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Crawford County Planning

Northwest COMMISSION

Crawford County Safety Action Plan

A roadmap to eliminate fatal and serious injury crashes in our region

June 2025

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Introduction

Crawford County, in collaboration with the Northwest Pennsylvania Rural Planning and Development Commission (Northwest Commission), developed this county-wide Safety Action Plan (SAP).

Background

This SAP initiative aligns with the objectives of the federal Safe Streets and Roads for All (SS4A) grant program, which aims to improve roadway safety and reduce transportation-related fatalities and serious injuries.

The SS4A Grant Program was created by the 2021 Bipartisan Infrastructure Law (BIL), which focused on infrastructure and multiple road user investments. The SS4A program has two types of grants: planning/demonstration and implementation grants. Planning/demonstration grants require establishing needs, collaboration with stakeholders, and project identification.

Purpose

This SAP aims to improve transportation safety and reduce fatal and serious injury crashes on non-interstate roadways in Crawford County.

This plan:

- summarizes countywide transportation-related safety issues,
- identifies location-specific and systemic strategies for addressing these safety issues,
- outlines implementation approaches to move these strategies forward, and
- identifies practices to measure progress and provide transparency during implementation.

Leadership Commitment & Goal Setting

As part of the SS4A program, an official leadership commitment must be established to eventually reduce roadway fatalities and serious injuries to zero. The commitment must also include a goal and timeline to achieve zero fatalities and serious injuries through one, or both, of the following:

- A target date for achieving zero roadway fatalities and serious injuries.
- A target percentage reduction of roadway fatalities and serious injuries by a specific date, with a longer-term goal for reducing fatalities and serious injuries.

In June 2025, the Crawford County Commissioners adopted a resolution to eliminate roadway fatalities and serious injuries on all roadways by the year 2035. County administration, alongside the County planning staff, endorsed the SAP as a comprehensive and holistic approach to achieving this goal. The full text of the resolution can be found in the Appendix.

Setting this goal provided key guidance to the project team when developing plan recommendations. The resolution commits this action plan to include existing conditions & historical trends, crash data, identification of a high injury network (HIN), a prioritized project list for implementation, and a framework for evaluating and tracking outcomes.

The resolution also advocates for providing copies of the SAP to municipalities to encourage collaboration and proactive planning to improve the safety of the county's transportation network, which local governments have a vital role in maintaining.

Plan Development Process

The development of the Safety Action Plan (SAP) involved various efforts and activities.

Steering Committee

A Steering Committee was established to help guide the overall vision and goals for the SAP. The multidisciplinary team, representing stakeholders and community leaders, provided direction, reviewed the data, and ensured the planning process was inclusive and aligned with county priorities.

Public Stakeholder Collaboration

A robust communications and public involvement strategy ensured that the SAP reflects the county's needs. Refer to the Public Engagement section for more detailed information about the communications and outreach strategies.

Safety Analysis

A comprehensive analysis of historical and current safety conditions was conducted, including:

- Reviewing and summarizing historical crash data,
- Identifying high-injury corridors and systemic trends, and
- Evaluating high priority roadway segments to identify contributing factors.

Strategy Identification & Prioritization

The safety conditions analysis and stakeholder engagement (with the Steering Committee and the public) help to identify and refine a comprehensive set of location-specific and systemic safety strategies and countermeasures.

Implementation & Monitoring

The Steering Committee collaborated with the County to secure leadership commitment to advance the SAP and to develop an implementation approach, including tools for measuring progress and providing transparency.

Figure 1 – Plan Development Process

Public Engagement

The public engagement tactics deployed allowed for an open, transparent, and interactive stakeholder process delivered in partnership with the Northwest Commission.

The primary goals of the public engagement process were to:

- Engage stakeholders in the development process;
- Provide the public with the opportunity to share feedback;
- Establish various methods of engagement with the public that were both interactive and equitable; and
- Consider the public's feedback on prioritized locations and critical safety enhancement recommendations.

The insights and feedback received through the public outreach were used to inform the identification of safety issues, locations, and countermeasures/strategies.

Project Website

Crawford County created a Safety Action Plan website as a resource for the public to access project-related information in a centralized location. The website allowed stakeholders and the public to easily access project updates, key messages, engagement opportunities, and feedback forms.

Website URL: https://crawford-county-safety-action-plan-rocklandplanning.hub.arcgis.com/

Outreach Strategy

The public was notified of the meetings and other opportunities to share feedback via press releases, social media posts, and emails. Steering Committee members helped champion the project and shared announcements about public involvement opportunities with their contacts.

Public Input Opportunities

Crawford County held public meetings to receive feedback on roadway safety issues and support the development of the SAP.

The public engagement process included the following outreach activities: public meetings across the County, online Wikimapping Feedback Tool, and a video & online feedback survey.

Public Meetings

Because of the project's large geographic area, the County offered the option of three locations over two days (December 3rd and 4th, 2024) for the first public meetings. The meetings could be attended in person in Linesville, Meadville, or Titusville, or virtually, using the meeting link provided to the public.

During these public meetings, the County's project team provided a background on the SS4A Program, identified general safety trends in the County, introduced the public Wikimapping Feedback Tool, and highlighted engagement opportunities.

There were 13 public participants across the three meeting locations (Linesville, Meadville, and Titusville).

Wikimapping Feedback Tool

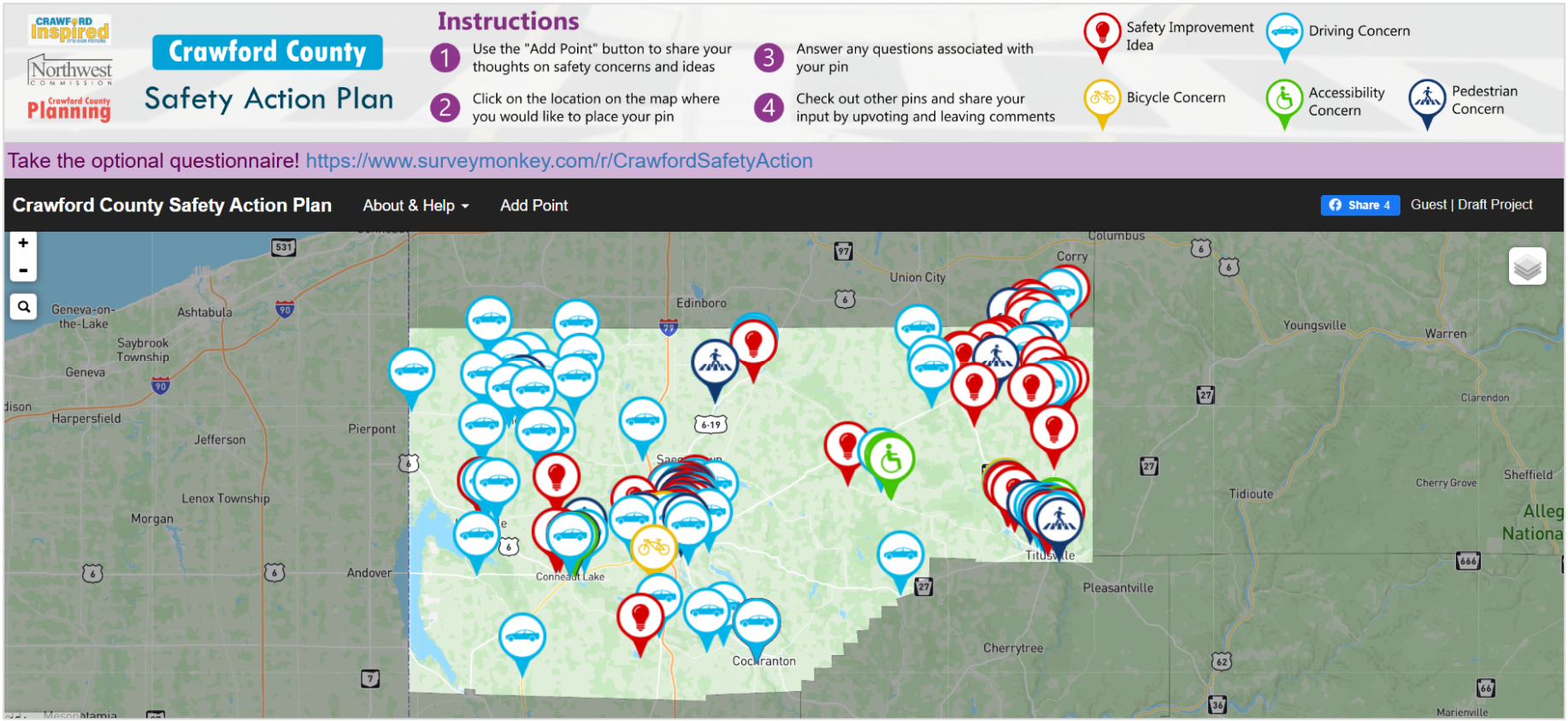
Wikimapping is an interactive digital online mapping tool for identifying safety concerns by adding pins to specific roadways and locations on a map. The online mapping survey allowed community members to identify locations of safety concerns, along with potential improvement ideas throughout the County.

A hard copy of the feedback form was available upon request for those who could not access the digital mapping tool.

The Steering Committee received 221 pins and 41 comments through Wikimapping (as shown in Figure 2, below).

Note: In addition to being incorporated into the SAP, written comments were also tabulated and shared with both the Steering Committee and Crawford County, for future reference.

Figure 2 – Public Input on Safety Issues and Locations through the Wikimapping Feedback Tool



Summary of Wikimapping Feedback

The themes for the five categories of public feedback pins are summarized below:

Pedestrian Concerns

- Sidewalks nonexistent in high pedestrian areas, especially in and around Meadville
- Visibility issues at intersections and along roadways utilized by horse and buggy

Driving Concerns

- Confusing intersections with concerning alignment and obstructed views
- Excessive speeding

Bicycle Concerns

- Safer Ernst Trail connections/crossings in Conneaut Lake and Meadville
- Safer bicycle accommodations in Meadville

Safety Improvement Ideas

- Intersection redesigns (roundabouts, realignments, traffic lights)
- Speed limit reduction strategies

Accessibility Concerns

- Increase sidewalk connections and ADA accommodations
- ADA crossings accommodations in Townville collect sediment and leaves due to runoff

The public's top three locations of interest (based on the number and types of comments received) are as follows:

1. Rogers Ferry Rd. (SR 2034) and Dunham Rd., Meadville
2. Buell's Corner Rd. and SR 89, Rome Township
3. Hydetown Rd./Spring St. and Central Ave./SR 27/SR 8, Titusville

Other top areas of concern identified include:

4. Allegheny St. and Park Ave., Meadville
5. Conneaut Lake Rd. and Silver Shores Restaurant, Conneaut Lake

The top three locations and areas of concern were considered when making key decisions within the safety analysis and when identifying the high priority locations and systemic safety issues.

Video & Online Survey

Following the completion of the safety analysis and development of draft recommendations, a prerecorded video was shared on the project website on April 7th, 2025, summarizing the County's top 10 High Injury Network (HIN) locations and systemic safety issues *(refer to the Safety Analysis section).*

The public was asked to provide 1) their comments on the proposed countermeasures for the top 10 HIN locations and 2) to share their personal prioritization of these locations and of the identified systemic safety issues.

