

## **Executive Summary**

### **Introduction**

Border master plans—as defined and supported by the U.S./Mexico Joint Working Committee on Transportation Planning and Programming, the Federal Highway Administration (FHWA), and the U.S. Department of State (USDOS)—are comprehensive, binational long-range plans to:

- Inventory transportation and port-of-entry (POE) infrastructure that facilitates trade.
- Prioritize and promote planned POE and related transportation projects.
- Inform decision making.
- Allocate limited funding resources.
- Ensure continued dialog and coordination on future POE and supporting transportation infrastructure needs and projects.

The El Paso/Santa Teresa–Chihuahua Border Master Plan was developed by The University of Texas at Austin’s Center for Transportation Research (CTR), the Texas A&M Transportation Institute (TTI), and The University of Texas at El Paso (UTEP).

The objectives of this border master plan are to:

- Design a stakeholder agency involvement process that is inclusive and ensures participation of all involved in POE projects and the transportation infrastructure serving those POEs.
- Increase understanding of the POE and transportation planning processes on both sides of the border.
- Develop and implement plans for prioritizing and promoting POE and related transportation projects, including evaluation criteria and rankings over the short, medium, and long terms.
- Establish a process that will ensure continued dialog among Federal, State, regional, and local stakeholder agencies on both sides of the border to assure continued coordination on current and future POE and supporting transportation infrastructure needs and projects.

The El Paso/Santa Teresa–Chihuahua Border Master Plan is the fifth border master plan on the U.S.-Mexico border and the third border master plan on the Texas-Mexico border. Its development followed an approach similar to the development of existing border master plans.

## **Decision-Making Structure**

The Binational Advisory Committee (BNAC) was the governing body in the development of the El Paso/Santa Teresa–Chihuahua Border Master Plan. Table ES.1 shows that BNAC is made up of 18 voting members and 26 non-voting members.

The mandate of the *voting* members is to:

- Provide overall direction.
- Establish clear metrics and parameters that can be measured to assure the appropriate progress.
- Review and endorse the criteria for prioritization of projects.
- Establish working groups to work with the study team in securing the relevant data and information.
- Endorse the final Border Master Plan.
- Incorporate the findings and priorities of the Border Master Plan in their agencies' planning and programming processes.

The mandate of the *non-voting* members is to:

- Provide assistance in the development of public and stakeholder outreach activities to ensure that all impacted stakeholders and communities are appropriately engaged.
- Review the assumptions, analyses, and documentation produced by the study team.
- Recommend criteria to prioritize projects to the BNAC voting members for endorsement.
- Make recommendations to BNAC voting members.

Table ES.1: BNAC Membership

United States	Mexico
(10)	Voting (8)
USDOS, Steven Kameny FHWA, Sylvia Grijalva Texas Department of Transportation (TxDOT) El Paso District, Robert Bielek El Paso County, Judge Veronica Escobar City of El Paso, Mayor John Cook General Services Administration, Jim King U.S. Customs and Border Protection, Mikhail A. Pavlov New Mexico Department of Transportation, Homer Bernal State delegation member, Senator Jose R. Rodriguez International Boundary and Water Commission, Gabriel Duran	Secretaría de Relaciones Exteriores, Sean Carlos Cázares Ahearne Secretaría de Comunicaciones y Transportes, Óscar Raúl Callejo Silva Secretaría de Comunicaciones y Obras Públicas Chihuahua, Eduardo Esperón González Municipio de Juárez, Vicente López Urueta Instituto de Administración y Avalúos de Bienes Nacionales, Héctor Enrique de Dios Abascal Administración General de Aduanas, Carlos Morales Tayavas Instituto Nacional de Migración, Ana Licenko Saval Promotora de Industria Chihuahuense, Sergio Jurado Medina
(15)	Non-voting (11)
Trucking industry, Miguel Perez and Hector Mendoza Maquila industry, Kathy Neal Brokers, Rosie Lara BNSF Railway Company, Nathan Asplund Union Pacific Railroad (UPRR), Ivan Jaime New Mexico Border Authority, Marco Herrera U.S. Consulate, Peter Sloan Greater El Paso Chamber of Commerce, Jack Chapman Hispanic Chamber of Commerce, Cindy Ramos-Davidson Doña Ana County, Dolores Saldaña-Caviness Congressman Reyes' office, Silvestre Reyes City of El Paso public member, Patrick Terrence Abeln County of El Paso public member, Stephanie Caviness Presidio County, Judge Paul Hunt	Trucking industry, Manuel Sotelo Maquila industry, Armendáriz and Guillermo Gutiérrez Brokers, Óscar Chávez Arvizo Ferrocarril Mexicano, Manuel Juárez Caminos y Puentes Federales, Héctor Carrasco Mexican Consulate, Roberto Rodríguez Hernández Instituto Municipal de Investigación y Planeación, Alberto Nicolás López Promofront, Antonio Casillas and Virginia Dorantes Comisión Internacional de Limites y Aguas, Armando Reyes

In accordance with their mandate, BNAC voting members established six working groups to work with the study team in securing necessary data and information for development of the Border Master Plan in a timely manner:

- *POE Working Group* to assist the study team in developing an inventory of current POE facilities and planned POE projects.
- *Transportation Infrastructure Working Group* to assist the study team in developing an inventory of current road and interchange facilities serving POEs in the study area, as well as planned road and interchange facilities.
- *Socio-demographic Working Group* to assist the study team in securing socio-economic and demographic data for the study area, such as income, population, employment, and land use data.
- *Rail Infrastructure Working Group* to assist the study team in developing an inventory of current rail facilities and planned rail projects in the study area.
- *Planning Working Group* to review the study team's analysis of the planning processes for transportation infrastructure in the study area.
- *Public Outreach Working Group* to provide input and insight into the organization of public outreach events.

## **Study Area**

The study area approved by BNAC voting members on May 23, 2012, includes an "Area of Influence" and a "Focused Study Area."

