimodal transportation infrastructure.
- This has resulted in:
 - Increasing Border Wait Times
 - Corridor
 - Local Congestion
 - Safety Hot Spots
 - Deferred Maintenance
 - Connectivity Gaps
- If not addressed, these issues could undermine future economic prosperity and impact quality of life in the Texas-Mexico border regions and beyond

Issues and Needs – Cross-cutting themes, Process and Performance Goals



Cross-cutting Themes



Binational and Multimodal Coordination,
Collaboration, and Cooperation



Integration of
New Technologies



Data Collection, Harmonization, Sharing, and
Analysis



System
Monitoring

Goals - Processes



Economic Competitiveness



Cross-border Resiliency



Sustainable Funding



Customer Service



Stewardship

Goals - Performance



Mobility and Reliability
Operational Efficiency



Mobility and Reliability
System Capacity



Safety and Security



Connectivity



Asset Preservation



Stewardship

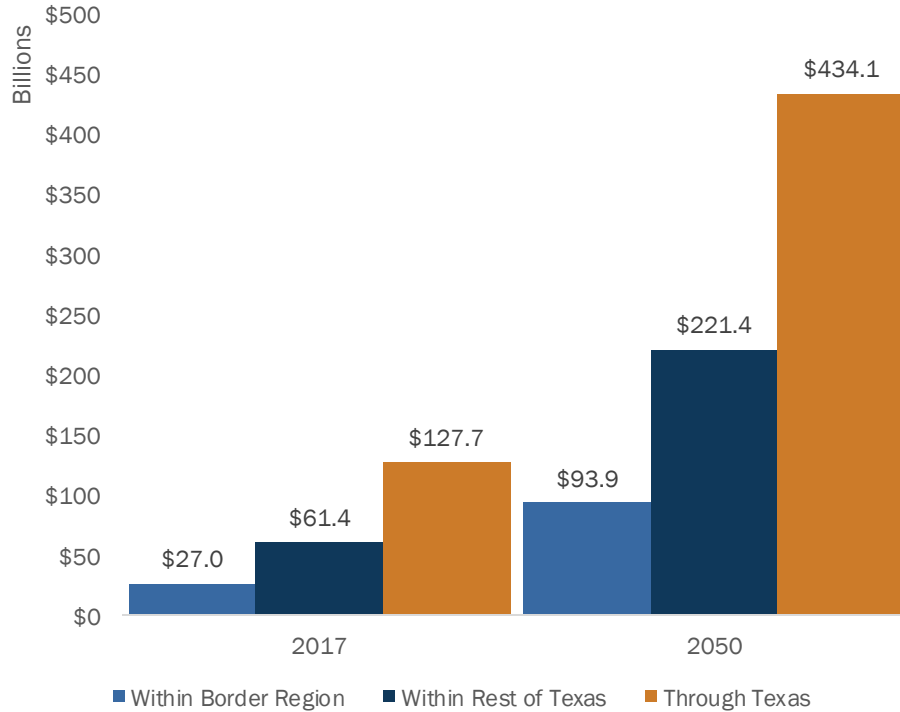
Environmental and community impacts of the binational multimodal transportation network including local congestion, safety hot spots, regional air quality, and hazardous material and e-waste sites.

Different U.S. and Mexico vehicle emission standards and regulations, need for policies to reduce vehicle idling at the border, need for improved routing and design of transportation infrastructure in border communities, opportunities to improve the consistency of air monitoring, need for climate action plans in Mexico border states, high reliance on traditional energy sources and low use of alternative renewable energy uses, and opportunity for improvements in hazardous material policies and disposal sites.

