



Appendix B: Existing Conditions



RMS 2052
METROPOLITAN TRANSPORTATION PLAN
Existing Conditions Technical Memorandum



Prepared by **WSP**

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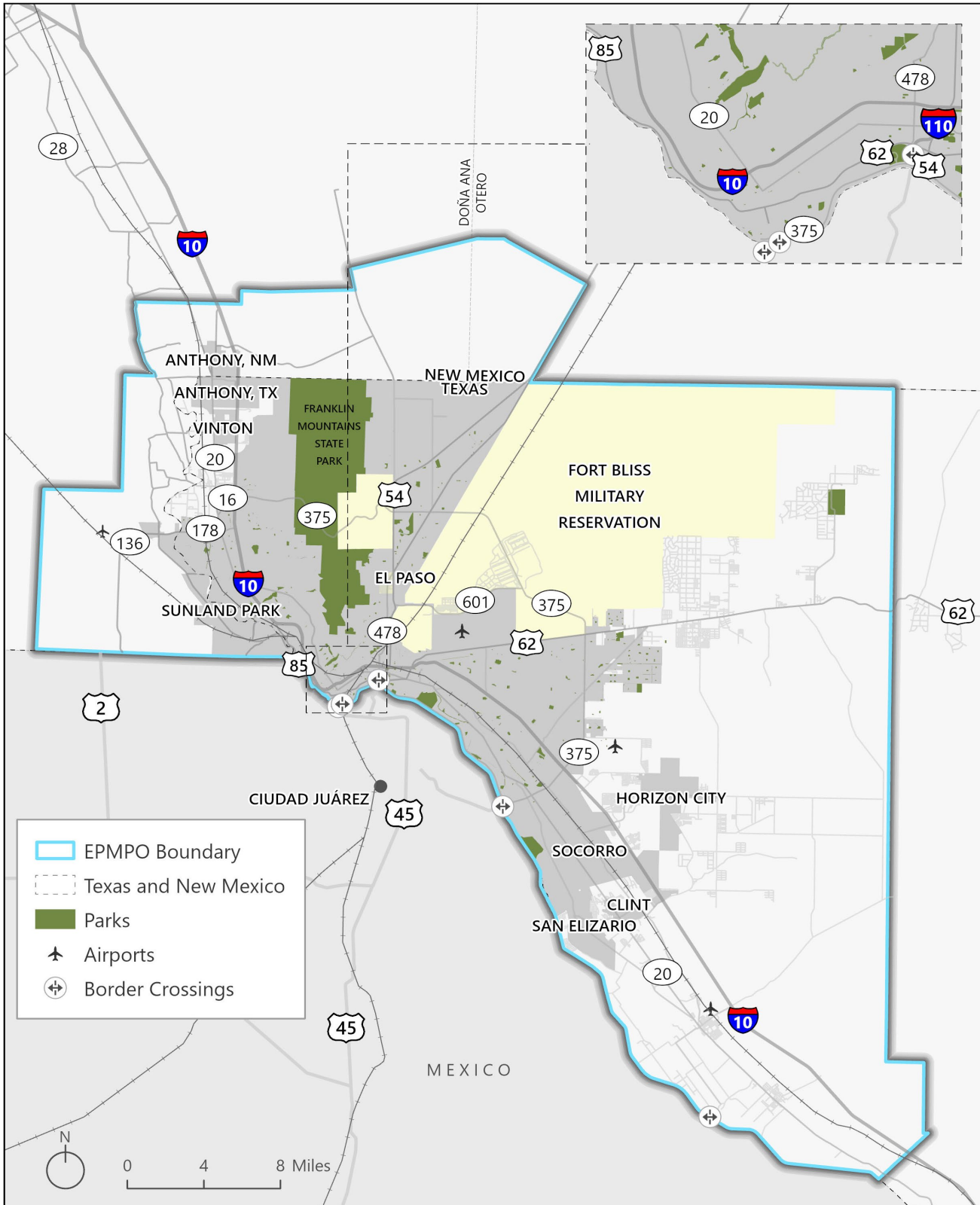
1 INTRODUCTION

The El Paso Metropolitan Planning Organization (EPMPO) is preparing the Regional Mobility Strategy 2052 (RMS 2052), the region’s Metropolitan Transportation Plan (MTP), which serves as a comprehensive, multimodal guide for transportation improvements and investments for the next 28 years. The metropolitan transportation planning process is a formal, federally mandated process required for a region to receive federal transportation improvement dollars. The metropolitan planning process takes a continuous, cooperative, and comprehensive planning approach (known as “3-C”) to preparing the MTP. The MTP is being developed through both technical analysis and the continuous and collaborative participation of numerous transportation agencies and organizations in an open, timely, and meaningful public outreach process. This document is a technical memorandum summarizing the existing conditions for the metropolitan planning area of the EPMPO. As such, this document covers existing social, economic, and transportation conditions.

2 METROPOLITAN PLANNING AREA

The metropolitan planning area (MPA) for the EPMPO encompasses the entirety of El Paso County, Texas, as well as portions of Doña Ana and Otero Counties in New Mexico, and the sovereign nation of Ysleta del Sur Pueblo. The MPA is inclusive of the following municipalities in Texas: Anthony, Clint, El Paso, Horizon City, San Elizario, and Socorro. In New Mexico, the MPA is inclusive of the following two municipalities: Anthony and Sunland Park. The MPA for the EPMPO is displayed in **Figure 2-1**.

Figure 2-1: Metropolitan Planning Area (MPA)





3 SOCIAL AND ECONOMIC CONDITIONS

The socioeconomic characteristics of a region are key factors in understanding regional travel patterns. Some important socioeconomic factors are population size, demographic distribution, education, employment, income levels, etc. Understanding the current and future attributes and trends is essential in assessing the transportation demand that pave the way for making informed decisions in transportation planning.

3.1 SOCIAL CONSIDERATIONS

3.1.1 POPULATION

The MPA has experienced significant population growth over the ten-year period 2013-2022, with a growth rate of 6.4%. **Figure 3-1** shows that EPMPPO population growth stagnated from 2015 to 2020, but a sharp increase has been observed following the COVID-19 pandemic. Both states encompassing the EPMPPO region saw growth in population over this course of time, but the growth rate differed significantly. While New Mexico had a 2.1% population growth rate, the Texas population grew by approximately 14%. The population of Doña Ana County (4.1%) and Otero County (4.8%) in New Mexico grew slower than that of El Paso County (6.3%) in Texas. **Table 3-1** shows the population levels for the MPA and comparative geographies from 2013 through 2022.

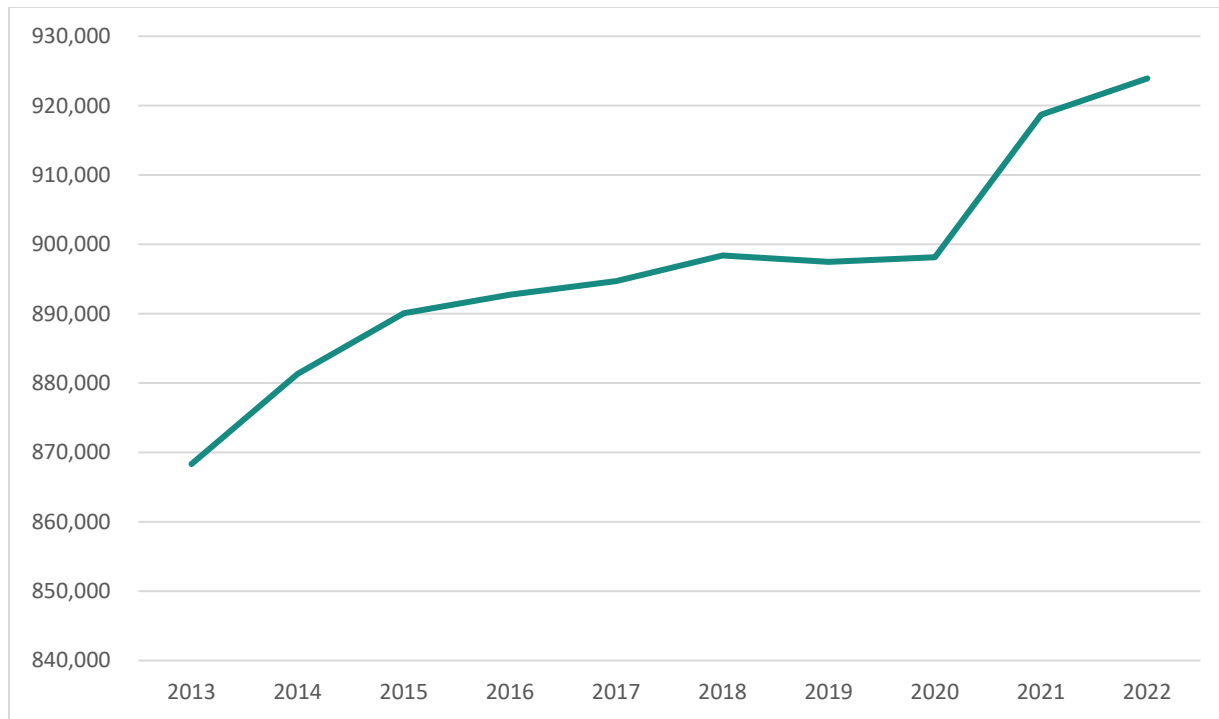
Table 3-1: Population

Geography	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Percent Change
New Mexico	2,069,706	2,080,085	2,084,117	2,082,669	2,084,828	2,092,434	2,092,454	2,097,021	2,109,366	2,112,463	2.1%
Texas	25,639,373	26,092,033	26,538,614	26,956,435	27,419,612	27,885,195	28,260,856	28,635,442	28,862,581	29,243,342	14.1%
Doña Ana County, NM	211,175	212,942	213,963	213,825	213,849	215,338	216,069	217,696	218,157	219,870	4.1%
Otero County, NM	64,767	65,415	65,318	65,333	65,130	65,745	66,137	66,804	67,298	67,850	4.8%
El Paso County, TX	813,015	823,862	831,095	833,592	834,825	837,654	836,062	836,915	860,485	863,832	6.3%
EPMPPO MPA	868,323	881,316	890,072	892,740	894,696	898,400	897,482	898,137	918,689	923,916	6.4%

Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table B01001.



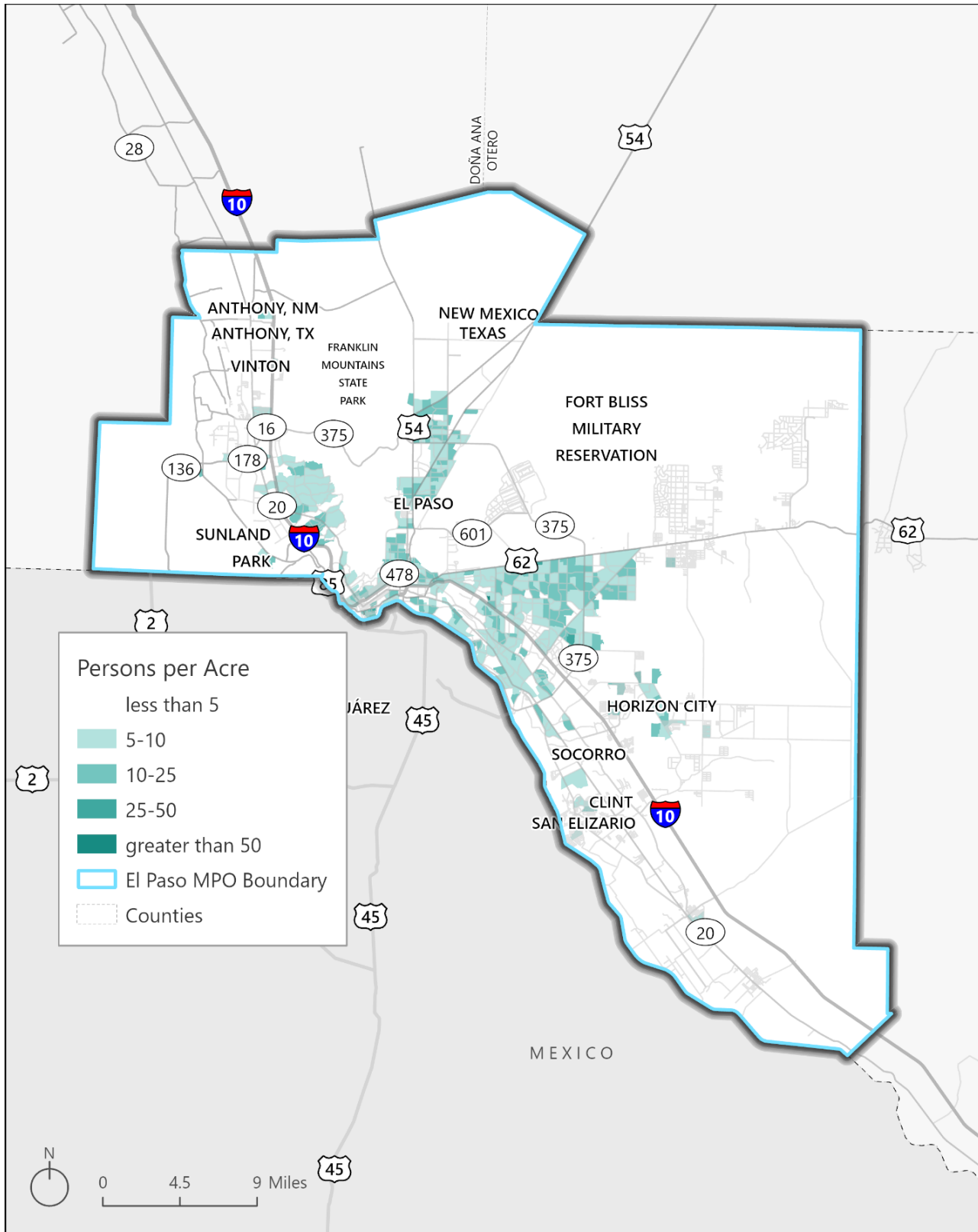
Figure 3-1: Population Trend in EPMPO



Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table B01001.

How the population is distributed across the region is important to analyze for effective transportation planning, as it directly impacts mobility patterns. Prioritizing infrastructure projects in densely populated areas can be a smarter way to ensure effective implementation of transportation improvements. This strategy is particularly advantageous for public transportation, whose success largely depends on the number of people they serve. **Figure 3-2** shows the population density in EPMPO. Greater population densities can be found within the city of El Paso, especially along the IH-10 corridor.

Figure 3-2: Population Density



Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table 01001.



3.1.2 RACE/ETHNICITY

As shown in **Table 3-2**, the EPMPO region demonstrates a distinct racial composition that notably differs from Texas and New Mexico state averages. This demographic pattern reflects the region's unique position along the U.S.-Mexico border and its strong cultural connections to Hispanic heritage, creating distinct needs and considerations for transportation planning and service delivery.

Table 3-2: Racial Composition

Geography	White Alone	Black or African American alone	American Indian and Alaska Native alone	Asian alone	Native Hawaiian and Other Pacific Islander alone	Hispanic or Latino	Some Other Race alone	Two or More Races
New Mexico	35.6%	1.8%	8.5%	1.5%	0.1%	49.8%	0.4%	2.4%
Texas	40.1%	11.8%	0.2%	5.1%	0.1%	39.9%	0.3%	2.6%
Doña Ana County, NM	26.2%	1.6%	0.7%	1.0%	0.1%	68.9%	0.2%	1.3%
Otero County, NM	46.9%	3.5%	5.9%	1.2%	0.1%	39.0%	0.4%	3.1%
El Paso County, TX	11.2%	2.8%	0.3%	1.1%	0.1%	82.9%	0.2%	1.3%
EPMPO MPA	11.1%	2.7%	0.3%	1.1%	0.1%	83.3%	0.2%	1.3%

Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table B02001.

As of 2022, the region is predominantly Hispanic or Latino, comprising 83.3% of the total population, significantly higher than Texas (39.9%) and New Mexico (49.8%). White alone represents 11.1% of the EPMPO population, substantially lower than Texas (40.1%) and New Mexico (35.6%). Other racial groups maintain smaller but important presences in the region. Black or African American alone accounts for 2.7% as opposed to almost 12% in Texas, Asian alone represents 1.1%, and Native Hawaiian and Other Pacific Islander alone comprise 0.1% of the population. American Indians and Alaska Natives alone make up 0.3% of the region's population, notably lower than New Mexico's 8.5%.

3.1.3 HOUSEHOLDS

Households, especially their number and size, significantly influence the volume of trips within a region. Household size directly influences trip volume within a region. Generally speaking, the larger the household, the more trips it will produce. Similar to population growth, an increase in the number of households results in greater transportation demand. **Table 3-3** shows the total number of households in New Mexico and Texas, each county in the MPO region, and the MPO overall.



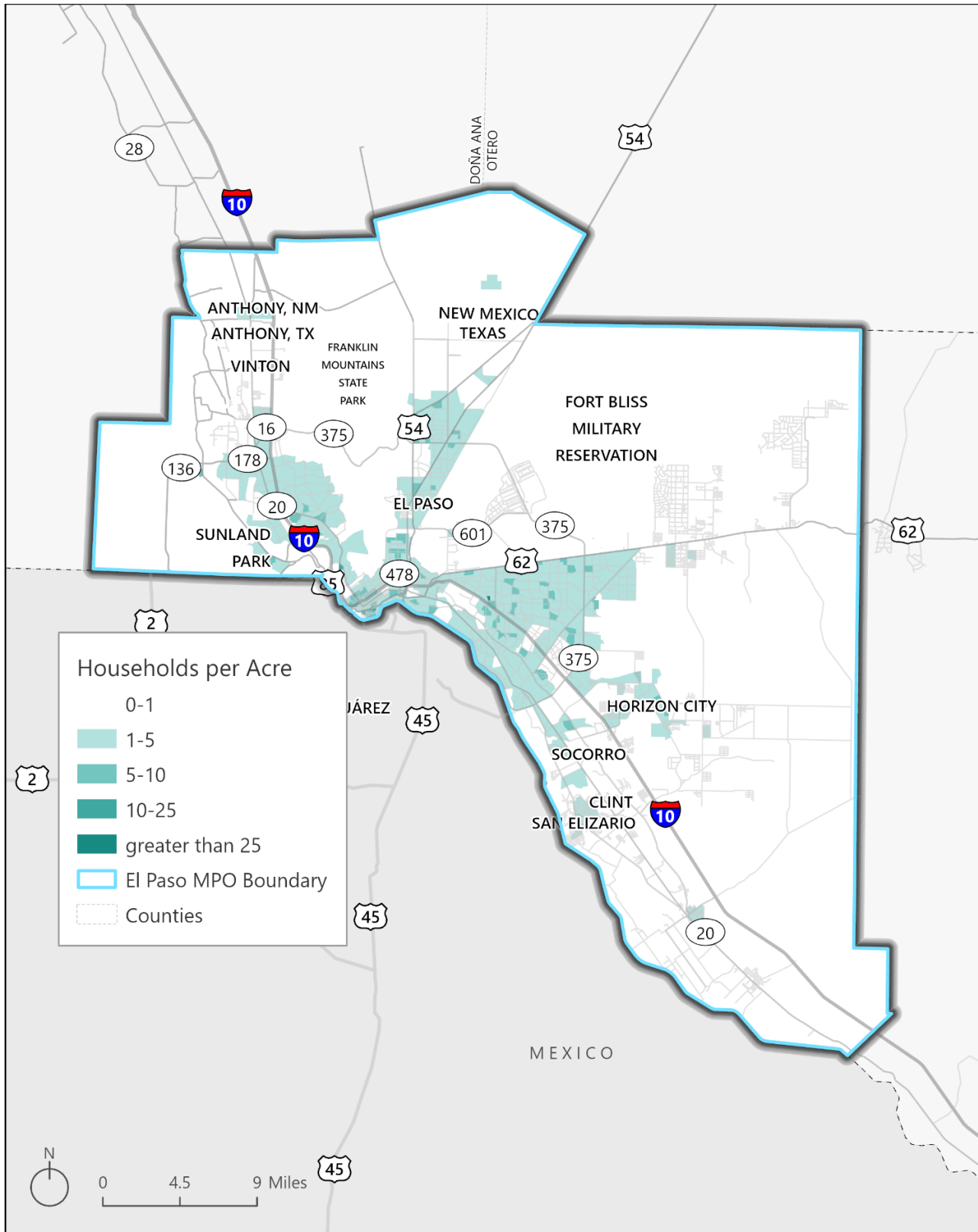
Table 3-3: Number of Households

Geography	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Percent Change
New Mexico	761,938	764,684	763,603	762,551	770,435	775,651	780,249	792,755	797,596	812,852	6.7%
Texas	8,886,471	9,013,582	9,149,196	9,289,554	9,430,419	9,553,046	9,691,647	9,906,070	10,239,341	10,490,553	18.1%
Doña Ana County, NM	73,797	74,623	74,762	74,989	76,740	77,453	77,842	79,421	79,933	81,969	11.1%
Otero County, NM	23,945	23,907	23,668	23,043	No Data	No Data	23,634	23,112	23,590	23,832	-0.5%
El Paso County, TX	255,573	257,600	259,612	261,415	263,200	265,724	268,310	273,662	288,186	292,580	14.5%
EPMPPO MPA	271,546	273,700	275,840	277,728	No Data	No Data	286,747	292,435	306,727	311,836	14.8%

Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table B11001.

Texas showed an 18% growth in the number of households during this ten-year period, while households in New Mexico grew by 6.7%. Households in Doña Ana County and El Paso County increased, but the growth trend in Otero County was stagnant. The total number of households in the MPO area increased by almost 15%. **Figure 3-3** shows the household distribution within the MPO area, showing higher density areas mostly concentrated around El Paso city center and along major transportation corridors.

Figure 3-3: Household Density



Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table B11001.



3.1.4 EDUCATION

Education attainment was assessed for the region. The MPA has shown an increase in higher education attainment over the past decade.

According to **Table 3-4**, the percentage of adults with education further than a high school diploma (referred to as “higher education”) in the region increased from 46% in 2013 to almost 52% in 2022. This upward trend aligns with the broader educational improvements in Texas and New Mexico during the same period. However, the MPA consistently falls behind the state-level figures, with Texas reaching 60.8% and New Mexico achieving 61.2% of higher education attainment by 2022. Within the MPO area, El Paso County experienced significant progress, rising from 50% to 55.7% over the ten-year period.

Table 3-4: Adults with Higher Education

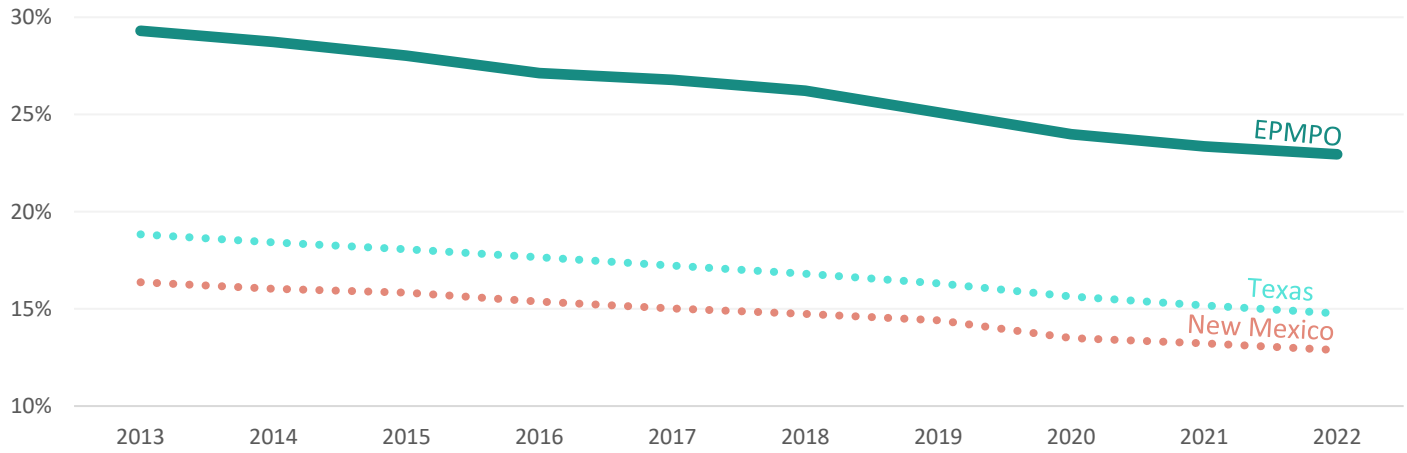
Geography	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
New Mexico	57.2%	57.6%	57.8%	58.2%	58.6%	58.8%	59.1%	60.3%	60.7%	61.2%
Texas	55.9%	56.3%	56.8%	57.3%	57.7%	58.2%	58.7%	59.7%	60.3%	60.8%
Doña Ana County, NM	55.5%	56.1%	56.3%	56.7%	57.0%	56.8%	56.7%	59.1%	59.2%	59.1%
Otero County, NM	47.8%	47.3%	47.0%	47.5%	48.5%	48.6%	47.2%	47.7%	49.3%	50.4%
El Paso County, TX	50.0%	50.5%	51.2%	52.1%	52.8%	53.7%	54.8%	55.8%	56.0%	55.7%
EPMPO MPA	46.1%	41.0%	46.9%	47.7%	48.3%	48.9%	50.1%	51.7%	52.0%	51.8%

Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table B15003.

Complementing the rise in higher education, the EPMPO area also saw a substantial drop in the proportion of adults with less than a high school education. **Figure 3-4** demonstrates this trend, where a sharp decline is noted from nearly 30% to approximately 23% in this time period. This reduction outpaces the improvements seen at the state level, suggesting that the MPO area is making notable strides in reducing educational disparities. **Figure 3-5** further shows the geographical distribution of adults with higher education attainment. Urban areas and regions along major transportation corridors tend to have a higher concentration of adults with higher education, particularly in and around the city of El Paso, since these areas have greater population density. Adults with higher education tend to make higher incomes and have more access to a personal vehicle than those with a lower educational attainment. Because of this, understanding the educational attainment of a region helps make better decisions relating to travel behavior and habits.

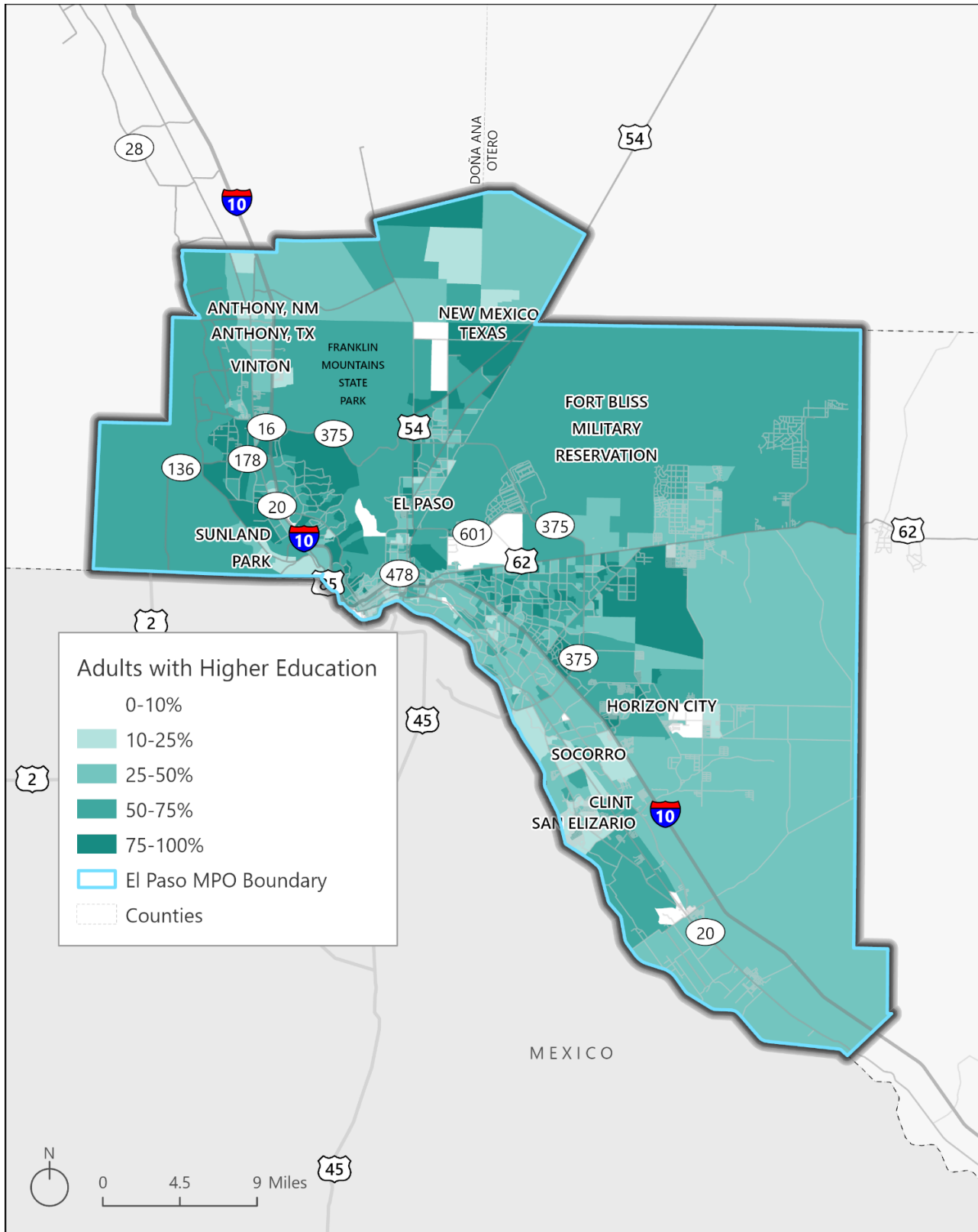


Figure 3-4: Adults with Less than a High School Education



Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table B15003.

Figure 3-5: Distribution of Adults with Higher Education



Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table B15003.

3.1.5 POVERTY

The EPMPO region has gradually improved poverty rates over the past decade yet continues to face significant challenges. **Table 3-5** shows that the poverty rate in the MPO area decreased from 25.6% in 2013 to 21.8% in 2022, with a 3.8% reduction overall. While this drop in poverty is positive, the MPO’s poverty rate remains consistently higher than both Texas and New Mexico state averages.

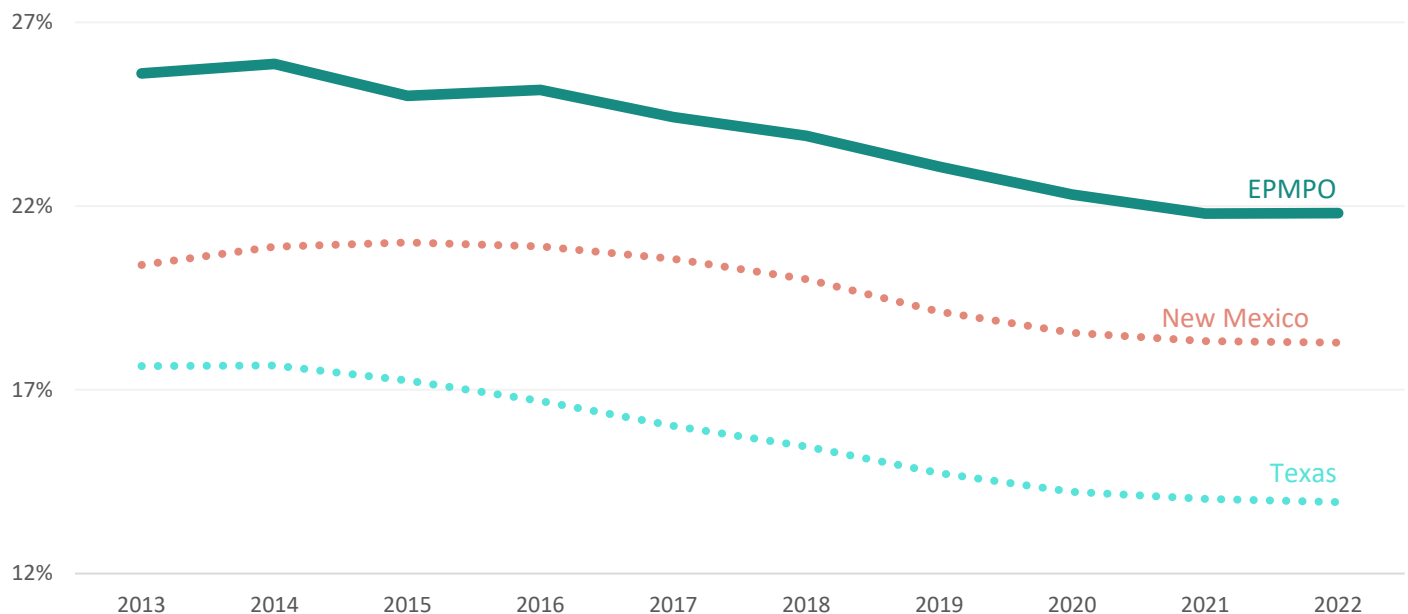
Table 3-5: Poverty rate

Geography	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
New Mexico	20.4%	20.9%	21.0%	20.9%	20.6%	20.0%	19.1%	18.6%	18.3%	18.3%
Texas	17.6%	17.7%	17.3%	16.7%	16.0%	15.5%	14.7%	14.2%	14.0%	13.9%
Doña Ana County, NM	27.0%	27.8%	28.2%	27.6%	27.9%	27.7%	26.4%	24.8%	23.2%	22.8%
Otero County, NM	20.4%	20.0%	21.0%	22.1%	19.4%	18.9%	20.2%	20.2%	18.2%	19.2%
El Paso County, TX	23.3%	23.4%	22.8%	22.5%	21.7%	21.3%	20.2%	19.5%	19.3%	19.5%
EPMPO MPA	25.6%	25.9%	25.0%	25.2%	24.4%	23.9%	23.1%	22.3%	21.8%	21.8%

Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table B17021.

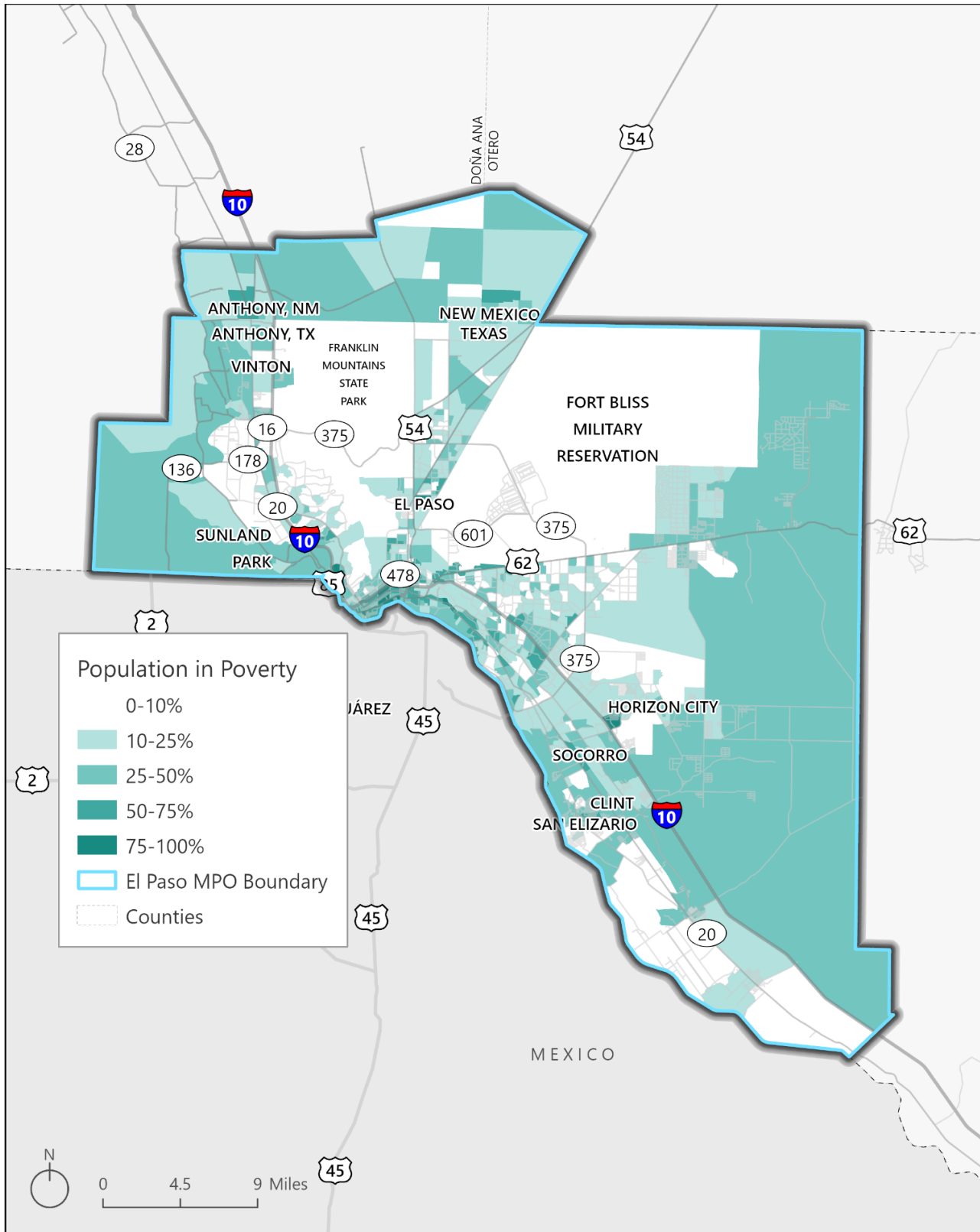
The line graph in **Figure 3-6** illustrates this disparity, where the MPO line lies consistently above the state lines, despite all three lines showing a downward trend. **Figure 3-7** further reveals the geographical variation of the poverty landscape. Higher concentration of poverty can be seen around central El Paso and along the US-Mexico border. Suburban and outlying areas generally show lower poverty. This metric is important to consider because people in poverty tend to have unique travel needs. People in poverty tend to utilize carpooling, transit, and active transportation more than those not in poverty. They also tend to not have a car available and are thus more dependent on those other modes of transportation to get to work and other essential activities.

Figure 3-6: Population in Poverty



Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table B17021.

Figure 3-7: Poverty Distribution



Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table B17021.



3.1.6 ENVIRONMENTAL JUSTICE

Environmental justice is a critical component in addressing the El Paso region’s transportation needs, complementing considerations of future population and employment growth. This principle aims to ensure equitable distribution of benefits and mitigation of adverse impacts from transportation systems, particularly for communities that have been historically marginalized or disproportionately affected by past infrastructure decisions.

The EPMPO considers environmental justice when making transportation planning decisions, in accordance with Presidential Executive Order 12898, “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations”, promulgated on February 11, 1994. Furthermore, the U.S. Department of Transportation (USDOT) Order 5610.2 requires the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) to implement environmental justice principles in all programs, policies, and activities.

The core principles of environmental justice that guide the EPMPO’s planning process are:

- 1 To avoid or mitigate disproportionately high public health, socioeconomic, and environmental effects on low-income and minority populations.
- 2 To locate and include all potentially impacted communities in the decision-making process.
- 3 To prevent barriers to benefits of the transportation planning process by low-income and minority populations.

3.1.6.1 MINORITY POPULATIONS

Identifying locations of minority and low-income populations and improving the public involvement process are key in accounting for environmental justice concerning transportation investments. According to the US Census, minority populations are those which make up less than 50% of the population, which for the US are American Indians (including Alaska Natives, Eskimos, and Aleuts); Asian Americans; Native Hawaiians and other Pacific Islanders; Blacks; and Hispanics. The MPO area has experienced a dramatic increase in its minority population over the past decade, particularly in recent years. This is particularly due to changes in how the US Census asked about racial and ethnic identification in recent years. As **Table 3-6** illustrates, from 2013 to 2022, the minority population in the area grew from 17.8% to 49.9%, a significant 180% increase. This growth was relatively stable from 2013 to 2019 but sharply increased from 2020 to 2022. Interestingly, while the EPMPO’s minority population percentage was initially lower than Texas and New Mexico, it has now surpassed both states, as shown in **Figure 3-8**. El Paso County shows an even more pronounced increase, rising from 19.1% in 2013 to 50.4% in 2022. This significant demographic shift has important implications for environmental justice considerations in transportation planning, requiring the EPMPO to ensure its processes and outcomes adequately serve this increasingly diverse population with equitable distribution of benefits and mitigation of adverse impacts across all communities.