### **Area of Influence**

The Area of Influence includes the following areas:

- On the U.S. side, the border counties of El Paso, Hudspeth, Jeff Davis, and Presidio in Texas and Doña Ana in New Mexico.
- On the Mexico side, the Mexican Municipalities of Guadalupe, Juárez, Ojinaga, and Práxedes G. Guerrero in the State of Chihuahua.

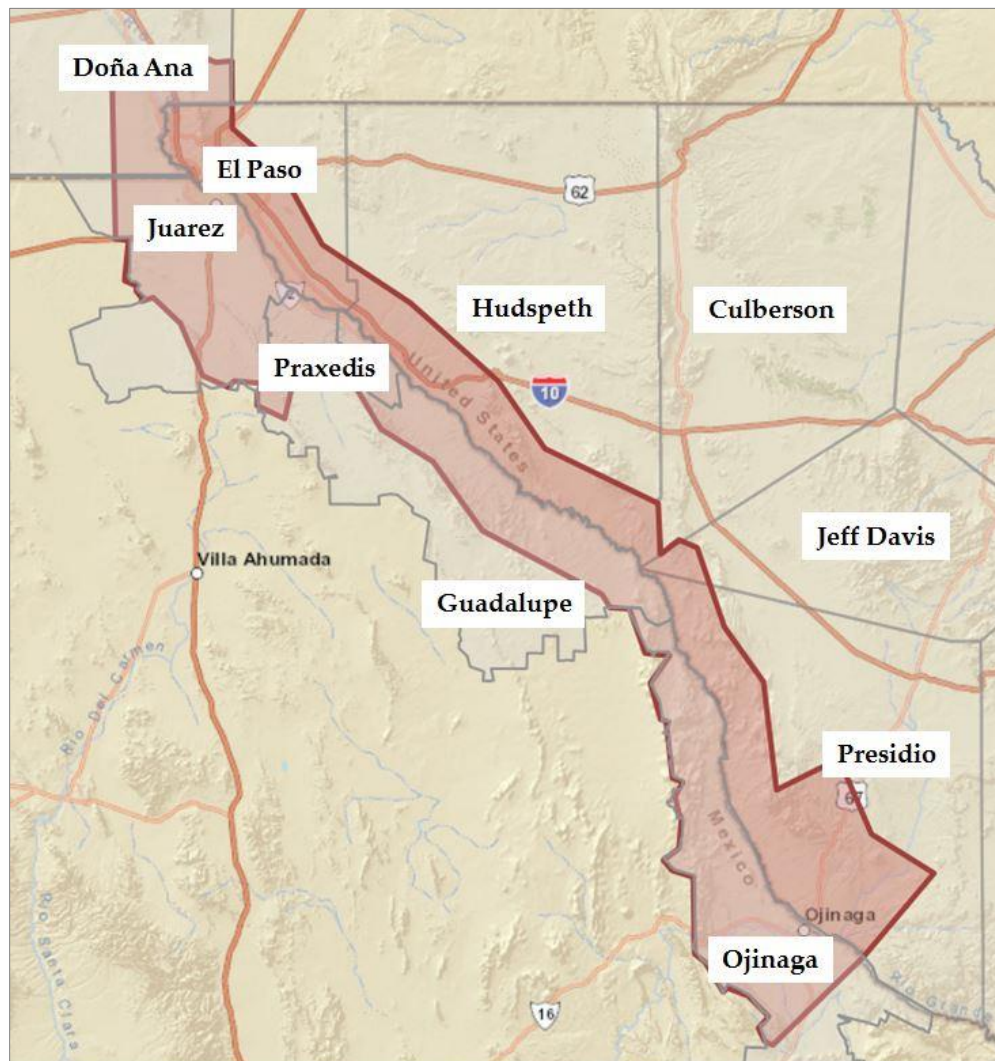
Current and projected data on population, employment, land use, and income were obtained for the Area of Influence. The study team found that total population is expected to increase from 2,393,208 in 2010 to 3,595,608 in 2030—an increase of 50.2 percent. Total employment is estimated to increase from 977,027 in 2010 to 1,481,624 in 2030—an increase of 51.6 percent. A number of trade corridors (IH 10, US 54, and US 67 in the United States and the Manzanillo–Gómez Palacio–Monterrey–City of Juárez and Topolobampo–Chihuahua–Ojinaga corridors in Mexico) also traverse the Area of Influence.

## Focused Study Area

The Focused Study Area is largely an area 10 miles (16 km) north and south of the Texas/New Mexico–Chihuahua international border (Figure ES.1). However, the boundary was expanded to include a silver mine in the Presidio area, the Samalayuca region south of the City of Juárez, and a planned truck and rail bypass east of El Paso, Texas. The borders of the Focused Study Area are:

- In the northwest, Las Cruces, New Mexico, on the U.S. side; and approximately Marker 28 on MEX 2 and Marker 305 on MEX 45 on the Mexican side.

In the southeast, Sierra Blanca, Van Horn, and Casa Piedra on the U.S. side; and Coyame del Sotol and Ejido Potrero del Llano on the Mexican side.



*Figure ES.1: Border Master Plan Focused Study Area*

The study team identified, in consultation with the working group members, the planned POE, road and interchange, transit, and rail projects in the Focused Study Area. Short-, mid-, and long-term priorities were subsequently established for the planned projects in the Focused Study Area.

### **Bridges/Crossings in Focused Study Area**

There are eight vehicular or pedestrian bridges/crossings and three rail bridges in the Focused Study Area. In addition, the Guadalupe-Tornillo Bridge is currently under construction. The bridges/crossings are illustrated in Figure ES.2.

In 2012, the total value of U.S.-Mexico trade that crossed the Focused Study Area border was \$86.1 billion—\$38.1 billion in exports and \$48.0 billion in imports. In El Paso, the total value of U.S.-Mexico trade that crossed the border was \$65.7 billion—\$29.7 billion in exports and \$36.0 billion in imports. Santa Teresa, New Mexico, accounted for \$19.9 billion in total trade—\$8.1 billion in exports and \$11.8 billion in imports. Presidio, Texas, accounted for \$498.4 million in U.S.-Mexico trade—\$318.8 million in exports and \$179.6 million in imports. The rail carriers operating in the Focused Study Area are UPRR, Ferromex, and BNSF Railway Company.

