



El Paso County Master Thoroughfare Plan

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Prepared for:

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Appendix A.	Existing Plan Review and Proposed Goals and Objectives (Technical Memorandum 1)
Appendix B.	Demographics, Land Use, and Environmental (Technical Memorandum 2)
Appendix C.	Transportation Network Existing Conditions and Needs/Opportunities Analysis (Technical Memorandum 3)
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ACRONYMS

County	El Paso County, Texas
CRRMA	Camino Real Regional Mobility Authority
DTS	Data Transfer Solutions, LLC
ETJ	Extraterritorial Jurisdiction
FM	Farm-to-Market Road
HHS	Department of Health and Human Services
I-10	Interstate 10
LEP	Limited English proficiency
LOS	Level of Service
MPO	Metropolitan Planning Organization
MTP	Master Thoroughfare Plan
ROW	Right-of-way
SH	State Highway
TAZ	Traffic Analysis Zone
TDM	Travel Demand Model
TTI	Texas A&M University Transportation Institute
TxDOT	Texas Department of Transportation
US	U.S. Highway



1. Introduction

The County of El Paso (County) is located on the western edge of Texas, sharing an international border with Mexico and a state border with New Mexico. The County’s population is growing, and this trend is projected to continue in the coming years. Population growth and development increase the demand for transportation. To address future challenges and opportunities, the County has completed the El Paso County Master Thoroughfare Plan (MTP). The MTP’s purpose is to comprehensively develop a future transportation network and recommend multimodal improvement strategies over the next 25 years. The MTP provides a “road map” for transportation development within the County and positions County projects to compete more effectively for state and federal funding. This plan identifies locations and proposed functional classifications of roadway facilities that are necessary to support mobility and accessibility. The MTP also identifies opportunities for active transportation (bicycle and pedestrian) improvements.

The MTP incorporates and builds on local and regional transportation goals, objectives, and priorities developed by municipal partners, including but not limited to the El Paso Metropolitan Planning Organization (MPO), the Camino Real Regional Mobility Authority (CRRMA), the Texas Department of Transportation (TxDOT), and incorporated cities. Ongoing coordination with stakeholders and the public helped the project team (consisting of the County and consultant partners) develop and refine plan recommendations.

illustrates the steps involved in completing the County MTP.

Figure 1. County MTP Development Process





This MTP document reviews the overall MTP process, key findings, stakeholder input, and recommendations. Further detail for each section is contained in Technical Memoranda available as appendices to this report. The MTP is designed to be used by the County to:

- ❖ Identify structural transportation routes within unincorporated areas of the County
- ❖ Work with developers and other municipal agencies to create a cohesive multimodal transportation network
- ❖ Develop example roadway cross sections to provide guidance on right-of-way (ROW), geometry, and amenities suited to each roadway's functional classification
- ❖ Identify high-, medium-, and low-priority corridors for improvements using criteria developed based on County goals and objectives

The MTP is intended as a “living” document that will require regular updates in response to changes in development, other agency plans, local priorities, or roadway design standards. Continued coordination with municipal partners and other stakeholders is recommended to ensure the MTP remains in alignment with overall regional plans, goals, and strategies.



2. Goals and Objectives

The goals and objectives for the MTP provide a framework to guide decision-making for transportation improvements that will meet local and regional needs. The goals and objectives were developed after reviewing various local and regional plans to ensure that they align with established priorities within the region. These plans provided insight into various efforts and projects that will help shape transportation in the County (more information is available in Technical Memorandum 1). Key plans reviewed include:

- ❖ El Paso MPO
 - Destino 2045 (2018)
 - Regional Mobility Strategy 2020
- ❖ CRRMA
 - Comprehensive Mobility Plan (2013)
- ❖ City of El Paso
 - Plan El Paso (2012)
 - El Paso Comprehensive Bike Plan (2016)
- ❖ City of Socorro
 - Comprehensive Master Plan (2014)
- ❖ Town of Horizon City
 - Vision 2020 Comprehensive and Strategic Plan (2011)—currently undergoing update
- ❖ El Paso County
 - Regional Transit Feasibility Study (2019)
- ❖ TxDOT—multiple studies
- ❖ Paso Del Norte Trail Master Plan (2018)

Draft goals and objectives were presented to stakeholders during an initial Stakeholder Working Group meeting held on June 20, 2019 (see Section 5 for more information on the stakeholder outreach process). Working group members included representatives from the local elected and municipal officials representing El Paso County, incorporated cities, transportation providers, and other agencies. Attendees were encouraged to comment on the proposed goals and objectives. Several attendees suggested increased emphasis on safety, including adding “safety” as a stand-alone goal area. Draft goals and objectives were then refined to incorporate the input received from stakeholders.

The final goals and objectives are listed below in **Table 1**. Each goal area is supported by a goal statement and one or more key objectives. These goals and objectives can be incorporated throughout many County transportation projects and processes to ensure improvements align with established priorities.



Table 1. El Paso County Master Thoroughfare Plan Goals and Objectives

Goal Area	Goal	Objectives
Mobility/ Accessibility	Improve transportation system connectivity/efficiency and effectiveness	Improve access to key destinations
		Address current and future congestion hot spots
Safety	Improve multimodal transportation safety	Improve safety and reduce conflict points on the transportation network
		Reduce the number of traffic-related fatalities and serious injuries
		Improve safety for children traveling to/from school
Sustainability	Improve the transportation system while protecting and enhancing the natural environment	Increase the quality and availability of travel options other than single-occupancy vehicles (transit, bicycle, pedestrian facilities)
		Reduce vehicle emissions
Travel Choice	Provide context-appropriate multimodal transportation options that serve local land use and travel needs	Facilitate development of sidewalk, bicycle, and trail networks, including addressing connectivity gaps
		Improve access to convenient, reliable transit services
Economic Vitality	Support the regional economy by improving access to economic centers and strengthening the regional freight network	Expand access to current and future employment centers
		Improve performance of high-freight corridors and roads connecting to intermodal or freight facilities
		Utilize the Marcelino Serna Port of Entry to its full capacity
Funding	Utilize multiple funding sources for County transportation improvements	Plan for transportation projects that meet local and regional needs to maximize eligibility for state, regional, and federal transportation funding



3. Demographics and Environmental Justice

An important component of transportation planning is understating current and future demographic trends. The County, like most of Texas, is experiencing a sustained period of growth in both population and employment that is projected to continue over the next 25 years. The County will need to plan for this continued growth and its associated transportation needs. For more information, see Technical Memorandum 2.

3.1. Population

Between 2000 and 2017, the population of El Paso County and the state of Texas grew by approximately 24 percent and 36 percent, respectively (see **Table 2**).

Table 2. *El Paso County and Texas Population, 2000 and 2017*

Area	Population in 2000	Population in 2017	Percent Change
El Paso County	679,622	840,410	23.7%
State of Texas	20,851,820	28,304,596	35.7%

Source: TSL 2018a, 2018b; USCB 2018a, 2018b

The population growth trend is projected to continue over the next 25 years. Based on the demographic information included in the El Paso MPO’s Destino 2045 Travel Demand Model (TDM), the region’s population is anticipated to grow to nearly 1.4 million people by 2045 (El Paso MPO, 2018). **Figure 2** shows the TDM’s projected distribution of population growth by traffic analysis zones (TAZs). A TAZ is a small unit of geography used in transportation planning. The map shows that some of the main areas of projected growth are located outside of Loop 375, and several of the highest-growth TAZs are within unincorporated areas of the County. These projected development patterns indicate the need for a robust, efficient transportation system to safely connect residents with jobs, school, retail, and other key destinations.

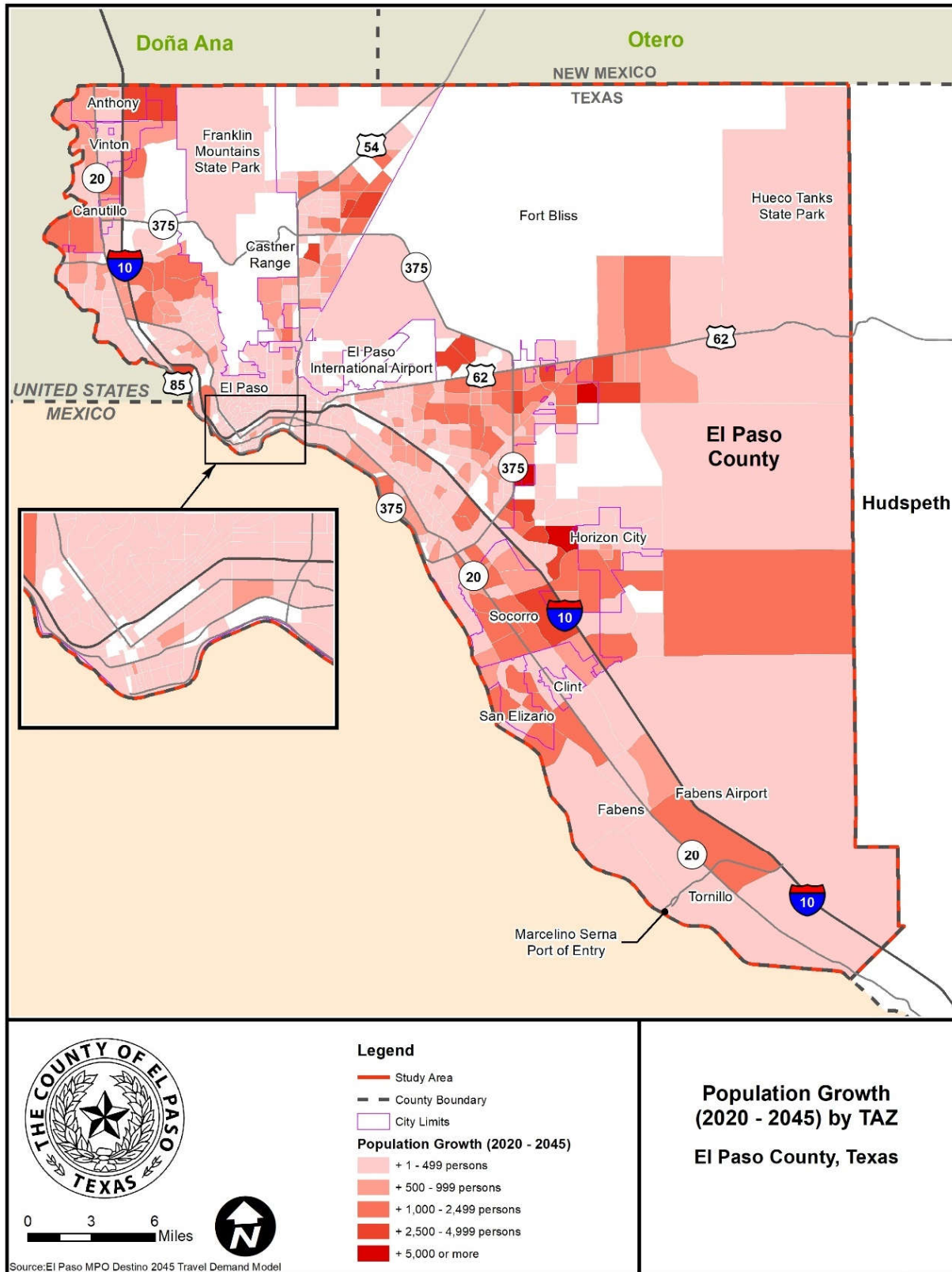
3.2. Employment

Figure 3 shows the projected employment change from 2020 to 2045, also based on El Paso MPO TDM forecasts. High projected employment growth areas are located throughout the County. Areas such as Horizon City, Interstate 10 (I-10)/Loop 375, and the northwestern parts of the city of El Paso are projected to add more than 1,000 jobs. Employment growth areas tend to be concentrated closer to the I-10 corridor; however, much like the population projections, several of the highest employment growth areas are located outside of Loop 375.

Top growth areas for both population and employment are shown in **Figure 4**. While top employment growth areas are clustered close to I-10, overall, a substantial proportion of these high-growth locations are located outside of Loop 375, and several are located within unincorporated areas of the County.



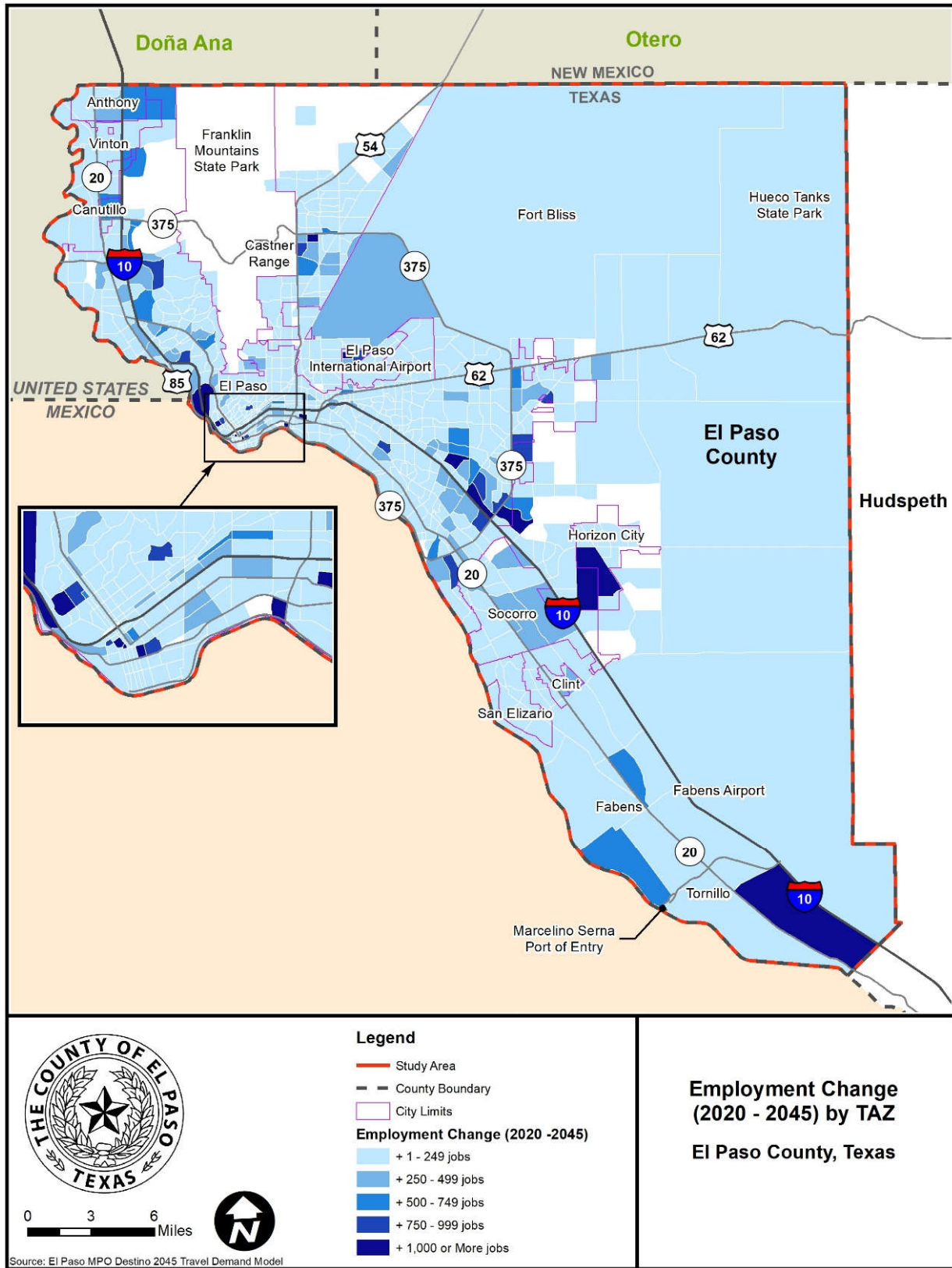
Figure 2. Population Growth, 2020 to 2045



Source: El Paso MPO Destino 2045 Travel Demand Model



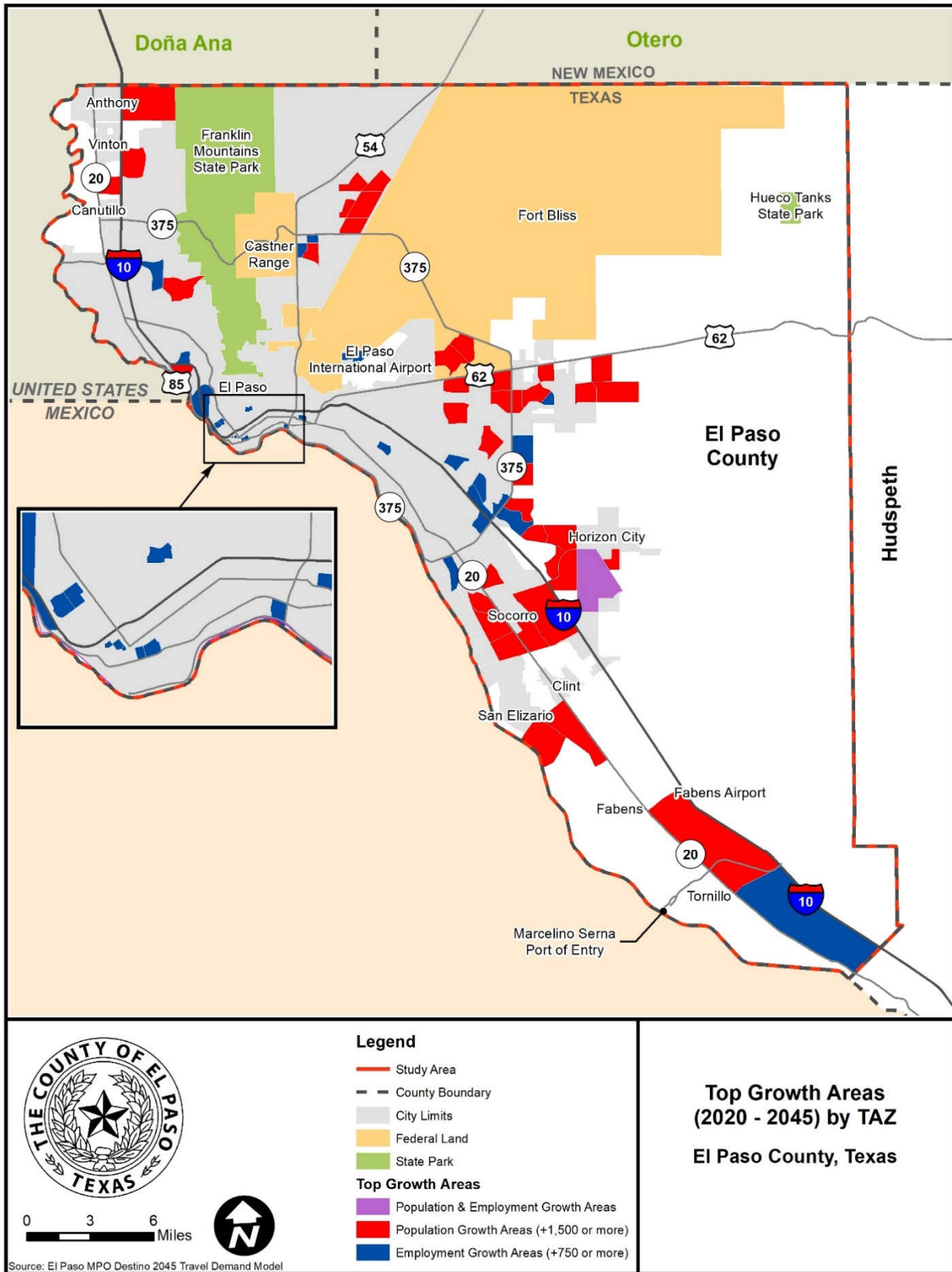
Figure 3. Employment Change, 2020 to 2045



Source: El Paso MPO Destino 2045 Travel Demand Model



Figure 4. Top Growth Areas by TAZ, 2020 to 2045



Source: El Paso MPO Destino 2045 Travel Demand Model



3.3. Environmental Justice

In addition to future employment and population projections, environmental justice considerations play a part in determining the County’s future transportation needs. Environmental justice is the fair treatment and meaningful involvement of all people—regardless of race, color, national origin, or income—with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies (U.S. Environmental Protection Agency, 2019). Environmental justice was introduced into national policy in 1994 by Executive Order 12898. The regulation requires projects to:

- ❖ Avoid or mitigate disproportionately high public health, socioeconomic, and environmental effects on low-income and minority populations
- ❖ Locate and include all potentially impacted communities in the decision-making process
- ❖ Prevent the denial or lack of receipt of benefits from the process by low-income and minority populations