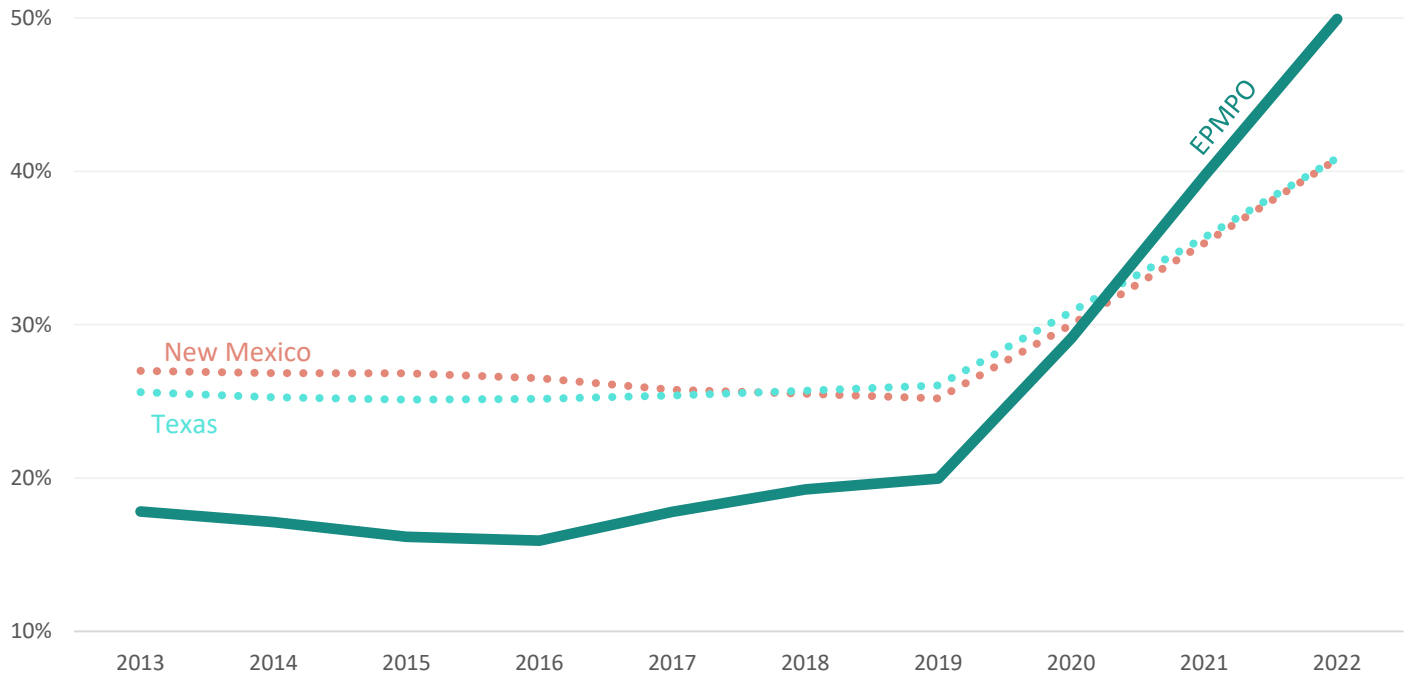
Table 3-6: Minority Populations

Geography	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
New Mexico	27.0%	26.8%	26.8%	26.5%	25.8%	25.5%	25.2%	30.0%	35.3%	40.8%
Texas	25.6%	25.3%	25.1%	25.2%	25.4%	25.7%	26.0%	30.8%	35.7%	40.9%
Doña Ana County, NM	10.7%	10.8%	10.9%	11.0%	11.7%	12.1%	12.9%	21.5%	32.4%	41.4%
Otero County, NM	22.0%	23.1%	24.4%	22.8%	22.3%	21.0%	19.9%	24.5%	29.4%	33.9%
El Paso County, TX	19.1%	18.3%	17.2%	17.1%	18.9%	19.7%	20.3%	30.7%	40.4%	50.4%
EPMPO MPA	17.8%	17.1%	16.2%	15.9%	17.8%	19.3%	20.0%	29.1%	39.7%	49.9%

Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table B02001.



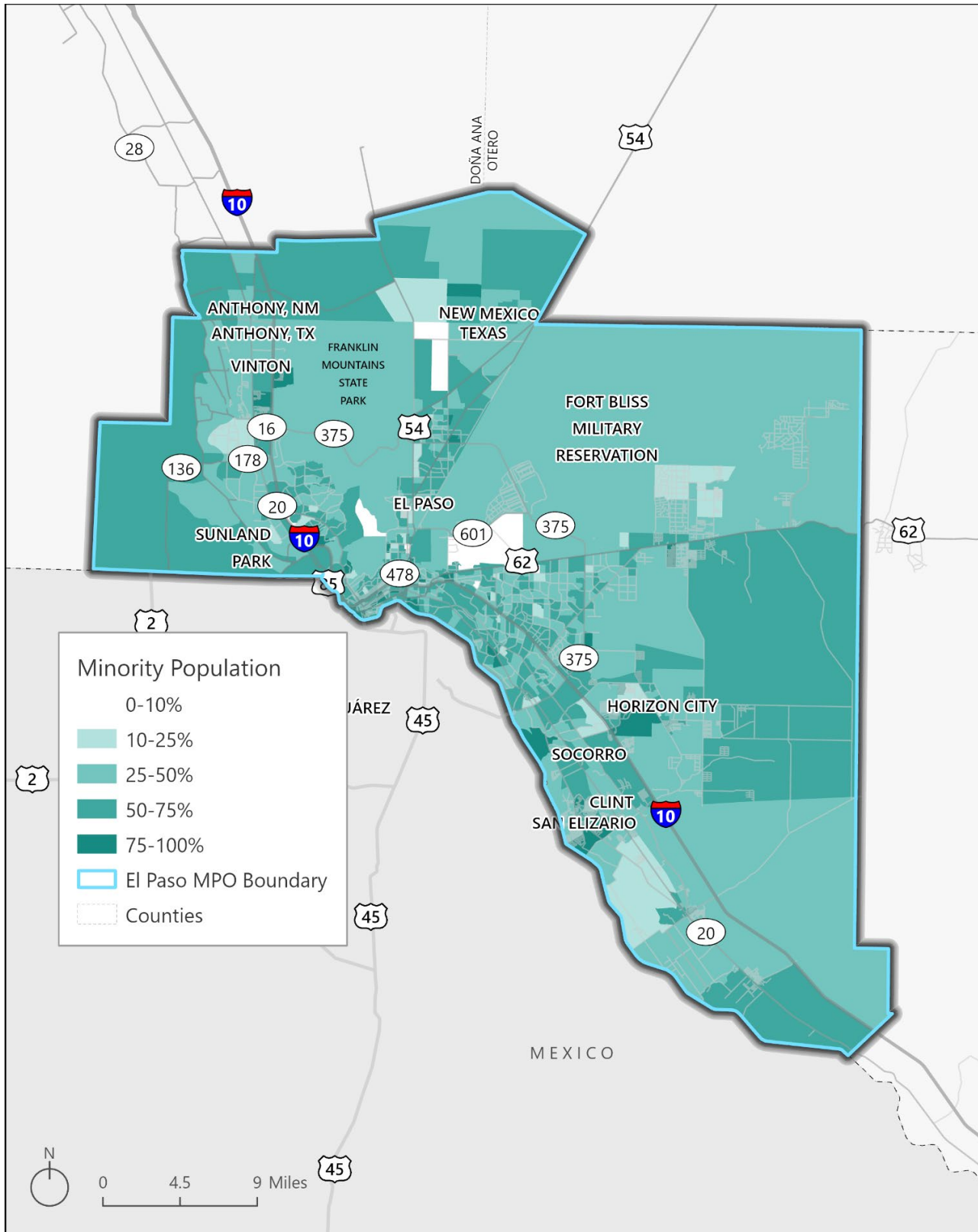
Figure 3-8: Minority Populations



Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table B02001.

Figure 3-9 shows that the MPO region has a significant minority population throughout its service area. The small-scale urban areas of the region, Horizon City, Socorro, San Elizario, and Vinton, have high concentrations (75-100%) of minority populations. The distribution pattern indicates moderate to high percentages (50-75%) across most of the metropolitan area, including bigger cities like El Paso and Sunland Park, reflecting the region's rich demographic diversity.

Figure 3-9: Minority Populations



Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table B02001.



3.1.6.2 LOW-INCOME POPULATIONS

The EPMPO defines low-income status as a household income level that is below the current Texas Health and Human Services (HHS) Supplemental Nutrition Assistance Program (SNAP) eligibility. **Table 3-7** displays the amount of maximum monthly household income to be eligible for SNAP in Texas and New Mexico.

Table 3-7: SNAP Maximum Monthly Income Limits

Family Size	Maximum Monthly Income	
	Texas	New Mexico
1	\$ 2,005	\$ 1,255
2	\$ 2,712	\$ 1,704
3	\$ 3,419	\$ 2,152
4	\$ 4,125	\$ 2,600
5	\$ 4,832	\$ 3,049
6	For each additional person, add \$707	\$ 3,497
7	For each additional person, add \$707	\$ 3,945
8	For each additional person, add \$707	\$ 4,394
For each additional person, add:	\$ 707	\$ 449

Source: Texas Health and Human Services, SNAP Food Benefits; New Mexico Health Care Authority, Income Eligibility Guidelines for SNAP & Financial Assistance

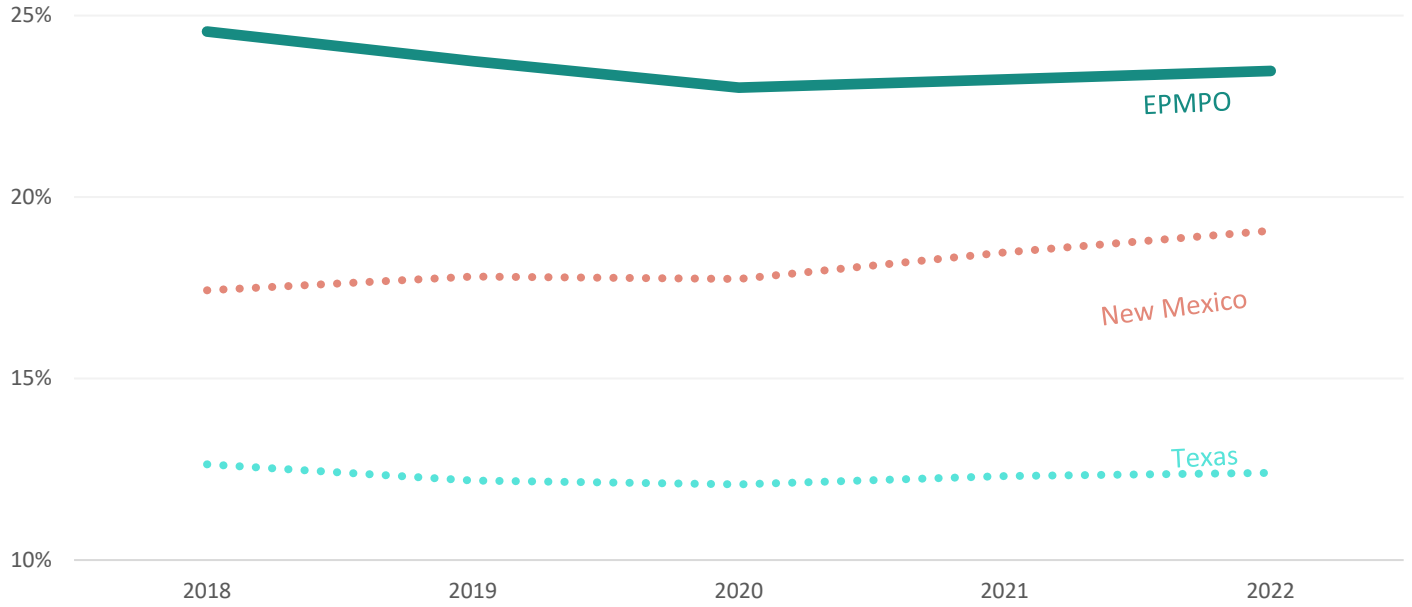
Table 3-8 shows the percentage of households that receive SNAP benefits, implying that these households count for low-income households. This measure is a useful indication of low-income status and may not capture all people of low-income population. The MPO area has higher rates of SNAP households compared to both Texas and New Mexico state-level averages. This indicates that there is significant economic disparity within the region. As of 2022, approximately 23.5% of households within the EPMPO region received SNAP benefits, whereas the number of households at the state-level in Texas was 12.4% and in New Mexico was 19.1%. At the county level, Doña Ana County has the highest concentration of SNAP beneficiaries at 24.9%, followed closely by El Paso County at 21.7%.

Table 3-8: Households with SNAP Benefits

Geography	2018	2019	2020	2021	2022
New Mexico	17.4%	17.8%	17.7%	18.5%	19.1%
Texas	12.6%	12.2%	12.1%	12.3%	12.4%
Doña Ana County, NM	24.4%	24.7%	23.8%	24.6%	24.9%
Otero County, NM	16.8%	17.4%	16.6%	17.4%	18.9%
El Paso County, TX	21.6%	21.3%	20.7%	21.3%	21.7%
EPMPO MPA	24.6%	23.7%	23.0%	23.2%	23.5%

Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table B19058.

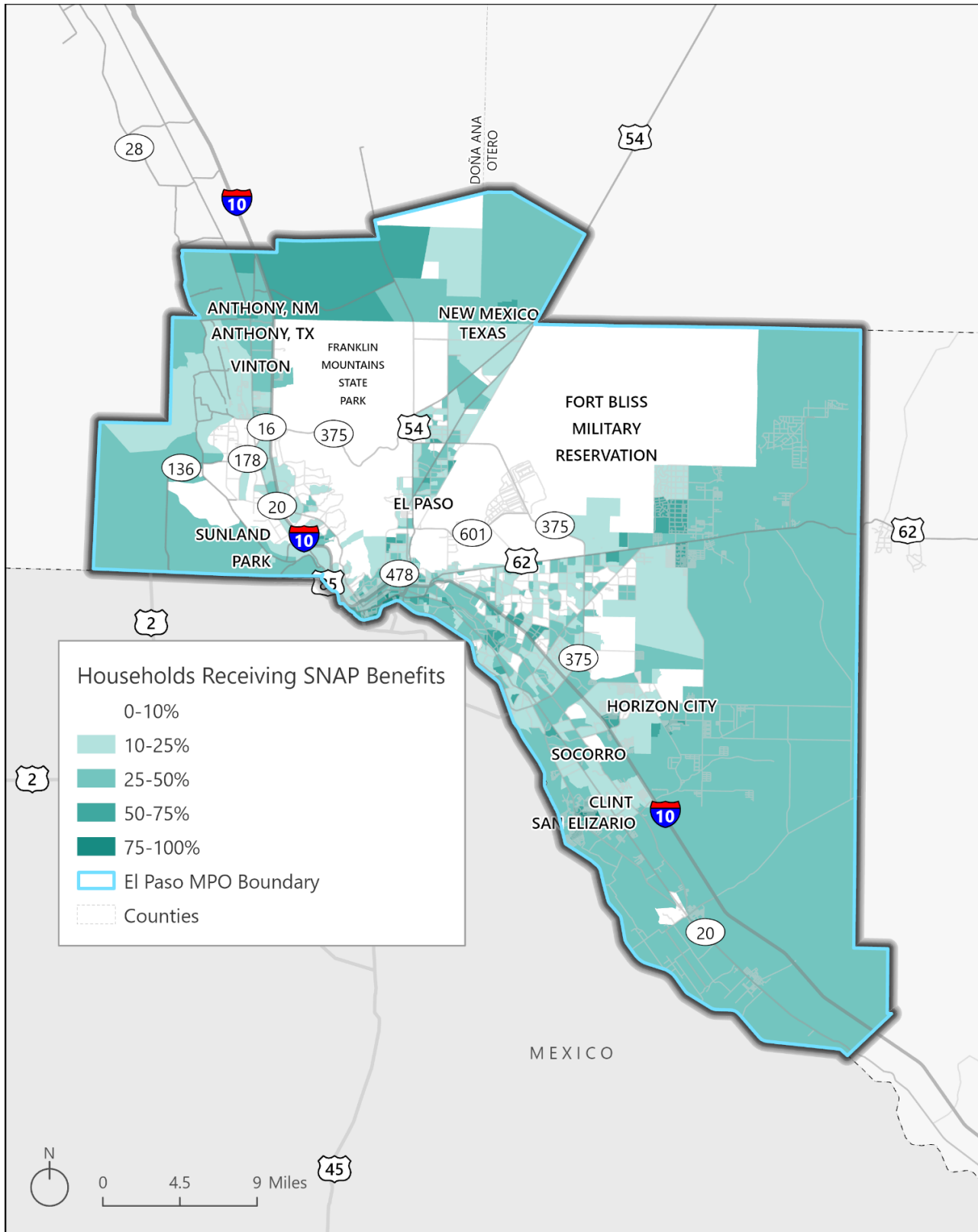
Figure 3-10: Households with SNAP Benefits



Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table B19058.

Figure 3-11 shows the spatial distribution of households receiving the benefits. The map reveals moderate concentrations (25-50%) in the city of El Paso area and also higher concentration of SNAP households are observed in Anthony.

Figure 3-11: Households with SNAP Benefits Distribution



Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table B19058.



3.1.6.3 LIMITED ENGLISH PROFICIENCY

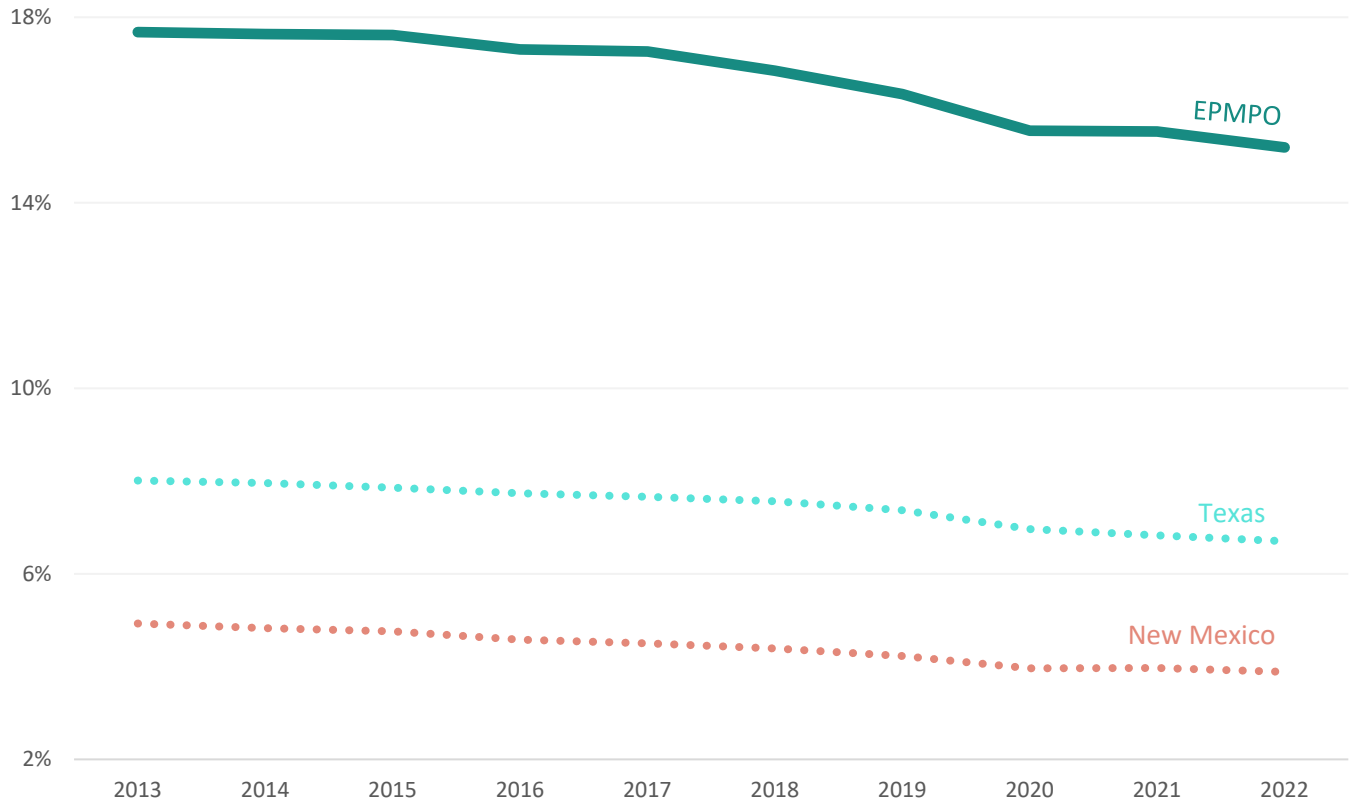
On August 11, 2000, the President signed Executive Order 13166 aiming to make federal services accessible to everyone, regardless of their English-speaking ability. Under this order, federal agencies and federal funds recipients must provide appropriate language assistance to people with Limited English Proficiency (LEP). LEP refers to individuals who primarily use a language other than English and have indicated they speak English less than “very well.” Complying with this order is particularly crucial to achieving environmental justice, as language barriers mostly affect specific racial and ethnic communities. Without proper assistance, they might be unable to participate in or benefit from federal programs and services fully. Additionally, LEP populations have a more difficult time with wayfinding and signing up for transportation services when no accommodations for language are provided. Compared to the state and county level, the EPMPO region had the highest percentage of LEP individuals, starting at 17.7% in 2013 and declining to 15.2% by 2022, as shown in **Table 3-9** and **Figure 3-12**. Interestingly, while most areas showed steady declines, Doña Ana County and Otero County in New Mexico fluctuated, with Otero County even experiencing slight increases in certain years. The map in **Figure 3-13** indicates that LEP populations are concentrated in specific areas, particularly in urban areas around El Paso.

Table 3-9: Populations with Limited English Proficiency

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
New Mexico	4.9%	4.8%	4.8%	4.6%	4.5%	4.4%	4.2%	4.0%	4.0%	3.9%
Texas	8.0%	8.0%	7.9%	7.7%	7.7%	7.6%	7.4%	7.0%	6.8%	6.7%
Doña Ana County, NM	9.4%	8.8%	8.6%	8.2%	8.5%	8.7%	9.0%	9.0%	8.8%	8.6%
Otero County, NM	2.9%	2.7%	2.6%	2.6%	2.7%	2.9%	2.9%	3.9%	3.7%	3.2%
El Paso County, TX	16.1%	15.9%	15.7%	15.3%	15.3%	14.8%	14.3%	13.7%	13.4%	13.1%
EPMPO MPA	17.7%	17.6%	17.6%	17.3%	17.3%	16.8%	16.3%	15.6%	15.5%	15.2%

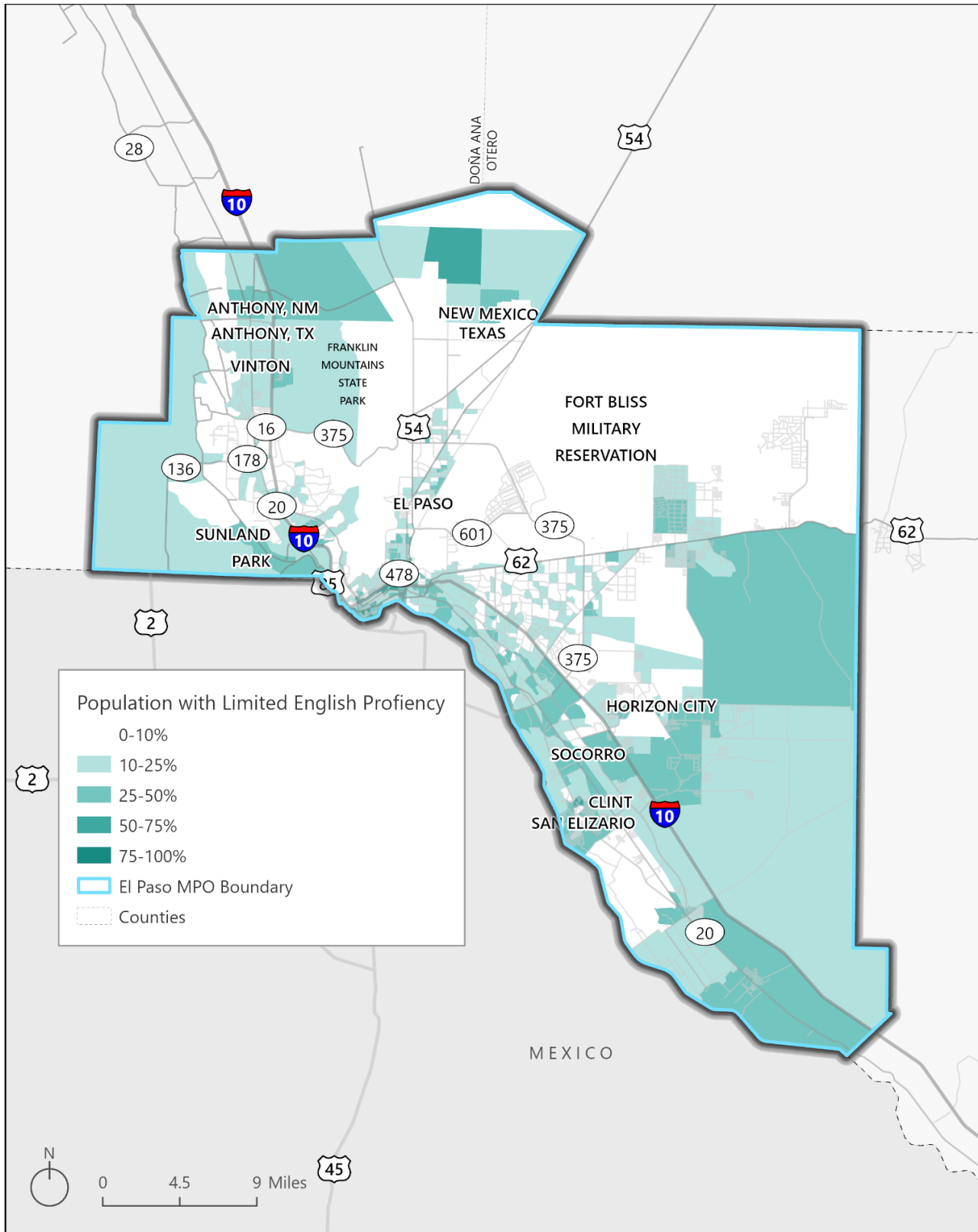
Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table B16004.

Figure 3-12: Populations with Limited English Proficiency



Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table B16004.

Figure 3-13: Populations with Limited English Proficiency Distribution



Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table B16004.



3.1.6.4 ELDERLY POPULATIONS

The elderly population (households with at least one person 65 years or older), tend to have mobility challenges as their ability to drive a personal vehicle declines, leading to increased reliance on public transit systems or assistance from others for their transportation needs. The impact of limited mobility can be pronounced among the minority elderly population, especially those with lower incomes. **Table 3-10** shows the percentage of the elderly population in EPMPPO region from 2013 to 2022.

Table 3-10: Households with Elderly Population

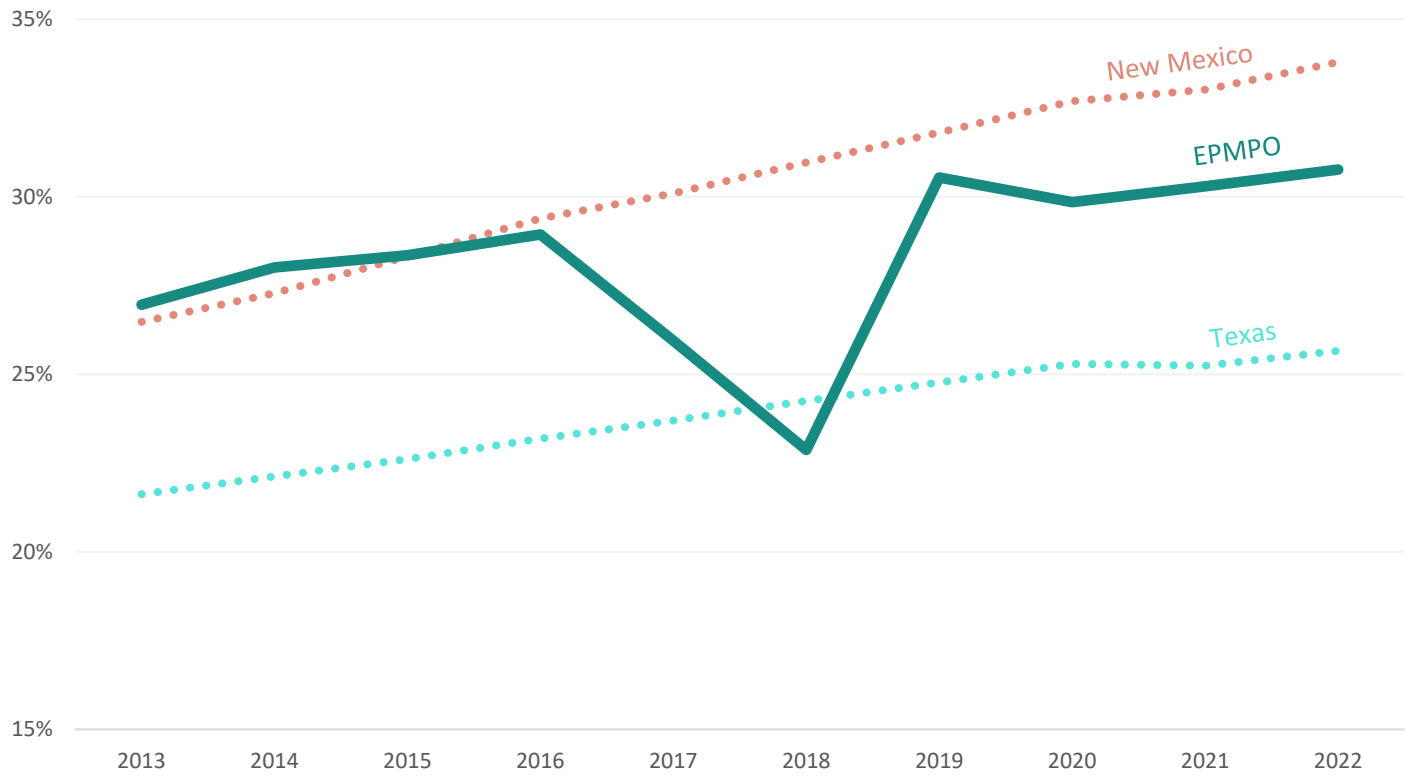
Geography	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
New Mexico	26.5%	27.3%	28.3%	29.4%	30.1%	31.0%	31.8%	32.7%	33.0%	33.8%
Texas	21.6%	22.1%	22.6%	23.2%	23.7%	24.3%	24.8%	25.3%	25.2%	25.7%
Doña Ana County, NM	25.8%	26.2%	26.9%	27.9%	28.2%	29.0%	29.8%	30.2%	30.2%	30.4%
Otero County, NM	31.0%	31.5%	32.7%	33.7%	34.0%	34.7%	36.2%	33.1%	33.4%	33.5%
El Paso County, TX	23.9%	24.3%	24.5%	25.0%	25.3%	25.8%	26.2%	27.1%	27.0%	27.4%
EPMPPO	27.0%	28.0%	28.4%	28.9%	25.9%	22.9%	30.5%	29.8%	30.3%	30.8%

Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table B11007.

Figure 3-14 shows an upward trend in the elderly populations across the MPO region. Within the EPMPPO region, there is an interesting pattern of growth in the elderly population with some volatility. The region shows an overall increase from 27.0% to 30.8%. On the state level, New Mexico has experienced the most significant increase, rising from 26.5% to 33.8%, consistently showing the highest percentage among all areas shown. In contrast, Texas has seen a more modest increase from 21.6% to 25.7%. Otero County maintains relatively high elderly population percentages throughout the period, ranging from 31.0% to 33.5%, while El Paso County shows steady growth from 23.9% to 27.4%.

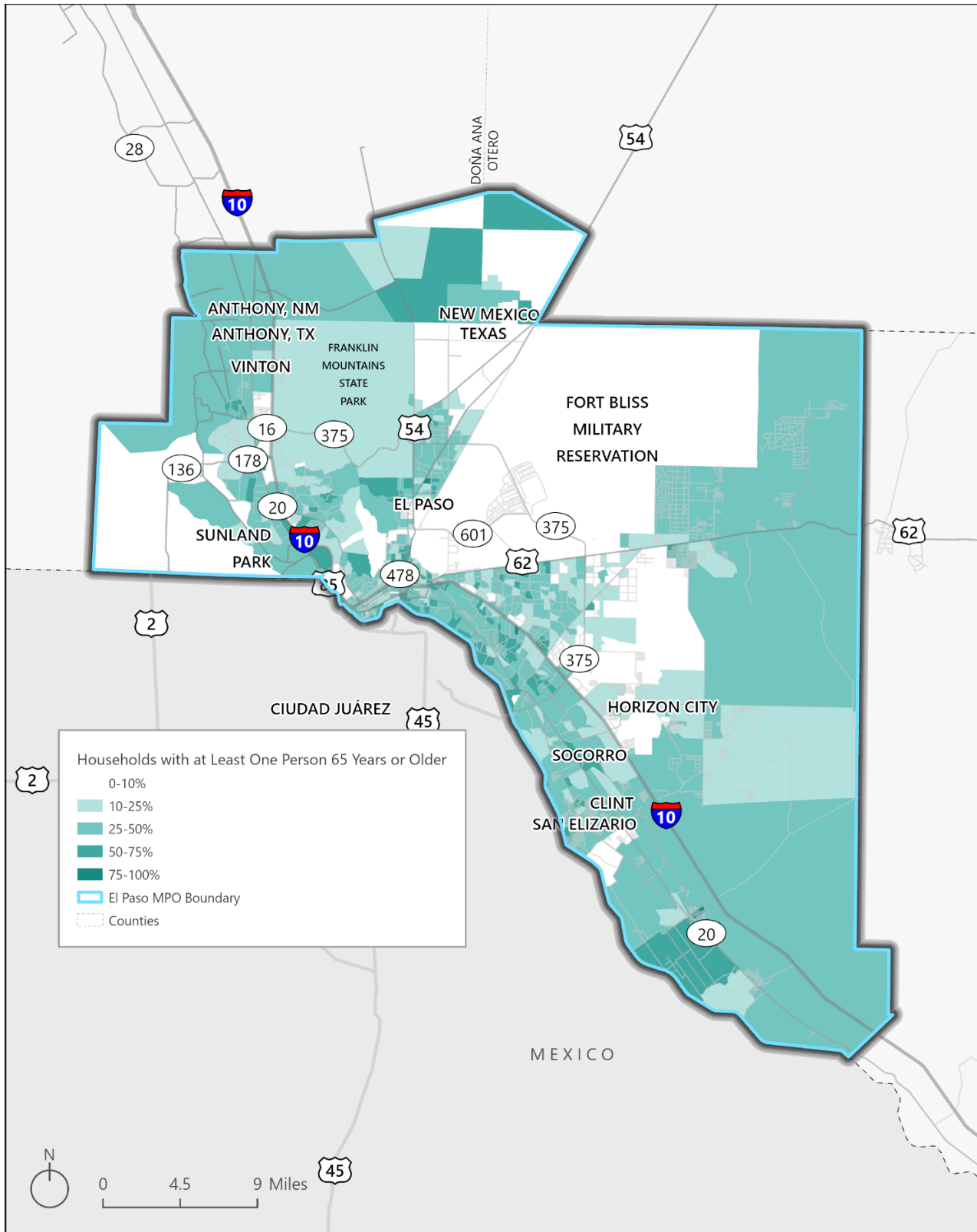
Figure 3-15 indicates varying concentrations of elderly populations throughout the EPMPPO region, with some areas showing higher concentrations (25-50% or higher) of households with at least one person 65 years or older. This spatial distribution of the elderly population appears unevenly dispersed across the region, with certain neighborhoods having notably higher concentrations of elderly residents than others.

Figure 3-14: Households with At Least One Person 65 Years or Older



Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table B11007.

Figure 3-15: Households with At Least One Person 65 Years or Older



Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table B11007.

3.1.6.5 PEOPLE WITH DISABILITIES

The EPMPO follows the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) and 49 Code of Federal Regulations (CFR) Parts 27, 37, and 38; and Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794) and 49 CFR Part 27 to protect individuals with disabilities from discrimination. The EPMPO programs and plans projects that its partner agencies must ensure are implemented in compliance with physical accessibility standards as described in the Americans with Disabilities Act.

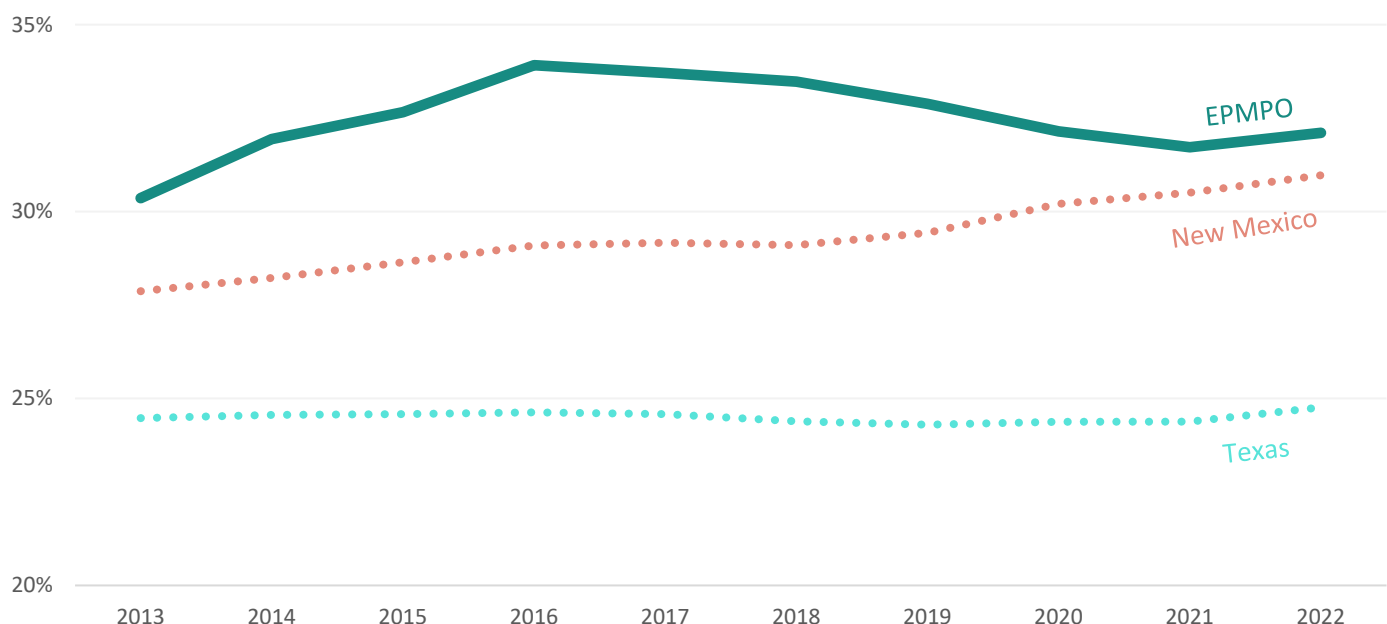
As **Table 3-11** depicts, the MPO region consistently shows a high percentage of households with disabilities, ranging from 30.4% in 2013 to 32.1% in 2022, with a peak of 33.9% in 2016. Otero County has maintained notably high percentages within the region, fluctuating between 32.6% and 35.9%. El Paso County shows relatively stable numbers, around 30%, while Doña Ana County has gradually increased from 23.4% to 30.6% over the decade. At the state level, New Mexico reports higher percentages than Texas, with New Mexico increasing from 27.9% to 31.0%, while Texas has remained relatively stable around 24-25%, evident in **Figure 3-16**. The geographical distribution in **Figure 3-17** appears fairly consistent across the urban areas of El Paso, Socorro, and Horizon City, suggesting that households with members who have disabilities are spread throughout both urban and suburban areas of the region.

