Kentuckiana Regional Safety Action Plan

On the Road to Safety, Every Life Counts

Jeffersontown, KY

Safety Action Plan

6/25/2025

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Introduction

In 2023, Jeffersontown, 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.

Jeffersontown 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 Jeffersontown Safety Action Plan addresses the seven 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

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.

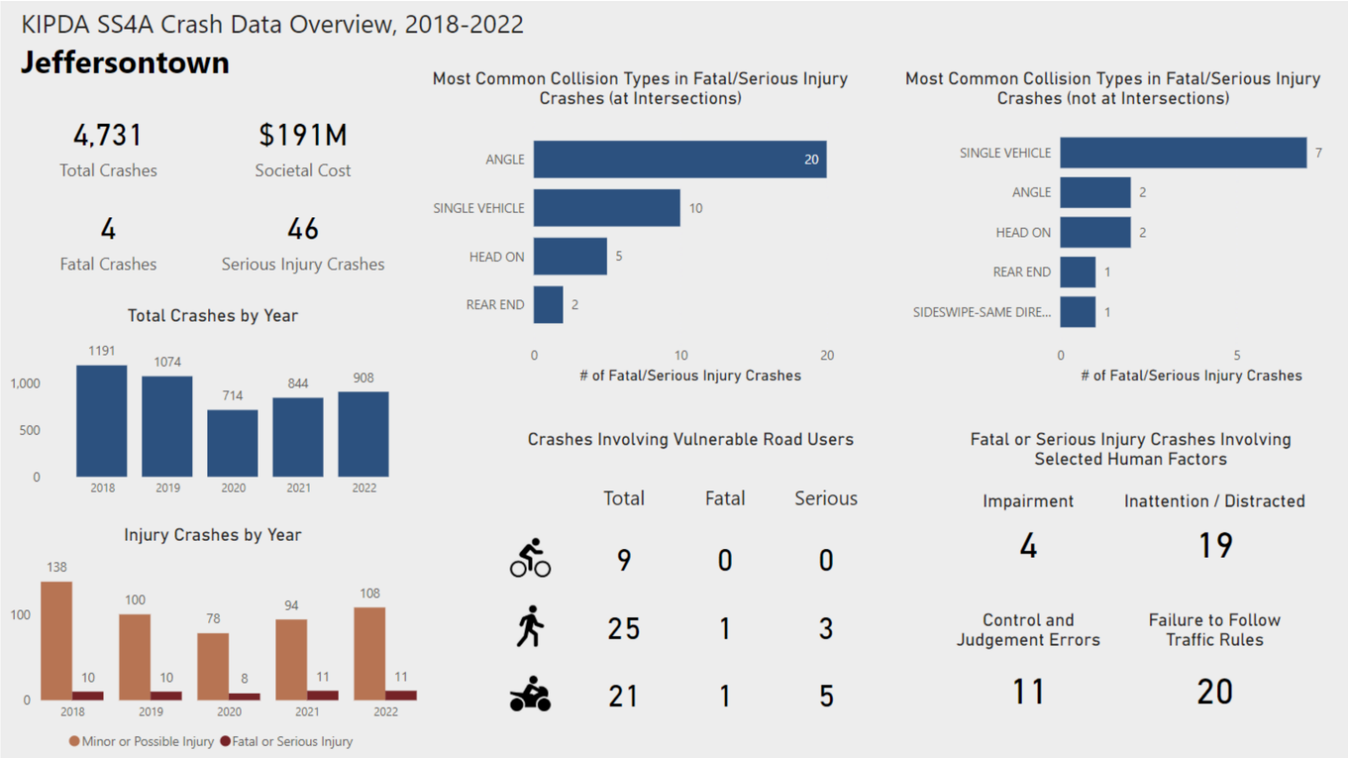
Safe System Approach vs Traditional Approach

The traditional approach to road safety often relies on perfect human behavior from all road users and 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.

Traditional approach		Safe System approach
Prevent crashes	→	Prevent death and serious injuries
Improve human behavior	→	Design for human mistakes/limitations
Control speeding	→	Reduce system kinetic energy
Individuals are responsible	→	Share responsibility
React based on crash history	→	Proactively identify and address risks

Overview

Jeffersontown had 4 fatal crashes and 46 serious injury crashes during the five-year period from 2018 to 2022, for a total of 50. There were 4,731 total crashes during this time. The total societal cost of all crashes was $191 million (including economic and quality of life factors). The figure below provides an overview of the crash data.



Important safety findings for Jeffersontown include:

- Fatal and serious injury crashes are concentrated on Hurstbourne Pkwy and Taylorsville Rd
- Lower severity crashes have hot spots at major intersections, including at the intersection of Hurstbourne Pkwy and I-64 and Hurstbourne Pkwy and Taylorsville Rd
- 17 of 50 fatal / serious injury crashes were single-vehicle crashes
- 4 of 50 fatal / serious injury crashes involved a pedestrian or bicyclist
- 11 of 50 fatal / serious injury crashes involved failure to yield right of way
- 19 of 50 fatal / serious injury crashes involved driver inattention / distraction

1. Leadership Commitment and Goal Setting

Jeffersontown is dedicated to ensuring safety for all users on the City's streets and highways. The City's commitment is demonstrated by the resolution on the following page, which states that its leaders aspire "to reduce and eventually eliminate traffic related fatalities and serious injuries on its roadways" and have established "a goal of working towards zero traffic fatalities and serious injuries by the year 2050."

Jeffersontown's commitment and leadership in implementing safety-focused projects, strategies, and policies are also supported by current programs and policies. Jeffersontown adopted the Jefferson County 2040 Comprehensive Plan in 2018. The comprehensive plan contains policies that promote a safe and accessible transportation system via both transportation and land use initiatives. Specifically, the Comprehensive Plan encourages transit-oriented development, reinforces strategies that encourage "complete streets," and promotes nodal density. The City's Land Development Code also includes standards for pedestrian infrastructure and for road design and construction.

CITY OF JEFFERSONTOWN
JEFFERSON COUNTY, KENTUCKY

RESOLUTION NO. 791, SERIES 2024

A RESOLUTION OF THE CITY OF JEFFERSONTOWN, KENTUCKY SUPPORTING THE VISION ZERO GOAL OF ACHIEVING ZERO TRAFFIC FATALITIES, AND SERIOUS INJURIES BY THE YEAR 2050.

WHEREAS, the City of Jeffersontown, Kentucky has lost 4 persons since 2018 and has witnessed another 47 persons experienced a serious or life-threatening injury due to traffic crashes within the city; and

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

WHEREAS, the City is utilizing a planning grant through the Safe Streets and Roads for All Program (SS4A) and coordinating with the Kentuciana Regional Planning and Development Agency (KIPDA) to develop a safety action plan for City of Jeffersontown, Kentucky to analyze existing conditions, historical trends, systemic and specific needs and to identify projects and strategies to address identified problems; and

WHEREAS a safety action plan is an eligibility requirement for implementation grants through the SS4A Program; and

WHEREAS community commitment to an eventual goal of zero fatalities and serious injury is an important component for USDOT consideration of an implementation grant through the SS4A program.

NOW, THEREFORE, IT IS HEREBY RESOLVED that the City of Jeffersontown hereby establishes a goal of working towards zero traffic fatalities and serious injuries by the year 2050.

INTRODUCED, SECONDED, READ, AND ADOPTED by the City of Jeffersontown on the 3rd day of September 2024, and on the same occasion signed by the Mayor of the City of Jeffersontown and declared to be in full force and effect.

Carol Pike Mayor

CAROL PIKE, MAYOR

DATE: 9/3/24

ATTEST:

Bill Fox

BILL FOX, CITY CLERK

2. Planning Structure

The planning structure for the Jeffersontown Safety Action Plan consisted of various committees, each playing a crucial role. The following provides a description of 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. It also included KIPDA and Regional Transportation Council (RTC) 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

City of Jeffersontown Leadership Meetings and Plan Review

Through plan development, Jurisdictional Stakeholder Meetings were conducted to receive and relay detailed input and feedback. The first meeting focused on presenting the initial data analysis and prioritization of needs, allowing stakeholders to identify, confirm, and prioritize critical safety issues. The second meeting allowed stakeholders to provide feedback on draft recommendations, both historical and systemic, as well as potential countermeasures. The goal was to identify the concerns and priorities of Jeffersontown so they could be addressed in the in the plan.

Safety Committee Meetings

The Safety Committee is the cornerstone of the planning structure, proving localized oversight and input into the plan. The committee consisted of a multidisciplinary team, comprising key stakeholders in the community. The intent of the Safety Committee is to advise Jeffersontown and KIPDA on the development, implementation, and monitoring of the plan. The committee provided input and feedback on potential safety needs and possible reactive and systemic safety countermeasures. Having many different perspectives and agencies in the meetings facilitates effective communication and results in a more effective safety action plan; one that better addresses the five elements of the Safe System Approach. 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 Jeffersontown, Kentucky, as shown in Figure 3-1. This study includes all public streets and roads within the City, except Interstate 64 (I-64). Private owned facilities and I-64 are not included in the study.

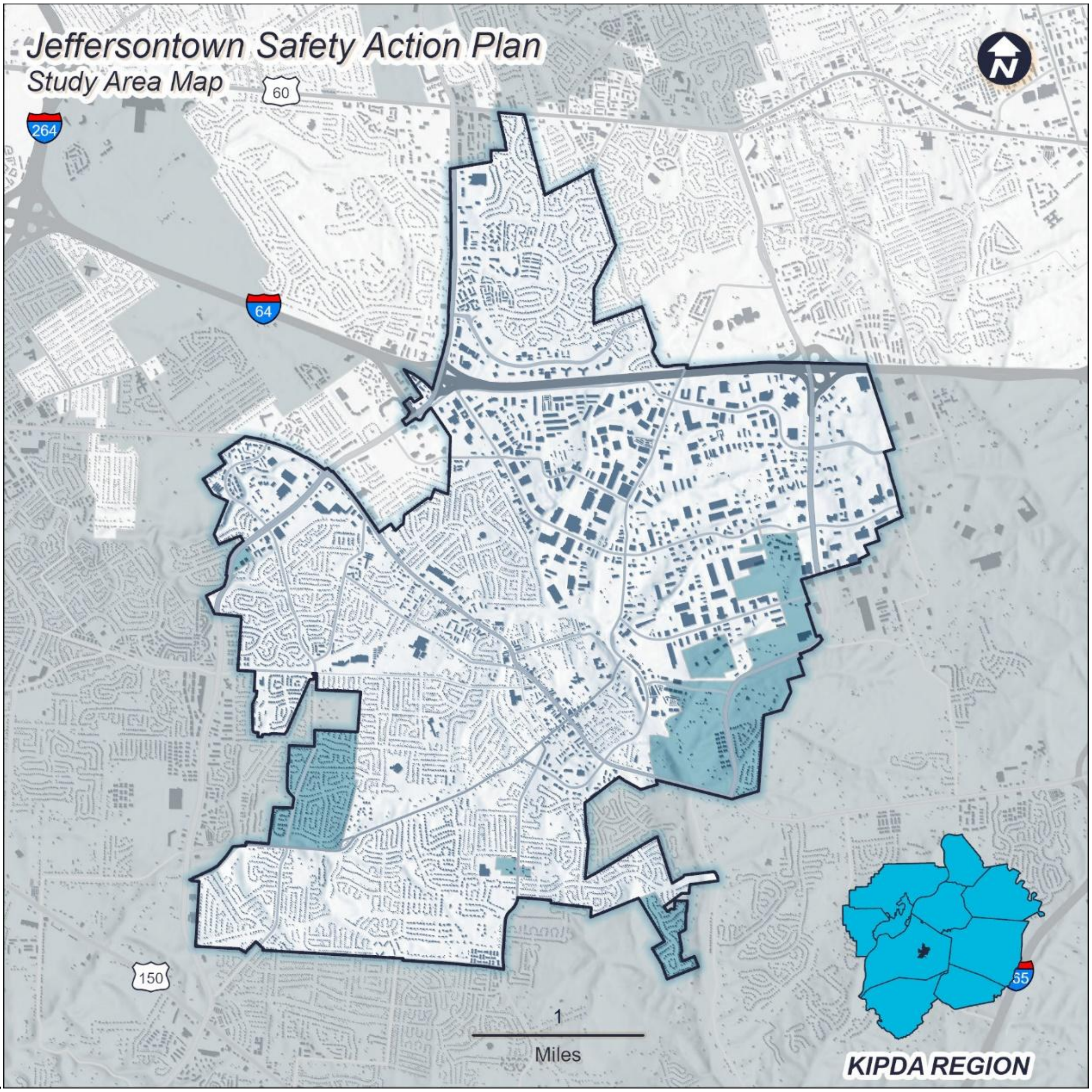


Figure 3-1: Study Area

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 Kentucky State Police (KSP) Crash Database through a custom dataset provided by the Kentucky Transportation Cabinet (KYTC) in partnership with the Kentucky Transportation Center (KTC). This data is primarily collected by city, county, and state police department crash investigation teams when they complete a Kentucky Uniform Police Traffic Collision Report form. This form captures critical information about the crashes, including location, type, severity, individuals and units involved, environmental factors, and the contributing factors of each crash. Departments enter this information into a database maintained by KSP.

