

4.1 Trends

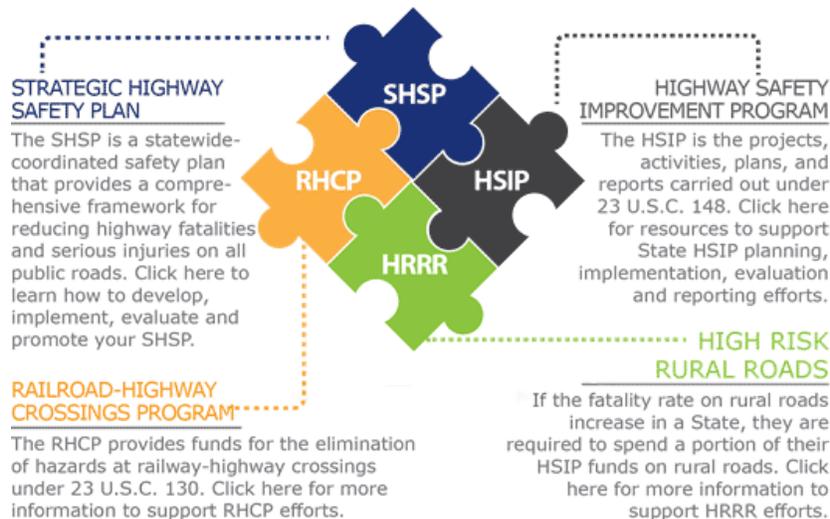
4.1.1 Permian Basin MPO

Aforementioned in Chapter 2, significant growth in the area has made a positive impact on the economy. However, along with increased economic activity comes transportation related challenges including safety and traffic congestion. TxDOT and the MPO have initiated efforts to address transportation safety and congestion in a coordinated manner as required under the MAP-21 and FAST Acts. Congestion is further discussed in Chapter 6. This chapter will focus on safety. Throughout this chapter, there are documented statistics, including crash data, for use by decision makers to analyze the safety of the transportation system for motorized and non-motorized users.

HSIP

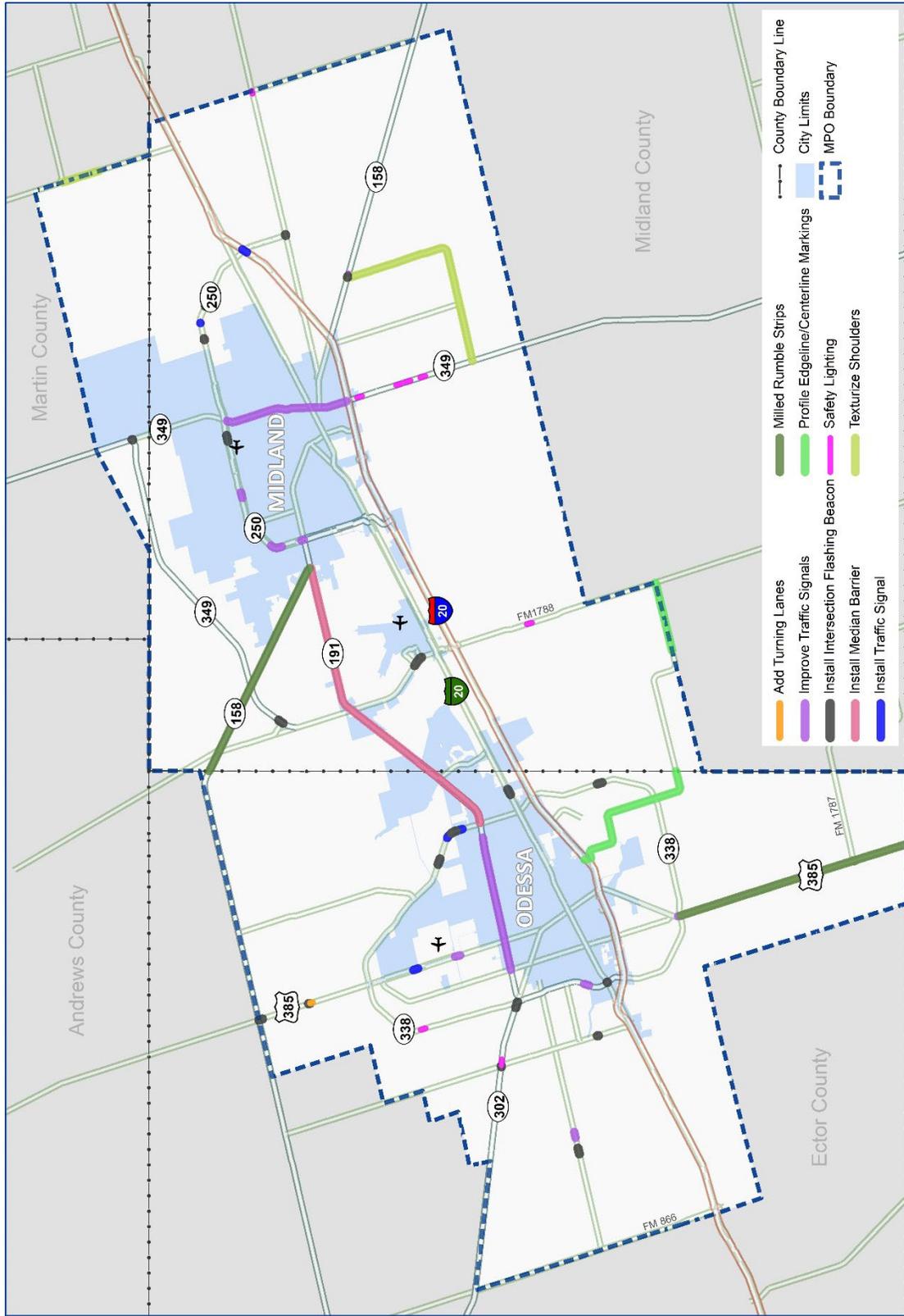
The Highway Safety Improvement Program (HSIP) was a key program in MAP 21 and continued with the FAST Act and the IIJA Act. The HSIP is a core Federal-aid program with the purpose of significantly reducing reduction in traffic fatalities and serious injuries on all public roads, non-State-owned roads and roads on tribal land. The HSIP requires a data-driven, strategic approach to improving highway safety on all public roads with a focus on performance. The cities and counties both apply for HSIP funding when projects calls are issued. HSIP funding contributes additional projects for the purpose of construction or installing traffic safety measures. The improvements include rumble strips, widening of shoulders, permissive left turn signals, and enhanced signage. To consider future safety improvements both cities and the TxDOT Odessa district commission corridor speed studies. A 5-year map of completed HSIP projects is below, Map 4.1.

Figure 4.1 HSIP Chart



Source: FHWA

Map 4.1 HSIP Projects 2014-2018



**Local HSIP Projects
January 2014 - December 2018**



This map was developed by Permian Basin MPO for the purpose of aiding in regional transportation planning decisions and is not warranted for any other use. No warranty is made by Permian Basin MPO regarding its accuracy or completeness.

According to the Federal Highway Administration (FHWA):

Safety throughout all transportation programs remains DOT's number one priority.

The HSIP emphasizes a data-driven, strategic approach to improving highway safety on all public roads that focuses on performance. The foundation for this approach is a safety data system, which each State is required to have to identify key safety problems, establish their relative severity, and then adopt strategic and performance-based goals to maximize safety. Every State is required to develop a Strategic Highway Safety Plan (SHSP) that lays out strategies to address these key safety problems. Every State now has an SHSP in place, and FAST Act ensures ongoing progress toward achieving safety targets by requiring regular plan updates and defining a clear linkage between behavioral (NHTSA funded) State safety programs and the SHSP. A State that fails to have an approved updated plan will not be eligible to receive additional obligation limitation during the overall redistribution of unused obligation limitation that takes place during the last part of the fiscal year. The SHSP remains a statewide coordinated plan developed in cooperation with a broad range of multidisciplinary stakeholders.

COUNTERMEASURE

Edge Line and Shoulder Rumbles



Source: FHWA

COUNTERMEASURE

SafetyEdgeSM



Source: FHWA

COUNTERMEASURE

Center Line Buffer Area



Source: Thurston County Washington

COUNTERMEASURE

Center Line Rumbles



Source: FHWA

Edge rumble strips are milled corrugations in pavement to alert inattentive drivers that they are leaving the roadway to reduce:

- Run-off-road crashes
- Fixed object crashes
- Rollovers
- Distracted/drowsy driver crashes

https://safety.fhwa.dot.gov/roadway_dept/pavement/rumble_strips

Fatal and Injury Reductions	
Run-Off-Road (two-lane rural)	36%
Run-Off-Road (rural freeways)	17%

Source: CHF Clearinghouse IDs 3394 and 3447

Center rumble strips are milled corrugations in pavement to alert inattentive drivers that they are crossing the center line to reduce:

- Head-on crashes
- Run-off-road left crashes
- Distracted/drowsy driver crashes

https://safety.fhwa.dot.gov/roadway_dept/pavement/rumble_strips

Fatal and Injury Reductions	
Head-On Rwd (two-lane rural)	45%

Source: CHF Clearinghouse ID 3360

Clean Reductions on Two-Lane Rural Roads

Crash Type	Reduction
Run-Off-Road	32%
Head-On Rwd	23%
Fatal & Injury	11%

Source: CHF Clearinghouse ID 3521, 3517, 3512, and 3508

A center line buffer area provides extra space between the two solid center line markings, further separating opposing directions of traffic to reduce:

- Head-on Crashes

Facility Type	Buffer Width	*Head-on Rwd Crash Reduction
2-lane	2 feet	35%
2-lane	4 feet	64%
2-lane	10 feet	90%
4-lane	Not significant	

*Preliminary results from NCHRP Project 17-66

Flattening steep slopes provides a better opportunity for vehicles to traverse the slope, reducing the likelihood of:

- Rollovers
- Fixed object crashes

Before Sideslope	After Sideslopes		
	1V:4H	1V:5H	1V:6H
1V:2H	10	15	21
1V:3H	8	14	19
1V:4H	—	6	12
1V:5H	—	—	6

Source: AASHTO Highway Safety Manual

COUNTERMEASURE

Slope Flattening

Source: FHWA

Adding a paved shoulder provides an errant driver an opportunity to regain control. Shoulders have been shown to be effective at reducing all roadway departure crashes. Adding shoulders may also allow for installation of rumble strips and the SafetyEdgeSM.

Crash Reductions for Adding a Shoulder on a 2-Lane Rural Road

Adapted from the AASHTO Highway Safety Manual (HSM) for 2 lane rural roads with no existing shoulder. For existing shoulders to be widened, see the HSM.