Table 3-11: Households with At Least One Person with A Disability

Geography	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
New Mexico	27.9%	28.2%	28.6%	29.1%	29.2%	29.1%	29.4%	30.2%	30.5%	31.0%
Texas	24.5%	24.6%	24.6%	24.6%	24.6%	24.4%	24.3%	24.4%	24.4%	24.8%
Otero County, NM	33.7%	35.1%	34.0%	32.8%	31.8%	32.6%	34.2%	35.8%	35.9%	34.9%
Doña Ana County, NM	23.4%	22.7%	23.4%	24.7%	26.6%	28.6%	29.6%	30.6%	31.4%	30.6%
El Paso County, TX	28.0%	29.0%	29.7%	30.8%	30.5%	30.4%	30.1%	30.1%	29.6%	30.3%
EPMPO MPA	30.4%	31.9%	32.7%	33.9%	33.7%	33.5%	32.9%	32.1%	31.7%	32.1%

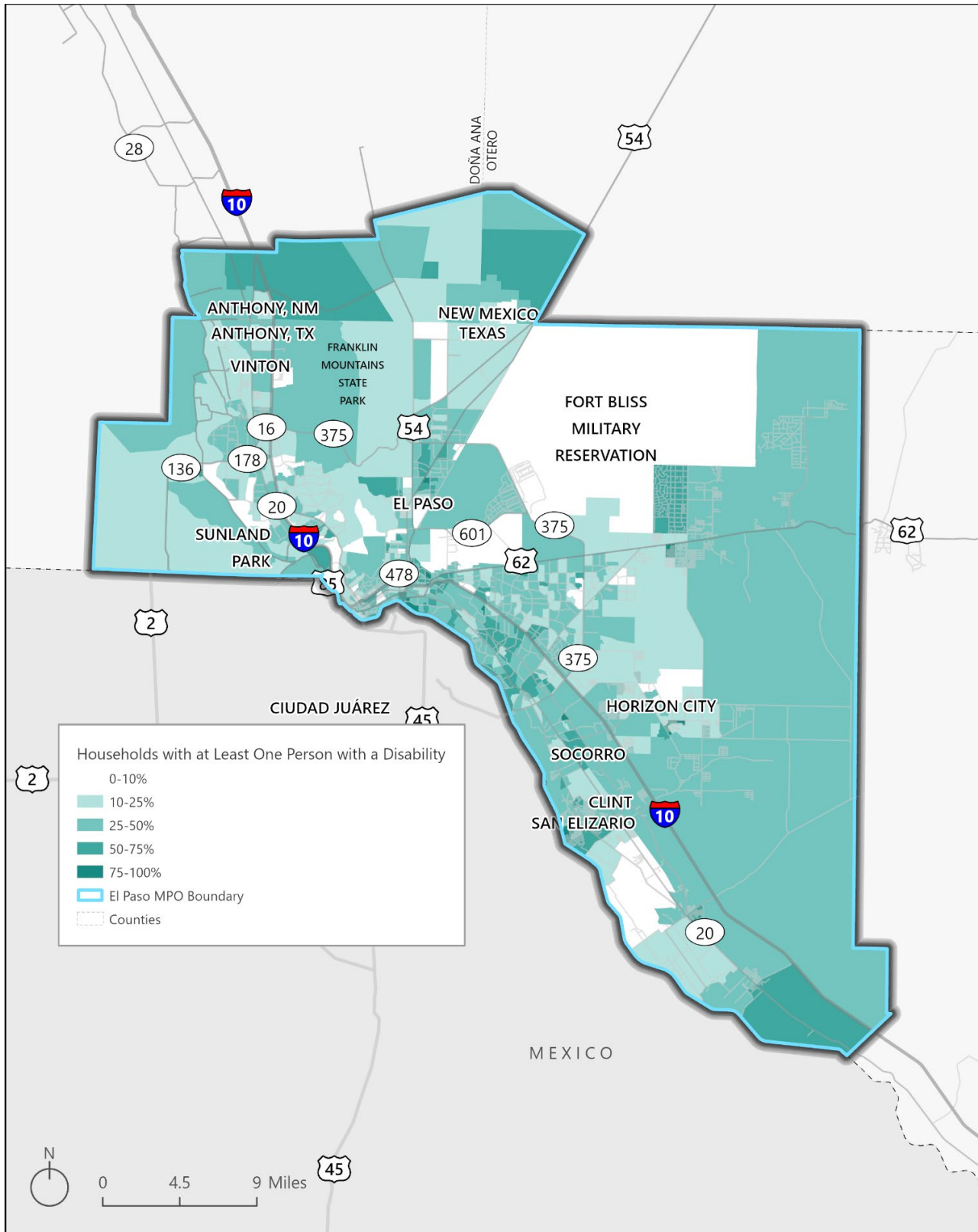
Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table B22010.

Figure 3-16: Households Having At Least One Person With A Disability



Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table B22010.

Figure 3-17: Households with At Least One Person with A Disability



Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table 22010.

3.1.6.6 HOUSING COST BURDENED

Housing affordability has important implications for transportation planning, particularly in areas where high housing costs may result in longer commutes or impact mobility choices. According to the U.S. Census Bureau, households are considered “cost-burdened” when they spend more than 30% of their income on housing costs, which include rent, mortgage payments, and other related expenses. If a household spends more than 50% of their income on housing, they are classified as severely cost-burdened. This affordability concern is persistent across the EPMPO region, with distinct patterns between homeowners and renters. **Table 3-12** and **Table 3-13** shows the change in the percentage of housing cost-burdened owners and renters from 2013 to 2022, respectively.

Table 3-12: Housing Cost Burdened Homeowners

Geography	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
New Mexico	16.1%	16.1%	15.7%	15.3%	14.9%	14.6%	14.0%	13.8%	13.9%	14.0%
Texas	15.1%	14.7%	14.1%	13.5%	13.2%	13.2%	13.0%	12.9%	13.2%	13.6%
Doña Ana County, NM	14.9%	14.2%	13.9%	13.7%	14.3%	14.6%	14.6%	14.1%	13.1%	13.1%
Otero County, NM	12.1%	12.3%	12.7%	12.3%	11.3%	11.5%	10.9%	9.9%	11.6%	11.3%
El Paso County, TX	16.4%	15.9%	14.9%	14.9%	15.1%	15.4%	15.4%	15.5%	16.2%	16.5%
EPMPO MPA	15.7%	15.1%	14.6%	14.5%	14.5%	14.4%	14.6%	14.9%	15.6%	15.6%

Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table B25091.

Over these ten years, the MPO region showed a minor decrease in the percentage of cost-burdened homeowners, with some minor fluctuations. On the state level, New Mexico and Texas both experienced a general decrease in percentages, with New Mexico dropping from 16.1% to 14.0% and Texas from 15.1% to 13.6%. In line with the state-level trend, Doña Ana County also saw a decline from 14.9% to 13.1%, despite some rise in the percentages before COVID-19 pandemic. Otero County showed a notable decrease from 12.1% to 11.3%, with a significant drop in 2020. However, in contrast to the general downward trend, El Paso County saw a slight increase from 16.4% to 16.5%, and the county consistently had the highest percentage of cost-burdened owners throughout the years. Refer to **Figure 3-18** for a graph of this trend. The spatial distribution of cost-burdened homeowners in **Figure 3-20** shows concentrated areas of burden in along the corridors of major highways.

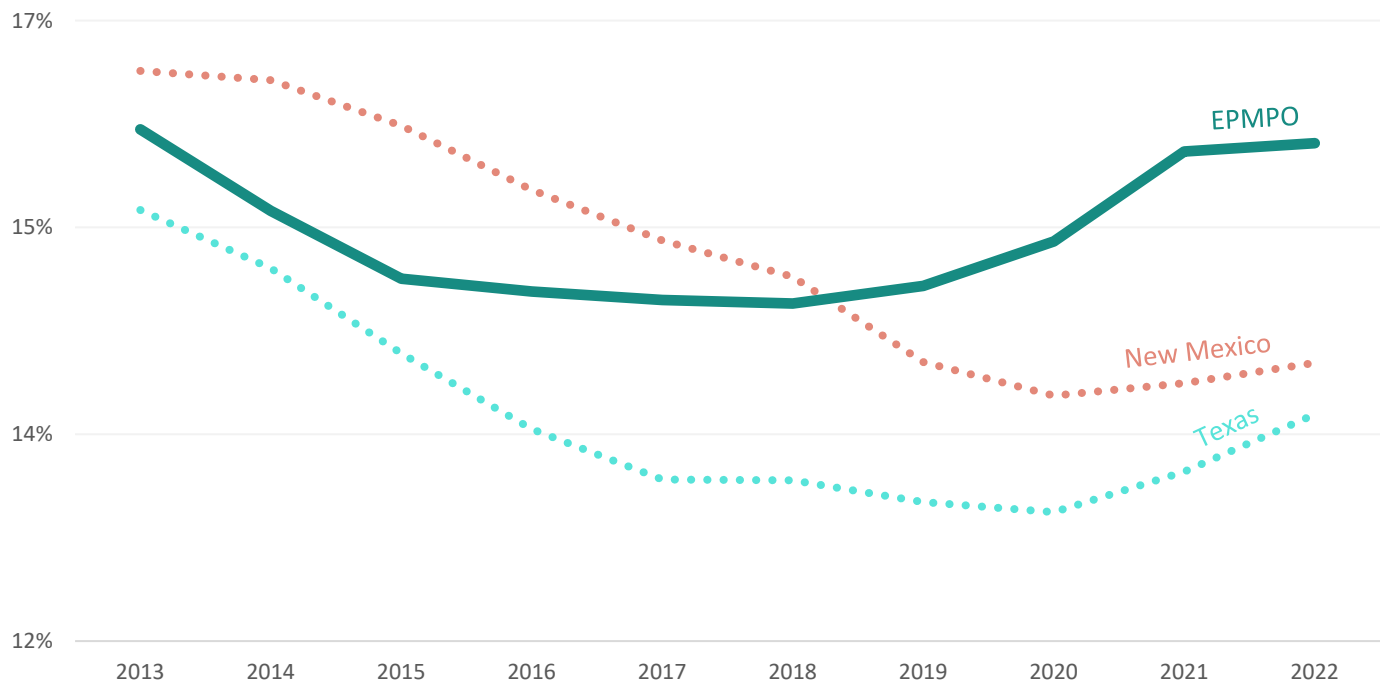
Table 3-13: Housing Cost Burdened Renters

Geography	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
New Mexico	37.2%	37.7%	38.1%	37.2%	36.9%	35.9%	35.3%	35.1%	35.5%	36.1%
Texas	36.9%	36.9%	36.5%	36.1%	35.9%	36.0%	35.9%	36.1%	36.8%	37.8%
Doña Ana County, NM	43.3%	42.4%	41.2%	40.2%	40.2%	40.2%	39.6%	41.9%	41.8%	42.9%
Otero County, NM	26.4%	25.4%	30.1%	31.1%	33.5%	33.5%	33.9%	27.4%	27.5%	25.0%
El Paso County, TX	36.8%	36.2%	36.0%	35.6%	36.1%	36.4%	36.8%	37.1%	38.1%	38.9%
EPMPO MPA	35.6%	34.4%	34.0%	33.5%	34.0%	34.3%	34.6%	33.8%	34.2%	34.6%

Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table B25070.

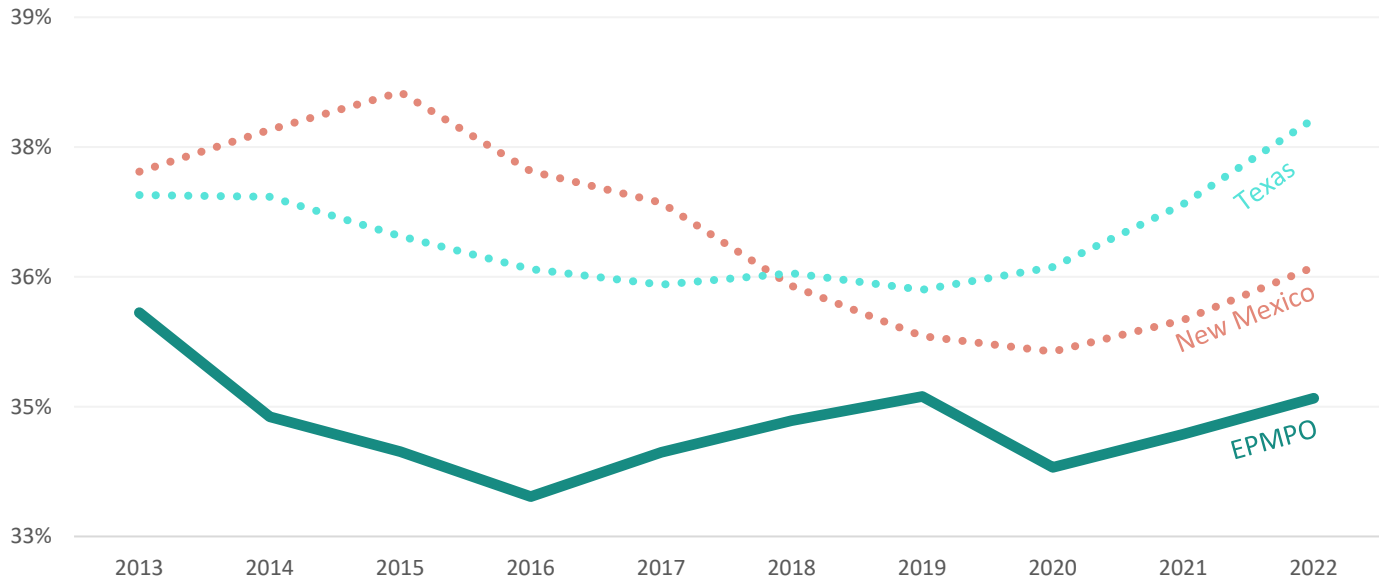
Compared to the percentage of cost-burdened homeowners over the ten-year period, the percentage of cost-burdened renters generally remained higher across most areas, highlighting a growing affordability issue for renters in the region. EPMPO region had approximately 34.6% of renters be considered cost-burdened in 2022, though this remains lower than state averages for both Texas (38.2%) and New Mexico (36.1%). Refer to **Figure 3-19** for a graph of this trend. The spatial distribution map in **Figure 3-21** reveals that renter cost-burden is most severe in the Anthony area in both New Mexico and Texas and most of the central El Paso neighborhoods, especially along the IH-10 corridor, where 50-75% of renters experience housing cost burden.

Figure 3-18: Housing Cost Burdened Houseowners



Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table B25091.

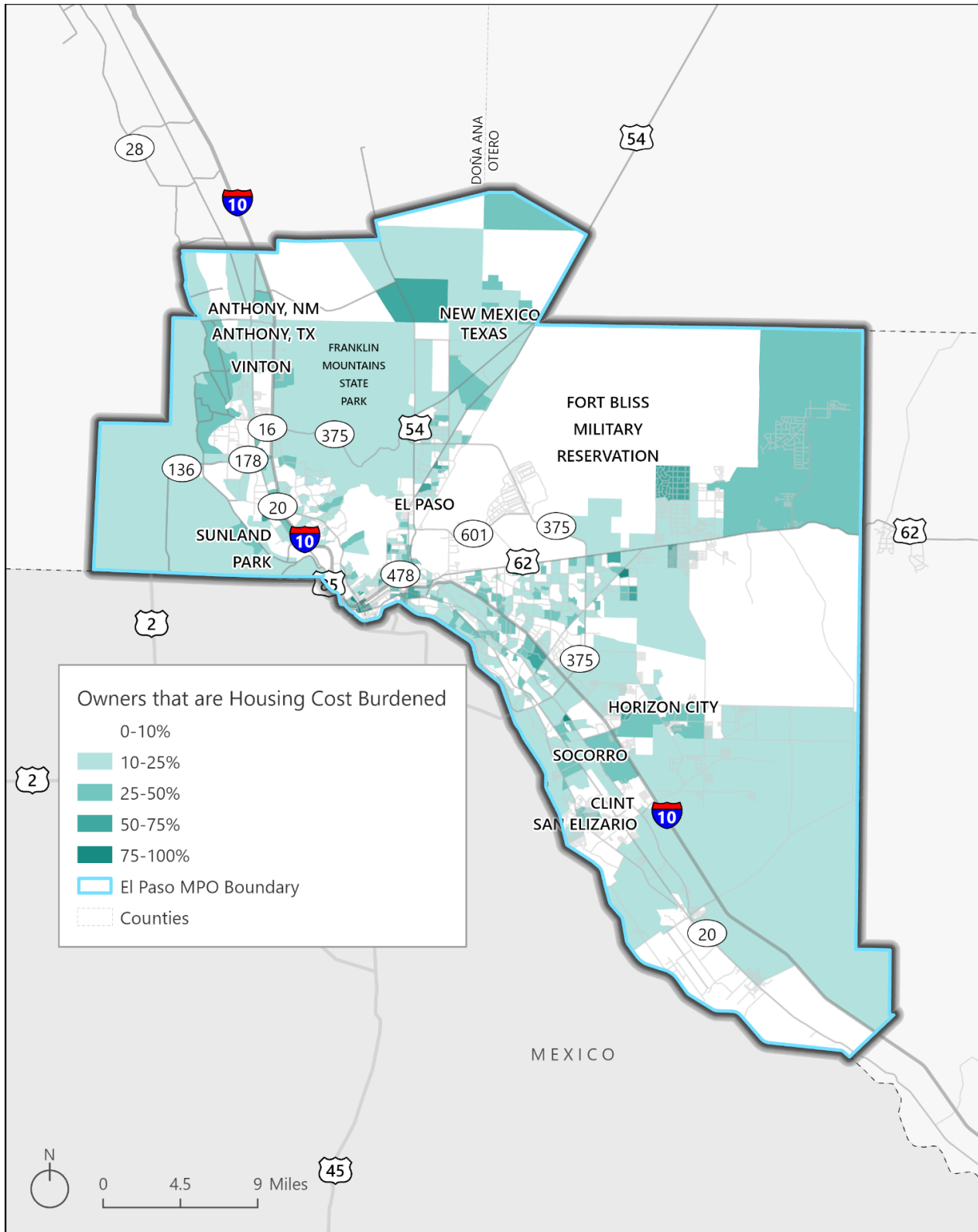
Figure 3-19: Housing Cost Burdened Renters



Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table B25070.

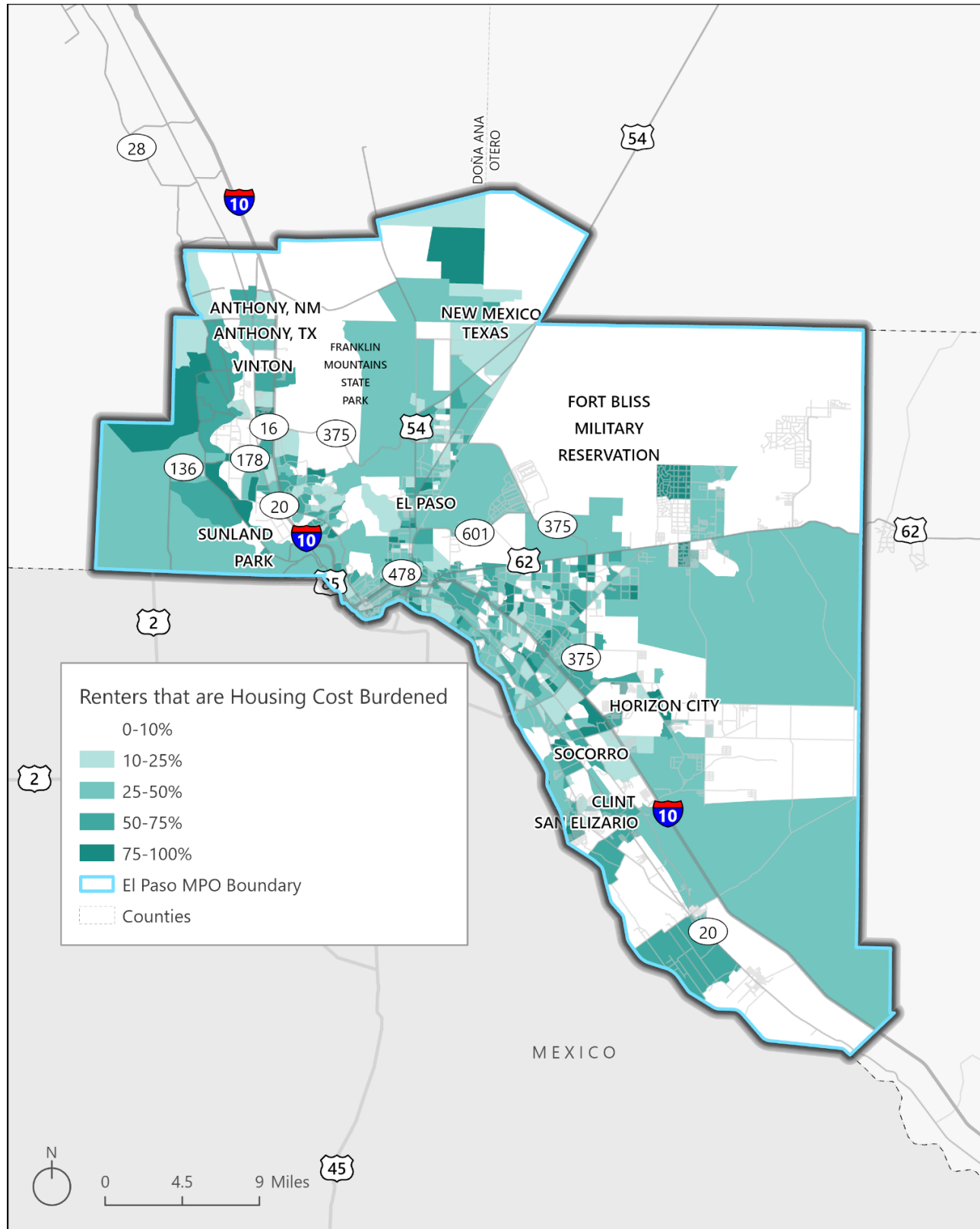
In addition to utilizing US Census data, housing costs can be evaluated using The Housing + Transportation (H+T®) Affordability Index from the Center for Neighborhood Technology. The results vary slightly from the U.S. Census Bureau American Community Survey 5-Year estimates but do show significant portions of the region to be housing cost burdened. Owners are shown in **Figure 3-22** and renters are shown in **Figure 3-23**.

Figure 3-20: Distribution of Housing Cost Burdened Houseowners



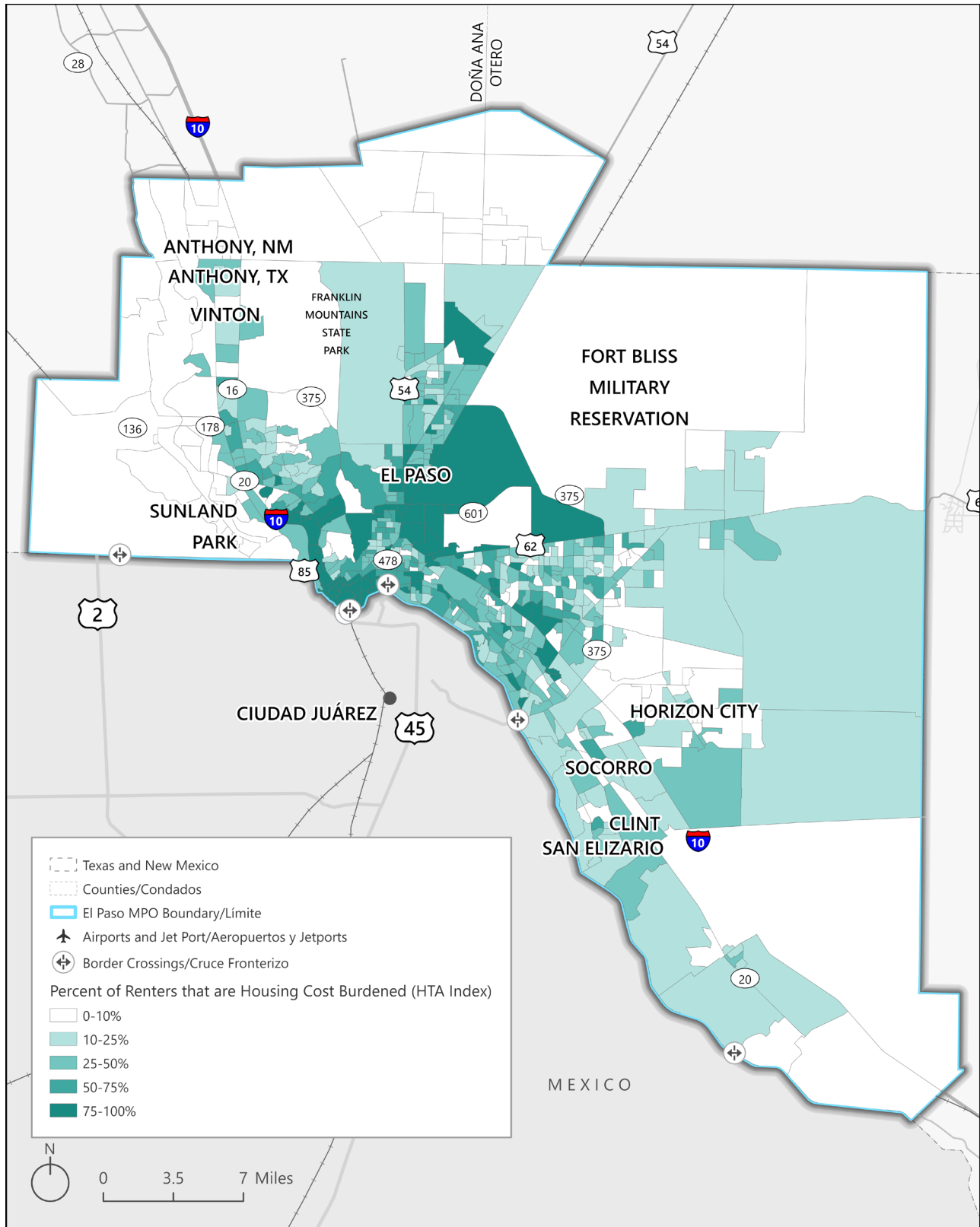
Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table B25091.

Figure 3-21: Distribution of Housing Cost Burdened Renters



Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table B25070.

Figure 3-23. The Housing + Transportation (H+T®) Affordability Index for Renters





3.1.6.7 INTERNET AVAILABILITY

The digital divide is the gap between those with and without internet access. Internet access is crucial for transportation, providing real-time updates on schedules and delays. Lack of internet access at home, people may need to travel to places like libraries to get online. This lack of access also limits participation in virtual meetings and online resources. Thus, the digital divide exacerbates transportation challenges and limits opportunities for those without reliable internet. These gaps in internet accessibility are crucial for developing inclusive mobility solutions and ensuring equitable access to transportation services. **Table 3-14** shows the percentage of households that do not have internet access.

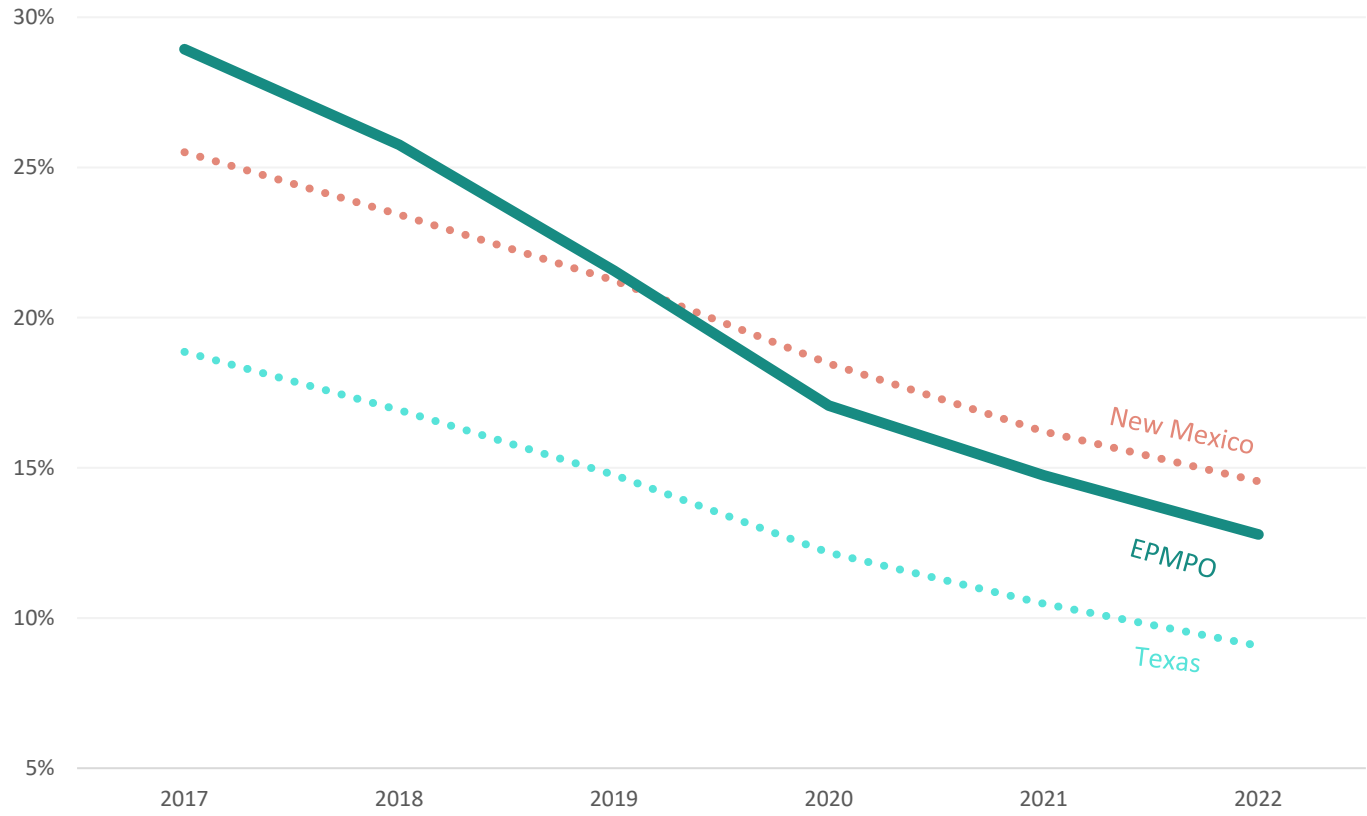
Table 3-14: Households without Internet Access

Geography	2017	2018	2019	2020	2021	2022
New Mexico	25.5%	23.4%	21.2%	18.5%	16.2%	14.5%
Texas	18.9%	16.9%	14.8%	12.2%	10.5%	9.1%
Doña Ana County, NM	25.2%	25.0%	22.6%	18.5%	15.8%	13.4%
Otero County, NM	24.7%	21.7%	20.8%	17.6%	14.1%	12.3%
El Paso County, TX	24.2%	21.3%	17.6%	14.2%	12.3%	10.7%
EPMPO MPA	28.9%	25.8%	21.6%	17.1%	14.7%	12.8%

Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table 28002.

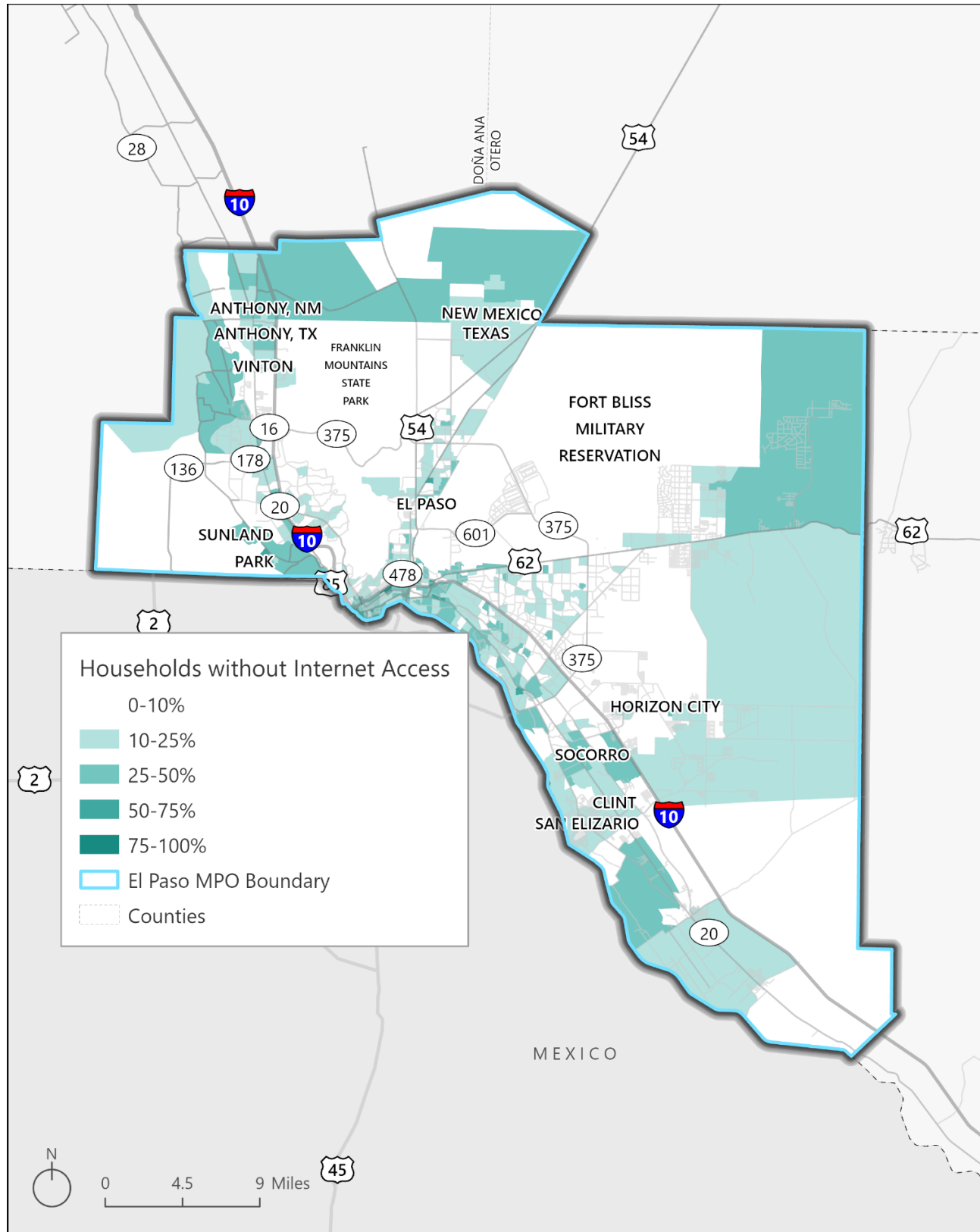
The MPO region has seen significant improvement in internet accessibility from 2017 to 2022, though disparities persist across different areas. The percentage of households without internet access in the EPMPO region decreased substantially from 28.9% in 2017 to 12.8% in 2022, reflecting broader digital infrastructure improvements. While this trend aligns with state-level patterns for Texas and New Mexico, EPMPO's rate remains higher than Texas (9.1%) but lower than New Mexico (14.5%). On the county level, El Paso County has the lowest percentage, indicating swifter improvement in internet service, compared to the counties in New Mexico. Refer to **Figure 3-24** for a graph of this trend. **Figure 3-25** reveals that internet access challenges are most pronounced in portions of central El Paso, particularly where there are dense neighborhoods along the highway corridors. The Sunland Park area and Anthony (NM and TX) show moderate levels of households without internet access, typically in the 25-50% range.

Figure 3-24: Households without Internet Access



Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table 28002.

Figure 3-25: Distribution of Households without Internet Access



Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table 28002.

3.2 ECONOMIC CONSIDERATIONS

A region’s economy is in part shaped by how easily workers can travel to their places of work. Hence, the transportation system must meet commuters’ demand by providing sufficient access and connectivity, as regional employment accounts for a significant number of trips.

3.2.1 EMPLOYMENT

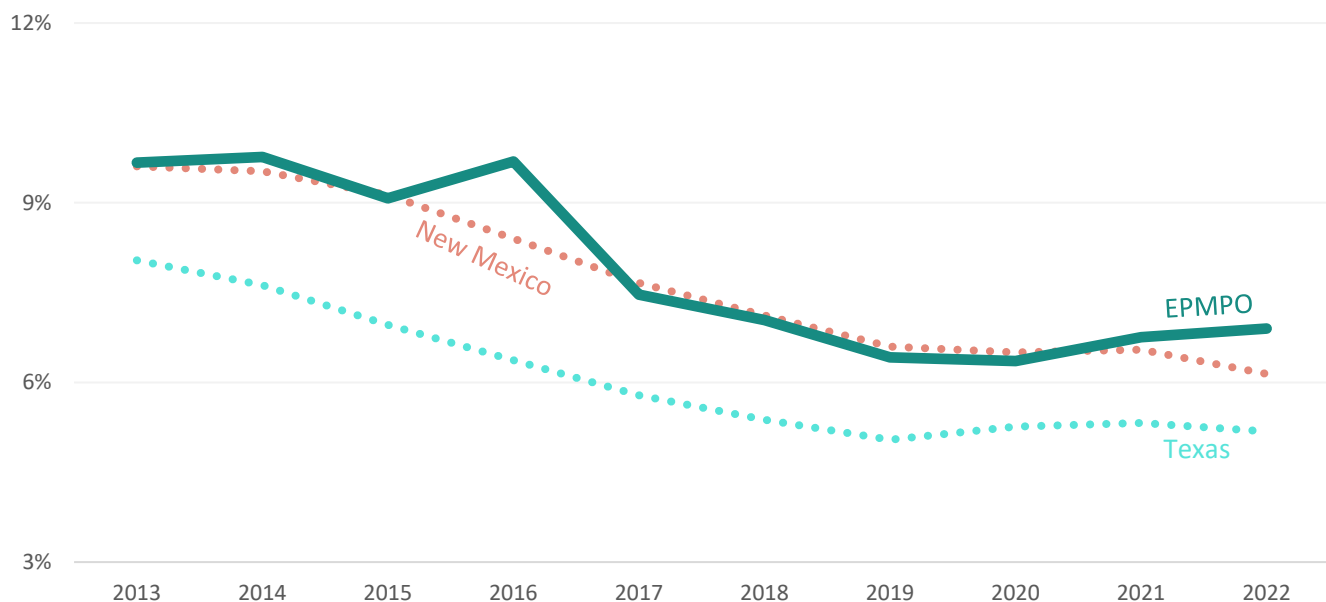
The region has shown a generally positive trend in employment from 2013 to 2022. According to **Table 3-15**, the employment rate in the EPMPO increased from 87.2% to 89.7% over this 10-year period. However, this employment rate remains slightly lower than the state-level figures for Texas and New Mexico, reaching 94.1% and 92.4%, respectively. The unemployment rate graph in **Figure 3-26** shows that the MPO region has closely followed the New Mexico’s unemployment trends, experiencing a significant drop from 2013 to 2019, followed by a slight increase in recent years. This is likely due to the impact of the COVID-19 pandemic, but the unemployment rate remains lower than in 2013.