The initial crash data collected from KYTC included crashes across Jeffersontown from 2018 to 2022. Crashes located on I-64 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 was 4,731 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.

KYTC provided geographic information system (GIS) files of roadway characteristics and traffic data for state-owned roadways, known as the Highway Information System (HIS) database. The crash data was joined with 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 provided by KYTC 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). KSP uses the KABCO scale and MMUCC 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. **Table 3-1** provides a breakdown of the crashes by severity.

Severity	MMUCC Severity Description	Crashes (2018-2022)	%
K	Fatal Injury	4	<1%
A	Suspected Serious Injury	46	1%
B	Suspected Minor Injury	177	4%
C	Possible Injury	341	7%
O	No Apparent Injury	4,163	88%
	Total	**4,731**	

Table 3-1: Crashes by Severity

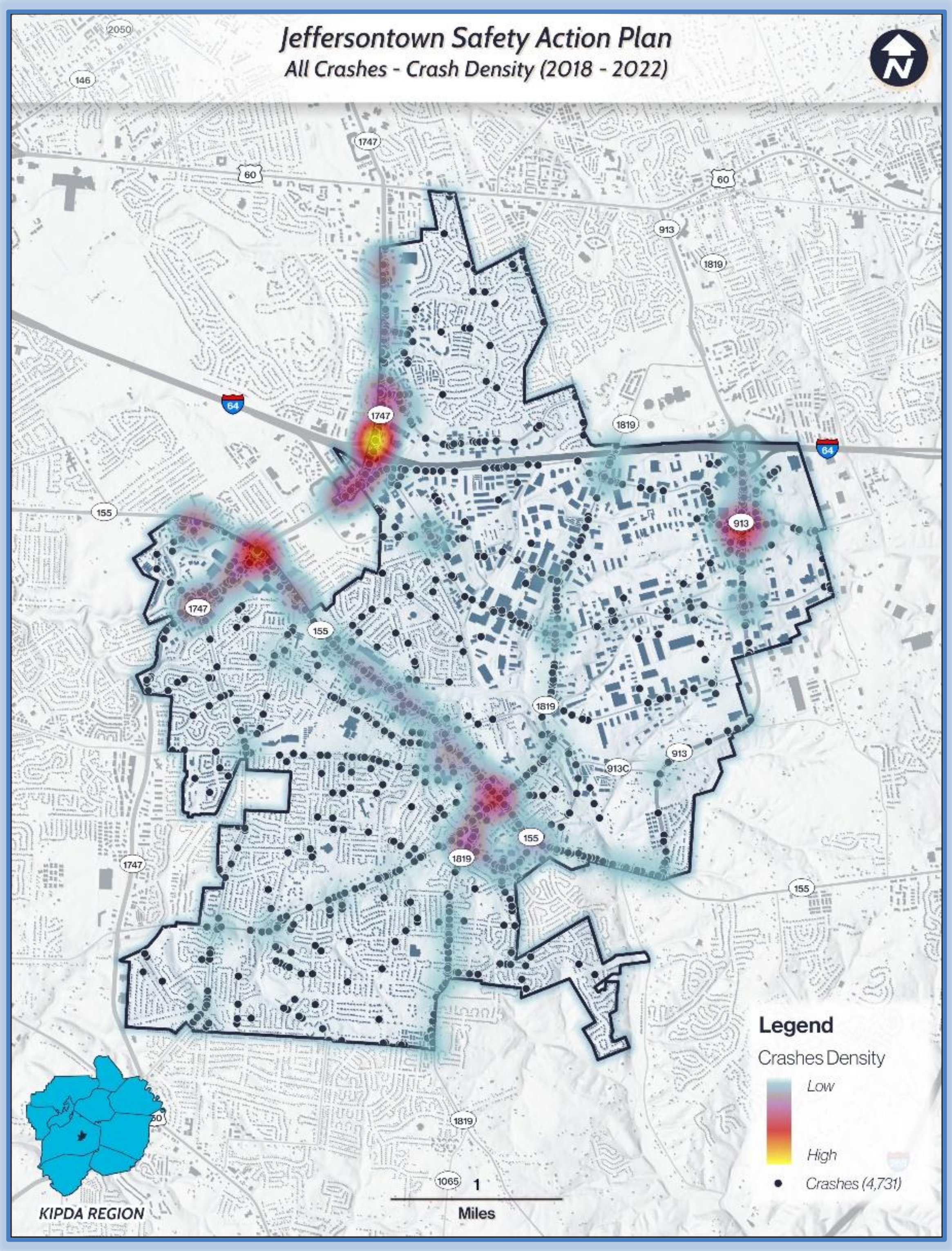


Figure 3-2: Crash Density Map

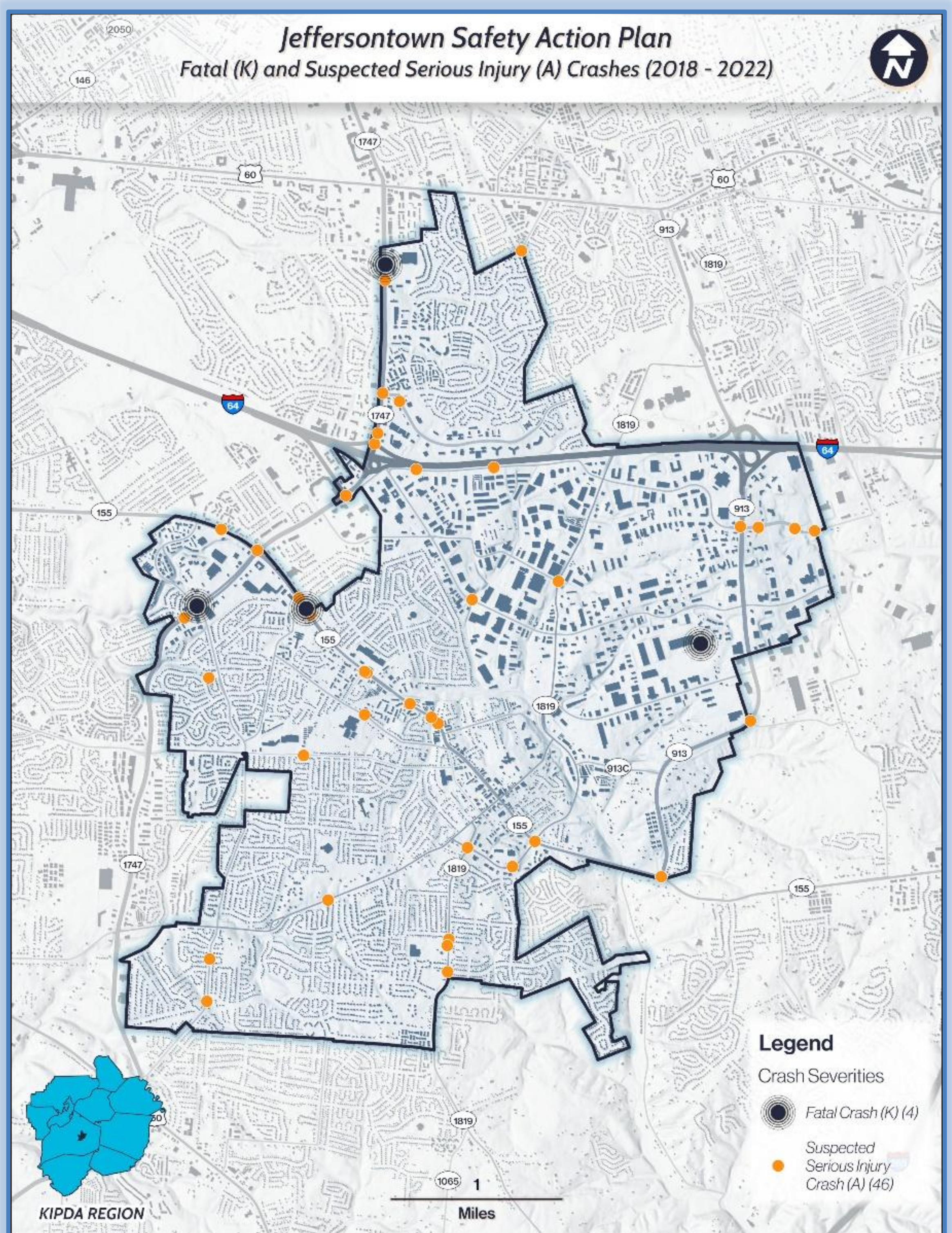


Figure 3-3: Fatal and Suspected Serious Injury Crash Map

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 for Jeffersontown reveals a slight downward trend in overall crashes over the five-year period. While there was a notable drop in 2020 (714 crashes), this reduction is attributed to the COVID-19 pandemic, which significantly altered traffic patterns and affected crash reporting due to modified police procedures aimed at minimizing exposure risks. Consequently, the reported number of crashes in 2020 is likely distorted, as crashes were underreported. Fatal and suspected serious injury crashes remained relatively consistent, ranging from 8 to 11 per year.

Figure 3-4 shows the fatal and suspected serious injury crashes remained relatively consistent during the study period.

Figure 3-4: Overall Crashes per Year

Crash Occurrence

Month

Figure 3-5 presents the crashes by month over the 5-year study period. The monthly crash data shows notable variations in the severity of crashes throughout the year. While the total number of crashes is fairly consistent, April and May exhibit significantly higher percentages of fatal and serious injury crashes, with 14% each, despite accounting for only 7-8% of all crashes. In contrast, months January, February and June have lower severity rates with only 4% of fatal and serious injury crashes, despite contributing to 8-9% of all crashes. March also shows a spike in severity, with 12% of the severe crashes.