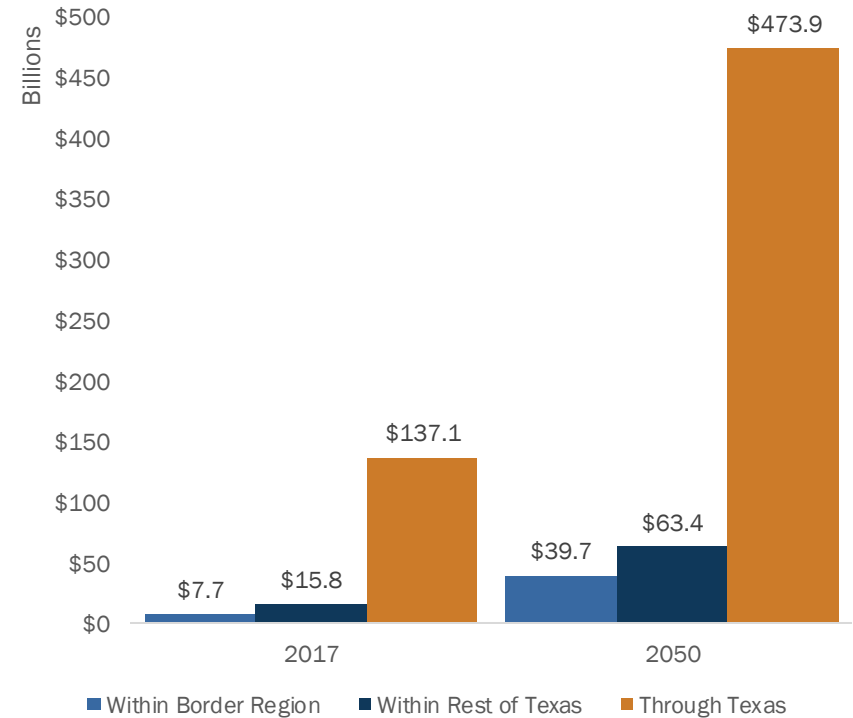
Total Trade by Value Through the Texas-Mexico Border: 2017–2050



Northbound Value, 2017-2050



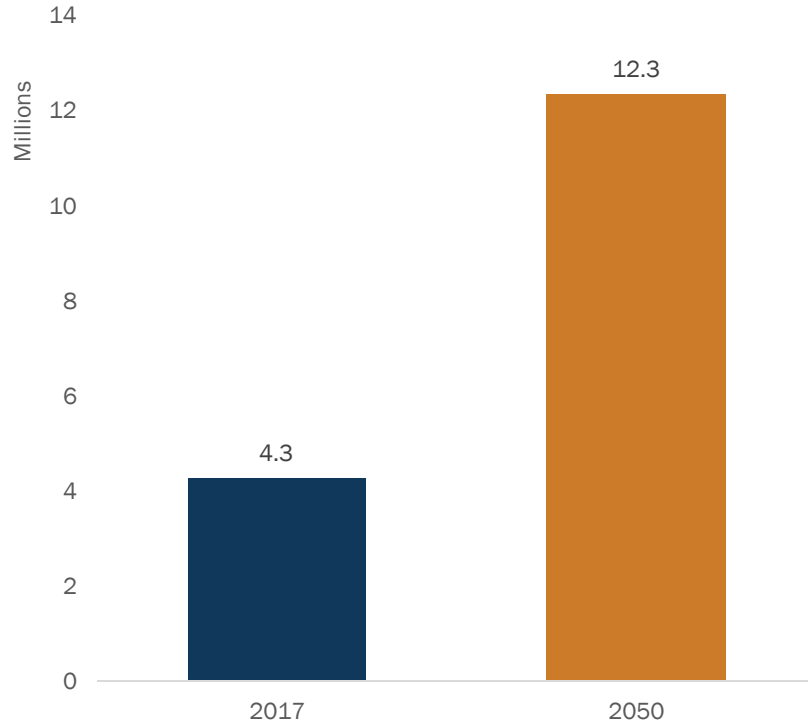
Southbound Value, 2017-2050



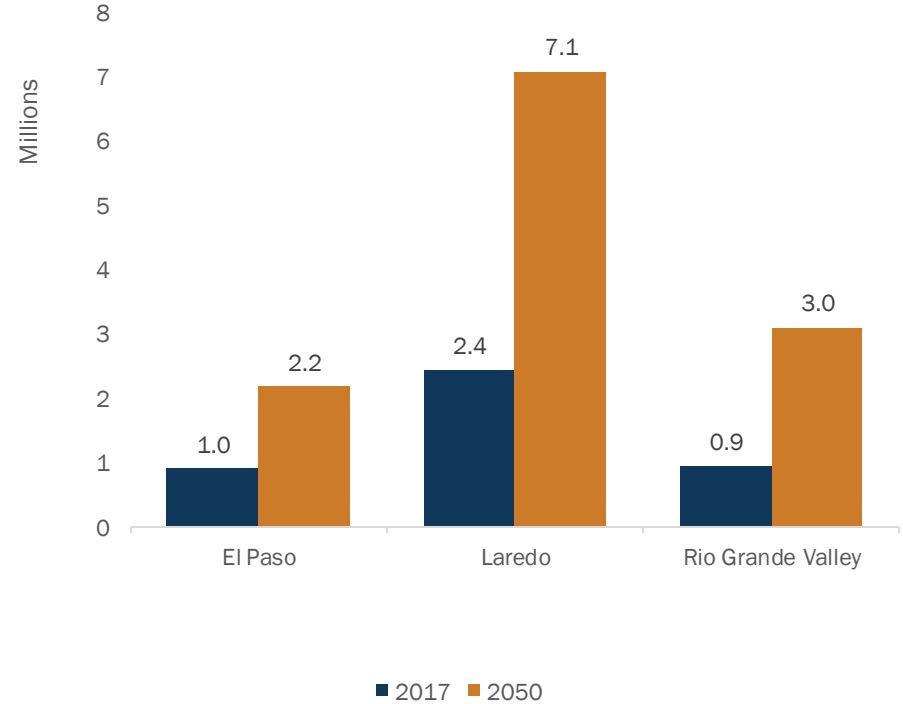
Total Truck Volumes Through Texas-Mexico Border – 2017-2050