In 2012, almost 10 million northbound privately owned vehicles (POVs) and more than 6 million northbound pedestrians crossed the Focused Study Area border. In El Paso, 9,014,493 northbound POVs and 6,152,089 northbound pedestrians crossed the border in 2012. In Santa Teresa, 381,903 northbound POVs and 103,119 northbound pedestrians crossed the border in 2012. In Presidio, 570,671 northbound POVs and 78,678 northbound pedestrians crossed the border in 2012.

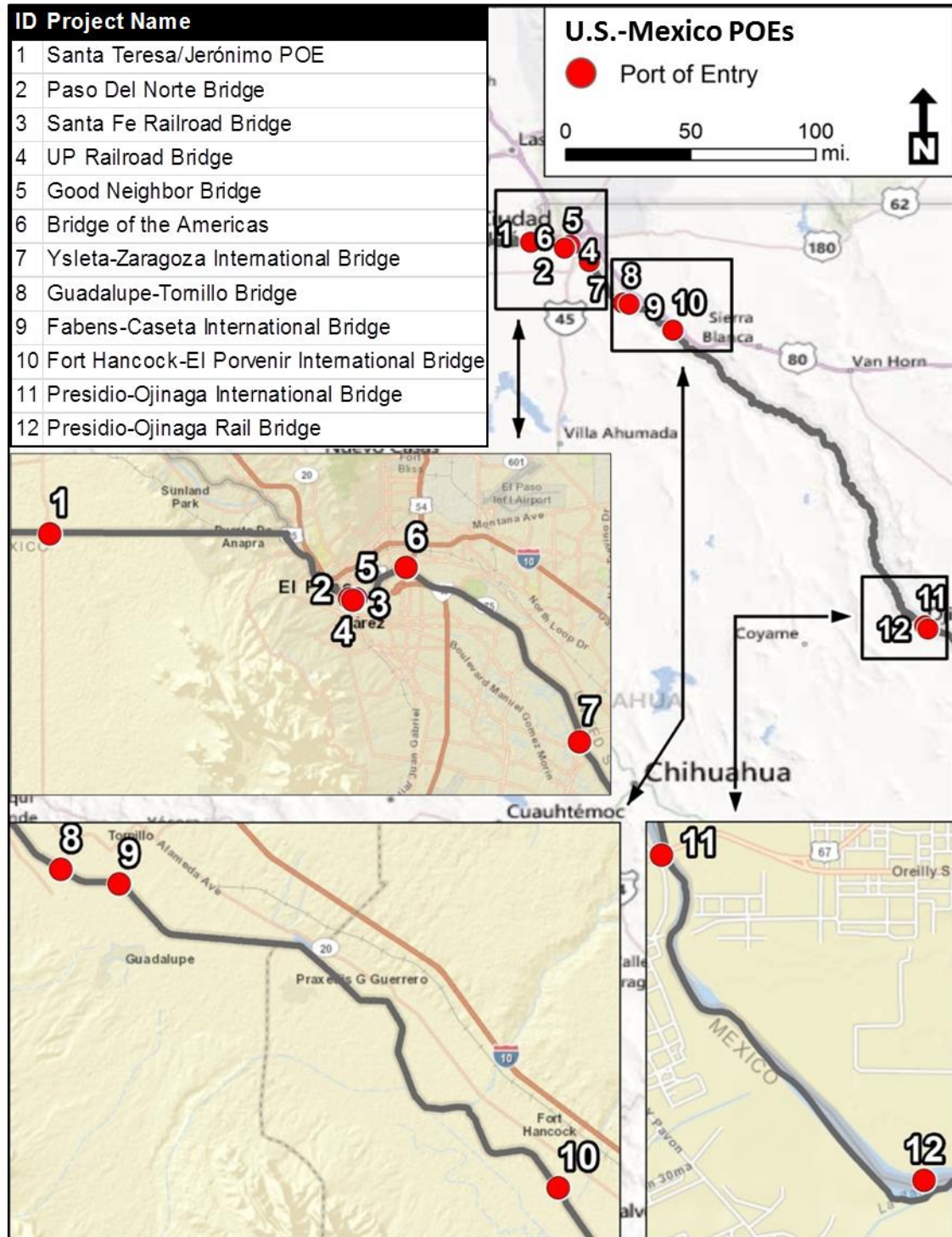


Figure ES.2: Location of Bridges/Crossings in Focused Study Area

## **Study Approach**

The study team developed the Border Master Plan in the following seven tasks:

1. Contact and interview BNAC members to determine their level of support for the Border Master Plan, address any issues or concerns, determine their anticipated commitment to and involvement in the development of the Border Master Plan, determine if any additional/specific changes to the scope of work are required, and establish an appropriate communications protocol and methodology for sharing information.
2. Hold a BNAC meeting to review the objectives of the study and the work plan, and address any issues or concerns raised in Task 1; the purpose is to reach agreement on the geographic area covered by the Border Master Plan and the number of years that constitute a short-, medium-, and long-term horizon, and to establish preliminary working groups that will work with the study team. In addition, host a public information event.
3. Collect data and create a detailed inventory of existing and planned POEs and the transportation facilities serving the POEs in the study area.
4. Hold a BNAC meeting to review data collected and verify planned project information.
5. Hold a BNAC workshop and BNAC voting member meeting to reach consensus on the categories, category weights, criteria, criterion weights, and scores used to prioritize individual projects. Host a public information event.
6. Prioritize and rank planned POE and transportation infrastructure projects using the ranking framework endorsed by BNAC voting members.
7. Finalize and obtain approval of the Border Master Plan document.

## **Stakeholder Participation**

For border master plans to be successful, stakeholder participation in and commitment to the development of these plans are critical. The study team secured stakeholder participation in and commitment to the development of the Border Master Plan by hosting regular meetings and maintaining contact with stakeholders and committee members.

### **BNAC Meetings**

The study team hosted four BNAC meetings during development of the Border Master Plan. During the meetings, BNAC provided overall direction, established clear metrics for the development of the Border Master Plan, established working groups, and reviewed and endorsed the ranking framework for prioritizing planned projects.