COUNTERMEASURE

Shoulder Widening

Source: FHWA

MAP-21, FAST Act, and IIJA Act

- States will set targets for the number of serious injuries and fatalities per million vehicle miles of travel. If a State fails to make progress toward its safety targets, it will have to devote a certain portion of its formula obligation limitation to the safety program and submit an annual implementation plan on how the State will make progress to meet performance targets.
- Although the federal bills eliminate the requirement for every State to set aside funds for High Risk Rural Roads, a State is required to obligate funds for this purpose if the fatality rate on such roads increases.
- States are required to incorporate strategies focused on older drivers and pedestrians if fatalities and injuries per capita for those groups increase.

Source: FHWA

Goals and Objectives

The Permian Basin MPO plans to achieve the Goal and Objectives from the approved *Vision 2040* MTP pertaining to transportation system safety. These will continue in the *Forward 45* MTP by addressing strategies and measuring the progress through federally Mandated Performance Measures (Chapter 7).

Safety related goals and objectives from page i are:

Goal 4: Incorporate best practices related to safety during the planning process.

Objective 1: Reduce crashes resulting in fatalities, injuries, and property damage within the region.

Objective 2: Promote regional efforts to maintain the existing system to keep it in optimal condition.

Goal 5: Assist with educational efforts to bring awareness to users of the transportation system.

Objective 1: Provide and promote opportunities to educate the public on transportation safety.

Performance Measures: Specific measures related to safety are identified in Chapter 7, Performance Based Planning.

Contributing Factors

There are many factors contributing to the root cause of vehicular crashes– faulty evasive action, driver inattention, driving under the influence – just to name a few. However, the four most common issues that have contributed to fatal and serious injury crashes over the past five years in the MPO boundary are failing to control speed, failing to yield right of way at stop signs, failing to yield right of way when turning left and changing lanes when unsafe. As shown in Table 4.1, over 44% of all crashes from 2017-2021 have involved one of these factors.

Table 4.1 2017-2021 MAB Top Contributing Factors

Contributing Factors	Count	Percentage
Failed to Control Speed	12564	30
Failed to Yield Right of Way - Stop Sign	5126	12
Failed to Yield Right Of Way - Turning Left	3174	7.4
Changed Lane When Unsafe	2400	5.6

Types of Vehicles

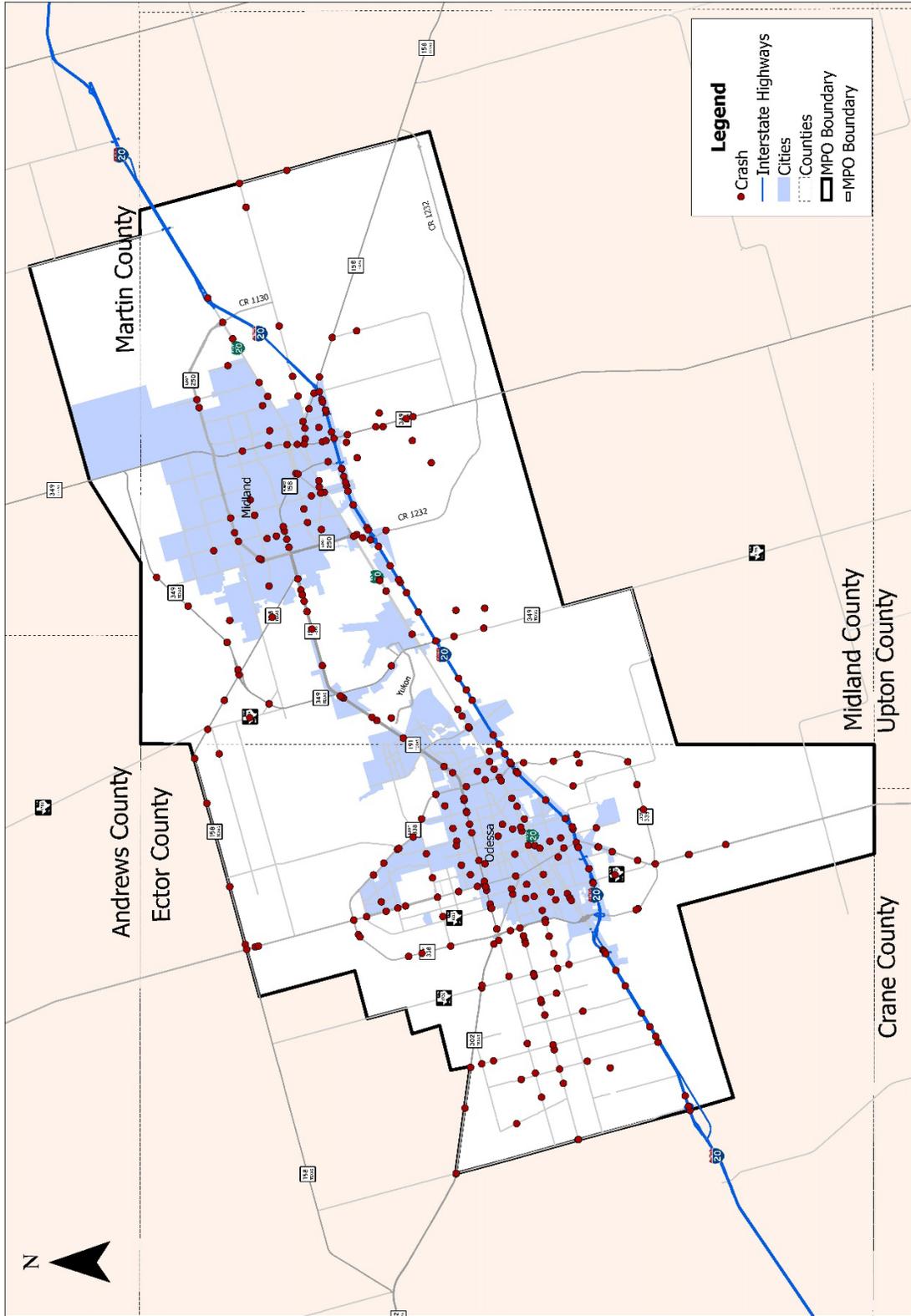
The type of vehicle involved in most crashes is the automobile. However, motorcycles, commercial motor vehicles, and other alternative modes of transportation are often involved in crashes which cause fatalities and/or serious injuries. Vehicles are often involved in crashes with pedestrians and bicyclists as well.

Crash Locations

It is important to analyze the locations of fatal and serious injury crashes to determined how the transportation system may be reconfigured to improve safety. Map 4.2 below displays fatal and serious injury crash locations in years 2017-2021.



Map 4.2 2017-2021 Crash Locations



Permian Basin MPO Fatal & Serious Injury Crash Locations

0 1.25 2.5 5 7.5 10 Miles

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Desired Safety Improvements

Safety initiatives and the implementation of needed improvements to the roadway system are intended to add safety measures to its users; however, advancements in technology, increased traffic, and changes in legislation illustrate that this effort must be continuous. This section features the efforts of the Permian Basin MPO and its member entities, the community colleges, and citizens of Midland and Ector counties.

Permian Basin MPO

Permian Basin MPO leads transportation planning in the region. The MPO utilizes a cooperative, continuous, and comprehensive process with its member entities to address concerns for safety. Permian Basin MPO has dedicated time and resources to address the issues and find practical solutions. Permian Basin MPO continues to gain the support of the Policy Board and TAC to further implement plans that assert safety as the top priority within the MPO's MAB.

TxDOT Unified Transportation Program

The Unified Transportation Program (UTP) is TxDOT's ten-year plan that guides transportation project development. It is developed annually in accordance with the Texas Administrative Code (TAC § 16.105) and is approved by the Texas Transportation Commission. This document authorizes projects for construction, development, and planning activities.

The 2020 UTP contains a safety category and includes the following project descriptions and the determining factors:

- Safety related projects on and off the state highway system. Projects are evaluated using three years of crash data and ranked by Safety Improvement Index.
- Future High-Risk Rural Roads projects will be managed under the HSIP if required by special rule.
- Allocations for the safety bond program are approved by the Texas Transportation Commission, with the program managed as an allocation program on a statewide basis.
- Projects evaluated, ranked, prioritized and selected by the Traffic Operations Division.
- Roadway widening projects on the state highway system are evaluated using Roadway Safety Features for Preventable Severe Crash Types. Projects evaluated, ranked, prioritized and selected by the Traffic Operations Division.

<ftp.dot.state.tx.us/pub/txdot-info>



TxDOT – Odessa District

Safety improvement projects vary in scope and include bridge replacements and new or rebuilt interchanges, warning signs or flashing beacons, projects that improve safety along an entire corridor.



Other improvements in the Permian Basin MPO MAB include the installation of rumble strips, shoulder widening, pavement markings, and signage including regional ITS that are all designed to improve safety.

TxDOT is creating a climate so that safety is inherent in everything it does. It is not an afterthought; it is part and parcel of every process, every design and every project. Safety discussions are a part of the conferences attended by TxDOT personnel to improve technical procedures and bring training to apply to projects being developed. It is a process of continual learning; as vehicles change and as driver behavior changes, TxDOT must incorporate those variables within each project's safety factors. TxDOT maintains a culture of safety.



It is a goal of the MPO to improve safety and functionality of corridors within the MPO's MAB. Some big-picture goals include:

- reconfiguring I-20 to an urban design complete with one-way service roads, adding U-turns, ramp reconfigurations, and interchanges
- continuing the development of Loop 338 in Odessa and Loop 250 in Midland
- completing Loop 250 main lanes and overpasses

Continued growth and an increase in available funding keep such projects moving forward. Other improvements include safety railing in the medians of I-20 and Loop 250 to prevent head on collisions resulting from lane departures on high speed corridors.

City of Midland

In order to continue safety improvements within the Midland city limits, officials are currently in the planning/design stages of the following proposed projects:

- A Street/Wadley Ave. – Using a \$1.5 million TxDOT grant from HSIP to increase capacity, add dual left turn lanes, and improve pedestrian accessibility beginning September 2019.
- Mockingbird/SH 349 – Signal installation and a geometric reconfiguration of the intersection have been completed; new paving is currently being completed.
- A Street/Texas; A Street/Illinois– Currently in design with bidding set for early 2020.

- Continuing Hike/Bike Trail and adding multiuse lanes to bike routes as part of larger maintenance/capital improvement projects.
- Paving improvements for Briarwood Ave, Market Street, and Tradewinds Boulevard.
- Construction of a new bridge and pedestrian crossing on Carver St. funded by the City of Midland and the Midland Development Corporation.



Source: City of Midland

City of Odessa

In order to continue safety improvements within the Odessa city limits, officials are currently in the planning, design or construction stages of the following projects:

- Widening of Faudree Rd. & Highway 191 to Yukon Rd.
- Traffic signal installation at E Loop 338 & Trunk Rd., Yukon Rd. at Dawn Ave., Faudree Rd. at Dorado Dr., and Billy Hext Rd. at Eastridge Rd.
- East Channel drainage improvements.
- Various improvements to downtown roads including lighting, and sidewalks, and public safety improvements.
- Study and design of Dawn Ave. from 87th Street to Yukon Rd., 56th from Faudree to East Loop 338, and South Dixie Blvd. from I-20 to South Loop 338.
- University Blvd. widening with protected center turn lane.
- Loop 338 at 52nd/56th St. grading improvements and signalization.
- TxDOT Road fund participation for future projects.