Total Truck Movements, 2017-2050



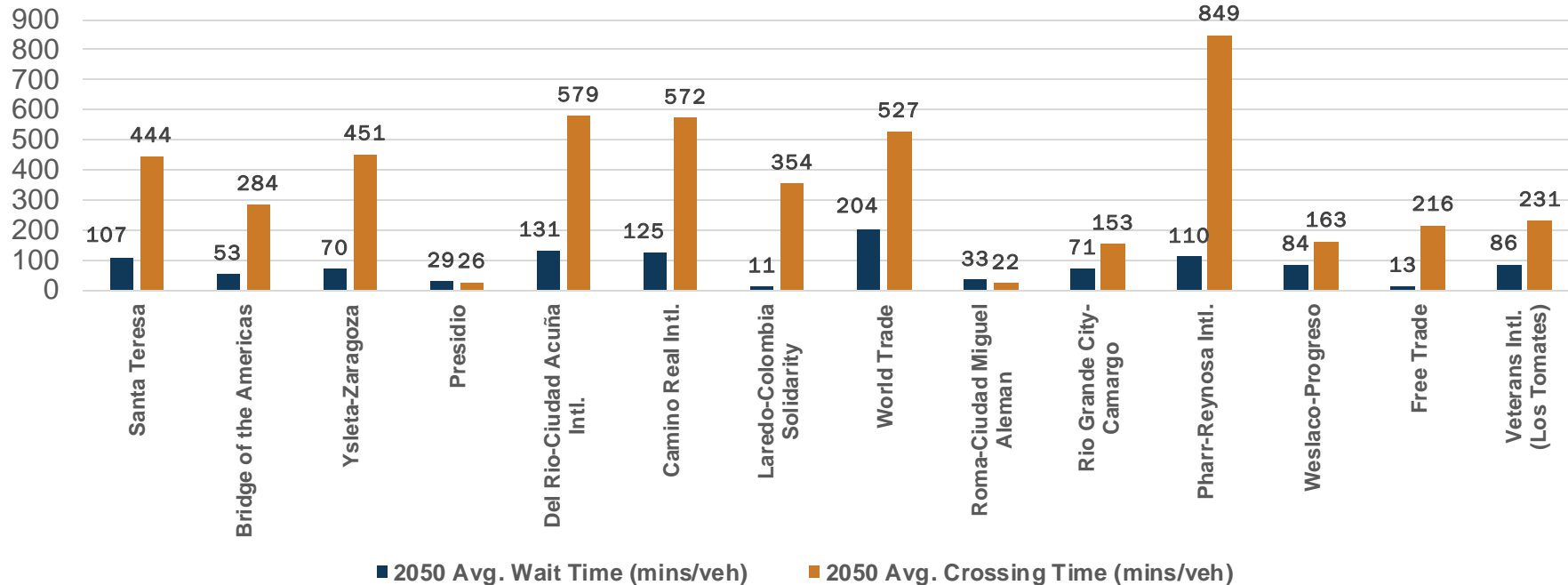
Total Truck Movements by Region, 2017-2050



Change from Border Wait Time to Border Crossing Time: Commercial Vehicles Comparison