## **Working Group Webinars**

CTR and TTI hosted five webinars with the U.S. members of five of the six working groups and three webinars with the Mexican members of five of the six working groups. The latter webinars were hosted in Spanish, and two webinars included more than one working group. During these webinars, the study team reviewed the data and information needed from working group members and the projects and information sources identified by the study team to date. The members of the Public Outreach Working Group were consulted by phone prior to the public information events to obtain their input.

All planned project information and data included in the Border Master Plan were provided by the project sponsors or working group members. The information and data were not independently verified, but the study team did review the information and data for reasonableness. Any concerns expressed by stakeholders about the information and data were addressed with the project sponsors.

## **Public Information Events**

UTEP organized and hosted three public information events in El Paso during which the study team shared information about the:

- Objectives for developing the El Paso/Santa Teresa–Chihuahua Border Master Plan, the defined study area and planning horizons, the approved work plan, and ways members of the public can remain informed and provide input into the development of the Border Master Plan.
- Identified planned POE and transportation infrastructure projects in the study area and the ranking framework that was developed by BNAC. Members of the public were invited to share their comments and provide input.
- Priority POE and transportation projects that emerged from the prioritization process. Members of the public were invited to share their comments and concerns regarding the Border Master Plan priorities.

## **Reaching Consensus**

Two objectives of the Border Master Plan were to develop and implement a plan for prioritizing and promoting POE and related transportation projects that include evaluation criteria and rankings over the short, medium, and long terms; and to design a stakeholder agency involvement process that would be inclusive and ensure participation of all involved. The plan for prioritizing projects required BNAC members to reach consensus on the elements of the ranking framework (categories, category weights, criteria, criterion weights, and scoring metrics) that would be used to prioritize the projects. To ensure a stakeholder involvement process that would be inclusive and

ensure participation of all involved, it was important that each BNAC member have an equal voice in selecting the categories, category weights, criteria, and criterion weights. Equally important was creating a non-threatening environment in which BNAC members would feel comfortable expressing themselves.

The study team used Classroom Performance System technology to reach consensus on the categories, category weights, criteria, and criterion weights to be used in prioritizing the identified planned projects. The process worked as follows: BNAC members were provided with a voting device (I>Clicker) that allowed them to rank an element of the ranking framework on importance. For example, each member could rank a specific criterion in prioritizing a project on a scale of A to E, where A was extremely important and E was extremely unimportant. The votes were anonymous, but the study team could track how many BNAC members voted.

Once the votes were cast, results were shared, and the study team facilitated a discussion about the voting results. BNAC members were then subsequently asked to vote again, and the process continued until consensus was reached or until the voting results did not change substantially from one round to the next. This approach allowed all attending BNAC members to participate in the selection of the categories, category weights, criteria, and criterion weights. The same process was followed for the endorsement of the categories, category weights, criteria, criterion weights, and scoring metrics by the BNAC voting members.

## **Ranking Framework**

Concurrence was reached regarding elements of the ranking framework (the categories, category weights, criteria, criterion weights, and scoring metrics) that would be used for project prioritization during the third BNAC meeting. A few criteria and criterion weights, as well as the scoring metrics, were modified during the fourth BNAC voting member meeting, but in general, BNAC voting members endorsed the ranking framework developed by BNAC.

Table ES.2 provides the prioritization criteria and weights assigned to the POE projects. In total, 17 criteria were endorsed for prioritizing the POE projects.

Table ES.3 provides the prioritization criteria and weights assigned to the road and interchange and transit projects. In total, 18 criteria were endorsed for prioritizing the road and interchange and transit projects.

Table ES.4 provides the prioritization criteria and weights assigned to the rail projects. In total, 18 criteria were endorsed for prioritizing the rail projects.

**Table ES.2: POE Project Prioritization Criteria**

Category	Criterion	Weight
Capacity/Congestion (Weight = 21.5%)	Increase in Number of Operational Booths	18.7%
	Increase Number of Secure Lanes	14.5%
	Decrease Wait Times	27.9%
	Alleviate Congestion	16.7%
	Increase POE Efficiency through a Congestion Management Strategy	22.2%
Demand (Weight = 19.6%)	Increase in Average Annual Daily Non-commercial Crossings	37.0%
	Increase in Average Annual Daily Commercial Crossings	37.0%
	Transit Demand	26.0%
Economic Value (Weight = 10.0%)	Socio-economic Impacts	30.6%
	Cost/Capacity Criterion	34.0%
	Cost/Demand Criterion	35.4%
Project Readiness (Weight = 9.0%)	Funding Availability	40.0%
	Phase of Project Development	60.0%
Safety (Weight = 4.3%)	Diversion of Commercial Traffic/Separation of Traffic by Type	100.0%
Regional Impacts (Weight = 12.3%)	Community Impacts	51.2%
	Geographical Impacts	48.8%
Binational Coordination (Weight = 23.3%)	Binational Coordination	100.0%

**Table ES.3: Road and Interchange and Transit Project Prioritization Criteria**

Category	Criterion	Weight
Capacity/Congestion (Weight = 18.6%)	Final Level of Service	24.2%
	Increase in Level of Service	42.2%
	Congestion Management	33.6%
Demand (Weight = 18.0%)	Increase in Average Annual Daily Traffic	33.2%
	Existing Percentage of Trucks	34.0%
	Multiple Mode Demand	32.8%
Economic Value (Weight = 8.5%)	Socio-economic Impacts	30.6%
	Cost/Capacity Criterion	34.0%
	Cost/Demand Criterion	35.4%
Project Readiness (Weight = 13.5%)	Funding Availability	40.0%
	Phase of Project Development	60.0%
Safety (Weight = 6.3%)	Accident Rate per Mile*	51.0%
	Measures to Improve Safety	49.0%
Regional Impacts (Weight = 17.1%)	Community Impacts	51.2%
	Geographical Impacts	48.8%
POE Connectivity (Weight = 18.0%)	Number of POEs Served	27.3%
	Improve Accessibility/Traffic Flow to and from POE	45.0%
	Degrees of Separation to POE	27.7%

Note: \*Accident rate is defined as the number of accidents per mile (see Appendix D). The accident rate was not defined according to the *Highway Capacity Manual*.