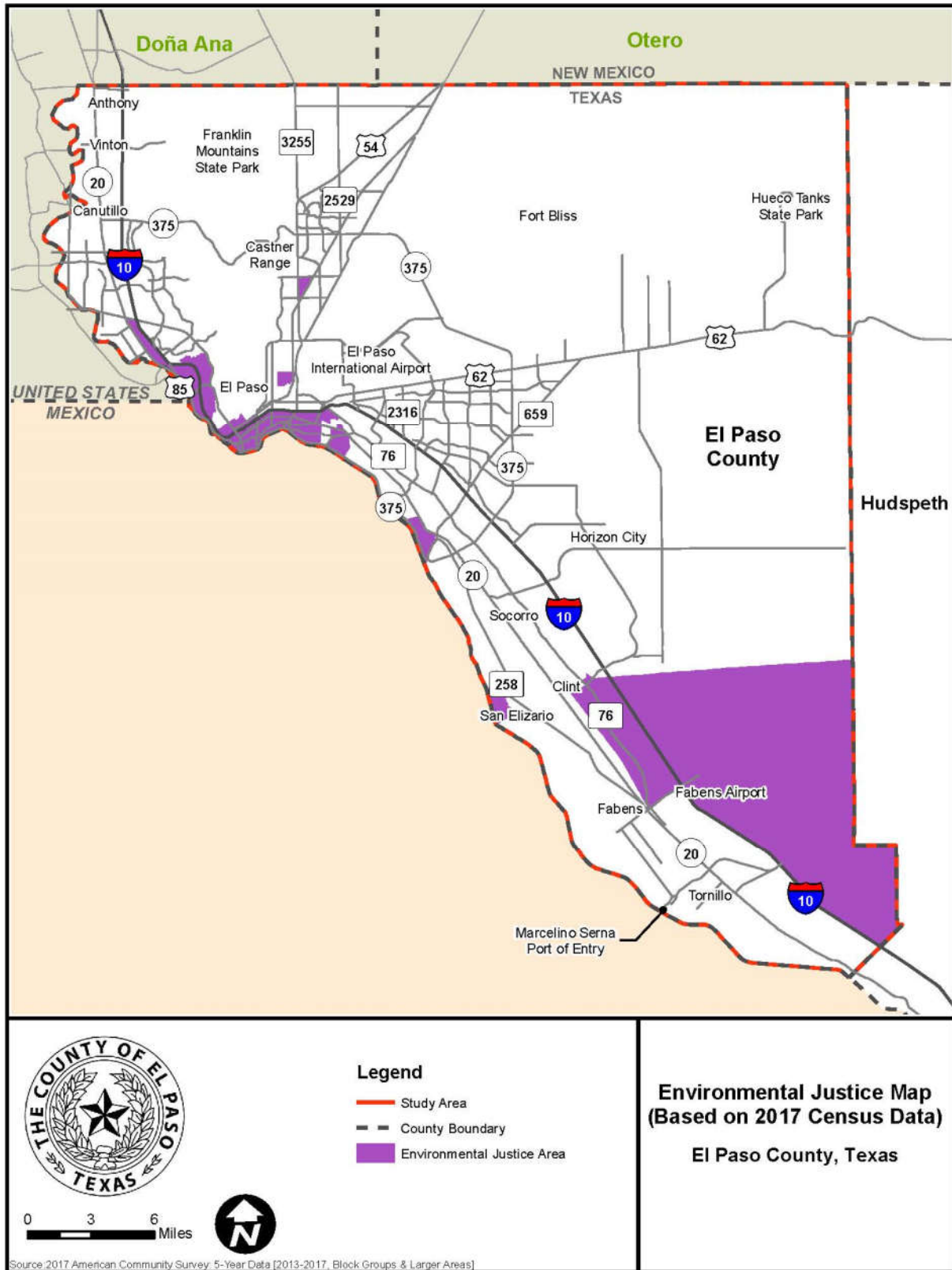
“Minority population” is defined as a population in an area with 50 percent or more minority residents. “Low-income population” is defined as any census tract population with a median household income less than the 2019 U.S. Health and Human Services (HHS) poverty threshold of \$25,750 for a family of four (HHS, 2019). Individuals within these two population groups who are not fluent in the English language—often because it is not their first language—are considered persons with limited English proficiency (LEP) and are entitled to certain types of assistance (translation services, non-English documentation, etc.).

“Minority population” is a vital aspect of environmental justice analysis; however, the majority-minority Hispanic/Latino population in the County makes the whole area an environmental justice area based solely on that criterion. Therefore, the MTP did not use minority population as an indicator for environmental justice communities and instead focused on low income and LEP as indicators for environmental justice communities. This methodology is consistent with the MPO’s Destino 2045 environmental justice definition.

As shown in **Figure 5**, low-income and LEP communities are concentrated near the United States/Mexico border in areas such as central El Paso and San Elizario, as well as areas north and east of Fabens. Any future transportation improvements in these areas will require detailed attention paid to potential impacts on these communities.



Figure 5. Environmental Justice Map



Source: U.S. Census Bureau, 2017



4. Existing/Forecasted Conditions and Needs

To identify where transportation improvements are needed, it is important to understand the existing transportation system within the County, including assets, conditions, and performance of the system. The existing transportation network and operations within the County were reviewed, including the roadway network, public transportation options, and bicycle and pedestrian facilities. For more information, see Technical Memorandum 3.

4.1. Roadway Network and Connectivity

The roadway network is the backbone of the County's transportation system, providing access and mobility to both passenger and commercial vehicles.



Figure 6 shows a map of the roads in the County, color coded by functional classification. A roadway's functional classification relates to its role in the transportation network, in terms of trip lengths, network roles, adjacent land uses, and community context. More information on functional classification can be found in Section 6 and Technical Memorandum 5.

This plan is mainly concerned with areas of the County outside of incorporated cities. Major roadways that exist outside of incorporated areas are labeled in



Figure 6 and include:

1. **Interstate 10 (I-10)** provides high-volume, access-controlled mobility through the County. I-10 provides connections not only to El Paso and the surrounding incorporated and unincorporated areas, but also to southern parts of Texas, the Gulf Coast states to the east, and New Mexico, Arizona, and southern California to the west. I-10 is maintained by TxDOT.
2. **Alameda Avenue**, also signed as State Highway (SH) 20 from downtown El Paso south, is located west of I-10 and generally runs parallel to I-10. Alameda Avenue is classified as a principal arterial north of South San Elizario Road, a minor arterial between South San Elizario Road and M.F. Aguilera Road, and a major collector south of M.F. Aguilera Road. Alameda Avenue provides an important alternative route to I-10 in case the interstate needs to shut down for any reason. This corridor is maintained by TxDOT.
3. **Montana Avenue**, also known as U.S. Highway (US) 180/US 62, is classified as a principal arterial and runs generally east/west from just south of El Paso International Airport to the western edge of the County line, continuing on into New Mexico. This is the predominant east/west road in the northeastern part of the County. Montana Avenue is maintained by TxDOT.
4. **Horizon Boulevard** is classified as a principal arterial and generally runs east/west, connecting Socorro and Horizon City. Horizon Boulevard intersects Ascencion Street and continues east toward the County line. Horizon Boulevard also serves as an alternate route to Eastlake Boulevard. This corridor is maintained by TxDOT.
5. **Darrington Road** is classified as a minor arterial and runs northwest/southeast, providing an important connection to I-10 from the Town of Horizon City. Darrington Road is maintained by the Town of Horizon City within the city limits; the remainder is maintained by the County.
6. **Pellicano Drive** connects to Darrington Road and runs east/west until crossing Loop 375, where it turns and runs northwest/southeast into the city of El Paso. Pellicano Drive is classified as a minor arterial and is maintained by the County outside of the El Paso city limits.
7. **Ascencion Street/North Ascencion Street** runs generally north/south and connects to Montana Avenue in the north and Las Colonias Road in the south. Ascencion Street is the main continuous north/south connection east of Loop 375 and is classified as a major collector. Ascencion Street is maintained by the County.
8. **Eastlake Boulevard** is located north of Horizon Boulevard and follows a similar east/west path, connecting back into Horizon Boulevard west of Ascencion Street. This corridor connects with I-10 and serves as an alternate route to Horizon Boulevard. Eastlake Boulevard is classified as a minor arterial and is maintained by the County (aside from the sections within the Town of Horizon City).
9. **Rojas Drive** is located northeast of I-10 and generally runs parallel to I-10, serving as an alternate route as far as Lomaland Drive. Rojas Drive also intersects with Eastlake Boulevard and connects the Eastlake/Mission Ridge area to the city of El Paso. This corridor is classified as a minor arterial and is maintained by the County outside of the El Paso city limits.
10. **Doniphan Drive/SH 20** is located in the northwest part of the County and generally runs parallel to I-10, serving as an alternate route. Doniphan Drive is classified as a major collector and connects Anthony, Vinton, and Canutillo to the city of El Paso. This corridor is maintained by TxDOT.



The County maintains approximately 620 miles of roadway in unincorporated areas; **Figure 7** shows the locations and extent of County-maintained arterials, collectors, and local streets.



Figure 6. County of El Paso Roadway Network by Functional Classification

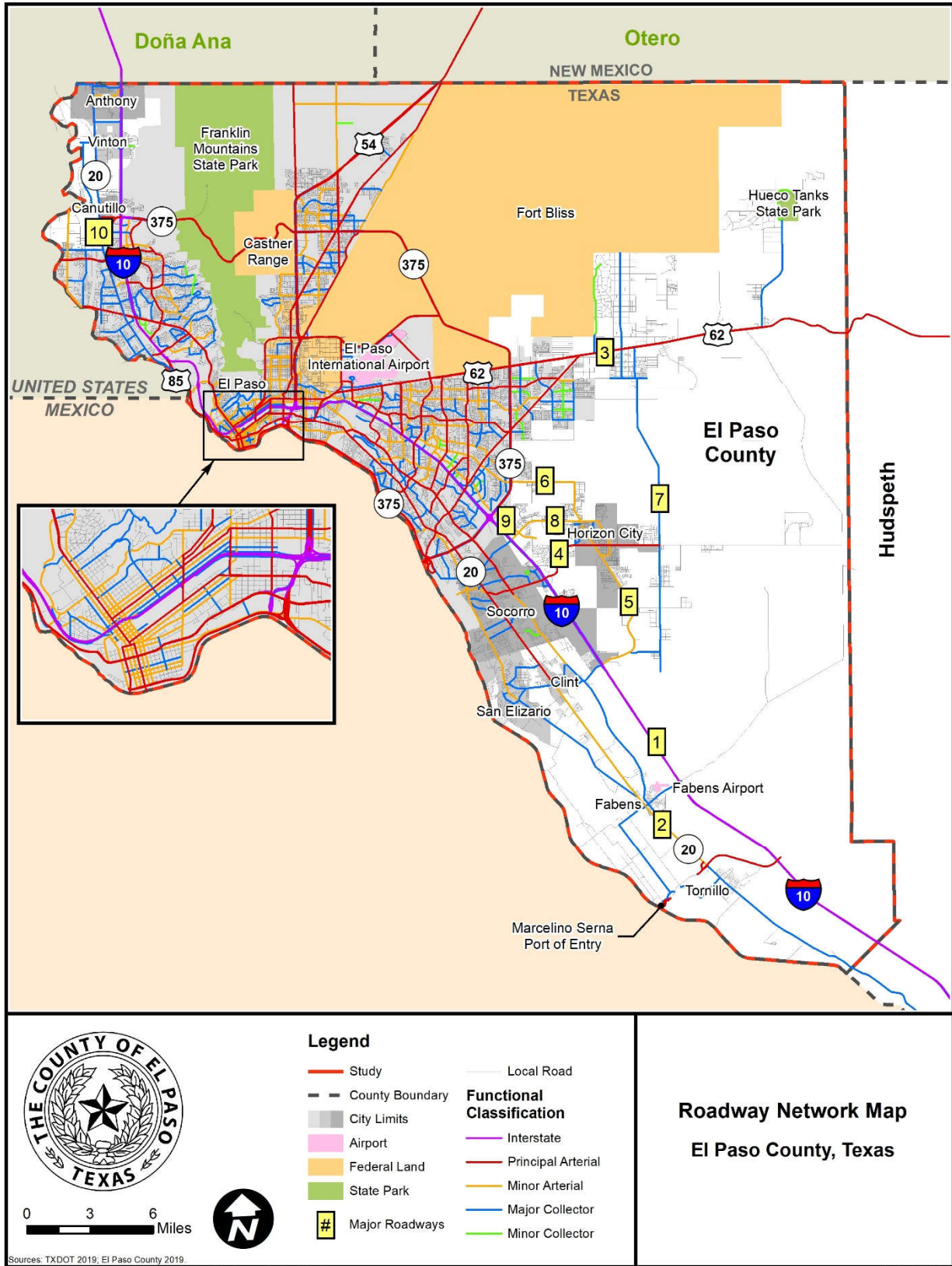
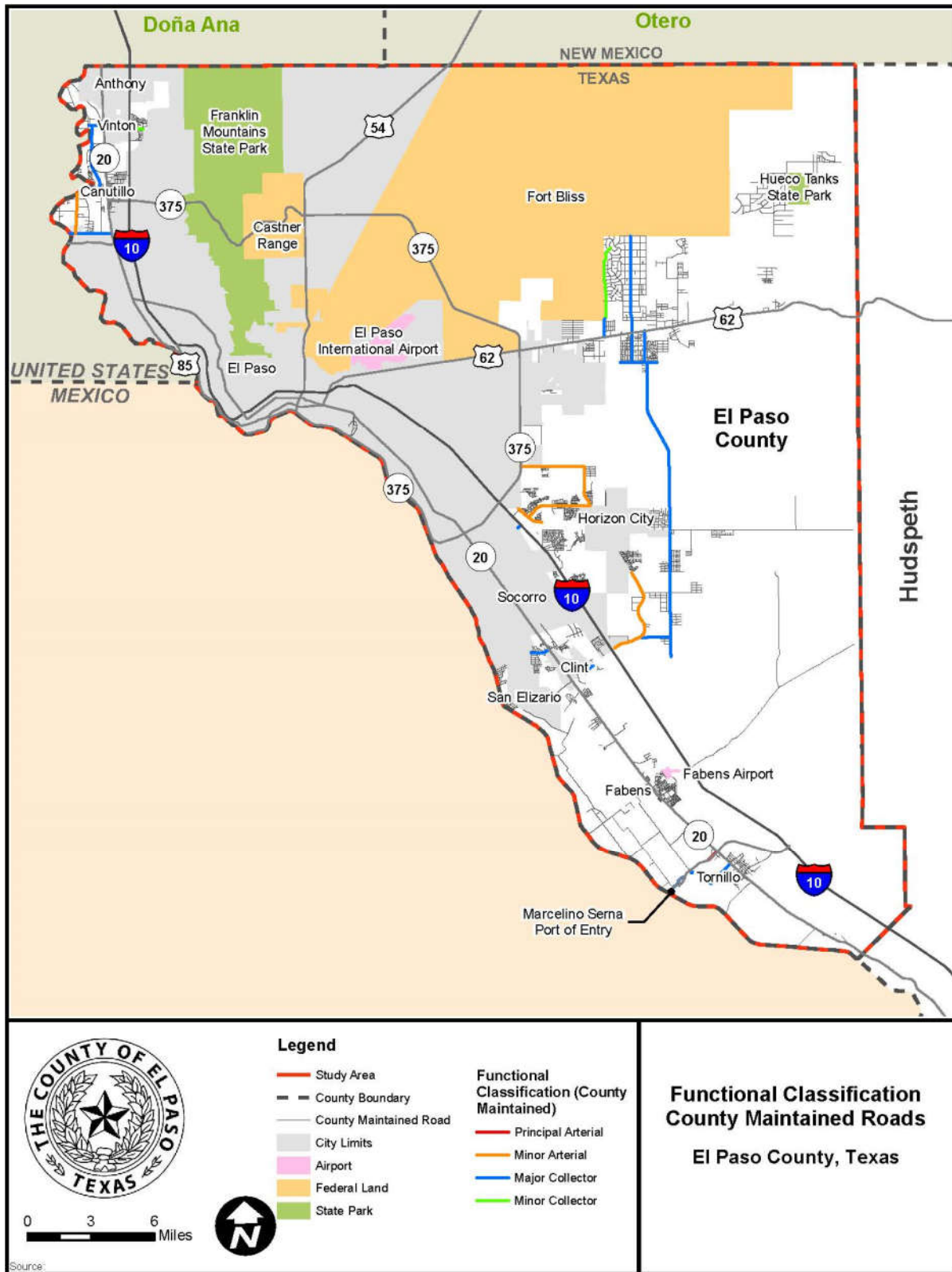




Figure 7. County Maintained Roadways





4.2. Existing and Forecasted Traffic and Safety Conditions

The El Paso TDM was used to identify roadway capacity concerns in the County by calculating roadway Level of Service (LOS), which is a qualitative measure that characterizes conditions within a traffic stream and how those conditions are perceived by users of the facility. LOS is measured on an A to F scale and is typically calculated as the ratio of traffic volume to roadway capacity. LOS A describes free-flow conditions with low volumes and high speeds, while LOS F describes severe congestion with stop-and-go traffic.

Traffic conditions for 2020 are presented in **Figure 8** and **Figure 9**. To provide more detailed information for the roadway network, these figures focus on areas with the highest concentration of County-maintained roads in the northwest and southeast areas of the County.

In the northwest area of the County, the majority of roadway segments operate at LOS C or better (see **Figure 8**); however, some capacity/connectivity improvements are needed in the east/west roadway system. The northwestern part of the County lacks continuous east/west roads, which forces vehicles to turn onto north/south roads to connect to east/west roads.

In the southeast area of the County, similar to the northwest area, most road segments operate at LOS C or better (see **Figure 9**), except for areas to the west of I-10, where some east/west roadway segments are currently at LOS D or worse.



Figure 8. Level of Service for Northwestern Portion of the County, 2020

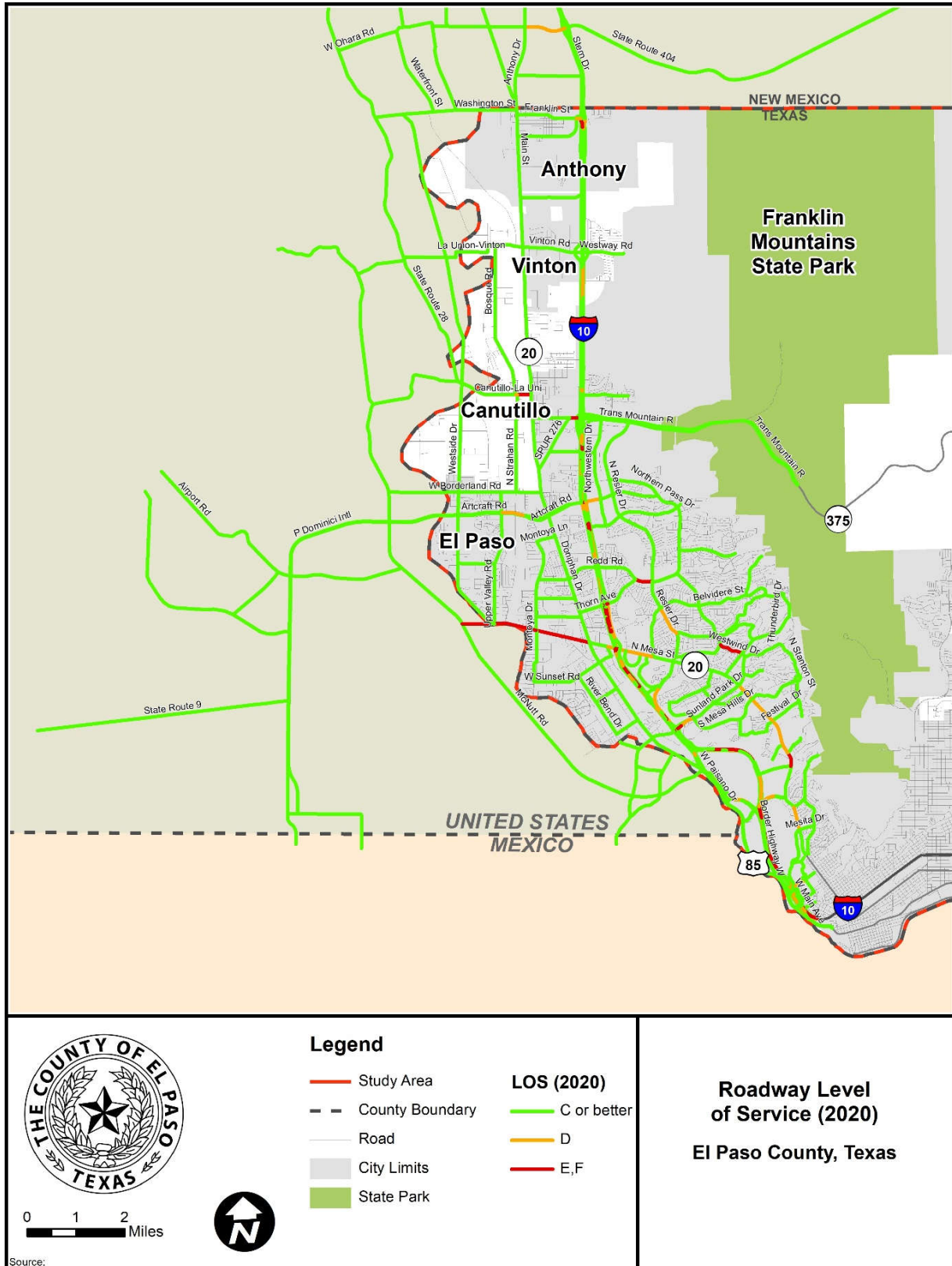
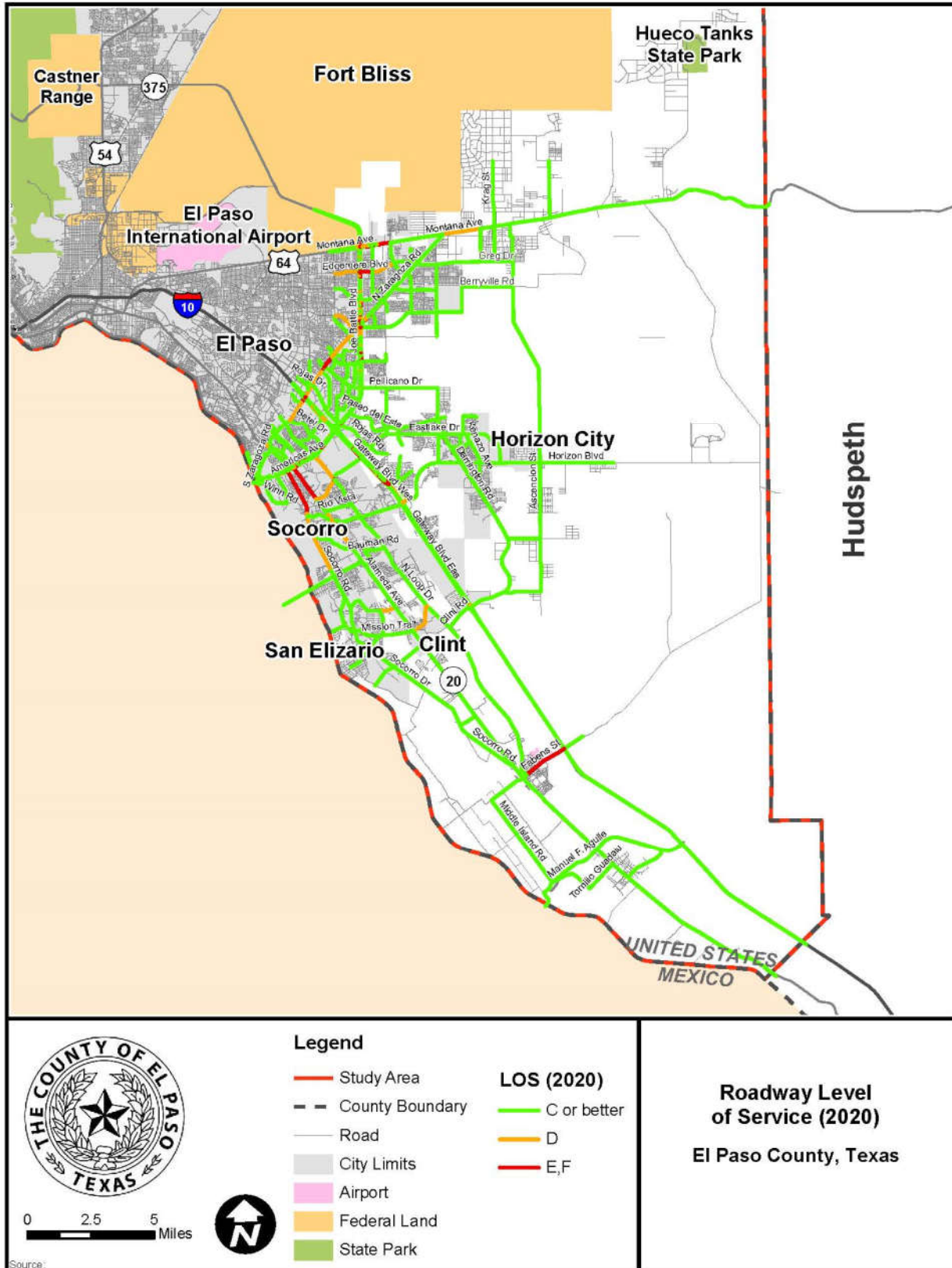