Midland College Transportation Training

The Midland College Transportation Training program provides individuals with training to obtain a CDL License in order to operate a commercial motor vehicle (CMV) safely within the rules and regulations set by the Department of Transportation. The program is 160 hours completed over four weeks. According to the director, the courses are fast paced so attendance and punctuality are imperative to ensure all information is received. Students learn how to perform pre-trip inspections, Federal Motor Carrier Safety Regulations, hazardous materials transport, and H₂S safety training. The information encompasses safety in all areas through hands-on training, videos, and lectures. Drivers must be aware of what it takes to maneuver a large-scale vehicle in order to take necessary precautions in the event of an emergency.



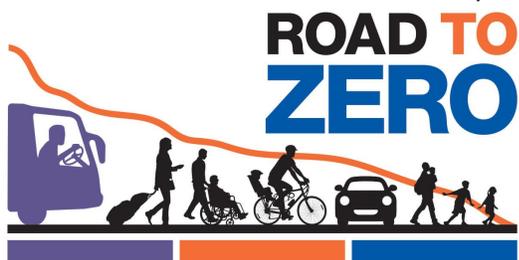
Odessa College – Professional Truck Driving School

Odessa College also offers a 160-hour course to prepare individuals for taking the CDL tests through the Texas Department of Public Safety (TxDPS). Students are taught the fundamentals of tractor trailer driving with key emphasis on safety. The amount of safety taught through this program cannot be determined by course segments or time, it’s an element that is included throughout the course - every chapter, every section. Once the course is complete, students should be able to pass the five written exams, air brake test, backing test, and driving test. Each person must also pass a federal Department of Transportation (DOT) physical which is repeated every two years. A federal pre-trip test consisting of naming parts and functions of large-scale vehicles was reinstated in 2015.



Permian Road Safety Coalition

The PRSC is a broad cross-section of stakeholders invested in addressing and solving road safety issues throughout the Permian Basin of New Mexico and Texas. These stakeholders are private industry leaders from the oil and gas industry, trucking industry, and public transportation and safety agencies. The PRSC advocates for road infrastructure improvements at the federal, state, and local levels as well as the implementation. The Coalition regularly holds quarterly forums to convene oil and natural gas operators, service companies, trucking companies, government agencies, and non-government organizations to leverage expertise and share best practices, and collaborate on data-driven research, an annual community wide safety initiative is conducted to educate the broader



community on the shared responsibility of road safety. From improving personal driving habits to including the use of technology in vehicles, the Coalition has played a role in making the roadways of the Permian Basin safer. The fifth Stand Down for Safety event is planned for November 7, 2019 in Monahans.

<https://www.nsc.org/road-safety/get-involved/road-to-zero>

Citizens of Midland and Ector Counties

During the three public workshops periods held in the fall of 2018, spring of 2019, and fall of 2019 as part of the MTP development process, citizens expressed safety concerns. The information indicated key areas the residents observed as needing safety improvements. The chart below depicts the frequency of the top safety-related matters as communicated by the attendees.



Pipeline Safety Is Everyone's Responsibility.

Did you know that Americans consume more than 700 million gallons of petroleum products each day in the form of gasoline, diesel fuel, heating oil and jet fuel?

Much of the petroleum you use is transported through underground pipeline systems. Each day, millions of gallons of oil and petroleum products are quietly delivered with minimal impact on the environment.

According to the Department Of Transportation (DOT), pipelines are the safest means of transportation for oil and petroleum products.

Pipelines In Your Community: Your Neighbor.

Written agreements, or easements, between landowners and pipeline companies, allow pipeline and utility companies to construct and maintain pipeline right-of-ways across public and privately owned property. Your property may be one of many in your community which contains an underground pipeline easement.

To determine if a pipeline runs through your property:

- Check for pipeline markers posted on your property or in your neighborhood.
- Check the National Pipeline Mapping system @ nmps.phmsa.dot.gov

Look For Pipeline Markers On Your Property or In Your Neighborhood.

For your safety, markers have been installed along the pipeline route to indicate the approximate location and provide vital emergency information. Take time to familiarize yourself with the pipeline markers on your property or in your community. Write down the names and phone numbers of pipeline companies or operators listed on the markers in case of an emergency.

Pipeline Accidents Are Preventable. Call Before You Dig.

Accidental "dig-ins" by property owners or contractors make up the majority of pipeline accidents. Dig-ins are preventable only if owners or excavators will contact pipeline companies BEFORE they attempt to dig. A pipeline marker will not necessarily indicate the exact location or direction of the pipeline.



Before you dig on your property, please contact your local One-Call System listed in this brochure, wait the proper amount of time, and then dig safely.

In case of an emergency, call the appropriate phone number listed on the back of this card, or the pipeline company listed on a pipeline marker on or near your property. Please remember to call 811 at least 48 hours prior to excavation activity. In the State of Texas the life of locale ticket is 14 days.

If you are an excavator in the state of Texas, you need to be aware of the new Texas Railroad Commission Damage Prevention Rule (Chapter 38) that can be found at www.tcc.state.tx.us/rules/rule38.html

For more information on pipelines in your area please visit the National Pipeline Mapping System at www.nmps.phmsa.dot.gov

For more information on Medallion's Emergency Response Plans please visit us at www.medallionmidstream.com

La Seguridad de los Oleoductos es la Responsabilidad de todos.

¿Sabía usted que en los Estados Unidos de Norteamérica se consumen diariamente más de 700 millones de galones de derivados del petróleo en forma de gasolina, combustible para calefactores, diesel, y combustible de aviación?

Mucho del petróleo que usted utiliza en sus diferentes derivados es transportado a través de sistemas subterráneos de oleoductos. Cada día, millones de galones de petróleo y derivados son silenciosamente entregados con un mínimo impacto al ambiente.

De acuerdo con el Departamento de Transporte (DOT por sus siglas en inglés), los ductos son la forma más segura de transportar petróleo y sus productos.

Oleoductos En Su Comunidad: Su Vecino.

Acuerdos escritos, o derechos de paso entre los terratenientes y las compañías de ductos, permiten que las campañas de servicios públicos y de ductos puedan construir y mantener el derecho de paso a través de la propiedad privada y pública. Su propiedad podría ser una de las varias en su comunidad en la cual exista un paso de ducto subterráneo.

Para determinar si un ducto pasa a través de su propiedad:

- Revise o busque marcadores de ductos puestos en su propiedad o en su vecindario.
- Consulte los archivos de la propiedad en la oficina del condado.

Busque Marcadores o Señalamientos de Oleoductos en su Propiedad o Vecindario.

Por su seguridad, se han instalado marcadores a lo largo de la ruta de los oleoductos para indicar aproximadamente su localización y proveerle con información vital en caso de emergencia. Tome tiempo para familiarizarse con los marcadores de oleoductos en su propiedad o comunidad. Escriba los nombres y números telefónicos de las compañías de oleoductos o de los operadores que se encuentran en los marcadores.

Los Accidentes en Oleoductos son Prevenibles. Llame Antes de Excavar.

Los accidentes en las excavaciones hechas por dueños de la propiedad o contratistas forman parte de la mayoría de los accidentes en los oleoductos. Estos accidentes son prevenibles solamente si los dueños de la propiedad o excavadores contactan a las compañías de ductos ANTES de tratar de excavar. Los marcadores o señalamientos de ductos no indican necesariamente la localización exacta o la dirección de los ductos.

Antes de cavar en su propiedad, por favor contacte a su sistema local de One-Call (Una Llamada) enlistado en este folleto, espere a que marquen la línea o ducto y después cave con cuidado. En caso de emergencia, llame al teléfono indicado en el reverso de esta tarjeta, o la compañía de oleoductos enlistada en el marcador o señalamiento cerca de su propiedad. Por favor recuerde llamar al 811 usted debe dar aviso por adelantado en mínimo 48 horas de la actividad de excavación. En el estado de Texas, si usted tiene un ticket de Dig Safe es válido ticket por 14 días.

Si usted es un excavador en el estado de Texas, usted debe saber acerca de la nueva Regla de Prevención contra Daños de la Comisión de Ferrocarriles de Texas (Capítulo 38), la cual puede ver en el sitio web www.tcc.state.tx.us/rules/rule38.html

Para obtener más información sobre las tuberías en su área, por favor visite la National Pipeline Mapping System en www.nmps.phmsa.dot.gov

Para obtener más información sobre planes de respuesta de emergencia del Medallion por favor visite www.medallionmidstream.com



Table 4.2 Citizen Safety Comments from Public Workshops

Problem	Road	Location	Frequency
Running Red Lights			
	Garfield	City of Midland At Loop 250	2
	Wadley Ave.	At Midkiff Rd.	2
City of Odessa			
	42 nd St.	At Grandview	8
	42 nd St.	At JRS Parkway	6
	University	At Dixie	4
	42 nd St.	At Andrews Hwy.	4
	42 nd St.	At Dixie	3
Speeding			
City of Midland			
	W. Loop 250	Entire Loop	3
City of Odessa			
	US 385	IH 20/Loop 338	5
	42 nd St.	At Andrews Hwy.	4
	42 nd St.	At JBS Parkway	3
Ramps			
City of Midland			
<i>Ramp too short</i>	Loop 250	At SH 191	2
<i>Congestion</i>	Loop 250	At SH 191	2
<i>Congestion</i>	IH 20	At Loop 250	2
<i>Congestion</i>	IH 20	At SH 349	
City of Odessa			
<i>Steep ramps</i>	IH 20	At US 385	3
<i>Steep ramps</i>	IH 20	At Loop 338	2
High Volume of Traffic			
City of Midland			
	Loop 250	Entire Loop	4
	N. A St.	At Loop 250	4
	Garfield	At Andrews Hwy.	2
	Midland Dr.	At Andrews Hwy.	2
City of Odessa			
	42 nd St.	At JBS Parkway	4
	FM 1788	SH 191 to BI 20	3
	University	Dixie to Grandview	3
	42 nd St.	Entire 42 nd St.	3
	IH 20	At Co. Road W.	3
Intersections			
City of Midland			
	Nothing Reported		
City of Odessa			
<i>Stop Sign Only</i>	N. Loop 338	At 52 nd St.	3
<i>Stop Sign Only</i>	US 385	At Co. Road W.	2
<i>Stop Sign Only</i>	N. Loop 338	At Yukon Rd.	2

4.2 Crash Statistics

For all the transportation modes in the region, Permian Basin MPO’s priority is to safeguard the citizens and visitors by identifying areas of safety concern, analyzing crash data and traffic trends, and then relaying this information to decision-makers as project selection priorities are established.

