

## **Chapter 4. Current POEs and Related Transportation Facilities**

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, Texas, 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<sup>1</sup>. The rail carriers operating in the Focused Study Area are UPRR, Ferromex, and BNSF Railway Company.

This chapter of the Border Master Plan describes the current and projected conditions of the four POEs<sup>2</sup> that are located in the Focused Study Area—Presidio, Fabens, El Paso, and Santa Teresa—and the current and planned transportation infrastructure for these POEs. 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 listed in Table 4.1, and their locations are illustrated in Figure 4.1.

The current number of lanes, rail tracks, and booths by bridge in the Focused Study Area is presented in Table 4.2. In 2011, the Bridge of the Americas had the highest number of lanes (12). The Ysleta-Zaragoza International Bridge and the Bridge of the Americas had the most booths (20 each).

**Table 4.1: Number of Bridges/Crossings in Focused Study Area**

| POE*            | U.S. County/<br>Chihuahua<br>Municipality | Bridges/Crossings                                | Number of<br>Vehicular/<br>Pedestrian Bridges<br>and Crossings | Number<br>of Rail<br>Bridges |
|-----------------|---|--|--|------------------------------|
| Presidio        | Presidio/Ojinaga                          | Presidio-Ojinaga<br>International Bridge         | 1  | 1 (closed)                   |
|                 |   | Presidio-Ojinaga Rail Bridge                     |  |                              |
| Fabens          | Hudspeth/Práxedes<br>G. Guerrero          | Fort Hancock-El Porvenir<br>International Bridge | 1  | 0                            |
|                 | El Paso/Guadalupe                         | Fabens-Caseta International<br>Bridge            | 1  | 0                            |
| El Paso         | El Paso/Juárez                            | Ysleta-Zaragoza International<br>Bridge          | 4  | 2                            |
|                 |   | Bridge of the Americas                           |  |                              |
|                 |   | Good Neighbor International<br>Bridge            |  |                              |
|                 |   | Paso del Norte International<br>Bridge           |  |                              |
|                 |   | Santa Fe Railroad Bridge                         |  |                              |
|                 |   | UPRR Bridge                                      |  |                              |
| Santa<br>Teresa | Doña Ana/Juárez                           | Santa Teresa/Jerónimo POE                        | 1  | 0                            |
| <b>Total</b>    |   |  | <b>8</b>   | <b>3</b>                     |

Note: \* POEs as defined by CBP

Source: New Mexico Border Authority<sup>3</sup> and TxDOT<sup>4</sup>

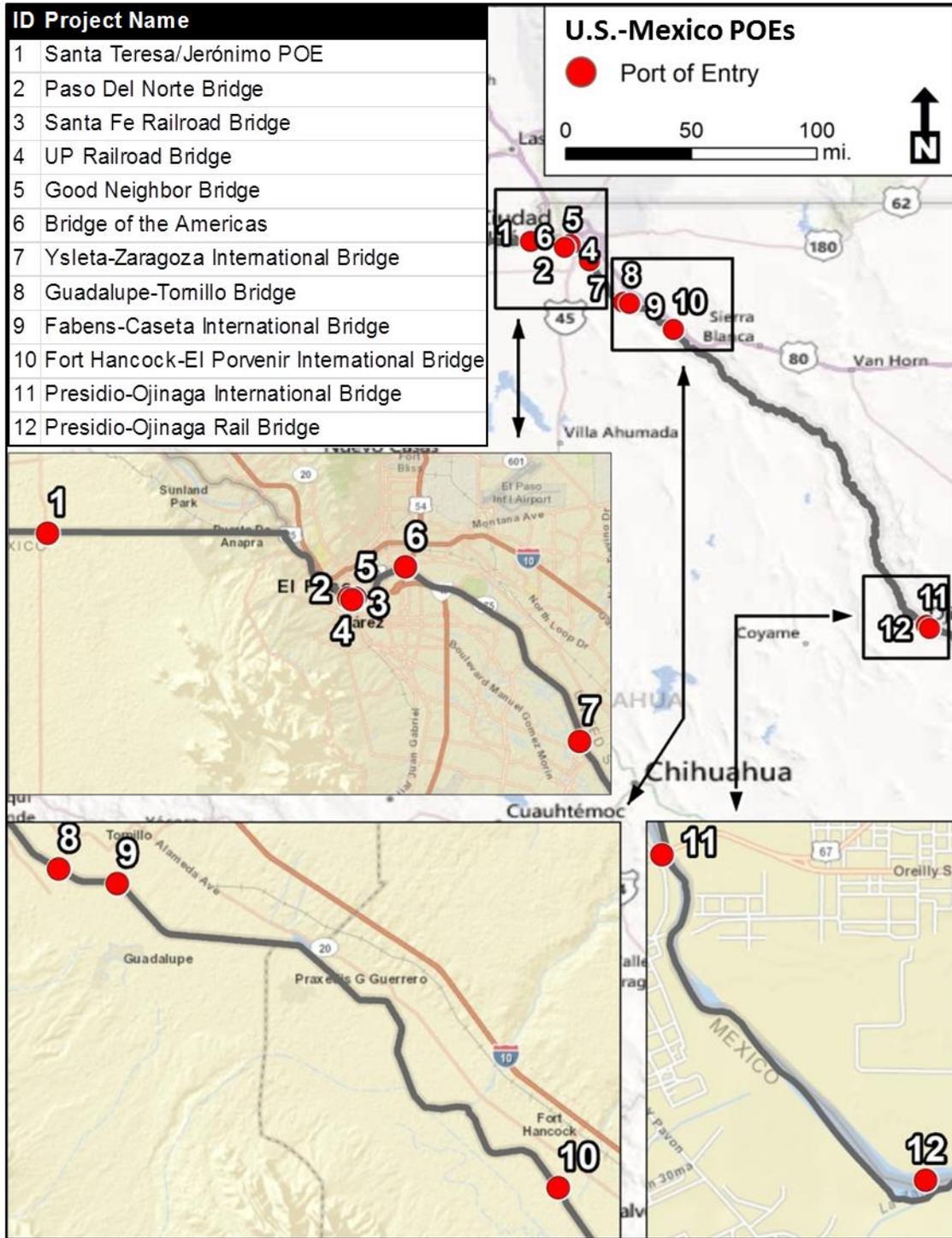


Figure 4.1: Location of Bridges/Crossings in Focused Study Area

**Table 4.2: Characteristics of Bridges/Crossings in Focused Study Area**

| Bridge  | Total Number of Inbound Lanes (POV and Cargo combined) | Total Number of Inbound Booths* (POV and Cargo combined) | Number of Inbound Pedestrian Turnstiles | Number of Dedicated FAST Lanes** | Number of Dedicated POV SENTRI Lanes*** | Number of Pedestrian SENTRI Lanes | Number of Outbound Lanes (POV and Cargo combined) | Number of Outbound Booths (POV and Cargo combined) |
|---|--|--|---|----------------------------------|---|-----------------------------------|---|--|
| Presidio-Ojinaga International Bridge         | 4  | 3  | 1                                       | 0                                | 0                                       | 0                                 | 3   | 1  |
| Presidio-Ojinaga Rail Bridge                  | N/A  | N/A  | N/A                                     | N/A                              | N/A                                     | N/A                               | N/A   | N/A  |
| Fort Hancock-El Porvenir International Bridge | 2  | 2  | 1                                       | 0                                | 0                                       | 0                                 | 1   | 0  |
| Fabens-Caseta International Bridge            | 2  | 2  | 1                                       | 0                                | 0                                       | 0                                 | 1   | 0  |
| Ysleta-Zaragoza International Bridge          | 20   | 20   | 3                                       | 2                                | 1                                       | 0                                 | 7   | 4  |
| Bridge of the Americas                        | 20   | 20   | 4                                       | 2                                | 0                                       | 0                                 | 4   | 1  |
| Good Neighbor International Bridge            | 3  | 3  | 0                                       | 0                                | 3                                       | 0                                 | 0   | 0  |
| Paso del Norte International Bridge           | 12   | 12   | 14                                      | 0                                | 0                                       | 1                                 | 0   | 0  |
| Santa Fe Railroad Bridge                      | N/A  | N/A  | N/A                                     | N/A                              | N/A                                     | N/A                               | N/A   | N/A  |
| UPRR Bridge                                   | N/A  | N/A  | N/A                                     | N/A                              | N/A                                     | N/A                               | N/A   | N/A  |
| Santa Teresa/Jerónimo POE                     | 7  | 7  | 2                                       | 1                                | 0                                       | 0                                 | 3   | 2  |

Note: \* Secure Electronic Network for Traveler’s Rapid Inspection (SENTRI) provides expedited CBP processing for pre-approved, low-risk travelers.

\*\* Free and Secure Trade (FAST)—a commercial clearance program—provides for expedited trade processing while ensuring safety and security. All lanes (POV and cargo) of the Ysleta-Zaragoza International Bridge, Bridge of the Americas, and Paso del Norte International Bridge are capable of being FAST lanes. The POE determines the need.

Source: New Mexico Border Authority<sup>3</sup> and TxDOT<sup>4</sup>

**Notes:**

1. The bridge crossing sections reflect the latest data available from CBP (northbound bridge crossings) and the bridge directors (southbound bridge crossings). Southbound bridge crossing data were not available for all modes.
2. 2010 and 2030 AADT and percent truck data for Texas roadways were obtained from TxDOT’s 2010 TLOG database. 2010 and 2030 AADT and percent truck data for New Mexico roadways were provided by NMDOT. 2010 AADT and percent truck data for Mexico roadways were provided by SCT, Dirección General de Servicios Técnicos. 2030 AADT data for Mexico were not made available to the study team at the time of publication.
3. Accident data for Texas were calculated using the 2010 Crash Records Information System (CRIS) database. The number of accidents per mile on a roadway is equal to the number of accidents along the roadway’s control section divided by the length of the control section.
4. Accident data for New Mexico and Mexico roadways were not made available to the study team at the time of publication.
5. The term “commercial truck” is used as defined by CBP when referring to bridge crossings, and the term “truck,” in relation to truck percentage of AADT, refers to the percent of single and combination trucks using a roadway as defined by TXDOT, NMDOT, and SCT.
6. Bridge toll rates are current as of June 2013, and a 12.50 Mexico peso (MXN) to 1 U.S. dollar (US\$) currency conversion rate is used for all bridge toll rates.<sup>5</sup>
7. Bridge hours of operation are provided in the time zone the bridge is located in.

**4.1 Texas/Mexico – Presidio/Ojinaga**

Presidio County and the Municipality of Ojinaga have one bridge crossing and one rail crossing. The bridge crossing serves pedestrians and non-commercial and commercial vehicles (see Table 4.3). As mentioned previously, the Presidio-Ojinaga Railroad Bridge is closed.

**Table 4.3: Summary of Presidio County/Municipality of Ojinaga Bridges**

| Bridge                                | Location         | Pedestrians | Non-commercial Vehicles | Commercial Vehicles | Rail         |
|---------------------------------------|------------------|-------------|-------------------------|---------------------|--------------|
| Presidio-Ojinaga International Bridge | Presidio/Ojinaga | Yes         | Yes                     | Yes                 | No           |
| Presidio-Ojinaga Rail Bridge          | Presidio/Ojinaga | No          | No                      | No                  | Yes (closed) |

#### 4.1.1 Presidio-Ojinaga International Bridge

On the U.S. side, the Presidio-Ojinaga International Bridge is owned by the State of Texas and operated by TxDOT. On the Mexican side, the bridge is owned by the Mexican Federal Government and operated by CAPUFE. The bridge is 791 feet long and has two lanes, one in each direction. The bridge opened in 1985. The bridge connects to US 67 on the U.S. side and Libre Comercio on the Mexican side. The crossing is known locally as the Presidio-Ojinaga Bridge or Puente Ojinaga.

##### *Border Station*

The U.S. border station is owned by a private individual (Richard Slack) and is leased to GSA. There are plans to expand the non-commercial inspection areas and the commercial lot entry and exit, but no time frame for construction has been established. On the Mexican side, the Government of Mexico (Customs and Immigration) operates the border station.<sup>4</sup>

##### *Hours of Operation*

The bridge currently operates 24 hours a day for privately owned vehicles (POVs). For commercial/cargo vehicles, the bridge operates from 10:00 a.m. to 6:00 p.m. Monday through Friday<sup>6</sup>.

##### *Tolls*

The current reported toll rates for the Presidio-Ojinaga International Bridge are provided in Table 4.4.

**Table 4.4: Toll Rates for Presidio-Ojinaga International Bridge**

| Mode                       | Southbound |       | Northbound |        |
|----------------------------|------------|-------|------------|--------|
|                            | (US\$)     | (MXN) | (MXN)      | (US\$) |
| Pedestrian                 | N/A        | N/A   | N/A        | N/A    |
| POV/Motorbike              | 1.95       | 24.38 | 22.00      | 1.76   |
| Passenger Bus              | N/A        | N/A   | 42.00      | 3.36   |
| Truck (up to 9-Axle LCVs*) | N/A        | N/A   | 42.00      | 3.36   |

Note: \* Long Combination Vehicle

Source: TxDOT<sup>4</sup> and SCT<sup>7</sup>

*Wait Times*

Table 4.5 shows that the average daytime wait times at the Presidio-Ojinaga International Bridge have been minimal, averaging 4.3 minutes for POVs and 0.2 minutes for commercial vehicles.

**Table 4.5: Average Daytime Wait Times for Presidio-Ojinaga International Bridge (in Minutes)**

| Bridge                                | Mode       | Year |      |      |      |      |      | Average (Minutes) |
|---------------------------------------|------------|------|------|------|------|------|------|-------------------|
|                                       |            | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |                   |
| Presidio-Ojinaga International Bridge | POV        | 0.2  | 0.2  | 2.6  | 8.3  | 7.8  | 6.9  | 4.3               |
|                                       | Commercial | 0.0  | 0.0  | 0.2  | 0.7  | 0.2  | 0.0  | 0.2               |

Note: Daytime is considered from 8:00 a.m. to 6:00 p.m.

Source: Bureau of Transportation Statistics<sup>8</sup>

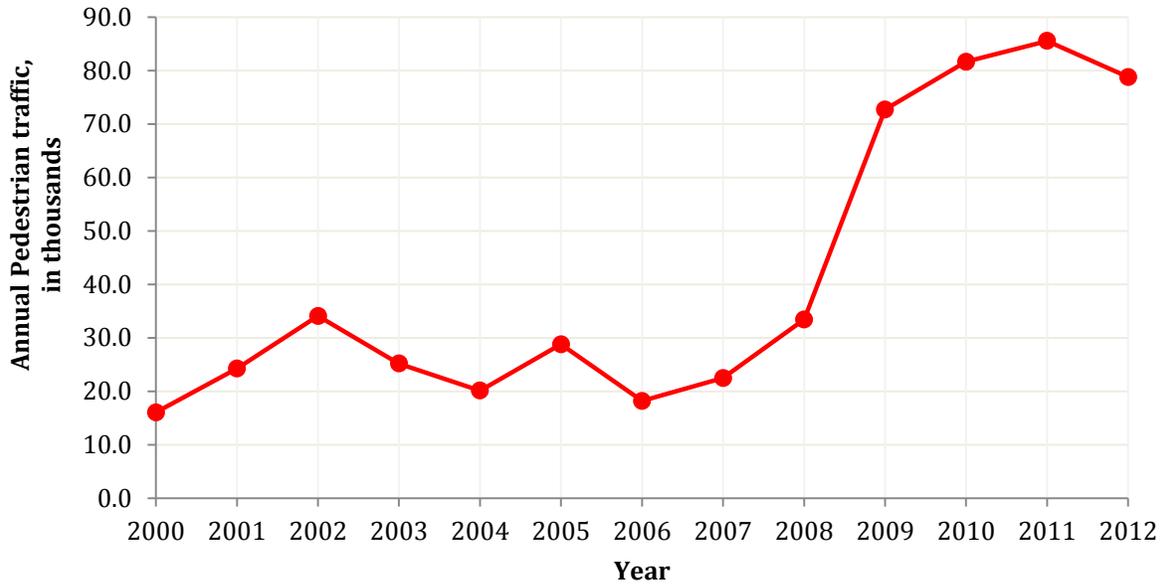
*Northbound Bridge Crossings*

Figures 4.2 through 4.5 illustrate annual northbound crossings by mode (pedestrian, POV, bus, and commercial truck) between the United States and Mexico between 2000 and 2012 at the Presidio-Ojinaga International Bridge. Southbound crossing data are not available for this bridge.

Figure 4.2 shows that the annual number of northbound pedestrian crossings at the Presidio-Ojinaga International Bridge increased by 391.7 percent between 2000 and 2012. Between 2006 and 2011, the annual number of northbound pedestrian crossings increased 371.1 percent to reach a peak of 85,545 in 2011. In 2012, the annual number of northbound pedestrian crossings decreased 7.9 percent compared to 2011 to reach 78,768.

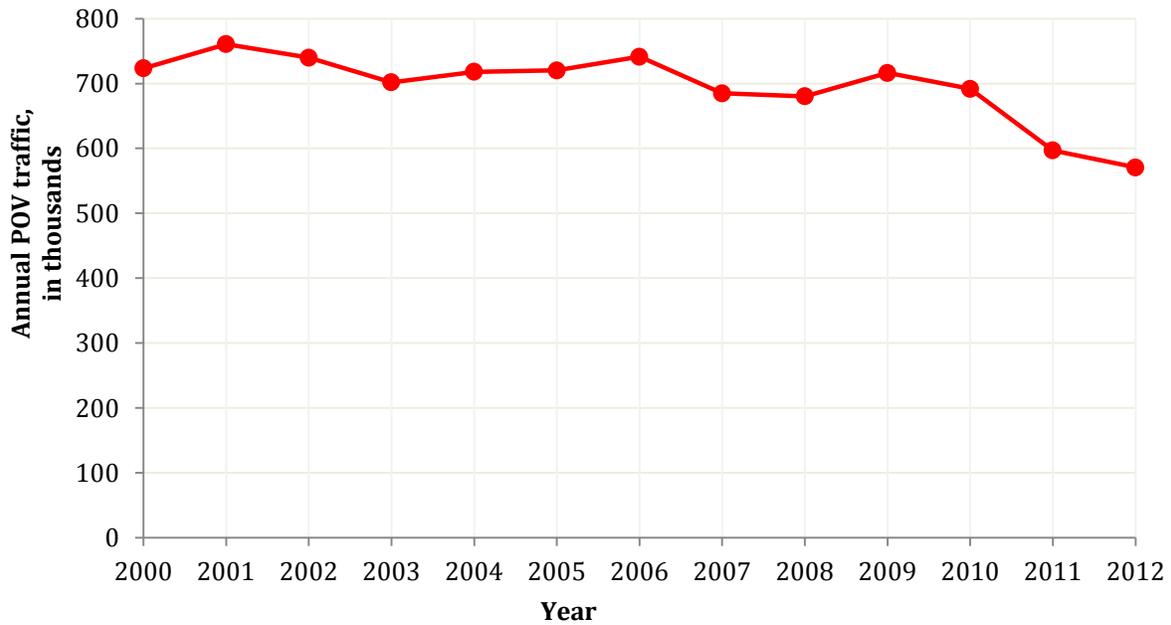
Annual northbound POV crossings have generally ranged between 680,000 and 760,000 between 2000 and 2010 (see Figure 4.3). In 2012, the annual number of northbound POV crossings decreased 17.5 percent compared to 2010 to reach 570,671—the lowest number of northbound crossings recorded since 2000.

Figure 4.4 shows that the annual number of northbound bus crossings at the Presidio-Ojinaga International Bridge ranged between 300 and 410 between 2000 and 2004. In 2005, the number of northbound bus crossings peaked at 965 crossings. Since 2005, the number of northbound bus crossings has decreased to reach the lowest level of 146 in 2008. Between 2008 and 2012, however, annual northbound bus crossings increased at an average annual rate of 31.4 percent to reach 435 crossings in 2012.



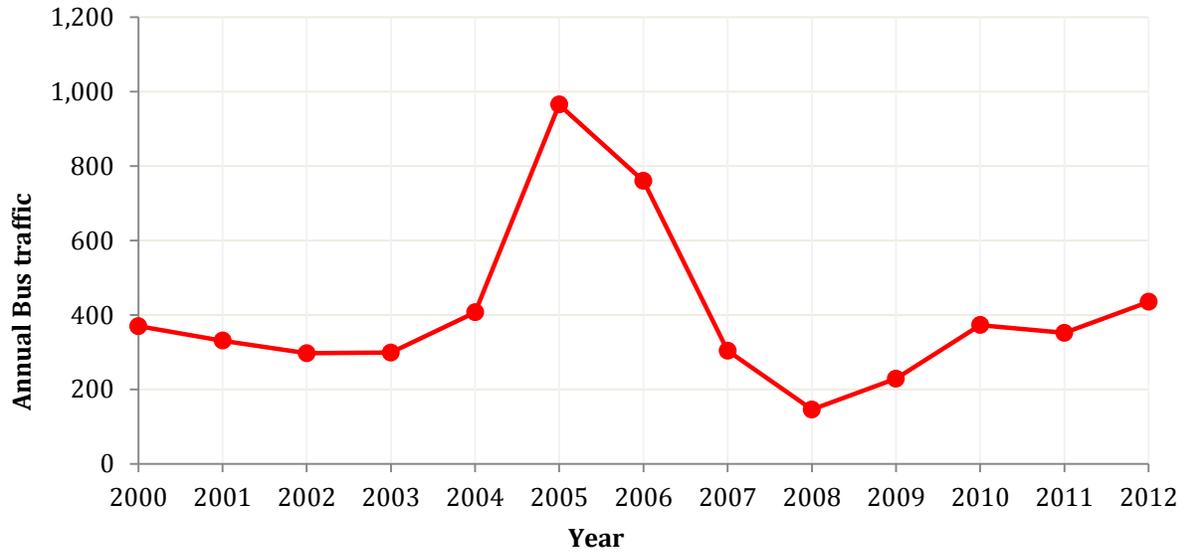
Source: CBP<sup>9</sup>

Figure 4.2: Presidio-Ojinaga International Bridge Northbound Pedestrian Crossings



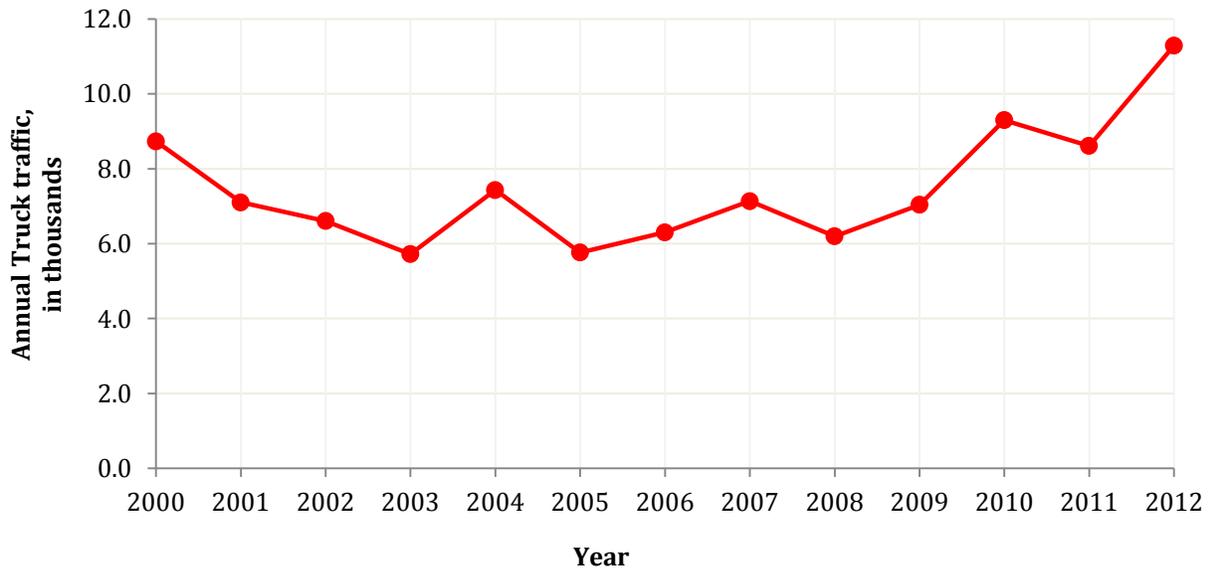
Source: CBP<sup>9</sup>

Figure 4.3 Presidio-Ojinaga International Bridge Northbound POV Crossings



Source: CBP<sup>9</sup>

Figure 4.4: Presidio-Ojinaga International Bridge Northbound Bus Crossings



Source: CBP<sup>9</sup>

Figure 4.5: Presidio-Ojinaga International Bridge Northbound Commercial Truck Crossings

Figure 4.5 shows that the number of northbound commercial crossings was similar in 2011 compared to 2000 (8,612 in 2011 and 8,734 in 2000). The number of commercial crossings in the intermediate years, however, varied. Between 2000 and 2003, the annual number of commercial crossings decreased an average of 13.2 percent per year. Between 2003 and 2008, the number of northbound crossings ranged between 5,700 and 7,450. Between 2008 and 2010, the number of northbound commercial crossings increased an average of 22.5 percent per year to reach 9,298 crossings in 2010. In 2011, the number of northbound crossings decreased 7.4 percent compared to 2010 to reach 8,612. In 2012, the number of northbound crossings increased 31.0 percent compared to 2011 to reach a peak of 11,286.