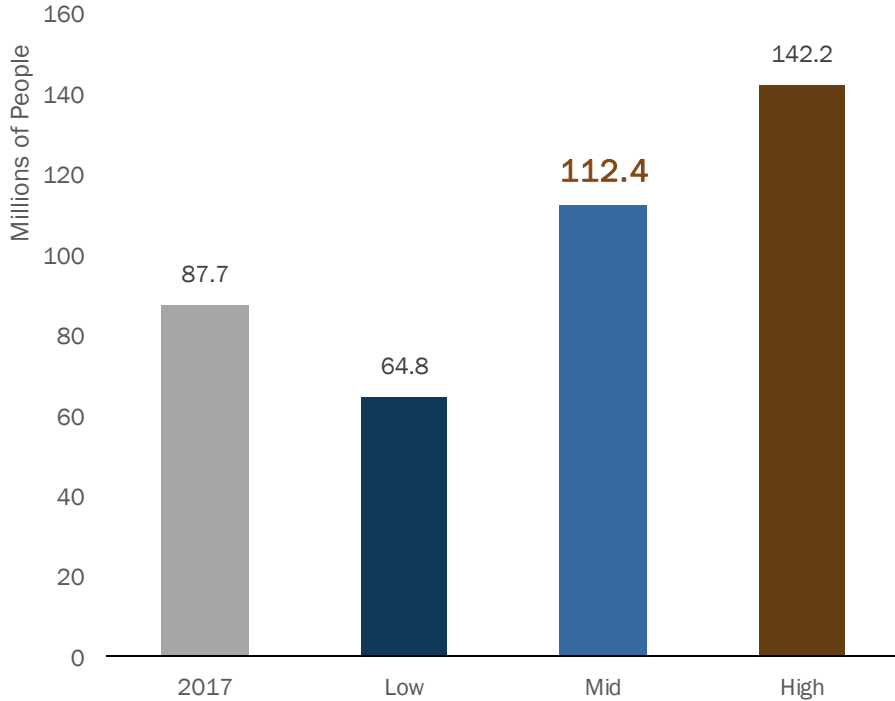


2050 Average Weight Time Compared to Average Crossing Time by CMV Border Crossing

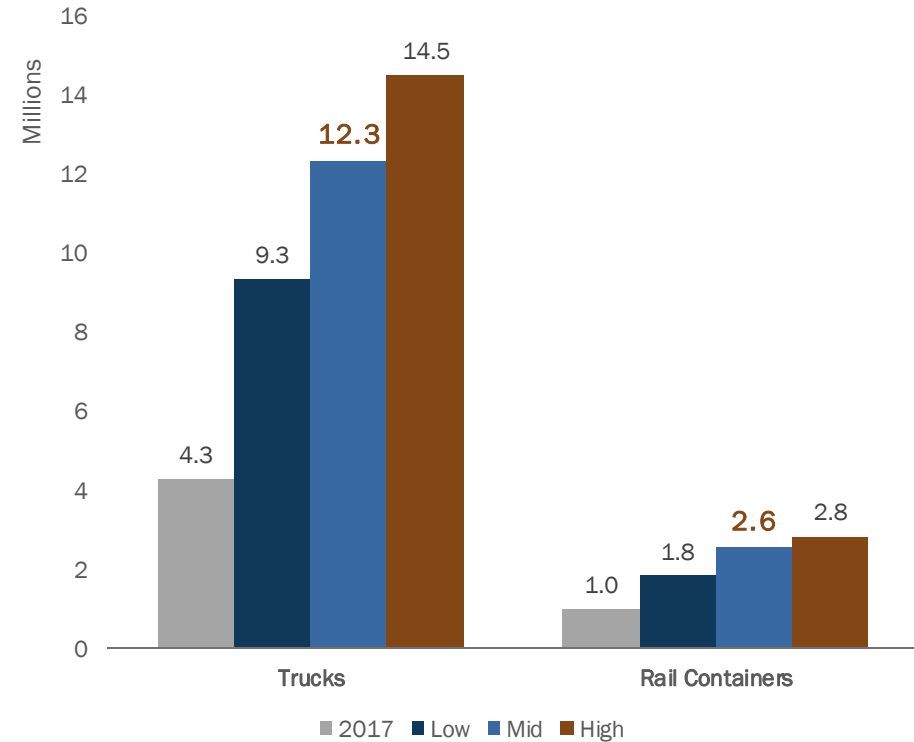




Movement of People (2050)



Northbound Freight Crossings (2050)