**Table ES.4: Rail Project Prioritization Criteria**

Category	Criterion	Weight
Capacity/Congestion (Weight = 18.6%)	Increase in Track Capacity	35.2%
	Alleviates Congestion Locally	36.0%
	Increase in Rail Mode Share	28.8%
Demand (Weight = 18.0%)	Increase in Average Annual Daily Rail Cars	33.1%
	Cross-Border Tonnage by Rail	35.2%
	Multiple Mode Demand	31.7%
Economic Value (Weight = 8.5%)	Socio-economic Impacts	30.6%
	Cost/Capacity Criterion	34.0%
	Cost/Demand Criterion	35.4%
Project Readiness (Weight = 13.5%)	Funding Availability	40.0%
	Phase of Project Development	60.0%
Safety (Weight = 6.3%)	Accident Rate per Mile*	51.0%
	Measures to Improve Safety	49.0%
Regional Impacts (Weight = 17.1%)	Community Impacts	51.2%
	Geographical Impacts	48.8%
POE Connectivity (Weight = 18.0%)	Number of POEs Served	27.3%
	Improve Accessibility/Traffic Flow to and from POE	45.0%
	Degrees of Separation to POE	27.7%

Note: \*Accident rate is defined as the number of accidents per mile (see Appendix D).

## Planned POE and Transportation Infrastructure Priorities

On the U.S. side, 35 POE projects, 43 road and interchange projects, 5 transit projects, and 2 rail projects were identified. On the Mexican side, 23 POE projects, 51 road and interchange projects, 1 transit project, and 3 rail projects were identified. Projects from the United States were ranked separately from those from Mexico because of the limited data that were provided for Mexican projects. The prioritization/ranking of both countries' projects together would have resulted in most of the Mexican projects receiving a lower priority/rank. Each country's projects were thus prioritized/ranked separately. Projects were then ranked by type—POE, road and interchange, transit, and rail projects. The complete ranking of all projects by type in each country is provided in Appendix E.

On the U.S. side, the project priorities are presented by county (El Paso, Presidio, and Doña Ana Counties), and on the Mexican side, the project priorities are presented by Mexican municipality (Municipalities of Juárez, Guadalupe, Práxedes G. Guerrero, and Ojinaga). Projects for which no time period was provided were categorized as "unknown." The highest ranked POE, road and interchange, and rail projects by U.S.

county and Mexican municipality are shown in Figure ES.3. These projects are briefly described in this Executive Summary.

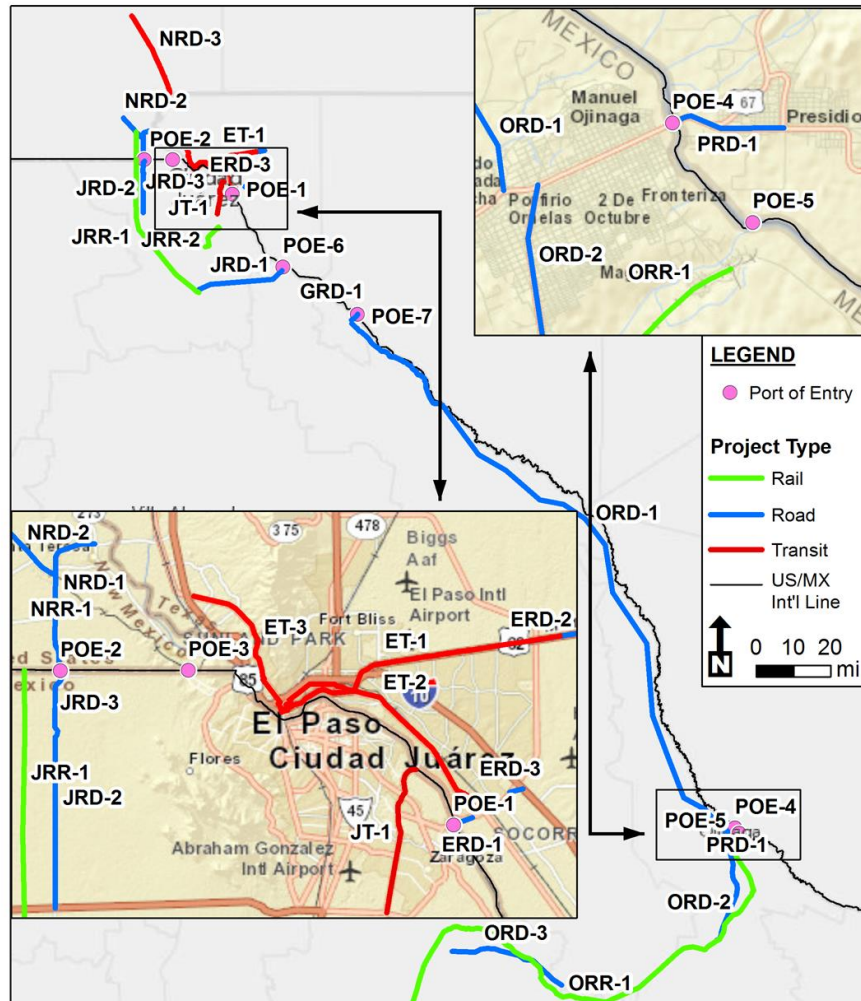
## **El Paso County**

### *POE Projects in El Paso County*

In El Paso County, 27 projects are planned for currently existing POEs, and 2 additional projects are planned for the construction of new POEs. The highest ranked existing POE project in El Paso County and the U.S. Focused Study Area is the construction of the Freight Shuttle System (FSS), which presents an automated, zero-emission, low-cost, and high-performing option for shippers who are increasingly constrained by congestion in critical freight corridors. The second-highest ranked project involves the addition of up to six primary inspection lanes to increase capacity at the Ysleta-Zaragoza International Bridge. The third-highest ranked project, also at the Ysleta-Zaragoza International Bridge, involves reconfiguring the passenger vehicle bridge lanes by reducing the sidewalk width on each side of the bridge from 10 feet to 5 feet and increasing the number of lanes from five (one Secure Electronic Network for Traveler's Rapid Inspection [SENTRI], two northbound, and two southbound lanes) to six (one SENTRI, one dedicated Ready, two northbound, and two southbound lanes). Other existing bridges in El Paso County where projects were identified include the Bridge of the Americas, Paso del Norte International Bridge, and Good Neighbor International Bridge. A new POE to accommodate only POVs and pedestrians is planned between the Bridge of the Americas and Ysleta-Zaragoza International Bridge, and a second FSS is planned at a proposed Billy the Kid POE located between Socorro and San Elizario.