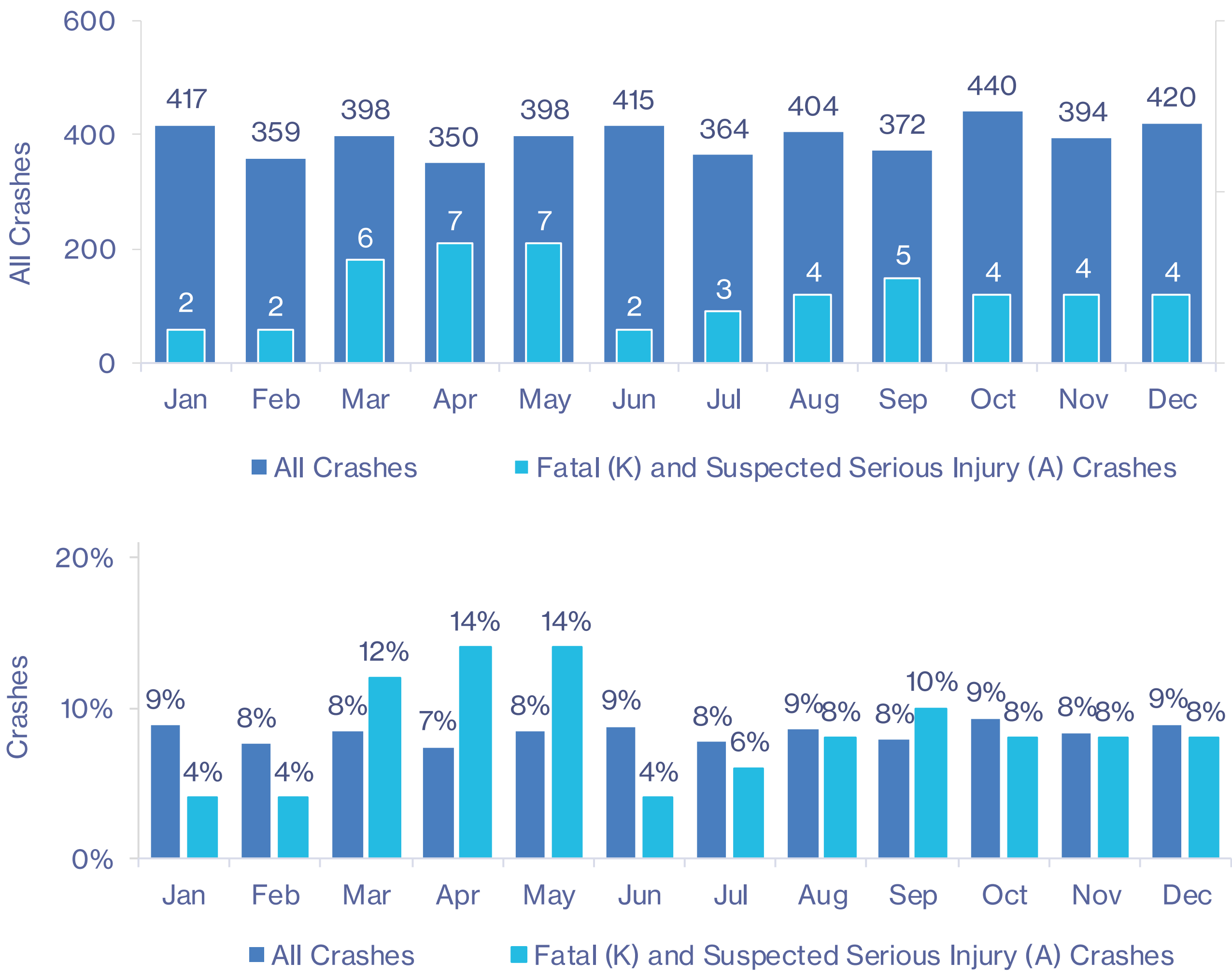


Figure 3-5: Monthly Crash Breakdown

Day of Week

As seen in Figure 3-6 the daily crash data for Jeffersontown reveals an overall increase in total crashes as the week progresses, peaking on Friday with 825 crashes. Weekends have the lowest number of crashes, with Sunday having roughly 50% as many crashes as a typical weekday. The decrease in weekend crashes is most likely attributed to lower traffic exposure and non-existent peak period congestion, lowering the potential for crashes to occur. Wednesday, with 703 total crashes – similar to other weekdays-has a relatively high number of severe crashes (11).

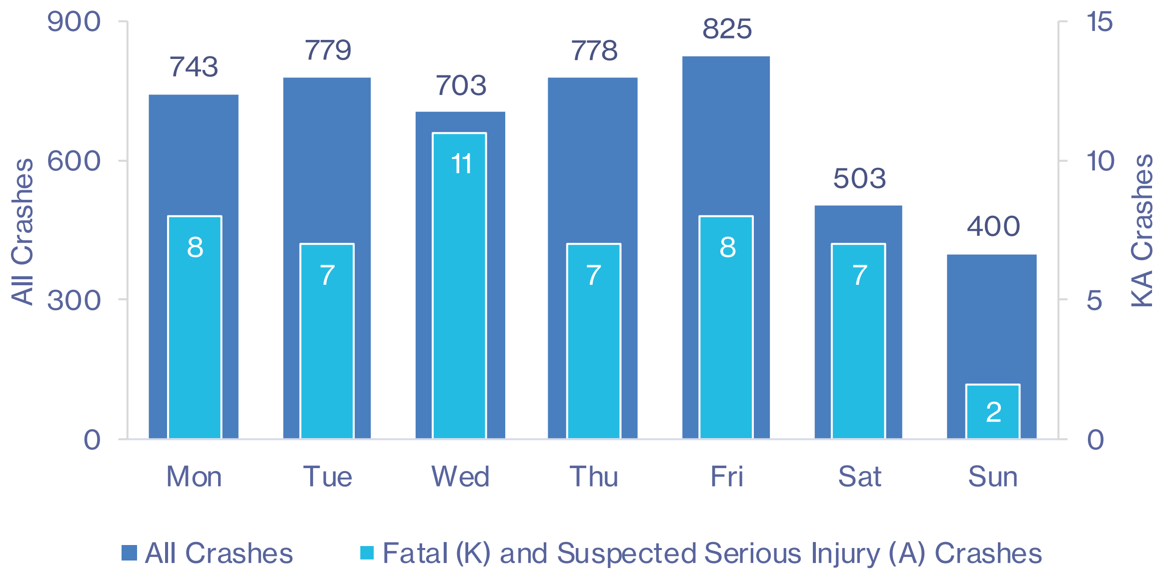


Figure 3-6: Crashes by Day of Week

Time of Day

As seen in Figure 3-7, the period between 3-6pm experiences the highest number of crashes, with 1,381 crashes, accounting for 29% of all crashes, likely reflecting the impact of increased traffic during the evening rush hour. While this period experiences the greatest number of crashes, the 12-3pm period experienced the highest number of severe crashes, with 13 fatal and suspected serious injury crashes.

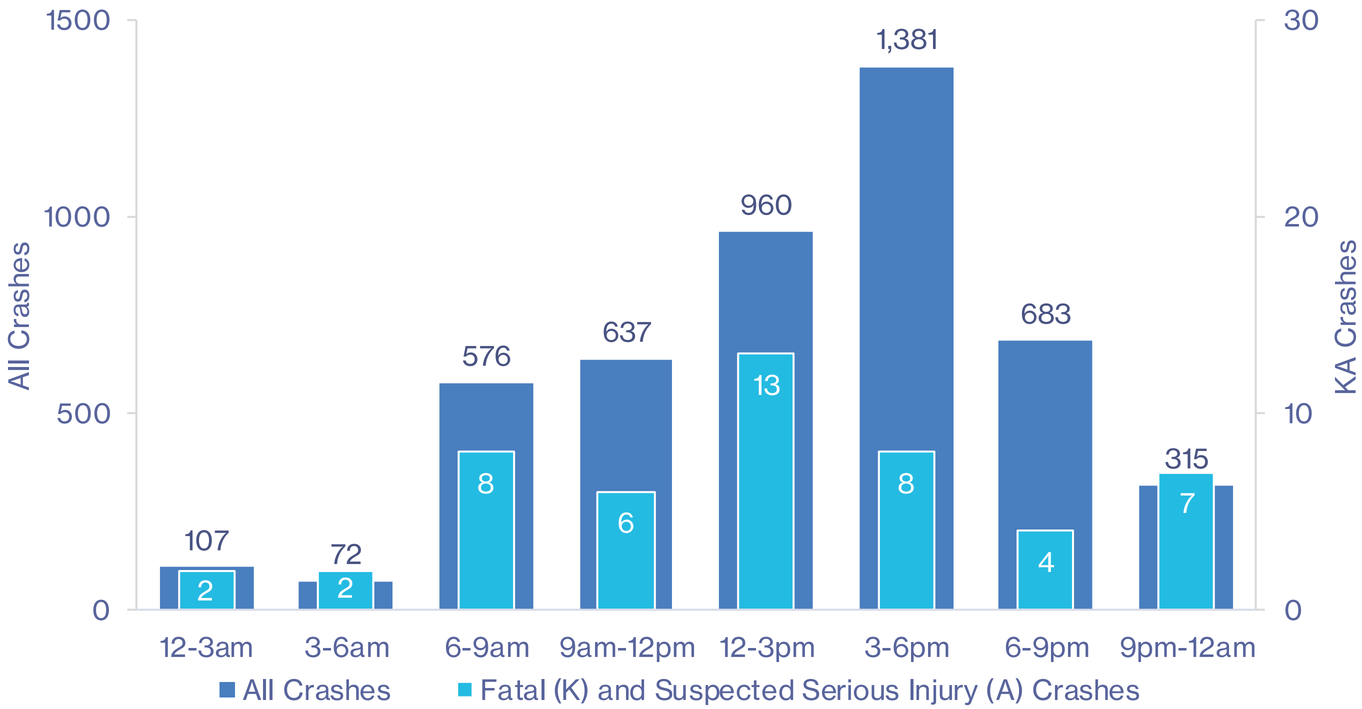
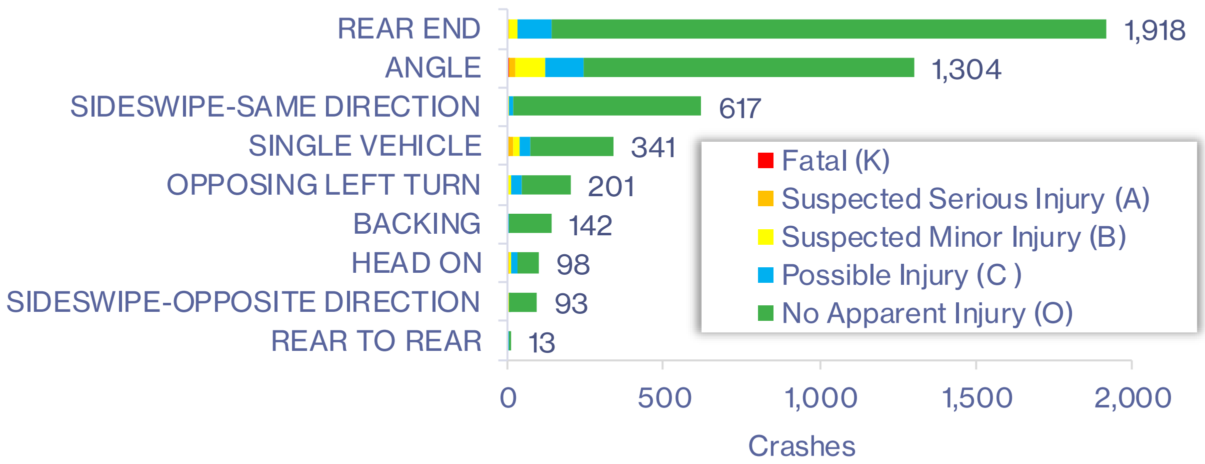


Figure 3-7: Crashes by Time of Day

Manner of Collision

As shown in Figure 3-8 rear-end crashes are the most common type of crash, accounting for 45% of all crashes, but only contribute to 6% of fatal and suspected serious injury crashes. While Angle crashes account for the most severe crashes, with 44% of fatal and suspected serious injury crashes. While single-vehicle crashes are only 8% of all crashes, they account for 34% of fatal and suspected serious injury crashes. Head-on crashes, while only comprising 2% of all crashes, contribute to 14% of fatal and suspected serious injury crashes, demonstrating that they are disproportionately severe when they occur.