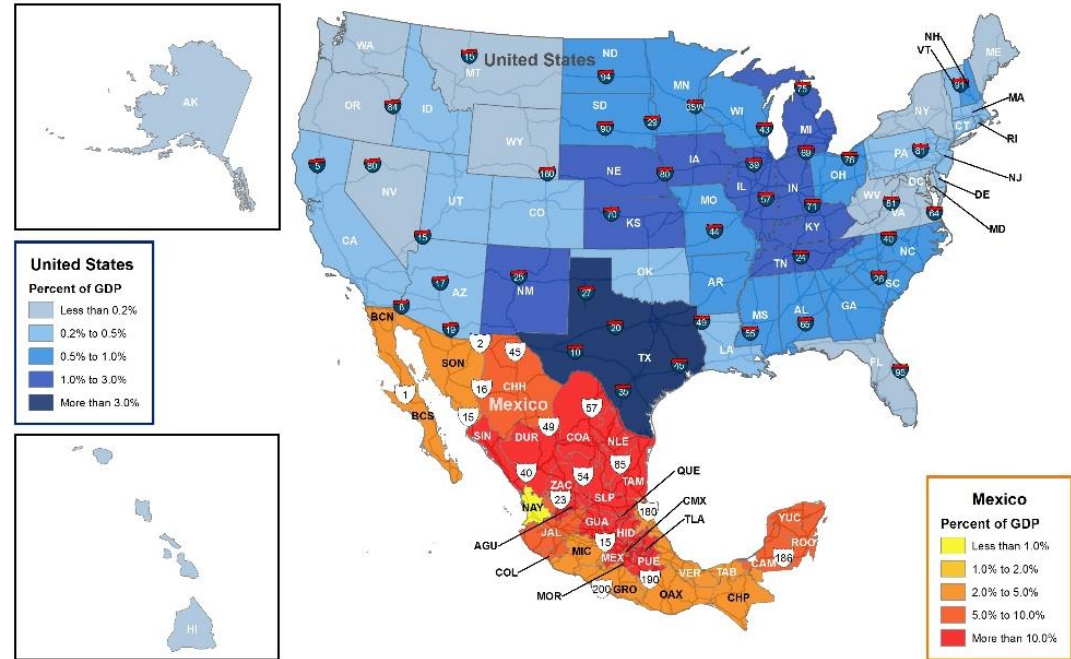


Economic Importance of Trade Through the Texas-Mexico Border



- Trade through the Texas-Mexico border **contributes to the GDP and employment** in all U.S. and Mexican states
 - Generating more than \$325 billion annually in GDP (2017)
 - Generating 6.2 million jobs in both countries (2017)
- Contribution to GDP will **more than triple by 2050, generating more than \$1 trillion in GDP and over 20 million jobs**