#### *Primary Roadways Serving the Presidio-Ojinaga International Bridge*

On the U.S. side, US 67 is the primary ingress and egress to the bridge (see Figure 4.6). About 0.75 miles from the bridge, US 67 branches into US 67 and O'Reilly Street (BUS 67A) before converging again about 2 miles north of the bridge. US 67 runs north and connects the bridge with the Presidio Lely International Airport. US 67 is a two-lane undivided highway. In 2010, the AADT on US 67 was 1,800 vehicles of which 6.9 percent were trucks. It is estimated that the AADT on this highway will reach 2,740 vehicles by 2030. There were 0.29 accidents reported per mile on this highway in 2010. In the same year, the LOS on US 67 was level A.

O'Reilly Street is a two-lane undivided highway that provides access between the bridge and Presidio. In 2010, the AADT on O'Reilly Street was 4,100 vehicles, of which 6.1 percent were trucks. No accidents were reported on this section of O'Reilly Street in 2010. In the same year, the LOS on O'Reilly Street was at level A.

On the Mexican side, Libre Comercio—a six-lane divided facility—is the primary ingress and egress to the bridge. Libre Comercio becomes MEX 16, which directly connects Ojinaga to the State capital of Chihuahua. In 2010, the AADT on MEX 16 was 2,238 vehicles, of which 12.8 percent were trucks. Another major street in Ojinaga is De La Juventud—a four-lane facility—that becomes CHIH-018, which connects Ojinaga to Camargo and Manuel Benavidez. In 2010, the AADT on CHIH-018 was 2,033 vehicles, of which 8.5 percent were trucks. Other important arterials in Ojinaga are 20A (six lanes), Avenida Cuauhtémoc (four lanes), Coronado (four lanes), Hidalgo (four lanes), Morelos (two lanes), and Internacional (two lanes).

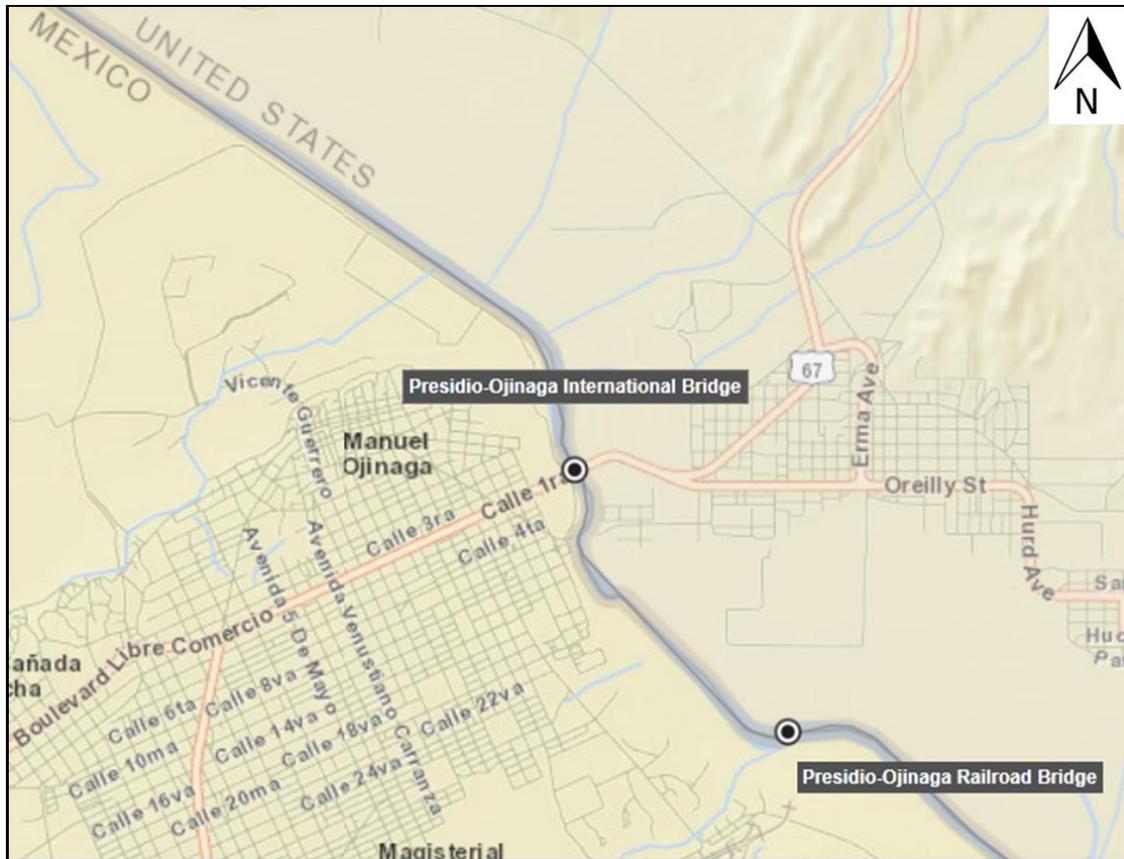


Figure 4.6: Presidio-Ojinaga International Bridge  
Existing Infrastructure Map

#### *Planned Changes in Infrastructure (Present to 2030)*

On the U.S. side, TxDOT is planning to improve the section of US 67 between O'Reilly Street and the bridge over a three-year period at an estimated cost of \$1.67 million. Given that US 67 is the most important highway in the Presidio area, it is expected that the planned investment will improve mobility in the region.

#### **4.1.2 Presidio-Ojinaga Rail Bridge**

This bridge is currently closed. In 2005, Texas Pacifico (TXPF), a subsidiary of Grupo Mexico and the current operator of the rail line leading to the Presidio-Ojinaga Rail Bridge, interchanged 98 carloads with Ferromex at the Presidio border crossing. In 2006, the interchange was 51 carloads. No cars have interchanged at the border since August 2006.

The Presidio-Ojinaga Rail Bridge on the U.S. side was a wood structure. On February 29, 2008, a portion of the bridge south of the levee at Presidio burned to the ground. On March 1, 2009, a second section of the bridge north of the levee at Presidio

burned. In February 2011, Presidio’s rail depot was also destroyed by fire. The Mexican portion of the bridge is a metallic structure and remains operational. TXPF is planning to replace the bridge because of the potential to move rail freight from Mexico’s marine ports on the Pacific Ocean to Texas and the United States.

*Primary Rail Lines Serving the Presidio-Ojinaga Rail Bridge*

On the U.S. side, the South Orient Rail Line (SORR) is approximately 391 miles long, starting at San Angelo Junction (in Coleman County, 5 miles southwest of Coleman) moving through San Angelo, Texas, and ending at Presidio on the Texas-Mexico border. The section of the rail line between San Angelo Junction and Alpine, Texas, was originally constructed in the early 1900s, with the section between Alpine and Presidio being completed in 1928. The line has always supported mining activities (e.g., sulfur and oil) and bulk shippers in the San Angelo area. Low traffic volumes and a filing for abandonment, however, resulted in deferred maintenance on the SORR.

In 1991, the State of Texas partnered with the South Orient Railroad Company (SORC)—the owner of the SORR—to prevent abandonment of the rail line. In this agreement, the State acquired the railroad right of way and a security interest in the tracks. In 1999, SORC expressed interest in abandoning the railroad. The Texas Legislature appropriated an additional \$6 million to TxDOT toward a purchase price of \$9.5 million for the railroad infrastructure. TXPF, a subsidiary of Grupo Mexico, provided another \$3.5 million.

On February 2, 2001, TxDOT acquired ownership of SORR and entered into a 40-year lease and operating agreement with TXPF. Figure 4.7 illustrates the TXPF rail line in green. The other colored rail lines are not pertinent to this study. Since 2001, several investments have been made to improve the infrastructure and operating speed of SORR. TXPF invested approximately \$9 million to perform limited rehabilitation of the line at critical locations to enable continued service. In 2004, TxDOT received a U.S. congressional appropriation of \$5.5 million for further rehabilitation of the infrastructure. These funds were used for ties (the majority of which were installed from near Alpine to Presidio), ballast, track alignment, and improvements to grade crossings in Fort Stockton, Texas.



Source: Texas Pacific Grupo Mexico<sup>10</sup>

Figure 4.7: Texas Pacific Railroad Line and Trackage Rights

In 2008, the Martifer-Hirschfeld Energy Corporation announced plans to develop a wind tower manufacturing facility in San Angelo. Rail service was seen as critical for transportation of the company’s raw materials and finished products. Since that time, TxDOT has invested more than \$25 million to replace cross ties and worn rail, has reconstructed 103 roadway-rail crossings, has undertaken miscellaneous bridge repairs, and has replaced a truss bridge at Ballinger, Texas. With these investments, the line became operable at 25 mph from San Angelo Junction to Sulphur Junction.

Rail is regarded as vital to economic growth and development in the region. At the same time, high energy prices and the surge in energy and mining activity have resulted in an unprecedented demand for rail service in the area.

On the Mexican side, Ferromex operates the Chihuahua Pacífico System, which includes lines A, Q, and P (see Figure 4.8). The Q line runs from Topolobampo, Sinaloa, to Presidio/Ojinaga, and the A line connects Torreon to the City of Juárez. The capacity of the Q line is 120 tons (indicated in yellow in Figure 4.9) from Ojinaga to Topolobampo. The exception is the section between La Junta and Chihuahua, which has a capacity of 123 tons (indicated in dark blue in Figure 4.9). The capacity of the A line is 130 tons (indicated in light blue in Figure 4.9).



Source: Ferronex<sup>11</sup>

Figure 4.8: Ferronex’s Chihuahua Pacifico System Lines A, Q, and P



Source: Ferronex<sup>12</sup>

Figure 4.9: Ferronex’s Ojinaga-Topolobampo Line’s Capacity (in Tons)

## 4.2 Texas/Mexico—Hudspeth/Práxedis G. Guerrero

There is one bridge crossing in Hudspeth County and the Municipality of Práxedis G. Guerrero. The bridge crossing serves pedestrian and non-commercial vehicles only (see Table 4.6).

**Table 4.6: Summary of Hudspeth County/Municipality of Práxedis G. Guerrero Bridges**

| Bridge  | Location                 | Pedestrians | Non-commercial Vehicles | Commercial Vehicles | Rail |
|---|--------------------------|-------------|-------------------------|---------------------|------|
| Fort Hancock-El Porvenir International Bridge | Fort Hancock/El Porvenir | Yes         | Yes                     | No                  | No   |

### 4.2.1 Fort Hancock-El Porvenir International Bridge

On the U.S. side, the Fort Hancock-El Porvenir International Bridge is owned by IBWC and operated by CBP. On the Mexican side, the bridge is owned by the Mexican Federal Government and operated by CAPUFE and CILA. The bridge is a two-lane facility (one lane in each direction) and is 510 feet long. The bridge opened in 1936 and was renovated in 1993. It connects to FM 1088 on the U.S. side and to a service road connecting to MEX 2 on the Mexican side. The bridge is known locally as Puente El Porvenir.

#### *Border Station*

The original U.S. border station at this bridge was constructed in 1955 and owned by the Immigration and Naturalization Service. The new U.S. border station (LPOE Fort Hancock) was completed in April 2003 and is owned by GSA. On the Mexican side, the Mexican Government operates the border station.<sup>4</sup>

#### *Hours of Operation*

The bridge currently operates from 6:00 a.m. to 10:00 p.m. for POVs.

#### *Tolls*

No tolls are charged to cross at the Fort Hancock-El Porvenir International Bridge.

Wait Times

Table 4.7 shows that the average daytime waiting time at the Fort Hancock-El Porvenir International Bridge has been minimal, averaging half a minute for POVs.

**Table 4.7: Average Daytime Wait Times for Fort Hancock-El Porvenir International Bridge (in Minutes)**

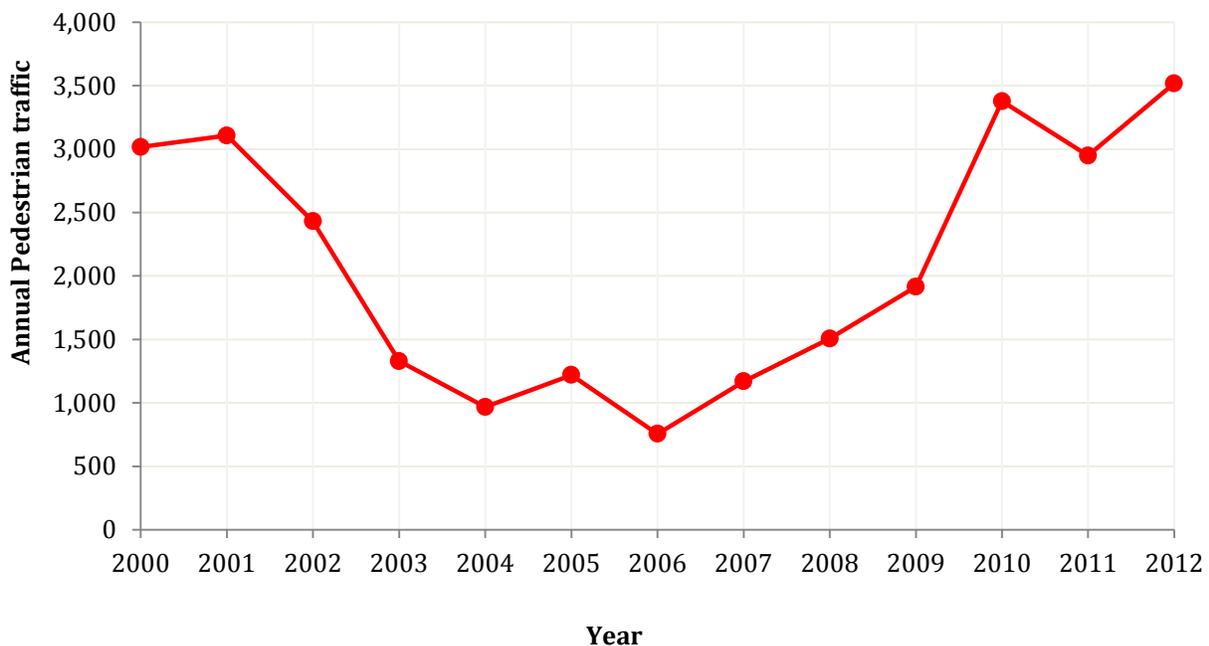
| Bridge  | Mode | Year |      |      |      |      |      | Average (Minutes) |
|---|------|------|------|------|------|------|------|-------------------|
|   |      | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |                   |
| Fort Hancock-El Porvenir International Bridge | POV  | N/A  | N/A  | N/A  | 0.5  | 0.5  | 0.6  | 0.5               |

Note: Daytime is considered from 8:00 a.m. to 6:00 p.m.

Source: Bureau of Transportation Statistics <sup>8</sup>

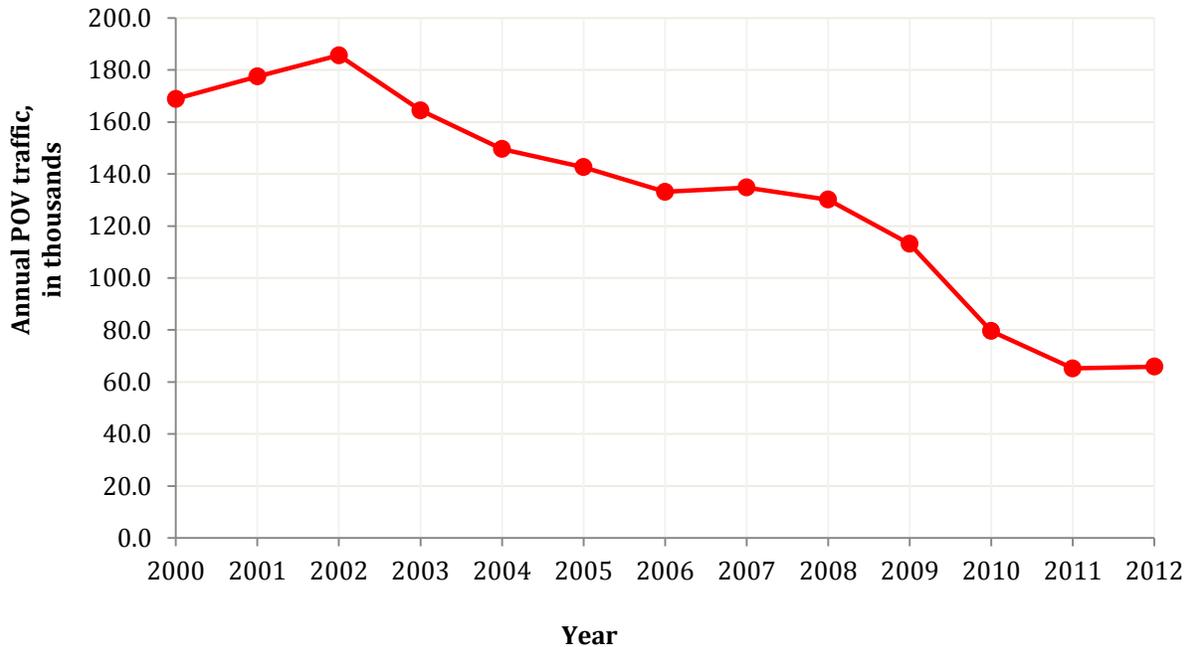
Northbound Bridge Crossings

Figures 4.10 and 4.11 illustrate the number of northbound crossings by mode between Mexico and the United States at the Fort Hancock-El Porvenir International Bridge between 2000 and 2012, the latest year for which data were available.



Source: CBP<sup>9</sup>

Figure 4.10: Fort Hancock-El Porvenir International Bridge Northbound Pedestrian Crossings



Source: CBP<sup>9</sup>

*Figure 4.11: Fort Hancock-El Porvenir International Bridge Northbound POV Crossings*

Figure 4.10 shows that the number of northbound pedestrian crossings at the bridge largely decreased between 2000 and 2006, with exceptions in 2001 and 2005, at an average rate of 20.6 percent per year. Between 2006 and 2010, however, the number of northbound pedestrian crossings increased an average of 45.4 percent per year to peak at 3,377 crossings in 2010. In 2011, the number of northbound pedestrian crossings decreased 12.7 percent to reach 2,949 crossings. In 2012, the number of northbound pedestrian crossings increased 19.3 percent to reach 3,518.

Figure 4.11 shows that the number of northbound POV crossings has decreased between 2002 and 2011 from 185,635 crossings in 2002 to 65,208 crossings in 2011—a decrease of 64.9 percent. The number of northbound POV crossings in 2012 was similar to the number of crossings in 2011 at 65,868.

#### *Primary Roadways Serving Fort Hancock-El Porvenir International Bridge*

On the U.S. side, FM 1088 is the primary ingress and egress to the bridge, providing direct access to major thoroughfares including SH 20, which leads to IH 10 (see Figure 4.12). FM 1088 is a two-lane undivided facility with an AADT of 720 vehicles in 2010, of which 10.7 percent were trucks. No traffic accidents were recorded for this facility. Current demand and capacity suggest that this facility was operating at LOS A.

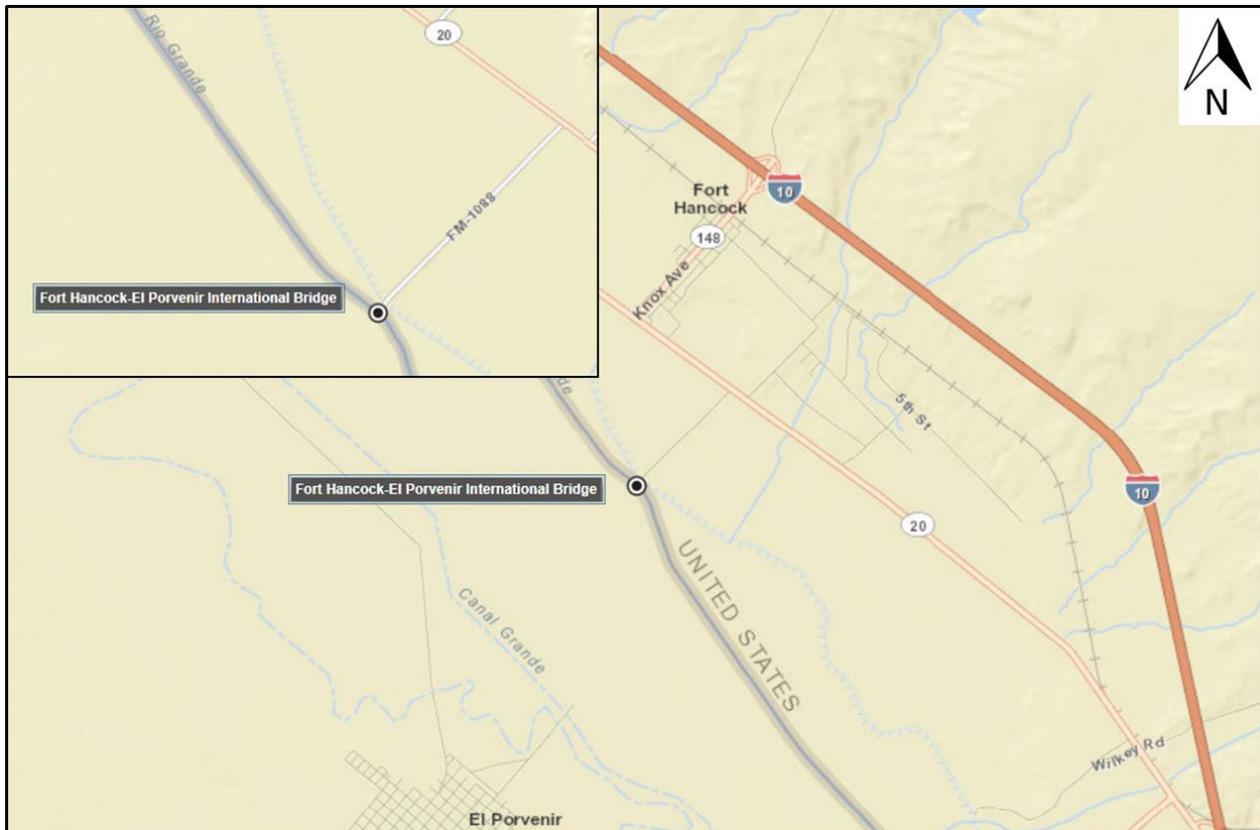


Figure 4.12: Fort Hancock-El Porvenir International Bridge Existing Infrastructure Map

Intersecting FM 1088 about 1 mile from the bridge is SH 20. SH 20 is a two-lane undivided highway that runs parallel to the U.S.-Mexico border on the U.S. side. In 2010, the AADT on SH 20 was 1,750 vehicles, of which 38.6 percent were trucks. There were 0.18 accidents reported per mile on SH 20 in 2010, and the LOS on the facility was level A.

On the Mexican side, an unnamed two-lane facility is the primary ingress and egress to the bridge. The egress road connects to MEX 2, a two-lane Federal highway facility, which connects the bridge to Porvenir (1 mile) to the east and to Práxedes G. Guerrero (10 miles) and the City of Juárez (60 miles) to the west. In 2010, the AADT on MEX 2 was 2,177 vehicles, of which 2.8 percent were trucks.

#### *Planned Changes in Infrastructure (Present to 2030)*

No planned changes to the transportation infrastructure near the Fort Hancock-El Porvenir International Bridge were identified on either side of the border.

### **4.3 Texas/Mexico—El Paso/Guadalupe**

There is one bridge crossing between El Paso County and the Municipality of Guadalupe. The Fabens-Caseta International Bridge serves pedestrians and non-commercial vehicles (see Table 4.8).

**Table 4.8: Summary of El Paso County/Municipality of Guadalupe Bridges**

| Bridge                             | Location      | Pedestrians | Non-commercial Vehicles | Commercial Vehicles | Rail |
|------------------------------------|---------------|-------------|-------------------------|---------------------|------|
| Fabens-Caseta International Bridge | Fabens/Caseta | Yes         | Yes                     | No                  | No   |

#### 4.3.1 Fabens-Caseta International Bridge

On the U.S. side, the bridge is owned by IBWC and operated by CBP. On the Mexican side, the bridge is owned by the Mexican Federal Government and operated by Mexican Customs. The bridge is a two-lane facility—one lane in each direction—and is 510 feet long. The bridge opened in 1938. It connects to SH 20 and FM 76, which subsequently connects to IH 10 on the U.S. side. On the Mexican side, the bridge connects to Leona Vicario and Doctor Porfirio Parra, which connects to MEX 2. The bridge is known locally as Puente La Caseta and Tornillo-Guadalupe. The bridge will be demolished when the new Guadalupe-Tornillo Bridge becomes operational in 2013.<sup>4</sup>

##### *Border Station*

On the U.S. side, a temporary border station (LPOE Fabens) was constructed at the end of the Fabens-Caseta International Bridge. The new Tornillo-Guadalupe border station is currently under construction by GSA on land donated by the County of El Paso.<sup>4</sup> The temporary border station (LPOE Fabens) will be demolished once the new Tornillo-Guadalupe border station is completed.<sup>4</sup>

##### *Hours of Operation*

The bridge currently operates from 6:00 a.m. to 10:00 p.m. for POVs and light trucks.<sup>13</sup>

##### *Tolls*

No tolls are charged to cross at the Fabens-Caseta International Bridge.