Figure 9. Level of Service for Southeastern Portion of the County, 2020



Source: El Paso MPO Destino 2045 Travel Demand Model



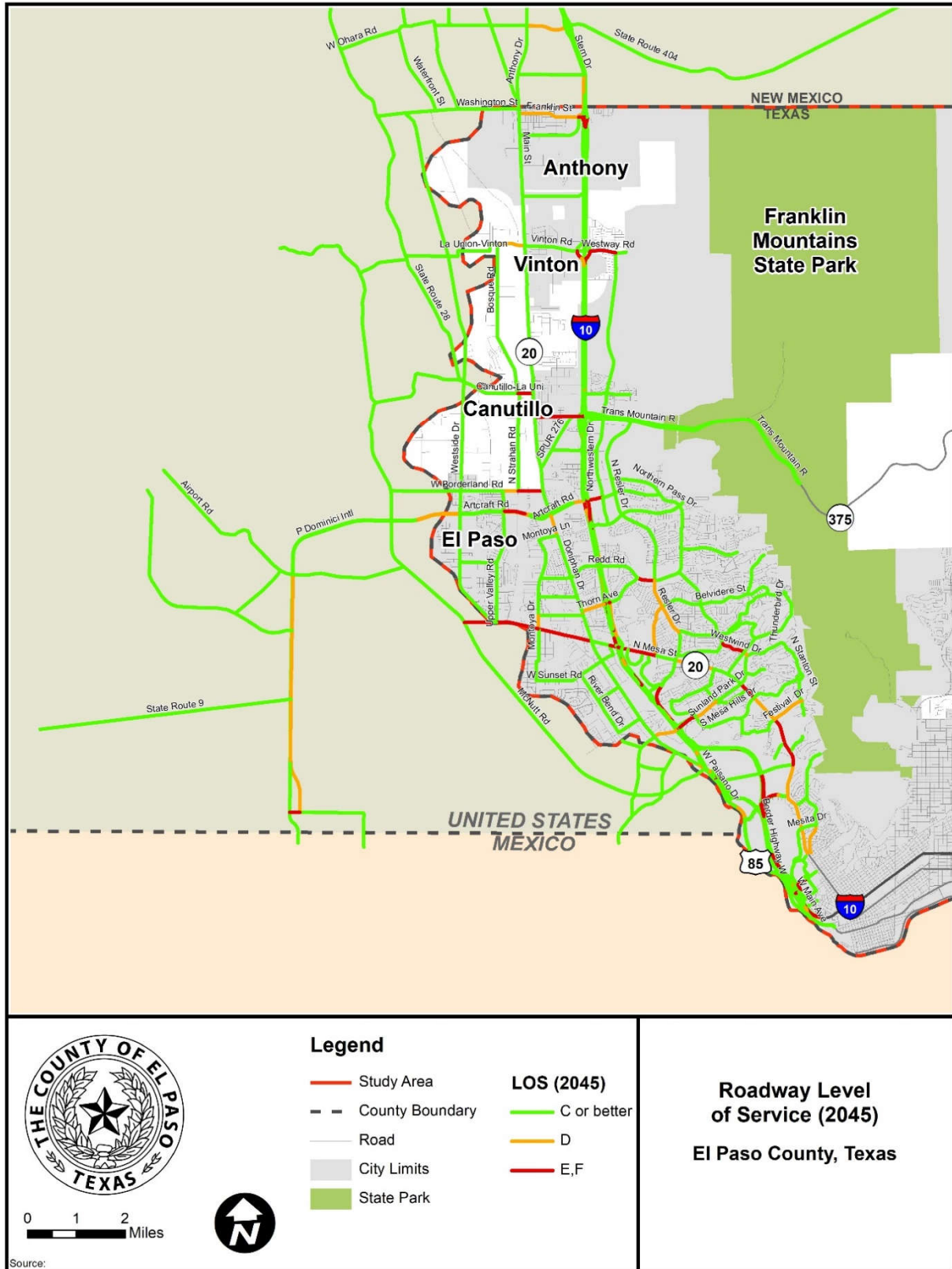
The traffic conditions for future year 2045 were also analyzed using the El Paso TDM to identify projected areas of congestion. **Figure 10** presents the projected LOS in 2045 in the County northwest area, which shows that, similar to 2020, most of the network is projected to operate at LOS C or better. However, there is an increase from 2020 in projected conditions of LOS D or worse on some east/west roadway segments to the west of the I-10 corridor. Portions of Canutillo-La Union Avenue (Farm-to-Market Road [FM] 259), Talbot Avenue, and Borderland Road are expected to experience increasing congestion, suggesting the need for alternate routes or capacity improvements to provide east/west access to major corridors like Doniphan Drive (SH 20) and I-10.

As presented in **Figure 11**, in the County southeast area, most road segments are projected to operate at LOS C or better. Considerable network improvements are planned to occur in this area between 2020 and 2045, which largely keep pace with expected traffic growth due to new development (see Section 4.4). Some roadway segments southwest of I-10 are projected to operate at LOS D or worse. East/west capacity and connectivity improvements in this area would help to alleviate projected congestion.

It should be noted that, while the travel demand model provides an approximation of potential capacity deficiencies on the roadway network, it is less adept at identifying congestion associated with operational conditions, such as traffic signals or turning movements. In addition, the model does not capture non-recurring congestion, such as that associated with crashes or special events.



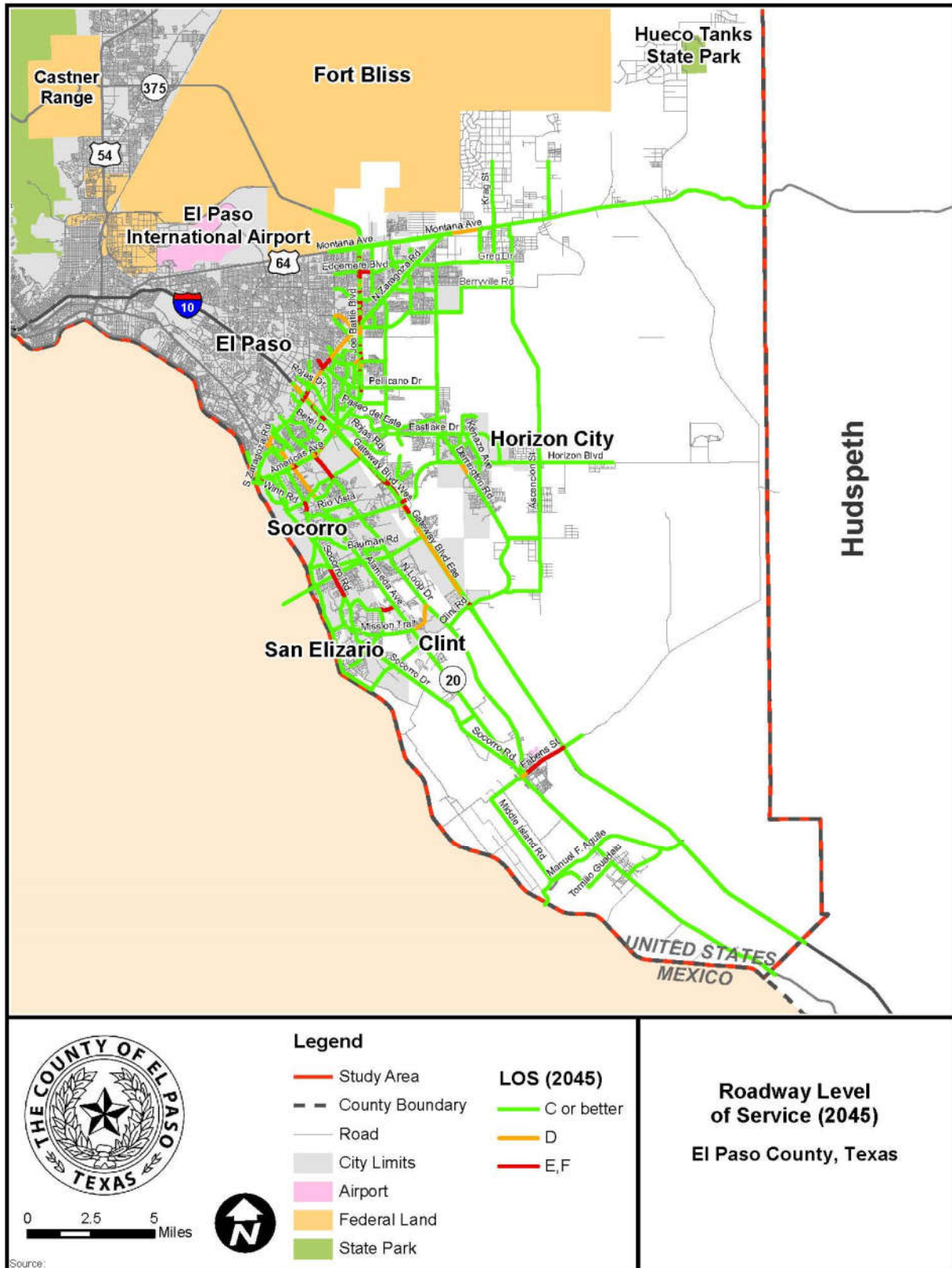
Figure 10. Projected Level of Service for Northwestern Portion of the County, 2045



Source: El Paso MPO Destino 2045 Travel Demand Model



Figure 11. Projected Level of Service for Southeastern Portion of the County, 2045



Source: El Paso MPO Destino 2045 Travel Demand Model



4.3. Safety Conditions

A crash analysis was conducted to evaluate existing safety conditions and identify deficiencies on the County’s roadway system. **Table 3** shows that the number of crashes in the County remained similar or slightly increased over the analysis years, and the majority of crashes were property damage only. Out of the total crashes from 2015 to 2017, 1.7 percent involved pedestrians and bicyclists, consistent with the statewide average of 1.6 percent. Compared to the Texas statewide average, as shown in **Table 4**, the County has a higher percentage of crashes with unknown severity and property damage only and slightly lower crash frequencies across all other severity categories.

Table 3. Number of Crashes by Severity in the County (2015 to 2017)

Year	Fatal	Serious Injury	Other Injury	Property Damage	Unknown	Total
2015	58	263	4,883	14,787	2,054	22,045
2016	78	231	5,044	15,278	2,154	22,785
2017	56	274	4,823	15,257	2,156	22,566
2015-2017	192	768	14,750	45,322	6,364	67,396

Source: TxDOT CRIS, 2019

Table 4. Crash Percentage by Severity in Texas and the County (2015 to 2017)

Crash Severity	2015 (%)		2016 (%)		2017 (%)	
	Statewide	County	Statewide	County	Statewide	County
Fatal	0.7	0.3	0.6	0.3	0.6	0.3
Serious Injury	2.8	1.2	2.7	1.0	2.6	1.2
Other Injury	31.1	22.2	30.4	22.1	28.7	21.4
Property Damage	61.3	67.1	62.4	67.1	64.4	67.6
Unknown	4.1	9.3	3.9	9.5	3.7	9.6

Source: TxDOT CRIS, 2019

To identify high-incident locations within the County, maps were created from the latitude and longitude coordinates or other location identifiers of each crash for which they were available. **Figure 12** and **Figure 13** show crash hotspots on all roadways in the County and on only County-maintained roadways, respectively. The County-wide crash heat map (**Figure 12**) shows higher concentrations of crashes within the El Paso city limits, especially along I-10, which is to be expected as the roads within the city generally carry higher volumes than the roads outside of the city. The County-maintained roadways crash heat map (**Figure 13**) shows higher concentrations of crashes along SH 20 west of Canutillo, on roadways in Fabens, on Eastlake Boulevard, and on US 62 just east of Loop 375. The scale of crash density is significantly different between the two maps, reflecting the substantially lower number of crashes within the unincorporated areas of the County.

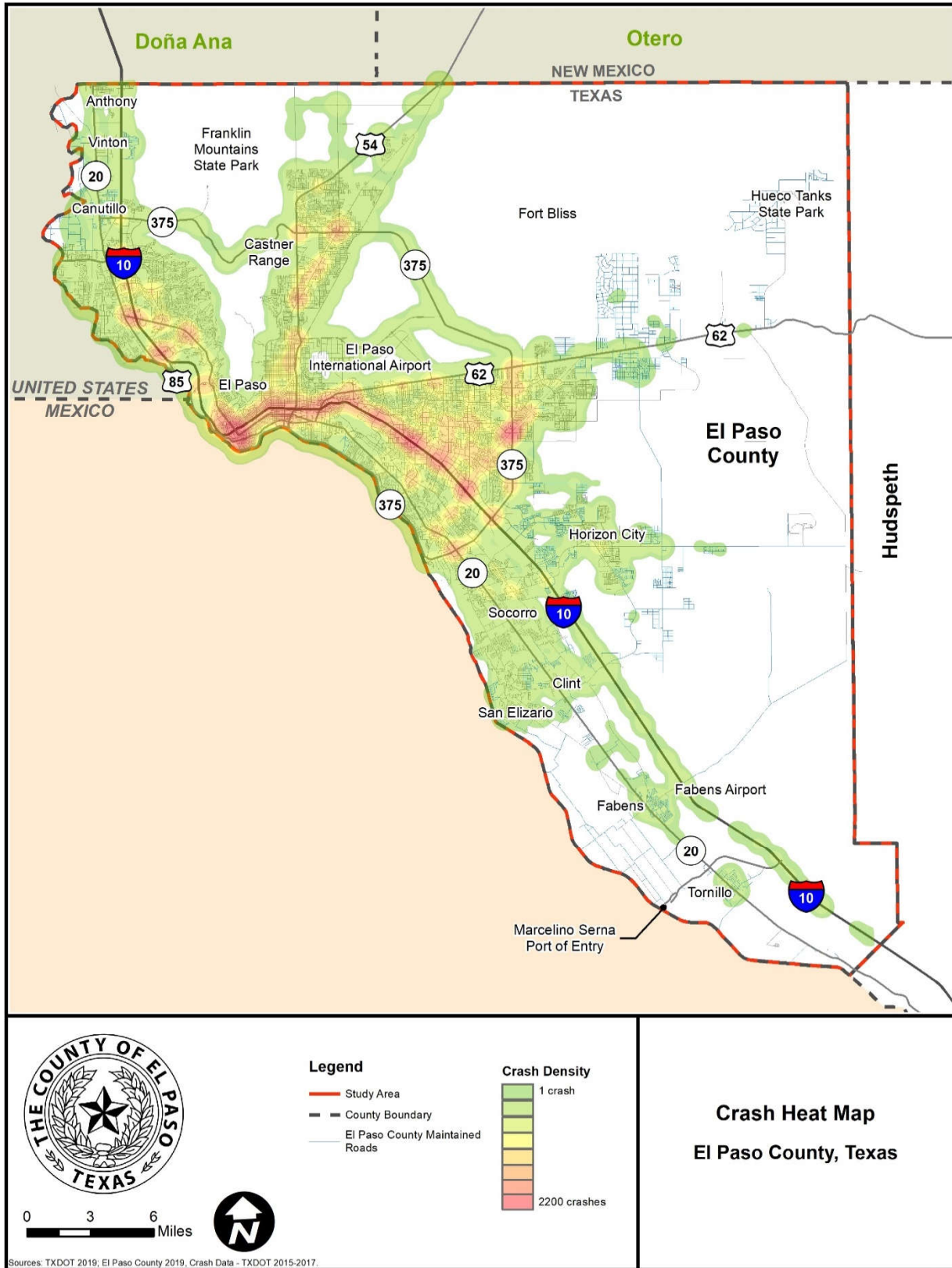


Figure 14 presents the crashes involving serious injuries and fatalities within the County, and it shows that most of the serious injuries and fatal crashes are located within the El Paso city limits. Outside of the city limits, serious injury and fatal crashes have occurred on US 62, SH 20, and I-10.

As development occurs within unincorporated County areas and the roads experience higher traffic volumes, safety concerns may increase. Safety improvements should be considered whenever projects occur on existing roadways, and best practices for safety should be incorporated into the design for new roadways. This includes separating vehicular traffic from bicyclists and pedestrians, controlling traffic speeds, minimizing conflict points, and implementing access management best practices.