Table 3-15: Employment Rate

Geography	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
New Mexico	89.5%	89.6%	90.0%	90.7%	91.4%	91.9%	92.4%	92.4%	92.2%	92.4%
Texas	91.2%	91.6%	92.3%	92.9%	93.5%	94.0%	94.3%	94.1%	94.0%	94.1%
Doña Ana County, NM	86.6%	87.0%	87.6%	88.7%	89.9%	91.0%	91.6%	91.7%	92.0%	92.3%
Otero County, NM	81.7%	82.1%	82.0%	84.0%	85.1%	87.2%	86.7%	84.3%	83.1%	81.0%
El Paso County, TX	87.0%	86.7%	86.9%	87.6%	88.6%	89.2%	89.7%	89.7%	89.2%	89.0%
EPMPO MPA	87.2%	87.2%	87.6%	87.2%	89.4%	90.0%	90.5%	90.3%	90.0%	89.7%

Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table B23025

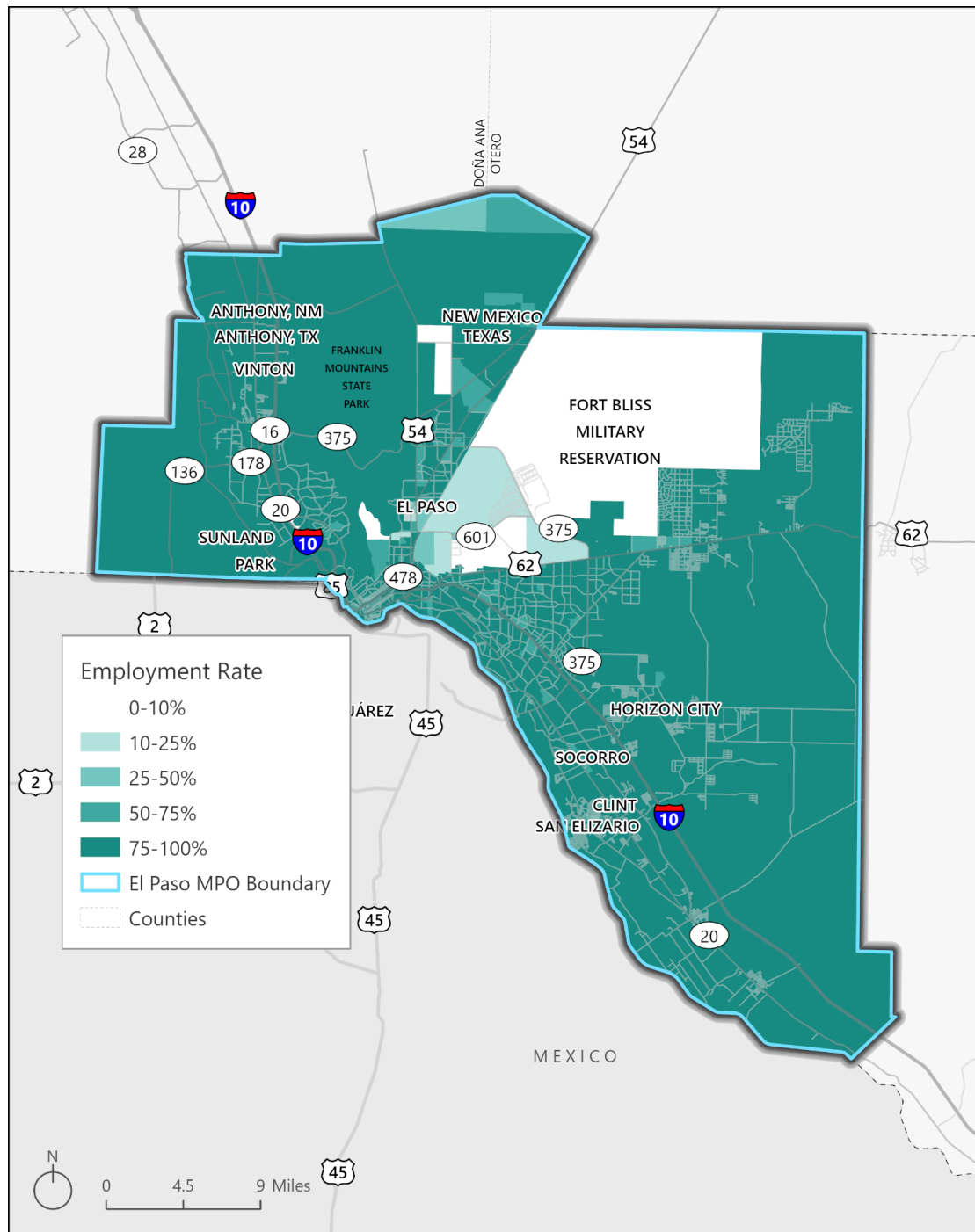
Figure 3-26: Unemployment Rate



Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table 23025

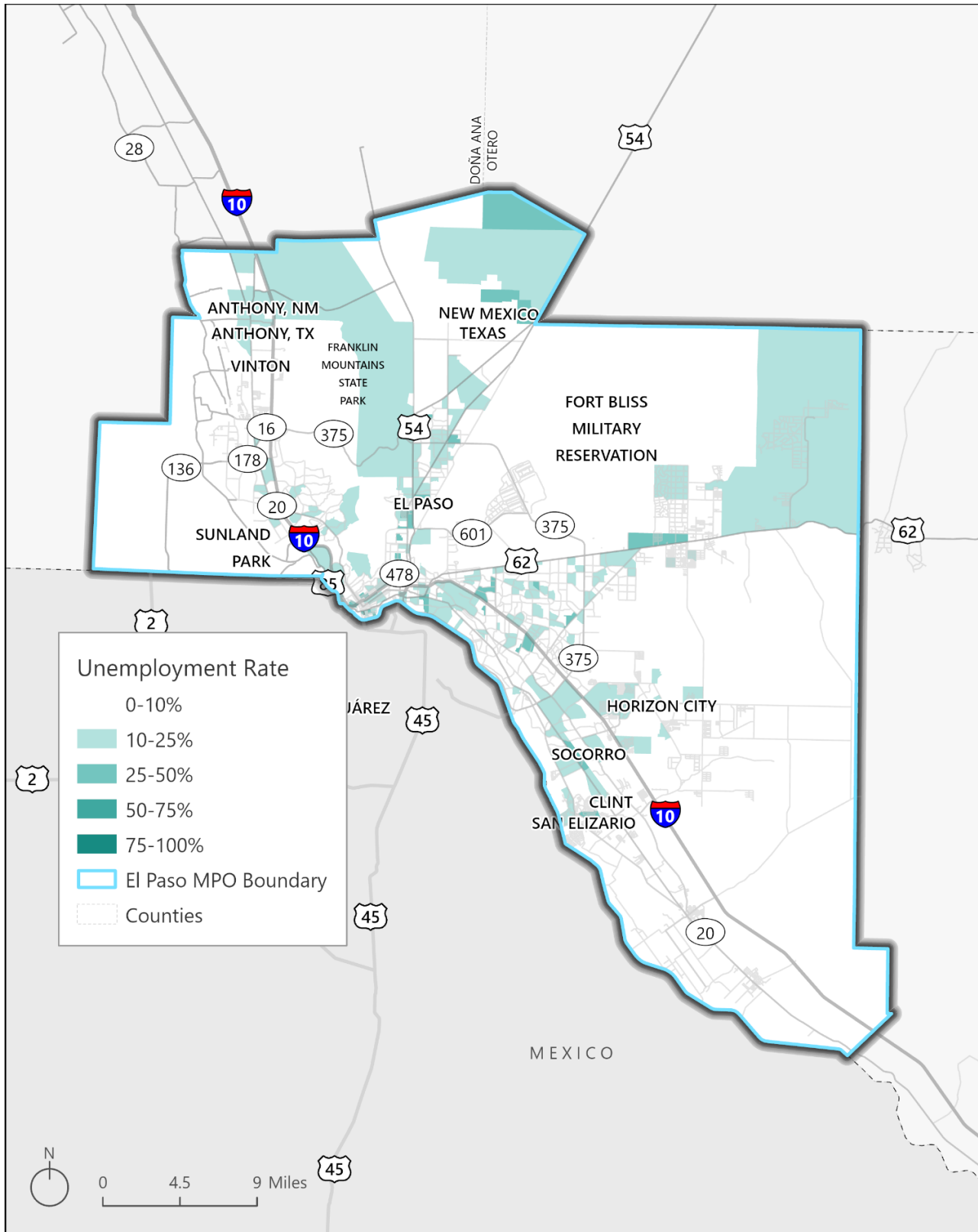
Figure 3-27 and Figure 3-28 show the geographical variation of employment and unemployment rates. The maps indicate that most of the MPO area falls within the highest category of employment, suggesting a relatively strong job market across the region. However, there are some variations within the area, with certain pockets showing lower employment rates, particularly in more rural areas of the MPA.

Figure 3-27: Employment Rate



Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table B23025.

Figure 3-28: Unemployment Rate



Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table B23025.



3.2.2 INCOME

Income, as an important socio-economic attribute, affects consumption power and travel behavior. This is why it is crucial to understand the income levels of the region to better understand where to prioritize the improvements in the transportation systems and ensure a consideration of disparities.

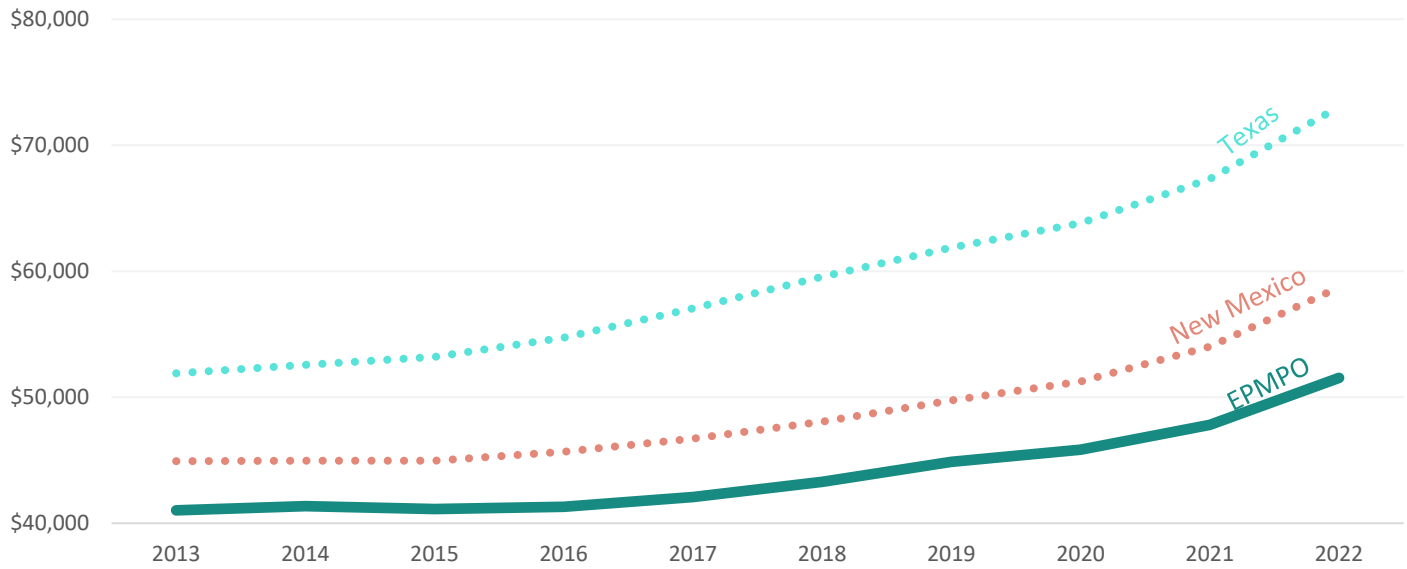
The MPO region has shown consistent growth in the median household income over the decade, but with notable differences compared to state averages. According to **Table 3-16**, the EPMPO region’s median household income rose from \$41,025 in 2013 to \$51,538 in 2022, marking a 25.6% increase. While this growth is substantial, it falls short of the more rapid increases seen in Texas (40.7%) and New Mexico (30.7%) over the same period. **Figure 3-29** depicts the EPMPO’s trajectory below both state lines, although all three trend lines exhibit upward movement. As noted in the preparation of the Travel Demand Model for the update to the Metropolitan Transportation Plan, the defined demographic assumptions not that while HH income in the EPMPO MPA will continue to increase through 2052, household purchasing power is expected to decline significantly over the next 27 years, with major decreases in the next few years.

Table 3-16: Median Household Income

Geography	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Percent Change
New Mexico	\$44,927	\$44,968	\$44,963	\$45,674	\$46,718	\$48,059	\$49,754	\$51,243	\$54,020	\$58,722	30.7%
Texas	\$51,900	\$52,576	\$53,207	\$54,727	\$57,051	\$59,570	\$61,874	\$63,826	\$67,321	\$73,035	40.7%
Doña Ana County, NM	\$37,933	\$38,426	\$38,853	\$38,636	\$39,114	\$39,164	\$40,973	\$44,024	\$47,151	\$51,232	35.1%
Otero County, NM	\$39,590	\$42,800	\$41,742	\$43,429	\$44,253	\$44,341	\$42,771	\$46,170	\$50,757	\$53,485	35.1%
El Paso County, TX	\$40,157	\$40,783	\$41,637	\$42,075	\$43,244	\$44,597	\$46,871	\$48,292	\$50,919	\$55,417	38.0%
EPMPO MPA	\$41,025	\$41,351	\$41,129	\$41,305	\$42,078	\$43,291	\$44,879	\$45,841	\$47,802	\$51,538	25.6%

Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table B19013.

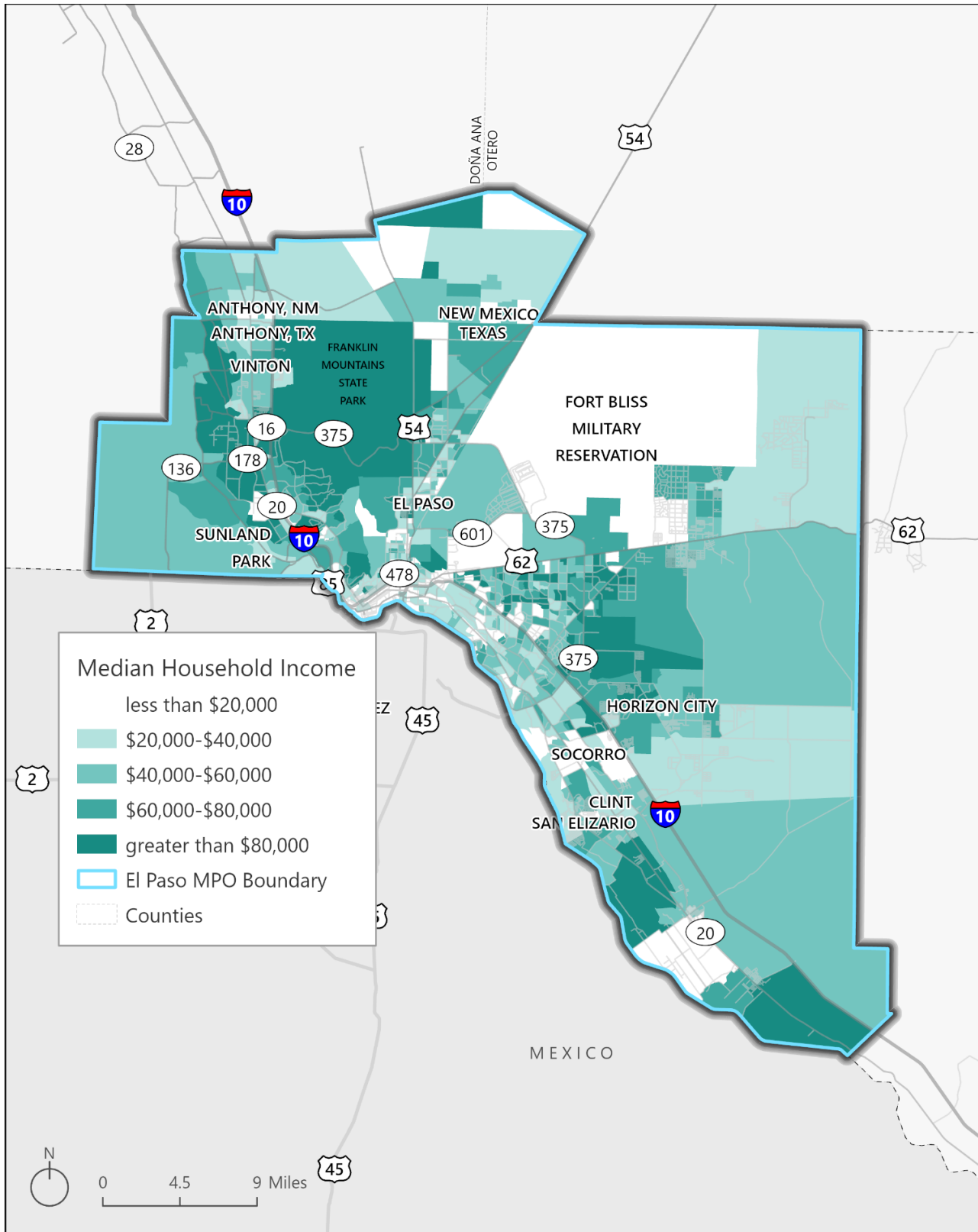
Figure 3-29: Median Household Income



Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table B19013.

Figure 3-30 shows the spatial distribution of median household income across the MPO. The map reveals that higher median incomes are concentrated in eastern and western El Paso neighborhoods, while central El Paso and areas near the US-Mexico border generally have lower incomes.

Figure 3-30: Median Household Income Distribution



Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table B19013.



4 TRANSPORTATION CONDITIONS

This section of this technical memorandum examines the current transportation conditions across the EPMPO region, exploring the roadways, safety, active transportation, transit, freight, airport transportation, and innovations and technology.

4.1 ROADWAYS

Roadways are the core of the region's transportation network, enabling the flow of people and goods within or throughout the region. They not only serve the vehicular traffic but also support other modes of transport. They offer routes for transit buses and often incorporate bicycle lanes and pedestrian walkways, creating a comprehensive transportation ecosystem.

4.1.1 FUNCTIONAL CLASSIFICATION

Roadways are categorized and designated in various ways important in understanding the regional network's operation, monitoring, and funding. The most fundamental categorization is functional classification, which groups roadways based on their primary purpose and characteristics. Mobility and access are the two key factors that derive the functionality of the roads. While the interstates offer the highest level of mobility with minimum access level, the local roads provide the highest level of access to traffic generator points but limited mobility. **Table 4-1** explains definitions of these different functional categories with examples from the regional roadway network. This MTP uses the functional classification scheme developed by the Federal Highway Administration (FHWA).

Figure 4-1 shows the roadway functional classification in the region. The roadway system within the EPMPO is categorized into Interstates, Freeways and Expressways, Principal Arterials, Minor Arterials, Major Collectors, Minor Collectors, and Local roads.

Table 4-2 presents the lane mile distribution among those roadways. Most of the network is local roads, covering 64.3% of the total lane miles across the MPO area. This predominance of Local roads underscores the importance of last-mile connectivity in the region's transportation infrastructure. Principal Arterials follow as the second most prevalent category, representing 12.6% of total lane miles, connecting major traffic generators, and providing mobility across the urban area.

While Interstates account for only 3.9% of the total lane miles, they serve as critical corridors for regional and interstate travel, with Interstate-10 forming a primary east-west axis through the region.

Table 4-1: Functional Classification Definitions

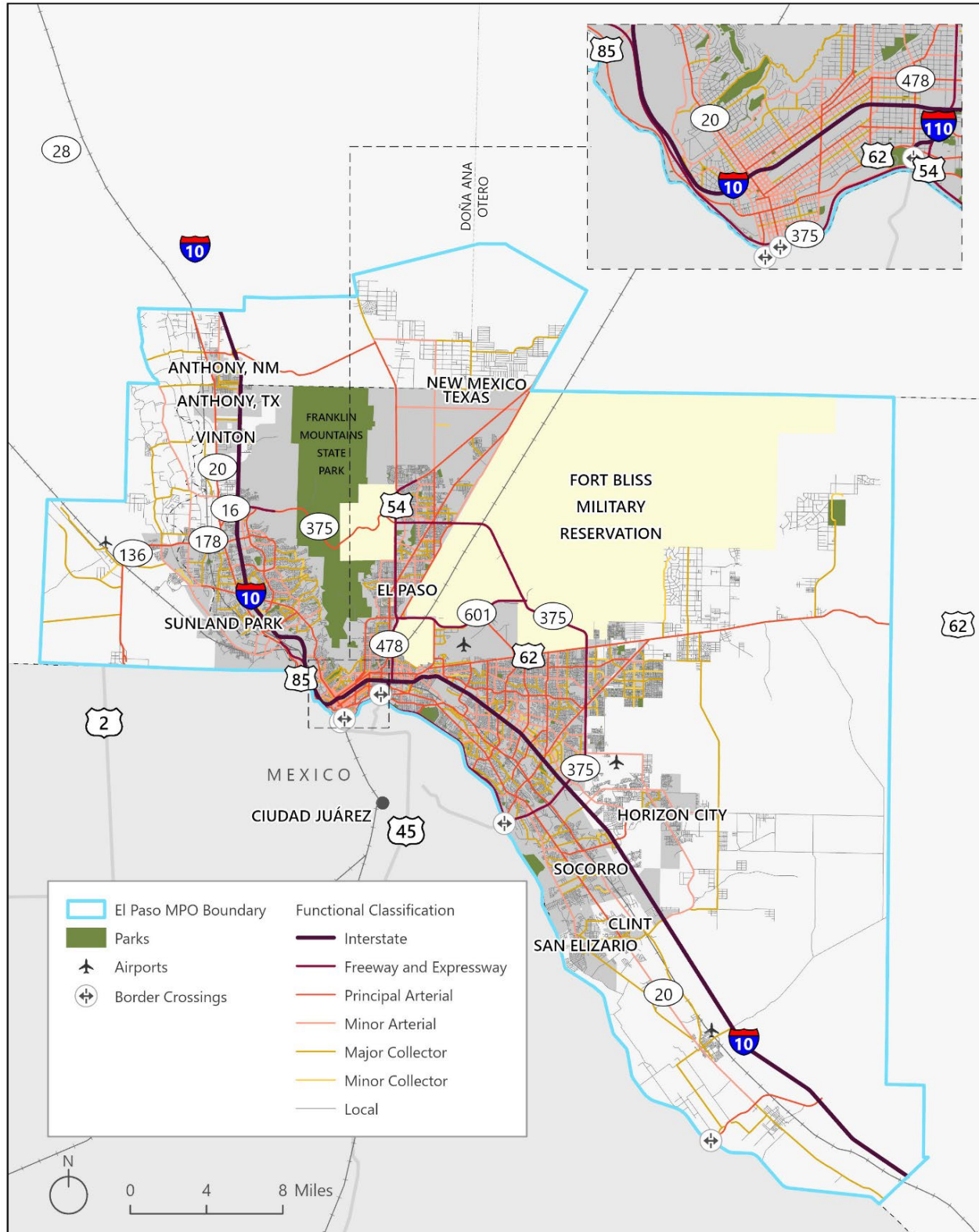
Functional Classification	Characteristics	Example
Interstate	<ul style="list-style-type: none"> High speed, divided highway with full control of access and grade separated interchanges Moves inter- and intra-regional traffic, particularly long trips in high traffic volume corridors. Provides access between cities and across metropolitan areas Normally in excess of 20,000 vehicles per day Formally designated by USDOT 	Interstate 10 (IH-10)
Other Freeway	<ul style="list-style-type: none"> High speed, divided highway with full control of access and grade separated interchanges crossing metropolitan areas and between major activity centers (2 or more miles) Usually in excess of 20,000 vehicles per day 	Loop 375
Principal Arterial	<ul style="list-style-type: none"> Typically, a divided street with major access points at intersections with the surface street system. Some direct access permitted to abutting land uses characterized by higher speeds, more truck, bus, and automobile traffic and typically have four lanes or more. Serves major centers of activity, with service to abutting land uses secondary to the provision of travel service Normally 10,000 to 30,000 vehicles per day 	Montana Ave
Minor Arterial	<ul style="list-style-type: none"> Number of lanes and type of median directly relate to traffic volumes and abutting land use Augments and feeds primary arterial system and distributes traffic to geographic areas smaller than those served by the higher system, with more emphasis on service to abutting land uses Normally 5,000 to 15,000 vehicles per day 	Dyer St
Collector	<ul style="list-style-type: none"> Function to “collect” traffic from residential streets and funnel them to arterials. Typically used for trips that are near their origin or destination point, primarily connecting neighborhoods within and among sub-regions Usually, 1,500 to 10,000 vehicles per day 	Resler Dr
Local	<ul style="list-style-type: none"> High access to driveways Provides direct access to abutting property Normally 1,500 or fewer vehicles per day 	Alvarez Dr

Table 4-2: Lane Miles by Functional Classification

Functional Classifications	Texas		NM		Total EPMPO	
	Lane Miles	Percentage	Lane Miles	Percentage	Lane Miles	Percentage
Interstate	338.4	4.0%	18.0	2.7%	356.4	3.9%
Freeway and Expressway	294.7	3.5%	0.0	0.0%	294.7	3.2%
Principal Arterial	1064.1	12.6%	88.5	13.0%	1152.6	12.6%
Minor Arterial	692.1	8.2%	32.5	4.8%	724.6	7.9%
Major Collector	604.6	7.2%	57.7	8.5%	662.4	7.3%
Minor Collector	52.2	0.6%	15.2	2.2%	67.4	0.7%
Local	5391.7	63.9%	468.7	68.9%	5860.4	64.3%

Source: Texas Department of Transportation Roadway Inventory & New Mexico Department of Transportation Roadway Inventory

Figure 4-1: Roadways by Functional Classification



Source: Texas Department of Transportation Roadway Inventory & New Mexico Department of Transportation Roadway Inventory



4.1.2 OWNERSHIP

Roadways across the EPMPO area represent a mix of ownership, indicating the complex relationship among various governmental and private entities in managing the region's transportation infrastructure. As illustrated in **Figure 4-2**, the roadway network is managed by a range of stakeholders, including state departments of transportation (TxDOT and NMDOT), county and municipal agencies, federal authorities, and private entities.

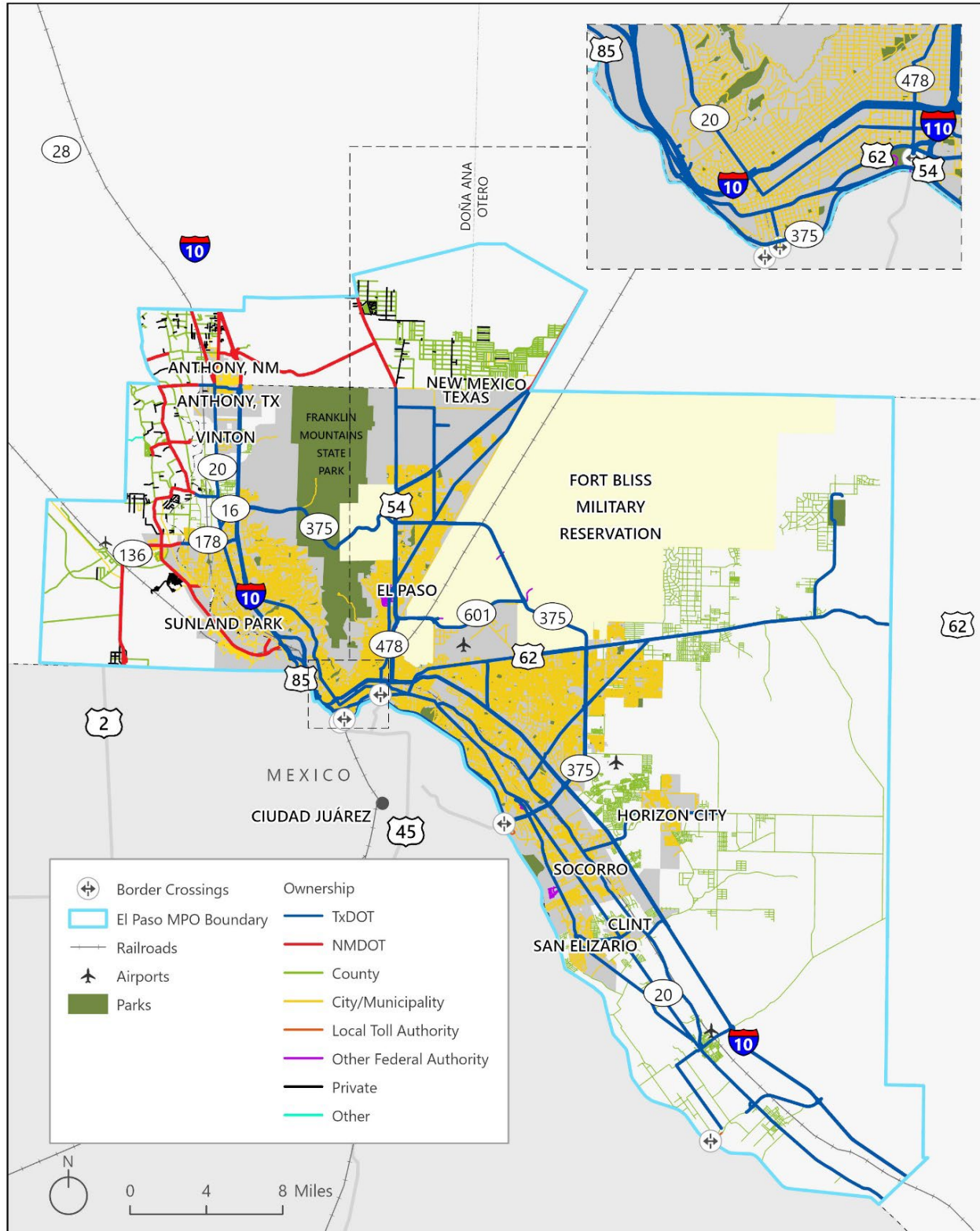
The ownership breakdown in **Table 4-3** indicates that City or Municipal Highway Agencies are the primary stakeholders, responsible for 33.4% of the roadways within the MPO boundary. This is closely followed by County Highway Agencies at 30.0%, indicating a significant role for local governments in managing the area's transportation network. State Highway Agencies, which typically manage major arterials and highways, account for 5.3% of the roadways. Notably, private ownership (excluding railroads) comprises a substantial 21.7% of the network, suggesting a significant role for private development in the region's road infrastructure. The remaining ownership is distributed among various entities, including federal agencies like the Bureau of Land Management and the Army, as well as other state and federal agencies, collectively accounting for less than 1% each.

Table 4-3: Ownership Distribution

Ownership	Percentage
State Highway Agency	5.3%
County Highway Agency	30.0%
City or Municipal Highway Agency	33.4%
Other State Agency	0.2%
Private (other than Railroad)	21.7%
Other Federal Agency	0.1%
Bureau of Land Management	0.1%
Army	0.2%
Other	9.2%

Source: T Texas Department of Transportation Roadway Inventory & New Mexico Department of Transportation Roadway Inventory

Figure 4-2: Roadway Ownership Distribution



Source: Texas Department of Transportation Roadway Inventory & New Mexico Department of Transportation Roadway Inventory

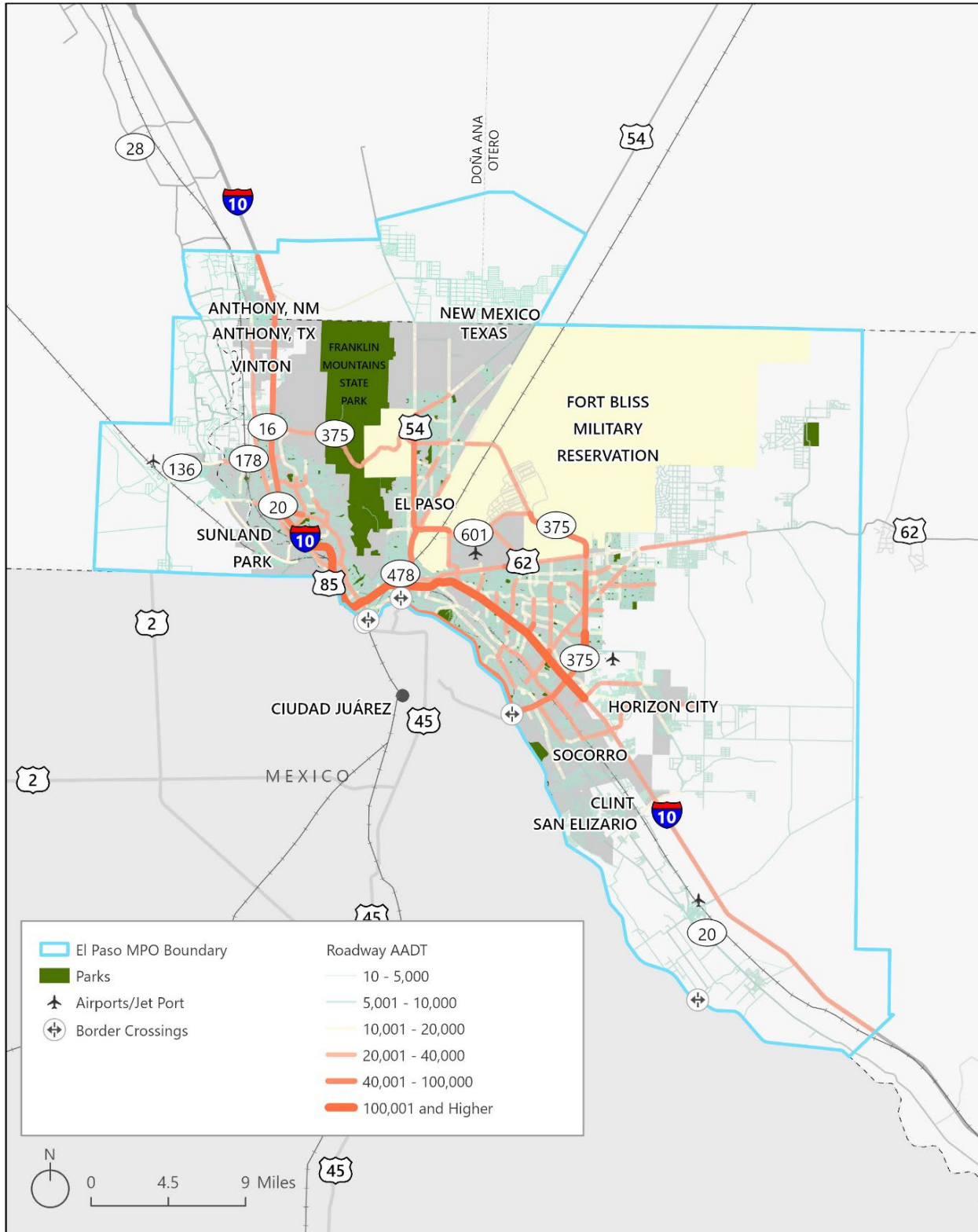


4.1.3 TRAFFIC VOLUME

Traffic volume is crucial in determining the type of improvements needed for different roadways. Average Annual Daily Traffic (AADT) is used as a metric to measure this volume, which estimates the average number of vehicles traveling on a specific roadway segment over the course of a year. The AADT for roadways within the MPO area was obtained from the TxDOT Roadway Inventory and NMDOT data source.

The MPO shows a wide range of AADT values across its roadway network, as illustrated in **Figure 4-3**. Major arterials and highways, depicted in varying shades of orange, handle between 20,001 and 100,000 vehicles daily. The busiest corridors, shown in thick orange lines, carry over 100,001 vehicles per day. These high-volume routes primarily include Interstate 10, which traverses the region from east to west, and portions of Loop 375. Lower traffic volumes (5,001 to 20,000) are typical of minor arterials and collectors throughout the region. In contrast, the lowest recorded volumes (10 to 5,000) are generally found on local roads and in less densely populated areas.

Figure 4-3: Traffic Volume

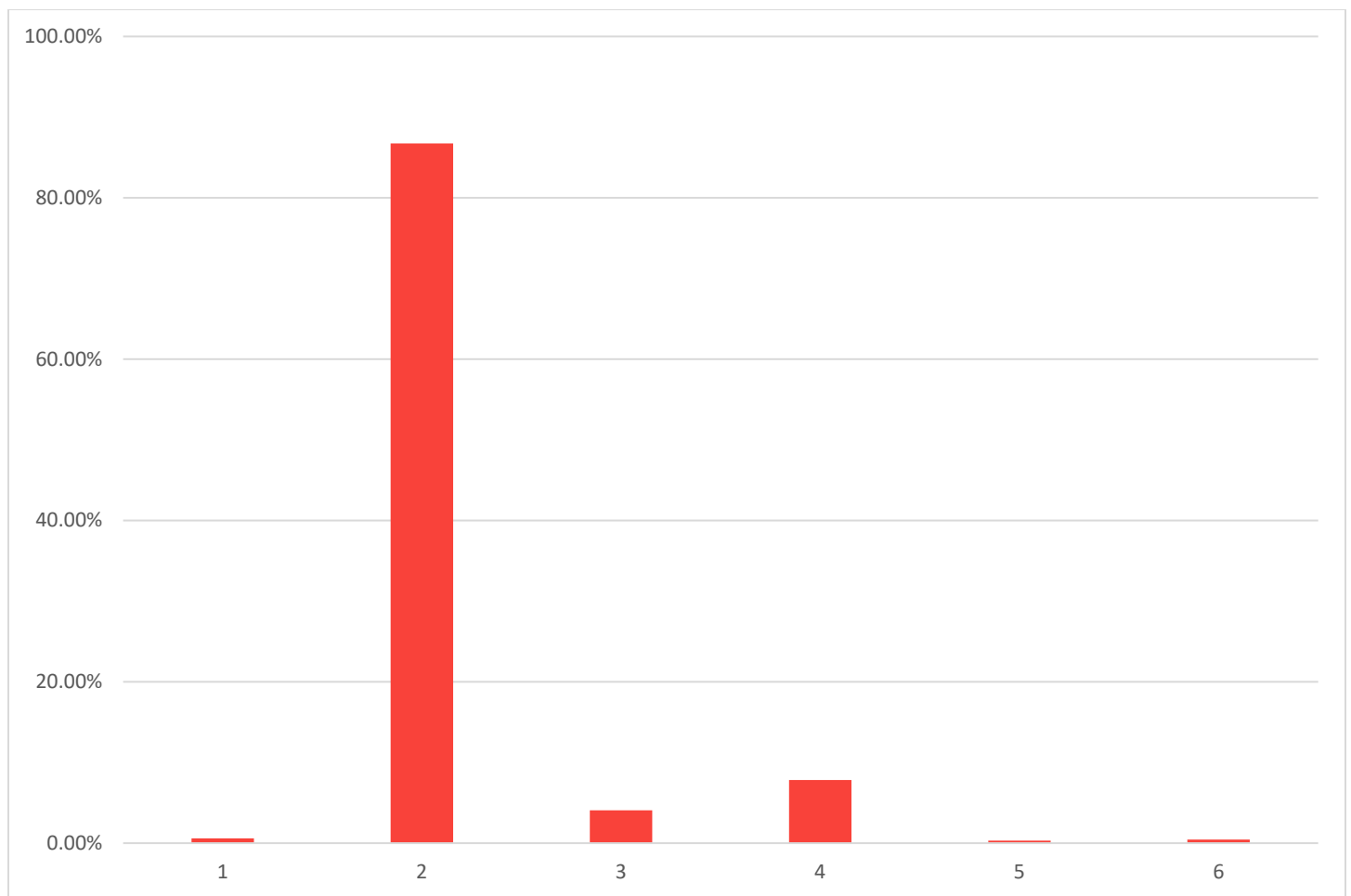


Source: Texas Department of Transportation Roadway Inventory & New Mexico Department of Transportation Roadway Inventory

4.1.4 ROADWAY LANES

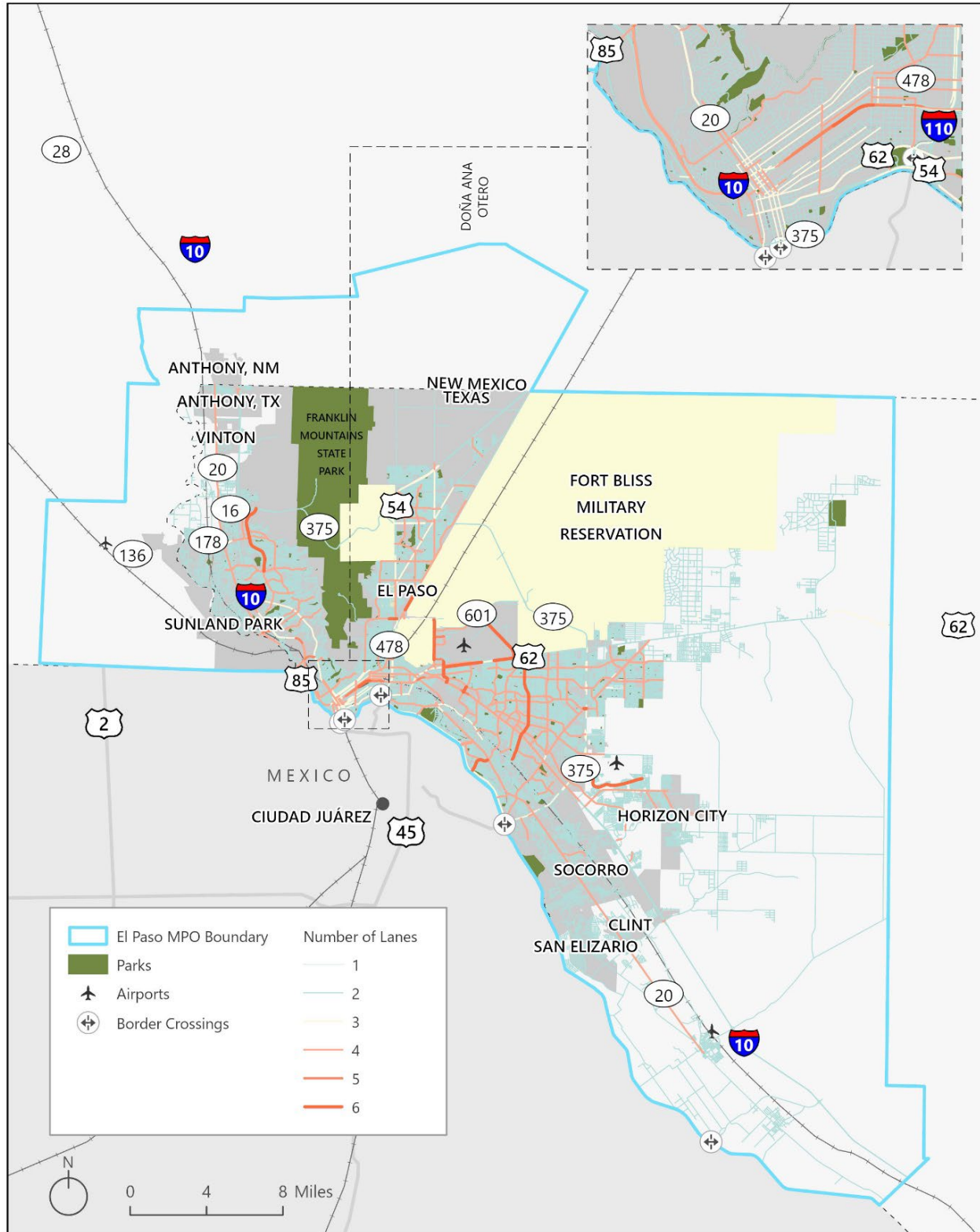
The distribution of the number of lanes shows a clear predominance of two-lane roads, which make up more than 85% of the roadway network, as shown in **Figure 4-4**. This prevalence of two-lane roads is typical of local streets and minor collectors that serve residential areas and provide local access. The remaining roadways are distributed among three-lane (about 5%), four-lane (approximately 8%), and facilities with five or more lanes, collectively making up a small percentage of the total network. These multi-lane roadways are primarily concentrated along major arterials, highways, and interstates, as clearly illustrated in **Figure 4-5** (map) showing the number of lanes across the MPO area.

