On the Road to Safety, Every Life Counts

Floyd County, IN

Safety Action Plan

6/25/2025

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Table of Contents

`

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List of Figures

`

List of Tables

Appendices

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Introduction

In 2023, Floyd County, in collaboration with the Kentuckiana Regional Planning & Development Agency (KIPDA) and 15 other participating cities and counties, applied for and successfully received a Safe Streets and Roads for All (SS4A) Action Plan Grant. The SS4A Action Plan Grant is a vital component of the broader federal SS4A initiative to improve road safety across the United States. The goal of the SS4A Program is to create a safer transportation network by supporting the development and implementation of comprehensive safety plans that are data-driven and community-focused.

Floyd County is dedicated to working towards a goal of zero traffic deaths and serious injuries by 2050. Achieving this goal will require a clear focus on prioritizing safety for all road users. The Floyd County Safety Action Plan addresses eight important SS4A Program safety components. Each component is a chapter in the Safety Action Plan.


Leadership Commitment and Goal Setting


Planning Structure


Safety Analysis


Engagement and Collaboration


Policy and Process Changes


Strategy and Project Selections


Progress and Transparency

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Safe System Approach

The Safe System Approach is a comprehensive approach based on the understanding that humans are fallible and make mistakes, but those mistakes should not result in fatalities or serious injuries. There are five broad impact areas for achieving this goal: **Safer People, Safer Vehicles, Safer Speeds, Safer Roads, and Post-Crash Care**. This approach significantly expands the traditional safety plan focus on roadway infrastructure. Six key principles undergird the approach.

Safe System Key Principles

Death and Serious Injuries are Unacceptable: Every human life is invaluable, and ensuring safety is the highest priority.

Humans Make Mistakes: Recognizing that human error is inevitable, we design and manage our roads to be forgiving, mitigating the potential consequences of these errors to prevent serious harm.

Humans are Vulnerable: We design the roadway system to account for the biological limits the human body can tolerate in a crash.

Responsibility is Shared: Preventing fatal and serious injuries is a shared responsibility. All stakeholders must work together to enhance road safety.

Safety is Proactive: Taking a proactive stance on safety means anticipating and addressing risks before they result in crashes. Being proactive involves identifying potential hazards and implementing measures to mitigate them.

Redundancy is Crucial: Embedding multiple layers of safety within the transportation system is important, so that if one layer fails, others can still protect people. This redundancy is vital for creating a resilient transportation network.

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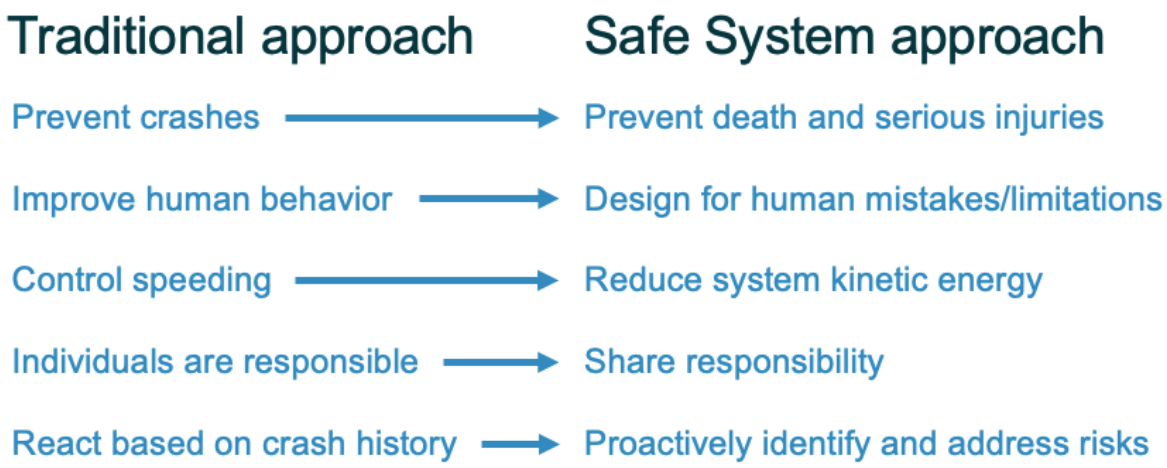
Safe System Approach vs Traditional Approach

The traditional road safety approach often relies on all road users' perfect human behavior. It tends to react to crashes *after* they occur, focusing on individual accountability. In contrast, the Safe System Approach acknowledges that humans are fallible and will inevitably make mistakes. This approach builds a system designed to minimize the severity of crashes resulting from those errors. This shift from an individual-focused model to a system-centric one highlights all stakeholders' shared responsibilities. The comparative graphic illustrates this fundamental shift, showcasing how the Safe System Approach aims to create a safer, more forgiving transportation system.



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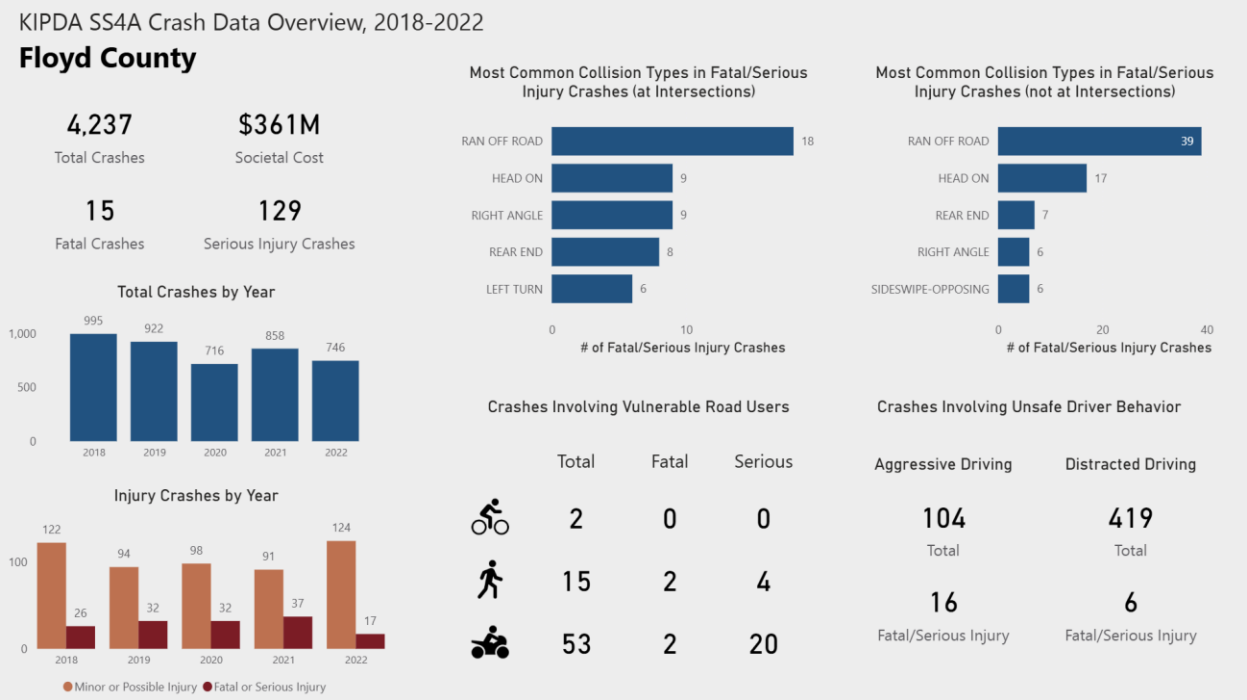
Overview

Floyd County had 15 fatal and 152 serious injury crashes during the five-year period from 2018 to 2022, for a total of 167. There were 4,237 total crashes during this time. The total societal cost of all crashes was $361 million (including economic and quality of life factors). The figure below provides an overview of the crash data.



Important safety findings for Floyd County include:

- Fatal and serious injury crashes are spread across the county on state and local highways
- 57 of 146 fatal / serious injury crashes were run-off road crashes
- 26 of 146 fatal / serious injury crashes were head-on crashes
- 16 of 146 fatal / serious injury crashes involved aggressive driving
- 6 of 146 fatal / serious injury crashes involved a pedestrian or bicyclist

1. Leadership Commitment and Goal Setting

Floyd County is dedicated to ensuring safety for all users on the County's streets and roads. The County's commitment is demonstrated by the resolution on the following page, which states that its leaders have established "a goal of working towards zero traffic fatalities and serious injuries by the year 2050."

The County's commitment and leadership in implementing safety-focused projects, strategies, and policies are also supported by current programs and policies.

The Floyd County Comprehensive Plan has clear goals that seek to develop enhanced approaches to improving safety and mobility for current and anticipated growth within the county, specifically along SR 64-62 and US 150. The plan additionally has a policy that seeks to improve safety signage for shared roads. This includes identifying county roads that are heavily used by bicyclists and working to improve their safety for both cyclists and drivers using the road. It also recommended the importance of implementing safety signage on roads identified as shared roadway spaces. This recommendation was paired with a call to educate both bicyclists and drivers on how best to safely navigate these roads together, including agricultural usage.

In conjunction with the Comprehensive Plan, the Paoli Pike Sidewalk plan is an initiative that recommended sidewalk improvements along Paoli Pike from Buffalo Creek Dr to US 150 in order to make the corridor safer for pedestrians. It also recommended lower-cost roadway improvements, such as lane width and improved crosswalks to help highlight that low-cost improvements are accessible to municipalities.

FCR 2024-20

A RESOLUTION OF THE COUNTY OF FLOYD IN SUPPORT OF VISION ZERO

WHEREAS, the USDOT has developed a discretional grant program to address roadway safety through the Safe Street and Roads for All (SS4A) program and Floyd County was awarded a SS4A grant; and

WHEREAS, through the adoption and implementation of the Vision Floyd County 2017 Comprehensive Plan Update, Floyd County established improving safety of its transportation system as one of the community goals; and

WHEREAS Floyd County aspires to reduce and eventually eliminate traffic related fatalities and serious injuries on its roadways; and

WHEREAS, Floyd County is moving toward implementation of the SS4A grant through the efforts of developing various reports from data analysis and a community engagement program to identify safety improvement projects.

NOW, THEREFORE BE IT RESOLVED that Floyd County hereby establishes a goal of achieving zero traffic fatalities and serious injuries by the year 2050.

SO RESOLVED this 19th day of November, 2024.

BOARD OF COMMISSIONERS

OF THE COUNTY OF FLOYD

Al Knable, President

John Schellenberger, Commissioner

Jason Sharp, Commissioner

ATTEST:

Diana Topping, County Auditor

2. Planning Structure

The planning structure for the Floyd County Safety Action Plan consisted of various committees, each playing a crucial role. The following describes these bodies and their collaborative efforts in the plan development.

Regional Steering Committee

The Regional Steering Committee provided oversight and strategic direction for the Safety Action Plan development process. The Committee was composed of representatives from 16 local government agencies, including Floyd County. It also included KIPDA staff. Steering Committee meetings were held at key points to provide information and gather input and feedback. Topics covered during the meetings included:

- Purpose of safety action plans
- Data collection and safety analysis
- Identification of high crash highways and intersections
- Countermeasure identification and prioritization
- Documentation and implementation opportunities

Agency Leadership Meetings and Plan Review

Agency Leadership and Staff Meetings were conducted at two key points during plan development to receive and relay detailed input and feedback. The first meeting focused on presenting the initial data analysis and prioritization of needs, allowing agency leadership to identify, confirm, and prioritize critical safety issues. The second meeting allowed agency leadership to provide feedback on draft recommendations and potential countermeasures. These interactions allowed the unique concerns and priorities of Floyd County to be adequately addressed in the plan.

The final Safety Action Plan was also reviewed by agency leadership to provide feedback and yield a plan that is useful for moving Floyd County forward toward a safer future.

Safety Committee Meetings

The Safety Committee is the cornerstone of the planning structure, providing localized oversight and input into the plan. The Committee consisted of a multidisciplinary team comprising key stakeholders in the community, including:

- Floyd County
  - Department of County Planning
  - Department of Building & Development Services
- Kentuckiana Regional Planning & Development Agency (KIPDA)

The Safety Committee will advise Floyd and KIPDA on the plan's development, implementation, and monitoring. The Committee provided input and feedback on potential safety needs and possible reactive and systemic safety countermeasures. Having different perspectives and agencies in the meetings has facilitated effective communication and resulted in a more effective safety action plan that better addresses the five elements of the Safe System Approach. A detailed review of the Safety Committee Meetings is provided in **4. Engagement and Collaboration.** The dialogue will continue in the future as the plan is implemented, updated, and enhanced over time.

3. Safety Analysis

Study Area

The study area for the safety analysis includes the entirety of Floyd County, Indiana, as shown in Figure 3-1. This study includes all public streets and roads within the County except interstate highways, private streets, or parking lots.

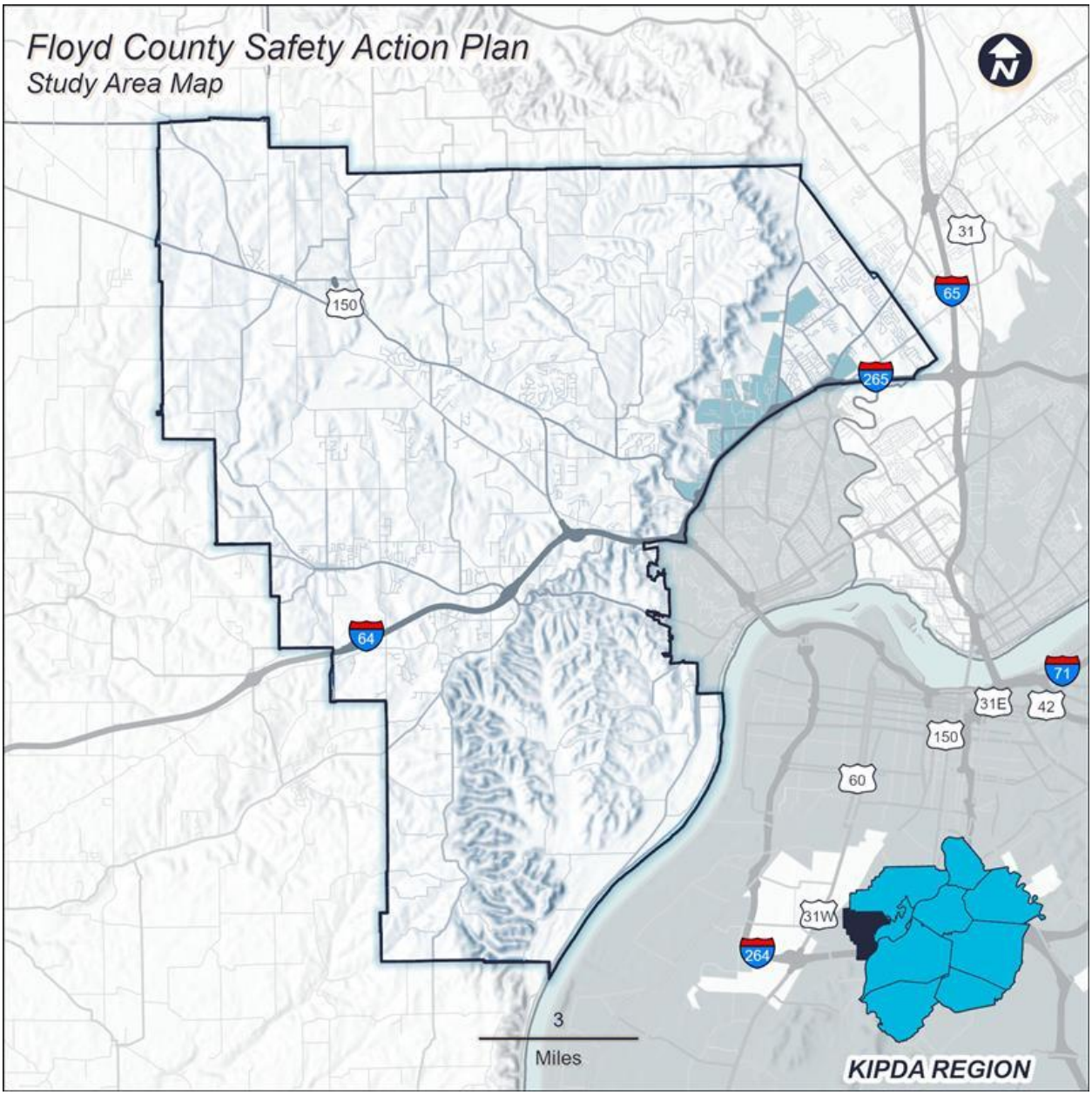


Figure 3-1. Study Area

Crash Data

The safety analysis was conducted using the five years of crash data between 2018 and 2022. This period was selected based on the desire to study consistent crash trends over a consecutive period, the availability of data when the project started, and expectations regarding future funding application data requirements.

The project team obtained the crash data from the Indiana State Police (ISP) crash database - Automated Reporting Information Exchange System (ARIES). This data is primarily collected by city, county, and state police department crash investigation teams when they complete an Indiana Officer's Standard Crash Report form. This form captures critical information about crashes, including location, type, severity, individuals and units involved, environmental factors, and contributing factors. Departments enter this information into a database maintained by ISP.

The initial crash data included all Floyd County crashes from 2018 to 2022. Crashes located on I-64, I-265, and those that occurred in parking lots were removed from the dataset. Additionally, some crashes could not be linked to the GIS roadway due to missing information. After these adjustments, the final crash database used for the study included 4,237 crashes.

This report focuses on crash events based on the most severe injury sustained in each incident. Since the analysis is event-based rather than individual-based, a single crash involving multiple injuries is counted as one event, categorized by the highest severity level recorded. Pedestrian crashes involve at least one pedestrian and one motor vehicle. Similarly, bicycle crashes refer to crashes involving at least one bicycle and one motor vehicle. Vehicle crashes involve at least one vehicle and do not involve a pedestrian or a bicycle.

The study team obtained geographic information system (GIS) files of with roadway characteristics and traffic data for roadways where this information was available. The team used this information to create a database of roadway segments and intersections. The crash data was joined with the GIS information to create a crash database that facilitates detailed analyses to identify crash trends, areas of opportunity, and risk factors to assist in prioritizing projects.

Crash Severity

The crash database uses the KABCO Injury Classification Scale. The KABCO injury classification system categorizes traffic crash injuries into five levels: Fatal (K), Suspected Serious (A), Suspected Minor (B), Possible (C), and No Apparent Injury (O). The KABCO scale is the recommended best practice for individual injury reporting by the Model Minimum Uniform Crash Criteria (MMUCC), developed by the National Highway Traffic Safety Administration (NHTSA). ISP uses the KABCO scale during field data collection and reporting the injury severity of a crash. Crash severity is determined by the most severe injury occurring in the crash. For example, if a fatality occurs, the crash is classified as a "K" or fatal injury crash.

For this plan, the crash severity data was reviewed against the reported detailed injury data to confirm the severity. This resulted in some crashes being adjusted to better match the MMUCC. The following table provides a breakdown of the total crashes by severity. Table 3-1 provides a breakdown of the crashes in Floyd County by severity.

Severity	MMUCC Severity Description	Crashes (2018-2022)	%
K	Fatal Injury	15	0%
A	Suspected Serious Injury	129	3%
B	Suspected Minor Injury	403	10%
C	Possible Injury	126	3%
O	No Apparent Injury	3,564	84%
	Total	**4,237**	

Table 3-1. Crashes by Severity

Figure 3-2 shows the location of all 4,237 crashes documented during the study period. Density of crashes is shown with a gradient scale. The highest number of crashes during the study period occurred near Milton and Bedford. Figure 3-3 shows the locations of fatal and suspected serious injury crashes.

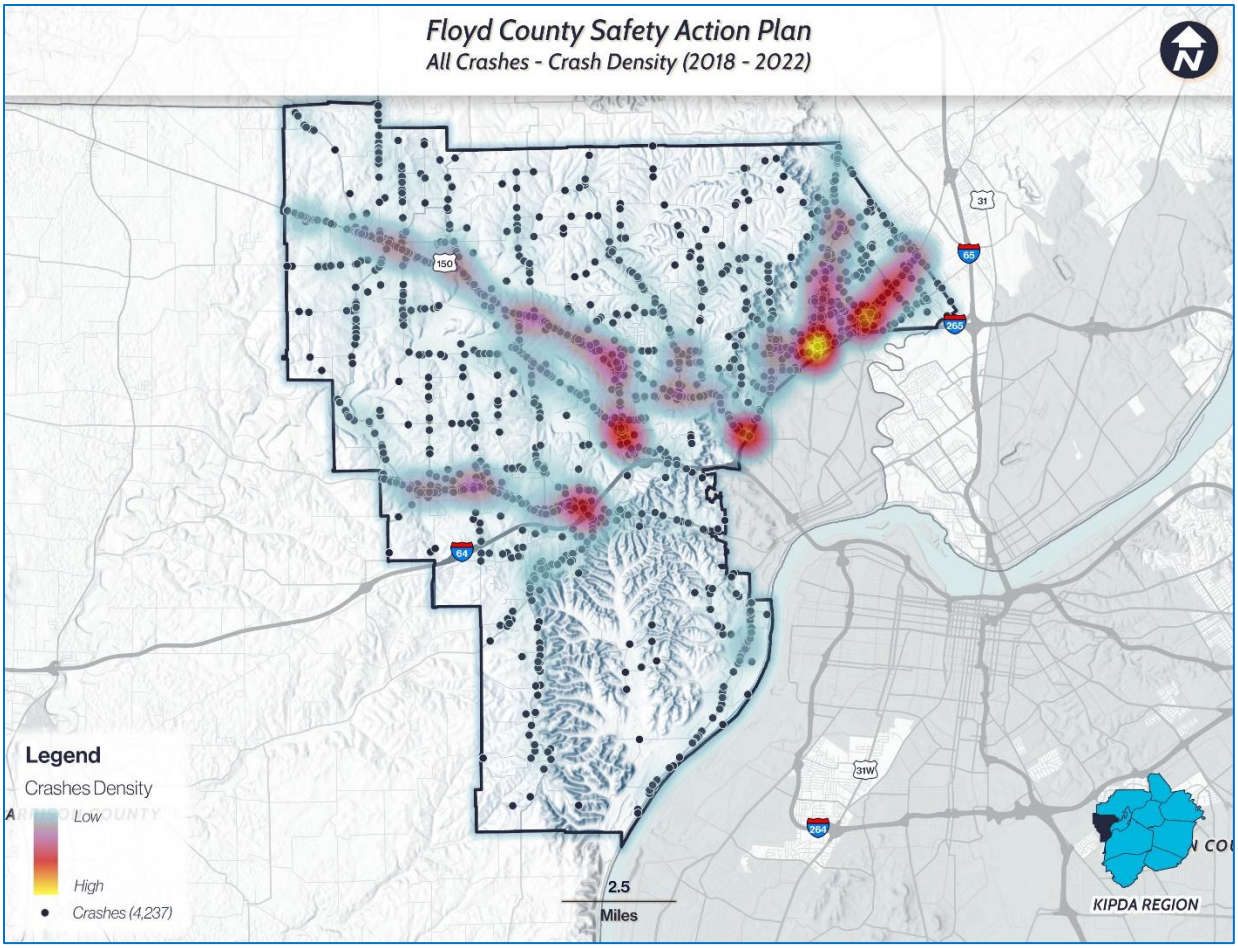


Figure 3-2. Crash Density Map

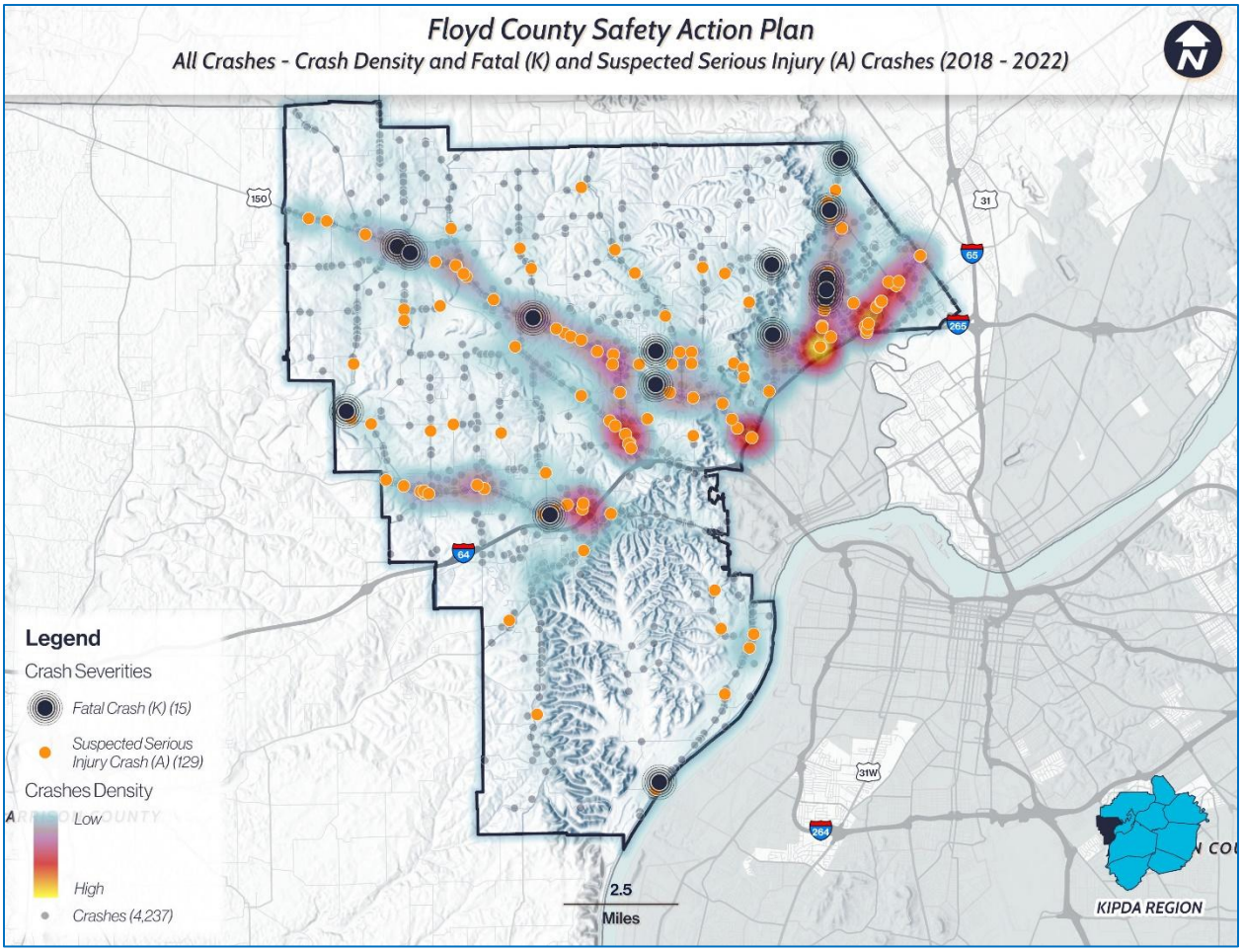


Figure 3-3. Fatal and Suspected Serious Injury Crash Map

Crash Trends

The crash data has been examined considering a number of different factors to identify patterns and safety needs. This trend analysis also provides information about potential safety countermeasures and approaches that could be explored to address those needs.

Annual Crash Trends

The 2018-2022 crash analysis shows a range of cases per year. The highest number of crashes occurred in 2018, with a total of 995 crashes, followed by a decrease in the subsequent years, reaching the lowest point in 2020 with 716 crashes, before rising to 858 crashes before falling again in 2022 to 746. This decline in 2020 aligns with COVID-19 pandemic, which greatly affected traffic patterns and likely led to underreporting of crashes. In early 2020, police operating procedures were modified to minimize potential exposure to the virus. Consequently, the reported number of crashes in 2020 is likely distorted, as crashes were underreported.

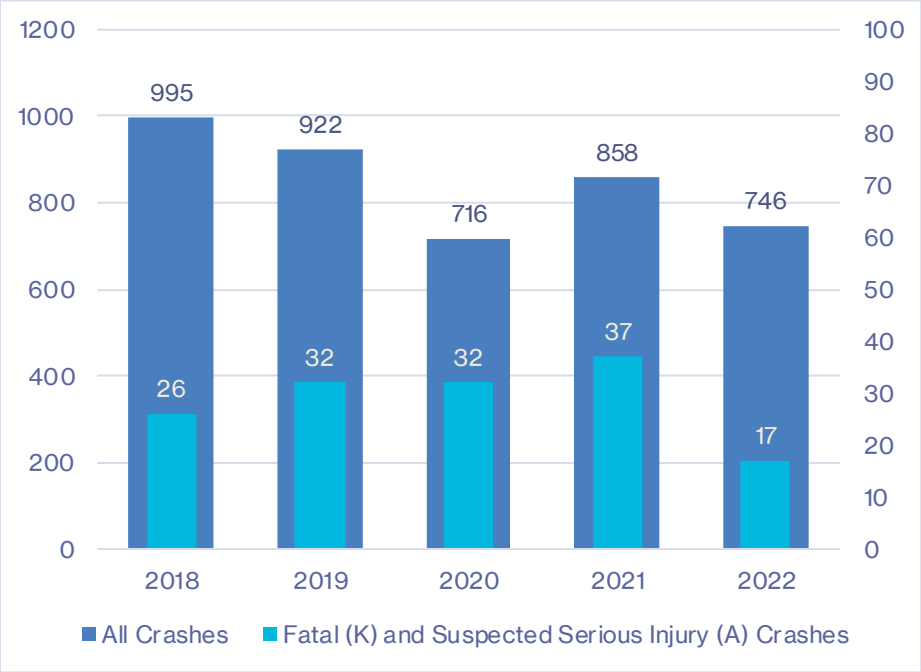


Figure 3-4. Overall Crashes per Year

Figure 3-4 also shows the trajectory of severe fatal (K) and suspected serious injury (A) crashes through the study period. These crashes rose steadily from 2018 to 2021, before dropping by 20 in 2022.

Crash Occurrence

Month

The following charts present the crashes by month over the 5-year study period. This monthly crash data shows notable variations in crash frequency and severity throughout the year. The highest number of crashes occurred in January (413 crashes). The second and third highest rate of crashes took place in October and November with 402 and 405 crashes respectively.

The highest rates of fatal and suspected serious injury crashes occurred in September with 15%, followed by January with 14%.

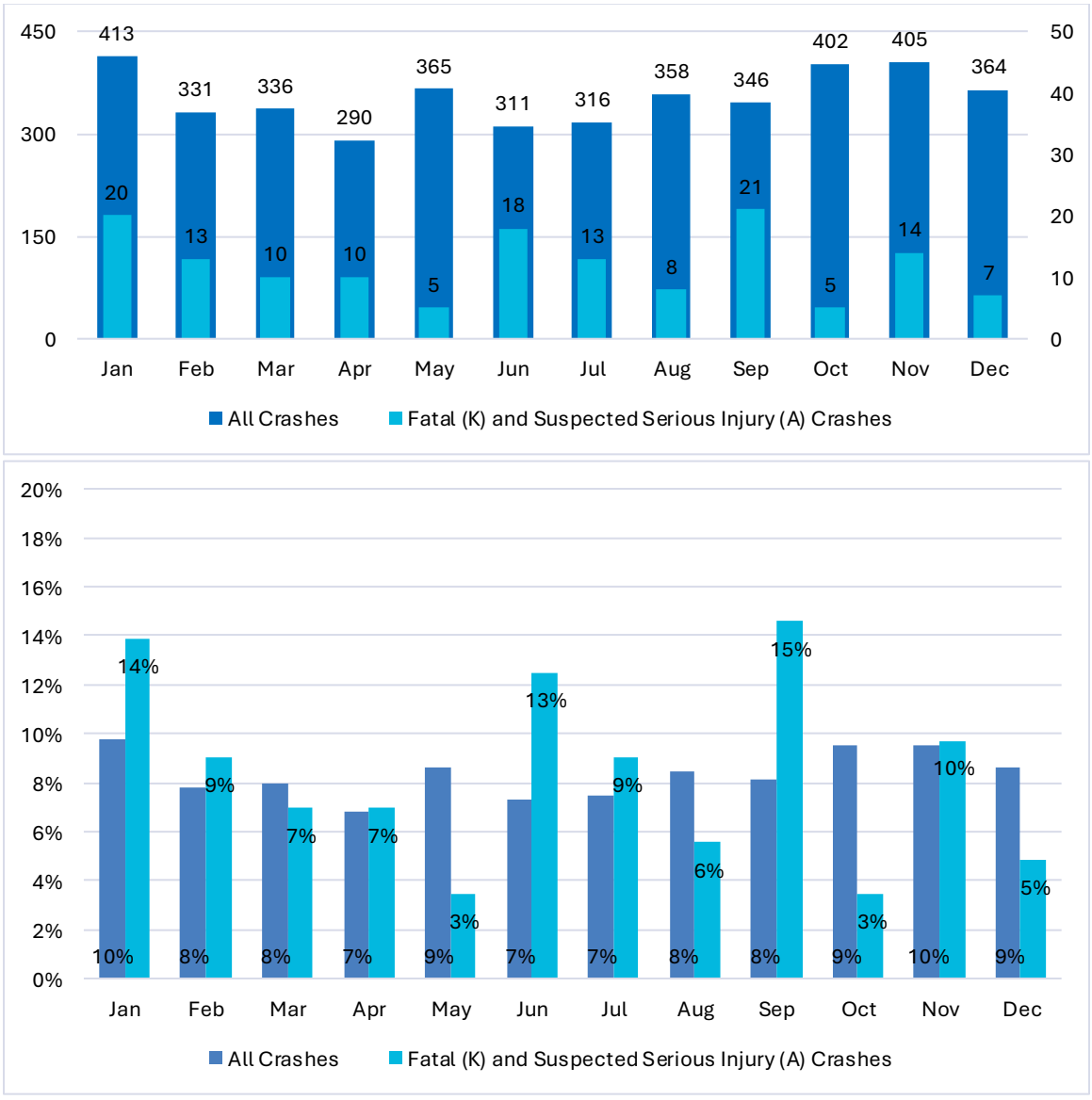


Figure 3-5. Monthly Crash Breakdown

Day of Week

As seen in the Figure 3-6, crashes remain relatively consistent across the weekdays, ranging from 693 crashes on Tuesday to 642 crashes on Monday. The data shows a decline of approximately 220 crashes on the weekends, with the lowest rate on Sunday with 414. The decrease in weekend crashes is most likely attributed to lower traffic exposure, lowering the potential for crashes. However, severe crash frequency does not align with all crashes. Despite having the fewest crashes overall, Sunday accounts for the highest number of fatal and suspected serious injury crashes (30), indicating a higher severity of crashes on this day.

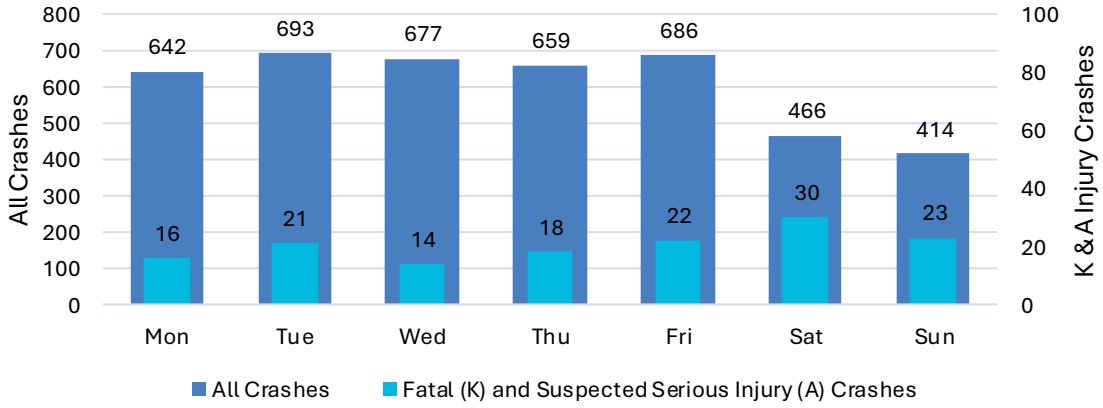


Figure 3-6. Crashes by Day of Week

Time of Day

As seen in Figure 3-7, the 3-6 pm period experiences the highest number of crashes, with 806, or 19% of all crashes. The highest rate of fatal and severe injury crashes occurred in the mornings between 6 and 9 am and early afternoons from 12-3 pm. Overall, the rate of fatal and severe injury crashes remains consistent throughout the day, ranging from a high of 22 to a low of 10.

A disproportionate number of fatal and severe injuries occurred in the overnight hours from 9 pm to 3 am (26) compared to the total number of crashes during the time period (499).

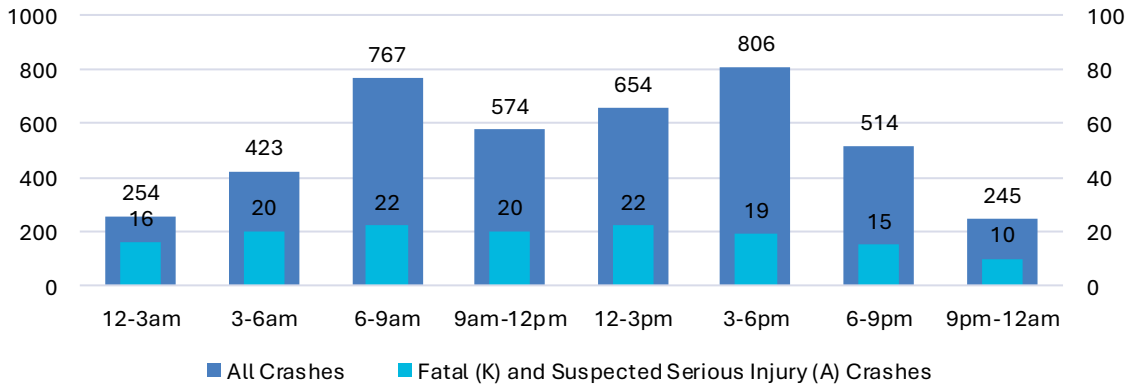


Figure 3-7. Crashes by Time of Day

Manner of Collision

As shown in Figure 3-9, rear end crashes are the most common type of crash, with a total of 1,218. Crashes when the vehicle leaves the roadway are the second most common type of crash, but account for more than one third of fatal and suspected serious injury crashes (39%). This is perhaps due to the likelihood of colliding with a fixed object, loose soil or gravel, and other dangers. Rear end and head on collisions account for 11% of fatal and severe injury crashes each, as seen in Figure 3-9.

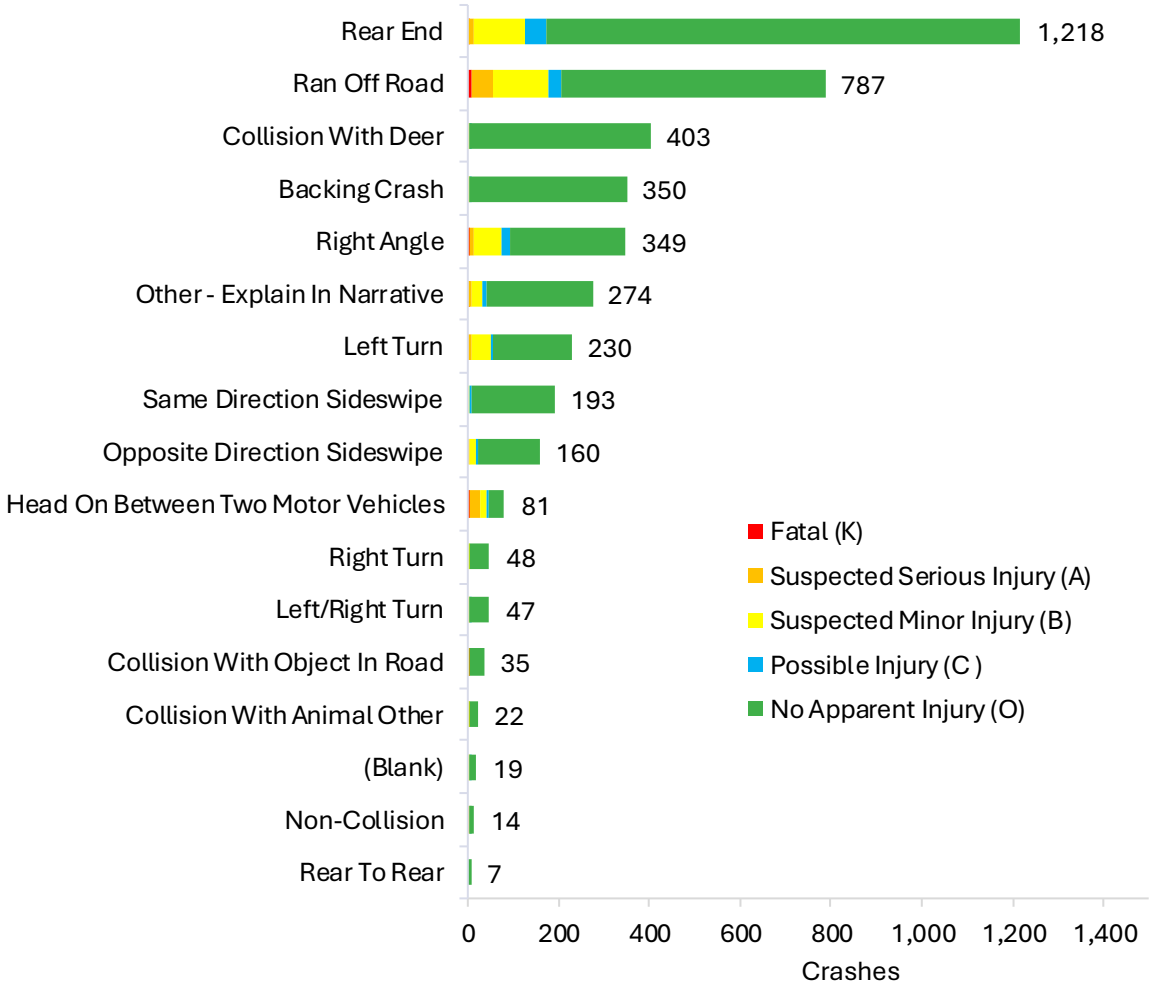


Figure 3-8. Manner of Collision

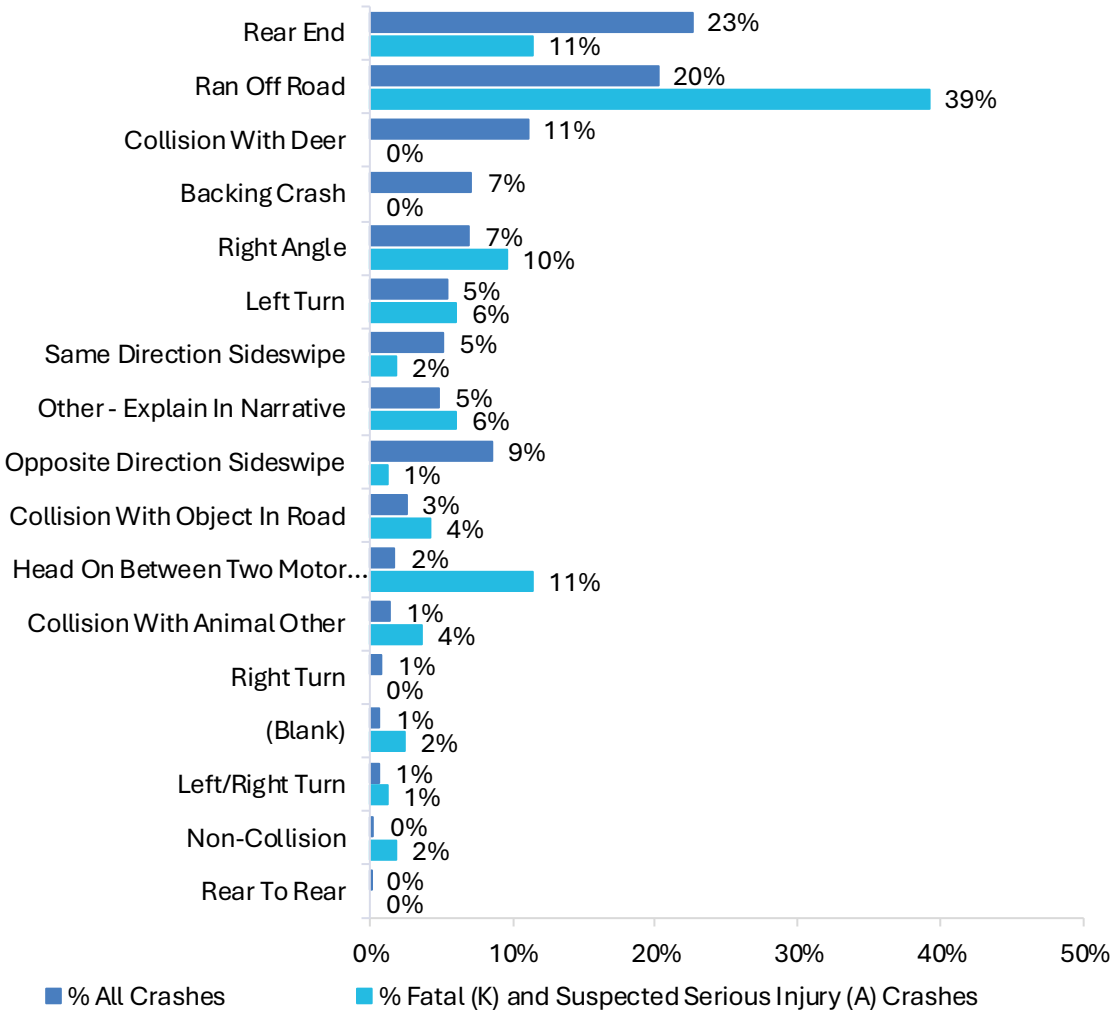


Figure 3-9. Manner of Collision by Severity

Lighting Conditions

Roadway lighting is a safety factor that impacts visibility and reaction times. However, the documentation of lighting infrastructure is not comprehensive. The available crash data provides only anecdotal evidence regarding the lighting conditions during a crash. Currently, there is no established infrastructure database detailing the presence and condition of street lighting, making it challenging to analyze the correlation between illumination and road safety.

Figure 3-10 indicates that 68% of all crashes during the five-year study period occur during daylight. A similar percentage of fatal and serious injury crashes also occur during daylight hours. In contrast, 21% of all crashes and 28% of fatal and suspected serious injury crashes occur in non-dark, not lighted conditions. This distribution suggests that while reduced visibility may increase crash risk, most severe crashes in Floyd County occur under daylight conditions.

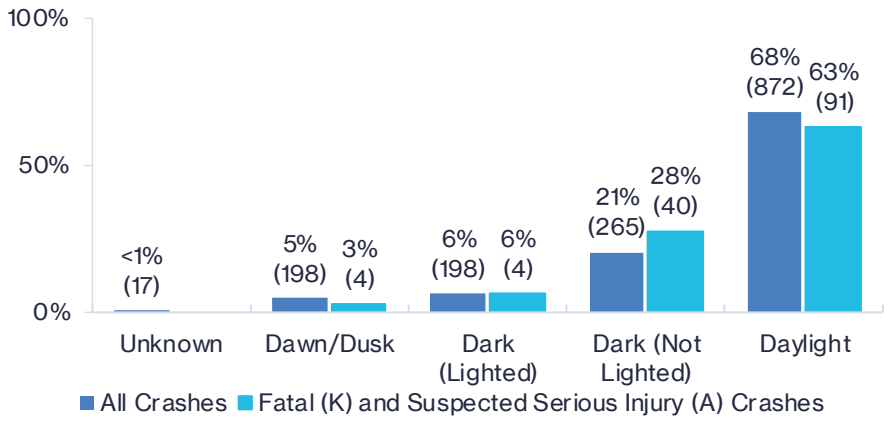


Figure 3-10. Crashes by Light Condition

Figure 3-11 shows all of the crashes that occurred during dark/not lighted conditions.

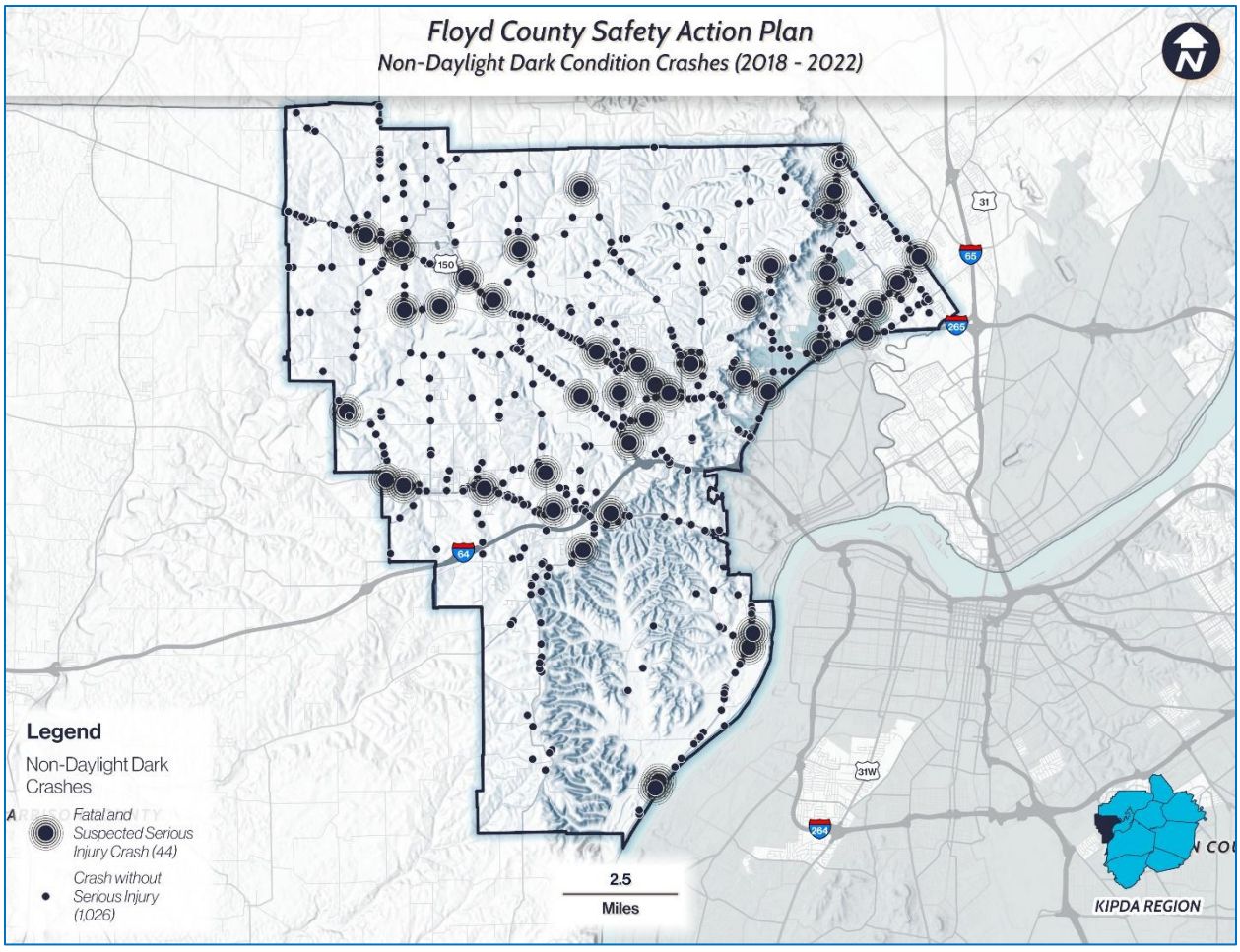


Figure 3-11. Lighting Condition: Non-Daylight Dark Condition Crashes Map

Crashes by Locations

The analysis identified crashes based on their location: intersections and roadway segments. 55% of all crashes occurred on roadway segments and 59% of fatal and suspected serious injury crashes occurred on these segments, as seen in Figure 3-12.

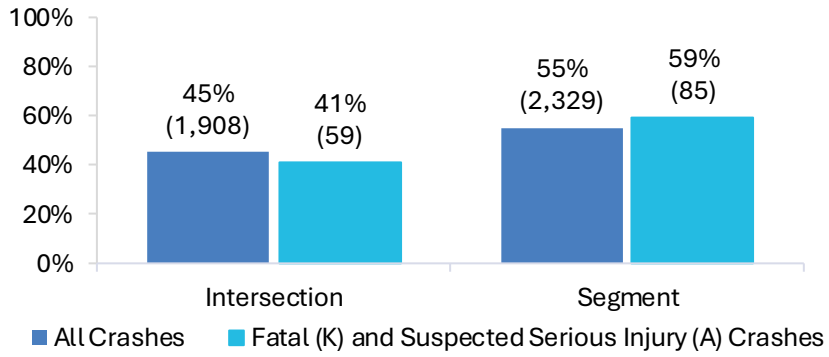


Figure 3-12. Crashes by Location

Roadway Departure Crashes

Roadway departure crashes occur when a vehicle crosses an edge line, a centerline, or leaves the traveled way. These crashes often lead to some of the most severe outcomes due to the increased risk of collision with fixed objects, overturning, or encountering unsafe roadside conditions. The inherent dangers of leaving the roadway contribute to higher rates of serious injuries and fatalities compared to other crash types.

The crash data indicates that roadway departure crashes significantly contribute to severe outcomes. Although roadway departure crashes account for just 19% of all crashes, they disproportionately represent a much higher percentage of fatal and serious injury crashes. Specifically, 40% of fatal and suspected injury crashes are related to roadway departures, as shown in Figure 3-13. Figure 3-15 shows the locations of roadway departure crashes resulting in injuries or fatalities.

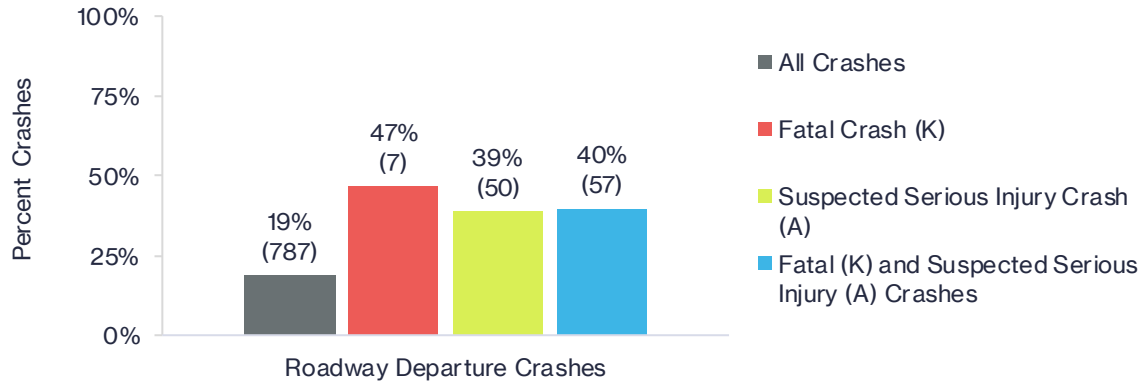


Figure 3-13. Roadway Departure Crashes by Severity

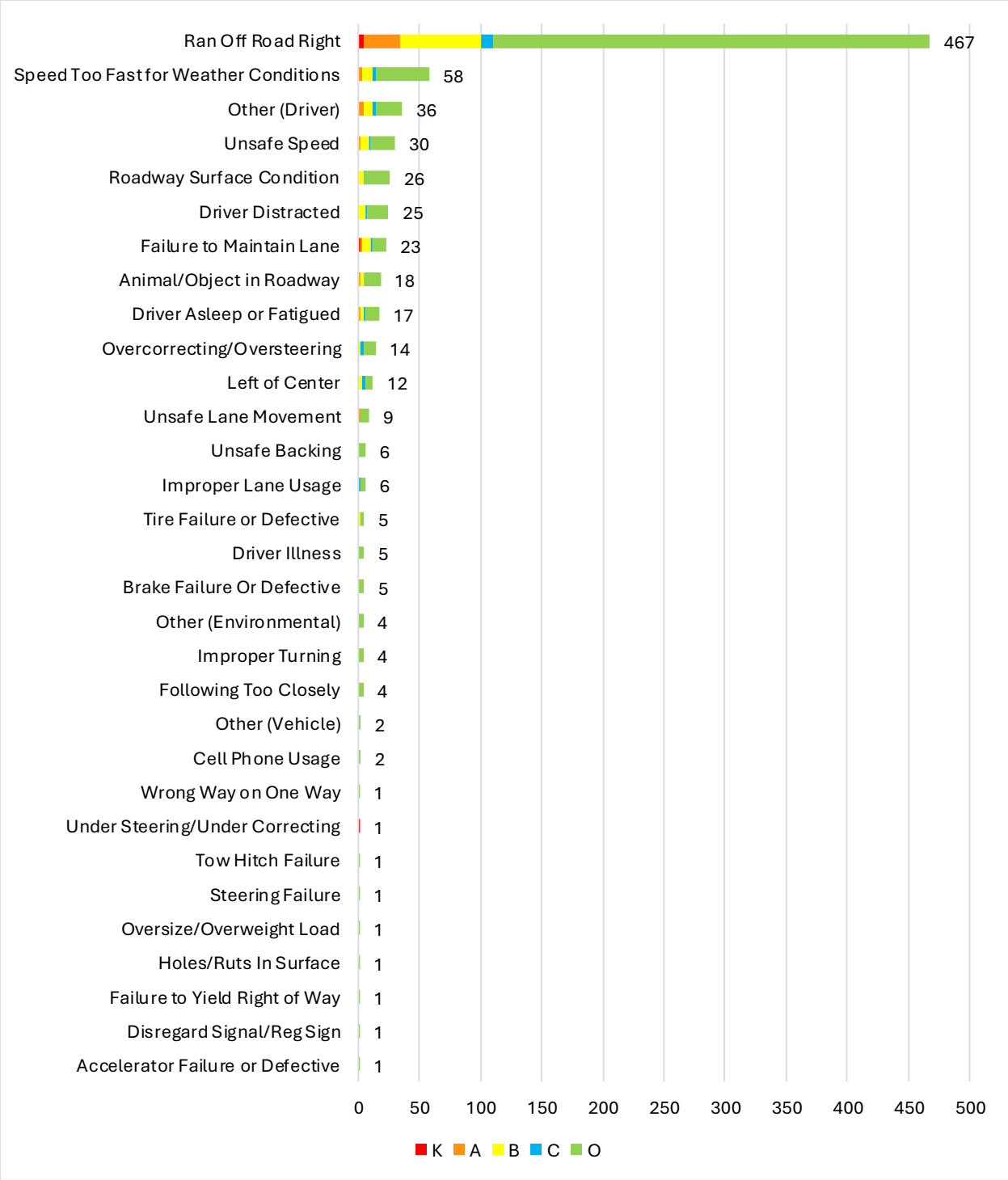


Figure 3-14. Primary Factor of Roadway Departure Crashes by Severity

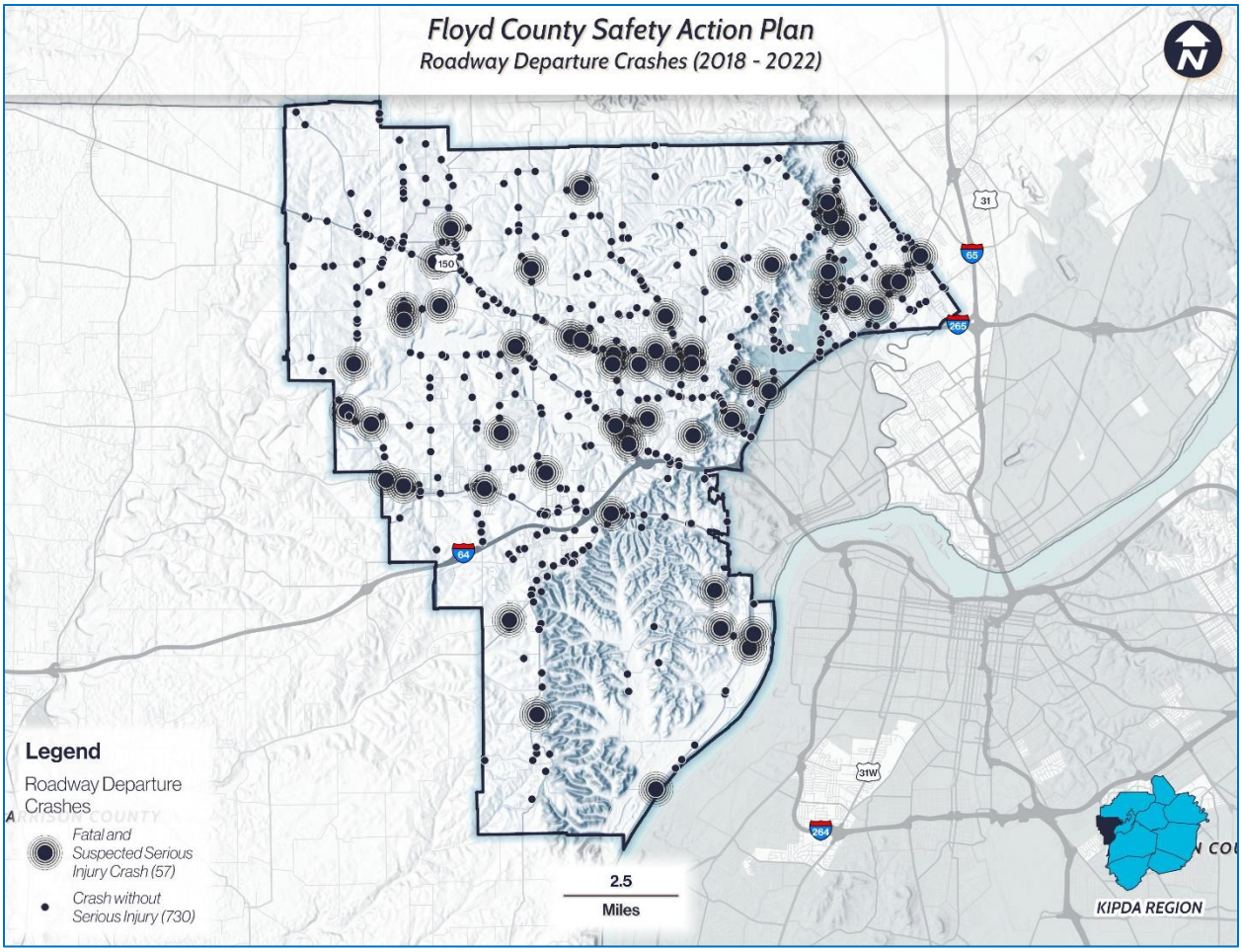


Figure 3-15. Roadway Departure Crashes Map

Vulnerable Road Users

Vulnerable road users, including pedestrians and bicyclists, are at greater risk due to their lack of physical protection compared to motor vehicle occupants. These crashes typically result in more severe injuries and fatalities because there is little to no buffer between these users and the force of a collision.

Pedestrians

Floyd County is considered to have both rural and urban characteristics. The two fatal crashes involving pedestrians occurred in the townships of Greenville and Floyds Knobs. Although pedestrian crashes are relatively infrequent in the County, they tend to result in injuries when they do occur. This highlights the need for continued emphasis on pedestrian safety. Table 3-2 lists the pedestrian crashes by severity and Figure 3-16 shows the location of pedestrian crashes during the study period.

Severity	Description	Crashes	%
K	Fatal	2	14%
A	Suspected Serious Injury	4	29%
B	Suspected Minor Injury	7	50%
C	Possible Injury	0	0%
O	No Apparent Injury	1	7%
	TOTAL	**14**	

Table 3-2. Pedestrian Crashes by Severity

Cyclists

Two cyclist crashes occurred in the county, with one being a minor injury. The locations are shown on Figure 3-17.

Severity	Description	Crashes	%
K	Fatal	0	0.0%
A	Suspected Serious Injury	0	0.0%
B	Suspected Minor Injury	1	50.0%
C	Possible Injury	0	0.0%
O	No Apparent Injury	1	50.0%
	TOTAL	**2**	

Table 3-3. Bicyclist Crashes by Severity

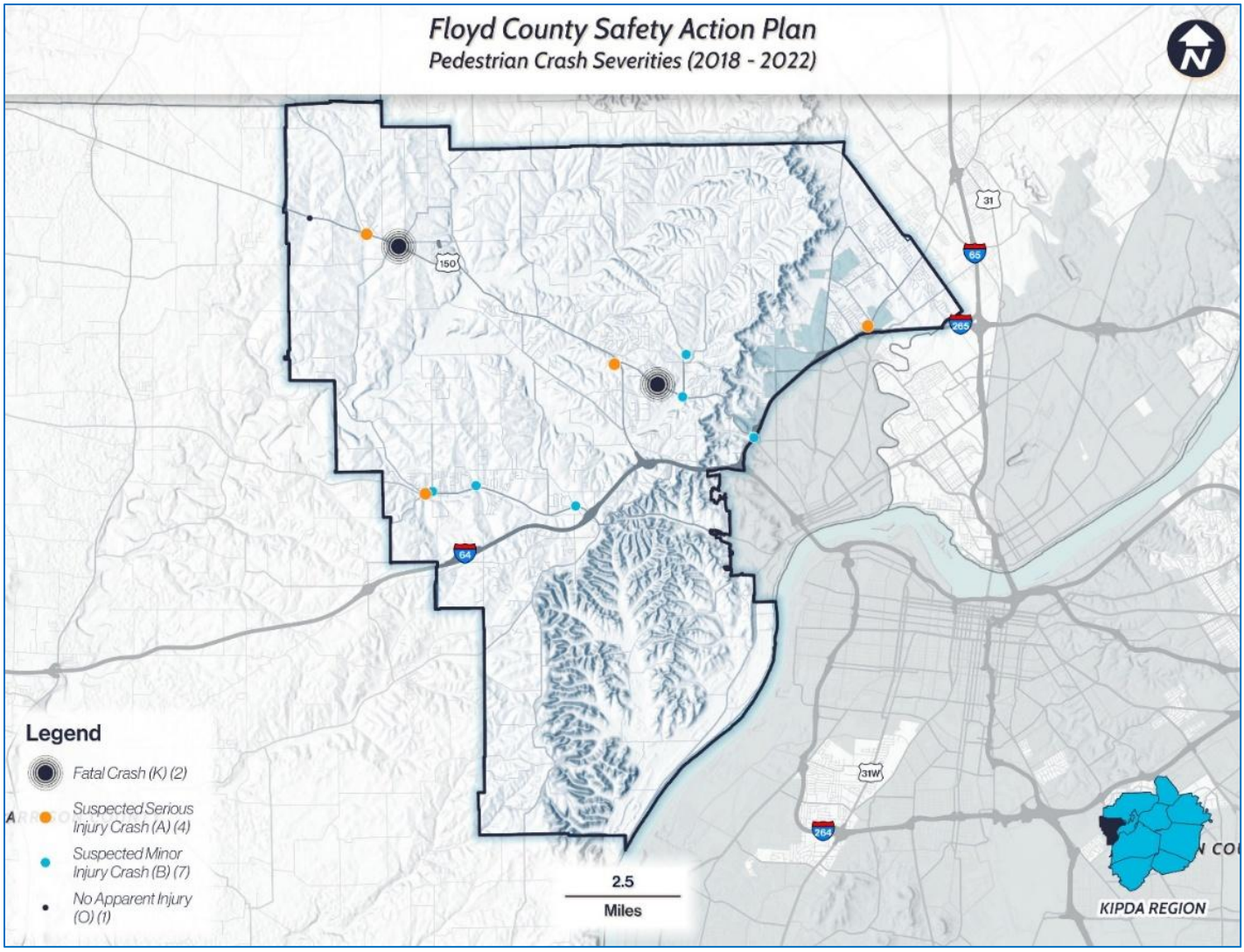


Figure 3-16. Pedestrian Crash Map

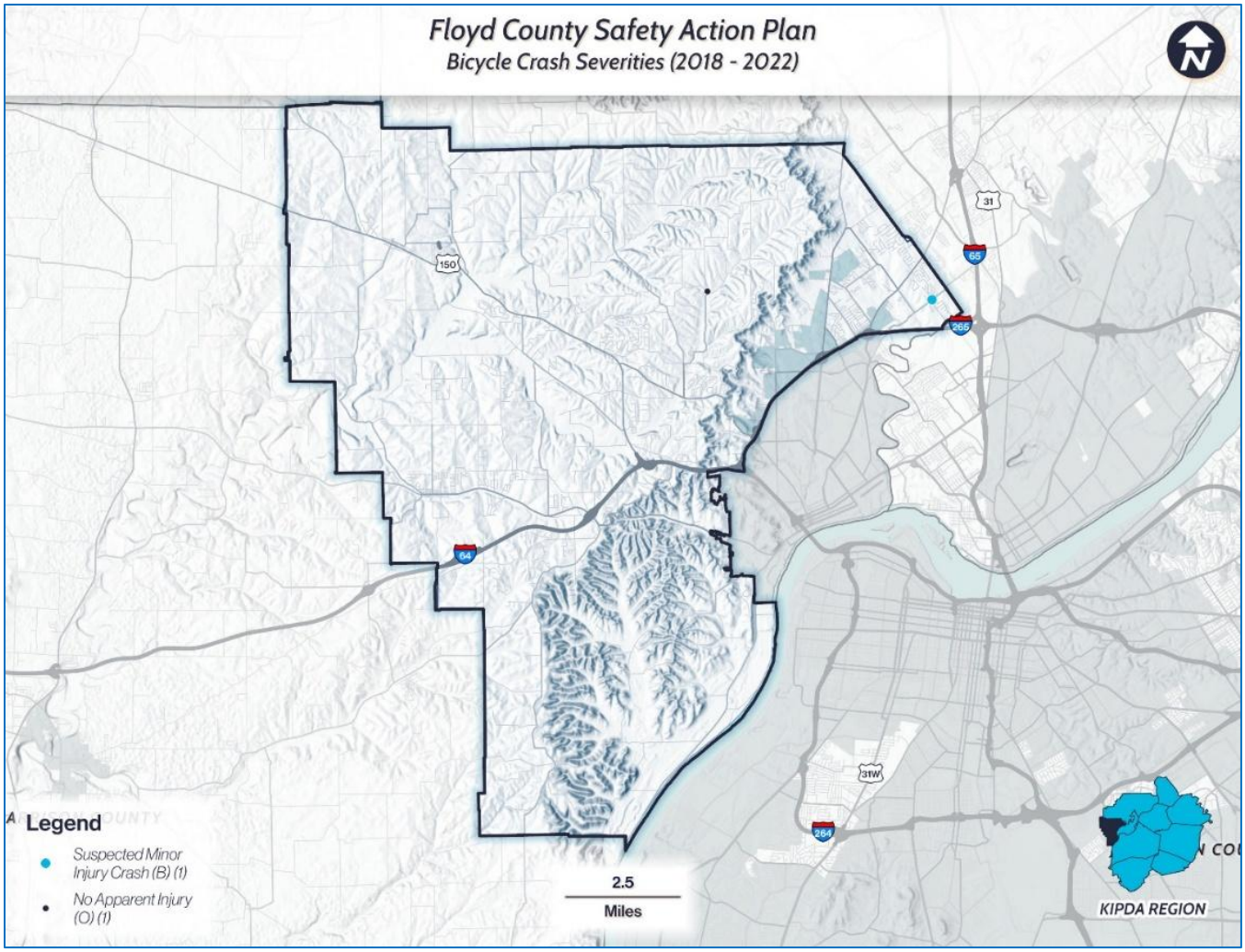


Figure 3-17. Bicyclist Crashes by Severity

Factors in Collisions

There are a number of factors that can contribute to vehicular collisions, which are attributed to one of three categories: human, environmental, or vehicle. In Floyd County, human factors were the primary reasons for crashes, amounting to 81% of crashes as seen in Figure 3-18. This is in comparison to environmental factors as the primary cause of 16% of crashes, and vehicle issues attributing to 2%.

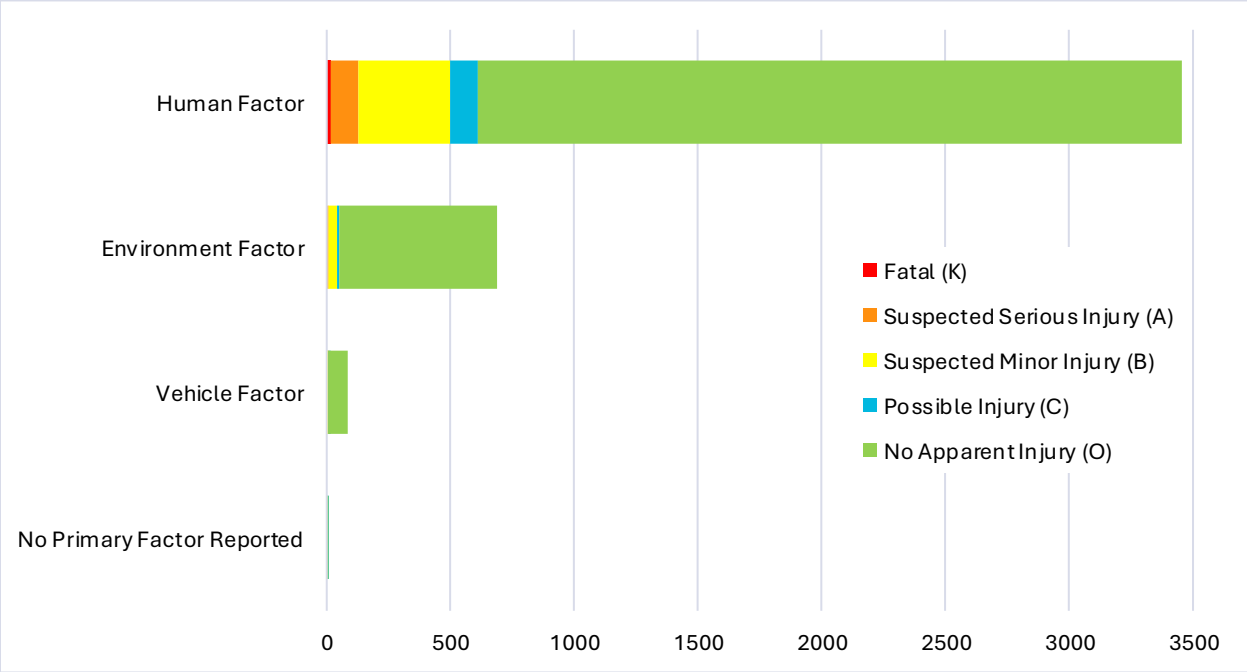


Figure 3-18. Primary Factor for Crashes by Severity

Human Factors

Human factors play a significant role in crash occurrences, often tied to errors in judgment and risky behaviors. These factors include speeding, failing to yield, distractions, fatigue, and the influence of alcohol or drugs. Following too closely is the human factor that is attributed to the most crashes in Floyd County, totaling 841 crashes, or 24% of the total. This is followed by failure to yield right of way at 601 crashes, or 17% of the total.

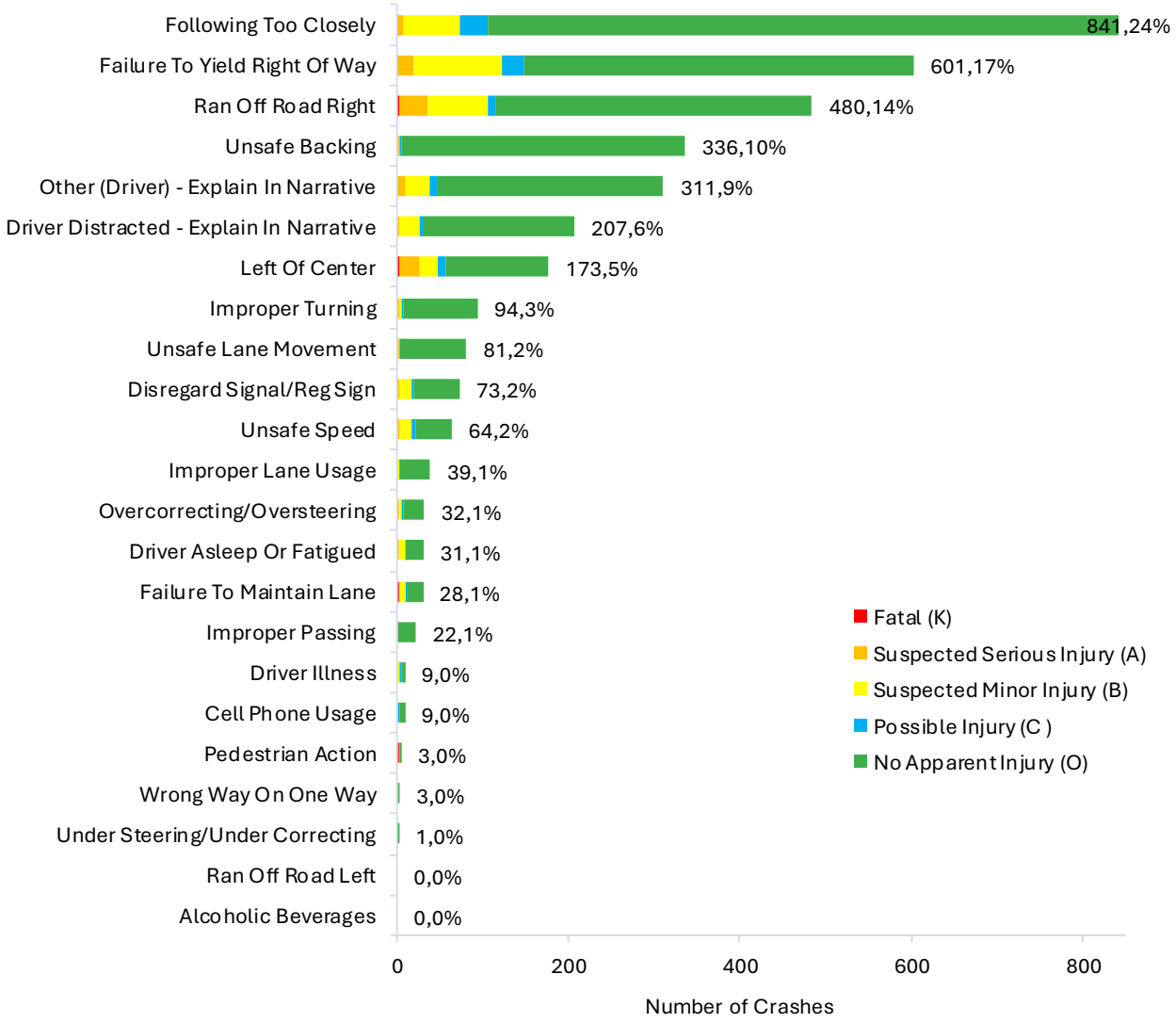


Figure 3-19. Crashes by Human Factor

As shown below, running off the road caused the most fatal and suspected serious injury crashes – four fatal and 33 involving suspected serious injury. Driving left of center was the cause of four fatal and 22 suspected serious injury crashes.

Given the high proportion of severe crashes where drivers ran off the road, crossed the centerline, or failed to yield the right of way, a speed management program is recommended. This would be designed to encourage drivers to make better decisions regarding their speed in various conditions. It could include infrastructure, behavioral, educational, and enforcement elements.

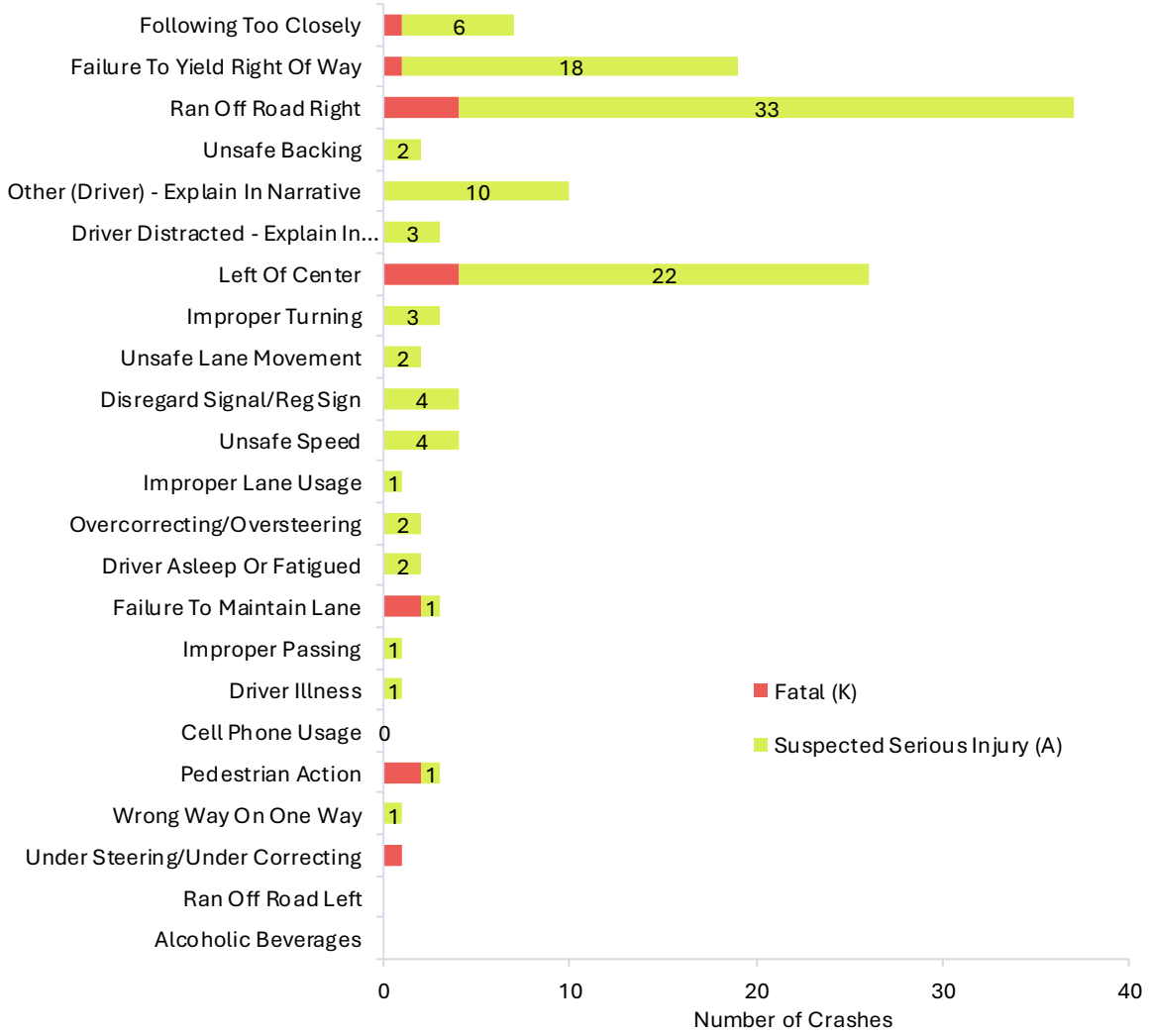


Figure 3-20. Fatal and Suspected Serious Injury Crashes by Human Factor

Environmental and Roadway Conditions

Environmental roadway conditions do not appear to contribute significantly to crash occurrence or severity. Adverse roadway conditions, defined as wet, snow, ice, or less common road conditions, comprise a quarter of the overall crashes, and 43% of fatal and suspected serious injury crashes. Wet roads account for 20% of all crashes and 10% of fatal and suspected serious injury crashes. Icy conditions only cause 2% of all crashes, but accounts for one third of fatal and suspected serious injury crashes. Table 3-4 shows the breakdown

Roadway Condition	All Crashes			Fatal and Suspected Serious Injury Crashes	
	#	%		#	%
Dry	3198	75%		117	56%
Wet	860	20%		21	10%
Ice	68	2%		68	33%
Snow/Slush	93	2%		-	0%
Other	6	0%		1	0%
Sand-Mud-Dirt-Oil-Gravel	1	0%		-	0%
Water (Standing or Moving)	11	0%		1	0%

Table 3-4 Crashes by Roadway Condition

High Injury Network

A High Injury Network (HIN) is a data-driven approach used to identify roadway segments that account for a disproportionate amount of a community's fatal and serious injury crashes. The HIN enables communities to concentrate their limited resources on improving safety along those high-priority, dangerous corridors. Following the Safe System Approach, the HIN also corresponds to the Safe Roads pillar. This pillar focuses on designing roadway environments to mitigate human mistakes and account for injury intolerances, encourage safe behaviors, and facilitate safe travel by the most vulnerable users.

The HIN provides a data-driven and focused list of corridors where a majority of the community's fatal and suspected serious injury crashes are occurring. The routes identified in the HIN will guide the development of strategies and project selection. These strategies and more information on the HIN can be found in **Chapter 6.Strategy and Project Selection.**

4. Engagement and Collaboration

A key component of the planning process is meaningful engagement with both the public and stakeholders. Throughout the development of this Safety Action Plan, engagement took various forms, allowing for a deeper understanding of current conditions, safety concerns, and challenges. These insights provide crucial context for the safety analysis. The following summarizes the community and stakeholder engagement completed for this Safety Action Plan.

Safety Action Plan Community Engagement

Regional Steering Committee

The Regional Steering Committee, comprised of diverse members from the region, was the guiding force and planning structure for the Safety Action Plan development. The Safety Action Plan's development evolved through a series of Committee meetings.

The first meeting provided an overview of the Safe Streets for All (SS4A) program and plan components, an explanation of the safety analysis process, outline of the engagement process connection points and tools, an overview of community considerations, and an overview of the project selection strategy and potential countermeasures. The second meeting reviewed detailed preliminary findings from the crash analysis. The project team identified focus areas based on feedback and local insights. Then, the project team guided the communities to adopt a Leadership Commitment resolution, setting a goal for each community to achieve the eventual goal of zero fatalities and serious injuries. The third meeting focused on the data collected from the public engagement to date and updates to the draft Safety Action Plan documents. During the fourth meeting, the discussions of the Committee centered on how the communities can use the Safety Action Plans, project identification, and potential improvements at the prioritized intersections and corridors on the High Injury Network (HIN).

Stakeholder Meetings

Twice during the planning process, the project team held one-on-one meetings with key stakeholders in the community to discuss elements brought up during the overall steering committee meetings. Local community engagement with the Safety Action Plan provided invaluable local knowledge and insight.

Meeting One

In July 2024, the first meeting introduced the project and set expectations for the project team and local leadership. The meeting included a request for previous plans and initiatives for community safety and future commitment goals to safety. The project team informed Stakeholders that the team would form Safety Committees following the first stakeholder meeting. The project team then provided a more extensive discussion of the currently available data and facilitated a discussion focusing on local conflict areas.

Meeting Two

The second meeting, held in February 2025, focused on reviewing the crash analysis dashboard and getting feedback on the initial prioritized High Injury Network (HIN) segments and priority intersections. Data on the dashboard included the location of the crash, mode of transportation, directional analysis, manner of collision, roadway condition, light condition, and the updated human factor. The group then discussed edits to the presented HIN potential corridor strategies, priority intersections, and potential intersection strategies. Key feedback included discussion about rural road right-of-way and the ranking of various roadways, including Paoli Pike.

Safety Committee

The Floyd County Safety Committee, comprised of diverse members from the community, such as emergency response representatives, played a key role in developing the Floyd County Safety Action Plan. Participants provided valuable feedback and insights into existing safety issues and concerns through two safety committee meetings.

Meeting One

Eight committee members attended the first meeting, which introduced the Safety Action Plan, its key components, and the Safe System Approach. The committee discussed historic crashes and brainstormed improvements for their local vehicular, pedestrian, and cyclist safety concerns. Data provided to the Committee included detailed crash maps organized by severity – including those for pedestrians and bicyclists – and intersection crash maps showing total and severe crashes. The committee's discussion focused on vehicular and pedestrian safety concerns, road striping, speeds, lack of shoulders, signage, school zones, and overall safety messaging.

Figure 4-1. Brainstorming Exercise

Meeting Two

Six committee members attended the second meeting. The Committee reviewed the draft prioritized HIN corridor segments, prioritized intersections, and potential safety countermeasures. The data provided included a preliminary ranking for each intersection and HIN corridor. It also included descriptions of potential countermeasures with their expected safety impacts. The project team provided maps of the HIN corridors and intersections for reference. The committee provided their priorities for both the HIN and the intersection list. They also provided feedback on what improvements they thought would be most appropriate and beneficial. There were four activities designed to elicit this information.

Activity A: Prioritizing HIN Corridors – There was general agreement on the top ranked HIN corridors with participants agreeing on the top ten in various orders. Portions of Highway 150 from I-64 to Voyles Road were ranked the highest (Segements 3, 4, and 5 on the High Injury Network (HIN).

Activity B: Potential Corridor Improvements - Most participants noted that all recommendations were appropriate with only minor notes about rumble strips and sidewalks.

Activity C: Prioritizing Intersections – The committee expressed interest in prioritizing several intersections that they thought were critical but were initially ranked lower than the top ten intersections. These locations have been highlighted in **Chapter 6. Strategy and Project Selection**.

Figure 4-2. Meeting Handout: Potential Safety Countermeasures

Activity D: Potential Intersection Safety Countermeasures – The committee agreed with the recommendations but some committee members eliminated alternative intersections (roundabouts and RCUTS) from all intersections. These suggestions have been incorporated into **Chapter 6. Strategy and Project Selection**.

Public Engagement

Survey One

The project team and committees conducted public engagement for the Safety Action Plan through an interactive online map. Residents within the KIPDA Region, including Floyd County, could provide input by identifying specific pedestrian, bicycle, or vehicle concerns on a map. Participants could add comments, images, and review or react to the contributions of others. This input offered valuable community perspectives on local safety issues.

The survey was available between July 9, 2024, and October 18, 2024. A total of 1,047 comments were collected for the entire region. Figure 4-4 provides an example view of the engagement map.

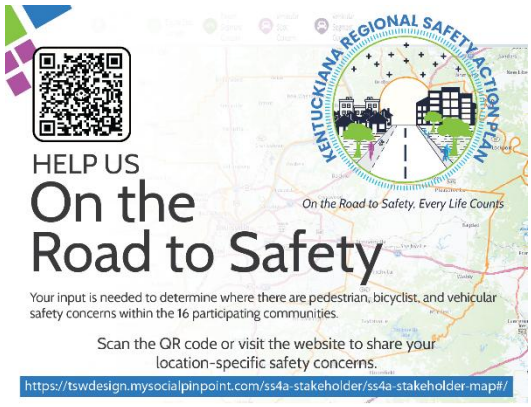


Figure 4-3. Promotional Flyer for Community Survey

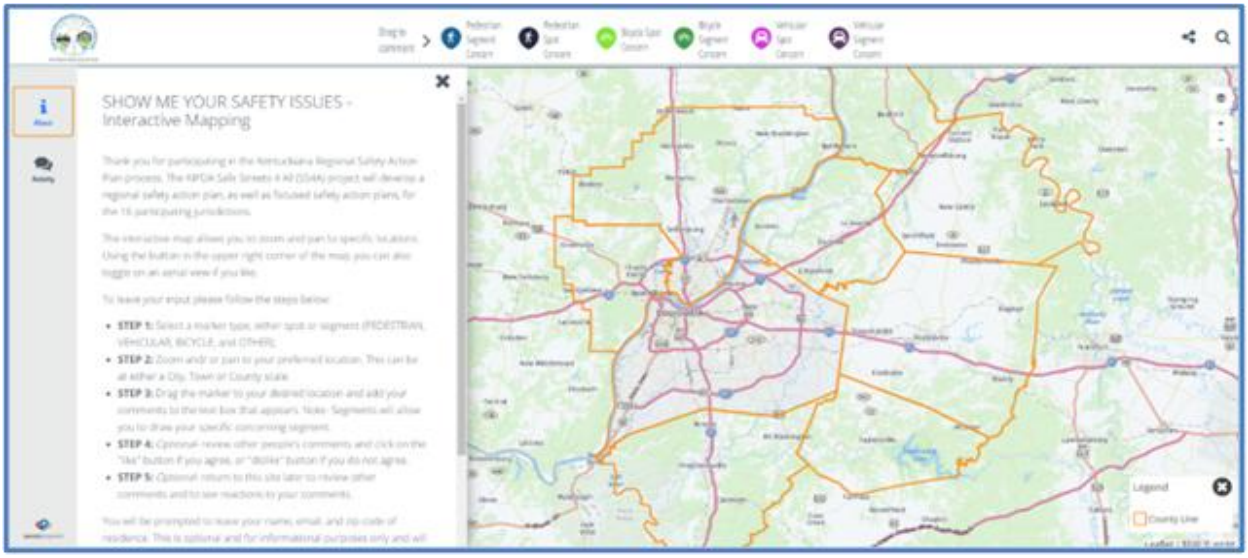


Figure 4-4. Social Pinpoint Online Engagement

The feedback collected from this platform played an integral role in identifying high-risk areas and shaping safety strategies so that the KIPDA Regional Safety Action Plan and the Floyd County Safety Action Plan address the concerns and needs of the public. The project team compared comment locations to the fatalities (K) and suspected serious injuries (A) in the 2018-2022 crash data to compare public perception of safety and data-driven crash densities. The following map shows the crash locations (blue) with the public comments (yellow). The locations where these two colors overlap (green-toned areas) represent locations where the perception of a safety issue is consistent with where severe crashes have occurred (for example, US Highway 150 north of I-64).

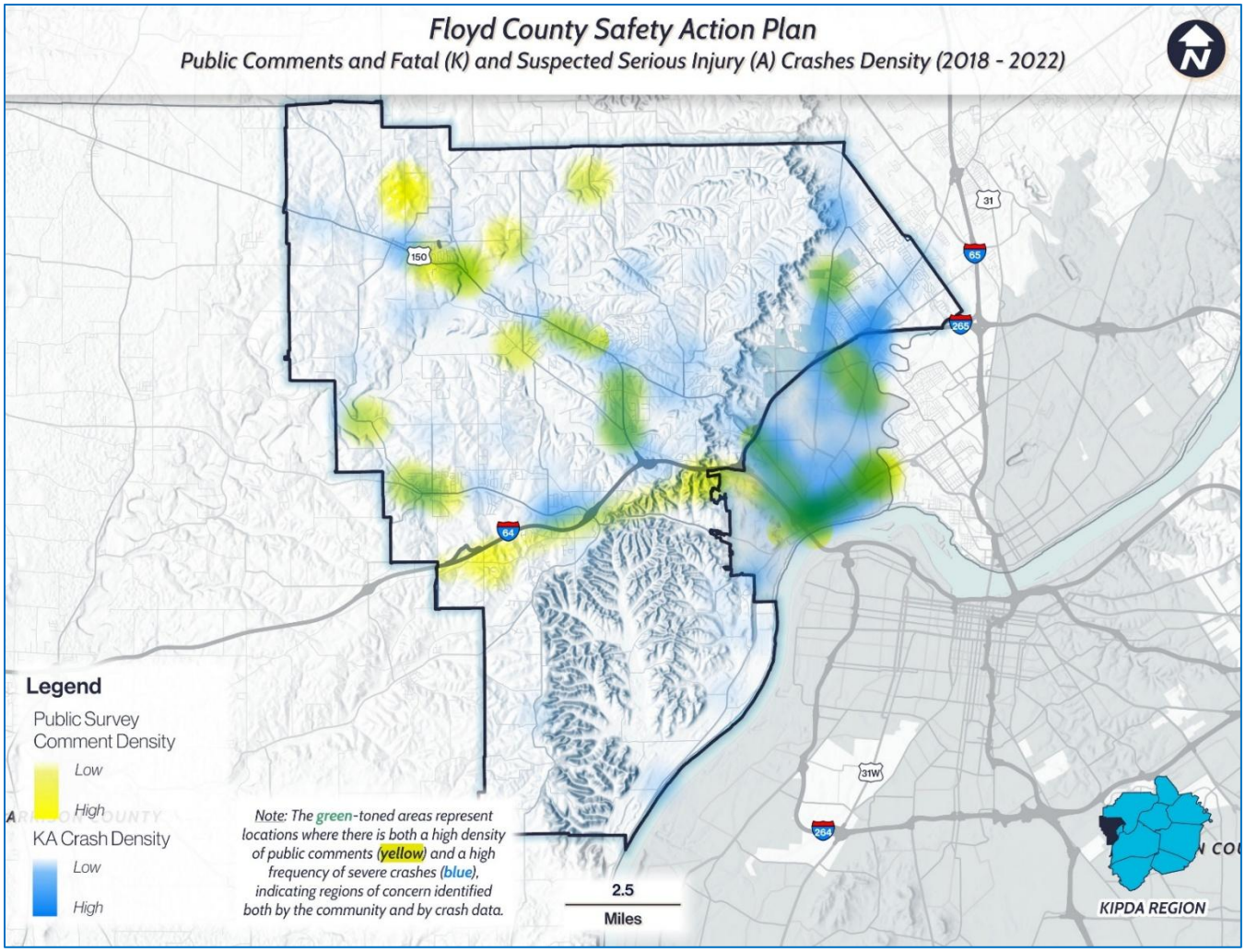


Figure 4-5. Public Comments and High Severity Crash Density

Survey Two

The project team and committees conducted a second public survey for the Safety Action Plan. Residents within the KIPDA Region, including Floyd County, could provide input on the results of the crash data analysis and potential countermeasures to improve safety in each community. Participants could provide opinions on if the identified recommended strategies and safety improvements were appropriate for each community. Links to additional information about the recommended strategies were included for reference. The survey was available between April 1, 2025, and April 30, 2025. A total of 524 responses were collected for the entire region. The survey results provided feedback on priority corridors and intersections as well as on what safety countermeasures were most appropriate. One Floyd County intersection mentioned in the survey comments was Mt Tabor at Bell Lane. In general, across the region, respondents tended to favor low-cost improvements at stop-controlled intersections, highway lighting, crosswalk visibility enhancements, left turn lanes, and two-way left turn lanes.

Active and Planned Projects

Transportation plans were reviewed to identify relevant Indiana Department of Transportation (INDOT) projects, KIPDA Transportation Improvement Program (TIP) projects, and Metropolitan Transportation Plan (MTP) projects, as well as ongoing Floyd County projects. Table 4-1 and Figure 4-6 show the current projects that have committed funds and are actively moving forward. Table 4-2 and Figure 4-7 show the long-range planning projects.

Map No.	State ID	KIPDA ID	Name	Type	Sponsor	Description
T-64	1800706	3147	US 150 Bridge Painting	Maintenance	INDOT	Bridge painting on US 150, 8.81 miles east of SR 335 over I-64 eastbound/westbound.
T-65	2100019	3148	I-64 Lighting	Intersection/ Interchange	INDOT	Lighting improvements from the I-64/I-265 interchange to US 150.
T-66	2200015	3149	I-64 Westbound Lane Over Quarry Road Bridge Replacement	Maintenance	INDOT	Bridge replacement of the I-64 westbound lane bridge over Quarry Road.
T-67	2200016	3150	I-64 New Bridge Over I-64 EB to I-265 EB Ramp	Maintenance	INDOT	New bridge construction on I-64 over the I-64 eastbound to the I-265 eastbound ramp.
T-70	2200019	3153	I-265 Bridge Replacement	Maintenance	INDOT	Bridge replacement on I-265 from the westbound I-265 ramp to EB I-64 over eastbound I-64 to eastbound I-265 ramp.
T-71	2200994	3154	US 150 Bridge Rehab Pipe Lining	Maintenance	INDOT	Bridge rehab pipe lining on US 150 over an unknown tributary of Little Indian Creek, 0.14 mile west of I-64.
T-77	2200837	3157	US 150 Hot-Mix Asphalt (HMA) Overlay	Maintenance	INDOT	Hot-mix asphalt (HMA) overlay, preventive maintenance, on US 150 from 3.32 miles west of I-64 (near Buck Creek) to I-64.
T-78	2201148	3056	US 150 Small Structures & Drains Construction (16 Locations)	Maintenance	INDOT	Small structures and drains construction on US 150 at various locations between 3.32 miles west of I-64 (near Buck Creek Road) to I-64.
T-127	1700205	2495	I-64	Maintenance	INDOT	Bridge deck replacement on I-64, WBL 1.63 miles west of US 150 at IN 62/IN 64 EB/WB.
T-132	1700206	2496	I-64	Maintenance	INDOT	Replace superstructure on I-64, eastbound lanes 1.63 miles west of US 150 over IN 62/IN 64 eastbound/ westbound.
T-137	1800807	2512	I-265 Payne-Koehler Road Bridge Deck Overlay	Maintenance	INDOT	Bridge rehabilitation project consisting of a bridge deck overlay on I-265 EB/WB over Payne-Koehler Road, located at 0.43 miles east of IN 311.
T-141	1700209	2545	US 150 & Maple Road	Roadway - Minor Widening	INDOT	Intersection improvement with added turn lanes at US 150 and Maple Road in Floyd County.
T-146	1800298	2592	US 150 Pavement Replacement	Roadway - Operations	INDOT	District pavement project, with pavement replacement on US 150, 4.9 miles east of IN 135 to 5.1 miles east of IN 135.
T-159	1800405	2520	US 150 Bridge Painting Over I-64 Westbound	Maintenance	INDOT	Bridge painting on US 150 located 08.81 miles east of IN 335 over I-64 Westbound lane.

Map No.	State ID	KIPDA ID	Name	Type	Sponsor	Description
T-161	17026 21	2521	US 150 Indian Creek Bridge Deck Overlay	Maintenance	INDOT	Construct a bridge thin deck overlay on US 150 located 02.69 miles east of IN 335 over Indian Creek.
T-162	18004 26	2522	US 150 Jersey Park Creek Bridge Deck Overlay	Maintenance	INDOT	Bridge rehabilitation project consisting of a bridge thin deck overlay located on US 150, located 02.46 miles east of IN 335 over Jersey Park Creek.
T-171	20001 44	2849	I-64 EB Bridge Over Yenowine Road	Maintenance	INDOT	Bridge deck overlay project on I-64 eastbound over Yenowine Road, 0.40 miles west of SR 64.
T-172	18029 87	2850	SR 62	Maintenance	INDOT	Small structure replacement on SR 62, 0.73 miles south of SR 11.
T-177	20003 34	2856	I-265 WB Bridge Over Jacobs Creek	Maintenance	INDOT	Bridge deck overlay on I-265 westbound over Jacobs Creek, 0.79 miles east of SR 311.
T-189	19001 18	2900	US 150	Roadway - Minor Widening	INDOT	Intersection improvement with added turn lanes at the intersection of Scenic Valley/Brush College Road.
T-190	18003 18	2901	SR 64	Intersection/ Interchange	INDOT	Intersection Improvement with added turn lanes on SR 64 at Copperfield Drive to reduce queueing and delay for motorists at this intersection.
T-194	20002 33	2913	US 150	Roadway - Operations	INDOT	Intersection improvement with new signals on US 150 at Everett Avenue, Steiller Road, and Buck Creek Road.
T-196	20020 73	2914	US 150 - Little Indian Creek	Maintenance	INDOT	Replace superstructure at WB over Little Indian Creek, 00.65 miles west of I-64.
T-213	21000 36	2967	SR 64 Added Travel Lane	Roadway - Major Widening	INDOT	Added travel lane on SR 64 from 2,150' west of the existing Oakes Road intersection to Edwardsville-Galena Road in Floyd County.
T-214	21000 47	2965	US 150 Intersection Improvement of Old Vincennes Road/Lawrence Banet Road	Intersection/ Interchange	INDOT	Intersection improvement at the intersection of Old Vincennes Road/Lawrence Banet Road.
T-231	17026 17	2514	I-64 at I-265 Bridge Deck Overlay #2	Maintenance	INDOT	Bridge rehabilitation project consisting of a bridge deck overlay on I-64. Located at 2.11 miles east of US 150, I-64 WB @ I-64 EB ramp to I-265 EB.
T-276	14005 50, 18009 00	2128	Charlestown Road Corridor Complete Streets	Bicycle/Pedestrian	Floyd County Board of Commissioners	Construction of a multi-use path on Charlestown Road from Sunset Drive to Chapel Lane, including pedestrian bridge.
T-402		3077	Bridge 43 - Scottsville Road Replacement		Floyd County Board of Commissioners	Bridge 43 is part of the Floyd County Inventory and has been identified in our recent Bridge Inventory for replacement.
T-448	18020 47	3283	I-64 CCTV/DMS	Roadway - Operations	INDOT	Deployment of 14 CCTV Cameras and six Dynamic Message Signs on I-64 from 3 miles west of SR 69 near the Illinois
T-527	20002 33	2913	US 150 Intersection Improvements		INDOT	Intersection Improvements with new signals on US-150 at Everett Ave, Stiller Rd, and Creek Rd.

Table 4-1. Current Floyd County TIP Projects

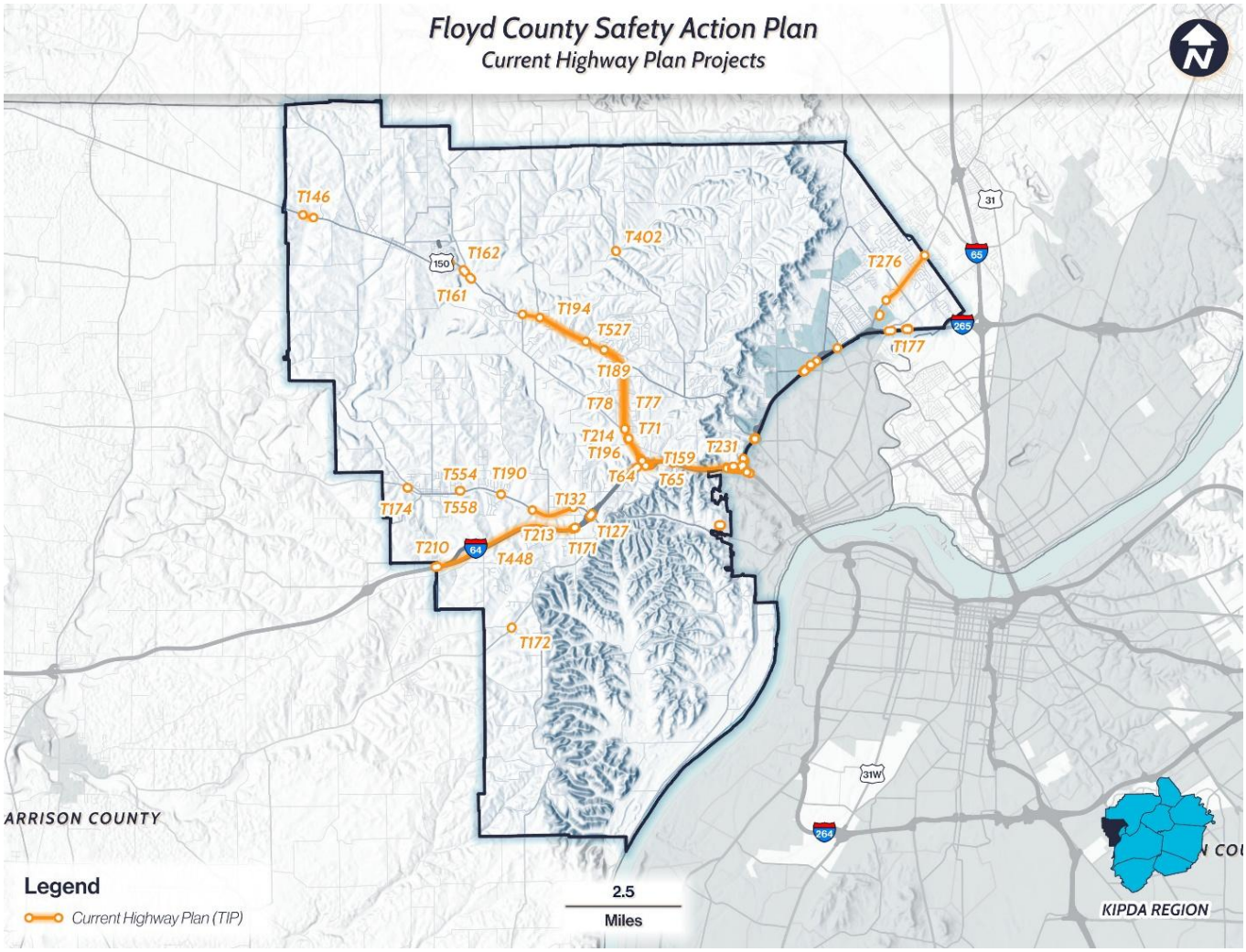


Figure 4-6. Current Floyd County TIP Projects

Map No.	State ID	KIPDA ID	Name	Type	Sponsor	Description
M-13	1700209	2545	US 150 & Maple Road	Roadway - Minor Widening	INDOT	Intersection improvement with added turn lanes at US 150 and Maple Road in Floyd County.
M-15	2000233	2913	US 150	Roadway - Operations	INDOT	Intersection improvement with new signals on US 150 at Everett Avenue, Steiller Road, and Buck Creek Road.
M-27		542	Old Vincennes Road Reconstruction Phase 3	Roadway - Minor Widening	Floyd County	Phase 3 of Reconstruction of Old Vincennes Road from south of Luther Road to US 150 in Floyds Knobs. Reconstruction includes widening of lanes/shoulders, drainage infrastructure, and reduction of unsafe sight lines.
M-33		3074	Baylor Wisman Road	Roadway - Major Widening	Floyd County	The proposed Baylor Wisman Road project would be widen the area of the narrow road coming down to a current one-lane bridge. It would also replace the existing bridge to improve safety.
M-34		3075	North Tucker Road Improvement Project	Roadway - Minor Widening	Floyd County	Proposed project would widen North Tucker Road. North Tucker Road is located in Georgetown Township in Floyd County. It has an intersection with State Road 64 and would be connected to the Brookstone Subdivision and future connector road through the County
M-35		3076	Innovation Parkway Extension Project	Roadway - New	Floyd County	Proposed project would create a connector road from Baylor-Wissman to Innovation Parkway. The new road would transverse the County's recent acquired Regional Park property.
M-36		3079	Chapel Lane Improvement Project	Roadway - Minor Widening	Floyd County	Chapel Lane serves as a major collector for eastern part of Floyd County. It connects Charlestown Road and Grant Line Road which are two of the most heavily travelled roads within the Floyd County system.
M-60		2032	Floyd Central - Highland Hills Safe Routes to School Project	Bicycle/Pedestrian	Floyd County	Multi-use path to connect Floyd Central High School and Highland Hills Middle School in Georgetown. Current area lacks any pedestrian/multi-modal infrastructure. Project could be located along Edwardsville-Galena
M-62		2103	Little Indian Creek Trail - Phase 1	Bicycle/Pedestrian	Floyd County	Project is a multi-use path connecting Highlander Point commercial area to Floyds Knobs commercial area. Path will go along Indian Creek stream system.
M-67	2100019	3148	I-64 Lighting	Intersection/Interchange	INDOT	Lighting improvements from the I-64/I-265 interchange to US 150.
M-68	2200016	3150	I-64 New Bridge Over I-64 EB to I-265 EB Ramp	Maintenance	INDOT	New bridge construction on I-64 over the I-64 eastbound to the I-265 eastbound ramp.
M-98		2770	Grant Line Road (Hausfeldt Lane to Security Parkway)	Roadway - Capacity Reconfiguration	New Albany	The need for improvement is based on the existing substandard geometrics, and lack of traffic capacity along the corridor, which is in a rapidly growing area of New Albany and Floyd County.
M-173	1900118	2900	US 150	Roadway - Minor Widening	INDOT	Intersection improvement with added turn lanes at the intersection of Scenic Valley/Brush College Road.
M-174	1800318	2901	SR 64	Intersection/ Interchange	INDOT	Intersection Improvement with added turn lanes on SR 64 at Copperfield Drive to reduce queueing and delay for motorists at this intersection.
M-178	2100036	2967	SR 64 Added Travel Lane	Roadway - Major Widening	INDOT	Added travel lane on SR 64 from 2,150' west of the existing Oakes Road intersection to Edwardsville-Galena Road in Floyd County.
M-179	2100047	2965	US 150 Intersection Improvement of Old Vincennes	Intersection/ Interchange	INDOT	Intersection improvement at the intersection of Old Vincennes Road/Lawrence Banet Road.

Map No.	State ID	KIPDA ID	Name	Type	Sponsor	Description
			Road/Lawrence Banet Road			
M-260		3047	Charlestown Road Corridor Complete Streets - Multi-Use Trail - Phase 2	Bicycle/ Pedestrian	Floyd County Board of Commissioners	Construction of a multi-use path on Charlestown Road to connect Chapel Lane to County Line Road.
M-309	1400550, 1800900	2128	Charlestown Road Corridor Complete Streets	Bicycle/ Pedestrian	Floyd County Board of Commissioners	Construction of a multi-use path on Charlestown Road from Sunset Drive to Chapel Lane, including pedestrian bridge.

Table 4-2. Current Floyd County MTP Projects

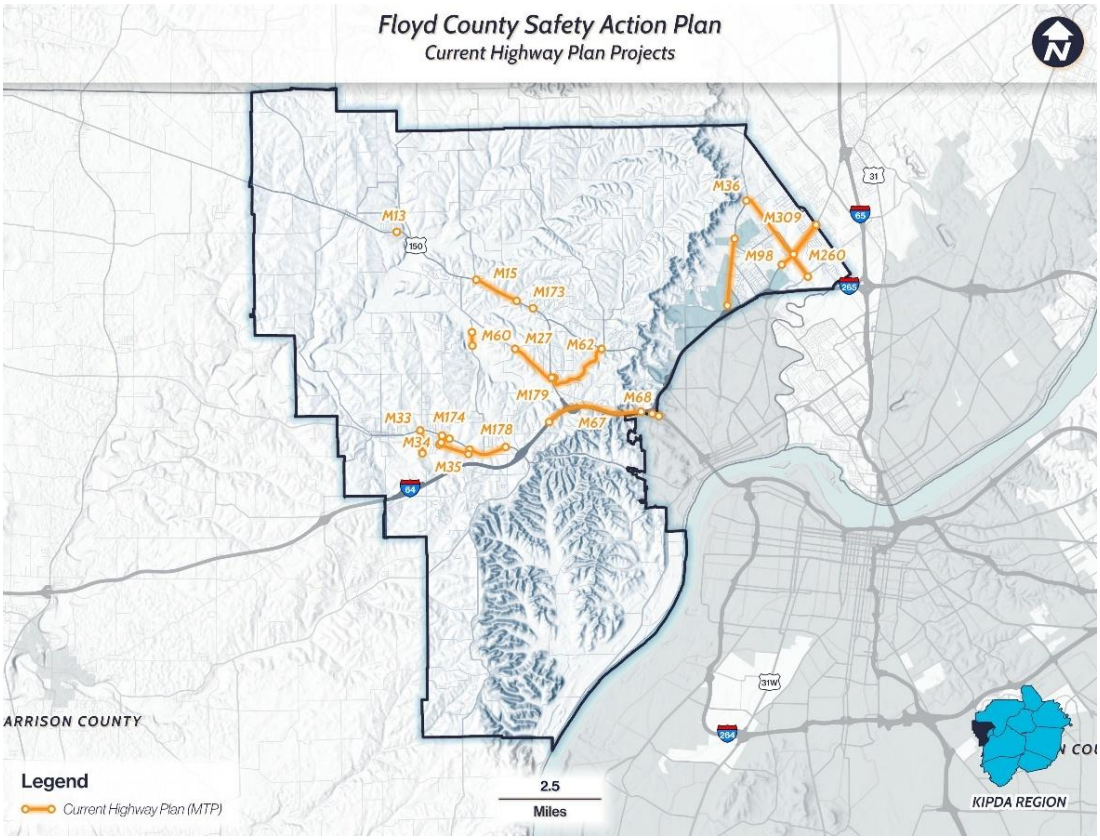


Figure 4-7. Current Floyd County MTP Projects

Community Considerations

The Safety Action Plan analyzed socio-economic and demographic data together with the crash data to determine if there are important trends, findings, or considerations related to specific areas or communities within the county.

Areas of Persistent Poverty

The Safe Streets and Roads for All 2025 Notice of Funding Opportunity defines Areas of Persistent Poverty (APP) based on the Infrastructure Investment and Jobs Act (IIJA, 49 U.S.C. 6702(a)(1)). It also states that this applies to the definition of Underserved Communities. Based on this definition, a project is located in an Area of Persistent Poverty if:

1. *The County in which the project is located consistently had greater than or equal to 20% of the population living in poverty in all three of the following datasets: (a) the 1990 decennial census; (b) the 2000 decennial census; and (c) the most recent (2021) Small Area Income Poverty Estimates; OR*
2. *The Census Tract in which the project is located has a poverty rate of at least 20% as measured by the 2014-2018 5-year data series available from the American Community Survey of the Bureau of the Census; OR*
3. *The project is located in any territory or possession of the United States.*

The Floyd County study area has two areas that are designated as Area of Persistent Poverty. It is important to consider these areas when planning safety projects as they are often areas of underinvestment in transportation safety infrastructure. It is also important to consider them because they tend to be overrepresented with regard to crashes and especially high severity crashes.

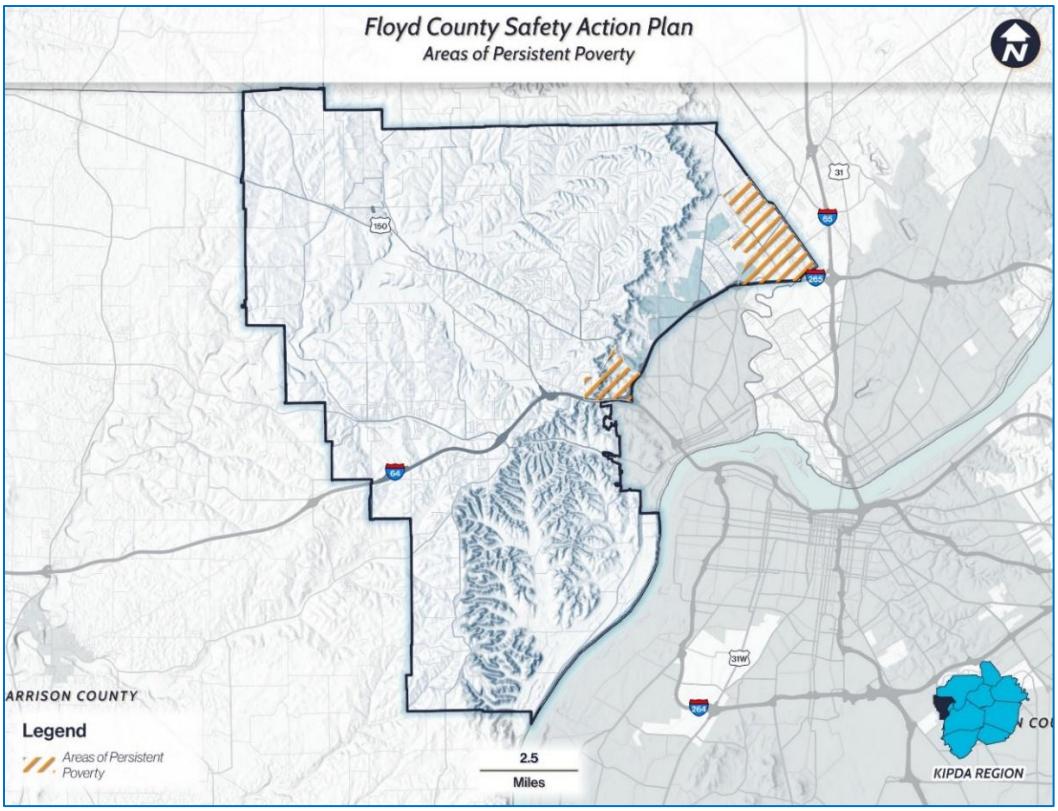


Figure 4-8. Areas of Persistent Poverty

Community Demographic Summary

The Safety Action Plan analyzed census tract areas, population, and crash occurrences within communities. The following four populations were analyzed using the United States Census American Survey (ACS). The 2022 ACS five-year table was used.

Elderly Population

Approximately 16.7% of the population of Floyd County is 65 or older. Higher percentages of elderly residents live near Georgetown and near New Albany, as shown below. Portions of the county with high elderly populations should consider tailored roadway safety countermeasures. Oversized signage, lighting, pedestrian refuge islands, leading pedestrian intervals (LPIs), and raised crosswalks are some of the countermeasures that benefit elderly populations.

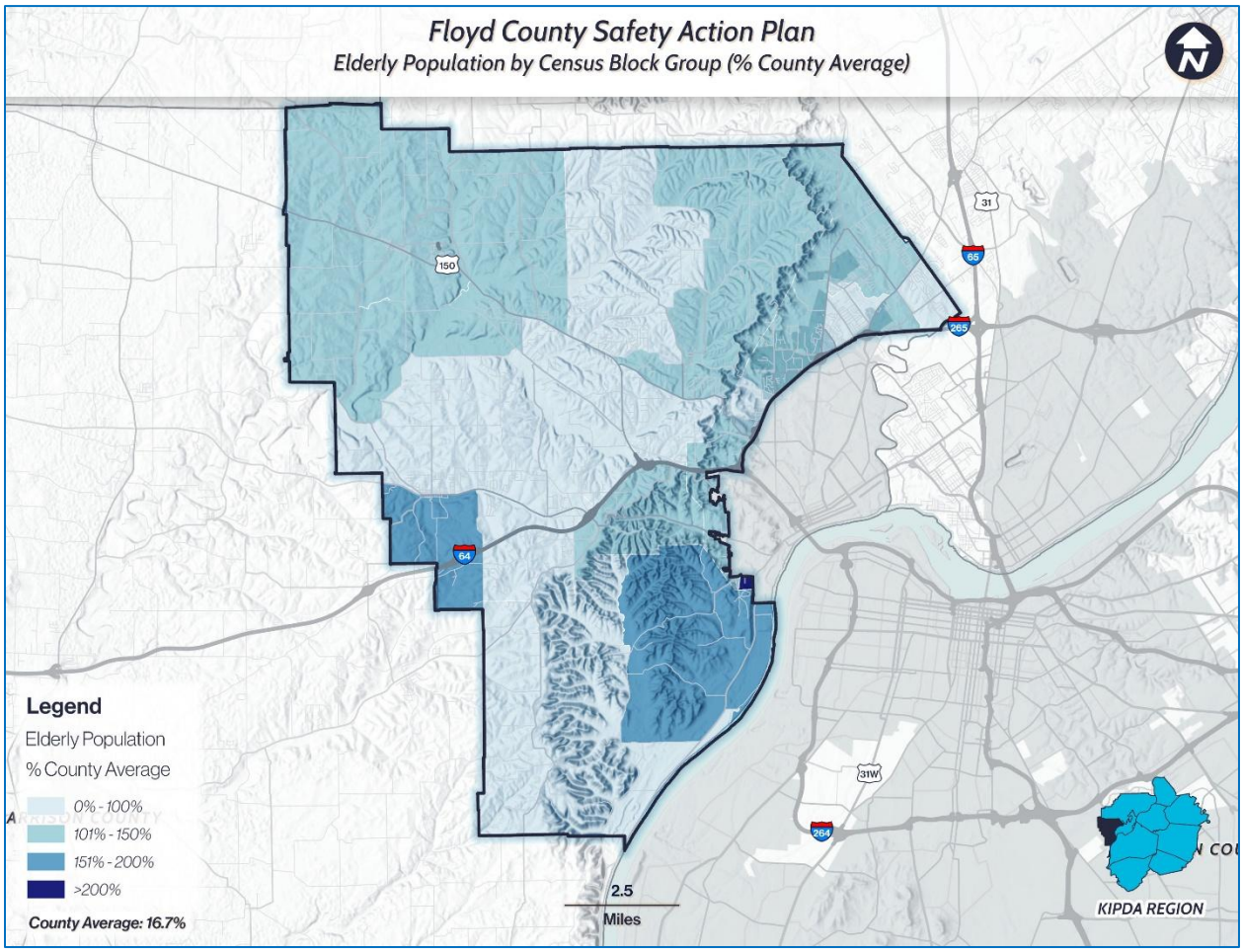


Figure 4-9. Elderly Population by Census Block Group Map

Population Impacted by Disability

In Floyd County, approximately 26.5% of households have one or more occupants with a disability. Similar to elderly populations, there are safety countermeasures available that support disabled populations. Many of these relate to pedestrian facilities such as curb ramps.

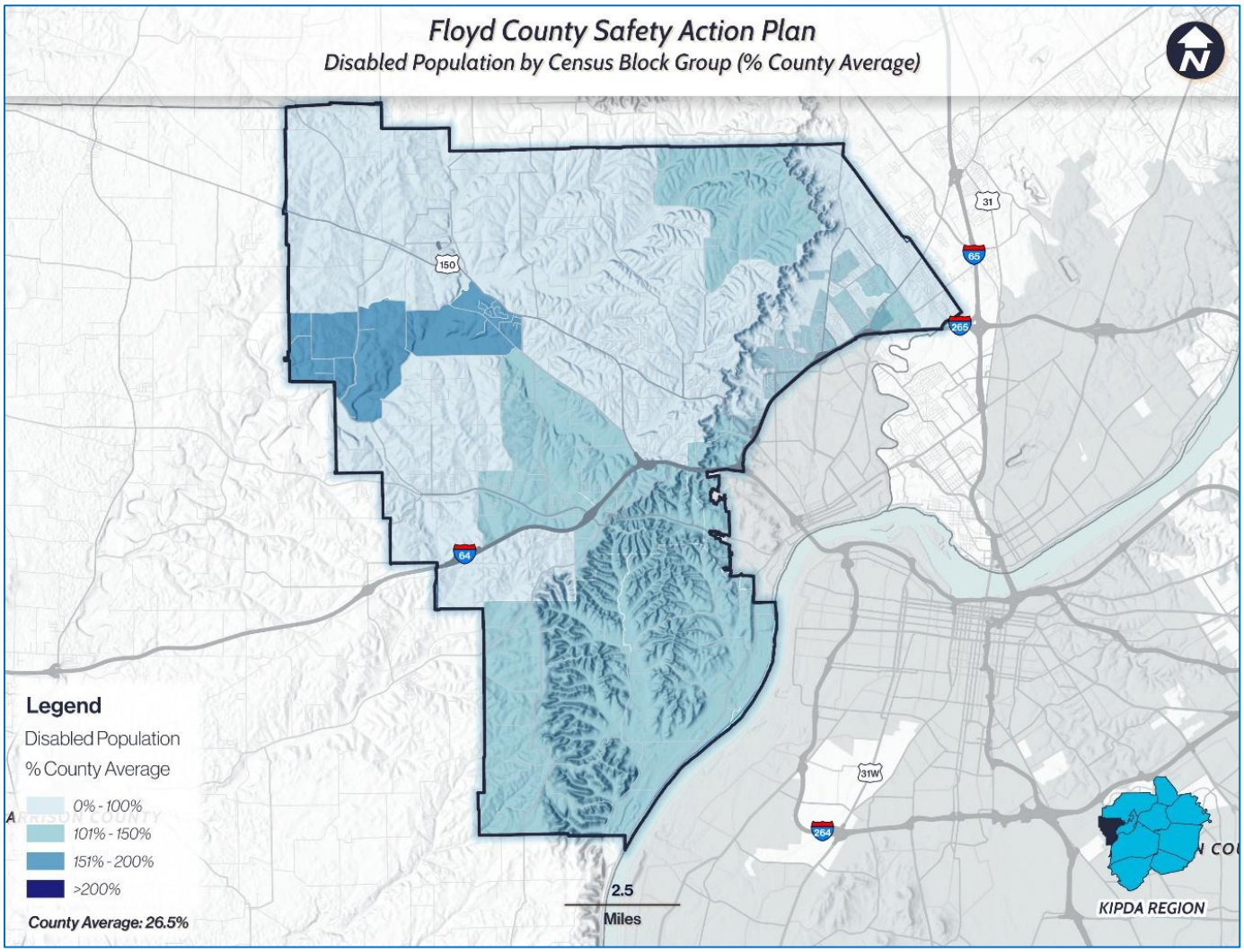


Figure 4-10. Disabled Population by Census Block Group Map

Population Experiencing Poverty

Approximately 9.4% of the population are at or below the poverty line with many of those residents living in the Census Block Group areas noted in the figure below. Areas with high poverty rates are often areas of underinvestment with regard to infrastructure and safety.

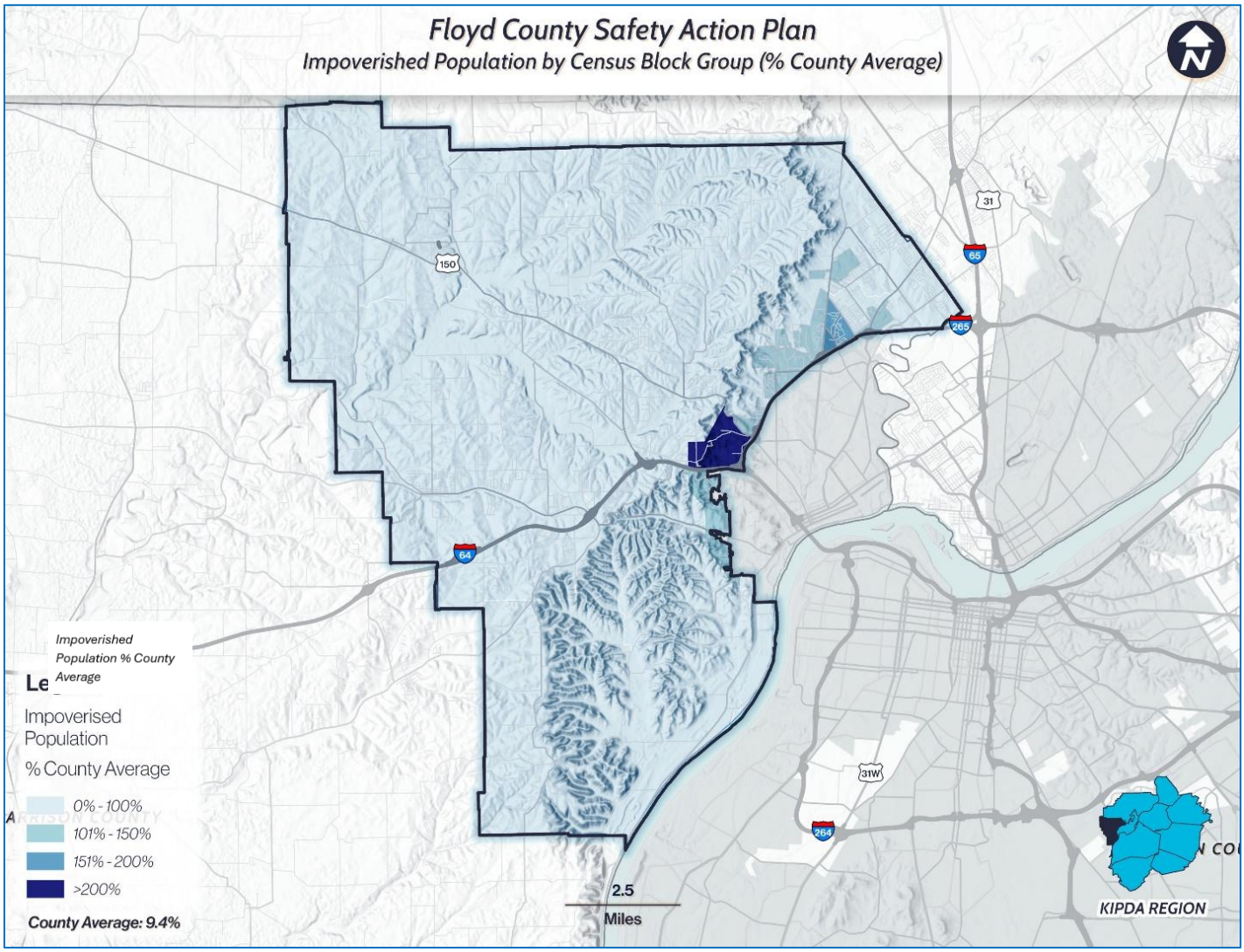


Figure 4-11. Impoverished Population by Census Block Group Map

Minority Population

Approximately 13.6% of the population of Floyd County identifies as non-white as illustrated in the figure below.

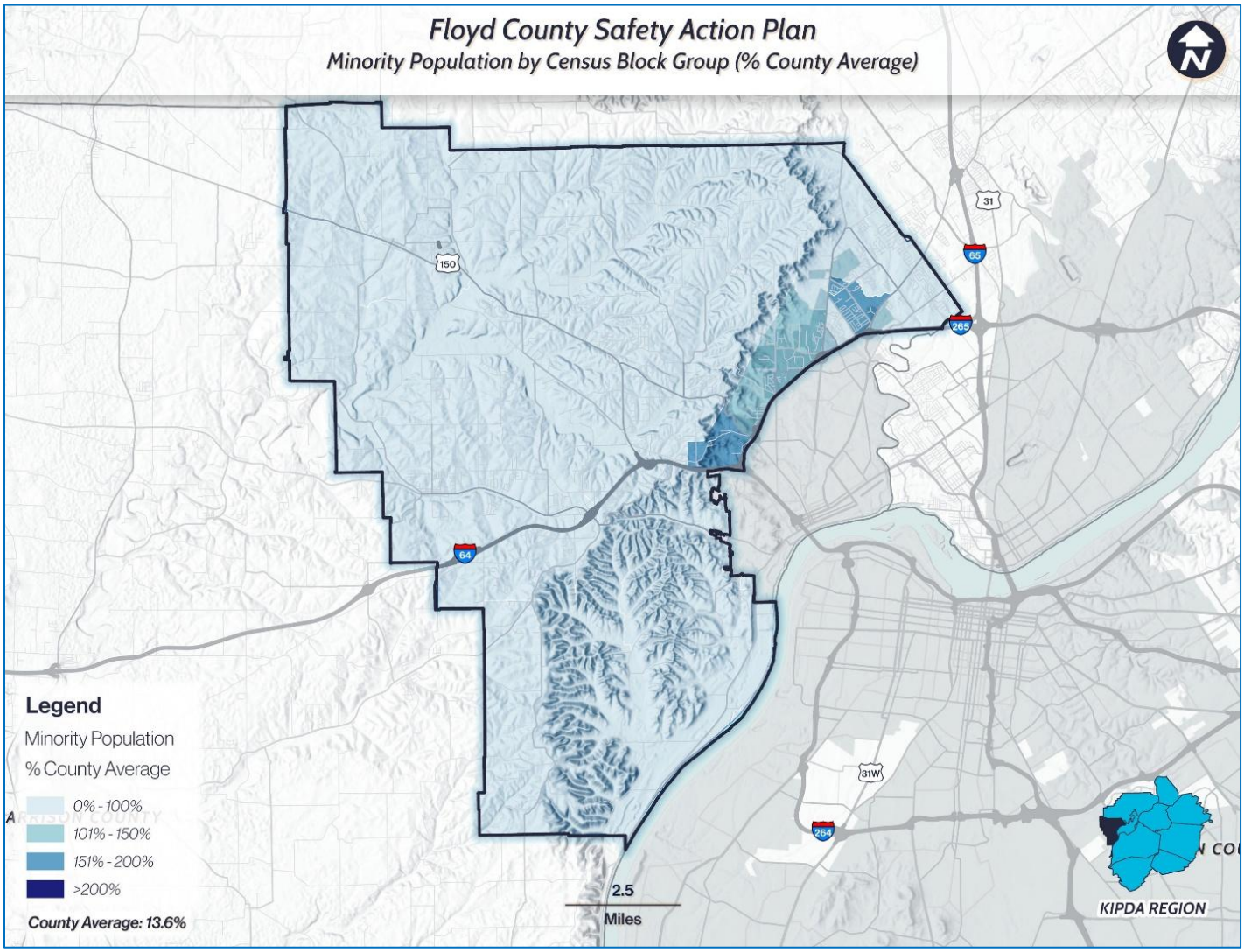


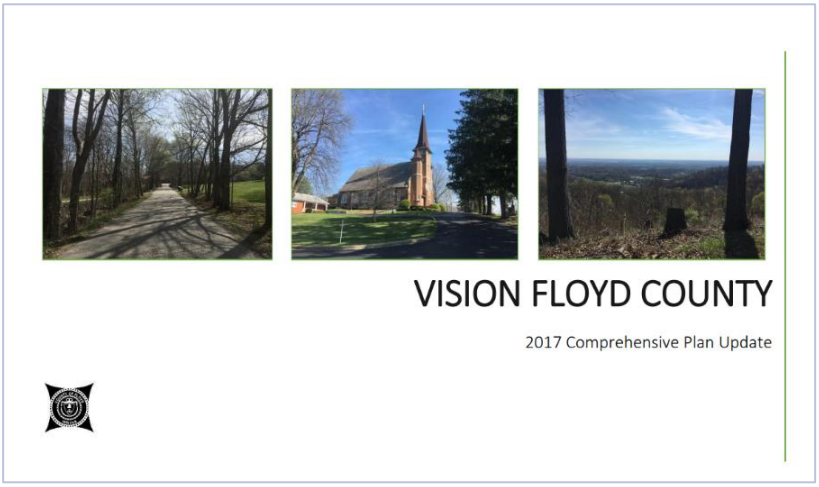
Figure 4-12. Minority Population by Census Block Group Map

5. Policy and Process Changes

A comprehensive review of Floyd County's existing policies, plans, guidelines, and standards has identified key opportunities to enhance transportation safety. The County aims to prioritize safety while creating a more accessible transportation network for all users.

Floyd County Comprehensive Plan

Link: Vision Floyd County



The Floyd County Comprehensive Plan, updated in 2017, outlines a strategic vision for land use, infrastructure, and transportation development. A central focus of the plan is enhancing safety and mobility along key corridors such as State Roads 64-62 and U.S. Highway 150, which are experiencing increased traffic due to regional growth.

Key safety-related policies include:

- Shared Roadway Safety Enhancements: Identification of county roads frequently used by bicyclists, with recommendations for safety signage to alert all users to shared roadway conditions.
- Education and Awareness Campaigns: Emphasis on educating both drivers and bicyclists about safe practices, especially in areas with agricultural traffic.
- Proactive Planning for Growth: Infrastructure investments are encouraged to support anticipated development while prioritizing safety and multimodal access.

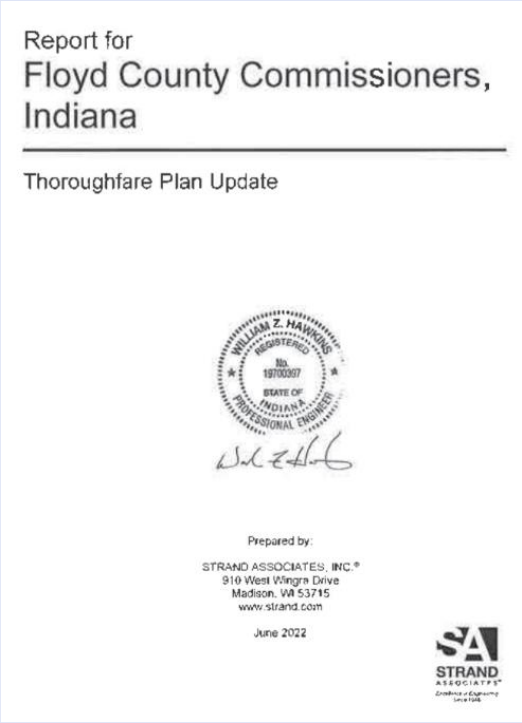
Thoroughfare Plan & Sidewalk Plan

Link: Floyd County Thoroughfare Plan

The Floyd County Thoroughfare Plan, adopted in 2022, provides a detailed classification and design framework for the county's roadway network. It supports the goals of the Comprehensive Plan by establishing standards for roadway function, connectivity, and safety.

Key elements include:

- Multimodal Integration: Encourages the inclusion of sidewalks, bike lanes, and shared-use paths in roadway projects, particularly in areas with high pedestrian or cyclist activity.
- Access Management and Safety: Recommends strategies to reduce conflict points, such as driveway consolidation and intersection improvements, to enhance safety for all users.
- Context-Sensitive Design: Promotes roadway designs that reflect the surrounding land use and community character, ensuring that safety improvements are compatible with local needs.


Report for
Floyd County Commissioners, Indiana

Thoroughfare Plan Update

Prepared by:

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June 2022

The Paoli Pike Sidewalk Plan is a targeted infrastructure initiative included in the 2022 update to the Floyd County Thoroughfare Plan. It focuses on improving pedestrian infrastructure along Paoli Pike from Buffalo Creek Drive to US 150, a corridor that connects residential neighborhoods with commercial and civic destinations.

Key recommendations include:

- Sidewalk Installation and Upgrades: New and improved sidewalks to enhance pedestrian safety and accessibility.
- Low-Cost Roadway Improvements: Measures such as lane narrowing and enhanced crosswalks to improve pedestrian visibility and reduce vehicle speeds.
- Model for Municipal Action: Demonstrates how incremental, cost-effective improvements can yield significant safety benefits.

Future Policy and Plan Considerations

These recommendations address potential future policy, planning, and guidance topics.

Traffic Calming Measures: Consider updating regulations to include guidelines for traffic calming measures, such as roundabouts, speed humps, chicanes, and raised intersections and crosswalks in residential subdivisions to reduce vehicle speeds and enhance safety for pedestrians and bicyclists. Implementing traffic calming strategies will reduce the risk and severity of crashes.

Pedestrian and Bicyclist Infrastructure: Consider updating pedestrian and bicyclist infrastructure requirements for new developments within the county to encourage safe access for all vulnerable road users. Sidewalks should meet accessibility standards and provide safe crossings at all intersections. Consider the inclusion of bike lanes or shared-use paths in all new developments and require connectivity to existing pedestrian and bicycle networks.

Traffic Safety Analysis and Improvements: Consider including language that requires a traffic safety analysis to demonstrate that the development or subdivision is not significantly impacting safety on nearby roads or intersections. Language could also be integrated into zoning and subdivision ordinances to provide for the analysis of, and recommendations for, potential countermeasures to address any potential impacts.

6. Strategy and Project Selection

The development of strategies and project selection is based on a comprehensive analysis of historical crash data, best practices implementation, and active engagement with stakeholders and the community. The reactive approach involves a detailed examination of crash data by frequency, severity, and location to identify the areas needing improvement the most. The following sections detail the methodology for prioritizing projects and strategy selection.

Prioritization

The County's goal is to eliminate fatal and serious injury crashes; therefore, crash severity is a critical factor in prioritizing projects and strategy selection. Comprehensive crash costs combine the economic cost of a crash and monetized pain and suffering. The Federal Highway Administration (FHWA) developed national crash costs to use as default crash unit values (Crash Costs for Highway Safety Analysis), which states and municipalities can adjust based on regional differences. Table 6-1 provides the comprehensive cost per crash adjusted to the KIPDA region as prescribed in the FHWA Crash Costs for Highway Safety Analysis.

Severity	Severity Description	Comprehensive Cost Per Crash (2022 Dollars)
K	Fatal Injury	$10,175,024
A	Suspected Serious Injury	$594,471
B	Suspected Minor Injury	$182,274
C	Possible Injury	$116,572
O	No Apparent Injury	$12,220

Table 6-1. KIPDA Comprehensive Crash Cost

Equivalent Property Damage Only Method

The Equivalent Property Damage Only (EPDO) is a method of weighting crashes by severity using the equivalent number of No Apparent Injury Crash costs, also called Property Damage Only (PDO) crash costs, to develop the weights. The following table shows the comprehensive costs and EPDO value breakdown by crash severity.

Severity	Comprehensive Cost Per Crash (2022 Dollars)	EPDO Weighted Value
K	$10,175,024	833
A	$594,471	49
B	$182,274	15
C	$116,572	10
O	$12,220	1

Table 6-2. KIPDA EPDO Crash Value

As shown in Table 6-2, the comprehensive cost of a fatal crash (K) compared to the other crash severities is significant. The EPDO method, however, may overly emphasize fatal crashes, potentially skewing focus towards areas with fewer crashes. To address this imbalance, analysts used a modified EPDO (MEPDO) approach to equally consider both fatal and suspected serious injury crashes by blending their values based on their comprehensive costs and frequency. Table 6-3 presents a breakdown of the MEPDO, providing a more balanced evaluation while maintaining a focus on fatal and suspected serious injury crashes. The crashes for the entire KIPDA region were used to calculate weighted average costs and MEPDO.

Severity	Crashes	Comprehensive Cost Per Crash (2022 Dollars)	Severity	Weighted Average Costs	MEPDO Value
K	618	$10,175,024	KA	$2,224,193	182
A	3,015	$594,471			
B	12,841	$182,274	B	$182,274	15
C	11,770	$116,572	C	$116,572	10
O	113,611	$12,220	O	$12,220	1

Table 6-3. KIPDA MEPDO Crash Value

Reactive Approach

Methodology

The reactive approach for analyzing crashes includes joining the crash data with roadway data. The team gathered Indiana geographic information system (GIS) files with roadway and traffic data. The GIS roadway layer was divided into segments and intersections. Analysts combined the crash data with the GIS information to facilitate detailed analysis by identifying the location of the crashes by road segment and intersection.

After joining the crashes to the roadway segments and intersections, analysts applied the MEPDO method to generate lists of prioritized intersections and corridors.

The lists are for planning purposes only. The intersections and corridors identified could potentially benefit from safety countermeasures; however, it is not necessary to make improvements in the listed order. In addition, there may be other high priority locally identified safety projects. Therefore, these lists provide high-level planning guidance for future agency consideration.

Intersections

Enhancing safety at intersections is vital for achieving a Safe System Approach. Evaluating roadway features such as geometrics and traffic operation and control is necessary for eliminating fatal and serious injury crashes. Intersections are deliberate points of interaction where vehicles and non-motorized users converge, significantly impacting the overall safety performance of the transportation system. These conflict points are historically where fatal and serious injury crashes occur. Therefore, intersection projects present unique opportunities to incorporate Safe System principles into planning, design, and operational decisions. Improving intersections can play a significant role in eliminating fatal and serious injury crashes.

Prioritized Intersections

Floyd County experienced 7 fatal and 52 suspected serious injury crashes at intersections, representing 41% of all fatal and suspected serious injury crashes. The intersections contain multiple conflict points and offer significant opportunities to enhance safety for all users. MEPDO was calculated and ranked for each intersection. Table 6-4 lists the top 20 intersections by MEPDO. These intersections account for all 15 fatal and suspected serious injury crashes at intersections. The remaining five intersections tended to have higher numbers of crashes but with lower overall severity and MEPDO. Figure 6-1 and Figure 6-2 illustrates these approaches to prioritizing intersections.

Ranking	Intersection	K	A	B	C	O	KA	TOTAL	MEPDO
1	Charlestown Rd & I-265 WB Ramps	0	3	4	3	15	3	25	649
2	Grant Line Rd & Hausfeldt Ln	0	2	8	3	73	2	86	585
3	Charlestown Rd & Kamer Miller Rd	0	2	7	4	58	2	71	565
4	State St & Kenzig Rd / I-265 WB Ramps	0	1	11	5	145	1	162	539
5	Chapel Ln & Grant Line Rd	0	2	9	1	28	2	40	536
6	Grant Line Rd & Klerner Ln	0	2	8	0	22	2	32	505
7	Charlestown Rd & County Line Rd	0	2	4	1	31	2	38	464
8	Buttontown Rd & US-150	1	1	3	1	9	2	15	427
9	Charlestown Rd & Sunset Dr	0	2	1	0	27	2	30	406
10	Grant Line Rd & Bald Knob Rd	0	2	2	0	8	2	12	402
11	SR-65 & Oakes Rd & Old Georgetown Rd	0	2	2	0	6	2	10	400
12	Paoli Pk & E Luther Rd	0	2	0	0	25	2	27	389
13	US-150 & Old Vincennes Rd	0	1	6	1	54	1	62	335
14	St. Joseph Rd & Grant Line Rd	1	0	3	2	38	1	44	284
15	St. Joe Station & Grant Line Rd	1	0	5	0	7	1	13	264
16	Mel Smith Rd & Grant Line Rd	1	0	3	0	26	1	30	253
17	US-150 & Navilleton Rd	0	1	2	0	12	1	15	224
18	Grant Line Rd & Security Pkwy	0	1	1	1	14	1	17	220
19	Paoli Pk & Old Hill Rd	0	1	1	0	10	1	12	207
20	SR-111 & Two Mile Ln	0	1	1	0	7	1	9	204

Table 6-4. Prioritized Intersections by MEPDO

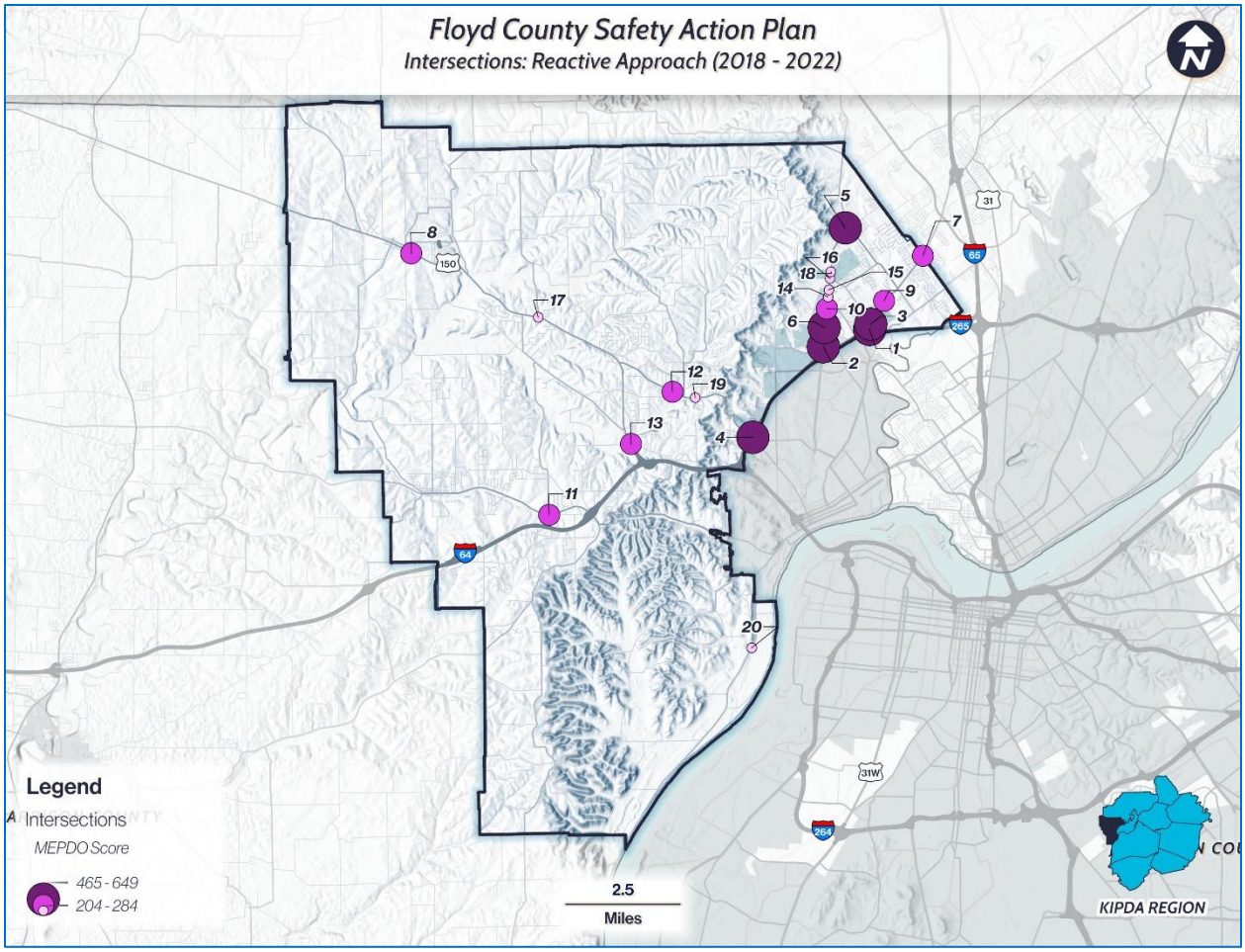


Figure 6-1. Intersections. Reactive Approach Map

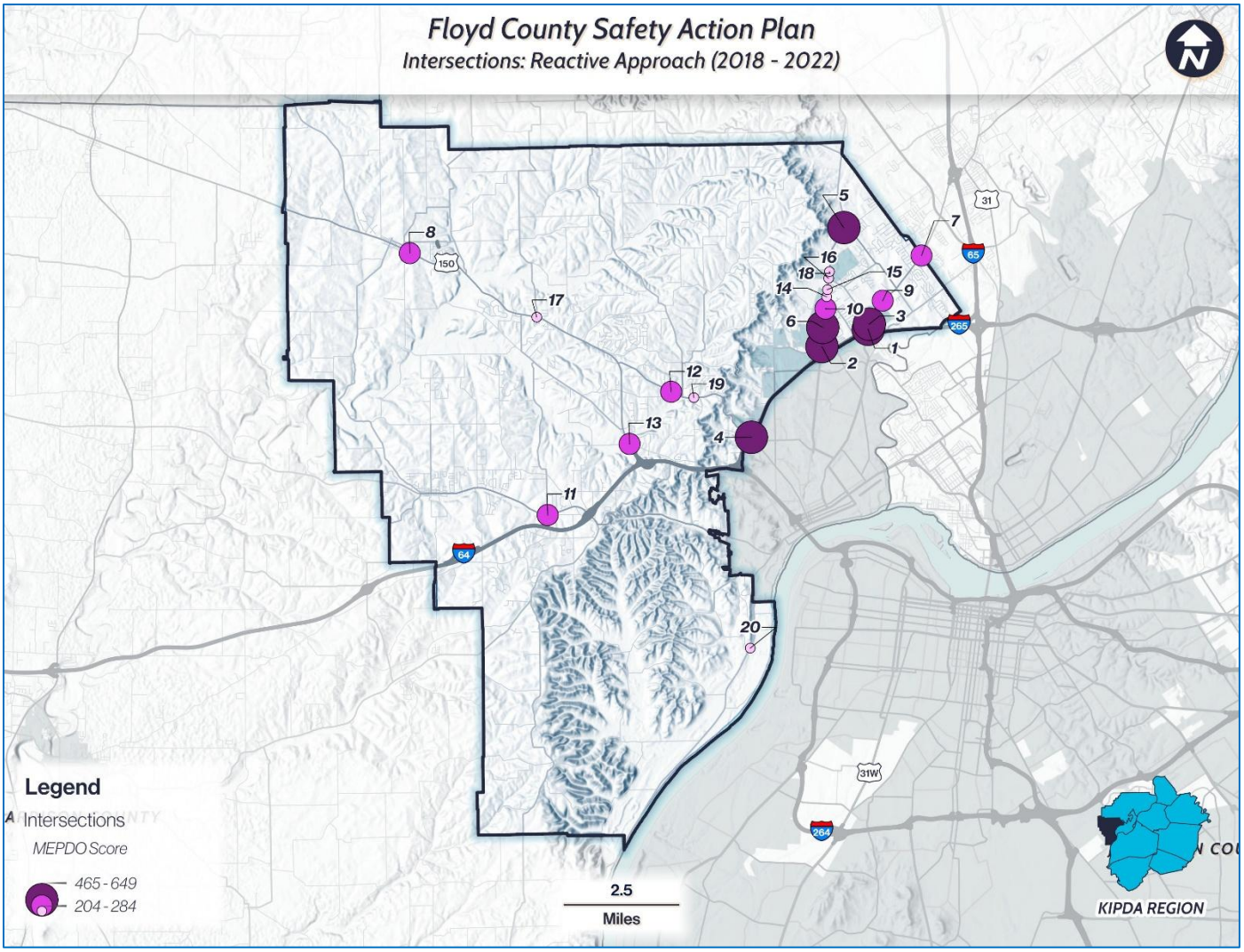


Figure 6-2. Intersections Prioritized by MEPDO Map

High Injury Network and Prioritized Corridors

A High Injury Network (HIN) is a data-driven approach to identify roadway segments that experience a disproportionately high number of fatal and serious injury crashes. This approach enables communities to focus resources on improving safety along those high priority corridors. Floyd County's HIN was developed using detailed crash data analysis and GIS mapping to pinpoint corridors with the highest concentration of severe crashes. Table 6-5, Figure 6-3, Figure 6-4, and Figure 6-5 illustrates Floyd County's HIN, highlighting its overlap with locations of fatal and serious injury crashes, and prioritized intersections based on MEPDO analysis.

Ranking	Route	Begin	End	Length (mile)	MEPDO	MEPDO/ mile
1	Grant Line Rd	I-265 Ramps	Security Pkwy / Barack Obama Way	1.78	3463	1945
2	Charlestown Rd	I-265 Ramps	Lawrence Meyer Rd / County Line Rd	2.08	3245	1560
3	US Highway 150	Buck Creek Rd	I-64 / IN-62 Ramps	3.00	2681	894
4	US Highway 150	Voyles Rd	Beechwood Dr	1.73	1460	844
5	US Highway 150	Beechwood Dr	Buck Creek Rd	3.36	2709	806
6	Paoli Pike	Scottsville Rd	I-265 Ramps	2.11	1595	756
7	Main St (IN-64)	Marci Ln	Self-Storage	2.26	1645	728
8	State Road 64	Wolfe Rd / County Line Rd	Church St	0.67	405	604
9	State Road 64 / State Road 62	Self-Storage	Yenowine Ln	2.07	1188	574
10	Old Vincennes Rd	Luther Rd	US Highway 150	1.18	664	563
11	Grant Line Rd	Security Pkwy / Barack Obama Way	W St Joe Road	2.66	1226	461
12	Moser Knob Rd	Hausfeldt Ln	N Skyline Dr	2.09	936	448
13	Paoli Pike	US Highway 150	Scottsville Rd	1.61	685	425
14	Georgetown Greenville Rd	Byrneville Rd	Malinee Ott Rd	1.59	614	386
15	Main St (IN-64)	Church St	Marci Ln	1.13	418	370
16	Scottsville Rd	Buck Creek Rd	Starlight Rd / Fertig Creek Rd	1.85	627	339
17	US Highway 150	Pete Reisert Rd	Voyles Rd	2.26	693	307
18	River Rd (IN-111)	Old River Road	Old River Road	2.22	681	307
19	Brush College Rd	US Highway 150	Scottsville Rd	1.97	600	305
20	Spickert Knob Rd	Scottsville Rd	Glenmill Rd	2.66	796	299
21	Scottsville Rd	Paoli Pike	Buck Creek Rd	1.95	438	225
22	Navilleton Rd	US Highway 150	Jersey Park Rd	2.05	434	212

Table 6-5. Prioritized Corridors - High Injury Network

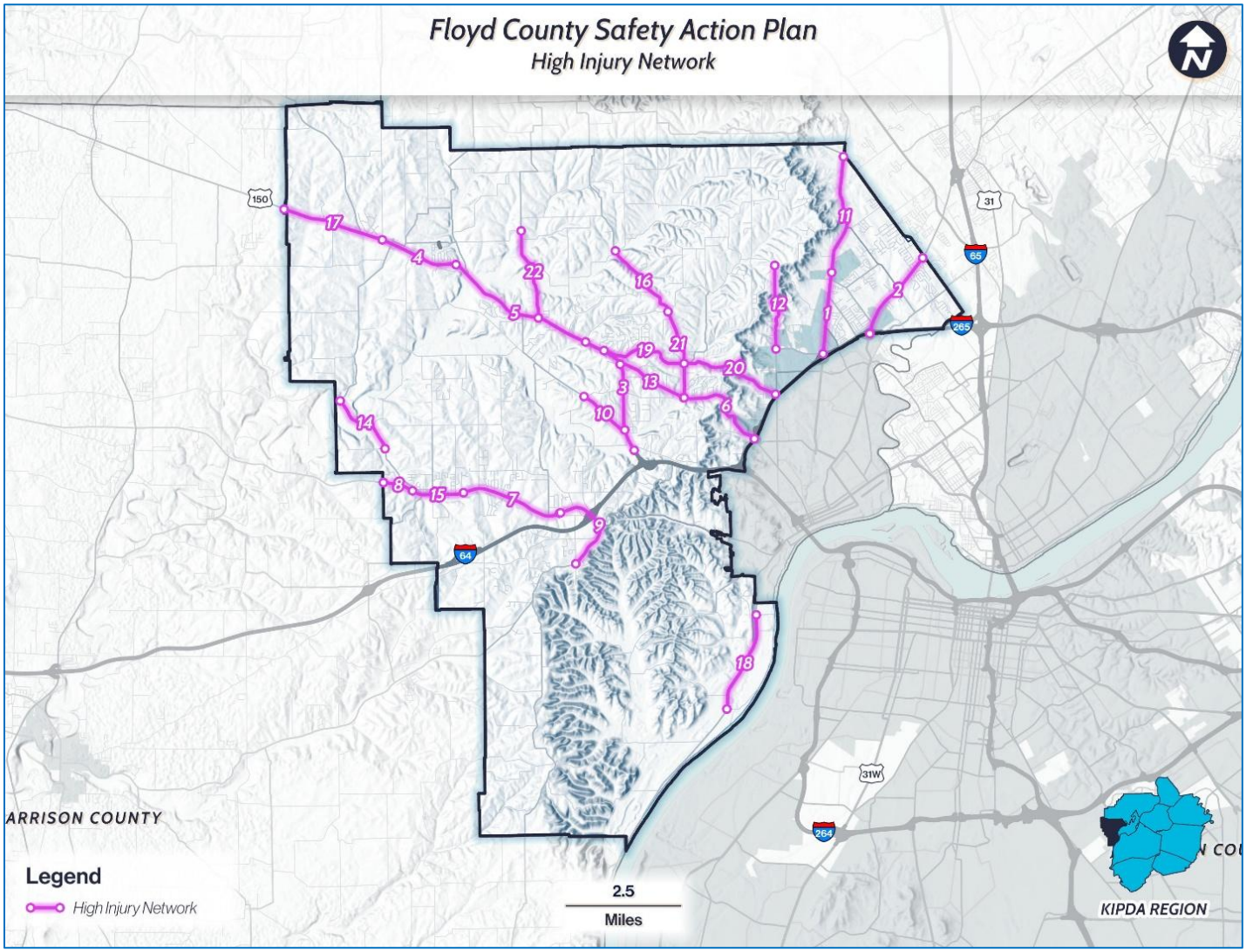


Figure 6-3. High Injury Network

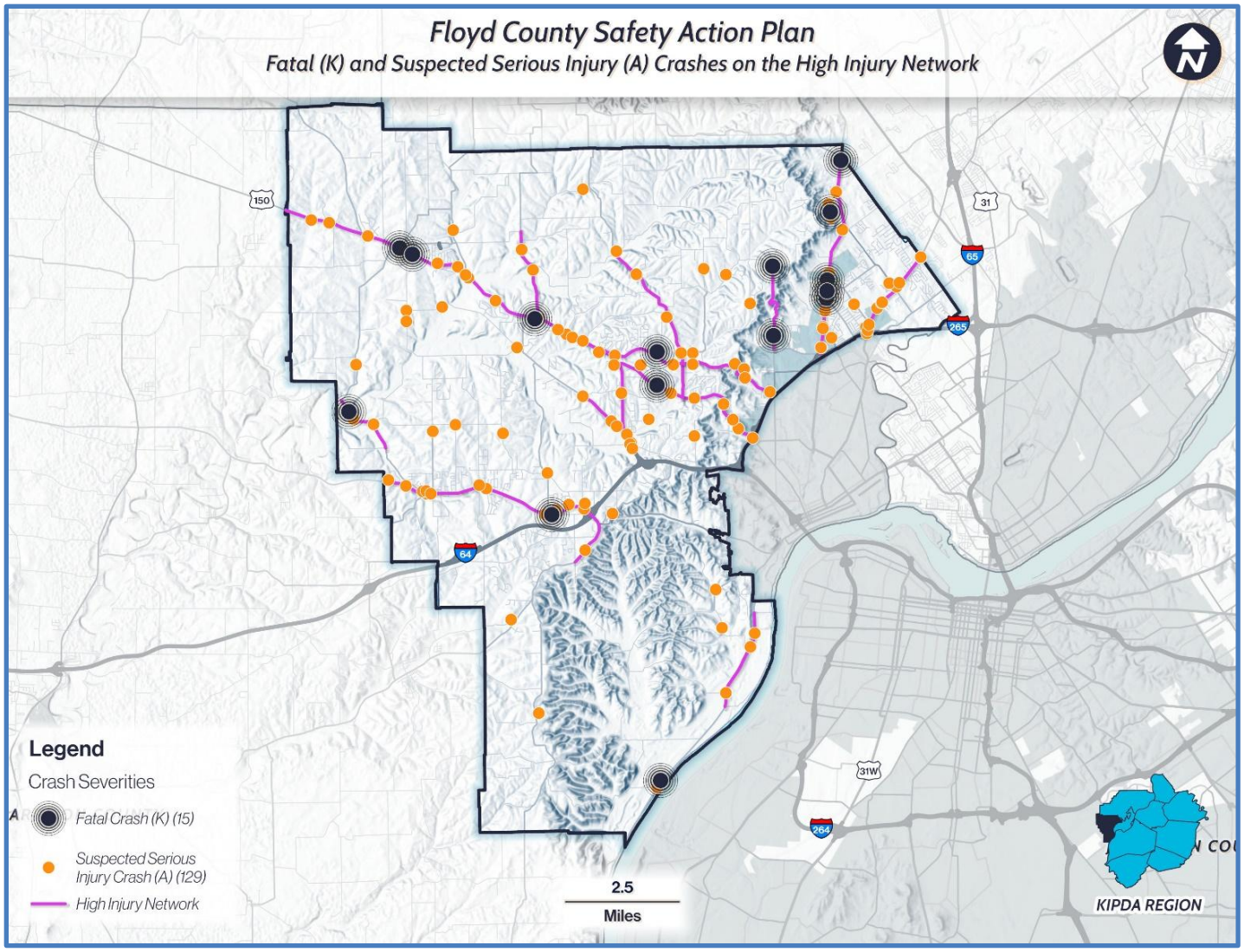


Figure 6-4. High Injury Network and Fatal and Suspected Serious Injury Crashes

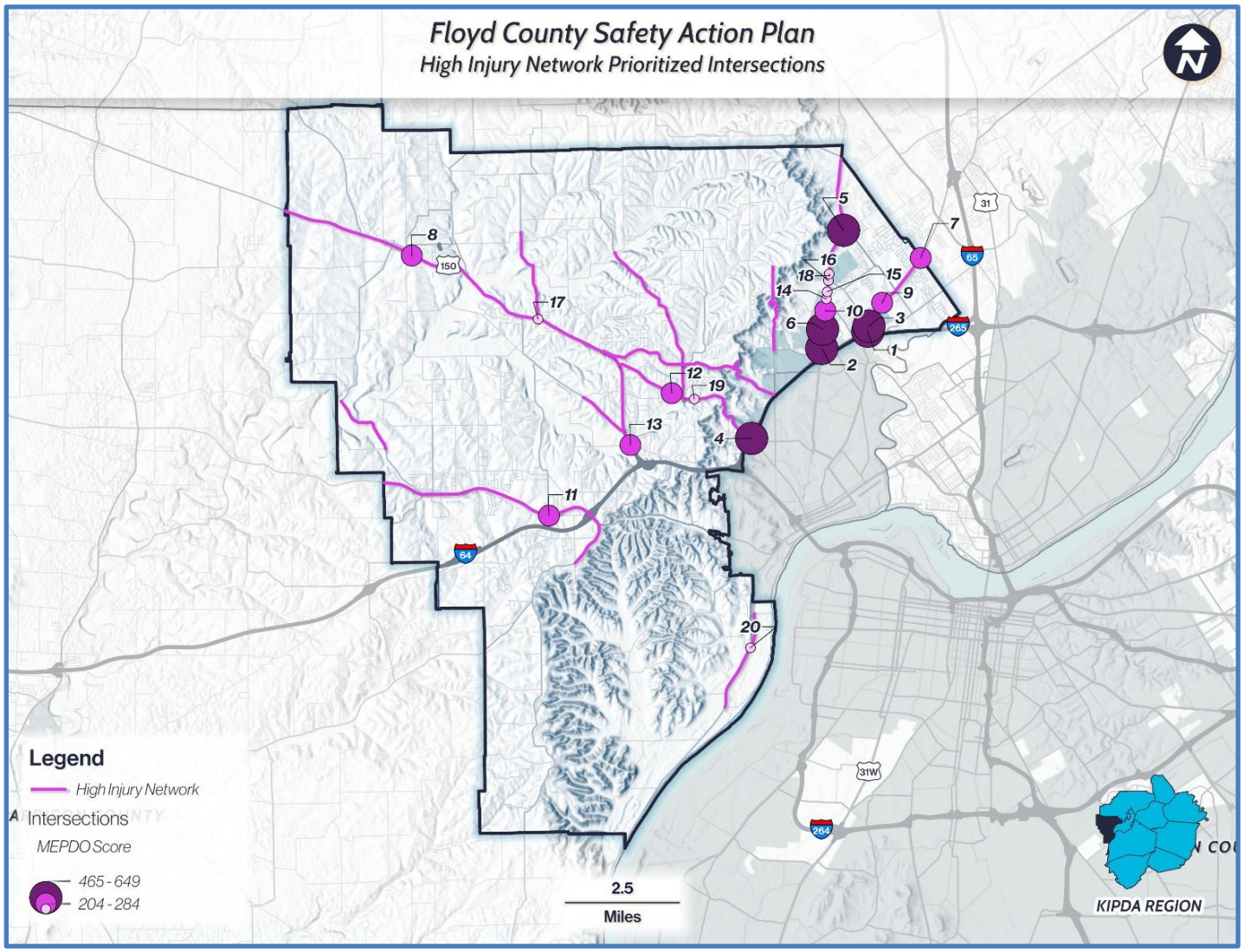


Figure 6-5. High Injury Network and Prioritized Intersections

Project Selection

A comprehensive set of recommended strategies and safety improvements was developed for the top-ranked intersections and corridors within the HIN. The improvements are based on the results of the safety analysis, feedback from the Safety Committee and the public, and the principles of the Safe System Approach.

Proven Safety Countermeasures

The following tables present a selection of proven safety countermeasures designed to reduce crashes. These measures are informed by before-and-after crash data from case studies. The countermeasures are organized into roadway segment and intersection improvement tables. The countermeasures includes an image, a description of the countermeasure's safety benefits, estimated safety impact statistics, and a link for further information.

Countermeasures should be implemented as appropriate based on the prioritized project locations. Estimated cost ranges for safety countermeasures can be found in Appendix A. This appendix also includes a project implementation timeline reference chart, which provides high-level guidance on the time required to complete a range of potential safety improvement projects. Please refer to the notes on the chart during the development of project timelines.

Additional information on potential safety countermeasures can be found using these links:

Proven Safety Countermeasures (Federal Highway Administration)
https://highways.dot.gov/safety/proven-safety-countermeasures

Innovative Intersections (Virginia Department of Transportation)
https://www.vdot.virginia.gov/about/our-system/highways/innovative-intersections/virginia-icap/

Federal Highway Administration Safety Programs
Intersection Safety - https://highways.dot.gov/safety/intersection-safety/about
Roadway Departure Safety – https://highways.dot.gov/safety/RwD
Speed Management Safety - https://highways.dot.gov/safety/speed-management
Pedestrian and Bicycle Safety – https://highways.dot.gov/safety/pedestrian-bicyclist
Local and Rural Safety - https://highways.dot.gov/safety/local-rural
Safety Data Analysis and Tools - https://highways.dot.gov/safety/data-analysis-tools

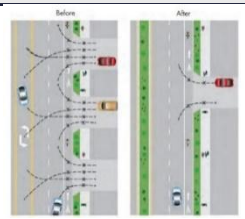
Example Segment Countermeasures							
Countermeasure	Description	Safety Impact	Links	Countermeasure	Description	Safety Impact	Links
Enhanced Delineation for Horizontal Curves				**Roadside Design Improvements at Curves**			
	High visibility markings and delineators around curves provide drivers with better information about curves.	Severe crashes ↓15-18%	FHWA		Includes treatments that improve horizontal curves, giving drivers the opportunity to recover safely or reducing crash severity.	Single Vehicle or All Crashes ↓8-44%	FHWA
Access Management (segment treatments)				**Medians and Pedestrian Refuge Islands**			
	Reducing the number and proximity of access points to focus turning traffic to fewer locations. Reduces turning conflicts.	2-lane Rural Road Crashes ↓5- 23% Urban Severe Crashes ↓25- 31%	FHWA		Provide curbed median between opposing travel lanes to provide separation, reduce left-turn risks, and improve pedestrian safety.	Ped Crashes ↓46-56% Vehicle Crashes ↓15%	FHWA and FHWA
Roadway Reconfiguration (Right Sizing or Road Diet)				**Shoulder Treatment – Safety Edge**			
	Often involves converting a 4-lane undivided road to a 3-lane road with 2 through lanes and a center two-way left-turn lane, which slows traffic and reduces conflicts.	All Crashes ↓19-47%	FHWA		Shoulder edge upgrades to improve recoverability for roadway departures.	Severe ↓11% Run-Off-Road ↓21% Head-On ↓19%	FHWA
Dynamic Speed Feedback Signs				**Pavement Friction Management**			
	Provide positive and negative feedback to drivers regarding their speed.	All Crashes ↓5%	FHWA (pg 5) FHWA Clearing house		High Friction Surface Treatment (HFST) can prevent roadway departure, intersection, and pedestrian-related crashes.	Severe Crashes at Curves ↓48% Crashes at Intersections ↓48%	FHWA

Table 6-6. Example Segment Countermeasures

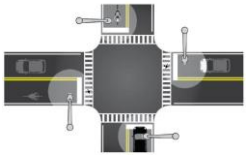
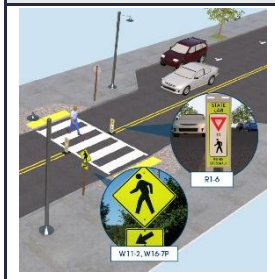
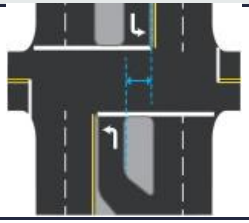
Example Intersection Countermeasures							
Countermeasure	Description	Safety Impact	Links		Countermeasure	Description	Safety Impact	Links
Access Management (intersection treatments)					**Intersection Lighting**			
	This refers to the design and control of access points including intersections which can enhance safety for all modes.	2-lane Rural Road Crashes ↓5- 23% Urban Severe Crashes ↓25- 31%	FHWA			Increased visibility at nighttime can improve safety for all modes of travel.	Nighttime Ped Injuries ↓42% Nighttime Crashes ↓33-38%	FHWA
Crosswalk Visibility Enhancement					**Reflective Backplates**			
	High-visibility crosswalks can reduce pedestrian injury crashes.	Pedestrian Injury Crashes ↓40%	FHWA			Improve the visibility of the illuminated face of the signal by introducing a controlled-contrast background.	Total Crashes ↓15%	FHWA
Low-Cost Countermeasures at Stop-Controlled Intersections					**Modern Roundabouts (RAB)**			
	Deploying a package of low-cost countermeasures, including enhanced signing and pavement markings increasing driver awareness.	Severe Crashes ↓10% Night Crashes ↓15% Rural Severe Crashes ↓27%	FHWA			Converting an intersection (stop or signal) into a roundabout can slow traffic. It also minimizes conflicts and reduces crash severity.	2-way Stop to RAB Severe Crashes ↓82% Signal to RAB Severe Crashes ↓78%	FHWA
Left and Right Turn Lanes					**Positive Offset Left-Turn Lane**			
	Left and right turn lanes provide physical separation between through traffic and turning traffic that is slowing or stopped.	Left Turn Lane ↓28-48% Right Turn Lane ↓14-26%	FHWA			Provides increased visibility for drivers turning left. It prevents opposing left turning vehicles from blocking sightlines.	Severe crashes ↓36%	FHWA

Table 6-7. Example Intersection Countermeasures

Potential Intersection Strategies

The following table lists the prioritized intersections based on their MEPDO values. Each intersection was evaluated for its existing condition. Relevant safety countermeasures were identified as potential improvements for each intersection.

Intersections – Reactive Approach													
Ranking	Intersection	Potential Countermeasures											
		Dedicated Turn Lane(s)	Offset Left Turn Lanes	Cycle Length and Clearance Intervals	Reflective Backplates	Access Management	Alt. Intersection (Roundabouts & RCUT)	Enhanced Markings / Striping	Enhanced Signing	Lighting	Pedestrian Facilities	Sight Distance Improvements	Re-Align / Tighten Intersection
1	Charlestown Rd & I-265 WB Ramps			X	X			X	X				
2	Grant Line Rd & Hausfeldt Ln		X	X	X		X	X	X	X			
3	Charlestown Rd & Kamer Miller Rd			X	X		X	X	X				
4	State St & Kenzig Rd / I-265 WB Ramps			X	X			X	X				X
5	Chapel Ln & Grant Line Rd	X					X	X	X			X	X
6	Grant Line Rd & Klerner Ln		X	X	X	X	X	X	X	X	X		
7	Charlestown Rd & County Line Rd			X	X	X	X	X	X	X			X
8	Buttontown Rd & US-150						X	X	X			X	
9	Charlestown Rd & Sunset Dr			X			X	X	X		X		
10	Grant Line Rd & Bald Knob Rd							X	X				X
11	SR-64 & Oakes Rd & Old Georgetown Rd					X		X	X				X
12	Paoli Pk & E Luther Rd	X						X	X				
13	US-150 & Old Vincennes Rd		X	X			X	X	X				
14	St. Joseph Rd & Grant Line Rd	X						X	X				
15	St. Joe Station & Grant Line Rd	X					X	X	X	X			
16	Mel Smith Rd & Grant Line Rd	X						X	X				
17	US-150 & Navilleton Rd			X	X		X	X	X	X			
18	Grant Line Rd & Security Pkwy			X	X		X	X	X	X			
19	Paoli Pk & Old Hill Rd	X					X	X	X		X		
20	SR-111 & Two Mile Ln							X	X			X	

Table 6-8. Potential Intersection Strategies

Potential High Injury Network Corridor Strategies

Table 6-9 outlines potential safety improvement strategies for the identified HIN. The list of improvements was developed using proven safety countermeasures aimed at reducing and eventually eliminating severe crashes. These routes can be further studied to guide implementation efforts.

Rank	Route Name	Begin and End Limits	Length (mile)	Potential Project Strategies
1	Grant Line Rd	I-265 Ramps and Security Pkwy / Barack Obama Way	1.78	Innovative intersections, left turn lanes, pedestrian facilities, enhanced pedestrian crossings, lighting, enhanced striping and signing
2	Charlestown Rd	I-265 Ramps and Lawrence Meyer Rd / County Line Rd	2.08	Innovative intersections, pedestrian facilities, enhanced pedestrian crossings, lighting This corridor could be segmented into smaller projects for implementation
3	US Highway 150	Buck Creek Rd and I-64 / IN-62 Ramps	3.00	RCUT Corridor, offset turn lanes, innovative intersections, lighting at intersections
4	US Highway 150	Voyles Rd and Beechwood Dr	1.73	Innovative intersections, pedestrian facilities, enhanced pedestrian crossings, lighting, enhanced striping and signing
5	US Highway 150	Beechwood Dr and Buck Creek Rd	3.36	Enhanced striping and signing, rumble strips, guardrail improvements, innovative intersections, lighting
6	Paoli Pike	Scottsville Rd and I-265 Ramps	2.11	Shoulder widening, enhanced signing and striping, rumble strips, curve signing, intersection improvements near I-265 Floyd County Paoli Pike Pedestrian/Bike Amenities Corridor Study examining Paoli Pike from Buffalo Trail to US Hwy 150
7	Main St (IN-64)	Marci Ln and Self-Storage	2.26	Innovative intersections, lighting, enhanced signing, rumble strips, left turn lanes
8	State Road 64	Wolfe Rd / County Line Rd and Church St	0.67	Enhanced striping and signing, rumble strips, innovative intersections
9	State Road 64 / State Road 62	Self-Storage and Yenowine Ln	2.07	Innovative intersections, interchange improvements, offset turn lanes, enhanced signing.
10	Old Vincennes Rd	Luther Rd and US Highway 150	1.18	Innovative intersections, enhanced pedestrian crossings, enhanced signing and striping
11	Grant Line Rd	Security Pkwy / Barack Obama Way and W St Joe Road	2.66	Shoulder widening, enhanced signing and striping, rumble strips, curve signing
12	Moser Knob Rd	Hausfeldt Ln and N Skyline Dr	2.09	Shoulder widening, enhanced signing and striping, rumble strips, curve signing
13	Paoli Pike	US Highway 150 and Scottsville Rd	1.61	Shoulder widening, enhanced signing and striping, rumble strips, intersection improvements Floyd County Paoli Pike Pedestrian/Bike Amenities Corridor Study examining Paoli Pike from Buffalo Trail to US Hwy 150
14	Georgetown Greenville Rd	Byrneville Rd and Malinee Ott Rd	1.59	Shoulder widening, enhanced striping and signing, rumble strips, curve realignment
15	Main St (IN-64)	Church St and Marci Ln	1.13	Innovative intersections, enhanced pedestrian crossings, curb bump outs, lighting, enhanced signing, pedestrian facilities

Rank	Route Name	Begin and End Limits	Length (mile)	Potential Project Strategies
16	Scottsville Rd	Buck Creek Rd and Starlight Rd / Fertig Creek Rd	1.85	Shoulder widening, enhanced striping and signing, rumble strips, curve signage, curve realignment, guard rail
17	US Highway 150	Pete Reisert Rd and Voyles Rd	2.26	Enhanced signing and striping, edgeline and centerline rumble strips, intersection left turn lanes
18	River Rd (IN-111)	Old River Road and Old River Road	2.22	Resurfaced with rumble strips 2023, enhance signing, intersection improvements
19	Brush College Rd	US Highway 150 and Scottsville Rd	1.97	Shoulder widening, enhanced striping and signing, rumble strips, curve realignment, curve signage
20	Spickert Knob Rd	Scottsville Rd and Glenmill Rd	2.66	Shoulder widening, enhanced striping and signing, rumble strips, upgrade guardrail
21	Scottsville Rd	Paoli Pike and Buck Creek Rd	1.95	Shoulder widening, left turn lanes, enhanced striping and signing, rumble strips, innovative intersections
22	Navilleton Rd	US Highway 150 and Jersey Park Rd	2.05	Shoulder widening, enhanced striping and signing, rumble strips, curve realignment

Table 6-9. Potential Corridor Strategies

System Level Approach and Strategies

The system level (or systemic) approach to safety identifies and addresses high-risk features across the entire roadway network rather than focusing solely on specific crash locations, as in the reactive approach. Risk factors for Floyd County's roadway network were identified by analyzing crash and roadway data.

Systemic strategies involve implementing widespread improvements to reduce the likelihood and severity of crashes across an area, not just at specific locations. These strategies proactively identify and mitigate potential hazards to prevent crashes.

Strategy 1 – Roadside Edge Treatments

57 (40%) of the 144 severe crashes in the county in the study period involved a roadway departure. Some of these crashes occurred on low volume rural roadways, while others occurred on higher volume arterials. To the extent possible, given the County's right-of-way restrictions it is recommended that roadway edge treatments be improved on County highways. For state highways, coordination with INDOT would be required. The goal of these treatments is to both reduce the likelihood of a vehicle leaving the roadway and to reduce the severity of the crash when a vehicle does leave the roadway.

This is in keeping with the Indiana Strategic Highway Safety Plan strategies for addressing roadway departures. Strategy 1 calls for improving the roadway, roadside, and traffic control devices. Strategy 2 calls for improving the roadside safety equipment and traffic control devices.

It is recommended that roadside edges treatments be considered for all county roadways with between 500 and 5,000 vehicles per day that have a higher than average number of potential

hazards (curves, fixed objects, intersections, horizontal or vertical sight distance limitations). Example roadways include Scottsville Road, Old Vincennes Road, Paoli Pike, and Georgetown-Greenville Road. Potentially, lower-cost treatments could be made standard on all repaving projects. Improvements could also be made to more heavily traveled highways whenever possible, including Grant Line Road, Highway 64, Highway 150, and Charlestown Road. Specific proven safety countermeasures that could be applied systemically to County roadways include the following:

- All Roads – Wider Edge Lines (up to 37% crash reduction) and Safety Edge
- Curves – Enhance curve delineation, guardrail, if volumes are sufficiently high curve flattening or high friction surface treatment could be considered
- Intersections and Sight Distance Limitations – Additional signing and markings or oversized signs, speed management techniques such as speed feedback signs (where volumes are higher)
- Fixed Objects (culverts etc.) – install upgraded guardrail
- Intersections – Rural roundabouts or transverse rumble strips

Strategy 2 – Center Line Buffers or Center Rumble Strips

While only 81 (2%) of the 4237 crashes in the county were head-on crashes, 26 (18%) of the 144 severe crashes were head-on crashes. Furthermore, of the 167 individuals that died or were severely injured 44 (26%) were involved in a head-on crash. This is because these crashes involve two vehicles and are frequently high severity crashes. Roadways that could be considered for this strategy include roads such as Scottsville Road, but also more major roads such as Highway 150.

One of the most effective methods for preventing head-on crashes on rural two-lane highways is to introduce centerline buffers. The research on this approach shows that a one-foot buffer can eliminate nearly 20% of these crashes and a two-foot buffer can eliminate nearly 40% of these crashes. It is recommended that Floyd County consider a new design standard that includes a painted buffer between the directions of travel on roadways where the pavement width can be designed to accommodate it.

If it is not possible to accommodate a center buffer then center rumble strips are recommended. These have also proven to reduce head-on crashes.

Strategy 3 – Innovative Intersections

Floyd County could work with INDOT and others to explore the implementation of safety focused innovative corridor and intersection designs to address the high severity head-on, run-off-road, and intersection conflict crashes on facilities such as Highway 150. Concepts that could be studied would include RCUT corridors (unsignalized and/or signalized), roundabouts, medians, access management, speed transition zone treatments (such as speed feedback signs, lane narrowing using striping, landscaping, etc.), and upgraded lighting at key locations.

Safety Action Plan Implementation

This plan has documented and prioritized many safety challenges. Based on the data, agency / stakeholder input, and best practices, it has also identified potential strategies and projects that would address these challenges. The focus continues to be on reducing high-severity crashes across the community. This section outlines an initial action plan for deploying potential strategies, projects, and safety programs. The actions are proposed to be implemented in four time ranges: short-term (0-3 years); mid-term (4-6 years); long term (7+ years); and ongoing. They cover the main intervention categories: infrastructure, behavioral safety, operational safety, and policies/procedures.

The implementation of each project, strategy, or program is dependent on funding availability. It is also dependent on the support of all relevant agencies and the County's capacity to execute each action. In cases where the County does not have primary authority for implementing the action, they will need to play a supporting role.

Timeframe	No	Project / Strategy / Program Description	Document Reference	Recommended First Step	Primary Category
Short Term (0 to 4 years)	1	Adopt updated traffic calming and/or updated safety related codes and policies	Chapter 5	Work with KIPDA to obtain model policies for adoption	Policy / Procedures
	2	Submit application for SS4A grant funding for one of the top HIN segments	Chapter 6; Table 6-9	Work with partners (as relevant) to identify and agree on a project and match funding	Infrastructure
	3	Initiate first safety outreach; Consider focusing on aggressive driving, speeding, and actions that cause roadway departures	Chapter 3 and 4	Work with KIPDA and other jurisdictions to develop a multi-agency outreach approach	Behavioral
	4	Implement initial low-cost Speed Management strategies on HIN corridors	Chapters 3, 4 and 6; Systemic Sec.	Work with law enforcement and INDOT to identify key corridors	Operational
	5	Support targeted speed and traffic control enforcement	Chapter 3 and 4	Work with law enforcement to identify key locations	Operational
Mid Term (4 to 8 years)	6	Implement one easy to implement systemic infrastructure focused project	Chapters 3 and 6; Systemic Sec.	Work with partners (as relevant) to identify a promising project and funding	Infrastructure
	7	Implement high priority HIN segment project	Chapter 3 and Chapter 6	Work with partners (as relevant) to identify a promising project and funding	Infrastructure
	8	Implement high priority intersection project	Chapter 3 and Chapter 6	Work with partners (as relevant) to identify a promising project and funding	Infrastructure
	9	Implement safety focused local street/highway upgrades and maintenance	Chapter 3 and Chapter 6	Use local funds to advance priority local projects / maintenance	Infrastructure
	10	Initiate second safety outreach; Consider focusing on aggressive driving, speeding, actions that cause roadway departures, or other relevant topics	Chapter 3 and 4	Work with KIPDA and other jurisdictions to develop a multi-agency outreach approach	Behavioral
Long Term (9+ years)	11	Implement additional systemic infrastructure focused projects (goal is one or more every five years)	Chapters 3 and 6; Systemic Sec.	Build long-term partnerships and identify funding to address key systemic needs	Infrastructure
	12	Implement additional infrastructure projects on HIN (goal is one or more every five years)	Chapter 3 and Chapter 6	Build long-term partnerships and identify funding to address key HIN needs	Infrastructure
	13	Implement additional intersection infrastructure projects (goal is one or more every five years)	Chapter 3 and Chapter 6	Build long-term partnerships and identify funding to address key intersection needs	Infrastructure
	14	Implement additional safety focused local street/highway improvements (goal is one or more every five years)	Chapter 3 and Chapter 6	Increase local funds to advance priority local projects / maintenance	Infrastructure
Ongoing	15	Continue Local Safety Meetings	Chapters 2 and 4	Schedule quarterly meetings	Policy / Procedures
	16	Collaborate with KIPDA to monitor, assess, and publicly report progress	Chapter 7	Coordinate with KIPDA to implement reporting plan	Policy / Procedures
	17	Continue building staff/agency knowledge regarding highway safety	Chapters 4, 5, and 6	Coordinate with KIPDA to schedule annual sessions	Policy / Procedures

Table 6-10: Implementation Action Plan Timeline

7. Progress and Transparency

Floyd County, with support from KIPDA, is dedicated to ensuring the success of this Safety Action Plan. Effective communication, continuous monitoring, and evaluation are crucial to eliminating fatalities and serious injury crashes by 2050. Maintaining ongoing transparency through public accessibility and clear communication of outcome data is also essential.

The following chapter outlines the plan for measuring progress, maintaining transparency, and continuously incorporating feedback to enhance this road safety initiative.

Safety Performance Measurement

Safety improvements are measured using community-wide performance metrics to assess progress. Additionally, project-specific performance is monitored to promote effective implementation and positive safety impacts. The following sections outline the annual public and accessible progress reporting structure and proposed metrics.

Annual Safety Performance Measures

Crash Severity

The County and KIPDA expect to monitor the total number of crashes annually by crash severity: Fatal, Suspected Serious Injury, Suspected Minor Injury, Possible Injury, and No Apparent Injury. In addition, the crash rate for the total number of crashes would be estimated. The crash rate is the total number of crashes per vehicle miles traveled in the County.

Fatal and Suspected Serious Injury Crashes

Evaluating fatal and suspected serious injury crash trends is a key focus. Fatal and suspected serious injury crashes should be monitored annually. The measurement includes monitoring the total number of fatal and suspected serious injury crashes and the crash rate. The crash rate is the number of fatal and suspected serious injury crashes per vehicle miles traveled in the County annually.

Vulnerable Road User Crashes

Crashes involving vulnerable road users should be monitored annually, focusing on fatal and suspected serious injury crashes. Since a significant portion of severe crashes involve vulnerable road users, this metric is critical for assessing safety improvements.

Community Focused

The County and KIPDA expect to assess the above safety performance metrics by Census Tract to explore underlying factors contributing to crash trends. By comparing these metrics to county-wide results, patterns can be identified, allowing for tailored solutions and resources to meet the needs of different parts of the community. This approach aims to create a safer environment for all, by addressing concerns and promoting safety across the different parts of the community.

Project-Specific Performance Measures

The safety action plan recommends improvements using both the reactive and systemic approaches. Monitoring focuses on project-specific improvements at prioritized signalized intersections, unsignalized intersections, and along the corridors identified on the High Injury Network. Key project-specific measures anticipated to be collected include:

Safety Improvement Projects Implemented at Prioritized Locations

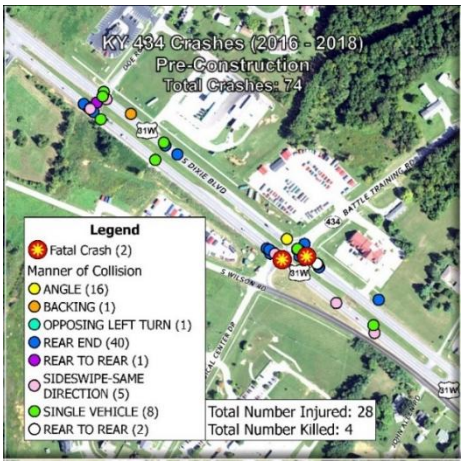
This performance measure tracks the number of safety-focused improvement projects constructed from the potential improvements listed in **Chapter 6 Strategy and Project Selection.** The total number of safety improvements implemented at the intersection and along the corridors identified on the HIN would be recorded annually.

Crash Trends at Project Locations

When a safety improvement project has been constructed, pre-construction and post-construction crash data can be collected to document the realized crash reduction benefit. Crash trends would be assessed for each project specific improvement to aid decision-makers in future safety improvement decisions. This performance measure tracks fatal and suspected serious injury crashes for each improvement project.

Safety Studies and Design

The status of safety studies and design plans would be monitored annually. These studies and design plans, which include cost estimates, public engagement, NEPA documentation, and project readiness, move projects closer to construction and the ultimate goal of eliminating fatal and suspected serious injury crashes.

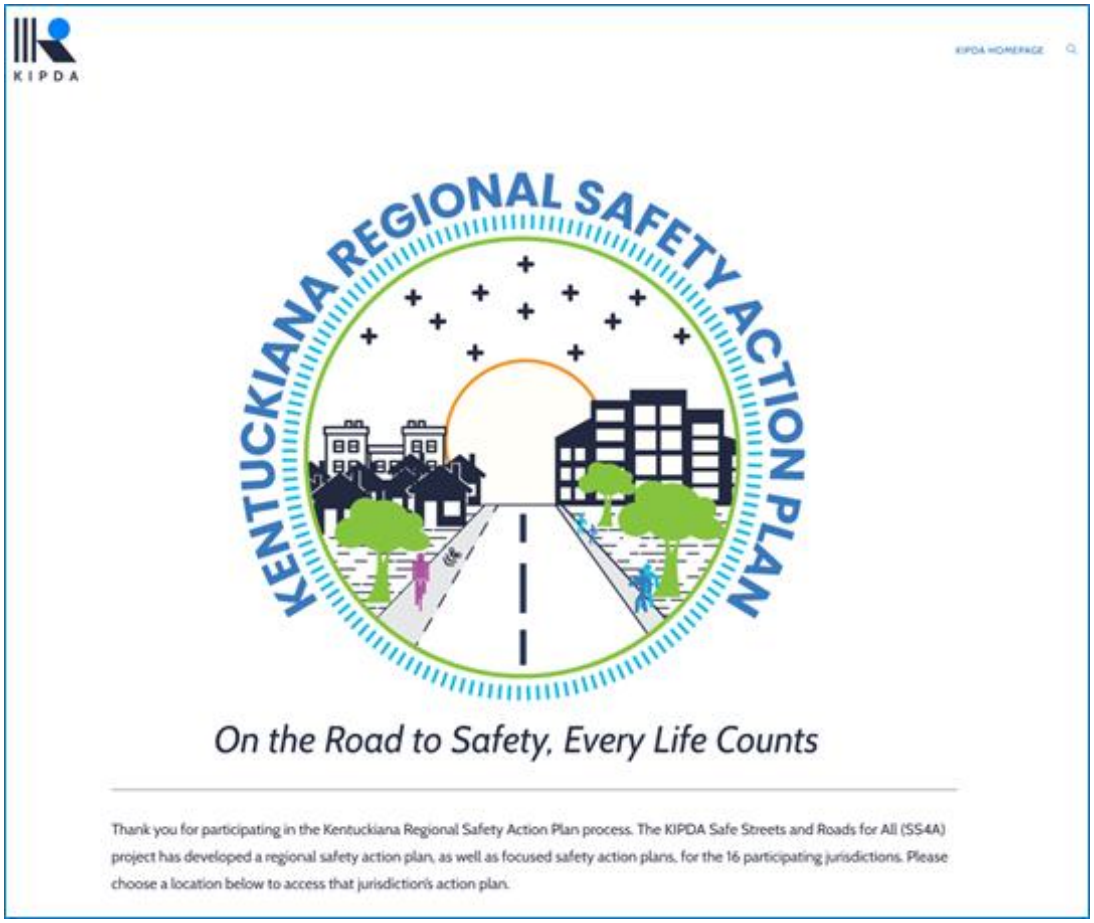


PRE-CONSTRUCTION → **POST-CONSTRUCTION**

Geospatial representation of crash trends for specific projects is an effective method to demonstrate their impact to the community. Illustrating pre and post-construction crash data, with a focus on the decrease in fatal and suspected serious injury crashes, clearly communicates safety improvements.

Transparency

The development of the Safety Action Plan has been shared publicly with residents and other relevant stakeholders through the KIPDA website. The MPO utilized its website to engage the community and disseminate further resources, including maps, the Safe Streets and Roads for All Grant Program, and the Safe Systems Approach. The Floyd County Safety Action Plan is posted publicly online at **SS4A – KIPDA Transportation**. The KIPDA website will continue to be the platform to engage the community and serve as a source of information and updates to the public



Feedback and Continuous Improvement

Creating the Safety Action Plan involved a collaborative effort with active community participation. The project team conducted comprehensive public surveys and facilitated stakeholder discussions through Stakeholder and Safety Committees. This engagement underscored the importance of continuous improvement in achieving safety goals. By advancing ongoing dialogue, feedback is used to assess the plan's efficacy and provides for regular plan amendments. This can help keep the Safety Action Plan relevant and effective in addressing community needs.

Appendix A

Safety Countermeasure Cost Estimate Ranges

and

Project Implementation Timeline Reference Chart

Planning Level Safety Countermeasure Cost Estimate Ranges

Values are based on an assumed construction cost and percentages for all other categories

Results are for order of magnitude cost estimation only

6/12/2025

Notes: ***Low Cost*** *Assumes Minimal Scope, Low Cost Approaches, and/or Ideal Conditions*

High Cost *Assumes Full Scope and Several Project Challenges*

All category and contingency percentages may need to be adjusted based on project size and complexity

(7%/yr compounded)

Cost Percentages ==>		*5%*	*15%*	*20%*	*10%*	*12%*			*15%*	*50%*			*61%*	*61%*
Project	**Unit**	**Planning**	**Design and Environmental Permitting**	**Right-of-Way**	**Utilities**	**Construction Inspection**	**Construction**	**Subtotal**	**Low Planning Level Contingency**	**High Planning Level Contingency**	**Low Total 2025 Cost**	**High Total 2025 Cost**	**Low Total 2032 Programming Cost**	**High Total 2032 Programming Cost**
Curve Realignment (moderate right-of-way/utilities)	Curve	$37,500	$112,500	$150,000	$75,000	$90,000	$750,000	$1,215,000	$182,250	$607,500	$1,397,250	$1,822,500	$2,243,678	$2,926,537
Dynamic Speed Feedback Sign	Each	$1,250	$3,750	$5,000	$2,500	$3,000	$25,000	$40,500	$6,075	$20,250	$46,575	$60,750	$74,789	$97,551
Enhanced Signing/Striping - Curves	Curve	$750	$2,250	$3,000	$1,500	$1,800	$15,000	$24,300	$3,645	$12,150	$27,945	$36,450	$44,874	$58,531
Enhanced Signing/Striping - Intersection	Intersection	$1,500	$4,500	$6,000	$3,000	$3,600	$30,000	$48,600	$7,290	$24,300	$55,890	$72,900	$89,747	$117,061
Enhanced Signing/Striping - Transition Zones	Location	$1,500	$4,500	$6,000	$3,000	$3,600	$30,000	$48,600	$7,290	$24,300	$55,890	$72,900	$89,747	$117,061
Enhanced Striping - Highway	Mile	$1,000	$3,000	$4,000	$2,000	$2,400	$20,000	$32,400	$4,860	$16,200	$37,260	$48,600	$59,831	$78,041
Guardrail Upgrades (minimal regrading)	500 Feet	$1,500	$4,500	$6,000	$3,000	$3,600	$30,000	$48,600	$7,290	$24,300	$55,890	$72,900	$89,747	$117,061
High Friction Surface Treatments ($40/sq yd)	Curve	$5,000	$15,000	$20,000	$10,000	$12,000	$100,000	$162,000	$24,300	$81,000	$186,300	$243,000	$299,157	$390,205
Lighting - Highway (multilane)	Mile	$30,000	$90,000	$120,000	$60,000	$72,000	$600,000	$972,000	$145,800	$486,000	$1,117,800	$1,458,000	$1,794,943	$2,341,229
Lighting - Intersection	Intersection	$3,750	$11,250	$15,000	$7,500	$9,000	$75,000	$121,500	$18,225	$60,750	$139,725	$182,250	$224,368	$292,654
Pedestrian Enhancements (signs, striping, ADA, bulb outs)	Location	$5,000	$15,000	$20,000	$10,000	$12,000	$100,000	$162,000	$24,300	$81,000	$186,300	$243,000	$299,157	$390,205
Pedestrian Enhancements (signs, striping, ADA, refuge)	Location	$2,500	$7,500	$10,000	$5,000	$6,000	$50,000	$81,000	$12,150	$40,500	$93,150	$121,500	$149,579	$195,102
Positive Offset Left Turn Lanes	Each	$15,000	$45,000	$60,000	$30,000	$36,000	$300,000	$486,000	$72,900	$243,000	$558,900	$729,000	$897,471	$1,170,615
Raised Median (no widening)	Sq Yards	$8	$23	$30	$15	$18	$150	$243	$36	$122	$279	$365	$449	$585
Reflective Backplates (no signal rebuild)	Intersection	$1,250	$3,750	$5,000	$2,500	$3,000	$25,000	$40,500	$6,075	$20,250	$46,575	$60,750	$74,789	$97,551
Reflective Backplates (with signal rebuild)	Intersection	$10,000	$30,000	$40,000	$20,000	$24,000	$200,000	$324,000	$48,600	$162,000	$372,600	$486,000	$598,314	$780,410
Restricted Crossing U-Turn Crossing Intersection (un-signalized)	Location	$87,500	$262,500	$350,000	$175,000	$210,000	$1,750,000	$2,835,000	$425,250	$1,417,500	$3,260,250	$4,252,500	$5,235,249	$6,828,586
Restricted Crossing U-Turn Crossing Intersection (signalized)	Location	$150,000	$450,000	$600,000	$300,000	$360,000	$3,000,000	$4,860,000	$729,000	$2,430,000	$5,589,000	$7,290,000	$8,974,713	$11,706,147
Road Reconfiguration (Convert 4-lane to 3-lane, w/ resurfacing)	Mile	$25,000	$75,000	$100,000	$50,000	$60,000	$500,000	$810,000	$121,500	$405,000	$931,500	$1,215,000	$1,495,785	$1,951,024
Roundabout (dual-lane)	Each	$120,000	$360,000	$480,000	$240,000	$288,000	$2,400,000	$3,888,000	$583,200	$1,944,000	$4,471,200	$5,832,000	$7,179,770	$9,364,918
Roundabout (single lane)	Each	$50,000	$150,000	$200,000	$100,000	$120,000	$1,000,000	$1,620,000	$243,000	$810,000	$1,863,000	$2,430,000	$2,991,571	$3,902,049
Rumble Strips - Center (no widening)	Mile	$1,000	$3,000	$4,000	$2,000	$2,400	$20,000	$32,400	$4,860	$16,200	$37,260	$48,600	$59,831	$78,041
Rumble Strips - Edge (no widening, both sides)	Mile	$1,250	$3,750	$5,000	$2,500	$3,000	$25,000	$40,500	$6,075	$20,250	$46,575	$60,750	$74,789	$97,551
Rural Re-Align Skewed Intersection (limited ROW/utilities)	Intersection	$37,500	$112,500	$150,000	$75,000	$90,000	$750,000	$1,215,000	$182,250	$607,500	$1,397,250	$1,822,500	$2,243,678	$2,926,537
Rural to Urban Transition Zone Treatments (high-cost)	Location	$37,500	$112,500	$150,000	$75,000	$90,000	$750,000	$1,215,000	$182,250	$607,500	$1,397,250	$1,822,500	$2,243,678	$2,926,537
Rural to Urban Transition Zone Treatments (low-cost)	Location	$12,500	$37,500	$50,000	$25,000	$30,000	$250,000	$405,000	$60,750	$202,500	$465,750	$607,500	$747,893	$975,512
Shoulder Widening & Roadside Improvements (limited ROW/utilities)	Mile	$60,000	$180,000	$240,000	$120,000	$144,000	$1,200,000	$1,944,000	$291,600	$972,000	$2,235,600	$2,916,000	$3,589,885	$4,682,459
Sidewalks - Highway (one side only)	Mile	$20,000	$60,000	$80,000	$40,000	$48,000	$400,000	$648,000	$97,200	$324,000	$745,200	$972,000	$1,196,628	$1,560,820
Sidewalks - Intersection (includes ADA)	Intersection	$4,000	$12,000	$16,000	$8,000	$9,600	$80,000	$129,600	$19,440	$64,800	$149,040	$194,400	$239,326	$312,164
Sight Distance Improvements (vegetation)	Intersection	$1,000	$3,000	$4,000	$2,000	$2,400	$20,000	$32,400	$4,860	$16,200	$37,260	$48,600	$59,831	$78,041
Signal Timing - Cycle Length, Clearance and Leading Ped Intervals	Intersection	$500	$1,500	$2,000	$1,000	$1,200	$10,000	$16,200	$2,430	$8,100	$18,630	$24,300	$29,916	$39,020
Signal Upgrade (may be required for protected left turn phasing)	Intersection	$10,000	$30,000	$40,000	$20,000	$24,000	$200,000	$324,000	$48,600	$162,000	$372,600	$486,000	$598,314	$780,410
Tighten Intersection (small intersection, limited drainage)	Each	$17,500	$52,500	$70,000	$35,000	$42,000	$350,000	$567,000	$85,050	$283,500	$652,050	$850,500	$1,047,050	$1,365,717
Tree Trimming	Linear Foot	$3	$8	$10	$5	$6	$50	$81	$12	$41	$93	$122	$150	$195
Turn Lanes (one turn lane, 150 ft plus taper)	Each	$12,500	$37,500	$50,000	$25,000	$30,000	$250,000	$405,000	$60,750	$202,500	$465,750	$607,500	$747,893	$975,512
Urban Re-Align Skewed Intersection (limited ROW/utilities)	Intersection	$75,000	$225,000	$300,000	$150,000	$180,000	$1,500,000	$2,430,000	$364,500	$1,215,000	$2,794,500	$3,645,000	$4,487,356	$5,853,073
Access Management (Low Complexity)	Mile	$75,000	$225,000	$300,000	$150,000	$180,000	$1,500,000	$2,430,000	$364,500	$1,215,000	$2,794,500	$3,645,000	$4,487,356	$5,853,073
Adjusted Cost Percentages ==>		*3%*	*12%*	*20%*	*10%*	*10%*			*10%*	*35%*			*61%*	*61%*
Access Management (Moderate Complexity)	Mile	$120,000	$480,000	$800,000	$400,000	$400,000	$4,000,000	$6,200,000	$620,000	$2,170,000	$6,820,000	$8,370,000	$10,951,430	$13,440,391
Access Management (High Complexity, Often Complete Rebuild)*	Mile	$300,000	$1,200,000	$2,000,000	$1,000,000	$1,000,000	$10,000,000	$15,500,000	$1,550,000	$5,425,000	$17,050,000	$20,925,000	$27,378,574	$33,600,977

Project Implementation Timeline Reference Chart
6/23/2025

This chart is intended to provide high-level guidance on the time required to complete a range of potential safety improvement projects.
1) The time required to secure funding for each phase (federal, state, or local) is not included. The time to execute federal grant agreements or other state or federal project agreements is also not included.
2) Time to procure planning, design, or other professional services should be added as required. Construction and inspection procurement are included if they can reasonably be accommodated during the pre-construction phases.
3) Local agencies should coordinate with state and KIPDA staff to estimate the time required for each task. This applies to local public agency (LPA) projects and includes projects using federal, state, and KIPDA funding.

To use this table, please determine the level of complexity for each phase of the project you are considering. For example, a project may be moderate with respect to planning, design, and construction, but complex with respect to right-of-way and utility coordination. This would likely result in a project that is somewhere between those two categories for the total project timeline.

Level of Complexity for Each Phase	Planning	Preliminary Engineering and Environmental	Final Design	Right-of-Way (ROW)	Utility Coordination	Construction	Estimated Total Project Timeline
Simple	3-6 months Few alternatives Limited or no public involvement No anticipated controversy No TIP/STIP issues	6 - 9 months Minimal design No survey or geotech NEPA CE (programmatic or low level)	6 months Minimal design effort	N/A Within existing ROW	3-6 months Notification only No relocations	6 - 9 months <$500K No phasing needed	2 to 3 years
Moderate	6–12 months Several alternatives Public involvement May require TIP/STIP mods	6–12 months Straightforward design Survey required NEPA CE (with public input)	6-12 months Moderate design effort Agency reviews	6–12 months Easements and/or minor acquisitions	6-18 months Relocations possible Agreements possible	6–12 months $500K–$2M Lane closures/phasing	3 to 6.5 years
Complex	12–18 months Numerous alternatives Public involvement May require TIP/STIP mods Multiple agencies involved	12–18 months Alternatives analysis Extensive design (survey, traffic, geotech) NEPA EA or CE (with public input)	12-18 months Major design effort Extensive permitting Environmental constraints	12–24 months Full ROW Relocations/eminent domain	12–18 months Major relocations Agreements required	12–24 months $2M+ Detours or complex staging	6 to 10 years

Notes:
Schedule estimates assume all required project funding is available
NEPA = National Environmental Policy Act of 1969
CE = Categorical Exclusion
EA = Environmental Assessment
TIP/STIP = Transportation Improvement Program / State Transportation Improvement Program