Please note: All crash data collected is within Midland and Ector Counties, however a portion occurred outside the Permian Basin MPO Metropolitan Area Boundary (MAB). Data for Martin county is unavailable. All data was collected through the TxDOT Crash Records Information System (CRIS) unless otherwise noted.



4.2.1 Highways and Bridges

Crashes Causing Fatalities and Serious Injury

The volume of vehicles on the roads in the Midland Odessa region has increased to such a degree that there are more crashes resulting in fatalities and serious injuries. Tables 4-2 through 4-5 indicate crash rates and total crashes from the beginning of 2014 through 2018. Map 4.6 is a heat map showing crash location by density in the region.

A lieutenant with the Midland Police Department’s Special Operations Division indicated that increased traffic congestion, driver inattention and speed are the biggest issues he has seen on Midland’s city streets. The Texas Department of Transportation (TxDOT) - Odessa District Public Information Officer stated that many fatalities are preventable, and the decisions drivers make impact the rates of serious to fatal crashes across the state. “Numerous drivers speed, text, and engage in activities that take their attention away from driving.” (mrt.com) Representatives from the Odessa Police Department agree, saying “a lot of wrecks occur here because of speeding and driver inattention; running red lights, another safety hazard, has led to wrecks as well.” “Pay attention, look both ways, be a defensive driver.”

Table 4.3 2017-2021 County Crash Rate and Total Crashes (100 million VMT)

TOTAL CRASHES AND CRASH RATE PER COUNTY						
County		2017	2018	2019	2020	2021
Ector	Crash Rate	181.9	238.41	270.66	261.00	199.78
	Total Crashes	3,082	4,589	5,131	3,787	3,272
Martin	Crash Rate	0	2.3	1.6	0	0
	Total Crashes	0	2	2	0	0
Midland	Crash Rate	259.57	297.85	287.61	202.02	197.07
	Total Crashes	4,407	5,298	5,380	3,327	3,587

*vehicle miles travelled

Source: TxDOT CRIS

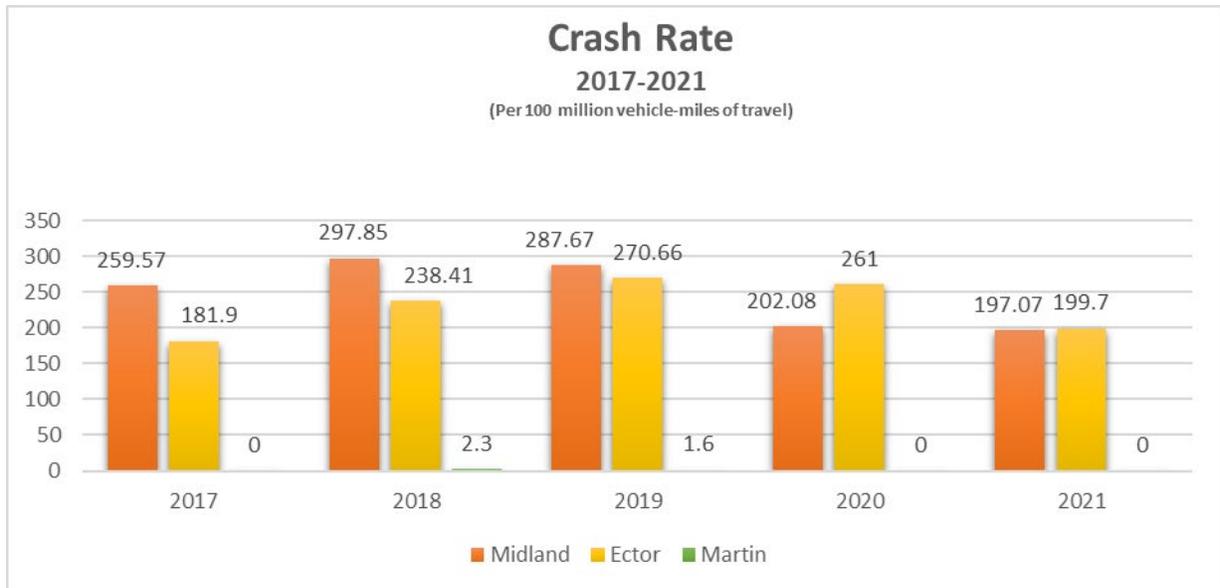


Table 4.4 2017-2021 County Total Crashes



Source: TxDOT CRIS

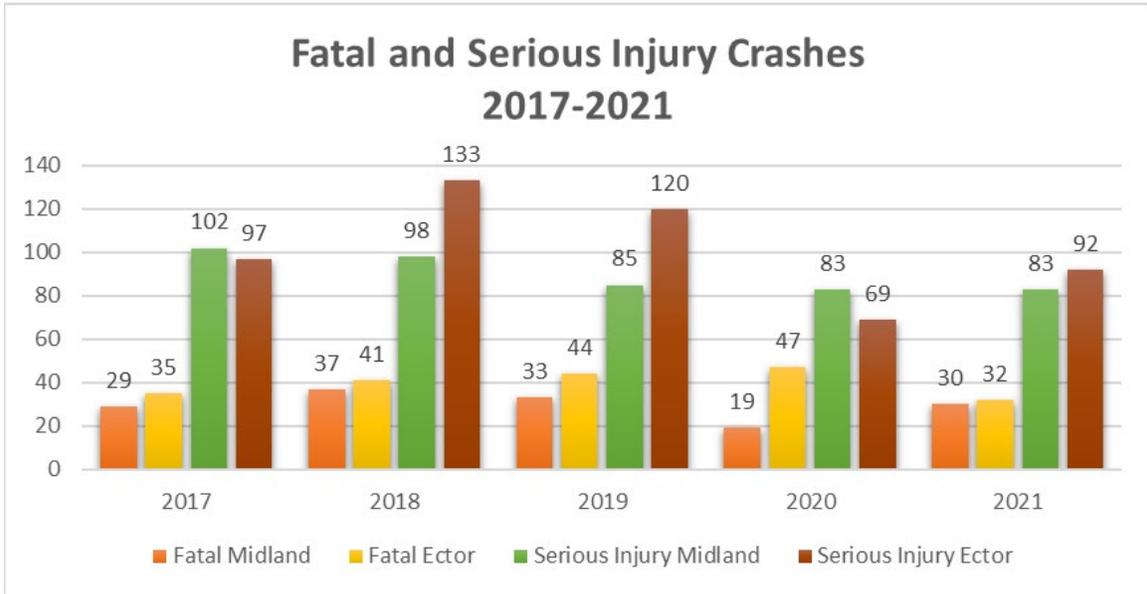
Table 4.5 2017-2021 County Crash Rate



Source: TxDOT CRIS



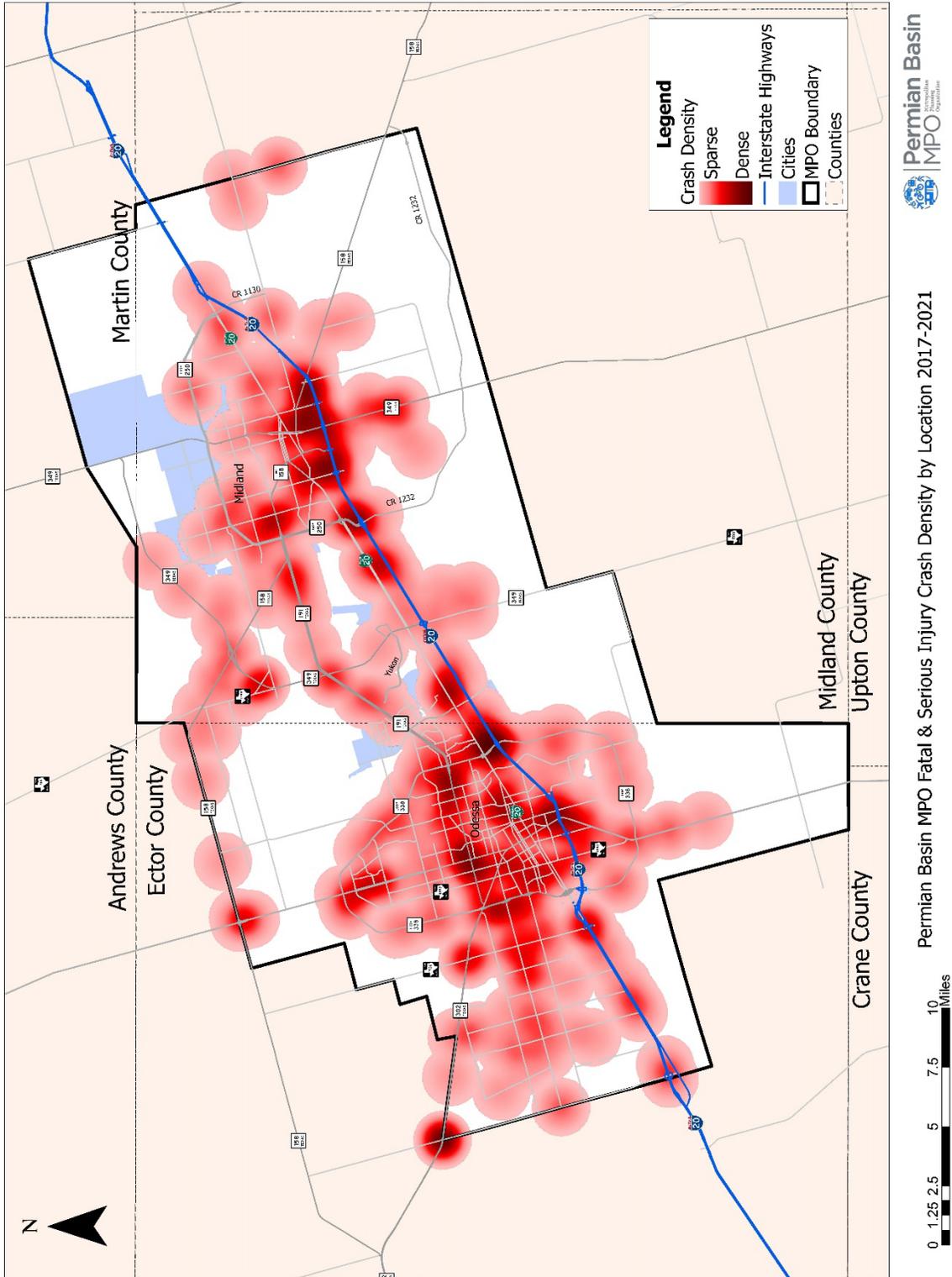
Table 4.6 2017-2021 Fatal & Serious Injury Crash