The public was given two weeks to watch the video and share their feedback through a SurveyMonkey feedback form. The Steering Committee received 34 responses.

The comments were used to modify the countermeasures, and the public's prioritization helped to inform plan implementation approaches.

Note: In addition to being incorporated into the Safety Action Plan, written comments were also shared with both the Steering Committee and Crawford County, for future reference.

Summary of Online Survey Feedback

Figure 3 –Survey Results – Number of Comments Received for each Top 10 HIN Location

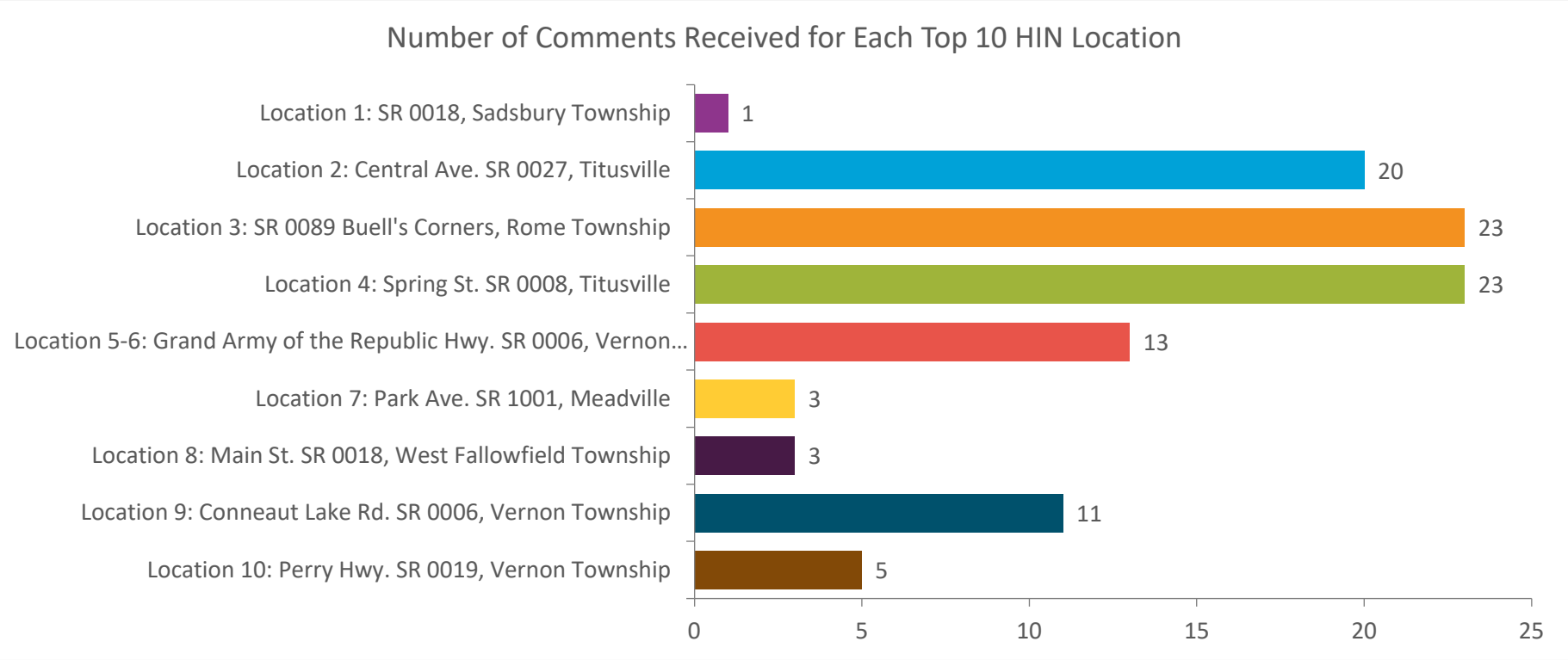


Figure 4 –Survey Results -Top 10 HIN Location Prioritization

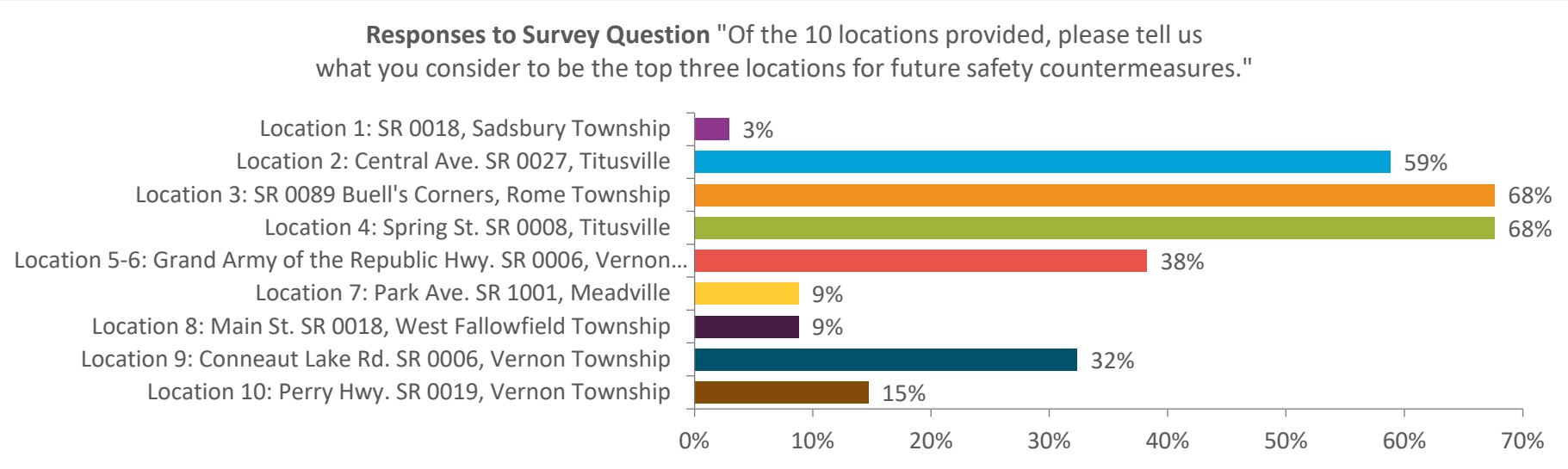
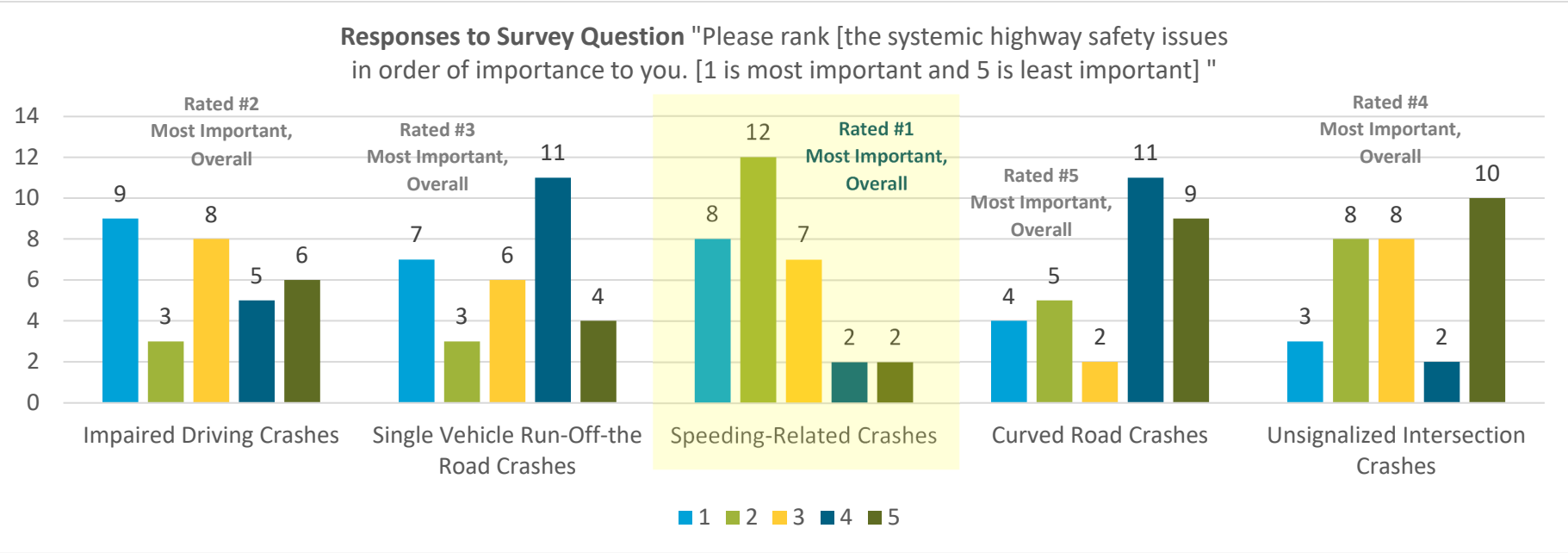


Figure 5 –Survey Results - Systemic Issues Location Prioritization



Safety Analysis

A comprehensive analysis of current and historical safety conditions was conducted, including:

- Reviewing and summarizing historical crash data,
- Identifying high-injury corridors and systemic trends, and
- Evaluating high priority roadway segments to identify contributing factors.

This safety analysis excluded interstate roadways, as they are not within the scope of this SAP.

Historical Crash Trends

The historical crash data for all non-interstate roadways within Crawford County were evaluated to better understand the crash locations, severity, types, and contributing factors.

Crash Data Source

The primary data source used for this evaluation was the PennDOT Pennsylvania Crash Information Tool (PCIT) public crash records database. This tool allows users to perform custom data searches and develop customized crash data reports. Only "reportable" crash data was evaluated, due to data accessibility and consistency.

The PCIT data can be filtered by geographic boundaries and by various crash characteristics. The filtered crash results can be summarized as points on a map and as data tables.

The PCIT crash data was pulled for all non-interstate roadways in Crawford County between 2019 and 2023 (the most current PCIT data available). *Note: this data includes both local and state roadways.*

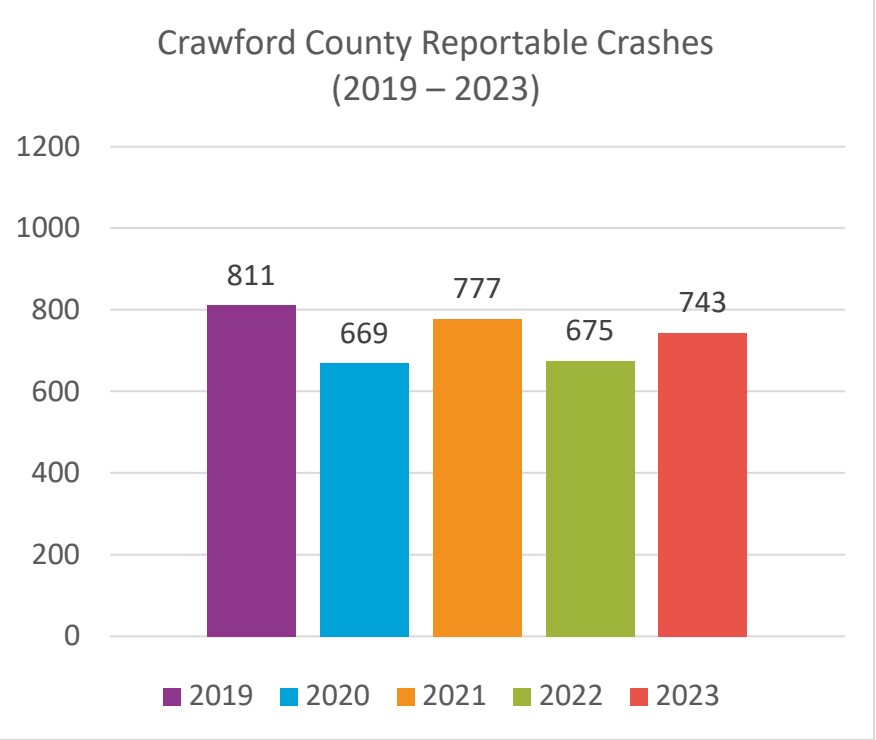
Crash Numbers

3,675 crashes
in Crawford County from 2019 – 2023
(non-interstate)

Over the last five years (between 2019 and 2023), Crawford County experienced a total of 3,675 crashes on non-interstate roadways.

Within the world of transportation safety, it is normal for the number of crashes to fluctuate over time. Looking at the year-by-year trends shown in Figure 6 below, the overall number of crashes in Crawford County has remained relatively constant (if not trending slightly downward).

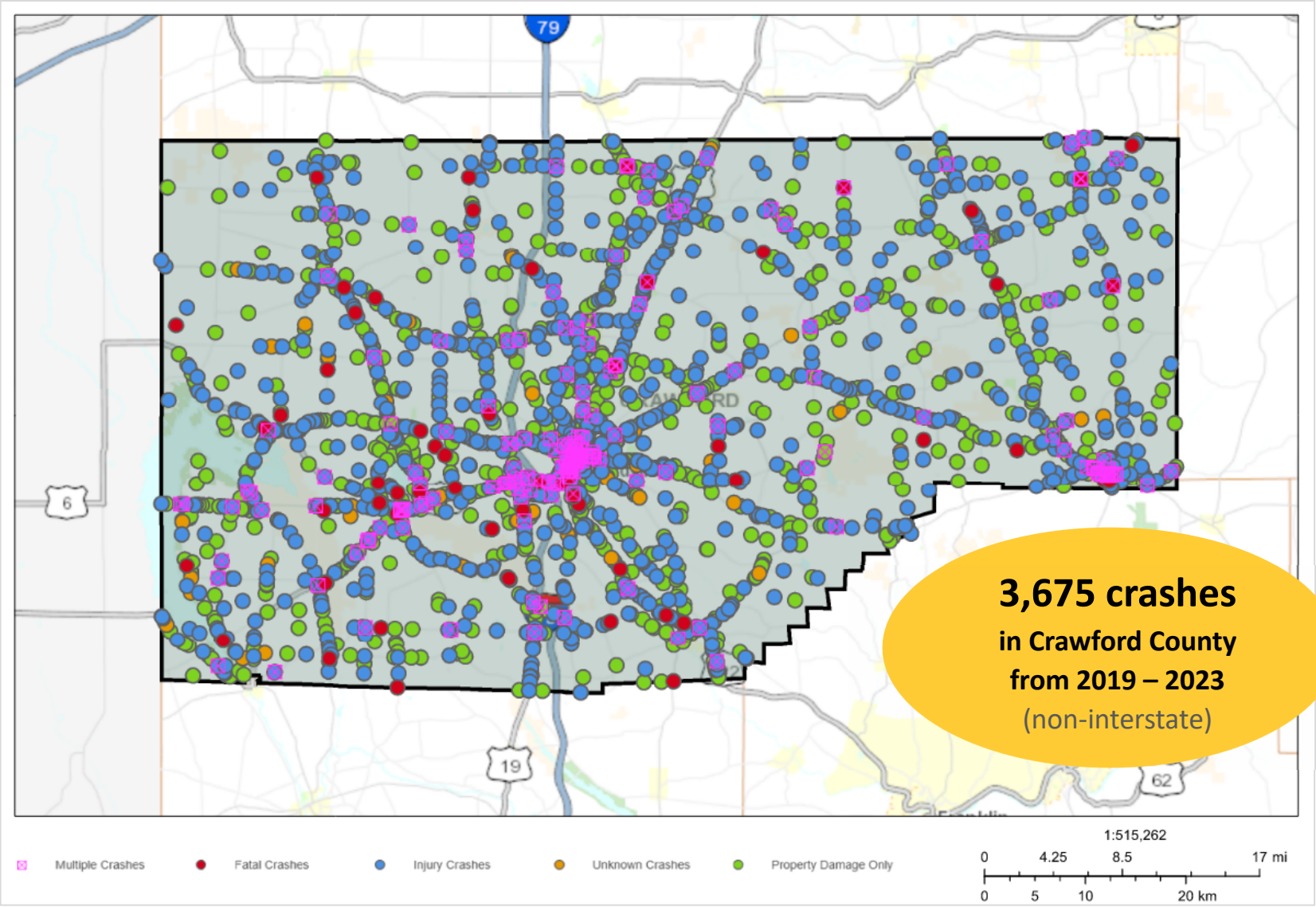
Figure 6 – Crawford County Reportable Crashes Over Time (2019 – 2023)



Crash Locations

The Crawford County non-interstate crashes over the last five years (between 2019 and 2023) are distributed across the county, however they concentrate along regionally significant highways and arterial roadways, (Figure 7).

Figure 7 – Geospatial Plot of Crawford County Reportable Crashes (2019 – 2023)



Crash Severity

Within crash reporting systems, crash severity is assigned to each crash based on the most serious injury involved in the crash. (i.e., if there is more than one injury resulting from a crash, then the most serious injury drives the crash severity designation).

The crash severity breakdown for the 3,675 non-interstate crashes over the last five years is shown in Figure 8 below.

Fatal & Serious Injury Crashes

Fatalities and serious injuries represent a combined 5.9% of non-interstate crashes over the last five years. To put this in perspective, this represents nearly 220 crashes - that's nearly 220 individuals within Crawford County who were seriously injured or killed on the County's non-interstate roadways.

Similar to the overall crashes, the fatal and serious injury crashes have fluctuated over time, as shown in Figure 9.

Figure 8 – Crawford County Crash Severity Breakdown - Percentages (2019 – 2023)

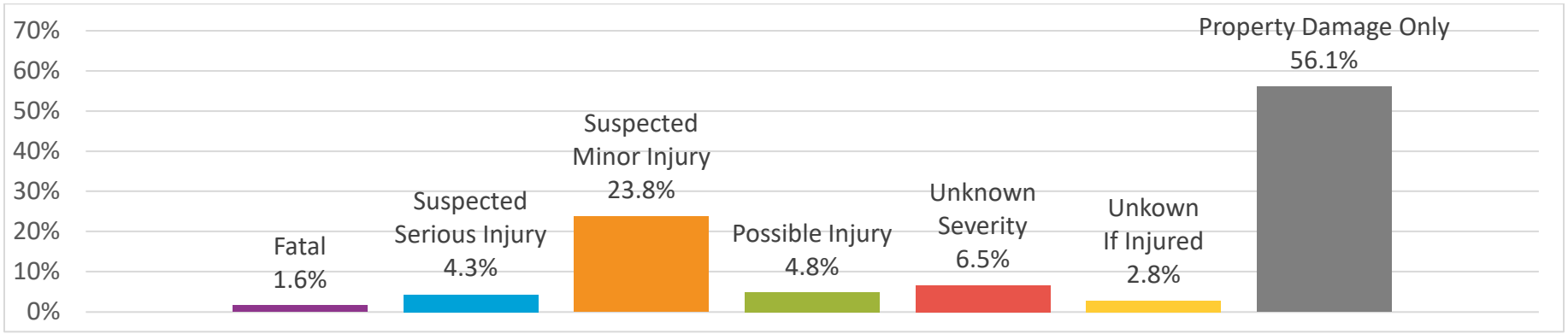
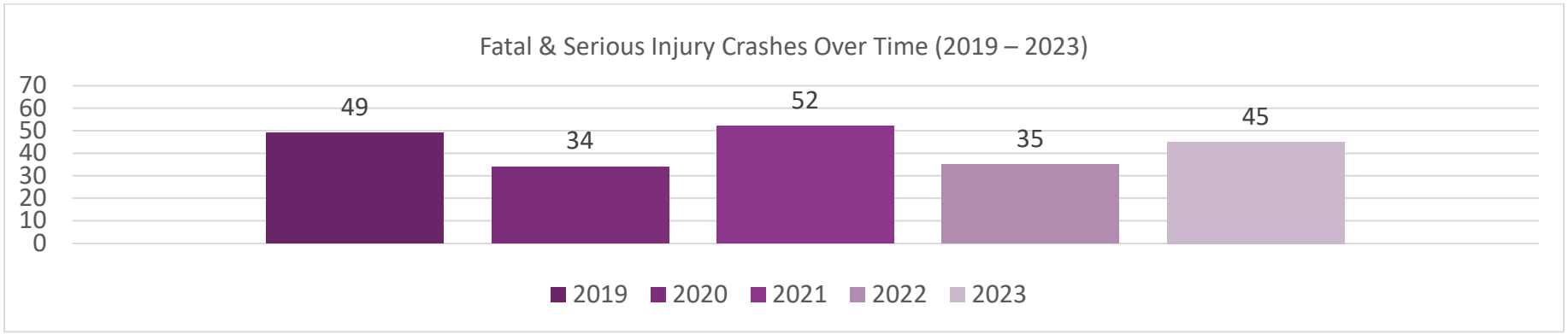


*Figure 9 – Crawford County **Fatal & Serious Injury Crashes** – Over Time (2019 – 2023)*



Crash Types

The crash type breakdown for the 3,675 non-interstate crashes over the last five years is shown in Figure 10.

The most common crash type, overall, is "Hit Fixed Object" crashes, which occur when a vehicle strikes a guiderail, tree, utility pole, etc. Run-off-the-road crashes are one crash sub-type underneath "Hit Fixed Object" crashes (although these crashes can also be classified as "Non-Collision" crashes if no object was struck).

The second most common crash type is "Angle" crashes, which involve one vehicle striking another at an angle and can occur at intersections, driveways, during lane changes, and other contexts.

Fatal & Serious Injury Crashes

For fatal and serious injury crashes, the top two crash types are also "Hit Fixed Object" and "Angle", as shown in Figure 11.

There are three crash types that are over-represented in the fatal and serious injury crash data (i.e. they have higher percentages for fatal and serious injury crashes than they do for all crash types):

- Non-Collision crashes (8.3% vs. 4.4%)
- Head On crashes (8.8% vs. 4.2%)
- Non-Motorist crashes (7.8% vs. 1.9%)

The largest difference is for non-motorist crashes (7.8% vs. 1.9%). Non-motorists (pedestrians) are commonly defined as "Vulnerable Road Users", as they are more likely to be injured in a crash.

Figure 10 – Crawford County Crash Types Breakdown - Percentages (2019 – 2023)

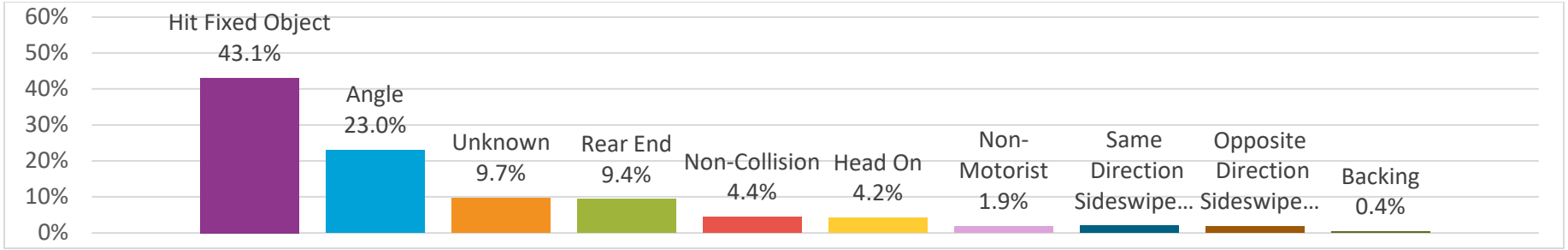
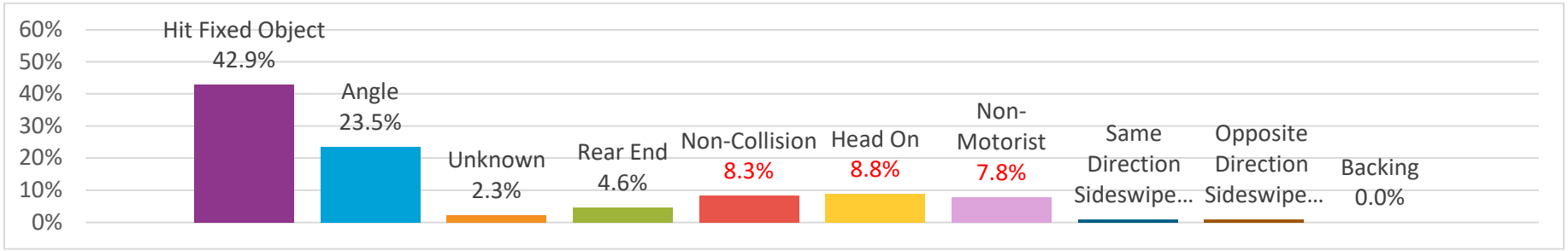


*Figure 11 – Crawford County Crash Types Breakdown - Percentages (2019 – 2023) - **for Fatal & Serious Injury Crashes***



Vehicle Types

The vehicle type breakdown for the 3,675 non-interstate crashes over the last five years is shown in Figure 12 below.

The top three most common vehicle types involved in crashes are as follows:

- Automobile
- SUV
- Small Truck

Fatal & Serious Injury Crashes

For fatal and serious injury crashes, there are five vehicle types that are over-represented in the fatal and serious injury crash data (i.e. they have higher percentages for fatal and serious injury crashes than they do for all crash types):

- Motorcycles (13.7% vs. 3.8%)
- ATV (4.7% vs. 0.9%)
- Horse & Buggy (1.3% vs. 0.5%)
- Bicyclist (0.9% vs. 0.4%)
- Others (3.5% vs. 1.1%)

The largest difference is for motorcycles, (13.8% vs. 3.8%). Motorcyclists are relatively more exposed to crash impact forces than drivers of other vehicle types.

Figure 12 – Crawford County Crashes - Vehicle Types Breakdown - Percentages (2019 – 2023)

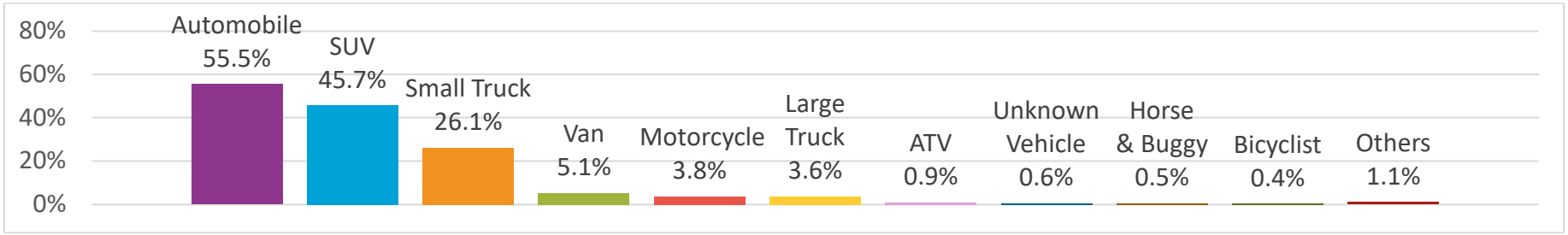
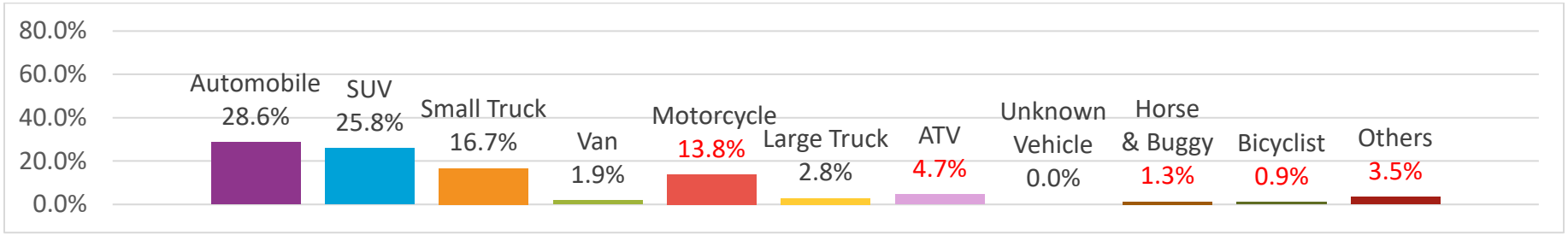


*Figure 13 – Crawford County Vehicle Types Breakdown - Percentages (2019 – 2023) – **for Fatal & Serious Injury Crashes***



Contributing Factors

There are many different factors that may contribute to a crash. A summary of some key county-wide contributing factors is provided below:

Figure 14 – Crawford County Crashes – Contributing Factors Breakdown - Percentages (2019 – 2023)

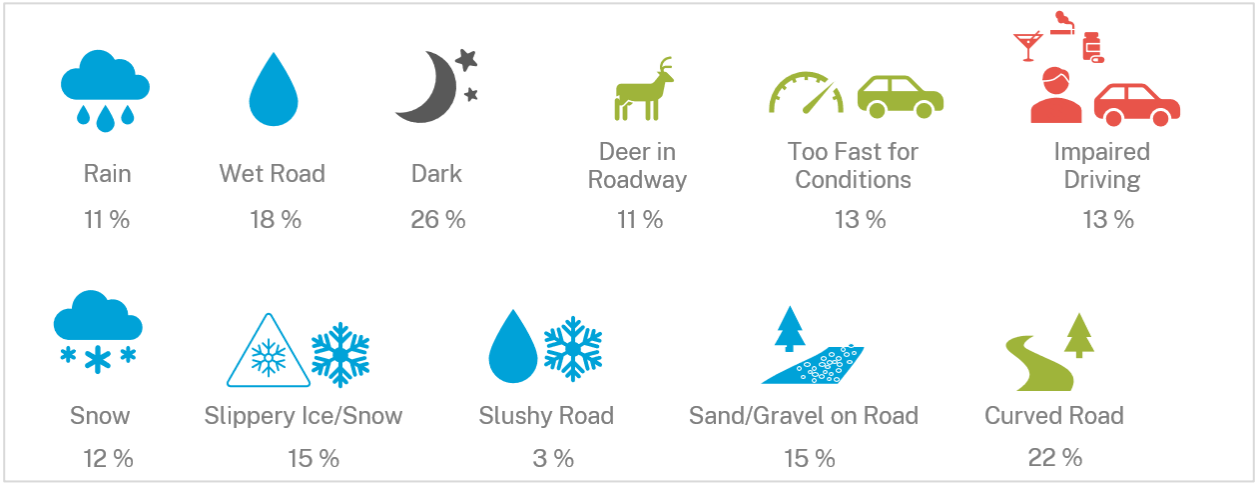
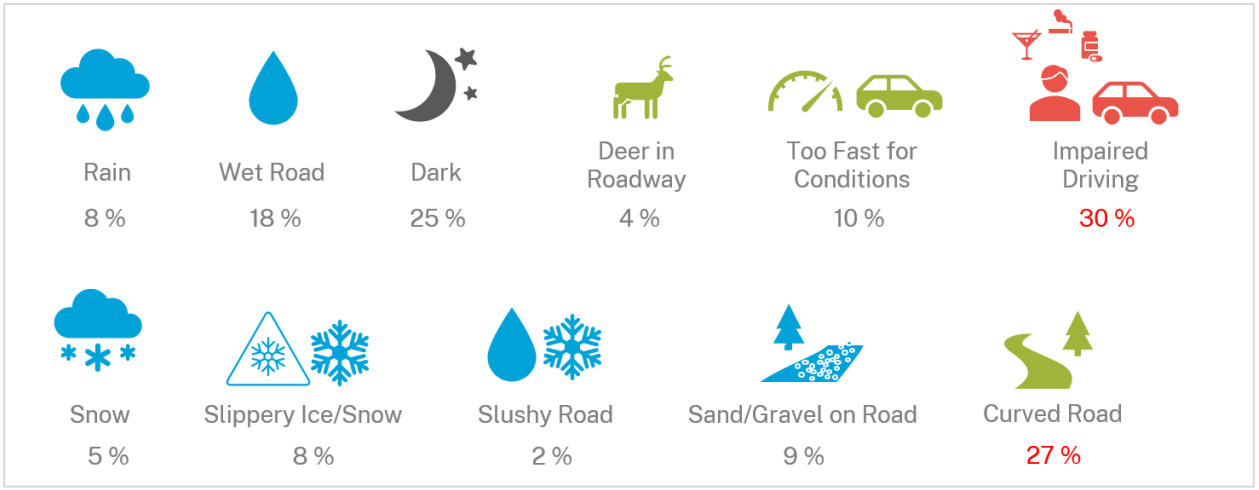


*Figure 15 – Crawford County Crashes – Contributing Factors Breakdown - Percentages (2019 – 2023) – **for Fatal & Serious Injury Crashes***



High Injury Network (HIN)

A High Injury Network (HIN) is a small proportion of all roads in a region that account for a large proportion of the fatal and serious injury crashes.

High Injury Networks are used to help to focus resources on the areas that may have the most impact in reducing injury crashes where vulnerable road users are involved.

HIN Scoring

Each roadway segment was assigned a numerical score. This score is determined based on the number of historical crashes on the roadway segment from 2019 to 2023 and the severity of those crashes. The total score was then weighted based on the vulnerability of those involved in the crashes.

Crash Severity Weighting:

- Fatal crashes are weighted most heavily, then serious injury crashes, then property-damage-only (PDO) crashes.
- The specific factors for these weights are based on the relative comprehensive costs to the individual and society.

Vulnerability Weighting:

- Vulnerable Road User (VRU) crashes (that involved bicyclists or pedestrians) were weighted more heavily. *Note: PennDOT and FHWA consider bicyclists and pedestrians to be VRUs.*
- Crashes that involved horse & buggy were also weighted more heavily. *Note: For the purposes of the federally-funded Highway Safety Improvement Plan (HSIP), horses & buggies are not classified as VRUs.*

Network Development

Once the HIN scores have been assigned to each road segment, then a transportation safety engineer reviews these segment scores and identifies which roadway segments to include in the HIN.

The goal is to identify not just disparate roadway corridors or roadway segment locations, but a connected network of roadways that represent a relatively small proportion of the overall roadway miles, but a large proportion of the fatal and serious injury crashes.

Note 1: the full list of HIN scores for all roadway segments across the county has been provided to Crawford County.

Note 2: Because the federally-funded HSIP does not classify horses & buggies as VRUs, the full list of HIN scores without the horse & buggy weighting has also been provided to Crawford County.

Network Map

Crawford County's resulting HIN Map is shown on the following page in Figure 16. The online GIS map URL is: https://tmp-map.s3.amazonaws.com/ss4a/crawford-sap.html

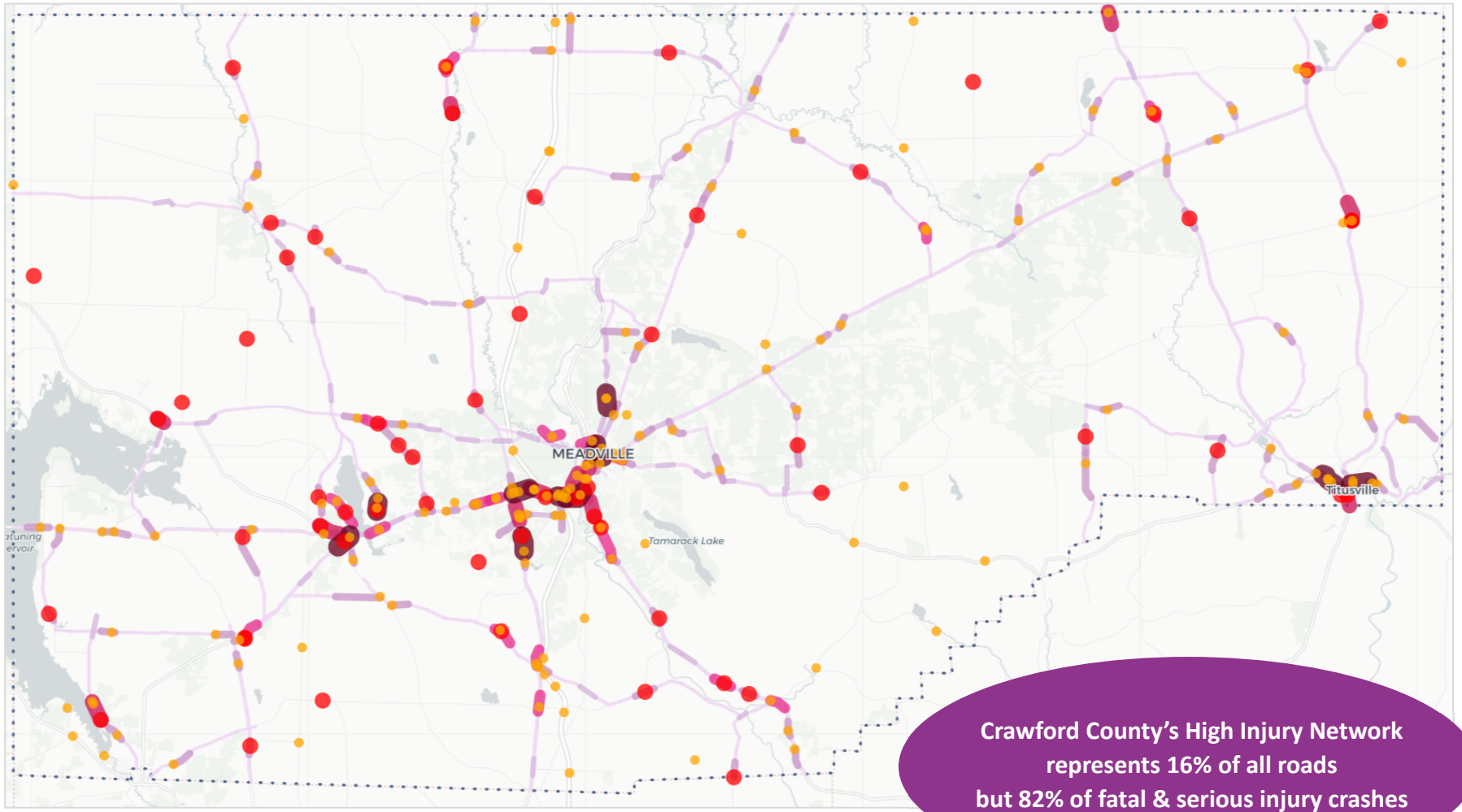
In the High Injury Network Map, the colors of the roadway segments represent the relative HIN scores:

- *very thin & light purple = relatively smaller HIN score*
- *thick & purple = relatively moderate HIN score*
- *thick & red = relatively high HIN score*
- *very thick & maroon = relatively very high HIN score*

The map also shows the fatal crashes (red dots) and serious injury crashes (orange dots).

$$HIN\ Score = (\#fatal\ crashes * 286 + \#severe\ injury\ crashes * 17.5 + \#pdo\ crashes * 1) * (3 * (\#bikeped\ crashes + \#horsebuggy\ crashes))$$

Figure 16 – High Injury Network (HIN)



Crawford County's High Injury Network represents 16% of all roads but 82% of fatal & serious injury crashes

Legend:

- *Fatal Crash*
- *Serious Injury Crash*

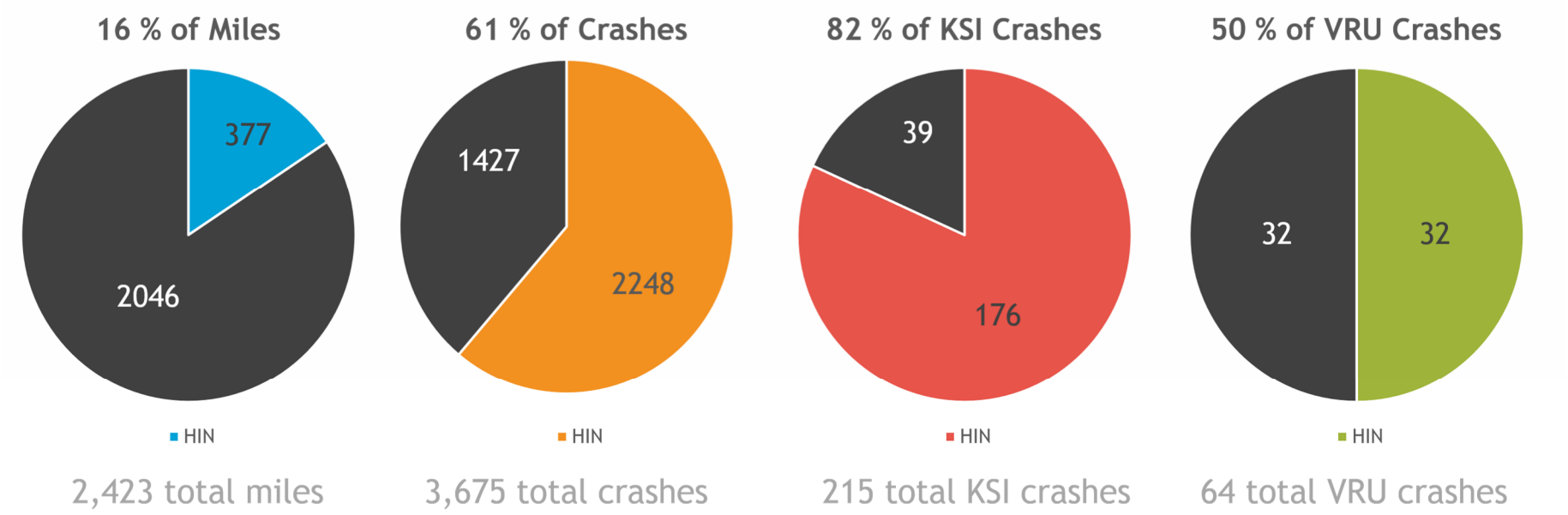
HIN Statistics

The Crawford County HIN represents 16% of all roadway miles, but 61% of all crashes, 82% of the fatal and serious injury crashes, and 50% of the vulnerable road user crashes (bicyclists and pedestrians).

Essentially, the roadways included in the network are over-represented in the crash data. If county organizations were to focus safety efforts on the roadways in the network, they would be able to hopefully address an outsized portion of the county's transportation safety issues.

Figure 17 – Typical Rural Roadway Context in Crawford County

Figure 18 – High Injury Network Map Statistics



HIN Top 10 Locations List

The roadway segments with the ten highest HIN scores across the county are summarized in Table 1 and are shown, overlaid on the High Injury Network map, in Figure 19 on the following page.

Note: the list of top 20 HIN locations is included in the Appendix and the full list of HIN scores for all roadway segments across the county has been provided to Crawford County.

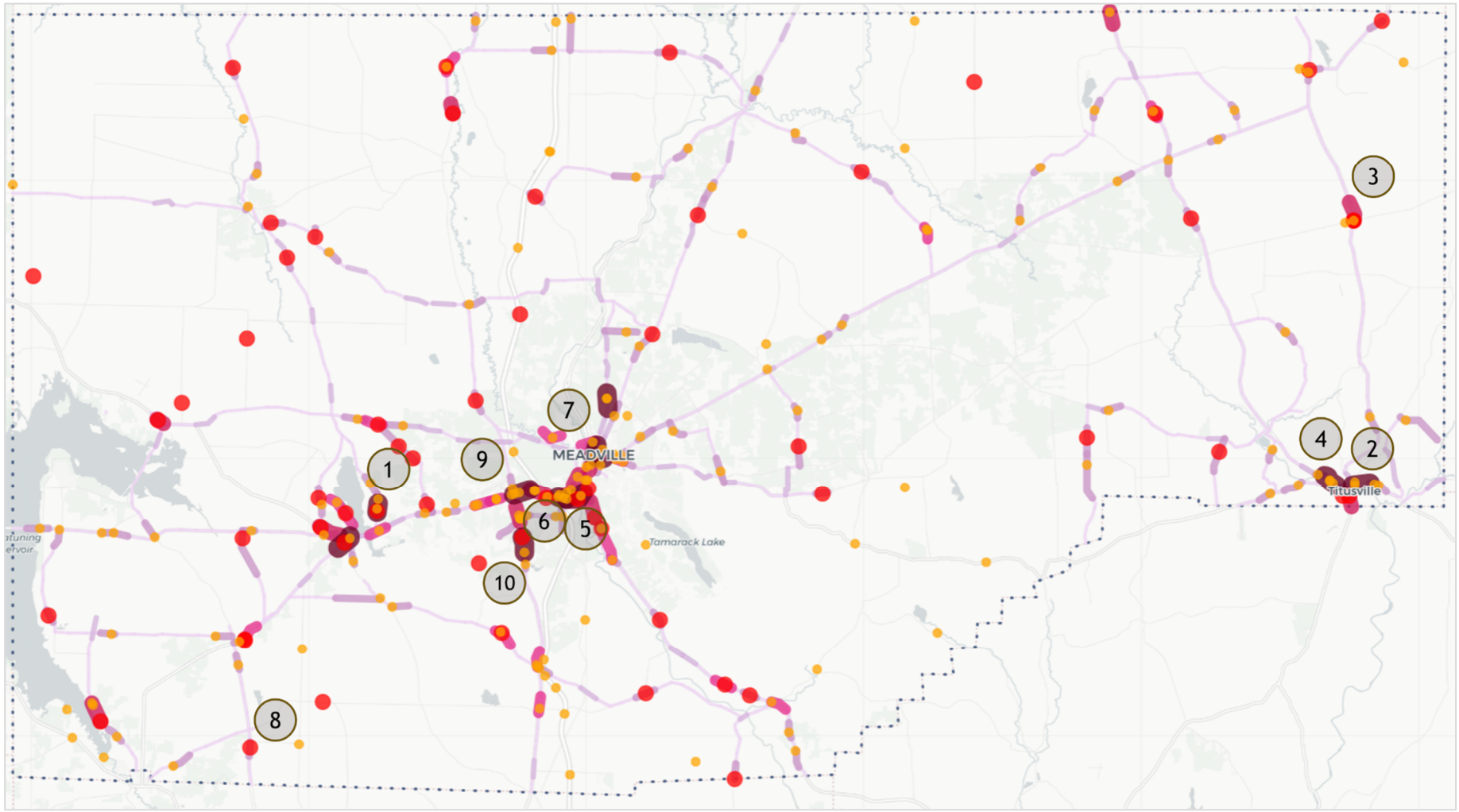
As part of this SAP, these top 10 locations were evaluated for specific safety countermeasures. The list of proposed countermeasures for each location is provided in the Appendix *(Refer to the Programs & Initiatives section of this plan for more details on how these projects will move forward).*

Table 1 – High Injury Network Top 10 Locations List

Rank	Location	Road Name	Segment Extents	Length (Miles)	KSI* Crashes	VRU** Crashes	Horse & Buggy
1	Conneaut Lake	SR 18	Shady Ave. and Edgeview Ave.	0.3	2	2	0
2	Titusville	SR 27 (Central Ave.)	Diamond St. and Caldwell St.	0.6	1	3	0
3	Buell's Corners	SR 89	Fairview Rd. and Buells Corners Rd.	0.6	3	0	1
4	Titusville	SR 8 (Spring St.)	Schwartz Lane and West Central Ave.	0.5	3	1	0
5	Kerrtown	SR 6 EB (Smock Highway)	Mercer Pike and French Creek Bridge	0.7	2	1	0
6	Kerrtown	SR 6 EB (Smock Highway	Pennsylvania Ave. and Mercer Pike	0.3	2	1	0
7	Meadville	SR 1001 (Park Ave.)	Baldwin St. and North St.	0.3	1	1	0
8	Adamsville	SR 18 (Main St.)	Atlantic Rd. and Salem Harwood	0.5	1	0	2
9	Vernon Twp.	SR 6 EB (Conneaut Lake Rd.)	Perry Highway and Dawn Drive	0.6	2	1	0
10	Vernon Twp.	SR 19 (Perry Hwy.)	Krider Rd./Bailey Rd. and Ridge Drive	0.5	2	1	0

**KSI = Fatal and Serious Injury // **VRU = Vulnerable Road User*

Figure 19 – High Injury Network Map with Top 10 Locations



Legend:

- *Fatal Crash*
- *Serious Injury Crash*

Network Screening

In addition to the High Injury Network, another safety analysis source is the PennDOT District 1-0 Network Screening.

Overview

PennDOT has pursued statewide highway safety network screening efforts to provide PennDOT's Engineering Districts with robust data to support Highway Safety Improvement Program (HSIP) project selection and prioritization.

Network screening data uses both predictive crash data and historical crash data to assign a "score" to each roadway segment and intersection to convey whether the segment is seeing more crashes than expected based on roadway and traffic characteristics.

Application for SAP

Based on the predictive vs. historical vs. expected analysis approach, the networking screening results provide data that complements the HIN development very effectively.

While the HIN tends to be biased toward more urbanized areas (by weighing vulnerable road users more heavily and because urban roadway segments see more concentrated crash patterns over time than rural areas), the network screening results provide a means to calculate the urban scores based on the unique urban characteristics and the rural scores based on the unique rural characteristics. This allows the "scores" for roadway segments and intersections within both contexts to be more easily compared. This will also be particularly relevant when considering any systemic trends and countermeasures.

The county's networking screening list/profiles will be shared with the Steering Committee and relevant planning partners, as needed, to support collaboration on these other county safety needs.

Figure 20 – Townhall Road, East Fairfield Township

Systemic Safety Trends

In addition to the location-based high-injury network locations, the County has identified systemic safety issues (Table 2). These systemic trends represent issues that are present across the county's transportation system, not limited to a specific location.

Table 2 – Summary of Systemic Safety Trends

Impaired Driving Crashes	Account for **13%** of all non-interstate crashes (and **30%** of the fatal & serious injury crashes).
Single Vehicle Run-Off-the-Road Crashes	Account for **50%** of all non-interstate crashes (and **53%** of the fatal & serious injury crashes).
Speeding-Related Crashes	Account for **23%** of all non-interstate crashes (and **27%** of the fatal & serious injury crashes).
Curved Road Crashes (Hit Fixed Object & Head On)	Account for **20%** of all non-interstate crashes (and **24%** of the fatal & serious injury crashes).
Unsignalized Intersection Crashes (e.g. Running Stop Sign, Proceed Without Clearance, and Improper/ Careless Turn)	Account for **23%** of all non-interstate crashes (and **22%** of the fatal & serious injury crashes).

Impaired Driving Crashes

Impaired Driving is a significant transportation safety issue in Crawford County. They represent 30% of the fatal and serious injury non-interstate crashes. The breakdown for types of impairment is shown in Table 3 on the right.

Alcohol-Related Crashes Higher than Statewide Averages

Statewide, alcohol-related crashes (with at least one driver or pedestrian with reported or suspected alcohol use) accounted for 7% of total crashes in 2023. In Crawford County, alcohol-related crashes accounted for 11% of total crashes over the last five years.

Statewide, alcohol-related crash fatalities accounted for 25% of total crash fatalities in 2023. In Crawford County, alcohol-related crash fatalities accounted for 29% of total crash fatalities over the last five years.

Table 3 – Summary of Impaired Driving Statistics

Impairment Type	All Crashes	Fatal/Serious
Drinking Driver	10 %	29 %
Drugged Driver	4 %	23 %
Marijuana Drugged Driver	0.8 %	15 %
Fatigued/Asleep Driver	3 %	4 %

Strategies for Addressing Safety Issues

There are a variety of recommended strategies that can be leveraged: existing plans, policy changes, programs & initiatives, infrastructure & engineering, and plan implementation.

Existing Plans

In addition to efforts at the federal level, PennDOT, the Northwest Commission, and Crawford County are working to develop plans, policies, and processes to address roadway safety issues. Below are a few examples that are impacting or will impact Crawford County.

Local Plans

Crawford Inspired

The 2024 County Comprehensive Plan, known as "Crawford Inspired", presents a data-driven, community-focused, forward-looking vision for the next decade. Crawford Inspired addresses the infrastructure and safety concerns related to the county's roads, bridges, and sidewalks, which were developed into one of the plan's primary goals: "Prosperity." Given the county's higher-than-average roadway fatalities, it is imperative to invest in public health across the county.

The plan includes policies focused on investing in community initiatives, specifically public health enhancements by implementing complete streets and active transportation strategies to mitigate serious injuries among pedestrians, cyclists, buggies, and drivers. Additionally, the plan seeks to leverage county resources to promote safe, affordable, and accessible travel within and between communities.

Meadville Active Transportation Plan

The Meadville Active Transportation Plan is an ongoing effort by the City of Meadville to improve Active Transportation throughout the City. Upon completion of the ATP, it is recommended that the City of Meadville coordinate with Crawford County Planning staff to identify and implement any projects that are identified in both the Safety Action Plan and ATP.

Ernst Trail Connections Feasibility Study

The feasibility study examines barriers that would need to be addressed to accommodate active transportation modes for commuting and recreational purposes and proposes conceptual alternatives to provide a few different options for the trail extension improvements. The study will allow for trail groups, counties, and municipalities to pursue grant funding and assistance to complete the proposed alternatives and improvements.

Although the study found the roadways currently are insufficient, there is potential if roadway improvements are made. In addition, ownership from Meadville/Vernon to Conneaut Lake has been secured, and the trail extension is underway. The trail group has proposed building a tunnel under US 19 to prevent conflicts and accidents between pedestrians/bicyclists and vehicles.

PA Route 27 Corridor Study

The study of the PA 27 corridor between the City of Meadville and the City of Titusville was developed in response to planning initiatives conducted by the Northwest Commission that identified various improvement needs within the study corridor related to safety and mobility. Prior planning efforts identified general areas of concern, but a more detailed level of analysis was required to suggest specific projects for the Transportation Improvement Program (TIP) and other funding sources. The overall goal of the study was to help the Northwest Commission and Crawford County identify capital project needs along PA 27.

The planning process identified 12 recommendations ranging from improving sight distance at several intersections, adding climbing lanes, and addressing crash clusters at three curves along the corridor. Now that the plan has been completed, the Northwest Commission continues to coordinate with Crawford County Planning and PennDOT to program the improvements identified.

Figure 21 – Bicycle Parking in Titusville

North Main Street Safety Improvement Study

This 2017 PennDOT study provides a brief description of existing conditions, safety assessment of potential improvements and locally preferred alternatives with a key focus on improving pedestrian safety and pedestrian-vehicle interactions along North Main Street (SR 0086) in Meadville. Prior to the study, PennDOT and the City of Meadville installed high-visibility crosswalks and additional pedestrian signing to enhance pedestrian safety. Based on historic crash trends, adjacent land uses, and discussions with multiple stakeholders, pedestrian safety is a major focal point of the project; therefore, most of the improvements that were considered focus on pedestrian safety.

In addition to the preferred short- and long-term alternatives that were identified in the study, immediate improvements were developed to improve safety along North Main Street in 2017. The study recommended that the short-term alternatives be implemented in three phases, as funding becomes available through 2027. The project phasing is interchangeable, but the improvements in the northern section of the corridor are expected to be the most impactful for changing near-term driver and pedestrian behavior.

Route 6/322/19 Study

The transportation and land use study was designed to promote safety and efficiency on the highway corridor that includes US 6, US 322, US 19, and SR 98 in Vernon Township. Proper land use and transportation planning will provide guidance to developers and improve safety and mobility, while preventing deficiencies due to an expected increased volume of traffic along the corridor.

As part of the plan, community planning, transportation, and multimodal improvement alternatives were developed to meet the project's goals and objectives. The improvement alternatives focused on addressing the main areas of concern that were identified throughout the planning process, including traffic flow, safety, and access for all modes of travel.

Regional Plans

Northwest RPO LRTP

The Northwest Rural Planning Organization's (RPO) most recent Long-Range Transportation Plan (LRTP) was adopted in March 2024. The plan includes strategies related to improving safety for non-motorized modes of transportation through PennDOT Connects and the project development processes, as well as evaluating highway crash cluster areas by accessing crash data to identify roadway corridors and intersections in need of safety improvements.

Identifying these locations through a data-driven approach can assist the County in identifying and recommending candidate Highway Safety Improvement Program (HSIP) projects. As an important first step in this charge, the RPO collaborated with Crawford County and PennDOT in administering the funding needed for the development of this Action Plan.

Northwest RPO Highway Safety Manual-Based Project Profiles

The Northwest RPO also developed Highway Safety Manual-based project profiles with a goal to advance the RPO's ability to incorporate explicit, quantitative considerations of safety into its planning and project development.

Each of the profiles provided a brief overview of the intersection, a 5-year crash analysis (2019-2023), and potential improvement considerations at each intersection. Two of these safety profiles were developed for Crawford County: 28th Division Highway & Adams Street / PA 173 and Perry Highway & Car Hill Road / Mullen Road.

PennDOT District 1-0 Highway Safety Plan (DHSP)

The District Highway Safety Plan (DHSP) is a resource that provides key information to facilitate decision-making based on safety and risk management strategies and principles. It summarizes the district's safety and risk management emphasis areas, its safety analysis activities and planning efforts, and its district safety improvement projects. Crawford County should work with PennDOT District 1-0 to identify overlapping opportunities.

PennDOT District 1-0 Highway Safety Network Screening

PennDOT has pursued statewide highway safety network screening efforts to provide PennDOT districts with robust data to support safety decisions. Network screening data uses both predictive crash data and historical crash data to assign a "score" to each roadway segment and intersection to convey whether the segment is seeing more crashes than expected based on the roadway characteristics. The county's networking screening list/profiles will be shared with the Steering Committee and relevant planning partners, as needed, to support collaboration on these other county safety needs.

Figure 22 – Roundabout in Saegertown

Statewide Plans

PennDOT Strategic Highway Safety Plan
In 2022, PennDOT updated its Strategic Highway Safety Plan (SHSP) in collaboration with federal, state, and regional partners. A state's SHSP is a critical requirement for participating in the federal Highway Safety Improvement Program. HSIP provides funding for safety projects with the goal of reducing fatalities and serious injuries on public roads through 2027.

The plan targets priority emphasis areas and safety focus areas that have the most influence on improving highway safety statewide. Among the state's priority emphasis areas include:

- **Pedestrian Safety –** Walking is the most fundamental form of transportation used by people of all ages and physical abilities. While the total number of fatalities has been trending down in Pennsylvania, pedestrian fatalities have been marginally increasing and account for 14 percent of the statewide fatalities each year. Active Transportation is on the rise and is being promoted across all areas of the state, from urban centers to small rural towns. This has resulted in increasing pedestrian activity, making it more likely to have collisions with motor vehicles.
- **Lane Departure Crashes –** Pennsylvania sustains more fatalities and serious injuries each year due to vehicles departing their travel lane compared to any other crash type. A lane departure crash occurs when a vehicle crosses the edge line or center line of a roadway. Two-thirds of all fatal and serious injury lane departures include a collision with a fixed object, most commonly, trees, utility poles, embankments, and guiderails.
- **Impaired Driving-** Crashes involving an individual driving under the influence of drugs or alcohol have been a top concern in PA since the first edition of the SHSP in 2006. While fatalities involving alcohol have been decreasing over the past 15 years, drug-related fatalities have increased in recent years. Alcohol, marijuana, opioids, and other drugs impair the ability to drive due to slow coordination, judgment, and reaction times. Driving while impaired by any substance (legal or illegal) puts all roadway users in harm's way and continues to account for approximately 1 of every 3 roadway fatalities.

PennDOT Vulnerable Road User Safety Assessment Report:
PennDOT also recently completed its Vulnerable Road User (VRU) Safety Assessment Report. This assessment is required under the federal Infrastructure Investment and Jobs Act (IIJA) and has been added to the 2022 SHSP as an appendix. The assessment developed a plan for improving pedestrian and cyclists' safety through targeted and system improvements.

Figure 23 – Pedestrians in Meadville

Policy Changes

To build on the commitment established by the County Commissioners in June 2025 to eliminate roadway fatalities and serious injuries by 2035, the project team proposes recommendations on a variety of new policies and process changes to help eliminate fatal and serious injury crashes. These policies can be either standalone or incorporated into other plans and guidelines.

Crawford County Complete Streets Policy: Complete Streets refers to the principle of designing streets with all road users (pedestrians, bicyclists, transit users, and drivers) in mind. As identified in Crawford Inspired, the County should consider developing and adopting a complete streets policy and design standards that include the following:

- **Design Standards:** Complete streets design treatments (i.e., safety countermeasures) and design treatment suitability matrix for different street types, and ensure compliance with modern ADA (Americans with Disabilities Act) requirements.
- **Performance measures:** Measures that can gauge the success of the Complete Streets Policy. These performance measures should align with the annual outcomes and implementation measures outlined in the annual performance report discussed in the Progress & Transparency section.
- **Process:** Formalizing the process for coordination between the County and local municipalities on roadway improvements and alignment with County plans, along with collaboration with stakeholders.

Incorporate Complete Streets Design Standards into routine maintenance and improvement projects: Crawford County should work with the Northwest RPO and PennDOT to incorporate Complete Street Design Principles into future road repair and improvement projects where feasible. For example, an intersection improvement in Meadville could be a prime opportunity to install bump-outs.

Crawford County Active Transportation Policy: Active transportation remains an essential priority throughout the commonwealth to ensure safe transportation options for all individuals. Crawford County should consider incorporating a countywide active transportation policy to mitigate conflicts between vehicles and users of alternative modes of transportation.

Crawford County Access Management Policy: Access management is the coordinated planning, regulation, and design of access between roadways and land development. Its goal is to promote the efficient and safe movement of people and goods by reducing conflicts on the roadway system with other modes of travel. Without access management policies, traffic safety and operations can deteriorate rapidly. In coordination with PennDOT, the Northwest RPO, and local municipalities, Crawford County should work to incorporate access management measures into the land development process to ensure roadways continue to be safe for all users and provide good mobility. Potential resources include the PennDOT Access Management Model Ordinances Handbook (2006) and the PA Governor's Center for Local Government Services has created an Access Management Fact Sheet (2019).

Efforts to increase awareness and connect Land Use Planning to Transportation Planning: Although crash data does not specifically identify conflicts between land use and transportation planning, trends have been developed identifying specific land use trends that contribute to certain crash types. For example, having bars and restaurants outside of downtown areas has forced individuals to drive to and from bars, which has resulted in Impaired driving crashes on the county's more rural roadways. Proper coordination to better concentrate these types of uses within Meadville and the county's boroughs could help reduce the number of crashes. The Crawford County Planning Department should consider providing additional support to municipalities to better align land use planning with the transportation process that is taking place at the county and the Northwest RPO

Programs & Initiatives

In addition to these projects and systemic strategies, the following programs and initiatives will help to improve safety.

Impaired Driving

Pennsylvania has a statewide task force that has developed a comprehensive Strategic Plan to Reduce Impaired Driving.

Given that impaired driving crashes represent 30% of fatal and serious injury crashes each year and engineering countermeasures are only so effective, the following programs and initiatives are also recommended.

Intervention Programs

Sober Ride Home Program: With impaired driving crashes resulting in 13% of all non-interstate crashes and 31% of Fatal or serious injury crashes, the Sober Ride Home Program would deliver an easily accessible and cost-effective rideshare alternative to driving under the influence, targeting patrons of businesses serving alcoholic beverages.

A Sober Ride Home Program would partner with established transportation network companies (TNCs) to offer on-demand transportation services during peak times when impaired driving crashes are occurring in a specified service area, targeting individuals who have consumed alcohol.

Sober Ride Home would provide users with easy access to a ride home, greatly increasing the user's personal safety and the overall safety of all community members and transportation system users, while decreasing the occurrence of DUI-related crashes and fatalities.

Educational Programs

Educational programs and initiatives are campaigns, awareness efforts, or events focused on changing behaviors to prevent or mitigate roadway crashes.

There are several educational programs that could be promoted by organizations throughout Crawford County, which include:

Community Traffic Safety Projects is a program that supports the State Highway Safety Office by generating earned media, coordinating mobilization, providing police outreach and training, leading educational programs for schools and the public related to impaired driving, while providing outreach on other safety focus areas.

PA Students Against Destructive Decisions mission is to empower young people to successfully confront the risks and pressures that they face, including issues of underage drinking, substance use and abuse, and impaired driving. There are currently over 650 chapters of Students Against Destructive Decisions throughout the state of Pennsylvania. The program website provides more information: https://www.sadd.org/pennsylvania. Crawford County staff should promote and share information about Students Against Destructive Decisions to encourage participation from youth across the County.

Funding Opportunities

PennDOT Behavioral Highway Safety Grants is a program that provides competitive grants to support planning, infrastructure, behavioral, and operational initiatives to prevent death and serious injuries on roads involving all roadway users, including bicyclists and pedestrians. Crawford County should work with its local municipal partners and non-profit organizations to pursue grant opportunities that support initiatives to prevent roadway fatalities or serious injuries. The program website provides more information: https://www.pa.gov/services/penndot/apply-for-penndot-behavioral-highway-safety-grants.html.

Enforcement Initiatives

Enforcement initiatives are deployed by agencies and employees responsible for enforcing laws, maintaining public order, and managing public safety. Like the educational programs, these initiatives are focused on impaired driving crashes.

There are two recommendations related to enforcement: using crash data to identify sobriety check locations and completing statewide law enforcement training:

Using Crash Data to identify sobriety check locations is an effective way to determine potential areas for law enforcement to set up checkpoints. In addition to reviewing crash data, reviewing data from the Pennsylvania Liquor Control Board that identifies establishments serving alcohol. Overlaying the impaired driving crashes with the Liquor license establishments can provide an understanding of where effective sobriety check point locations can be set up by law enforcement.

Completing Statewide Law Enforcement Training: Providing and conducting roadway safety training for law enforcement officials is critical to achieving the safety goals of this plan. For impaired driving crashes, the most effective strategies are enforcement based, so providing adequate police training specific to this issue is important. The comprehensive Strategic Plan to Reduce Impaired Driving prepared by the statewide task force outlines specific training, including:

- Drug recognition experts to detect impaired motorists,
- Advanced roadside impaired driving enforcement,
- Standardized Field Sobriety Test by the National Highway Traffic Safety Administration, and
- Sobriety Check Points.

Figure 24 – Crawford County Courthouse in Meadville

Infrastructure & Engineering

Infrastructure and/or engineering projects are a key part of addressing roadway safety issues.

Projects

Engineering countermeasure profiles have been developed for each of the top 10 HIN locations (provided in the Appendix). These profiles list proposed countermeasures and identify any existing, related planning efforts.

Project Summaries

The projects from these countermeasure profiles are also summarized in a supplemental table that includes key project information, such as:

- Lead Organization/Agency
- Supporting Organizations/Agencies
- Potential Time Ranges for Deployment
- Planning-Level Cost Estimates
- Measures of Success
- Potential Funding Sources

*Refer to the **Error! Reference source not found.** section for the recommended process to move these projects forward.*

Systemic Infrastructure Strategies

There are a variety of infrastructure strategies that can be applied systemically (i.e., across the system, not just individual locations).

The Crawford County Countermeasure Toolkit for Systemic Issues *(provided in the Appendix)* provides a menu of effective infrastructure countermeasures that can be applied systemically to address systemic issues, along with recommended communications and engagement best practices for moving safety efforts forward.

Figure 25 – Sidewalk Construction Project in Springboro

Organizational Support

The Crawford County Safety Action Plan will be implemented through collaborative organizational processes.

Safety Action Plan (SAP) Coalition

The County will form a coalition to advance the Crawford County Safety Action Plan (SAP). This group will provide additional structure and accountability to the SAP's implementation. *See the Appendix for a draft charter outlining coalition responsibilities.*

Coalition Members

This SAP Coalition will be chaired by Crawford County Planning and will include representatives from the following organizations:

- Crawford County Staff (Planning and Public Safety)
- PennDOT District 1-0
- Northwest PA Regional Planning & Development Commission
- Crawford County Public Safety Commission
- Cities (Meadville & Titusville)
- PA State Association of Boroughs
- PA State Association of Township Supervisors

Other local/regional entities will be invited to participate in coalition meetings, as needed.

Coalition Meetings

This group will meet biannually to review plan implementation progress, strategize on project efforts and funding requests, review and discuss annual crash trends, and more. Meetings are anticipated to be held in July/August and in January/February of each year.

Note: the initial frequency of these coalition meetings will be higher, due to the kickoff and start-up activities outlined in the following section.

Initial Coalition Process for Moving Infrastructure Projects Forward

The Crawford County SAP Coalition will need to complete some initial next steps to begin advancing the High Injury Network (HIN) Top 10 Location projects. The recommended initial process to move the projects forward is summarized below in *Table 4*.

Table 4 – SAP Coalition's Initial Process

Step	Action	Description
A	Local Leader Engagement	Coalition members will have informational meetings with the local officials for the ten project locations to share findings, discuss countermeasures, build alignment, and refine the project's countermeasures approach.
B	Project Prioritization	Coalition members will review and prioritize the refined projects, documenting the prioritization process and criteria.
C	Project Funding Evaluation	Coalition members will evaluate the funding opportunities and/or gaps for the projects and identify the highest priority projects (for which the Coalition will pursue funding first).
D	Project Plans & Leaders	For each of the high-priority projects, coalition members will work with local officials to map out the major steps to advance the project activities (with milestone timelines) and identify a project leader who will take point on coordinating these next steps.
E	Status Accountability	Coalition members will provide accountability by reviewing and discussing the status of the high-priority projects during the regular coalition meetings.
F	Evaluations	Coalition members will review crash data (and perform site visits, as needed) following the implementation of countermeasure projects to evaluate whether safety conditions have improved and to determine whether additional countermeasures are needed.
G	Additional Projects	As the high-priority projects are addressed, coalition members will revisit the list of HIN Top 10 Locations to identify the next projects to tackle. *Coalition members will also review current crash data trends on a regular basis (annually) to determine whether any new HIN locations need to be considered.*

Crawford County Staffing Support

In addition to leading the SAP Coalition, Crawford County staff will take a leading role in advancing many of the existing plans, policy changes, programs & initiatives, and infrastructure & engineering strategies that are identified in this SAP.

These efforts are significant and important and will ultimately require a dedicated time commitment from Crawford County staff. In order to fully support these efforts, Crawford County would benefit greatly from having dedicated transportation planning-related staff.

Figure 26 – Crawford Area Transportation Authority (CATA) Bus

Progress & Transparency

As Crawford County transitions from planning phases to implementation, it is essential to recognize that "planning" comprises only a portion of the planning process. The more substantive work involves executing the SAP's recommendations and following through on reporting and measuring progress.

For the Safety Action Plan to be truly effective and for the Crawford County Commissioners and planning staff to be held accountable, the County has developed an implementation plan that includes strategies and targets to track the performance and progress being made. Crawford County is dedicated to implementing the SAP recommendations and will endeavor to sustain the momentum for successful execution. This will be achieved through a multi-pronged approach, including the development and convening of a Safety Action Plan Coalition, which will be tasked with various roles and responsibilities in guiding and monitoring plan implementation. Their work will be documented in an annual performance report to convey both performance and progress.

Measuring Progress

To support the Safety Action Plan's implementation, this section provides a complete list of implementation strategies, which outline a tactical approach for advancing the SAP's vision by specifying tangible actions to be taken to ensure progress. The implementation plan is organized around three major headings, including: Policy Changes; Programs & Initiatives, and Engineering. Each strategy notes who the lead implementing agency would be, along with a series of targets to be achieved through the SAP horizon year of 2035.

The Crawford County Planning Department will use the implementation plan as part of developing and maintaining an annual "performance report" that summarizes the performance and progress made over the past year. The adage "the things that get measured are the things that get done" is apt, since county government is increasingly giving more emphasis on performance-based planning and programming. Such reporting will help ensure accountability while providing flexibility for adjustments in certain approaches. It is recommended that the performance report be shared with members of the Coalition and County Administration for input and review. Additionally, the report should be added as an appendix to the Planning Commission's Annual Report.

Tracking Performance

The implementation of this plan will start in the fourth quarter of 2025, with the first step in the process being the development of a Safety Action Plan Coalition. The following table (*Table 5*) displays the action strategies, the lead agency responsible, the timeline, funding sources, and targets.. The working version of the action plan will include "at-a-glance" icons that convey status…whether the action item is "Complete (and Ongoing)," "In Progress," "Forthcoming," or "Demands Attention" – as shown below.

Table 5 – SAP Strategy Implementation

Strategy Type	Strategies	Lead	Timeline	Eligible Funding Sources[1]	Targets	Status
Policy	Develop a Complete Streets Policy	Crawford County Planning Department	4-7 years	5, 8	Year 4 - Strategy Development Year 5 - Policy completed Year 7 - 20 percent of municipalities adopt the policy	
Policy	Develop a Countywide Active Transportation Policy	Crawford County Planning Department	1-2 years	5, 8	Year 1 - Strategy Development Year 2 - Policy completed Year 5 - 20 percent of municipalities adopt the policy	
Policy	Develop an Access Management Policy	Crawford County Planning Department	1-3 years	5, 8	Year 1 - Strategy Development Year 3 - Policy completed Year 5 - 20 percent of municipalities adopt the policy	
Policy	Context Sensitive Road Design and Operations Policy	Crawford County Planning Department	4-7 years	5	Year 4 - Strategy Development Year 5 - Policy completed Year 7 - 20 percent of municipalities adopt the policy	
Policy	Develop a Countywide Growth Management Plan	Crawford County Planning Department	4-7 years	7	Year 4 - Strategy Development Year 6 - Plan completed Year 7 - 20 percent of municipalities adopt the plan's growth areas	
Programs and Initiatives	Develop SAP Coalition	Crawford County Planning Department	1 year	13	Year 1 - Coalition assembled and begins monitoring and reporting on SAP implementation	
Programs and Initiatives	Sober Ride Home Program	Crawford County Planning Department	1-3 years	4, 5	Year 1 - Apply for SS4A Demo Grant Year 3 - Program Launched; data added to data hub	

[1] See Eligible Funding Sources Key below table

Table 5 Continued…

Strategy Type	Strategies	Lead	Timeline	Eligible Funding Sources[1]	Targets	Status
Programs and Initiatives	Community Traffic Safety Project	Coalition/ PSP/ PennDOT	1-3 years	3, 13	Year 1 - Launch community education campaign Year 2 - Implement 2+ enforcement campaigns Year 3 - Publish county traffic safety report	
Programs and Initiatives	Impaired Driving Program	Coalition/ PSP/ Local Police	1-2 years	13	Year 1 - Program Development Year 2 - Program Implemented	
Programs and Initiatives	Students Against Destructive Decisions Outreach	PennDOT/ Coalition	1-2 years	13	Year 1 - Coordinate with Local Chapter Year 2 - Promote Awareness	
Programs and Initiatives	PennDOT Behavioral Highway Safety Grants	Crawford County Planning Department	3-5 years	3, 13	Year 3 - Identify priorities Year 4 - Apply for grants Year 5 - Implementation	
Engineering	Run-off-Road	PennDOT District 1-0/ Municipalities	1-5 years	1, 2, 6, 9, 11	Year 1 - Prioritize locations Year 2 - XX locations addressed Year 5 - XX locations addressed	
Engineering	Speeding	PennDOT District 1-0/ Municipalities	1-5 years	1, 2, 6, 11	Year 1 - Prioritize locations Year 2 - XX locations addressed Year 5 - XX locations addressed	
Engineering	Curved Road	PennDOT District 1-0/ Municipalities	1-5 years	1, 2, 6, 9, 11	Year 1 - Prioritize locations Year 2 - XX locations addressed Year 5 - XX locations addressed	
Engineering	Unsignalized Intersections	PennDOT District 1-0/ Municipalities	1-5 years	1, 2, 6, 11	Year 1 - Prioritize locations Year 2 - XX locations addressed Year 5 - XX locations addressed	
Engineering	HIN Top 10 Location Projects	Coalition	1-5 years	1, 2, 6, 9, 10	Year 1 - Steps A thru D [2] Year 2+ - Steps E thru G [2]	

[1] See Eligible Funding Sources Key below table
[2] In the "Initial Coalition Process for Moving Infrastructure Projects Forward" section

Eligible Funding Sources Key	
1	Highway Safety Improvement Program (HSIP)
2	Low-Cost Safety Improvement Program (LCISP)
3	PennDOT Behavioral Highway Safety Grant
4	Highway Safety Grant Programs (NHTSA)
5	Safe Streets and Roads for All Planning and Demonstration Grant
6	Safe Streets and Roads for All Implementation Grant
7	Municipal Assistance Program (MAP)
8	Better Utilizing Investments to Leverage Development (BUILD)
9	TIP (Various, depending on eligibility)
10	CDBG
11	ACT 13 (local transportation infrastructure)
12	Green Light-Go Program (GLG)
13	County General Fund

**It should be noted that the regional TIP is not a funding source per se, but a planning document developed and maintained by the Northwest RPO documenting how regional transportation projects using state and federal dollars will be funded. The TIP includes approximately a dozen different funding programs, from the National Highway Performance Program (NHPP) to the Highway Safety Improvement Program (HSIP). The Northwest TIP for 2027-30 is estimated to be valued at approximately $222.7 million when it is expected to be approved by the RPO and the State Transportation Commission (STC) during the summer of 2026.*

Appendix

A. Crawford County Vision Zero Resolution

B. High Injury Network List – Top 20
   - With Horse & Buggy Crashes
   - Without Horse & Buggy Crashes

C. High Injury Network Top 10 Locations - Countermeasure Profiles

D. High Injury Network Top 10 Locations - Countermeasure Profile Project Tables

E. Infrastructure and Engineering Countermeasure Toolkit for Systemic Issues

F. Crawford County SAP Coalition Charter