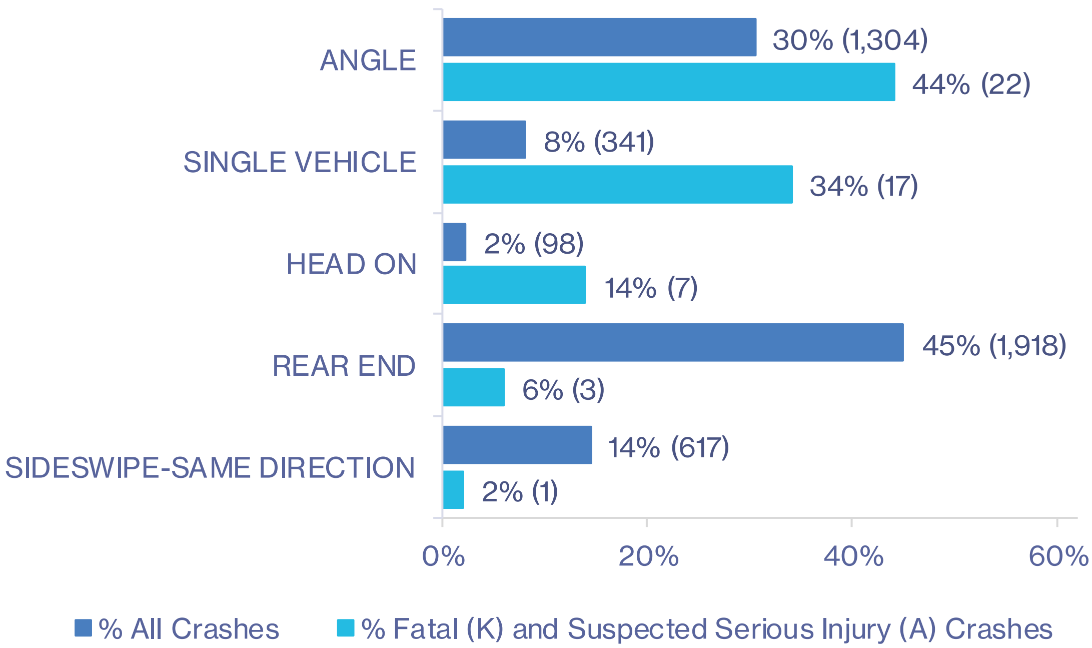


Figure 3-8: Manner of Collision by Severity

Driver Behavior

Driver behavior is a shared responsibility and can be the determining factor in a crash. The actions and decisions made by drivers can significantly influence the likelihood and severity of crashes. Addressing key areas of concern, such as aggressive driving, distracted driving, an d impaired driving, is essential for fostering a safer roadway environment.

Aggressive Driving

Aggressive driving is generally defined as behavior by drivers that negatively impacts the safety of other motorists or pedestrians, contributing to crashes. Aggressive crashes are coded to have the following behaviors.

- Failure to yield to right of way
- Following too close
- Traveling too fast for conditions
- Disregarding traffic control
- Exceeding posted speed limit
- Improper passing
- Weaving in traffic

Crashes involving aggressive driving contribute disproportionately to fatal and suspected serious injury crashes compared to all crashes. While aggressive driving behaviors are present in 32% of all crashes, they account for 44% of crashes resulting in fatalities and severe injuries. This indicates a higher risk of severity associated with aggressive driving behaviors. Figure 3-9 details this data and Figure 3-10 shows where these crashes occurred.

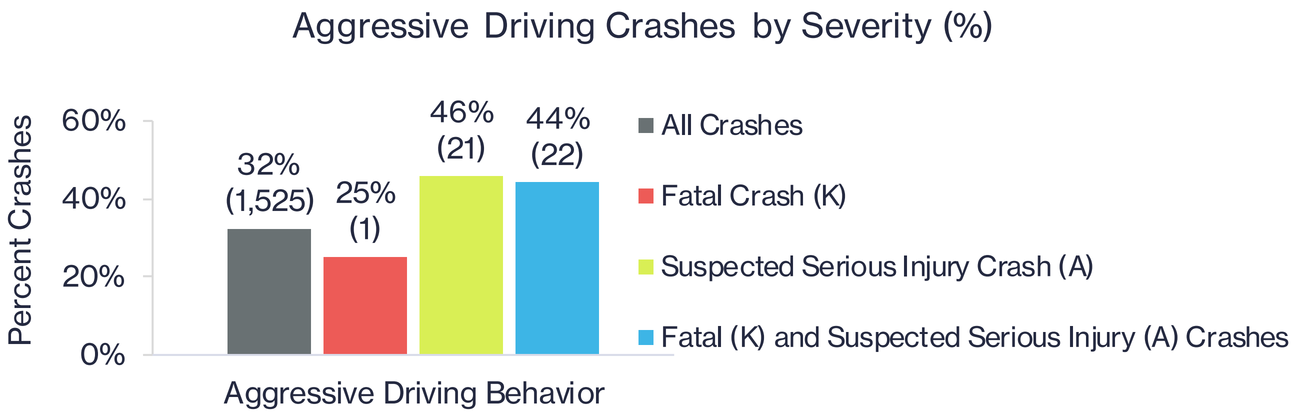


Figure 3-9: Aggressive Driver Crashes by Severity

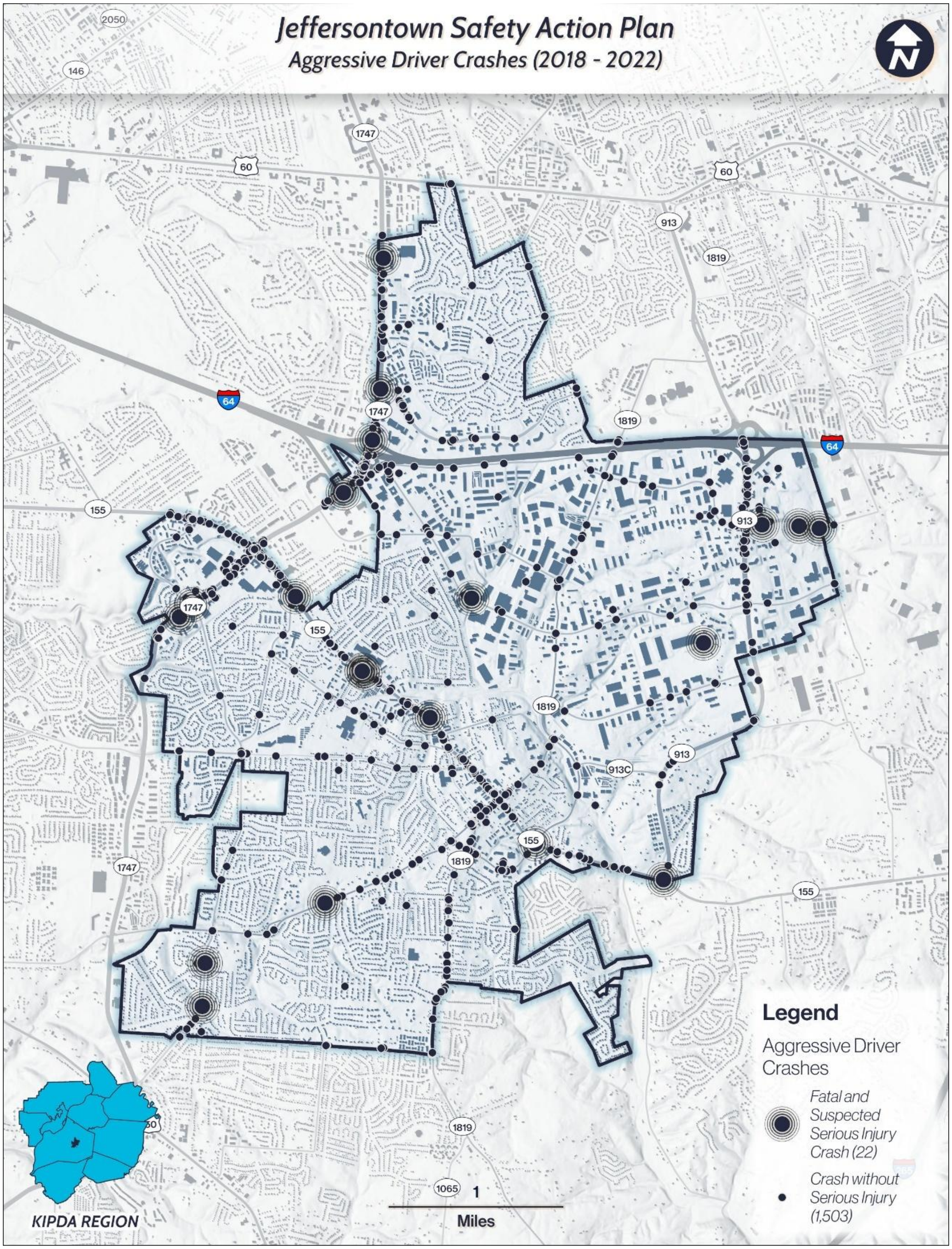


Figure 3-10: Aggressive Driver Crashes Map

Distracted Driving

Distracted driving refers to any activity by a vehicle operator that diverts their attention from the primary task of driving, thereby increasing the risk of a crash. The three main types of distracted driving involve drivers taking their eyes off of the road, hands off the wheel, and mind away of driving. In Jeffersontown, fatal and suspected serious injury crashes linked to distracted driving were consistent throughout the study period as seen in Figure 3-11.

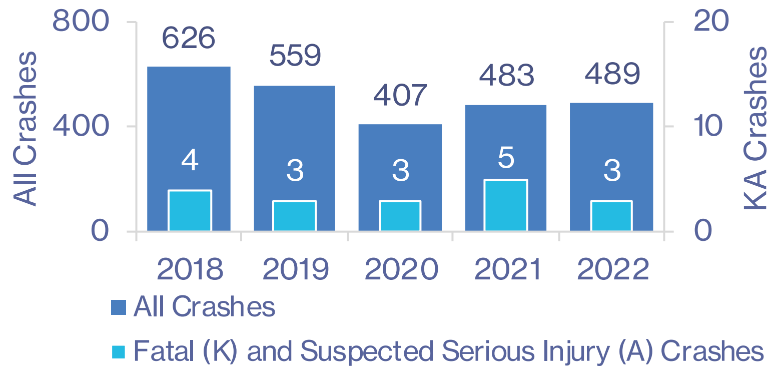


Figure 3-11: Distracted Driver Crashes by Year

In Jeffersontown, distracted driving is a significant factor in crashes, accounting for 54% (2,564) of all crashes. Additionally, 36% of fatal and suspected serious injury crashes were linked to distracted driving as seen in Figure 3-12. Figure 3-13 shows the location of these crashes.