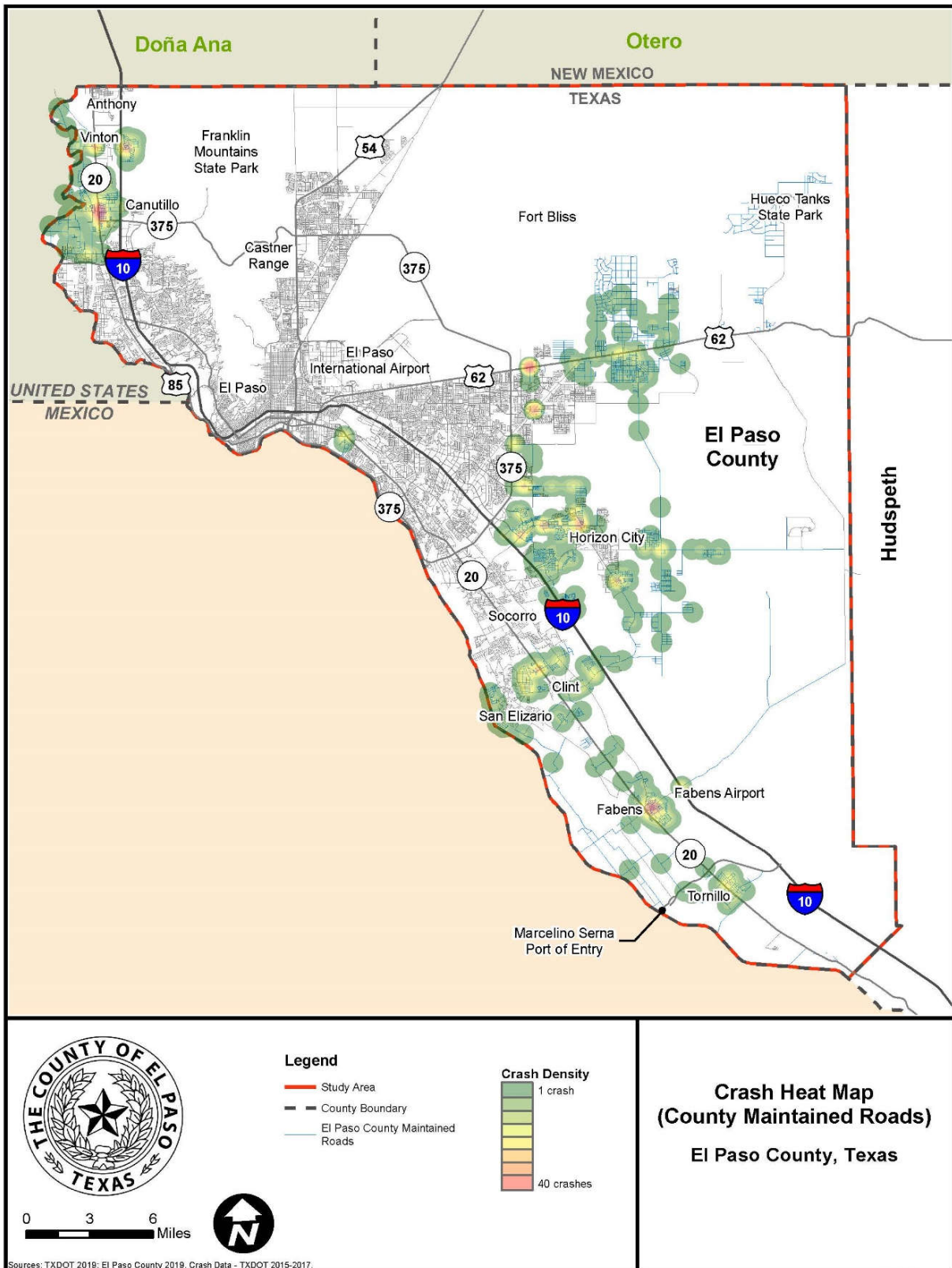
Figure 12. County Crash Heat Map, 2015 to 2017



Source: TxDOT CRIS, 2019



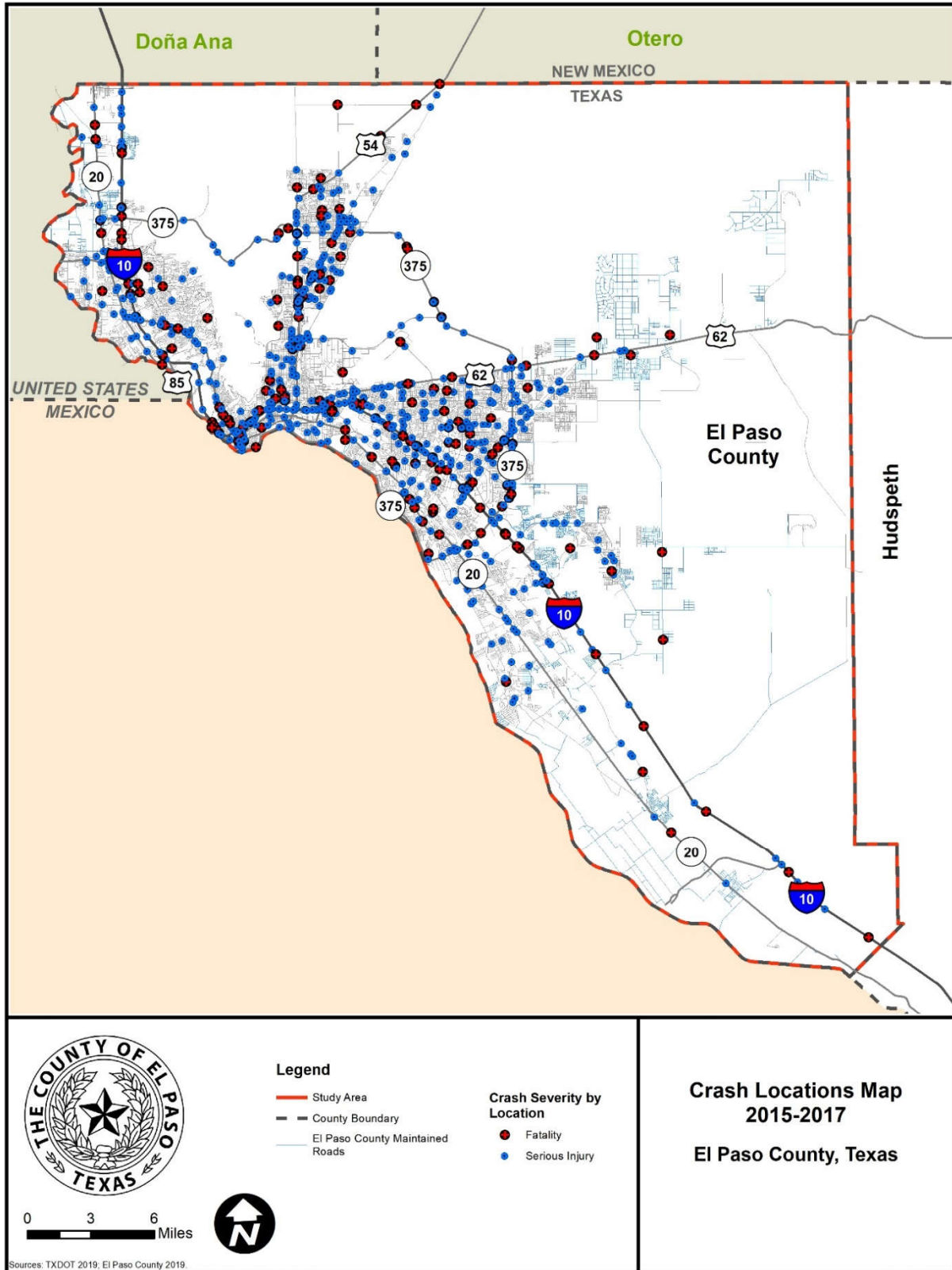
Figure 13. County-Maintained Roadways Crash Heat Map, 2015 to 2017



Source: TxDOT CRIS, 2019



Figure 14. County Fatality and Serious Injury Crash Locations



Source: TxDOT CRIS, 2019



4.4. Planned Roadway Projects in the Region

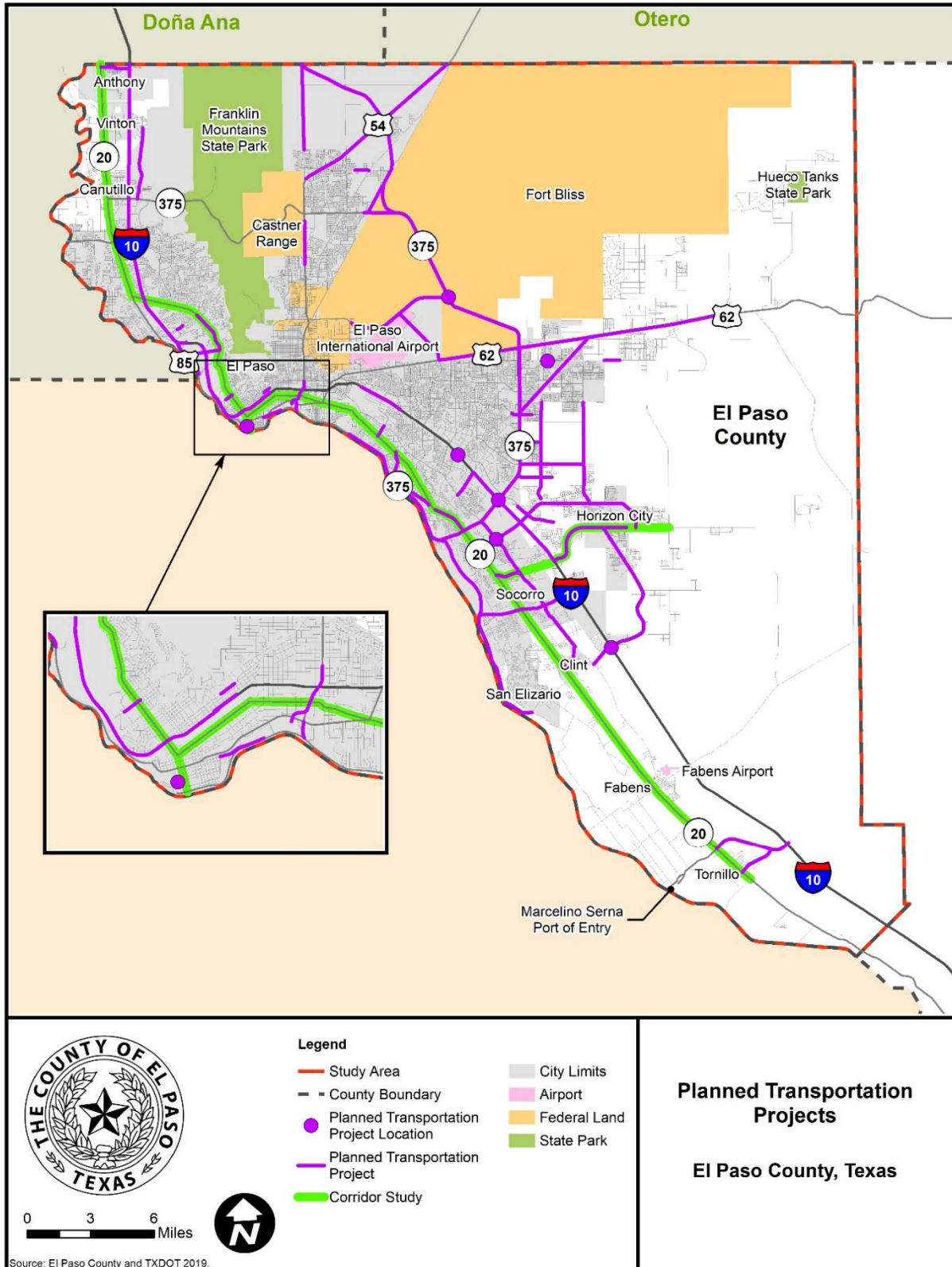
Nearly 100 roadway improvement projects are included for development between 2020 and 2045 in the El Paso MPO, TxDOT, and/or CRRMA plans. These projects are shown in **Figure 15**. Key projects in the region include improvements to I-10 and Loop 375, as well as the construction of the Borderland Expressway connection between New Mexico and El Paso. TxDOT is currently undertaking (or recently completed) five corridor studies, which discuss specific suggestions for mobility and safety improvements, including:

- ❖ Reimagine I-10
- ❖ Alameda Avenue (SH 20)
- ❖ Mesa Street (SH 20)
- ❖ Doniphan Drive (SH 20)
- ❖ Horizon Boulevard

Many of the planned roadway improvements are located within unincorporated County areas, particularly east of Loop 375. Based on discussions with local developers (see Section 5.3), a substantial portion of new development in the County is expected to occur east of Loop 375, particularly between Loop 375 and the Town of Horizon City. The planned roadway projects in this area will serve new development and provide access to destinations throughout the County. This MTP includes and expands on these planned projects within the development of the recommended roadway network.



Figure 15. Planned Roadway Projects in the County





4.5. Public Transportation

Public transportation provides a transportation alternative to single-occupancy vehicles and improves mobility for populations who choose not to or are unable to drive. There are three public transportation service providers in the County: Sun Metro (the city of El Paso’s mass transit department), El Paso County Transit, and New Mexico Department of Transportation.

Sun Metro primarily operates within the El Paso city limits but partners with El Paso County Transit to operate Route 84, which provides service from the Mission Valley Transfer Center to Socorro. Additionally, the New Mexico Department of Transportation partners with TxDOT through the County of El Paso to operate the Gold Route. This route links downtown El Paso, Anthony, Texas, and Las Cruces, New Mexico.

El Paso County Transit serves areas located within the County but outside of the El Paso city limits. El Paso County Transit has a contract with First Transit to operate five bus routes: 10, 20, 30, 40, and 50.

- ❖ Route 10 services Anthony, Vinton, and Canutillo in the northwest
- ❖ Route 20 services the Montana Vista and Homestead Meadows area
- ❖ Route 30 services Socorro, Horizon City, and Agua Dulce in the southeast
- ❖ Route 40 services Socorro, San Elizario, Fabens, and Tornillo in the southeast
- ❖ Route 50 services Socorro and San Elizario in the southeast

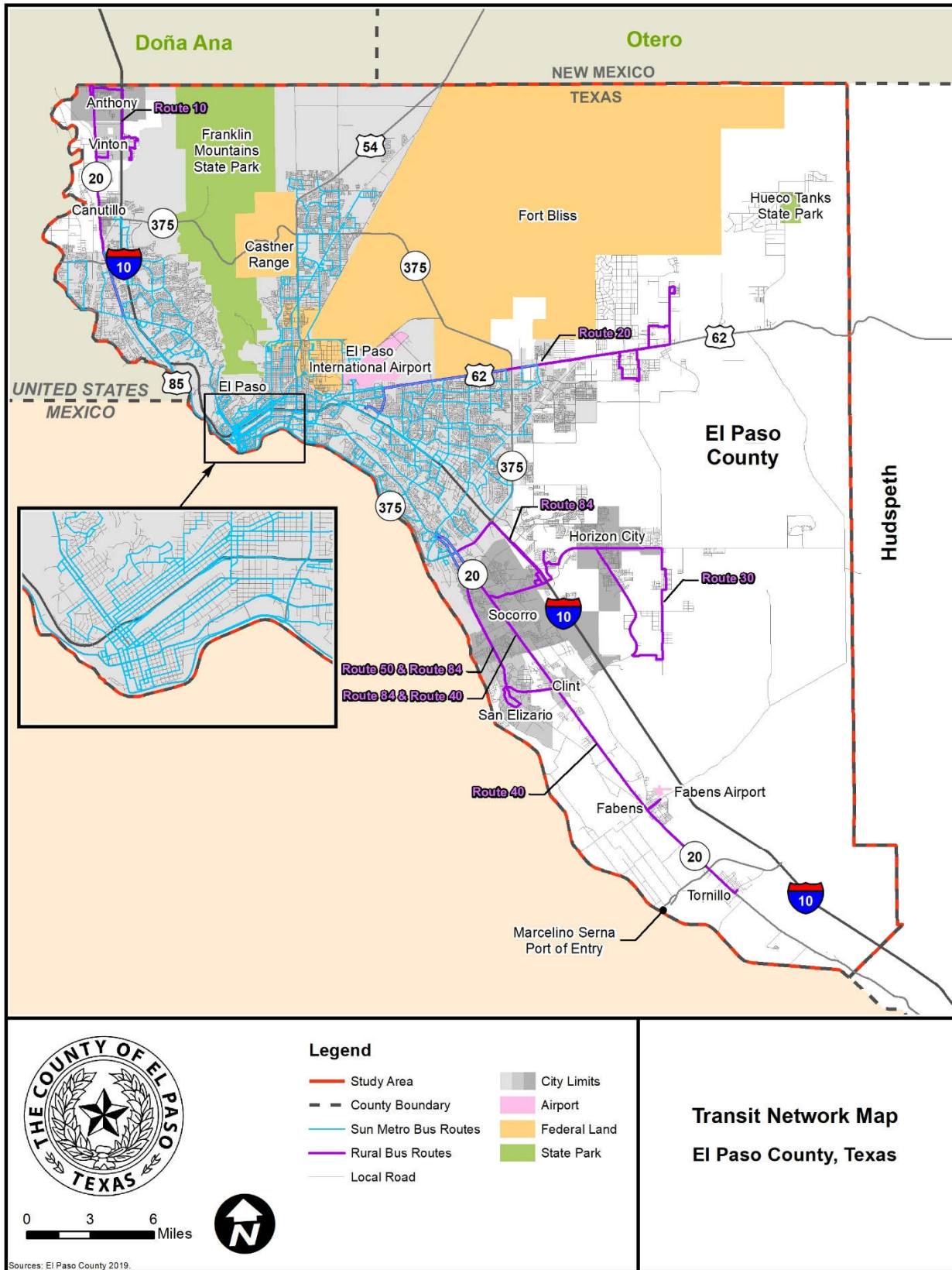
Passengers can board these routes by flagging the bus at locations along the route with adequate shoulder space for the bus to pull over safely. The County bus routes also provide connections to Sun Metro transfer stations within the El Paso city limits. **Figure 16** shows a map of the Sun Metro and El Paso County Transit routes.

“Bike on Bus” is available on all fixed-route bus routes operated by Sun Metro and El Paso County Transit for riders to transport their bicycles either in the bus or on a rack on the bus.

In addition to the public transit operations, El Paso County Transit operates Vámonos Vanpool, which provides vans and subsidies to commuters with similar origins and destinations on weekdays. El Paso County Transit contracts with Enterprise, Inc. to operate the program. The cost per individual varies based on the length of commute and number of passengers in the vanpool.



Figure 16. El Paso County Transit Network





The County, along with the Texas A&M University Transportation Institute (TTI), recently completed two public transportation research projects. One project involved developing best practices and guidelines for El Paso County Rural Public Transportation to identify potential adjustments to route alignments and stop locations. As part of this project, TTI identified service gaps, recommended operational improvements, and pinpointed potential bus stop locations. The second project developed guidelines and best practices for County staff to use in the identification of bus shelter locations that are tailored to the conditions and layout of the County. The project delivered guidelines that County staff or consultants can use as a reference for future use, recommended the most suitable locations for rural amenity enhancements (such as bus shelters), and prioritized the stop/shelter alternatives. This study also assessed the route configuration and ROW on all roadways with County bus routes to avoid shelter locations in problematic areas. Both projects began in the summer of 2019 and wrapped up in the spring of 2020.

4.6. Bicycle and Pedestrian Facilities

Bicycle and pedestrian facilities form an important part of the transportation network. These facilities often provide the first/last mile connection to transit routes and can be used by children going to school and commuters going to work. Safe, connected bicycle and pedestrian facilities can provide an attractive, sustainable alternative to single-occupancy vehicle travel.

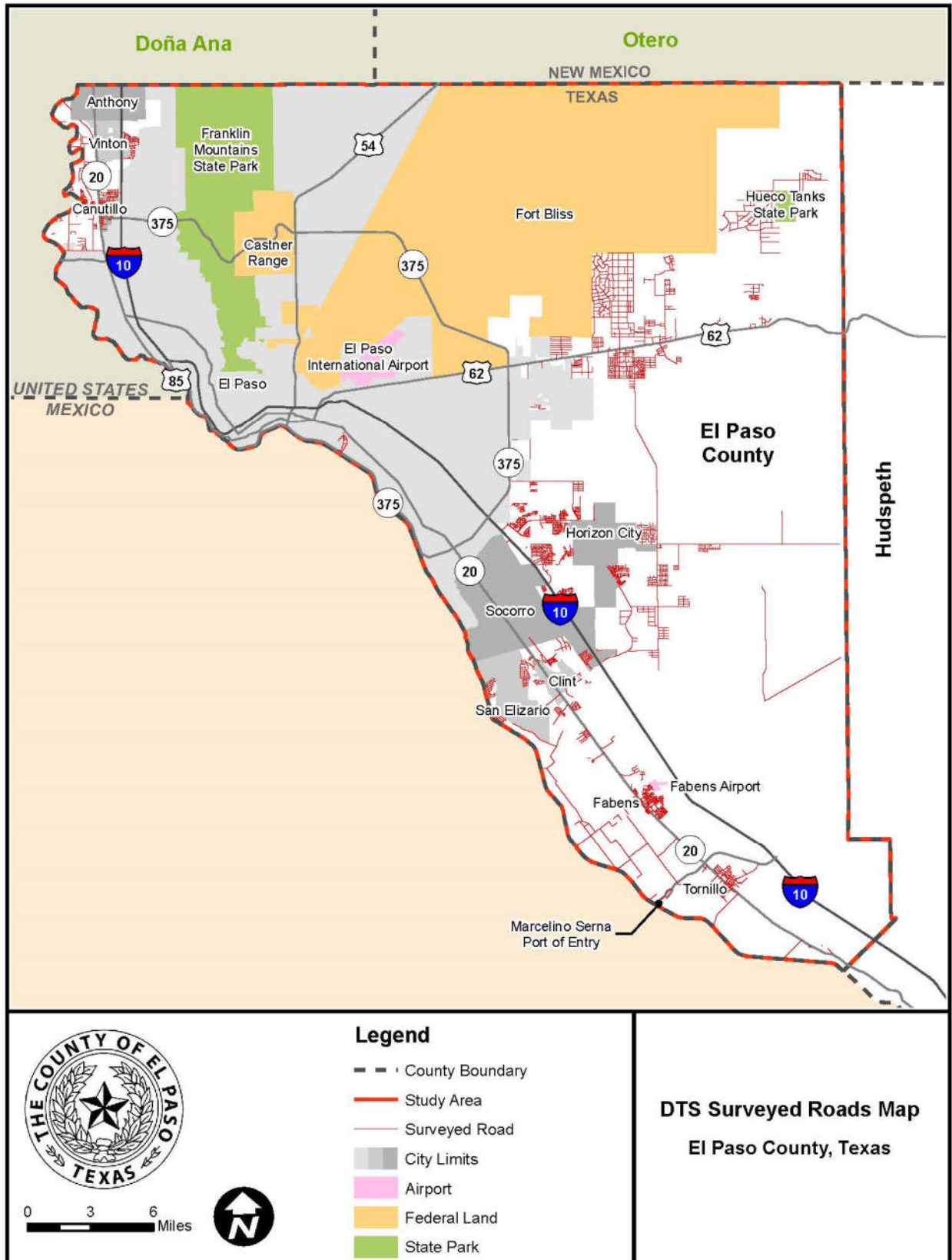
4.6.1. County Bicycle and Pedestrian Facility Analysis

The project team surveyed approximately 600 miles of County-maintained roadways to determine the extent, type, and condition of bicycle and pedestrian infrastructure (**Figure 17**). Data Transfer Solutions, LLC (DTS) used spatial image analysis software to analyze and digitize bicycle and pedestrian facilities from collected ROW imagery. The information was digitized, recorded to a database, and associated with the street section being surveyed. The facilities were then evaluated on a “good-fair-poor” scale.