Percent of GDP Impact Attributable to the Movement of Goods in 2017

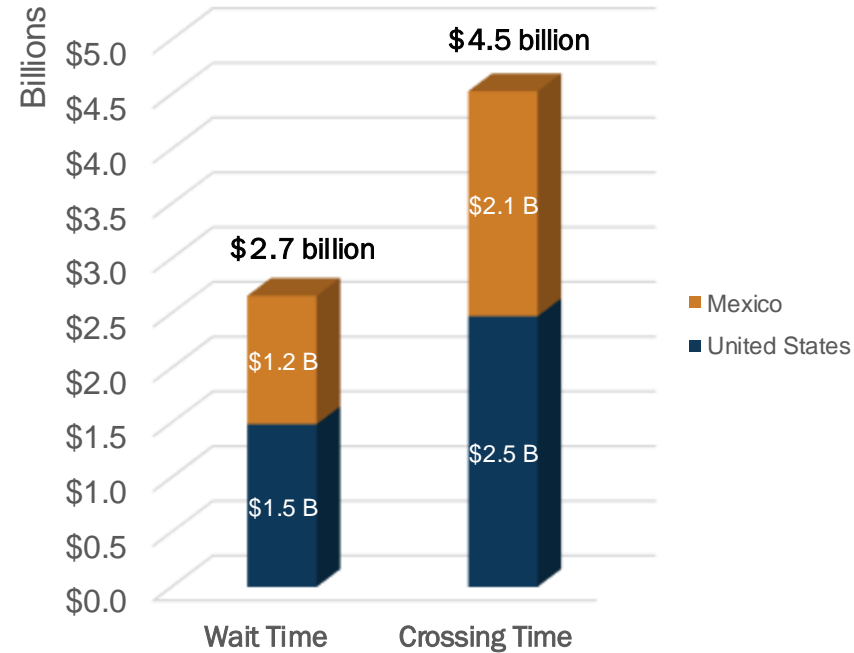


Economic Impacts of Delays at the Texas-Mexico Border on GDP



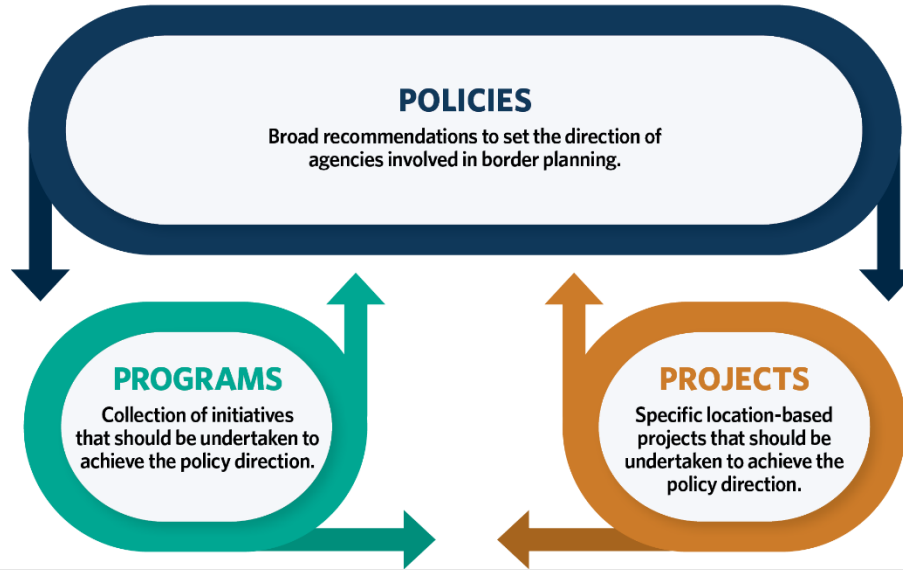
- **Border delays represent missed opportunities** to the U.S. and Mexican economies
 - More than \$2.7 billion in GDP in 2017
 - This impact almost doubles if we consider crossing time (to \$4.5 billion in GDP in 2017)
- If existing infrastructure is not upgraded to meet future demands, skyrocketing border delays will have greater impacts
 - **\$30.9 billion bi-national impact in 2050**

Economic Impact of Delays at Border Crossings on GDP in 2017





- The BTMP recommendations fall into three : Policies, Programs, and Projects



Key BTMP Policy Recommendations



Policies	BTMP Goal/Issue
Improve Binational Coordination, Collaboration, and Cooperation	Customer Service, Stewardship
A Smart Border Transportation System for the Future	Mobility & Reliability
A Data-Driven Border Transportation System	Customer Service, Stewardship
Funding and Financing the Border Transportation System	Sustainable Funding
The Border as the Backbone of Trinational Economies	Economic Competitiveness
A Resilient Border Transportation System	Cross-Border Resiliency
Stewardship for Border Communities	Stewardship
An Operationally-Managed Border Transportation System	Mobility & Reliability
An Expanding Border Transportation System	Mobility & Reliability
A Safe and Secure Border Transportation System	Safety & Security
Asset Protection for the Border Transportation System	Asset Preservation
A Connected Border Transportation System	Multimodal Connectivity
A Multimodal Border Transportation System (People and Goods)	Multimodal Connectivity
Public Awareness for the Border Transportation System	Customer Service

Key BTMP Program Recommendations



Develop new institutional framework to better plan, invest, manage, and operate border crossings and multimodal transportation network.

Prepare the border to embrace innovation and new technology

Develop a comprehensive mechanism to collect, share, harmonize, and analyze data regularly and consistently

Develop an institutional framework for binational performance monitoring and evaluation of the border transportation system.