##### *Wait Times*

Table 4.9 shows that the average daytime waiting time at the Fabens-Caseta International Bridge has been minimal for POVs, averaging 3.8 minutes.

**Table 4.9: Average Daytime Wait Times for Fabens-Caseta International Bridge  
(in Minutes)**

| Bridge                                | Mode | Year |      |      |      |      |      | Average<br>(Minutes) |
|---------------------------------------|------|------|------|------|------|------|------|----------------------|
|                                       |      | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |                      |
| Fabens-Caseta<br>International Bridge | POV  | 0.0  | 0.1  | 1.8  | 5.3  | 6.8  | 8.6  | 3.8                  |

Note: Daytime is considered from 8:00 a.m. to 6:00 p.m.

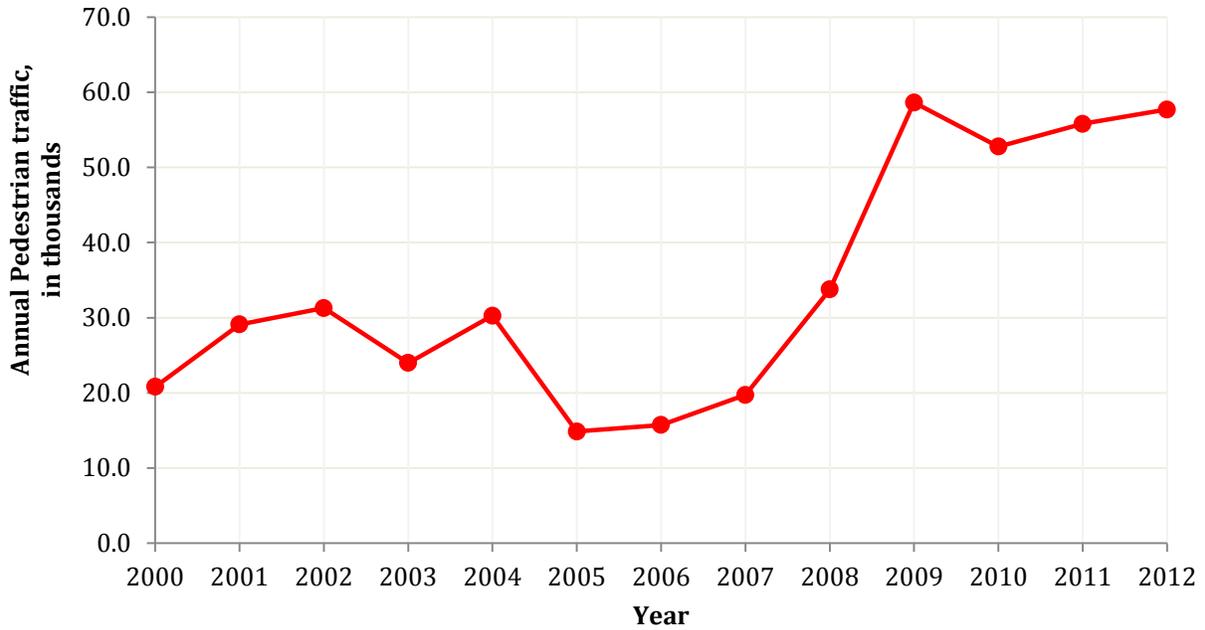
Source: Bureau of Transportation Statistics<sup>8</sup>

### *Bridge Crossings*

Figures 4.13 and 4.14 illustrate the northbound crossings by mode between Mexico and the United States between 2000 and 2012 at the Fabens-Caseta International Bridge.

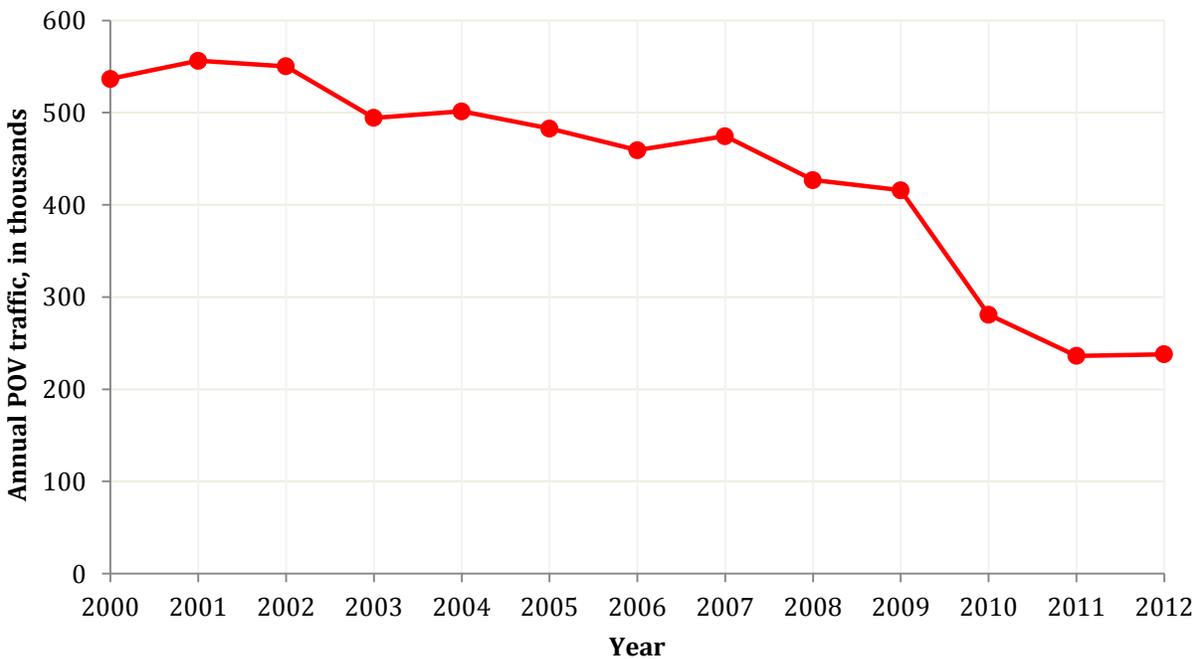
Figure 4.13 shows that the annual number of northbound pedestrian crossings at the Fabens-Caseta International Bridge fluctuated between 2000 and 2005, increasing between 2000 and 2002, decreasing in 2003, and increasing again in 2004. Between 2004 and 2005, the number of northbound pedestrian crossings decreased 50.9 percent. This was followed by a four-year period (2005 to 2009) when northbound pedestrian crossings increased an average of 41.0 percent per year. Since 2009, the number of northbound pedestrian crossings decreased to 52,769 in 2010 before increasing to 57,698 in 2012.

Figure 4.14 shows that the number of northbound POV crossings at the Fabens-Caseta International Bridge has decreased almost consistently between 2001 and 2011, with exceptions in 2004 and 2007. Between 2001 and 2011, the annual number of northbound POV crossings decreased from 556,338 crossings in 2001 to 236,255 in 2011— a decrease of 57.5 percent. The number of northbound POV crossings in 2012 remained similar to that of 2011 at 237,929.



Source: CBP<sup>9</sup>

Figure 4.13: Fabens-Caseta International Bridge Northbound Pedestrian Crossings



Source: CBP<sup>9</sup>

Figure 4.14: Fabens-Caseta International Bridge Northbound POV Crossings

### Primary Roadways Serving Fabens-Caseta International Bridge

Lower Island Road (CR 7181) and Island Guadalupe Road (CR 474) are the primary access roads leading to the Fabens–Caseta International Bridge. Figure 4.15 shows that Lower Island Road connects the bridge to FM 76 (Middle Island Road) on the northwest and SH 20 (Alameda Avenue) on the east. Approximately 5 miles north of the bridge, FM 76 also merges with SH 20 near the Fabens city center. FM 76, along Middle Island Road, is a two-lane undivided roadway with a 2010 AADT of 1,200 vehicles, of which 48.2 percent were trucks. The number of accidents on FM 76 in 2010 was 1.35 accidents per mile, and the facility was operating at LOS A.

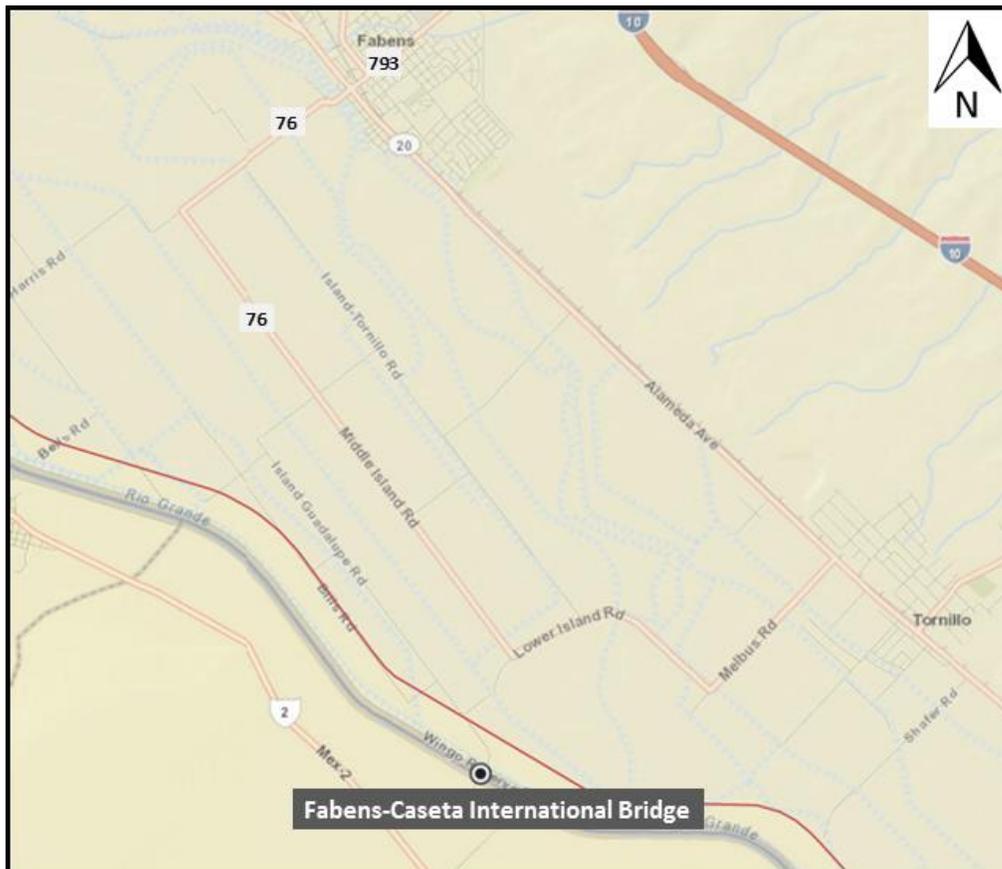


Figure 4.15: Fabens-Caseta International Bridge  
Existing Infrastructure Map

FM 76 connects to FM 793 and SH 20. FM 793 is a two-lane undivided facility in the north-south direction that intersects FM 76 and SH 20, and terminates at IH 10. The AADT on FM 793 was 9,500 vehicles in 2010, of which 20.3 percent were trucks. The number of accidents on FM 793 in 2010 was 4.23 accidents per mile, and the facility was operating at LOS A.

SH 20 runs approximately 4 miles north of the bridge parallel to the U.S.-Mexico border on the U.S. side. The number of lanes on SH 20 varies between two and four. The AADT on SH 20 was 6,200 vehicles in 2010, of which trucks accounted for 22.5 percent. The number of accidents on SH 20 in 2010 was 0.79 accidents per mile, and the facility was operating at LOS A.

On the Mexican side, Cruz Rey, which becomes Leona Vicario (a two-lane facility), is the primary ingress and egress to the bridge. Leona Vicario intersects with Doctor Porfirio Parra (a two-lane facility) that connects Caseta to MEX 2 City of Juárez-El Porvenir, a two-lane Federal highway facility. In 2010, the AADT on MEX 2 was 5,344 vehicles, of which 2.9 percent were trucks.

#### *Planned Changes in Infrastructure (Present to 2030)*

On the U.S. side, three major road and interchange projects are planned in the vicinity of the Fabens-Caseta International Bridge. The first involves construction of the Manuel F. Aguilera Highway, a two-lane undivided facility, between SH 20 (Alameda Avenue) and IH 10. The project includes the construction of an overpass over SH 20 to avoid at-grade crossings between the two highways. The project is scheduled for letting in 2014 at an estimated cost of \$17.23 million.

The second planned project serves the Fabens-Caseta International Bridge and the Ysleta-Zaragoza International Bridge. The planned project includes resurfacing SH 20 between FM 76 (Fabens) and Loop 375. The project will let in September 2013 and will be completed in 2014. This planned project will improve the riding conditions on this section of SH 20. The AADT on this section was 10,648 vehicles in 2010, which is expected to grow by 2.2 percent to reach 16,497 vehicles in 2030.

The third planned project also serves the Fabens-Caseta International Bridge and the Ysleta-Zaragoza International Bridge. The planned project involves construction of continuous turn lanes and the widening of the paved shoulders on FM 258 between northbound and southbound SH 20. The project is expected to be completed at an estimated cost of \$2.15 million in 2017. It is anticipated that the traffic volume along this corridor will grow at an annual rate of 1.7 percent. These planned upgrades will improve traffic flow along the corridor and ensure that the facility continues to operate at LOS A in the foreseeable future.

#### **4.4 Texas/Mexico—El Paso/Juárez**

There are four bridge crossings and two rail crossings between El Paso County and the Municipality of Juárez. Two of the bridge crossings, Ysleta-Zaragoza International Bridge and the Bridge of the Americas, serve pedestrians, non-commercial vehicles, and commercial vehicles. The Paso del Norte International Bridge serves pedestrians and non-

commercial vehicles, while the Good Neighbor International Bridge serves only non-commercial vehicles. The two rail crossings are the Santa Fe Railroad Bridge and Union Pacific Railroad Bridge (also known as the Black Bridge). The specific transportation modes served by each of the facilities are summarized in Table 4.10.

**Table 4.10: Summary of El Paso County/Municipality of Juárez Bridges**

| Bridge                                | Location       | Pedestrians | Non-commercial Vehicles | Commercial Vehicles | Rail |
|---------------------------------------|----------------|-------------|-------------------------|---------------------|------|
| Ysleta-Zaragoza International Bridge  | El Paso/Juárez | Yes         | Yes                     | Yes                 | No   |
| Bridge of the Americas                | El Paso/Juárez | Yes         | Yes                     | Yes                 | No   |
| Good Neighbor International Bridge    | El Paso/Juárez | No          | Yes                     | No                  | No   |
| Paso del Norte International Bridge   | El Paso/Juárez | Yes         | Yes                     | No                  | No   |
| Santa Fe Railroad Bridge              | El Paso/Juárez | No          | No                      | No                  | Yes  |
| Union Pacific Railroad (Black) Bridge | El Paso/Juárez | No          | No                      | No                  | Yes  |

#### 4.4.1 Ysleta-Zaragoza International Bridge

On the U.S. side, the Ysleta-Zaragoza International Bridge is owned and operated by the City of El Paso. On the Mexican side, Promofront S.A. de C.V. holds the bridge concession until 2017, but the bridge is operated by CAPUFE. The bridge has two structures: one has four lanes for commercial traffic, and the other has five lanes for non-commercial traffic. The non-commercial structure also accommodates two pedestrian walkways. The bridge is 804 feet. It opened in 1938 and was rebuilt in 1955 and 1990. On the U.S. side, the bridge connects to Loop 375, Cesar Chavez Border Highway, and Americas Avenue, which connects to IH 10. On the Mexican side, the bridge connects to MEX 2 and MEX 45D via Ramon Rayon and Waterfill, respectively. The crossing is known locally as Zaragoza Bridge, Puente Zaragoza, and Puente Ysleta Zaragoza.

##### *Border Station*

The U.S. border station (LPOE Ysleta) was completed in August 1992. New commercial facilities were inaugurated in October 2008. The new facilities included an

increase in the number of commercial lanes from six to eight, an x-ray machine for truck scans in one of the lanes, and updated radiation monitors. The investment also allows for the addition of two commercial lanes in the future.<sup>4</sup>

*Hours of Operation*

The bridge currently operates 24 hours a day for pedestrians and POVs. The bridge has a SENTRI lane (dedicated commuter lane) that also operates 24 hours a day. For commercial/cargo vehicles, the bridge operates from 6:00 a.m. to midnight Monday through Friday and from 8:00 a.m. to 4:00 p.m. on Saturdays.<sup>14</sup>

*Tolls*

The toll rates for the Ysleta-Zaragoza International Bridge are provided in Tables 4.11 and 4.12. Express lane users traveling northbound on the Ysleta-Zaragoza International Bridge must purchase an annual pass for MXN \$4,297 that allows unlimited crossings.

**Table 4.11: Toll Rates for Ysleta-Zaragoza International Bridge (Southbound)**

| Mode       | (US\$)    | (MXN)      |
|------------|-----------|------------|
| POV        | 2.50      | 31.25      |
| Commercial | 3.50/axle | 43.75/axle |
| Pedestrian | 0.50      | 6.25       |

Source: City of El Paso<sup>15</sup>

**Table 4.12: Toll Rates for Ysleta-Zaragoza International Bridge (Northbound)**

| Mode                                   | (MXN)  | (US\$) |
|--|--------|--------|
| Pedestrian                             | 7.00   | 0.56   |
| POV/ Motorbike                         | 25.00  | 2.00   |
| Passenger Bus/Truck<br>(2 and 3 Axles) | 75.00  | 6.00   |
| Trucks (4 and 5 Axles)                 | 158.00 | 12.64  |
| Trucks (6 Axles)                       | 250.00 | 20.00  |
| Additional Truck Axle                  | 36.00  | 2.88   |

Source: Puente Internacional Zaragoza-Ysleta<sup>16</sup>

### Wait Times

Table 4.13 gives the average daytime wait times for the Ysleta-Zaragoza International Bridge for POVs and commercial vehicles between 2004 and 2009. Table 4.13 shows the POV daytime wait times increased 14.6 minutes between 2008 and 2009, while the commercial vehicle daytime wait times decreased 2.2 minutes during the same period. On average, the daytime wait times for POVs and commercial vehicles between 2004 and 2009 were 19.1 and 14.4 minutes, respectively.

**Table 4.13: Average Daytime Wait Times for Ysleta-Zaragoza International Bridge (in Minutes)**

| Bridge                               | Mode       | Year |      |      |      |      |      | Average (Minutes) |
|--------------------------------------|------------|------|------|------|------|------|------|-------------------|
|                                      |            | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |                   |
| Ysleta-Zaragoza International Bridge | POV        | 12.6 | 9.6  | 15.9 | 24.4 | 18.8 | 33.4 | 19.1              |
|                                      | Commercial | 17.0 | 16.5 | 11.8 | 20.4 | 11.4 | 9.2  | 14.4              |

Note: Daytime is considered from 8:00 a.m. to 6:00 p.m.

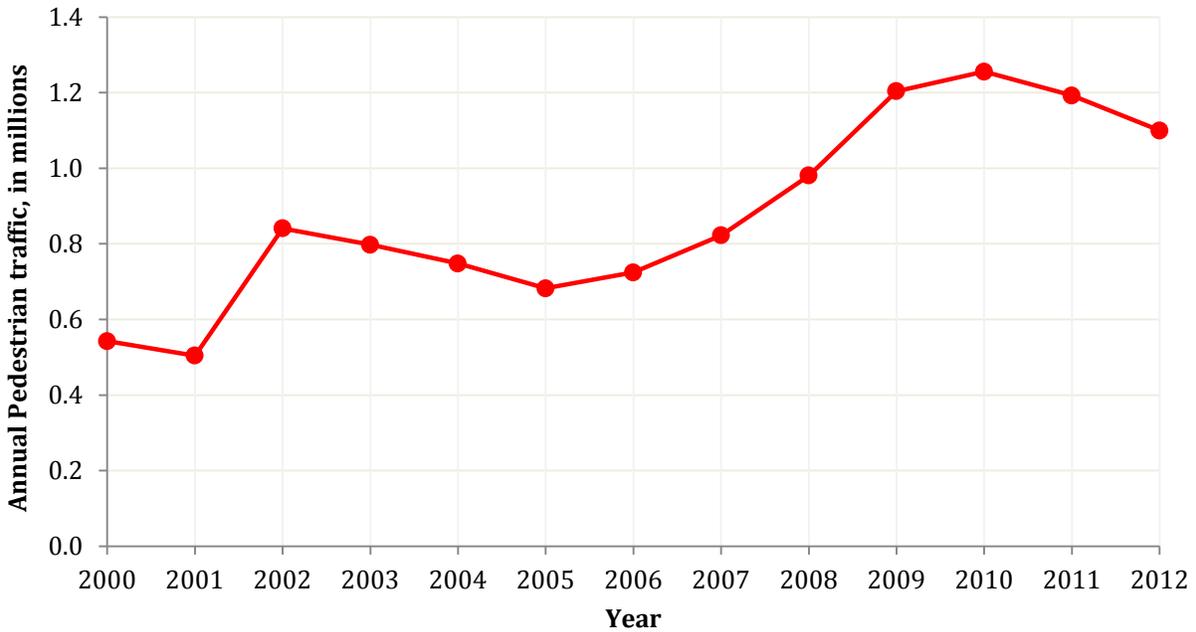
Source: Bureau of Transportation Statistics<sup>8</sup>

### Bridge Crossings

Figures 4.16 through 4.19 illustrate the northbound crossings by mode between Mexico and the United States between 2000 and 2012 at the Ysleta-Zaragoza International Bridge. Figures 4.20 and 4.21 illustrate the southbound crossings by mode between the United States and Mexico from 2004 to 2012 at the Ysleta-Zaragoza International Bridge.

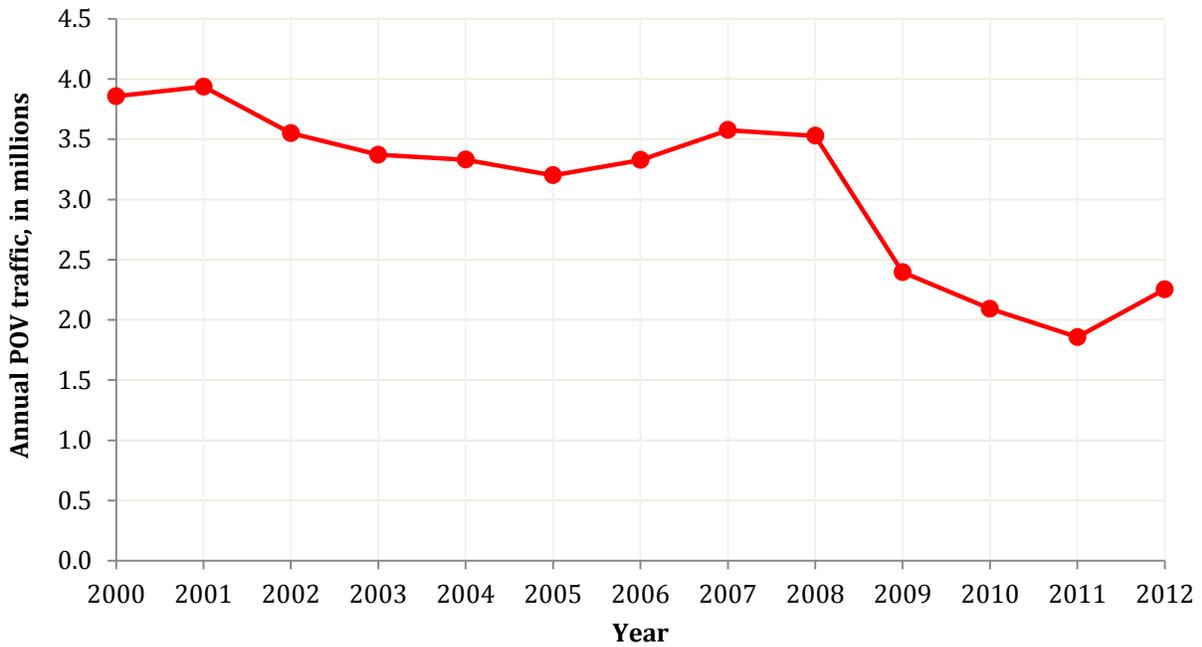
Northbound Crossings: Between 2000 and 2005, the number of northbound pedestrian crossings at the Ysleta-Zaragoza International Bridge fluctuated, decreasing between 2000 and 2001, increasing in 2002, and decreasing again between 2002 and 2005. Between 2005 and 2010, however, northbound pedestrian crossings increased from 682,259 to a peak value of 1,255,702 in 2010—an average of 13.0 percent per year. Between 2010 and 2012, the number of northbound pedestrian crossings decreased an average of 6.4 percent per year to reach 1,099,885 in 2012 (see Figure 4.16).

Figure 4.17 shows the number of annual northbound POV crossings decreased from 3,856,461 in 2000 to 2,253,298 in 2012—a decrease of 41.6 percent. The largest decrease in the number of crossings occurred between 2008 and 2009, when the number of northbound POV crossings decreased from 3,527,551 to 2,395,551—a decrease of 32.1 percent.