Approximately 25 percent of the roads surveyed by DTS include sidewalks, adding up to approximately 147 miles of County-maintained sidewalks. More than 96 percent of these sidewalk facilities are in good condition. Several small sections of sidewalk, adding up to less than one mile, were observed to be in poor condition. These sections will be prioritized for repairs. There are fewer than five miles of bicycle lanes on DTS surveyed roads, and there is an approximately three-mile-long shared-use path located along Paseo del Este. Detailed subarea maps of the sidewalks, bicycle lanes, and shared-use path along with the Sun Metro and rural transit routes can be found in Technical Memorandum 3.



Figure 17. DTS Surveyed County Roads





4.6.2. Bicycle and Pedestrian Projects

Several bicycle and pedestrian projects within the County are intended to improve bicycle and pedestrian connectivity and mobility. Two of the most notable projects include:

- ❖ Tornillo Shared-Use Path—This County project consists of a 2.5-mile-long, 8-foot to 12-foot-wide asphalt shared-use path along O.T. Smith Road from Alameda to I-10 in the southeastern part of the County.
- ❖ Paso del Norte Trail—This approximately 60-mile-long trail will run from the New Mexico/Texas border near Anthony south along the Rio Grande River, through downtown El Paso and then southeast paralleling I-10 before terminating south of Tornillo. The alignment was determined through extensive community and agency input and is intended to maximize connectivity via existing and other proposed trails. The region the trail will traverse has been divided into five distinct districts, each one broadly defined by its unique geographical, historical, and cultural context, as well as various amenities and attractions that help define the districts. The trail is intended to provide dozens of neighborhoods and communities with access to the outdoors and linkages to community destinations (Paso Del Norte Health Foundation, 2018).

Additionally, the County was awarded funding in January 2020 through the Safe Routes to School Program to complete two projects:

- ❖ Tornillo South Sidewalks/Shared-Use Path—This project will connect residences to schools and transit by constructing 1.6 miles of sidewalks along Cobb Avenue, Florinda Drive, Linda Drive, Florella Drive, and 2nd Street in Tornillo. Additionally, the project includes construction of a shared-use path for pedestrian and bicycle use on 3rd Street for one-tenth of a mile to connect to the previously funded shared-use path along O.T. Smith Road (discussed above) (El Paso Herald-Post, 2020).
- ❖ Tornillo North Sidewalks—This project will connect neighborhoods to businesses and school campuses by constructing approximately 1.6 miles of sidewalks along Drake Street, Old Mill Drive, and Los Coyotes Drive in Tornillo. This project will also connect to a previously funded shared-use path along O.T. Smith Road (El Paso Herald-Post, 2020).



5. Stakeholder and Public Outreach

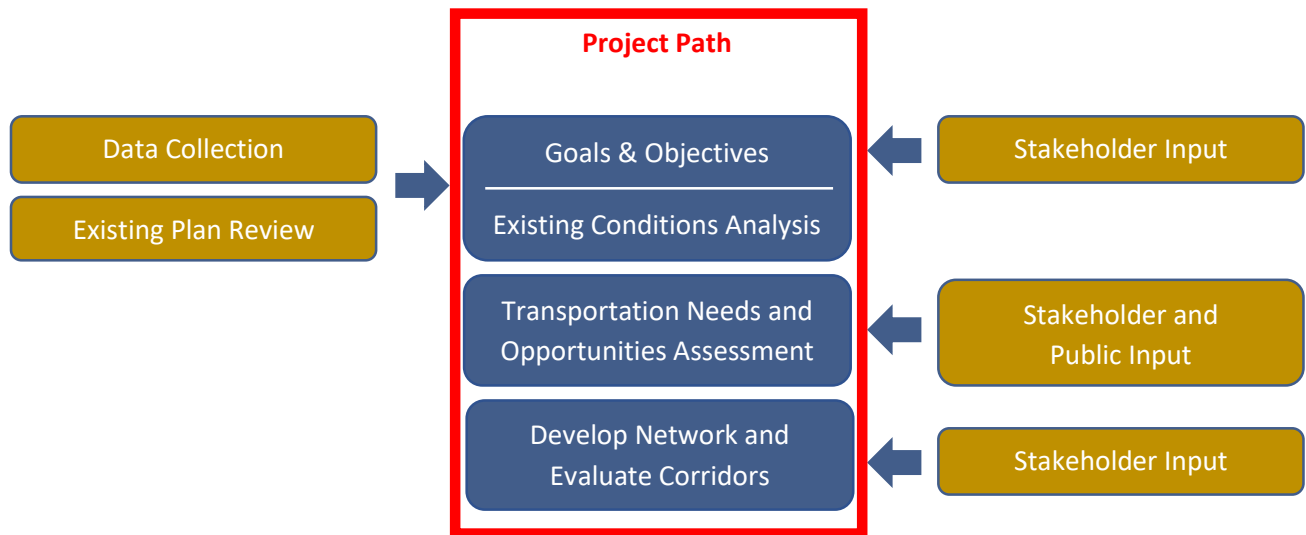
Stakeholder and citizen engagement formed an important component of the El Paso County MTP. The project team developed a multifaceted outreach process to identify key stakeholders, involve local citizens, and gather input at key points in the planning process. See Technical Memorandum 4 for more information on the outreach process.

The project team employed a three-pronged process to engage stakeholders and the public:

- ❖ **Stakeholder Working Group:** The team convened a group of local elected and municipal officials representing El Paso County, incorporated cities, transportation providers, and other agencies (see Technical Memorandum 4 for a full list). This group met three times at various key milestones to review progress and provide input heading into the next stage of project development. The recurring nature of these meetings gave participants the opportunity to see the project through from start to finish.
- ❖ **Public Meetings:** The project team held public meetings at various locations throughout the County to gather citizen input after the initial data analysis, but before the development of plan recommendations.
- ❖ **One-on-One Meetings:** In addition to the regular Stakeholder Working Group meetings, the project team would schedule one-on-one meetings with members of the working group or other interests on an as-needed basis.

The overall MTP process involved several key steps: developing goals/objectives, analyzing existing conditions, assessing needs, and developing the recommended thoroughfare network. Stakeholder and public outreach provided crucial input at various steps in the process. **Figure 18** shows the points when stakeholder and public input were incorporated.

Figure 18. El Paso County MTP Process





The first outreach stage occurred early in the process. After the project team reviewed local plans, completed preliminary analysis of regional data including population and employment trends, and developed initial goals and objectives, stakeholders were invited to provide input on the goals and overall priorities for the plan.

In the second, most crucial phase, stakeholders and citizens were invited to review the results of detailed data analysis and provide input before the development of plan recommendations.

Finally, stakeholders were invited to review the draft thoroughfare plan network and make comments before the plan was finalized. This round of outreach included more one-on-one meetings with other agencies, such as cities with their own thoroughfare plans, to identify any potential conflicting recommendations and maximize continuity.

5.1. Stakeholder Working Group Meetings

Three Stakeholder Working Group meetings were held throughout the project process, and the stakeholders were able to see the process through from start to finish. The working group meetings were held at the El Paso MPO offices at 211 N. Florence St., El Paso, TX 79901. At the start of all meetings, participants were greeted and asked to sign in. They received an agenda and other handouts as necessary. Each meeting included a presentation, group discussion, and subgroup breakout sessions. Approximately 15 to 20 stakeholders attended each meeting.

The initial Stakeholder Working Group meeting was held on Thursday, June 20, 2019. The purpose of the meeting was to introduce stakeholders to the project, discuss project scope and initial background information, and solicit input on goals, objectives, and overall plan priorities. Key comments from the session included:

- ❖ The need for improved connectivity, more options for getting into/out of various communities
- ❖ Ensuring coordination with developers/addressing suburban sprawl
- ❖ Safety issues, particularly regarding access to/from schools; participants suggested “safety” should be its own goal area
- ❖ The importance of transit and the need for transit improvements/accommodations

Participants were divided into smaller groups to review County-level maps and asked to identify problem or opportunity areas for transportation improvements. Team members assisted each group and recorded comments on the large-format maps.

The second Stakeholder Working Group meeting was held on Tuesday, October 1, 2019. At this point in the project process, the team had completed the analysis of demographics, environmental factors, transportation network performance, and transportation modes (see Technical Memorandum 2 and Technical Memorandum 3 for more information). The purpose of the meeting was to present the results of the analysis and solicit more detailed input before developing a recommended future transportation network. Three public meetings were held during the same week (see Section 5.2), and the project team recommended stakeholders attend and spread the word to others.



The group discussed evaluation criteria that would be used to prioritize corridors in the MTP for future improvements. The criteria were designed to align with the plan's goals and objectives. The project team would use the stakeholders' input to determine (1) whether the criteria developed were the correct criteria to use for evaluation, and (2) the relative importance of each criterion. Attendees were provided with a scoring sheet on which they could provide comments and rank the importance of each criterion on a scale of 1 to 5. Evaluation criteria related to safety and transit service ranked highly, while criteria related to shortening travel paths, bicycle facilities, and Fabens Airport access ranked lower. More information on the results of the scoring is included in Section 7.1 and Technical Memorandum 5.

Participants then divided into smaller subgroups to review subarea maps focused on unincorporated County areas, including the northwest, east, and southeast sections of the County. Team members assisted each group and recorded comments on the printed maps. Participants recommended improved connectivity in the northwest and southeast portions of the County, as well as a grid-type network in the area east of Loop 375.

The final Stakeholder Working Group meeting was held on Tuesday, February 18, 2020. The purpose of the meeting was to present the draft thoroughfare plan network and results of the evaluation process. Attendees were able to review the network and provide comments before the plan was finalized.

The project team provided a recap of the project process, key findings, and input received at previous Stakeholder Working Group and public meetings. The results of the plan's active transportation analysis were reviewed (more information is available in Technical Memorandum 3). The group then discussed the creation of the draft thoroughfare plan network, the roadway functional classification system, and how County roadways fit into the larger regional system.

The group divided into smaller subgroups to review the detailed subarea maps showing the network recommendations. Maps showed connecting facilities and thoroughfare plans from other local cities. Subgroups were asked to address the following questions regarding the proposed network:

- ❖ Are the right connections in place?
- ❖ Is the proposed functional classification appropriate?
- ❖ Is the priority level appropriate?
- ❖ Did we miss anything?

Participants discussed the maps within their groups and made notes of suggested revisions. These comments were incorporated into the draft network shown in Section 6 of this report.

5.2. Public Meetings

The project team held a series of three public meetings in various locations throughout the County from October 1 to October 3, 2019. Locations were selected (1) to target unincorporated areas where a majority of MTP recommendations are located, and (2) to provide easily accessible sites near major highways or thoroughfares. The public meetings were hosted jointly with a team from TTI studying County transit routes and bus shelter locations. Meeting dates, times, and locations were as follows:



Tuesday, October 1, 2019
El Paso County NW Annex
435 Vinton Road, Suite B
Vinton, TX 79821
5:00 p.m. to 7:00 p.m.

Wednesday, October 2, 2019
TxDOT El Paso District
13301 Gateway Bl West
El Paso, TX 79928
5:00 p.m. to 7:00 p.m.

Thursday, October 3, 2019
El Paso County Warehouse
1331 North Fabens Road
Fabens, TX 79838
5:00 p.m. to 7:00 p.m.

Meeting notifications were delivered to stakeholders via email, notices were posted on El Paso County social media sites, and the County printed and distributed flyers at key locations such as libraries, convenience stores, and community centers. The County’s Marketing Coordinator distributed a press release to local media outlets.

Citizens were invited to stop in at any time between 5:00 p.m. and 7:00 p.m. to review project materials, speak to project team members, and leave comments. The meetings followed an open house-style format; no formal presentation was delivered, and participants could come and go at their leisure. Upon arrival, attendees were greeted and asked to sign in. They were provided with handouts, including a comment form and the same evaluation criteria scoring worksheet used at the second Stakeholder Working Group meeting.

A total of 13 display boards were printed for the meetings, showing plan processes, goals and objectives, maps, and key details that were also shared with stakeholders during the second working group meeting. Several large-format maps were available on tables showing a detailed representation of the transportation network in the area surrounding the meeting location (maps of other County areas were available as well, if needed). Participants were encouraged to mark the maps with brightly colored markers, showing the locations of problems or suggested improvements. Project team staff were nearby to discuss issues and make sure attendees’ comments were clearly understood. These comments were incorporated into the development of network recommendations.

5.3. Additional Stakeholder Input

In addition to the established Stakeholder Working Group and public meetings, the County understood that other groups, organizations, or interested parties also should be part of the process. The project team was open to speaking to other groups on an as-needed basis throughout the project, and sometimes reached out to members of the Stakeholder Working Group when more targeted, one-on-one meetings were needed.

During the first Stakeholder Working Group meeting, participants noted the importance of the County working with the development community to understand where, when, and what types of development are planned within the upcoming years. The County and the project team met with four major El Paso developers in July 2019, to discuss the types, locations, and needs of upcoming development projects. The developers confirmed that a significant amount of future growth is likely to occur in unincorporated County areas.

The project team interacted with other agencies and key stakeholders one on one as needed to develop a responsible plan that aligns with other regional and local efforts. The team held meetings with the city



of El Paso to discuss compatibility between the City's and County's thoroughfare plans. To coordinate on bicycle and pedestrian recommendations, the team met with the group planning the Paso del Norte Trail to assess opportunities for trail connections. The project team also contacted the Town of Horizon City and TxDOT directly to discuss plan coordination.



6. Recommended Thoroughfare Plan

The goals and objectives, analysis, and stakeholder outreach discussed above led to the development of the County thoroughfare network. The network is designed to meet the County's current and future travel needs by laying out a hierarchical system of roadways and associated improvements to provide multimodal connectivity for residents and businesses.

6.1. Network Development

The proposed transportation network was developed with input from a variety of sources, including:

- ❖ Review of other regional and local plans in the area, including adjacent city thoroughfare plans (for a detailed review of other plans in the region, see Technical Memorandum 1)
- ❖ Stakeholder and public outreach (including targeted discussions with the development sector) (see Technical Memorandum 4)
- ❖ El Paso County Master Thoroughfare Plan goals and objectives (see Technical Memorandum 1)
- ❖ Key environmental features (see Technical Memorandum 2)
- ❖ Analysis of transportation patterns, current and projected traffic volumes, and levels of service (see Technical Memorandum 3)
- ❖ Analysis of other transportation modes, including bicycle and pedestrian, transit, and rail (see Technical Memorandum 3)

The MTP is designed to serve as a guide for future investments in the roadway network, including projects funded by the public as well as private sectors. The MTP establishes the structural elements of the transportation network and designates key connections, providing a framework for future growth. It does not, however, attempt to define the configuration of local and neighborhood streets, which will be designed and reviewed as part of the land development process. To the maximum extent feasible, the MTP network maintains the alignments of the dirt roads and "paper plats" in the eastern portions of the County.

The primary components of a thoroughfare plan include the thoroughfare network; the functional classification system; and typical roadway elements and cross sections by functional class. The County's thoroughfare network maps are included as Figure 19 to Figure 23. The roadways are color coded by functional classification, which is discussed further in Section 6.2. These exhibits focus on the areas of the County that are outside of incorporated cities. The County's MTP was developed to complement city thoroughfare plans, TxDOT plans, and active transportation plans to create an interconnected regional transportation system.

In the northwest portion of the County (**Figure 19**), the focus was on improving east/west connectivity while maintaining consistency with adjacent city roadways (cities of El Paso, Vinton, Anthony). A lack of continuous roadways connecting to major north/south arteries, such as I-10 and Doniphan Drive (SH 20), leads to a projected increase in congestion (see Technical Memorandum 3). Proposed extensions of roadways, such as Los Mochis Drive, would provide additional improved connectivity; however, creating



additional crossings over the Rio Grande River and adjacent railway corridors would require extensive environmental review, coordination, and permitting processes.

In the Montana Vista/Homestead Meadows area (**Figure 20**), the proposed network connects and extends several City of El Paso roadways, and creates an interconnected network north and south of Montana Avenue. Farther south (**Figure 21**), the proposed thoroughfare network creates a roadway hierarchy in a grid-type network. Arterial roadways—namely, Darrington Road, John Hayes Street, Pellicano Drive, Eastlake Boulevard, Rojas Drive, and Ascencion Street—form the backbone of the network, while major and minor collectors provide shorter-distance connections. Roadways were designed to connect/complement thoroughfare networks in the city of El Paso, Town of Horizon City, and city of Socorro.

Near the cities of Socorro, Clint, San Elizario, and southern Horizon City (**Figure 22**), the MTP seeks to maximize connectivity and cohesion with other local transportation networks. TxDOT's Reimagine I-10 Project proposes a new interchange roughly halfway between Horizon Boulevard and Darrington Road, which would provide enhanced connectivity across the highway.

The portion of El Paso County between I-10 and the United States/Mexico border includes corridors running parallel to I-10—namely, Alameda Avenue (SH 20), Socorro Road, and North Loop Drive. This area lacks consistent cross-connectivity linking these corridors. In 2015, TxDOT completed the Border Highway East Planning and Environmental Linkages Study, a study of a potential new corridor between I-10 and the United States/Mexico border. This project included several conceptual southwest/northeast connections. These potential new connections are included in the network maps (**Figure 22** and **Figure 23**) and were incorporated into the development of the El Paso County MTP recommended network. The exact alignment and functional classification of these corridors would need to be determined in more detail at a later date. No timeline or funding has been established for development of these corridors.

The Horizon City and Socorro thoroughfare plan networks are included within the County MTP's network maps (**Figure 21** and **Figure 22**) to show how the city and County's proposed networks connect. **The City of El Paso also has a thoroughfare plan that encompasses not only roadways within the city limits but within portions of the city's extraterritorial jurisdiction (ETJ) and unincorporated area as well. Due to the extensive nature of the city's thoroughfare network, it was not included in the County's MTP maps; however, development within the ETJ is subject to the requirements of the city's thoroughfare plan, and coordination will be required between city and County planners and engineers. The City of El Paso is currently in the process of updating its thoroughfare plan.**