### *Road and Interchange Projects in El Paso County*

Thirty-five out of the 43 road and interchange projects identified in the U.S. Focused Study Area are planned in El Paso County. The highest ranked road and interchange project in El Paso County and the U.S. Focused Study Area is the construction of a new commercial access road to the Ysleta-Zaragoza International Bridge. The second-highest ranked project involves interchange improvements on IH 10, including construction of a direct connector between LP 375 northbound and IH 10 eastbound. The third-highest ranked project in El Paso County includes adding capacity to US 62 between Global Reach/Yarbrough Drive and RR 659 (Zaragoza Road).



EL PASO COUNTY			
RANK	POE	ROAD	TRANSIT
1	Build the Freight Shuttle System at Ysleta-Zaragoza International Bridge [POE-1]	Build Pan American Drive at Loop 375 to Ysleta-Zaragoza International Bridge [ERD-1]	Construct Bus Rapid Transit (BRT) System on SH 20 (Alameda Avenue) [ET-2]
2	Build additional primary commercial inspection lanes at Ysleta-Zaragoza International Bridge [POE-1]	Make interchange improvements on IH 10 at Loop 375 [ERD-3]	Construct BRT System on US 180 (Montana Avenue/Montana Corridor Routes) [ET-1]
3	Reconfigure bridge lanes at Ysleta-Zaragoza International Bridge [POE-1]	Add capacity on US 62—Global Reach/Yarbrough Drive to RR 659 (Zaragoza Road) [ERD-2]	Design and construct BRT on SH 20 (Mesa Street) [ET-3]
DOÑA ANA COUNTY			
RANK	POE	ROAD	RAIL
1	Build Commercial and Bus Inspection Facility at Santa Teresa/Jerónimo POE [POE-2]	Construct Strauss Road from NM 136 to approximately 6.5 miles from Union Pacific Intermodal Yard [NRD-2]	Prepare Presidential Permit for the construction of the Santa Teresa rail bypass [NRR-1]
2	Construct new crossing at Anapra-Sunland Park [POE-3]	Perform pavement preservation, design, and construct multi-use path on NM 136 from MP 7.5 to MP 8.4 [NRD-1]	
3	Build Commercial Weight Inspection Station at Santa Teresa/Jerónimo POE [POE-2]	Perform IH 10 pavement preservation [NRD-3]	
PRESIDIO COUNTY			
RANK	POE	ROAD	
1	Prepare Presidential Permit and construct twin structure at Presidio-Ojinaga International Bridge [POE-4]	Improve US 67 from O'Reilly Street to Presidio-Ojinaga International Bridge [PRD-1]	
2	Build Commercial and Bus Inspection Facility at Presidio-Ojinaga International Bridge [POE-4]		
3	Reconstruct the International Rail Bridge on South Orient at Presidio [POE-5]		
MUNICIPALITY OF JUÁREZ			
RANK	POE	ROAD	TRANSIT
1	Construct new non-commercial POE northwest of Juarez at Anapra Sunland Park [POE-2]	Construct access loop to the new Guadalupe/Tornillo POE [JRD-1]	Improve public transportation, develop BRT, and connect originating zones with important destinations including POEs [JT-1]
2	Construct new rail POE to divert cargo away from the urban area of City of Juárez to Santa Teresa/Jerónimo POE [POE-2]	Modernize and widen MEX 48 to include a shoulder on each side [JRD-2]	
3	Construct sidewalks to provide dedicated routes for pedestrians at Santa Teresa/Jerónimo POE [POE-2]	Modify the radius and super-elevation of the curve located at the Kilometer 18 marker [JRD-3]	
MUNICIPALITIES OF GUADALUPE AND PRÁXEDIS G. GUERRERO			
RANK	POE	ROAD	
1	Construct administrative facilities and bridge structure for new Guadalupe/Tornillo POE [POE-6]	Modernize the intersection of MEX 2 and the road leading to Fort Hancock-El Porvenir International Bridge; construct shoulders and merge lanes [GRD-1]	
2	Modernize and expand administrative facilities at Fort Hancock-El Porvenir International Bridge [POE-7]		
MUNICIPALITY OF OJINAGA			
RANK	POE	ROAD	RAIL
1	Construct exclusive export lane at Presidio-Ojinaga International Bridge [POE-4]	Modernize and widen the rural section to accommodate 2 lanes and shoulders from El Porvenir to Ojinaga [ORD-1]	Replace and improve rail and structures on the Chihuahua-Ojinaga section of the Q rail line [ORR-1]
2	Construct exclusive import lane at Presidio-Ojinaga International Bridge [POE-4]	Modernize CHI 67; construct a second parallel section of highway [ORD-2]	
3	Construct new international bridge and new administrative facilities at Presidio [POE-5]	Modernize CHI 80–La Mula; construct a second parallel section of highway [ORD-3]	

Figure ES.3: Highest Ranked POE, Road and Interchange, and Rail Projects by U.S. County and Mexican Municipality

### *Transit Projects in El Paso County*

Four bus rapid transit (BRT) projects and one preliminary engineering study for a BRT system on US 62/180 were identified in the U.S. Focused Study Area, and all are planned in El Paso County. The highest ranked BRT project in El Paso County and the U.S. Focused Study Area is the SH 20 (Alameda Avenue) system on Santa Fe Street at Fourth Avenue to Zaragoza Road. The project corridor serves four major crossings in the area, and the project's completion is expected to improve mobility to and from each of these four crossings. The second-highest ranked BRT project is planned on US 180, also known as the Montana Corridor Route. This planned project includes the design and construction of diamond-striped lanes and signal prioritization. The third-highest ranked transit project planned in El Paso County and the U.S. Focused Study Area involves design and construction of a BRT system on SH 20 (Mesa Street) between Fourth Avenue and Remcon Circle.