Regularly track and communicate specific needs of the Texas-Mexico border with decision-makers on both sides of the border

Harmonize binational policy coordination to support current and future trilateral economic competitiveness – U.S., Mexico, and Canada

Develop comprehensive binational framework for a resilient border

Develop a harmonized, binational framework to support and enhance environmental and community stewardship along the border and border transportation system

Develop a comprehensive strategy for robust, coordinated, and efficient border management and investments

Develop a comprehensive and binational mechanism for enhancing system capacity of border crossings and corridors

Identify and implement strategies to improve safety and security in and near border crossings and along designated corridors

Develop binational asset management frameworks to protect assets on the border transportation system

Improve connectivity between border crossings, between the two countries, and throughout the border transportation system network

Coordinate binational stakeholder and public outreach, information, and engagement activities

Program Recommendations for Addressing Stewardship



Stewardship

Develop a harmonized, binational policy framework to support and enhance environmental and community stewardship along the border and border transportation system.

Description	Goals Addressed	Impact
<i>Programs to Promote Binational Efforts to Enhance Environmental and Community Stewardship</i>		
<p>Improve Air Quality Monitoring Programs to achieve consistency across the border region and review alternative renewable energy uses in coordination with environmental agencies. This will enable continuous measurement of air quality against national standards in the U.S. and Mexico and identification of areas for improvement, particularly finding ways to reduce idling.</p>	<ul style="list-style-type: none"> ▪ Stewardship ▪ Economic Competitiveness 	High
<p>Encourage environmental sustainability on the border transportation system through alternative renewable energy uses. This effort should also encompass recommendations from several other goal areas, such as installing electrical vehicle chargers near the border.</p>	<ul style="list-style-type: none"> ▪ Stewardship ▪ Economic Competitiveness 	Medium
<p>Increase participation in the U.S. Environmental Protection Agency SmartWay program to reduce industry carbon emissions. This program provides a comprehensive system for tracking, documenting, and sharing information about fuel use and freight emissions across supply chains, and helps to identify the most efficient transport modes, equipment, and operational strategies.</p>	<ul style="list-style-type: none"> ▪ Stewardship ▪ Economic Competitiveness 	Medium



Develop a harmonized, binational policy framework to support and enhance environmental and community stewardship along the border and border transportation system.



- Minimize environmental impacts throughout the binational transportation system by harmonizing environmental, air quality (including vehicle idling at the border), and hazardous material regulations on both sides of the border.
- Address energy inefficiency and the need for renewable energy throughout the binational and multimodal border transportation system.
- Reduce negative community impacts through improvements to the multimodal binational transportation system to improve mobility choices, reduce mode interactions, limit idling, and ensure safe passage of hazardous cargo.
- Solicit input and feedback from border region stakeholders about environmental, community, and investment decisions related to the border region and the binational transportation system.

BTMP Project Recommendations



The BTMP recommends over 505 projects at a cost of over \$25.4 billion.

505 Projects

- 78% Corridor-Related projects.
- 22% Border Crossing-Related projects
- 433 projects or 85.7% are U.S. projects.
- 68 projects or 13.5% are Mexico projects
- 4 Projects or 0.8% are joint U.S./Mexico projects

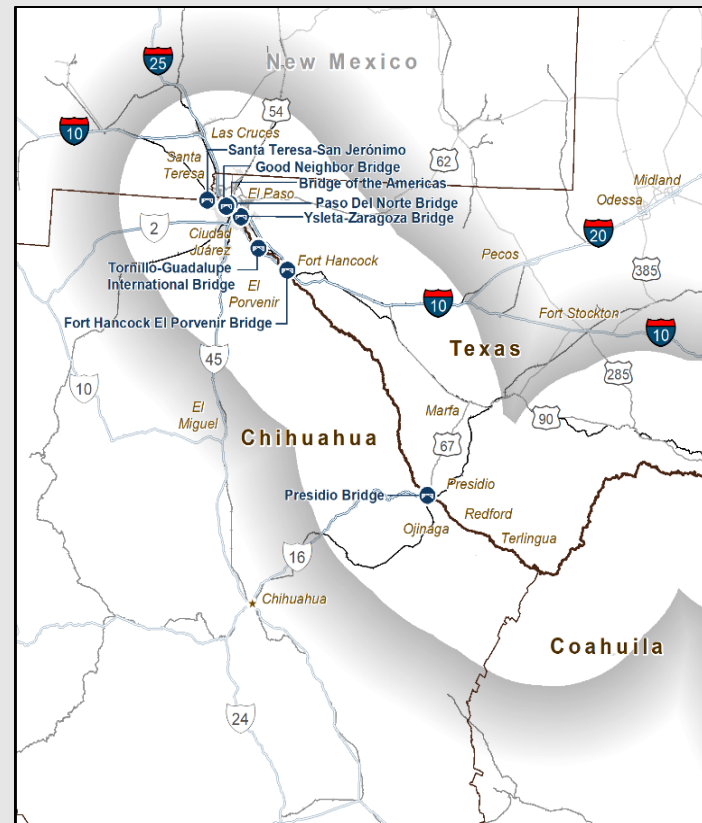
\$25.4 billion

- 87% of cost is Corridor-Related.
- 13% of cost is Border Crossing-Related.
- \$22.9B or 90.5% are U.S. projects.
- \$2.4B or 9.4% are Mexico projects.
- \$0.1B or 0.1% are joint U.S./Mexico projects.