Figure 19. Master Thoroughfare Plan Network—Subarea 1

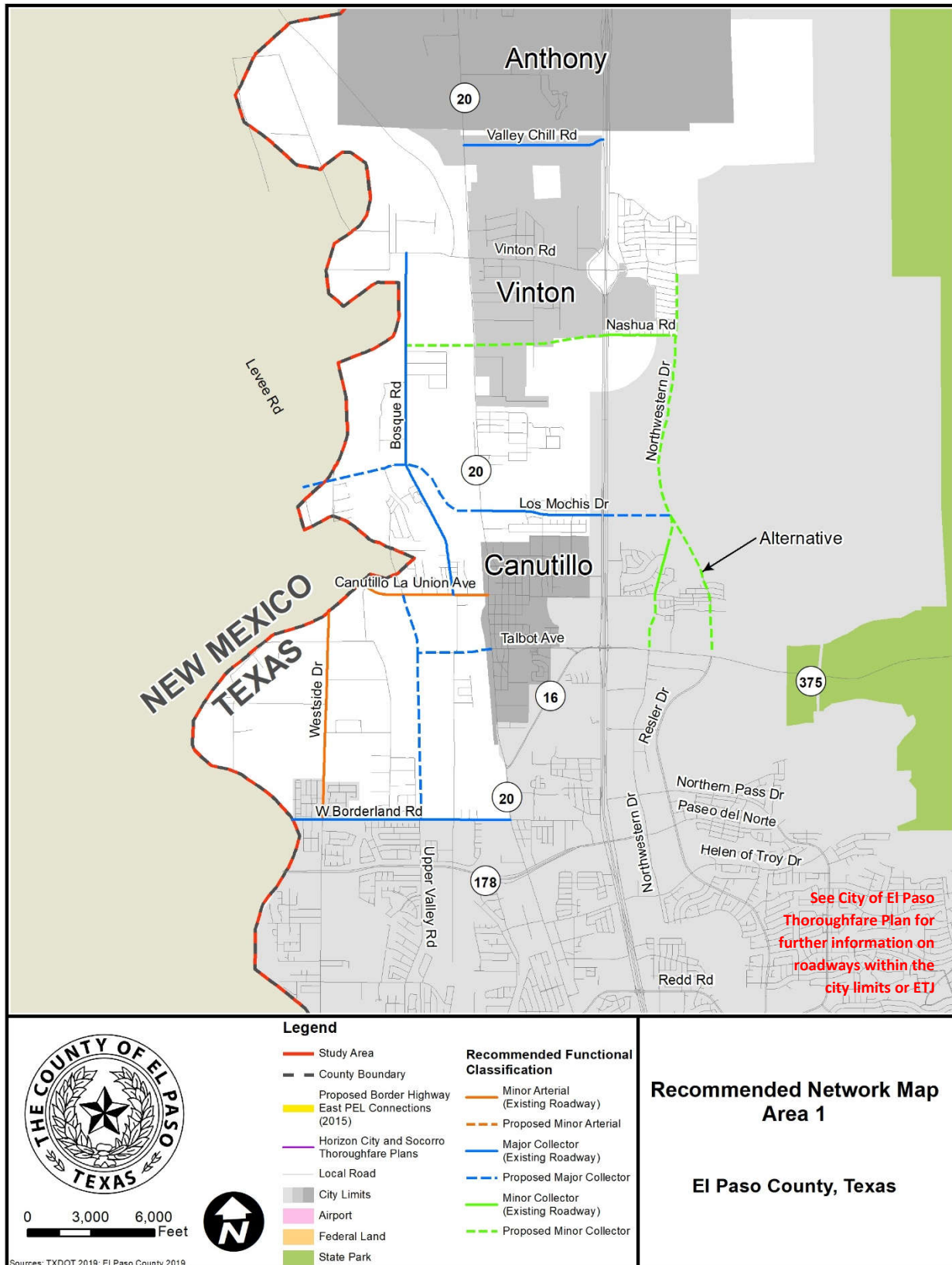




Figure 20. Master Thoroughfare Plan Network—Subarea 2

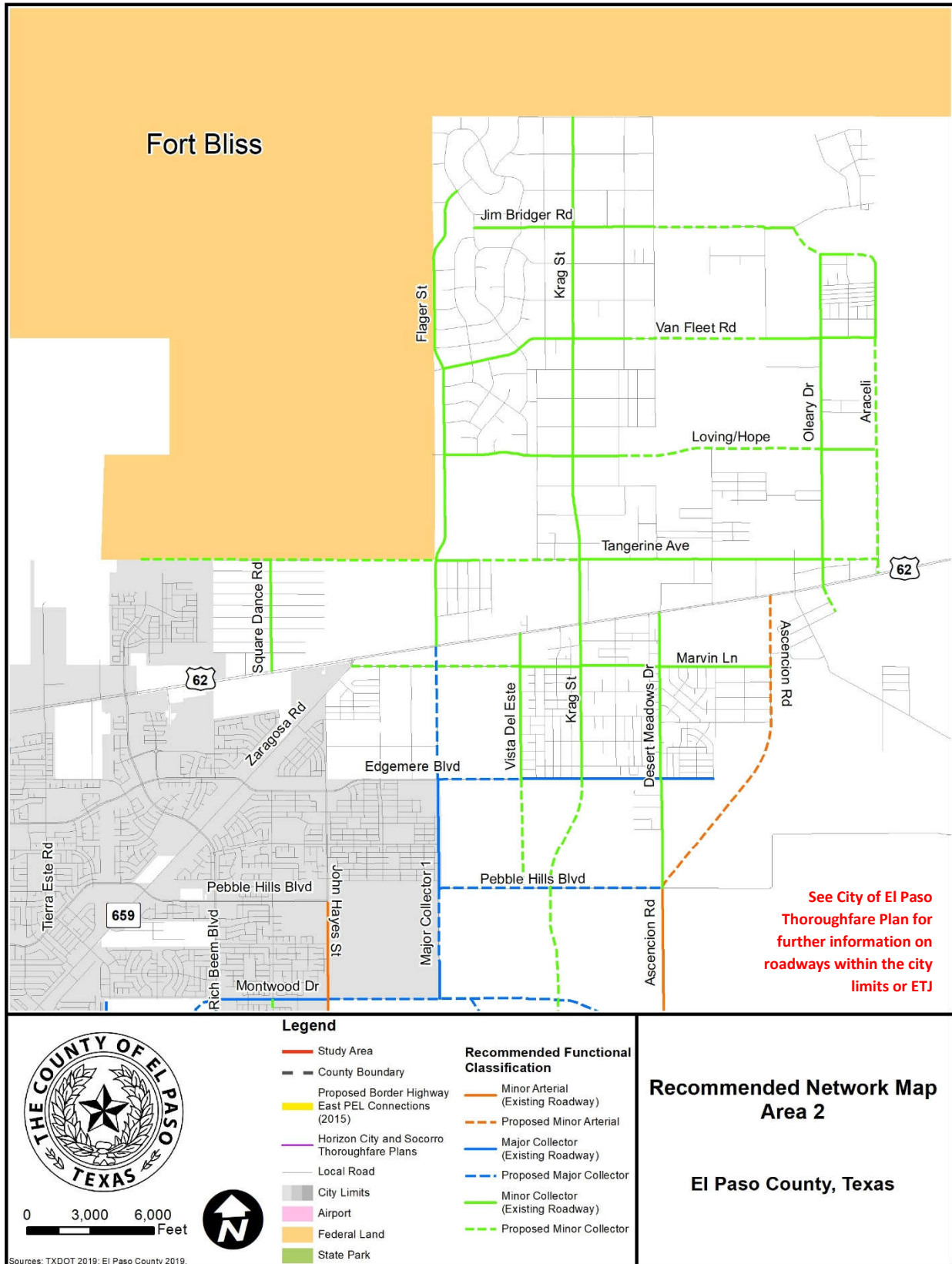




Figure 21. Master Thoroughfare Plan Network—Subarea 3

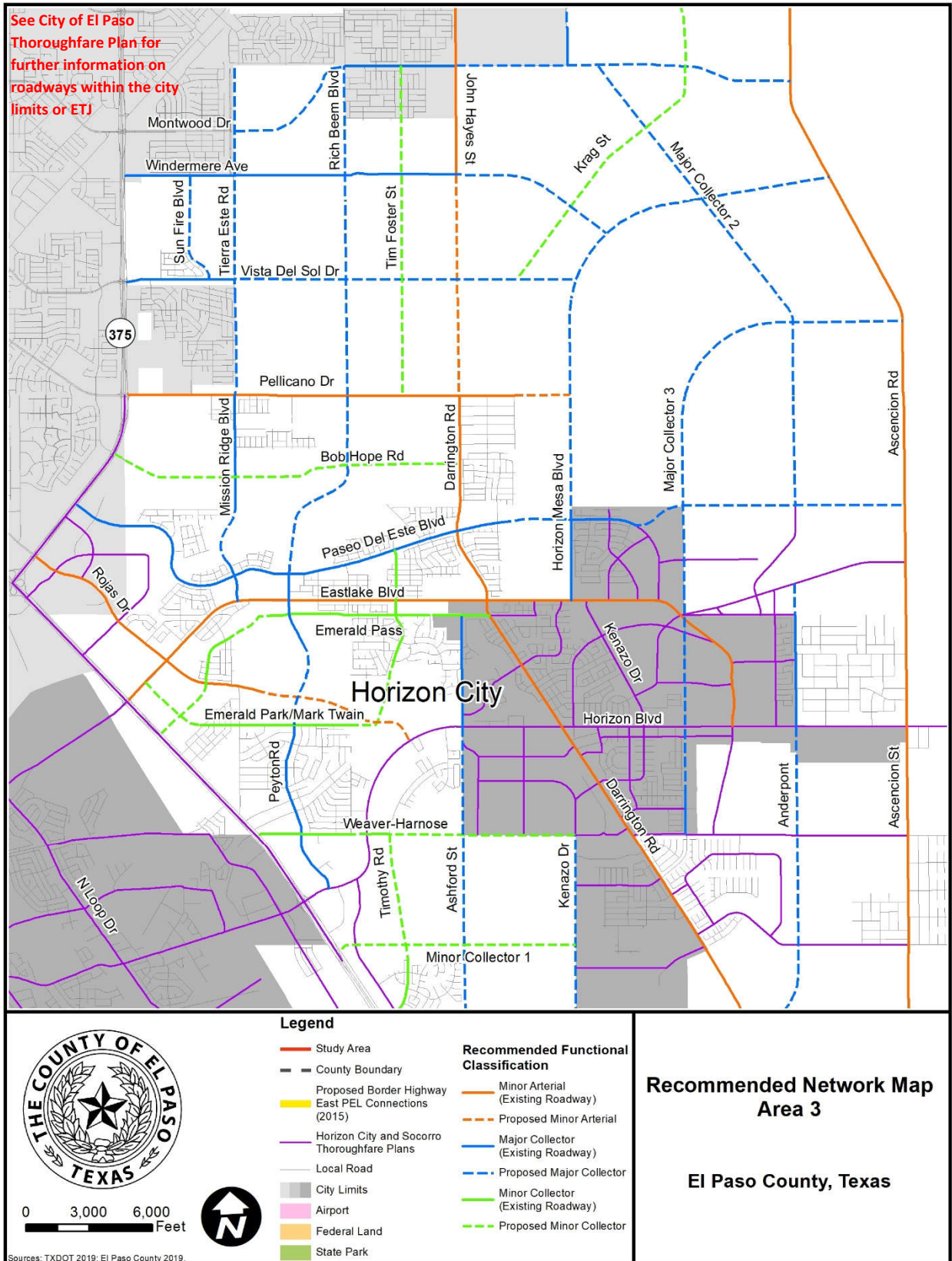
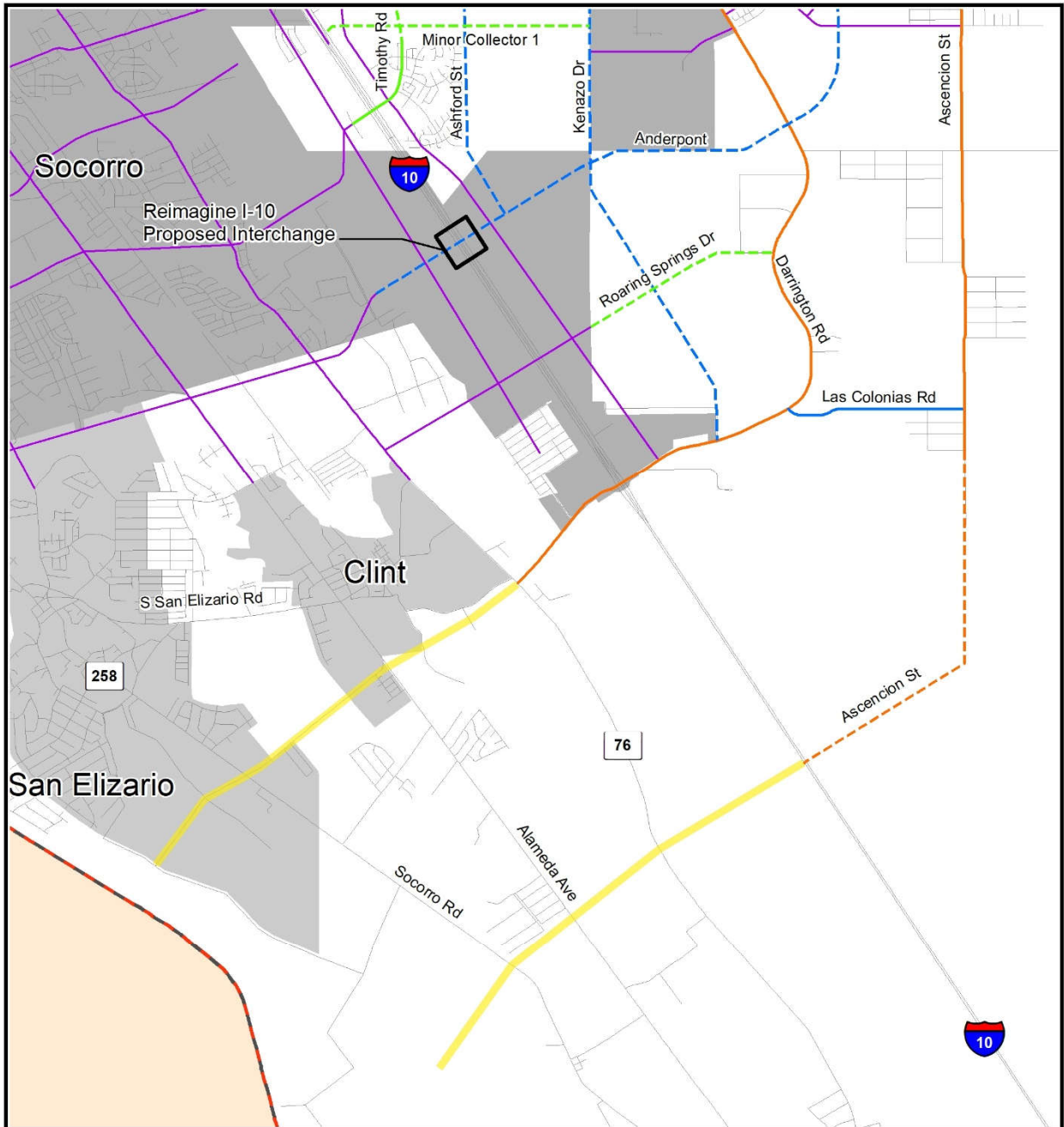




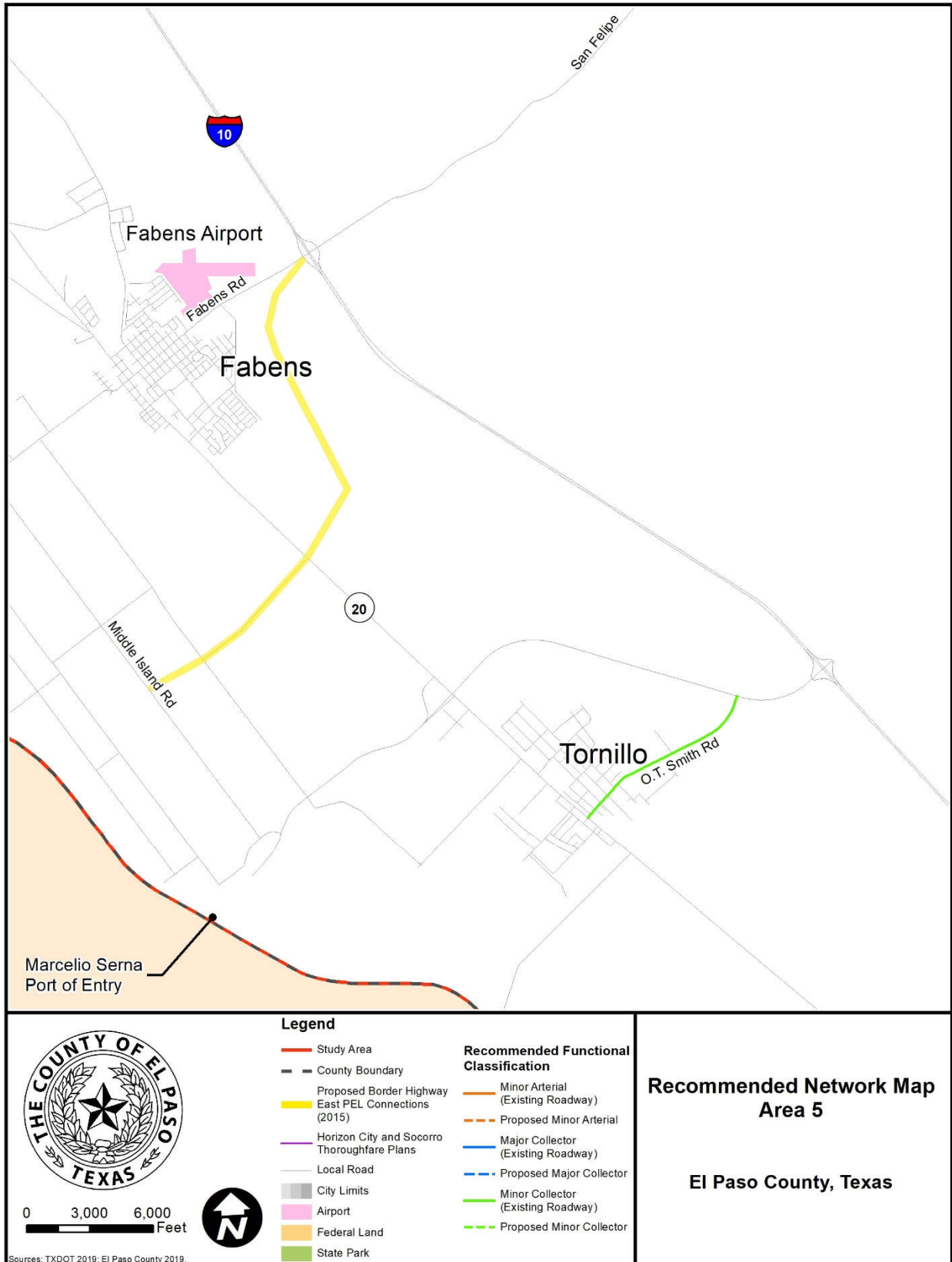
Figure 22. Master Thoroughfare Plan Network—Subarea 4



	Legend		<p>Recommended Functional Classification</p> <ul style="list-style-type: none"> — Minor Arterial (Existing Roadway) — Proposed Minor Arterial — Major Collector (Existing Roadway) — Proposed Major Collector — Minor Collector (Existing Roadway) — Proposed Minor Collector
	<ul style="list-style-type: none"> Study Area County Boundary Proposed Border Highway East PEL Connections (2015) Horizon City and Socorro Thoroughfare Plans Local Road City Limits Airport Federal Land State Park 	<p>Recommended Network Map Area 4</p> <p>El Paso County, Texas</p>	



Figure 23. Master Thoroughfare Plan Network—Subarea 5





6.2. El Paso County Functional Classifications

The recommended thoroughfare plan classifies the existing and planned roadways within the County’s jurisdiction by their intended network roles, access to adjacent land uses, and context within the surrounding areas. The plan also provides conceptual roadway standards by functional classification for use in the planning and construction of future roadways.

6.2.1. MTP Functional Classifications

The functional classifications for El Paso County roadways were developed in accordance with Federal Highway Administration standardized classifications, which are also used by TxDOT, the El Paso MPO, and other local municipalities. The overall hierarchy of functional classification relates to a the distance of travel being served, and the roadway’s role in the transportation network, from providing access directly to residences to delivering mobility for hundreds of thousands of vehicles each day. **Table 5** shows the broader range of roadway classifications used by local, state, and federal authorities.

Table 5. Roadway Functional Classifications

Functional Classification	Objectives
Interstate	Principal arterial designated as part of the Interstate system
Other Freeway/Expressway	Non-interstate controlled-access facility
Principal Arterial	Principal arterial without control of access (e.g., Montana Avenue, Horizon Boulevard)
Minor Arterial	Links cities and towns; provides service to corridors with greater trip distance and travel density
Major Collector	Provides service to trip generators not served by higher systems; links places with towns or roads of higher classification
Minor Collector	Collects traffic from local roads; provides service to smaller communities
Local Street	Provides access primarily to adjacent land; serves relatively short-distance trips

Classifications for roadways included in the County’s MTP are proposed to fall into the categories of Minor Arterial, Major Collector, and Minor Collector. These classifications are consistent with current TxDOT Statewide Planning Maps and El Paso MPO designations. In some cases, roadways may change functional classifications throughout their extent, such as those proposed to link to City of El Paso roadways that may have higher traffic volumes nearer the central city area. It is possible for roadways to change functional classifications over time, as development progresses and volumes increase. As described above, the MTP is intended to lay out the main structural network; it does not include roadways in the Local classification.



6.2.2. MTP Typical Cross Sections by Function Classification

For each of the functional classes defined in the MTP, typical cross sections were developed to use in the planning and conceptual engineering of roadways as they are developed, improved, or expanded. The following typical cross sections (see **Figure 24** to Error! Reference source not found.) are intended as conceptual guides for the planning and engineering process. Roadway design is not a “one size fits all” process, and these cross sections are not intended to be strict directives with no room for variation. Each functional classification contains two alternatives based on adjacent land uses and types/volumes of travel. These cross sections may be combined or adjusted during the design process to best fit local and regional needs.

Each cross section includes key elements of vehicle lanes and bicycle/pedestrian facilities. The higher functional classifications include larger ROW widths and more travel options. The urbanized minor arterial cross section, for example, includes both a shared-use path as well as a buffered bike lane, but depending on context, adjacent land uses, and proximity to other infrastructure, both options may not be needed.