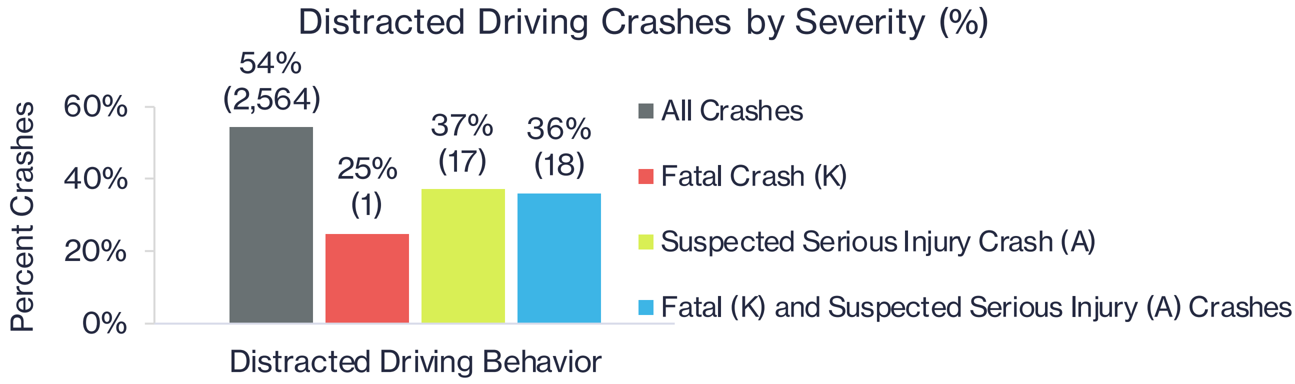


Figure 3-12: Distracted Driver Crashes by Severity

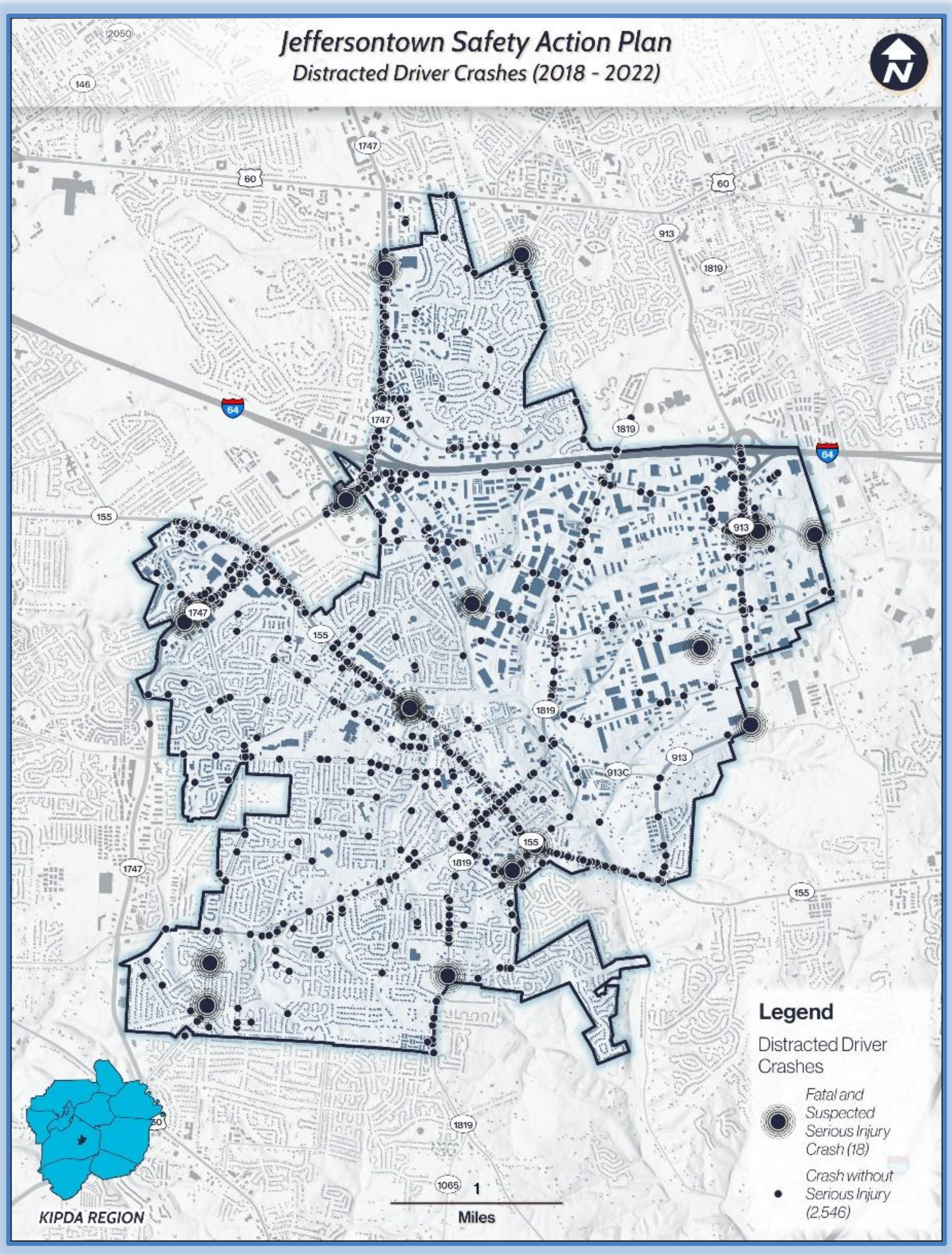


Figure 3-13: Distracted Driver Crashes Map

Impaired Driving

Impaired driving is recognized as driving a motor vehicle while under the influence of alcohol or narcotics. Impairment affects reaction time, judgement, and coordination, all of which are critical to safely operating a vehicle.

Figure 3-14: Impaired Driver Crashes by Year

While impaired driving behaviors are identified in only 3% of all crashes, they disproportionately contribute to more severe crashes. Impaired driving is involved in 8% of fatal and suspected serious injury crashes. This data, as shown by year in Figure 3-14 and by severity in Figure 3-15 highlights the heightened risk that impaired driving poses, as crashes involving impaired drivers are much more likely to result in fatal or serious injuries compared to non-impaired driving crashes. Figure 3-16 shows the location of these crashes.

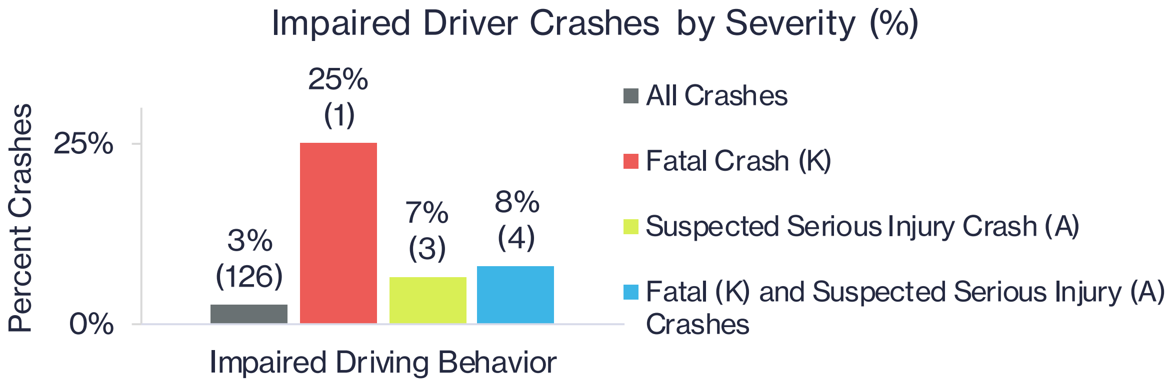


Figure 3-15: Impaired Driver Crashes by Severity

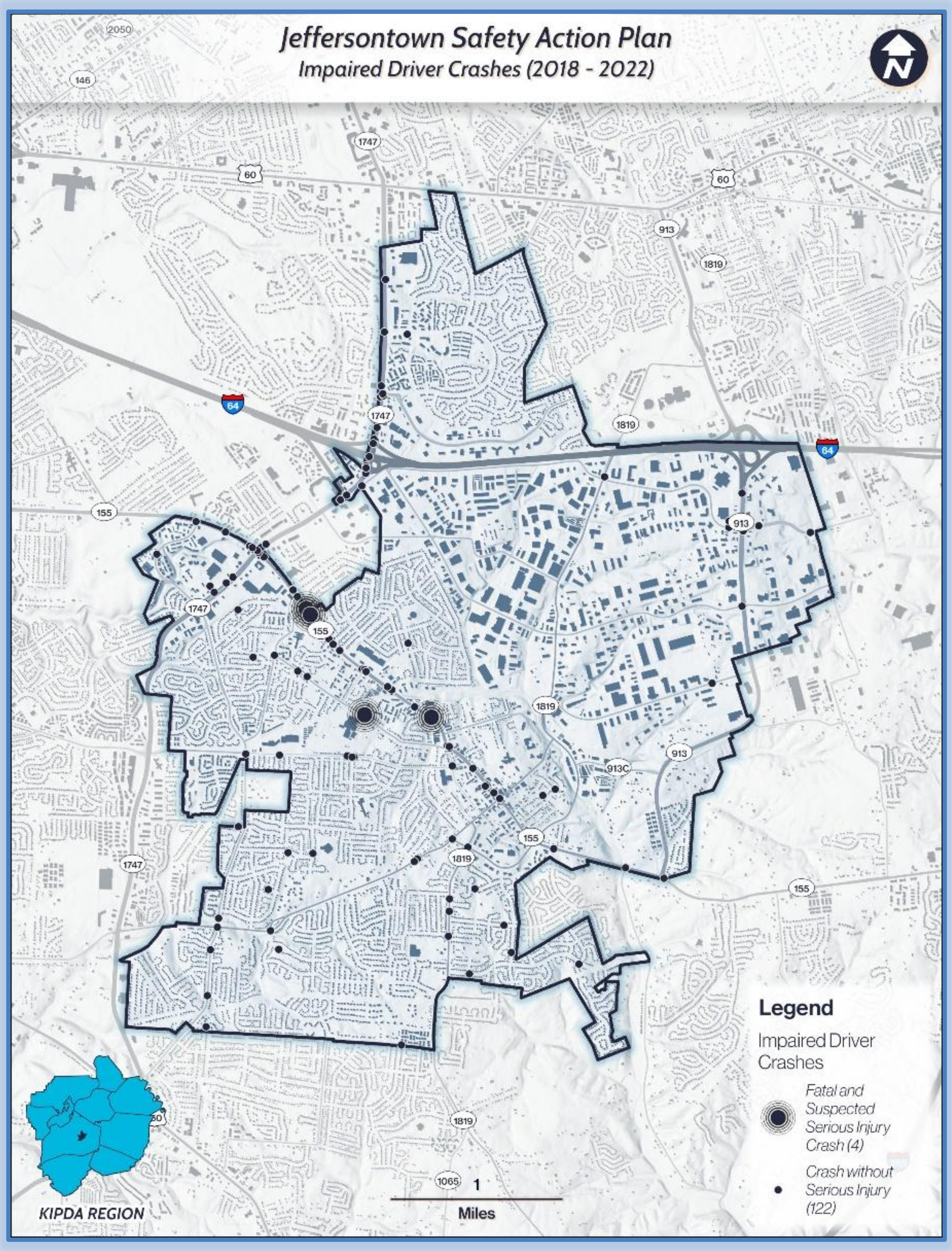


Figure 3-16: Impaired Driver Crashes Map

Lighting Condition

Roadway lighting is a factor in safety, influencing visibility and reaction times. However, the documentation of lighting infrastructure is not comprehensive. The available crash data provides only anecdotal evidence regarding the lighting condition at the time of 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.