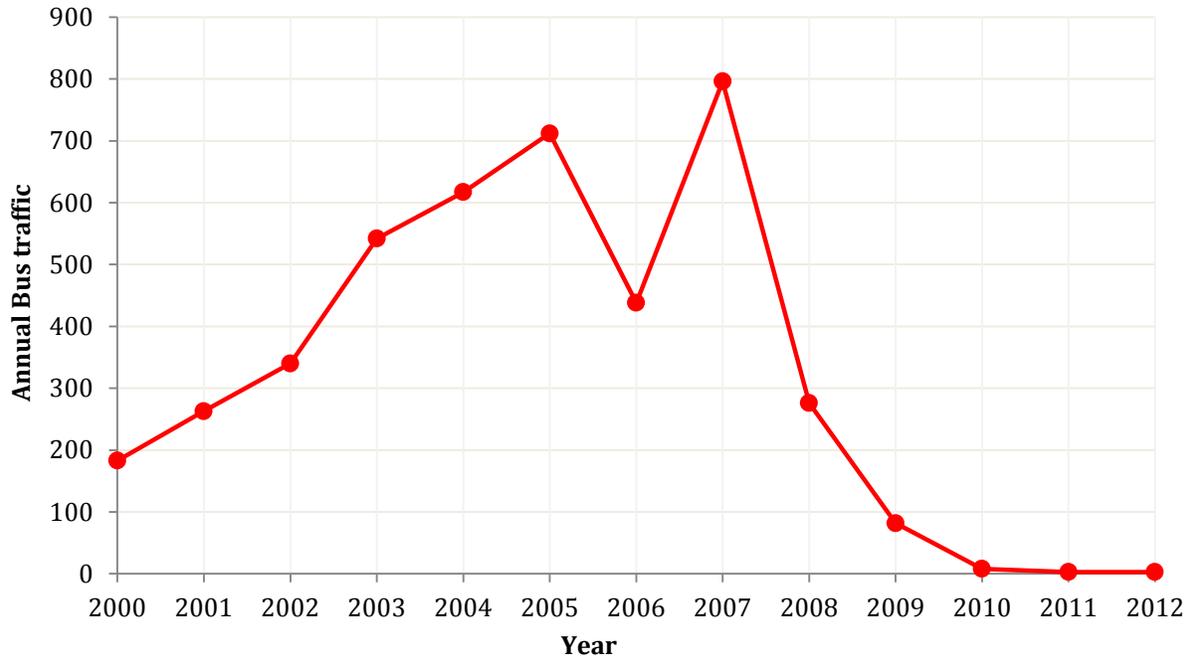
Source: CBP<sup>9</sup>

Figure 4.16: Ysleta-Zaragoza International Bridge Northbound Pedestrian Crossings



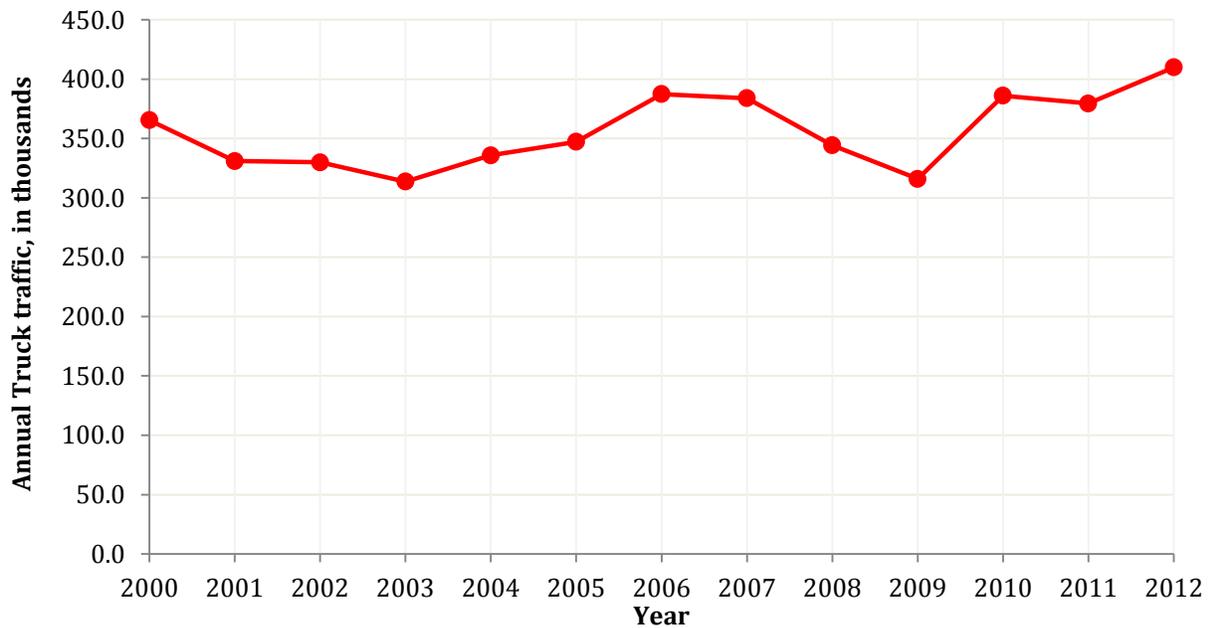
Source: CBP<sup>9</sup>

Figure 4.17: Ysleta-Zaragoza International Bridge Northbound POV Crossings



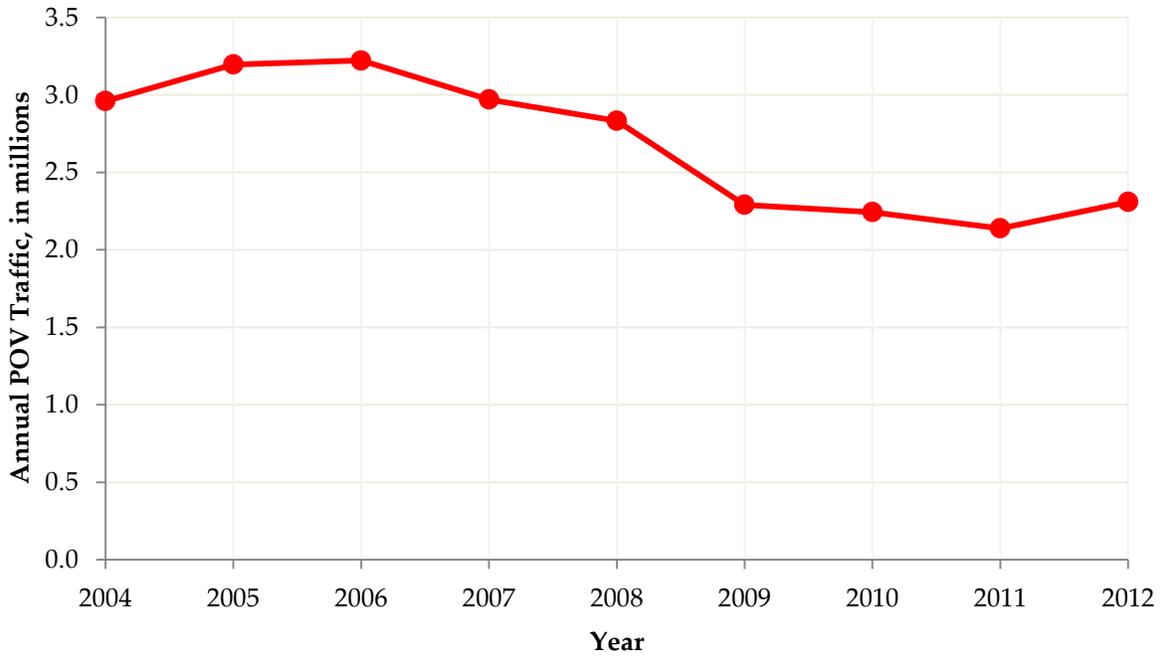
Source: CBP<sup>9</sup>

Figure 4.18: Ysleta-Zaragoza International Bridge Northbound Bus Crossings



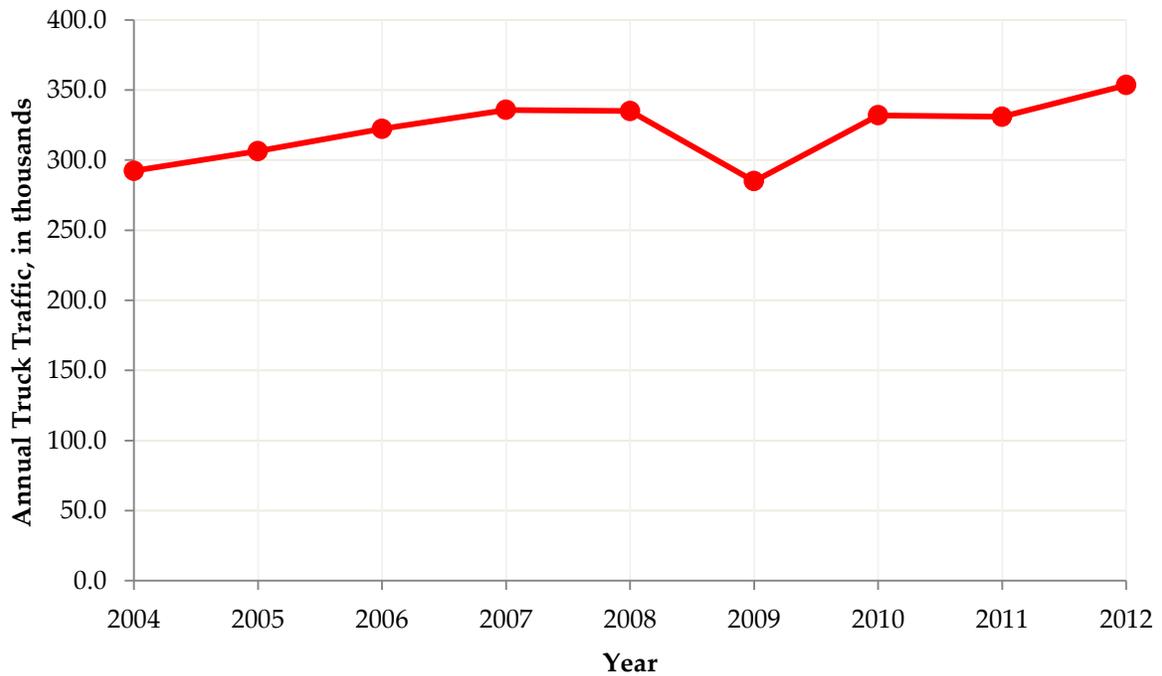
Source: CBP<sup>9</sup>

Figure 4.19: Ysleta-Zaragoza International Bridge Northbound Commercial Truck Crossings



Source: City of El Paso<sup>15</sup>

Figure 4.20: Ysleta-Zaragoza International Bridge Southbound POV Crossings



Source: City of El Paso<sup>15</sup>

Figure 4.21: Ysleta-Zaragoza International Bridge Southbound Commercial Truck Crossings

Figure 4.18 shows the number of annual northbound bus crossings largely increased between 2000 and 2007 with the exception of 2006, when the number of northbound bus crossings decreased 38.5 percent in 2006 relative to 2005. Since 2007, however, the number of annual northbound bus crossings has consistently decreased from the peak of 796 in 2007 to three crossings in 2012.

Figure 4.19 shows annual northbound commercial crossings have ranged between 310,000 and 400,000 between 2000 and 2011. In 2012, however, the number of northbound commercial crossings increased 8.0 percent relative to 2011 to reach a peak of 409,930 crossings in 2012.

Southbound Crossings: The annual number of southbound POV crossings at the Ysleta-Zaragoza International Bridge increased from 2,960,078 in 2004 to 3,221,913 in 2006—an increase of 8.8 percent (see Figure 4.20). Between 2006 and 2011, however, the number of southbound POV crossings decreased 33.6 percent to reach 2,138,649 in 2011. In 2012, the number of southbound POV crossings increased marginally to reach 2,308,964.

Figure 4.21 shows the number of annual southbound truck crossings increased from 292,318 in 2004 to 335,006 in 2008—an increase of 14.6 percent. In 2009, however, the number of southbound truck crossings decreased 14.9 percent relative to 2008. Between 2009 and 2012, the number of southbound truck crossings increased 24.1 percent to peak at 353,555 in 2012.

#### *Primary Roadways Serving Ysleta-Zaragoza International Bridge*

On the U.S. side, Zaragoza Road connects directly with the bridge and is intersected by Loop 375, a four-lane divided highway, approximately 0.3 miles north of the bridge (see Figure 4.22). In 2010, the AADT on Loop 375 was 41,000 vehicles, of which 3.9 percent were trucks. The number of accidents on Loop 375 in 2010 was 5 accidents per mile, and the facility was operating at LOS C. Northeast of Ysleta–Zaragoza International Bridge toward Gateway Boulevard (FM 258), the AADT on Loop 375 was 32,100 vehicles in 2010, of which 4.2 percent were trucks. The number of accidents on this facility was 37 per mile in 2010, and the facility was operating at LOS B.

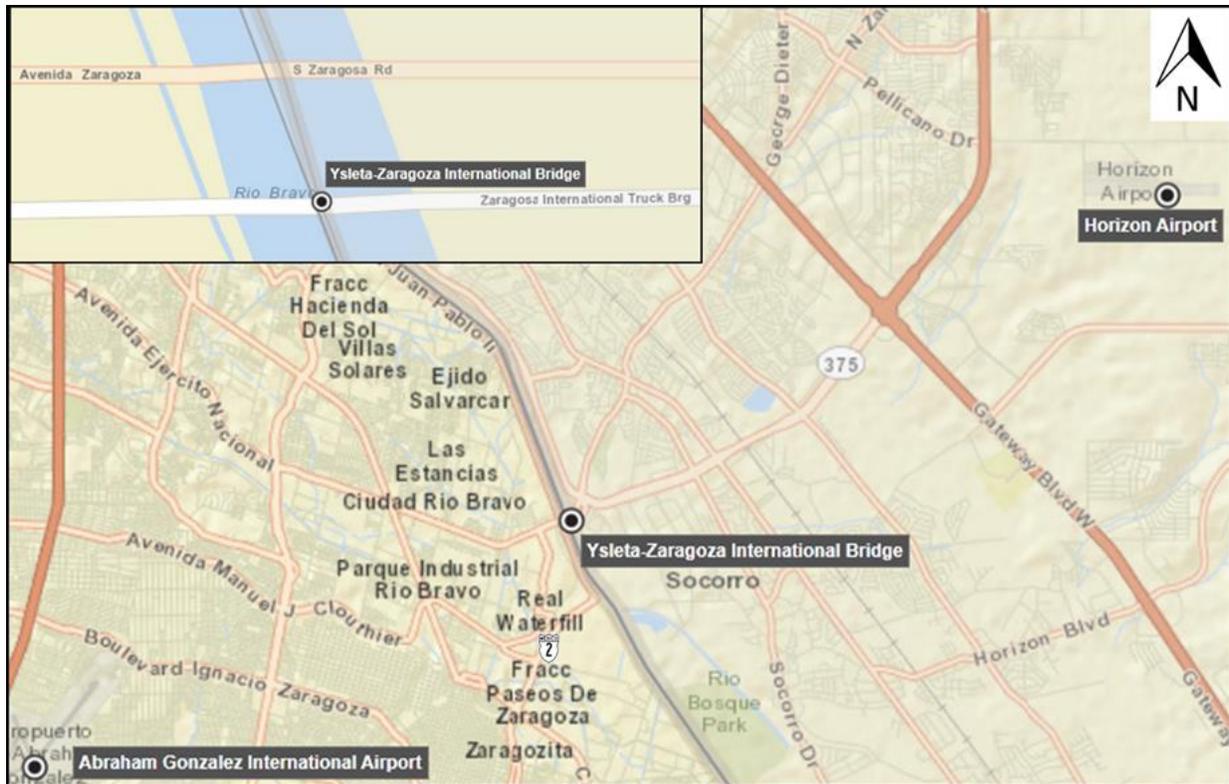


Figure 4.22: Ysleta-Zaragoza International Bridge Existing Infrastructure Map

On the Mexican side, Waterfill, a six-lane facility, is the primary ingress and egress to the bridge. Near the bridge, Waterfill is paralleled by Manuel Sandoval, a restricted route (Ruta Fiscal) that connects the Río Bravo Industrial Park to a Customs post and then to the Ysleta-Zaragoza International Bridge. The Industrial Park is also served by Río Bravo, a six-lane facility. Waterfill splits into Ejército Nacional and Ramón Rayón, both four-lane facilities. MEX 2 City of Juárez-El Porvenir, a Federal highway, merges into Bulevar Independencia, a six-lane outer loop of the City of Juárez. In 2010, the AADT on MEX 2 was 17,091 vehicles, of which 2.8 percent were trucks. All the streets mentioned intersect at different points with Manuel Gómez Morín and Manuel J. Clouthier, both six-lane facilities. Bulevar Juan Pablo II, a four-lane facility, runs parallel to Río Bravo and underneath the bridge.

#### *Planned Changes in Infrastructure (Present to 2030)*

On the U.S. side, six road and interchange projects are planned near the Ysleta-Zaragoza International Bridge. The first planned project is the resurfacing of SH 20 between FM 76 (Fabens) and Loop 375. The project will let in September 2013 and will be completed in 2014. This planned project will improve the riding conditions on this section of SH 20. The AADT on this section was 10,648 vehicles in 2010, which is expected to grow by 2.2 percent to reach an AADT of 16,497 vehicles in 2030.

The second planned project is the construction of continuous turn lanes and widening of the paved shoulders on FM 258 between northbound and southbound SH 20. The project is expected to be completed at an estimated cost of \$2.15 million in 2017. It is anticipated that the traffic volume along this corridor will grow at an annual rate of 1.7 percent. These planned upgrades will improve traffic flow along the corridor and ensure that the facility continues to operate at LOS A in the foreseeable future.

The third planned project provides for the reconstruction of on- and off-ramps for Loop 375, west of Pan American Drive, to segregate POE commercial and non-commercial traffic. Work on this project is expected to start in 2020 and be completed in 2021. The cost to complete this project is estimated at \$7 million.

The fourth project planned in this area involves the installation of traffic management technology on FM 659 (Zaragoza Road) at an estimated cost of \$1.8 million. The AADT on FM 659 was 53,000 vehicles in 2010, with trucks accounting for 7.2 percent of AADT. It is anticipated that the investment will ease traffic flow along this corridor, but no change in the current LOS is anticipated in the foreseeable future.

The fifth project planned in the area includes the reconstruction of SH 20 between Padres Drive and Loop 375. Work on the project is expected to start in 2015 and will be completed at an estimated cost of \$9.2 million in 2017. This section of SH 20 had an AADT of 19,550 vehicles in 2010, with trucks accounting for 2.7 percent of the AADT. Although traffic along this corridor is expected to grow at an annual rate of 2.7 percent, it is anticipated that the completion of this planned project will ensure that the highway continues to operate at its current LOS A in the near future.

The sixth and final project planned in this area involves construction of a bus rapid transit (BRT) system on SH 20 between Santa Fe Street/Fourth Avenue, Kansas/Campbell Streets, and two other locations. This planned project will also serve Bridge of the Americas, Good Neighbor International Bridge, and Paso del Norte International Bridge. Work on the project is expected to start in 2013 and be completed at an estimated cost of \$8.4 million in 2014.

#### **4.4.2 Bridge of the Americas**

On the U.S. side, the Bridge of the Americas is owned by IBWC and operated by CBP. On the Mexican side, the bridge is owned by CILA and operated by Mexican Customs. The bridge is 506 feet long and has four separate structures: two two-lane bridges for truck traffic and two four-lane bridges for other vehicular traffic. The bridge structure that accommodates truck traffic includes an empty cargo lane as well as FAST and Express lanes for import/export traffic. The bridge opened in 1967 and was rebuilt in 1998. The bridge connects to SH 110, US 62, and US 54, which connects to IH 10 on the U.S. side. On the Mexican side, the bridge connects to the beginning of MEX 45D. The

bridge is known locally as Puente Rio Bravo, Puente Internacional Cordova-Las Americas, Cordova Bridge, Puente Libre, BOTA, and Free Bridge.

*Border Station*

The U.S. border station (LPOE BOTA) is owned by GSA. The border station was completed in 1967 and renovated in 1992. An expansion of the import lot was completed in 1998. In 2004, additional vehicular lanes were added.<sup>4</sup>

*Hours of Operation*

The bridge currently operates 24 hours a day for POVs. For commercial/cargo vehicles, the bridge operates from 6:00 a.m. to 6:00 p.m. on weekdays (Monday through Friday) and from 6:00 a.m. to 2:00 p.m. on Saturdays.<sup>14</sup>

*Tolls*

No tolls are charged to cross the Bridge of the Americas.

*Wait Times*

Table 4.14 illustrates the average daytime wait times at the Bridge of the Americas for POVs and commercial vehicles between 2004 and 2009. Table 4.14 shows that POV daytime wait times have more than doubled and that the commercial vehicle daytime wait times have increased by 69.0 percent between 2004 and 2009. On average, the daytime wait times for POVs and commercial vehicles between 2004 and 2009 were 25.5 and 11.8 minutes, respectively.

**Table 4.14: Average Daytime Wait Times for Bridge of the Americas  
(in Minutes)**

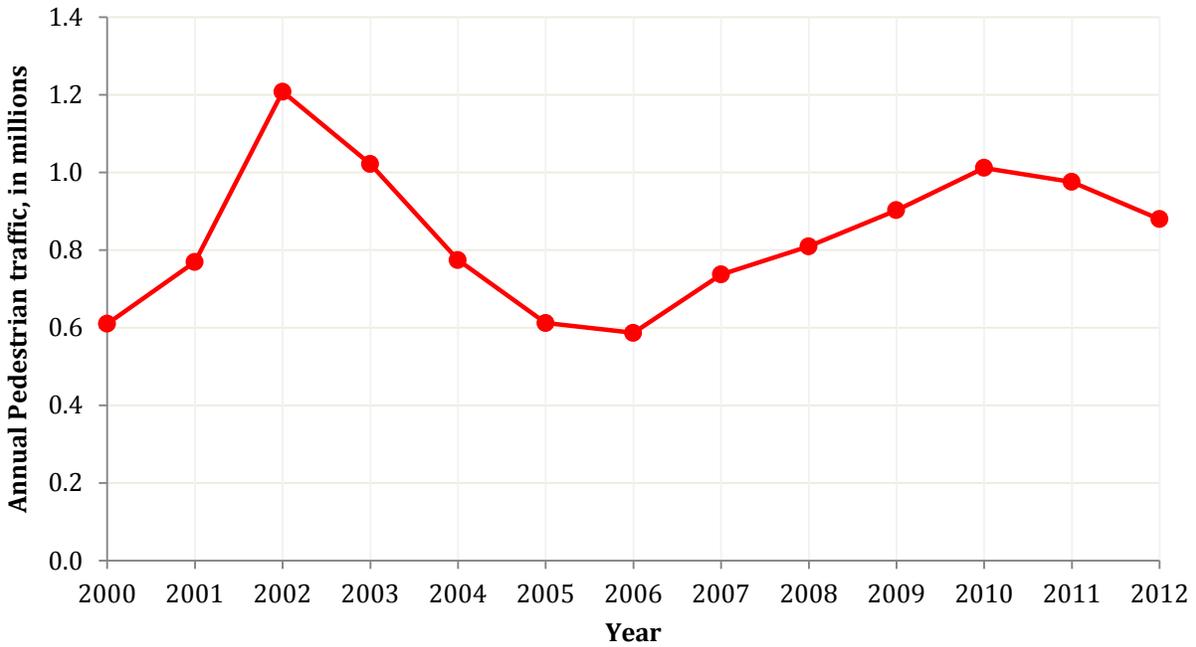
| Bridge                 | Mode       | Year |      |      |      |      |      | Average (Minutes) |
|------------------------|------------|------|------|------|------|------|------|-------------------|
|                        |            | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |                   |
| Bridge of the Americas | POV        | 17.6 | 11.8 | 23.2 | 36.3 | 27.4 | 36.5 | 25.5              |
|                        | Commercial | 8.7  | 13.5 | 15.4 | 9.3  | 9.1  | 14.7 | 11.8              |

Note: Daytime is considered from 8:00 a.m. to 6:00 p.m.

Source: Bureau of Transportation Statistics<sup>8</sup>

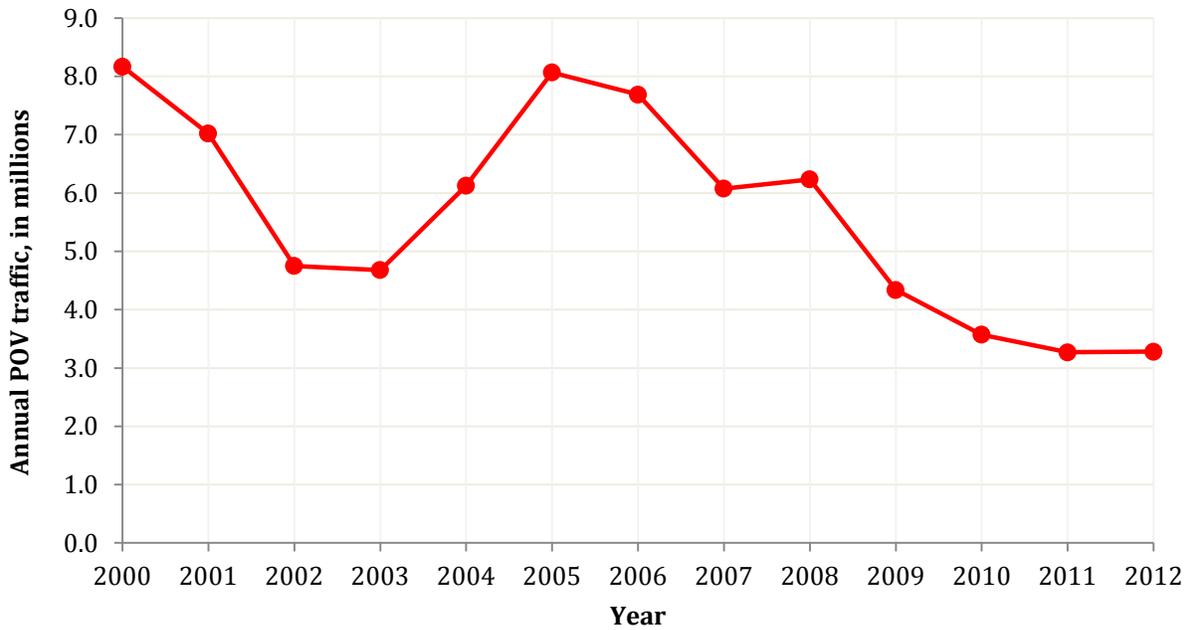
*Bridge Crossings*

Figures 4.23 through 4.26 illustrate the northbound crossings by mode between Mexico and the United States at the Bridge of the Americas between 2000 and 2012.



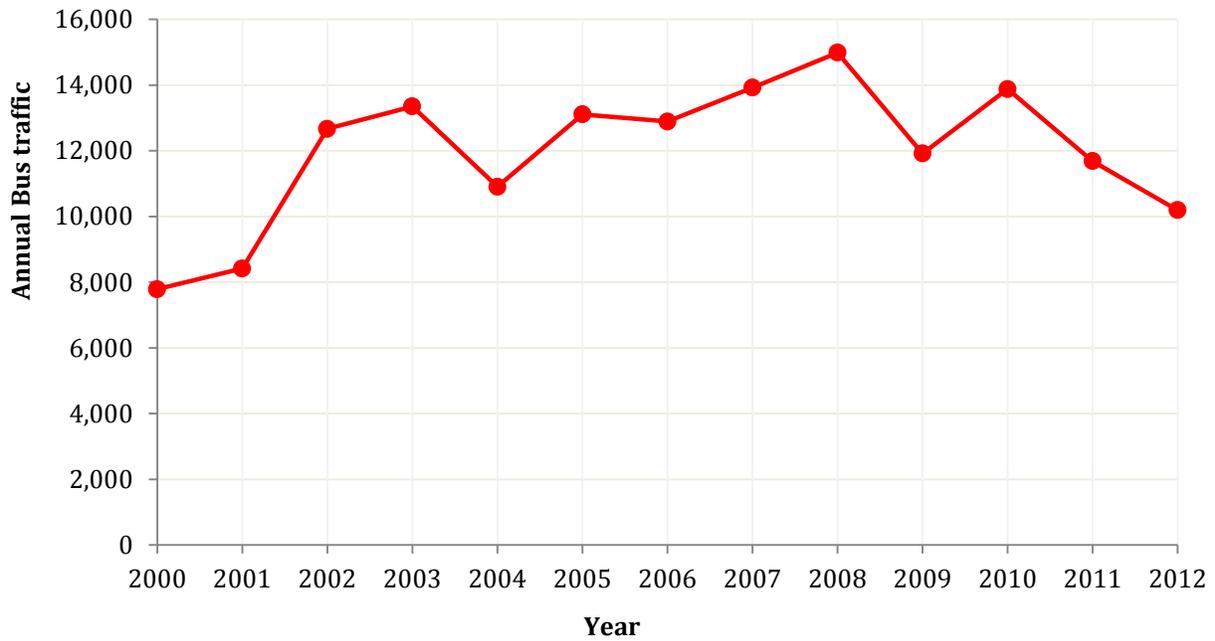
Source: CBP<sup>9</sup>

Figure 4.23: Bridge of the Americas Northbound Pedestrian Crossings



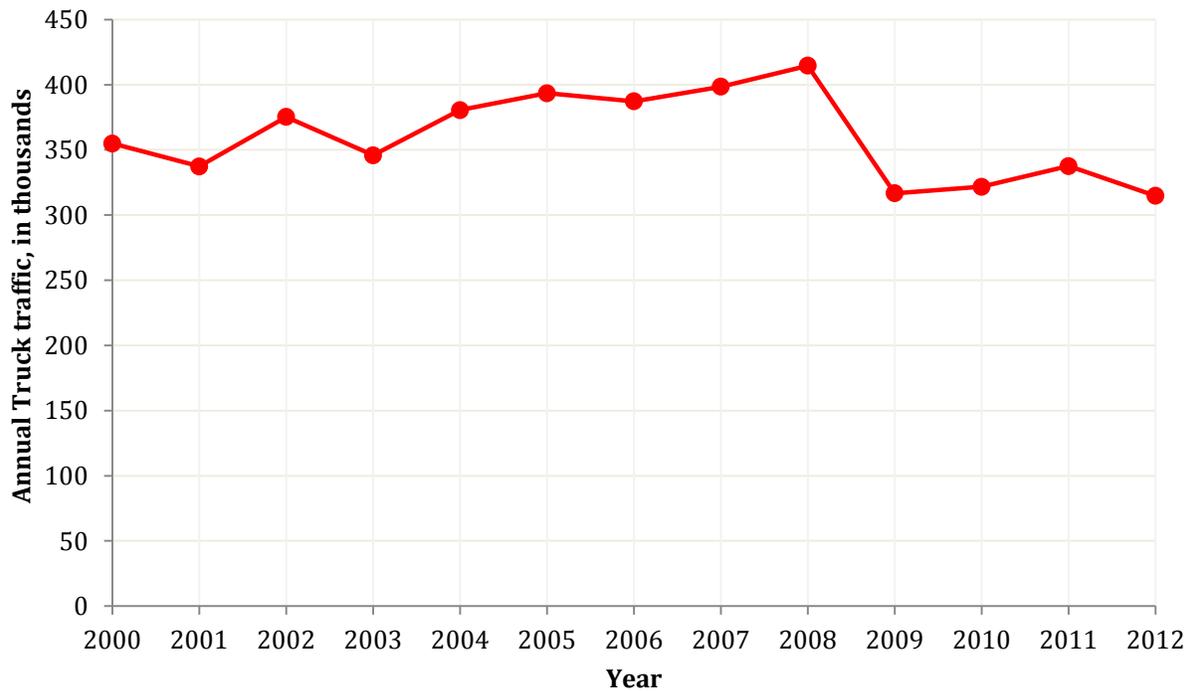
Source: CBP<sup>9</sup>

Figure 4.24: Bridge of the Americas Northbound POV Crossings



Source: CBP<sup>9</sup>

Figure 4.25: Bridge of the Americas Northbound Bus Crossings



Source: CBP<sup>9</sup>

Figure 4.26: Bridge of the Americas Northbound Commercial Truck Crossings

Figure 4.23 shows the number of annual northbound pedestrian crossings at the Bridge of the Americas increased 98.0 percent between 2000 and 2002. This was followed by a four-year period during which the number of northbound pedestrian crossings decreased from 1,207,738 in 2002 to 586,520 in 2006—a decrease of 51.4 percent. Between 2006 and 2010, the number of northbound pedestrian crossings increased an average of 14.6 percent per year to reach 1,011,462 in 2010. Between 2010 and 2012, however, the number of northbound pedestrian crossings decreased an average of 6.8 percent per year to reach 879,409 in 2012.

Figure 4.24 shows that the number of northbound POV crossings decreased between 2000 and 2003 and increased between 2003 and 2005 to reach a peak value of 8,065,901 crossings in 2005. Since 2005, however, the number of northbound POV crossings has decreased 59.5 percent to reach the lowest recorded level of 3,268,176 in 2011. In 2012, the number of northbound POV crossings increased marginally (0.4 percent) to 3,281,025 crossings.

Figure 4.25 shows that the number of annual northbound bus crossings at the Bridge of the Americas fluctuated substantially between 2000 and 2012. In general, the number of northbound bus crossings increased from 7,789 in 2000 to a peak of 14,984 in 2008—an annual average increase of 8.5 percent. However, between 2008 and 2012, the number of northbound crossings decreased an average of 9.2 percent per year to reach 10,192 in 2012.

Figure 4.26 shows that, despite fluctuations, the number of annual northbound commercial truck crossings increased 16.8 percent between 2000 and 2008. In 2009, however, the number of northbound commercial truck crossings decreased 23.6 percent relative to 2008 to reach the lowest recorded level of 316,731 crossings. Since 2009, the number of northbound crossings has increased marginally to reach 337,609 crossings in 2011, before decreasing again to reach 314,730 crossings in 2012.

#### *Primary Roadways Serving the Bridge of the Americas*

On the U.S. side, IH 110 is the primary ingress and egress to the bridge (see Figure 4.27). It connects to US 54 in the north, which is a four-lane divided facility that connects the bridge with the El Paso International Airport and major highways, including IH 10. The AADT on US 54 was 17,540 in 2010, of which 7.2 percent were trucks. In 2010, 50.0 accidents were reported per mile of this highway between IH 110 and Loop 375, which is significantly higher relative to the number of accidents reported on similar facilities in the Focused Study Area. The LOS on US 54 was level A in 2010.

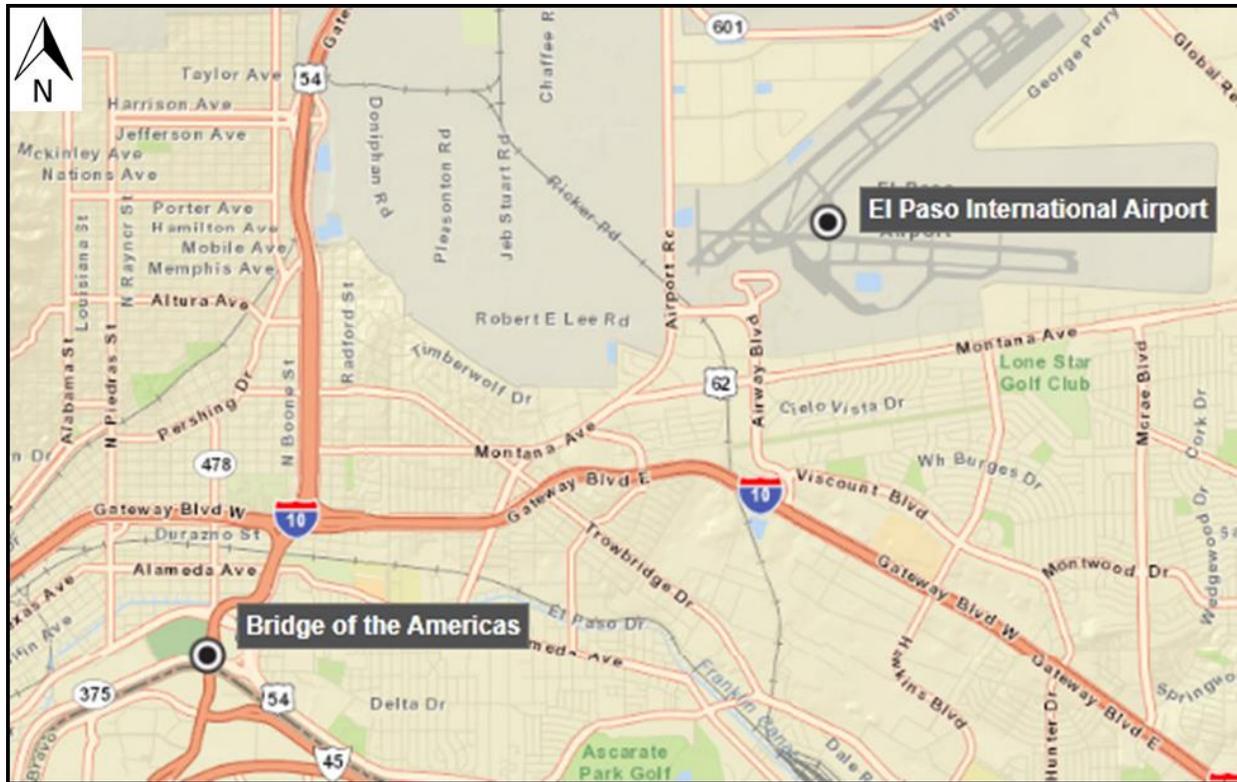


Figure 4.27: Bridge of the Americas Existing Infrastructure Map

Intersecting US 54 about 300 feet from the bridge is Loop 375. Loop 375 is a four-lane divided facility that runs parallel to the U.S.-Mexico border on the U.S. side. At Loop 375 and US 54, the AADT on Loop 375 was 43,000 vehicles in 2010, of which 3.9 percent were trucks. The number of accidents on Loop 375 in 2010 was approximately 4.97 accidents per mile, which is substantially lower compared to, for example, the accident rate for US 54. In 2010, the LOS on Loop 375 was level B.

On the Mexican side, MEX 45D Avenida de las Américas, a four-lane facility, is the primary ingress and egress to the bridge. In 2010, the AADT on MEX 45D was 6,244 vehicles, of which 26.9 percent were trucks. MEX 45D connects the City of Juárez to the State capital of Chihuahua and intersects with important roads in the area, including Hermanos Escobar, 16 de Septiembre, Adolfo López Mateos, and Rafael Pérez Serna. The Rafael Pérez Serna is a six-lane facility that connects the bridge, the Omega and Vista del Sol Industrial Parks, and the Bridge of the Americas. Near the international bridge, Rafael Pérez Serna and Río Bravo become restricted routes connecting the truck parking lots for empty and full trucks to the international bridge facility.

#### *Planned Changes in Infrastructure (Present to 2030)*

Three major road and interchange projects are planned in this area. The first is a new highway location, as part of the Loop 375 extension, to facilitate construction of an

expressway. This planned project represents the section of Loop 375 between Park Street and Paisano Drive (US 62). The project will also serve the Good Neighbor International Bridge and Paso del Norte International Bridge. Work on the project will begin in late 2018 and is expected to be completed at an estimated cost of \$184 million in 2022.

The second planned project in the area is construction of a BRT system involving several locations on US 180 (Montana Avenue). This planned project will also serve the Good Neighbor International Bridge and Paso del Norte International Bridge. The entire project is scheduled to begin in 2015 and be completed in 2016 at an estimated cost of \$9.25 million. US 180 had an AADT of 36,770 vehicles in 2010, with trucks accounting for 7.1 percent of the AADT. Traffic along this corridor is expected to grow at an annual rate of 2 percent, resulting in a decrease in the LOS on this facility from level A to B in the future given no investments in infrastructure.

The final project planned in this area involves construction of a BRT system on SH 20 between Santa Fe Street/Fourth Avenue, Kansas/Campbell Streets, and two other locations. Work on the project is expected to start in 2013 and be completed at an estimated cost of \$8.4 million in 2014.

#### **4.4.3 Good Neighbor International Bridge**

On the U.S. side, the Good Neighbor International Bridge is owned and operated by the City of El Paso. On the Mexican side, the bridge is owned and operated by the Mexican Federal Government. The bridge has three lanes for southbound vehicular traffic and one northbound SENTRI lane or dedicated commuter lane (DCL). No commercial traffic is allowed on the bridge. The bridge opened in 1967. On the U.S. side, the bridge connects to Stanton Street, which is parallel to US 62. On the Mexican side, the bridge connects to MEX 45D via Avenida Heroico Colegio Militar. The bridge is known locally as the Stanton Street Bridge, Friendship Bridge, Puente Rio Bravo, and Puente Lerdo-Stanton.

##### *Border Station*

The U.S. border station (LPOE Stanton) was completed in 1967 and is owned by GSA, which leases the facilities to the City of El Paso.<sup>4</sup>

##### *Hours of Operation*

The bridge currently operates for the northbound DCL and POVs from 6:00 a.m. to midnight on weekdays (Monday through Friday) and from 10:00 a.m. to midnight on weekend days (Saturday and Sunday). The bridge operates 24 hours a day for southbound POVs.<sup>14</sup>

*Tolls*

The toll rates for the Good Neighbor International Bridge are provided in Table 4.15.

**Table 4.15: Toll Rates for Good Neighbor International Bridge (Southbound)**

| Mode                  | (US\$) | (MXN) |
|-----------------------|--------|-------|
| Southbound POV        | 2.50   | 31.25 |
| Southbound Pedestrian | 0.50   | 6.25  |

Source: City of El Paso<sup>15</sup>

The CAPUFE Línea Express de Capufe (LINEXP) Stanton-Lerdo/Paso del Norte Program provides for purchase of an annual pass for MXN \$4,297 that allows unlimited northbound crossings at the Good Neighbor International Bridge and the Paso del Norte International Bridge. In 2011, CAPUFE was instructed to legally separate and differentiate the programs for the Good Neighbor International Bridge and Paso del Norte International Bridge.

*Wait Times*

Table 4.16 shows that the average daytime wait times at the Good Neighbor International Bridge have been minimal, averaging 1.8 minutes for POVs.

**Table 4.16: Average Daytime Wait Times for Good Neighbor International Bridge (in Minutes)**

| Bridge               | Mode | Year |      |      |      |      |      | Average (Minutes) |
|----------------------|------|------|------|------|------|------|------|-------------------|
|                      |      | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |                   |
| Good Neighbor Bridge | POV* | N/A  | N/A  | N/A  | 1.8  | 1.2  | 2.4  | 1.8               |

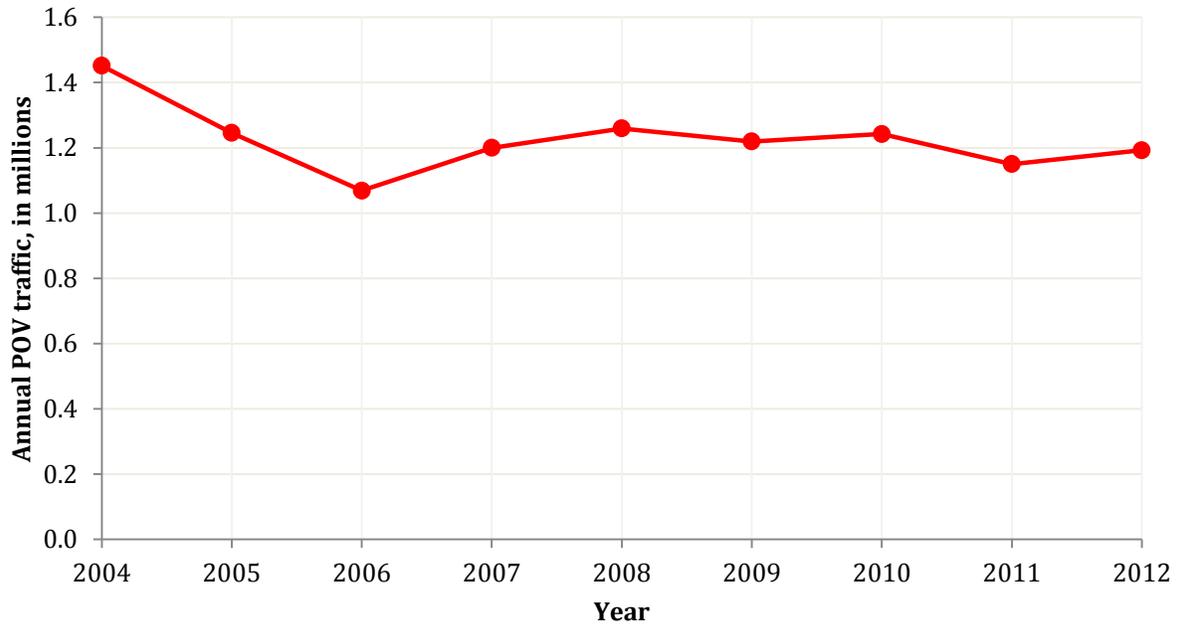
Note: \* Non-commercial traffic only

Daytime is considered from 8:00 a.m. to 6:00 p.m.

Source: Bureau of Transportation Statistics<sup>8</sup>

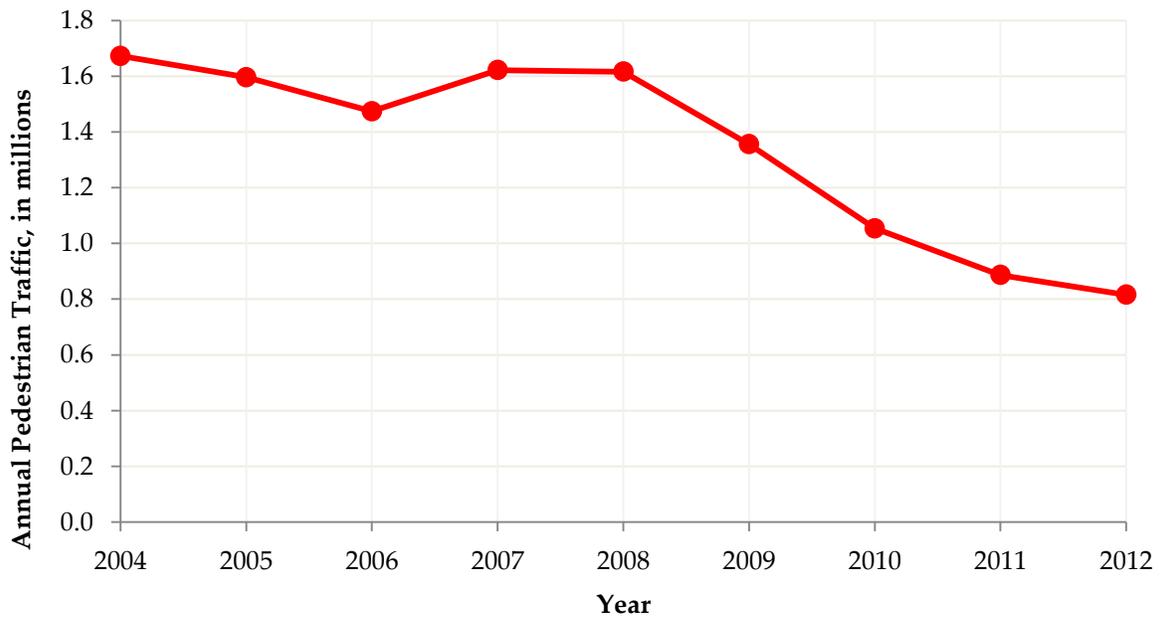
*Bridge Crossings*

Figure 4.28 illustrates the northbound DCL crossings between Mexico and the United States at the Good Neighbor International Bridge between 2004 and 2012. Figures 4.29 and 4.30 illustrate southbound pedestrian and POV crossings, respectively, between the United States and Mexico at the Good Neighbor International Bridge between 2004 and 2012.



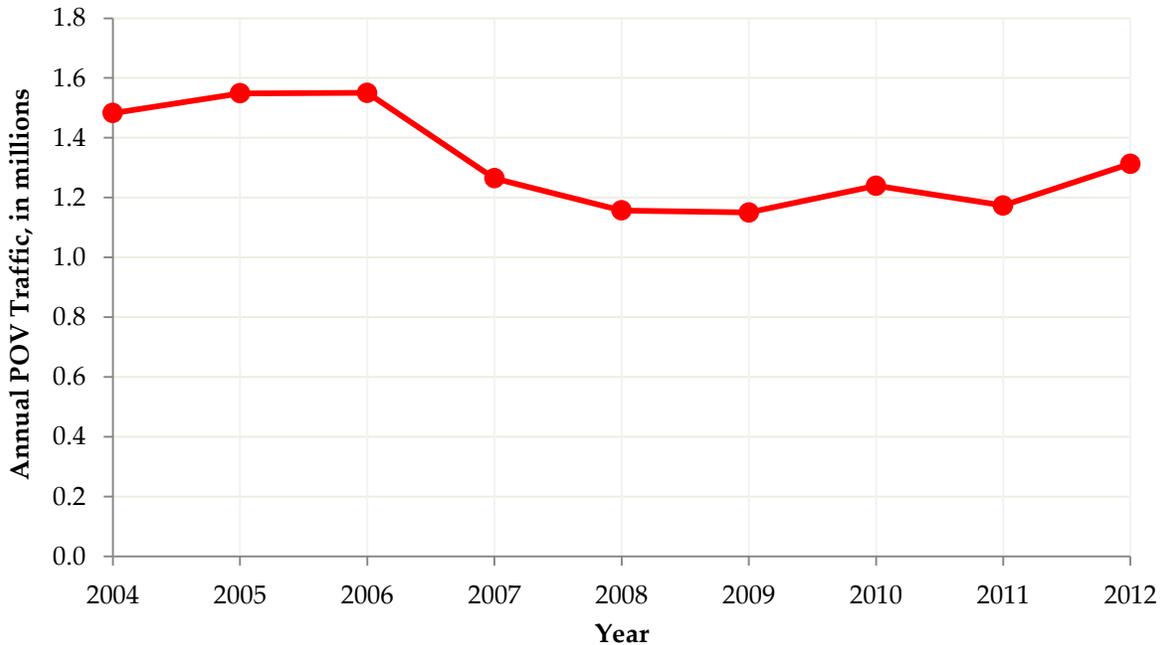
Source: City of El Paso<sup>15</sup>

Figure 4.28: Good Neighbor International Bridge Northbound DCL Crossings



Source: City of El Paso<sup>15</sup>

Figure 4.29: Good Neighbor International Bridge Southbound Pedestrian Crossings



Source: City of El Paso<sup>15</sup>

Figure 4.30: Good Neighbor International Bridge Southbound POV Crossings

Northbound Crossings: Figure 4.28 shows that between 2003 and 2006 the number of northbound DCL crossings decreased an average of 10.2 percent per year. Since 2006, the number of northbound DCL crossings has fluctuated between 1.15 and 1.26 million crossings.