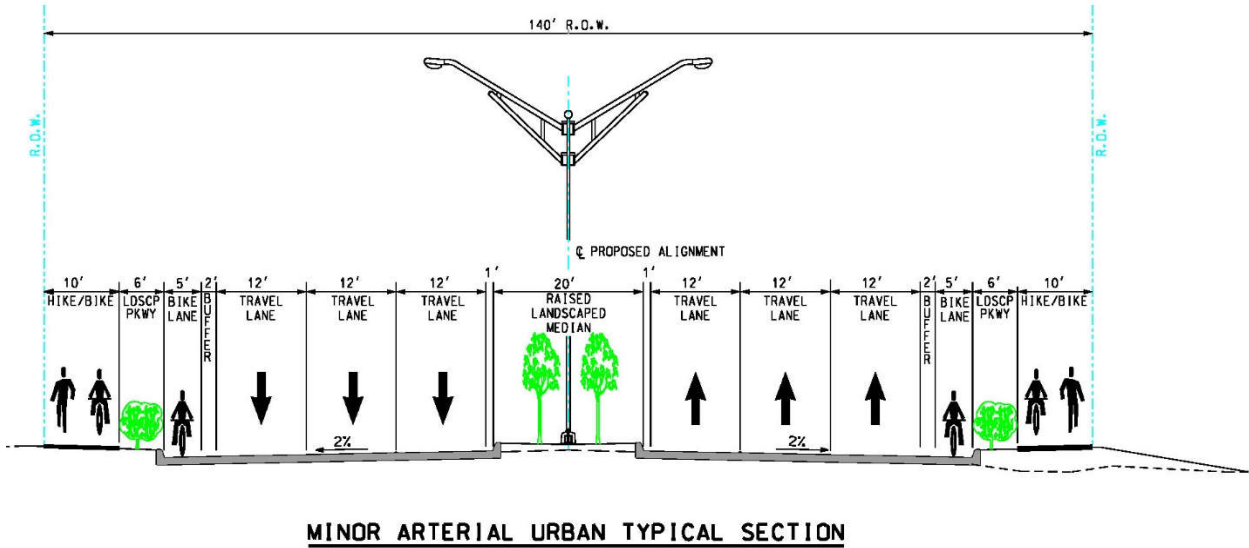
Variations in roadway design should take into account:

- ❖ **Volume and speed of travel.** Roadways at a higher functional classification, which serve longer-distance trips, typically have higher design speeds and overall volumes of traffic. Projected traffic volumes can help determine the number of vehicle lanes needed. Active transportation accommodations on high-volume roadways should consider safety during the design phase, with the addition of buffered bike lanes to better protect cyclists from faster-moving traffic, or shared-use paths which fully separate cyclists and pedestrians from vehicular traffic.
- ❖ **Intensity of current and planned future development (e.g. urban vs. rural).** Urbanized environments have different needs for access management, active transportation accommodations, landscaping, and other factors compared with rural environments. These factors are incorporated into the cross sections below.
- ❖ **Adjacent land uses (e.g. commercial v. residential).** Residential and mixed-use environments may have different needs for sidewalks, shared-use paths, etc. compared with strictly commercial and/or industrial areas.
- ❖ **Regional bicycle and pedestrian network.** For roadways near or intersecting other established or planned active transportation pathways such as the Paso Del Norte Trail, shared-use paths along major corridors, or other trailways, the design team should consider connectivity and design compatibility.

Specific engineering requirements and design guidelines for implementation of roadways are contained in the County subdivision regulations and other capital improvement program guidelines. The engineering and design of specific facilities must be carried out in collaboration with and under the review of the County Planning and Development Department.



Figure 24. Minor Arterial – Urban



Note: Minor Arterial design is appropriate for Major Arterial functional class at such time as that classification becomes relevant.

Figure 25. Minor Arterial – Rural

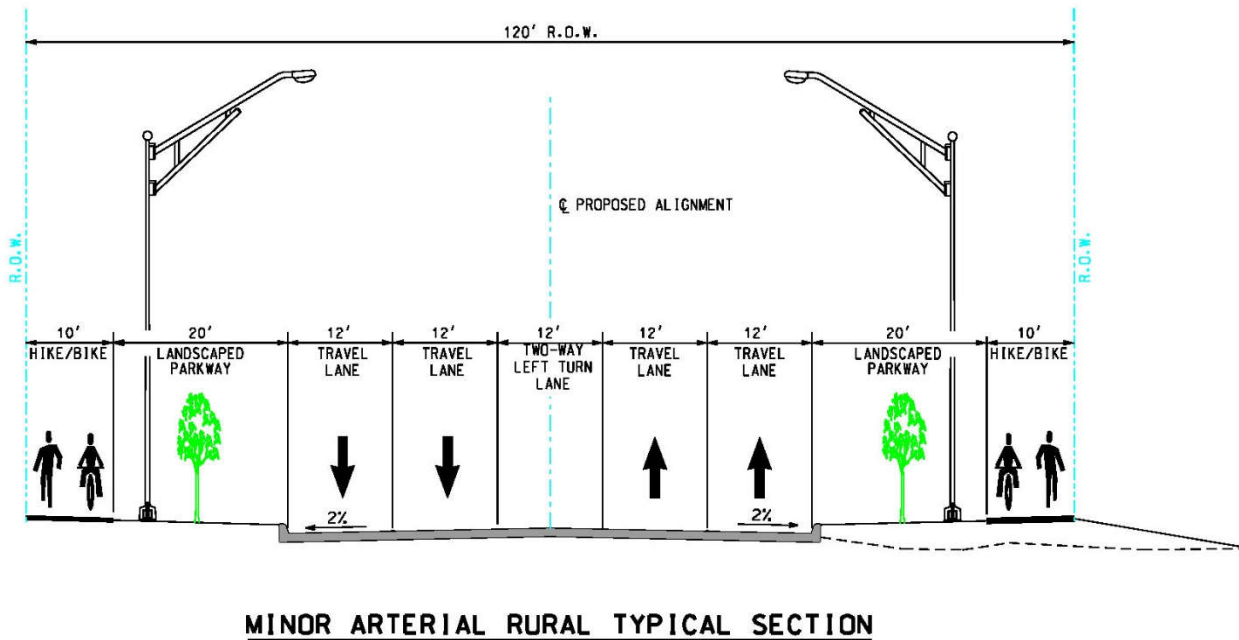




Figure 26. Major Collector

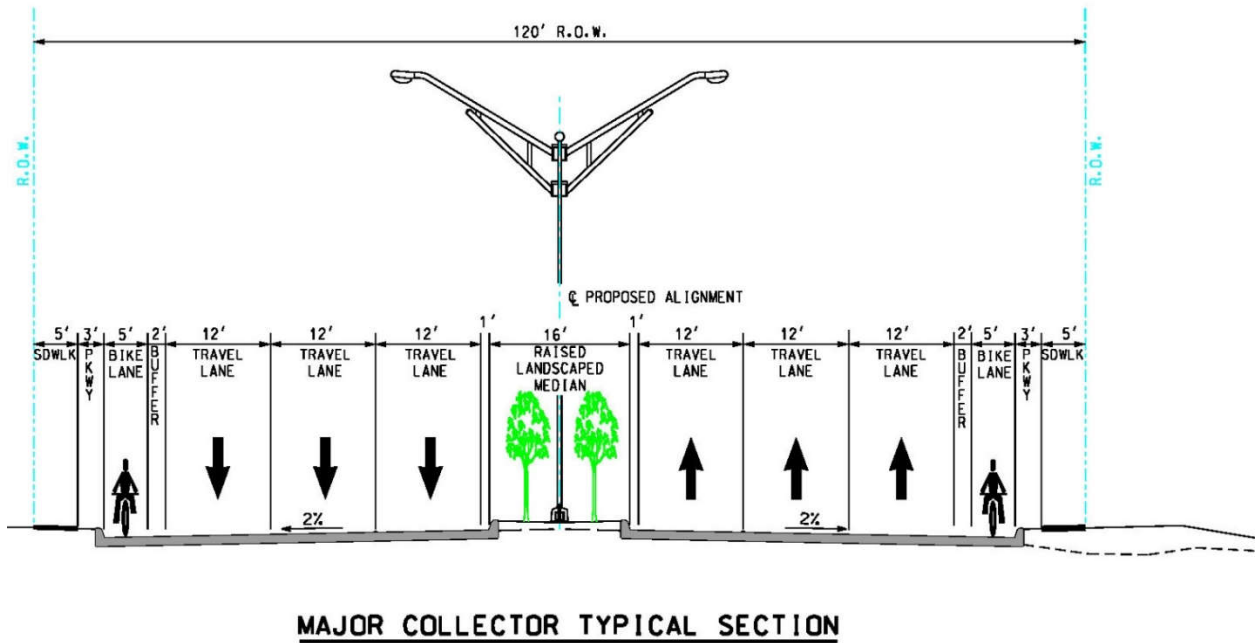


Figure 27. Minor Collector – Urban

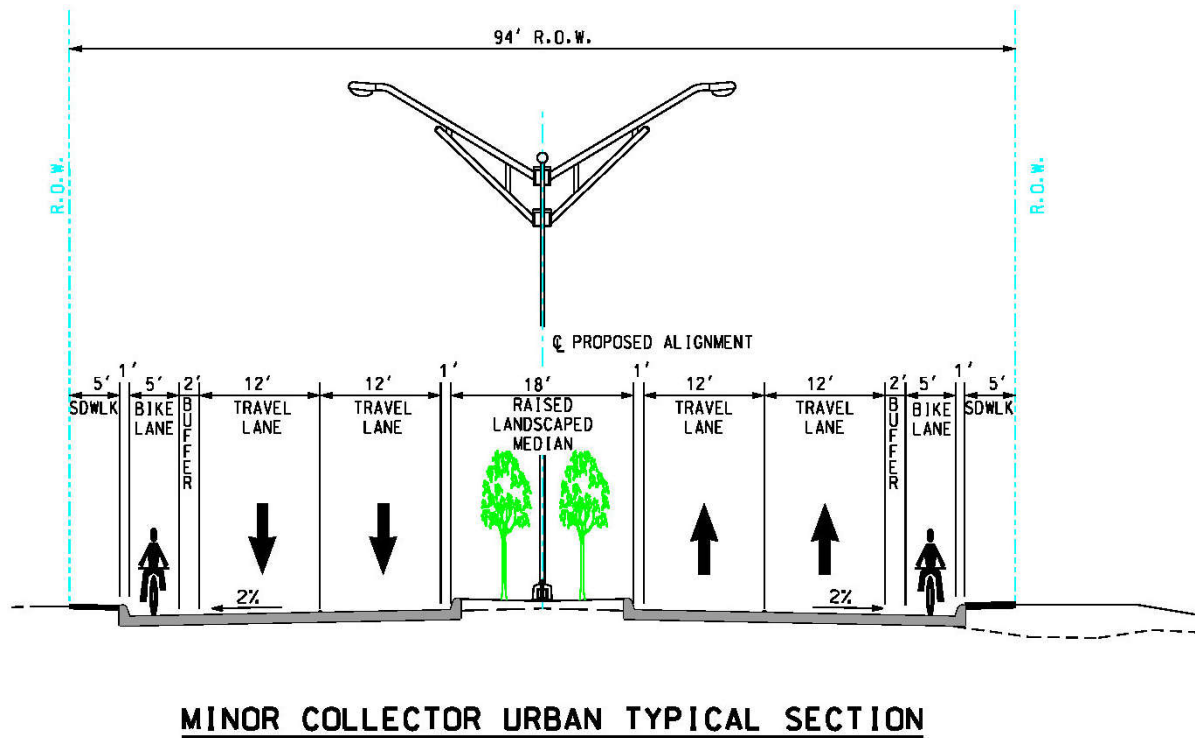
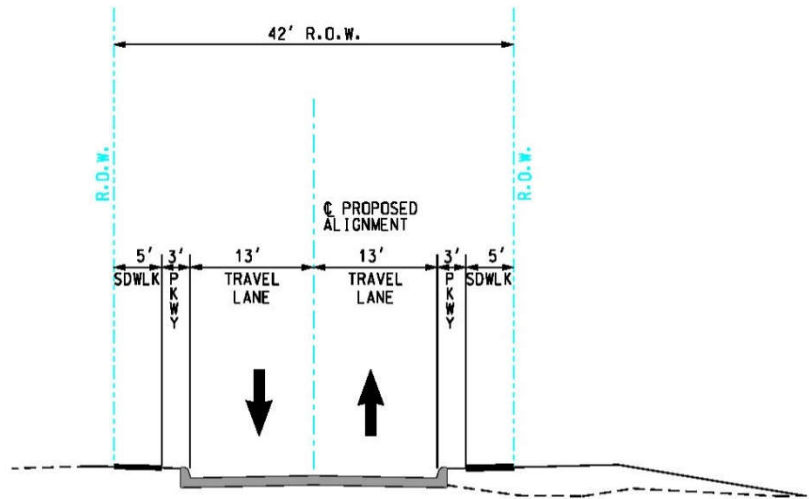




Figure 28. Minor Collector – Rural



MINOR COLLECTOR RURAL TYPICAL SECTION

Note: No Parking signs may be needed. Driveways in narrow parkways may reduce drainage street-carrying capacity.



7. Corridor Evaluation Process

7.1. Evaluation Criteria

The project team developed a series of criteria to evaluate and prioritize transportation improvements within the MTP. The evaluation criteria were developed to link directly to the goals and objectives (see Technical Memorandum 5 for more information). Each criterion is linked directly to one of the MTP’s key goal areas:

- ❖ Mobility/Accessibility
- ❖ Safety
- ❖ Sustainability
- ❖ Travel Choice
- ❖ Economic Vitality
- ❖ Funding

An initial set of evaluation criteria was presented to stakeholders at the Stakeholder Working Group meeting on October 1, 2019, and the public meetings on October 1, 2, and 3, 2019 (see Section 5 and Technical Memorandum 4 for more information). At the Stakeholder Working Group and public meetings, attendees were provided a worksheet and asked to weigh the importance of each criterion on a scale of 1 to 5, where 1 was the lowest importance and 5 was the highest importance. This input was used to refine the evaluation criteria and assign appropriate weighting to each criterion. **Table 6** shows the criteria and weightings that were ultimately used to evaluate the relative importance of improvements to County corridors.

Table 6. Evaluation Criteria

Goal	Objectives	Weighting
Mobility/Accessibility	Provides a new connection (new roadway or new connection between major corridors)	Neutral
	Improves a corridor with a projected 2045 level of service of D or below	Neutral
Mobility/Accessibility and Sustainability	Shortens a travel path between key origins and destinations or provides an alternative to major thoroughfares or congested roadways	-25%
Safety	Improves a corridor with a history of crashes	+25%
	Provides safety improvements within the vicinity (e.g., one-half mile) of a school	Neutral
Sustainability and Travel Choice	Provides an important bicycle or pedestrian linkage	Neutral
	Improves a current or planned future transit corridor	+25%



Goal	Objectives	Weighting
Economic Vitality	Serves a current or planned activity center (residential, commercial, and/or industrial)	Neutral
	Improves a corridor with a large volume of freight traffic	Neutral
	Provides or improves a connection to border crossing facilities	Neutral
	Provides or improves a connection to the Fabens Airport	-50%
Funding		N/A

7.2. Application of Evaluation Criteria

The project team used the evaluation criteria to score each corridor included in the MTP network shown in Section 6.1. The evaluation applies to corridors within unincorporated County areas and reflects the relative importance of improvements to each corridor in achieving the MTP’s established goals and objectives. The results of this evaluation process are not intended as an exact priority list for future County transportation projects. Individual projects intended for these corridors would require further evaluation, and would require consideration of funding availability/partnerships, adjacent development, and other factors.

Application of the evaluation criteria resulted in all the corridors in the MTP receiving either a high-, medium-, or low-priority ranking. High-priority corridors were defined as those scoring 5 points or higher. Medium-priority corridors scored between 2 points and 5 points, while low-priority corridors scored 2 points or less. Two TxDOT corridors that play key roles in unincorporated County areas were also scored, in order to understand the relative importance of these corridors within the region. A detailed scoring breakdown of each corridor is included in Technical Memorandum 5.

Figure 29 to Figure 33, below, show subarea maps of the prioritized corridors. When viewed geographically, the maps show corridors near existing developed areas generally ranking higher than corridors in undeveloped areas. This is consistent with the logic of the criteria, which includes topics that largely apply to existing corridors, such as improving roads with a history of safety issues, providing improvements near schools, etc. Corridors in the northwest section of the County also ranked relatively highly, particularly new east/west connections. This ranking reflects the projected traffic congestion on east/west linkages in this area and the need for improved multimodal connectivity.

The highest-priority County corridors include:

- ❖ Darrington Road (Pellicano Drive to I-10)
- ❖ Ascencion Street
- ❖ Borderland Road
- ❖ Los Mochis Drive



Improvements to Darrington Road are planned or underway from Pellicano Drive south to Eastlake Boulevard (the border of the Town of Horizon City); throughout Horizon City, Darrington Road is a four-lane facility with sidewalks and a grassy median. At the southern border of Horizon City, however, Darrington Road transitions to a two-lane roadway with no curbs, lighting, or other improvements.

Similarly, Ascencion Street is a rural two-lane roadway running north/south through the eastern portion of the County. This MTP envisions Ascencion Street playing a larger role in mobility as the County grows, providing a key link between major roadways, including Montana Avenue and I-10. The future network maps continue Ascencion Street south to connect with I-10; this improvement could feasibly occur when frontage roads are extended farther southeast along I-10, a project included in TxDOT's Reimagine I-10 Project.

Roadways such as Borderland Road and Los Mochis Drive in northwest El Paso County scored highly due to the lack of east/west connectivity in the area, and higher levels of projected future congestion on existing links. These roadways form key parts of an expanded network in the area that would address connectivity problems. Los Mochis Drive is proposed to provide a new crossing over the Rio Grande River and link up with SH 28, which connects Texas and New Mexico. Completion of new river crossings will require extensive coordination with local, state, and federal authorities, as well as the railroads.

Additionally, there are two major TxDOT roadways in the County that scored very highly: Fabens Road (this corridor had the overall highest score, by far) and Canutillo-La Union Avenue/FM 259. These roadways play important roles in collecting and distributing travelers in unincorporated areas of the County. Collaboration between TxDOT and the County will be essential for any future corridor improvements. As the County plans to expand uses at the Fabens Airport, improving Fabens Road (currently a two-lane facility) may be a priority as it provides sole access to/from I-10.