The majority of crashes in Jeffersontown occurred during daylight conditions, accounting for 75% (3,546 crashes) of all crashes and 66% of fatal and suspected serious injury crashes. Non-daylight dark conditions accounted for 9% of all crashes but 16% of fatal and suspected serious injury crashes. Although a majority of the crashes occurred during daylight condition, there is an overrepresentation of severe crashes in non-daylight dark conditions. Figure 3-17 provides a breakdown of these data and Figure 3-18 shows the location.

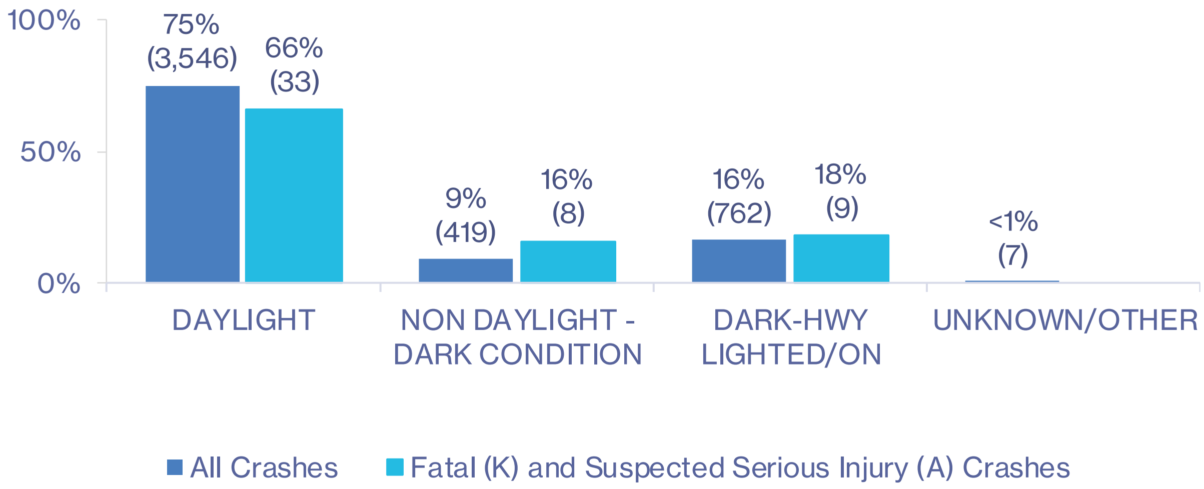


Figure 3-17: Crashes by Light Condition

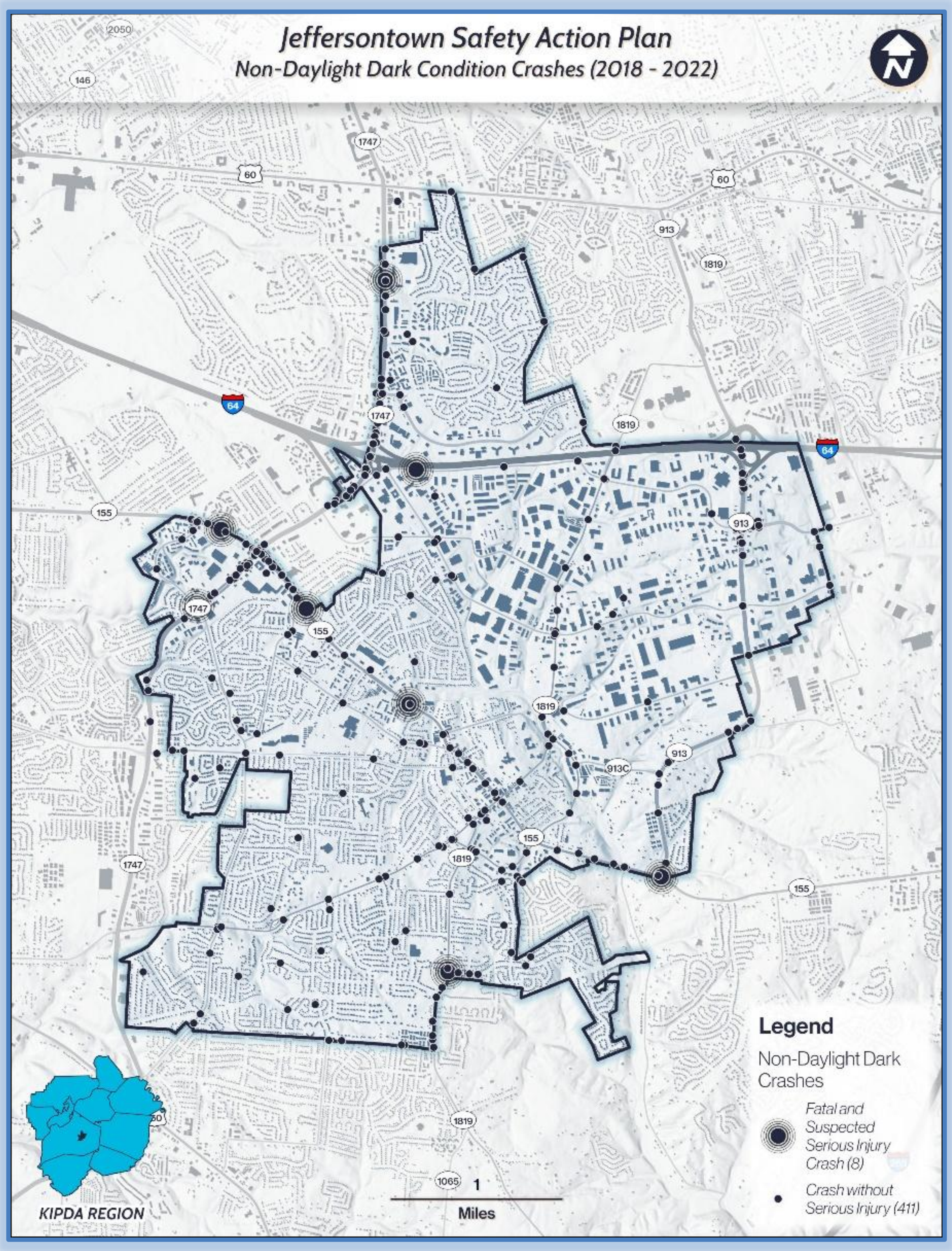


Figure 3-18: Lighting Condition: Non-Daylight Dark Condition Crashes Map

Crashes by Locations

In the analysis as shown in Figure 3-19, crashes were identified based on their location: intersections and segments. In Jeffersontown, a significant majority of crashes occurred at intersections, accounting for 77% (3,665 crashes) of all crashes and 80% (40 crashes) of fatal and suspected serious injury crashes. This is expected for an urban area where intersections serve as high-conflict points for vehicles, pedestrians, and cyclists. By comparison, 23% (1,066 crashes) of all crashes and 20% (10 crashes) of severe crashes occurred on roadway segments.

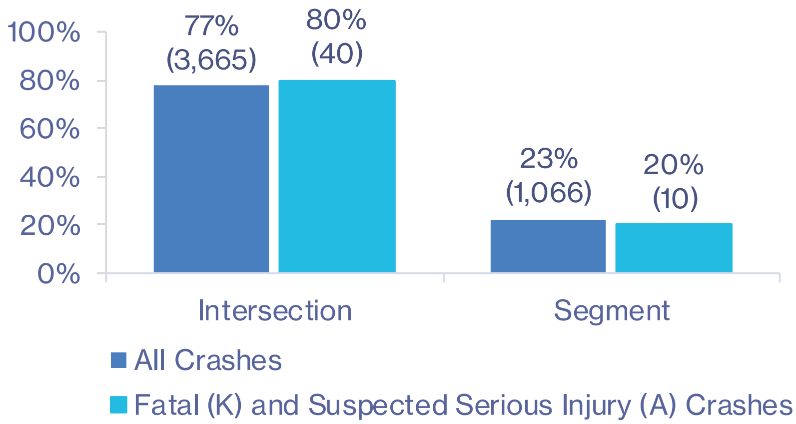


Figure 3-19: Crashes by Location

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.

Figure 3-20 indicates that roadway departure crashes is a contributor to severe outcomes. Although roadway departure crashes account for 13% of all crashes, they disproportionately represent a much higher percentage of fatal and serious injury crashes. Specifically, 24% of fatal and suspected injury crashes are related to roadway departures. Figure 3-21 shows the location of these crashes.