### *Rail Project in El Paso County*

Two planned rail projects were submitted for inclusion in the Border Master Plan. One of these rail projects is in El Paso County and involves various upgrades to 31 bridges on the BNSF El Paso Subdivision over the next 10 to 15 years. It was reported that these upgrades will have substantial impacts on rail freight moved in both the United States and Mexico. This rail project was ranked second in the U.S. Focused Study Area.

## **Presidio County**

### *POE Projects in Presidio County*

Three of the 35 planned U.S. POE projects in the U.S. Focused Study Area are in Presidio County. The highest ranked POE project in Presidio County (ranked 16th in the U.S. Focused Study Area) is the preparation of a Presidential Permit for the addition of a twin structure at the Presidio-Ojinaga International Bridge. The two other POE projects planned in Presidio County are the construction of a commercial and bus inspection facility at an estimated cost of \$1.16 million and the International Rail Bridge on South Orient at Presidio. TxDOT and Texas Pacifico Transportation Ltd. are in the preliminary planning stages for reconstruction of the International Rail Bridge.

### *Road and Interchange Project in Presidio County*

Planned improvements to US 67 between O'Reilly Street and the Presidio-Ojinaga International Bridge constitute the only road and interchange project in Presidio County that has been identified for inclusion in the Border Master Plan. The project involves the installation of intelligent transportation system (ITS) technologies to improve traffic flow along the corridor.

## **Doña Ana County**

### *POE Projects in Doña Ana County*

Three of the 35 planned U.S. POE projects in the U.S. Focused Study Area are in Doña Ana County; however, insufficient information was provided by stakeholders concerning these projects. The first project involves the construction of a new POE at the City of Sunland Park. The second and third projects involve the construction of a commercial and bus inspection facility and a commercial weight inspection station at Santa Teresa/Jerónimo POE.

### *Road and Interchange Projects in Doña Ana County*

Of the 43 planned U.S. road and interchange projects in the U.S. Focused Study Area, 7 are in Doña Ana County. The highest ranked road and interchange project in Doña Ana County (ranked 13th in the U.S. Focused Study Area) is the construction of Strauss Road, which connects NM 136 to the Union Pacific Intermodal Yard. The second-highest ranked project involves maintenance, repair work, and design/construction of a multi-use path on NM 136, as well as drainage and erosion control work. The third-highest ranked project in Doña Ana County includes maintenance and repair work on IH 10 from Las Cruces to the Texas–New Mexico State line. The project includes the installation of ITS technologies to alleviate congestion concerns along the corridor.

### *Rail Project in Doña Ana County*

The higher ranked of the two planned rail projects in the U.S. Focused Study Area is the preparation of a Presidential Permit application for the construction of the Santa Teresa, New Mexico, rail bypass.

## **Municipality of Juárez**

### *POE Projects in Municipality of Juárez*

Of the 23 POE projects identified in the Mexico Focused Study Area, 14 are planned in the Municipality of Juárez; 10 of these 14 projects are at existing POEs. The

highest ranked planned project at the Santa Teresa/Jerónimo POE in the Municipality of Juárez (ranked eighth in the Mexico Focused Study Area) is planned and involves the construction of sidewalks for pedestrians using this facility. The second-highest ranked project at the Santa Teresa/Jerónimo POE in the Municipality of Juárez (ranked ninth in the Mexico Focused Study Area) involves the modernization and expansion of administrative facilities and renovations at the Bridge of the Americas. The third-highest ranked project at the Ysleta-Zaragoza International Bridge in the Municipality of Juárez (ranked 11th in the Mexico Focused Study Area) involves the widening of the access road to Mexican Customs from two to three lanes to increase capacity and to separate heavy vehicles. Additional planned POE projects were identified for the Good Neighbor International Bridge and Paso del Norte International Bridge.

In addition, two new planned crossings for Anapra-Sunland Park and the Santa Teresa/Jerónimo rail POE were identified to the northwest of the City of Juárez. The proposed non-commercial crossing at Anapra-Sunland Park will connect McNutt Road (SH 273) and Sunland Park Drive on the U.S. side with Carretera Anapra/San Jerónimo in Mexico. Initially, the crossing will have four lanes plus an additional two lanes for buses and two lanes for pedestrians. In the future, the four lanes may be expanded to six. The new crossing will have double-stacked operational booths and ITS technologies to expedite the processing of passenger vehicles, buses, bicycles, motorcycles, and pedestrians. The second-highest ranked new POE project in the Municipality of Juárez (ranked sixth in the Mexico Focused Study Area) is the construction of a new rail POE at the Santa Teresa/Jerónimo POE. Other new POE projects in the Municipality of Juárez include the construction of a new non-commercial bridge between the Bridge of the Americas and the Ysleta-Zaragoza International Bridge, and an FSS at a new proposed POE between Socorro and San Elizario.

#### *Road and Interchange Projects in Municipality of Juárez*

Forty-four of the 51 Mexican road and interchange projects that serve the POEs are in the Municipality of Juárez. The highest ranked road project in the Municipality of Juárez and the Mexico Focused Study Area involves the construction of the City of Juárez's Loop, connecting the Guadalupe/Tornillo POE to MEX 2. The second- and third-highest ranked road projects in the Municipality of Juárez (ranked second and third in the Mexico Focused Study Area, respectively) involve the modernization, widening, curve elevation, and radius modification of different sections of MEX 48. MEX 48 loops around the southwest side of the City of Juárez, connecting MEX 2 with the Santa Teresa/Jerónimo POE.

### *Transit Project in Municipality of Juárez*

Only one planned transit project was submitted for inclusion in the Border Master Plan. The planned project involves general improvements to the public transportation system and the development of a BRT system in the Municipality of Juárez. The project is expected to add up to 30 buses per hour to the public transportation system in the Municipality.