Source: TxDOT CRIS



Map 4.3 2017-2021 Fatal & Serious Injury Crash Density

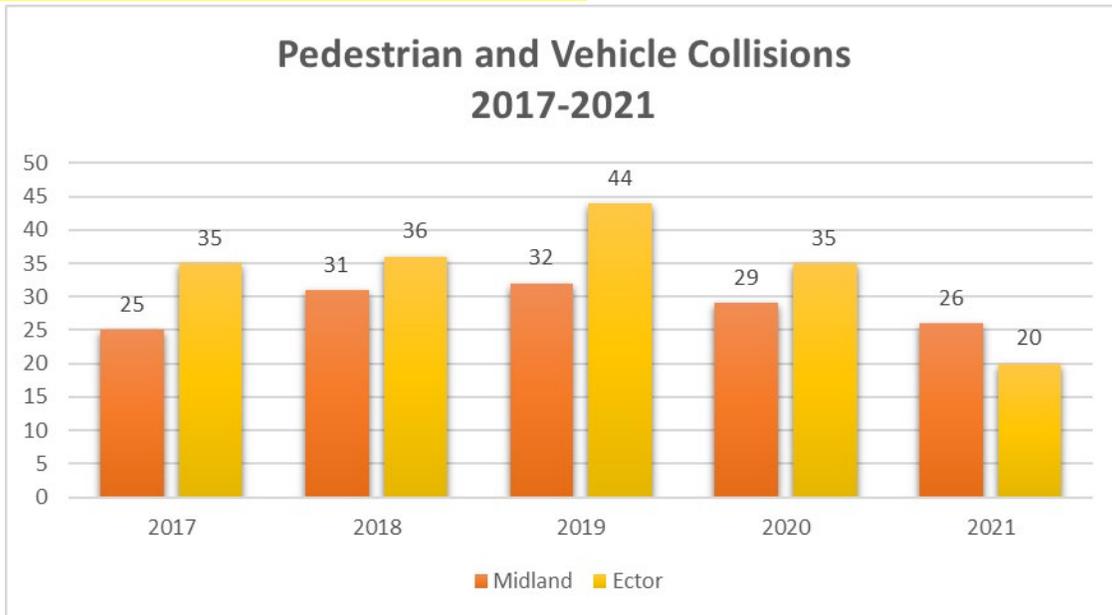


Permian Basin MPO Fatal & Serious Injury Crash Density by Location 2017-2021

4.2.2 Bicycle and Pedestrian

It is not uncommon for a pedestrian or bicyclist to be involved in a crash with a vehicle. Crashes and other incidences may occur when a pedestrian or bicyclist does not yield the right-of-way to a vehicle or when driver negligence results in a pedestrian fatality or serious injury. For more information on the non-motorized transportation system in the Permian Basin MPO MAB, please refer to Chapter 3 section 3.2.3 *Bicycle and Pedestrian Network*. Tables 4.6 and 4.7 show a five-year history of pedestrian and vehicle crashes as well as bicycle and vehicle collisions. Maps 4.7 & 4.8 indicate the location of these types of crashes.

Table 4.7 2017-2021 Pedestrian/Vehicle Collisions



Source: TxDOT CRIS



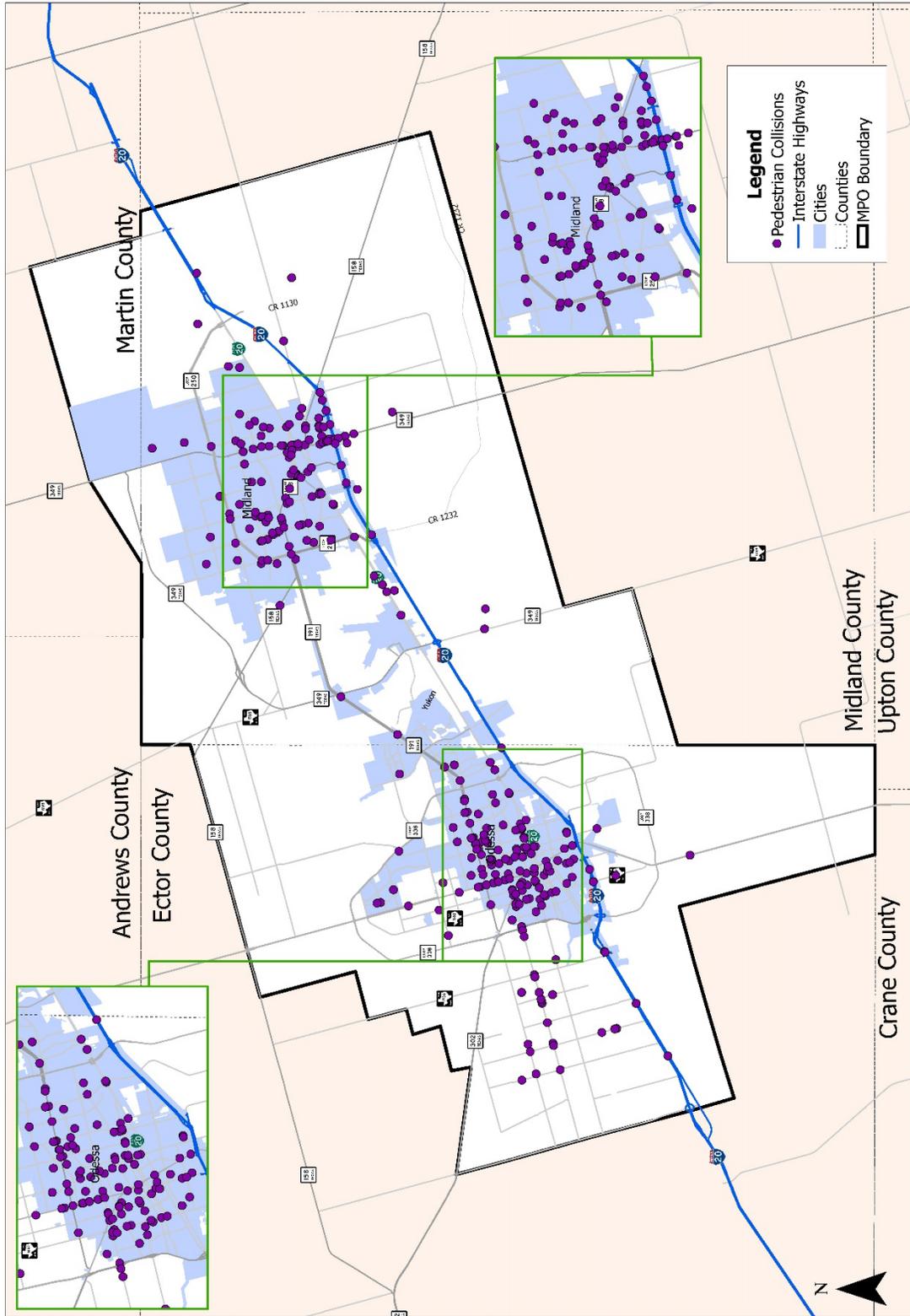
Table 4.8 2017-2021 Bicycle/Vehicle Collisions



Source: TxDOT CRIS



Map 4.4 2017-2021 Pedestrian & Vehicle Crash Locations

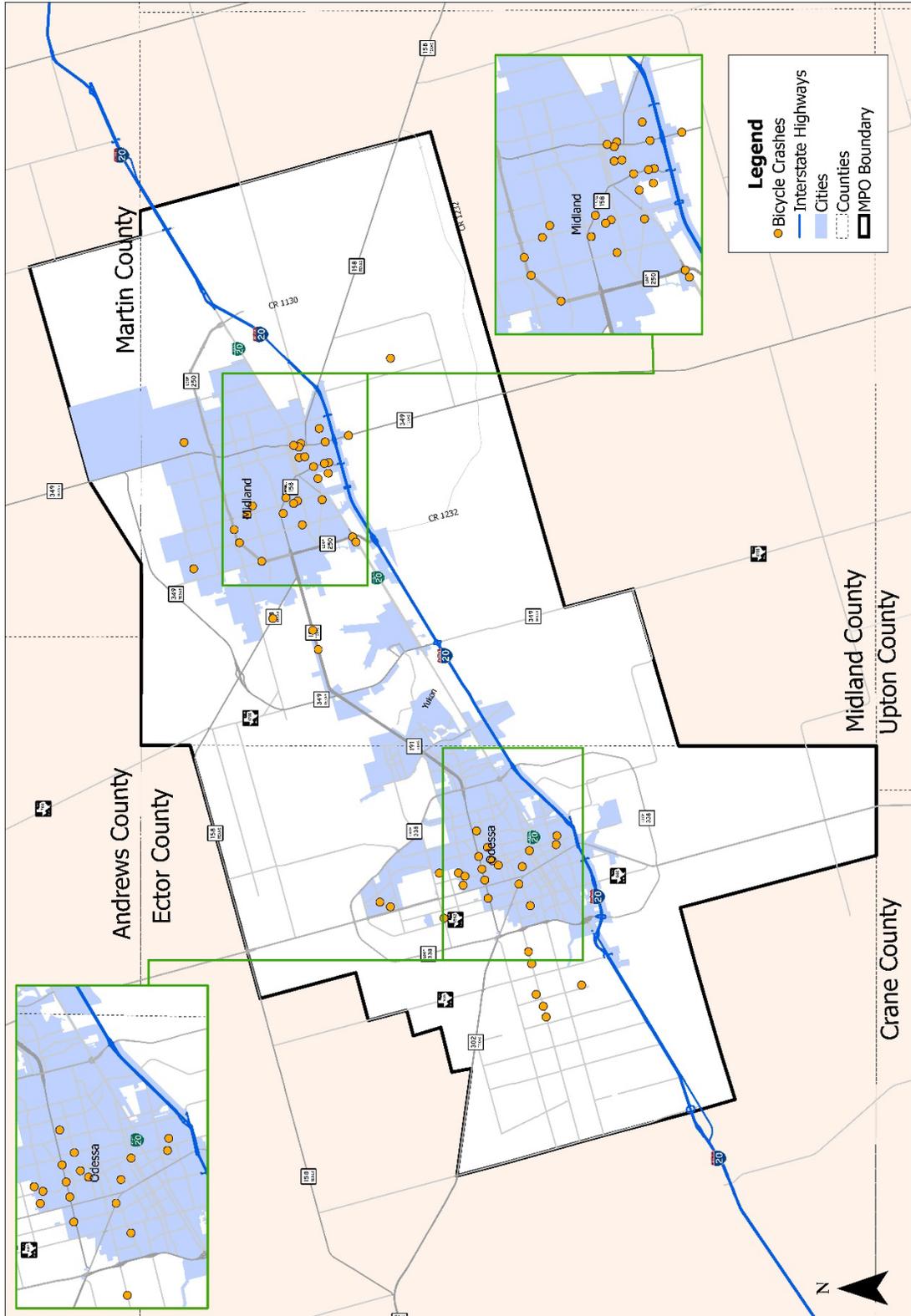


Permian Basin MPO Pedestrian and Vehicle Collisions 2017-2021

The map was developed by Permian Basin MPO for the purpose of aiding in regional transportation planning decisions and is not warranted for any other use. No warranty is made by Permian Basin MPO regarding its accuracy or completeness.



Map 4.5 2017-2021 Bicycle & Vehicle Crash Locations



Permian Basin MPO Bicycle and Vehicle Collisions 2017-2021

0 1.25 2.5 5 7.5 10 Miles

This map was developed by Permian Basin MPO for the purpose of aiding in regional transportation planning decisions and is not warranted for any other use. No warranty is made by Permian Basin MPO regarding its accuracy or completeness.



4.2.3 Transit

Transit Provider – EZ-Rider

Since launching services in 2003, EZ-Rider has maintained a high standard of safety with the well-being of its passengers as top priority. EZ-Rider believes in reducing congestion and increasing safety as part of its strategy *“To provide safe, reliable, affordable, and efficient public transportation with quality customer service solutions for the communities of Midland and Odessa”*.

At the beginning of 2018, an average of 1,049 passengers used public transportation per day in Midland and Odessa. Assuming each passenger would otherwise use a single occupancy vehicle, their decision to use EZ-Rider removed approximately 1,049 vehicles from the congested network roads. Removing single occupancy vehicles from the road system helps support a comprehensive effort to address safety issues and improve system reliability.

Because more people are using the bus system during peak times (7-9am/11-1pm/4-6pm), less vehicles are on the road networks that experience the same pattern of usage.

EZ-Rider’s fleet of 19 transit buses, 21 cutaway buses, and 3 support vehicles all contain security cameras and are maintained regularly by trained mechanics. These automotive technicians must have the ability to perform the necessary repairs and tasks required on large diesel type engines and transit equipment as well as smaller vehicles and gasoline type engines. Knowledge is required in the areas of diesel engine troubleshooting and repair, air brake systems, transmission service, suspension and steering systems, and basic electrical systems troubleshooting and repair. Previous experience in the areas of bus air conditioning, multiplex electronics, security and video systems, electronic revenue collection system service and repair, and electronic sign and voice equipment service and repair is preferred.



Bus operators must possess a CDL with Passenger and Air Brake endorsements. EZ-Rider provides all training for customer service, passenger care, safety and security, care for passengers with disabilities, system routes, and all other areas that are incidental of the position of bus operator. This training includes everything from air brake systems to winter driving to drug and alcohol use. Trainees also drive with an experienced operator who evaluates them on both the morning and afternoon runs. Both mechanics and bus operators must pass a DOT physical, drug screen, and police background investigation and are subject to random drug and alcohol testing.

On July 19, 2018, the Federal Transit Administration (FTA) published the Public Transportation Agency Safety Plan (PTASP), which requires certain operators of public transportation systems that receive federal funding under FTA’s Urbanized Area Formula Grants to develop safety plans that include the processes and procedures to implement the Safety Management System (SMS). The plan must include safety performance targets. Transit operators also must certify they have a safety plan in place meeting the

requirements of the rule by July 20, 2020. The plan must then be updated and certified by the transit agency annually.

Table 4.9 EZ-Rider Crashes

2020-2021	PREVENTABLE ACCIDENTS	NON- PREVENTABLE ACCIDENTS
OCTOBER	5-FIXED/1-MAINT	3-FIXED
NOVEMBER	0	1-FIXED/1-PARA
DECEMBER	0	2-FIXED
JANUARY	0	6-FIXED/1-PARA
FEBUARY	1-FIXED/2-PARA	1-FIXED
MARCH	2-FIXED	2-FIXED/2-PARA
APRIL	1-FIXED/1-PARA	1-FIXED/1-PARA
MAY	0	0
JUNE	0	2-FIXED
JULY	0	0
AUGUST	1-FIXED/2-PARA	0
SEPTEMBER	1-FIXED/1-PARA	0

2021-2022	PREVENTABLE ACCIDENTS	NON- PREVENTABLE ACCIDENTS
OCTOBER	0	0
NOVEMBER	1-FIXED	0
DECEMBER	0	0
JANUARY	1-FIXED	0
FEBUARY	0	0
MARCH	0	0
APRIL	2-FIXED	1-FIXED/2-PARA
MAY	3-FIXED	1-FIXED/1-PARA
JUNE	0	1-FIXED
JULY	0	0
AUGUST	0	1-PARA
SEPTEMBER	0	0

**“FIXED” indicates the accident involved a bus on our fixed route system; “PARA” is for our ADA paratransit service. “OFFICE” means the accident involved administrative staff (eg. not driving a route).*



4.2.4 Aviation

The Federal Aviation Administration office of Aviation Safety is responsible for the certification, production approval, and continued airworthiness of aircraft; and certification of pilots, mechanics, and others in safety-related positions.

Aviation Safety is also responsible for:

- Certification of all operational and maintenance enterprises in domestic civil aviation
- Certification and safety oversight of approximately 7,300 U.S. commercial airlines and air operators
- Civil flight operations
- Developing regulations

Source: https://www.faa.gov/about/office_org/headquarters_offices/avs/

4.2.5 Rail

Union Pacific

The Federal Railroad Administration (FRA) establishes minimum standards for all areas of railroad safety that Union Pacific (UP) must meet. The FRA has 28 compliance manuals that address a broad array of safety issues including rail safety, emergency management, railroad workplace safety, etc. These manuals can be found on the FRA website, www.fra.dot.gov

UP has provided rail service in Midland and Odessa for over 100 years and like most communities, the cities grew around the railroad. As regulated by the FRA, UP abides by the following procedures:

- Under the Train Horn Rule (49 CFR Part 222), the proceeding principles are applied:
 - Locomotive engineers must begin to sound train horns at least 15 seconds, and no more than 20 seconds, in advance of all public grade crossings.
 - If a train is traveling faster than 60 mph, engineers will not sound the horn until it is within ¼ mile of the crossing, even if the advance warning is less than 15 seconds.
 - There is a "good faith" exception for locations where engineers can't precisely estimate their arrival at a crossing and begin to sound the horn no more than 25 seconds before arriving at the crossing.



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- Train horns must be sounded in a standardized pattern of two long, one short and one long blast. The pattern must be repeated or prolonged until the lead locomotive or lead cab car occupies the grade crossing. The rule does not stipulate the durations of long and short blasts.
- The maximum volume level for the train horn is 110 decibels which is a new requirement. The minimum sound level remains 96 decibels.
- The signal lights along the tracks are block signals like highway traffic signals. They indicate to crews if preceding track “blocks” are clear of train traffic.
- Maximum authorized track speed through Midland and Odessa is 70 mph.

“The faster we can move trains through a city the less impact we have on vehicle traffic.” - Union Pacific, Manager of Public Safety.

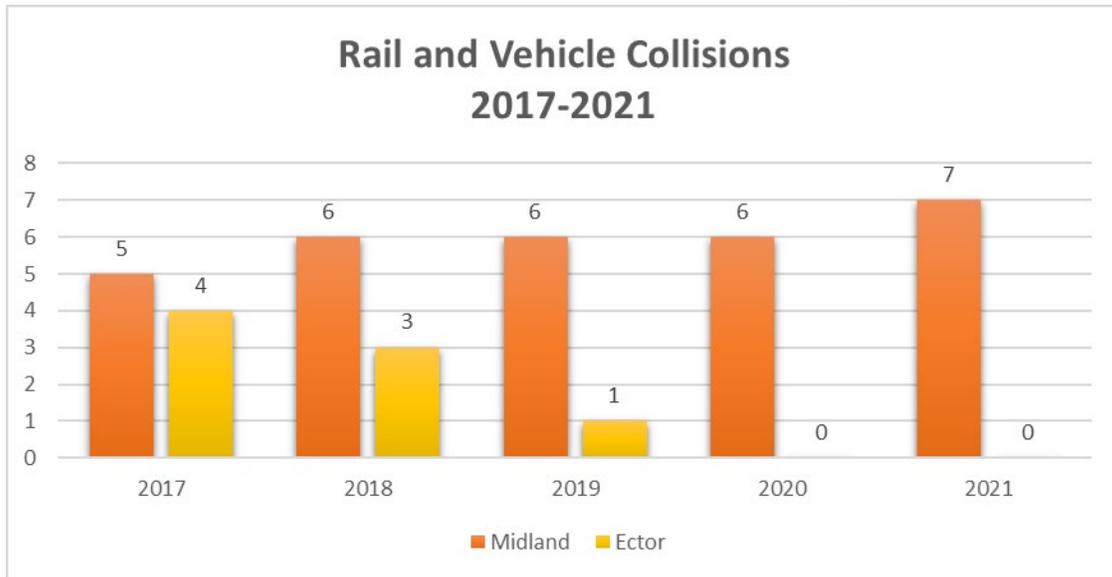
“We are always trying to improve our safety by inspecting our tracks, locomotives and cars carrying hazardous products, including crude oil. In addition, Union Pacific has extensive safety training and preparedness programs that involve our employees and first responders,” the UP spokeswoman said in a statement. (www.oaoa.com)

Any community can request grade crossing safety training, hazardous material response training and emergency response training free of charge.

Rail collisions, as defined by TxDOT, are if a crash involves or is related to a train, railcar, or railroad crossing. These collisions also include when signal poles/posts or crossing gates are struck. The top four contributing factors for rail collisions, per TxDOT, are failure to stop for train, driving under the influence of alcohol, disregard for stop signage or light, and driver inattention. **These factors generate 20% of all rail and vehicle crashes between 2017 and 2021 within the MPO boundary. Table 4.9 and Map 4.9 Indicate the number and location of rail and vehicle collisions for the period 2017 through 2021.**



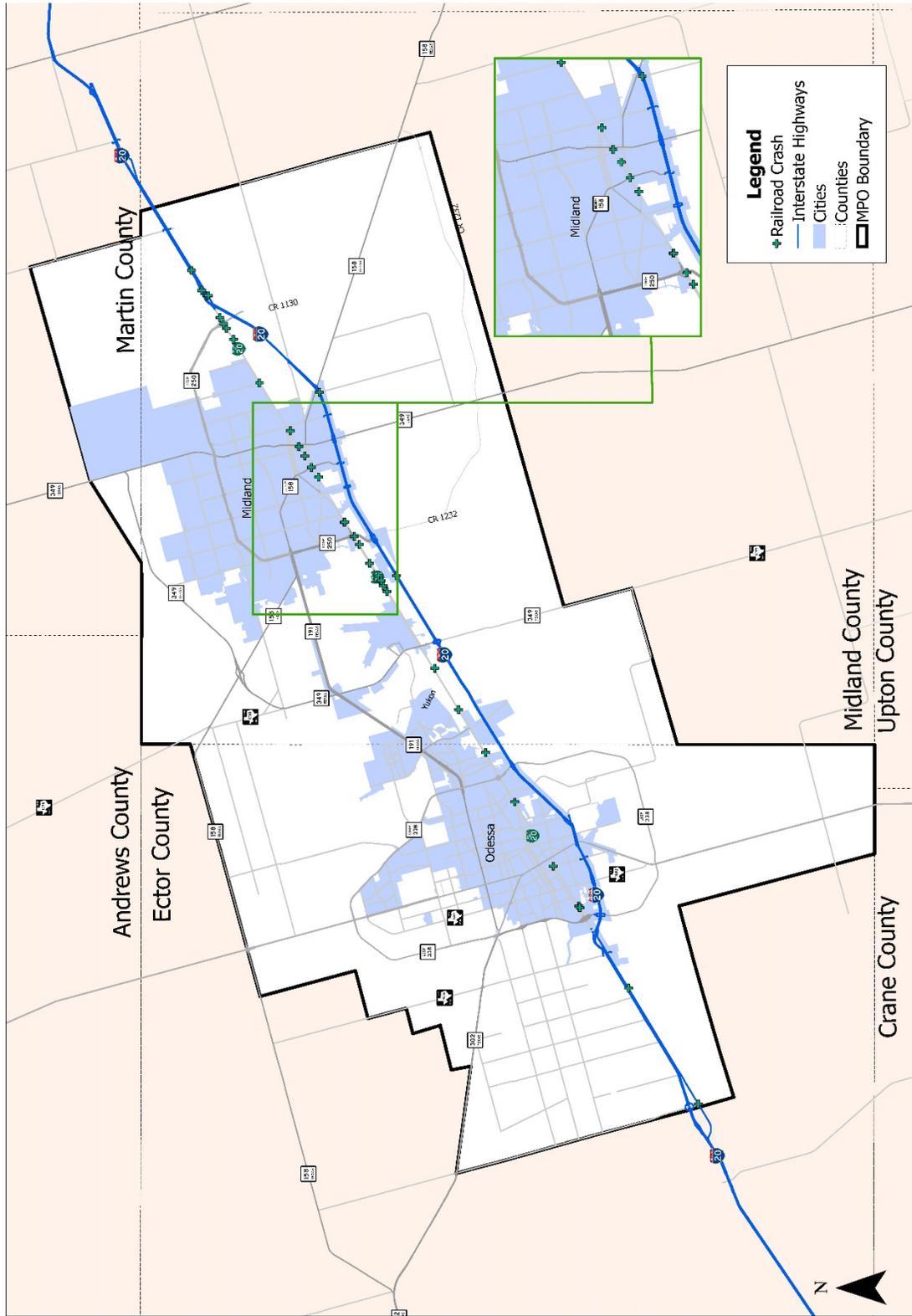
Table 4.10 Railroad Crashes in Midland and Ector Counties 2017-2021



Source: TxDOT CRIS



Map 4.6 Railroad Crashes in Midland and Ector Counties 2017-2021



Permian Basin MPO Railroad Crashes 2017-2021

4.3 Local Safety Initiatives

It is important to outline the steps local entities are taking to increase safety on the roads in the Midland Odessa region. Stakeholders involved in the transportation planning process view safety as a top priority and continuously strive toward improving the conditions of the transportation system. There are many agencies and individuals participating in long-range planning development and this section describes how these advocates are working to reduce crash rates and improve safety.

Permian Basin MPO

The MPO gathers and analyzes crash data from the TxDOT-Odessa District, city and county offices, and the TxDOT CRIS. Evaluating this information gives Permian Basin MPO the opportunity to discover traffic trends and root causes of crashes; therefore, making its member agencies and interested citizens aware of probable actions which may be taken to develop safety measures to implement into transportation planning. Additionally, Permian Basin MPO established PM1 (FAST Act and IIJA Act performance measures) safety targets in conjunction with TxDOT to address regional safety issues. Figures 4.2 and 4.3 exhibit those safety measures. Other FAST Act and IIJA Act performance measures are described in Chapter 7, Performance Based Planning.

Figure 4.2 TxDOT and MPO FY 2022 Safety Performance Targets and Measures

Performance Targets:

Target: Total number of traffic fatalities

2022 Target: To decrease the expected rise of fatalities to not more than a five-year average of 3,563 fatalities in 2022. The 2022 Target expressed as a 5-year average would be as follows:

Year	Target or Actual Data	Source
2018	3,648	FARS
2019	3,615	ARF
2020	3,896	CRIS
2021	3,384	Target
2022	3,272	Target
2022 Target expressed as 5-year average		3,563

As noted in the table above, the calendar year target for 2022 would be 3,272 fatalities.



Target: Total number of serious injuries

2022 Target: To decrease the expected rise of serious injuries to not more than a five-year average of 16,677 serious injuries in 2022. The 2022 Target expressed as a 5-year average would be as follows:

Year	Target or Actual Data	Source
2018	14,975	CRIS
2019	15,855	CRIS
2020	14,656	CRIS
2021	18,835	Target
2022	19,065	Target
2022 Target expressed as 5-year average		16,677

As noted in the table above, the calendar year target for 2022 would be 19,065 serious injuries.

Target: Fatalities per 100 million vehicle miles traveled

2022 Target: To decrease the expected rise of fatalities per 100 MVMT to not more than a five-year average of 1.27 fatalities per 100 MVMT in 2022. The 2022 Target expressed as a 5-year average would be as follows:

Year	Target or Actual Data	Source
2018	1.29	FARS
2019	1.25	ARF
2020	1.33	CRIS
2021	1.24	Target
2022	1.23	Target
2022 Target expressed as 5-year average		1.27

As noted in the table above, the calendar year target for 2022 would be 1.23 fatalities per 100 MVMT.



Target: Serious Injuries per 100 million vehicle miles traveled

2022 Target: To decrease the serious injuries per 100 MVMT to not more than a five-year average of 5.76 serious injuries per 100 MVMT in 2022. The 2022 Target expressed as a 5-year average would be as follows:

Year	Target or Actual Data	Source
2018	5.31	CRIS
2019	5.50	CRIS
2020	5.00	CRIS
2021	6.51	Target
2022	6.47	Target
2022 Target expressed as 5-year average		5.76

As noted in the table above, the calendar year target for 2022 would be 6.47 serious injuries per 100 MVMT.

Target: Total number of non-motorized fatalities and serious injuries

2022 Target: To decrease the expected rise of non-motorized fatalities and serious injuries to not more than a five year average of 2,367 non-motorized fatalities and serious injuries in 2022. The 2022 Target expressed as a 5-year average would be as follows:

Year	Target or Actual Data	Source
2018	2,104	FARS-CRIS
2019	2,291	ARF-CRIS
2020	2,238	CRIS
2021	2,560	Target
2022	2,642	Target
2022 Target expressed as 5-year average		2,367

As noted in the table above, the calendar year target for 2022 would be 2,642 non-motorized fatalities and serious injuries.



The MPO continues to coordinate with member agencies to provide Public Service Announcements (PSAs) through media outlets to inform the public of crash statistics and root causes of fatal and serious injury crashes. It is anticipated that providing this service will alter driver behavior and increase awareness on the region’s public road system. Permian Basin MPO holds a variety of events to involve the public and to receive feedback about safety including open houses, workshops, and networking meetings.

TxDOT

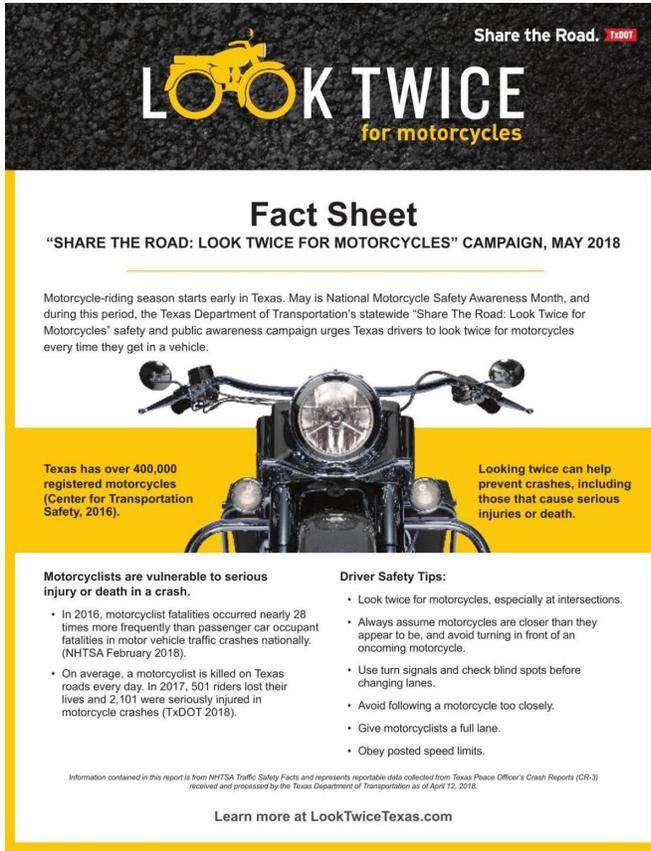
TxDOT’s mission is to work with others to provide safe and reliable transportation solutions for Texas. Along with that, one of its goals is to maintain a safe system. Through several resources, TxDOT is working to decrease fatalities and injuries sustained in crashes. All efforts to improve safety throughout the state are directly affecting conditions in Midland and Odessa. In addition to emphasizing safety in road design, TxDOT actively seeks to identify and respond to other safety needs.

TxDOT frequently releases public awareness campaigns designed to improve safety for drivers on Texas highways. The agency increases public awareness through campaigns dedicated to changing driver behavior and encouraging more awareness of surroundings. The table below describes the most recent PSAs and campaigns published and aired by TxDOT throughout the state.



Table 4.11 TxDOT Safety Campaigns

	<p>Effective September 1, 2013, drivers must move over or slow down when approaching TxDOT workers and vehicles that are stopped with overhead flashing blue or amber lights. This was an expansion from the original law that required drivers to yield to police, fire, and emergency vehicles.</p>
	<p>TxDOT has launched a public awareness campaign using outdoor and newspaper ads, radio PSAs and information cards to urge drivers to be aware of their surroundings and to remind everyone that when you drive friendly and drive safe, you save lives. TxDOT wants all motorists to remember these four important rules of the road:</p> <ul style="list-style-type: none"> <i>Watch for pedestrians and don't block crosswalks with your vehicle</i> <i>Slow down in work zones and watch for construction detours</i> <i>Keep an eye out for cyclists and never drive in a bike lane</i> <i>Adjust your speed to road conditions.</i>
	<p>The recent boom in oil and gas production across Texas has created thousands of jobs and many new opportunities for energy-producing areas. Unfortunately, with an influx in traffic in these areas, there also has been an increase in crashes. TxDOT has launched Be Safe. Drive Smart., a public education campaign to remind motorists to use extra caution when driving through energy work zones. TxDOT is partnering with oil and gas companies, the Texas Department of Public Safety and communities across the Permian Basin and Eagle Ford Shale energy sectors to promote roadway safety. The campaign includes safety messages on TV, radio, billboards, and gas pumps.</p>
	<p>April is National Distracted Driving Awareness Month and TxDOT is continuing our Talk. Text. Crash. campaign to raise awareness of the dangers associated with distracted driving and to encourage Texans to put down their cell phones while driving. Distracted driving, which includes distraction, driver inattention or cell-phone use, is becoming increasingly common and dangerous, causing traffic crashes and fatalities. In fact, nearly one in four crashes in Texas involves driver distraction. Although cell phone use is the most easily recognized distractions, all in-vehicle distractions are unsafe and can cause crashes or fatalities. TxDOT calls on all Texans to focus on the road and wait until arriving at their destinations to conduct non-driving activities.</p>
	<p>Safety belts save lives. That's why Texas is drawing the line for drivers and passengers: Buckle up or face a fine! Law enforcement officials statewide are participating in the "Click It or Ticket" campaign to increase safety belt use. All drivers and all passengers in the vehicle must be properly restrained or run the risk of a fine up to \$250. The National Highway Traffic Safety estimates that since its inception, the "Click It or Ticket" campaign in Texas has resulted in 3,962 fewer traffic fatalities while preventing 66,823 serious injuries and saving more than \$15 billion in related economic costs.</p>
	<p>Texas is a big energy-producing state with a lot of big trucks. Semis, trailers and tankers mix with rural farmers and ranchers to produce heavy truck traffic in the state's energy sectors. The Energy Sector Safety Campaign is under the umbrella of Be Safe. Drive Smart. and focuses on reminding drivers to be extra cautious when driving through Texas energy sectors. https://www.txdot.gov/driver/share-road/be-safe-drive-smart/energy-sector.html</p>
	<p>Not all anniversaries are happy and Nov. 7 is one of the saddest of all. Since Nov. 7, 2000, at least one person has died on Texas roadways every single day. In an effort to end this deadly 18-year milestone, the Texas Department of Transportation, through its #EndTheStreakTX campaign, reminds drivers it's a shared responsibility among roadway users and engineers to keep our roads safe. https://www.txdot.gov/inside-txdot/media-center/psas/end-streak.ht</p>



TxDOT’s statewide “Share the Road: Look Twice for Motorcycles”

Motorcycle safety and public awareness campaign urges motorists to look twice for motorcycles, especially at intersections, where motorcycle collisions most commonly occur.



TxDOT – Odessa District

TxDOT-Odessa District is an important partner in the Permian Basin MPO transportation planning process. As members of the Technical Advisory Committee (TAC) and the Policy Board, TxDOT staff offer recommendations and votes on transportation policy including safety. Below is a list of some of the recent major safety projects completed in either the MPOs MAB or in adjacent counties. Each of these projects includes professional and financial assistance from the cities and counties.

- A three-strand cable barrier fence has been built in the median of Interstate Highway 20 (IH 20). This safety measure is used to mitigate head-on collisions. Currently the fence covers 41 miles from West Odessa, through Midland and ending at Stanton, a town just outside the Permian Basin MPO MAB. Plans are to extend the fence westward about 11 miles to Penwell. The cable barrier immediately proved its worth by preventing several vehicles from crossing the center median of IH 20.
- Loop 338 improvements are being made on the northeast side of Odessa between Yukon Road and US Highway 385 (US 385). Instead of a two-lane road, the corridor will be a divided, four-lane section of roadway. In addition, signals will be added at the intersections of FM 554 and US 385. Permian Basin MPO helped fund this project which cost around \$8.8 million.



- SH 158 improvements are underway on the west side of Midland between SH 191 and Midkiff Rd. Improvements consist of widening lanes and rehabilitation.
- Improvements at the intersection of 52nd and 56th in Odessa. The improvements include reconstruction of the intersection and installation of traffic signals and illumination elements.
- Bridge repair of I-20 at SH 302 southbound and Loop 338 southbound.
- Roadway rehabilitation projects in the region include Yukon Road to SH 191 and 8th; SL 250 from I-20 West to Fairgrounds Road, SL 250 at CR 140, BS 349 in north Midland from SL 250 to the Martin County line; and US 385 in the vicinity of RM 1492 to name a few.

Union Pacific

Union Pacific also promotes public safety through UP CARES and offer UP CARES grants to provide financial support for community-owned railroad safety initiatives. Table 4.11 displays a few of the many safety campaigns UP has released.

In addition to the billboard campaigns, UP CARES initiative promotes pedestrian and driver safety through a variety of outreach channels:

- **Grade crossing education and enforcement** - during which motorists violating rail crossing signage and laws are educated about the dangers of such actions. Related "positive enforcement" initiatives reward drivers who operate safely at grade crossings.
- **Safety trains** - hosting local law enforcement, media and public officials and providing them the opportunity to ride in the locomotive cab and see traffic violations from a locomotive engineer's point of view. This also allows Union Pacific to connect with community leaders and help them better understand the railroad's safety focus.
- **Communication blitzes** - which educate the public via community events, media outreach and paid advertising. Media outreach coincides with safety trains in UP communities.



Table 4.12 UP Safety Campaigns

	<p>Union Pacific Railroad is launching a multi-media, bilingual public safety campaign aimed at encouraging Midland and Odessa, Texas, drivers to safely use railroad crossings. The advertising campaign utilizes radio spots and billboards to remind residents of key railroad safety tips.</p>
	<p>Union Pacific's 2013 public safety advertising campaign utilized billboards and public safety outreach to promote rail safety in 12 Union Pacific communities. These billboards reached more than 2 million people and the associated proactive media efforts reached more than 3 million people. Each billboard included the reminder "Always Expect a Train," along with an eye-catching visual and attention-grabbing headline.</p>

City of Midland

The City of Midland has developed plans for directly improving transportation safety within the city limits. City staff also works collaboratively with Midland County officials to meet safety standards throughout the area. Since 2015, the City of Midland has undertaken several traffic safety related projects. Highlights of some key projects are as follows:

- Beginning in early 2015, the City of Midland began a widespread effort to install flashing yellow arrow (FYA) left-turn displays at traffic signals, a measure which has been nationally recognized as providing for a safer operation for left-turning drivers, as well as allowing for more efficient signal operation. As of Fall 2019, there are FYA displays on more than 100 approaches at nearly 40 intersections across the City.

- Starting in 2018, the City, with funding support from the Midland Development Corporation, began installation of a new citywide radio system and central software platform to monitor and manage traffic signals from anywhere with access to the City’s computer network. This system allows staff to remotely troubleshoot issues and address concerns more quickly and accurately than was possible when technicians had to physically travel to the intersection.
- In 2018 and 2019, the City also installed a new, GPS-based emergency vehicle pre-emption system at many traffic signals, allowing fire trucks and ambulances to receive green indications during emergency runs to reduce response times and conflicts with cross-traffic at intersections.
- Over a two-year period, the City upgraded nearly 650 city-maintained streetlights with LED fixtures, improving energy efficiency and reducing outages and maintenance time.
- In the past several years, the City has partnered with TxDOT on three Highway Safety Improvement Projects (HSIP), including the complete reconstruction of the intersection of Wadley Avenue at A Street, as well as two other projects to improve safety at signalized intersections on Loop 250 and on Big Spring Street / Rankin Highway.
- The City has also continued its past program to install battery back-up units on traffic signals citywide. As of Fall 2019, a total of 97 of 115 city-maintained traffic signals had been equipped, reducing outages during short-duration power failures.
- High-intensity crosswalk warning systems have been installed at mid-block locations where significant numbers of pedestrians cross the city streets on A Street at Midland High School, Illinois Avenue at Midland Memorial Hospital, Illinois Avenue at Concho Resources’ campus, and Deauville Boulevard at Griffith Drive. A similar pedestrian crossing for students is also planned to go to construction in early 2020 on Wadley Avenue at Abell Junior High School.
- As part of several planned maintenance projects, the City has also taken the opportunity provided by roadway reconstruction work to improve pedestrian accessibility with significant sidewalk and ramp upgrades and has reduced vehicle speeds in neighborhoods by narrowing intersections and tightening some curb radii on local streets.

City of Odessa

The City of Odessa has increased safety by installing radar speed signs throughout the City. These signs make drivers aware of the speed they are going and expectantly encourages motorists to slow down if they are detected driving a speed above the posted limit.

The Odessa Police Department (OPD) began a more aggressive approach as a result of increased crashes. Officers no longer issue warnings or citations to reckless drivers; they arrest them. “The main thing that



we want to address is to remind the public that if somebody is driving recklessly [includes street racing], they will be arrested” an OPD corporal said in a statement to the Odessa American.

The City of Odessa is working towards implementing ITS solutions for its traffic signals soon. The city is taking an important first step in that effort by allocating funds in its Capital Improvement Program to invest in traffic signal software upgrades. This includes a new multi-year phase-in for a new emergency vehicle preemption system. This equipment allows better fire truck and ambulance tracking for quicker traffic signal; response to help get these vehicles to their destination in a timelier manner.

Midland County

When initiating safety projects, Midland County considers the safety concerns of all residents and businesses. The county has been emphasizing the restriping of roadways and signage. Additionally, the county is advocating a heavier presence of law enforcement to counteract unlicensed CDL drivers and unpermitted overweight vehicle movement within the county.

Ector County

In order to help protect county road travelers, Ector County’s Public Works department provides routine maintenance on all county roads. In addition, upgrades and restriping of county roads are performed when deemed necessary. All county signs are currently being replaced with signs having larger fonts and higher reflectivity. Culverts allowing water to flow under the road were replaced in numerous locations in Ector County.

4.4 Safety and Mobility Studies

As part of its **FY 2022 and FY 2023** Unified Planning Work Program the Permian Basin MPO identified important studies to be completed within the MTP Planning window.

IH 20 Corridor Access and Mobility Management (TxDOT)

TxDOT is continuing work with the MPO, and the TxDOT Odessa District to address mobility management along a 40-mile corridor within the Metropolitan Area Boundary to modernize the portion of I-20 inside the MPO boundary. This work commenced in the summer of 2015. Numerous committee and stakeholder meetings have been held and work will continue in FY 2022. The work is funded by TxDOT.

Interregional Planning and Environment Linkage (PEL) Study

This work will involve analysis and recommendation for the location of the potential outer loop to facilitate the movement of freight and people and for long range economic development. The study is on-going with anticipated completion in FY 2023.

Loop 338 Odessa Feasibility Study (TxDOT)

This work is currently underway. It is a feasibility study to analyze Loop 338 around Odessa to determine the possibility of constructing freeway segments. The work is funded by TxDOT.



Resiliency Plan

This work involves the preparation of a regional Resiliency Plan. Work will be led by the Texas A&M Transportation Institute (TTI) and will be completed in FY 2023.