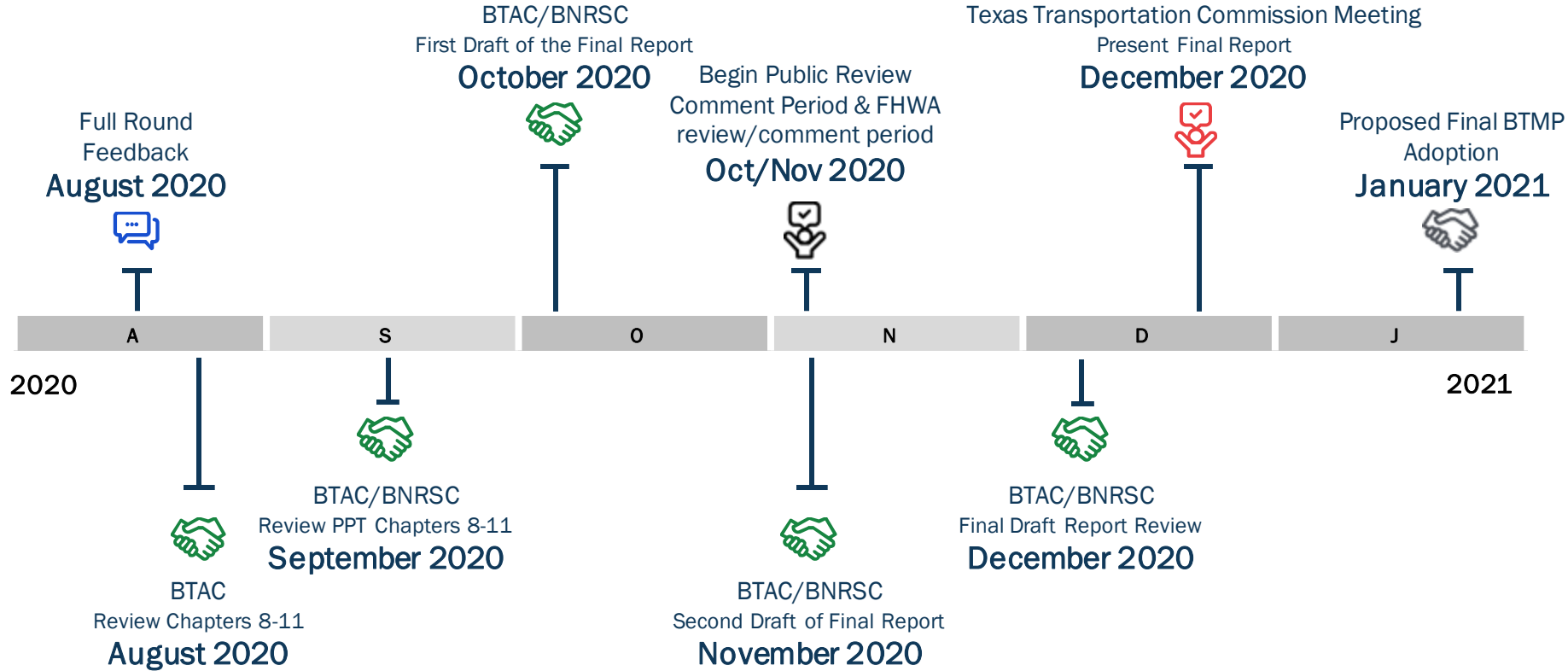
This border region has a total of **158 projects** with an estimated cost of **\$3.9 billion**, or **15 percent** of the total border region projects.

This region's projects include the following:

- 129 projects on the U.S. side of the border with an estimated cost of \$3.7 billion.
- 28 projects on the Mexico side of the border with an estimated cost of \$0.2 billion.
- 1 joint U.S./Mexico project with an estimated cost of \$0.0 billion.



BTMP Schedule





Questions

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