Southbound Crossings: Figure 4.29 shows the annual number of southbound pedestrian crossings at the Good Neighbor International Bridge decreased from 1,672,791 crossings in 2004 to 815,532 crossings in 2012, a decrease of 51.2 percent.

Figure 4.30 shows the number of annual southbound POV crossings at the Good Neighbor International Bridge increased 4.6 percent between 2004 and 2006. In 2007, however, the number of southbound POV crossings decreased 18.4 percent relative to 2006. Between 2007 and 2011, the number of annual southbound commercial crossings ranged between 1.15 million and 1.30 million. In 2012, however, the number of southbound commercial crossings increased 11.9 percent relative to 2011 to reach 1,313,114 crossings.

*Primary Roadways Serving the Good Neighbor International Bridge*

On the U.S. side, US 85 (Stanton Street) connects directly with the bridge (see Figure 4.31). Approximately 400 feet from the bridge, US 85 intersects Loop 375. AADT on the six-lane roadway was recorded at 18,000 vehicles in 2010, with LOS A and 5.15 accidents per mile.

AADT recorded for Loop 375 near the bridge in 2010 was 17,800 vehicles. Trucks accounted for approximately 3.9 percent of the AADT on the four-lane divided highway. In 2010, the number of accidents recorded on Loop 375 was 4.97 per mile. The LOS on Loop 375 near US 85 in 2010 was level A.

On the Mexican side, Lerdo, a three-lane facility with one northbound and two southbound lanes, is the primary ingress and egress to the bridge. Lerdo intersects with Ing. David Herrera (Avenida Malecón), a six-lane facility that connects the Good Neighbor International Bridge with the Bridge of the Americas and Francisco Villa—the latter parallel to the Paso del Norte International Bridge entrance in the City of Juárez. Boulevard Fronterizo (also called Heroico Colegio Militar) runs underneath the bridge and connects with Norzagaray and Camino Real, the City of Juárez’s western outer loops leading to the Anapra/Jerónimo areas. Other main roadways serving the area are Ignacio Mejía (also called Hermanos Escobar), 16 de Septiembre, Insurgentes, and Eje Vial Juan Gabriel.

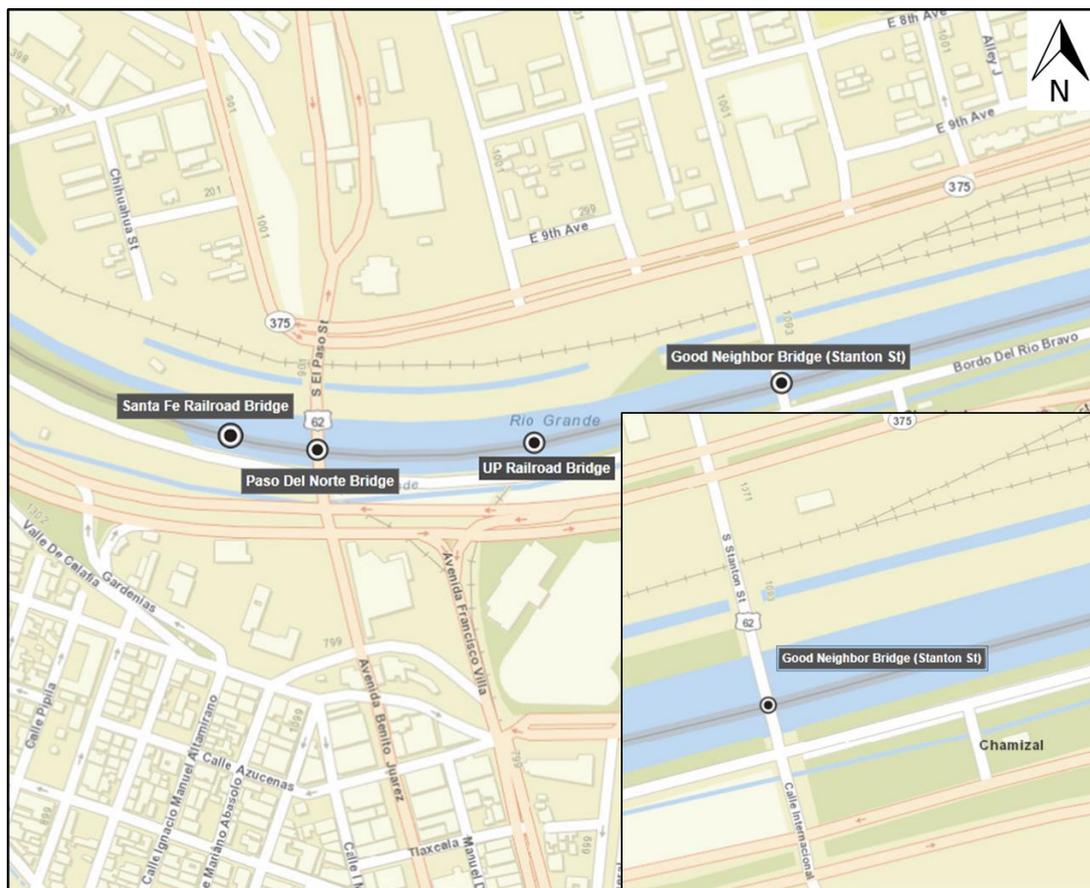


Figure 4.31: Good Neighbor International Bridge Existing Infrastructure Map

*Planned Changes in Infrastructure (Present to 2030)*

Four major road and interchange projects are planned in this area. The first project involves the construction of a BRT system on SH 20 between Santa Fe Street/Fourth Avenue, Kansas/Campbell Streets, and two other locations. Work on the project is expected to start in 2013 and be completed at an estimated cost of \$8.4 million in 2014.

The second is a new highway location, as part of the Loop 375 extension, to facilitate construction of an expressway. This planned project represents the section of Loop 375 between Park Street and Paisano Drive (US 62). Work on the project will begin in late 2018 and is expected to be completed at an estimated cost of \$184 million in 2022.

The third planned project in the area is the construction of a BRT system involving several locations on US 180 (Montana Avenue). The entire project is scheduled to begin in 2015 and be completed in 2016 at an estimated cost of \$9.25 million.

The fourth and final project in the area involves the design and construction of road and pedestrian elements on Oregon Street that are required to integrate street cars between Glory Road and the Paso del Norte International Bridge. The total cost of the project is estimated at \$133 million. Work on the project is expected to start in 2020.

#### **4.4.4 Paso del Norte International Bridge**

On the U.S. side, the Paso del Norte International Bridge is owned and operated by the City of El Paso. On the Mexican side, the bridge is owned by the Mexican Federal Government and operated by CAPUFE. The bridge is 982 feet long and has four lanes for non-commercial traffic. The bridge has two pedestrian walkways for northbound and southbound pedestrian traffic. The bridge opened in 1967. It connects to South El Paso Street, which runs parallel to US 85 on the U.S. side. On the Mexican side, the bridge connects to Juárez Street and Avenida Francisco Villa, which connects to Ing. David Herrera and goes on to MEX 45D.

The crossing is known locally as the Paso del Norte International Bridge, Santa Fe Street Bridge, Puente Benito Juárez, Puente Paso del Norte, and Puente Juárez-Santa Fe.

##### *Border Station*

The U.S. border station is owned by GSA. It was renovated in 1991. Subsequently, GSA received congressional funding to expand and renovate the facility. This expansion and renovation project was completed in April 2009.<sup>4</sup>

##### *Hours of Operation*

The bridge currently operates 24 hours a day for POVs and pedestrians only.<sup>14</sup>

### Tolls

Toll rates for the Paso del Norte International Bridge are provided in Table 4.17.

**Table 4.17: Toll Rates for Paso del Norte International Bridge (Southbound)**

| Mode       | (US\$) | (MXN) |
|------------|--------|-------|
| POV        | 2.25   | 28.13 |
| Pedestrian | 0.50   | 6.25  |

Source: City of El Paso<sup>15</sup>

The CAPUFE LINEXP Stanton-Lerdo/Paso del Norte Program provides for the purchase of an annual pass for MXN \$4,297 that allows unlimited northbound crossings at the Good Neighbor International Bridge and the Paso del Norte International Bridge. In 2011, CAPUFE was instructed to legally separate and differentiate the programs for the Good Neighbor International Bridge and Paso del Norte International Bridge.

### Wait Times

Table 4.18 illustrates the average daytime wait times for POVs at the Paso del Norte International Bridge. Table 4.18 shows that the average daytime wait times varied from a low of 7.6 minutes in 2005 to a relative high of 32.3 minutes in 2009. The average daytime wait time for the period 2004 to 2009 for POVs was 20.8 minutes.

**Table 4.18: Average Daytime Wait Times for Paso del Norte International Bridge (Minutes)**

| Bridge                              | Mode | Year |      |      |      |      |      | Average (Minutes) |
|-------------------------------------|------|------|------|------|------|------|------|-------------------|
|                                     |      | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |                   |
| Paso del Norte International Bridge | POV  | 11.9 | 7.6  | 15.6 | 31.2 | 26.1 | 32.3 | 20.8              |

Note: Daytime is considered from 8:00 a.m. to 6:00 p.m.

Source: Bureau of Transportation Statistics<sup>8</sup>

### Bridge Crossings

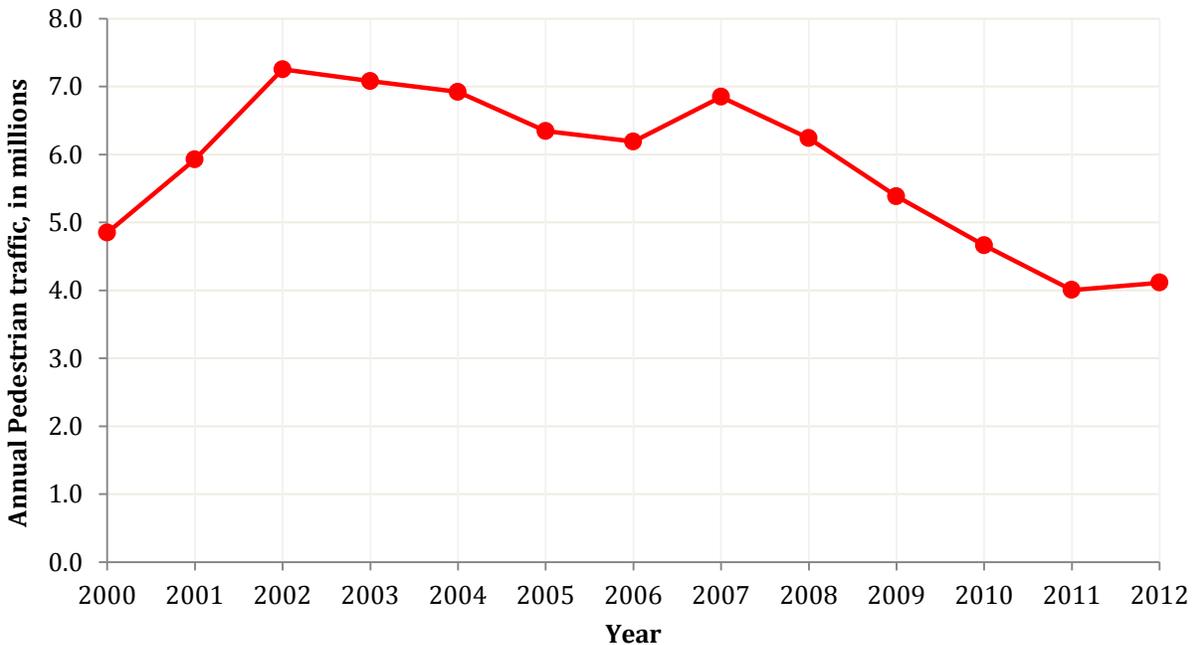
Figures 4.32 through 4.34 illustrate the northbound crossings by mode (POV, pedestrian, and bus) between 2000 and 2012 at the Paso del Norte International Bridge. Figure 4.35 illustrates the southbound pedestrian crossings from 2004 to 2012 at the Paso del Norte International Bridge.

Northbound Crossings: Figure 4.32 illustrates the trend in the number of northbound pedestrian crossings at the Paso del Norte International Bridge. Between 2000 and 2002,

the number of northbound pedestrian crossings increased an average of 22.3 percent per year to reach a peak of 7,251,991 in 2002. Since 2002, however, the number of northbound pedestrian crossings has decreased almost every year, with two exceptions: in 2007, the number of northbound pedestrian crossings increased relative to 2006, and in 2012, the number of northbound pedestrian crossings increased relative to 2011. Between 2002 and 2012, the number of northbound pedestrian crossings decreased 43.3 percent to reach 4,111,579 in 2012.

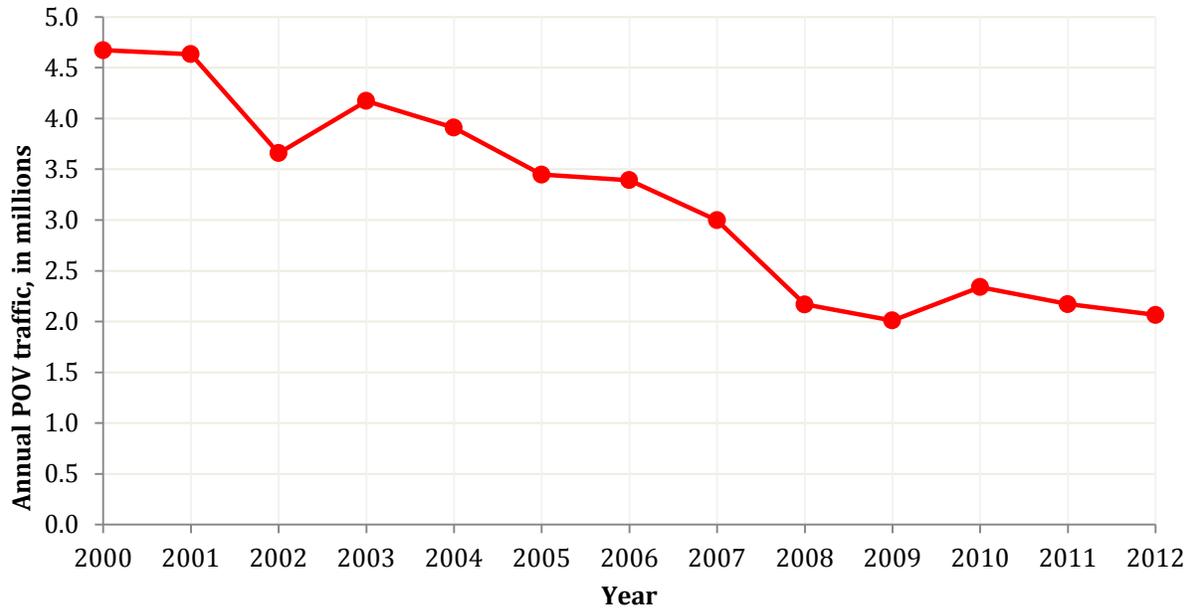
Figure 4.33 shows that the number of northbound POV crossings has generally decreased an average of 8.9 percent per year between 2000 and 2009 to reach the lowest recorded number of northbound crossings of 2,010,814 crossings in 2009. Since 2009, the number of northbound POV crossings increased 16.4 percent in 2010 relative to 2009 before decreasing an average of 6.1 percent per year between 2010 and 2012.

Figure 4.34 shows that the number of northbound bus crossings decreased an average of 46.9 percent per year from its peak value of 19,301 in 2002 to reach the lowest recorded number of northbound bus crossings of 1,534 in 2006. Between 2006 and 2012, the number of northbound bus crossings increased an average of 42.1 percent per year to reach 12,613 in 2012.



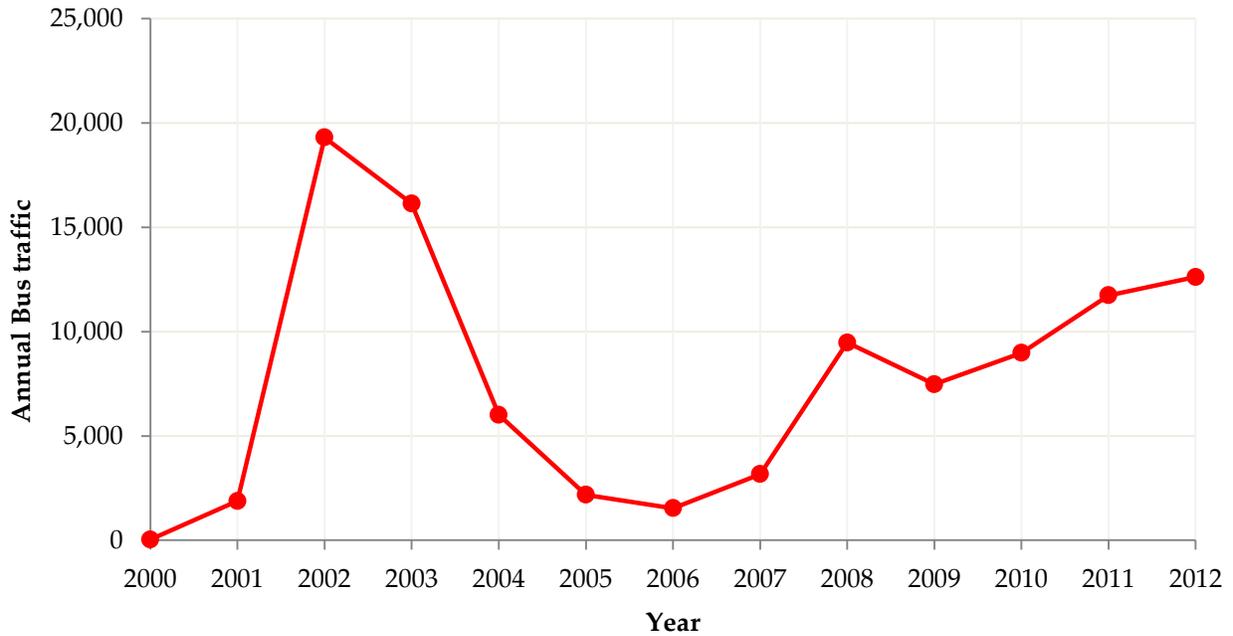
Source: CBP<sup>9</sup>

Figure 4.32: Paso del Norte International Bridge Northbound Pedestrian Crossings



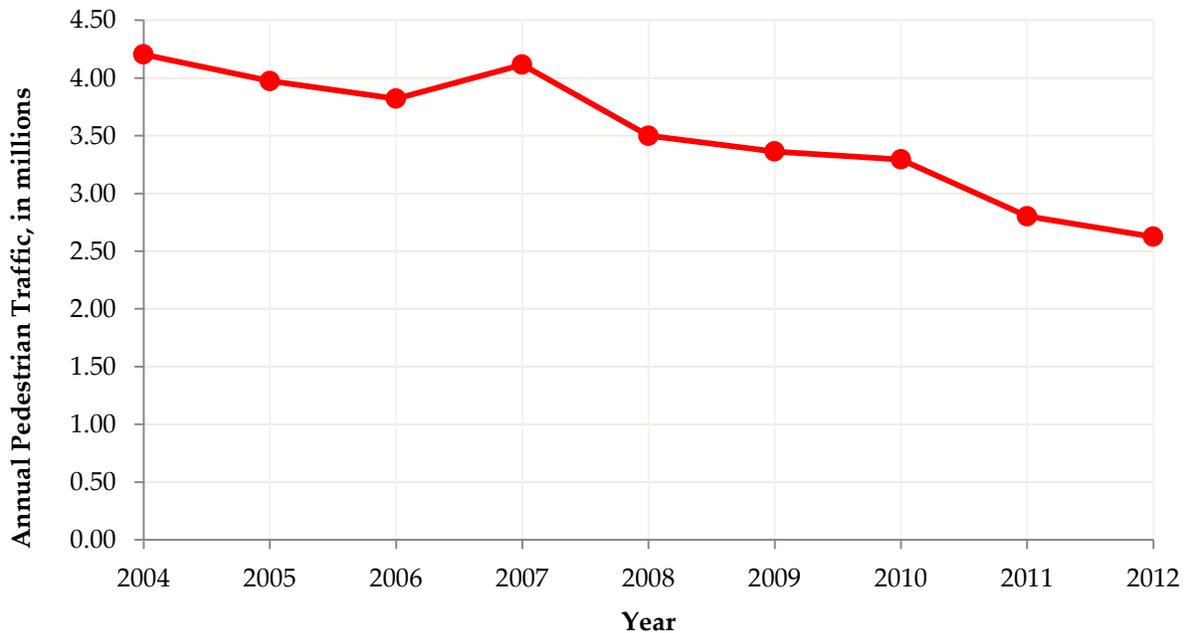
Source: CBP<sup>9</sup>

Figure 4.33: Paso del Norte International Bridge Northbound POV Crossings



Source: CBP<sup>9</sup>

Figure 4.34: Paso del Norte International Bridge Northbound Bus Crossings



Source: City of El Paso<sup>15</sup>

*Figure 4.35: Paso del Norte International Bridge Southbound Pedestrian Crossings*

Southbound Crossings: Figure 4.35 shows that the number of southbound pedestrian crossings decreased 37.6 percent from 4,203,676 in 2004 to 2,624,960 in 2012. The exception was 2007 when the number of southbound pedestrian crossings at the Paso del Norte International Bridge increased 7.7 percent relative to 2006 to peak at 4,115,586 crossings.

#### *Primary Roadways Serving Paso del Norte International Bridge*

On the U.S. side, the Paso del Norte International Bridge directly connects to El Paso Street, which intersects Loop 375 approximately 300 feet from the bridge (see Figure 4.36). At this intersection, Loop 375 recorded an AADT of 12,400 vehicles in 2010. The LOS for this section of Loop 375 was level A.

On the Mexican side, Juárez, a three-lane facility with all northbound lanes, is the primary ingress and egress to the bridge. Juárez runs parallel to Francisco Villa, which intersects with Ing. David Herrera (Avenida Malecón), a six-lane facility that connects all three international bridges: Good Neighbor, Bridge of the Americas, and Paso del Norte. Boulevard Fronterizo (also called Heroico Colegio Militar) runs underneath the bridge and connects with Norzagaray and Camino Real, the City of Juárez's western outer loops leading to the Anapra/Jerónimo area. Other main roads serving the area include Ignacio Mejía (also called Hermanos Escobar), 16 de Septiembre, Insurgentes, and Eje Vial Juan Gabriel.

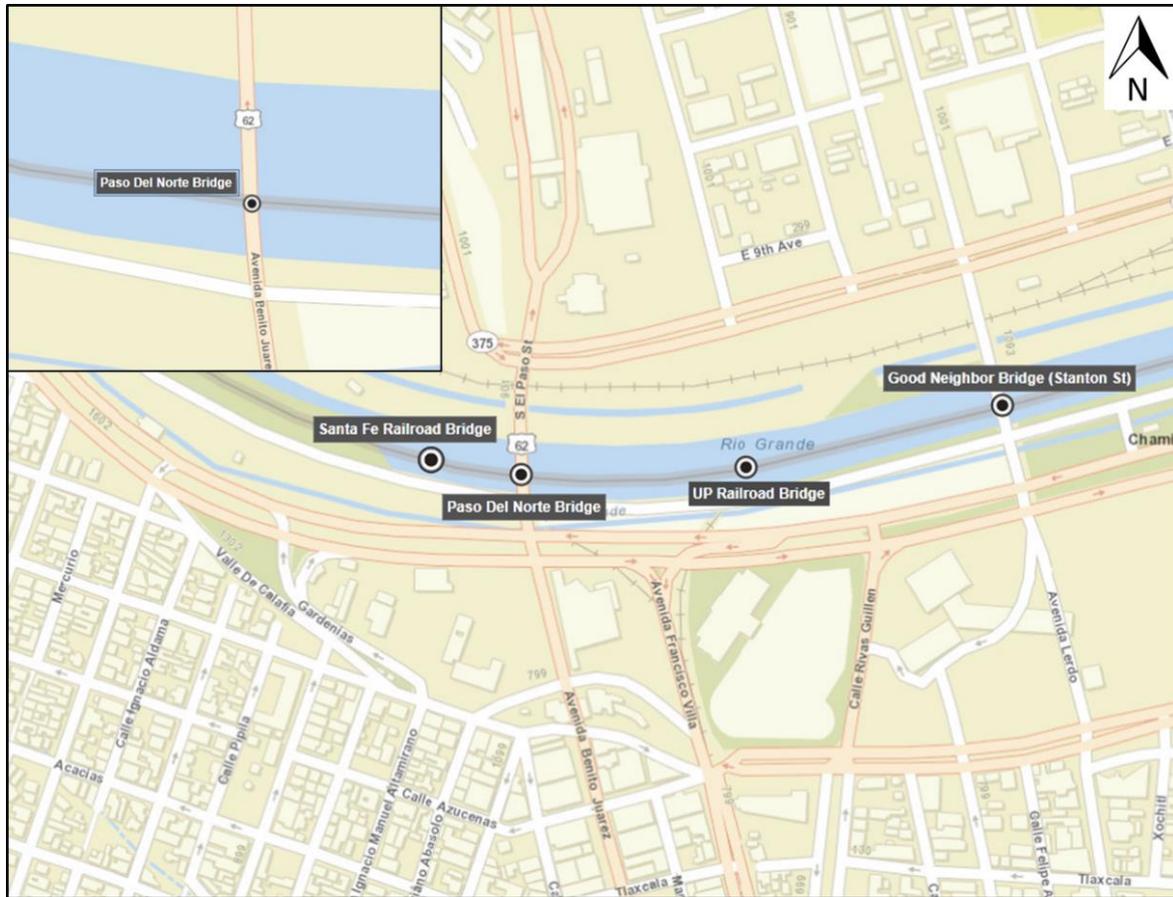


Figure 4.36: Paso del Norte International Bridge Existing Infrastructure Map

*Planned Changes in Infrastructure (Present to 2030)*

Four major road and interchange projects are planned near the Paso del Norte International Bridge. The first project involves construction of a BRT system on SH 20 between Santa Fe Street/Fourth Avenue, Kansas/Campbell Streets, and two other locations. Work on the project is expected to start in 2013 and be completed at an estimated cost of \$8.4 million in 2014.

The second project is a new highway location, as part of the Loop 375 extension. This planned project represents the section of Loop 375 between Park Street and Paisano Drive (US 62). Work on the project will begin in late 2018 and is expected to be completed at an estimated cost of \$184 million in 2022.

The third planned project in the area is the construction of a BRT system involving several locations on US 180 (Montana Avenue). The entire project is scheduled to begin in 2015 and to be completed in 2016 at an estimated cost of \$9.25 million.

The fourth and final project in the area involves the design and construction of road and pedestrian elements that are required on Oregon Street to integrate street cars

between Glory Road and the Paso del Norte International Bridge. The total cost of the project is estimated at \$133 million. Work on the project is expected to start in 2020.

#### 4.4.5 Santa Fe Railroad Bridge

BNSF Railway Company and UPRR currently interchange with the Mexican railroad company Ferromex in El Paso, Texas, and the City of Juárez, Chihuahua.<sup>17</sup> Both BNSF and UPRR have a rail yard and an intermodal terminal facility in El Paso.

The Santa Fe Railroad Bridge, also known as the BNSF Bridge or Black Bridge, is a steel bridge owned and operated by BNSF. It is located west of the interchange with Ferromex along the El Paso Subdivision line (see Figure 4.37) and continues to BNSF’s El Paso Intermodal Terminal at the Santa Fe yard on the U.S. side of the border. The BNSF El Paso Subdivision line is approximately 241 miles long and consists of a single mainline track with few sidings.<sup>17</sup>

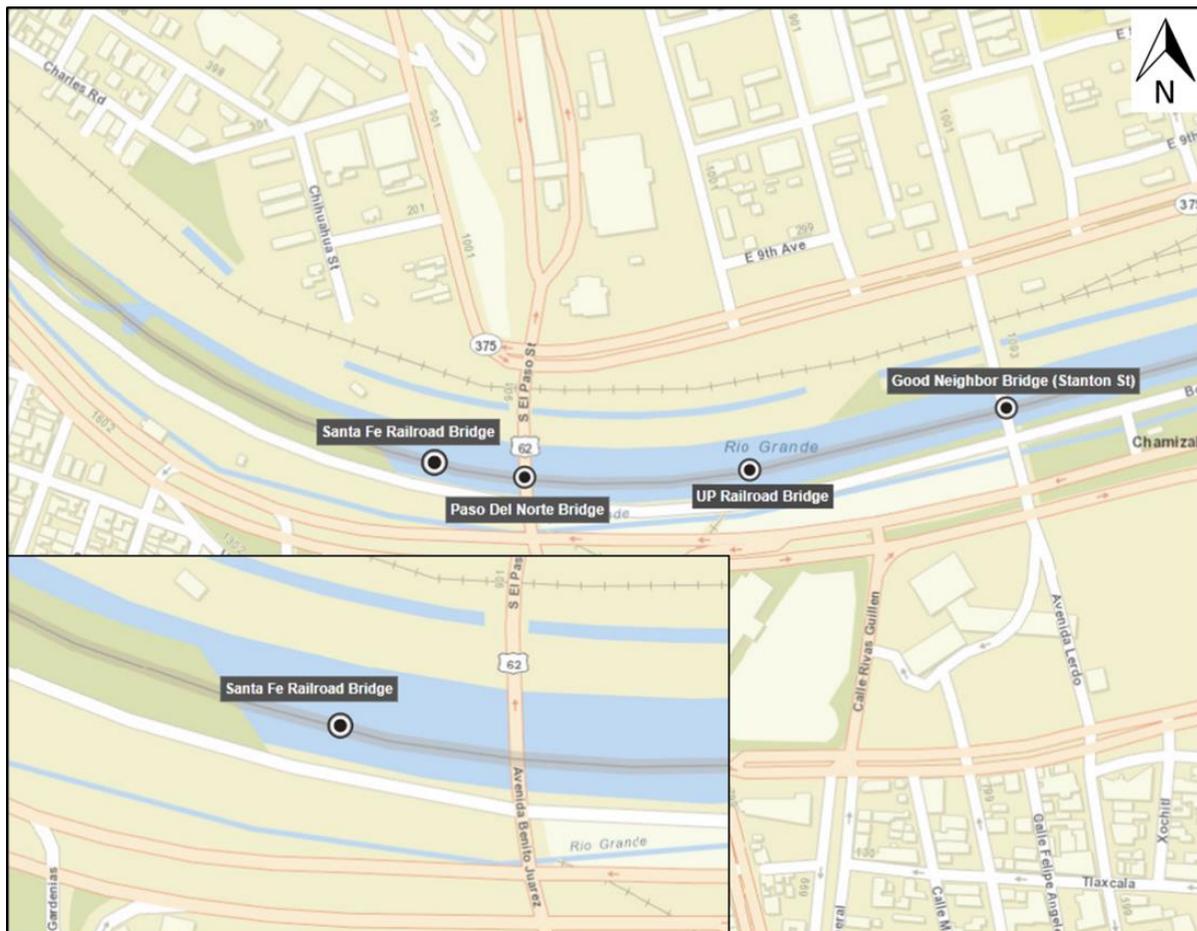


Figure 4.37: Santa Fe Railroad Bridge Existing Infrastructure Map

The BNSF El Paso Subdivision connects to BNSF’s East-West Transcon Route at Belen, New Mexico.<sup>17</sup> Safety and congestion concerns in the City of Juárez have resulted

in trains being permitted to operate only between 10:00 p.m. and 7:00 a.m. on the Mexican side of the El Paso crossing. This curfew has limited the capacity of the crossing to approximately 10 trains per day.<sup>17</sup>

BNSF completed the Chihuahuita connection in June 2010. The project involved rehabilitation and construction of 550 feet of track from BSNF Track 130 to the Santa Fe Railroad Bridge. The Chihuahuita connection provides an alternative route for southbound trains by allowing these trains to operate over Track 130, while northbound trains from Mexico continue to use the main track to the BNSF yard. The alternative Track 130 route enables southbound trains to park while “...interchanging BNSF locomotives with Ferromex locomotives, reconnecting air brake hoses on the locomotives to the train, and performing air brake tests prior to being moved into Mexico.”<sup>17</sup>

#### *Planned Changes in Infrastructure (Present to 2030)*

Planned changes in the rail infrastructure at the Santa Fe Railroad Bridge include construction of road/rail grade separations in the City of Juárez and relocation of the BNSF El Paso Yard.<sup>17</sup> The objective of the grade separations is to alleviate congestion and accidents that still occur at the at-grade crossings during morning rush hour.<sup>17</sup> According to the El Paso Region Freight Rail Study, 18,000 vehicles cross the rail line daily at the five major at-grade crossings between Ferromex’s rail yard in the City of Juárez and the international border crossing—a distance of less than 1 mile. The proposed improvement project includes grade separations at the five crossings with Municipio Libre, Vicente Guerrero, 16 de Septiembre, David Herrera, and Bulevard Fronterizo.<sup>17</sup> It is anticipated that the grade separations will expand the operating window from 9 to 12 hours and increase the capacity of the international crossing, which will reduce train congestion and delay and result in an estimated benefit of more than \$49 million.<sup>17</sup> Furthermore, the benefits from reduced shipping costs, inventory costs, and locomotive emissions associated with reduced train dwell time are estimated at more than \$61 million. The grade separations would also enhance vehicular traffic flow resulting in reduced delay, idling, emissions, congestion, accidents, and overall vehicle operating costs—benefits estimated at approximately \$19 million.<sup>17</sup> The total benefits of the grade separations are estimated at nearly \$130 million, while the estimated cost amounts to \$13.4 million.<sup>17</sup>

#### **4.4.6 Union Pacific Railroad Bridge**

UPRR’s rail line in El Paso is part of its Sunset Route that connects the West Coast to San Antonio (see Figure 4.38). The Union Pacific Railroad Bridge is a steel bridge owned and operated by UPRR. The bridge is east of the interchange with Ferromex, and from the bridge the rail line continues along the Valentine Subdivision to UPRR’s Alfalfa Yard on the U.S. side.<sup>17</sup> The largest volume of rail tonnage is moved on the Valentine Subdivision between El Paso and Sierra Blanca, followed by the Toyah Subdivision from

Sierra Blanca to Dallas/Fort Worth, and the Carrizozo Subdivision running north from El Paso.<sup>17</sup>

According to the El Paso Freight Rail Study, the Valentine Subdivision begins east of Tower 47 at the Dallas Street Yard in El Paso at the terminus of the Lordsburg Subdivision and ends west of Alpine, where the line continues east toward Del Rio as the Sanderson Subdivision. The Valentine Subdivision is approximately 216 miles long and crosses El Paso, Hudspeth, Culberson, Jeff Davis, Presidio, and Brewster Counties. The rail line passes through the cities of El Paso, Sierra Blanca, Valentine, and Marfa. Amtrak’s Sunset Limited route operates on the Valentine Subdivision, while BNSF has trackage rights on the segment from El Paso to Sierra Blanca. The Valentine Subdivision has a double track mainline from Tower 47 in El Paso to approximately 12 miles east, where it transitions to a single mainline track with limited sidings for the remainder of the subdivision.<sup>17</sup>

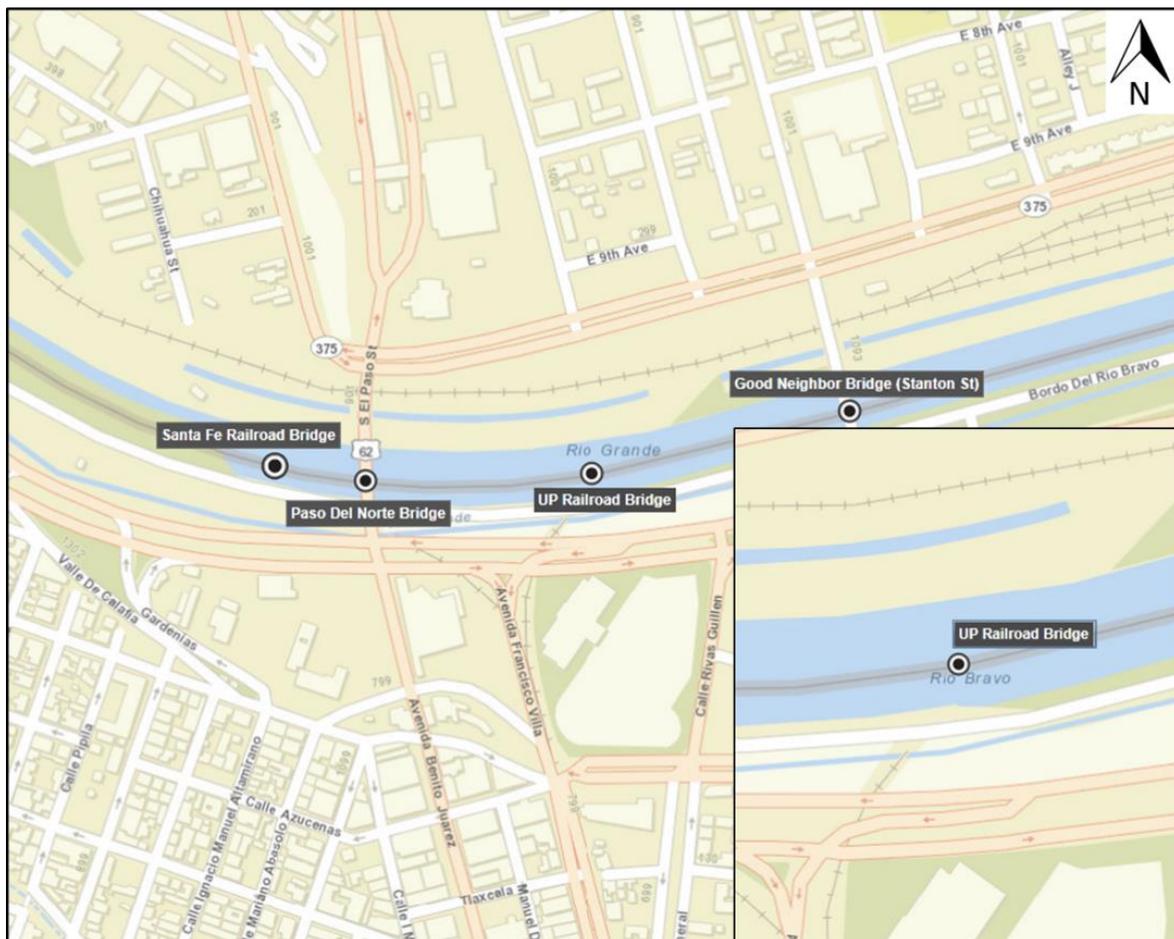
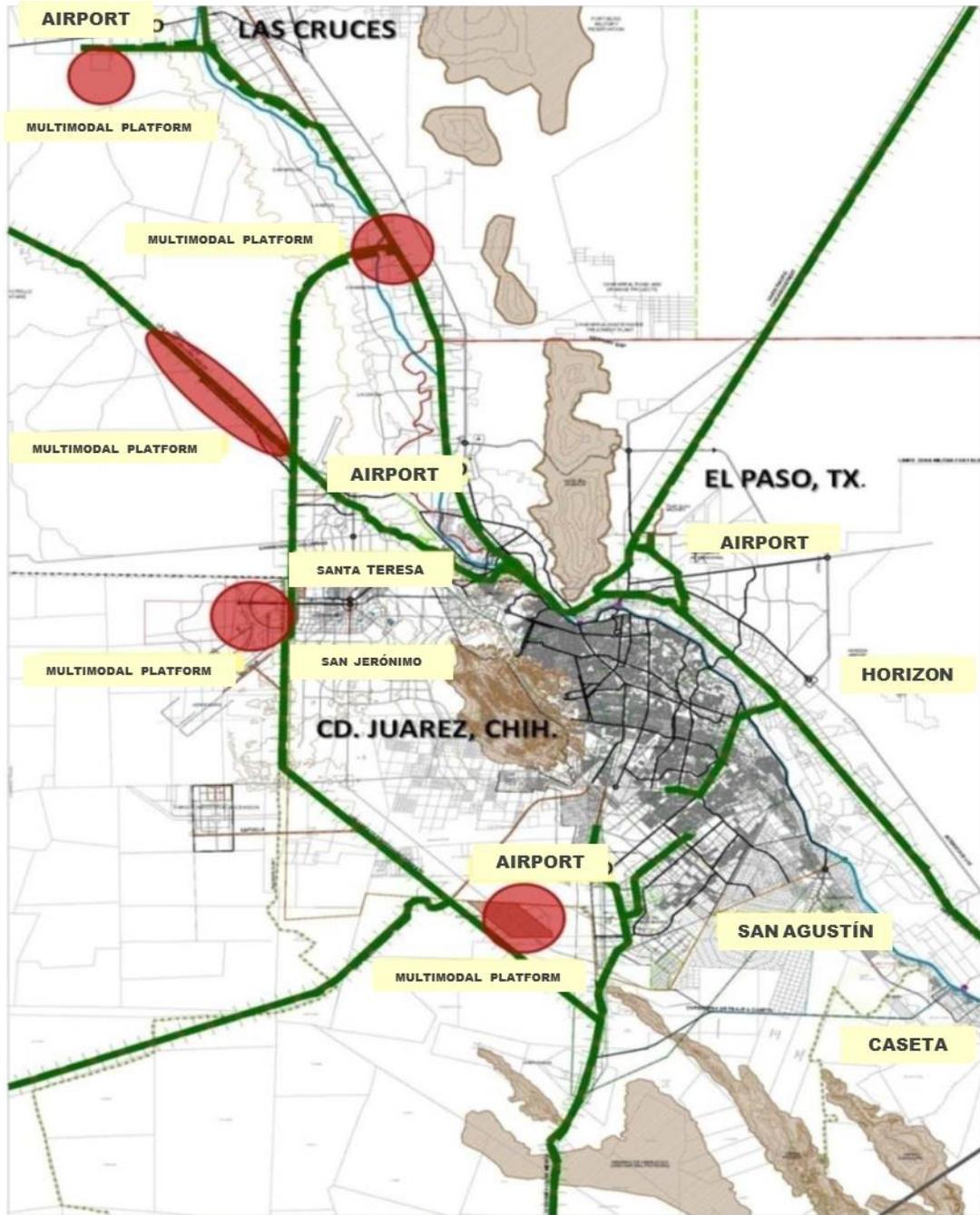


Figure 4.38: Union Pacific Railroad Bridge Existing Infrastructure Map

*Planned Changes in Infrastructure (Present to 2030)*

UPRR is currently constructing a new rail yard west of the Sunset Route intersection with the UPRR Tucumcari Line in the Santa Teresa area. Initially, the yard will serve as a refueling station, but in the future it will be upgraded to handle yard operations (e.g., crew handling, locomotives, and administration) currently handled at the Dallas Street Yard in El Paso. It is anticipated that the rail tracks west of the Dallas Street Yard will be removed to allow for new development to meet the needs of the city. Challenges include construction of grade separations near Bataan Trench to serve north-south streets connecting to the former rail yard.<sup>17</sup>

On the Mexican side, the Municipality of Juárez's long-term vision for rail infrastructure could impact UPRR traffic crossing at the Union Pacific Railroad Bridge. Figure 4.39 shows that the Municipality of Juárez's long-term vision includes construction of a rail bypass crossing through the Santa Teresa/Jerónimo POE. According to this vision, one alternative could be to divert UPRR contracted traffic to the rail bypass, while BNSF's contracted traffic could continue to traverse downtown's Black Bridge. A potential constraint given this alternative is, however, the capacity of the rail yards in downtown El Paso.



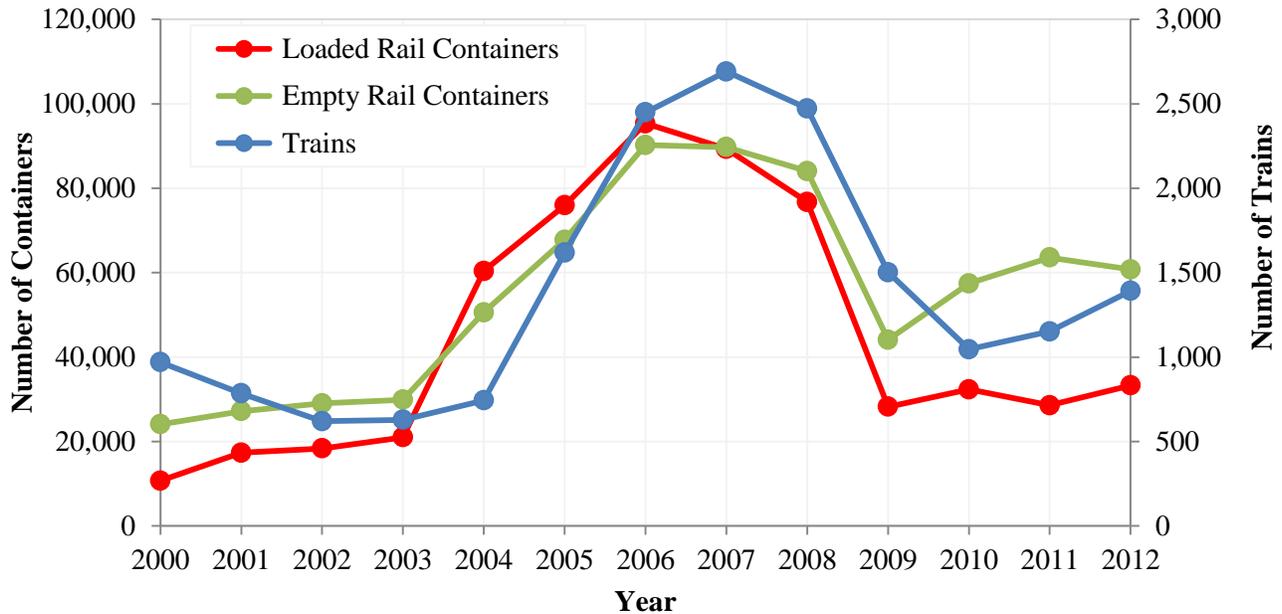
Source: Municipality of Juárez<sup>18</sup>

Figure 4.39: Long-Term Vision for Rail Infrastructure in City of Juárez

### Bridge Crossings

Figure 4.40 illustrates the northbound bridge crossings on both the Santa Fe Railroad Bridge and the Union Pacific Railroad Bridge. Figure 4.40 shows that the number of train crossings increased substantially (327.8 percent) between 2003 and 2007.

The decrease in the number of northbound train crossings (61.1 percent) between 2007 and 2010 is likely a reflection of the U.S. economy at the time. By 2012, the number of train crossings increased again by 33.1 percent relative to 2010. The number of container crossings followed a similar trend. Southbound rail crossing information was not available for analysis.



Source: Bureau of Transportation Statistics<sup>19</sup>

Figure 4.40: Santa Fe and Union Pacific Railroad Bridges Northbound Trains and Container Crossings

#### 4.5 New Mexico/Mexico—Doña Ana/Juárez

There is one crossing between Doña Ana County, New Mexico, and the Municipality of Juárez—the Santa Teresa/Jerónimo land crossing. The crossing serves pedestrians, non-commercial, and commercial vehicles (see Table 4.19).

Table 4.19: Summary of Doña Ana County/Municipality of Juárez Crossings

| POE                       | Location            | Pedestrians | Non-commercial Vehicles | Commercial Vehicles | Rail |
|---------------------------|---------------------|-------------|-------------------------|---------------------|------|
| Santa Teresa/Jerónimo POE | Near El Paso/Juárez | Yes         | Yes                     | Yes                 | No   |

#### 4.5.1 Santa Teresa/Jerónimo POE

The POE opened in 1992 and was rebuilt in 1997. The Santa Teresa/Jerónimo POE has two lanes and includes the largest facility for the import and export of livestock on the U.S.-Mexico border.<sup>20</sup> This facility includes a special opening through the border fence and is located approximately 1 mile east of the vehicular POE. On the U.S. side, Pete V. Domenici Memorial Highway connects the Santa Teresa/Jerónimo POE with NM 9 and IH 10. On the Mexican side, a loop connects the Santa Teresa/Jerónimo POE with MEX 2 and MEX 45D. The crossing is known as Cruce Jerónimo/Santa Teresa in Mexico.

##### *Border Station*

On the U.S. side, the new facility that replaced the original 1992 POE was completed in 1997.<sup>21</sup> In March 2013, the addition of two POV booths (resulting in four total) increased the capacity of the crossing.

##### *Hours of Operation*

The POE currently operates daily from 6:00 a.m. to midnight seven days a week for non-commercial vehicles. For commercial/cargo vehicles, the crossing operates from 8:00 a.m. to 8:00 p.m. Monday through Friday and from 10:00 a.m. to 2:00 p.m. on Saturdays.<sup>22</sup>

##### *Tolls*

No tolls are charged to cross at the Santa Teresa/Jerónimo POE.

##### *Wait Times*

Table 4.20 shows that the average daytime wait times at the Santa Teresa/Jerónimo POE have been negligible, averaging 5.4 minutes for POVs and 1.1 minutes for commercial vehicles.

**Table 4.20: Average Daytime Wait Times for Santa Teresa/Jerónimo POE  
(in Minutes)**

| POE                             | Mode       | Year |      |      |      |      |      | Average<br>(Minutes) |
|---------------------------------|------------|------|------|------|------|------|------|----------------------|
|                                 |            | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |                      |
| Santa<br>Teresa/Jerónimo<br>POE | POV        | 0.8  | 0.1  | 1.6  | 8.6  | 6.7  | 14.6 | 5.4                  |
|                                 | Commercial | 0.1  | 0.1  | 0.7  | 2.1  | 0.6  | 3.2  | 1.1                  |

Note: Daytime is considered from 8:00 a.m. to 6:00 p.m.

Source: Bureau of Transportation Statistics<sup>8</sup>

*Santa Teresa/Jerónimo Livestock POE Facility*

The Santa Teresa/Jerónimo Livestock POE Facility (owned by Unión Ganadera Regional de Chihuahua [UGRC]) at the Santa Teresa/Jerónimo POE is the largest in size and in number of crossings on the U.S.-Mexico border. UGRC operates on both sides of the Santa Teresa/Jerónimo crossing (see Figures 4.41 through 4.43). Cattle, horses, and other livestock are processed at this facility.<sup>20</sup>



*Figure 4.41: Santa Teresa/Jerónimo Livestock POE*



*Figure 4.42: Santa Teresa/Jerónimo Livestock POE U.S. Entrance*



Figure 4.43: Santa Teresa/Jerónimo Livestock POE Crossing Process

Located approximately 1 mile east of the Santa Teresa/Jerónimo POE, the facility can hold up to 13,000 head and has the capacity to process the crossing of up to 4,500 head in less than 12 hours. The facility includes inspection, feeding, and quarantine facilities. UGRC plans to expand the facility in 2014 to accommodate an additional 2,000 head for a total of 15,000-head capacity.<sup>20</sup>

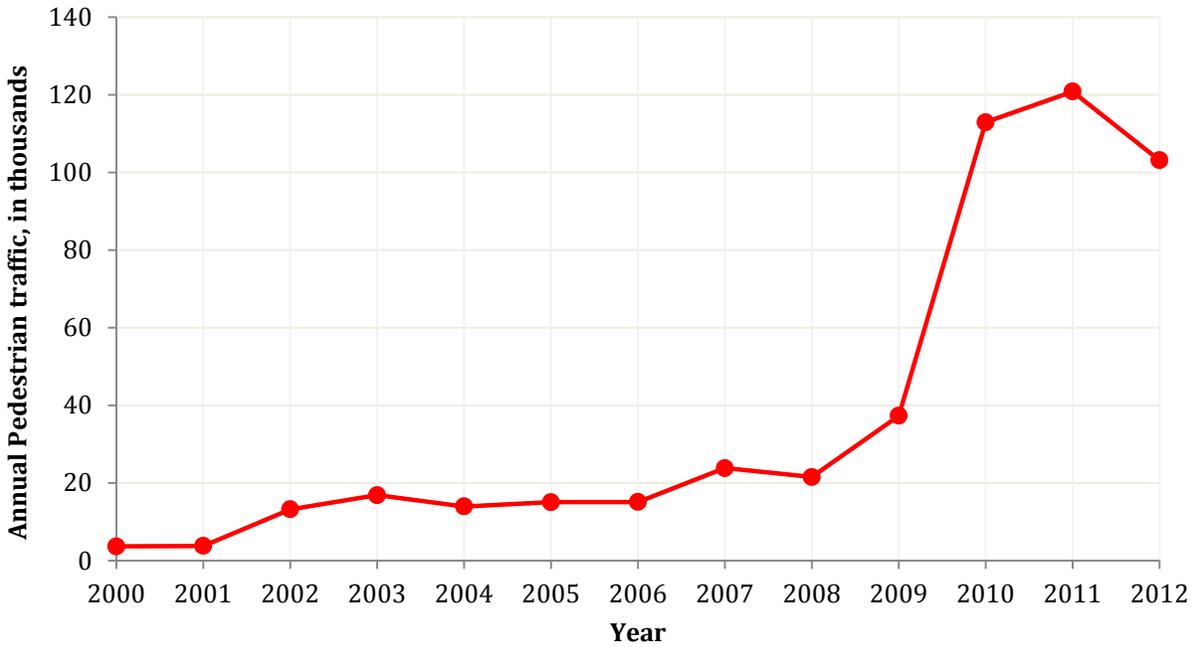
Most cattle crossing at the facility are feedstock destined for pasture and feedlots in Texas, New Mexico, Arizona, California, and the Midwestern United States. Even though most animals originate in Chihuahua, there is an increasing trend to import animals from throughout Mexico.<sup>20</sup>

At this facility, livestock are penned and processed at the border and then walked into the United States, saving time and transportation costs while minimizing weight loss. At other border livestock facilities, livestock must be trucked between processing facilities on each side of the border, increasing costs and stress to the animals.

#### *Land Crossings*

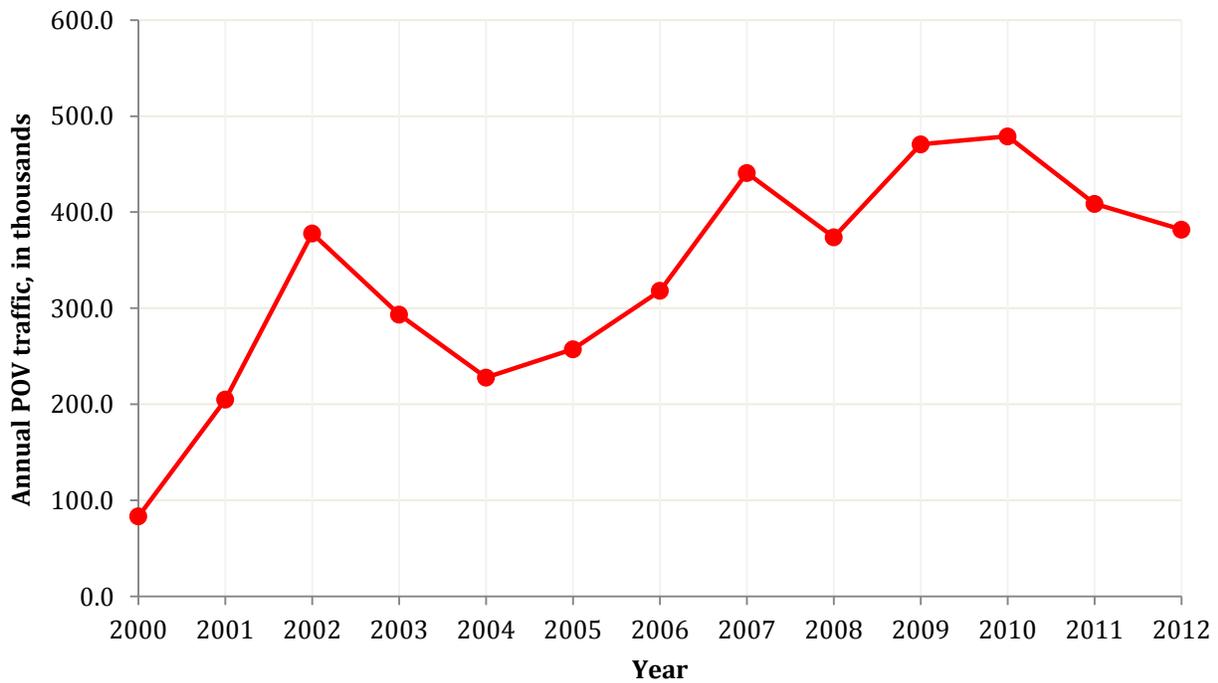
Figures 4.44 through 4.47 illustrate the number of northbound crossings by mode between Mexico and the United States between 2000 and 2012 at the Santa Teresa/Jerónimo POE. Southbound crossing data are not available for the POE.

Figure 4.44 shows that for the period 2000 to 2008, the annual number of northbound pedestrian crossings increased an average of 24.9 percent per year. However, between 2008 and 2009, and 2009 and 2010, a dramatic increase in the number of northbound pedestrian crossings is seen at 73.2 percent and 202.6 percent, respectively. In 2011, the number of northbound pedestrian crossings increased 7.0 percent relative to 2010 to peak at 120,813. However, in 2012, the number of northbound pedestrian crossings decreased 14.6 percent to 103,119.



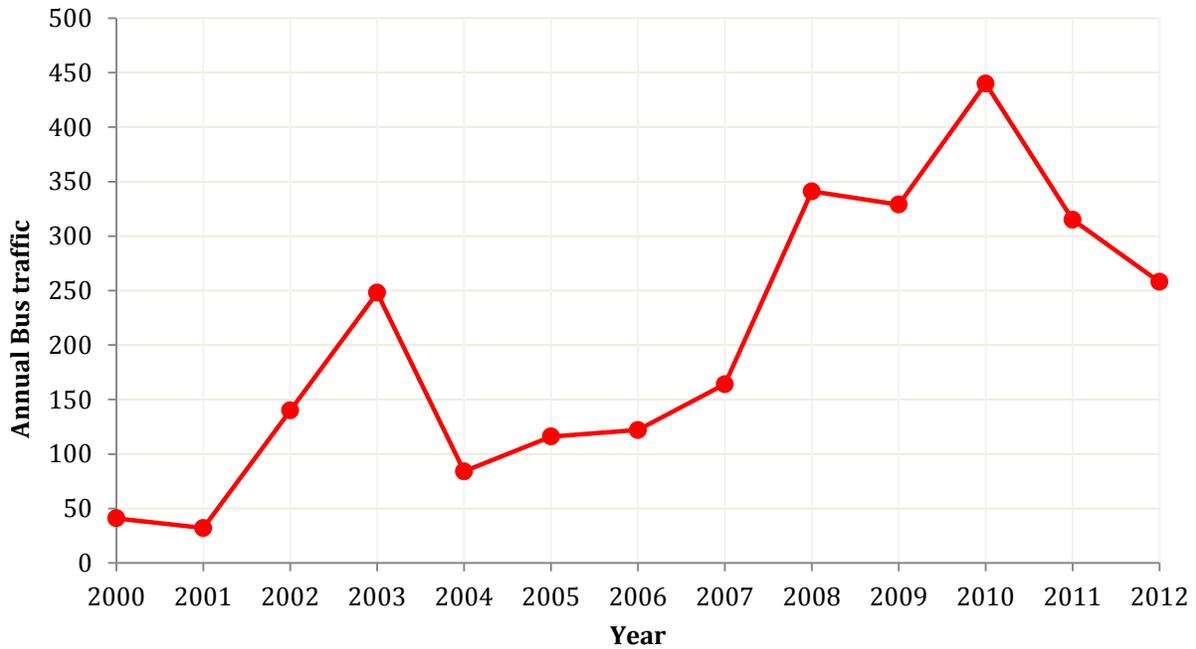
Source: CBP<sup>9</sup>

Figure 4.44: Santa Teresa/Jerónimo POE Northbound Pedestrian Crossings



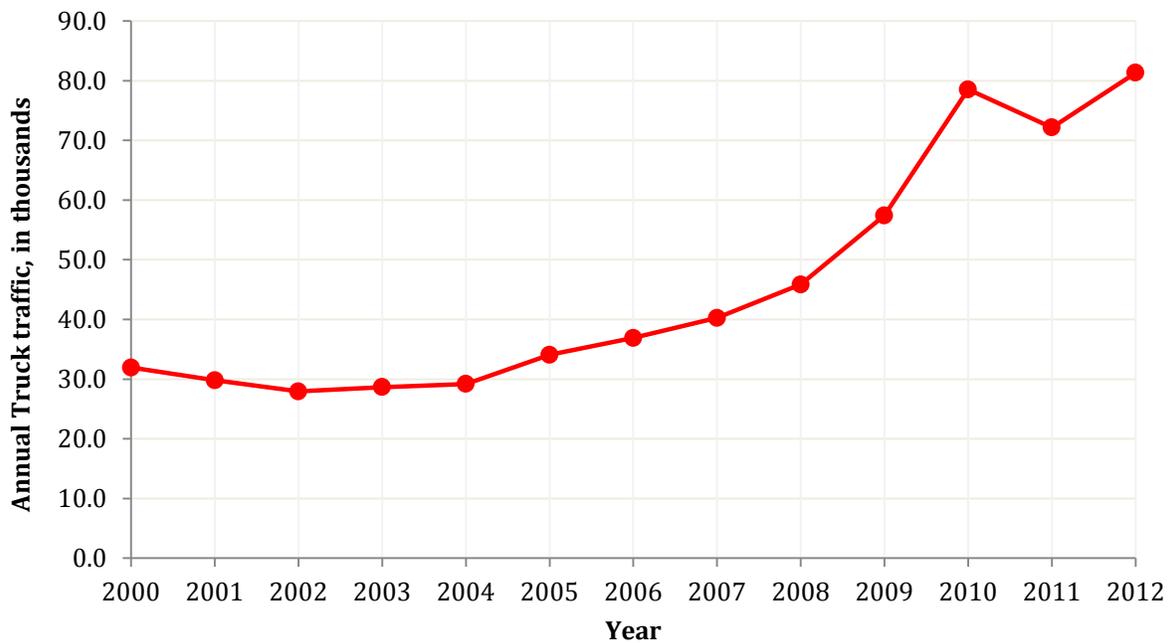
Source: CBP<sup>9</sup>

Figure 4.45: Santa Teresa/Jerónimo POE Northbound POV Crossings



Source: CBP<sup>9</sup>

Figure 4.46: Santa Teresa/Jerónimo POE Northbound Bus Crossings



Source: CBP<sup>9</sup>

Figure 4.47: Santa Teresa/Jerónimo POE Northbound Commercial Truck Crossings

Although the number of northbound POV crossings increased between 2000 and 2012 at the Santa Teresa/Jerónimo POE, the number of crossings in the intermediate years varied substantially (see Figure 4.45). Between 2000 and 2002, the number of northbound crossings increased an average of 113.0 percent per year before decreasing between 2002 and 2004 by an average of 22.4 percent per year. This was followed by a period (2004 to 2007) during which the number of POV crossings increased to reach 440,857 in 2007. In 2008, northbound POV crossings decreased to reach 373,905, but between 2008 and 2010 the number of crossings increased an average of 13.2 percent per year to reach a peak of 478,970 in 2010. Between 2010 and 2012, the number of northbound POV crossings decreased an average of 10.7 percent per year to reach 381,903 in 2012.

Similar to the northbound POV crossings at the Santa Teresa/Jerónimo POE, the number of northbound bus crossings increased between 2000 and 2012, but the annual crossings in the intermediate years varied substantially. Figure 4.46 shows that the number of northbound bus crossings increased an average of 178.4 percent per year between 2001 and 2003 before decreasing 66.1 percent in 2004. Between 2004 and 2010, the number of northbound bus crossings increased an average of 31.8 percent per year to reach a peak of 440 in 2010. Between 2010 and 2012, the number of northbound bus crossings decreased an average of 23.4 percent per year to reach 258 crossings in 2012.

Figure 4.47 shows that the number of northbound commercial crossings ranged between 27,000 and 32,000 between 2000 and 2004. Between 2004 and 2010, the number of northbound commercial crossings increased an average of 18.0 percent per year to reach 78,879 crossings in 2010. In 2011, the number of northbound commercial crossings decreased 9.5 percent to 71,362 crossings. However, in 2012, it increased 13.1 percent to peak at 80,744 crossings.

#### *Primary Roadways Serving Santa Teresa/Jerónimo POE*

On the U.S. side, NM 136 provides direct access to the Santa Teresa/Jerónimo POE (see Figure 4.48). NM 136 is a four-lane divided facility. In 2010, the AADT on NM 136 was 5,245 vehicles, of which 28.0 percent were trucks. Approximately 2 miles from the Santa Teresa/Jerónimo POE, NM 136 is intersected by NM 9 (Columbus Road), which is a two-lane undivided highway that runs parallel to the U.S.-Mexico border in New Mexico. In 2010, the AADT on NM 9 was 625 vehicles, of which 42.0 percent were trucks.

On the Mexican side, MEX 48, a two-lane facility, is the primary ingress and egress to the crossing. The Anapra-San Jerónimo highway, a two-lane facility that was unpaved until 2010, connects Anapra, the livestock POE, and the Santa Teresa/Jerónimo POE. Ascensión-City of Juárez and MEX 45D intersect MEX 48, creating an extensive outer loop that links to the Ysleta-Zaragoza International Bridge.

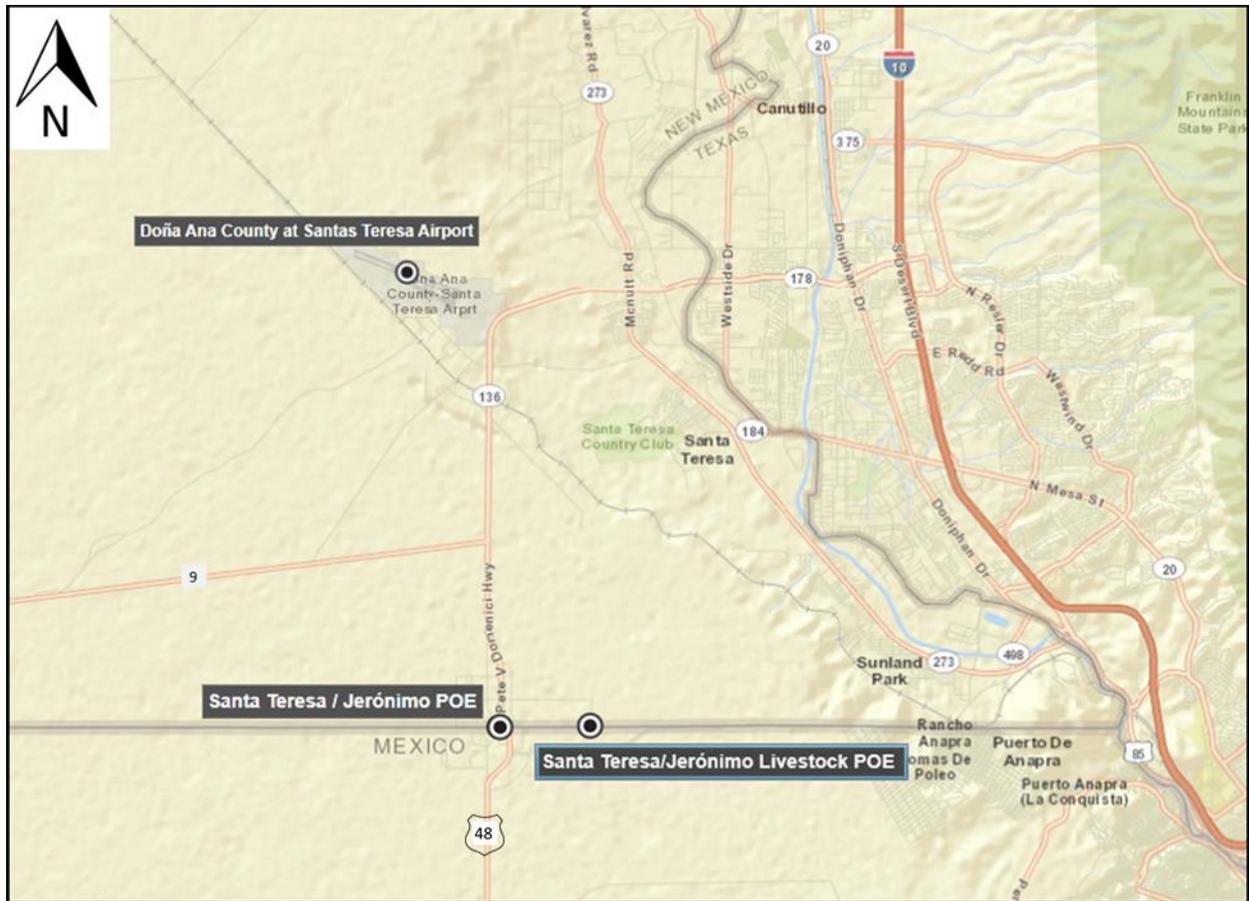


Figure 4.48: Santa Teresa/Jerónimo POE Existing Infrastructure Map

#### Planned Changes in Infrastructure (Present to 2030)

Two major road and interchange projects are planned near the Santa Teresa/Jerónimo POE. The first involves preventive maintenance and repair work on NM 136, including design and construction of a multi-use path, drainage improvements, and erosion control. Work on this project began in 2012, and it is estimated that the project will cost \$6 million. The planned investment would improve ride quality and enhance the overall safety of the facility. It is anticipated that the LOS on NM 136 would remain at its current level A for the foreseeable future.

The second project involves improvements to County Road A017 (Strauss Road) and Industrial Drive, relocation of St. John's access point on NM 136, and new construction of the section of Strauss Road from NM 136 for approximately 6.5 miles to the UPRR Intermodal Yard. The project's cost is estimated at \$11.5 million, and work began in 2012. Current AADT on this facility is estimated at 12,777 vehicles, of which 28 percent are trucks. It is anticipated that the LOS on Strauss Road would remain at its current level A for the foreseeable future.

## 4.6 Concluding Remarks

This chapter of the Border Master Plan describes the current and projected POEs in the Focused Study Area and the current and planned transportation infrastructure that serves these POEs. The next chapter provides the priorities assigned to the planned POE and transportation infrastructure projects in the Focused Study Area.

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- <sup>1</sup> Bureau of Transportation Statistics, North American Transborder Freight Data, <http://transborder.bts.gov/programs/international/transborder/> (accessed May 2013).
  - <sup>2</sup> POEs as defined by CBP. The stakeholder information and data that were submitted, however, used “POE” and “bridge/crossing” interchangeably. These terms are thus used interchangeably in the remainder of the document.
  - <sup>3</sup> NMBA, Santa Teresa, [http://www.nmborder.com/Santa\\_Teresa.aspx](http://www.nmborder.com/Santa_Teresa.aspx) (accessed October 2013).
  - <sup>4</sup> TxDOT, Texas-Mexico International Bridges and Border Crossings Existing and Proposed, 2011, [http://ftp.dot.state.tx.us/pub/txdot-info/iro/2011\\_international\\_bridges.pdf](http://ftp.dot.state.tx.us/pub/txdot-info/iro/2011_international_bridges.pdf) (accessed June 2013).
  - <sup>5</sup> Bloomberg, US Dollar-Mexican Peso Exchange Rate, <http://www.bloomberg.com/quote/USDMXN:CUR> (accessed July 2013).
  - <sup>6</sup> CBP, Port of Entry – Presidio, <http://cbp.gov/xp/cgov/toolbox/contacts/ports/tx/2403.xml> (accessed June 2013).
  - <sup>7</sup> SCT, Dirección General de Desarrollo Carretero, last updated August 29, 2012.
  - <sup>8</sup> Bureau of Transportation Statistics, Transportation Statistics Annual Report 2010, [http://www.rita.dot.gov/bts/sites/rita.dot.gov/bts/files/publications/transportation\\_statistics\\_annual\\_report/2010/index.html](http://www.rita.dot.gov/bts/sites/rita.dot.gov/bts/files/publications/transportation_statistics_annual_report/2010/index.html) (accessed June 2013).
  - <sup>9</sup> CBP, Texas Bridge Crossing Data from 2000 to 2012 (received March 2012 and June 2013). New Mexico Santa Teresa bridge data taken from [http://transborder.bts.gov/programs/international/transborder/TBDR\\_BC/TBDR\\_BCQ.html](http://transborder.bts.gov/programs/international/transborder/TBDR_BC/TBDR_BCQ.html).
  - <sup>10</sup> Texas Pacifico Grupo Mexico, Route Map, <http://www.texaspacifico.com/routeMap.html> (accessed June 2013).
  - <sup>11</sup> Ferromex División Chihuahua, <http://www.ferromex.com.mx/servi/divChi.html> (accessed October 2013).
  - <sup>12</sup> Ferromex, Capacidad de Vía, <http://www.ferromex.com.mx/servi/capac.html> (accessed October 2013).

- 13 CBP, Port of Entry – Fabens,  
<http://cbp.gov/xp/cgov/toolbox/contacts/ports/tx/2404.xml> (accessed January 2013).
- 14 CBP, Port of Entry – El Paso,  
<http://cbp.gov/xp/cgov/toolbox/contacts/ports/tx/2402.xml> (accessed January 2013).
- 15 City of El Paso provided most current toll rates and 2004 to 2012 southbound bridge crossing data. Correspondence with international bridges director, April 2013.
- 16 Puente Internacional Zaragoza-Ysleta, private correspondence with international bridges director, April 2013.
- 17 TxDOT, El Paso Region Freight Rail Study, prepared by HNTB, 2011,  
[http://ftp.dot.state.tx.us/pub/txdot-info/rail/freight/el\\_paso.pdf](http://ftp.dot.state.tx.us/pub/txdot-info/rail/freight/el_paso.pdf) (accessed June 2013).
- 18 Municipality of Juárez, private correspondence, October 2012.
- 19 Bureau of Transportation Statistics, Border Crossing/Entry Data  
[http://transborder.bts.gov/programs/international/transborder/TBDR\\_BC/TBDR\\_BCQ.html](http://transborder.bts.gov/programs/international/transborder/TBDR_BC/TBDR_BCQ.html)  
(accessed June 2013).
- 20 NMBA, Livestock Imports and Exports,  
<http://www.nmborder.com/livestock.html> (accessed March 2013).
- 21 NMBA, Santa Teresa POE,  
[http://www.nmborder.com/santa\\_teresa.html](http://www.nmborder.com/santa_teresa.html) (accessed March 2013).
- 22 CBP, Port of Entry – Santa Teresa,  
<http://www.cbp.gov/xp/cgov/toolbox/contacts/ports/nm/2408.xml> (accessed June 2013).