Figure 4-4: Distribution of Number of Lanes



Source: Texas Department of Transportation Roadway Inventory & New Mexico Department of Transportation Roadway Inventory

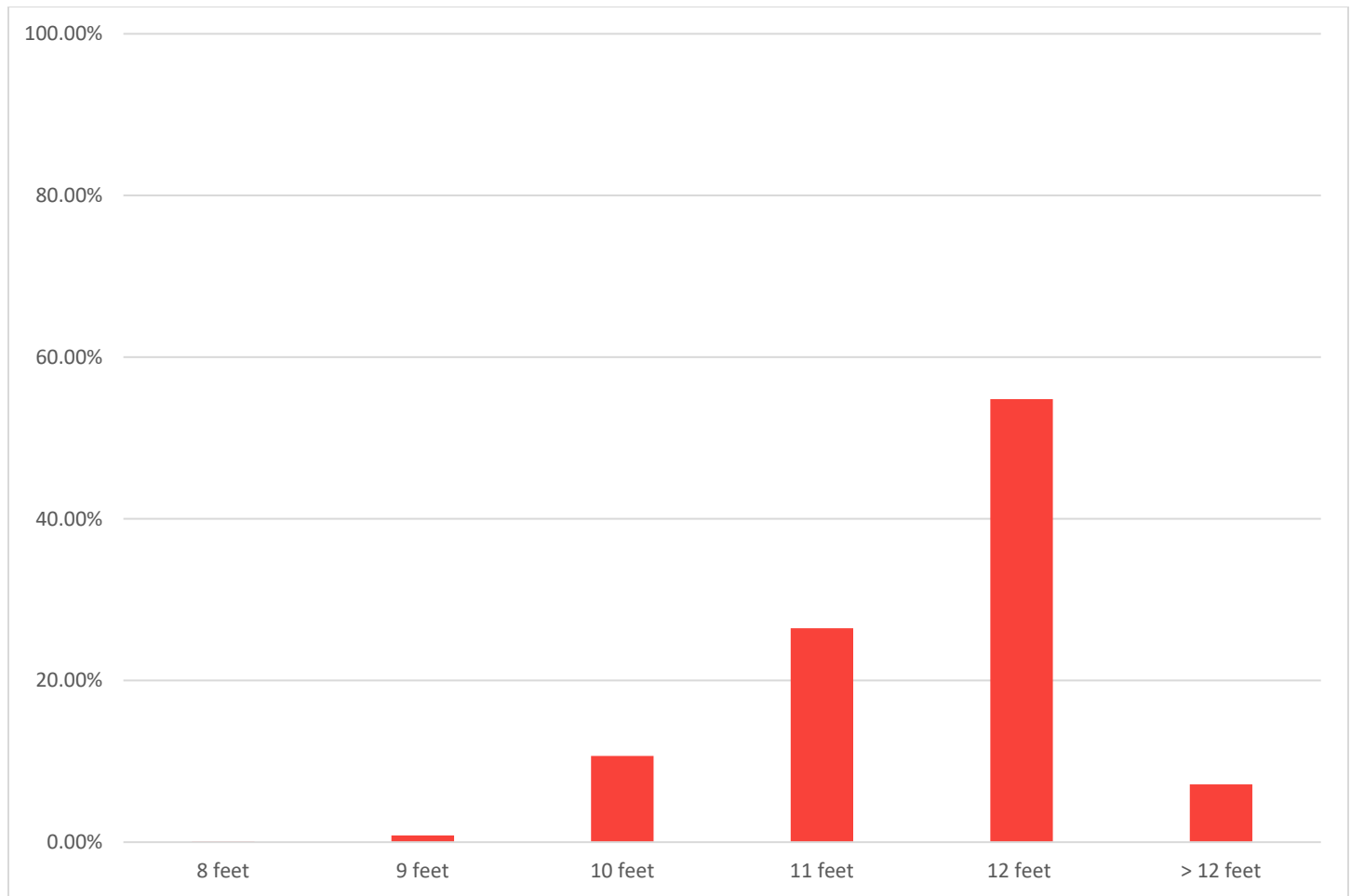
Figure 4-5: Number of Lanes



Source: Texas Department of Transportation Roadway Inventory & New Mexico Department of Transportation Roadway Inventory

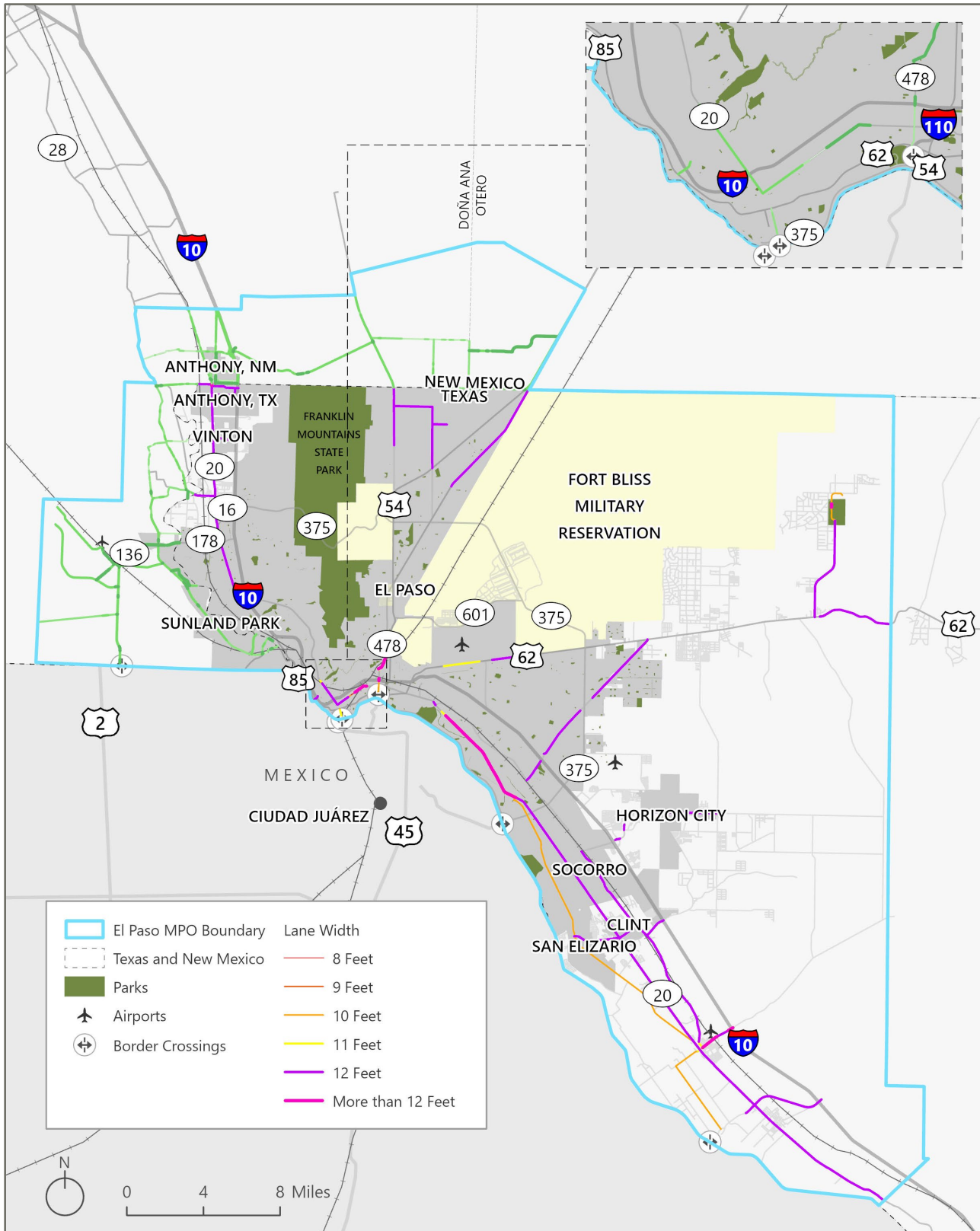
Figure 4-6 shows the lane width distribution across the region. The most prevalent lane width is 12 feet, accounting for over 55% of all lanes. Lanes of 11 feet in width are the second most common, making up about 27% of the network. Lanes wider than 12 feet, counting for about 7% of the network, are typically reserved for high-speed corridors or areas requiring additional maneuvering space. Narrower lanes of 10 feet or less are less common, collectively accounting for about 11% of the network, and are usually found in urban environments with lower speed limits or areas with right-of-way constraints.

Figure 4-6: Distribution of Lane Width



Source: Texas Department of Transportation Roadway Inventory & New Mexico Department of Transportation Roadway Inventory

Figure 4-7: Roadway Lane Widths



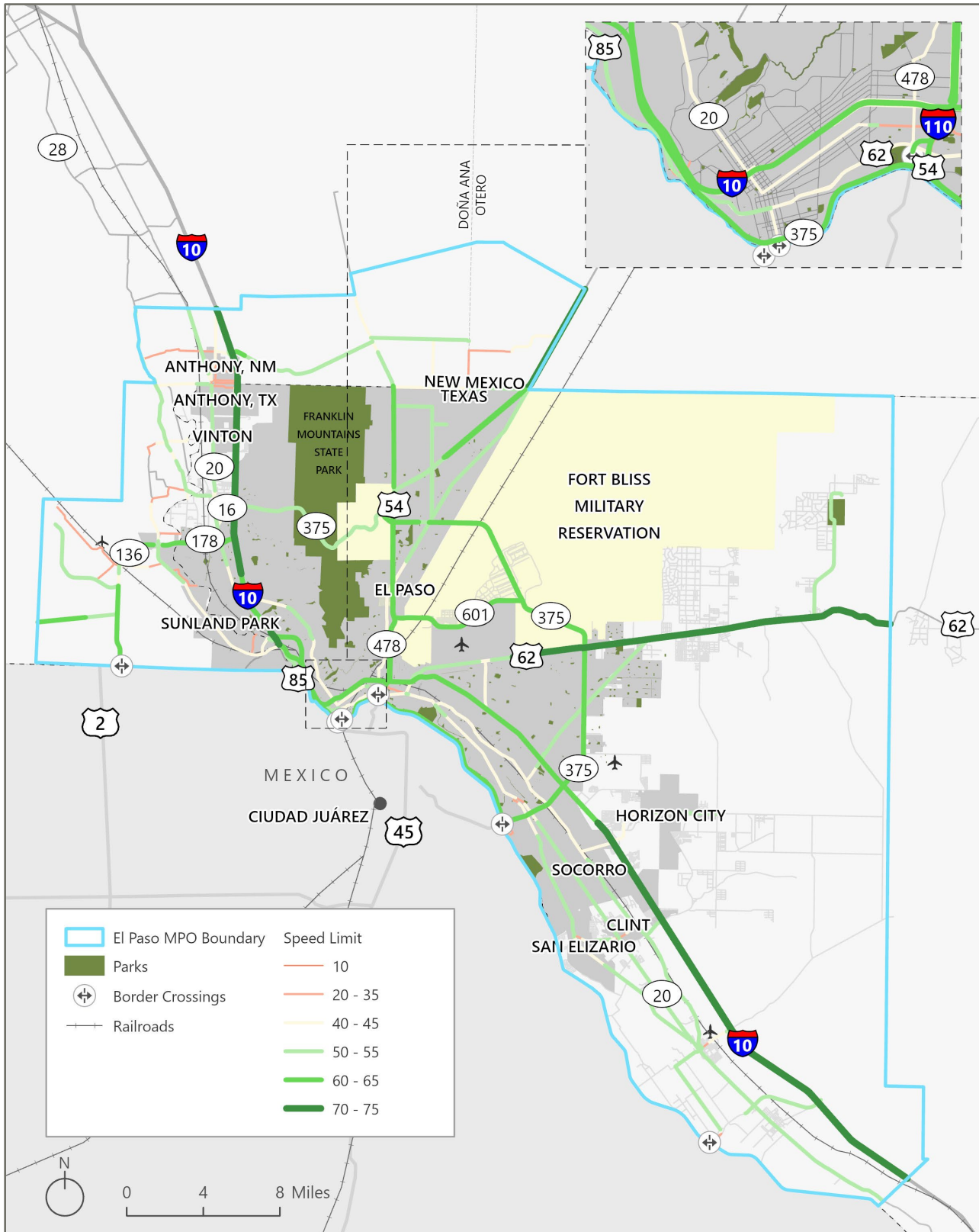
Source: Texas Department of Transportation Roadway Inventory & New Mexico Department of Transportation Roadway Inventory



4.1.5 SPEED LIMIT

Figure 4-8 shows six different categories of speed limits in the region. The highest speed limits, ranging from 65 to 75 miles per hour (mph), are primarily found on major interstate highways and other freeways such as IH-10, particularly in less urbanized areas. Speed limits of 55 to 65 mph are common on highways and major arterials connecting different parts of the region. The mid-range speed limits of 45 to 55 mph are typically seen on important urban arterials and some highways within more developed areas. Lower speed limits of 35 to 45 mph are seen on minor arterials and collectors in urban and suburban settings. The ranges of 10 to 35 mph and 10 mph or less are mainly observed in residential areas, school zones, and dense urban cores, prioritizing pedestrian safety and reflecting the complex traffic patterns in these areas.

Figure 4-8: Roadway Speed Limit



Source: Texas Department of Transportation Roadway Inventory & New Mexico Department of Transportation Roadway Inventory

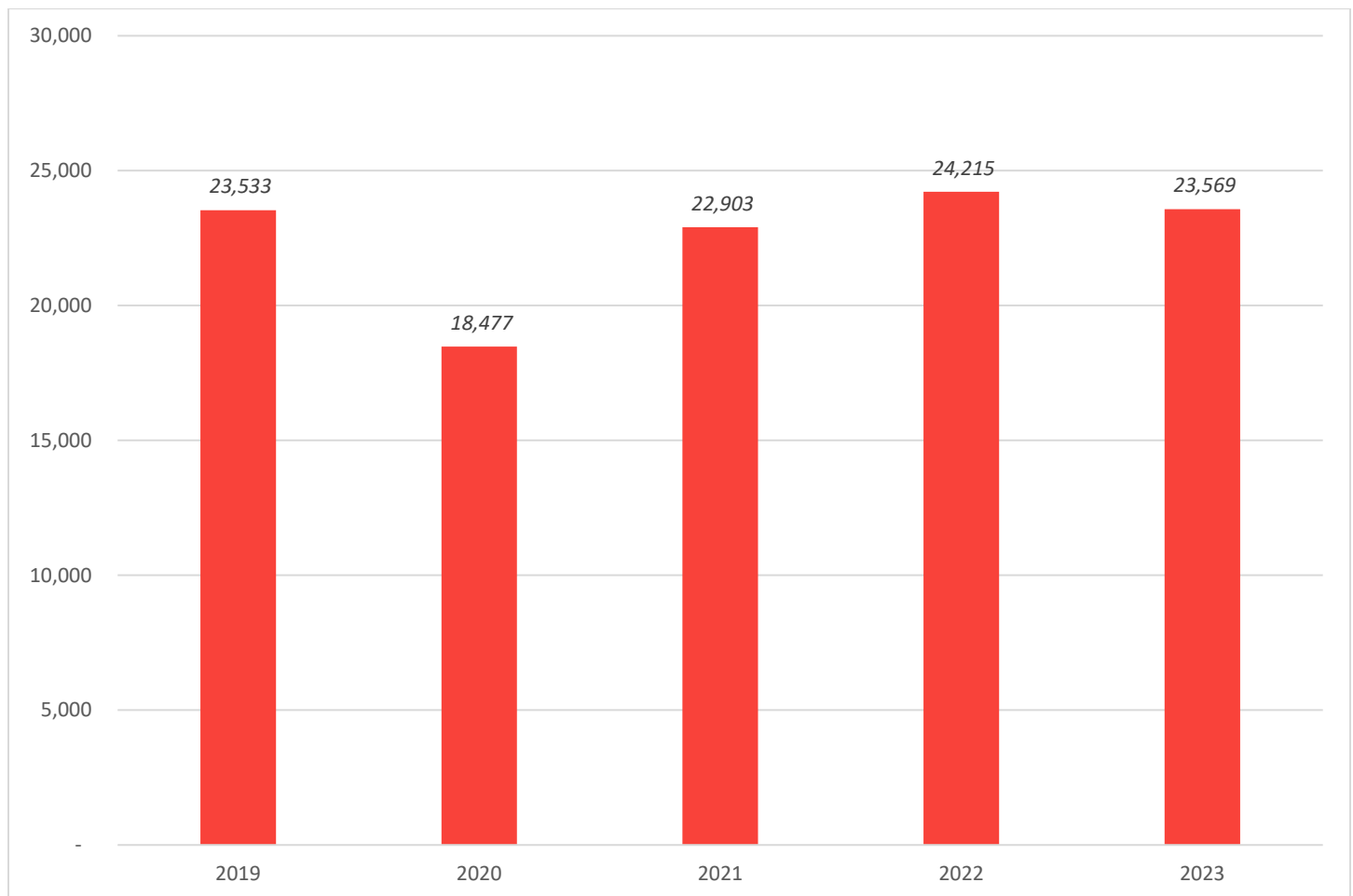
4.2 SAFETY

A safety analysis was conducted to explore crash locations, crash hotspots, crash severity, bicycle and pedestrian crashes, and the overall cost of crashes to society. Data was collected for the years 2019 through 2023 for the full EPMO area, comprising data sourced from both the Texas Department of Transportation (TxDOT) Crash Record Inventory System (CRIS) and the New Mexico Department of Transportation (NMDOT) Statewide Traffic Records System (STRS).

4.2.1 CRASH LOCATIONS AND CRASH HOTSPOTS

According to the TxDOT CRIS and NMDOT STRS data, 112,697 crashes occurred across the MPA from January 1, 2019, through December 31, 2023. The total number of crashes for each year from 2019 to 2023 is shown in **Figure 4-9**. The crash average for 2019 through 2023 is 22,539.4. Within this five-year period (2019 through 2023), the largest number of crashes occurred in 2022 with 24,215 crashes. The lowest number of crashes occurred in 2020 with 18,477 crashes, which could be attributed to COVID-19 when people traveled less.

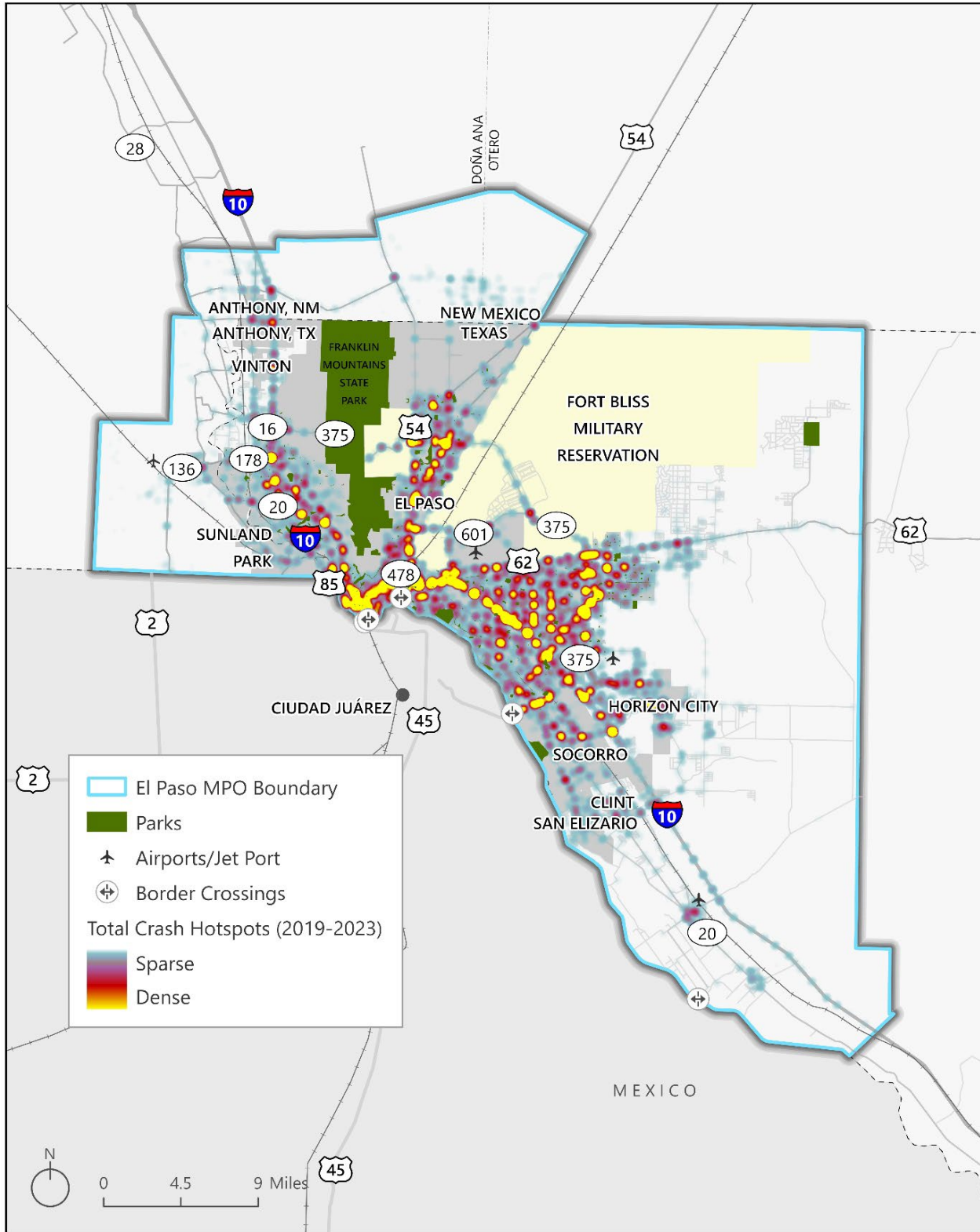
Figure 4-9: Total Crashes by Year



Source: Texas Department of Transportation Crash Record Inventory System and the New Mexico Department of Transportation Statewide Traffic Records System

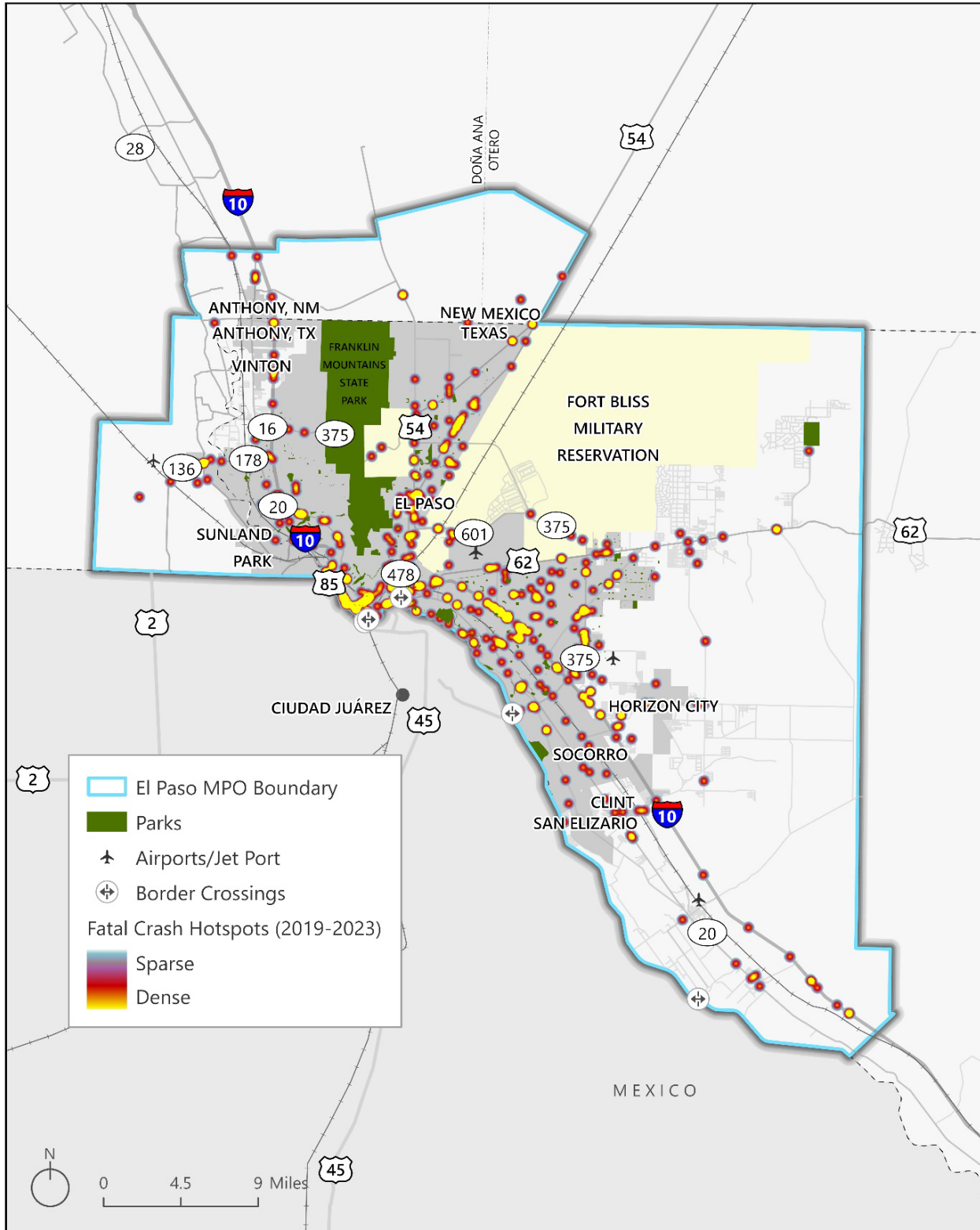
Identifying crash hotspots provides a glimpse of where crashes are occurring most frequently. **Figure 4-10** shows major hotspots corresponding with urban areas within the MPO area. A dense concentration of hotspots is present in Downtown El Paso and along major corridors such as IH-10, SH 20, US 62, Loop 375, US 54, and US 85. **Figure 4-11** displays fatal crash hotspots for the 441 fatal crashes from 2019-2023. Fatal crash hotspots occur frequently in urban areas such as El Paso and on major corridors.

Figure 4-10: Crash Hotspots (2019 - 2023)



Source: Texas Department of Transportation Crash Record Inventory System and the New Mexico Department of Transportation Statewide Traffic Records System

Figure 4-11: Fatal Crash Hotspots



Source: TxDOT CRIS & NMDOT Traffic Records

4.2.2 CRASH SEVERITY

Crashes are categorized by severity, such as Not Injured, Possible Injury, Suspected Minor Injury, Suspected Serious Injury, and Fatal Injury. The count of crash severity by year is shown in **Table 4-4**. The most common crash severity is crashes with no injury at 75,832, followed by crashes with a possible injury at 12,457 and minor injury crashes at 10,781. Serious and fatal crashes accounted for the least number of crashes at 1,287 and 441 crashes.

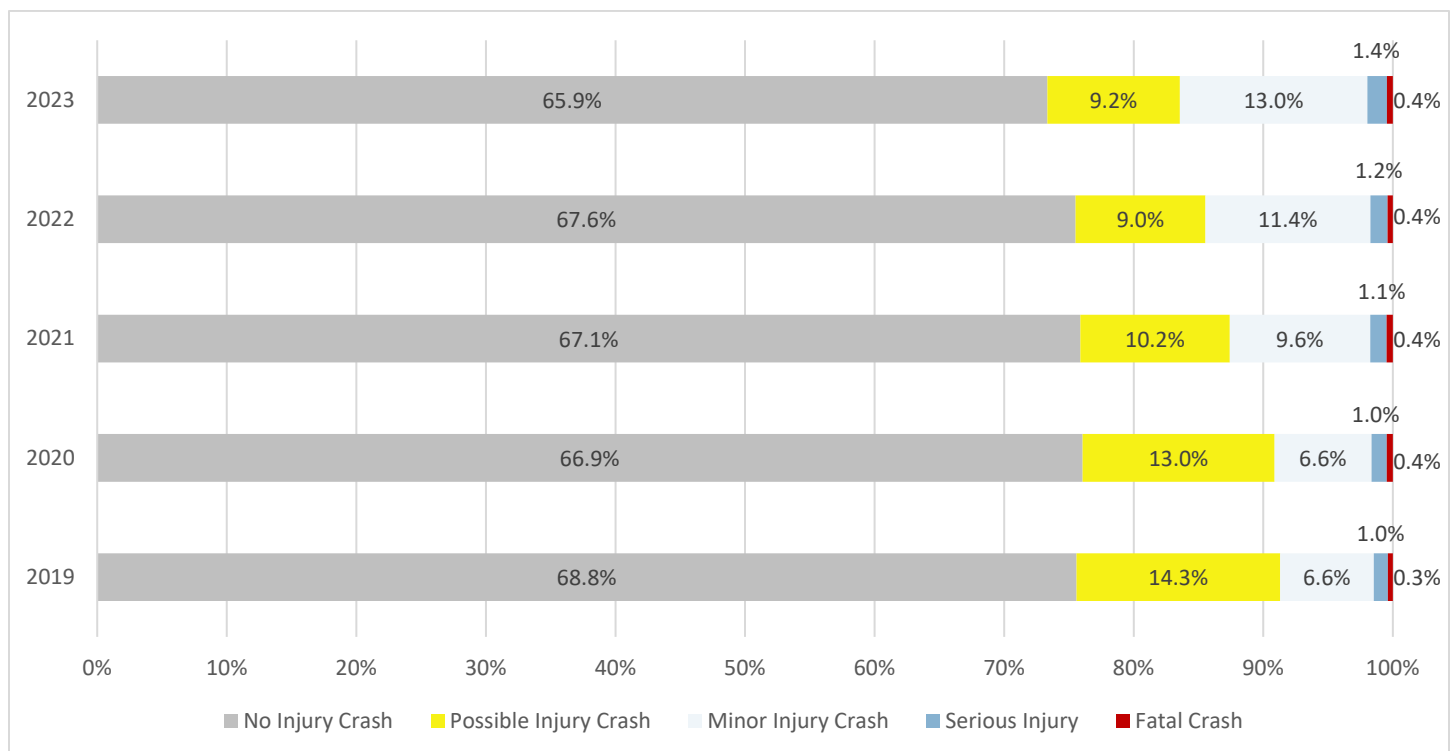
Figure 4-12 displays the percentage of each crash severity for crashes from 2019-2023. The number of crashes without injury accounted for 65.94 percent to 68.95 percent of all crashes. Crashes involving a possible injury accounted for 9 percent to 14.3 percent of all crashes. Crashes with a minor injury resulted in 6.6 percent to 13 percent, while crashes with a suspected serious injury resulted in 1 percent to 1.4 percent of all crashes. Lastly, fatal crashes accounted for 0.3 to 0.40 percent of all crashes. **Figure 4-13** displays the crash locations categorized by severity.

Table 4-4: Count of Crash Severity by Year

Crash Severity	2019	2020	2021	2022	2023	Total
Possible Injury Crash	3,366	2,410	2,337	2,175	2,169	12,457
Minor Injury Crash	1,545	1,216	2,196	2,758	3,066	10,781
Serious Injury Crash	234	192	256	286	319	1,287
Fatal Injury Crash	82	76	97	89	97	441
No Injury	16,186	12,367	15,376	16,364	15,539	75,832

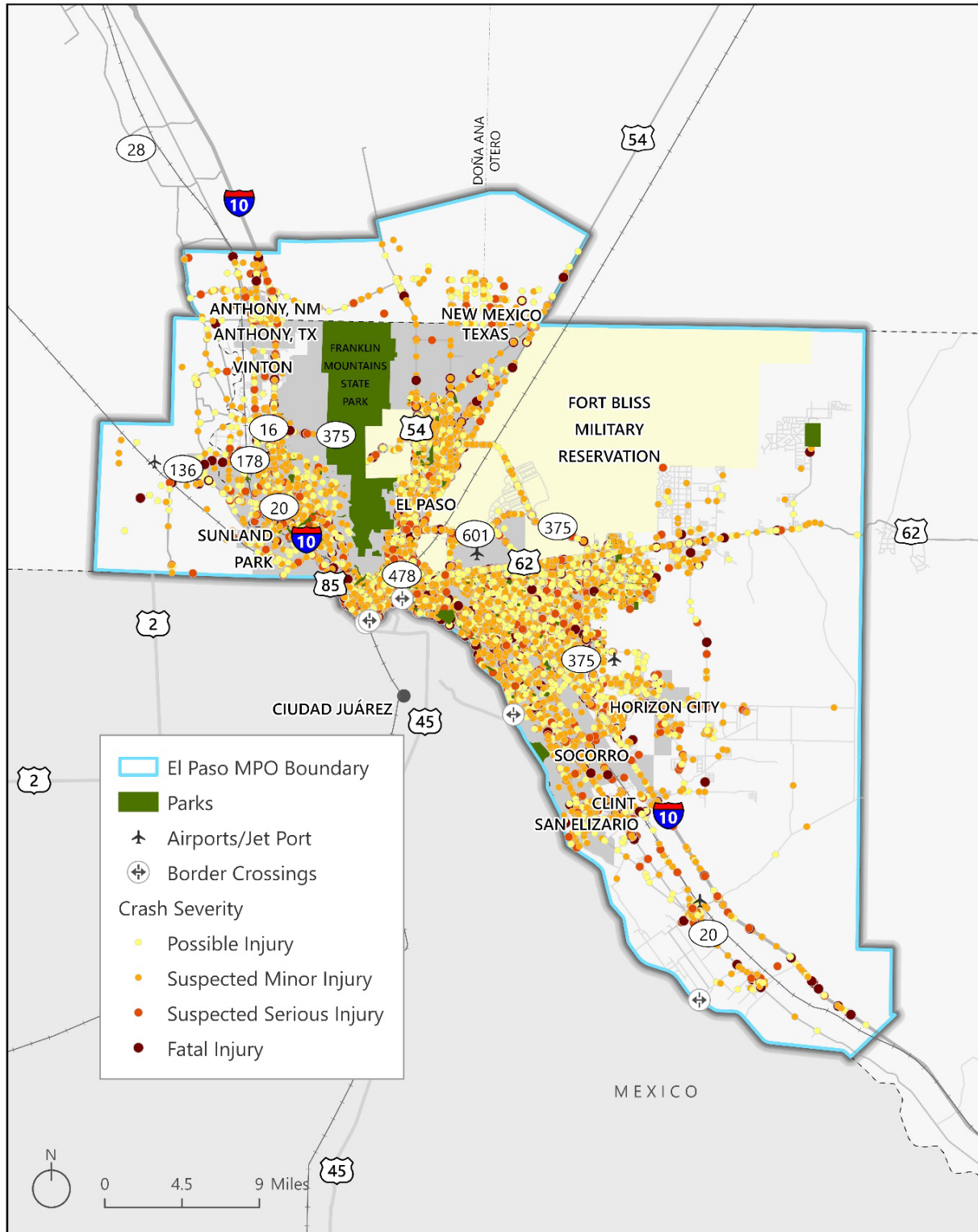
Source: Texas Department of Transportation Crash Record Inventory System and the New Mexico Department of Transportation Statewide Traffic Records System

Figure 4-12: Crashes by Severity (Percent)



Source: Texas Department of Transportation Crash Record Inventory System and the New Mexico Department of Transportation Statewide Traffic Records System

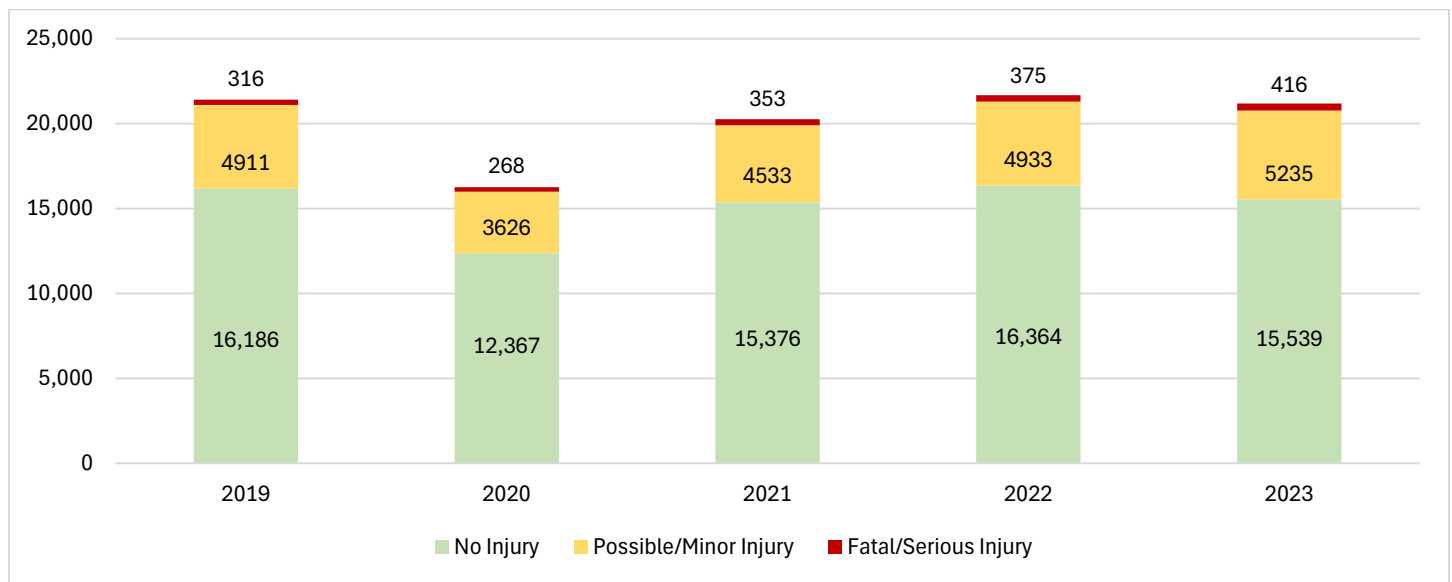
Figure 4-13: Crash by Severity Locations



Source: TxDOT CRIS & NMDOT Traffic Records

The focus of the analysis is to determine the number of fatal/serious crashes versus possible/minor injury crashes and no-injury crashes. As shown in **Figure 4-14**, fatal and serious injury crashes account for 316, 268, 353, 375, and 416 crashes, respectively, from 2019-2023. Although there was a decline in fatal and serious crashes in 2020, these crashes have increased steadily from 2021 to 2023. The number of possible and minor injury crashes has followed similar trends and increased in 2021 through 2023 after declining in 2020.

Figure 4-14: Serious Injury, Injury, and No Injury Crashes



Source: Texas Department of Transportation Crash Record Inventory System and the New Mexico Department of Transportation Statewide Traffic Records System

4.2.3 BICYCLE AND PEDESTRIAN CRASHES

The count and percentage of crashes involving bicycle and pedestrians are listed in **Table 4-5**. Out of the 112,697 crashes, 1,335 of them involved pedestrians, and 348 of them involved bicyclists. One hundred and twenty of these accidents resulted in a fatality, 112 crashes related to pedestrians, and eight crashes related to bicyclists. **Figure 4-15** displays the annual breakdown of bicycle and pedestrian crashes and those resulting in fatalities. The year 2019 had the highest number of pedestrian-related crashes at 332 and the lowest the following year, 2020, at 186. Pedestrian-related crashes increased in the following years, reaching 286 crashes in 2023. The highest number of crashes involving bicyclists occurred in 2019 and steadily decreased to 53 in 2023. Crashes involving bicyclists and pedestrians declined in 2019, but crashes involving pedestrians have steadily increased since 2020. The number of fatal crashes involving pedestrians and bicyclists has remained between 76 and 93 from 2019-203. Bicycle and pedestrian crash locations are shown in **Figure 4-16**. These crashes are clustered within urban areas of the MPO area.

Table 4-5: Crashes Involving Bicycles and Pedestrians

Type	Total Crashes	Crash Percent	Fatal Crashes
Bicycle	348	0.31%	8
Pedestrian	1,335	1.18%	112
Total Crashes	1,683	1.49%	120

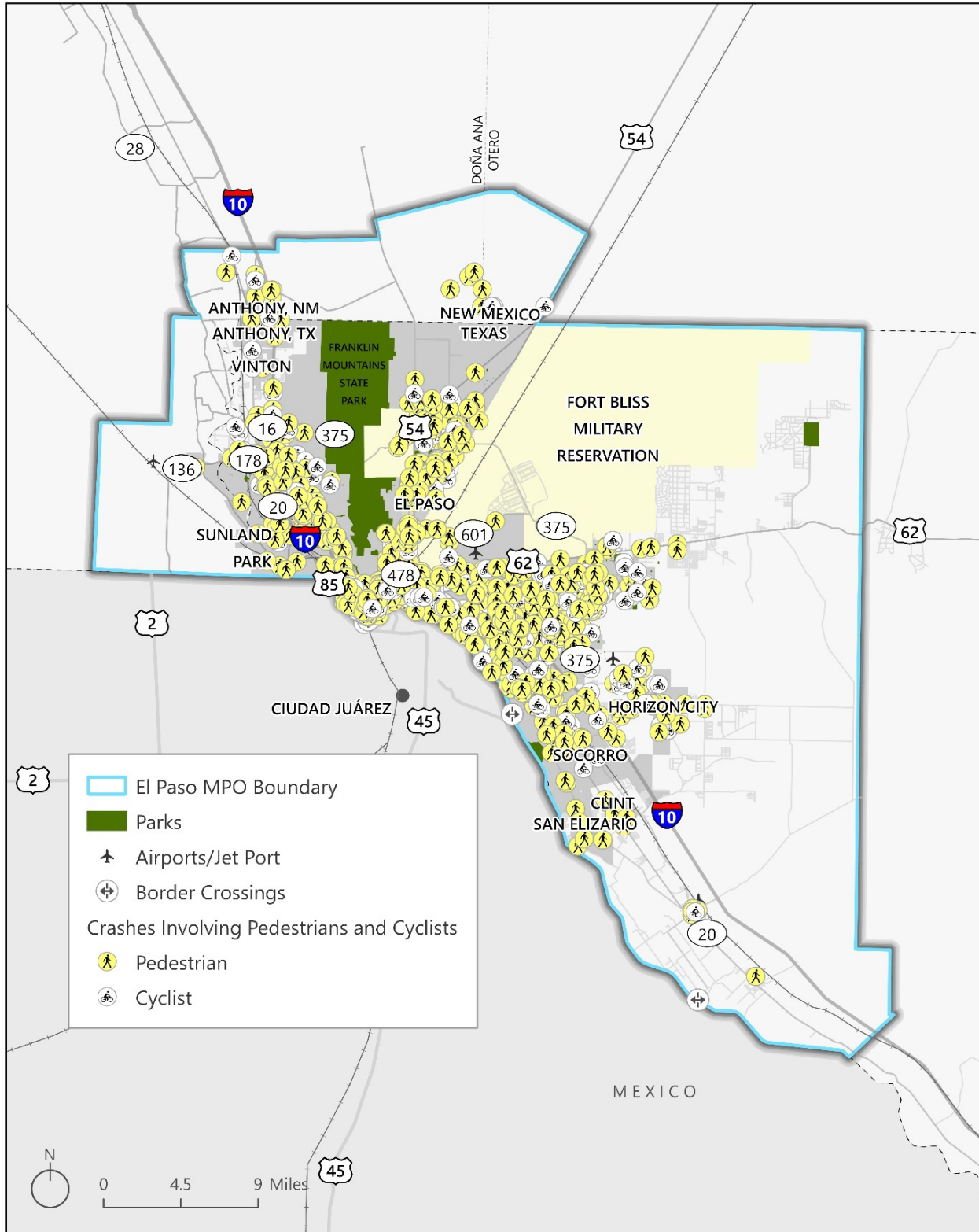
Source: Texas Department of Transportation Crash Record Inventory System and the New Mexico Department of Transportation Statewide Traffic Records System

Figure 4-15: Annual Number of Fatal, Bicycle, and Pedestrian Crashes



Source: Texas Department of Transportation Crash Record Inventory System and the New Mexico Department of Transportation Statewide Traffic Records System

Figure 4-16: Crashes Involving Pedestrians and Bicyclists



Source: Texas Department of Transportation Crash Record Inventory System and the New Mexico Department of Transportation Statewide Traffic Records System



4.2.4 CRASH COST TO SOCIETY

Quantifying crash costs provides an outlook at the economic impacts of crashes on society. This analysis uses the *Crash Costs for Highway Safety Analysis* from the Federal Highway Administration (FHWA) as a guide for calculation as shown in Table 4-6. In just five years, crashes resulted in over \$10.4 billion in societal costs for the MPA, in 2016-dollar terms (the most recent data for crash costs from FHWA). The cost of injury and fatality accounted for nearly half of that amount, at \$5.8 billion. The cumulative crash costs by severity for the El Paso region is shown in **Table 4-7**.

Table 4-6: Crash Costs from the FHWA

Severity	Comprehensive Crash Unit Cost (2016 dollars)
Serious Injury	\$655,000
Minor Injury	\$198,500
Possible Injury	\$125,600
Fatal Injury	\$11,295,400
No Injury	\$11,900

Source: TxDOT CRIS & NMDOT Traffic Records

Table 4-7: Cumulative Crash Costs by Severity for El Paso MPA

Severity	Crashes	Comprehensive Crash Unit Cost (2016 dollars)
Serious Injury	1,287	\$842,985,000
Minor Injury	10,781	\$2,140,028,500
Possible Injury	12,457	\$1,564,599,200
Fatal Injury	441	\$4,981,271,400
No Injury	75,832	\$902,400,800

Source: TxDOT CRIS & NMDOT Traffic Records



4.3 ACTIVE TRANSPORTATION

Active transportation is a critical component of the overall transportation network. Active transportation provides alternative transportation options, including cycling and walking, and can be used for local or short-distance trips. Active transportation is also often a step of travel for those using private motor vehicle or public transportation. Active transportation networks should provide connections to community facilities such as parks and trails to improve access to those facilities. Transportation networks with robust and comprehensive active transportation options supply users with healthy lifestyle options and improve the overall connectivity of the network. A GIS analysis was completed to determine the comprehensiveness and connectivity of the existing active transportation network within the EPMPO planning area. Additionally, relevant planning documents, including the El Paso Bike Plan (2016) and Vision Zero El Paso (2023), were reviewed to examine current active transportation planning goals and objectives in the EPMPO planning area.

4.3.1 EXISTING FACILITIES

Existing active transportation facilities within the EPMPO area consist of bicycle lanes, buffered bicycle lanes, cycle tracks / protected bicycle lanes, shared lane markings, shared use paths, and two-way cycle tracks. The existing facilities are concentrated in three primary regions of the EPMPO area. These facilities include just west of Franklin Mountain State Park, near the University of Texas at El Paso, and southeast of El Paso International Airport (ELP). A consistent shared bicycle lane is present throughout the Loop 375 route, which provides access to a vast majority of the EPMPO planning area and the network of state park trails within Franklin Mountain State Park. Facilities along other major thoroughfares, such as FM 20 and FM 76, provide connectivity to the northwest and southeast parts of the EPMPO area, respectively. The details of the existing facilities within the City of El Paso can be found in **Figure 4-17** and **Table 4-8**.

Figure 4-17: EPMPPO Bicycle Network

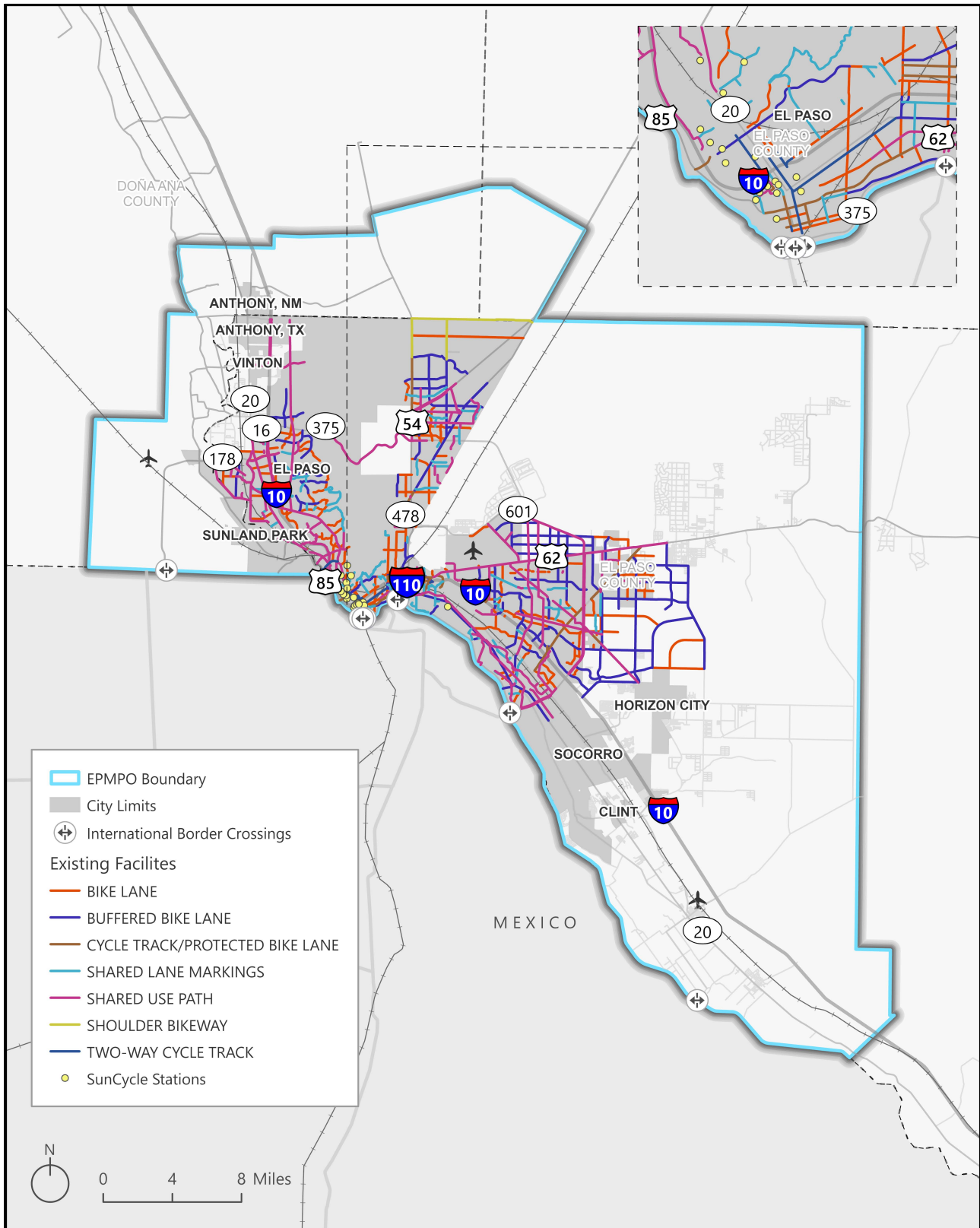




Table 4-8: Length of Active Transportation Facilities

Facility Type	Length (Miles)
Bicycle Lane	58.5
Buffered Bicycle Lane	44.5
Cycle Track / Protected Bicycle Lane	7.8
Shared Lane Markings	10.15
Shared Use Path	46
Two Way Cycle Track	2.25
Total	169.16

Source: City of El Paso Open Data Portal

4.3.2 SYSTEM USERS

Users of the active transportation system may include commuters but also recreational bicyclists and pedestrians. Regarding commuters, 2.28% of commuters in El Paso County (or approximately 8,000) reported using a taxicab, motorcycle, or bicycle for their commute, and 1% of commuters (or approximately 3,500) using public transportation as shown in **Table 4-9**. Commuters using public transportation may also include active transportation means at some stage of their commute. Recreational systems users include those but are not limited to bicyclists and pedestrians using the existing facilities for exercise or to access community facilities.

Table 4-9: Means of Commute for El Paso, Doña Anna, and Otero Counties

Means of Commute	El Paso County	Doña Anna County	Otero County
Car, truck, or van	95.21%	95.15%	95.80%
Public transportation (excluding taxicab)	1.00%	0.31%	0.41%
Walked	1.51%	2.43%	3.02%
Taxicab, motorcycle, bicycle, or other means	2.28%	2.11%	0.77%

Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table B08301.

4.3.3 CONNECTIVITY ANALYSIS

A GIS analysis was completed to determine the connectivity of the existing active transportation network to community facilities such as parks, state park trails, and transit stops. These facilities are relevant to the active transportation network’s commuter and recreational user base. This GIS analysis consisted of importing shapefiles of the existing active transportation facilities, parks, state park trails, and transit stops and executing an intersection function between the existing active transportation facilities and the community facilities. Additionally, a buffer of 500 feet was added to the existing active transportation facilities. The intersection function was executed again to determine if the existing active transportation facilities are within proximity of the community facilities.

Existing active transportation facilities provide direct access to approximately 28% of the transit stops within the EPMPO planning area. Approximately 40% of the transit stops within the EPMPO planning area are within 500 feet of a transit stop within the EPMPO planning area. The existing active transportation facilities provide direct access to 37% of the parks and recreational facilities within the EPMPO planning area.

Approximately 60% of the parks and recreational facilities within the EPMPO planning area are within 500 feet of an existing active transportation facility.



4.3.4 PLAN REVIEW

Recent active transportation planning efforts were reviewed to examine the state of active transportation planning within the area. Recent plans examined include the El Paso Bike Plan (2016), the El Paso Complete Streets Policy (2022), and the El Paso Vision Zero Action Plan (2023).

4.3.4.1 EL PASO BIKE PLAN (AUGUST 2016)

The El Paso Bike Plan, published in August 2016, establishes a vision and goals for cycling within El Paso, describes existing conditions, conducts a needs analysis, and provides recommendations and strategies for implementation. In describing the existing conditions, the El Paso Bike Plan stated that there were 140 total miles of existing cycling facilities within El Paso and that the system had three primary deficiencies. These deficiencies include a lack of overall system connectivity, low-stress facilities for less experienced bicyclists, and a lack of pavement markings leading up to and throughout intersections along existing bikeways. The needs analysis conducted within the El Paso Bike Plan found that cycling demand was highest in areas of greater population density, near schools and the University of Texas at El Paso, and areas closer to transit access.

The El Paso Bike Plan included recommendations to improve the existing bicycle system and program in El Paso. These recommendations included adding 938 miles of bicycle facilities, the majority of which would consist of bicycle lanes, shared-use paths, and buffered bicycle lanes. The system recommendations also included improvements to end-of-trip facilities, including increasing the number, quality, and security of bicycle racks, corrals, and lockers at transit stops and near residential developments. Program recommendations included promotional and open street bicycling events to increase community involvement and further development of bicycle network maps and informational materials to increase community awareness. Other recommendations included increasing city-led policies, initiatives, and staffing related to bicycling and following the Vision Zero Policy related to active transportation.

4.3.4.2 EL PASO COMPLETE STREETS POLICY (JULY 2022)

The El Paso Complete Streets Policy, published in July 2022, seeks to “create a connected, resilient, and equitable transportation network through a shift in street and road design that ensures equitable access to community resources for all people, including those who walk, bicycle, use a wheelchair, use public transportation, or drive” (City of El Paso, 2022). The principles of safety, accessibility, equity, diversity, inclusivity, land use, environment, and economic vitality guide the policy. Regarding active transportation, the policy discusses implementing projects that would improve walking, biking, and transit facilities that would increase pedestrian, bicycle, and transit levels of service. The strategies related to these projects would be to fill in gaps in the pedestrian, bicycle, and public transit networks and improve first-mile/last-mile transit access connections.

4.3.4.3 EL PASO VISION ZERO ACTION PLAN (JUNE 2023)

The El Paso Vision Zero Action Plan, published in June 2023, analyzes and presents crash data and trends to convey the current state of roadway safety in El Paso. Regarding active transportation, the El Paso Vision Zero Action Plan states that 68% of all fatal and serious injury crashes involved someone walking or biking. The fatal and serious injury crashes involving bicyclists and pedestrians occurred on only 5% of El Paso’s local streets. A concentration of the Bicycle/Pedestrian High Injury Network is located within downtown El Paso. Through the public engagement process, the El Paso Vision Zero Action Plan heard from the community that 40% of survey respondents felt comfortable walking in El Paso, and 82.5% wanted to make walking safer. Additionally, 16% of survey respondents felt comfortable biking, and 70% wanted to make biking safer. To improve pedestrian safety, the El Paso Vision Zero Action Plan recommended:



- Improved lighting
- High-visibility crosswalks
- Leading pedestrian intervals
- Medians and pedestrian refuge islands
- Corridor access management
- Turning restrictions
- To improve bicycle safety, the El Paso Vision Zero Action plan recommended:
- Implementing additional bicycle lanes and low-stress bikeway facilities
- Wayfinding signs
- Driveway improvements
- Parking treatments
- Improved roadway lighting

4.4 TRANSIT

Transit, also known as public transportation, is provided by three service providers within the El Paso Metropolitan Planning Organization (MPO) area. Sun Metro is the largest transit provider in the El Paso area, which operated a fleet of 252 revenue vehicles transporting 5,182,445 annual passengers in 2022. The agency is a department of the City of El Paso that primarily serves within the city limits with limited service in the rest of El Paso County. Sun Metro provides fixed-route, demand-response, and streetcar services. Service in unincorporated areas and all municipalities in the eastern portion of El Paso County (except Socorro) is provided by El Paso Transportation Authority (ETA), which operates as a local government corporation comprised of the County and all of the municipalities. ETA was previously known as El Paso County Transit and rebranded to ETA in 2024. In 2022, ETA operated 121 revenue vehicles providing transport for 398,104 annual passengers. South Central Regional Transit District (SCRTD) provides transit service in Doña County and Otero County in New Mexico, which includes the cities of Anthony and Sunland Park, and offers connections to El Paso, Texas. SCRTD operated 14 revenue vehicles for 85,075 annual passengers in 2022. Each of these services is described further below. A map of the fixed routes for Sun Metro and SCRTD is shown in **Figure 4-18**.

4.4.1 RIDERSHIP

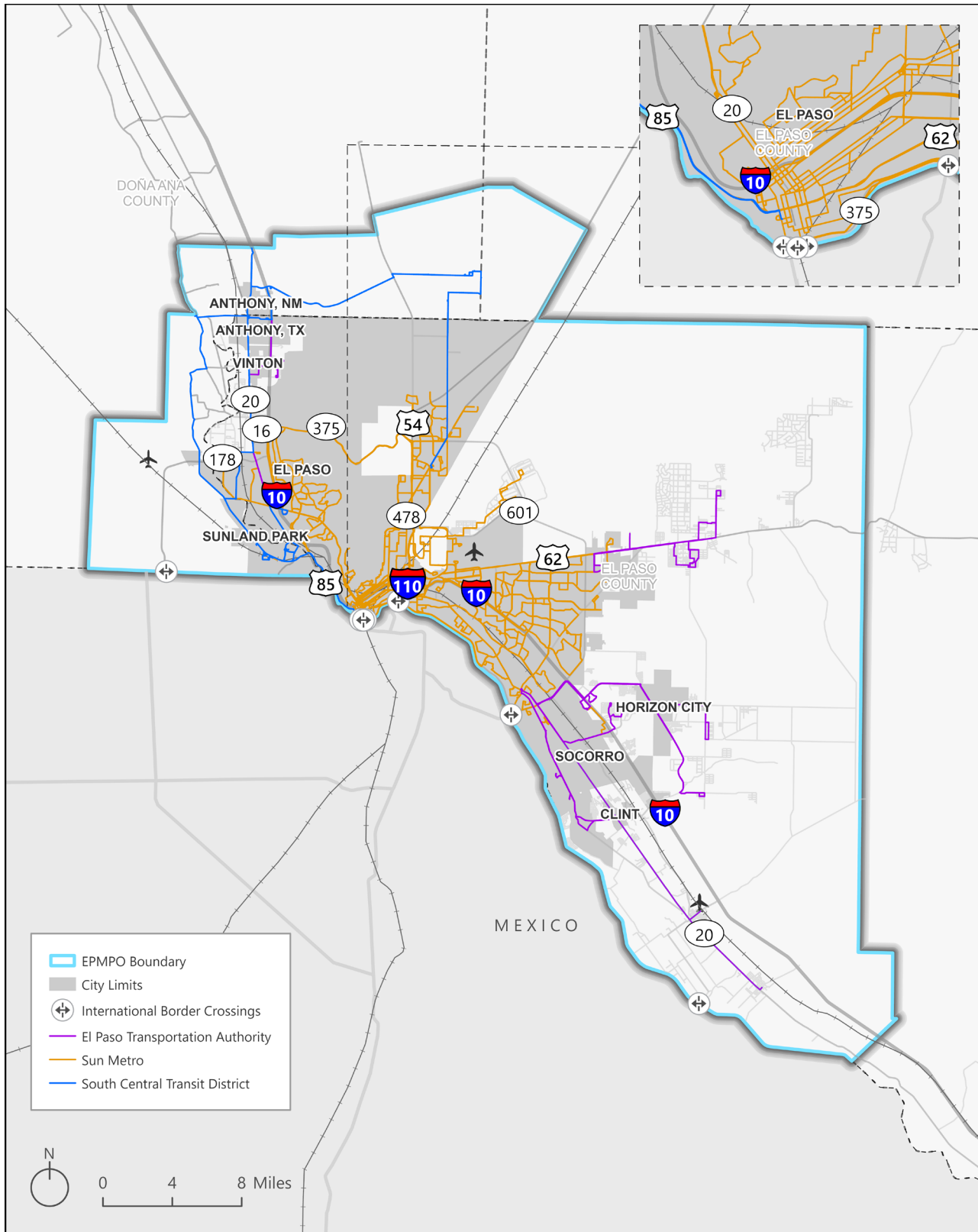
Transit utilization is determined by the level of ridership or passenger trips on a system. Passenger miles traveled is the sum of the distances ridden by each passenger in a transit system. Unlinked passenger trips refer to the total number of passengers who board public transit vehicles, regardless of how many vehicles it takes to reach a destination. **Table 4-10** displays annual passenger miles and unlinked trips for Sun Metro between 2018 to 2022. **Table 4-11** and **Table 4-12** show annual unlinked trips between 2018 and 2022 for El Paso County Transit and SCRTD, respectively. Data on annual passenger miles between these years were not available for these transit providers. As indicated by **Table 4-10**, Sun Metro ridership decreased significantly between 2019 to 2021 during the COVID-19 pandemic. No 2018 data is available for Sun Metro’s streetcar service, which opened in November 2018. Ridership levels increased slightly between 2021 and 2022. It was not until 2023 that the streetcar service returned to 7-day-a-week service. El Paso County Transit’s commuter bus service experienced a similar trend in ridership levels between these years (**Table 4-11**). However, the data also shows that ridership levels for the agency’s vanpool service, which operates in partnership with Enterprise, did not decrease and remained consistent between 2019 and 2021 before increasing significantly in 2022. **Table 4-12** shows that ridership for SCRTD decreased in 2020, the first year of the pandemic, but grew significantly in 2021 and 2022.

Table 4-10. Sun Metro Annual Passenger Miles and Unlinked Trips

Year	Streetcar Rail		Fixed Route		Demand Response	
	Passenger Miles	Unlinked Trips	Passenger Miles	Unlinked Trips	Passenger Miles	Unlinked Trips
2018	N/A	N/A	74,781,311	12,792,258	3,033,504	323,674
2019	343,070	222,773	73,773,488	10,969,703	3,026,610	321,393
2020	294,300	188,757	39,065,074	5,614,479	2,321,567	267,398
2021	9,648	4,119	24,952,868	3,663,299	1,687,788	182,773
2022	91,507	47,384	29,548,345	4,928,858	1,938,963	206,203

Source: U.S. Department of Transportation Bureau of Transportation Statistics

Figure 4-18: Sun METRO, SCTR, and ETA Fixed Routes



Source: Sun Metro and South Central Transit District



Table 4-11. El Paso County Transit Annual Unlinked Trips

Year	Commuter Bus	Vanpool
2018	199,194	185,687
2019	208,164	235,731
2020	144,307	237,756
2021	88,221	236,295
2022	122,258	275,846

Source: U.S. Department of Transportation Bureau of Transportation Statistics

Table 4-12. SCRTD Annual Unlinked Trips

Year	Bus
2018	30,332
2019	35,124
2020	29,695
2021	64,630
2022	85,075

Source: U.S. Department of Transportation Bureau of Transportation Statistics

4.4.2 OPERATING COSTS AND FUNDING SOURCES

Annual operating expenses between 2018 and 2022 for each transit provider are provided in **Table 4-13** to **Table 4-15**. **Table 4-13** indicates that between 2021 and 2022, annual operating costs for Sun Metro’s streetcar service decreased slightly by approximately 0.4%, while operating costs for fixed-route service increase slightly by 0.4%. Sun Metro’s demand respond service experienced the highest increased in annual operating costs, increasing by approximately 10%. **Table 4-14** shows that operating costs for El Paso County Transit’s commuter bus service increased by approximately 3.8% between 2021 and 2022, while operating costs for the vanpool increased significantly by approximately 76.3% between these years. SCRTD’s operating costs increased significantly between 2021 and 2022, which grew by 37.3%.

Table 4-13. Sun Metro Annual Operating Costs

Year	Streetcar Rail	Fixed Route	Demand Response
2018	N/A	\$53,858,605	\$9,827,153
2019	\$2,584,352	\$52,142,310	\$10,521,717
2020	\$2,415,926	\$50,444,174	\$9,406,345
2021	\$1,596,876	\$43,531,718	\$7,229,288*
2022	\$1,590,795	\$43,691,972	\$7,953,140

*Includes data for a contract with another reporter.

Source: U.S. Department of Transportation Bureau of Transportation Statistics



Table 4-14. El Paso County Transit Annual Operating Costs

Year	Commuter Bus	Vanpool
2018	\$3,333,808	\$428,946
2019	\$3,493,860	\$579,524
2020	\$3,368,749	\$717,500
2021	\$3,665,400	\$743,416
2022	\$3,803,586	\$1,310,753

Source: U.S. Department of Transportation Bureau of Transportation Statistics

Table 4-15. SCRTD Annual Operating Costs

Year	Bus
2018	\$847,534
2019	\$862,610
2020	\$1,078,860
2021	\$1,305,810
2022	\$1,792,525

Source: U.S. Department of Transportation Bureau of Transportation Statistics

Sun Metro’s services in 2022 were funded mostly through the federal government (approximately 62%), while a smaller percentage is covered by the local government (29%) and user fees (fares) (9%). On the other hand, federal funds and fares are the largest funding sources for El Paso County Transit’s services, comprising approximately 38% and 36% of funding sources, respectively. Approximately 20% comes from the local government, and 6% is provided by the state government. Meanwhile, SCRTD’s services are mostly funded by the federal government (53%) and the local government (48%), while a small percentage (1%) is covered through fares. **Table 4-16** to **Table 4-18** display the amount of fare revenues collected each year between 2018 and 2022 for all three transit providers. As shown in **Table 4-16**, Sun Metro’s fare revenues decreased between 2019 and 2021 during the pandemic but began to increase in 2022, though not at the same level as pre-pandemic. A similar trend is shown for El Paso County Transit’s commuter bus service, but fare revenues for the vanpool service fluctuated between 2019 to 2021 before increasing significantly in 2021 (**Table 4-17**). Fare revenues for SCRTD decreased in 2020 before increasing significantly between 2021 and 2022, exceeding pre-pandemic fare revenues (**Table 4-18**).

Table 4-16. Sun Metro Annual Fare Revenues

Year	Streetcar Rail	Fixed Route	Demand Response
2018	N/A	\$7,470,682	\$681,632
2019	\$48,451	\$7,274,468	\$653,956
2020	\$3,534	\$3,851,569	\$445,720
2021	\$0	\$2,801,201	\$405,133*
2022	\$0	\$4,021,398	\$449,277

*Includes data for a contract with another reporter.

Source: U.S. Department of Transportation Bureau of Transportation Statistics



Table 4-17. El Paso County Transit Annual Fare Revenues

Year	Commuter Bus	Vanpool
2018	\$319,849	\$537,455
2019	\$319,601	\$741,012
2020	\$178,182	\$894,565
2021	\$94,887	\$851,334
2022	\$150,344	\$1,054,019

Source: U.S. Department of Transportation Bureau of Transportation Statistics

Table 4-18. SCRTD Annual Fare Revenues

Year	Bus
2018	\$9,854
2019	\$13,600
2020	\$10,394
2021	\$14,585
2022	\$23,440

Source: U.S. Department of Transportation Bureau of Transportation Statistics

4.4.3 SERVICE PERFORMANCE

Transit service performance measures provide insight into a transit system's operational status. They are useful as a basis for future strategic decision-making regarding route planning, fleet planning, budgeting, and scheduling. Three service performance measures are used to monitor the transit agency's service performance: service effectiveness, service efficiency, and cost-effectiveness.

Service effectiveness is measured by dividing annual unlinked passenger trips (APT) by annual vehicle revenue miles (VRM) and annual vehicle revenue hours (VRH). APT represents the number of passengers who board the operational revenue vehicles. Passengers would be counted each time they board the vehicles, regardless of how many vehicles they have boarded in the current trip. VRM and VRH are the total amount of miles and hours for all vehicles in a transit system when the vehicles are available to the general public. Higher numbers of the measures mean better service effectiveness. It is a measure of transit utilization describing the level of ridership on a system given the level of service of a transit system. Service effectiveness for Sun Metro, El Paso County Transit, and SCRTD from 2018 and 2022 are summarized in **Table 4-19**, **Table 4-20**, and **Table 4-21**, respectively.

Table 4-19. Sun Metro Service Effectiveness

Year		2018	2019	2020	2021	2022
Streetcar Rail	APT per VRM	N/A	2.9	3.2	1.4	1.8
	APT per VRH	N/A	20.5	2	9.3	12.2
Fixed Route	APT per VRM	1.8	1.7	1.1	0.7	1
	APT per VRH	23.2	22.1	14.8	9.7	13.8
Demand Response	APT per VRM	0.1	0.1	0.1	0.1	0.1
	APT per VRH	2	2	22.7	1.9	2.1

Source: U.S. Department of Transportation Bureau of Transportation Statistics



Table 4-20. El Paso County Transit Service Effectiveness

Year		2018	2019	2020	2021	2022
Commuter Bus	APT per VRM	0.2	0.2	0.2	0.1	0.1
	APT per VRH	5.3	5.6	4.1	2.2	3.2
Vanpool	APT per VRM	0.1	0.1	0.1	0.1	0.1
	APT per VRH	4	4.1	4	4.3	4.4

Source: U.S. Department of Transportation Bureau of Transportation Statistics

Table 4-21. SCTRD Service Effectiveness

Year		2018	2019	2020	2021	2022
Bus	APT per VRM	0.1	0.1	0.1	0.2	0.2
	APT per VRH	3.4	3.5	2.5	3.4	3.8

Source: U.S. Department of Transportation Bureau of Transportation Statistics

Service efficiency is calculated by dividing the annual operating expenses (OE) by annual vehicle revenue miles (VRM) and annual vehicle revenue hours (VRH). Lower numbers of the measures translate to better service efficiency. Service efficiencies for each provider from 2018 to 2022 are summarized in **Table 4-22** to **Table 4-24**.

Table 4-22. Sun Metro Service Efficiency

Year		2018	2019	2020	2021	2022
Streetcar Rail	OE per VRM	N/A	\$33.88	\$41.04	\$535.68	\$60.60
	OE per VRH	N/A	\$237.79	\$69.06	\$3,621.03	\$409.26
Fixed Route	OE per VRM	\$7.42	\$7.87	\$9.64	\$7.84	\$8.51
	OE per VRH	\$97.62	\$105.23	\$133.30	\$115.15	\$121.94
Demand Response	OE per VRM	\$3.59	\$4.01	\$4.18	\$4.28	\$4.60
	OE per VRH	\$62.13	\$65.78	\$290.45	\$73.99	\$79.54

Source: U.S. Department of Transportation Bureau of Transportation Statistics

Table 4-23. El Paso County Transit Service Efficiency

Year		2018	2019	2020	2021	2022
Commuter Bus	OE per VRM	\$3.65	\$3.83	\$3.89	\$3.79	\$4.06
	OE per VRH	\$88.90	\$93.22	\$95.99	\$0.24	\$100.29
Vanpool	OE per VRM	\$0.15	\$0.18	\$0.22	\$91.81	\$0.38
	OE per VRH	\$9.18	\$10.18	\$12.01	\$13.66	\$20.96

Source: U.S. Department of Transportation Bureau of Transportation Statistics



Table 4-24. SCRTD Service Efficiency

Year		2018	2019	2020	2021	2022
Bus	OE per VRM	\$3.58	\$3.08	\$3.22	\$3.65	\$4.10
	OE per VRH	\$95.24	\$84.84	\$90.77	\$69.33	\$81.04

Source: U.S. Department of Transportation Bureau of Transportation Statistics

The measures for cost-effectiveness are operating expenses per APT and annual passenger miles traveled (PMT). El Paso County Transit and SCRTD did not provide data on PMT between 2018 to 2022. PMT is the cumulative sum of a passenger who boards an operational revenue vehicle. Lower figures for the measures mean higher cost effectiveness. The cost-effectiveness of each transit provider between 2018 through 2022 is summarized in **Table 4-25** to **Table 4-27**.

Table 4-25. Sun Metro Cost Effectiveness

Year		2018	2019	2020	2021	2022
Streetcar Rail	OE per Passenger Mile	N/A	\$7.53	\$8.21	\$165.51	\$17.38
	OE per Unlinked Passenger Trip	N/A	\$11.60	\$12.80	\$387.69	\$33.57
Fixed Route	OE per Passenger Mile	\$0.72	\$0.71	\$1.29	\$1.74	\$1.48
	OE per Unlinked Passenger Trip	\$4.21	\$4.75	\$8.98	\$11.88	\$8.86
Demand Response	OE per Passenger Mile	\$3.24	\$3.48	\$4.05	\$4.28	\$4.10
	OE per Unlinked Passenger Trip	\$30.36	\$32.74	\$35.18	\$39.55	\$38.57

Source: U.S. Department of Transportation Bureau of Transportation Statistics

Table 4-26. El Paso County Transit Cost Effectiveness

Year		2018	2019	2020	2021	2022
Commuter Bus	OE per APT	\$16.74	\$16.78	\$23.34	\$41.55	\$31.11
Vanpool	OE per APT	\$2.31	\$2.46	\$3.02	\$3.15	\$4.75

Source: U.S. Department of Transportation Bureau of Transportation Statistics

Table 4-27. SCRTD Cost Effectiveness

Year		2018	2019	2020	2021	2022
Bus	OE per APT	\$27.94	\$24.56	\$36.33	\$20.20	\$21.07

Source: U.S. Department of Transportation Bureau of Transportation Statistics



4.5 FREIGHT NETWORK

El Paso has a robust freight transportation system that serves the movement of goods and chiefly supports international trade between the U.S. and Mexico. This movement is done primarily with highway and rail, but air freight, pipelines, international crossings, and other intermodal facilities play a critical role in the region's freight infrastructure. The following sections further detail the region's major roadway and multimodal freight network.

4.5.1 FREIGHT ROADWAY NETWORK

The majority of freight value in 2023 passing through El Paso goes through trucks on roadways. A safe, reliable, and connected roadway system is essential to deliver these goods that are distributed throughout the state and even the whole country. There are several facility designations for our roadways.

4.5.2 NATIONAL HIGHWAY FREIGHT NETWORK

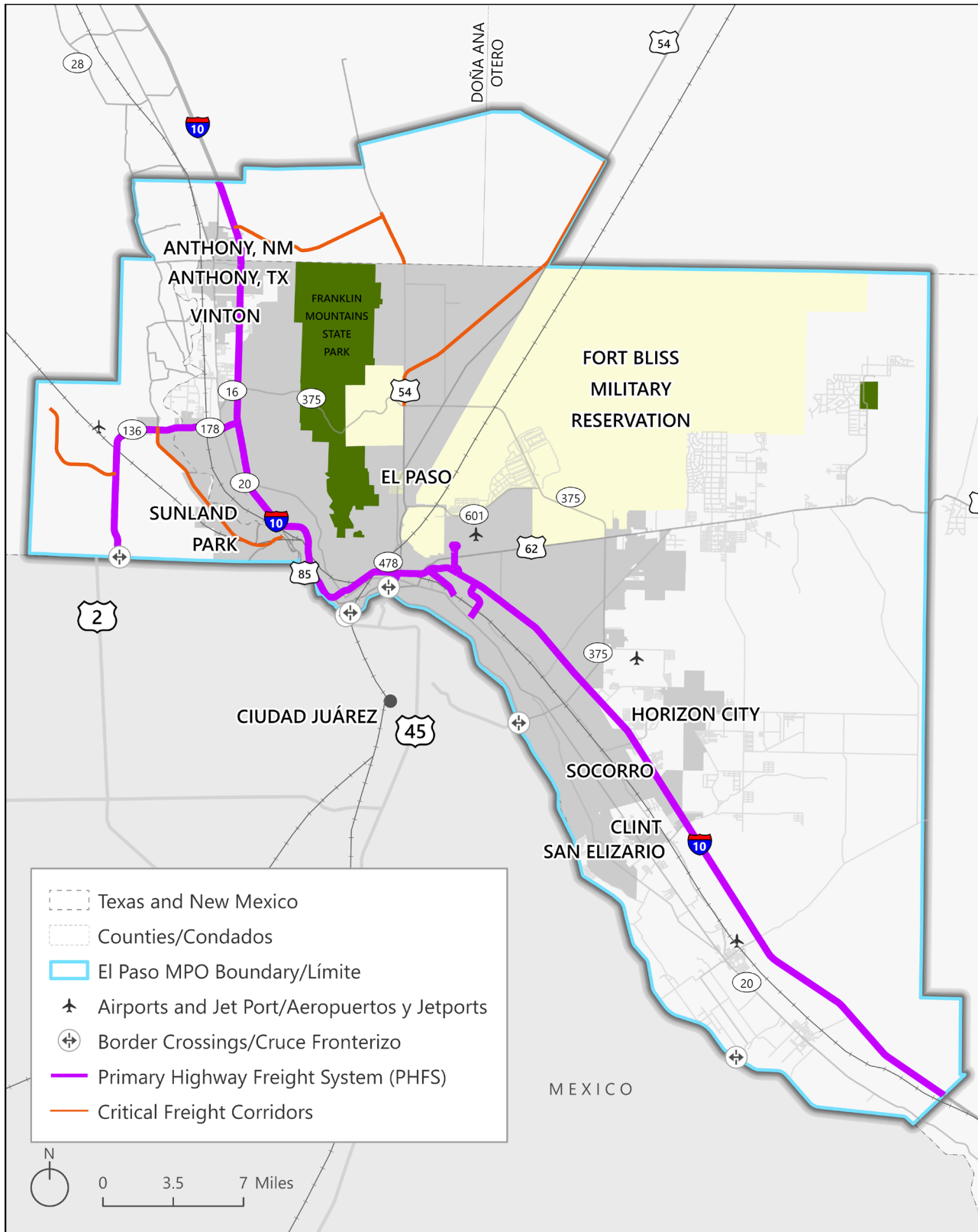
The Fixing America's Surface Transportation (FAST) Act introduced the National Highway Freight Network (NHFN) to strategically direct federal resources and policies toward improved performance of highway portions of the freight transportation system. The Bipartisan Infrastructure Law authorizes \$1.37 billion in Fiscal Year (FY) 2022 and \$1.40 billion in FY 2023. The NHFN has several components.

- **Primary Highway Freight System (PHFS)** – The PHFS, as designated by the FHWA, is a network of highways identified as the most critical highway portions of the U.S. freight transportation system. EPMPO's portion of the PHFS totals 84.48 miles.
- **Other Interstate portions not on the PHFS** – These highways consist of the remaining portion of interstate highways not included in the PHFS. These routes provide important continuity and access to freight transportation facilities. EPMPO has zero miles of non-PHFS Interstates.
- **Critical Urban/Critical Rural Freight Corridors** – These designations were created at the federal level to allow TxDOT and MPOs to add to the NHFN. Critical Urban Freight Corridors (CUFCs) are determined by TxDOT in partnership with MPOs, and Critical Rural Freight Corridors (CRFCs) are designated by TxDOT. TxDOT is limited by federal law to approximately 745 miles of CRFC corridors and 382 miles of CUFC corridors. These locations must meet federal criteria and be submitted to FHWA to become eligible for National Highway Freight Program funding.

As shown in **Figure 4-19**, there are 84.48 miles of the PHFS as part of the NHFN represented within the EPMPO region, including:

- IH-10 from the TX/NM border to the EPMPO boundary near Tornillo.
- Airway Blvd from the El Paso International Airport to IH-10
- Hawkins Blvd from the Union Pacific Railyard to IH-10
- NM SH136 / TX SH 178 from Santa Teresa POE in New Mexico to IH-10 in El Paso, Texas

Figure 4-19: NHFN in EPMPO Region



Source: Federal Highway Administration National Highway Freight Network



In addition to these national freight designations, the U.S. DOT has designated the Strategic Highway Network (STRAHNET) and Strategic Rail Corridor Network (STRACNET), which can identify the highways and railroads most important for military transportation. In El Paso, Fort Bliss is connected by rail and the highway network to ensure connections with other primary deployment centers (Fort Cavazos) and key military arsenals (namely Red River Army Depot).

4.5.3 MAJOR TRUCK FACILITIES

Several truck facilities in the region support the freight trucking industry. These truck facilities provide various services, from industrial parks to truck stops. Industrial parks offer services such as warehousing and storage and transferring and handling freight cargo between trucks. Truck stops provide services to truck drivers, such as parking, rest areas, fueling, and maintenance. Many of the EPMPO region's warehouses are located alongside IH-10 near the intersection with Loop 375. These areas serve as important transfer areas for goods moving through El Paso. Several truck stops are in this area as well. Another area of truck stops is located along IH-10 in Anthony, Texas, on the Texas-New Mexico border. This placement is likely due to the financial benefits of getting gas in Texas.

4.5.4 NATIONAL MULTIMODAL FREIGHT NETWORK.

In addition to the NHFN designation for important freight roadways, the FAST Act also provided a new National Multimodal Freight Network (NMFN) designation for other important freight multimodal infrastructure. The purpose of the NMFN is to:

- Strategically direct resources toward improved system performance for the efficient movement of freight
- Inform freight transportation planning
- Assist in the prioritization of federal investments
- Evaluate and support investments to achieve national goals

NMFN components within the El Paso region include:

- *Highways*: 84.48 miles total consisting of the NMFN designations of IH-10, SH 136/178, Airway Blvd, and Hawkins Blvd as discussed above
- *Railways*: 105.61 miles total consisting of BNSF and Union Pacific (UP) railroads
- *Port of Entry (POE)*: Seven roadway POEs, two rail POEs, and one airport POE
- *Airports*: El Paso International Airport (ELP)

4.5.5 RAILROAD NETWORK AND FACILITIES

Rail is the only freight mode that relies exclusively on private funding for both infrastructure and operations. Rail is an important freight mode for the El Paso region. Two of the seven rail Ports of Entry (POEs) along the United States-Mexico international border are located within El Paso. A total of 112 miles of rail are in the EPMPO region.

The U.S. Surface Transportation Board classifies railroads based on their annual operating revenue. The following operating revenue thresholds determine the railroad classification:

- **Class 1** – \$1,032,002,719 or more
- **Class 2** – Less than \$1,032,002,719 and greater than \$46,325,455
- **Class 3** – \$46,325,455 or less

These revenue thresholds are periodically updated to account for the effect of inflation. The most recent update was in 2022.

Two major Class 1 railroads operate in the region:



- **Union Pacific (UP) Railroad** – UP operates the most extensive rail network in not only Texas, but also the United States. Union Pacific lines run from El Paso to the east, connecting with the rest of the Texas rail network.
- **BNSF Railway** – BNSF is the largest freight railroad in the United States and covers most of the United States west of the Mississippi River. The BNSF line runs from El Paso to the north into New Mexico.

In the EPMPO region, there are two railroad bridges connecting the United States and Mexico. One is operated by UP, and the other is operated by BNSF. Both rail bridges are on either side of the Paso del Norte Port of Entry. They each lead to a rail yard for their respective companies. UP has another railyard at St. Rogers Depot next to IH-10. UP has an additional railyard in New Mexico called the Union Pacific Santa Teresa Facility. This rail yard serves as an intermodal terminal for UP.

4.5.6 PORTS OF ENTRY

The EPMPO area has six international border crossings or Ports of Entry (POEs) with two rail bridges. Each structure has a unique set of characteristics and modes permitted to travel:

- **Santa Teresa:** Located in New Mexico, this bridge was created to help alleviate traffic from the El Paso Bridge of the Americas Port of Entry. This POE has three dedicated commercial vehicle lanes and four passenger lanes. It is just a quick drive to El Paso from the west.
- **Paso del Norte:** Frequently called the Santa Fe Bridge, the Paso del Norte Bridge serves downtown El Paso and only permits non-commercial vehicles. It has four northbound lanes and serves pedestrians.
- **Good Neighbor:** Also known as the Staton Bridge; it has three southbound lanes and one northbound lane, all for non-commercial traffic. Commercial vehicles are not permitted on this bridge.
- **Bridge of the Americas (BOTA):** Sometimes referred to as BOTA, this bridge is federally owned and operated. It is the only bridge that does not charge a toll and handles commercial, non-commercial vehicles, and pedestrians. It connects US 54 (and indirectly IH-10) to MX 45. Each direction has four lanes for non-commercial traffic and lanes for commercial truck traffic.
- **Ysleta-Zaragoza:** The Ysleta-Zaragoza Bridge consists of two structures. One structure is a four-lane facility exclusively serving commercial vehicles, and the other is a five-lane bridge for non-commercial traffic, including pedestrians.
- **Tornillo-Guadalupe International Bridge:** The Tornillo-Guadalupe bridge has three travel lanes in each direction, with one lane designated for commercial traffic and the other two for passenger vehicles. The bridge also has two pedestrian walkways.
- **Union Pacific Rail Bridge:** Union Pacific's rail bridge in El Paso is a single-track crossing located due east of the Paso del Norte Bridge. In El Paso, it connects to a Union Pacific rail switching yard, while on the Mexican side, it connects to Ferromex track that serves the interior of the country.
- **BNSF Rail Bridge:** BNSF's rail bridge in El Paso is a single-track rail bridge located due west of the Paso del Norte Bridge. In El Paso, it connects to the BNSF intermodal rail facility, while in Mexico it connects to Ferromex Railroad.

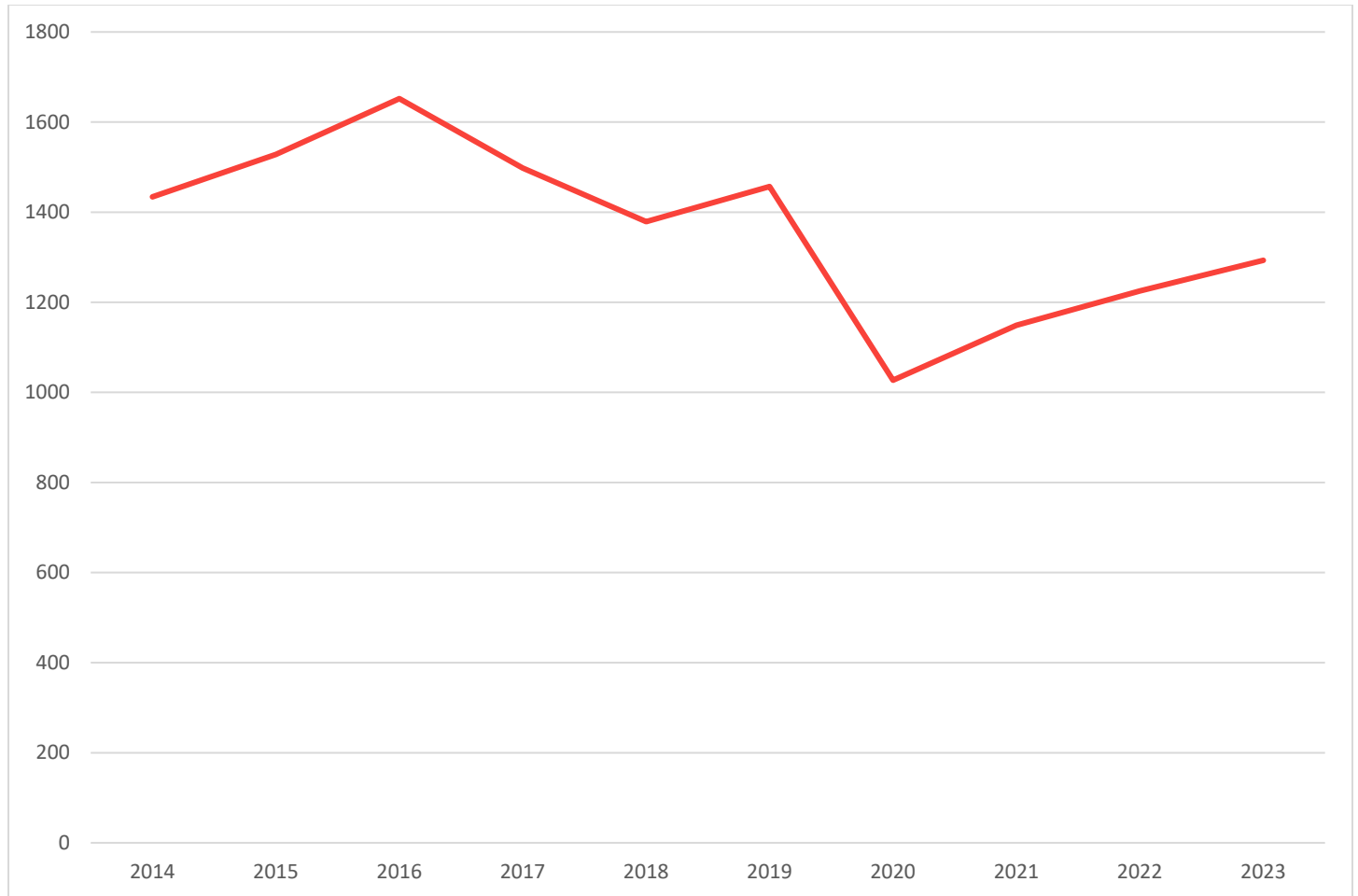
4.5.6.1 TRAFFIC BY PORTS OF ENTRY

This section covers the number of annual international crossings by year based on the mode of travel. The modes of travel covered are rail, truck, bus, personal vehicle, and pedestrian. Each figure includes a brief description of the data.

4.5.6.1.1 Rail

Figure 4-20 shows the annual number of international rail crossings per year. Rail crossings climbed from 2014 to 2015 and slowly fell from 2016 to 2018. There was a slight increase in 2019 before falling significantly in 2020. Rail crossings started to recover from 2021 to 2023 when they were still below 2014 levels.

Figure 4-20: Annual Number of International Rail Crossings per Year (2014 - 2023)

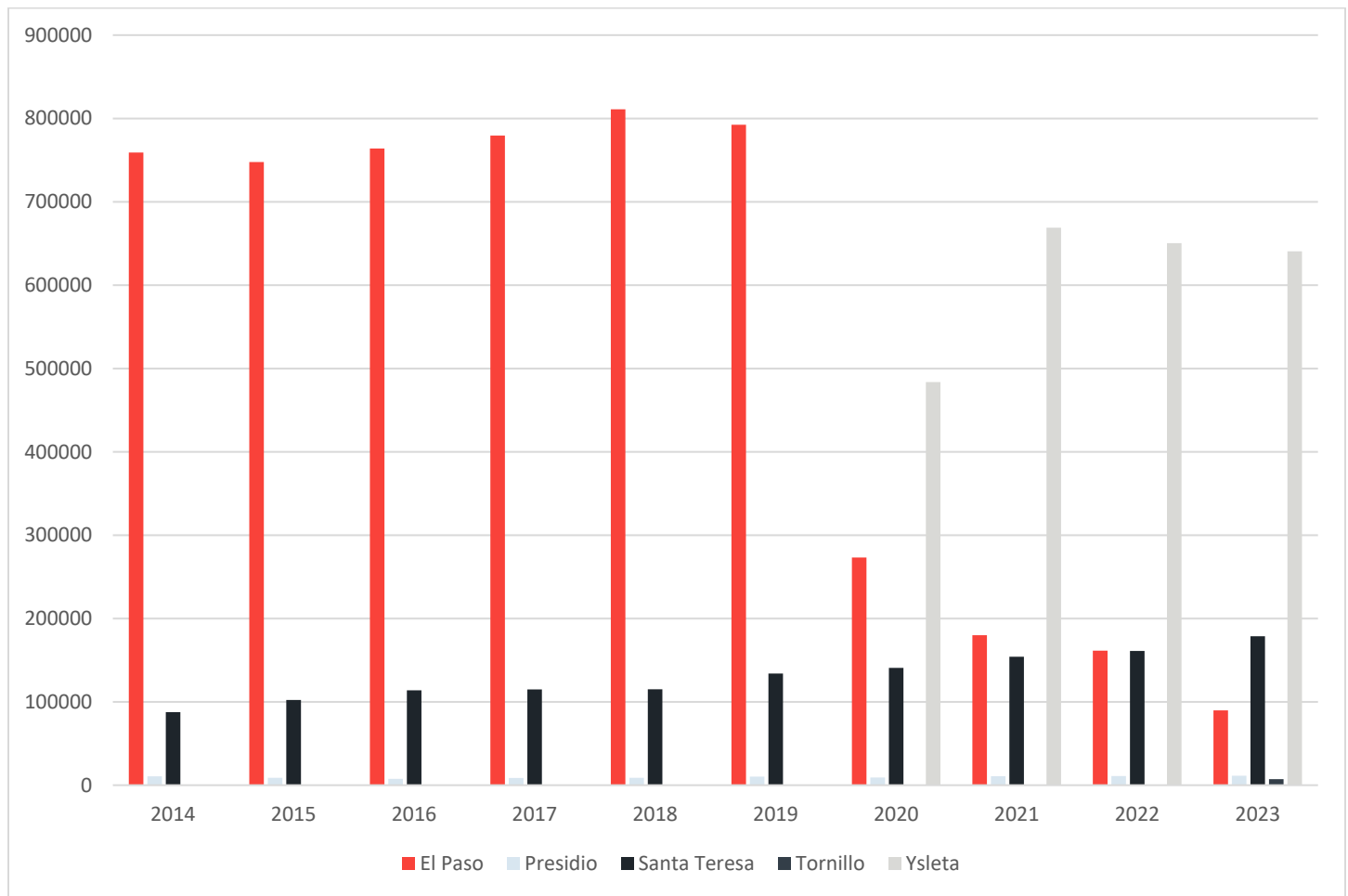


Source: U.S. Department of Transportation Bureau of Transportation Statistics

4.5.6.1.2 Truck

Figure 4-21 shows the annual number of international truck crossings per year by POE. El Paso POE (which is a combination of Good Neighbor, Paso del Norte, and BOTA) dwarfed the other POE areas for truck crossings from 2014 until the opening of the Ysleta-Zaragoza Bridge in 2020. After 2020, despite overall decreased levels in truck crossings, Ysleta-Zaragoza bridge is the most popular POE for international truck crossings. The Tornillo crossing was completely closed to operations during some of the period between 2014 and 2023.

Figure 4-21: Annual Number of International Truck Crossings per Year by Port (2014 – 2023)

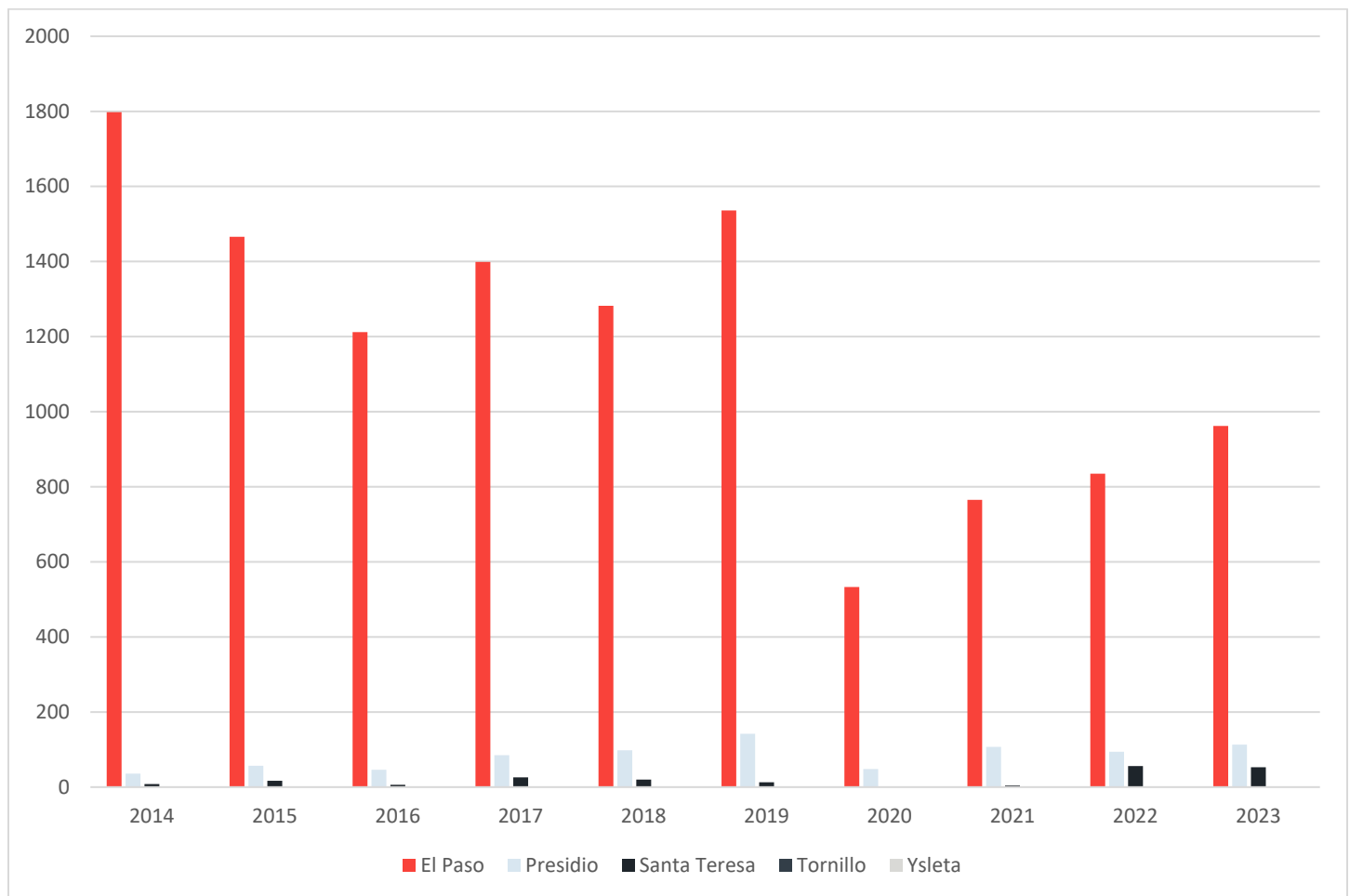


Source: U.S. Department of Transportation Bureau of Transportation Statistics

4.5.6.1.3 Bus

Figure 4-22 shows the annual number of international bus crossings per year by POE. El Paso is the dominant POE area for international bus crossings. The second most popular POE for bus crossings is Presidio POE. As shown in the figure, the number of annual bus crossings sharply declined between 2019 and 2020, likely due to the COVID-19 pandemic. Since 2020, the number of internal bus crossings have gradually increased.

Figure 4-22: Annual Number of International Bus Crossings per Year by Port (2014 – 2023)

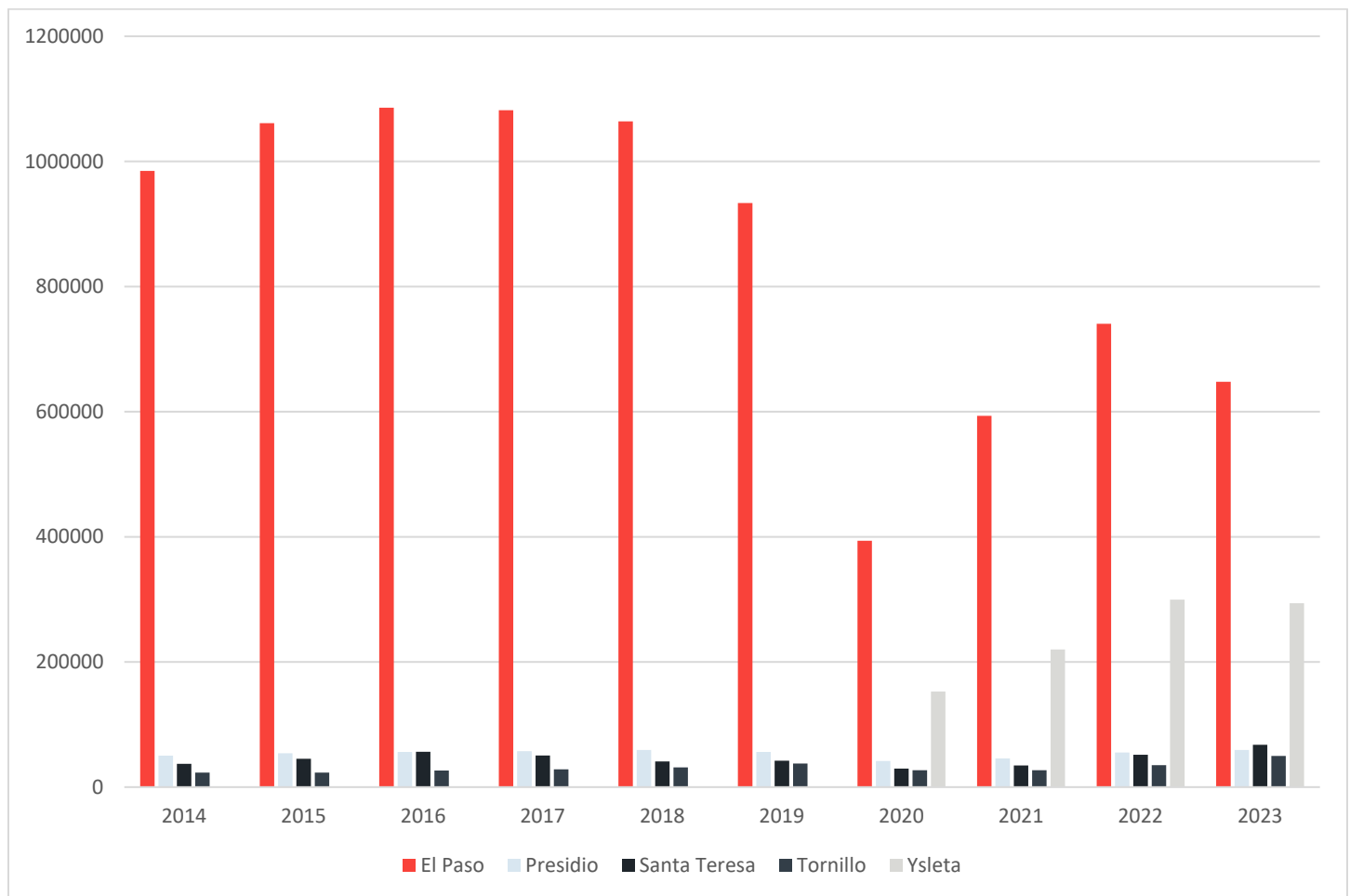


Source: U.S. Department of Transportation Bureau of Transportation Statistics

4.5.6.1.4 Personal vehicle

Figure 4-23 shows the annual number of international personal vehicle crossings per year by POE for 2014-2023. The majority of international personal vehicle crossings occur at the El Paso POE. As shown in the figure, the number of international personal vehicle crossings sharply declined between 2019 and 2020, likely due to the COVID-19 pandemic. Since 2020, the number of internal bus crossings have gradually increased. A slight increase is seen in 2023, following 2024.

Figure 4-23: Annual Number of International Personal Vehicle Crossings per Year by Port (2014 – 2023)

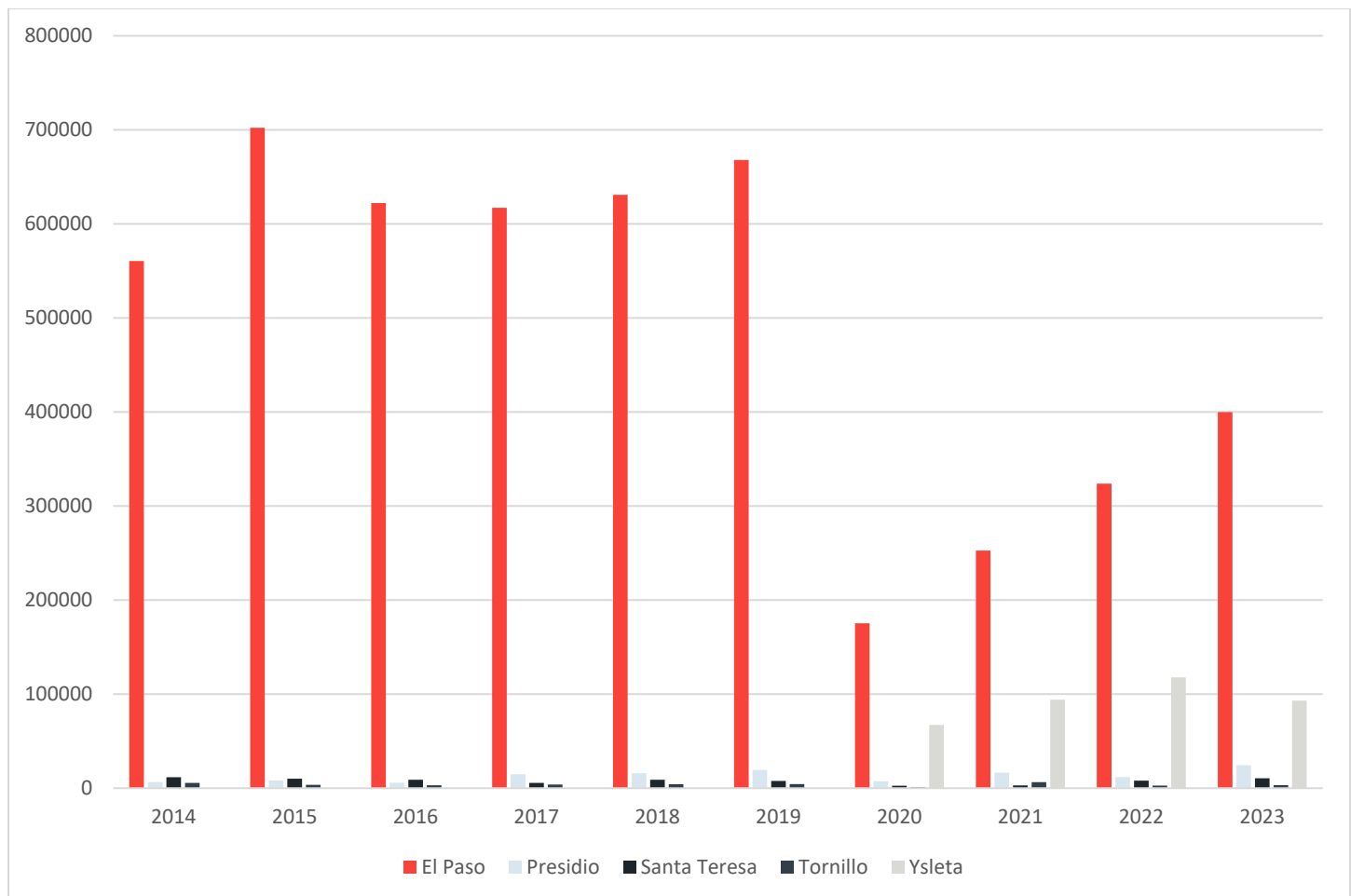


Source: U.S. Department of Transportation Bureau of Transportation Statistics

4.5.6.1.5 Pedestrian

Figure 4-24 shows the annual number of international pedestrian crossings per year by POE. As shown in the figure, the number of pedestrian crossings sharply declined between 2019 and 2020, likely due to the COVID-19 pandemic. Since 2020, the number of pedestrian crossings has gradually increased.

Figure 4-24: Annual Number of International Pedestrian Crossings per Year by Port (2014 – 2023)



Source: U.S. Department of Transportation Bureau of Transportation Statistics

4.5.6.2 MULTIMODAL CONNECTIVITY TO PORTS OF ENTRY

Transit options near the ports of entry in El Paso are limited. The Santa Teresa, Presidio, and Tornillo POEs lack nearby transit services. Ysleta, BOTA, Paso del Norte, and Good Neighbor POEs each have a single transit stop within 0.5 miles of their respective bridges. Paso del Norte and Good Neighbor POE are served by routes 2, 4, and 24 with route 24 also serving BOTA. Ysleta POE is connected to Routes 60 and 89. Pedestrian access to these transit stops remain limited and often involve crossing major roadways. Several of the bridges have pathways for pedestrians and bicyclists. While international crossings by pedestrians and bicyclists are far below their pre-pandemic levels, these pathways still play a critical role for the businesses and families that share a connection between the two countries. These pathways also help people avoid sitting in the multi-hour traffic at POEs.

4.5.7 GOODS MOVEMENT

The following tables show the domestic and international freight data by origin, mode, commodity, and total numbers. These tables demonstrate that trade is increasing in the region in every mode. This data is sourced from the Federal Highway Administration (FHWA) Freight Analysis Framework 5, first completed in 2017. Data for El Paso as both an origin and destination were combined to calculate the totals displayed in the tables. For mode classification, import data shows the mode of transportation used to bring goods into the country, while export data represents the mode used for domestic transport. Overall, the data shows that trade is becoming more important to the region, and expanding infrastructure to support this is critical. **Table 4-28** shows the top domestic trading partners in the U.S. by millions of dollars. Each of the top domestic trading partners showed a slight increase in annual growth from 2017 to 2023, except for New Mexico, which showed a slight decrease.

Table 4-28: Top Domestic Trading Partners in the U.S. (Millions of Dollars)

State	Region	Annual Trade Value (\$ Millions)		Annual Growth Rate (2017-2023)
		2017	2023	
New Mexico	New Mexico	1,206.4	1,122.0	-1.19%
Michigan	Detroit	1,029.3	1,099.8	+1.11%
Connecticut	Rest of CT	952.1	869.8	-1.50%
Texas	Dallas-Fort Worth	709.1	722.2	+0.31%
Illinois	Chicago	569.0	613.7	+1.27%
Missouri	Kansas City	543.3	588.0	+1.33%

*CSA is defined as a Combined Statistical Area.

Source: Federal Highway Administration, Freight Analysis Framework 5, 2017

4.5.7.1 DOMESTIC INBOUND AND OUTBOUND MOVEMENTS

Table 4-29 shows the domestic goods movements from 2023 to 2050. In terms of billions of dollars, both inbound and outbound trade are projected to grow by around 50% in trade. For weight moved, Inbound trade saw a 25% increase, whereas outbound trade saw a smaller increase of 6.5%.

Table 4-29: Domestic Goods Movements, 2023 and 2050

Type	Trade Values (\$ Billions)			Trade Value (Tons-Millions)		
	2023	2050	% Change	2023	2050	% Change
Inbound	463.2	825.8	56.3%	33.1	42.7	25.3%
Outbound	260.6	423.3	47.6%	25.2	26.9	6.5%

Source: Federal Highway Administration, Freight Analysis Framework 5, 2017

4.5.7.2 DOMESTIC GOODS MOVEMENT BY MODE

Table 4-30 presents trade values by mode from 2023 to 2050. Domestic goods moved by truck make up the majority of trade at 70% and is expected to continue through 2050. Most modes are projected to maintain stable percentages of trade, except for pipelines, which are projected to decline from 17% to 6.3% in dollar value. In terms of trade value measured by tons, trucks are projected to increase from 56% of total trade to 70% by 2050.

Table 4-31 shows domestic freight flow changes by mode from 2023 to 2050. All modes are projected to see a double-digit increase by 2050, except for pipelines. Pipelines will see a 44.7% decrease in value while having a 35% increase in tonnage. This likely means that the value of goods moved by pipeline is expected to decrease while the tonnage is expected to increase.

Table 4-30: Domestic Freight Values by Mode, 2023 and 2050

Type	Trade Values (\$ Billions)				Trade Value (Tons-Millions)			
	2023	% of Total	2050	% of Total	2023	% of Total	2050	% of Total
Truck	468.5	64.7%	915.3	73.3%	327.1	56.1%	486.9	70%
Air	20.4	2.8%	34.6	2.8	0.1	0.01%	0.2	0.03%
Pipeline	123.0	17%	78.1	6.3%	225.5	38.7%	158.3	22.8%
Rail	4.3	0.6%	6.1	0.5%	11.8	2%	13.9	2%
Other Modes	107.6	14.9%	214.8	17.2%	18.8	3.2%	36.2	5.2%
Total	723.8	100%	1248.9	100%	583.3	100%	695.5	100%

Source: Federal Highway Administration, Freight Analysis Framework 5, 2017

Table 4-31: Domestic Freight Flow Changes by Mode, 2023 and 2050

Type	Trade Values (\$ Billions)			Trade Value (Tons-Millions)		
	2023	2050	% Change	2023	2050	% Change
Truck	468.5	915.3	64.6%	327.1	486.9	39.3%
Air	20.4	34.6	51.6%	0.1	0.2	100%
Pipeline	123.0	78.1	-44.7%	225.5	158.3	35%
Rail	4.3	6.1	34.6%	11.8	13.9	16.3%
Other Modes	107.6	214.8	66.5%	18.8	36.2	63.3%
Total	723.8	1248.9	53.2%	583.3	695.5	17.5%

Source: Federal Highway Administration, Freight Analysis Framework 5, 2017

4.5.7.3 DOMESTIC TRADE BY COMMODITIES

Table 4-32 shows domestic trade values by commodity from 2023 to 2050. The top commodities traded are electronics, gasoline, pharmaceuticals, base metals, and plastics/rubber. Electronics, plastics/rubber, and pharmaceuticals are all projected to grow the sizes of their shares. In contrast, gasoline and base metals are expected to make up less of the trade value measured by dollars. In terms of value calculated by tons, electronics, pharmaceuticals, base metals, and plastics/rubber are expected to increase significantly. At the same time, gasoline will drop considerably from 84.6% of trade value by tons to 65.1%.

Table 4-33 shows those same products by value changes. All but one are expected to have double-digit increases, with plastics/rubber having the largest at 95%. The one commodity facing a decrease in dollar value and tons is gasoline, with a 47.2% and 41.2% decrease, respectively.

Table 4-32: Domestic Trade Values by Commodity, 2023 and 2050

Type	Trade Values (\$ Billions)				Trade Value (Tons-Millions)			
	2023	% of Total	2050	% of Total	2023	% of Total	2050	% of Total
Electronics	153.8	36.4%	258.1	40.4%	7.3	2.8%	12.7	5.7%
Gasoline	123.5	29.2%	76.3	11.9%	222.0	84.6%	146.1	65.1%
Pharmaceuticals	53.1	12.6%	112.0	17.5%	4.8	1.8%	10.9	4.9%
Base metals	48.5	11.5%	69.9	10.9%	19.1	7.3%	28.6	12.7%
Plastics/Rubber	43.5	10.3%	122.4	19.7%	9.3	3.5%	26.2	11.7%
Total	422.4	100%	638.7	100%	262.5	100%	224.5	100%

Source: Federal Highway Administration, Freight Analysis Framework 5, 2017

Table 4-33: Domestic Trade Value Changes by Commodity, 2023 and 2050

Type	Trade Values (\$ Billions)			Trade Value (Tons-Millions)		
	2023	2050	% Change	2023	2050	% Change
Electronics	153.8	258.1	50.6%	7.3	12.7	54%
Gasoline	123.5	76.3	-47.2%	222.0	146.1	-41.2%
Pharmaceuticals	53.1	112.0	71.4%	4.8	10.9	77.7%
Base metals	48.5	69.9	36.2%	19.1	28.6	39.8%
Plastics/Rubber	43.5	122.4	95.1%	9.3	26.2	95.2%
Total	422.4	638.7	40.8%	262.5	224.5	15.6%

Source: Federal Highway Administration, Freight Analysis Framework 5, 2017

4.5.7.4 INTERNATIONAL TRADE FLOWS

Table 4-34 and **Table 4-35** illustrate the top foreign trading partners for imports and exports, respectively. The top foreign trading import partners from 2017 to 2023 are Mexico, SE Asia and Oceania, Eastern Asia, Europe, and the rest of the Americas. The top foreign trading export partners from 2017 to 2023 are Mexico, Canada, Europe, Eastern Asia, and SE Asia & Oceania. Mexico is the largest trading partner with El Paso, dwarfing the other partners. All partners, exports and imports, saw dramatic increases in annual growth rates except for exporting to Canada, which saw a dramatic decrease of 70.79% from 2017 to 2023 from El Paso.

Table 4-34: Top Foreign Trading Import Partners (Millions of Dollars)

Country/Region	Annual Trade Value (\$ Millions)		Annual Growth Rate (2017-2023)
	2017	2023	
Mexico	40,409.4	44,896.7	+1.77%
SE Asia and Oceania	53.5	1,113.9	+65.86%
Eastern Asia	201.8	1,315.6	+36.68%
Europe	97.5	211.7	+13.79%
Rest of Americas	8.8	386.4	+87.83%

Source: Federal Highway Administration, Freight Analysis Framework 5, 2017

Table 4-35: Top Foreign Trading Export Partners (Millions of Dollars)

Country/Region	Annual Trade Value (\$ Millions)		Annual Growth Rate
	2017	2023	(2017-2023)
Mexico	30,323.1	31,780.3	+0.76%
Canada	1,608.4	1.0	-70.79%
Europe	6.0	13.9	+15.03%
Eastern Asia	5.1	19.5	+25.05%
SE Asia & Oceania	5.9	5.9	0%

Source: Federal Highway Administration, Freight Analysis Framework 5, 2017

4.5.7.5 TOTAL FOREIGN TRADE

Table 4-36 shows the international import and export trade flows from 2023 to 2050. Imports and exports are forecasted to increase by over 50% in dollars and tons. This demonstrates the need for expanded trade infrastructure for the El Paso region.

Table 4-36: International Import and Export Trade Flows, 2023 and 2050

Type	Trade Values (\$ Billions)			Trade Value (Tons-Millions)		
	2023	2050	% Change	2023	2050	% Change
Imports	48.1	88.8	59.5%	4.9	9.5	63.9%
Exports	31.8	65.6	69.4%	24.8	40.7	48.6%
Total	79.9	154.4	63.6%	29.7	50.2	51.3%

Source: Federal Highway Administration, Freight Analysis Framework 5, 2017

4.5.7.6 FOREIGN TRADE BY MODE

Table 4-37 shows international trade values by mode from 2023 to 2050. The table shows that the mode by dollar amount will still heavily be from trucks at 77.1% in 2050, but other modes will increase in use. Regarding trade value measured by tons, the mode remains diversified with truck, rail, and other modes (this includes water, multiple modes, and pipelines), which will continue to play an important role. Air is outsized in trade value compared to its next-to-nothing trade value by tons.

Table 4-38 shows significant increases in the trade value by both dollars and tonnage from 2023 to 2050. Rail, Air, and other modes will see triple-digit increases in trade value by dollars, whereas the rest will see increases north of 50%.

Table 4-37: International Trade Values by Mode, 2023 and 2050

Type	Trade Values (\$ Billions)				Trade Value (Tons-Millions)			
	2023	% of Total	2050	% of Total	2023	% of Total	2050	% of Total
Truck	689.9	86.4%	1190.3	77.1%	94.6	31.9%	181.0	36.1%
Rail	57.6	7.2%	186.6	12.1%	118.9	40%	170.8	34%
Air	33.2	4.2%	104.7	6.8%	0.3	0.1%	1.1	0.2%
Other Modes	18.2	2.3%	62.6	4.1%	83.1	28%	149.2	29.7%
Total	798.8	100%	1544.1	100%	297.0	100%	502.1	100%

Source: Federal Highway Administration, Freight Analysis Framework 5, 2017

Table 4-38: International Freight Flow Changes by Mode, 2023 and 2050

Type	Trade Values (\$ Billions)			Trade Value (Tons-Millions)		
	2023	2050	% Change	2023	2050	% Change
Truck	689.9	1190.3	53.2%	94.6	181.0	62.7%
Rail	57.6	186.6	105.7%	118.9	170.8	35.8%
Air	33.2	104.7	103.7%	0.3	1.1	114.3%
Other Modes	18.2	62.6	109.9%	83.1	149.2	56.9%
Total	798.8	1544.1	63.6%	297.0	502.1	51.3%

Source: Federal Highway Administration, Freight Analysis Framework 5, 2017

4.5.7.7 FOREIGN TRADE BY COMMODITY

Table 4-39 shows international trade values by commodity from 2023 to 2050. The top five commodities are electronics, motorized vehicles, precision instruments, machinery, and plastics/rubber. Electronics is forecasted to face a decline in both dollar value and tons despite being the largest commodity in both dollar value and tons. All others are forecasted to have an increase in the share of trade value by dollars and tons, except for precision instruments, which will see a slight decrease only in terms of trade value by dollars.

Table 4-40 shows international trade value changes by commodity from 2023 to 2050. All commodities are forecasted to see increases in total value by dollars and tons by 2050. Almost all are forecasted to see increases above 50%, with Machinery and Plastics/Rubber seeing increases above 90% in both dollars and tons.

Table 4-39: International Trade Values by Commodity, 2023 and 2050

Type	Trade Values (\$ Billions)				Trade Value (Tons-Millions)			
	2023	% of Total	2050	% of Total	2023	% of Total	2050	% of Total
Electronics	372.6	58.1%	614.6	51.5%	15.7	36.5%	30.3	30.5%
Motorized vehicles	87.9	13.7%	187.1	15.7%	9.8	22.8%	22.8	22.9%
Precision instruments	79.0	12.3%	123.3	10.3%	2.0	4.7%	3.5	3.5%
Machinery	67.1	10.5%	179.2	15%	8.1	18.8%	22.9	23%
Plastics/rubber	34.2	5.3%	90.2	7.6%	7.3	17%	19.8	20%
Total	640.8	100%	1194.4	100%	43.0	100%	99.5	100%

Source: Federal Highway Administration, Freight Analysis Framework 5, 2017

Table 4-40: International Trade Value Changes by Commodity, 2023 and 2050

Type	Trade Values (\$ Billions)			Trade Value (Tons-Millions)		
	2023	2050	% Change	2023	2050	% Change
Electronics	372.6	614.6	49%	15.7	30.3	63.5%
Motorized vehicles	87.9	187.1	72.2%	9.8	22.8	79.8%
Precision instruments	79.0	123.3	43.8%	2.0	3.5	54.5%
Machinery	67.1	179.2	91%	8.1	22.9	95.5%
Plastics/rubber	34.2	90.2	90%	7.3	19.8	92.3%
Total	640.8	1194.4	60.3%	43.0	99.5	79.3%

Source: Federal Highway Administration, Freight Analysis Framework 5, 2017



4.5.7.8 DEFINING REGIONAL FREIGHT ISSUES AND NEEDS

In addition to technical analysis examining the performance of freight infrastructure and goods movement in the region described above, major state and regional plans were reviewed to further define freight issues and needs for the EPMPO region through the 2052 planning horizon.

Two major planning initiatives were identified and reviewed for this MTP to ensure that strategies and recommendations for freight movements in the region were consistent with ongoing planning efforts: the Texas Freight Mobility Plan and the Texas-Mexico Border Transportation Master Plan.

4.5.7.8.1 Texas Freight Mobility Plan

With the enactment of the FAST Act, each state is required to develop a freight plan that comprehensively addresses short- and long-term freight planning activities and investments. The latest Texas Delivers 2050 Texas Freight Mobility Plan adopted in 2023 serves to address freight transportation needs by establishing goals and strategies to guide investment decisions and prioritize projects that align with the state’s transportation and economic development goals. The goals in this plan are Safety, Economic Competitiveness, Asset Preservation and Modernization, Mobility and Reliability, Connectivity, Resiliency and Security, Equity, Stewardship, and Sustainable Funding. Several new projects are identified in the plan’s project appendices. Project types include Freight Projects in the 2023 Unified Transportation Program, National Highway Freight Program Eligible Projects, Rail Projects, and Air Cargo Projects.

4.5.7.8.2 Texas-Mexico Border Transportation Master Plan

TxDOT, in collaboration and partnership with the Border Trade Advisory Committee, worked with U.S. and Mexican agencies and stakeholders to develop the Border Transportation Master Plan (BTMP). The master plan identifies the cross-border challenges of moving people and goods and includes an analysis of existing transportation systems—roadways, transit, pedestrian, pipeline, airport, maritime, and rail. The plan analyzes current and future transportation and includes a prioritized list of transportation investment strategies that support binational, state, regional, and local economic competitiveness and improves the impacts of cross-border trade and transportation. The purpose of the BTMP is to serve as a blueprint for collaboration, partnerships, and decision-making to address cross-border multi-modal transportation system challenges by

- Outlining the Texas-Mexico border story and having a collective vision for supporting local, regional, state, national, and binational goals and objectives.
- Identifying and designating the Texas-Mexico multi-modal transportation system as critical.
- Providing an assessment of past, present, and future transportation needs and challenges.
- Assessing the economic importance of the cross-border movement of people and goods and the economic impact of border delays and congestion.
- Identifying robust policy, program, and project investment strategies and planning activities.
- Outlining a comprehensive action plan for implementing recommendations in the short, medium, and long terms to address current and future needs of cross-border movement.

4.5.7.9 MAJOR INTERMODAL FACILITIES

Intermodal facilities are cargo transfer points between one mode of freight transportation to another. In the region, intermodal facilities transfer freight loads from truck to rail or rail to truck. Typically, the freight cargo is packaged in a container, and the container is transferred from one mode to another. Using the container allows the transfer to occur without any direct handling of the cargo. This method reduces cargo handling and, therefore, improves security, reduces damages and losses, and allows faster freight transport. As the transfer point between rail and truck modes, intermodal facilities in the El Paso region are located at the nexus of the railroad and highways.

Three areas were identified as the main intermodal facilities in the EPMPO region.

- **IH-10/Loop 375 intersection area:** This area has several intermodal facilities, including warehouses, and serves as a transfer point for goods moving from one truck to another.
- **El Paso Airport (ELP):** A few intermodal facilities are located in the immediate surrounding area of the airport, serving as a transfer point for goods moving from air freight to truck and vice versa.
- **Union Pacific Intermodal Terminal** A large intermodal facility transferring goods to and from freight rail is located at the UPRR Yard Santa Tersea facility.

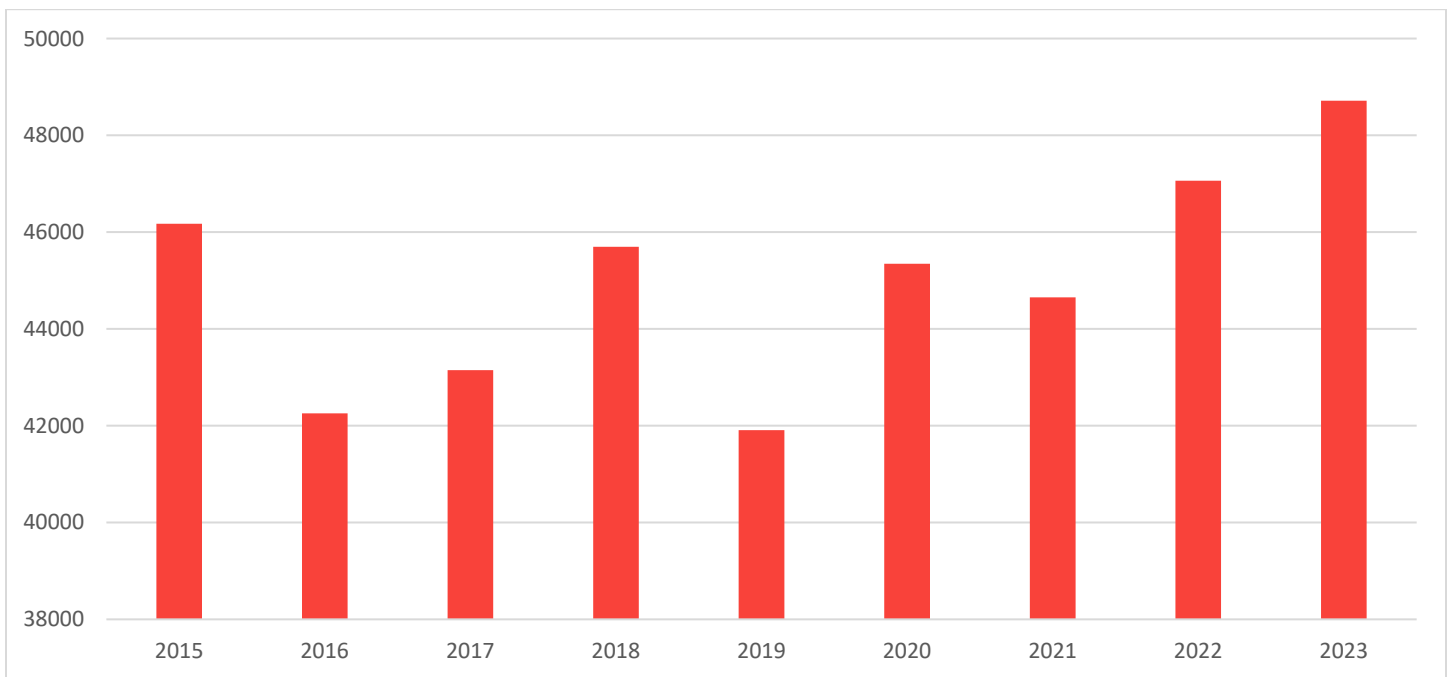
4.5.7.10 AIR FREIGHT

Air freight in El Paso is served by the El Paso International Airport (ELP), which has dedicated facilities to handle air freight. ELP is located seven miles northwest of downtown El Paso and four miles from the international border (straight distance). The airport has direct access to US 62, with IH-10 a short drive away.

ELP currently has three runways, 280,000 square feet of storage space, and three major air cargo operators, including Federal Express, UPS, and DHL. ELP is home to the border’s largest cargo facility and is emerging as the border’s most centralized intermodal hub.

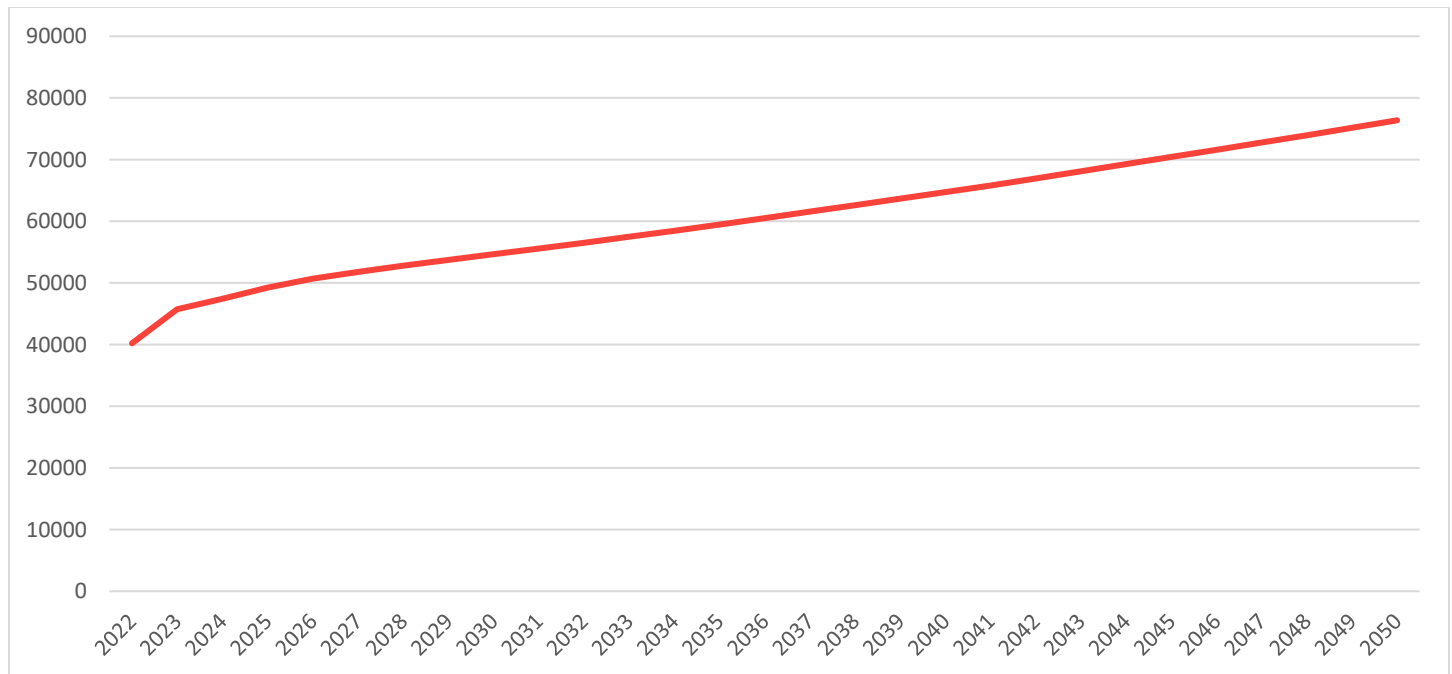
In the EPMPO region, air freight is becoming an increasingly important component of the transportation goods. Air freight typically serves time-sensitive, high-value commodities such as documents and precision equipment. Demand for air freight is increasing as nearshoring becomes more common. Total air freight enplanements at ELP by tone for the years 2015 through 2023 is shown in **Figure 4-25**. Projected air carrier operations for ELP for 2023 forecasted to 2050 is shown in **Figure 4-26**.

Figure 4-25: Total Air Freight Enplanements at ELP by Tons, 2015-2023



Source: Terminal Area Forecast Detail Report, FAA

Figure 4-26: Projected Air Carrier Operations at ELP, 2023-2050



Source: Terminal Area Forecast Detail Report, FAA

4.5.7.11 PIPELINES

Texas is the leading domestic oil and natural gas producer and has the most extensive pipeline network of any state. Pipelines are critical in freight transportation and in moving natural gas, crude oil, and various liquefied products.

While El Paso does not contain any natural gas processing plants or underground storage, it does have several natural gas pipelines and hydrogen gas liquids (HGLs) pipelines running through the MPO region. A single petroleum refinery is located in the EPMPO region.

4.6 AIRPORT

4.6.1 OVERVIEW OF EXISTING AIRPORT FACILITIES

The El Paso International Airport (ELP) is the EPMPO region's primary airport, providing air transportation services for cargo and passengers. Standard Airlines first opened the current airport as a transcontinental mail service stop and later as a training base for Army pilots during World War II. It has since expanded to cover 6,670 acres and has three runways. The airport is located seven miles northwest of Downtown El Paso, west of Fort Bliss, between SH Spur 601 and US 62.

ELP is the largest airport in West Texas and is owned and operated by the City of El Paso. It primarily serves customers in West Texas, New Mexico, and Ciudad Juarez.

ELP is served by seven commercial airlines: Alaska Airlines, Allegiant Airlines, American Airlines, Delta Airlines, Frontier Airlines, Southwest Airlines, and United Airlines. The top five destination airports from El Paso are Dallas/Ft. Worth, Phoenix, Denver, Dallas Love Field, and Las Vegas. Southwest Airlines made up the biggest share of passengers, at 50.12% of all passengers between May 2023 and April 2024.



Additionally, ELP is classified as a Foreign Trade Zone (FTZ) site, a federal designation that allows for exemption from many regular U.S. Customs rules and regulations and benefits companies and trade.

4.6.2 PHYSICAL AIRPORT CHARACTERISTICS

ELP contains three runways. The primary runway, Runway 04/22, is approximately 12,020 feet. The secondary runway, Runway 08R/26L, is approximately 9,025 feet. The final runway, Runway 08L/26R, is approximately 5,499 feet.

The airport is divided into two concourses: the west and east concourses. The west concourse contains gates A1-A4, while the east concourse contains Gates B1-B11. There are 15 gates in total.

ELP is connected to the larger region through numerous modes. Sun Metro Route 33 and Route 50 offer daily service from the airport to downtown El Paso. The airport is also served by several taxi, shuttle, and car rental companies to take passengers to and from the airport. Finally, parking is available for passengers at the airport who choose to drive to the airport. Drivers can access the airport through US 62.

4.6.3 PHYSICAL AIRPORT UPGRADES

The City of El Paso released their five-year capital improvements plan in 2023. In a presentation for the plan, ELP shows that they have been awarded a total of \$88,940,000 in federal and state grants for improvements. \$36.98 million comes from the Bipartisan Infrastructure Law and \$25 million comes from the Build Back Better Grant. Several major projects are in the works. ELP plans three sustainability projects: Solar-Covered Parking in Short term, an airfield solar generation facility, and LED ramp lighting. \$129 million will be spent on major reconstruction, relocation, and rehabilitation of the airfield. \$44 million will be spent on major terminal projects that rehabilitate and renovate the terminal. Finally, \$102 million will be spent on extensions and drainage improvements for the airport.

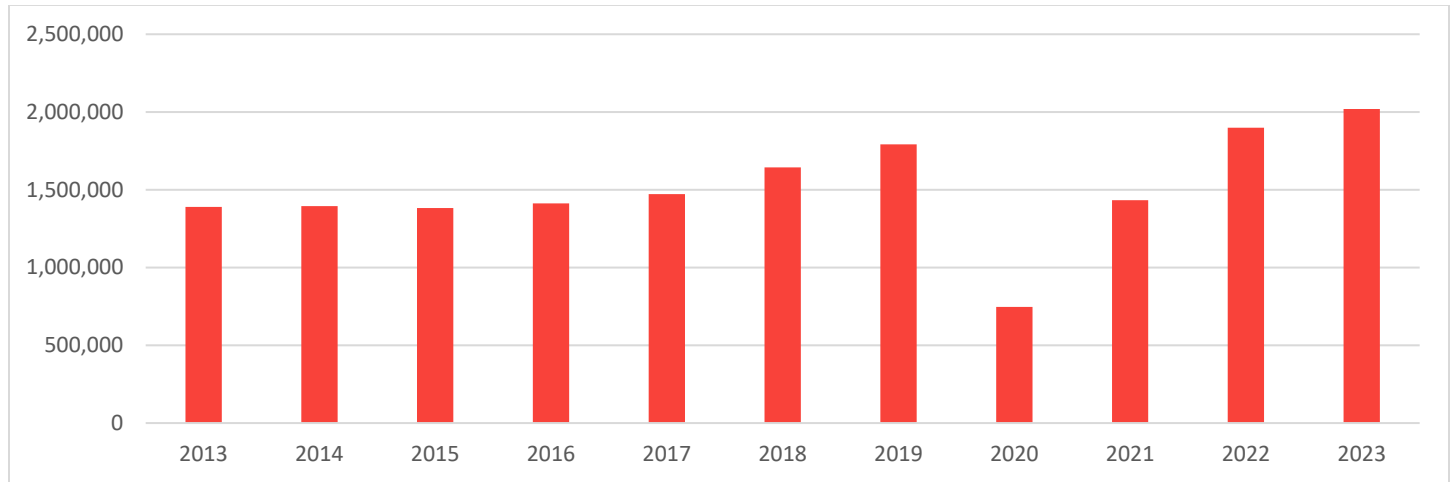
The airport also serves as an economic engine for the region. According to ELP, there are around 500 businesses operating from the nearly 7,000 acres of airport property, 247 direct leases, generating \$10.6 million annually, and 2,800 airport-based employees working on the premises. Two upcoming leases will transform the region: Build Back Better Innovation Factory and a 250-acre Advanced Manufacturing District both paid for with funding from the Build Back Better legislation.

4.6.4 PASSENGER OPERATIONS

Figure 4-27 portrays the total enplanements at ELP for the years 2013 through 2023. Enplanements are the sum of originating and connecting passengers at an airport.

Between the years 2013 through 2016, enplanements were relatively stagnant with little growth. After 2016, ELP saw a steady rise in enplanements until the 2020 Covid-19 pandemic nosedived enplanements from nearly 1.8 million to a mere 746,556 enplanements. It took until 2022 for enplanements to recover and rise above pre-pandemic levels where enplanements at ELP now are hovering above two million enplanements.

Figure 4-27: ELP Annual Passenger Enplanements, 2013-2023



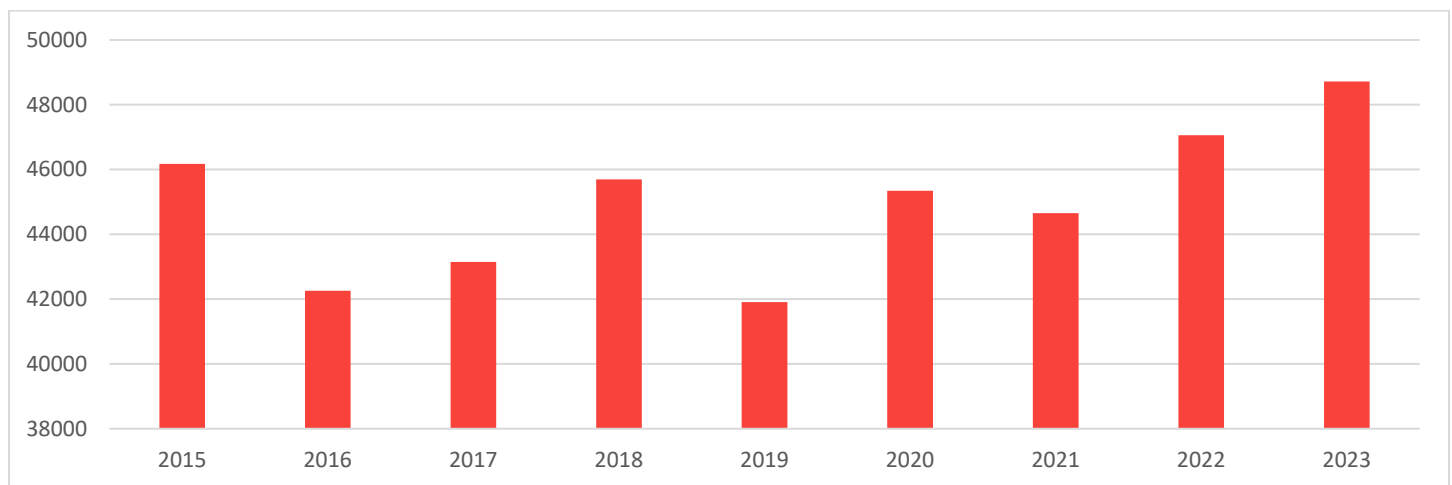
Source: El Paso International Airport, 2024

ELP on-time performance from 2019-2023 shows that the average percentage of departures on time was 82% with an average delay of 73.4 minutes. USDOT considers a flight delayed if it arrived or departed 15 or more minutes than the schedule.

4.6.5 FREIGHT OPERATIONS

Figure 4-28 shows the number of units in tons of cargo freight from 2015 through 2023. The number of tons of cargo freight has fluctuated drastically over the past eight years but seems to be on a steady rise from 2021 through 2023. This is possibly due to the increased demand for goods and push for nearshoring since the Covid-19 pandemic. As trade increases between the United States and Mexico, demand for cargo freight will continue to increase, putting a further strain on the cargo air freight system.

Figure 4-28: ELP Annual Freight Enplanements, 2013-2023



Source: El Paso International Airport, 2024



5 TECHNOLOGY AND INNOVATION

5.1 AUTONOMOUS VEHICLES

Autonomous vehicles (AVs) use technology to partially or fully automate the driving process. There are various levels of automation, and many cars already have some level of automation. These levels of automation currently exist, ranging from cruise control to fully autonomous. The technology has not yet been fully developed, but several companies like Waymo and Cruise are already testing fully autonomous vehicles in several Texas cities.

5.1.1 OPPORTUNITIES OF AUTONOMOUS VEHICLES

Autonomous vehicles promise to be connected to other vehicles, providing a safer driving experience that communicates with surrounding cars. Proponents argue that autonomous vehicles make fewer mistakes than human drivers and eliminate human error. Another promise of autonomous vehicles is better traffic management. Autonomous vehicles have the potential to be more consistent with traffic laws and adequate spacing between vehicles, which can reduce the occurrence of traffic jams.

5.1.2 CHALLENGES OF AUTONOMOUS VEHICLES

While autonomous vehicles promise a safer driving experience, this new technology poses several challenges. First, the transition from human drivers to autonomous vehicles may be difficult since much of the safety of autonomous vehicles relies on their connection to surrounding vehicles. Secondly, autonomous vehicles would require significant telecommunications infrastructure to stay connected with other vehicles. This will put a strain on existing telecommunications infrastructure like cell towers. Thirdly, autonomous vehicles also pose cybersecurity concerns. This comes in two forms: a malicious hack that controls vehicles and data privacy concerns considering travel data will be recorded and stored. Finally, there is a concern that since autonomous vehicles can drive on their own, they do not need to park creating “ghost drivers.” These ghost drivers are cars that roam around until the user calls for their return. This creates several purposeless driving trips that further strain the traffic management situation, possibly similar to ridesharing and taxi trips without passengers.

5.1.3 PLANNING CONSIDERATIONS

Policymakers should consider several factors to make the transition to autonomous and connected vehicles as smooth as possible. First, local governments must recognize that this transition is happening and reflect on policies and impacts relating to this transition. This means starting studies like a fiscal implication study of autonomous vehicles in the El Paso area. Secondly, mass transit and active transportation should continue to be developed to support underserved populations who may be unable to purchase autonomous vehicles. Consider priority access areas for AVs dropping and picking people up at high-demand locations. Finally, be flexible. As with any new technology, the impacts are not fully known. Maintaining flexibility and strong evaluation and adjustment mechanisms will allow the El Paso region to adapt and perfect the transportation planning of autonomous vehicles.

5.2 ELECTRIC VEHICLES

Electric Vehicles (EVs) are vehicles that are propelled using an electric motor that is powered by a battery. These are called Battery Electric Vehicles (BEV). These batteries are usually recharged using a plug-in at one’s home or at a charging station. Another type is Plug-In Hybrid Electric Vehicles (PHEV). These vehicles have a gasoline engine and an electric battery that can be charged with a plug-in. Both are becoming more common through market demand for more sustainable vehicles and federal subsidies. While electric vehicles used to be a niche market like Tesla, many traditional car companies like Toyota, Ford, Honda, and more are making electric vehicles for purchase.



5.2.1 OPPORTUNITIES OF ELECTRIC VEHICLES

Electric vehicles promise several benefits and opportunities to users and regions. One of those benefits is the obvious reduction in greenhouse gas emissions. Transportation accounts for the largest portion (28%) of total U.S. greenhouse gas emissions in [2022](#). Electric vehicles do not produce tailpipe emissions. There is flexibility with where electricity to power EVs is sourced from. Another benefit is lower vehicle and maintenance costs. EVs have fewer parts and require less maintenance. Common maintenance costs like oil changes are needed for EVs. EVs are also 3.6 times more energy efficient than a similar conventional vehicle, and with a lower cost of electricity, owners of EVs have a lower total cost of ownership. Finally, EVs can help local transit operators. Electric buses are becoming more common as the benefits of lower emissions and costs become more apparent. The Federal Transit Administration has the Low or No Emissions Grant Program that awards transit agencies money to help modernize bus facilities and fleets.

5.2.2 CHALLENGES OF ELECTRIC VEHICLES

While EVs have numerous benefits, several concerns and challenges still exist. Regarding the vehicle itself, EVs are still generally more expensive than conventional vehicles. This creates inequitable ownership. Electric vehicles are also heavier than conventional vehicles. This has caused faster degradation of roads, parking garages, and other concrete infrastructure because the weights go beyond engineering assumptions at the time of construction. This has also caused faster wearing of tires and has led to pieces of tires being found in the environment.

As it relates to charging, there are a few challenges. Many are worried about running out of battery, creating a feeling known as “range anxiety.” Electric vehicle charging also takes longer than simply filling up a gasoline tank. The technology is improving, so there are faster charging speeds and further range, but it is still behind. Additionally, there are an insufficient number of charging stations. More publicly available charging stations are needed. Not everyone can have a charger at home, especially those renting a multi-family unit, like an apartment. Finally, all the new electric vehicles and charging stations dramatically increase the demand on the electrical grid.

5.2.3 PLANNING CONSIDERATIONS

Policymakers should keep some things in mind to prepare for the EV transition. First, improvements to the electrical grid are necessary to meet the demand for electricity by EVs. The region should assess the local grid infrastructure conditions and then work to expand and modernize electrical grid equipment. Second, more charging stations are needed. Increasing the number of charging stations will enable the region to meet everyone’s charging needs. The region should identify possible locations for charging stations to develop a cohesive network.

5.3 MICRO-MOBILITY

The Federal Highway Administration defines micro-mobility as “any small, low-speed, human- or electric-powered transportation device, including bicycles, scooters, electric-assist bicycles, electric scooters (e-scooters), and other small, lightweight, wheeled conveyances.” They are typically low speeds (under 30 mph) and small in size (typically less than 500 pounds and less than 3 feet wide. “According to a recent National Association of City Transportation Officials (NACTO) report, users took 136 million trips in 2019 on shared micromobility systems, a 60 percent increase from 2018.”

5.3.1 OPPORTUNITIES

The biggest opportunity for micro-mobility is that it helps solve the first- and last-mile problems. Users can use micro-mobility to travel to or from a transit station or other destination. This can help enhance a transit system and increase ridership. Micro-mobility leads to fewer private vehicles on the road, helping with traffic management. With more micro-mobility, less space is needed for private vehicle parking, like parking spaces and garages. Electric micro-mobility is far more sustainable than most modes of transportation, including electric vehicles. Finally, micro-mobility has more affordable upfront and maintenance costs, allowing for expanded travel options for underserved areas.



5.3.2 CHALLENGES

Micro-mobility offers some of the best opportunities out of all the emerging technologies, but it does not come without its serious challenges. Safety is a serious concern for riders who may be involved in crashes. At high speeds, users can fall or crash into objects, causing serious injuries. This occurs in part because micro-mobility options often do not have mechanisms to limit their speed. There is also typically a lack of infrastructure to support micro-mobility. Similar infrastructure used for bicycles and active transportation can help resolve this. Micro-mobility is also weather-dependent. Like active transportation, users may opt for another mode of transportation if there are temperature extremes or heavy precipitation.

Additionally, parking and storage of micro-mobility options is a concern. E-scooters and dockless bicycles are often found left in the middle of sidewalks and sometimes on the road. Finally, micro-mobility options are often not accessible to people with disabilities. While bicycles can be adapted, several other micro-mobility options like e-scooters are not.

5.3.3 PLANNING CONSIDERATIONS

First and foremost, regions need to address safety concerns with micro-mobility. This involves several aspects. First, increasing education to users of micro-mobility on safe handling and awareness to drivers of micro-mobility users is critical. Second, speed limits and geo-fencing are essential, especially in high-traffic areas. Thirdly, adequate parking and storage of micro-mobility is necessary to ensure clear pathways and roads. Designated parking areas or docks should be placed with possible fines for not properly parking them. Finally, increased investment and construction of active transportation infrastructure, such as protected bicycle lanes, will enable users to safely travel throughout the region.

5.4 RIDESHARING

While ridesharing in the form of taxis has been with us for some time, applications and smartphones have transformed this technology into a more tech-centered business. Modern companies like Uber and Lyft have become the dominant players in this space. Ridesharing involves people ordering rides using their phones and riding in someone else's vehicle for a trip.

5.4.1 OPPORTUNITIES

Ride-sharing has helped in numerous ways, but most predominantly, it has helped people travel to destinations using a car without necessarily owning or renting one. Ride-sharing services are valuable in helping people reach destinations they may not be able to reach using transit, walking, or biking. Replacing car ownership with ridesharing can be cost-effective for people who make infrequent trips. When shared with others, ridesharing can reduce the carbon emissions per person. Ride-sharing can also save lives by making it easier for people who are intoxicated or feel unsafe to get a safe ride home from wherever they are.

5.4.2 CHALLENGES

Ride-sharing services face a few challenges. First, ride-sharing can lead to increased traffic congestion caused by "ghost cars" driving around without a trip purpose until a user orders a ride. Another challenge is that drivers are usually considered contractors and thus do not qualify for benefits like health insurance. Additionally, while rare, companies may not conduct fingerprinting or background checks on drivers, which can create an unsafe environment. Even more likely, yet still rare, are situations in which passengers harm drivers.

5.4.3 PLANNING CONSIDERATIONS

When it comes to ridesharing, several planning considerations should be kept in mind. Policymakers should consider identifying and creating designated drop-off and pick-up locations for ride-sharing services in high-traffic areas. Furthermore, policymakers should investigate ways to incentivize carpooling rides to reduce emissions.



5.4.4 UNMANNED AERIAL SYSTEMS (UAS)

Unmanned Aerial Systems, also known as UAS or Unmanned Aerial Vehicles (UAVs), are aircraft that operate without a human pilot onboard. They are typically controlled remotely and usually within sight of the operator but can receive special approval from the Federal Aviation Administration (FAA) to fly out of sight. Batteries on UAS usually last around 20 minutes.

5.4.5 OPPORTUNITIES

Drones initially became popular for their military and recreational applications, but cities have increasingly adopted their use to solve issues in their community. Communities can use UAS to spot wildfires, survey areas, law enforcement activities, etc. They can conduct these activities with less risk to a human pilot operating and can fit into smaller spaces such as windows. Commercial use of them is also increasing as companies like Amazon and Walmart look to use them for fast delivery of goods. Dozens of companies are competing to create commercial-use drones that can deliver to people at faster times. This has the potential to reduce traffic as fewer delivery drivers are needed.

5.4.6 CHALLENGES

Currently, little regulation exists regarding drones in cities. This is common with emerging technologies. While UAS can be much cheaper and safer than human-piloted aircraft, UAS can also be cost-prohibitive for everyday users. Drones can violate people's privacy if hovering over residential areas above people's backyards. UAS can also be a nuisance. Many operate at around 85dB, similar to heavy road traffic. Finally, drones can pose a safety risk when operating near power lines, airports, or crowded events. If a drone hits anything, it can cause major disruption and harm.

5.4.7 CONSIDERATIONS

Cities must be thinking about how to regulate UAS properly. The little regulation that the FAA provides mainly pertains to recreational drone use, but policymakers need to think of ways to regulate commercial use properly. Companies like Walmart and Amazon will likely use more drones and create busier airspace than currently used for recreational purposes. Buffer zones should be established around sensitive areas or areas where harm can occur. Policymakers should also consider identifying drone delivery hubs to better contain drone use. Regional government should support training of public employees on drone use and look for cost-saving applications of UAS.

5.5 AIR TAXIS

Air taxis, also known as "advanced air mobility" (AAM), are aerial vehicles that transport people to and from destinations. They are typically operated by a human pilot but can be autonomous and almost exclusively are VTOL (vertical take-off and landing). Air taxis would likely land on different helipads in high-traffic areas. While it may sound far-fetched, companies such as United Airlines and Uber are drawing planes to use them in cities like Chicago and New York soon.

5.5.1 OPPORTUNITIES

Air taxis have several opportunities to improve regional transportation. They can help reduce urban congestion by bypassing roads. AAMs also have faster travel times in a safer mode of travel. Finally, given their uniqueness and the industries that would likely support the operations of an air taxi system, air taxis can be a great economic development tool.



5.5.2 CHALLENGES

Air taxis are likely to be incredibly cost-prohibitive from a business and consumer perspective. There are also safety concerns with aircraft flying low in cities, especially if there are several operating at the same time. Air taxis would likely be weather-sensitive and limited to operating during sunny weather. While electric VTOL air taxis would certainly produce less noise than a helicopter, they could still be considered a noise nuisance. Air taxis would likely face heavy regulatory hurdles to be approved and operate within a city. Finally, there would be cybersecurity threats by malicious hackers seeking to disrupt or control air taxis, especially if they are autonomous.

5.5.3 CONSIDERATIONS

Policymakers should keep several things in mind when considering air taxis as a transportation option in the future. First, feasibility studies should be conducted to determine the locations of vertiports and landing pads. Second, air traffic control for low-altitude airspace should be considered to manage airspace. Thirdly, local emergency services should make plans for how to respond in the case of an emergency involving air taxis. Policymakers also need to consider noise pollution mitigation strategies for air taxis. Finally, ITS and charging infrastructure needs to be further developed to support the operation of an air taxi system.

6 CONCLUSION AND NEXT STEPS

This existing conditions analysis covered various topics to fully understand the El Paso region's socioeconomic and transportation conditions. For social and economic conditions, this report mapped out and shared data on several different demographic and economic data points, including population, race, poverty, LEP, education, households, commute, employment, income, and more. For transportation conditions, this report shared findings on the current conditions for roadways, freight, airport, transit, and trade. This section also included crash data showing where crashes occur and the number of crashes.

The next steps for the MTP process are to further examine the region, establish a vision statement and guiding principles, develop a congestion management process, estimate funding, and create a project list for the next 26 years. Throughout this process, the general public and stakeholders will be engaged.