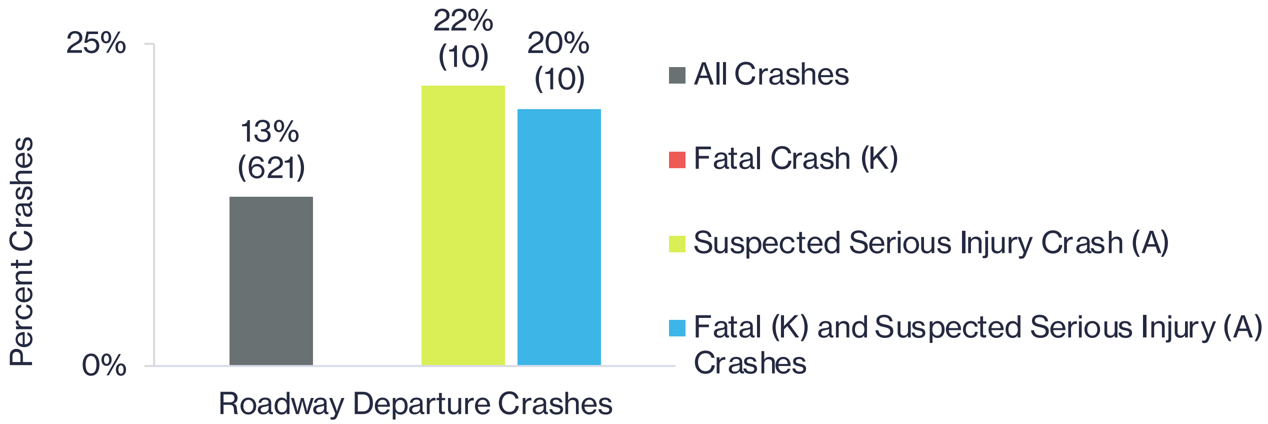


Figure 3-20: Roadway Departure Crashes by Severity

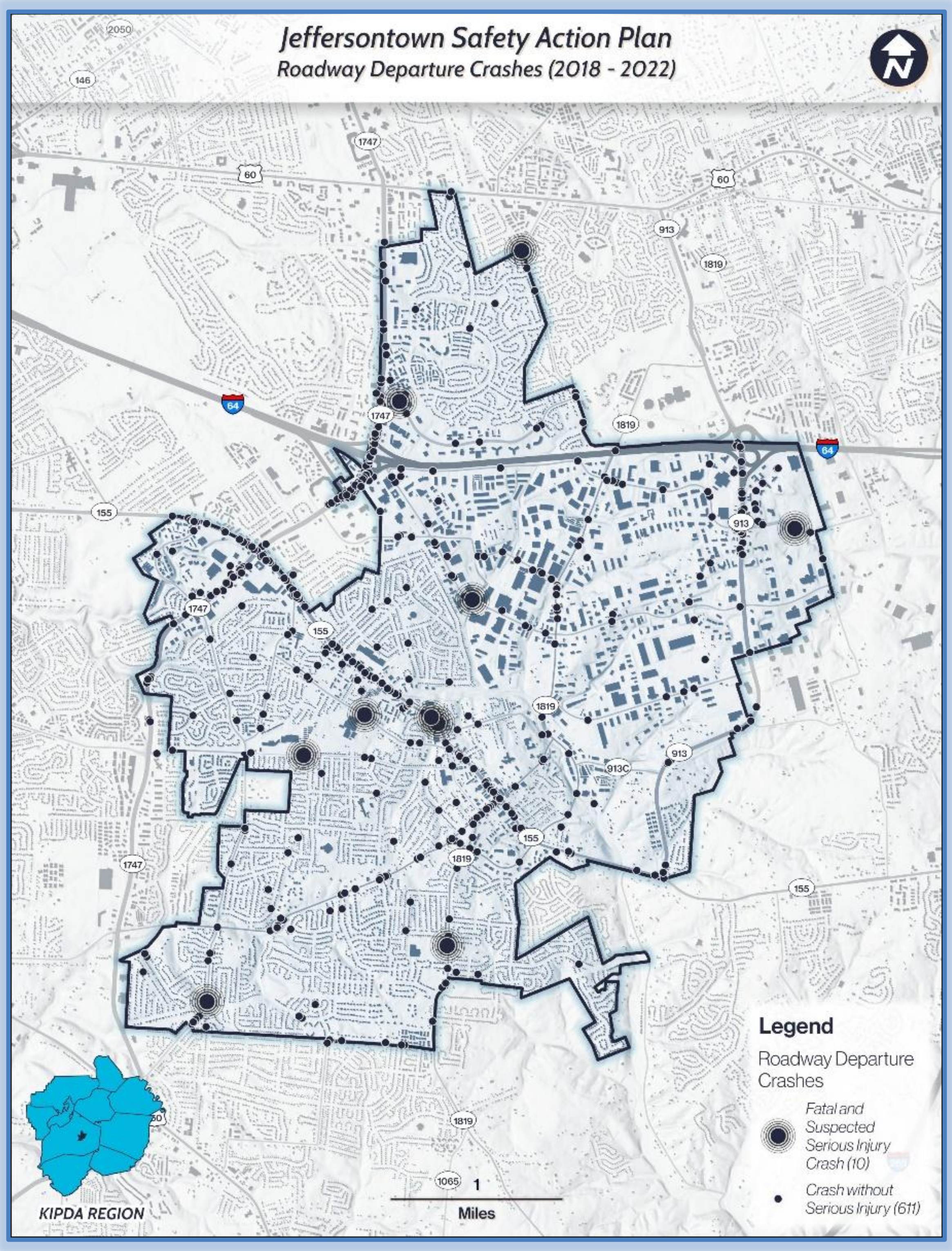


Figure 3-21: Roadway Departure Crashes Map

Vulnerable Road Users

Vulnerable road user crashes, including pedestrian and bicyclist, are at a 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 they have little to no buffer between them and the force of the collision.

Bicyclists

A total of nine bicyclist crashes were reported in Jeffersontown as shown in Figure 3-22. Among these, two were suspected minor injury crashes, two were possible injury crashes, and five were identified as no apparent injury crashes. There were no fatal or suspected serious injury crashes involving bicyclists.

Pedestrians

In Jeffersontown, a total of 25 pedestrian crashes occurred during the study period. There was one fatal crash and 3 suspected serious injury crashes, as detailed in Table 3-2. Additionally, suspected minor injuries made up 24% (6 crashes), and possible injuries accounted for 40% (10 crashes). One in six pedestrian crashes (16%) resulted in a severe outcome, either fatal or suspected serious injury. This highlights the need for continued emphasis on pedestrian safety. The location of these crashes are shown in Figure 3-23.

Severity	Description	Crashes	%
K	Fatal	1	4%
A	Suspected Serious Injury	3	12%
B	Suspected Minor Injury	6	24%
C	Possible Injury	10	40%
O	No Apparent Injury	5	20%
	TOTAL	25	

Table 3-2: Pedestrian Crashes by Severity

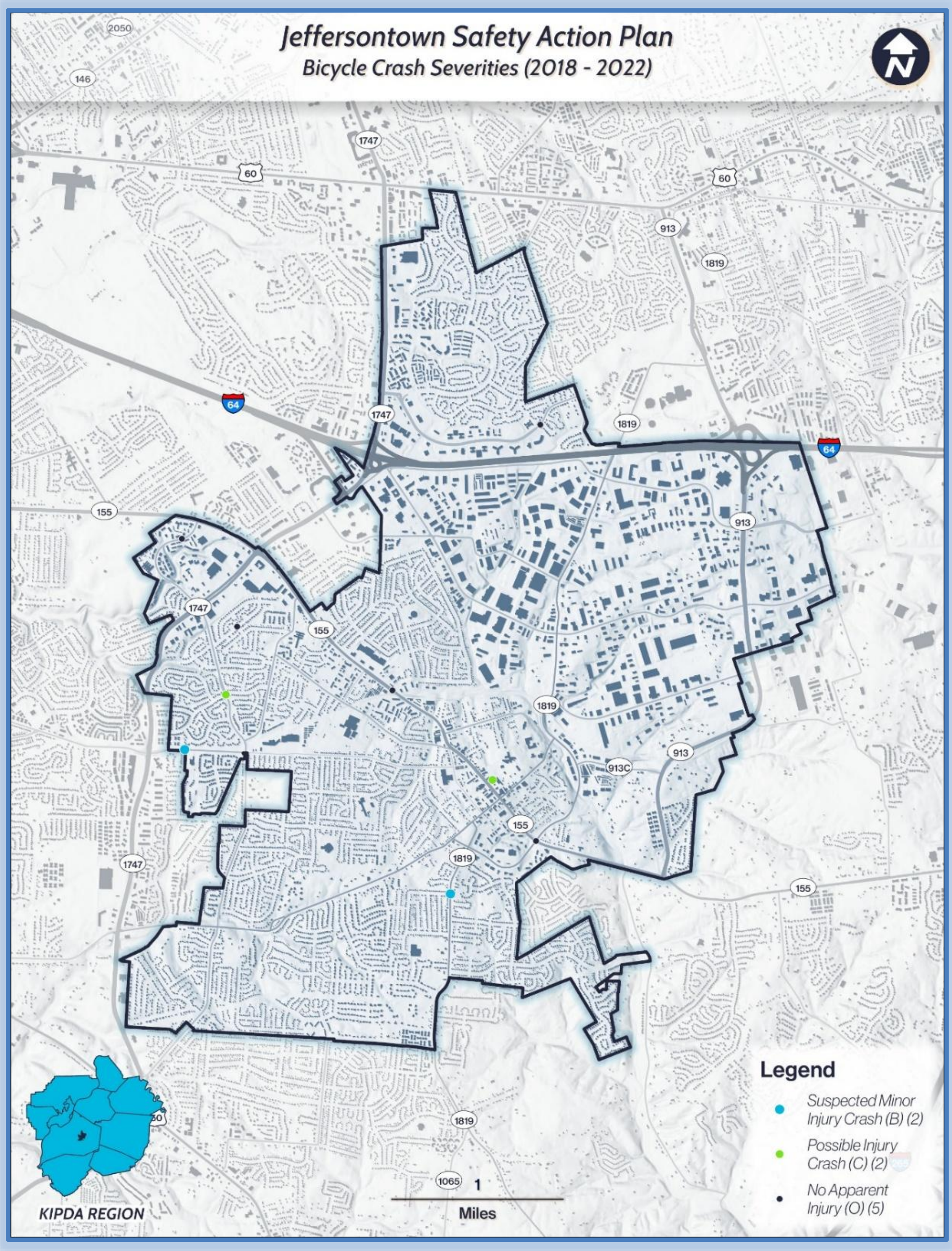


Figure 3-22: Bicycle Crash Map

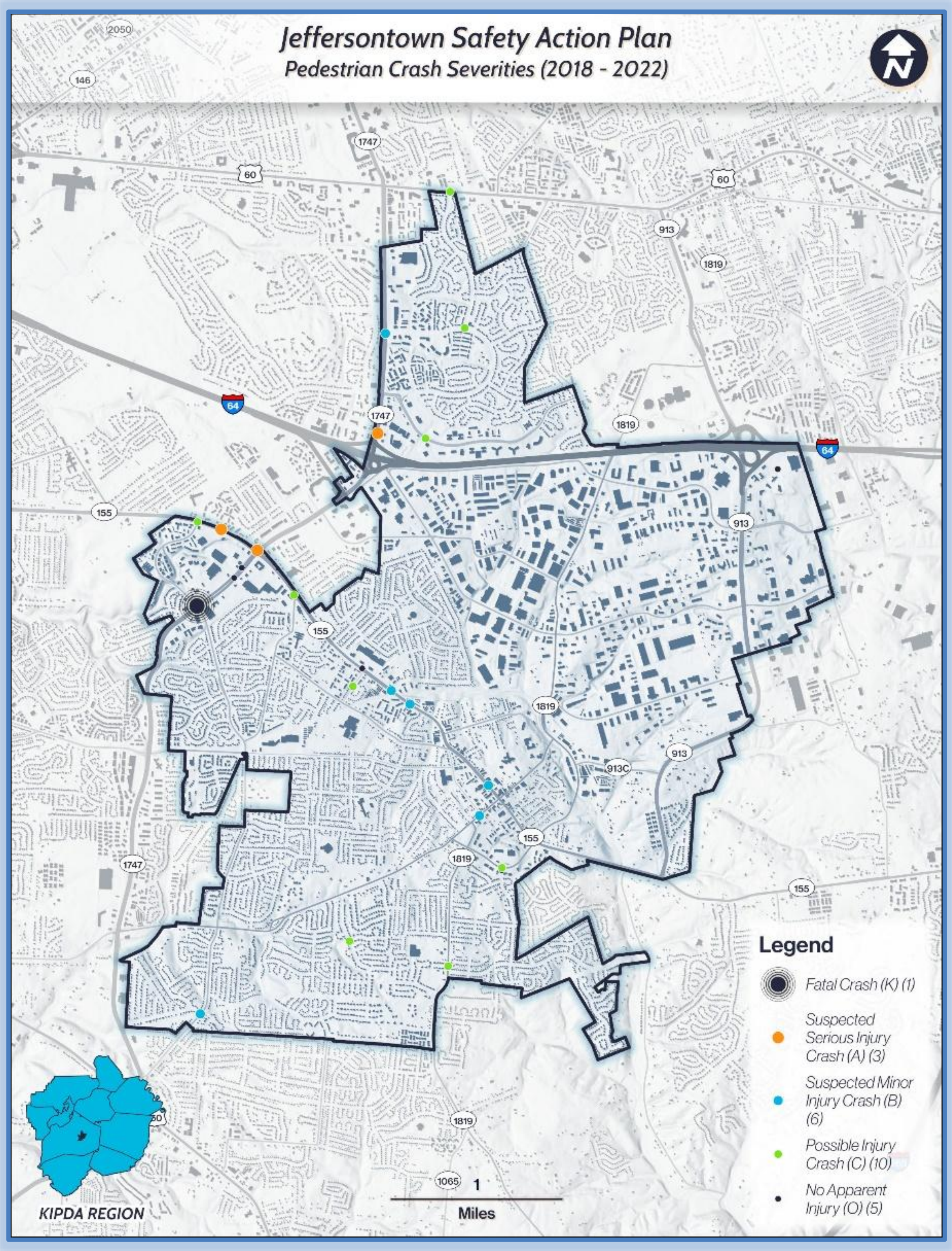


Figure 3-23: Pedestrian Crash Map

Occupant Protection

Occupant Protection involves any device that is intended for protective use in a vehicle, such as a seatbelt, airbag, child safety seat, or booster seat, which helps prevent death or serious injury in the event of a crash. The restraint crash data used for this study was based on all vehicle occupants restrained. If a single occupant was unrestrained, i.e., not wearing a seatbelt, then the crash was categorized as unrestrained.