### *Rail Projects in Municipality of Juárez*

Three planned rail projects were identified in the Mexico Focused Study Area, of which two are planned in the Municipality of Juárez. The highest ranked rail project in the Municipality of Juárez and the Mexico Focused Study Area is the construction of a new rail line that connects the City of Juárez to the new Santa Teresa/Jerónimo POE. The second planned rail project involves construction of a rail spur connecting to the Electrolux Plant in the southeast of the City of Juárez.

## **Municipalities of Guadalupe and Práxedes G. Guerrero**

### *POE Projects in Municipalities of Guadalupe and Práxedes G. Guerrero*

Two POE projects were identified in the Mexico Focused Study Area for the Municipalities of Guadalupe and Práxedes G. Guerrero. Administrative facilities and a bridge structure for the new Guadalupe/Tornillo POE was the highest ranked POE project in the Municipality of Guadalupe and the Mexico Focused Study Area. The other planned project at the Fort Hancock-El Porvenir International Bridge in the Municipalities of Guadalupe and Práxedes G. Guerrero, which ranked 19th in the Mexico Focused Study Area, involves modernizing and expanding administrative facilities at the existing bridge.

### *Road and Interchange Project in Municipalities of Guadalupe and Práxedes G. Guerrero*

The only planned road project in the Municipalities of Guadalupe and Práxedes G. Guerrero ranked 30th out of the 51 planned Mexican road and interchange projects in the Mexico Focused Study Area. The project involves the modernization of the intersection of MEX 2 and the road leading to the Fort Hancock-El Porvenir International Bridge.

## **Municipality of Ojinaga**

### *POE Projects in Municipality of Ojinaga*

Seven planned Mexican projects involving the Municipality of Ojinaga were submitted for inclusion in the Border Master Plan, including a new crossing and the

construction of administrative facilities. The construction of exclusive export lanes and exclusive import lanes at the Presidio-Ojinaga International Bridge tied in ranking first in the Municipality of Ojinaga (tied in ranking third out of the 23 planned POE projects in the Mexico Focused Study Area). The third-highest ranked POE project in the Municipality of Ojinaga (seventh out of the 23 planned POE projects in the Mexico Focused Study Area), involves the reconstruction and widening of the Presidio-Ojinaga Rail Bridge. This project also includes the modernization of the existing border infrastructure. The only new POE project in the Municipality of Ojinaga (ranked fifth in the Mexico Focused Study Area) involves the construction of a new international bridge and administrative facilities.

#### *Road and Interchange Projects in Municipality of Ojinaga*

Six planned road and interchange projects in the Municipality of Ojinaga were submitted for inclusion in the Border Master Plan. The highest ranked road and interchange project in the municipality (ranked fifth out of the 51 Mexican road and interchange projects) involves the modernization and widening of MEX 2 along the U.S.-Mexico border from El Porvenir to Ojinaga. This project will include high-occupancy vehicle lanes and is expected to accommodate double the current traffic as well as facilitate increased economic activity. The modernization of CHIH 67, ranked second in the Municipality of Ojinaga (ranked 12th out of the 51 Mexican road and interchange projects), will improve CHIH 67 from Ojinaga south to the intersection with CHIH 80 by constructing a parallel section of road to result in a divided highway, thereby increasing safety and providing additional vehicle capacity.

#### *Rail Project in Municipality of Ojinaga*

One planned rail project was identified in the Municipality of Ojinaga and involves the replacement and improvement of rail line Q in the Ojinaga region.

## **Recommendations**

### **Institutionalizing the Dialogue**

Border master plans should be updated when there are major changes in the content of the border master plans. For example, if a number of priority projects have been completed or if a number of planned projects have emerged since the border master plan was developed, the plan will need updating. This keeps the contents and inventories current and allows the border master plan to continue to represent the region's vision and goals. The timing of the updates may differ from region to region.

It is recommended that BNAC convene every year to determine the need for updates. Information on all completed priority projects and any planned projects that

have emerged since the completion of the previous Border Master Plan should be presented. This presentation will allow BNAC to make an informed decision about the need to update the planned project inventory and technical data of the Border Master Plan. Similarly, BNAC will be able to determine the need for a comprehensive update to the plan. A comprehensive update would involve revisiting the planning horizons (short, medium, and long term), the geographic boundaries of the study area (Focused Study Area and Area of Influence), the socio-economic data, cross-border travel demand changes, and the ranking framework that was used to prioritize projects. Finally, it is recommended that a representative of BNAC or TxDOT's International Relations Office make regular informative presentations to the U.S./Mexico Joint Working Committee to discuss the need to update the existing Border Master Plan or to report on any in-progress border master plan updates.

### **Development of Future Border Master Plans**

The study team offers the following observations and recommendations for consideration in development of future border master plans or updates of this Border Master Plan:

- Three of the four U.S. States on the southern border have overseen the development of border master plans. To remain a viable planning tool, these plans must reflect each different region's needs, interests, and priorities. If the ultimate goal is to establish U.S.-Mexico project priorities, it is recommended that regions follow a similar—although not necessarily the same—approach in the development of all border master plans. A consistent approach would allow projects across the entire border to be compared.
- Border master plans currently provide detailed inventories of planned project priorities in a Focused Study Area. Two enhancements to the scope of work for updating the border master plans should be considered: identify funding opportunities for high-priority projects in the Focused Study Area, and develop technical tools to evaluate the potential regional impact of investments. The implementation of some of the identified high-priority projects could potentially reduce the need or delay the need for implementing some of the other high-priority projects. As currently developed, border master plans do not quantify or model the demand impact of an investment in specific projects on other crossings or transportation infrastructure in the region.
- Ensure participation by actively reaching out to stakeholders. Keep stakeholders engaged in the development of border master plans, ensure a process where every stakeholder has an equal voice in the selection of the criteria that will be used to prioritize projects, and make all reports and information disseminated available in both English and Spanish. Ultimately, continued support for

development of border master plans will only prevail if results can be demonstrated—by the funding and implementation of high-priority projects identified by the border master plan.