Figure 29. Corridor Priority Ranking—Subarea 1

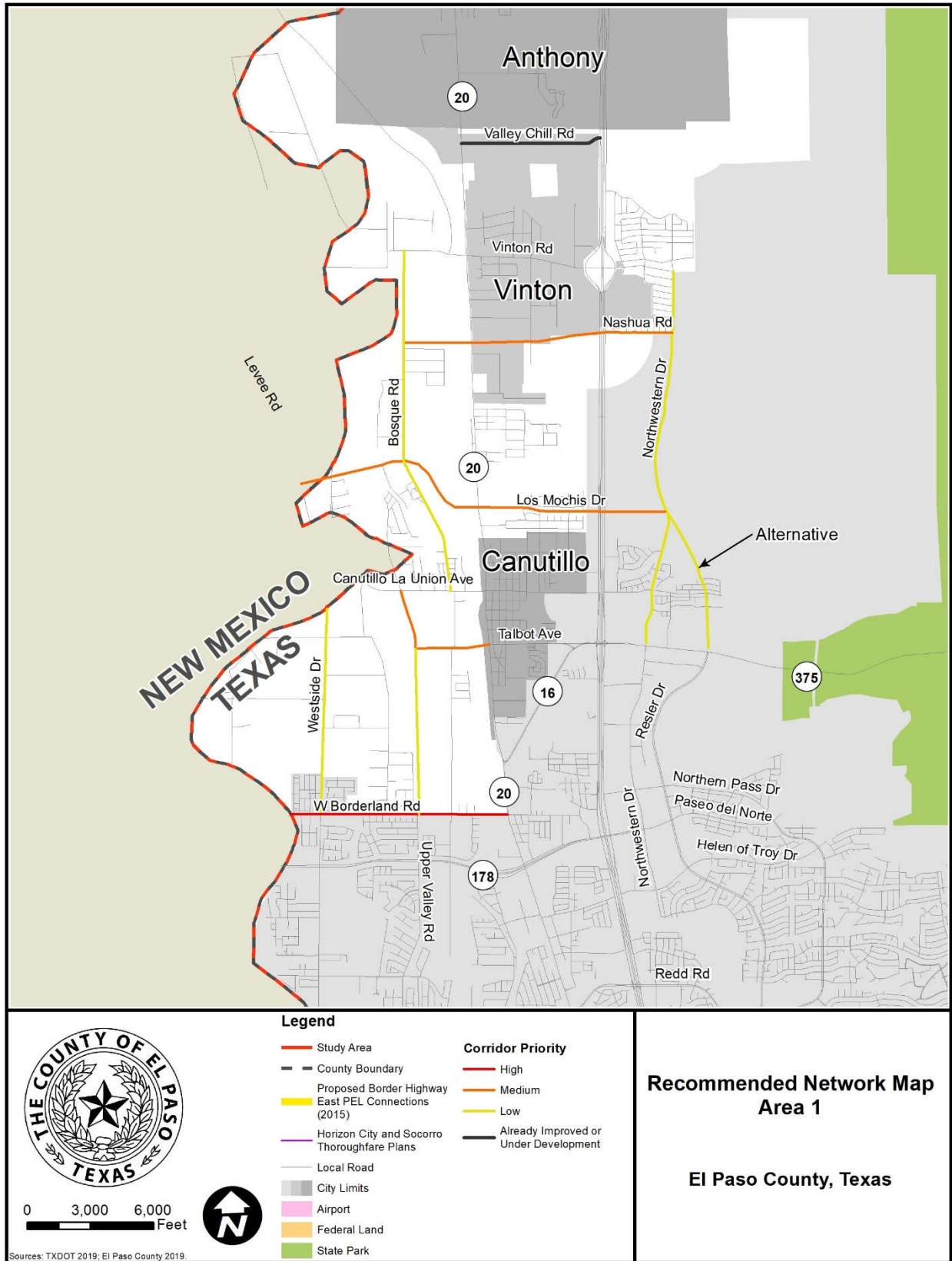




Figure 30. Corridor Priority Ranking—Subarea 2

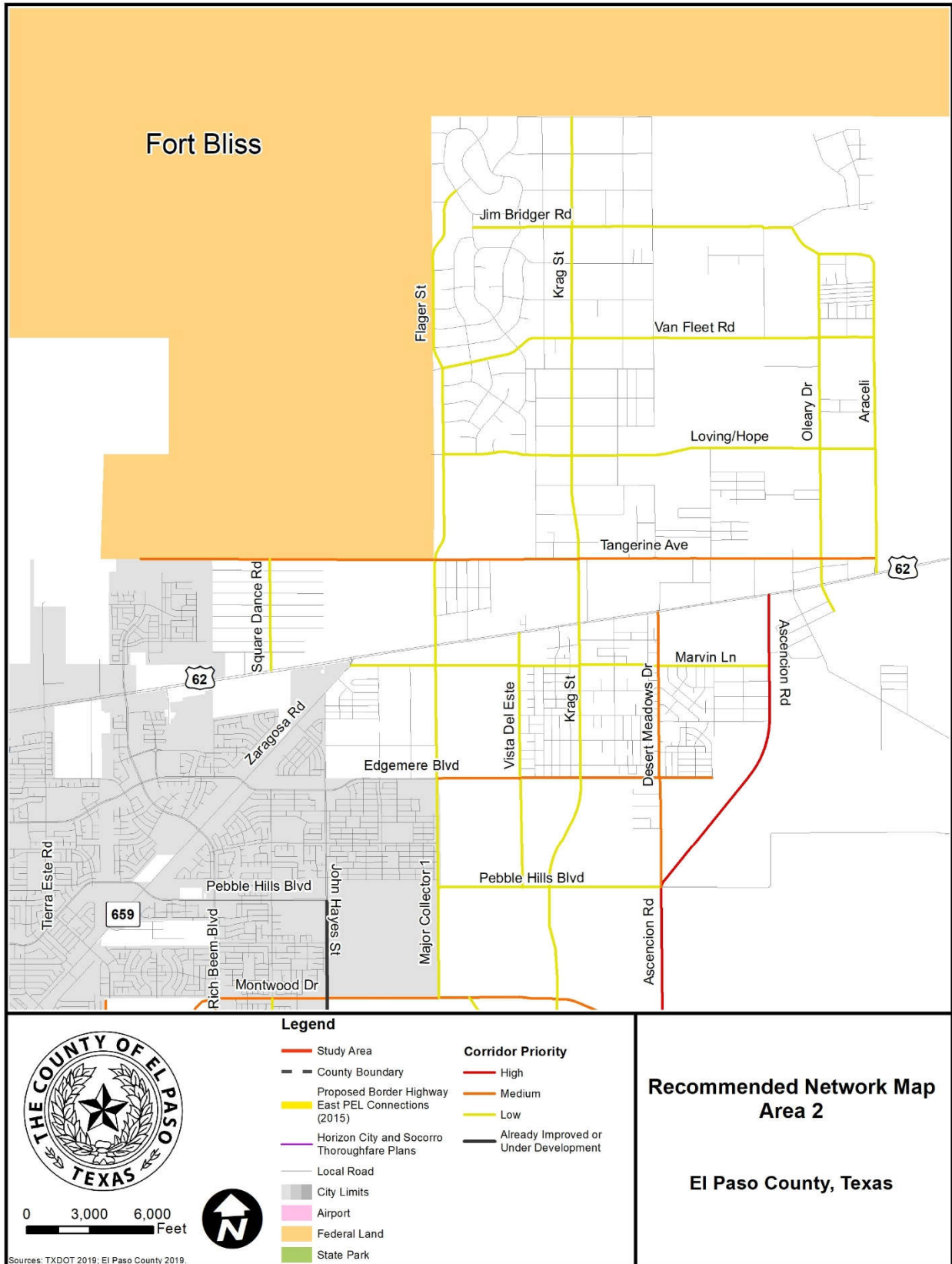




Figure 31. Corridor Priority Ranking—Subarea 3

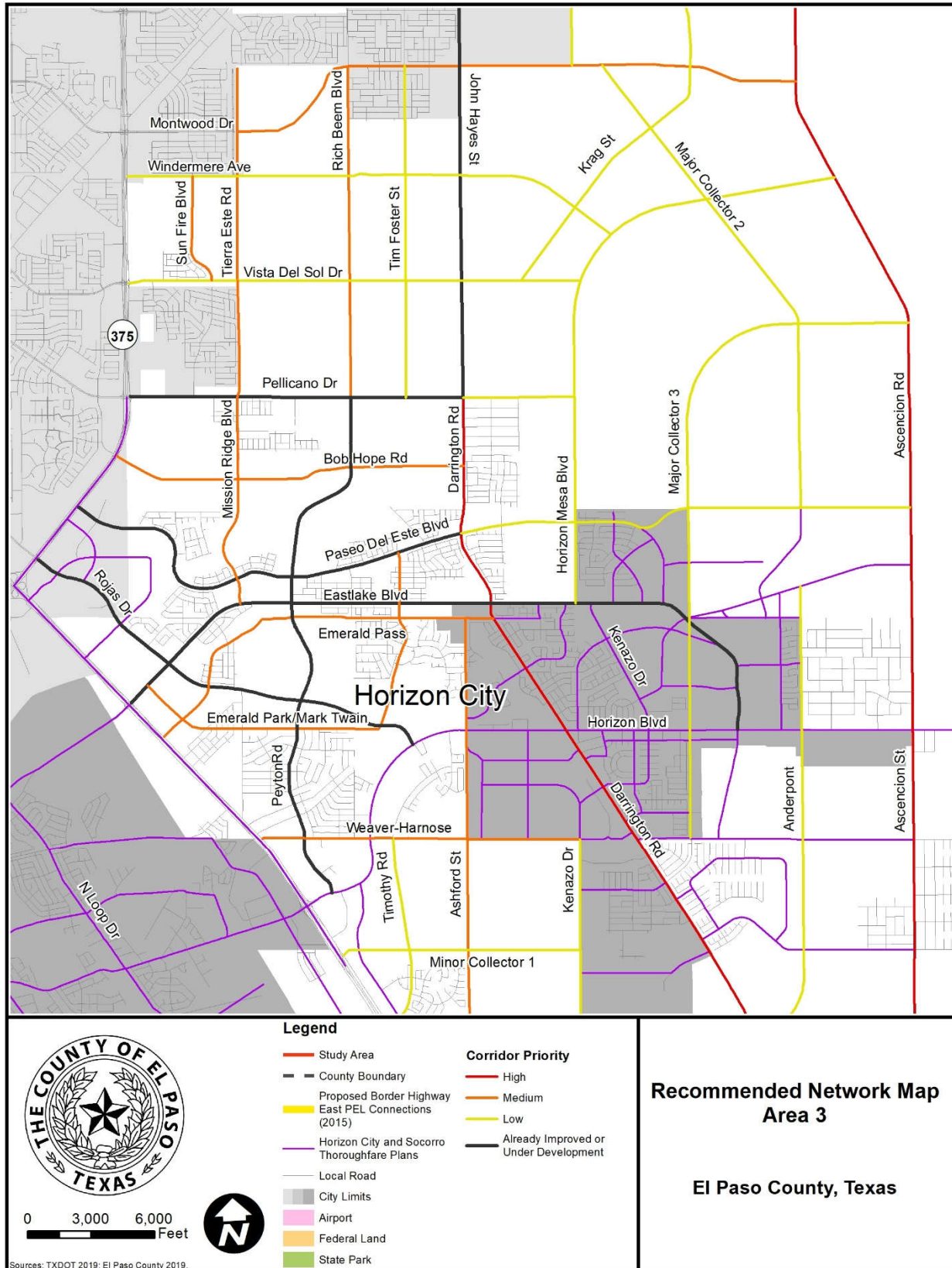
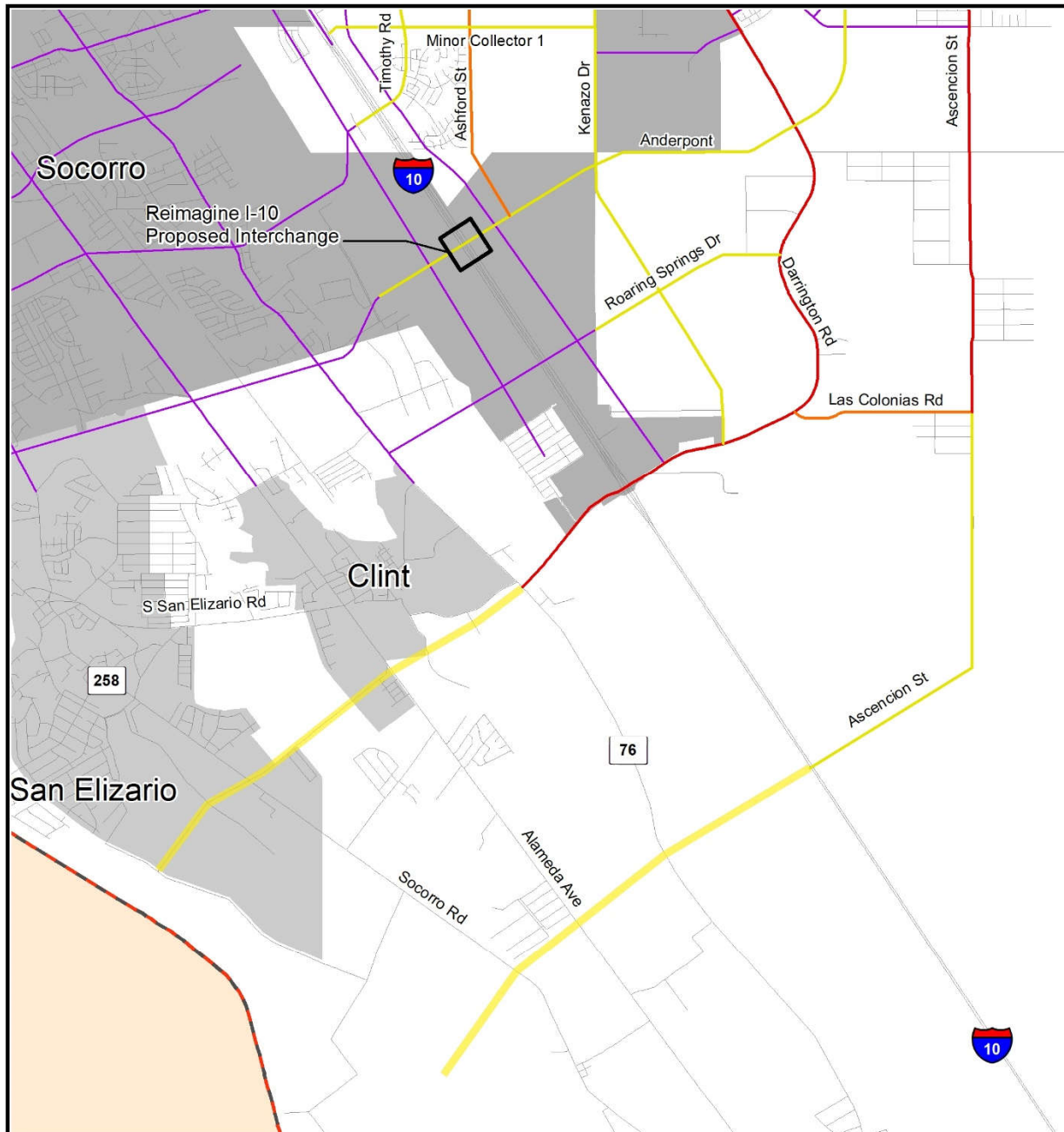




Figure 32. Corridor Priority Ranking—Subarea 4

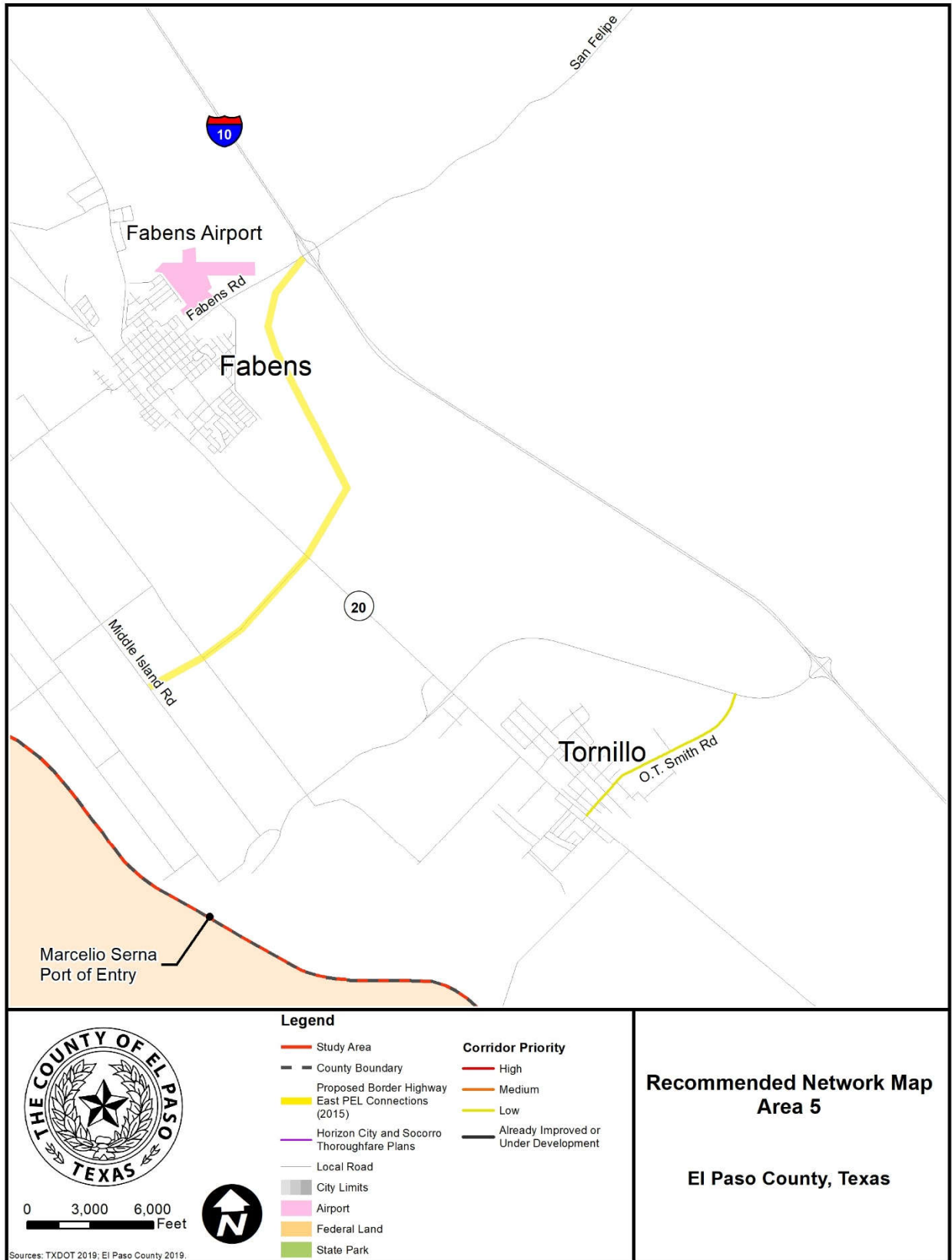


	Legend										
	<ul style="list-style-type: none"> — Study Area County Boundary Proposed Border Highway East PEL Connections (2015) Horizon City and Socorro Thoroughfare Plans Local Road City Limits Airport Federal Land State Park 	<table border="0"> <tr> <th colspan="2">Corridor Priority</th> </tr> <tr> <td>—</td> <td>High</td> </tr> <tr> <td>—</td> <td>Medium</td> </tr> <tr> <td>—</td> <td>Low</td> </tr> <tr> <td> </td> <td>Already Improved or Under Development</td> </tr> </table>	Corridor Priority		—	High	—	Medium	—	Low	
Corridor Priority											
—	High										
—	Medium										
—	Low										
 	Already Improved or Under Development										
 	<p>Recommended Network Map Area 4</p> <p>El Paso County, Texas</p>										

Sources: TXDOT 2019; El Paso County 2019
 Date: 11/15/2019 File: Data Path: \\ARBR\GIS\Projects\2019\Subarea 4.mxd Date: 11/15/2019



Figure 33. Corridor Priority Ranking—Subarea 5





8. Bicycle and Pedestrian Network Recommendations

Bicycle and pedestrian facilities form an important part of a multimodal transportation plan. Active transportation provides many community benefits, including improved public health, reduced vehicle emissions, and increased use of public spaces. The County understands the importance of facilitating bicycle and pedestrian travel, and intends to incorporate sidewalks, bicycle lanes, and shared-use paths on County roadway facilities wherever feasible, depending on roadway functional classification and adjacent uses.

Bicycle and pedestrian networks are growing throughout the region. Key initiatives include:

- ❖ The City of El Paso's 2016 Bike Plan, which aims to create 938 additional miles of bicycle lanes in the city
- ❖ TxDOT corridor studies underway or recently completed along Doniphan Drive, Mesa Street, Horizon Boulevard, and Alameda Avenue, which include bicycle and pedestrian facilities such as shared-use paths
- ❖ The Paso del Norte Trail, a multi-regional initiative to develop a long-distance trail spanning the entire County, is underway with certain sections already completed

See Technical Memorandum 1 and Technical Memorandum 3 for more information on these efforts.

As shown in Section 6.2.2, above, each conceptual roadway cross section included within the MTP includes active transportation facilities (sidewalk, bicycle lane, or shared-use path). The type of facility recommended on each corridor will depend on the ROW width, design speed, traffic volumes, connecting facilities, and adjacent uses. The County's goal is for all new or reconstructed County roadways to incorporate appropriate bicycle and/or pedestrian accommodations.

The MTP also includes targeted bicycle and pedestrian recommendations along existing corridors aimed at closing gaps, improving access to local schools, and connecting to current and future regional trails. The detailed street-level data collected showing the exact locations, types, and conditions of existing bicycle and pedestrian facilities were instrumental in completing this analysis (see Technical Memorandum 3 for more information). Maps showing the locations and types of these bicycle and pedestrian recommendations can be found in Technical Memorandum 5.

- ❖ The County regularly applies for Safe Routes to School funding through the state of Texas. The County developed a set of recommended corridors for sidewalk improvements, which would help students safely access their local schools. These recommendations were developed using field research and stakeholder input. The project consulting team reviewed the County's recommendations within the context of the street-level data compilation and developed several additional suggestions for the County to consider in upcoming Safe Routes to School application processes.
- ❖ The project team also reviewed existing bicycle and pedestrian infrastructure with an eye toward improving regional trail interconnectivity. Recommendations were developed to link



current and future trails, including Paso Del Norte Trail, future TxDOT shared-use paths, and other facilities with County roadways.



9. Summary and Conclusion

The County, like most of Texas, is experiencing a sustained period of growth in both population and employment that is projected to continue over the next 25 years. The MTP provides the County with a transportation network that is designed to meet the County's current and future travel needs. The network consists of a system of roadways grouped by functional classification, as well as improvements to provide multimodal connectivity for residents and businesses. The MTP is designed to serve as a guide for future investments in the transportation network, including projects funded by the public as well as private sectors.

The County MTP is a direct product of input and guidance provided by County residents, stakeholders, elected officials, agencies, and all others who contributed to the plan's development. The combined efforts of the project team and the community resulted in a plan that will guide transportation development over the next 25 years to create a safer, more interconnected system. The MTP is intended to be updated regularly to respond to changing circumstances, priorities, and design standards. The County's continued coordination with citizens, stakeholders, and government agencies will foster lasting partnerships and improve mobility within El Paso County and beyond.



10. References

El Paso Herald Post. (2020). *Tornillo, Ysletta Get Portion of TxDOT \$24M For Safe Routes to School, Transportation Alternatives*. Retrieved from <https://elpasoheraldpost.com/tornillo-ysleta-get-portion-of-txdot-24m-for-safe-routes-to-school-transportation-alternatives/>

El Paso MPO. Destino 2045 Travel Demand Model.

El Paso MPO. 2018. Destino 2045 Metropolitan Transportation Plan. Retrieved from http://www.elpasompo.org/scroll_bar_area/mtp/mtp_destino_2045/default.htm

Environmental Protection Agency. (2019). Environmental Justice. Retrieved from <https://www.epa.gov/environmentaljustice>

Health and Human Services (HHS). (2019). Poverty Guidelines 2019. Retrieved from <https://aspe.hhs.gov/poverty-guidelines>

Paso del Norte Health Foundation. 2018. *Paso Del Norte Trail Master Plan*. Retrieved from https://529f554e-5a56-4093-857e-4af5e33db7a9.filesusr.com/ugd/f5cd80_f0708e479406433eb19eeeace0e82003.pdf

Texas Department of Transportation (TxDOT). 2019. CRIS. 2015-2017 Crash data. Retrieved from <https://cris.dot.state.tx.us/public/Query/app/welcome>

Texas State Library. 2018a. Population Estimates for Texas Counties, 2010-2017: Arranged in Descending Order. Retrieved from <https://www.tsl.texas.gov/ref/abouttx/popcnty201011.html>

_____. 2018b. Population Estimates for Texas Counties, 2010-2017. Retrieved from <https://www.tsl.texas.gov/ref/abouttx/popcnty2010-11.html>

U.S. Census Bureau (USCB). 2017. American Community Survey 2013-2017 Community Facts. Retrieved from https://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml

_____. 2018a. QuickFacts El Paso County, Texas. Retrieved from <https://www.census.gov/quickfacts/fact/table/elpasocountytexas/PST045218>

_____. 2018b. QuickFacts Texas. Retrieved from https://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml