

Midland County
VISION ZERO
Safe Streets for Midland

MIDLAND COUNTY
Comprehensive Safety Action Plan

AUGUST 2024

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Midland County VISION ZERO
Safe Streets for Midland

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Expect More. Experience Better.

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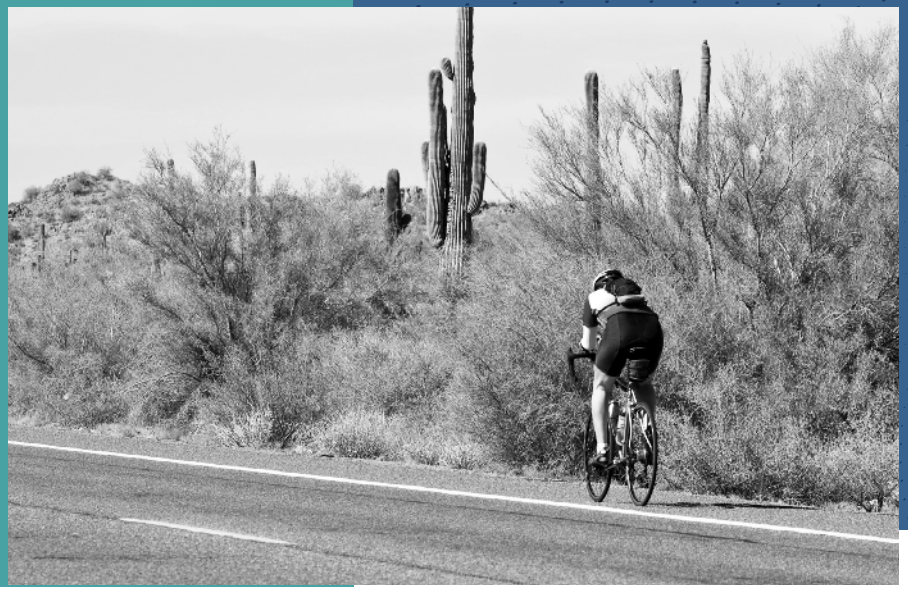

Executive Summary

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Executive Summary

Both the City of Midland and Midland County acknowledged the need and opportunity to eliminate fatal and serious crashes for all roadway users through a Comprehensive Safety Action Plan (CSAP). As such, the City and County embarked on a joint planning effort that leveraged shared and regional perspective and responsibility. Although the planning effort leveraged resources and expertise from both jurisdictions through several joint Vision Zero Task Force (VZTF) meetings, two separate documents were produced, specific to Midland City and Midland County. This report only outlines the Comprehensive Safety Action Plan for Midland County. The three-phase project approach kicked off in August 2023 and ran through adoption on August 6th, 2024. A timeline that outlines and describes each phase of the project is included in **Chapter 2**.

This Plan is organized into three parts, each containing a purpose statement and listing of chapters contained within. The parts of the plan correspond to the various phases of the planning process:

- Part I: Background and Purpose
- Part II: Midland County State of Safety
- Part III: Vision Zero Action Plan

The Safe Streets and Roads for All (SS4A) program is a primary driving force behind the development and funding of the CSAP, which is characterized and guided by the Federal Highway Administration's (FHWA) Safe Systems Approach. The guiding principles for this plan are viewed through a Vision Zero lens, which aims to eliminate all traffic fatalities and severe injuries, prioritizing the principles of safe road design, enforcement, education, and community engagement to achieve this goal. The guiding principles of the Safe Systems Approach and this document are detailed in **Chapter 1**, but can more generally be summarized as follows:

DEATH OR SERIOUS INJURY IS UNACCEPTABLE

HUMANS MAKE MISTAKES

HUMANS ARE VULNERABLE

RESPONSIBILITY IS SHARED

SAFETY IS PROACTIVE

REDUNDANCY IS CRUCIAL

With these guiding principles in mind, the Task Force worked together to establish a mission that clearly communicates the reason for being and declare how this Plan aims to serve the community and stakeholders into the future. This vision for both the Midland City and Midland County Comprehensive Safety Action Plans is:

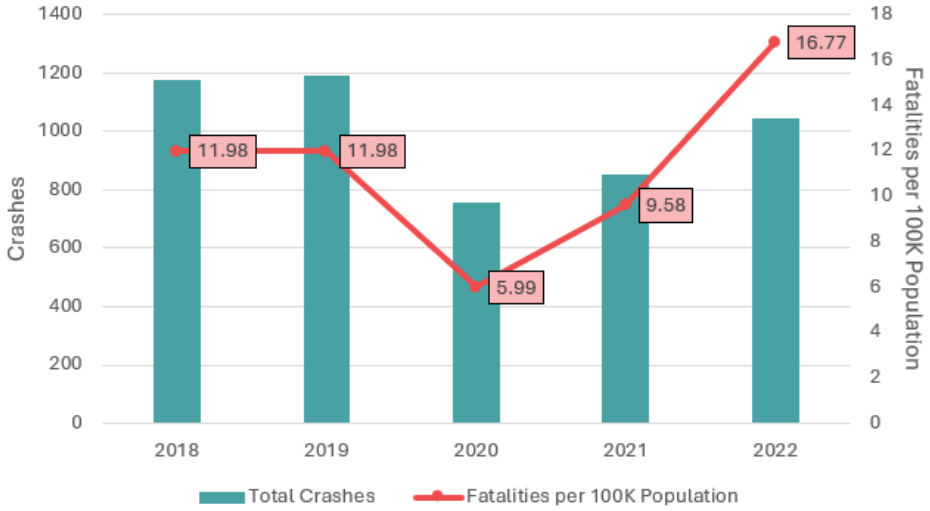
> *Eliminating deaths on Midland's roads by **BUILDING** complete streets, **ENGAGING** the community, and **INNOVATING** safer solutions to protect all users.*

To make this mission a reality, Midland County's Commissioner Court, along with the Task Force and staff commit to the overall goal of improving safety in Midland by adopting a Vision Zero resolution on August 6th, 2024. The Vision Zero Resolution is provided in **Appendix Item A**.

Part II of the Plan, Midland County State of Safety, establishes an empirical understanding of existing conditions and key safety considerations, laying the foundation for **Part III** of the Plan. **Chapter 3** analyzes the Countywide crash history, details safety emphasis areas, and reviews the equitable state of safety throughout the county.

Countywide crash trends revealed that the Midland County's total crashes peaked in 2019, with a significant decrease in 2020, largely due to the COVID-19 pandemic (**Figure i**). However, since 2020, total crashes in Midland County have increased each year, with fatal crashes per 100,000 population spiking dramatically in 2022.

Figure i: Midland County Total Crash Summary (2018-2022)



To drill down and better understand the causative factors of these crashes, eight safety emphasis areas were analyzed and compared to the statewide observance rate. The eight safety emphasis areas are detailed in **Chapter 3**, but are summarized and compared to the State observance rates in **Table i**.

Table i: Midland County vs Texas Emphasis Area Crash Percentage

Emphasis Area	Midland	Texas	Difference
Roadway/Lane Departure	36%	35%	**1%**
Intersection-Related	42%	32%	**10%**
Red Light/Stop Sign Running	34%	12%	**22%**
Speed-Related	32%	33%	**-1%**
Impaired Driving	23%	18%	**5%**
Unrestrained Persons	18%	17%	**1%**
Vulnerable Road Users	16%	13%	**3%**
Distracted Driving	12%	15%	**-3%**

Key takeaways when comparing Midland to Texas crash percentage by emphasis area include:

LANE DEPARTURE, INTERSECTIONS, AND SPEED-RELATED CRASHES ARE THE ***TOP CONTRIBUTORS*** TO SEVERE CRASHES IN MIDLAND COUNTY, SIMILARLY THE STATE OVERALL.

RED LIGHT/STOP SIGN RUNNING IS A SAFETY CHALLENGE ***UNIQUE*** TO BOTH THE CITY AND MIDLAND COUNTY.

IMPAIRED DRIVING AND UNRESTRAINED PERSONS ARE FAR MORE COMMON CAUSES OF ***SEVERE CRASHES*** IN THE COUNTY.

DISTRACTED DRIVING IS NOT AS SEVERE OF AN ISSUE IN THE COUNTY COMPARED TO THE STATE.

VULNERABLE ROAD USER CRASHES ARE LOWER THAN THE STATE, BUT LIKELY DUE TO ***DECREASED DEMAND FOR BICYCLE AND PEDESTRIAN FACILITIES*** IN THE STUDY AREA.

An additional key consideration of **Chapter 3** is Equity & Safety in Midland County. The analysis considered equity and disadvantaged areas of Midland County to better improve historically underserved parts of the community. Disadvantaged areas were identified through an analysis conducted by the United States Department of Transportation. The analysis included population characteristics for five categories:

- Transportation Insecurity
- Environmental Burden
- Social Vulnerability
- Health Vulnerability
- Climate and Disaster Risk Burden

The census tracts within Midland County that are considered disadvantaged are primarily located on the west side of the county. The analysis revealed that while approximately 20% of the Midland County population lives in disadvantaged areas, between 2018 and 2022, a disproportionate amount (45%) of Fatal Injury (K) and Suspected Serious Injury (A) Crashes occurred in those areas

Table ii: Countywide vs Disadvantaged Crash Severity

Crash Severity	Countywide	Disadvantaged	Difference
K - FATAL INJURY	0.4%	0.7%	0.3%
A - SUSPECTED SERIOUS INJURY	1.8%	2.5%	0.7%
B - SUSPECTED MINOR INJURY	10.3%	10.8%	0.5%
C - POSSIBLE INJURY	15.7%	15.0%	-0.7%
N - NOT INJURED	66.4%	64.1%	-2.3%
99 - UNKNOWN	5.4%	6.8%	1.5%

A high-injury network (HIN) is a network of roads, intersections, or other transportation infrastructure, that has a higher-than-average rate of crashes resulting in injuries or fatalities. Identifying and prioritizing facilities within the HIN is a crucial step in enhancing road safety to reduce fatal and severe crashes. **Chapter 4** details the methodology used to calculate the following HIN, as well as detailing the individual segments.

Part III of the plan details countermeasures and recommendations for study corridors and systemic improvements as part of the Vision Zero Action Plan. This includes policies, programs, and various strategies and actions that provide improvements for specific safety emphasis areas in Midland County. **Chapter 5** recommends three road segments on the High-Injury Network were selected as priority corridors to make targeted recommendations that improve safety on the County's most unsafe corridors today (Table iii). The highest priority study corridors were selected with input from County staff and scored based on equity, engagement, and feasibility.

Table iii: Study Corridors

Study Corridor	Limits		Length (mi)	Crashes			Daily Volumes
	From	To		K	A	Total KAs	
1. SH 158 (Garden City Highway)/CR 1140	CR 120	FM 1213	1.89	2	7	9	17,900
2. SH 349 (Rankin Highway)	IH-20	CR 130	2.04	5	11	16	39,600
3. FM 1788	CR 140	CR 150	1.02	2	1	3	8,400
		Total	**4.95**	**6**	**23**	**28**	

Targeted recommendations at study corridors provide detailed and crafted recommendations for specific areas of Midland County that have varying crash history, road geometry, intersection control, and land use context. Additionally, systemic recommendations are organized by safety emphasis area and provide a countermeasure toolbox to make Countywide improvements.

Systemic countermeasures can be implemented in all areas of the city to improve safety, not limited to previous recommendations and study corridors. The corresponding toolbox in **Chapter 5** provides a comprehensive collection of strategies and interventions designed to address specific traffic safety issues and challenges. Included in this table are the crash modification factors (CMF) for each countermeasure. Crash modifications factors are essential for determining the expected number of crashes after the countermeasure is implemented on a roadway or intersection. There is also a summary of these countermeasures in **Table iv**.

Table iv: Systemic Countermeasure Toolbox

Safety Emphasis Areas	Raised Median	Lane Designation Markings and Signs	High Contrast Lane Markings	Wide Edge Lines	Roadway Reconfiguration	Speed Feedback Signs	Roundabouts	Bike Lanes	Retroreflective Backplates	Corridor Access Management	Rectangular Rapid Flashing Beacon	Improve Signing and Visibility at Signals	Pedestrian Hybrid Beacon	Sidewalks
CMF	0.29	0.75	0.75	0.97	0.53	0.95	0.59	0.435	0.85	0.93	0.31	0.732	0.883	0.598
Roadway & Lane Departure	●	●	●	●	●									
Speed-Related	●				●	●	●	●						
Intersection-Related		●					●		●	●	●	●		
Vulnerable Road Users	●				●			●			●	●	●	●
Distracted Driving		●	●	●				●	●			●		
Impaired Driving	●	●	●	●				●	●			●		
Unrestrained Persons	●				●	●	●	●						

Table v: Action Plan Strategies by Emphasis Area

Roadway and Lane Departure (LD)
Strategy LD1. Partner with TXDOT to open new rest stops in Midland County.
Strategy LD2. Update design standards to address deficiencies that may contribute to roadway/lane departure crashes.
Strategy LD3. Increase awareness on the dangers of drowsy driving.
Speed-Related (SP)
Strategy SP1. Implement a campaign encouraging safe driving behaviors.
Strategy SP2. Deploy engineering interventions to prevent speeding.
Strategy SP3. Establish a targeted enforcement program for speeding.
Intersection-Related (IN)
Strategy IN1. Update intersection design standards to foster safer intersections.
Strategy IN2. Update signal timing and infrastructure Countywide.
Strategy IN3. Ensure all future and existing intersections meet new safety standards.
Strategy IN4. Develop a campaign strategy to remind drivers to practice safe driving behaviors at intersections
Distracted Driving (DD)
Strategy DD1. Update existing roadway design standards to help minimize distracted driving crashes and their severity.
Strategy DD2. Develop a campaign that discourages cell phone use when driving.
Strategy DD3. Develop enforcement strategies to mitigate for cell phone use when driving.

Impaired Driving (ID)
Strategy ID1. Spread awareness about the consequences of impaired driving.
Strategy ID2. Encourage local event venues to provide alternate transportation options.
Strategy ID3. Develop an understanding of impaired driving citation patterns.
Strategy ID4. Acquire substance abuse and mental health help resources for the County.
Unrestrained Persons (UP)
Strategy UP1. Generate awareness on the consequences of not using a seatbelt.
Strategy UP2. Increase the public's knowledge on correct car seat selection.
Strategy UP3. Establish a targeted enforcement program for non-seatbelt usage.
Vulnerable Road Users (VRU)
Strategy VRU1. Increase drivers' awareness of vulnerable road users.
Strategy VRU2. Improve the quality of multimodal facilities in future County projects.
Strategy VRU3. Create an active transportation plan for the County.
Post Crash Care (PC)
Strategy PC1. Improve EMS resources and training in the Region.
Strategy PC2. Supplement staff in providing crash clearing efforts.
Strategy PC3. Determine future connections that aid in servicing EMS response in areas with low connectivity.

Chapter 6 outlines the action plan, which is comprised of policies and programs to create solutions for systemic issues and are organized by the eight safety emphasis areas and focus on eliminating deaths on Midland roads. To make goals easier to achieve for each emphasis area, each goal has strategies and actions outlined. The corresponding table provides each strategy outlined in the action plan for each emphasis area (Table v).

Chapter 7 expands on the strategies outlined in Chapter 6 and identifies partners, timeframe, and funding sources into an Implementation Matrix. Finally, the annual reporting responsibility for Vision Zero and progress on projects made publicly available is outlined.

Background & Purpose

Part I: Background & Purpose

Introduction

The Midland County Comprehensive Safety Action Plan (CSAP) was developed over a one-year period to help Midland County achieve their goal of zero traffic-related fatalities on roads in the county. The CSAP for Midland County will assist County Staff, County Commissioner's Court, and other local partners in making informed decisions when identifying projects that will enhance the safety of all roadway users in the greater Midland area. This portion of the document (Part I of III) includes several chapters that detail the plan's purpose and process.

> The Vision Zero movement utilizes a **paradigm shift** to address how communities take ownership of traffic-related injuries and fatalities. **By choosing to take ownership** and dismissing the notion that injuries and fatalities are simply a byproduct of modern transportation networks, **real change can begin to take place through the Vision Zero lens.**

Chapter 1. Purpose

Chapter 1 outlines the guiding principles of the Midland County CSAP, and highlights the importance of each principle, and how they will be utilized to create safer streets for all users. To accomplish the Safe Streets and Roads for All (SS4A) campaign and initiatives, the guiding principles, Vision Zero, the Safe System Approach, and the Six E's of Safety, will each play a vital role.

Guiding Principles

Vision Zero

Vision Zero is a traffic safety initiative that aims to eliminate all traffic fatalities and severe injuries, prioritizing the principles of safe road design, enforcement, education, and community engagement to achieve this goal. It emphasizes a holistic approach to transportation safety, recognizing that human error is inevitable and that road systems should be designed to minimize the consequences of mistakes. It represents a comprehensive approach to improving quality of life, safety, and mobility of communities through crash-related injury reduction.

The Vision Zero movement utilizes a paradigm shift to address how communities take ownership of traffic-related injuries and fatalities. By choosing to take ownership and dismissing the notion that injuries and fatalities are simply a byproduct of modern transportation networks, real change can begin to take place through the Vision Zero lens.

Safe System Approach

The Safe Systems Approach was pioneered in the 1990's by Swedish road safety expert, Claes Tingvall. The Safe Systems Approach is the framework and mechanism by which this Vision Zero Action Plan can be implemented. There are six key principles that can be utilized to implement the elements of the Safe Systems Approach, and are as follows:

DEATH OR SERIOUS INJURY IS UNACCEPTABLE

Focusing attention on preventing fatal and sever crashes over minor crashes so residents are better protected on the public roads.

HUMANS MAKE MISTAKES

Human error is inevitable, inevitably leading to crashes, but a roadway system that accounts and accommodates for this fact can mitigate the effects (avoiding serious injury or death).

HUMANS ARE VULNERABLE

Human tolerance to crashes is a recognized and measurable benchmark (kinetic energy transfer can be measured) and should be incorporated into design considerations.

RESPONSIBILITY IS SHARED

No single party is responsible for crash prevention alone, but collectively all parties are responsible. This includes transportation designers and engineers, users, law enforcement, vehicle manufacturers, and publicly appointed decisionmakers.

SAFETY IS PROACTIVE

Rather than responding to tragedy, measures should be taken beforehand to identify and mitigate potential risks.

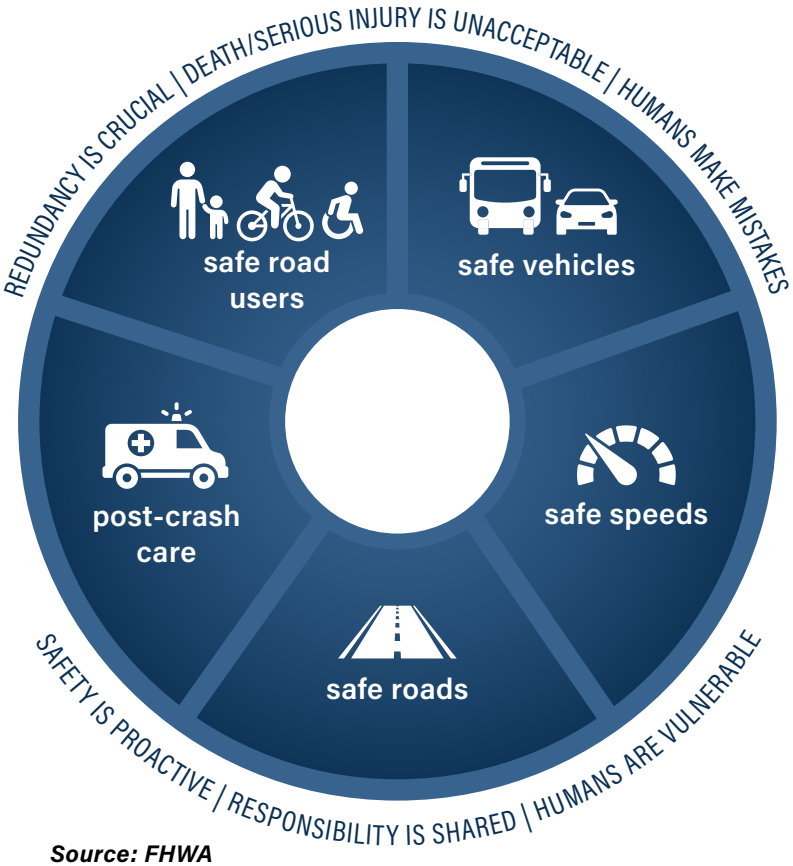
REDUNDANCY IS CRUCIAL

Affecting change requires strengthening of all Safe Systems elements. In the case that one element fails, redundancy prevents systemwide failure, ensuring people are protected.

A principles-based approach intended to eliminate serious and fatal injuries, the Safe Systems Approach relies on accommodating for human mistakes and keeping potential impacts on the human body at tolerable levels. Accommodating for human mistakes can be accomplished through roadway design features and technological advancements in vehicles (lane departure assist, autonomous emergency breaking, etc.). Efforts to mitigate or lessen the physical impacts on the human body include reducing speeds, physically separating automobiles from alternative mode users, as well as technological advancements in vehicles. There are five complementary objectives outlined by the U.S. Department of Transportation (USDOT) that correspond and support implementation of the Safe Systems Approach as provided in **Figure 1**:

1. **Safe road users** bear the burden of responsibility for complying with rules and regulations of the roadway.
2. **Safe vehicles** are responsible for mitigating or preventing the potential impacts of crashes. Active safety measures can help prevent crashes from occurring, while passive measures can lessen the implications of a crash.
3. **Safe speeds** have a direct correlation with increased rate of survival in crashes. Reducing speeds reduce impact, improve visibility, and afford drivers additional braking time.
4. **Safe roads** are not defined by their design alone. Rather, the road design, construction, maintenance, operation, and countermeasures work collaboratively to improve safety.
5. **Post-crash care** accounts for the actions of those that respond to a crash, whether it be emergency services, law enforcement, or clean up.

Figure 1: The Safe System Approach



Source: FHWA

The Six "E's" of Safety

Similar to how the Safe Systems Approach works, the Six E's of safety are components of an integrated and comprehensive framework. While every community varies in its composition and understanding of safety, the Six E's can be deployed at all levels to enhance the user experience and improve safety. The Safety Action Plan (Part III) of this report utilizes each of the Six E's as an organizing approach to implementation.

ENGINEERING

Engineering projects and interventions in support of Vision Zero may be implemented through the built environment to improve safety. Calming traffic and improving safety for all users is the primary goal. Examples of engineering projects proven include the implementation of safety countermeasures, or traffic calming measures that reduce speeding.

EDUCATION

Education can improve safety by raising awareness of transportation choices, furthering, or establishing the benefits of multimodal transportation, and demonstrating the proper way to utilize the system, thus reducing the margin of error.

EVALUATION

Evaluation can support both proactive and responsive measures. Understanding the when, where, and why of crashes allows us to respond to historical trends and adjust improve future safety. Similarly, careful evaluation can help head off potential issues before they reach greater severity.

EQUITY

Equity efforts must be made to acknowledge and rectify the imbalance and additional burden that disadvantaged populations carry. Vulnerable and disadvantaged populations are historically hard-to-reach and deserve access to the same information and infrastructure as everyone else.

ENFORCEMENT

Enforcement can ensure that traffic laws and regulations are being followed by system users, while also ensuring that profiling does not occur. Enforcement can also target and prioritize problem behaviors like speeding and other dangerous behavior over minor infractions.

ENCOURAGING

Encouraging the community to further their knowledge and understanding of safety principles can be fun and interactive. Events and activities can support and promote better behavior.

This chapter details the project timeline and highlights the **key takeaways and perspectives gathered** from the **public engagement efforts** throughout the length of the project.

Chapter 2. Process

This chapter details the project timeline and highlights the key takeaways and perspectives gathered from the public engagement efforts throughout the length of the project. Additionally, guidance from the Vision Zero Task Force (VZTF) and other County leadership was pivotal in the creation of the County's CSAP.

Coordination with Midland City CSAP

During the early stages of the County CSAP, Midland County and the City of Midland worked jointly to kick-off their respective CSAP projects. The first two VZTF meetings were joint meetings where important local information was exchanged between the City and County. This partnership was to ensure a unified effort toward meeting their shared goal; zero deaths by 2050.

Project Timeline

As one of the first counties in the region to develop a CSAP, Midland County serves as a leader for safety efforts in the region alongside the City of Midland. The partnership between the City, County, and other stakeholders plays a critical role in setting safety as a priority for the region and why it should be. Midland County CSAP's development was divided into three primary phases as detailed below:

PHASE I
DISCOVERY

- Kick-off
- Visioning
- Public Involvement
- Existing Conditions

PHASE II
DATA ANALYSIS

- Crash Trends & Statistics
- County High-Injury Network
- Field Observations
- Countermeasure Identification

PHASE III
DRAFT PLAN

- County Action Plan
- Adoption

The Discovery Phase of the project consisted of the project initiation and establishing a strong foundation for the rest of the project. Prior to the first VZTF meeting, data was acquired from all relevant parties to ensure that all necessary information was available for the quantitative analysis in the following phase. The initial VZTF meeting was conducted on September 7, 2023, to establish a qualitative understanding of the project, roles and responsibilities of the committee and consulting team members, as well as establishment of a singular mission statement. During this initial phase, a project website was also launched to create a centralized space to solicit feedback and generate awareness for the project and future public engagement events.

For the Data Analysis Phase of the project, both a qualitative and quantitative analysis was utilized. The quantitative analysis consisted of various forms of crash analyses and the creation of the High-Injury Network (HIN) model. Qualitative analysis for this project included field observations, countermeasure identification, and input from the VZTF and public.

During the final phase, results and key takeaways from the quantitative and qualitative analyses were utilized to develop an implementation plan that works towards Vision Zero. The VZTF and public were shown the initial plan and provided input on the direction of the Action Plan throughout this phase. Utilizing feedback and input from the public, the draft plan was finalized and celebrated through adoption on August 6th , 2024.

A timeline for Task Force and Public Meetings for the County's CSAP is shown in the table below:

	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
PHASE I: DISCOVERY												
TF Meeting 1: Kick-Off & Visioning		●										
TF Meeting 2: Public Involvement & Existing Conditions			●									
Public Engagement Pop-Ups (Vision & Existing Conditions)			●									
PHASE II: DATA ANALYSIS												
TF Meeting 3: County High-Injury Network							●					
TF Meeting 4: County Strategic Session										●		
PHASE III: DRAFT PLAN												
TF Meeting 5: Draft County CSAP											●	
Public Engagement Pop-Up (Draft County CSAP)											●	
Adoption Celebration												●

● = Meeting Date

Vision Zero Task Force

The Vision Zero Task Force (VZTF) was established to help guide the planning process, build consensus and ownership of the plan, and provide critical feedback at major milestones. The VZTF was comprised of both City and County staff from varying departments and additional public representatives from local organizations. Creating a VZTF that combined both City and County staff was a conscious effort to unite both the City and County Comprehensive Actions Safety Plans. Although separate City and County subcommittees were created to evaluate and respond to issues directly related to their jurisdictional representation, the first two meetings were held jointly between the two groups (**Figure 2**). The initial two task force meetings were held on the following days:

- **Meeting 1**: Kick-Off & Goal-Setting – September 7, 2023
- **Meeting 2**: Public Engagement & Map Activity – October 26, 2023

The three VZTF County Subcommittee meetings slated to occur during Phases II and III were held on the following dates:

- **Meeting 3**: Countywide Analysis & High-Injury Network – February 22, 2024
- **Meeting 4**: County Strategic Session - May 29, 2024
- **Meeting 5**: County CSAP Draft Review – June 20, 2024

Members of the VZTF served as champions and ambassadors of the plans throughout the process and will continue to generate awareness and educate the public on the plan for implementation. Through several work sessions during Phase I with the VZTF, a mission statement was established to communicate its reason for being and declare how it aims to serve the community and stakeholders moving forward.

> *Eliminating deaths on Midland's roads by **BUILDING** complete streets, **ENGAGING** the community, and **INNOVATING** safer solutions to protect all users.*

After both the City and County Comprehensive Safety Action Plans are adopted, the subcommittees will reconvene and celebrate their progress and prepare to enter the implementation phase of these plans to continue working towards eliminating deaths on Midland's roads.

Figure 2: Photos from VZTF Meetings 1-3

Public Engagement

Public engagement for the Midland County Comprehensive Safety Action Plan involved online engagement opportunities, pop-up events, and dissemination of promotional materials and advertisements. To ensure that this plan was reflective of the safety concerns of all who use Midland's roads, residents, community leaders, and other key stakeholders were actively involved. Additionally, all online engagement materials are available both in English and Spanish to ensure an equitable public engagement experience as shown in **Figure 3**.

Online Engagement

Social Pinpoint was used throughout the plan's development and served as a central online hub for information on upcoming events, links to surveys, and housed the plan itself. Through the utilization of online surveys, Midland County residents had two opportunities to provide input on their thoughts on safety within the County. This effort received helpful feedback from both residents and stakeholders in Midland. Furthermore, the website served as a joint website for both the City and County CSAPs (**Figure 4**).

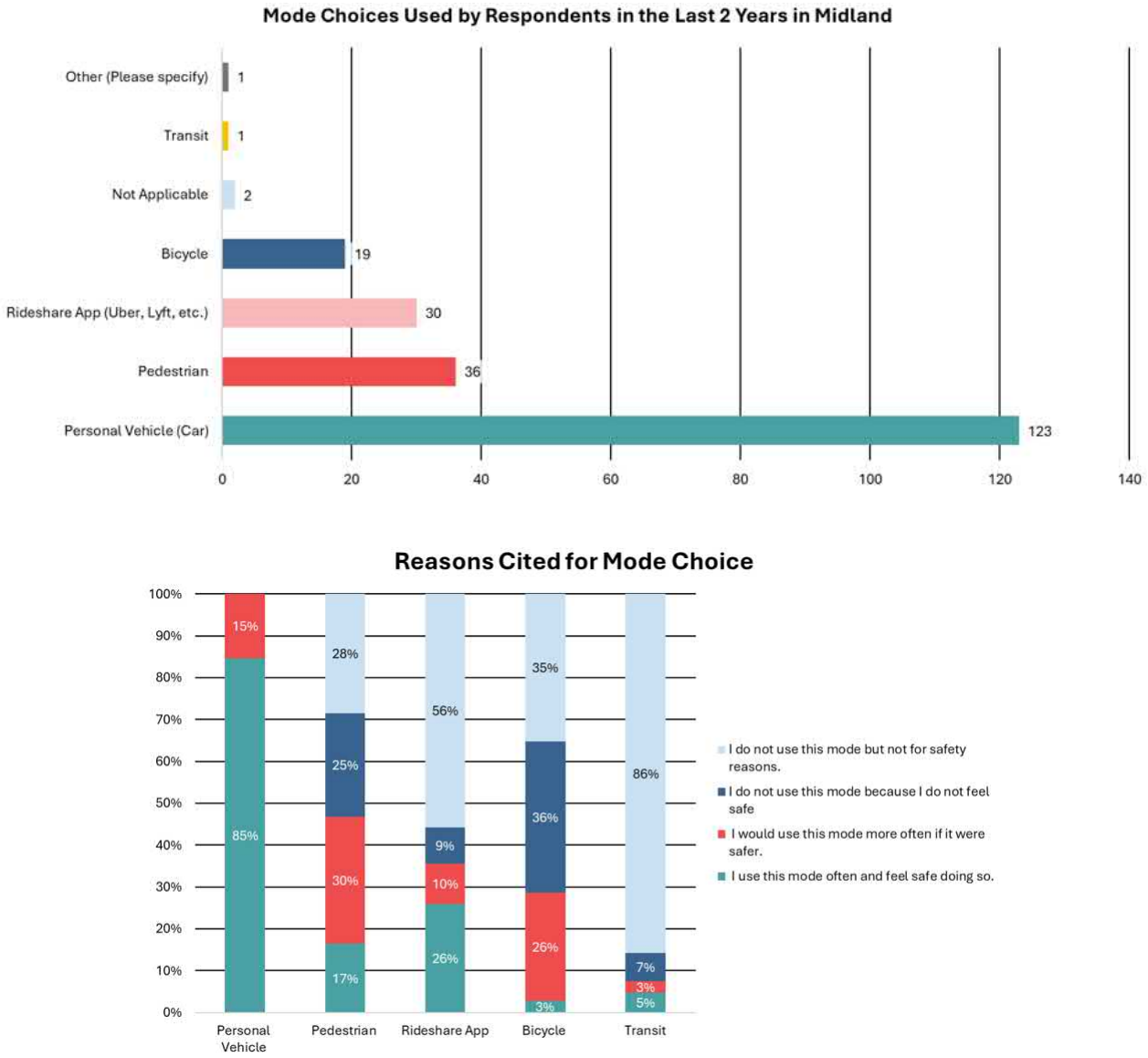
Figure 3: Business Cards Advertising the Project in Both English and Spanish

Figure 4: Project Website Home Page

Roadway Safety Survey

The Midland Vision Zero Roadway Safety Survey aimed at collecting information on demographics, commute, mode choice, and roadway safety concerns. The survey was comprised of 24 questions, divided into 4 sections. This survey was available on the project website and the in-person public events. In total, the Roadway Safety Survey received 371 responses, 125 (34%) of which indicate that they live or work within Midland County. As summarized in **Figure 5**, within the past 2 years Midland County residents state their primary form of transportation are personal vehicles (cars) while walking or using rideshare services are the next most common mode choices. Furthermore, over half of respondents (55%) stated they would walk or do not walk around Midland County due to safety issues while 62% held the same opinion regarding bicycling in Midland County.

Figure 5: Travel Mode Statistics

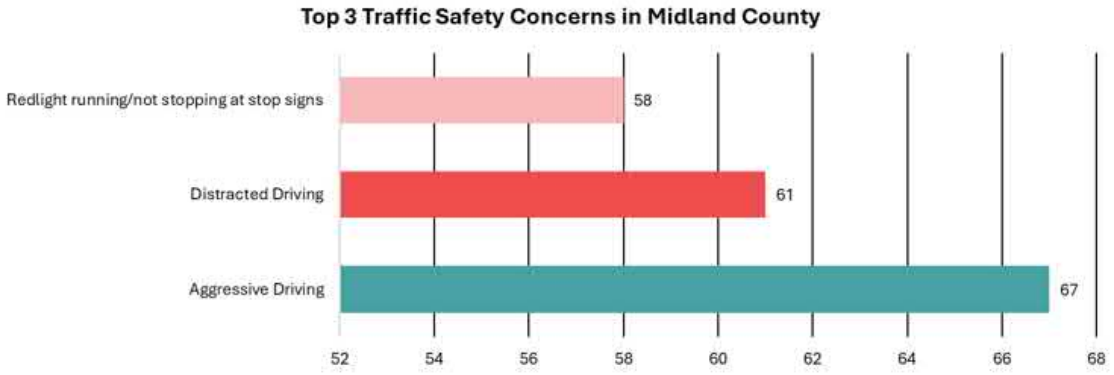


While many respondents stated they do not regurlaryl or ever walk or bicycle in Midland County, there is a desire within the respondent pool to make walking and bicycling safer in the County. Approximately 71% of respondents agree with the starategy to make walking safer and 56% agree with the strategy of making bicycling safer (**Figure 6**).

Additionally, the top three safety concerns for survey participants were aggressive driving (18%), distracted driving (16%), and red light/ stop sign running (15%) as shown in **Figure 7.**

Figure 6: Opinions on Certain Safety Strategies

Figure 7: Top 3 Safety Concerns



Interactive Map Survey

Using an interactive map on the website, Midland County residents had the opportunity to provide feedback on the safety conditions of the existing roadway. This engagement tool allowed users to place a point or line on the map along with one of the comment types available; some of the comment types included "Speeding Issue" or "Pedestrian Safety Issue". The comment types were used to help organize the information provided by users. Furthermore, participants had the ability to up or down vote other ideas to indicate their agreement or disagreement. **Figures 8-9** and **Exhibit 1** provide a visual summary of the 73 comments received from this activity.

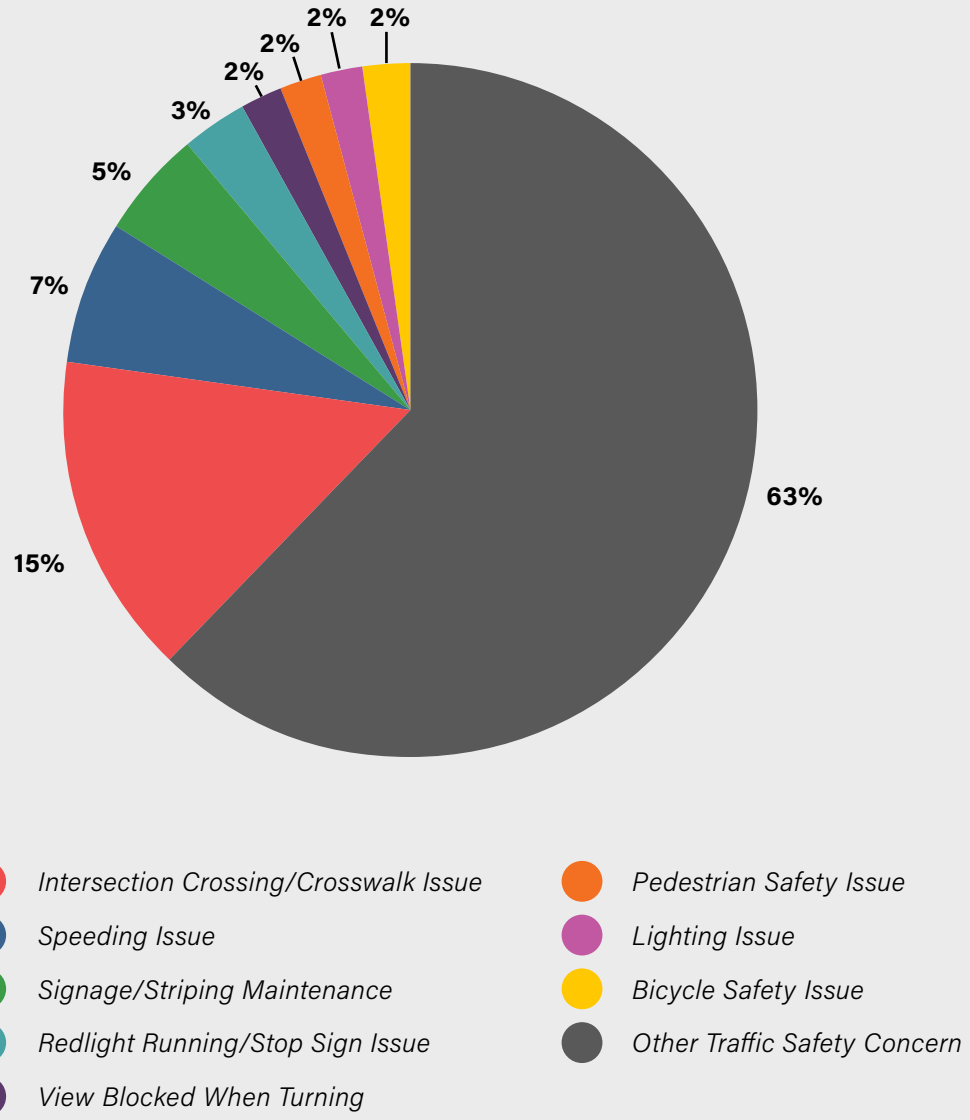
Figure 9: Top Roadways by Number of Map Comments

1) Farm to Market 307 (8 comments)

2) State Highway 158 (7 comments)

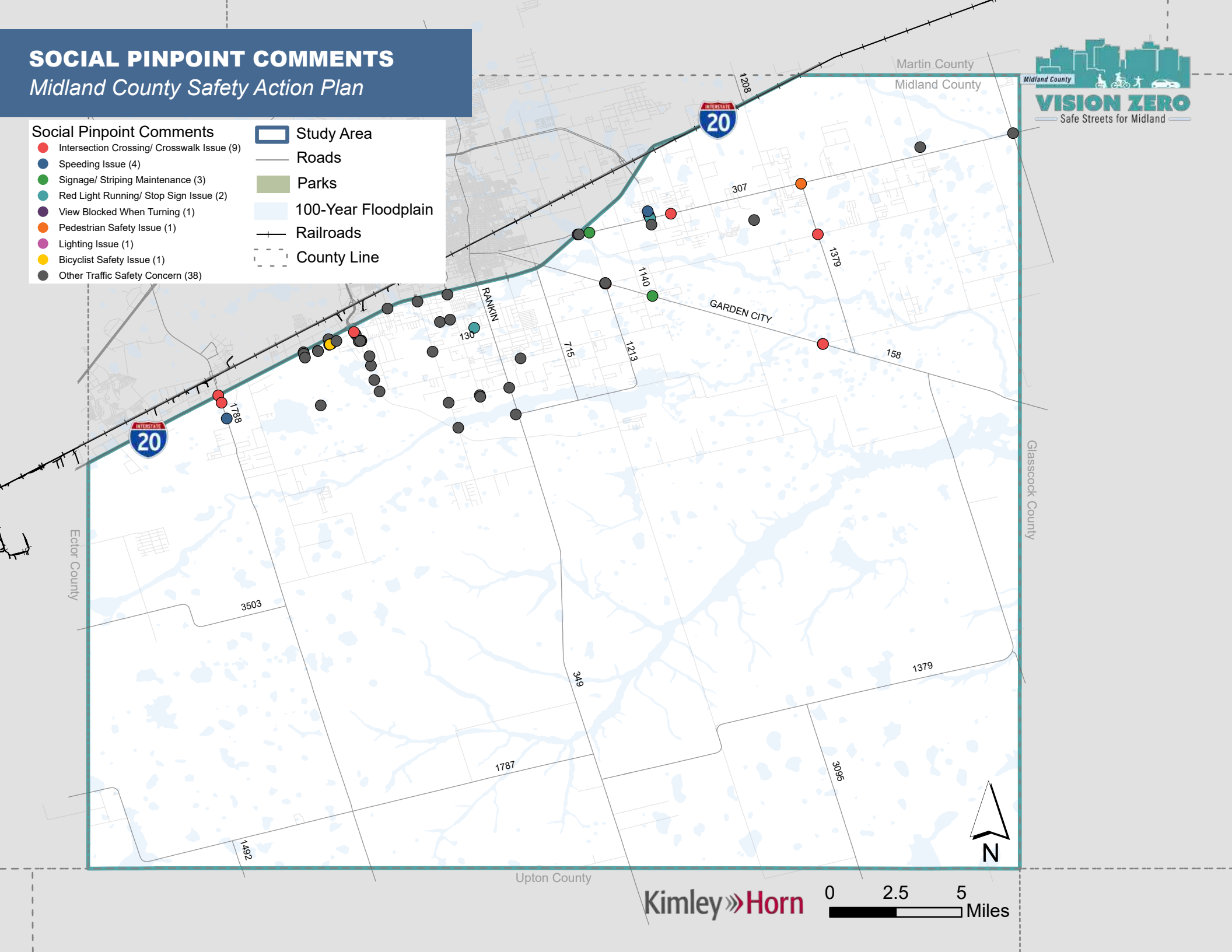
3) Cholla Road (5 comments)

Figure 8: Interactive Map Comments



SOCIAL PINPOINT COMMENTS

Midland County Safety Action Plan



Public Events

In-person public pop-up events were also used to engage the public in the planning process. The pop-up events gave residents the chance to interact with the project team, understand the importance of safety in the County, and how residents could improve safety locally. These events were held in public settings with the intention to generate awareness about both the City's and County's Safety Action Plans and Vision Zero.

During October 2023, two separate pop-up events were held: the Midland Trunk-or-Treat Halloween event and the Movies in the Park at Centennial Park. These events primarily served to raise awareness on the City of Midland's and Midland County's safety efforts. Through these events, the project team was able to engage in valuable discussions with the people of Midland County on their top safety concerns.

The Midland Trunk-or-Treat Halloween event was a family-friendly booth spreading awareness about the Safety Action Plans and Vision Zero. During the Halloween Pop-Up, English and Spanish surveys were given to attendees, as well as visual aids that people could read and learn about the CSAP, Vision Zero, and local roadway safety trends. Similarly, the Movies in the Park event was another family friendly booth where parents and their kids could learn about safety through fun activities (**Figure 10**). At this event, QR codes to the online engagement options were distributed to the attendees, leading to a spike in online engagement the following week.

Figure 10: Movies in the Park

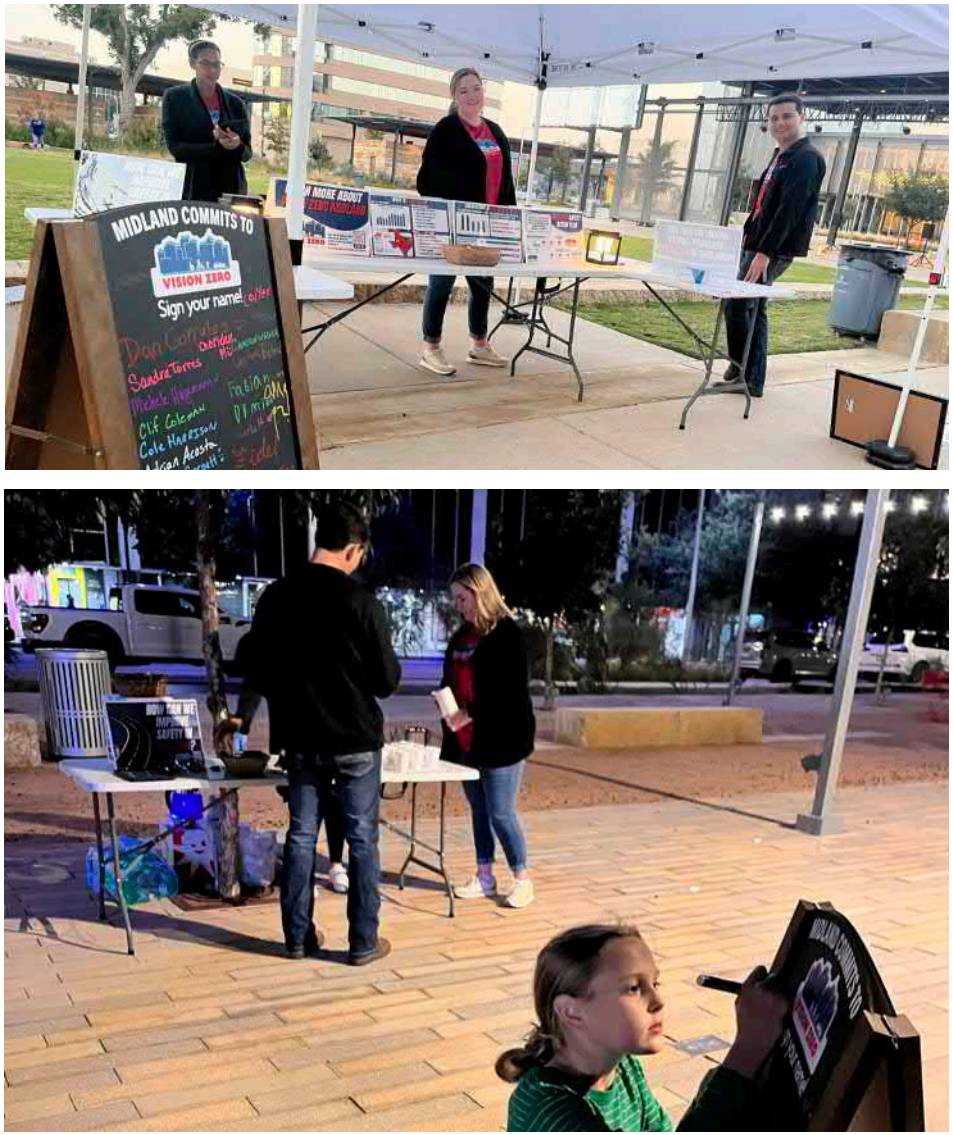
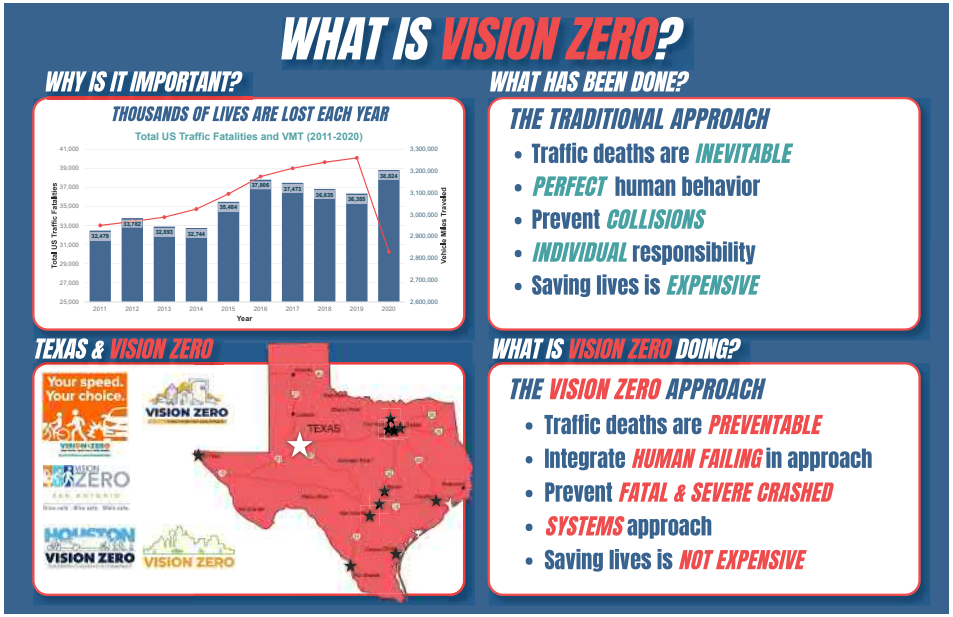
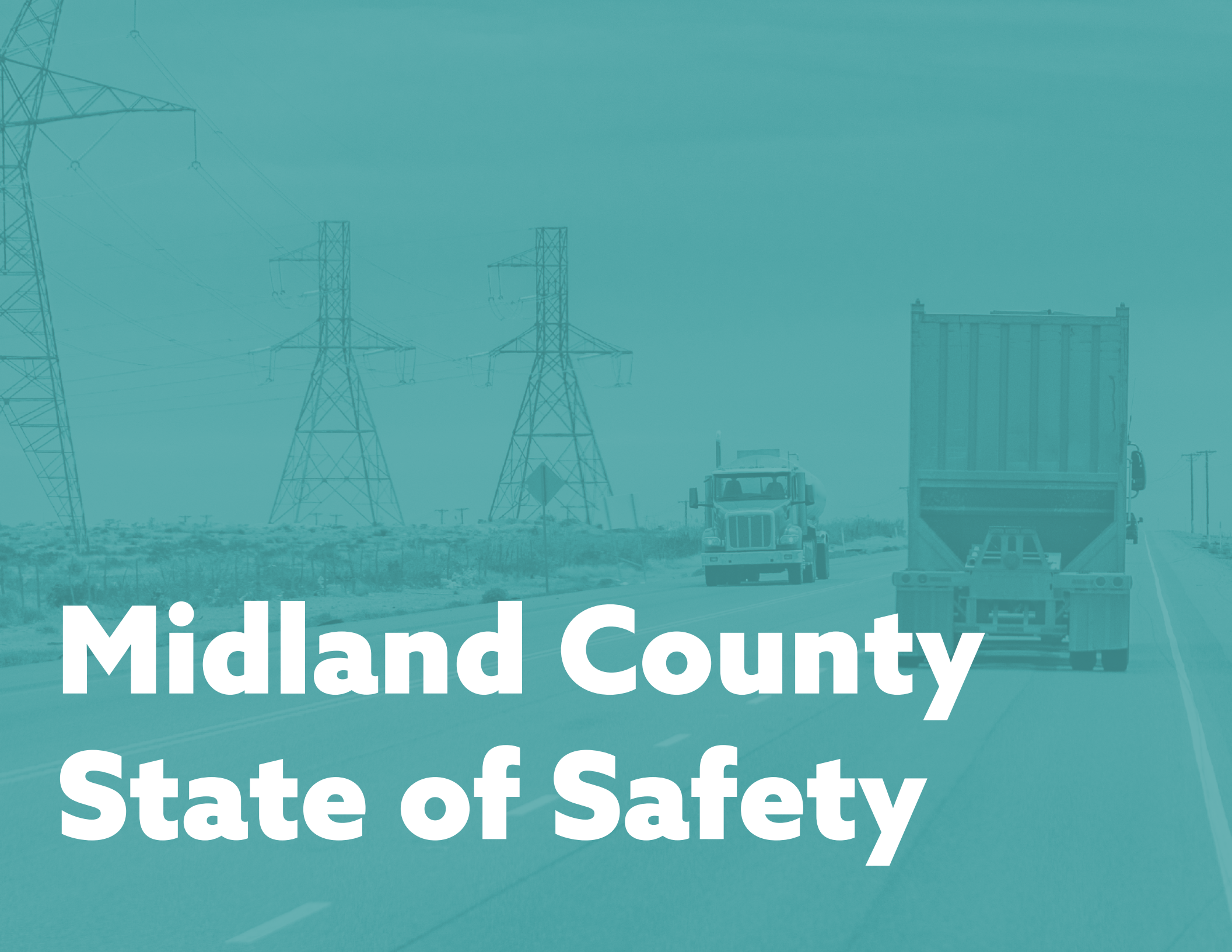


Figure 11: Making an Impact Juneteenth Event



Leadership Commitment

County Commission played a crucial role in enacting a Vision Zero Resolution for their County by leading the initiative, setting goals, and garnering community support. They commit to eliminating traffic fatalities and severe injuries, allocating resources, and implementing policies that prioritize road safety. Through collaboration with various stakeholders, County leaders create and implement comprehensive strategies that include infrastructure improvements, education campaigns, and enforcement measures, to achieve the Vision Zero goals and create safer streets for all users.



Midland County State of Safety

Part II: Midland County State of Safety

Introduction

While Part I of this report established that the improvement of safety for all mobility modes in Midland County is a priority for County Staff and Task Force members, Part II elaborates on the State of Safety in Midland County. An understanding of the County's State of Safety is gathered through a data-driven review of the crash history, equity considerations, and other contributing elements. Part II of the report lays the foundation for Part III, the Vision Zero Action Plan, by providing insight into the existing conditions, key safety observations, and input from the public, key stakeholders, and the VZTF.

To complete the crash history analysis and **creation of the High-Injury Network (HIN)**, historical crash data for the last **five years** (2018-2022) from TXDOT's Crash Record Information System (CRIS) was used.

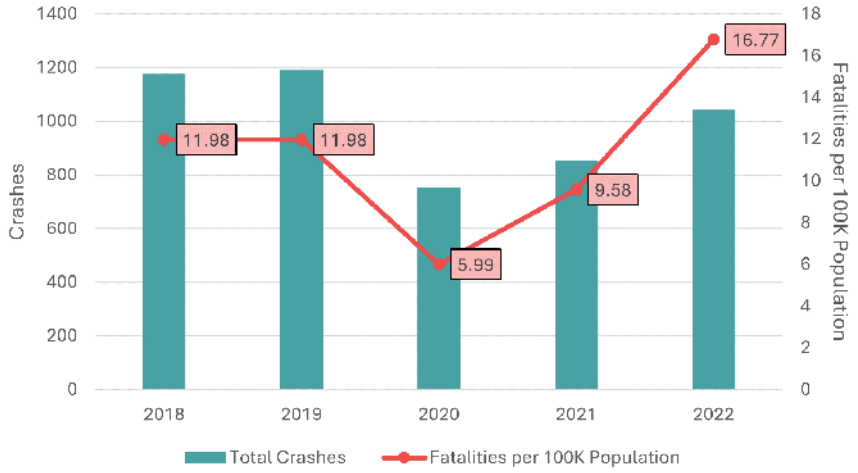
Chapter 3. Crash History Analysis

Chapter 3 focuses on Midland County's crash history, performance within the safety emphasis areas, and the state of safety from an equitable perspective. To complete the crash history analysis and creation of the High-Injury Network (HIN), historical crash data for the last five years (2018-2022) from TXDOT's Crash Record Information System (CRIS) was used.

Countywide Crash Trends

Crash data from 2018 to 2022 was utilized to identify Countywide crash trends, as summarized in **Figure 12**. Prior to 2020, the number of crashes per year in the county hovered around 1,190 total crashes followed by a significant decrease in 2020 (754 crashes); this decrease can be attributed to the COVID-19 pandemic in 2020. While the total number of crashes in the County is still lower than pre-pandemic numbers, the total number per year is steadily increasing, with 2022 having 1,043 crashes. Similarly, to the trend exhibited by the total number of crashes per year, fatalities per 100,000 population was steady prior to 2020 with a significant decrease in 2020 and increasing since then. Of the five years of historical crash data that was analyzed, 2022 experienced the highest fatalities per 100,000 population with a total of 16.77 (**Figure 12**). This crash trend analysis highlights a rapid increase in fatal crashes since 2020.

Figure 12: Total Crash Summary (2018-2022)



The total number of fatal (K) and suspected serious injury (A) crashes have also been increasing since 2020 as shown in **Table 1**. In 2022, there were 64 KA crashes reported, the highest number within the five years of historical crash data. Of the 64 KA crashes, 28 were fatal crashes and 36 were suspected serious injury crashes. While KA crashes were at an all-time high, the other crash severities were not exceeding previous years, but are steadily increasing since 2020.

Table 1: Total Crashes by Severity (2018-2022)

Year	K - FATAL INJURY		A - SUSPECTED SERIOUS INJURY		B - SUSPECTED MINOR INJURY		C - POSSIBLE INJURY		N - NOT INJURED		99 - UNKNOWN	
2018	20	1.7%	32	2.7%	168	14.3%	111	9.4%	826	70.2%	20	1.7%
2019	20	1.7%	26	2.2%	143	12.0%	112	9.4%	862	72.4%	28	2.4%
2020	10	1.3%	22	2.9%	85	11.3%	64	8.5%	547	72.5%	26	3.4%
2021	16	1.9%	32	3.8%	108	12.7%	67	7.9%	602	70.6%	28	3.3%
2022	28	2.7%	36	3.5%	126	12.1%	68	6.5%	748	71.7%	37	3.5%
	Indicates the two highest years by percent											

Figure 13: Top Contributing Factors (2018-2022)

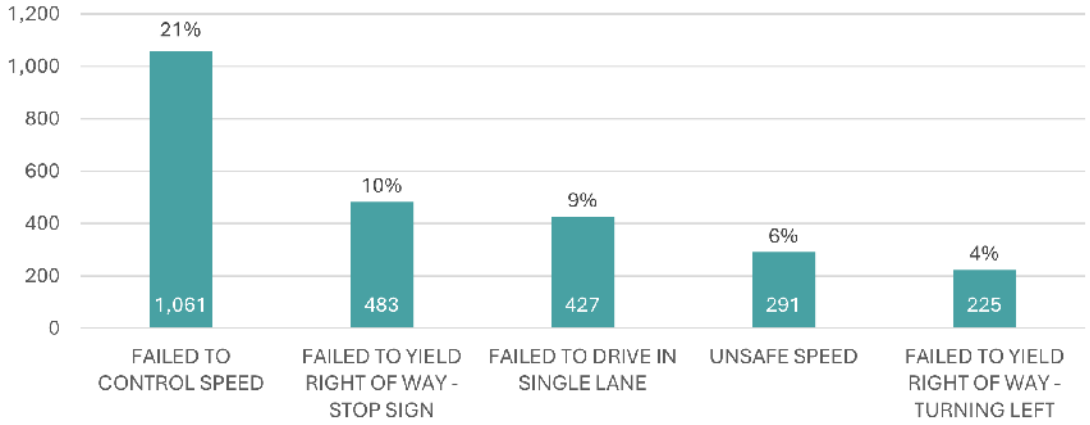
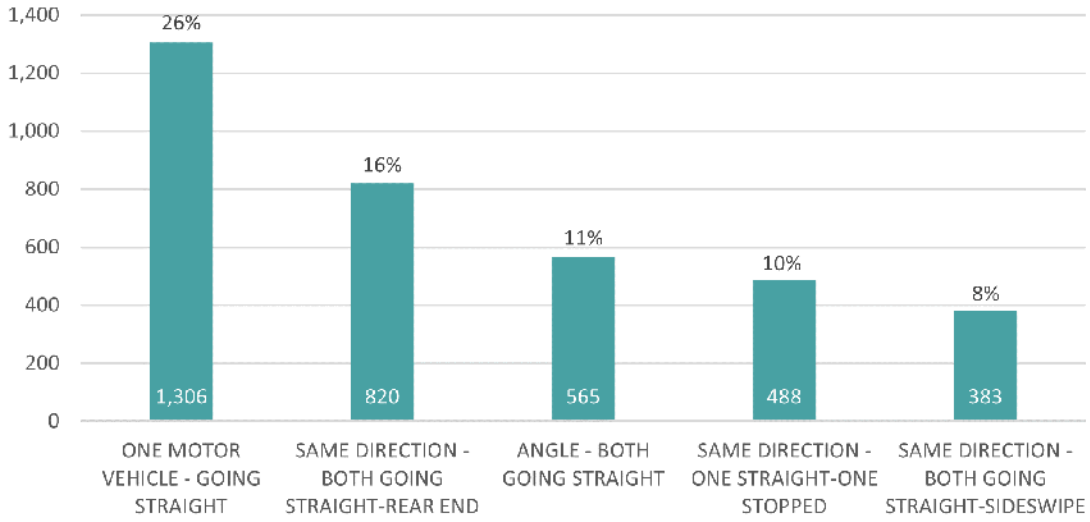


Figure 13 summarizes the top contributing factors for crashes in the County for the past five years. The most common contributing factor is 'Failed to Control Speed'; this contributing factor has over double the number of crashes than any other of the contributing factors.

Figure 14: Top Manners of Collision (2018-2022)



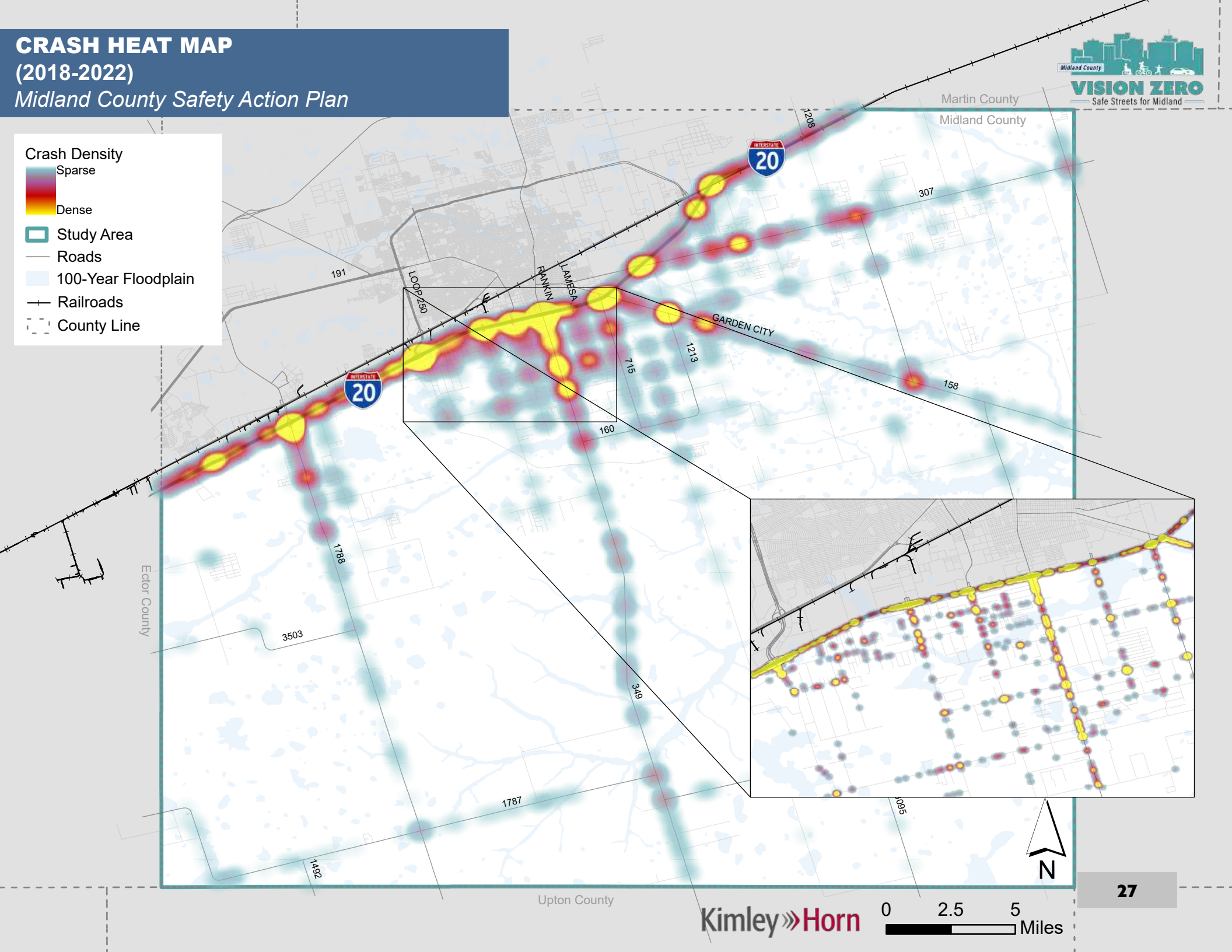
The top manners of collision and how the crash occurred between vehicles, are shown in **Figure 14**. In the County, the top manners of collision were 'One Motor Vehicle – Going Straight' (26%), 'Same Direction – Both Going Straight' (16%), and 'Angle-Both Going Straight' (11%). When the manner of crash is 'One Motor Vehicle – Going Straight' it usually means that the vehicle ran off the road and failed to maintain the vehicle in a single travel lane. 'Same Direction – Both Going Straight' crashes refer to the rear-end collisions while 'Angle-Both Going Straight' crashes refers to T-bone crashes.

Crash Heat Map

A crash heat map was created to highlight the density of crashes within the County from 2018 – 2022 as seen in **Exhibit 2** on Page 27. This map is a visual representation of the pure density of crash counts at various locations in Midland County. While the crash heat map does not account for traffic volumes, number of lanes, or speed limits, these factors do affect the frequency of crashes.

The highest concentration of crashes occurs along IH-20 with the highest densities at high volume intersections on IH-20. State Highway 349 or Rankin Highway, from I-20 to County Road 130, captured the largest concentration of crash densities in the County. Another area with a large concentration of crashes was the intersection between FM 1788 and IH-20.

CRASH HEAT MAP
(2018-2022)
Midland County Safety Action Plan



High Crash Intersections

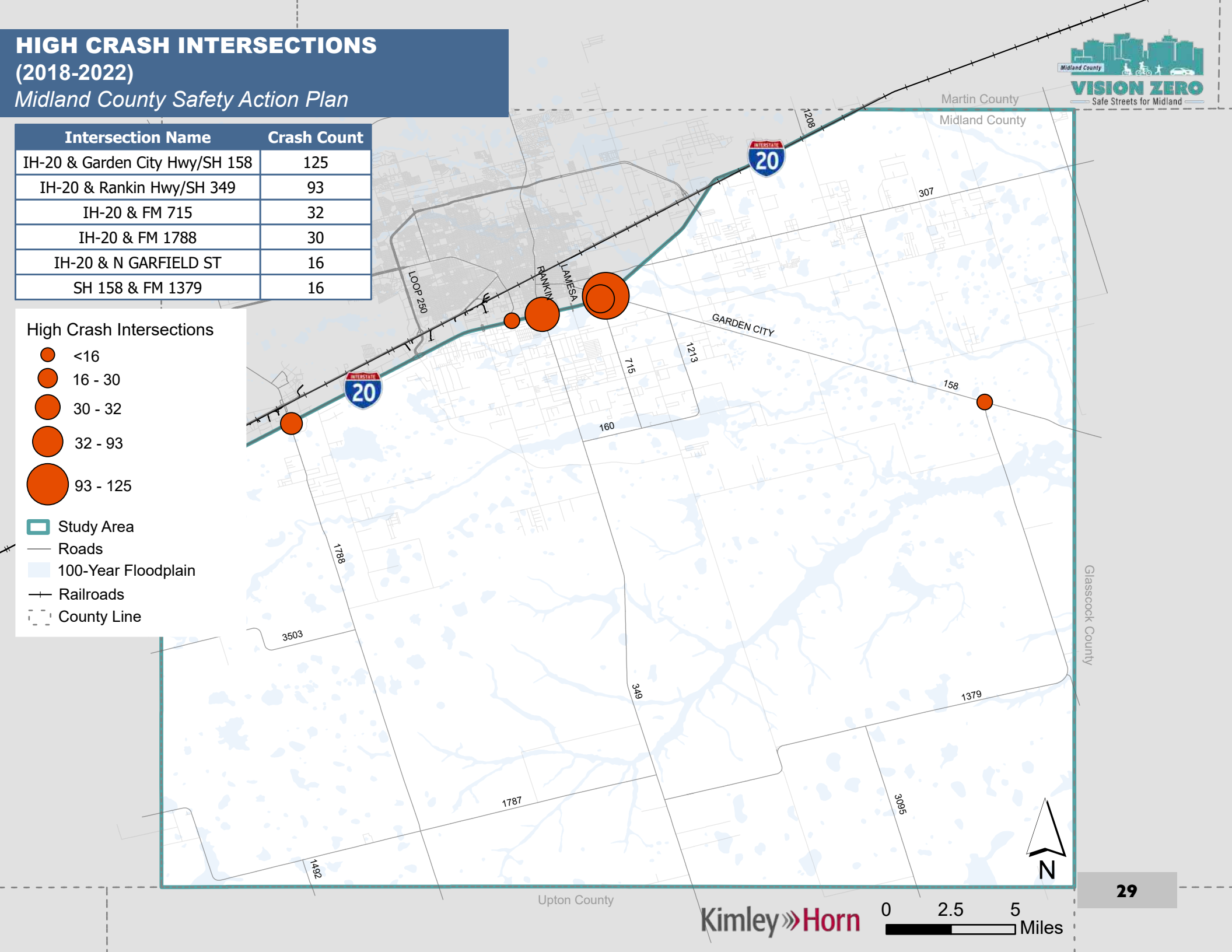
Approximately 40% of all the crashes in the County occur at intersections. Intersections can easily become safety hazards for all roadway users since these are areas where the most conflicts for vehicles, pedestrians, and bicyclists occur. In Midland County, the intersection between IH-20 and Garden City Highway/SH 158 had the most crashes over the five-year study period. The intersection consists of frontage road connections into an undivided five-lane highway. Of the other five intersections listed in Table 2, four of the high crash intersections included a connection to IH-20. **Exhibit 3** on Page 29 contains a map that shows the locations of the high crash intersections in the County.

Table 2: High Crash Intersections

Rank	Intersection	Number of Crashes
1	IH-20 & Garden City Hwy/SH 158	125
2	IH-20 & Rankin Hwy/SH 349	93
3	IH-20 & FM 715	32
4	IH-20 & FM 1788	30
5	IH-20 & N Garfield St	16
6	SH 158 & FM 1379	16

HIGH CRASH INTERSECTIONS
(2018-2022)
Midland County Safety Action Plan

Intersection Name	Crash Count
IH-20 & Garden City Hwy/SH 158	125
IH-20 & Rankin Hwy/SH 349	93
IH-20 & FM 715	32
IH-20 & FM 1788	30
IH-20 & N GARFIELD ST	16
SH 158 & FM 1379	16



Bicycle & Pedestrian Crashes

During a crash involving pedestrians or bicyclists, the most vulnerable to fatal or serious injuries are the pedestrian or bicyclist. This fact is further supported by the crash history of Midland County. In the past five years, the County has experienced 24 pedestrian crashes and 1 bicyclist crash as shown in **Exhibit 4** on Page 31. While the one bicyclist crash was a suspected minor injury (B) crashes, the 24 pedestrian crashes had a total of 16 KA crashes; there were 9 fatal (K) crashes and 7 suspected serious injury (A) crashes. The KA crashes comprised 64% of all pedestrian and bicycle crashes in Midland County.

On average pedestrian and bicycle crashes are more severe than vehicle-only crashes in the County. While only 5% of vehicle-only crashes are fatal or suspected serious injury crashes, 64% of pedestrian and bicyclist crashes are fatal or involve a suspected serious injury. This indicates that all bicycle or pedestrian crashes in the study area involved an injury – no crashes were without fatality or injury. This supports the notion that while bicycle and pedestrian crashes are not as frequent compared to the state, they are consistently severe and should still be treated as a priority to prevent. A comparison between bicycle/pedestrian and vehicle-only crashes by severity is shown in **Table 3**.

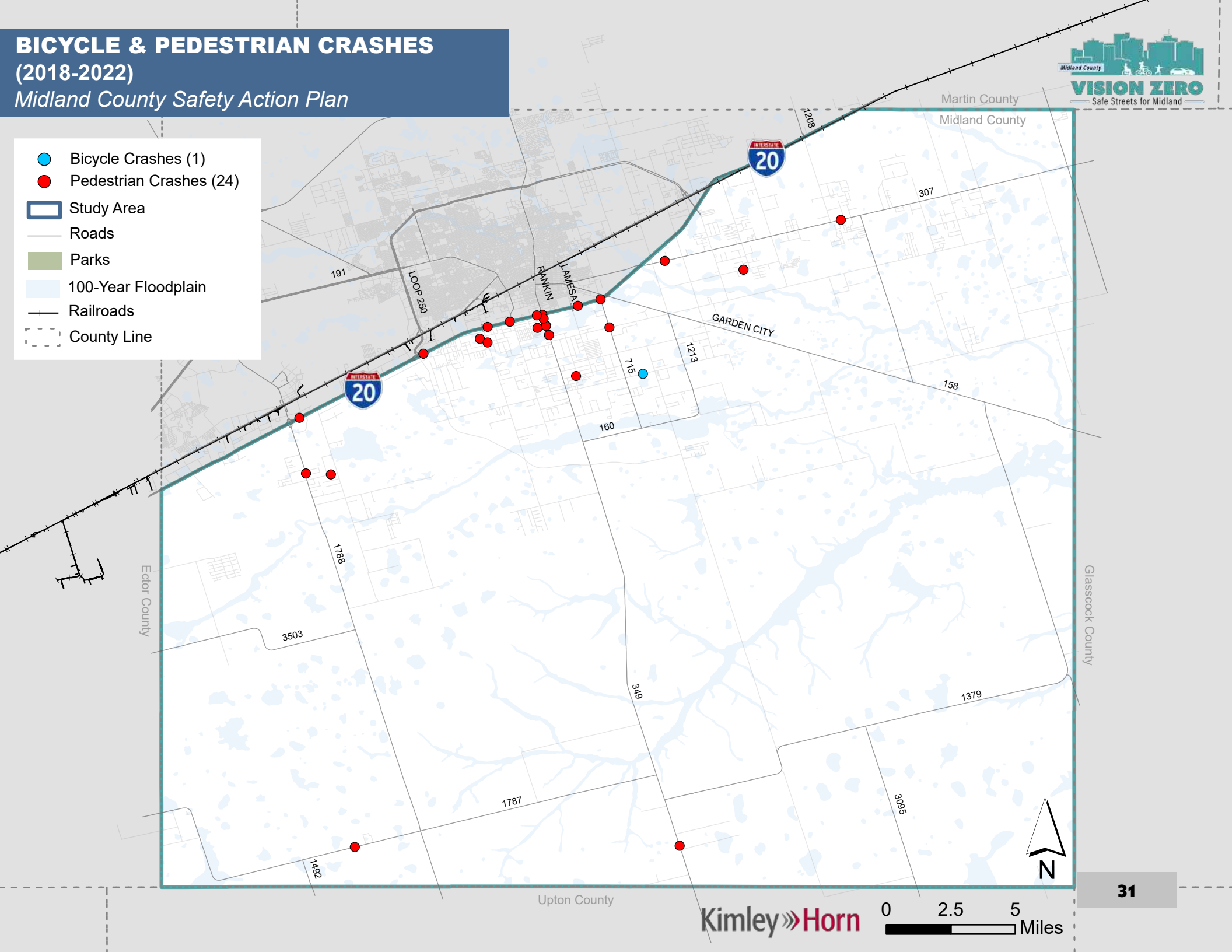
Table 3: Vehicles vs Bicycle & Pedestrian Crash Severity

Crash Severity	Vehicles	Bicycle/ Pedestrian	Difference
K - FATAL INJURY	2%	36%	34%
A - SUSPECTED SERIOUS INJURY	3%	28%	25%
B - SUSPECTED MINOR INJURY	13%	32%	19%
C - POSSIBLE INJURY	8%	4%	-4%
N - NOT INJURED	71%	0%	-71%
99 - UNKNOWN	3%	0%	-3%

There appears to be a concentration of pedestrian and bicycle crashes located on SH 349 between IH-20 and County Road 130. Aside from that concentration of crashes on SH 349, the majority of pedestrian and bicycle crashes are spread throughout other major thoroughfares and principal arterials. Other pedestrian and bicycle crashes are also located on local streets within neighborhoods.

BICYCLE & PEDESTRIAN CRASHES (2018-2022)

Midland County Safety Action Plan



Safety Emphasis Areas

In an effort to reduce traffic-related fatalities and injuries on Texas's transportation network, Texas has created the Texas Strategic Highway Safety Plan (SHSP). The SHSP is a comprehensive document that outlines strategies and initiatives that aim to create a safer transportation network through crash data analysis, identification of high-risk areas, and prioritization of countermeasures. To create a holistic approach that would address key factors contributing to crashes, different disciplines and strategies were used, such as engineering, enforcement, emergency medical services, and education. Through the implementation of the targeted interventions, the SHSP seeks to improve the overall safety of the Texas transportation network and save lives.

Eight safety emphasis areas to improve statewide in an effort to achieve the goal of zero fatalities were highlighted in the Texas SHSP. All are data-based, besides Post Crash Care. The eight safety emphasis areas are the following:

Distracted Driving
where distraction in vehicle, drive inattention, or cell phone or mobile use was cited as a contributing factor.

Impaired Driving
where at least one driver was identified as having been drinking, having taken medication, been under the influence of alcohol or drugs, a blood alcohol content greater than zero, or a positive drug test.

Intersection Safety
occurs within the boundaries of an intersection or in which the first harmful event occurred on an approach to or an exit from an intersection and is related to movement through the intersection.

Occupant Protection
where a vehicle occupant was not restrained or not using appropriate child restraints or seat belts.

Roadway and Lane Departures
where single motor vehicles run off the road and head-on collisions.

Speed-Related
where unsafe speed under the limit or over the limit was cited as a contributing factor.

Vulnerable Road Users
consists of pedestrian and bicyclists and separating users in terms of time and/or space.

Post Crash Care
enhance the survivability of crashes through expedient access to emergency medical care, crash investigation, traffic incident management, and justice.

Midland County vs Texas

Midland County has chosen to utilize the safety emphasis areas outlined by Texas's SHSP to guide their safety efforts. An area of increased interest in Midland County is the 'Unrestrained Persons' emphasis area since the percentage of unrestrained persons involved crashes in the County exceeds the percentage exhibited by the overall state of Texas. The other safety emphasis areas of increased focus in the County are 'Impaired Driving', 'Red Light/Stop Sign Running', and 'Roadway/Lane Departure' due to their comparison to Texas as a whole. **Table 4** compares Midland County to Texas using their percentage of crashes per safety emphasis area for each.

Table 4: Midland County vs. Texas Emphasis Area Crash Percentage

Emphasis Area	Midland	Texas	Difference
Roadway/Lane Departure	36%	35%	1%
Speed-Related	31%	33%	-2%
Intersection-Related	30%	32%	-2%
Unrestrained Persons	29%	17%	12%
Impaired Driving	22%	18%	4%
Red Light/Stop Sign Running *	15%	12%	3%
Vulnerable Road Users	7%	13%	-6%
Distracted Driving	7%	15%	-8%

** Although red light/stop sign running is not an emphasis area listed in the Texas State Highway Safety Plan, it was included due to the County's specific issue with it as seen through the crash data analyses.*

Other key takeaways from the comparison between Midland County and Texas are the following:

1. Lane departure, intersections, and speed-related crashes are the top contributors to severe crashes in Midland County, similarly the state overall.
2. Red light/stop sign running is a safety challenge unique to both the City and Midland County.
3. Impaired driving and unrestrained persons are far more common causes of severe crashes in the County.
4. Distracted driving is not as severe of an issue in the County compared to the State.
5. Vulnerable road user crashes are lower than the state, but likely due to decreased demand for bicycle and pedestrian facilities in the study area.

Part III of the report will provide detailed information regarding policies, programs, and systemic recommendations that could improve safety in Midland County. All recommendations are organized by the safety emphasis areas mentioned in this section and detail how the recommendations will aid the County in achieving its vision zero goals.

Equity & Safety in Midland

Utilizing data collected from the USDOT's Equitable Transportation Community (ETC) Explorer, underserved communities within the County were identified. An integral part of the crash history analysis completed was considering equity and existing disadvantaged areas of the County to better improve safety in underserved parts of the community. This analysis included population characteristics for five categories:

- Transportation Insecurity
- Environmental Burden
- Social Vulnerability
- Health Vulnerability
- Climate and Disaster Risk Burden

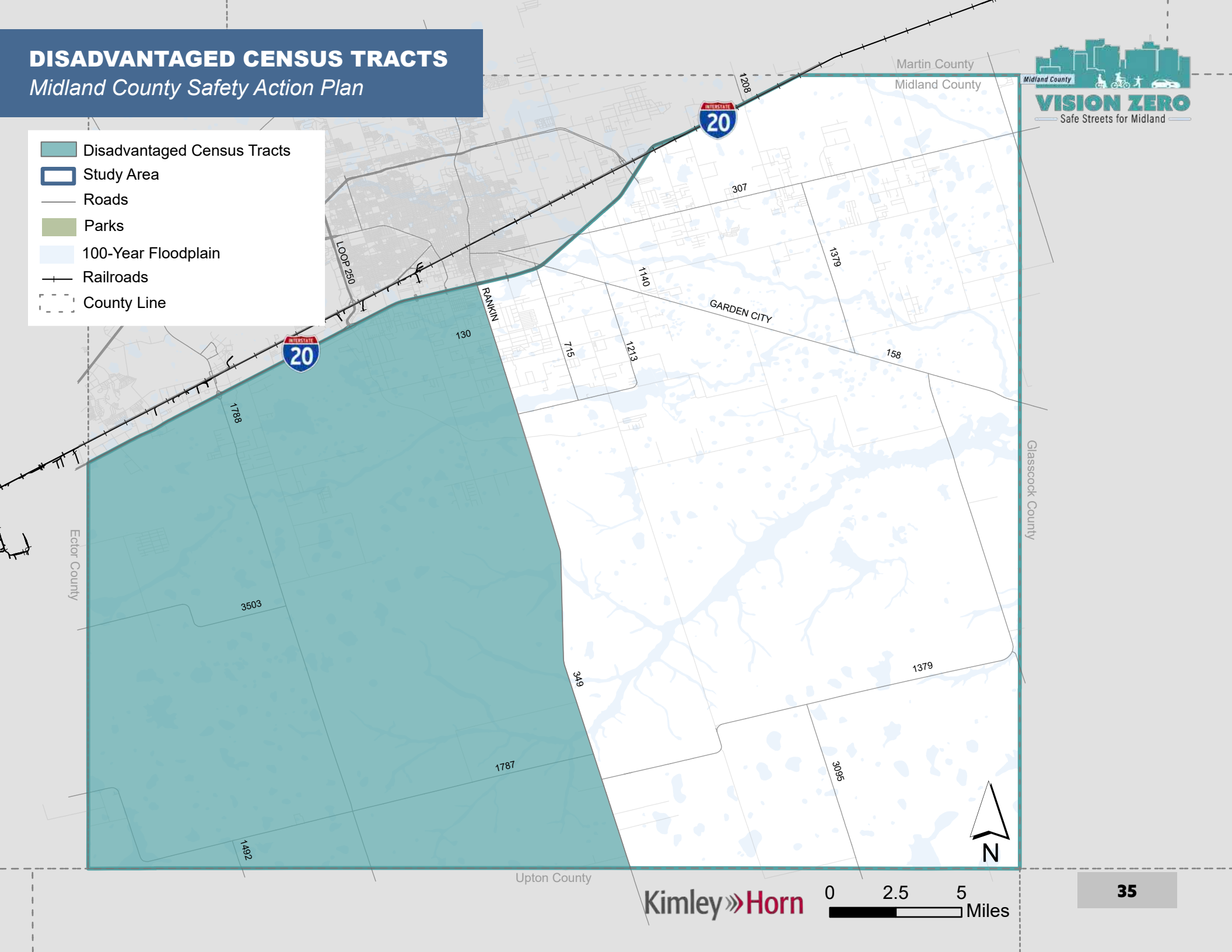
The five categories were scored, summed, and the resulting percentiles are ranked to create the final index score for a census tract. According to USDOT's metrics, a census tract is experiencing disadvantage if the overall score places it at 65% or higher than all census tracts in the United States (US). .

Disadvantaged Census Tracts

The disadvantaged census tracts in Midland County account for approximately a third of the county with them all being located near IH-20. It encompasses the area located West of SH 349 until the borders of Ector and Upton County. The eastern portion of Midland County does not contain any disadvantaged census tracts. The locations of the disadvantaged census tracts in the County according to USDOT's ETC Explorer are pictured in **Exhibit 5** on Page 35.

DISADVANTAGED CENSUS TRACTS

Midland County Safety Action Plan



Disadvantaged Crash History vs. Countywide

Approximately 20% of the Midland County study area's population lives in disadvantaged census tracts. There were 109 total KA crashes in disadvantaged census tracts over the last five years (2018-2022), representing approximately 45% of all KA crashes observed in the County over the same period. Additionally, over the last five years, 11 of the 16 total bicycle and pedestrian KA crashes were in disadvantaged areas (68%).

Throughout Midland County, 5% of all crashes are KAs, whereas in disadvantaged census tracts, this number is 4% (Table 5). Overall, this data differs from the nationwide trend that fatal and severe crashes are more frequent in disadvantaged areas.

Table 5: Countywide vs. Disadvantaged Crash Severity

Crash Severity	Countywide	Disadvantaged Census Tracts	Difference
K - FATAL INJURY	2%	2%	0%
A - SUSPECTED SERIOUS INJURY	3%	2%	-1%
B - SUSPECTED MINOR INJURY	13%	10%	-3%
C - POSSIBLE INJURY	8%	7%	-1%
N - NOT INJURED	71%	76%	5%
99 - UNKNOWN	3%	4%	1%

For bicycle and pedestrian crashes in Midland County, approximately 64% are KA crashes, whereas in disadvantaged census tracts, 100% of all bicycle and pedestrian crashes are KAs (**Table 6**). This means that fatal and severe crashes involving a bicycle or pedestrian are more frequent in disadvantaged areas.

Table 6: Countywide vs. Disadvantaged Crash Severity – Bicycle & Pedestrians

Crash Severity	Countywide	Disadvantaged Census Tracts	Difference
K - FATAL INJURY	36%	57%	21%
A - SUSPECTED SERIOUS INJURY	28%	43%	15%
B - SUSPECTED MINOR INJURY	32%	0%	-32%
C - POSSIBLE INJURY	4%	0%	-4%
N - NOT INJURED	0%	0%	0%
99 - UNKNOWN	0%	0%	0%

A **high-injury network** is a network of roads, intersections, or other transportation infrastructure, that has a **higher-than-average rate of crashes** resulting in injuries or fatalities.

Chapter 4. High-Injury Network

A high-injury network is a network of roads, intersections, or other transportation infrastructure, that has a higher-than-average rate of crashes resulting in injuries or fatalities. Traffic crash data is utilized in determining the network through the consideration of crash factors, such as crash frequency and severity. The purpose of the HIN is to help the County determine future transportation project and their priorities.

A crucial step in reducing fatal and severe crashes is identifying and prioritizing facilities within the HIN to improve. Before safety countermeasures for the County can be identified, the HIN must be determined to aid in the decisions regarding roadway safety enhancements.

Critical Crash Rate Method

The Federal Highway Administration (FHWA) outlines methods to calculate crash rates to prioritize locations where safety improvements are most needed. Outlined in the Highway Safety Manual, Section 4.4.4.5 on Page 4-41, the critical crash rate method identifies crash hotspots by comparing the observed crash rate at a roadway segment to the expected crash rate based on similar functional classification and traffic volumes. If the observed crash rate exceeds the expected crash rate, the roadway segment is considered to have a critical crash rate and is considered for the HIN.

An ArcGIS Pro model was created to calculate the critical crash rate and supporting calculations for each roadway segment in the County. The model assigns crashes to an adjacent segment and performs the calculations in the order outlined by the FHWA. The following section outlines the process used in the calculation of the critical crash rate using fatal and severe crashes from the previous five years (2018-2022) in Midland County.

Critical Crash Rate Calculation

The following three steps were followed to calculate the critical crash rate for each road segment in Midland County:

- Assigning Data to Road Segments
- Calculate Variables of Critical Crash Rate
- Calculate Critical Crash Rate Ratio

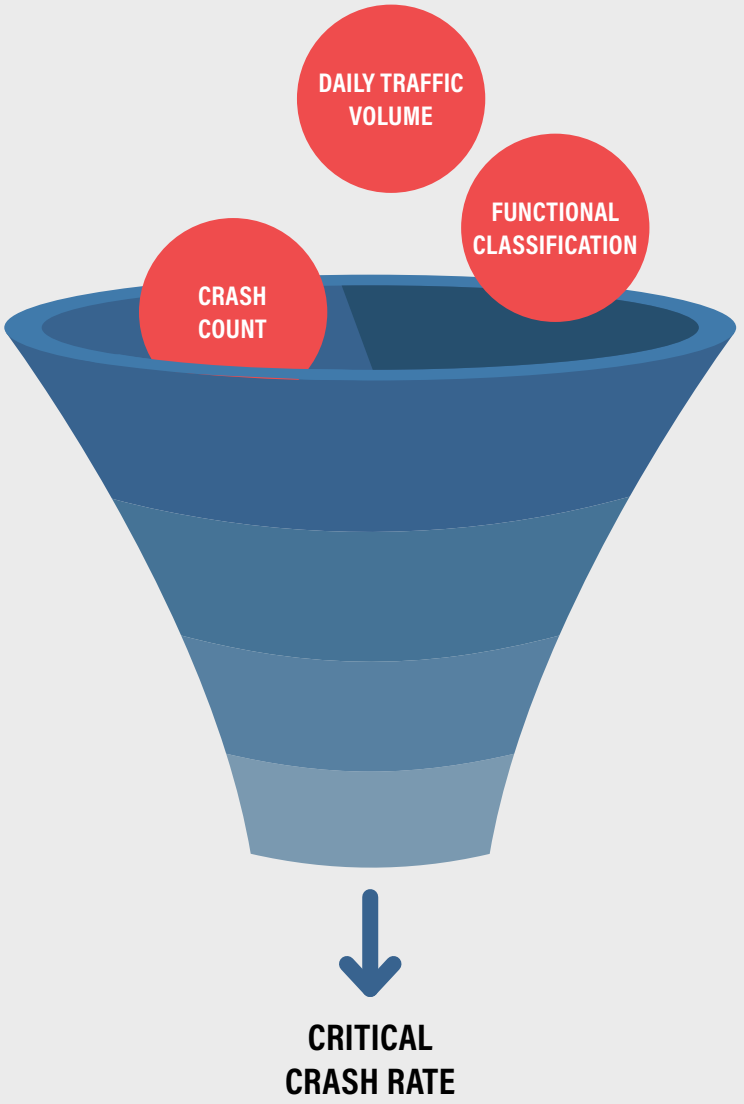
Assigning Data to Road Segments

Calculating the critical crash rate requires three data inputs: roadway functional classification, daily traffic volumes, and crash counts. Since different factors, such as higher traffic volumes, more travel lanes, and higher speed limits, can inflate crash rates, the normalization and comparison of these rates are crucial. The critical crash rate compares road segments that have similar roadway functional classification and normalizes daily traffic volumes to calculate crashes at a more even level based on their commonalities.

Calculate Variables of Critical Crash Rate

The critical crash rates were calculated using the equations outlined in the FHWA's Highway Safety Manual. The observed crash rate represents the existing KA crashes on each road segment per 100 million vehicle-miles traveled. For the expected average crash rate per 100 million vehicle-miles traveled calculations, the daily volumes for each functional class were normalized. Furthermore, roadways were only compared to other roadways that were similar; for example, local roads were only compared to local roads. **Figure 15** outlines the data inputs needed to calculate the critical crash rate.

Figure 15: HIN Data Inputs



Calculate Critical Crash Rate Ratio

A ratio is used to identify the magnitude of difference between the observed and expected crash rates. If the ratio is greater than 1.0 or the observed crash rate is higher than the expected crash rate, then that road segment's crash history was greater than the other road segments that share the same functional classification. Any segments with a ratio of 1 or greater were flagged as potential HIN segments. **Exhibit 6** on Page 41 provides a visual summary of all the ratio results.

HIN Development and Results

The HIN was created through the selection of segments based on data-driven criteria combined with qualitative refinement of the model results. The goal of the HIN is to maximize the total vehicle-only KA crashes and bicycle/pedestrian KA crashes on the smallest amount of County roads.

To refine and clean the model results, crash segments that only saw one crash but had a ratio of greater than 1.0 were removed from the model to prioritize segments with more severe crash histories. After this initial cleaning, the remaining segments were those with more than one KA crash that occurred within the last five years and had a higher-than-expected crash rate. While not all segments experienced a KA crash, the influence area of the crash usually bleeds over to adjacent segments. To create a coherent and continuous HIN, the gaps between high crash segments were filled.

Following the refinement of the calculated critical crash rates, the HIN for Midland County is determined. Midland County's HIN consists of approximately 85 miles of Midland County roadways while capturing 57% of vehicle-only KA crashes, 60% of K crashes, and 56% of bicycle and pedestrian KA crashes.

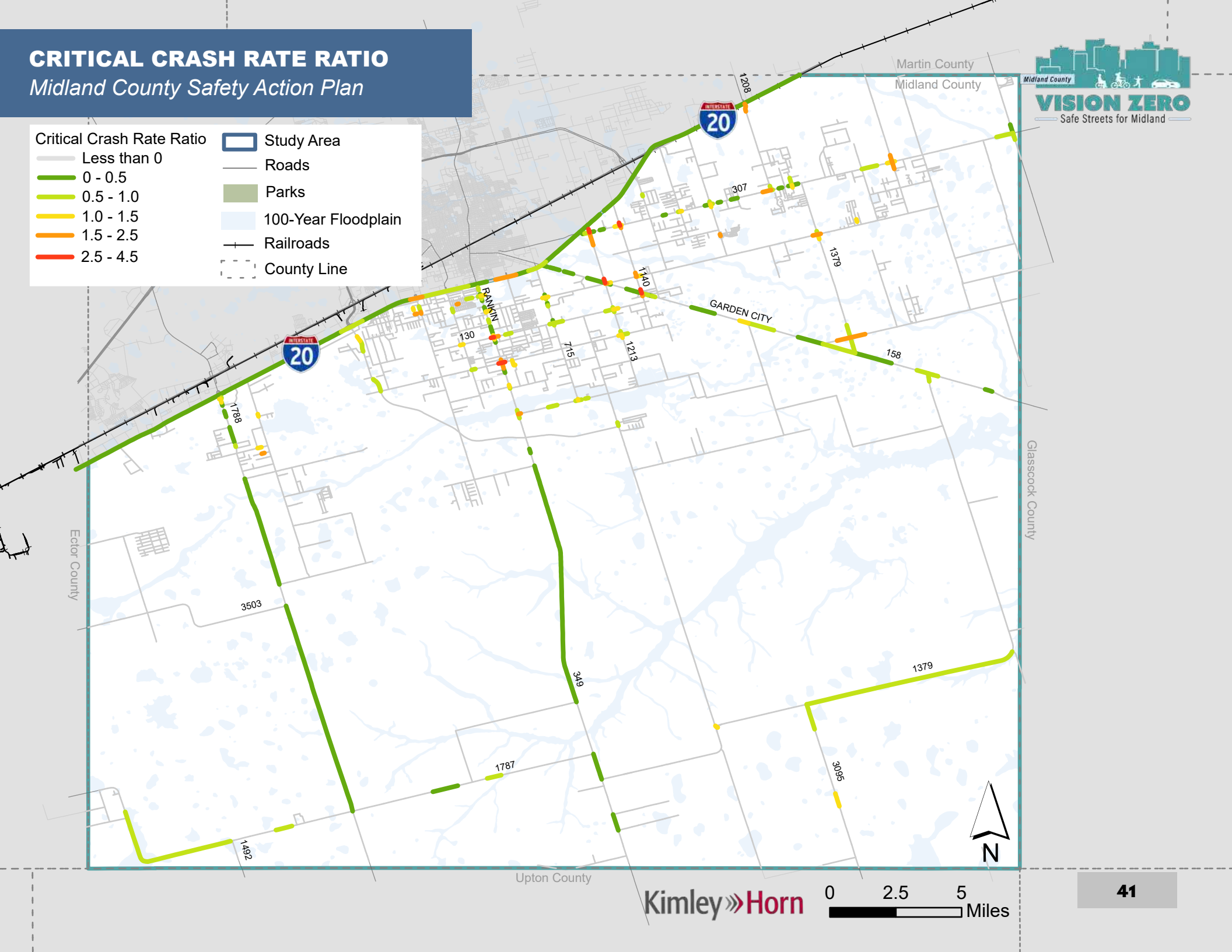
A summary of all segments included in the HIN is shown in **Table 7**, and a map of the County's High Injury Network is shown in **Exhibit 7** on Page 42.

Table 7: High-Injury Network Segments

HIN Segment	Limits		Length (mi)	Crashes			Daily Volumes
	From	To		K	A	Total KAs	
CR 130	CR 1201	CR 1185	1.63	4	2	6	3,400
FM 307	IH-20	CR 1050	10.50	7	15	22	25,400
CR 1150/ FM 1213	IH-20	CR 140	4.29	1	5	6	3,300
CR 1140	CR 120	SH 158	0.65	2	2	4	400
SH 158	CR 1150	Midland County Limits	13.76	11	19	30	17,900
IH-20	1,500' W of Market St	3,000' E of CR 1150	8.88	14	21	35	36,900
SH 349	IH-20	CR 270	16.22	12	22	34	39,600
FM 1213	SH 349	CR 1160	3.01	1	4	5	3,100
FM 1379	CR 300	FM 1357	10.50	0	3	3	1,000
FM 1379	FM 307	SH 158	6.66	5	2	7	8,400
FM 3095	FM 1379	Midland County Limits	6.00	0	2	2	400
FM 1788	IH-20	CR 150	2.29	2	5	7	17,100
FM 715	CR 120	CR 130	1.01	1	2	3	9,200

CRITICAL CRASH RATE RATIO

Midland County Safety Action Plan

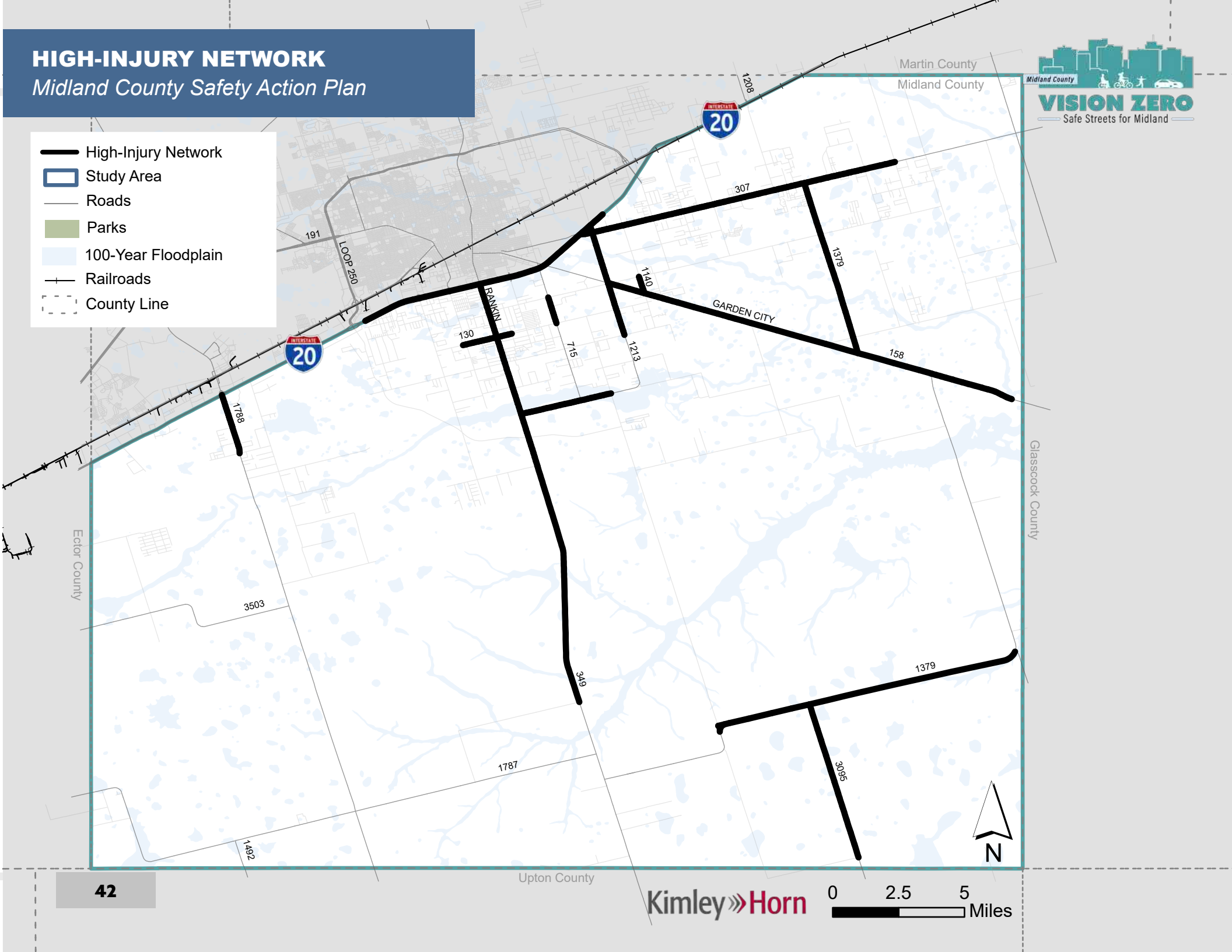


Midland County VISION ZERO Safe Streets for Midland

Kimley»Horn

HIGH-INJURY NETWORK

Midland County Safety Action Plan



VISION ZERO
Safe Streets for Midland

Kimley»Horn

Midland County's HIN consists of approximately:

85
miles of Midland County roadways

57%
of all fatal and severe injury crashes

60%
of all fatal crashes

56%
of fatal and severe crashes involving a bicyclist or pedestrian

Vision Zero Action Plan

Part III: Vision Zero Action Plan

Introduction

Part III details countermeasures and recommendations for study corridors and systemic improvements as part of the Vision Zero Action Plan. This includes policies, programs, and various strategies and actions that provide improvements for specific safety emphasis areas in Midland County.

Chapter 5. Countermeasures

This chapter details the three study corridors identified by the HIN and VZTF along with their respective targeted recommendations and countermeasures. Targeted recommendations at study corridors provide detailed improvements to specific areas of Midland County that have specific crash histories, road geometries, intersection controls, and land use contexts. Additionally, systemic recommendations for each safety emphasis area are provided in a countermeasure toolbox to make countywide improvements.

Targeted Recommendations

To select projects and recommendations that would improve safety, in-field observations were made to understand existing conditions and crash locations. A memorandum with in-depth observations, field photos, and preliminary recommendations can be referenced in **Appendix Item C**.

The following section summarizes the crash history and highlights corridor and intersection-level recommendations for each of the three selected study corridors.

Study Corridors

Three road segments on the High-Injury Network were selected as priority corridors to make targeted recommendations that improve safety on the County's most unsafe corridors today. The highest priority study corridors were selected with input from County staff and scored based on equity, engagement, and feasibility. The criteria for scoring each road segment were the following:

EQUITY

- Disadvantaged Areas (USDOT ETC Explorer)
- Transportation Disadvantaged Areas (USDOT ETC Explorer)

ENGAGEMENT

- Social Pinpoint Map Survey Comments
- Task Force Study Area Comments (from Meeting 2)
- Task Force Priority Corridors Selection (from Meeting 3)

FEASIBILITY

- Current City Projects
- TxDOT On/Off System

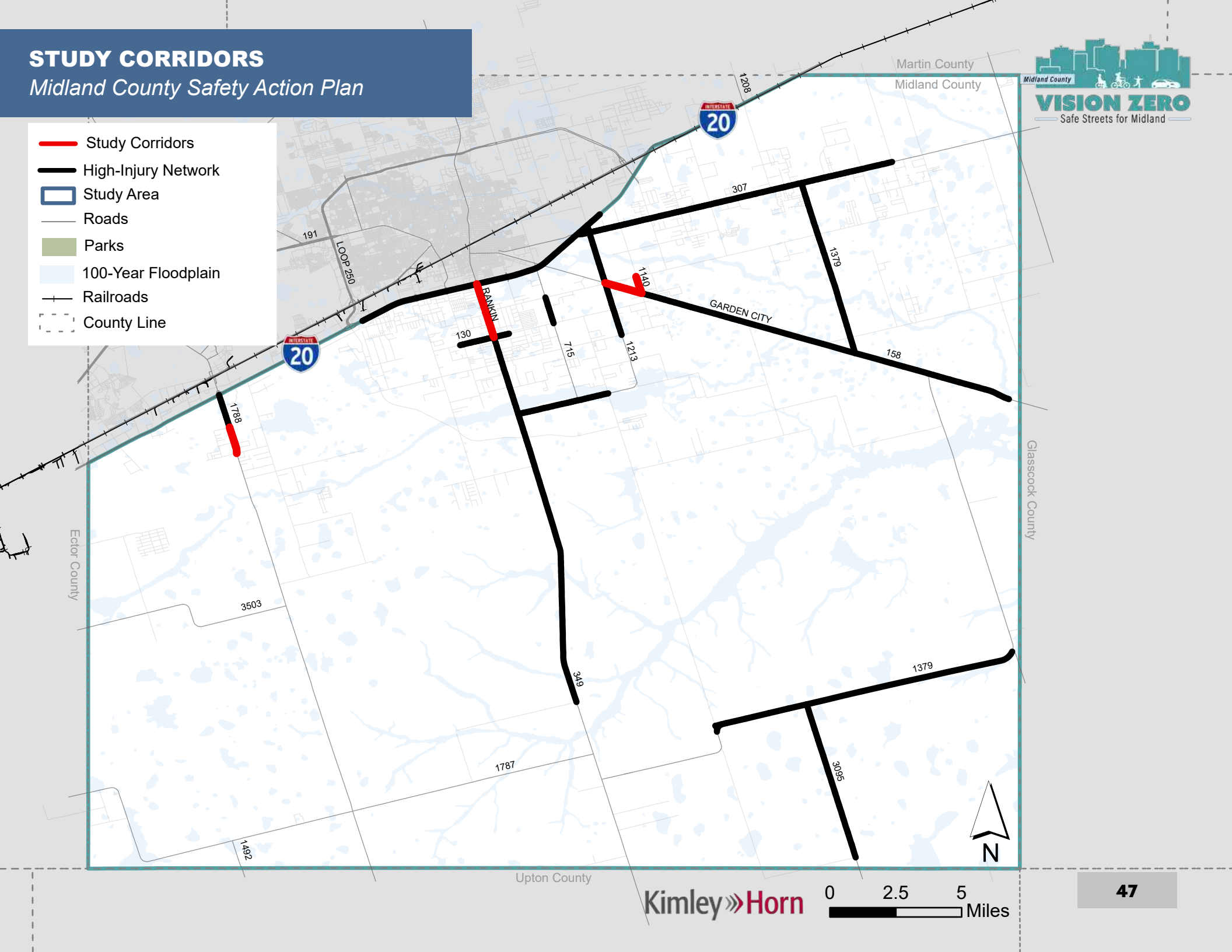
In coordination with County Staff and the VZTF, the three study corridors selected for targeted recommendations are outlined in **Table 8**. The study corridors add up to 4.95 miles of roadway and capture 28 KA crashes within their limits. Each are spread between various parts of the Midland County and are located near multiple land use contexts. **Exhibit 8** on Page 47 highlights the chosen corridors in Midland County.

Table 8: Study Corridors

Study Corridor	Limits		Length (mi)	Crashes			Daily Volumes
	From	To		K	A	Total KAs	
1. SH 158 (Garden City Highway)/CR 1140	CR 120	FM 1213	1.89	2	7	9	17,900
2. SH 349 (Rankin Highway)	IH-20	CR 130	2.04	5	11	16	39,600
3. FM 1788	CR 140	CR 150	1.02	2	1	3	8,400
		Total	**4.95**	**6**	**23**	**28**	

STUDY CORRIDORS

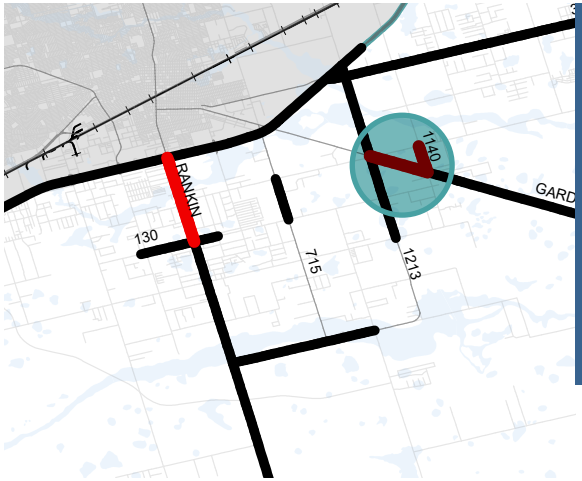
Midland County Safety Action Plan



Midland County VISION ZERO
Safe Streets for Midland

Kimley»Horn

1 Corridor 1: SH 158 (Garden City Highway) - CR 1140, From CR 120 to FM 1213



Context

The section of SH 158 - CR 1140 from CR 116 to FM 1213 is 1.89 miles in length and is located in northwest Midland County. This Corridor is comprised of two intersecting roadway, SH 158 and CR 1140. SH 158, also known as Garden City Highway, is a five-lane undivided roadway with a center two-way left turn lane and has a volume of 17,900 vehicles per day. The speed limit on SH 158 increases from 60 mph to 75 mph travelling south. While SH 158 is a five-lane roadway, CR 1140 is a two-lane undivided roadway with a speed limit of 40 mph. Additionally, there is a 5-leg intersection located at the start of the corridor on SH 158 named the "Five Points" intersection; this intersection comprises of CR 120, FM 1213, and SH 158.

Crash History

There were 157 total crashes on this section of SH 158 – CR 1140 between 2018-2022. Of these total crashes, 9 were KAs. Key takeaways for crash trends along this section of SH 158 - CR 1140 were the following:

135

*of the 157 total crashes were **intersection-related** (86%), which included 9 of the 9 KA crashes (100%)*

77

*of the 157 total crashes were **angle - both going straight** (49%) making this the top manner of collision*

82

*of the 157 total crashes were **failed to yield to ROW - stop sign** (20%) making this the top contributing factor*

A full summary of crash history at SH 158 - CR 1140 is found in **Exhibit 9** on Page 50.

Corridor Recommendations

It is recommended to install a speed feedback sign along SH 158, at the midway point between CR 120 and CR 1140. This will alert drivers of their travel speed and will aid to adhere to the posted speeds along the corridor. In addition, it is recommended to re-evaluate the posted speed along SH 158, especially as it transitions to 75 mph.

It is also recommended to stripe a wide edge line along CR 1140 to enhance visibility of the county road with the addition of a striped center line with raised pavement markings. This will increase visibility of the travel lanes for all vehicles.

Intersection Recommendations

It is recommended to install illumination at all primary intersections along the study corridor for enhanced visibility, especially in night conditions. It is also recommended to restripe intersection pavement markings at all primary intersections, which include stop bars, turn lanes (if present), and approach lanes.

CR 120/FM 1213

It is recommended to reconfigure all approaches at the 5-leg intersection to be a more typical 4-leg intersection with a traffic signal. In addition to the installation of a traffic signal, it is also recommended to install left and right-turn deceleration lanes at all approaches to improve operations and reduce delays for the high truck traffic in the area.

CR 1140

It is recommended to install a traffic signal at the intersection, which will provide safe turning and cross cutting movements at all approaches. Again, with the installation of a traffic signal, it is recommended to install left and right-turn deceleration lanes at all approaches to improve operations and reduce delays for the high truck traffic in the area. Furthermore, an advance warning sign for the traffic signal should be added to warn drivers of its presence.

CR 120

It is recommended to realign the skewed north and south legs of the intersection to align directly. This will improve sight distance and decrease the time to cross CR 120, travelling along CR 1140. It is also recommended to install flashing LEDs at the existing stop signs on the north and south legs to improve visibility of the two-way stop-controlled intersection.

Table 9 summarizes the recommended CMFs and anticipated benefits for crash prevention over a 20-year horizon for SH 158 – CR 1140. **Exhibit 10** summarizes all recommendations and countermeasures along SH 158 – CR 1140.

Table 9: Countermeasure Application Results for SH 158 – CR 1140

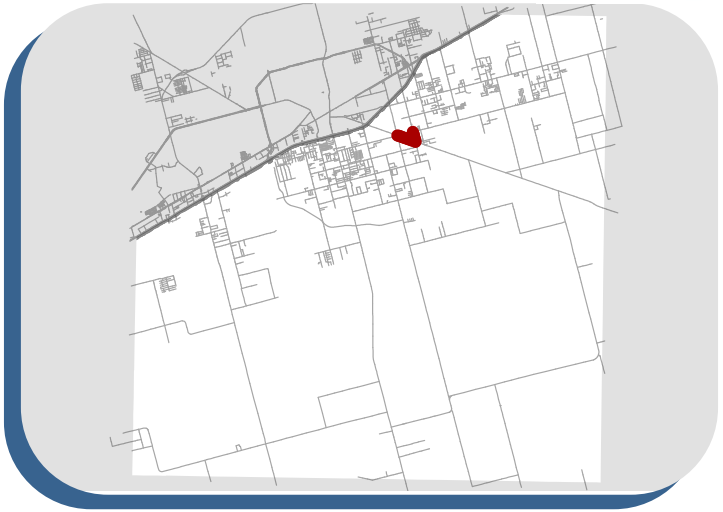
ID	Location	Recommendation	Countermeasure	CMF	Crash Type	Total Crashes Reduced over 20-Year Period
C.1.1	All Intersections	Install intersection lighting	Install Intersection Lighting	0.881	Nighttime	21
C.2.1	All Intersections	Restripe intersection pavement markings	Upgrade Intersection Pavement Markings	0.75	All	125
1.1	Corridor	Install a speed feedback sign along SH 158	Install Dynamic Speed Feedback Sign	0.95	All	32
1.2	Corridor	Stripe wide edge lines along CR 1140	Install Wider Edge Lines (4 in to 6 in)	0.635	All	82
1.3	Corridor	Re-evaluate speed limit along SH 158	Lower Posted Speed	0.856	All	33
1.4	Corridor	Stripe center line and raised pavement markings along CR 1140	Place Edge line and Centerline Markings	0.76	All	52
1.A.1	Intersection	Install a traffic signal with dedicated turn lanes at all approaches	Install A Traffic Signal and Left Turn Lanes	0.57	All	93
1.B.1	Intersection	Install a traffic signal with dedicated turn lanes at all approaches	Install A Traffic Signal and Left Turn Lanes	0.57	All	56
1.C.1	Intersection	Realign skewed intersection	Change Intersection Skew Angle	0.94	All	4
1.C.2	Intersection	Install flashing LED stop sign	Replace Standard Stop Sign with Flashing LED Stop Sign	0.585	All	22

CORRIDOR 1: SH 158/CR 1140 - CRASH HISTORY

From CR 120 to CR 1140

157 CRASHES **9** KAs | **40 - 75** MPH | **17,900** VEH PER DAY

PRINCIPAL ARTERIAL | **2 - 5** LANE UNDIVIDED SECTION



Top Crash Attributes

Intersection-Related
135 Crashes (86%)
9 KAs (100%)

Vulnerable Road Users
0 Crashes (0%)
0 KAs (0%)

Nighttime Crashes
47 Crashes (30%)
2 KAs (22%)

Angle - Both Going Straight
77 Crashes (49%)
1 KA (11%)

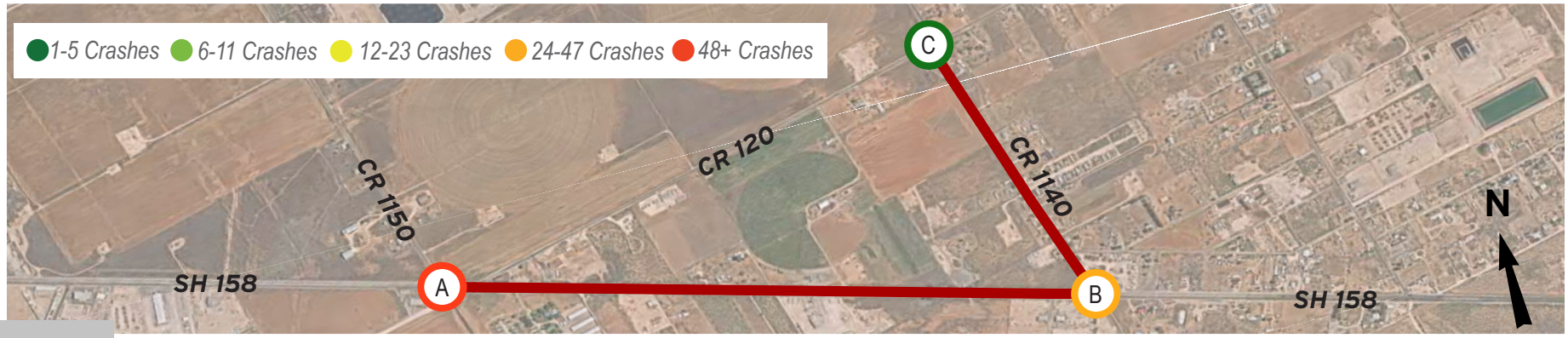
Angle - One Straight - One Turning Left
18 Crashes (11%)
3 KAs (33%)

Same Direction - Both Going Straight - Rear End
11 Crashes (7%)
2 KAs (22%)

Failed to Yield ROW - Stop Sign
85 Crashes (54%)
4 KAs (44%)

Failed to Control Speed
17 Crashes (11%)
3 KAs (33%)

Crash Density by Intersection



CORRIDOR 1: SH 158/CR 1140 - RECOMMENDATIONS

From CR 120 to CR 1140

VISION ZERO
Safe Streets for Midland

CORRIDOR-WIDE

- Dynamic Speed Display
- Stripe Wide Edge Lines
- Speed Reduction
- Stripe Center Line and Pavement Markings

A

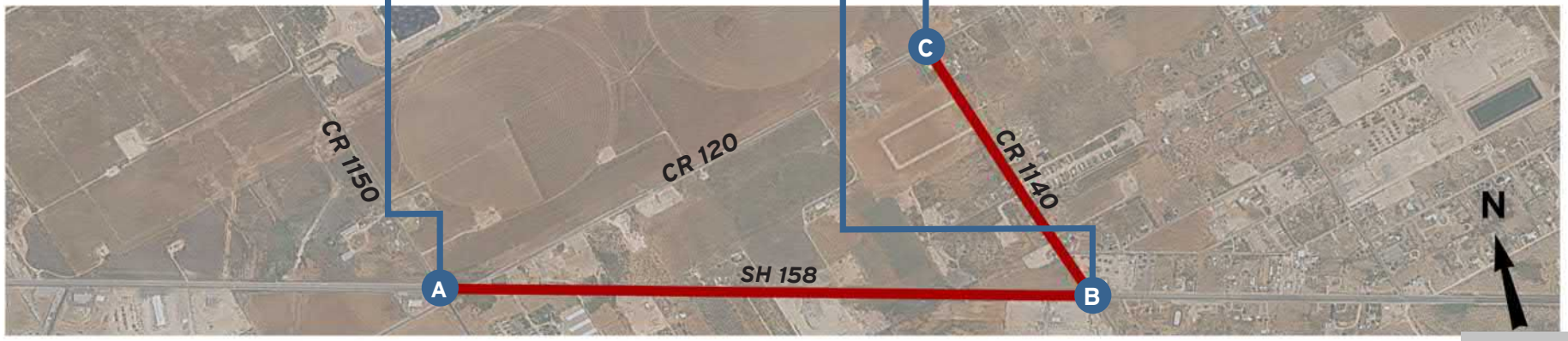
- Stripe Pavement Markings
- Intersection Lighting
- Traffic Signal and Turn Lanes

B

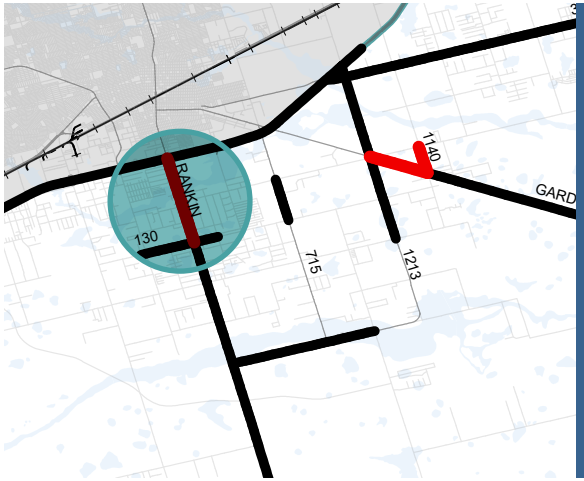
- Intersection Lighting
- Stripe Pavement Markings
- Traffic Signal and Turn Lanes

C

- Stripe Pavement Markings
- Intersection Lighting
- LED Stop Signs
- Realign Skewed Intersection



2 Corridor 2: SH 349 (Rankin Highway), From IH-20 to CR 130



Context

SH 349, also known as Rankin Highway, is a five-lane undivided roadway with a center two-way left turn lane. This corridor is approximately 2.04 miles in length and is located in the northern part of the County's study area. The area around the corridor consists of residential, industrial, and commercial land use. Furthermore, this section of the corridor is comprised of many unsignalized intersections and private driveways closely spaced together. Corridor 2 has a varied speed limit ranging from 50 to 60 mph and has a volume of 40,000 vehicles per day.

Crash History

There were 327 total crashes on this section of SH 349 between 2018-2022. Of these total crashes, 16 were KAs. Key takeaways for crash trends along this section of SH 349 were the following:

135

*of the 157 total crashes were **intersection-related** (43%), which included 8 of the 16 KA crashes (50%)*

64

*of the 327 total crashes were **angle - one straight - one turning left** (20%) making this the top manner of collision*

63

*of the 327 total crashes were **failed to yield to ROW - stop sign** (19%) making this the top contributing factor*

A full summary of crash history at SH 349 is found in **Exhibit 11** on Page 56.

Corridor Recommendations

In order to reduce turning movement conflicts along the corridor, it is recommended to install access management measures throughout the corridor. In addition, it is recommended to install corridor lighting along SH 349 to provide added illumination during dark conditions. It is also recommended to install a buffered sidewalk or shared use path on the east side of SH 349, connecting any gaps between existing sidewalk segments. Finally, it is recommended to stripe a wide edge line throughout the corridor to provide a more enhanced view of the travel lanes boundaries.

Intersection Recommendations

It is recommended to install illumination at all primary intersections along the study corridor for enhanced visibility, especially in night conditions. It is also recommended to restripe intersection pavement markings at all primary intersections, which include stop bars, turn lanes (if present), and approach lanes.

IH-20

It is recommended to install pedestrian crosswalks, signal heads, push buttons, and ADA compliant ramps at the intersection to provide adequate facilities for vulnerable road users. With the addition of pedestrian facilities, it is recommended to update the traffic signal timing to provide proper crossing times for pedestrians and updated vehicle detection to radar detection.

It is also recommended to install a sidewalk or pedestrian crossing beneath the IH-20 bridge that provides a connection between the north and south sides of the freeway.

Dayton Road

It is recommended to install a traffic signal at the intersection, which will allow for protected turning movements for all approaches. With the installation of a traffic signal, it is also recommended to construct left and right-turn lanes at each approach. Dedicated turn lanes will improve operations at the intersection and remove turning vehicles from high volume movements.

CR 114

It is recommended to install a traffic signal at the intersection, which will allow for protected turning movements for all approaches. With the installation of a traffic signal, it is also recommended to construct left and right-turn lanes at each approach. Dedicated turn lanes will improve operations at the intersection and remove turning vehicles from high volume movements.

CR 120

It is recommended to install a traffic signal at the intersection, which will allow for protected turning movements for all approaches. With the installation of a traffic signal, it is also recommended to construct left and right-turn lanes at each approach. Dedicated turn lanes will improve operations at the intersection and remove turning vehicles from high volume movements.

Finally, it is recommended to remove vegetation on the southeast corner of the intersection to improve intersection sight distance and relocate the commercial driveway away from the intersection.

CR 127

It is recommended to move the existing stop bar and stop sign forward, ahead of the neighborhood entrance sign, to provide improved sight distance for turning vehicles. It is also recommended to install a northbound right-turn lane along SH 349 at the intersection. This will provide deceleration space for turning vehicles, especially heavy vehicles typically in the area.

CR 130

It is recommended to install a traffic signal at the intersection, which will allow for protected turning movements for all approaches. With the installation of a traffic signal, it is also recommended to construct left and right-turn lanes at each approach. Dedicated turn lanes will improve operations at the intersection and remove turning vehicles from high volume movements.

Table 10 summarizes the recommended CMFs and anticipated benefits for crash prevention over a 20-year horizon for SH 349. **Exhibit 12** summarizes all recommendations and countermeasures along SH 349.

Table 10: Countermeasure Application Results for Fairgrounds Road

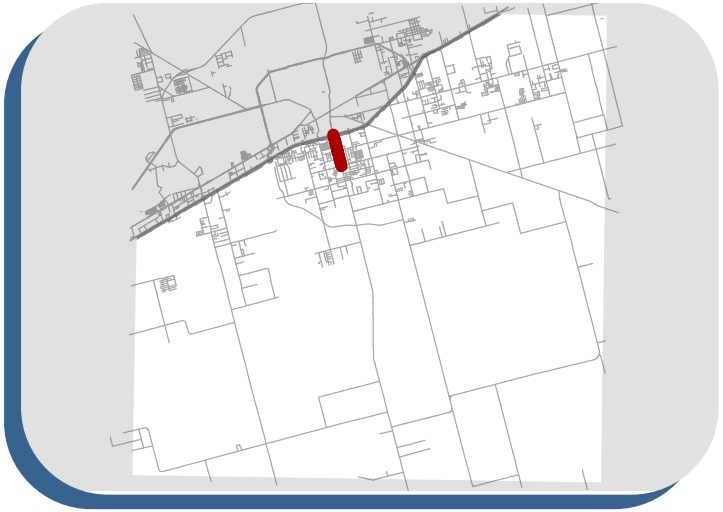
ID	Location	Recommendation	Countermeasure	CMF	Crash Type	Total Crashes Reduced over 20-Year Period
C.1.2	All Intersections	Install intersection lighting	Install Intersection Lighting	0.881	Nighttime	18
C.2.2	All Intersections	Restripe intersection pavement markings	Upgrade Intersection Pavement Markings	0.75	All	134
2.1	Corridor	Install a raised median	Install Raised Median	0.76	All	97
2.2	Corridor	Install corridor lighting	Illumination	0.73	All	104
2.3	Corridor	Install a buffered sidewalk	Install Sidewalk	0.598	Vehicle/ Pedestrian	2
2.4	Corridor	Stripe wide edge lines	Install Wider Edge Lines (4 in to 6 in)	0.635	All	148
2.A.1	IH-20	Install pedestrian crosswalks, signal heads, push buttons, and ADA ramps	Implement Systemic Signing and Visibility Improvements at Signalized Intersections	0.732	All	2
2.A.2	IH-20	Construct a pedestrian crossing under IH-20 bridge	Install Sidewalk	0.598	Vehicle/ Pedestrian	2
2.A.3	IH-20	Install radar vehicle detection	Improve Signal Timing	0.85	All	21
2.B.1	Dayton Road	Install a traffic signal with turn lanes at all approaches	Install a Traffic Signal and Left Turn Lanes	0.57	All	18
2.C.1	CR 114	Install a traffic signal with turn lanes at all approaches	Install a Traffic Signal and Left Turn Lanes	0.57	All	25
2.E.1	CR 120	Install a traffic signal with turn lanes at all approaches	Install a Traffic Signal and Left Turn Lanes	0.57	All	28
2.E.2	CR 120	Remove vegetation to improve sight distance	Remove or Relocate Fixed Objects Outside of Clear Zone	0.62	All	25
2.G.1	CR 127	Move stop sign and stop bar forward	Implement Systemic Signing and Marking Improvements at Stop-Controlled Intersections	0.917	All	1
2.G.2	CR 127	Install a northbound right-turn lane	Provide a Right Turn Lane on One Major Road Approach	0.86	All	1
2.H.1	CR 130	Install a traffic signal with turn lanes at all approaches	Install a Traffic Signal and Left Turn Lanes	0.57	All	73

CORRIDOR 2: SH 349 - CRASH HISTORY

From IH-20 TO CR 130

327 CRASHES **16** KAs | **50-60** MPH | **39,600** VEH PER DAY

PRINCIPAL ARTERIAL | **5** LANE UNDIVIDED SECTION



Top Crash Attributes

Intersection-Related
139 Crashes (43%)
8 KAs (50%)

Vulnerable Road Users
5 Crashes (2%)
3 KAs (19%)

Nighttime Crashes
85 Crashes (26%)
6 KAs (38%)

Angle - One Straight - One Turning Left
64 Crashes (20%)
4 KAs (25%)

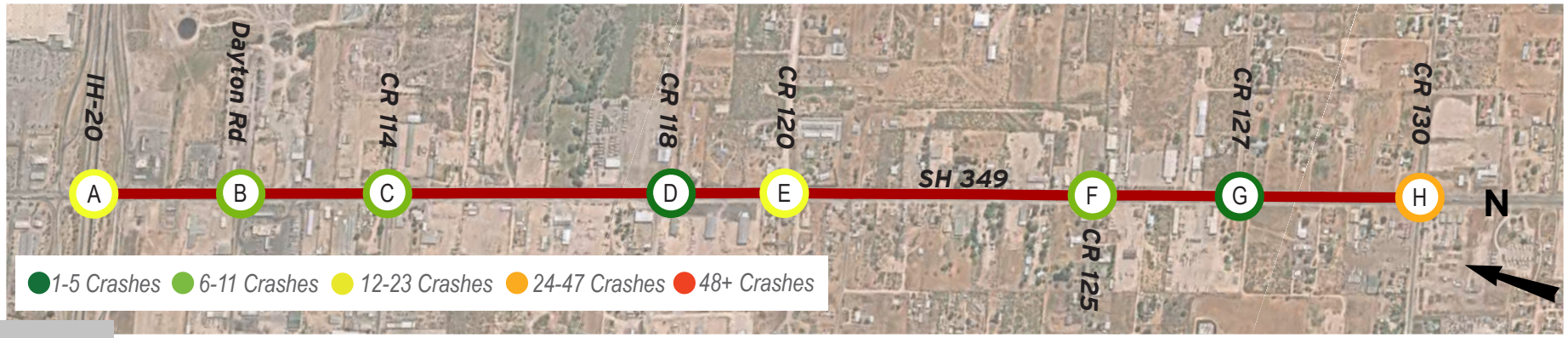
Angle - Both Going Straight
60 Crashes (18%)
2 KAs (13%)

Failed to Yield ROW - Stop Sign
63 Crashes (19%)
2 KAs (13%)

Failed to Control Speed
45 Crashes (14%)
3 KAs (19%)

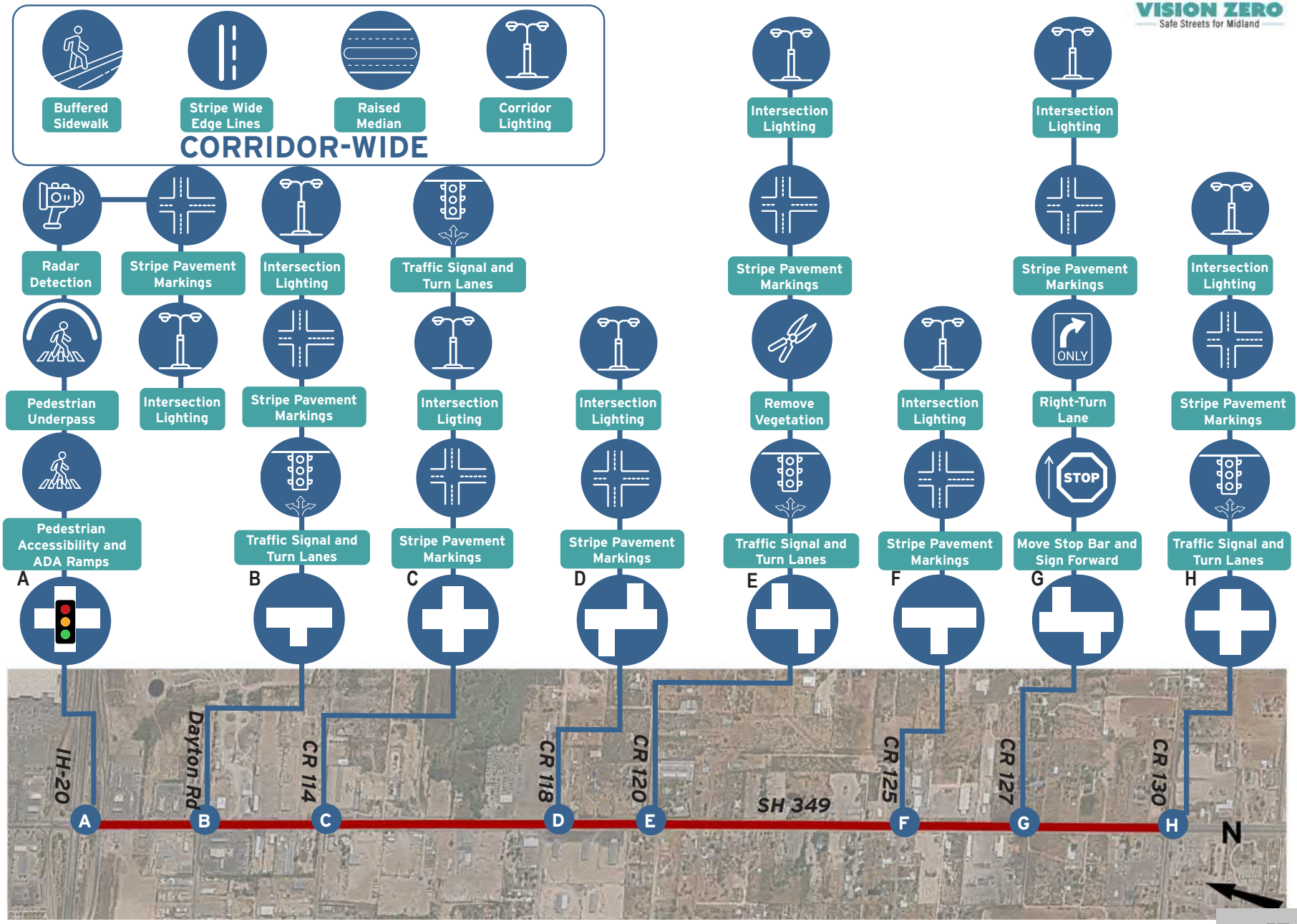
Failed to Yield ROW - Private Drive
38 Crashes (12%)
1 KA (6%)

Crash Density by Intersection

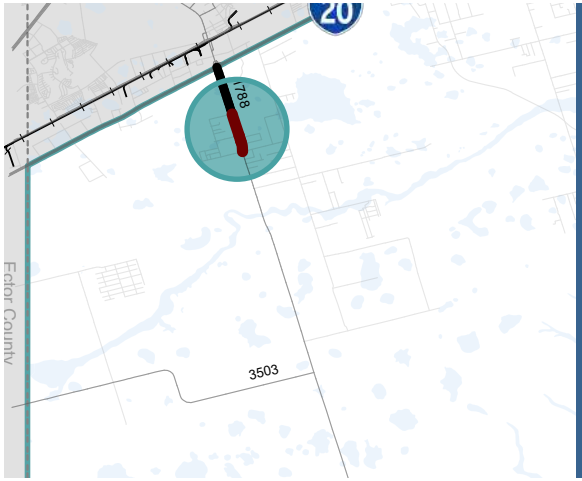


CORRIDOR 2: SH 349 - RECOMMENDATIONS

From IH-20 to CR 130



3 Corridor 3: FM 1788, From CR 140 to CR 150



Context

The section of FM 1788 from CR 140 to CR 150 is 1.02 miles in length and is located in Northwest Midland County. It has a posted speed limit of 55 mph near the beginning of the section and increases to 60 mph towards the end of the corridor. FM 1788 is a two-lane undivided roadway and has a volume of 8,400 vehicles per day. The land adjacent to the corridor is predominately comprised of industrial and residential land use.

Crash History

There were 53 total crashes on this section of FM 1788 between 2018-2022. Of these total crashes, 3 were KAs. Key takeaways for crash trends along this section of FM 1788 were the following:

30

*of the 53 total crashes were **intersection-related** (57%), which did not include any of the KA crashes*

13

*of the 53 total crashes were **one motor vehicle - going straight** (25%) making this the top manner of collision*

14

*of the 53 total crashes were **failed to control speed** (26%) making this the top contributing factor*

A full summary of crash history at FM 1788 is found in **Exhibit 13** on Page 60.

Corridor Recommendations

It is recommended to install advanced delineation signs and improvements along the curve, going both northbound and southbound. It is also recommended to install a two-way left-turn lane along the entirety of the corridor to provide a separated lane for turning vehicles into adjacent commercial developments and driveways. Speeding is an issue in the area, and it is recommended to install speed feedback signs along FM 1788 to mitigate speeding vehicles and warn vehicles of their travel speed.

It is also recommended to stripe wide edge lines along the corridor to better differentiate between travel lanes and the shoulder along FM 1788. Finally, it is recommended to install lighting throughout the corridor, which will improve visibility in dark conditions.

Intersection Recommendations

It is recommended to install illumination at all primary intersections along the study corridor for enhanced visibility, especially in night conditions. It is also recommended to restripe intersection pavement markings at all primary intersections, which include stop bars, turn lanes (if present), and approach lanes.

Table 11 summarizes the recommended CMFs and anticipated benefits for crash prevention over a 20-year horizon for SH 349. **Exhibit 14** summarizes all recommendations and countermeasures along SH 349.

Table 11: Countermeasure Application Results for FM 1788

ID	Location	Recommendation	Countermeasure	CMF	Crash Type	Total Crashes Reduced over 20-Year Period
C.1.3	All Intersections	Install intersection lighting	Install Intersection Lighting	0.881	Nighttime	5
C.2.3	All Intersections	Restripe intersection pavement markings	Upgrade Intersection Pavement Markings	0.75	All	30
3.1	Corridor	Install advanced delineation improvements along the curve	Improve Curve Delineation	0.82	Non-Intersection	6
3.2	Corridor	Install a center two-way left-turn lane	Introduce TWLTL On Rural Two Lane Road	0.64	All	77
3.3	Corridor	Install a speed feedback sign	Install Dynamic Speed Feedback Sign	0.95	All	11
3.4	Corridor	Stripe wide edge lines	Install Wider Edge Lines (4 in to 6 in)	0.635	All	5
3.5	Corridor	Install corridor lighting	Illumination	0.73	All	30

CORRIDOR 3: FM 1788 - CRASH HISTORY

From CR 140 to CR 150

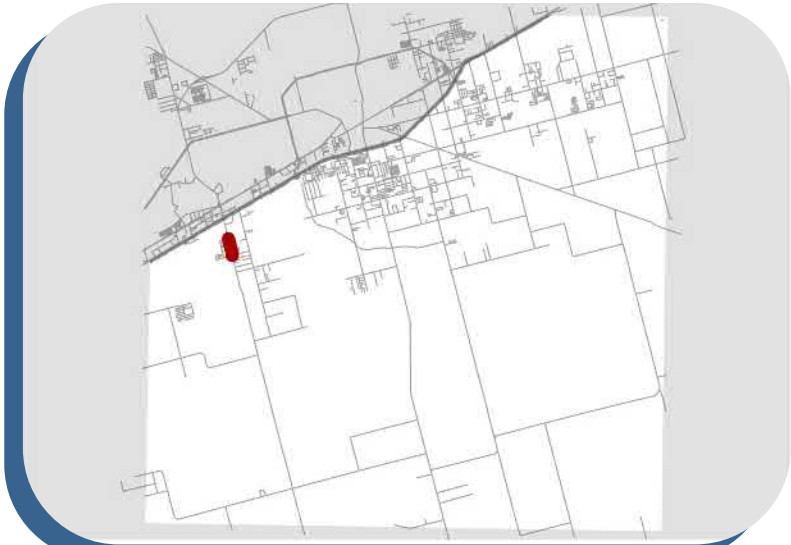
53 CRASHES **3** KAs

55-60 MPH

8,400 VEH PER DAY

MAJOR COLLECTOR

2 LANE UNDIVIDED SECTION



Top Crash Attributes

Intersection-Related
30 Crashes (57%)
0 KAs (0%)

Vulnerable Road Users
1 Crash (2%)
1 KA (33%)

Nighttime Crashes
18 Crashes (34%)
2 KAs (67%)

One Motor Vehicle - Going Straight
13 Crashes (25%)
0 KAs (0%)

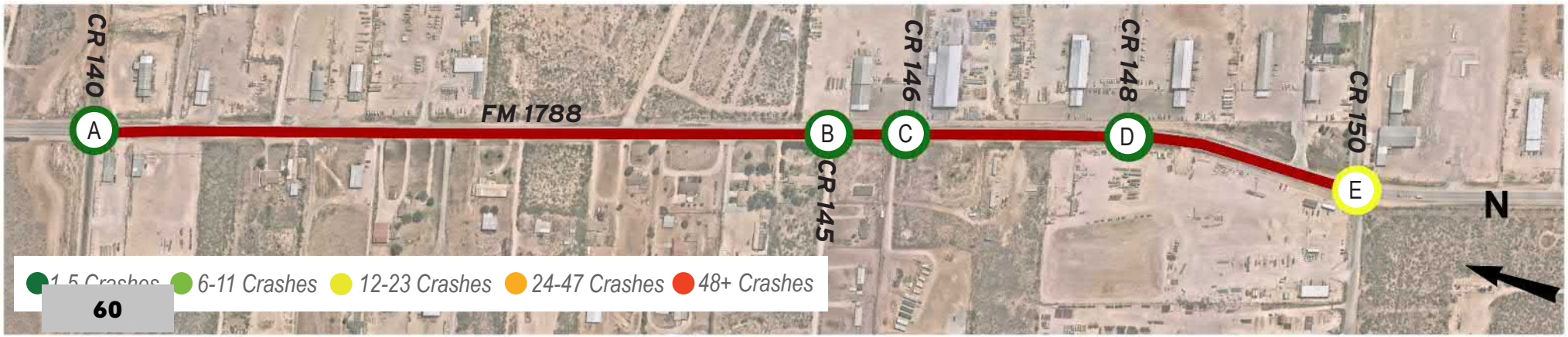
Same Direction - Both Going Straight - Rear End
7 Crashes (13%)
1 KA (33%)

Same Direction - One Straight - One Turning Left
6 Crashes (11%)
0 KAs (0%)

Failed to Control Speed
14 Crashes (26%)
1 KA (33%)

Disregarding Stop Sign or Light
5 Crashes (9%)
0 KAs (0%)

Crash Density by Intersection



CORRIDOR 3: FM 1788 - RECOMMENDATIONS

From CR 140 to CR 150

Midland County VISION ZERO Safe Streets for Midland

CORRIDOR-WIDE

- Speed Dynamic Sign (YOUR SPEED 60)
- Stripe Wide Edge Lines
- Corridor Lighting
- Curve Delineation
- Two-Way Turn Lane

A

- Intersection Lighting
- Stripe Pavement Markings

B

- Intersection Lighting
- Stripe Pavement Markings

C

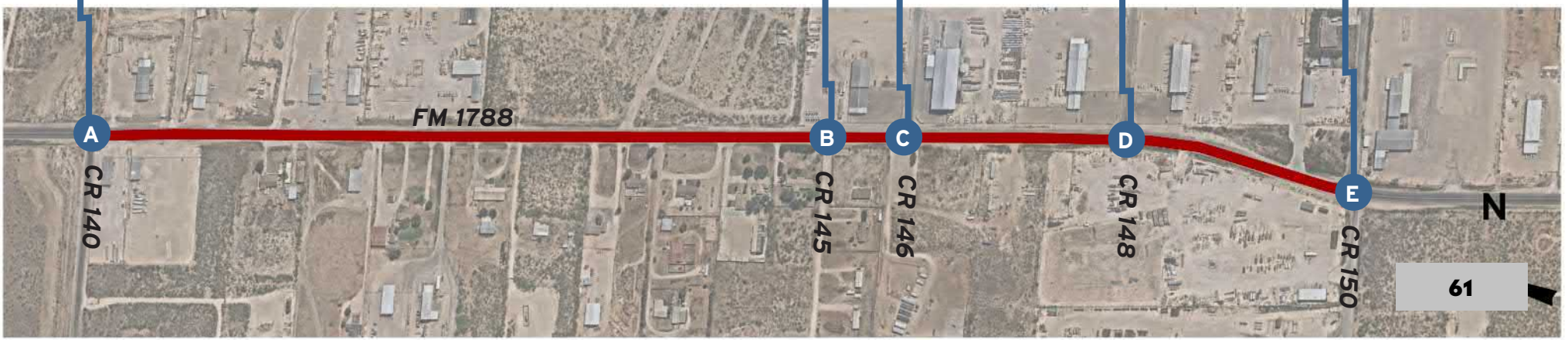
- Intersection Lighting
- Stripe Pavement Markings

D

- Intersection Lighting
- Stripe Pavement Markings

E

- Intersection Lighting
- Stripe Pavement Markings



Systemic Countermeasure Toolbox

A countermeasure toolbox is a comprehensive collection of strategies and interventions designed to address specific traffic safety issues and challenges. It provides transportation professionals with a range of options and resources to effectively mitigate risks, improve safety, and enhance the overall performance of roadways and transportation systems.

The following details systemic countermeasures that can be implemented in all areas of the County to improve safety, not limited to previous recommendations and study corridors. Midland County's systemic countermeasure toolbox is provided with each categorized by safety emphasis area on page 62. Priority should be given to roads along the HIN and in areas of disadvantaged populations to lessen severity among crashes.

Table 12: Systemic Countermeasure Toolbox

Safety Emphasis Areas	Raised Median	Roadway Reconfiguration	Lane Designation Markings and Signs	High Contrast Lane Markings	Wide Edge Lines	Speed Feedback Signs	Roundabouts	Bike Lanes	Retroreflective Backplates	Corridor Access Management	Rectangular Rapid Flashing Beacon	Improve Signing and Visibility at Signals	Pedestrian Hybrid Beacon	Sidewalks
CMF	0.29	0.53	0.75	0.75	0.635	0.95	0.59	0.435	0.85	0.93	0.31	0.732	0.883	0.598
Roadway & Lane Departure	●	●	●	●	●									
Speed-Related	●	●				●	●	●						
Intersection-Related			●				●		●	●	●	●		
Vulnerable Road Users	●	●						●			●	●	●	●
Distracted Driving			●	●	●			●	●			●		
Impaired Driving	●		●	●	●			●	●			●		
Unrestrained Persons	●	●				●	●	●						

Figure 16: Raised Median Example

Source: FHWA, City of Charlotte, NC

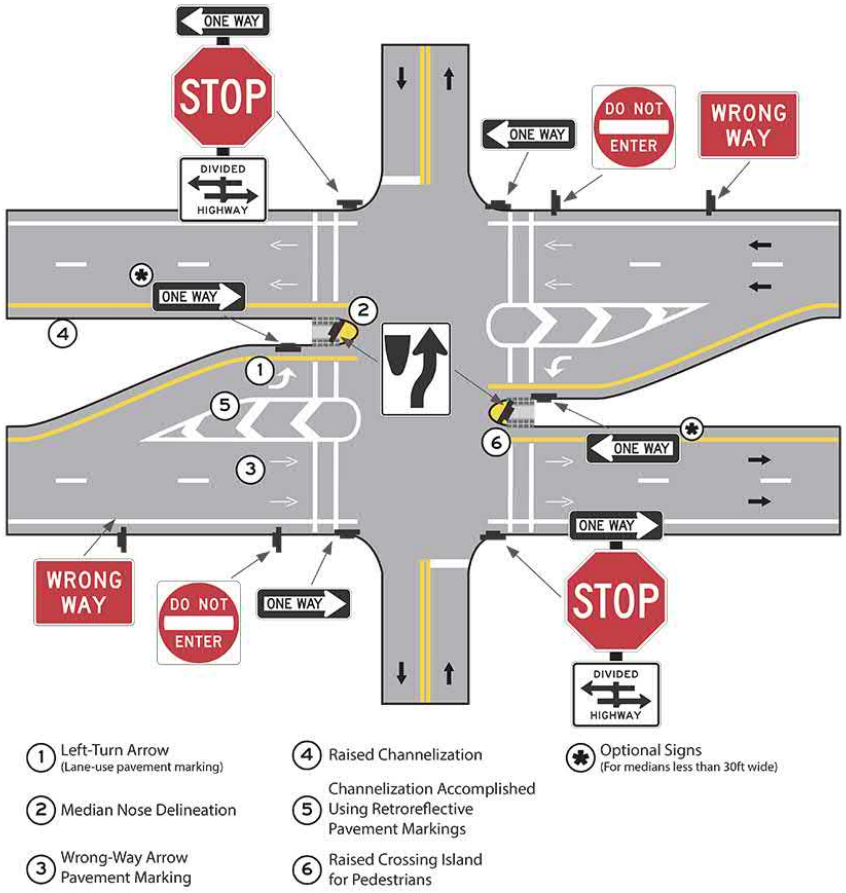
Raised Median

A raised median is a physical barrier or divider that separates opposing lanes of traffic on a roadway. It is most commonly used in urban and suburban areas to enhance safety and traffic flow by preventing vehicles from crossing over into opposing lanes or making certain left-turn movements. Installing a raised median has a CMF of 0.29 for all crash types and severities (CMF ID: 2219). **Figure 16** provides an example of a raised median.

Applicable Safety Emphasis Areas:

- Roadway & Lane Departure
- Speed-Related
- Vulnerable Road Users
- Impaired Driving
- Unrestrained Persons

Figure 17: Lane Designation Markings Example



Source: FHWA

Lane Designation Markings and Signs

Pavement markings are painted or applied symbols, lines, and patterns on road surfaces to convey traffic regulations, guidance, and warnings to drivers. They enhance safety by providing clear visual cues for lane delineation, intersection control, and other traffic management purposes. Pavement markings help reduce confusion, improve traffic flow, and minimize the risk of crashes by assisting drivers in navigating roadways effectively and safely. Upgrading pavement markings has a CMF of 0.75 for all crash types and severities (CMF ID: NS01). **Figure 17** provides an example of pavement markings for lane designation.

Applicable Safety Emphasis Areas:

- Roadway & Lane Departure
- Distracted Driving
- Vulnerable Road Users
- Impaired Driving

Figure 18: High Contrast Lane Markings Example

Source: FHWA

High Contrast Lane Markings

High contrast lane markings refer to road markings that are designed to be easily distinguishable from the surrounding pavement, typically by contrasting colors or materials. These markings are intended to enhance visibility and clarity for drivers, especially in challenging conditions such as low light, inclement weather, or areas with poor visibility. This has a CMF of 0.75 for all crash types and severities (CMF ID: NS01). **Figure 18** provides an example of high contrast lane markings.

Applicable Safety Emphasis Areas:

- Roadway & Lane Departure
- Distracted Driving
- Intersection-Related
- Impaired Driving

Figure 19: Wide Edge Line Example

Source: FHWA, Texas Transportation Institute

Wide Edge Lines

Edge lines are the pavement markings at the edge of travel lanes and are designed to help drivers clearly identify the road alignment ahead. Edge lines are considered "wider" when the marking width is increased from the minimum normal line width of 4 inches to the maximum normal width of 6 inches. Wider edge lines enhance the visibility of travel lane boundaries compared to traditional edge lines. This has a CMF of 0.635 for all crash types and for K, A, B, or C crash severities (CMF ID: 4737). **Figure 19** provides an example of a wide edge line.

Applicable Safety Emphasis Areas:

- Roadway & Lane Departure
- Impaired Driving
- Distracted Driving

Figure 20: Speed Feedback Sign Example

Source: FHWA

Speed Feedback Signs

Speed feedback signs are traffic control devices designed to alert drivers of their current vehicle speed and encourage compliance with posted speed limits. These signs typically consist of a display panel, often featuring LED or digital readouts, which visually indicates the speed of approaching vehicles as they pass by.

The primary purpose of speed feedback signs is to increase driver awareness of their speed and encourage voluntary speed reductions, ultimately promoting safer driving behaviors and reducing the risk of crashes. These signs are commonly deployed in school zones, residential areas, work zones, and other locations where speeding may pose a safety hazard. Installing speed feedback signs has a CMF of 0.95 for all crash types and severities (CMF ID: 6885). **Figure 20** provides an example of a speed feedback sign.

Applicable Safety Emphasis Areas:

- Speed-Related
- Unrestrained Persons

Figure 21: Roundabout Example

Source: FHWA

Roundabouts

A roundabout is a type of circular intersection where traffic flows continuously around a central island. Vehicles entering a roundabout must yield to traffic already circulating within it, promoting a smooth and efficient flow of traffic with reduced conflict points compared to traditional intersections. Roundabouts are designed to improve safety, reduce congestion, and enhance traffic flow. The CMF for installing a roundabout is 0.59 for all crash types and severities (CMF ID: 10434). **Figure 21** provides an example of a roundabout.

Applicable Safety Emphasis Areas:

- Speed-Related
- Intersection-Related
- Unrestrained Persons

Figure 22: Bike Lane Example

Source: pedbikeimages.org/ Dan Burden

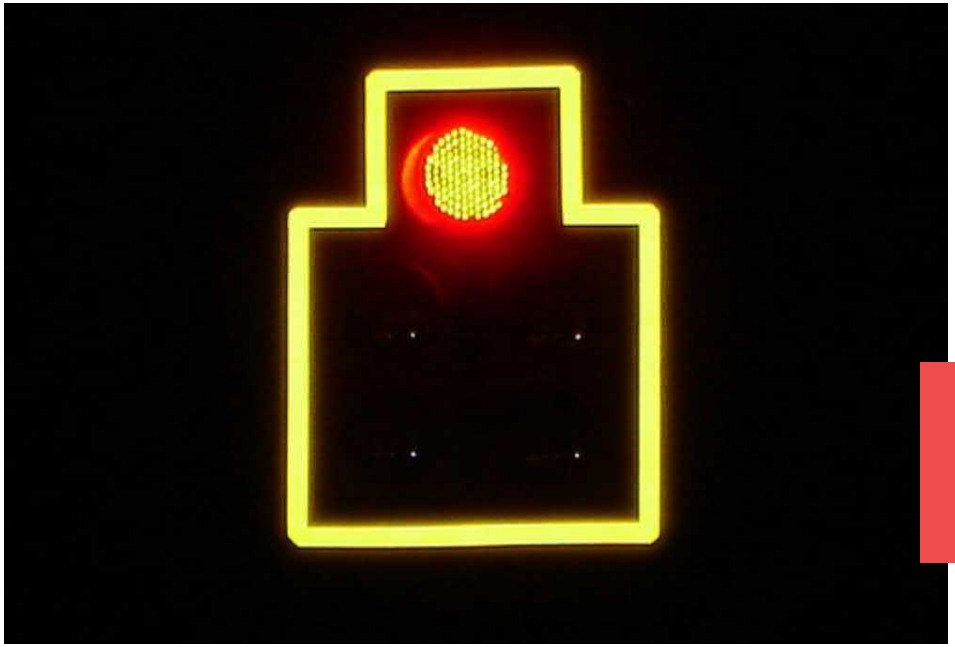
Bike Lanes

A bike lane is a designated area of a roadway that is reserved for bicycles, typically marked with pavement markings and signage. Bike lanes provide cyclists with a dedicated space to ride, improving safety by reducing conflicts with motor vehicles, and encouraging more people to choose bicycling as a mode of transportation. The CMF for bike lanes is 0.435 for vehicle and bicycle crashes and all crash severities (CMF ID: 10737). **Figure 22** provides an example of a bike lane.

Applicable Safety Emphasis Areas:

- Speed-Related
- Vulnerable Road Users
- Distracted Driving
- Impaired Driving

Figure 23: Retroreflective Backplate Example



Source: FHWA

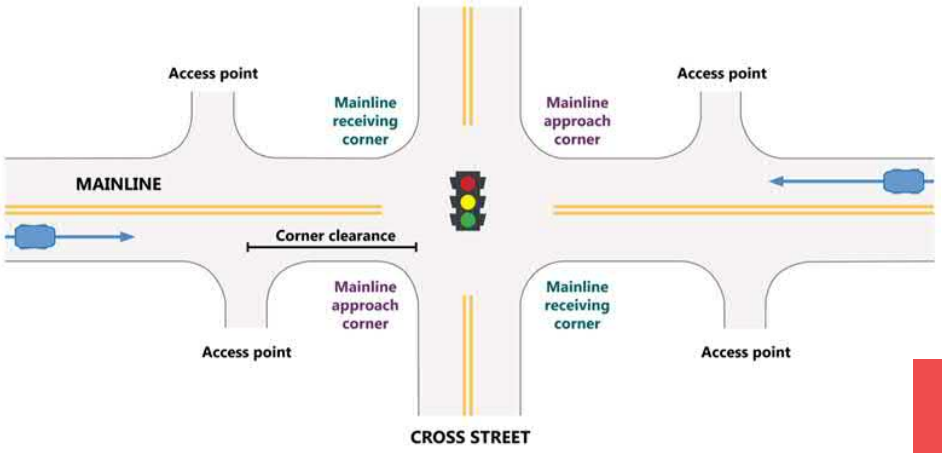
Retroreflective Backplates

A retroreflective backplate is a backplate made by framing a signal head with a 1-to-3-inch yellow retroreflective border. They improve the visibility of the illuminated face of the signal by introducing a controlled-contrast background. They are also more visible and conspicuous in both daytime and nighttime conditions. Installing retroreflective backplates has a CMF of 0.85 for all crash types and severities (CMF ID: 1410). **Figure 23** provides an example of a retroreflective backplate installed on a signal head.

Applicable Safety Emphasis Areas:

- Intersection-Related
- Distracted Driving
- Impaired Driving

Figure 24: Corridor Access Management Example



Source: FHWA

Corridor Access Management

Access management pertains to the planning, implementation, and regulation of entry and exit locations along a road, encompassing intersections with other roads and driveways serving nearby properties. Thoughtful management of access along a corridor can improve safety for all transportation modes, promote walking and cycling, and alleviate traffic congestion and delays. Closure or relocation of driveways from functional area of intersection has a CMF of 0.93 for all crash types and severities (CMF ID: 442). **Figure 24** provides an example of corridor access management elements and example.

Applicable Safety Emphasis Areas:

- Intersection-Related

Figure 25: RRFB Example

Source: pedbikeimages.org/ Toole Design Group

Rectangular Rapid Flashing Beacon (RRFB)

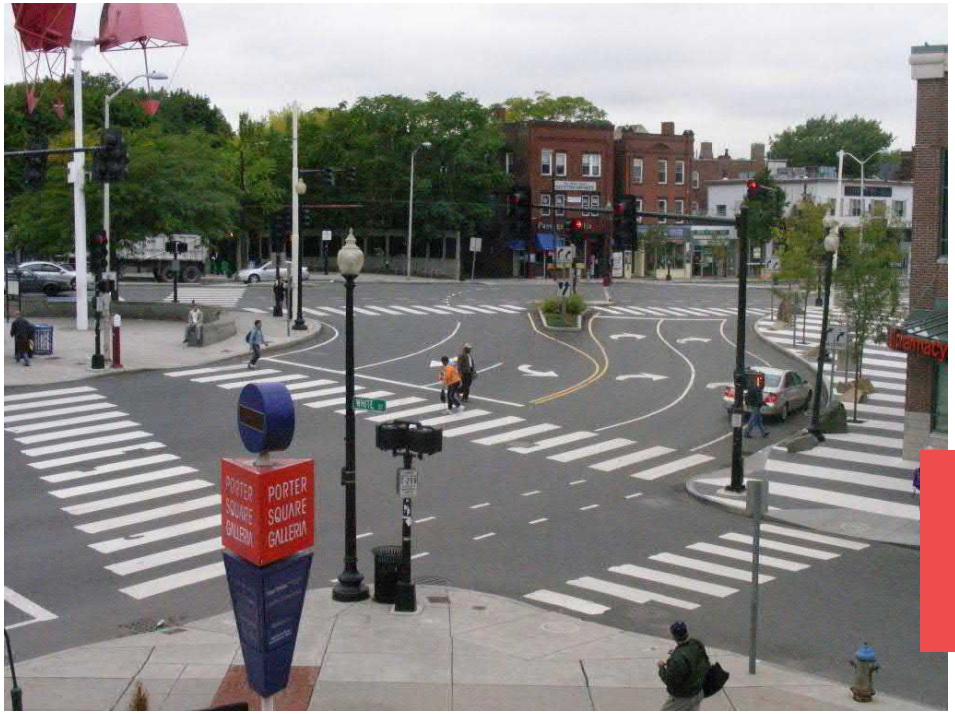
A rectangular rapid flashing beacon (RRFB) is a pedestrian-activated safety device installed at crosswalks to enhance visibility and alert drivers to the presence of pedestrians. When activated, the RRFB emits a rapid, alternating pattern of flashing lights to prompt drivers to yield to pedestrians crossing the street.

According to FHWA, RRFBs can result in motorist yielding rates as high as 98 percent at marked crosswalks with varied speed limit, crossing distance, and number of travel lanes. A CMF of 0.31 applies for all vehicle and pedestrian crashes and all crash severities (CMF ID: 11158). **Figure 25** provides an example of an RRFB for a pedestrian crossing.

Applicable Safety Emphasis Areas:

- Intersection-Related
- Vulnerable Road Users

Figure 26: Crosswalk and Pedestrian Crossing Example



Source: pedbikeimages.org/ Gary Thomas

Improve Signing and Visibility at Signal

The minimum improvements to the equipment and facilities at signalized intersections should include high contrast crosswalks, pedestrian signal heads and push buttons, ADA compliant curb ramps. When constructed, pedestrians and other vulnerable road users are provided adequate facilities to make safe crossings and motorists are alerted of dedicated crossing areas.

Installing a high-visibility crosswalk and pedestrian signals has a CMF of 0.732 for vehicle and pedestrians crashes for all severities (CMF ID: 8967). **Figure 26** provides an example of high contrast crosswalks with pedestrian signal head and push buttons.

Applicable Safety Emphasis Areas:

- Intersection-Related
- Vulnerable Road Users
- Distracted Driving
- Impaired Driving

Figure 27: PHB Example

Source: pedbikeimages.org/ Mike Cynecki

Pedestrian Hybrid Beacon

The pedestrian hybrid beacon (PHB) is a traffic control device designed to help pedestrians safely cross higher-speed roadways at midblock crossings and uncontrolled intersections. PHBs are typically effective at locations where three or more lanes will be crossed, or traffic volumes are above 9,000 annual average daily traffic. If PHBs are not familiar to a community, agencies and other governmental departments should provide appropriate education campaigns. PHBs have a CMF of 0.883 for all crash types and severities, primarily on minor roads (CMF ID: 10585). **Figure 27** provides an example of a pedestrian hybrid beacon for a pedestrian crossing.

Applicable Safety Emphasis Areas:

- Vulnerable Road Users

Figure 28: Buffered Sidewalk Example

Source: pedbikeimages.org/ Dan Burden

Sidewalks

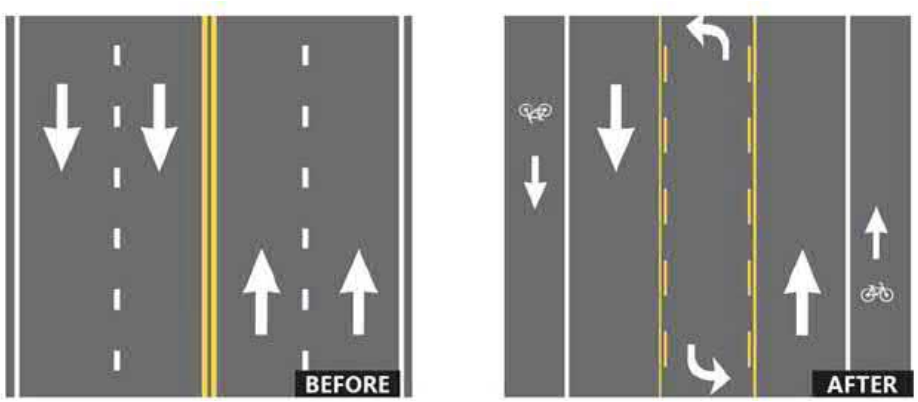
A sidewalk is a designated pathway alongside a road or street intended for pedestrian use. It provides a safe and separate space for pedestrians to walk, away from vehicular traffic. Sidewalks enhance pedestrian safety by reducing the risk of collisions with vehicles, promoting walking as a mode of transportation, and providing accessible routes for people of all ages and abilities.

Installing a sidewalk has a CMF of 0.598 of vehicle and pedestrian crashes of all types and severities (CMF ID: 11246). **Figure 28** provides an example of a buffered sidewalk.

Applicable Safety Emphasis Areas:

- Vulnerable Road Users

Figure 29: Roadway Reconfiguration



Source: FHWA

Roadway Reconfiguration

A roadway reconfiguration usually involves converting an existing four-lane roadway into a three-lane roadway. Implementing a roadway reconfiguration can improve safety, calm traffic, provide better mobility and access for all users, and enhance the quality of life in a community. Roadway reconfigurations can provide an opportunity to improve mobility by making space for the addition of bike lanes.

Completing a roadway reconfiguration from four to three lanes has a CMF of 0.53 for all crash types and severities (CMF ID: 2841). **Figure 29** Provides an example of what a roadway reconfiguration can look like.

Applicable Safety Emphasis Areas:

- Roadway and Lane Departures
- Soeed Related
- Vulnerable Road Users
- Unrestrained Persons

> ...with each **emphasis area having overarching goals** that focuses on **eliminating deaths on Midland roads** through the building **complete streets, engaging the community, and finding innovative solutions** to protect all road users.

Chapter 6. Policies and Programs

This chapter outlines the recommended policies and programs that could aid in achieving the Vision Zero goals set by the VZTF. These policies and programs are meant to help solve the safety deficiencies found in the County's transportation system. The policies and programs are organized by the eight safety emphasis areas discussed previously; with each emphasis area having overarching goals that focuses on eliminating deaths on Midland roads through the building complete streets, engaging the community, and finding innovative solutions to protect all road users. To create a clear path towards achieving the Vision Zero goals, each emphasis area has strategies and actions that should be done as part of implementation efforts.

Figure 30: Example Action Item Policy Hierarchy

Roadway & Lane Departures

Roadway and lane departure crashes make up approximately 36% of all fatal (K) and severe (A) crashes, making them the most common contributing factor in KA crashes in the County. The strategies and actions listed in **Table 13** aim to decrease the number of roadway and lane departure crashes by helping to prevent some of the most common causes of roadway and lane departure crashes. Common causes of these crashes include the environment (light conditions or weather), human factors (drowsiness or inattention), and design factors.

Table 13: Summary of Roadway & Lane Departure (LD) Strategies and Actions

Action #	Description
Strategy LD1. Partner with TXDOT to open new rest stops in Midland County.	
Action LD1.1.	Partner with TXDOT to identify potential locations for new rest stops in Midland County.
Action LD1.2.	Establish a new rest stop in Midland County.
Strategy LD2. Update design standards to address deficiencies that may contribute to roadway/lane departure crashes.	
Action LD2.1.	Conduct a study on roadway/lane departure crash locations.
Action LD2.2.	Prioritize fixing the issues discovered.
Strategy LD3. Increase awareness on the dangers of drowsy driving.	
Action LD3.1.	Utilize existing educational campaign materials from NHTSA and the National Sleep Foundation.

LD1. Partner with TXDOT to open new rest stops in Midland County.

The implementation of new rest stops in Midland County could curb the act of drowsy driving, a common contributor of roadway and lane departure crashes. Currently there are no rest stops in Midland County, with the nearest one being 53 miles East in Howard County (**Figure 31**). Through a partnership with the Texas Department of Transportation (TXDOT), the County could identify locations for potential rest stops and begin the process of creating one. Creating a rest stop in Midland County, would provide drivers with a space to get a break from driving and return them to the roadway rested and alert effectively targeting drowsy driving.

LD1.1. Partner with TXDOT to identify potential locations for new rest stops in Midland County.

Alongside TXDOT, Midland County should perform a review to identify potential locations where a rest stop would be most beneficial. The review could identify roadway locations with the highest number of roadway/lane departure crashes and/or locations with high severity crashes. By identifying these key locations, the County would have the opportunity to greatly impact the number of roadway/lane departure crashes occurring within the community.

LD1.2. Establish a new rest stop in Midland County.

Once a location is identified, the County should work closely with TXDOT to construct the rest stop. The rest stop should strive to be attractive, safe, and clean to entice drivers to stop and rest on their travels. In TXDOT's effort to encourage the use of their rest stops, their new generation of rest stops feature regional designs, modern restrooms, display exhibits of local features, and separate parking for cars and trucks (**Figure 32**). The addition of this rest stop in Midland County could be essential in reducing roadway and lane departure crashes, the most common type of fatal and severe crashes in the County.

Figure 31: Existing Rest Stop in Howard County

Source: Texas Department of Transportation (TXDOT)

Figure 32: Features in TXDOT's New Generation Safety Rest Stops

Exhibit in IH-27 Northbound Rest Stop | Source: TxDOT

Renovated restroom in IH-10 Eastbound Rest Stop Source: TxDOT

LD2. Update design standards to address deficiencies that may contribute to roadway/lane departure crashes.

To identify design deficiencies that could be contributing to roadway/lane departure crashes, a study that aims to evaluate locations with high occurrences of roadway and lane departure crashes is recommended. Using the results of this study as a guide, updates to existing design standards should occur and include countermeasures recommended in the Action Plan. Through this strategy, Midland County is attempting to use roadway design as a tool to help eliminate these crashes from occurring or reducing their severity.

LD2.1. Conduct a study on roadway/lane departure crash locations.

A Countywide engineering study should be conducted on roadway locations that have a high number of roadway and lane departure crashes to identify common design features that could be contributing to these crashes. After the design deficiencies are identified, new design features that would mitigate these types of crashes should be determined and incorporated into County design standards.

LD2.2. Prioritize fixing the issues discovered.

Based on the results of the study, the County should prioritize fixing the most common deficiencies contributing to roadway and lane departure crashes. It is recommended to begin this effort on roadways located on the HIN or in disadvantaged census tracts. The projects undertaken to complete this action should be included in the County's Capital Improvement Plan.

LD3. Increase awareness on the dangers of driving drowsy.

Drowsy driving is estimated to contribute to as many as 1.2 million collisions and results in potentially 5,000 to 8,000 fatalities per year, according to the National Highway Traffic Safety Administration (NHTSA). Despite this risk, driving drowsy is a common occurrence amongst drivers; 1 in 3 drivers admit to driving when they were so tired that they had trouble keeping their eyes open within the past 30 days according to the AAA Foundation for Traffic Safety. Since driving drowsy is a main contributor to roadway and lane departure crashes, it is recommended that Midland County lead the region in an effort to raise awareness within the region about the dangers driving drowsy.

LD3.1. Utilize existing educational campaign materials from NHTSA and the National Sleep Foundation.

To raise awareness on driving drowsy, it is recommended that Midland utilizes education campaign materials and strategies from NHTSA and the National Sleep Foundation. NHTSA has an existing driving drowsy education campaign, "Take a Break. Drive Awake.", that aims on educating drivers on the risks associated with drowsy driving and encouraging drivers of alternatives to driving drowsy, such as stopping at rest stops (**Figure 33**).

While NHTSA's campaign aims to educate drivers on actions to take when they become drowsy, the National Sleep Foundation's Drowsy Driving Prevention Week on November 3 – 9, 2024 aims to encourage everyone to prioritize sleep and drive when they are alert and refreshed. Their campaign material means to educate the public on different ways to improve their sleep effectively by trying to solve drowsy driving at the root (**Figure 34**). Since the Nation Sleep Foundation has already created education materials and strategy, it would be beneficial for the County to use them as a guide for their own campaign strategy.

Through the utilization of these campaign materials, Midland County has an opportunity to decrease the number of roadway and lane departure crashes caused by drowsy driving by educating its residents on the risks associated.

Figure 33. NHTSA Infographic for the "Take a Break. Drive Awake." Campaign

Source: NHTSA

Figure 34. Educational Infographic from the Nation Sleep Foundation

Source: National Sleep Foundation

Speed-Related

Although Midland County is under the state average regarding the number of KA crashes caused by speeding, speeding is the second most common contributing factor in fatal and severe crashes (31%) within the County. Higher speeds increase both the frequency and severity of crashes, yet it is still the norm amongst drivers. Not only does speeding endanger the life of the driver, unsafe speeding behaviors are especially harmful to vulnerable road users (pedestrians or bicyclists). To promote safer speed on Midland County's roads, a combination of targeted education campaigns, utilizing engineering interventions, and increased community engagement efforts will be used as summarized in **Table 14**.

Table 14: Summary of Speed-Related Strategies and Actions

Action #	Description
Strategy SP1. Implement a campaign encouraging safe driving behaviors.	
Action SP1.1.	Partner with TXDOT to run the "Drive a Safe Speed" Campaign.
Strategy SP2. Deploy engineering interventions to prevent speeding.	
Action SP2.1.	Increase visibility and frequency of speed limit signs along County roads.
Action SP2.2.	Update design standards to incorporate speeding countermeasures (Chapter 5).
Action SP2.3.	Update design standards to include transverse rumble strips and warning signs prior to an intersection on high-speed roadways.
Strategy SP3. Establish a targeted enforcement program for speeding.	
Action SP3.1.	Develop an understanding of speeding citation patterns.
Action SP3.2.	Develop a targeted enforcement plan for locations with high speeding.

SP1. Implement a campaign encouraging safe driving behaviors.

It is recommended that the County implement a speed-related campaign that aims to encourage drivers to slow down and practice safe driving behaviors to help reduce crashes. While roadway design and infrastructure greatly aid in reducing speed, a targeted campaign would play a crucial role in encouraging drivers to actively choose to drive at safe speeds by educating them on why following speed limits keeps them and other road users safe.

SP1.1. Partner with TXDOT to run the "Drive a Safe Speed" Campaign.

Since TXDOT has an existing campaign that involves safe speeds education, Midland County should partner with TXDOT to implement their campaign. The "Be Safe. Drive Smart. Drive a Safe Speed." campaign urges drivers to slow down while also providing speed-related driving tips. Campaign materials included with this campaign are video/radio public service announcements (PSA), print materials, billboards, and social media posts (**Figure 35**). Through this partnership, the implementation of this campaign could be fast-tracked due to the availability of all the campaign materials.

Figure 35. "Be Safe. Drive Smart." Social Media Post

Source: TxDOT

SP2. Deploy engineering interventions to prevent speeding.

To work towards creating a safer roadway environment, the County should implement engineering interventions that aid in reducing speeds on their roadways. This strategy aims to use the design of the roadways and accompanying infrastructure as a tool to encourage drivers to comply with established speed limits, create safer conditions for vulnerable road users, and reduce crashes.

SP2.1. Increase visibility and frequency of speed limit signs along County roads.

Speed limit signs are an essential part in ensuring speed compliance by drivers since these signs inform drivers of the speed limit and empower them to calibrate their speed accordingly. Due to their crucial role in maintaining a safe roadway environment, there should be an effort to increase speed sign visibility and frequency along County roads. Existing signs that are faded or obstructed should be replaced or relocated to allow for better visibility. Furthermore, the frequency of speed limit sign in the County should be increased to ensure that drivers have a constant reminder of the maximum speed limit. Although increasing the visibility and frequency of speed limit signs may seem small, this piece of infrastructure is pivotal in encouraging drivers to travel at safe speeds and arrive at their destination safely (**Figure 36**).

SP2.2. Update design standards to incorporate speeding countermeasures (Chapter 5).

The countermeasures recommended on the "Systemic Countermeasures Toolbox" in Chapter 5 should be incorporated into the existing design standards to help in speed management. The application of these countermeasures would aid in the creation of safer roadways for all users by helping reduce speeds and increasing drivers' awareness of their own speeds.

Figure 36. Speed Limit Sign on TxDOT Facility

Source: TxDOT

SP2.3. Update design standards to include transverse rumble strips and warning signs prior to an intersection on high-speed roadways.

Because of the need to decrease speeds quickly when approaching an intersection, updating design standards to include transverse rumble strips and warning signs, as shown in Figure 37, would be beneficial. These countermeasures would alert drivers of the intersection ahead and remind them to decrease their speeds so as to accommodate for any sudden stopping they may have to do.

Strategy SP3. Establish a targeted enforcement program for speeding.

Establishing a targeted enforcement program to monitor speed compliance could serve as a tool to increase speed compliance throughout the County. Not only is the enforcement program aiming to deter unsafe speeding behaviors, it also means to remind residents of local speed limits. Although the education and prevention plans related to speeding aim to create safe driving habits within the public, this enforcement strategy helps support the use of those taught behaviors.

SP3.3. Develop an understanding of speeding citation patterns.

While it would be simple to have the enforcement program to be an increase of law enforcement presence Countywide, this would not be an effective use of resources. Instead, it is recommended to first develop an understanding of speeding citation patterns in Midland County to help identify times and locations where enforcement is most needed. This action will require collecting citation history for the County and conducting an analysis to find any patterns regarding common locations, times of day, or historically high citation days. Through this action, Midland County will show a dedication towards data-driven enforcement efforts in creating safer roadways.

SP3.4. Develop a targeted enforcement plan for locations with high speeding.

After finding locations and times in which speeding increases, an enforcement plan should be developed to better monitor those specific locations. While this enforcement plan would involve increased law enforcement presence, the aim is not to increase the number of citations given, but rather to serve as a reminder to drivers to be aware of their speeds. Through this intentional awareness of speeding behaviors, there is hope that Midland County drivers will adopt safer speeding habits that will contribute to safer roadways for all.

Figure 37. TXDOT's Speed Limits and Laws

Source: Institute of Transportation Engineers (ITE)

Intersection-Related

Intersection-related severe and fatal crashes in the County are below the average of the state with them comprising 30% of the total number of KA crashes in the County compared to Texas's 32%. Although Midland County is below the average regarding intersection-related severe and fatal crashes, the County has a unique issue with red light/stop sign running. Approximately 15% of fatal and severe crashes in the County were caused by red light/stop sign running while only 12% of Texas's fatal and severe crashes involved this contributing factor. The following strategies in **Table 15** have been developed that use educational and engineering strategies that aim to enhance intersection safety in the County.

Table 15: Summary of Intersection-Related Strategies and Actions

Action #	Description
Strategy IN1. Update intersection design standards to foster safer intersections.	
Action IN1.1.	Create new standards and policies that would allow for the use of roundabouts.
Action IN1.2.	Update design standards to increase lighting at intersections.
Strategy IN2. Update signal timing and infrastructure Countywide.	
Action IN2.1.	Evaluate existing signal timing at intersections to determine future timing improvements.
Action IN2.2.	Create a policy that would require a signal warrant for high crash intersection every 5 years.
Action IN2.3.	Upgrade existing traffic signal infrastructure to include red-light indicator lights.
Strategy IN3. Ensure all future and existing intersections meet new safety standards.	
Action IN3.1.	Evaluate all pending construction projects.
Action IN3.2.	Evaluate existing intersections to determine if they meet new design standards.
Action IN3.3.	Prioritize intersection evaluations and redesigns in vulnerable census tracts.
Strategy IN4. Develop a campaign strategy to remind drivers to practice safe driving behaviors at intersections.	
Action IN4.1.	Create campaign materials that remind drivers to practice safe driving behaviors at intersections.
Action IN4.2.	Increase campaign visibility at high crash intersections.
Action IN4.3.	Revisit training requirements for employees driving County-owned vehicles.

Strategy IN1. Update intersection design standards to foster safer intersections.

Existing intersection design standards should be updated to better support the Vision Zero goals being pursued. These updates to the current standards and policies will bring a systemic solution to design deficiencies that exist in the transportation network that could be contributing to intersection-related crashes. The new standards are meant to create safer intersections for all roadway users by reducing conflict points and increasing visibility.

IN1.1. Create new standards and policies that would allow for the use of roundabouts.

Although roundabouts can be outside of the norm, they can substantially reduce crashes that result in fatal or severe injuries therefore it is recommended that standards and policies be updated to make the implementation of roundabouts easier. Roundabouts not only reduce the number of conflict points at an intersection but also result in lower speeds leading to an environment more suitable for walking and cycling (**Figure 38**). By including roundabouts as an option during intersection design, the County would be working towards creating safer roads using innovative solutions.

IN1.2. Update design standards to increase lighting at intersections.

A lack of adequate lighting at intersections was prevalent throughout Midland County's transportation network therefore intersection design standards should be updated to include increased lighting. While the number of fatal crashes occurring during the day and night are about the same, the nighttime fatality rates are three times higher than the daytime rate due to only 25% of vehicle miles traveled (VMT) occur at night according to FHWA. Increasing visibility at intersections is crucial in reducing the number of crashes since this is where various modes of travel cross paths. Furthermore, adequate lighting can also provide security benefits for vulnerable road users as they travel along and across roadways.

Figure 38 Example of a Roundabout in Corinth, Texas

Source: City of Corinth

Figure 39 Lighting at an Intersection

Source: FHWA

Figure 40. Red-light Indicator Light

Source: Josh Spreiter (wowt.com)

Strategy IN2. Update signal timing and infrastructure Countywide.

An update to the timing and infrastructure on the County's traffic signals is necessary in an effort to create safer intersections for all users. Although traffic signals are often implemented to improve vehicle throughput, in some cases they can present a trade-off between mobility and safety. Evaluating current signal timing practices and updating current infrastructure can both contribute to safer intersections.

IN2.1. Evaluate existing signal timing at intersections to determine accuracy of lighting.

An evaluation on the current signal timing plan needs to be conducted to determine what re-timings should be implemented to enhance safety at intersections. During this evaluation, special attention should be focused on the existing redlight interval to ensure that this interval is not excessive. Excessively long redlight intervals can cause drivers to become impatient and lead to higher rates of redlight running. These updates to the existing signal timing plan can improve safety at intersections by increasing vulnerable road user visibility and fixing deficiencies in the current system.

IN2.2. Create a policy that would require a signal warrant for high crash intersection every 5 years.

A policy should be included that requires a review of the signal timing plan for traffic signals every 5 years or if there is a significant change in traffic volumes or roadway conditions. FHWA recommends that traffic signal timing plans be reviewed every three to five years unless there are special circumstances. Special circumstances that would warrant a more frequent review could be an increase in pedestrian volume, a significant change in turning movements, or a change in land use. The implementation of a regulatory signal warrant for high crash intersections would allow for a better understanding of traffic frequency and concentrations in the area.

IN2.3. Upgrade existing traffic signal infrastructure to include red light indicator lights.

Red-light indicator lights, also known as tattletale lights (**Figure 40**), activate when the traffic signal is red and helps law enforcement officers to more easily determine when a driver has run the red light from downstream of the intersection. The implementation of these lights aims to reduce redlight running crashes by creating a safer and more efficient method of enforcement. While other states utilize traffic cameras to enforce redlight compliance, this technology is less invasive.

Strategy IN3. Ensure all future and existing intersections meet new safety standards.

To ensure County intersections are upholding the new safety standards developed in pursuit of the County's Vision Zero goals, an evaluation of current intersections and designs for future ones should be undertaken. Conducting these evaluations will give the County an opportunity to determine if the proposed designs for future intersections meet multimodal safety needs, or if there are opportunities to use countermeasures that would enhance safety. The design of the intersections itself can play a large role in enforcing safe driving behaviors and creating a safer environment for vulnerable road users.

IN3.1. Evaluate all pending construction projects.

A systemic evaluation process should be created to evaluate all the proposed intersection construction projects. This systemic process should include a step-by-step method for the evaluation and what design criteria the construction plans need to meet. Evaluations for existing projects nearing the end of their design phase should be prioritized to not greatly impact construction timelines. It is important for these evaluations efforts to be ongoing so Midland County can guarantee that future projects are being designed to increase safety at intersections.

IN3.2. Evaluate existing intersections to determine if they meet new design standards.

While it is important that the County makes sure their future construction projects do not take a step back in their safety efforts, ensuring that existing infrastructure is also improved is crucial. The evaluation of existing intersections should follow the same framework as the evaluation process for future intersections. These evaluations should determine what design features or infrastructure is missing at the intersection that is contributing to diminished safety.

IN3.3. Prioritize intersection evaluations and redesigns in disadvantaged census tracts.

In the County's effort to create safer intersections, intersections in disadvantaged census tracts should be given priority. In Midland County approximately 45% of fatal and severe crashes occurred in disadvantaged census tracts during the study period. Prioritizing safety improvements in disadvantaged census tracts will ensure that these communities receive safety resources that they lack.

Figure 41. Example of Intersection with Safety Measures Implemented

Source: National Association of City Transportation Officials (NACTO)

Strategy IN4. Develop a campaign strategy to remind drivers to practice safe driving behaviors at intersections.

Developing a campaign designed to remind drivers to practice safe driving behaviors at intersections would help create safer roadways for all. Although there are little to no campaigns dedicated to intersection safety, TXDOT has an existing campaign. "Be Safe. Drive Smart." (**Figure 42**), that aims to teach drivers driving tips for varying array of topics. Since TXDOT makes their campaign materials free and accessible to the public, Midland County could utilize TXDOT's existing materials to develop its own intersection safety campaign. This campaign strategy could be undertaken through a partnership between Midland County, TXDOT, and other local organizations.

IN4.1. Create campaign materials that remind drivers to practice safe driving behaviors at intersections.

Utilizing TXDOT's resources as a guide, it is recommended that the County creates new campaign materials that would make drivers aware of their own unsafe driving behaviors and how to correct them. Some safe driving behaviors that should be included in this campaign are reminding drivers to look both ways before entering an intersection, to stop at all stop signs and red lights, all intersections are crosswalks, and to plan for delayed commute times. To provide further assistance with this campaign, the County could further reference TXDOT's energy sector specific portion of the "Be Safe. Drive Smart." Campaign.

IN4.2 Increase campaign visibility at high crash intersections.

After campaign materials are created, they should be placed near a high crash intersection in the County. This would allow for the campaign to have the most impact possible on crash reduction since the County will be targeting intersections with high crash frequencies.

Figure 42. "Be Safe. Drive Smart." Campaign Material

Source: TXDOT

IN4.3. Revisit training requirements for employees driving County-owned vehicles.

In Texas, transportation-related incidents are the leading cause of fatal work injuries according to the Texas Department of Insurance. To help keep Midland County employees safe on the road, it is recommended that the training requirement for employees who drive County-owned vehicles be re-visited. The Division of Workers' Compensation (DWC) created an Occupation Driving Safety Program Checklist (**Figure 43**) that helps employers determine if their current training program is effective. If not, this checklist also provides basic elements that should be included in an effective occupational driving safety program. Through this effort, Midland County can show the general public that they are committed to creating safer roadways by they themselves practicing safe driving habits.

Figure 43. DWS's Occupation Driving Safety Program Checklist

Source: Texas Department of Insurance, Division of Workers' Compensation

Distracted Driving

Distracted driving crashes make up 7% of fatal and severe crashes in Midland County. Distracted driving plays a large role in causing crashes by diverting driver attention away from the road. The following strategies aim to influence human behavior by providing education and encouraging safe driving behaviors. Although inattentive driving is largely the choice of the driver, by using roadway design as a tool the County can help support and enforce attentive driving. The following strategies and actions in Table 16 aim to help decrease the number and severity of distracted driving crashes in the County.

Table 16: Summary of Distracted Driving Strategies and Actions

Action #	Description
Strategy DD1. Update existing roadway design standards to help minimize distracted driving crashes and their severity.	
Action DD1.1.	Update roadway design standards to include the usage of wide edge lines on rural roadways.
Action DD1.2.	Conduct a roadway signage audit for County facilities every 3 years.
Action DD1.3.	Update existing infrastructure to meet new safety standards.
Strategy DD2. Develop a campaign that discourages cell phone use when driving.	
Action DD2.1.	Develop an educational program to teach students the dangers of distracted driving.
Action DD2.2.	Generate awareness of the dangers of cell phone usage while driving to all residents.
Strategy DD3. Develop enforcement strategies to mitigate for cell phone use when driving.	
Action DD3.1.	Create a targeted enforcement plan for school zones.
Action DD3.2.	Create a targeted enforcement plan for work zones.

Strategy DD1. Update existing roadway design standards to help minimize distracted driving crashes and their severity.

Although distracted driving is largely caused by driver behavior, designing roadways with countermeasures against roadway and lane departure crashes could help reduce their frequency or reduce the severity of the crashes. All safety responsibility should not be placed on drivers when there are design improvements the County can systemically implement that would aid in enhancing safety.

DD1.1 Update roadway design standards to include the usage of wide edge lines on rural roadways.

Due to the numerous amounts of rural roadways in Midland County, roadway design standards should be updated to have wide edge lines to be the norm on these roadways. Enhancing the visibility of the travel lanes boundaries using wide edge lines can help draw drivers' attention back to the roadway. This countermeasure is proven to reduce non-intersection, fatal and severe crashes on rural, two-lane roadways by 37% (FHWA).

DD1.2. Conduct a roadway signage audit for County facilities every 3 years.

Well-maintained signs are crucial for drivers when making decisions on the roadway since signs typically require or advise drivers to take specific actions. Due to the importance of adequate signage, it is recommended that the County conduct a roadway signage audit for County facilities every 3 years to determine if signs are in good condition. Keeping up with sign maintenance makes roadways safer for all users by giving drivers the information they need to make safe and predictable movements. This audit requirement should be added to Section 4.6 of the "Road Maintenance Guidance Document" for Midland County (Figure 45). The Guidance Document details how to determine when roadways and signs require maintenance, and what types of repairs to apply based on observed damage.

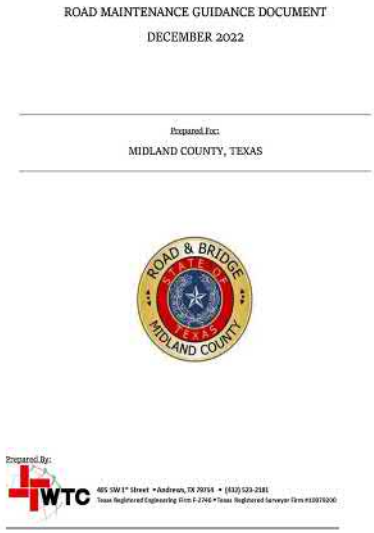
DD1.3. Update existing infrastructure to meet new safety standards.

To continue the County's work towards their Vision Zero goals, the County should update the existing infrastructure, to meet the new safety standards established in this document. It is important to acknowledge that this action will need to be an ongoing effort for the County and will not be able to be completed in a short time frame.

Figure 44. Example of Wide Edge Lines

Source: Neal Hawkins/ITE

Figure 45. Road Maintenance Guide



Source: Midland County

Figure 46. FWHA's Guide to Streets and Highways

Source: TXDOT

Strategy DD2. Develop a campaign that discourages cell phone use when driving.

By creating a centralized campaign designed to discourage cell phone use when driving, the County will support an environment where distracted driving is no longer tolerated. This centralized campaign could be created utilizing existing materials from TXDOT's "Talk. Text. Crash." Campaign which discourages the use of cell phone use when driving while encouraging the use of hands-free technology (**Figure 46**).

DD2.1. Develop an educational program to teach students the dangers of distracted driving.

Through a partnership with both the Midland and Greenwood Independent School District, both educational materials and a program should be developed that will teach young drivers safe driving habits. Although the primary goal of this program is to instill good driving habits into future drivers, this program is also meant to stress the importance of traffic safety and the consequences of inattentive driving.

DD2.2. Generate awareness of the dangers of cell phone usage while driving to all residents.

Since TXDOT already has a campaign dedicated to educating drivers on the dangers of distracted driving, Midland County should utilize these free materials. TXDOT has various types of campaign materials ranging from video PSAs to billboards. A partnership with TXDOT and local organizations would help the dissemination of the campaign materials and would engage all members of the community.

Strategy DD3. Develop enforcement strategies to target cell phone use when driving.

Creating a targeted enforcement program will help deter cell phone related distracted driving due to the increased risk of getting a citation. These citations could also serve as a reminder of existing laws drivers are not aware of, such as the use of any handheld device in a school zone is illegal or that drivers under the age of 18 are prohibited from using handheld devices at all. These enforcement efforts are designed to help support the educational campaigns being disseminated in the County by ensuring that the safe behaviors being taught are being practiced by drivers.

DD3.1. Create a targeted enforcement plan for school zones.

Implementing a targeted enforcement plan for school zones will help ensure the safety of one of the most vulnerable populations. According to the United States Center for Disease Control and Prevention (CDC), motor vehicle crashes is one of the leading causes of death in children and young adults between the ages of 8 to 24. This enforcement plan's goals are to make drivers aware of their unsafe driving habits specifically in work zones and to educate them on cell phone laws they are unaware of.

DD3.2. Create a targeted enforcement plan for work zones.

Since work zones can present challenging environments for drivers, it is pivotal that drivers always focus on the road especially since driver inattention is one of the leading causes of school zone crashes. Creating a targeted enforcement plan that would increase police presence at work zones to guarantee compliance with Texas law regarding texting while driving. In Texas, it is illegal to read, write, or send texts while driving. Additionally, drivers that receive in a work zone are penalized with double the fine as a way to encourage more attentive driving especially through these delicate areas.

Figure 47. Work Zone Safety Campaign Material

Source: TXDOT

Impaired Driving

Approximately 22% of fatal and severe crashes in Midland County are attributed to impaired driving exceeding Texas's 18%. This suggests that Midland County has specific problems that could be contributing to its high rate of impaired driving crashes. Through community input and key takeaways from the crash analyses it is recommended to mitigate these behaviors by addressing the causes of impaired driving at the root. The strategies developed to mitigate the number of impaired driving related crashes in the County will focus on creating an environment within the County that is dedicated to ending impaired driving crashes through proactive programs, campaigns, and enforcement efforts. The following table is a summary of the recommended strategies and actions to create safer roads in Midland County by decreasing the number of impaired driving crashes (**Table 17**).

Table 17: Summary of Impaired Driving Strategies and Actions

Action #	Description
Strategy ID1. Spread awareness about the consequences of impaired driving.	
Action ID1.1.	Develop a public awareness campaign on impaired driving specific to Midland County.
Action ID1.2.	Develop an impaired driving awareness pop-up event kit.
Strategy ID2. Encourage local event venues to provide alternate transportation options.	
Action ID2.1.	Create materials advertising rideshare companies as an alternative transportation option.
Action ID2.2.	Encourage local event venues to advertise alternate transportation options.
Strategy ID3. Develop an understanding of impaired driving citation patterns.	
Action ID3.1.	Conduct a review of citation patterns for impaired driving stops.
Action ID3.2.	Create a targeted enforcement program for impaired driving.
Strategy ID4. Acquire substance abuse and mental health help resources for the County.	
Action ID4.1.	Partner with the City of Midland to support substance abuse and mental health help resources for the Region.

Strategy ID1. Spread awareness about the consequences of impaired driving.

With this effort to create more awareness on the dangers of impaired driving, it is important to remind drivers that impaired driving can have physical, emotional, and financial consequences for all those involved. Although it can seem overwhelming to try and solve the issue of impaired driving in Midland County, one step towards the solution is coming together as a community to educate all members on the consequences of impaired driving. To foster this unification within the County, a variety of educational programs and campaigns should be developed that are designed to engage the community.

ID1.1. Develop a public awareness campaign on impaired driving specific to Midland County.

To create a campaign that appeals to County residents, the County should utilize TXDOT and NHTSA campaigns as a resource throughout their development. NHTSA's campaign, "Buzzed Driving is Drunk Driving", educates drivers on unsafe driving behaviors associated with impaired driving while TXDOT's campaign, "Faces of Drunk Driving" (**Figure 49**), humanizes impaired driving by showing the real impact it has on people's lives. Mirroring these campaign strategies in the County's own attempt at creating a campaign could help increase community engagement. The main goal of this campaign should be to engage the community and create a unified front against impaired driving.

ID1.2. Develop an impaired driving awareness pop-up event kit.

By creating a pop-up event kit, the ability to generate awareness and educate the public on impaired driving becomes more accessible. This kit would make it possible for any community member or organization to generate awareness of this issue with existing County-approved materials. A mobile-friendly kit of impaired driving simulation activities should include Fatal Vision goggles for drunk and drowsy conditions, educational pamphlets, and prizes for those who complete the activity (**Figure 50**). Since this kit should be easily accessible, it could be kept at one of the sheriff's department in the County.

> **60%** of Midland County's survey respondents support **"funding for educational programs for driver safety and enhanced enforcement."**

Figure 49. Poster for the "Faces of Drunk Driving" Campaign

Source: TXDOT

Figure 50. Fatal Vision Kit

Source: SB Scientific

Strategy ID2. Encourage local event venues to provide alternate transportation options.

Since impaired driving happens most often during and after events, engaging local event venues in this effort is pivotal in this work. Local event venues should be encouraged to advertise alternate mobility options to attendees who have been consuming alcohol, so they are less inclined to drive while impaired.

ID2.1. Create materials advertising rideshare companies as an alternative transportation option.

To make it easier for local event venues to advertise alternate transportation options, such as Uber or Lyft, the County should assist in providing them with advertising materials. Midland County could create advertising materials similar to **Figure 51** that contains contact information to various local transportation services.

Alternatively, the County could form a partnership with the organization Mothers Against Drunk Driving (MADD) to obtain existing materials they have created advertising Uber as an alternate transportation option. MADD through a partnership with Uber and Anheuser-Busch created the "If you drink, don't drive. Decide to Ride." Campaign that aims to reach consumers before they begin consuming alcohol (**Figure 52**). This campaign effort also offered regional discounts on Uber rides to incentivize consumers to choose not to drive drunk. Whether new campaign materials are created or a partnership with MADD is created, advertising alternate transportation choices are crucial in reminding drivers they do not have to drive drunk.

Figure 51. Advertisement Material from Monroe County, IN

Figure 52. Campaign Materials from MADD

Source: MADD

ID2.2. Incentivize local event venues to advertise alternate transportation options.

Engaging local events venues in the County in the practice of advertising alternate transportation options is an essential part of creating safer roadways. To get better engagement from the local venues, the County could partner with the City of Midland to determine different incentives that could be offered to the venues that do decide to participate.

Strategy ID3. Develop an understanding of impaired driving citation patterns.

Developing an understanding of impaired driving citation patterns is necessary in order to create a holistic view of where and when impaired driving traffic stops most occur. Studying these patterns will yield information that shows what locations in the County have the highest rates of impaired driving that could benefit both enforcement and campaign strategies being developed. Furthermore, this information will lead to more intentional and data-driven enforcement efforts rather than simply increasing law enforcement presence blindly.

ID3.1. Conduct a review of citation patterns for impaired driving stops.

To conduct this review, historical citation data will need to be gathered for Midland County and an analysis be performed to identify any existing patterns. These patterns should include common location, times of day, and historically high citation days. Utilizing these identified patterns law enforcement and the County should begin a discussion about what these results mean and how to reduce these crashes through either educational or enforcement efforts.

ID3.2. Create a targeted enforcement program for impaired driving.

The targeted enforcement program should be developed utilizing the results from the citation pattern review. Utilizing these results would allow for law enforcement to prioritize specific locations in the County; priority being determined by high crash rates and citations. Furthermore, creating this enforcement plan based on data-driven decision would allow for more efficient enforcement and wise use of resources.

Strategy ID4. Partner with City substance abuse and mental health help resources for the County.

Acquiring substance abuse and mental health help resources for affected community member is the County's proactive strategy to decrease the number of impaired driving related crashes. By supporting the effort to provide the community with help resources, the County is trying to solve the root of impaired driving, the irresponsible use of substances.

ID4.1. Partner with the City of Midland to support substance abuse and mental health help resources for the Region.

Since the City of Midland has also decided to acquire substance abuse and mental health help resources, it would be beneficial to partner with the City and offer any support needed. This strategy having support from the County, City, and various local organizations shows this regions dedication to reducing impaired driving crashes with empathy and care.

Unrestrained Persons

While 17% of fatal and severe crashes in Texas involve an unrestrained person, the County has 29% of its crashes that fall in this category; highlighting Midland County's unique issue with seatbelt compliance. To decrease the number of crashes involving unrestrained persons, the following strategies and actions involve understanding the County's seatbelt compliance, educating the community on the importance of seatbelts, and creating a strategic enforcement plan (**Table 18**).

Table 18: Summary of Unrestrained Persons Strategies and Actions

Action #	Description
Strategy UP1. Generate awareness on the consequences of not using a seatbelt.	
Action UP1.1.	Develop an educational campaign highlighting the consequences of not using a seatbelt.
Action UP1.2.	Conduct a study to determine seatbelt compliance for passenger vehicles around Midland County.
Action UP1.3.	Target campaign materials in locations with low seatbelt usage.
Action UP1.4.	Partner with other local enforcement agencies to host a Traffic Safety Enforcement Day Event for the Region.
Strategy UP2. Increase the public's knowledge on correct car seat selection.	
Action UP2.1.	Partner with TXDOT to create a County Car Seat Information Program.
Strategy UP3. Establish a targeted enforcement program for non-seatbelt usage.	
Action UP3.1.	Develop a plan for the targeted enforcement efforts.
Action UP3.2.	Consider the creation of more severe fines or punishments for not using a seatbelt.

Strategy UP1. Generate awareness on the consequences of not using a seatbelt.

Although more than 90% of Texans wear their seatbelts, 17% of fatal and severe crashes involved unrestrained person in Texas with 1,183 unbuckled drivers and passengers being killed in 2023. In Midland County, seatbelt compliance is a unique problem; 29% of fatal and severe crashes on Midland roadways involve unrestrained persons. While better enforcement of seatbelt use laws can aid in increasing compliance, the County wants to remind drivers and passenger s why seatbelt usage is so important. Creating a community that prioritizes safety begins with reminding residents about measures that can be taken to ensure their own safety.

UP1.1. Develop an educational campaign highlighting the consequences of not using a seatbelt.

According to TXDOT, one of the biggest challenges in increasing seatbelt compliance is convincing drivers and passengers to use their seatbelts. This campaign's goal should be to remind drivers and passengers of the risks they take when not wearing a seatbelt. Furthermore, seatbelts can reduce the risk of dying by 45% for people in the front seats of vehicles and 60% for those in pickups. The County should partner with TXDOT to run the "Click it or Ticket" campaign in the region. TXDOT has a vast array of campaign materials for this general campaign (**Figure 53**) but also has campaign materials targeted towards younger drivers.

Figure 53. "Click it or Ticket." Campaign Billboard

Source: TXDOT

UP1.2. Conduct a study to determine seatbelt compliance for passenger vehicles around Midland County.

Due to Midland's unique issue with fatal and severe crashes involving unrestrained persons, it would be beneficial to conduct a seatbelt study that determined the rate of seatbelt compliance for passenger vehicles around Midland County. To complete this study, random locations where observations will be taken should be identified that cover as much of the County's geographical area as possible. This study would provide vital information such as where in the County seatbelt usage is low and whether seatbelt usage changes between day and night. While TXDOT conducts a similar study for the overall state, having a study focusing on Midland County would provide invaluable information as to why the County is struggling with seatbelt compliance.

UP1.3. Target campaign materials in locations with low seatbelt usage.

Utilizing the results from the seatbelt study, a list of locations in the County where seatbelt usage is low could be created. These locations should be where education campaign materials should be placed to have maximum impact. The goal of the County's campaign efforts is to increase seatbelt compliance through encouragement and education therefore it would be highly strategic to increase campaign effort in locations where driver awareness may be lacking.

UP1.4. Partner with other local enforcement agencies to host a Traffic Safety Enforcement Day Event for the Region.

Since enforcement is a building block of safer roadways for all, the creation of a Traffic Safety Enforcement Day Event should be created. This event would be created through a partnership with local enforcement agencies in the County and the region, and should be focused on educating the public on all the traffic safety laws in place. There is an opportunity at this event to remind roadway users that these traffic safety laws are in-place not to inconvenience them but rather to protect them from the dangers driving can present. Because Midland County is making a large effort to increase seatbelt compliance, Traffic Safety Enforcement Day should dedicate much of its time to seatbelt use laws. Ultimately, this Traffic Safety Enforcement Day Event could become a safe space for a community wide discussion on improving safety in the County.

Strategy UP2. Increase the public's knowledge on correct car seat selection.

Although most parents believe that their children are properly buckled up, a study from NHTSA shows that 46% of all children are not buckled up correctly. This staggering statistic is a reminder to all drivers with a child passenger of how important it is to choose the right seat and use it correctly. Prioritizing the safety of one of our most vulnerable populations ensures a safer roadway environment for all therefore the County wants to increase public awareness on correct car seat selection and use.

UP2.1. Partner with TXDOT to create a County Car Seat Information Program.

Through a partnership with TXDOT, the County can create a car seat information program that would increase the public's awareness of proper car seat use and selection. Since TXDOT has recently launched a Car Seat Inspection Program (**Figure 54**), the County should aid them in advertising their program throughout the region and could create educational materials as a supplement to the program. This inspection program could be very beneficial in the County's effort to generate awareness on this topic especially since TXDOT has inspection appointments at their Odessa District Office.

Figure 54. Advertisement for TXDOT's Car Seat Inspection Program

Source: TXDOT

Strategy UP3. Establish a targeted enforcement program for non-seatbelt usage.

A targeted enforcement program is suggested to increase seatbelt compliance in the County. Although giving out citations for non-compliance could be an effective strategy to remind drivers to where their seatbelts, this enforcement program can also help educate the public. These traffic stops for non-compliance could serve as an opportunity for law enforcement officers to remind drivers and passengers of some Texas specific laws, such as everyone in the vehicle must be buckled up or face a fine and that children under eight must be in a child safety or booster seat unless taller than 4 feet 9 inches. While increased enforcement can be inconvenient for both residents and law enforcement agencies, it is one small part in ensuring everyone is working towards building safer driving habits.

UP3.1. Develop a plan for the targeted enforcement efforts.

Similarly, to the other targeted enforcement efforts proposed in this plan it is suggested to find key locations throughout the County that have the highest rates of crashes involving unrestrained persons. By focusing enforcement on these locations, law enforcement resources could be used more efficiently. Furthermore, since this enforcement plan should also be used to increase awareness on Texas laws regarding safety restraints law enforcement agencies should consider giving out warnings for first time offenders.

UP3.2. Consider the creation of more severe fines or punishments for not using a seatbelt.

According to NHTSA, there does exist a correlation between fines and seatbelt usage; increasing fines was associated with increased seatbelt usage. While the County could increase fines, Texas already has the highest fine ($200) for first time offenders in the Country. Increasing the current fine would continue showing drivers how important seatbelt laws are since low fines can send the message that seatbelt laws are not taken seriously. Although fines are an integral part of the enforcement of strong seatbelt use laws, without effective enforcement, judicial support, and good publicity increased fines may not be as effective in increasing seatbelt compliance.

Vulnerable Road Users

Creating a transportation system that is safe for all users requires continued work towards reducing the number of crashes that involve vulnerable road users must continue. The following strategies aim at creating a road environment that is safe and accessible for all road users whether they drive, walk, bike, or roll. If Midland County roadways are designed for the safety of the most vulnerable user, this would inherently make the transportation system safer for everyone. These strategies and actions are summarized in **Table 19**.

Table 19: Summary of Vulnerable Road Users Strategies and Actions

Action #	Description
Strategy VRU1. Increase drivers' awareness of vulnerable road users.	
Action VRU1.1.	Partner with TXDOT and the City of Midland to create an awareness campaign promoting alternate transportation mode users.
Action VRU1.2.	Develop a centralized campaign to encourage off road vehicle (ORV) drivers to practice safe driving behaviors.
Strategy VRU2. Improve the quality of multimodal facilities in future County projects.	
Action VRU2.1.	Update existing design standards to include improved pedestrian and bicycle infrastructure in high-speed roadways.
Strategy VRU3. Create an active transportation plan for the County.	
Action VRU3.1.	Identify gaps in the existing active transportation network through a facilities inventory.
Action VRU3.2.	Develop an active transportation plan that prioritizes robust stakeholder input.
Action VRU3.3.	Establish external funding sources that will be used to implement recommendations from the plan.

Figure 55. TXDOT Pedestrian Awareness Billboard

Strategy VRU1. Increase drivers' awareness of vulnerable road users.

The County wants to work towards creating an environment where it is assumed vulnerable road users are present and drivers are more aware. To create this mindset within all County residents, the County should create a campaign aimed at highlighting the different types of roadway users that exist in Midland County.

VRU1.1. Partner with TXDOT and the City of Midland to create an awareness campaign promoting alternate transportation mode users.

An awareness campaign should be developed with the help of TXDOT and the City of Midland that aims to celebrate the reality of people utilizing different modes of transportation to get around the County. This campaign could highlight community members' stories on how they move around the County, whether that be walking, driving, or rolling. Ultimately this campaign should remind drivers that these roads are shared, and they should always be expecting a vulnerable road user. TXDOT has a wide range of campaign materials that encourage drivers to watch for pedestrians and other safety tips (**Figure 55**). Generating this awareness could decrease the number of fatal and severe crashes involving vulnerable road users in Midland County.

VRU1.2. Develop a centralized campaign to encourage off road vehicle (ORV) drivers to practice safe driving behaviors.

In the County, there appears to be an increased number of off-road vehicles (ORV), such as All-terrain vehicles (ATV) and golf carts, on the roads therefore the County should try to remind those users to be taking safety precautions when on the roads. Some of these suggested precautions could be wearing a helmet when riding or adding blinking lights on their ORVs to ensure they are visible to all road users. Furthermore, this campaign would also make regular vehicle drivers aware of new types of transportation modes on the roads. Ensuring all roadway users know who and what to expect on their travel guarantees a safer road.

Strategy VRU2. Improve the quality of multimodal facilities in future County projects.

Improving the quality of future multimodal facilities in Midland County is required to increase the security and accessibility of the transportation network. By creating safer and more comfortable facilities for pedestrians and bicyclists, the decision to walk or bike could be made easier and encourage County residents to use alternative transportation modes.

VRU2.1. Update existing design standards to include improved pedestrian and bicycle infrastructure near high-speed roadways.

Since high-speed roadways can be the most dangerous areas for vulnerable road users, it is pivotal to provide them with sufficient infrastructure, so they can navigate these areas safely. It would be irresponsible to intentionally neglect these areas to discourage vulnerable roads user from traveling through them therefore the County will update its design standards for high-speed roadways that include measure that improve pedestrian and bicyclist facilities. Potential infrastructure that could be included in the update are sidewalks, protective buffers, and crossings.

Strategy VRU3. Create an active transportation plan for the County.

Due to Midland County's dedication to creating a safer roadway environment through improved infrastructure, it is recommended that the County create an active transportation plan. An active transportation plan provides recommendations for improving bicycling, walking, rolling, and other modes of transportation to ensure that facilities are complete, comfortable, and connected. Active transportation infrastructure can bring many benefits to the community such as improved economic opportunity, improved human health, and reduce congestion and traffic fatalities if designed with all users in mind. To accomplish the creation of an active transportation plan there are several actions that should be taken as discussed below.

VRU3.1. Identify gaps in the existing active transportation network through a facilities inventory.

Before future active transportation infrastructure is planned, it is important to understand what infrastructure is currently in place and determine any challenges associated with adding specific infrastructure. Midland County should conduct an inventory on their existing pedestrian and bicyclist facilities to determine where infrastructure exists and locations where it is needed.

Figure 56. Pedestrians and Bicyclists on a Shared Use PathInspection Program

Source: Adobe Stock

VRU3.2. Develop an active transportation plan that prioritizes robust stakeholder input.

Although the results of the inventory can inform the County of lacking infrastructure and potential locations for improvements, stakeholders are essential in the development of an active transportation plan. This will guarantee that the plan will reflect the needs of different stakeholders in the County. One method that could be utilized to receive stakeholder input could be a survey that asks participants about routes they commonly use to get around the County. The results of this survey would help the County determine locations that should be prioritized in the active transportation plan.

VRU3.3. Establish external funding sources that will be used to implement recommendations from the plan.

After the active transportation plan is finalized, funding sources should be identified to fund the construction of the suggested infrastructure. Due to USDOT's dedication to meeting community's need for safe, affordable, and convenient active transportation networks for all users, there are several funding programs they advertise. These funding programs include the Active Transportation Infrastructure Investment Program (ATIIP), the Congestion Mitigation and Air Quality Improvement (CMAQ) Program, the Carbon Reduction Program (CRP), among other programs.

Figure 57. Shared Use Path Next to a Texas Toll Road

Source: traillink.com

Post Crash Care

When a crash occurs, effective post crash care can reduce the risk of a fatality or serious injury. To enhance post crash care, focus should be given to providing accessible emergency medical care, preventing secondary crashes, and prioritizing the safety of all those involved including incident responders. Common countermeasures implemented to improve post crash care are shown in **Figure 58**. The following strategies summarized in **Table 20** aim at creating a more efficient response times, well-trained emergency medical services (EMS) personnel, and improved traffic incident management.

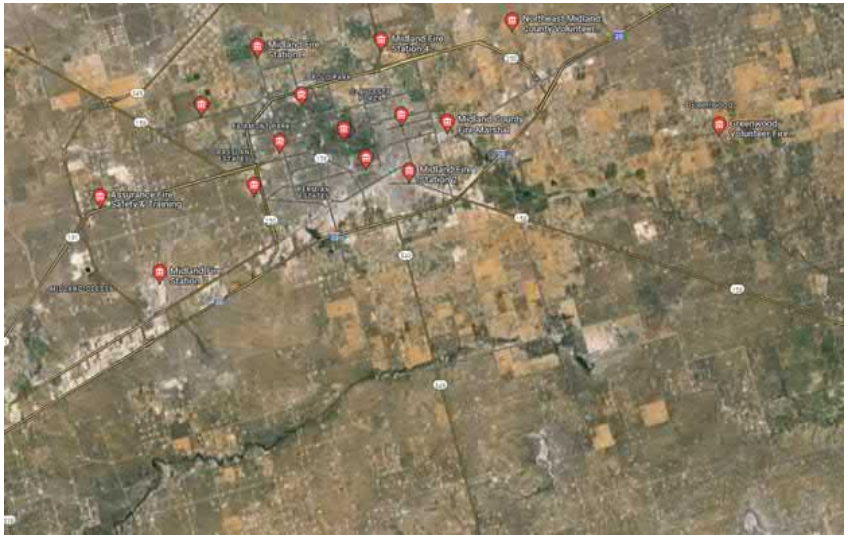
Table 20: Summary of Post Crash Care Strategies and Actions

Action #	Description
Strategy PC1. Improve EMS resources and training in the Region.	
Action PC1.1.	Construct a new fire station in the County.
Action PC1.2.	Provide advanced training to EMS Staff.
Strategy PC2. Supplement staff in providing crash clearing efforts.	
Action PC2.1.	Partner with TXDOT to implement their HERO Program in Midland County.
Strategy PC3. Determine future connections that aid in servicing EMS response in areas with low connectivity.	
Action PC3.1.	Conduct a study of emergency response times in the County.
Action PC3.2.	Re-visit the county's thoroughfare plan to prioritize connections in low connectivity areas.

Figure 58. Common Countermeasure for Post Crash Care

Source: USDOT

Figure 59. Locations of Existing Fire Departments in Midland County



Strategy PC1. Improve EMS resources and training in the County.

After a crash has occurred, effective emergency treatment and trauma care can greatly reduce the risk of death and serious injury therefore it is crucial that County EMS services are improved. The goal of this strategy is to increase the survivability of crashes that occur in Midland County through more expedient access and improved treatment methods.

PC1.1. Construct a new fire station in the County.

To allow for more expedient access to EMS services, it is recommended that Midland County construct a new fires station. As shown in **Figure 59**, there is currently only one volunteer fire department in study area for this safety plan. The lack of fire stations with EMS personnel could be contributing to increased response times to crashes that occur within the study area. To decrease response times to crashes, the addition of a fire stations in the study area could increase the survivability of crashes occurring on County roads effectively working towards Vision Zero goals.

While providing more access to EMS services can decrease response times, advance training should be provided to EMS staff to improve the level of care they can administer at crash scenes. Due to Midland County's rural nature, there are unique challenges that exist for EMS staff in which specific and advance training could help solve. To help provide this training to their community, Midland County should apply for the TXDOT Rural/Frontier EMS Grant. This grant aims to assist agencies and departments with initial, refresher, instructor, and continuing education training. Some of the additional training available for funding are listed below:

- Advanced Cardiac Life Support (ACLS)
- Emergency Pediatric Care
- International Trauma Life Support (ITLS)
- Pre-Hospital Trauma Life Support (PHTLS)
- Pre-Hospital Emergency Pediatric Provider (PEPP)

Figure 60. TXDOT Rural/Frontier EMS Grant Advertisement

Source: TEEX.org

Strategy PC2. Supplement staff in providing crash clearing efforts.

A large part of post crash are the traffic incident management practices in place that prevent secondary crashes. Nationally, approximately 20% of all traffic incidents are secondary incidents due to improper incident management according to TXDOT. Furthermore, these practices are also responsible for creating a safe working environment for first responders. From 2019- 2021, 60 traffic incident responders were struck and killed by other vehicles while working at roadway incidents in the United States. To enhance roadway safety after a crash for both travelers and incident responders, Midland County will improve its traffic incident management practices.

PC2.1. Partner with TXDOT to implement their HERO Program in Midland County.

Midland County should create a partnership with TXDOT to bring the Highway Emergency Roadside Assistance (HERP) Program to the Region (**Figure 61**). The HERO Program aims create safer roadways for travel by clearing minor crashes, assisting first responders at crash scenes, removing stranded vehicles from the roadway, providing warnings to drivers of stopped vehicles ahead, and much more. This program is currently operational in three other cities in Texas; Austin, El Paso, and San Antonio. Bringing this program to Midland County, could aid in improving Midland County's traffic incident management strategy by adding a new resource to the County.

Strategy PC3. Determine future connections that aid in servicing EMS response in areas with low connectivity.

Alongside well-trained EMS, the timely arrival of emergency responders is a major factor in ensuring an injured person receives the medical care they need to survive. According to the National Emergency Medical Services Information System (NEMESIS), death rates increase by 3% for every minute first responders are delayed. Issues with long response

times can be especially exasperated in rural areas due to poor connectivity and environmental barriers. The following strategies aim to identify where Midland County is experiencing longer than average response times and how to improve connectivity in those areas.

PC3.1. Conduct a study of emergency response times in the County.

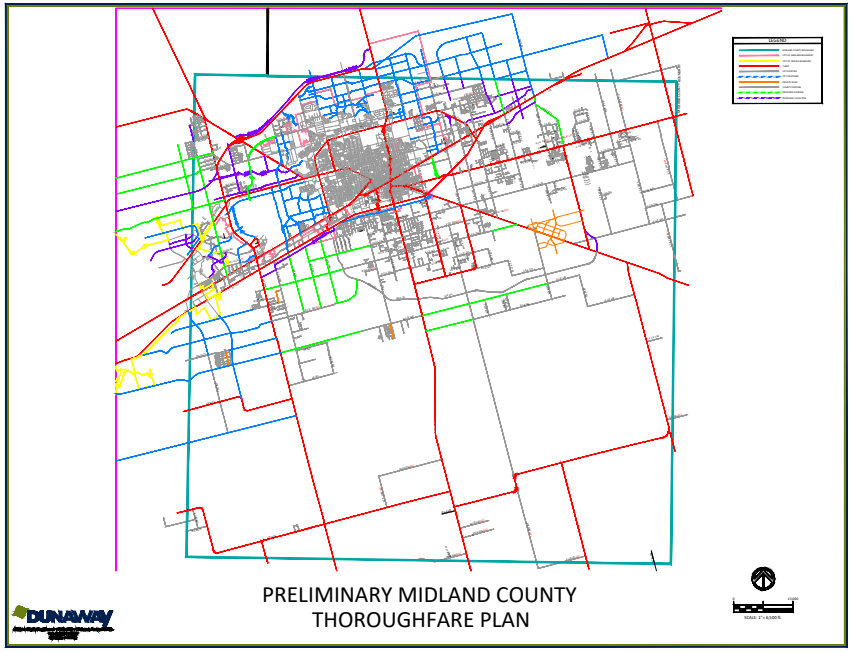
It is recommended that Midland County conduct a study to review EMS response times Countywide. The study should aim to identify locations in Midland County that experience longer than average response times. These results will be pivotal in creating a plan toward aiding EMS response times through improved connectivity.

PC3.2. Re-visit the County's thoroughfare plan to prioritize connections in low connectivity areas.

After key locations are identified from the study, the County should re-visit its thoroughfare plan (**Figure 62**) to determine projects that could be implemented moving forward. Updating the thoroughfare plan to include projects that aim to improve connections in the locations highlighted in the study will help ensure crash victims get the right care at the right time. Post crash care is the last best chance to prevent a fatality or serious injury therefore it is crucial that low connectivity areas are prioritized in Midland County's Thoroughfare Plan.

Figure 61. TXDOT HERO Program Advertisement

Figure 62. Preliminary Midland County Thoroughfare Plan



> A strong implementation plan not only identifies **"what"** and **"why"** actions need to be done to improve road safety, but also **"who,"** **"when,"** and **"how"** by identifying partners, timeframe, and funding sources.

Chapter 7. Implementation Plan

This chapter reviews the full list of recommended projects, strategies, and actions and provides additional supporting details to implement the Safety Action Plan in Midland County. A strong implementation plan not only identifies "what" and "why" actions need to be done to improve road safety, but also "who," "when," and "how" by identifying partners, timeframe, and funding sources. The entirety of this plan's recommendations for projects, policies, and programs is summarized in the Implementation Matrix beginning on Page 137 139.

Additionally, to ensure that the plan continues through the implementation phase and remains relevant, this chapter sets forth annual reporting and update procedures for the Task Force.

Vision Zero Implementation Matrix

How to Read the Implementation Matrix

Implementation Partners

These departments and organizations have been identified as having an important role in the implementation of the Safety Action Plan. In the Implementation Matrix under the column "Responsible Parties" includes all partners that should be consulted during the implementation of the corresponding action. Partners listed first and bolded are expected to be the lead implementer and should report to the Task Force on the progress of the action item. Below lists a key for the partners identified in Implementation Matrix tables:

- Midland County Commissioner (MCC)
- Midland County Public Works (PW)
- Midland County Road and Bridge (RB)
- Midland County Emergency Management (EM)
- Midland County Sheriff Office (MCSO)
- Midland County Purchasing (MCP)
- Texas Department of Transportation (TXDOT)
- Midland County Media Relations (MR)
- Midland Independent School District (MISD)
- Greenwood Independent School District (GISD)
- Texas Department of Public Safety (TXDPS)
- Permian Road Safety Coalition (PRSC)
- Permian Basin Metropolitan Planning Organization (PBMPO)
- Permian Basin Regional Planning Commission (PBRPC)

- Midland Chamber of Commerce (MCoC)
- Midland Hispanic Chamber of Commerce (MHCC)
- Midland Health (MH)
- United Way of Midland (UWM)

Timeframes for Implementation

For every strategy, each action provides an estimated timeframe for implementation. The estimate timeframe for implementation allows for better decision making and allocation of funding to complete the action plan strategies and actions in a timely manner. This is broken out between the following:

- **Short (<2 years)**: This action is a top priority and can be a "quick win" for Vision Zero.
- **Medium (2 – 5 years)**: This action may take more time but can be accomplished before the next CSAP update.
- **Long (>5 years)**: This action will require many years but will have significant impact when complete.

Funding Sources

Funding and its source is an important step in implementing the action plan. The matrix also provides the information if the action can be accomplished through three different funding sources:

- Existing Funds
- Reallocation of Funds
- Grant Acquisition

Countermeasure Recommendations (Chapter 5)

Table 21: Countermeasure Recommendations Summary

Action #	Description	Which of the six E's
Strategy CM1.	Construct recommended countermeasures on the corridors identified in Chapter 5.	Engineering
Action CM1.1	Prioritize existing recommendations by areas of the highest need for grant funding applications.	Evaluation; Equity
Action CM1.2	Obtain funding and construct the targeted countermeasures.	Engineering
Strategy CM2.	Study the remaining HIN segments identified in Chapter 4 for targeted countermeasure application.	Evaluation, Engineering
Action CM2.1	Prioritize remaining segments by areas of the highest need for study priority.	Evaluation; Equity
Strategy CM3.	Implement the systemic countermeasures in design standards or other engineering resources to increase their usage Countywide.	Engineering
Action CM3.1	Update Countywide intersection, access management, traffic calming, and bicycle/pedestrian design standards to include the use of each of the systemic countermeasures.	Engineering

(Continues on page 117)

Responsible Party	Timeframe	Funding
PW; RB; TXDOT	Long (>5 years)	Grant Acquisition
PW; RB; TXDOT	Short (<2 years)	Grant Acquisition
PW; RB; TXDOT	Long (>5 years)	Grant Acquisition
PW; RB; TXDOT	Short (<2 years)	Grant Acquisition
PW; RB; TXDOT	Short (<2 years)	Grant Acquisition
PW; RB; TXDOT	Medium (2-5 years)	Reallocation
PW; RB; TXDOT	Medium (2-5 years)	Reallocation

(Continued from page 116)

Roadway and Lane Departure Recommendations (Chapter 6)

Table 22: Strategies and Actions for Roadway and Lane Departure Emphasis Area

Action #	Description	Performance Metric
Strategy LD1. Partner with TXDOT to open new rest stops in Midland County.		
Action LD1.1	Partner with TXDOT to identify potential locations for new rest stops in Midland County.	Number of rest stops within Midland city limits
Action LD1.2.	Establish a new rest stop in Midland County.	
Strategy LD2. Update design standards to address deficiencies that may contribute to roadway/lane departure crashes.		
Action LD2.1.	Conduct a study on roadway/lane departure crash locations.	Number of projects identified
Action LD2.2.	Prioritize fixing the issues discovered.	Number of projects completed for lane departure issues
Strategy LD3. Increase awareness on the dangers of drowsy driving.		
Action LD3.1.	Utilize existing educational campaign materials from NHTSA and the National Sleep Foundation.	The educational campaign is completed

(Continues on page 119)

Which of the six E's	Responsible Party	Timeframe	Can be accomplished through existing funds	Can be accomplished through reallocation of funds	Can be accomplished through grant acquisition
Evaluation; Engineering	PW, MCC, TXDOT	Medium (2 – 5 years)	Y	N	N
Engineering	PW, MCC, TXDOT	Long (> 5 years)	N	Y	Y
Engineering; Evaluation	MCSO, RB	Short (<2 years)	N	Y	Y
Engineering; Evaluation	MCSO, RB	Long (> 5 years)	N	N	Y
Education	EM, MR, GO, TXDOT, PRSC	Short (<2 years)	N	Y	Y

(Continued from page 118)

Speed-Related Recommendations (Chapter 6)

Table 23: Strategies and Actions for the Speed-Related Emphasis Area

Action #	Description	Performance Metric
Strategy SP1. Implement a campaign encouraging safe driving behaviors.		
Action SP1.1.	Partner with TxDOT to run the "Drive a Safe Speed" Campaign.	Number of campaign billboards and message boards in use
Strategy SP2. Deploy engineering interventions to prevent speeding.		
Action SP2.1.	Increase visibility and frequency of speed limit signs along County roads.	Number of speed limits sign projects completed Completion of updated design standards
Action SP2.2.	Update design standards to incorporate speeding countermeasures (Chapter 5).	
Action SP2.3.	Update design standards to include transverse rumble strips and warning signs prior to an intersection on high-speed roadways.	
Strategy SP3. Establish a targeted enforcement program for speeding.		
Action SP3.1.	Develop an understanding of speeding citation patterns	Number of high speeding enforced locations
Action SP3.2	Develop a targeted enforcement plan for locations with high speeding.	

(Continues on page 121)

Which of the six E's	Responsible Party	Timeframe	Can be accomplished through existing funds	Can be accomplished through reallocation of funds	Can be accomplished through grant acquisition
Education	MR, MCC, TXDOT	Short (<2 years)	N	Y	Y
Engineering	RB, PW, TXDOT	Short (<2 years)	Y	N	N
Engineering	RB, PW, TXDOT	Short (<2 years)	Y	N	N
Engineering	RB, PW, TXDOT	Short (<2 years)	Y	N	N
Evaluation	MCSO, EM	Short (<2 years)	Y	Y	Y
Enforcement	MCSO, EM	Medium (2 – 5 years)	N	Y	Y

(Continued from page 121)

Intersection-Related Recommendations (Chapter 6)

Table 24: Strategies and Actions for the Intersection-Related Emphasis Area

Action #	Description	Performance Metric
Strategy IN1. Update intersection design standards to foster safer intersections.		
Action IN1.1.	Create new standards and policies that would allow for the use of roundabouts.	Completion of updated roundabout and lighting standards
Action IN1.2.	Update design standards to increase lighting at intersections.	
Strategy IN2. Update signal timing and infrastructure Countywide.		
Action IN2.1.	Evaluate existing signal timing at intersections to determine future timing improvements.	Countywide timing study complete
Action IN2.2.	Create a policy that would require a signal warrant for high crash unsignalized intersections every 5 years.	Number of signal warrants
Action IN2.3.	Upgrade existing traffic signal infrastructure to include red-light indicator lights.	Number of intersections with red-light indicator lights installed
Strategy IN3. Ensure all future and existing intersections meet new safety standards.		
Action IN3.1.	Evaluate all pending construction projects.	Number of construction projects evaluated Number of intersections evaluated
Action IN3.2.	Evaluate existing intersections to determine if they meet new design standards.	
Action IN3.3.	Prioritize intersection evaluations and redesigns in vulnerable census tracts.	
Strategy IN4. Develop a campaign strategy to remind drivers to practice safe driving behaviors at intersections		
Action IN4.1.	Create campaign materials that remind drivers to practice safe driving behaviors at intersections.	Completion of campaign materials Number of visibility improvements made
Action IN4.2.	Increase campaign visibility at high crash intersections.	
Action IN4.3.	Revisit training requirements for employees driving County-owned vehicles.	

(Continues on page 123)

Which of the six E's	Responsible Party	Timeframe	Can be accomplished through existing funds	Can be accomplished through reallocation of funds	Can be accomplished through grant acquisition
Engineering	RB, PW	Short (<2 years)	Y	N	N
Engineering	RB, PW, TXDOT	Short (<2 years)	Y	N	N
Engineering	RB, PW, TXDOT	Medium (2 – 5 years)	N	Y	Y
Evaluation; Engineering	RB, PW, TXDOT	Short (<2 years)	Y	N	N
Engineering; Enforcement	RB, PW, MCSO, MCC	Medium (2 – 5 years)	N	Y	Y
Evaluation	RB, PW, TXDOT	Short (<2 years)	Y	Y	N
Engineering; Evaluation	RB, PW, TXDOT	Medium (2 – 5 years)	Y	Y	N
Equity; Evaluation; Engineering	PW, RB, TXDOT	Long (>5 years)	N	N	N
Education	RB, PW, TXDOT, MR	Medium (2 – 5 years)	N	Y	N
Education; Evaluation	MCSO, MR, TXDOT	Short (<2 years)	N	Y	Y
Education	RB, PW, TXDOT, MR	Medium (2 – 5 years)	N	Y	N

(Continued from page 122)

Distracted Driving Recommendations (Chapter 6)

Table 25: Strategies and Actions for the Distracted Driving Emphasis Area

Action #	Description	Performance Metric
Strategy DD1. Update existing roadway design standards to help minimize distracted driving crashes and their severity.		
Action DD1.1.	Update roadway design standards to include the usage of wide edge lines on rural roadways.	Completion of updated design standards
Action DD1.2.	Conduct a roadway signage audit for County facilities every 3 years.	Completion of roadway signage audit
Action DD1.3.	Update existing infrastructure to meet new safety standards.	Number of signage projects completed
Strategy DD2. Develop a campaign that discourages cell phone use when driving.		
Action DD2.1.	Develop an educational program to teach students the dangers of distracted driving.	Number of schools participating in the educational program
Action DD2.2.	Generate awareness of the dangers of cell phone usage while driving to all residents.	Number of billboards and message boards with campaign materials in place
Strategy DD3. Develop enforcement strategies to mitigate for cell phone use when driving.		
Action DD3.1.	Create a targeted enforcement plan for school zones.	Number of school zone-related cell phone citations
Action DD3.2.	Create a targeted enforcement plan for work zones.	Number of work-zone related citations

(Continues on page 125)

Which of the six E's	Responsible Party	Timeframe	Can be accomplished through existing funds	Can be accomplished through reallocation of funds	Can be accomplished through grant acquisition
Engineering	PW, RB, TXDOT	Medium (2 – 5 years)	N	Y	N
Engineering; Evaluation	PW, RB, TXDOT	Medium (2 – 5 years)	N	Y	N
Engineering	RB, PW, TXDOT	Medium (2 – 5 years)	N	Y	N
Education	MCC, MISD, GISD, SC, EM	Short (<2 years)	N	Y	Y
Education	MCC, TXDOT, SC	Short (<2 years)	N	Y	Y
Enforcement	MCSO	Medium (2-5 years)	Y	Y	Y
Enforcement	MCSO	Medium (2-5 years)	Y	Y	Y

(Continued from page 124)

Impaired Driving Recommendations (Chapter 6)

Table 26: Strategies and Actions for the Impaired Driving Emphasis Area

Action #	Description	Performance Metric
Strategy ID1. Spread awareness about the consequences of impaired driving.		
Action ID1.1.	Develop a public awareness campaign on impaired driving specific to Midland County.	Completion of campaign
Action ID 1.2.	Develop an impaired driving awareness pop-up event kit.	Number of kits used during the year
Strategy ID2. Encourage local event venues to provide alternate transportation options.		
Action ID2.1.	Create materials advertising rideshare companies as an alternative transportation option.	New materials are created
Action ID2.2.	Encourage local event venues to advertise alternate transportation options.	Number of participating local businesses
Strategy ID3. Develop an understanding of impaired driving citation patterns.		
Action ID3.1.	Conduct a review of citation patterns for impaired driving stops.	Completion of citation review
Action ID3.2.	Create a targeted enforcement program for impaired driving.	Number of impaired driving locations targeted
Strategy ID4. Acquire substance abuse and mental health help resources for the County.		
Action ID4.1.	Partner with the City of Midland to support substance abuse and mental health help resources for the Region.	Results of the study should be made public on the city website

(Continues on page 127)

Which of the six E's	Responsible Party	Timeframe	Can be accomplished through existing funds	Can be accomplished through reallocation of funds	Can be accomplished through grant acquisition
Education	MR, MCSO, EM, MCC	Short (<2 years)	N	Y	Y
Education	MR, MCSO, EM, MCC	Short (<2 years)	N	Y	Y
Encouragement' Education	MR, MCoC, MHCC, MCC, TXDOT	Short (<2 years)	Y	Y	N
Encouragement	MR, MCoC, MHCC	Medium (2 – 5 years)	Y	Y	N
Enforcement	MCSO, EM	Short (<2 years)	N	Y	Y
Enforcement	MCSO, EM	Short (<2 years)	N	Y	Y
Equity; Education	MH, UWM	Medium (2 – 5 years)	N	N	Y

(Continued from page 126)

Unrestrained Persons Recommendations (Chapter 6)

Table 27: Strategies and Actions for the Unrestrained Persons Emphasis Area

Action #	Description	Performance Metric
Strategy UP1. Generate awareness on the consequences of not using a seatbelt.		
Action UP1.1.	Develop an educational campaign highlighting the consequences of not using a seatbelt.	Seatbelt study is completed Number of target locations running the campaign Estimated attendance at the Traffic Safety Enforcement Day Event
Action UP1.2.	Conduct a study to determine seatbelt compliance for passenger vehicles around Midland County.	
Action UP1.3.	Target campaign materials in locations with low seatbelt usage.	
Action UP1.4.	Partner with other local enforcement agencies to host a Traffic Safety Enforcement Day Event for the Region.	
Strategy UP2. Increase the public's knowledge on correct car seat selection.		
Action UP2.1.	Partner with TXDOT to create a County Car Seat Information Program.	Estimated participants in the program
Strategy UP3. Establish a targeted enforcement program for non-seatbelt usage.		
Action UP3.1.	Create a partnership with TXDOT to develop campaign strategies.	Seatbelt campaign is implemented
Action UP3.2.	Consider the creation of more severe fines or punishments for not using a seatbelt.	

(Continues on page 129)

Which of the six E's	Responsible Party	Timeframe	Can be accomplished through existing funds	Can be accomplished through reallocation of funds	Can be accomplished through grant acquisition
Education	MR, TXDOT, MCC	Short (<2 years)	N	Y	Y
Evaluation	MCSO, MCC, EM	Short (<2 years)	N	N	Y
Education	TXDOT, MCC, MR	Short (<2 years)	Y	Y	N
Education	MCSO, TXDPS	Medium (2 – 5 years)	Y	N	N
Education	EM, MCSO, MCC, MR	Medium (2 – 5 years)	N	Y	Y
Education	TXDOT, SC	Short (<2 years)	N	Y	Y
Enforcement	MCSO, MCC, LCG	Short (<2 years)	Y	N	N

(Continued from page 128)

Vulnerable Road User Recommendations (Chapter 6)

Table 28: Strategies and Actions for the Vulnerable Road Users Emphasis Area

Action #	Description	Performance Metric
Strategy VRU1. Increase drivers' awareness of vulnerable road users.		
Action VRU1.1.	Develop an educational campaign highlighting the consequences of not using a seatbelt.	Completion of campaign for alternate modes and off-road vehicles
Action VRU1.2.	Partner with TXDOT and the City of Midland to create an awareness campaign promoting alternate transportation mode users.	
Strategy VRU2. Improve the quality of multimodal facilities in future County projects.		
Action VRU2.1.	Develop a centralized campaign to encourage off-road vehicle (ORV) drivers to practice safe driving behaviors.	Standards have been updated
Strategy VRU3. Create an Active Transportation Plan for the County.		
Action VRU3.1.	Identify gaps in the existing active transportation network through a facilities inventory.	Creation of the Active Transportation Plan Number of projects funded
Action VRU3.2.	Develop an active transportation plan that prioritizes robust stakeholder input.	
Action VRU3.3.	Establish external funding sources that will be used to implement recommendations from the plan.	

(Continues on page 131)

Which of the six E's	Responsible Party	Timeframe	Can be accomplished through existing funds	Can be accomplished through reallocation of funds	Can be accomplished through grant acquisition
Education	TXDOT, MCC, MR	Short (<2 years)	N	Y	Y
Encouragement	MCC, MR	Short (<2 years)	N	Y	Y
Engineering	RB, PW	Medium (2 – 5 years)	N	Y	Y
Evaluation	TXDOT, RB, PW	Medium (2 – 5 years)	N	Y	Y
Encouragement	TXDOT, RB, PW	Medium (2 – 5 years)	N	Y	Y
Engineering	TXDOT, RB, PW	Long (>5 years)	N	Y	Y

(Continued from page 130)

Post Crash Care Recommendations (Chapter 6)

Table 29: Strategies and Actions for the Post Crash Care Emphasis Area

Action #	Description	Performance Metric
Strategy PC1. Improve EMS resources and training in the Region.		
Action PC1.1.	Construct a new fire station in the County.	A new fire department is added to the study area EMS obtains advance training
Action PC1.2.	Provide advanced training to EMS Staff.	
Strategy PC2. Supplement staff in providing crash clearing efforts.		
Action PC2.1.	Partner with TXDOT to implement their HERO Program in Midland County.	HERO Program is started in Midland County
Strategy PC3. Determine future connections that aid in servicing EMS response in areas with low connectivity.		
Action PC3.1.	Conduct a study of emergency response times in the County.	Emergency response time study is complete Update the thoroughfare plan
Action PC3.2.	Re-visit the county's thoroughfare plan to prioritize connections in low connectivity areas.	

(Continues on page 133)

Which of the six E's	Responsible Party	Timeframe	Can be accomplished through existing funds	Can be accomplished through reallocation of funds	Can be accomplished through grant acquisition
Enforcement	MCC, EM, MCP	Long (>5 Years)	N	N	Y
Education	EM, TXDOT	Short (<2 years)	N	Y	Y
Enforcement	EM, TXDOT, MCC	Medium (2 – 5 years)	Y	Y	Y
Evaluation	EM, MCSO	Short (<2 years)	Y	Y	N
Engineering	RB, PW, EM, MCC	Long (>5 years)	Y	Y	Y

(Continued from page 132)

Annual Reporting & Transparency

The Vision Zero Task Force is responsible for implementing the actions recommended in this plan with special consideration for maintaining transparency through the production of an Annual Vision Zero Progress Report. Annual progress reporting procedures are established in the Vision Zero Resolution passed by County Commissioner Court on August 6, 2024. **Table 30** below details the procedures by how often each task is expected to be completed by the Task Force.

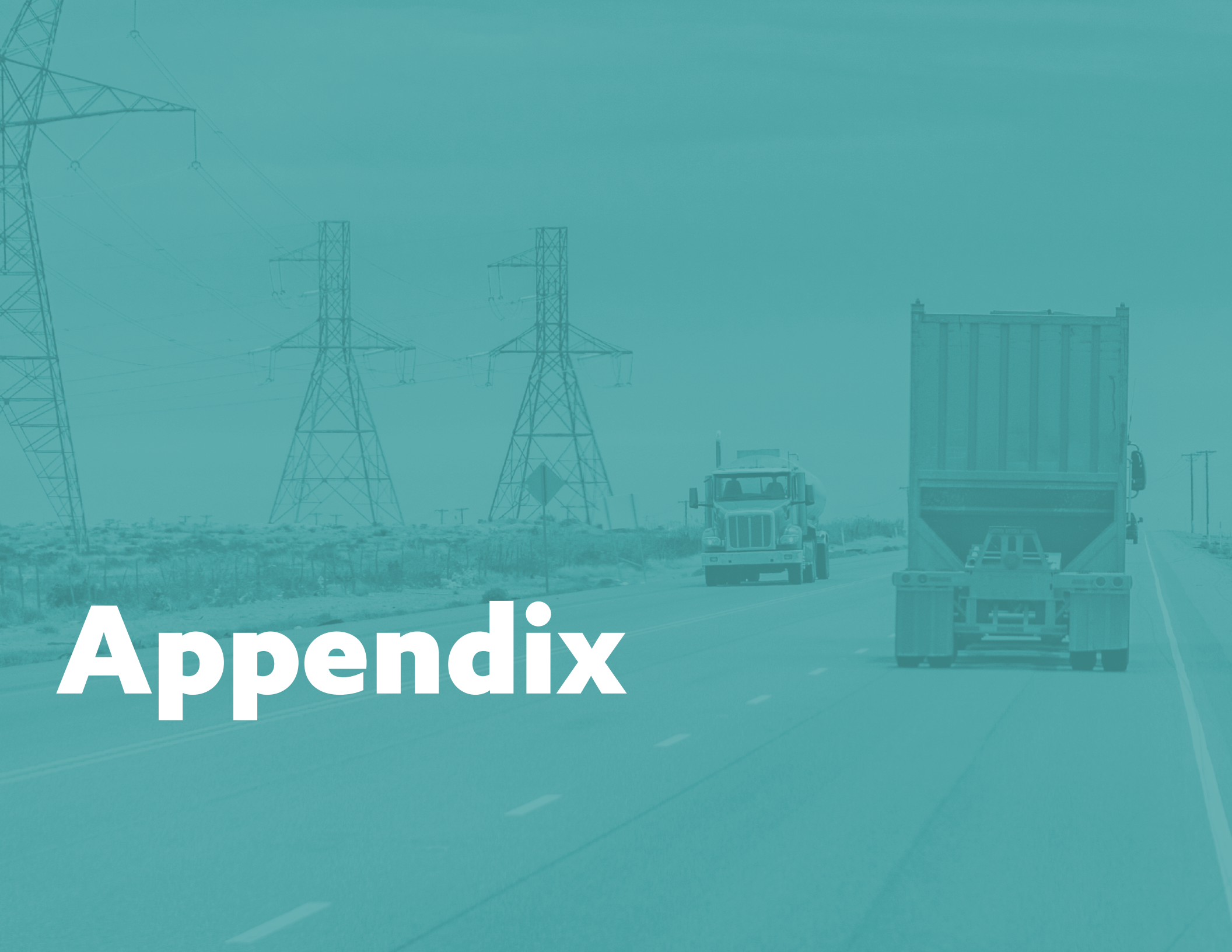
Overall, the annual reporting of Vision Zero efforts plays a crucial role in ensuring transparency, accountability, and effectiveness in the use of public resources allocated for community safety and improvement initiatives.

The adopted Midland County Comprehensive Safety Action Plan is available on the Midland County Public Works website (co.midland.tx.us/895/Public-Works).

Table 30: Plan Updates and Timeframe

Plan Update Level	Recommended Frequency	Approval By
Minor Revision – text or wording changes, not affecting the recommendations	As needed	Vision Zero Task Force
Major Revision – any change that substantively changes a recommendation	As needed	Vision Zero Task Force
Vision Zero Implementation Progress Report	Annual	County Commissioner Court
Full Plan Update	Every five years	County Commissioner Court

> ...the annual reporting of Vision Zero efforts plays a **crucial role** in ensuring **transparency, accountability, and effectiveness** in the use of public resources



Appendix

A

A. Vision Zero Resolution

A RESOLUTION OF THE COMMISSIONERS COURT OF MIDLAND COUNTY, TEXAS ADOPTING A VISION ZERO POLICY

PREAMBLE

WHEREAS, the life and health of all persons living and traveling within Midland County are our utmost priority, and no one should die or be seriously injured while traveling on our County streets;

WHEREAS, Vision Zero is the concept that traffic deaths and serious injuries on our roadways are unacceptable;[1]

WHEREAS, Vision Zero is a holistic strategy aimed at eliminating all traffic fatalities and severe injuries suffered by all road users while increasing safe, healthy, equitable mobility for all;

WHEREAS, streets and transportation systems have traditionally been designed primarily to move cars efficiently, and Vision Zero supports a paradigm shift by designing streets and transportation systems to move all people safely, including people of all ages and abilities, pedestrians, bicyclists, public transit users, scooter riders, and motorcyclists, as well as drivers and passengers of motor vehicles;

WHEREAS, Vision Zero recognizes that people will sometimes make mistakes, so the road system and related policies should be designed to ensure that those inevitable mistakes do not result in severe injuries or fatalities; therefore, transportation planners and engineers and policymakers are expected to improve the roadway environment, policies, and other related systems to lessen the severity of crashes;

WHEREAS, 102 people in the County lost their lives to traffic deaths in 2018-2022 and traffic crashes are among the leading cause of deaths in the United States;[2]

WHEREAS, the County's transportation infrastructure serves an increasing number of vulnerable road users such as pedestrians and bicyclists;

WHEREAS, according to the TxDOT Crash Records Information System, pedestrians and bicyclists are involved in 0.5 percent of collisions and account for 9 percent of traffic deaths in the County;

WHEREAS, the injury rate for pedestrians involved in collisions is approximately 96 percent, and the injury rate for bicyclists involved in collisions is approximately 100 percent;

WHEREAS, speed is recognized as a major determining factor of survival in a crash;[3]

WHEREAS, the County will work toward reducing vehicle speeds because the likelihood of a pedestrian surviving a crash is 10 percent if hit by a vehicle moving 40 mph;[4]

WHEREAS, children, older adults, people of color, people with disabilities, people who are unhoused, and people with low income face a significantly disproportionate risk of traffic injuries and fatalities;[5]

WHEREAS, people of color are disproportionately affected by racial profiling and inequitable enforcement of traffic violations;[6-8]

WHEREAS, making streets safer for all people using all modes of transportation will encourage people to travel on foot, by bicycle, and by public transit, which supports a healthier, more active lifestyle and reduces environmental pollution;

WHEREAS, successful Vision Zero programs are a result of both a complete government approach (i.e., interdepartmental, coordinated initiatives) and community support of Vision Zero objectives and action plans;

WHEREAS, Vision Zero resolutions have been adopted by many jurisdictions across the United States; and

NOW, THEREFORE, BE IT RESOLVED, by the Commissioners Court of Midland County, Texas, as follows:

1. The County adopts the goal of zero traffic deaths and serious injuries, stating that no loss of life or serious injury is acceptable on our streets.

2. The County adopts the goal of eliminating traffic deaths and serious injuries by 2050 and endorses Vision Zero as a comprehensive and holistic approach to achieving this goal.

3. The County adopts the goal of promoting fair and equitable enforcement of traffic violations.

4. The County adopts the Vision Zero policy attached hereto as Exhibit A and makes it part of this Resolution, effective immediately.

5. The County Clerk shall certify the adoption of this Resolution, effective immediately, by the County Commissioners Court.

PASSED AND ADOPTED by the Commissioners Court of Midland County, Texas, on August 6, 2024, by the following vote: [5-0].

X

Terry Johnson
County Judge

Exhibit A

This Vision Zero Policy was adopted by the Commissioners Court of Midland County, Texas on August 6, 2024.

VISION ZERO POLICY OF MIDLAND COUNTY, TEXAS

A. PURPOSE

The purpose of this Vision Zero Policy ("Policy") is to eliminate all traffic fatalities and traffic-related severe injuries by using data-driven policy changes and equity-focused community engagement of diverse and necessary stakeholders to design and implement a transportation system that provides safe, healthy, and equitable mobility for all. This Policy seeks to achieve this purpose by (1) establishing that Vision Zero is a priority goal for Midland County and (2) creating a Vision Zero Task Force of senior County officials (or their designees) that is responsible for gathering data and working with the community – including traditionally underrepresented groups – to develop an action plan for achieving the goals of Vision Zero through equity-focused strategies that establish safe speeds, create safe streets, and improve safety culture and collaboration.

B. DEFINITIONS

1. "Community Engagement" means the various methods of informing, consulting, collaborating with, involving, or empowering community members with respect to government decisions.

2. "Fatal Injury" means a person is pronounced dead at the scene or dies as a result of injuries received in a traffic crash within thirty days of the date of the crash.

3. "High-Injury Network" means specific streets or roads (or portions thereof) and/or intersections within the boundaries of the County that have a high concentration of traffic fatalities and/or severe injuries, according to Traffic Safety Data.

4. "Priority Populations" means youth, older adults, communities of color, people with low income, people with disabilities, people with limited English proficiency, people who are unhoused, or others who have a higher risk of Severe or Fatal Injury resulting from a collision with a motor vehicle, due to limited access to efficient and affordable transportation options; unsafe neighborhood transit infrastructure; or population-specific risk factors.

5. "Severe Injury" is an injury other than fatal which results in one or more of the

following: Severe laceration resulting in exposure of underlying tissues/muscle/organs or resulting in significant loss of blood; Broken or distorted extremity (arm or leg); Crush injuries; Suspected skull, chest or abdominal injury other than bruises or minor lacerations; Significant burns (second and third degree burns over 10% or more of the body); Unconsciousness when taken from the crash scene; or Paralysis.

6. "Traffic Safety Data" means data collected for each traffic collision that results in a Fatal or Severe Injury and, to the extent possible, shall include but are not limited to the following data elements: (a) exact location; (b) date and time of day; (c) category of each road user involved (e.g., pedestrian, bicyclist, scooter rider, driver of motor vehicle); (d) type of vehicle(s) involved, if applicable (e.g., motorcycle, car, bus, commercial truck); (e) whether any road users were fatally or severely injured; (f) ages of people involved; (g) collision factors (e.g., unsafe speed, driver distraction, poor lighting); and (h) the movement preceding the collision (e.g., left turn, changing lanes).

7. "Vulnerable Road Users" means pedestrians, bicyclists, people using mobility devices, scooter riders, and any other road users who are at high risk of Severe or Fatal Injury resulting from a collision with a motor vehicle.

C. VISION ZERO TASK FORCE

1. The purpose of the Task Force is to develop and implement a Vision Zero action plan, ensuring coordination across all relevant departments, agencies, and stakeholders. The Vision Zero Task Force is hereby established and shall comprise the County Manager (or designee) and the Directors (or designees) of the Engineering, Development Services, Intergovernmental Relations, Fire, Parks & Recreation, Planning, Police, and Strategic Communications Departments, as well as Midland Development Corporation and the Midland-Odessa Urban Transit District.

2. The Commissioner of Precinct 3, Luis Sanchez shall chair the Task Force and be responsible for ensuring that the duties of the Task Force set forth in Section C.3 are completed in a timely manner.

3. The Task Force shall perform the following tasks:

    a. Within 12 months of the effective date of this Policy, (1) develop and finalize a Vision Zero Action Plan ("Action Plan") and (2) present the Action Plan to the

County Commissioners Court.

b. Convene its first meeting no later than 60 days from the effective date of this Policy and meet at least bi-monthly until the Action Plan is finalized and any revisions have been fully implemented.

c. Revise the Action Plan, as needed.

d. Report on implementation of the Action Plan and progress toward Vision Zero goals pursuant to Section D of this Policy.

e. Maintain a comprehensive public web page to share information on Midland County's Vision Zero endeavors – for example, relevant data; the adopted Resolution; the Action Plan and any updates to it; and progress on the strategies in the Action Plan – as well as to solicit feedback on safety concerns, projects, and strategies.

D. ONGOING IMPLEMENTATION & EVALUATION

The Task Force shall be responsible for ongoing implementation and oversight of the Action Plan, including the following tasks:

1. Implementation of all strategies identified in the Action Plan, prioritizing strategies that benefit Priority Populations and High-Injury Network.
2. Identification of funding needs and oversight of strategies to obtain the funding needed to fully implement the Action Plan, prioritizing Priority Populations and the High-Injury Network.
3. Obtaining the data necessary to determine whether the performance goals for each strategy have been met; assessing whether the goals have been met based on these data; and if any goals have not been met, ascertaining the reasons.
4. Pursuit and oversight of any partnerships with other public or private entities necessary to implementation of the Action Plan.
5. Revision of the Action Plan as needed to meet the Vision Zero goals of the Resolution.

E. REQUIREMENTS FOR REPORTING & COMMUNITY MEETINGS

1. Within 6 months of finalizing the Action Plan, the Task Force shall submit to the County Commissioners Court a written report on the progress made toward finalizing and/or implementing the Action Plan.

2. Within 12 months of finalizing the Action Plan and annually thereafter, the Task Force shall submit to the County Commissioners Court and make publicly available online a written implementation report based on the performance goals of the Action Plan. The implementation report shall include, at a minimum, the following items:

    a. An overview of progress toward full implementation of the Action Plan (and any revisions thereto) and the Vision Zero goals of the Resolution

    b. The status of all strategies set forth in the Action Plan (and any revisions thereto), including specific highlighting of the status of all strategies benefitting Priority Populations and the High-Injury Network.

    c. The status of funding necessary for implementation of the Action Plan, and steps taken to address any unmet funding needs.

    d. A description of any unanticipated obstacles to implementation of the Action Plan and plans to address those obstacles.

References

1. What is Vision Zero? Vision Zero Network website: visionzeronetwork.org/about/what-is-vision-zero/.
2. 10 leading causes of death, United States, 2020, both sexes, all ages, all races. Centers for Disease Control and Prevention website: wisqars.cdc.gov/data/lcd/home.
3. Institute of Transportation Engineers; Road to Zero Coalition; and RTZ Safe System Working Group. Safe System. Institute of Transportation Engineers website: ite.org/technical-resources/topics/safe-systems/.
4. Ferrier K. Landmark national study urges safety over speed. Vision Zero Network website: visionzeronetwork.org/safety-over-speed. July 25, 2017.
5. Fox J, Shahum L. *Vision Zero Equity Strategies for Practitioners.* Oakland, CA: Vision Zero Network; 2017.
6. *Targeted Fines and Fees Against Communities of Color: Civil Rights and Constitutional Implications.* Washington, DC: US Commission on Civil Rights; 2017.
7. *Investigation of the Ferguson Police Department.* Washington, DC: Civil Rights Division, US Department of Justice; 2015.
8. Bingham S, Calhoun S, Case A, et al. *Paying More for Being Poor: Bias and Disparity in California's Traffic Court System.* San Francisco, CA: Lawyers' Committee for Civil Rights of the San Francisco Bay Area; 2017.

B. Social Pinpoint - Public Engagement Results

Created on	Type	Comment	Up Votes	Down Votes	Latitude	Longitude
10/27/2023 6:35	Bicyclist Safety Issue	No shoulder or lane to protect cyclist	4	0	32.029944	-102.163839
11/2/2023 10:33	Bicyclist Safety Issue	Bike lane ends with no safe method of continuing through the busy Scharbauer intersection.	4	1	32.018742	-102.08896
11/2/2023 10:52	Bicyclist Safety Issue	Difficult intersection to navigate on a bike, but typically the safest place to get across Andrews Highway. Not sure if the light is on a timer or if a vehicle should trigger it, but I typically have to cross against the light when biking.	4	0	32.004284	-102.125934
11/2/2023 19:56	Bicyclist Safety Issue	Dedicated bike lane to safely cross the loop.	4	0	32.011783	-102.158368
11/10/2023 13:19	Bicyclist Safety Issue	Bicyclists regularly ignore traffic controls on Golden Gate Mockingbird to County Road 50	0	0	32.034528	-102.187829
11/18/2023 10:30	Bicyclist Safety Issue	Distracted drivers and trash in the bike lane so it's not always usable.	1	0	32.023359	-102.174397
11/18/2023 10:34	Bicyclist Safety Issue	40mph in this neighborhood so drivers get right behind me and then blow by as close as possible when they pass. One day, my 12 year old and I were just about to turn left into the school parking lot. Even though we were both clearly signaling a left turn, a large truck zoomed by us on our left blocking our ability to turn. I had to yell at my son to go straight otherwise, he would have been killed.	3	0	32.028089	-102.181349
11/18/2023 10:37	Bicyclist Safety Issue	Bike lane to cross the loop. It should last long enough to get to a neighborhood or shopping parking lot.	1	0	32.028817	-102.145557
11/18/2023 10:38	Bicyclist Safety Issue	Bike lane to cross the loop. It should extend far enough north and south to get to a neighborhood or shopping parking lot.	1	0	32.037694	-102.11277
11/18/2023 10:39	Bicyclist Safety Issue	Bike lane to cross the loop. It should extend far enough north and south to get to a neighborhood or shopping parking lot.	1	0	32.043405	-102.085176
11/27/2023 9:59	Bicyclist Safety Issue	IMO, this is a more common and safer bicycle crossing area for the loop. While actual loop crossing is relatively easy, once we reach the League Dr intersection, it feels very unsafe to either make the west bound turn or continue north on Holiday Hill. I would love to see more signage or even a dedicated bicycle lane.	1	0	32.016009	-102.159328
12/27/2023 20:43	Bicyclist Safety Issue	Our residents on bikes need a bike lane. At full capacity we will have 100 homes and a lot of folks on bikes.	0	0	31.939116	-102.154559
10/27/2023 6:29	Intersection Crossing/ Crosswalk Issue	Needs a traffic light to stop the flow of traffic so that residents and businesses can exit from driveways onto 158. Also it's just a dangerous intersection with to many roads crossing and not signal to control the flow of traffic	3	0	31.972588	-102.003593
10/31/2023 17:30	Intersection Crossing/ Crosswalk Issue	Very dangerous intersection. Speed limit should not be 45 until after Bluebird.	1	0	32.037294	-102.130581
10/31/2023 18:39	Intersection Crossing/ Crosswalk Issue	Vehicles exiting HEB back-up at this spot and/or vehicles enter the driving lanes in unsafe ways because many drivers insist on trying to turn left onto Midkiff even though traffic patterns don't allow for it. In addition, the left turn lane is almost non-functional with vehicles trying to turn into the Whataburger lot.	8	0	32.018743	-102.124733
11/3/2023 13:58	Intersection Crossing/ Crosswalk Issue	Very busy intersection during work traffic. Many car make unsafe turns because traffic backs up at stop signs and constant stream of vehicles make it impossible to turn onto the road. Suggest 4 way stop or traffic light.	6	0	31.991416	-102.16871
11/3/2023 14:20	Intersection Crossing/ Crosswalk Issue	School youth use this intersection during lunch and before/after school. There are not crossing markings or a way for them to cross in an organized manner leading to many of the younger drivers speeding through or not following 4-way stop rules to try and avoid sitting at the stop sign.	1	0	32.015686	-102.127994
11/3/2023 14:22	Intersection Crossing/ Crosswalk Issue	Difficulty turning north (right) from Wall St. onto Andrews Hwy. No matter what everyone always takes a wide turn because the angle makes it difficult to turn correctly/safely. Striping/marking is also difficult to see north of the intersection.	3	0	31.993414	-102.09864
11/10/2023 13:12	Intersection Crossing/ Crosswalk Issue	West bound traffic in the right turn only lane continues going straight causing a hazard for traffic entering Briarwood from Avalon.	2	0	32.022049	-102.179332
11/16/2023 12:52	Intersection Crossing/ Crosswalk Issue	Drivers often confused and yield inappropriately	6	0	32.010742	-102.099077
11/17/2023 9:50	Intersection Crossing/ Crosswalk Issue	This incredibly wide four-way stop just doesn't work most days.	6	0	31.991912	-102.157563

11/17/2023 13:16	Intersection Crossing/ Crosswalk Issue	Traffic signals are needed here badly along with a reduced speed limit. Traffic on Briarwood backs up and creates congestion and impatience. Traffic on 158 turning onto Briarwood makes this more dangerous. This intersection needs more turn lanes, better lighting, and signaling.	7	0	32.014699	-102.210231
11/18/2023 7:32	Intersection Crossing/ Crosswalk Issue	Needs to go back to two lanes to turn north on A street. This backs up close to the loop off ramp with people trying to access the neighborhoods north of the loop off of A street.	6	0	32.041578	-102.096212
11/18/2023 7:55	Intersection Crossing/ Crosswalk Issue	A light is needed here for safety.	3	0	32.014481	-102.209759
11/18/2023 21:14	Intersection Crossing/ Crosswalk Issue	Extremely unsafe intersection. There is limited visibility from all sides. There's a great need for a traffic light, better and longer turn lanes, and controlling the traffic backup that happens.	3	0	32.014794	-102.210067
11/18/2023 21:21	Intersection Crossing/ Crosswalk Issue	Dangerous intersection. Need a light as well as a turn-left lane for those going west-bound turning into the neighborhood.	1	0	32.060866	-102.077699
11/27/2023 7:55	Intersection Crossing/ Crosswalk Issue	People on the right lane are not allowing oncoming vehicles to safely enter from the ramp. Either the right lane should have an area marked to merge left before the ramp to allow for oncoming traffic, or the loop should be extended there as it is on other intersections. Side note: The terms and conditions for this submission are not showing up (image attached).	0	0	32.043093	-102.089687
12/14/2023 20:07	Intersection Crossing/ Crosswalk Issue	Intersection was safer before it was reconfigured. Now more difficult to see southbound traffic.	1	0	31.985187	-102.077872
12/15/2023 4:26	Intersection Crossing/ Crosswalk Issue	Would like to see a bus lane installed down 307. School busses stopping traffic on 307 at rush hour times both in the morning and afternoon create dangerous situations.	0	0	32.010902	-101.967406
12/15/2023 4:33	Intersection Crossing/ Crosswalk Issue	This intersection needs to be completely re-built. 5 points is the most dangerous intersections in the county	0	0	31.972811	-102.003409
12/15/2023 4:35	Intersection Crossing/ Crosswalk Issue	Right and left turn lanes installed on 1379 at this intersection.	0	0	31.999561	-101.886694
12/15/2023 12:36	Intersection Crossing/ Crosswalk Issue	We desperately need either an overpass or an underpass at Garfield and Front and Industrial. Someone will die on the way to the hospital from south of the tracks. Right now all traffic that needs to avoid dealing with two roads and a railroad track are forced to go through downtown Midland which is already strangled with traffic at all hours. Will it take the death of someone "important" to get this done?	2	0	31.98558	-102.093527
12/26/2023 17:04	Intersection Crossing/ Crosswalk Issue	Traffic always backs up during rushes because of the intersection between I-20 & 1788. The exit ramp off of the interstate should be pushed back to help. The interchange could be rebuilt, and a diverging diamond interchange might work.	0	0	31.911136	-102.215887
12/26/2023 17:12	Intersection Crossing/ Crosswalk Issue	It would be funny if one of these streets had a bridge. 158 makes the most sense, but 120 seems to be a better option.	0	0	31.972509	-102.003061
12/27/2023 20:35	Intersection Crossing/ Crosswalk Issue	This intersection needs a light badly. It is nearly impossible to turn north on Antelope from eastbound Cholla.	0	0	31.907126	-102.214072
12/27/2023 20:39	Intersection Crossing/ Crosswalk Issue	This intersection desperately needs a light. It's nearly impossible to turn left onto Antelope from either direction on cholla. I accidentally made this comment on the wrong intersection but couldn't delete it.	0	0	31.945899	-102.141405
12/27/2023 21:02	Intersection Crossing/ Crosswalk Issue	There needs to be a 4 way stop installed here to slow/deter the flow of traffic through this neighborhood.	1	0	32.011692	-102.114546
12/28/2023 8:15	Intersection Crossing/ Crosswalk Issue	Vehicles consistently go into the crosswalk or drive through the light. There have been multiple accidents involving children crossing the street in this area. A pedestrian bridge could alleviate some of the issues.	0	0	32.017855	-102.133093
12/29/2023 4:54	Intersection Crossing/ Crosswalk Issue	Most dangerous intersection needs to be addressed sooner than what's indicated on xdot plans	0	0	31.944499	-102.172747
12/30/2023 8:12	Intersection Crossing/ Crosswalk Issue	Very difficult to turn left off of Avalon onto Briarwood. Would like to see deceased speed during school pick up and drop off hours.	1	0	32.022095	-102.179224

12/31/2023 12:57	Intersection Crossing/ Crosswalk Issue	The turn-off for westbound Loop 250 Frontage traffic onto North 349 should be much longer, allowing more vehicles to queue. Those vehicles block through traffic.	1	0	32.044137	-102.084765
1/1/2024 9:15	Intersection Crossing/ Crosswalk Issue	Too many serious accidents at this intersection. Need a traffic light, or overpass and ramps for this intersection.	0	0	31.939376	-101.883865
11/1/2023 10:06	Lighting Issue	Lighting in the AM for school bus pick up is very bad. I have seen several near misses here with the bus and traffic. Its mainly the high school bus stop. Speeding is also bad here due to increase in houses built.	0	0	32.060582	-102.079639
11/1/2023 21:24	Lighting Issue	lighting at night for all streets and entire street not good or non-existent	0	0	32.021033	-102.138686
11/2/2023 11:13	Lighting Issue	Pioneer Park has insufficient lighting.	0	0	32.003727	-102.147137
11/18/2023 12:31	Lighting Issue	There are more street lights on Main Street and residential side streets in this area needed because the streets are dark at night and drivers are not able to see well enough to see pedestrians or other objects in streets. We also need a signal light at the intersection of Main & Scarbruer street.	0	0	32.024591	-102.079685
11/30/2023 15:10	Lighting Issue	The north-directed light at this intersection is tilted downward and you can't see the color until you're right under it. Also, it doesn't seem to align with the light by DK, as the marked intersection light will be red while the light by DK is green or yellow.	0	0	32.017691	-102.088558
12/13/2023 23:13	Lighting Issue	More lighting is needed on these long blocks just West of Midland Dr. (Stanolind, Gulf, Humble)	0	0	32.006793	-102.140279
12/15/2023 1:21	Lighting Issue	Street lighting is inadequate on this particular stretch of Industrial Ave. A fatality was reported in a single vehicle crash in May of 2022.	0	0	31.98829	-102.087791
12/15/2023 7:49	Lighting Issue	There is no lighting on the stretch of 1130.	0	0	32.009686	-101.979325
12/18/2023 10:13	Lighting Issue	Too dark at night and everyone drives with brights, making it harder to see the road. Need street lights.	0	0	32.073207	-102.070531
12/27/2023 23:41	Lighting Issue	Add more lights	0	0	31.999028	-102.048837
12/29/2023 22:59	Lighting Issue	Turn signal is not visible unless you are directly under it and in the intersection.	0	0	32.02032	-102.080633
10/31/2023 18:22	Other Traffic Safety Concern	Some cars on West Golf Course don't want to wait at the stoplight, so they turn into the church's parking lot and speed through it to the far entrance (far West side) to turn onto Andrews Highway. They pay no attention to other traffic or pedestrians on the lot.	2	0	32.004844	-102.124806
11/1/2023 9:25	Other Traffic Safety Concern	Traffic backing up onto Loop 250	5	0	32.03084	-102.141384
11/1/2023 10:04	Other Traffic Safety Concern	Need to have 4 way stop or Light here to control traffic trying go across Mockingbird very soon you will have a bad wreck here. In the morning and 5 pm very dangerous.	2	0	32.060801	-102.077644
11/1/2023 21:27	Other Traffic Safety Concern	many common drives behind houses deteriorated greatly and need repaving. Several streets in area could use repaving as well.	0	0	32.020887	-102.138659
11/2/2023 9:29	Other Traffic Safety Concern	Constant U-Turns here cause major concern for those trying to turn right out of the neighborhood on Heritage Oaks Drive to Briarwood. Not sure what the solution is for those leaving the apartment complex (on the north side of Briarwood) that need to go east since there is a median in the way and they can't turn left without doing a u-turn, but there is entirely too much high-speed traffic on Briarwood for people pulling out in front of others while doing a u-turn.	3	0	32.022813	-102.176381
11/2/2023 10:50	Other Traffic Safety Concern	I've had drivers pass me on the left in this school zone for no apparent reason. People park all along the neighboring streets for school pickup. Drivers frequently seen with cell phones in hand rolling through the stop signs.	0	0	31.995952	-102.129475
11/2/2023 10:55	Other Traffic Safety Concern	Although there are signs telling drivers to not form a line in the road for the Starbucks, there is still a line in the road nearly daily. Further, drivers turning from Midland drive or funneling from the Loop exits do not yield correctly in order to get to the turn for the Starbucks and strip mall.	7	0	32.029064	-102.144404
11/3/2023 13:56	Other Traffic Safety Concern	This road has a lot of traffic and is a poorly maintained road - lots of pothole on top of potholes, slow traffic turning into fast traffic, and non existent road markings.	2	0	32.020484	-102.185555
11/3/2023 14:01	Other Traffic Safety Concern	Many cars making right turn here drive on uneven shoulder to get out of fast moving traffic. Safer to have a dedicated turn lane here or slower speed limit.	3	0	32.00551	-102.191219
11/3/2023 14:29	Other Traffic Safety Concern	Always congested on Big Spring from about Stokes to I-20. This causes cars to block intersections (especially the one at Longview and Big Spring!) and commercial entry/exits when they try to make the light.	1	0	31.97358	-102.074296

11/10/2023 13:15	Other Traffic Safety Concern	There is no shoulder on the southbound lane with a dangerous drop-off. Lanes are narrow and traffic exceeds speed limits.	1	0	32.032437	-102.182658
11/16/2023 12:48	Other Traffic Safety Concern	traffic light is desperately needed at 349 and Occidental, very dangerous intersection, many accidents here	5	0	32.08032	-102.090883
11/16/2023 12:53	Other Traffic Safety Concern	County road 140 is in bad condition. Too many potholes makes it dangerous to drive. It is all the way from 349 to the intersection of 1160.	1	0	31.931459	-102.049899
11/17/2023 8:40	Other Traffic Safety Concern	Better design exiting ramp and extend light timing during peak times. A better exit ramp would help a lot.	4	0	32.030628	-102.142348
11/17/2023 9:38	Other Traffic Safety Concern	Road conditions are poor, and only getting worse. Heavy traffic at all hours of the day, and avoiding potholes within two lanes sometimes seems like a hazard in itself.	1	0	32.018128	-102.195768
11/17/2023 9:43	Other Traffic Safety Concern	Roads are in worse condition every time I need to head this way, and the volume of entrances makes it a bit of a crapshoot as to what's going to happen.	4	0	32.031823	-102.127608
11/17/2023 10:05	Other Traffic Safety Concern	People will use the Bowlero parking lot to cut past the intersection, even speeding through/ underneath the awning at the front entrance. I've seen people almost ran over at the front doors due to this.	3	0	32.016917	-102.15811
11/17/2023 13:07	Other Traffic Safety Concern	finish this project!!!	7	1	32.009436	-102.103758
11/18/2023 7:54	Other Traffic Safety Concern	Speed limit too high all along 158, from 191 to 1788. There is too much traffic for the 2 lanes.	1	0	32.000652	-102.182465
11/18/2023 8:05	Other Traffic Safety Concern	This exit ramp has been a problem for AT LEAST more than a decade. During rush house it backs up onto the loop and drivers coming off the loop don't have time to slow down from 60mph to stop. This happens at other exits too. All the loop exits need to be flipped the way the exits and entrances from the Loop to 191 were recently switched.	5	0	32.030818	-102.14088
11/18/2023 10:07	Other Traffic Safety Concern	Need light	3	0	32.074484	-102.089113
11/18/2023 10:07	Other Traffic Safety Concern	Need light	0	0	32.083002	-102.091774
11/18/2023 10:09	Other Traffic Safety Concern	Finish road	3	0	32.063274	-102.066894
11/18/2023 10:20	Other Traffic Safety Concern	There needs to be an additional outlet to Loop 250. Mockingbird, Magellan, Stonebridge, Lamesa access to 349 and Loop 250 is not enough.	3	0	32.063087	-102.067371
11/18/2023 20:59	Other Traffic Safety Concern	There is a pot hole forming	1	0	32.080747	-102.091064
11/18/2023 21:18	Other Traffic Safety Concern	There is no set turn-left lane for those coming southbound trying to turn into LST. This is unsafe and is dangerous for those leaving the neighborhood.	3	0	32.074497	-102.089202
11/18/2023 21:24	Other Traffic Safety Concern	Unusual traffic pattern with an unregulated turn. Should be a traffic light.	0	0	32.03464	-102.094093
11/20/2023 15:31	Other Traffic Safety Concern	This light turns red when no traffic is present on the cross streets. It backs up traffic. It is also a very short light and causes traffic to back up for half a mile.	1	0	32.0316	-102.128729
11/29/2023 9:09	Other Traffic Safety Concern	Long lines to turn left at light. The right lane could be used for left turns also.	0	0	32.048079	-102.063053
12/2/2023 14:07	Other Traffic Safety Concern	Road needed to connect with the loop 250	1	0	32.063151	-102.066818
12/2/2023 14:14	Other Traffic Safety Concern	Enable the right line to turn left when the light is green, So both lines can turn left to the 349.	0	0	32.059441	-102.084038
12/2/2023 14:17	Other Traffic Safety Concern	Add a new line or exit to turn right.	2	0	32.080934	-102.090996
12/2/2023 14:34	Other Traffic Safety Concern	Road needed to connect the loop 250 with the Fairgrounds Rd, there are new home constructions and a future school on the area, Mockingbird Ln is not going to be enough to handle all the traffic.	1	0	32.05048	-102.063611
12/2/2023 14:36	Other Traffic Safety Concern	Road needed to connect the the Fairgrounds Rd with the loop 250, there are new home constructions and a future school on the area, Mockingbird Ln is not going to be enough to handle all the traffic.	1	0	32.063328	-102.066872
12/13/2023 14:45	Other Traffic Safety Concern	This new intersection has a "right-turn-only" lane where the "go straight lane" should be. This causes the left-turn and straight lanes under the bridge to be out of alignment, confusingly requiring drivers to shift lanes mid-intersection. Just remove the right-turn-only signage and allow the right lane to go straight or turn right, or add a true right-turn lane.	0	0	31.93481	-102.169075
12/13/2023 14:51	Other Traffic Safety Concern	This intersection needs either an all-way stop or the right lane of Northbound Tradewinds to be required to turn right at Thomason. The traffic on Thomason backs up all the way to Loop 250 in the afternoon and before sporting events because it is difficult to make the right turn with light but steady traffic coming up Tradewinds.	1	0	31.975836	-102.151002

12/13/2023 14:53	Other Traffic Safety Concern	This intersection needs either an all-way stop or the right lane of Northbound Tradewinds to be required to turn right at Thomason. The traffic on Thomason backs up all the way to Loop 250 in the afternoon and before sporting events because it is difficult to make the right turn with light but steady traffic coming up Tradewinds.	1	0	31.979882	-102.152413
12/13/2023 14:59	Other Traffic Safety Concern	Mockingbird needs to be continuous between Garfield and A St.	2	0	32.051717	-102.117019
12/13/2023 15:07	Other Traffic Safety Concern	Whitman needs to continue through here. The surrounding neighborhoods have a lot of unnecessary traffic due to drivers needing to navigate around the unfinished section.	1	0	32.038071	-102.121407
12/13/2023 15:22	Other Traffic Safety Concern	Foolishly dangerous jog here. Figure out a way to take the jog away from the intersection. Perhaps diverting the West leg southward and the East leg northward so they connect directly at Garfield.	0	0	32.002422	-102.101505
12/13/2023 23:18	Other Traffic Safety Concern	This is a dangerous curve with the view blocked by bumper to bumper parking on both sides of the street. At least one side should be no parking in the curves.	0	0	32.027643	-102.148433
12/13/2023 23:28	Other Traffic Safety Concern	Contrary to the map, CR 130 does not continue West of Midkiff. It should continue straight through to Antelope Trail and further on to CR 1250. (I realize this is not in the city limits.)	0	0	31.935147	-102.098222
12/13/2023 23:30	Other Traffic Safety Concern	CR 120 needs to be continued to CR 1210 (Midkiff) and further on to Antelope Tr.	0	0	31.951461	-102.094209
12/13/2023 23:33	Other Traffic Safety Concern	Midland Dr should continue South of I-20 along the survey section line. S CR 1220 should be realigned along this section line and continue south all the way to CR 140. Had this been done before the I-20 work was planned they would undoubtedly have already put a bridge here, helping with our current construction traffic issues.	0	0	31.958817	-102.122962
12/13/2023 23:36	Other Traffic Safety Concern	Midland Dr should have been realigned to follow the section line many years ago before all of the businesses were built south of this curve. It should be straightened to align with Midland Dr South of BI-20 and an interchange should be constructed to allow traffic straight across BI-20 and the railroad tracks.	0	0	31.97287	-102.127962
12/13/2023 23:37	Other Traffic Safety Concern	Midland Dr should be able to cross the railroad tracks and Wall St at this location. North Midland Dr should be realigned to meet up here.	0	0	31.968738	-102.125967
12/13/2023 23:42	Other Traffic Safety Concern	Midkiff South of I-20 should have been widened to 4+1 lanes when the reconstruction was done a couple of years ago. The extra width should continue to County Road 140.	0	0	31.962658	-102.106526
12/13/2023 23:43	Other Traffic Safety Concern	Cotton Flat Rd South of I-20 should have been widened to 4+1 lanes when the reconstruction was done a couple of years ago. The extra width should continue to County Road 140.	0	0	31.966499	-102.090089
12/13/2023 23:46	Other Traffic Safety Concern	The misalignment of County Road 150 (due to negligence of Midland County government over the years) has resulted in two dangerous jogs: one at CR 1200 and the other at TX 349. The one at CR 1200 could be remediated by obtaining some of the empty property around the house at this corner and installing a curve West of 1200 allowing 150 to continue straight across 1200.	0	0	31.91127	-102.072301
12/13/2023 23:50	Other Traffic Safety Concern	The misalignment of 150 causes dangerous and inconvenient intersections at Hwy 349. The county should have obtained the property at this corner years ago when it was vacant. Now it will cost more but should still be done. A curve should be installed West of 349 so that 150 is aligned straight across the highway, eliminating the extra intersection and the head-on traffic that occurs in the left-turn lane on 349.	0	0	31.91535	-102.056143
12/13/2023 23:53	Other Traffic Safety Concern	This is an insanely dangerous location where the county chose to match up opposing traffic lanes. I see a near head-on collision at least once a week here. Antelope Tr/1232 needs to be widened all the way to CR 120 to allow the lanes to match up and provide a left turn lane onto 120.	1	0	31.944561	-102.140408
12/13/2023 23:53	Other Traffic Safety Concern	There needs to be a left turn lane for southbound traffic at this intersection. The traffic light should be replaced with a 4-way stop.	0	0	31.941101	-102.138047
12/13/2023 23:56	Other Traffic Safety Concern	The county needs to obtain the right-of-way to continue CR 120 all the way to CR 1250. If there's no planning of roads we will have a ridiculously dangerous mess that is too expensive to fix.	0	0	31.940901	-102.138798
12/13/2023 23:59	Other Traffic Safety Concern	The county should obtain right-of-way to continue CR 120 along the proper alignment to and beyond Antelope Tr/CR 1232 and eliminate this jog. Someday this will be a major street with businesses along it and it will be cost-prohibitive to fix it then.	0	0	31.941247	-102.137361

12/14/2023 0:01	Other Traffic Safety Concern	CR 120 should intersect CR 1250 here to alleviate traffic at I-20 and guarantee a safe, straight roadway in the future as businesses continue to go up. It should follow the section line as straight as possible.	0	0	31.935529	-102.1612
12/14/2023 0:04	Other Traffic Safety Concern	I guess not much to be done about this unnecessarily dangerously curvy road now that it's built. Millions of taxpayer dollars spend to build a road at the whim of a handful of property owners, instead of using imminent domain to make a straight safe road. Stripes need to be highly reflective and well-maintained and some lighting should be installed at county expense to improve the safety along these curves.	0	0	31.919594	-102.130237
12/14/2023 0:14	Other Traffic Safety Concern	The county should obtain right-of-way to continue 150 on a straight path to 1232.	0	0	31.907117	-102.089403
12/14/2023 0:16	Other Traffic Safety Concern	The county should obtain right-of-way to continue CR 160 West on as straight a path as possible all the way CR 1210.	0	0	31.900669	-102.052538
12/14/2023 0:19	Other Traffic Safety Concern	The county foolishly missed an opportunity to construct CR 160 through this area before businesses and oil and gas facilities were placed in the path. They should start the process to obtain right-of-way on as straight a path as possible to continue 160 from 349 all the way to the line where 1230 should fall. Actual construction won't be necessary immediately, but if the land is not obtained we will end up with dangerous jogs in the roads.	0	0	31.893382	-102.084103
12/14/2023 0:25	Other Traffic Safety Concern	The county should obtain right-of-way to continue CR 140 all the way to FM 1788 along as straight a path as possible, before more businesses and oil and gas facilities make the future roadway dangerously curvy and jogged. This path will also reduce some traffic congestion on 1232 and I-20 as well as the 1788/I-20 intersection. (This will be especially important in around 3 years when TxDOT tears down the 1788 overpass to switch it around.)	0	0	31.913274	-102.12734
12/14/2023 0:29	Other Traffic Safety Concern	The county NEEDS to obtain right-of-way to extend CR-130 STRAIGHT through to Antelope/1232. They should also obtain right-of-way to extend it along a straight path all the way to line up with CR-1250, which will provide safe roadway infrastructure through this rapidly building area.	1	0	31.927498	-102.132061
12/14/2023 0:31	Other Traffic Safety Concern	The county should obtain right-of-way to continue CR-1250 STRAIGHT along the section line to intersect with the CR-140 line. This is a rapidly building area and safe arterial road infrastructure is an important responsibility of the county government.	0	0	31.935438	-102.161114
12/14/2023 0:33	Other Traffic Safety Concern	CR 120 should intersect CR 1250 here to alleviate traffic at I-20 and guarantee a safe, straight roadway in the future as businesses continue to go up. It should follow the section line as straight as possible.	0	0	31.933924	-102.168893
12/14/2023 0:34	Other Traffic Safety Concern	The county should obtain right-of-way to continue CR-1250 STRAIGHT along the section line to intersect with the CR-140 line. This is a rapidly building area and safe arterial road infrastructure is an important responsibility of the county government.	0	0	31.931889	-102.168276
12/14/2023 0:38	Other Traffic Safety Concern	Here should be the intersection of S CR-1250 and W CR-140.	0	0	31.905651	-102.159634
12/14/2023 0:43	Other Traffic Safety Concern	The county needs to obtain right-of-way to construct County Road 1240 along the appropriate section line before encroaching businesses make a safe, straight road prohibitively expensive to build. It should be continued at least to the CR-130 line, with property acquisition continuing to the CR-140 line for future expansion.	0	0	31.942011	-102.155385
12/14/2023 0:47	Other Traffic Safety Concern	The county should obtain right-of-way to continue CR-1200 South all the way to CR-180. This will prevent any future encroachment on the proper straight road alignment by oil and gas and other development.	0	0	31.910396	-102.072022
12/15/2023 4:24	Other Traffic Safety Concern	Needs to be 4 lane to clear up those turning left onto the interstate to allow for those needing to go towards Fairgrounds to go around. Turning off of the I-20 service road east on 307 is a blind turn, hard to see cross traffic coming	0	0	31.999593	-102.017853
12/15/2023 4:29	Other Traffic Safety Concern	Needs turn lanes installed on 137 for turning right and left onto 307 at this intersection.	0	0	32.055136	-101.779531
12/15/2023 10:14	Other Traffic Safety Concern	Dangerous Intersection with high speeds on Frontage Roads not stopping, traffic backing up to the south onto the south Frontage Road. Probably needs a signal, the only Loop 250 interchange without one.	0	0	32.042009	-102.096258
12/15/2023 10:28	Other Traffic Safety Concern	Mockingbird Lane needs to be connected here between Holiday Hill Road and Oriole.	0	0	32.040476	-102.165213

12/16/2023 18:31	Other Traffic Safety Concern	It would be beneficial to have an all-way stop at the intersection of Mockingbird and Midland, similar to where Mockingbird crosses Midkiff. I am aware of several accidents that have occurred at this intersection in the last year or two.	1	0	32.043855	-102.150482
12/26/2023 17:02	Other Traffic Safety Concern	Later when I-14 replaces 158, flyover ramps will be needed from I-20 to 158. There is 4 gas stations in this area, so the land would be better used for freeway anyway.	0	0	31.982497	-102.039429
12/27/2023 20:45	Other Traffic Safety Concern	Rampant illegal dumping all up and down Cholla. We have noticed that there are mobile tire changing services that come out to change the big truck tires and just leave the tires. There are used oil drums, refrigerator boxes, and more. Our Glean Up crew cleans it often but it's hard to keep up and we have no way to handle the tires.	1	0	31.941001	-102.151029
12/27/2023 20:59	Other Traffic Safety Concern	Fairgrounds NEEDS to be completed to Loop 250! There are already over 7000 homes that have N Fairgrounds/Mockingbird to 349 as their only way out of the neighborhoods, with another 4000 being built in the Mockingbird Ridge subdivision. The new elementary school will also be built in Lone Star Trails in two years. The traffic is already horrendous and dangerous!	1	0	32.063354	-102.066902
12/27/2023 21:02	Other Traffic Safety Concern	The Occidental/349 intersection needs redone. Since Kent Kwik was opened, the traffic here has easily tripled, and Occidental needs dedicated turn lanes to turn both ways onto SH349, along with a light. There are accidents here weekly, and a traffic light would make a world of positive difference in the flow of traffic and the safety of those who use this intersection daily.	1	0	32.080817	-102.091236
12/27/2023 23:40	Other Traffic Safety Concern	Horrible Roads (all of Wadley)	0	1	32.024316	-102.10541
12/28/2023 1:10	Other Traffic Safety Concern	everyone is worried because it will generate problems in road costs and no one looks at the difficulty and delay that a single access road generates in the area... during school hours it only causes an immense delay for everyone	0	0	31.941083	-102.137382
12/28/2023 1:12	Other Traffic Safety Concern	a finished street, recognized by the city and without access to the public...	0	0	31.932661	-102.132854
12/28/2023 7:38	Other Traffic Safety Concern	This entire road is to narrow and with the damage that on the narrow road it is hard to drive safely especially when meeting another car and impossible if it is on Wednesdays when there are 30-50 bikers on that road	0	0	32.033273	-102.182781
12/29/2023 4:48	Other Traffic Safety Concern	Traffic is allowed to stop on Midkiff for child pick up. I have nearly been hit several times by cars un aware of the traffic obstruction and swerving into the left lane.	0	0	31.989031	-102.115074
12/29/2023 17:17	Other Traffic Safety Concern	Merging traffic does not thave enough space to merge. Too much traffic for a two lane road. Adding two lane turning helped manage this but two lanes to 3 lanes only aggrevates the drivers.	0	0	32.030729	-102.14317
12/29/2023 17:19	Other Traffic Safety Concern	Another turning lane like Midland Drive will help this intersection. During Christmas, the traffic was backed up on both the service road and onto the exit ramp to the main lanes.	0	0	32.033965	-102.129052
12/29/2023 17:25	Other Traffic Safety Concern	The traffic problem is on the north service road. With a traffic light, the south service road will back up but only during the afternoons. This forecasts the coming additional traffic on A Street North as there is only one way into the neighborhoods north. An east-west throughfare would alleviate this pr	0	0	32.04152	-102.096199
12/29/2023 17:37	Other Traffic Safety Concern	Develop an east west thoroughfare to replace the idea of Mockingbird. Extend Telluride from Whitman to A Street. and have it connect south of the development that it currently comes into. This will alleviate the traffic problems at Loop 25 and A Street.	0	0	32.055589	-102.100929
12/29/2023 17:43	Other Traffic Safety Concern	The City should extend the reliever route east to connect to Fairgrounds Road. This would relieve the traffic at 349 and Loop 250. It would take the majority of truck traffic east. This would open development north of Oxy and east of Lamesa Road.	0	0	32.09663	-102.095306
12/29/2023 17:47	Other Traffic Safety Concern	Accelerate row of way acquisition for Todd Road going north. This could move up completion of Loop 250. Not pursuing this means that when this comes up in 2035 you will hinder letting of the overpass here.	0	0	32.053846	-102.046661
12/29/2023 17:51	Other Traffic Safety Concern	Right of way is acquired. Schematics are done; TXDoT is waiting on the City to extend Briarwood. This is one of the intersections that will prove to be regrettable the longer it is postponed.	0	0	32.014679	-102.210469
12/29/2023 17:58	Other Traffic Safety Concern	Place this road in the MPO MTP for TXDoT to look into acquiring it.	0	0	31.941004	-102.137967

12/29/2023 18:03	Other Traffic Safety Concern	Extend the road north and connect to Ainsley east. This should increase development. This will add access to the schools that will be built in this area.	0	0	31.946986	-102.173145
12/29/2023 18:31	Other Traffic Safety Concern	Extend Stokes from Garfield to Rankin Hwy. Be prepared for work on Rankin Hwy and I-20. Don't create the problem like the extension of Harris between Midkiff and Garfield. I would be interested in the effect of the lack of this road on the Petroleum Museum and the Horseshoe as well as the visitor's center.	0	0	31.973534	-102.090634
12/29/2023 18:35	Other Traffic Safety Concern	Close this railroad crossover as there is not enough traffic to make it a viable maintenance project.	0	0	31.98995	-102.085771
12/29/2023 18:39	Other Traffic Safety Concern	Can't understand why the Transportation Dept. will not maintain the roads on Airpark. The Airport Department does not have the equipment to fill the potholes. This has been reported and the request closed without action at least 2 times. If you are waiting on a bridge to be built to Airpark there will be progress from multiple potholes to one huge hole.	0	0	32.034689	-102.095927
12/29/2023 18:46	Other Traffic Safety Concern	Ever thought about extending a ring road to the north from A Street. If you build a bridge over the draw then change the entry to Airpark as well using this as a time for change. "A" Street could intersect with the South Service road and create another thoroughfare to go south into town.	0	0	32.034591	-102.094177
12/29/2023 18:50	Other Traffic Safety Concern	Ever approached TxDoT about a roundabout.	1	0	31.97286	-102.003348
12/29/2023 18:52	Other Traffic Safety Concern	Purchase Right of Way here and extend CR 120.	0	0	31.952707	-102.088609
12/29/2023 18:57	Other Traffic Safety Concern	Purchase these 5 houses and extend 1130 south.	0	0	32.004881	-101.978056
12/29/2023 19:00	Other Traffic Safety Concern	Pave CR 1040 to Martin County Line	0	0	32.047421	-101.830511
12/29/2023 19:03	Other Traffic Safety Concern	Create Ranger Avenue to connect Greenwood High School to the new elementary school.	0	0	32.007408	-101.921688
12/29/2023 23:22	Other Traffic Safety Concern	Double turn lane (no one uses just one lane) on holiday hill and people running the red light going south on loop access road are very dangerous and have barely avoided several accidents.	0	0	32.015745	-102.158169
12/30/2023 11:25	Other Traffic Safety Concern	We need a turning lane	0	0	31.93939	-101.884017
12/31/2023 12:19	Other Traffic Safety Concern	Mockingbird needs to be completed between Garfield and A Street, despite Polo Club blocking the direct path.	1	0	32.055481	-102.101279
12/31/2023 12:23	Other Traffic Safety Concern	There should be a double left turn from the westbound Loop 250 Frontage road onto southbound Garfield. This would fix the left lane backing up all the way onto the loop off ramp.	1	0	32.038348	-102.11269
12/31/2023 12:26	Other Traffic Safety Concern	There should be a double left turn from the westbound Loop 250 Frontage road onto southbound Midland Drive. That would alleviate much of the line of cars that backs up onto the loop exit ramp.	2	0	32.029471	-102.145622
12/31/2023 12:28	Other Traffic Safety Concern	There should be a double left turn from the loop frontage road onto eastbound Wadley. Traffic backs up here with people wanting to turn left	1	0	32.011904	-102.158947
12/31/2023 12:31	Other Traffic Safety Concern	Vehicles on the westbound Loop 250 Frontage road should not have to yield when turning right to go north on A Street. It is not intuitive, and can allow cars to block the right lane of the westbound Loop 250 Frontage Rd.	1	0	32.042246	-102.09637
12/31/2023 12:54	Other Traffic Safety Concern	Allowing HEB to build here would be a complete traffic disaster	0	0	32.04185	-102.087085
12/31/2023 12:58	Other Traffic Safety Concern	There should be a double left turn from the westbound Loop 250 frontage onto southbound 349.	0	0	32.044023	-102.084795
12/31/2023 13:00	Other Traffic Safety Concern	There should be a dedicated right turn lane here to go north on Midkiff	0	0	32.031737	-102.128568
10/27/2023 6:37	Pedestrian Safety Issue	No infrastructure to protect pedestrians or cycling commuters	4	0	32.040686	-102.131717
11/1/2023 8:52	Pedestrian Safety Issue	There are tons of dangerous loose dogs in the area including entire packs; given there's a school nearby, it's just a matter of time before something tragic happens. I've seen or been attacked by loose pitbulls and other aggressive dogs while walking down Pleasant, Pasadena, Bentwood, Leisure, Wilshire, Eire, Meadow, Burchill, and Versailles. Dog owners insist the barking, snapping, growling of their unleashed dogs isn't an issue. I stopped walking out of fear and calls to police go unanswered.	5	0	31.975928	-102.136953
11/1/2023 10:10	Pedestrian Safety Issue	No cross walk or Pedestrian access across to new subdivision. Need to add this as a cross over.	2	0	32.069802	-102.069726

11/1/2023 21:23	Pedestrian Safety Issue	Sidewalks not clear on all streets forcing people into the road.	0	0	32.020732	-102.138637
11/2/2023 10:37	Pedestrian Safety Issue	Sidewalks on Camarie Ave at Ward St terminate with no safe path to continue walking.	1	0	32.020869	-102.116281
11/2/2023 10:38	Pedestrian Safety Issue	Sidewalks on W Shandon Ave at Ward St terminate without safe path to continue on Ward St.	1	0	32.02004	-102.115978
11/2/2023 10:38	Pedestrian Safety Issue	There are many loose, aggressive dogs in this area.	1	0	31.976752	-102.133209
11/2/2023 10:39	Pedestrian Safety Issue	Sidewalks on W Dengar Ave at Ward St terminate with no safe option to continue walking on Ward St.	1	0	32.019217	-102.115718
11/2/2023 10:41	Pedestrian Safety Issue	Sidewalks along Cimmaron Ave are disjointed and make pedestrian travel difficult, especially at Ward St where there is no safe opportunity for foot traffic to continue.	1	0	32.018476	-102.115088
11/2/2023 10:42	Pedestrian Safety Issue	Sidewalk on Lanham St is missing at the corner of Lanham St and W Shandon Ave.	0	0	32.020729	-102.111999
11/2/2023 10:43	Pedestrian Safety Issue	Sidewalk is missing/disjointed on Lanham St at the Cimmaron Ave intersection.	0	0	32.019519	-102.111615
11/2/2023 10:46	Pedestrian Safety Issue	Sidewalk on Lanham St is disjointed between Stanolind Ave and Gulf Ave preventing safe pedestrian travel.	1	0	32.013558	-102.109534
11/2/2023 11:31	Pedestrian Safety Issue	Sidewalk on Sinclair Ave between Idlewilde Dr and Palo Duro Dr on the North side of Sinclair is missing making pedestrian traffic unsafe.	0	0	32.002064	-102.149946
11/2/2023 11:52	Pedestrian Safety Issue	Speeding on W Illinois Ave and W Texas Ave make it very dangerous for the high school students who are walking on the sidewalks.	2	0	31.999439	-102.081467
11/2/2023 11:52	Pedestrian Safety Issue	Speeding on W Illinois Ave and W Texas Ave make it very dangerous for the high school students who are walking on the sidewalks.	3	0	31.998411	-102.082169
11/3/2023 14:31	Pedestrian Safety Issue	IDEA students are always crossing this road (across Lamesa) to get to their homes at the apartment complexes. No crossing infrastructure at all! Worries me since the speeds are higher, drivers aren't expecting pedestrians, and it's often darker due to lack of lighting, especially in the mornings and evenings.	1	0	31.982451	-102.059512
11/9/2023 8:31	Pedestrian Safety Issue	Inattentive drivers do not yield to pedestrians in crosswalk. Similar lights/indicators needed to crosswalks on A street by the high school.	2	0	31.997413	-102.079157
11/17/2023 13:19	Pedestrian Safety Issue	There's no sidewalk for pedestrians along Golden Gate. With the coming of the new YMCA, this will become a greater safety issue.	1	0	32.025233	-102.184846
11/18/2023 21:27	Pedestrian Safety Issue	There needs to be a pedestrian cross light here for MHS students. It is very scary for them to cross. It leaves the onus on drivers to notice students crossing versus forcing them to stop.	0	0	31.997795	-102.084855
11/18/2023 21:28	Pedestrian Safety Issue	There needs to be a pedestrian cross light here for MHS students. It is very scary for them to cross. It leaves the onus on drivers to notice students crossing versus forcing them to stop.	2	0	31.996764	-102.08456
12/10/2023 11:40	Pedestrian Safety Issue	5 loose dogs this morning, called police non emergency and was told that the worthless midland pigs won't do anything even though loose and dangerous dogs fall under title vi police regulations of the city of midland. there are children in the neighborhood and does one need to be mauled before the city does anything?	1	0	31.975932	-102.13294
12/26/2023 16:58	Pedestrian Safety Issue	307 is Greenwoods "Main Street", but there is little to no way to traverse without a car, and the speed limit is 60 all the way. A dedicated side road for the ATV's that people use would be beneficial to the residents of this suburb, and A decent bike/walk path would help some of the kids in the area walk to school, this would alleviate some of the before and after school pick up traffic caused by buses and such. More of a TXDot & GISD problem.	0	0	32.027367	-101.895921
12/26/2023 17:22	Pedestrian Safety Issue	There should be a pedestrian bridge over 191. The people of Grasslands would benefit with the easy access to the HEB shopping area.	1	0	31.997671	-102.154391
12/27/2023 21:17	Pedestrian Safety Issue	There needs to be speed bumps installed along Hughes St. to slow/deter the flow of traffic, to protect children playing in the neighborhood.	2	1	32.012634	-102.11483
12/28/2023 8:12	Pedestrian Safety Issue	Students from the high school cross the road here through traffic creating a danger to themselves and the cars.	0	0	32.01863	-102.124532
12/28/2023 8:13	Pedestrian Safety Issue	Sidewalks are inconsistent in this whole area on Wadley.	0	0	32.021461	-102.11807
12/28/2023 8:57	Pedestrian Safety Issue	Aggressive drivers make pedestrian crossing at this intersection unsafe.	1	0	31.997366	-102.078088

10/31/2023 18:13	Red Light Running/ Stop Sign Issue	The South-side stop sign at this intersection is incorrectly placed. It confuses the traffic flow because cars leaving the hospital lot are not aligned with the other traffic at this four-way stop.	0	0	32.006214	-102.134005
10/31/2023 18:17	Red Light Running/ Stop Sign Issue	Traffic has gotten so heavy on the frontage road that vehicles back up along A Street during afternoon "rush" because vehicles can't cross nor merge onto the frontage road.	4	0	32.04197	-102.09643
11/1/2023 9:22	Red Light Running/ Stop Sign Issue	Red light running	3	0	32.000113	-102.111944
11/1/2023 10:00	Red Light Running/ Stop Sign Issue	At 0730 it is a big issue speeding and light running also with traffic flow. People go across then U Turn to make a right avoiding light.	2	0	32.059364	-102.084167
11/1/2023 10:01	Red Light Running/ Stop Sign Issue	Light needed here to control the traffic out of the new subdivisions people speed out and do not do 45 posted speed.	3	1	32.063055	-102.067666
11/1/2023 10:17	Red Light Running/ Stop Sign Issue	This is the area where people U Turn in the mornings to avoid the left turn traffic.	2	0	32.059166	-102.084714
11/1/2023 10:21	Red Light Running/ Stop Sign Issue	People making a Left hand turn to avoid the light here. This is very dangerous in the mornings mainly. This intersection already has had a couple of MVA's that I have seen.	0	0	32.057402	-102.083545
11/1/2023 11:04	Red Light Running/ Stop Sign Issue	Morning "rush hour" issue. In addition to drivers making a U-turn to avoid waiting in the turn lane, drivers have now started to make a left turn from Mockingbird on the 349 southbound from the middle lane, which is for through traffic only continuing West on Mockingbird. There is not a second turn lane.	2	0	32.059564	-102.08436
11/2/2023 9:17	Red Light Running/ Stop Sign Issue	This location after 10 P.M. stop light is out of sync. I will sit in the SB Lane for 10 minutes before the light will turn green for me, meanwhile the light heading NB has turned green to red 3 times over.I've seen many people run that light because of it.	0	0	32.001824	-102.136923
11/2/2023 10:32	Red Light Running/ Stop Sign Issue	South and northbound drivers speed through the light after it is red daily. Cars turning left from Illinois to Midland frequently continue turning after the protected turn arrow turns red.	0	0	31.987774	-102.132425
11/2/2023 10:34	Red Light Running/ Stop Sign Issue	At Anetta and Eisenhower, vehicles roll through the stop sign, barely slowing down. Henderson Elementary students cross here going to and from school.	1	0	31.972549	-102.13514
11/2/2023 13:24	Red Light Running/ Stop Sign Issue	Drivers will not just roll but accelerate through the red lights on Wall Street, sometimes 2-3, well after the light has turned red. Many pedestrians crossing to access parking at Wilco are endangered by this, as well as drivers coming from Marienfeld.	2	0	31.997397	-102.079291
11/3/2023 14:26	Red Light Running/ Stop Sign Issue	I take this route everyday to get my son to school and everyday there are multiple cars running the red light at this intersection (mainly on Big Spring).	1	0	31.997404	-102.078009
11/17/2023 9:41	Red Light Running/ Stop Sign Issue	These stop signs would be better put to use elsewhere; nobody seems to read them.	1	0	32.035824	-102.160138
11/18/2023 7:28	Red Light Running/ Stop Sign Issue	People are going straight through this light and then making u-turns in the apartments, on mockingbird and in the neighborhoods because the left turn lane to go south on Big Spring is so backed up.	1	0	32.059307	-102.085005
11/18/2023 7:29	Red Light Running/ Stop Sign Issue	Wrecks here almost daily with people trying to turn left	0	0	32.057311	-102.083816
11/18/2023 8:01	Red Light Running/ Stop Sign Issue	Beginning around 5:00 until around 7:00 traffic stays backed up all the way from the Loop to this intersection. Traffic will back up into the intersection because there is no where else to go.	0	0	32.031491	-102.146437
11/18/2023 10:12	Red Light Running/ Stop Sign Issue	This light needs to have a turn signal. With the increase in traffic from midland college and hillander it's hard to make left turns coming out of the college.	0	0	32.025478	-102.100507
11/18/2023 21:22	Red Light Running/ Stop Sign Issue	Need a traffic light here. Very dangerous. People do not obey stop sign.	4	0	32.080244	-102.072877
11/19/2023 3:29	Red Light Running/ Stop Sign Issue	The light is ran all the time, drivers get in the far lane because they think they do not have to stop because Whitney dead ends into Andrews Highway.	0	0	32.000893	-102.114444
11/29/2023 9:07	Red Light Running/ Stop Sign Issue	After school traffic can get aggressive here. Please consider making this a four-way stop.	0	0	31.997627	-102.054337
12/14/2023 18:02	Red Light Running/ Stop Sign Issue	Needs a light. Trucks speed thru this intersection	1	0	32.095906	-102.096439
12/15/2023 1:45	Red Light Running/ Stop Sign Issue	An issue with the traffic light trigger is readily apparent while stopped at the signal in the right-hand lane of the southbound terminus of Godfrey at Andrews Hwy. This occurs when no vehicles are present and stopped in the left-lane of Godfrey. Note: Eastbound traffic onto Andrews Hwy from the intersection of Godfrey include dual left-hand turn lanes.	0	0	32.003752	-102.128821
12/15/2023 4:38	Red Light Running/ Stop Sign Issue	Sync this light better with the Wall intersection light. When this light is green, the one at Wall stays red too long causing this intersection to become cluttered	0	0	31.992485	-102.097997
12/15/2023 4:46	Red Light Running/ Stop Sign Issue	Consider adding a left turn signal to this light coming off of Marienfeld onto Business 20.	0	0	31.993335	-102.079173

12/15/2023 7:51	Red Light Running/ Stop Sign Issue	The stop light at this intersection is inadequate for the amount of traffic. Inadequate turn lanes that allows proper flow of traffic.	0	0	32.008335	-101.978703
12/17/2023 21:27	Red Light Running/ Stop Sign Issue	The lights and lanes for the North I-20 frontage road and Rankin intersection needs to be recalibrated so traffic doesn't back up on big spring St or up the I-20 exit ramp causing the interstate to back up.	0	0	31.972797	-102.074168
12/22/2023 21:58	Red Light Running/ Stop Sign Issue	CR125 has 3 stop signs one after another that most residents and truckers use as a recommendation. For the size and condition of the road, a lower speed limit and getting rid of the stop signs (or 2 of them at least) would make this area more bearable to traverse through.	0	0	31.948241	-102.075379
1/1/2024 9:21	Red Light Running/ Stop Sign Issue	Drivers making a left turn from Northbound 158 to Westbound I-20 Service Road run the red light almost every cycle. I see 2, 3 or 4 cars turn after my light (straight through, Southbound 158) has turned green almost every time I use this intersection. People making that same left, from the right lane, is also very common. Increased enforcement at this intersection is requested.	0	0	31.982899	-102.039084
11/1/2023 10:15	Signage/ Striping Maintenance	Code Dept. need to Enforce Alley Maintenance by home owners. Many Alley ways are not kept up and overgrown behind various houses in Adobe meadows and surrounding subdivisions with an Alley.	1	0	32.062564	-102.079103
11/2/2023 11:48	Signage/ Striping Maintenance	Drivers frequently drive the wrong way down W Texas Ave. We need bigger signage and much greater quantities of signs, perhaps arrows on the road. With speeding traffic on W Texas Ave, this is a recipe for a very dangerous accident.	5	0	31.998427	-102.080007
11/9/2023 8:27	Signage/ Striping Maintenance	There isn't a marked turning lane here, but vehicles move to the shoulder to the right of through traffic to turn right onto Wadley. If this is the intention, it needs to be striped so that vehicles are fully in one lane or the other. Turning drivers frequently block the through traffic and vise-versa.	2	0	32.015736	-102.14132
11/17/2023 15:25	Signage/ Striping Maintenance	Repaint faded lane and directional pavement markings at W Ohio Ave and Kent St.	2	0	31.996556	-102.101216
11/17/2023 15:29	Signage/ Striping Maintenance	Repaint faded lane and directional pavement markings on S. Main St., at intersection of S. Main St. and E. Front St.	0	0	31.996021	-102.074316
11/18/2023 21:23	Signage/ Striping Maintenance	The lanes are not marked and lead to accidents due to people not knowing there is a dedicated turn-left lane.	2	0	32.080272	-102.072724
11/20/2023 15:34	Signage/ Striping Maintenance	The lane is wide enough for a right turning lane so cars try squeeze by. This area needs to be painted as a turn lane or not.	1	0	32.016018	-102.14159
11/20/2023 15:38	Signage/ Striping Maintenance	The turning lanes have two different broken lines to direct the traffic through the intersection. Which line is the intended path of travel?	0	0	32.031745	-102.146609
11/23/2023 10:04	Signage/ Striping Maintenance	People are Dumping dog poop in alley ways all up and down this area. This is getting to be a health hazard.	1	0	32.063313	-102.079756
11/28/2023 19:22	Signage/ Striping Maintenance	People do not understand double white lines. Needs more signage to show "stop crossing solid white lines". People are impatient and start crossing earlier and earlier as they exit loop 250. Busy traffic in front to the PETSMART	1	0	32.030631	-102.143513
11/28/2023 19:25	Signage/ Striping Maintenance	People are crossing the solid white lines as soon as they start exiting the loop in front of Havertys and the Petsmart. Need more signage to not cross solid white lines on the service road. This maybe a TXDOT issue and not the City	2	0	32.030754	-102.142836
12/15/2023 7:48	Signage/ Striping Maintenance	1130 between I20 and 307. Is extremely high volume, very poor conditions, traffic travel at high rates of speed with no lane stripping. This needs to be a 4 lane road. Until then the road needs serious repair.	0	0	32.010378	-101.979604
12/22/2023 22:17	Signage/ Striping Maintenance	Fairgrounds South of this Golf Course Intersection NEEDS repaving	0	0	32.020999	-102.054169
12/26/2023 17:15	Signage/ Striping Maintenance	Putting a "Road may Flood" sign doesn't fix the floods. There is going to be more rain, Midland needs to realize that and fix drainage issues everywhere in the county.	0	0	32.000499	-102.012126
12/27/2023 10:28	Signage/ Striping Maintenance	Needs new striping. Can't see any striping at all in this intersection in the turn lane out of Walgreens parking lot.	0	0	31.994345	-102.099292
12/27/2023 10:32	Signage/ Striping Maintenance	Huge pot holes here need to be filled in.	1	0	32.001846	-102.114208
12/28/2023 5:08	Signage/ Striping Maintenance	The Entire street from Hillander School to HEB needs to be redone, it's as if we are too close to each other and going off roading for the amount of bumps there are	2	0	32.022961	-102.111005

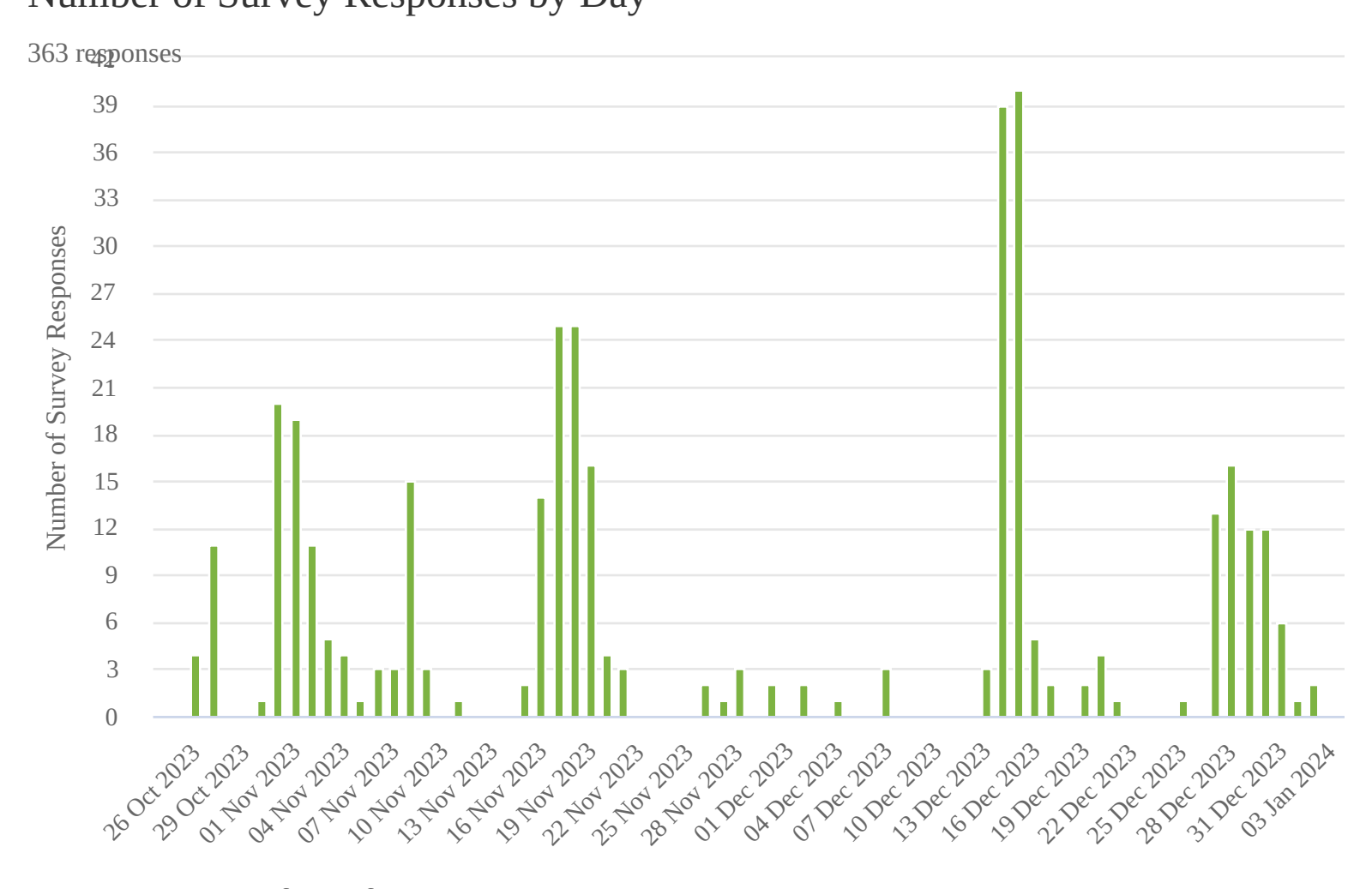
1/1/2024 9:10	Signage/ Striping Maintenance	Trucks Entering/Exiting Highway sign needed. 1 Fatality accident and 1 injury accident happened at this yard in the last year. Both times trucks were making a left turn into the yard and the trailers were struck by northbound vehicles at highway speeds.	0	0	31.965721	-101.977501
10/27/2023 6:33	Speeding Issue	Some speed control would be great here in the form of speed bumps or other. This area has grown into a residential community and too many cyclist and pedestrians have to commute next to vehicles traveling 60+	6	0	32.024514	-102.169032
10/31/2023 17:32	Speeding Issue	People DO not drive 40 on this road.	3	0	32.029151	-102.181635
11/1/2023 10:02	Speeding Issue	People speed out and down this area from APT's and also from the new subdivisions. Already one fatality from speeding here.	1	0	32.061146	-102.076228
11/1/2023 10:08	Speeding Issue	No one coming down this road obeys speed limits. When we walk and try to cross over People are speeding 10 to 15 Mph over the limits. More controls are needed before a pedestrian fatality occurs here also. New Houses will cause a wreck here also.	3	0	32.069765	-102.069554
11/1/2023 10:19	Speeding Issue	People speeding down and across the intersection toward A Street from North Big Spring all the way to A Street is very dangerous in the mornings.	0	0	32.059116	-102.085288
11/2/2023 10:36	Speeding Issue	In general drivers speed on Beal Parkway from W Wall to Anetta, but on weekends, drivers make laps speeding and driving recklessly.	1	1	31.96482	-102.139828
11/2/2023 10:45	Speeding Issue	Lots of speeding in the school zone during school hours. Drivers weave around others and drive erratically.	0	0	32.001785	-102.083716
11/2/2023 10:48	Speeding Issue	Speeding on Wadley is generally very prevalent, but from Garfield to Fairgrounds is the worst--even doing 5-10 over to try to stay with the flow of traffic, drivers are still blowing past at 55-60.	3	1	32.026461	-102.096076
11/2/2023 11:07	Speeding Issue	Drivers on Wydewood Dr are frequently speeding in excess of 15 mph over the posted speed limit of 30 mph. This is a hazard to pedestrians and property owners alike. When Rusk Elementary is dismissed from classes, the problem is especially dangerous for the children walking home from school.	1	0	32.011201	-102.146632
11/2/2023 11:51	Speeding Issue	Speeding on W Texas Ave is truly a danger to anyone nearby. The way the MHS students in particular drive on W Texas Ave makes me wish they would take away off campus lunch.	3	0	31.998418	-102.081291
11/3/2023 14:18	Speeding Issue	During LHS lunch and afterschool, there is an abundance of drivers speeding down this street. We've called the police before but it's a consistent problem. Even during Halloween with kids walking the neighborhood people were flying down the street! There was an accident a few years back due to speeding in the area and I don't want it to happen again.	1	0	32.015158	-102.130376
11/10/2023 13:16	Speeding Issue	Eastbound traffic entering from County Road 50 regularly exceed the speed limit of 30 mph.	0	0	32.03522	-102.187464
11/17/2023 10:00	Speeding Issue	School zone speed limits ignored, even more unsafe with cars parked on street most days.	1	0	32.030704	-102.077848
11/18/2023 7:30	Speeding Issue	People are constantly speeding down mockingbird.	0	0	32.059274	-102.085186
11/18/2023 7:48	Speeding Issue	Speeding well above speed limits all along this road.	1	0	32.030235	-102.186499
11/18/2023 7:48	Speeding Issue	Need stop light with heavy traffic it seems very dangerous most mornings	0	0	31.999947	-102.14523
11/18/2023 7:48	Speeding Issue	Speeding well above speed limits all along this road.	1	0	32.040458	-102.184997
11/18/2023 9:07	Speeding Issue	This is a tough spot to turn out. It's high speed which moves to lower speed area. No one slows down. The apartments are u turning or pulling out and you have heritage oaks people turning out in the same spot. A stop light here would help this intersection.	1	0	32.02254	-102.177347
11/18/2023 10:47	Speeding Issue	Drivers speed down this alley. The driveways on one side are blind and there's an elementary school on the other side.	0	0	32.023809	-102.139796
11/18/2023 21:16	Speeding Issue	Having a longer turn-right lane would allow vehicles to slow down more efficiently and not have to take fast, sharp turns into the neighborhood.	1	0	32.073666	-102.088799
11/27/2023 8:06	Speeding Issue	In addition to a light, please consider reducing the speed limit around this area. Commercial traffic makes it difficult for residents to safely exit the neighborhood. The frustration of waiting for an opportunity to turn left has us making dangerous turns.	1	0	32.080716	-102.091243
12/14/2023 18:04	Speeding Issue	Need a light here. Speeding on 349 is a hazard for turning at occidental	0	0	32.081487	-102.090919

12/15/2023 4:50	Speeding Issue	1788 needs to be 4 lanes for at least a couple of miles south of I20. I have pictures and videos of 18 wheelers passing the traffic jam across the double yellow line in the wrong lane! They are always speeding to try to get to the turning lane, which is very short. I am surprised there have not been more serious accidents but I have seen cars coming from I20 get run off the road. It is a difficult area to patrol and I have seen few sheriff vehicles trying.	0	0	31.898437	-102.211239
12/15/2023 7:53	Speeding Issue	Speed limit is 40. Most traffic including the semi trucks run 60-70. On a road that is full of pot holes and bad disrepair.	0	0	32.012252	-101.980119
12/27/2023 20:39	Speeding Issue	Drag racing nearly every day	0	0	31.938925	-102.15502
12/27/2023 20:41	Speeding Issue	Need bike lane from The Field's Edge to Antelope Trail. When we are at full capacity (100 homes) there will be a lot of bikes.	0	0	31.939562	-102.153668
12/27/2023 21:04	Speeding Issue	There is a huge speeding problem here, daily. This needs to be seriously addressed before I child is injured or killed by a speeding vehicle in this neighborhood. Speed bumps would be highly appreciated to slow/deter the flow of traffic traveling along Hughes St.	0	0	32.01297	-102.114948
12/27/2023 21:12	Speeding Issue	This intersection is congested with most turns “across traffic”. And people approaching have no regard for speed or courtesy.	0	0	32.026738	-102.14494
12/27/2023 21:16	Speeding Issue	Speed bumps need to be installed here before a child is injured or killed by speeders from the school.	1	0	32.012579	-102.114959
12/27/2023 21:53	Speeding Issue	Major cut through with excessive speeding	1	0	32.014753	-102.097836
12/28/2023 9:02	Speeding Issue	Speeding on Tradewinds makes it difficult and dangerous to enter and exit businesses.	0	0	31.985388	-102.157166
12/29/2023 23:17	Speeding Issue	Racing or loud mufflers cars running down holiday hill.	0	0	32.019393	-102.160497
10/31/2023 16:11	View Blocked When Turning	Can't see when I try to turn left	0	0	31.996786	-102.117359
10/31/2023 16:13	View Blocked When Turning	view of on coming traffic is blocked	0	0	31.999496	-102.018566
10/31/2023 17:28	View Blocked When Turning	Can't see due to Kent Quik landscape.	0	0	32.035429	-102.130159
10/31/2023 18:11	View Blocked When Turning	The yard wall with shrubbery is right up to Godfrey, so a driver heading West on Shell cannot see southbound traffic on Godfrey.	0	0	32.006635	-102.129491
11/1/2023 8:07	View Blocked When Turning	The cacti fully block the oncoming W Louisiana Ave traffic when stopped at the San Angelo St stop sign.	0	0	32.003422	-102.083131
11/1/2023 10:13	View Blocked When Turning	Multiple vehicles are blocking intersections at various times. Current code is not being enforced as people park too close to intersections which I have seen several near misses here due to trucks obstructing view at stop at corners. People are also not street parking with the flow of traffic.	0	0	32.062637	-102.078266
11/1/2023 10:16	View Blocked When Turning	Apartment complex here needs to take down or remove vegetation plants etc. as these obstruct the safe view from the east side of the intersection.	0	0	32.060753	-102.077472
11/2/2023 9:23	View Blocked When Turning	These bushes or trees on the corner make it impossible to see traffic coming from the South	0	0	32.000664	-102.136371
11/2/2023 9:25	View Blocked When Turning	I believe this location would benefit from a four-way stop. The vehicles parked on the side of the road in either direction of Louisiana makes it extremely difficult to cross through that stop sign sure that we aren't going to get T-boned by a car going 30+ miles an hour (because that is an issue)	0	0	31.992643	-102.124947
11/2/2023 10:35	View Blocked When Turning	When South bound on N Pecos St crossing Neely Ave, you cannot see the oncoming West bound traffic on Neely Ave.	0	0	32.021582	-102.085397
11/2/2023 11:11	View Blocked When Turning	When North bound on Dentcrest Dr at W Wadley Ave, it is very difficult to see the East bound traffic on W Wadley without pulling into the intersection.	0	0	32.014337	-102.147322
11/3/2023 14:25	View Blocked When Turning	Hard to see oncoming traffic when facing south, turning left onto Texas. The curves make it so you can't see if anyone is coming around the bend, and if there are cars in the opposite turn lane it completely blocks your view to safely turn.	0	0	31.994497	-102.099059
11/17/2023 9:47	View Blocked When Turning	Fence.	0	0	32.04197	-102.158711
11/17/2023 10:03	View Blocked When Turning	Semi-blind turns, made more dangerous by people that won't stop at a crossing.	0	0	32.013668	-102.157263
12/13/2023 23:15	View Blocked When Turning	This is a very dangerous curve. Honestly the street should be straightened. But a 'No Parking' zone along the curve would help greatly.	0	0	32.004901	-102.14133
12/29/2023 4:49	View Blocked When Turning	Tree obstruction to the left	0	0	32.021752	-102.125651

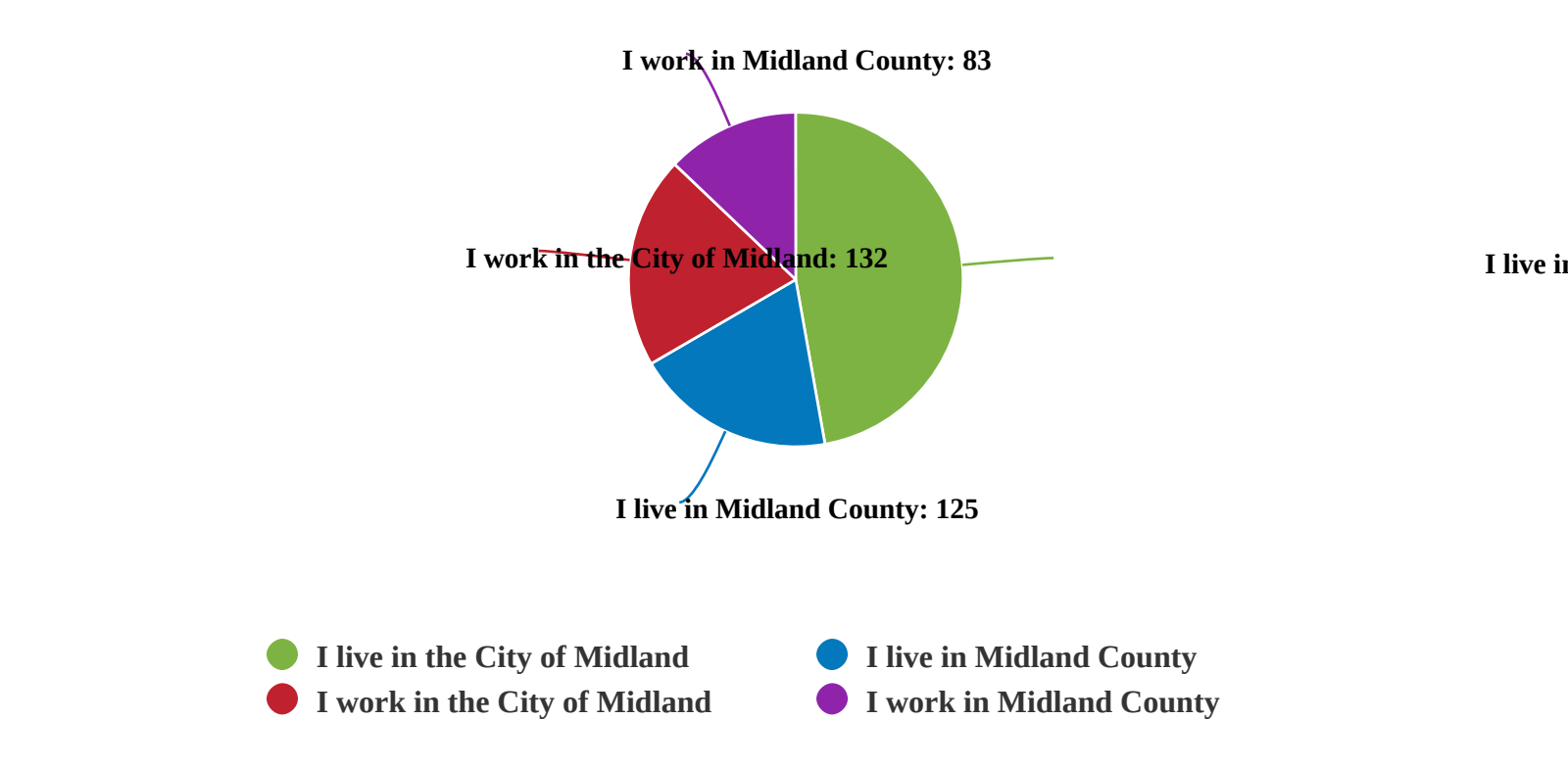
12/31/2023 11:59	View Blocked When Turning	When turning left from northbound 349 onto westbound Mockingbird, if there are vehicles in the turn lane on the other side of the intersection, it is too difficult to see if oncoming traffic is coming. The vehicles in the opposite turn lane block your view of oncoming traffic, which is often moving very fast.	0	0	32.059201	-102.08421

Number of Survey Responses by Day

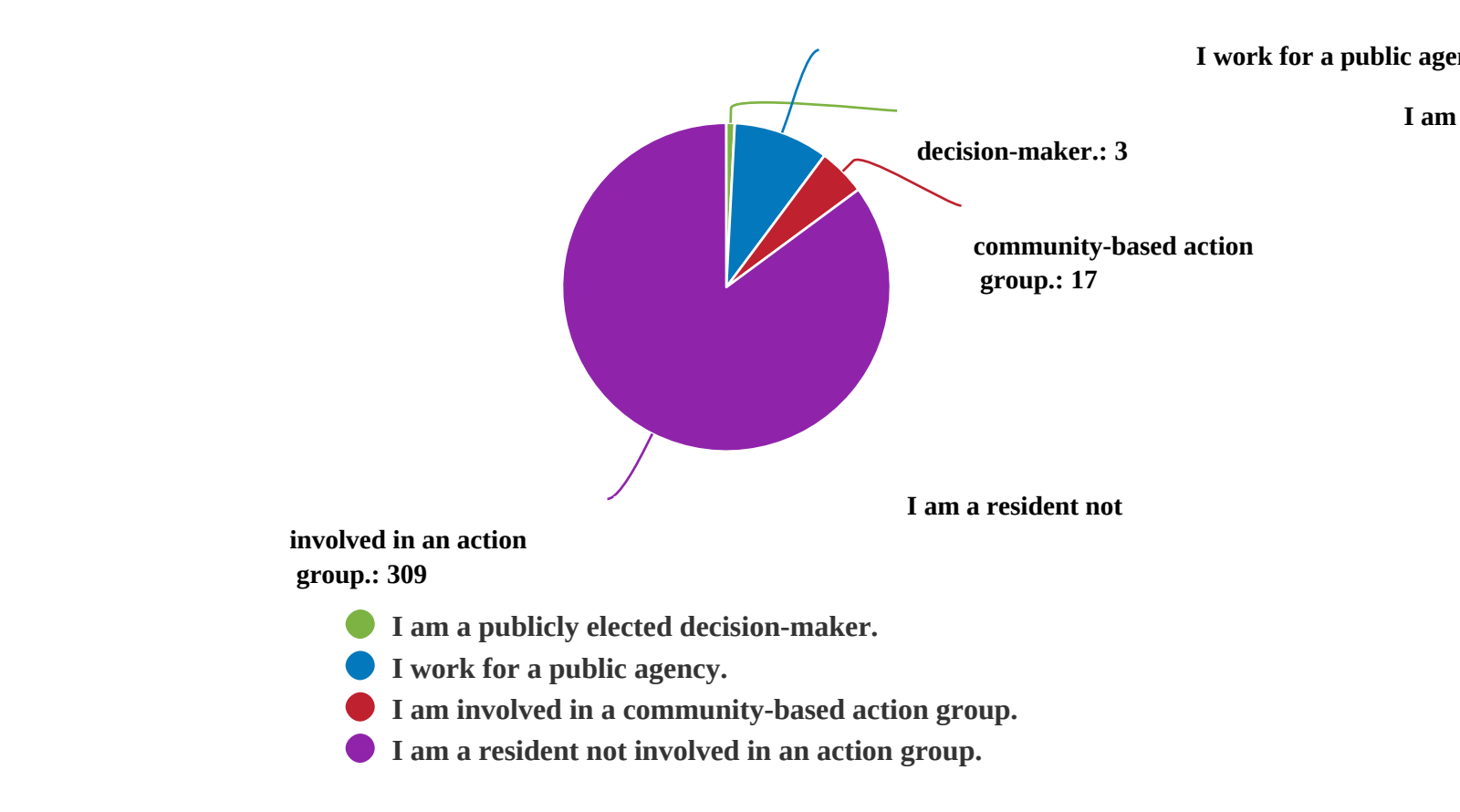
363 responses



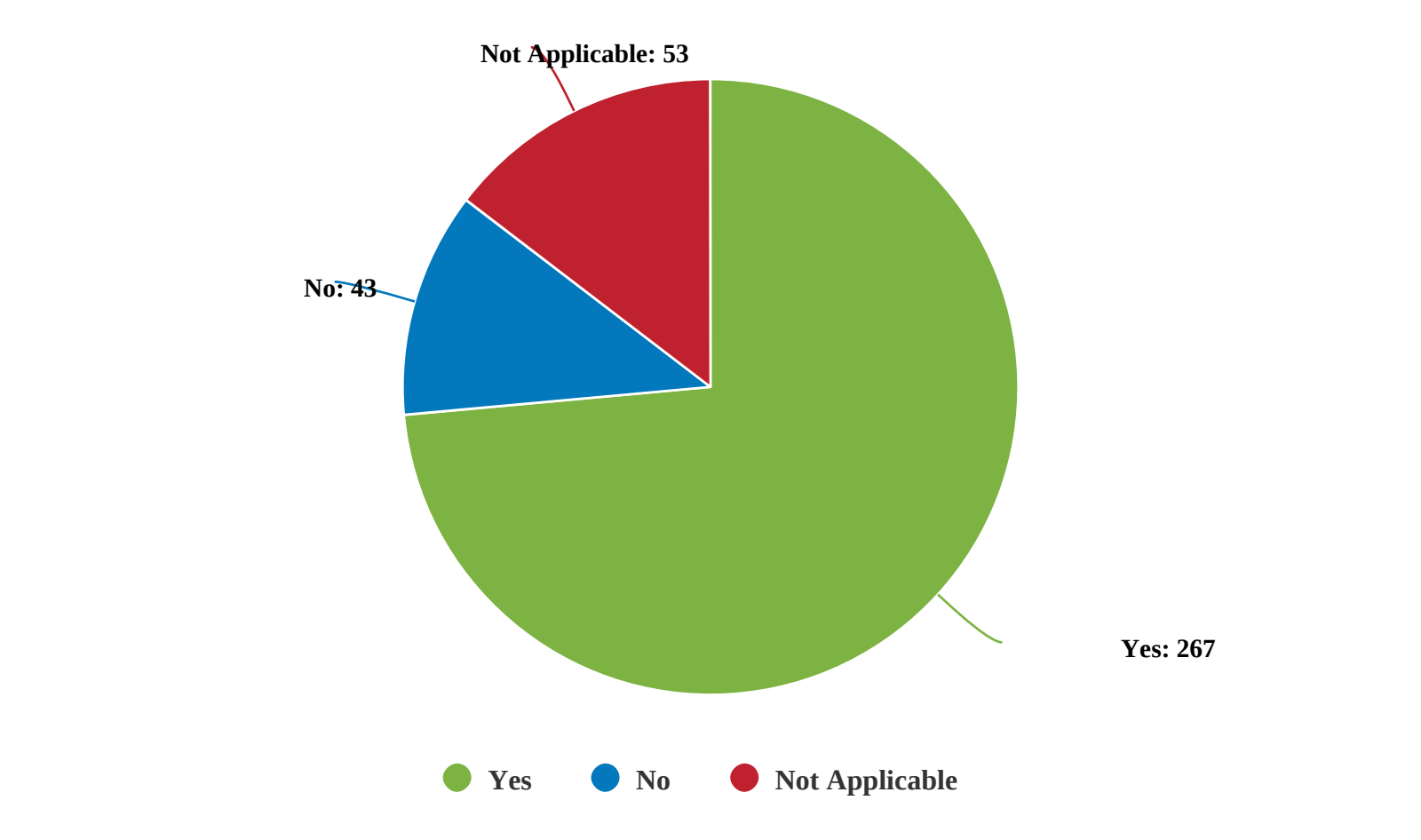
Q1. 1. Which of the following statement(s) describe your relationship to Midland County and the City of Midland? (Select all that Apply)



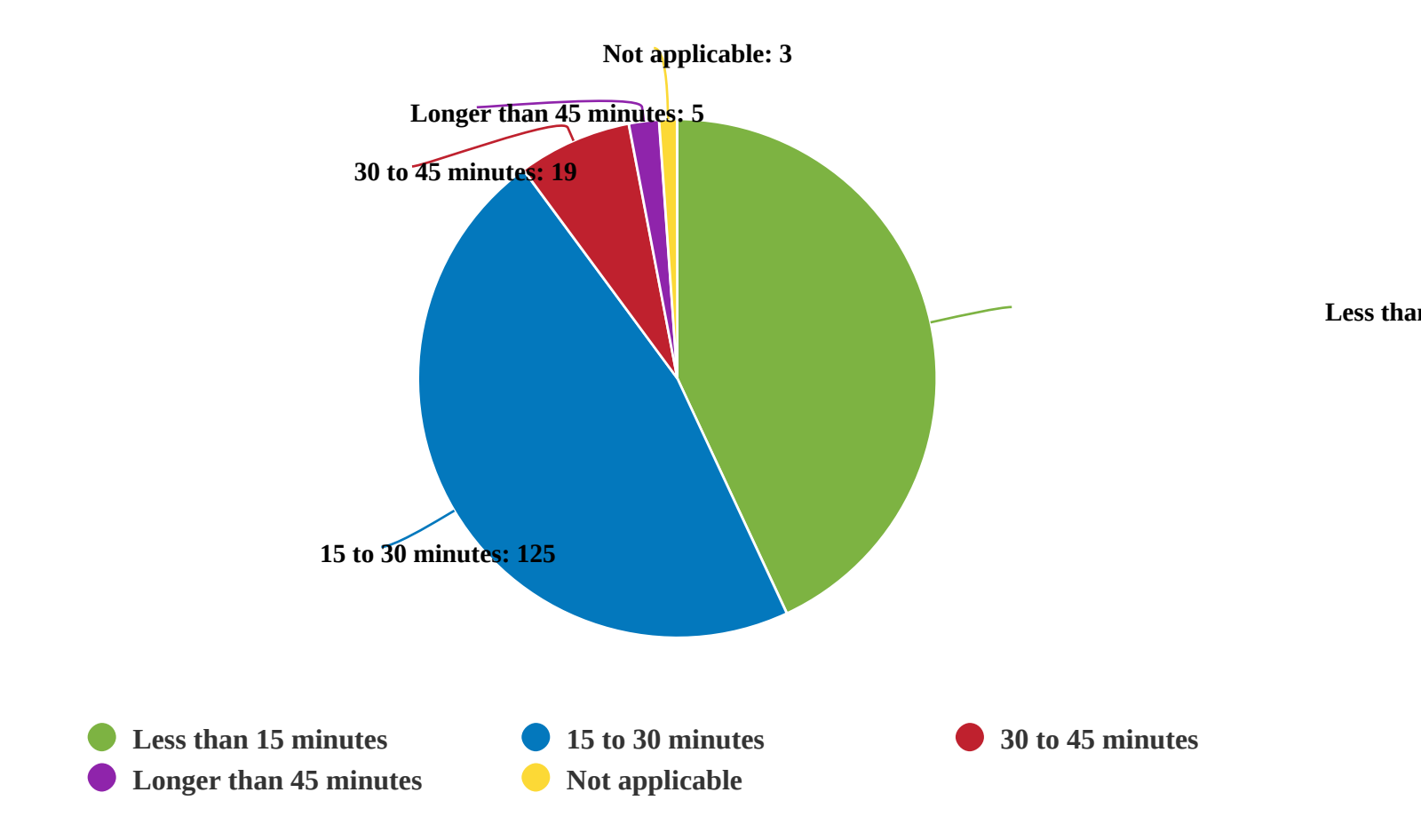
Q4. 4.Which of the following describes your relationship to public decision-making?



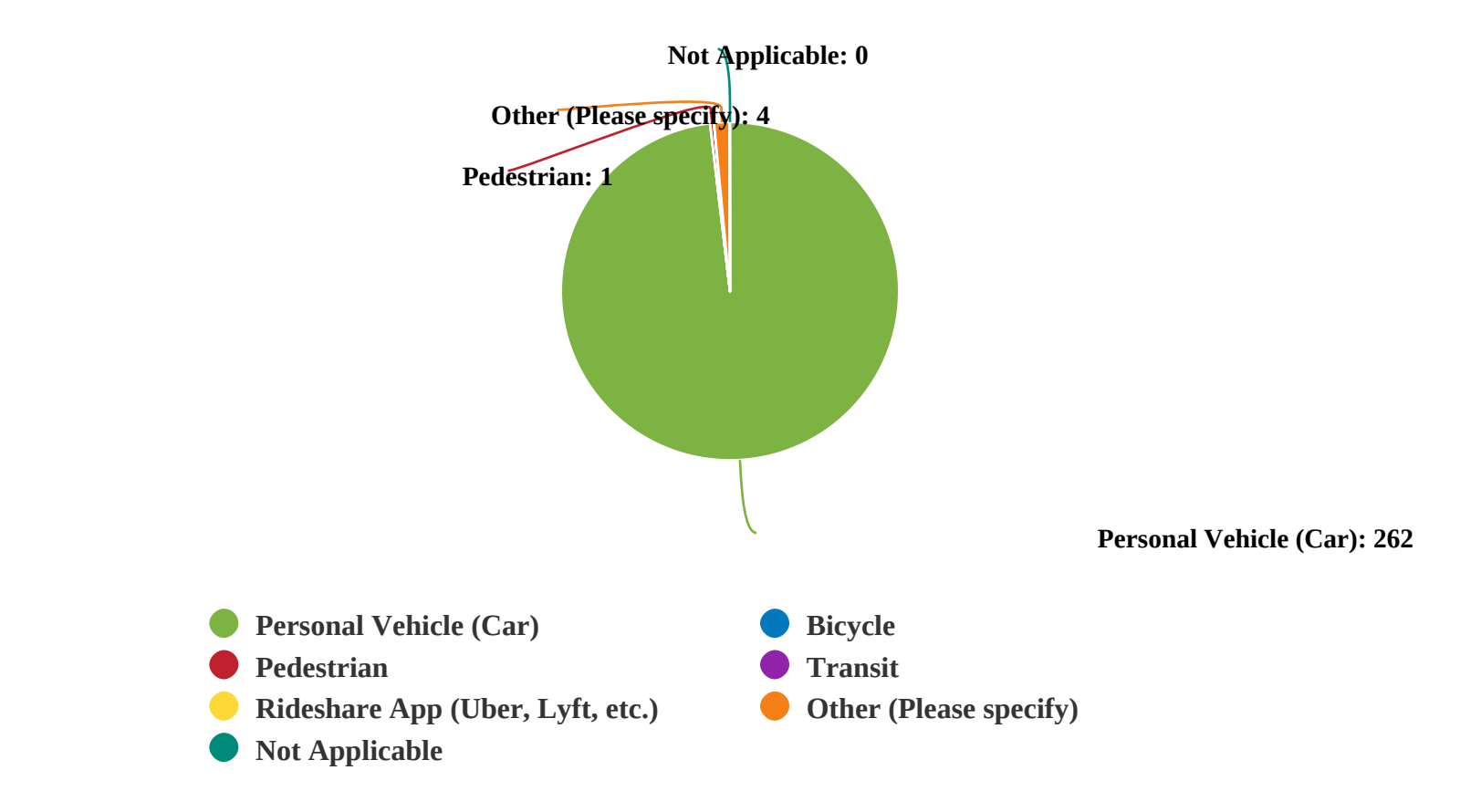
Q5. 5. Is your place of work located outside the home?



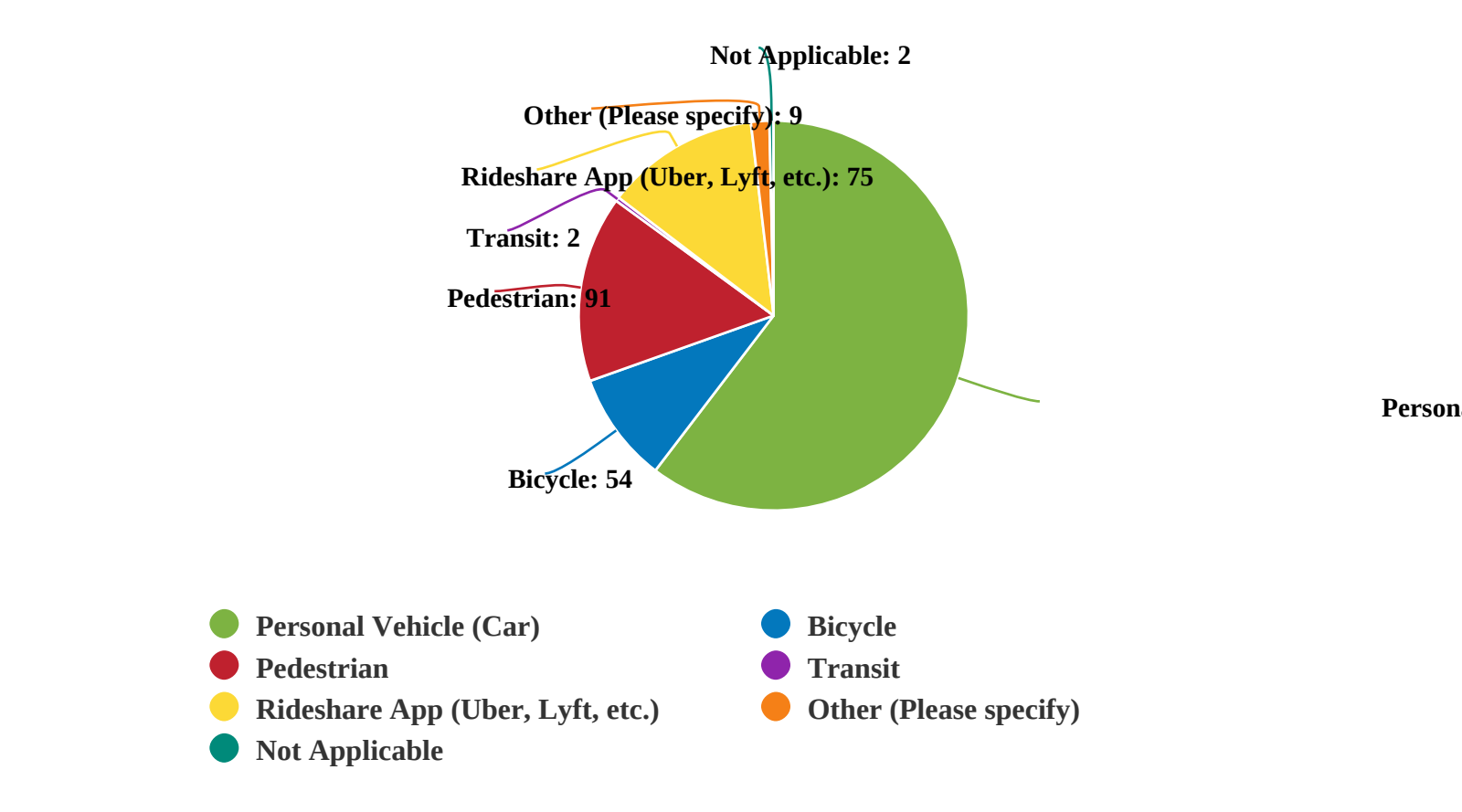
Q6. 6. How long is the commute to your workplace?



Q7. 7. What mode of transportation do you primarily use for your commute?

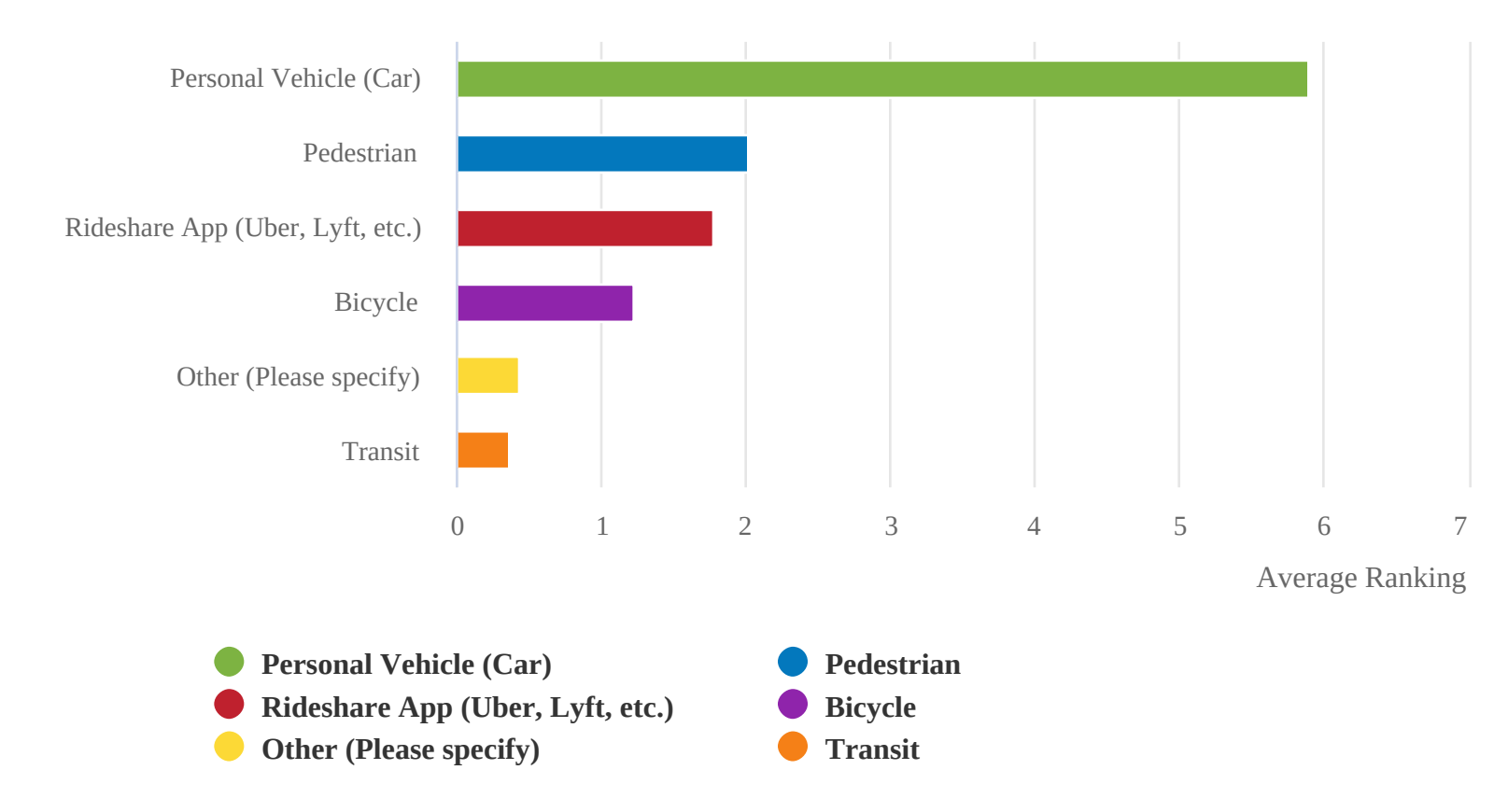


Q9. 8. Which of the following modes of transportation have you used in the last 2 years in Midland? (Select all that apply)



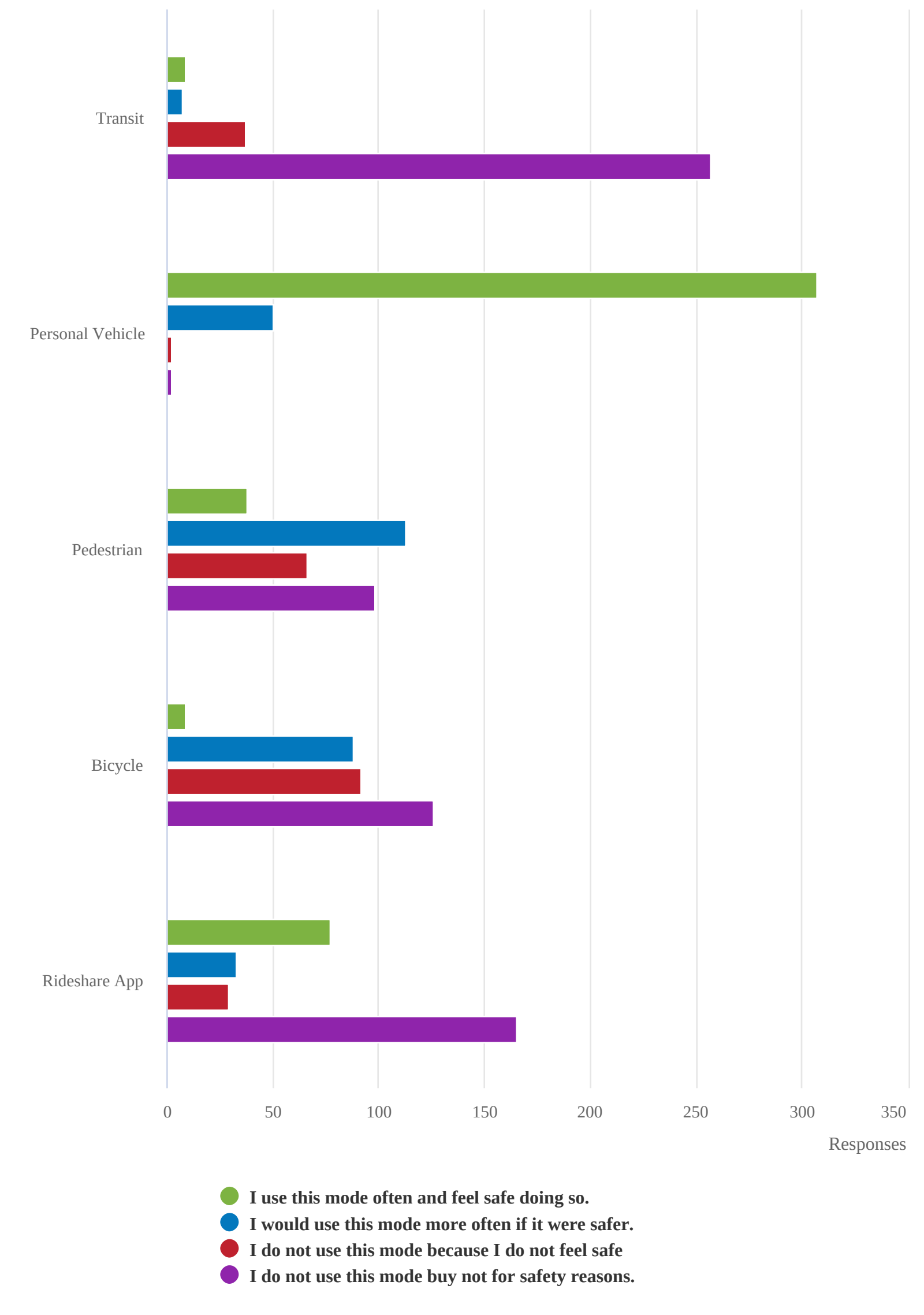
Q11. 9. Please rank the following modes from 1 to 6 in order of how often you use them (excluding modes that you never use):

363 answers

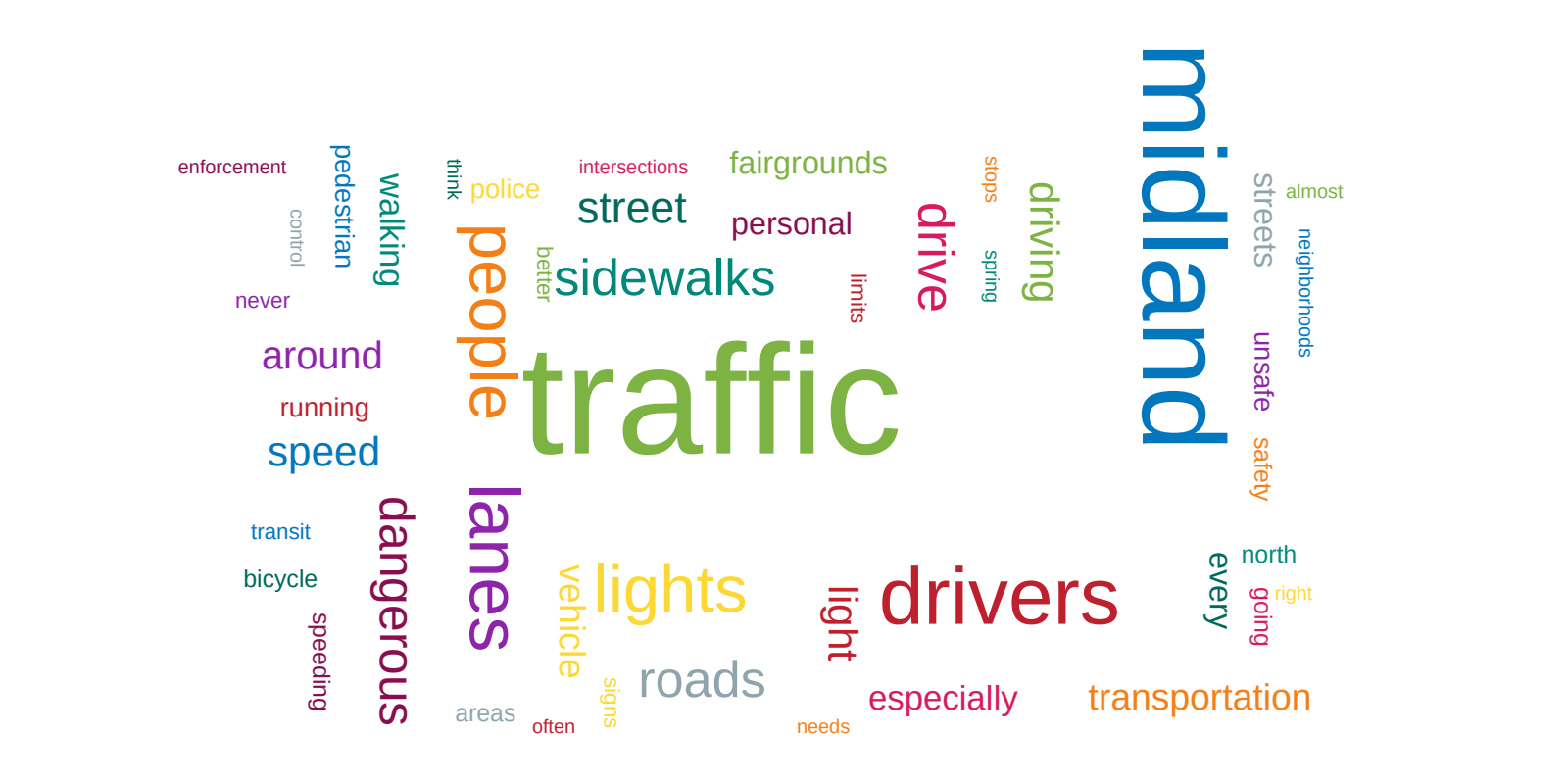


Q13. 10. Select all that apply:

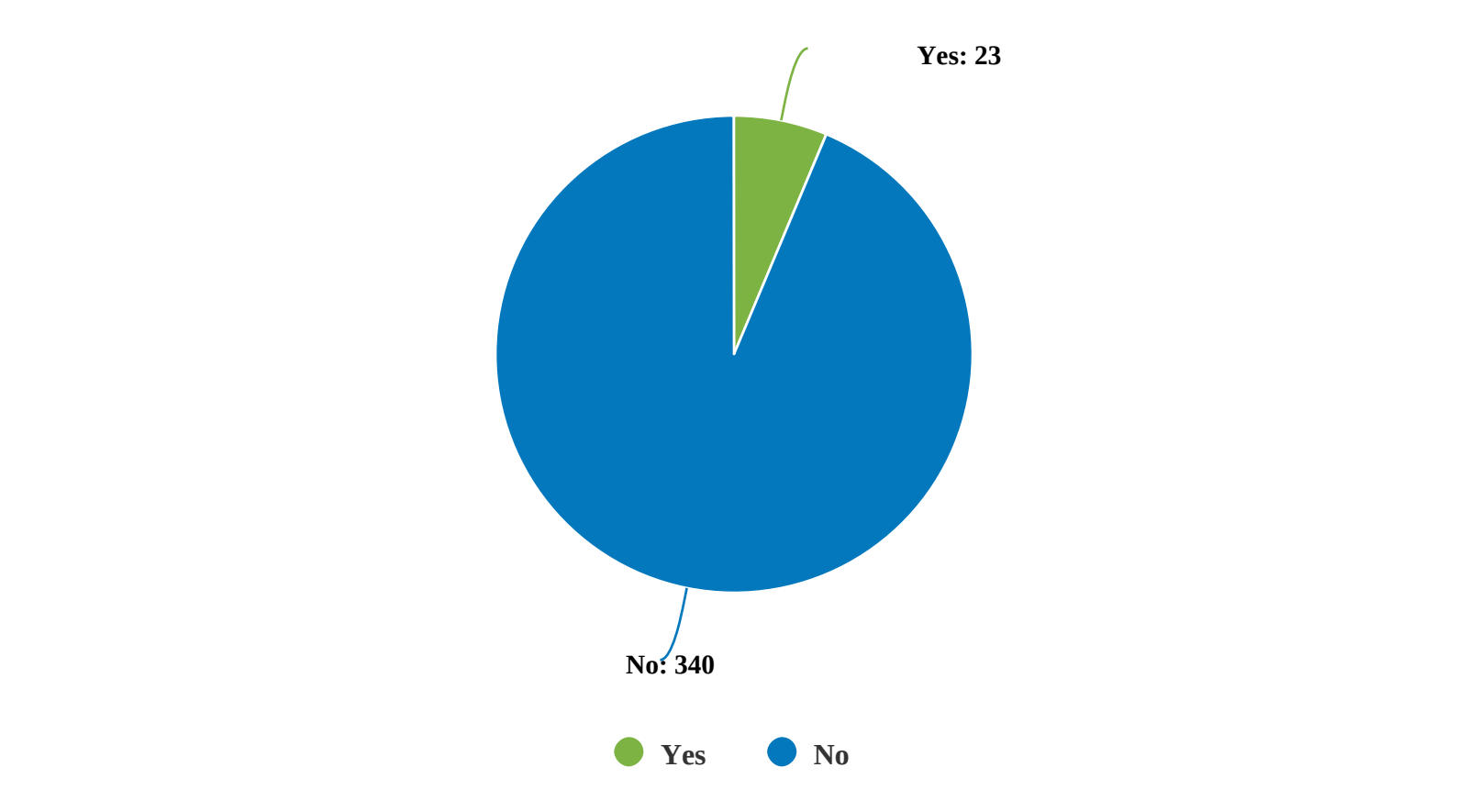
363 answers



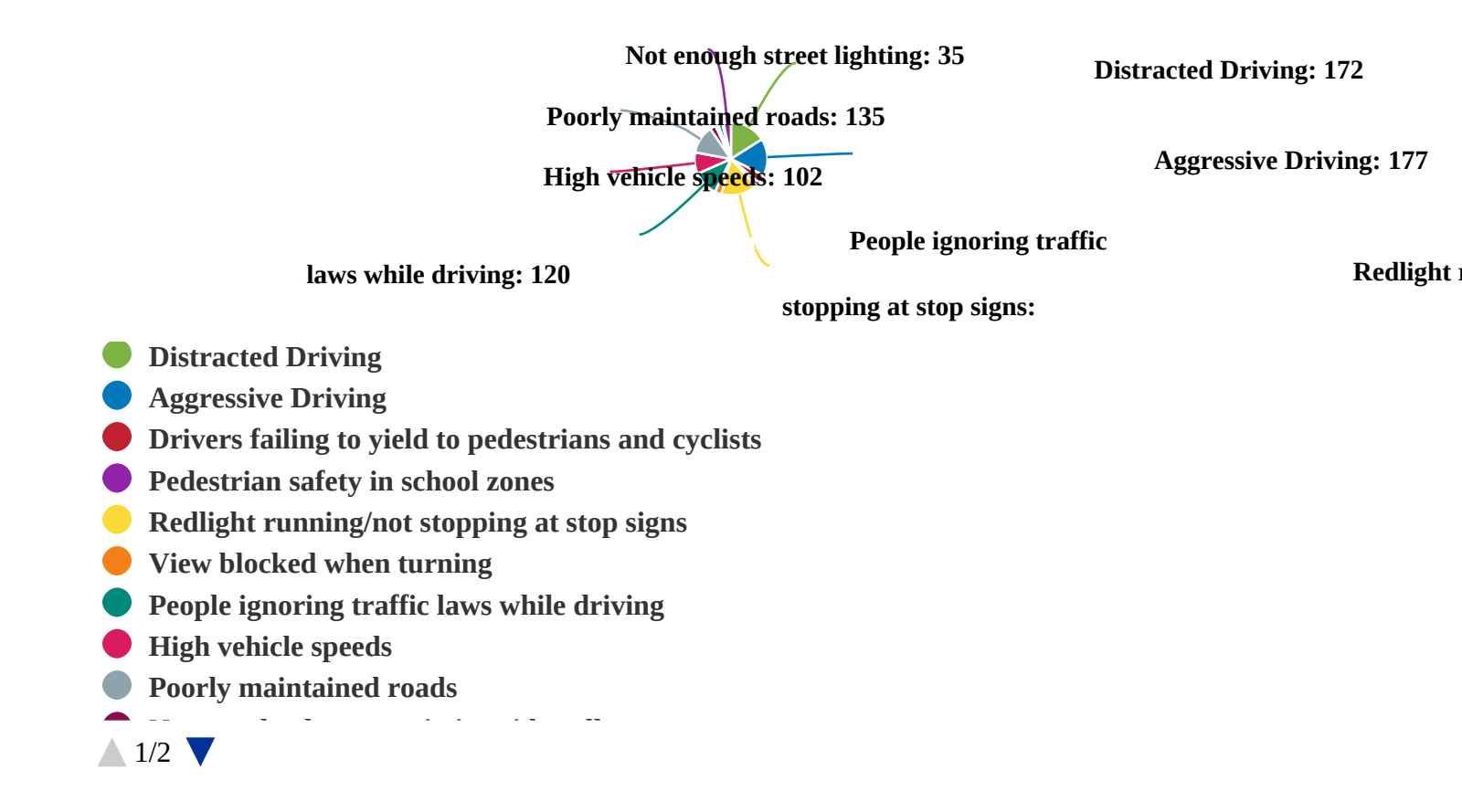
Q14. 11. Is there anything you would like to add regarding mode choice and safety in Midland?



Q15. 12. Are there any members of your household who are þÿeligible to have a driver s license and do not hav

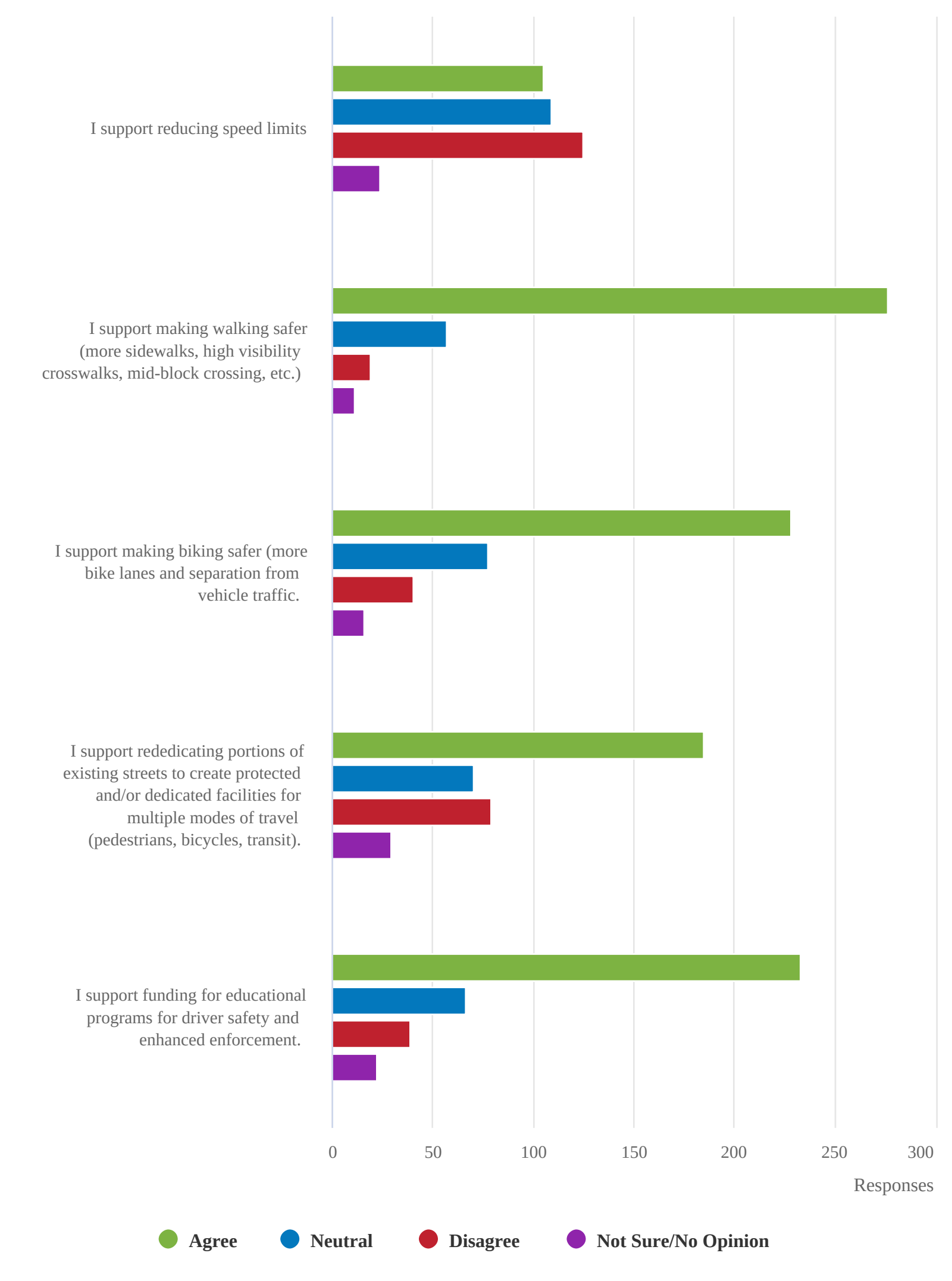


Q18. 13.What are your top (3) traffic safety concerns for Midland? (Choose 3)

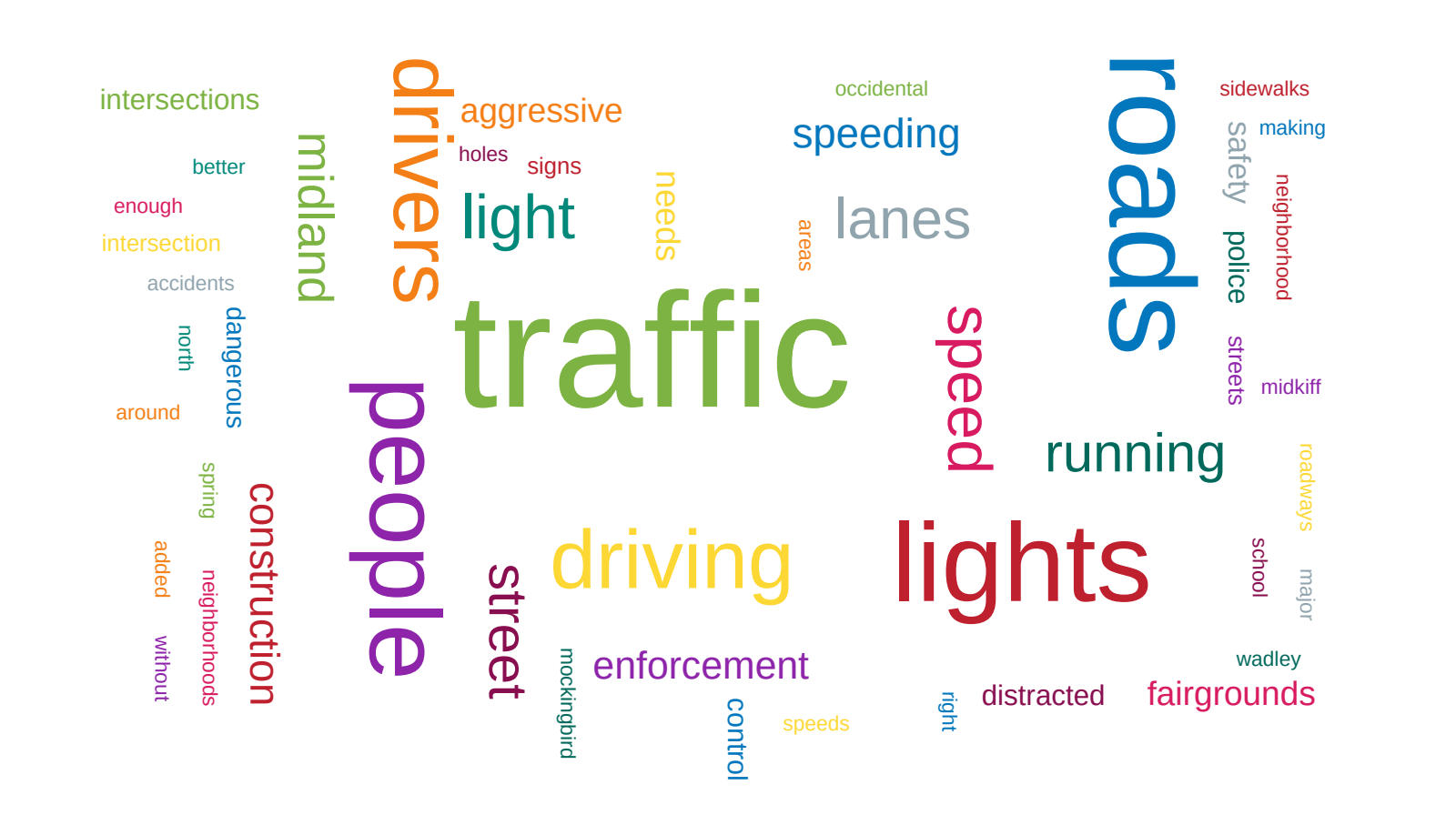


Q19. 14. Share your thoughts on the following safety strategies:

363 answers

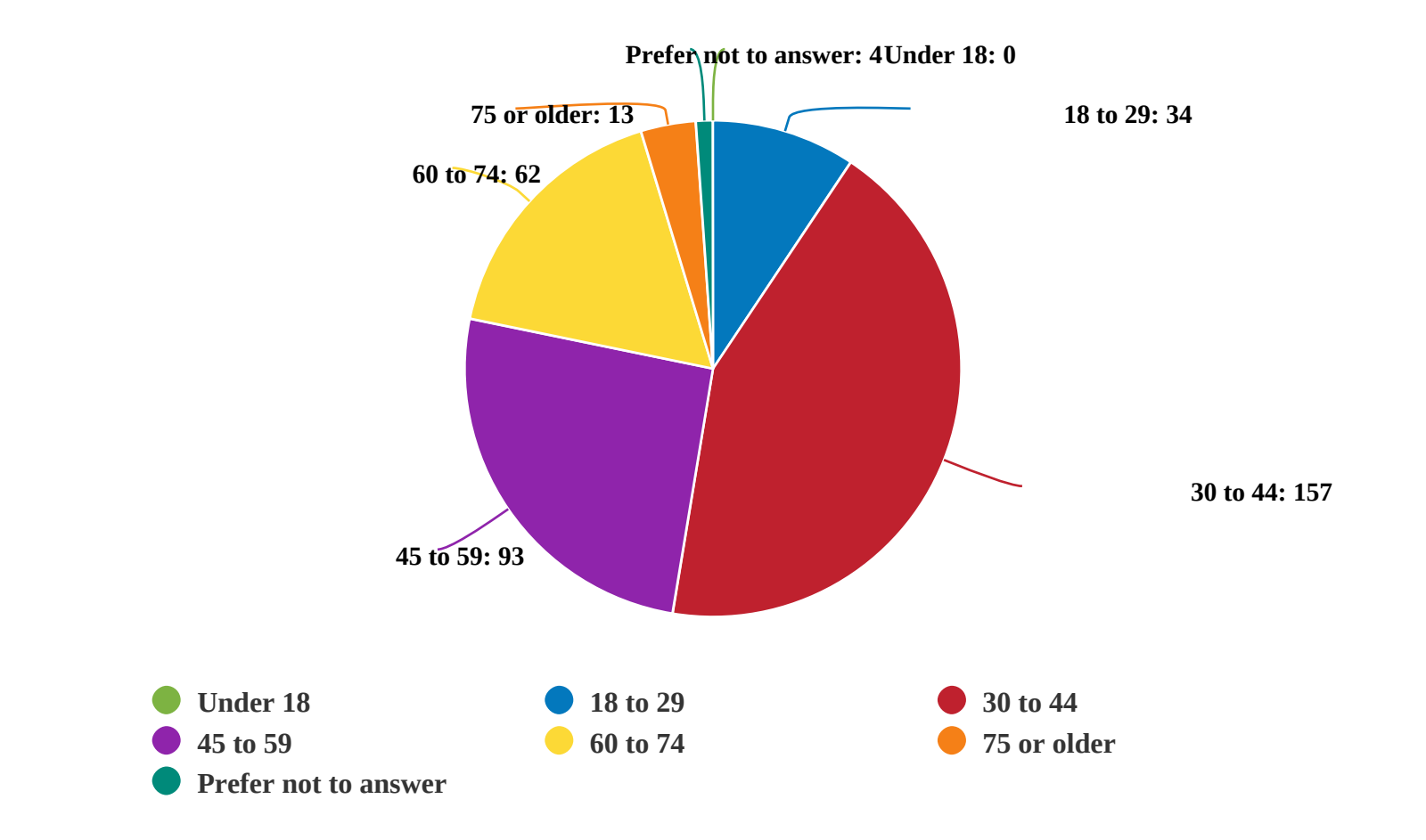


Q20. 15. What is the most important roadway safety concern you would like to see addressed in Midland?

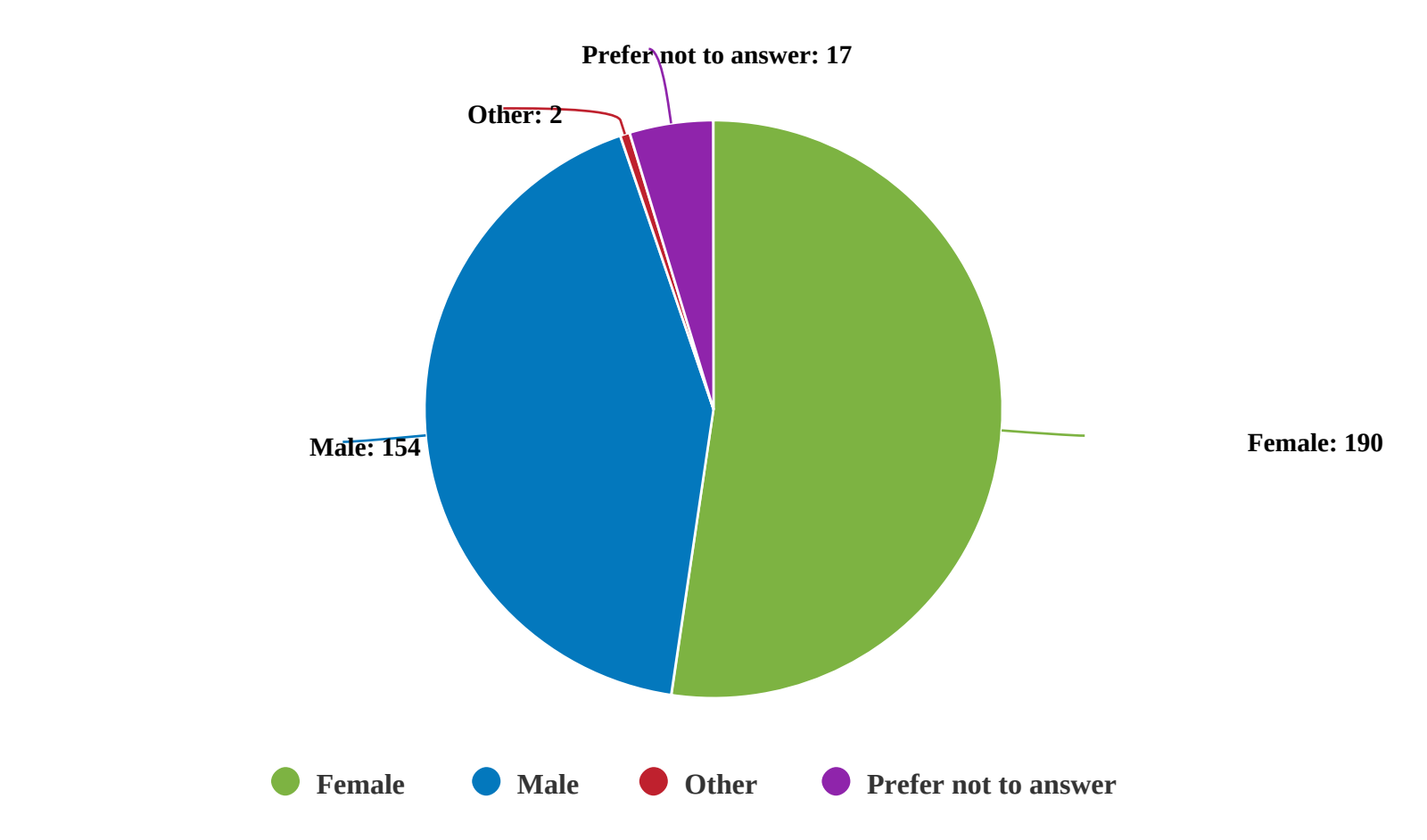


Q21. 16. Are there any other specific opportunities to improve roadway safety in the region that you would like to see addressed?

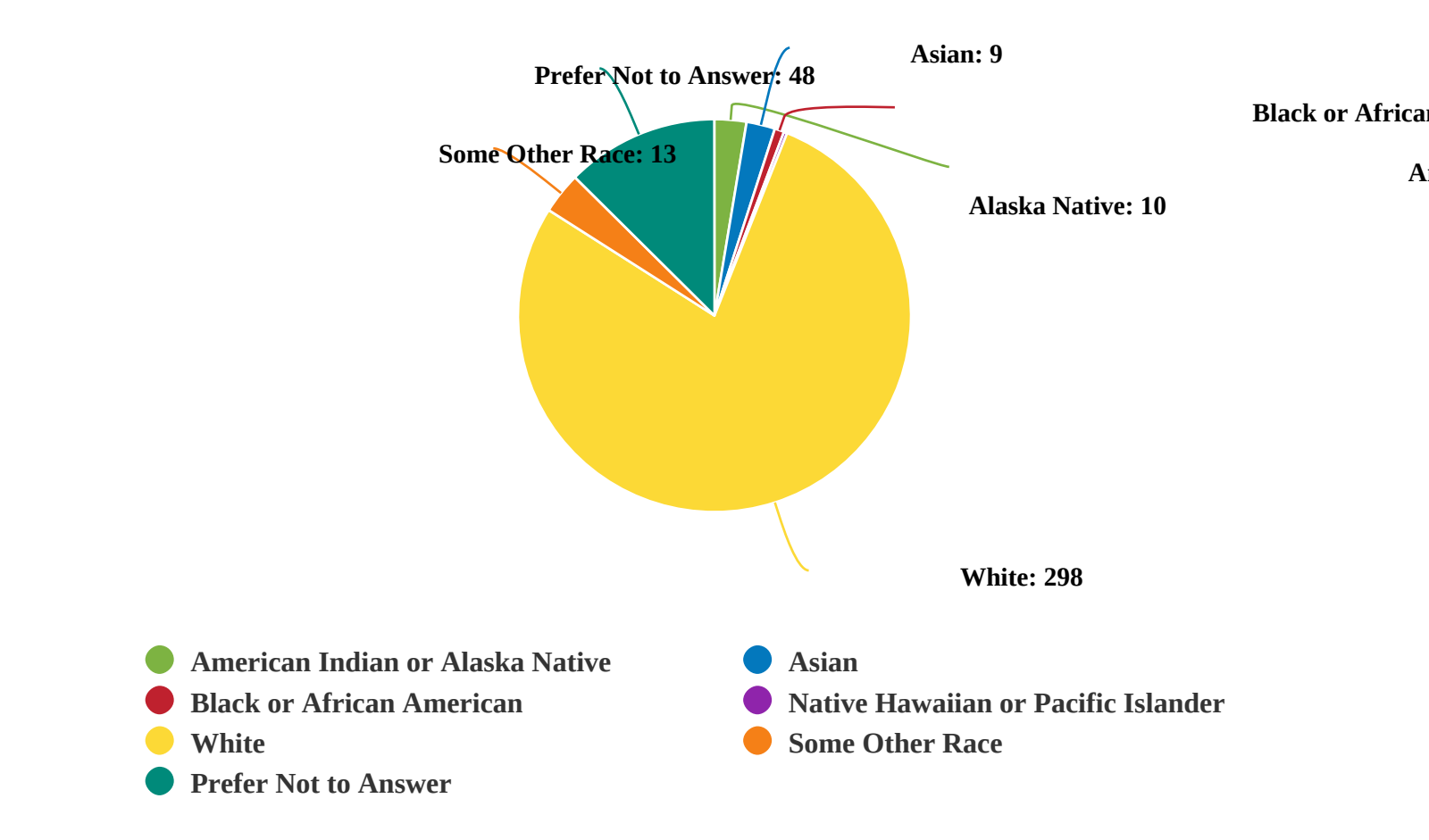
Q22. 17.Please select your age range:



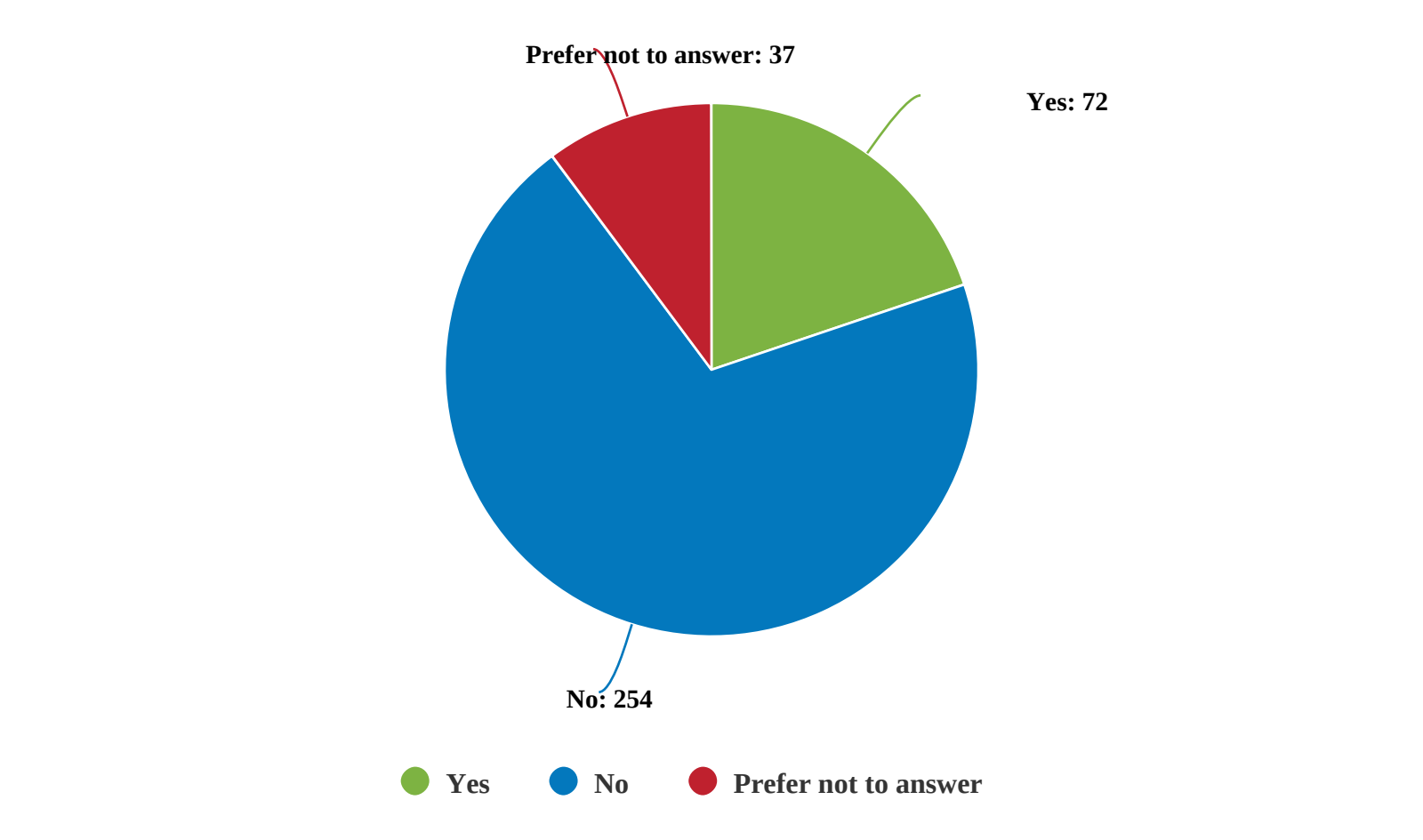
Q23. 18. What is your gender?



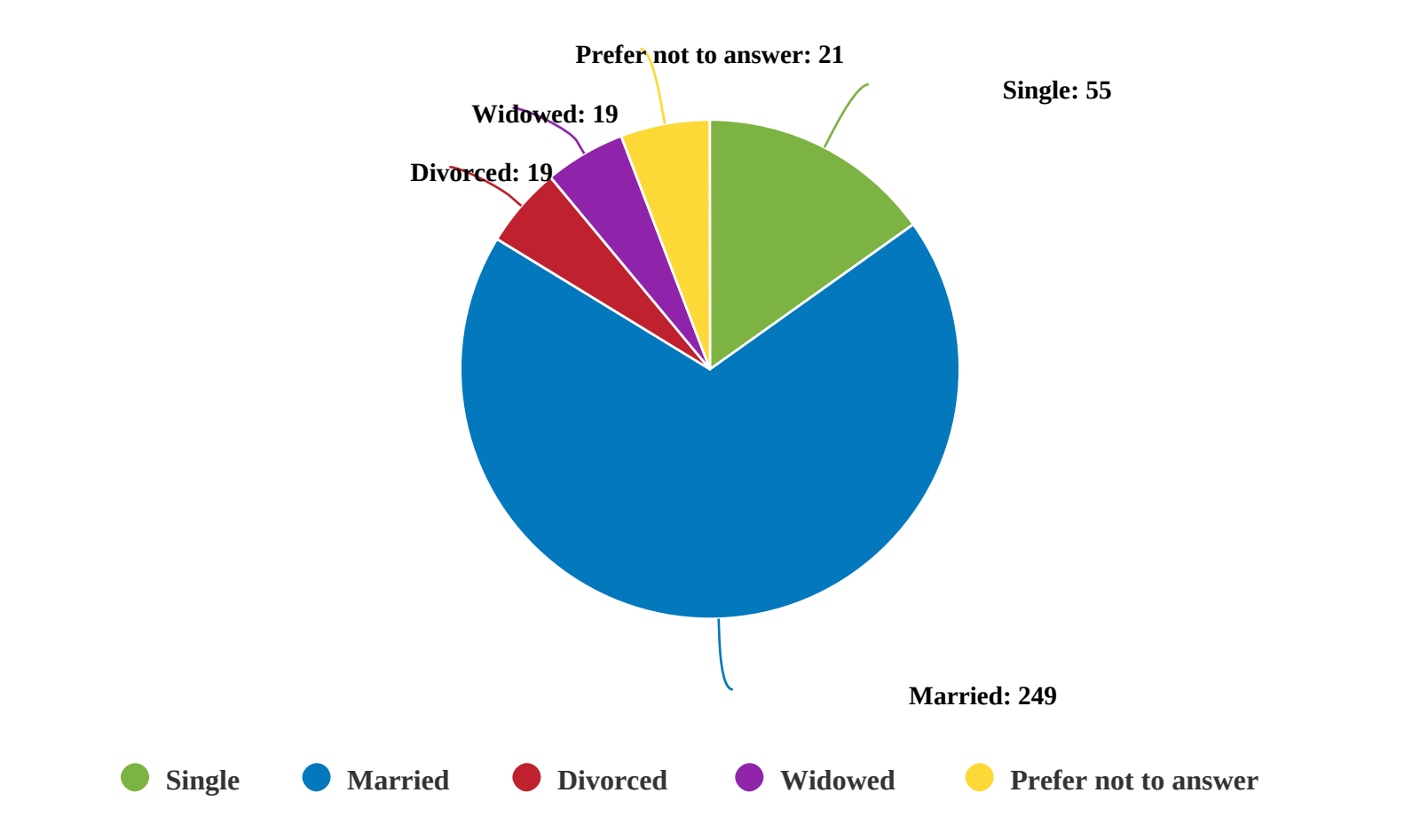
Q24. 20. Select all that apply:



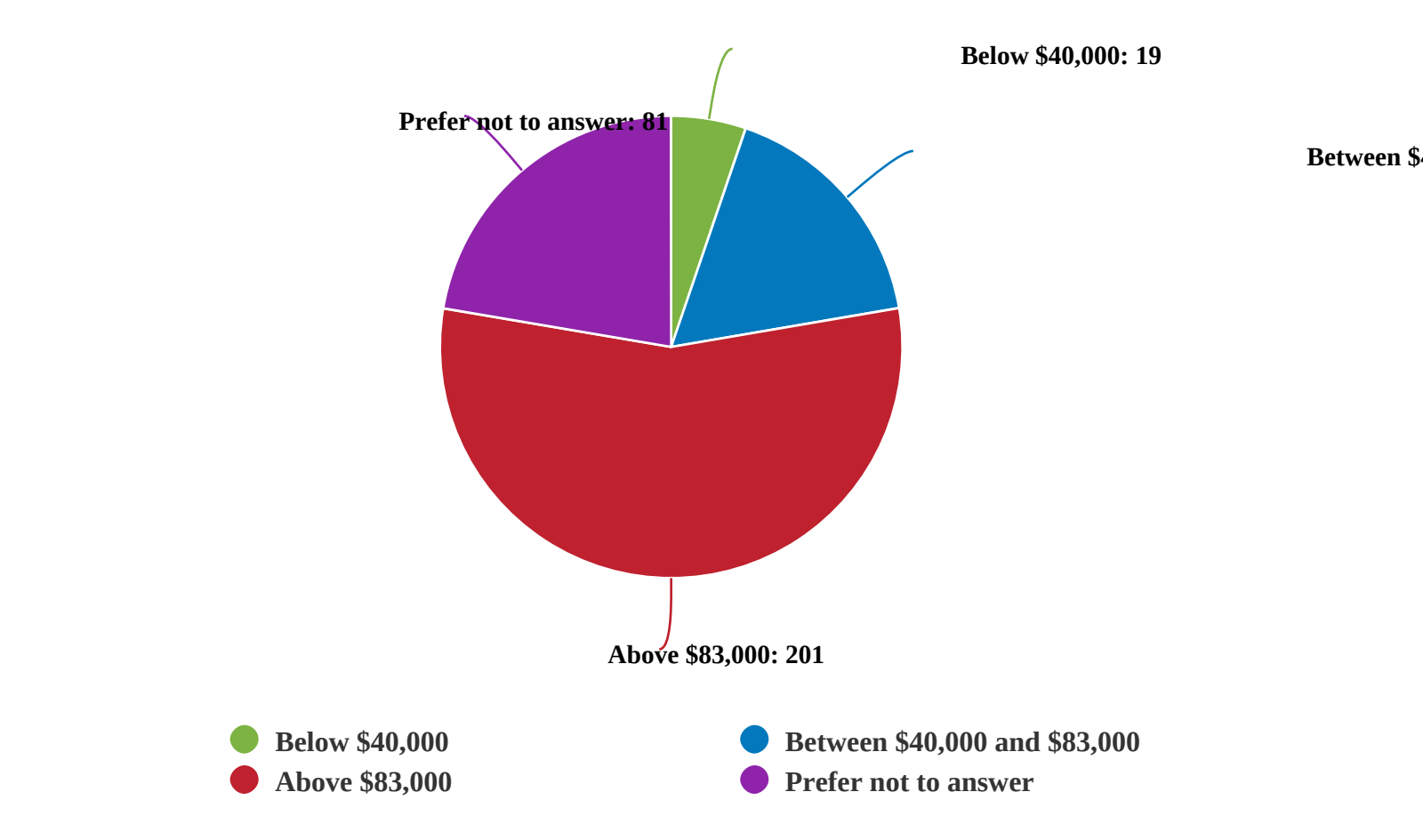
Q25. 21. Are you Hispanic or Latino origin?



Q26. 22. Marital Status:



Q27. 23. Income



C. Field Observations Memorandum

MEMORANDUM

To:	Andrew Avis, Director of Public Works
From:	Monica Powell, AICP Pete Kelly, P.E. Mason Shoaf, EIT Lizbeth Juarez-Bartolo Kimley-Horn and Associates, Inc.
Date:	May 7, 2024
Subject:	Midland County CSAP – Field Observations and Recommendations

OVERVIEW

The following memorandum provides a summary of the field observations and recommendations along each of the three study corridors as part of the Comprehensive Safety Action Plan (CSAP) for the Midland County. Data collection details and efforts are also summarized.

IN-FIELD DATA COLLECTION

In April 2024, the project team conducted in-field observations of the three study corridors to understand existing conditions, crash locations, and other factors. The in-field observations were obtained by foot and vehicle as needed.

The field visit observation data was collected via mobile phones using the ArcGIS Field Maps app (**Figure 1**). This allowed the team to review crash data and compare to existing conditions while in the field. Field notes and photos were logged in the mobile app to geo-tag the field observations to the correct locations. The observations were grouped into two categories: corridor-wide and intersection-focused for each of the study corridors.

Figure 1. Mobile Crash Data and Notes

COUNTYWIDE OBSERVATIONS

The following observations were made at the countywide level for all study corridors:

Lighting

There was a lack of lighting observed on roadways countywide. It is recommended to increase lighting throughout the county with a specific focus at intersections. Increasing lighting along roadway segments would provide enhanced visibility of the roadway through uniform placement lighting features. Although increasing lighting along roadway segments would be beneficial, if it is not feasible, increased lighting at intersections could provide similar safety benefits. Increased visibility at intersections is crucial since these are locations where various modes of travel cross paths. Through an increase in lighting, driver and pedestrian visibility could decrease the chances of a crash.

Stop Bars

At many of the unsignalized intersections there was a lack of stop bars observed. Stop bar pavement markings help make drivers aware of an upcoming intersection and where they should stop at. Since there was a lack of stop bars noticed, it is recommended that stop bars be added at all intersections or be re-striped if already existing.

1. SH 158/CR 1140

Corridor Observations and Recommendations

The following observations were made at the corridor-level along SH 158/CR 1140:

Speed Management

State Highway (SH) 158 or Garden City Highway is a five-lane undivided roadway with a center two-way left turn lane. Along this corridor, there were various access points and unsignalized intersections observed. Given these observations, it is recommended that the existing speed limit be evaluated to determine if the speed limit should be lowered. The current speed limit on this corridor is 75 miles per hour (MPH) which creates an unsafe roadway environment due to the numerous access points and unsignalized intersections onto SH 158. To aid with speed management, it is also recommended that a speed feedback sign should be installed at the midway point of this corridor to alert drivers of their speed. This is approximately midway between FM 1213 and CR 1140, along SH 158.

Pavement Striping

Throughout the corridor on SH 158 it was observed that the existing edge lines were narrow and faded due to sun exposure therefore it is recommended to re-stripe the edge lines and turn them into a wide edge line. Utilizing a wide edge line versus a standard edge line would improve visibility for all lighting and weather conditions.

Furthermore, on County Road (CR) 1140 it was observed that there was no centerline or edge lines striped along the roadway. It is recommended to add a centerline, wide edge lines, and raised pavement markers throughout this section of the study corridor to properly distinguish the two travel lanes. These additions would enhance the visibility of the travel lane boundaries as well.

Intersection Observations and Recommendations

The following observations were made at the intersection-level along SH 158/CR 1140:

CR 1150 on SH 158

This intersection consists of a skewed approach from CR 1150 and two other unsignalized intersection near the main intersection. There is an approach from CR 120 onto SH 158 approximately 300 ft. from the CR 1150 and SH 158 intersection as well as an approach 150 ft. away from Ridge Rd. onto CR 1150. Due to closely spaced approaches at this intersection, different measures are recommended to enhance safety.

To help with congestion at this intersection, it recommended that a traffic signal be added on the primary intersection (CR 1150 and SH 158 intersection). Furthermore, to mitigate the access points onto SH 158, medians and dedicated turn lanes should be implemented on SH 158 and CR 1150/FM 1213. On SH 158, an eastbound right turn lane onto FM 1213 should be added. There should also be a northbound left-turn only added onto the FM 1213 approach and an eastbound acceleration lane from FM 1213 onto SH 158. It is also recommended to make the temporary yield sign on CR 1150 permanent.

Figure 2. Temporary Yield Sign on CR 1150

Additionally, to enhance the safety of roadway users entering SH 158 at the primary intersection from CR 120 realignments and new roadway connections are recommended. The approach from CR 120 located east of the primary intersection should be realigned to achieve a 90-degree approach onto SH 158 and relocated more to the east to provide more distance between access points. It is also recommended that an additional connection from CR 120 to SH 158 west of the primary intersection

be considered. It is also recommended that left-turns are restricted from Ridge Road to the south leg of the intersection but left-turns into Ridge Road from FM 1213 be provided with a left-turn lane. If these recommendations are not chosen, an elliptical roundabout could also be considered to replace the existing roadway configuration.

CR 1140 Intersection on SH 158

Based on the crash history observed at this intersection, it is recommended to conduct a signal warrant analysis. Many of crashes that occurred at this intersection were 'angle-both going straight' crashes (T-bone crashes) which can be reduced through converting this intersection into a signalized intersection. If a traffic signal is added, advanced warning signs or lights should also be added to warn drivers of its presence, especially with the high speed along SH 158.

CR 120 Intersection on CR 1140

An unsignalized intersection was observed approximately 50 ft. South of the CR 120 and CR 1140 intersection. To help prevent dangerous crossings across CR 1140, it is recommended that the southbound approach of CR 1140 is shifted to the west to meet the northbound CR 1140 approach onto CR 120. Existing pavement markings should also be re-striped to enhance travel lane visibility. Additionally, flashers should be added to the stop sign located on the northbound approach of CR 1140 since it has the appropriate infrastructure in place for it as shown in **Figure *3*** and **Figure *4***.

Figure 3. Stop Sign on CR 120 (Front)

Figure 4. Stop Sign on CR 120 (Back)

2. SH 349

Corridor Observations and Recommendations

The following observations were made at the corridor-level along SH 349:

Access Management/Pavement Striping

SH 349 or Rankin Highway is a five- lane undivided roadway with a center two-way left turn lane and contains many unsignalized intersections and private driveways closely spaced together. The area around the corridor consists of residential, industrial, and commercial land use. Due to the mix of land use and the many access points in the area, it is recommended to implement access management measures, such as a raised median or driveway consolidation, along the corridor. Additionally, the pavement markings on the corridor are extremely faded therefore it is recommended to re-stripe all existing pavement markings. During the re-striping efforts, wide edge lines should be added to enhance the visibility of the travel lane boundaries.

Sidewalks

There were sidewalk gaps observed at the north end of the corridor near the IH-20 and SH 349 intersection. To address the existing sidewalk gaps, it recommended that the gaps are filled, and sidewalks are added throughout the length of the corridor. Due to existing drainage conditions on the East side of SH 349, as pictured in **Figure 5**, it may be challenging to fill the sidewalk gaps and install new sidewalk on this side. It is recommended that sidewalk gaps and add new sidewalks be built on the East side of SH 349 to avoid disturbing the existing drainage located on the West side of SH 349.

Figure 5. Existing Drainage on SH 349

Intersection Observations and Recommendations

The following observations were made at the intersection-level along SH 349:

IH-20 Interchange

The traffic signals at this intersection should be upgraded to radar detection to mitigate issues caused by sun glares. At various times of the day, it was observed that glares from the sun obstruct the view of signal heads and cause issues with the typical camera detection. Additionally, the signal timing should be re-evaluated at these signals to determine if there is sufficient time to cross the road given the pedestrian crossing distance. Pedestrian crossings should also be added at this intersection since they are currently missing, but there are sidewalks as pictured in **Figure 6**. There is also a ramp on the Southwest corner of the intersection that has a ramp (**Figure 7**) that should be cleaned and fixed.

Figure 6. Absent pedestrian crossing infrastructure.

Figure 7. Existing Ramp at the Intersection

CR 120

Based on high volumes on SH 349 and sight distance issues observed (**Figure 8** and **Figure 9**), it is recommended that a signal warrant analysis is conducted at this intersection. To further improve sight distance at the intersection, it is recommended that vegetation/obstructions are removed. Furthermore, the addition of lanes onto the CR 120 approach should be considered to mitigate the formation of queues and decrease the overall delay at the approach and intersection.

Figure 8. Sight distance from behind the stop sign

Figure 9. Sight distance from farther up the approach

CR 125

The CR 125 approach currently has a sharp corner turn therefore it is recommended to improve the approach by increasing the curb radius. It is also recommended to install lighting at the intersection as well as a stop bar at the approach.

CR 127

There is a wall behind the stop sign (**Figure *10***) that is causing poor sight distance at the CR 127 as shown in **Figure *11***. To improve sight distance, it is recommended to either remove the obstruction or move the stop sign further up the roadway and add a stop bar, so the wall is no longer obstructing the view. Furthermore, it is recommended to add a northbound right turn lane along SH 349 into CR 127 to separate right-turning vehicles from the main travel lanes.

Figure 10. Stop sign location on CR 127

Figure 11. Sight distance from behind the stop bar

CR 130

Due to the high volumes on SH 349, it recommended to conduct a signal warrant at this intersection. A stop bar should also be added since there is currently not one although there is a stop sign present

(**Figure *12***). Additionally, the CR 130 approach and curbs should be updated by creating a two-lane approach for a left/through and a right turn lane.

Figure 12. Stop sign on CR 130

3. FM 1788

Corridor Observations and Recommendations

The following observations were made at the corridor-level along Farm-to-Market (FM) 1788:

Enhanced Delineation Improvements

There was a curve with little advance warning measures observed at the end of the study corridor on FM 1788. To help improve curve safety at this location it is recommended that enhanced delineation improvements are added. The enhanced delineation improvements in advance or within the curve, such as the addition of chevron signs, delineators, and/or improved pavement markings. Enhanced delineation measures can alert drivers to the upcoming curve, direction and sharpness of the curve and appropriate operating speed.

Intersection Observations and Recommendations

The following observations were made at the intersection-level along FM 1788:

CR 140

The CR 140 approach was observed to have a tree obstructing the sight distance (**Figure *13***) therefore it is recommended to remove the tree to improve sight distance. It is also recommended to add a left turn lane at this approach.

Figure 13. Tree obstruction on CR 140 approach

CR 145

There was a missing stop sign and stop bar on the CR 145 approach (**Figure *14***). It is recommended to add a stop sign and a stop bar at the location where one is currently missing. Additionally, a left turn lanes should be added to the CR 145 approaches.

Figure 14. Missing stop sign and bar on CR 145

D. Study Corridor CMF Calculations

ID	Study Corridor	Context	Location	Recommendation	CMF ID #	Countermeasure	CMF	CMF Crash Type	CMF Crash Severity	CMF Area Type	CMF Crash Type Count	CMF Crash Type - 20 Years	CMF Reduction - 20 Years
1.1	SH 158 - CR 1140	Corridor	Corridor	Install a speed feedback sign along SH 158	6885	Install Dynamic Speed Feedback Sign	0.95	All	All	Rural	157	628	32
1.2	SH 158 - CR 1140	Corridor	Corridor	Stripe wide edge lines along CR 1140	4737	Install Wider Edge Lines (4 in to 6 in)	0.635	All	K, A, B, C	Rural	56	224	82
1.3	SH 158 - CR 1140	Corridor	Corridor	Re-evaluate speed limit along SH 158	11288	Lower Posted Speed	0.856	All	K, A, B, C	All	56	224	33
1.4	SH 158 - CR 1140	Corridor	Corridor	Stripe center line and raised pavement markings along CR 1140	101	Place Edgeline and Centerline Markings	0.76	All	A, B, C	Rural	54	216	52
2.1	SH 349	Corridor	Corridor	Install a raised median	7792	Install Raised Median	0.76	All	K, A, B, C	Rural	101	404	97
2.2	SH 349	Corridor	Corridor	Install corridor lighting	581	Illumination	0.73	All	A, B, C	All	96	384	104
2.3	SH 349	Corridor	Corridor	Install a buffered sidewalk	11246	Install Sidewalk	0.598	Vehicle/Pedestrian	All	Rural	1	4	2
2.4	SH 349	Corridor	Corridor	Stripe wide edge lines	4737	Install Wider Edge Lines (4 in to 6 in)	0.635	All	K, A, B, C	Rural	101	404	148
3.1	FM 1788	Corridor	Corridor	Install advanced delineation improvements along the curve	10612	Improve Curve Delineation	0.82	Non-Intersection	K, A, B, C	Rural	7	28	6
3.2	FM 1788	Corridor	Corridor	Install a center two-way left-turn lane	583	Introduce TWLTL On Rural Two Lane Road	0.64	All	All	Rural	53	212	77
3.3	FM 1788	Corridor	Corridor	Install a speed feedback sign	6885	Install Dynamic Speed Feedback Sign	0.95	All	All	Rural	53	212	11
3.4	FM 1788	Corridor	Corridor	Stripe wide edge lines	4737	Install Wider Edge Lines (4 in to 6 in)	0.635	All	K, A, B, C	Rural	17	68	25
3.5	FM 1788	Corridor	Corridor	Install corridor lighting	581	Illumination	0.73	All	A, B, C	All	15	60	17
1.A.1	SH 158 - CR 1140	Intersection	CR 120 / FM 1213	Install a traffic signal with dedicated turn lanes at all approaches	7967	Install A Traffic Signal and Left Turn Lanes	0.57	All	All	Rural/Suburban	54	216	93
1.B.1	SH 158 - CR 1140	Intersection	CR 1140	Install a traffic signal with dedicated turn lanes at all approaches	7967	Install A Traffic Signal and Left Turn Lanes	0.57	All	All	Rural/Suburban	32	128	56
1.C.1	SH 158 - CR 1140	Intersection	CR 120	Realign skewed intersection	11273	Change Intersection Skew Angle	0.94	All	All	Rural	13	52	4
1.C.2	SH 158 - CR 1140	Intersection	CR 120	Install flashing LED stop sign	6602	Replace Standard Stop Sign with Flashing LED Stop Sign	0.585	Angle	All	All	13	52	22
2.A.1	SH 349	Intersection	IH-20	nstall pedestrian crosswalks, signal heads, push buttons, and ADA ramp	8967	Implement Systemic Signing and Visibility Improvements at Signalized Intersections	0.732	All	All	All	1	4	2
2.A.2	SH 349	Intersection	IH-20	Construct a pedestrian crossing under IH-20 bridge	11246	Install Sidewalk	0.598	Vehicle/Pedestrian	All	Rural	1	4	2
2.A.3	SH 349	Intersection	IH-20	Install radar vehicle detection	503	Improve Signal Timing	0.85	All	All	All	35	140	21
2.B.1	SH 349	Intersection	Dayton Road	Install a traffic signal with dedicated turn lanes at all approaches	7967	Install A Traffic Signal and Left Turn Lanes	0.57	All	All	Rural/Suburban	10	40	18
2.C.1	SH 349	Intersection	CR 114	Install a traffic signal with dedicated turn lanes at all approaches	7967	Install A Traffic Signal and Left Turn Lanes	0.57	All	All	Rural/Suburban	14	56	25
2.E.1	SH 349	Intersection	CR 120	Install a traffic signal with dedicated turn lanes at all approaches	7967	Install A Traffic Signal and Left Turn Lanes	0.57	All	All	Rural/Suburban	16	64	28
2.E.2	SH 349	Intersection	CR 120	Remove vegetation to improve sight distance	1024	Remove or Relocate Fixed Objects Outside of Clear Zone	0.62	All	All	All	16	64	25
2.G.1	SH 349	Intersection	CR 127	Move stop sign and stop bar forward	886	Implement Systemic Signing and Marking Improvements at Stop-Controlled Intersections	0.917	All	All	All	1	4	1
2.G.2	SH 349	Intersection	CR 127	Install a northbound right-turn lane	285	Provide a Right Turn Lane on One Major Road Approach	0.86	All	All	All	1	4	1
2.H.1	SH 349	Intersection	CR 130	Install a traffic signal with dedicated turn lanes at all approaches	7967	Install A Traffic Signal and Left Turn Lanes	0.57	All	All	Rural	42	168	73
C.1	All	Intersection	All	Install intersection lighting	4462	Install Intersection Lighting	0.881	Nighttime	All	All	90	360	43
C.1.1	SH 158 - CR 1140	Intersection	All Intersections	Install intersection lighting	4462	Install Intersection Lighting	0.881	Nighttime	All	All	43	172	21
C.1.2	SH 349	Intersection	All Intersections	Install intersection lighting	4462	Install Intersection Lighting	0.881	Nighttime	All	All	37	148	18
C.1.3	FM 1788	Intersection	All Intersections	Install intersection lighting	4462	Install Intersection Lighting	0.881	Nighttime	All	All	10	40	5
C.2	All	Intersection	All	Restripe intersection pavement markings	NS01	Upgrade Intersection Pavement Markings	0.75	All	All	All	289	1156	289
C.2.1	SH 158 - CR 1140	Intersection	All Intersections	Restripe intersection pavement markings	NS01	Upgrade Intersection Pavement Markings	0.75	All	All	All	125	500	125
C.2.2	SH 349	Intersection	All Intersections	Restripe intersection pavement markings	NS01	Upgrade Intersection Pavement Markings	0.75	All	All	All	134	536	134
C.2.3	FM 1788	Intersection	All Intersections	Restripe intersection pavement markings	NS01	Upgrade Intersection Pavement Markings	0.75	All	All	All	30	120	30

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