The data on occupant protection in Jeffersontown reveals a high rate of restraint use across all crash severities. Restraint use was observed in 75% of fatal crashes and 87% of suspected serious injury crashes, increasing to 92% for suspected minor injury crashes, 94% for possible injury crashes, and 99% for no apparent injury crashes. Despite the commendable restraint usage, the data still reflects a clear relationship between occupant protection and crash severity, with lower restraint usage in fatal and severe injury crashes compared to less severe crashes. This emphasizes the continued importance of promoting restraint use to reduce crash severity and prevent fatalities.

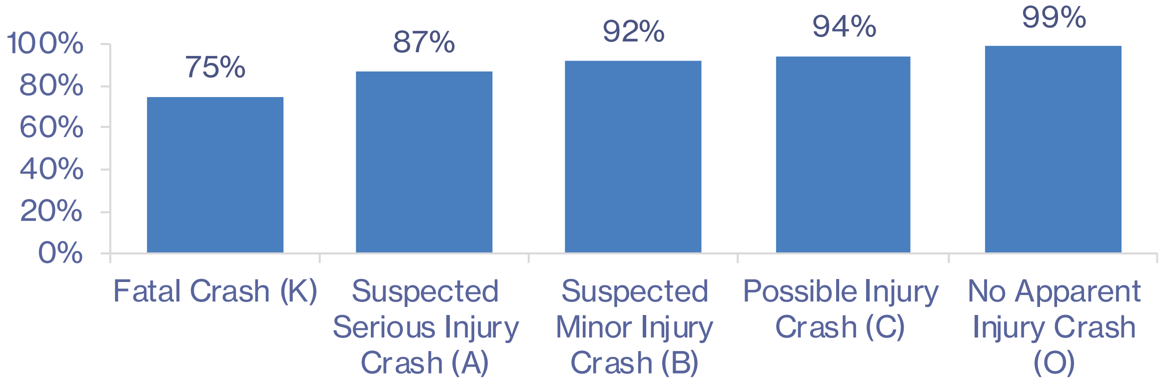


Figure 3-24: Restraint Use in Crashes

Driver Age

The driver age profile shows that many drivers between 25 and 29 years old were involved in high severity crashes. The 75+ age group also, had a much higher share of the high severity crashes than the overall number of crashes. Both young drivers and older drivers could benefit from outreach and education programs.

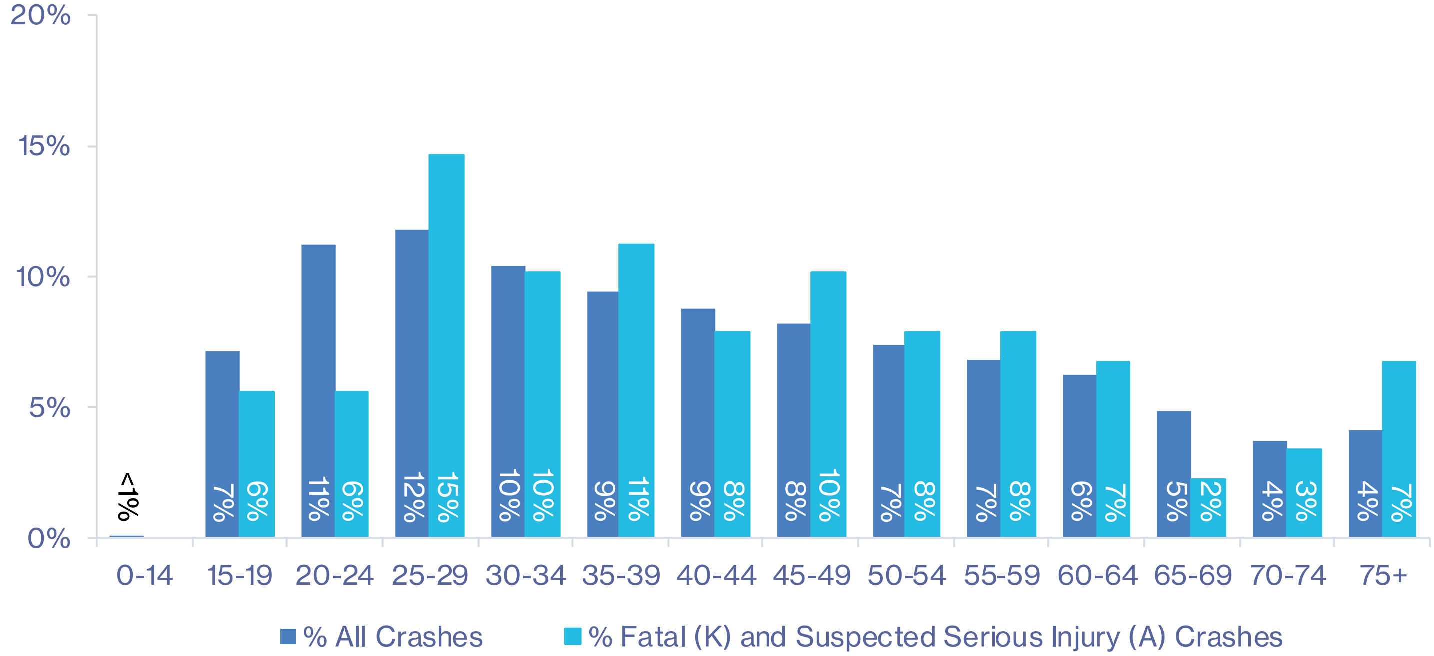


Figure 3-25: Crash Percentages by Driver Age

Contributing Human Factors

Human factors play a significant role in crash occurrences, often tied to errors in judgement and risky behaviors. These factors include speeding, failing to yield, distractions, fatigue, and influence of alcohol or drugs.

In Jeffersontown, driver inattention is the leading factor, contributing to 2,397 crashes, followed by failed to yield right of way (963 crashes) and not under proper control (386) crashes.

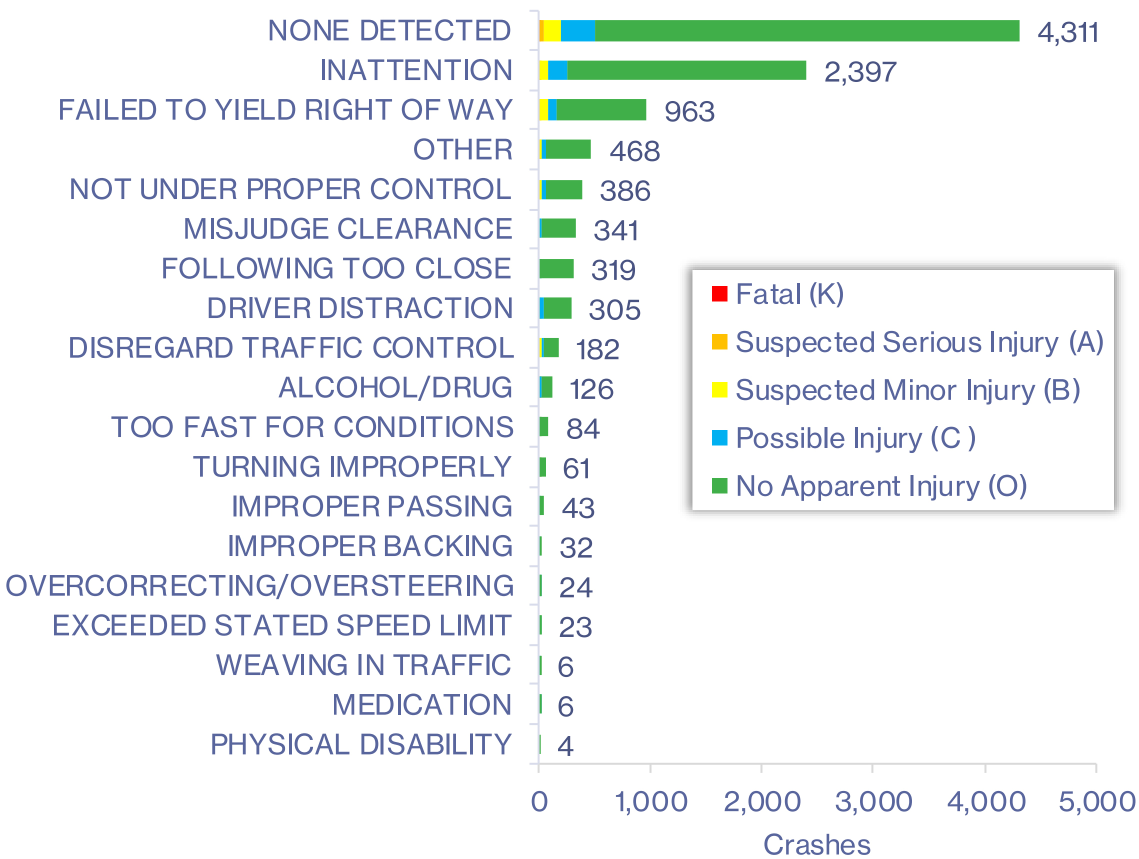


Figure 3-26: Crashes by Human Factor

Of the fatal and suspected serious injury crashes, 36% (18) were categorized as Inattention. Driver failure to yield right of way contributed to 22% of fatal and suspected serious injury crashes.

Given the high proportion of drivers being inattentive or failing 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.

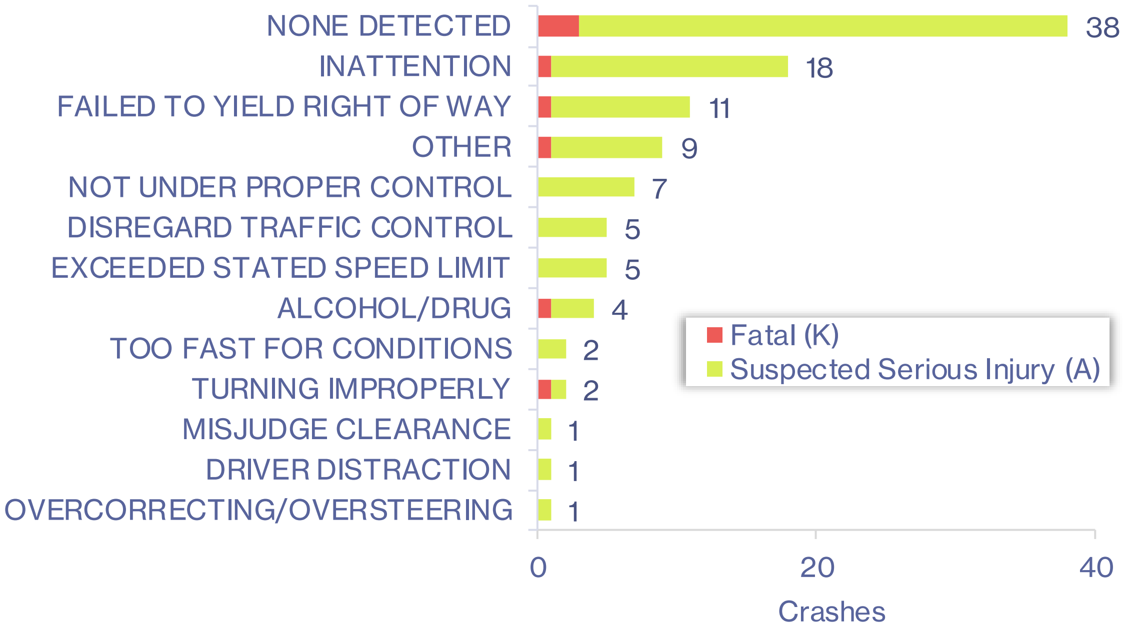


Figure 3-27: Fatal and Suspected Serious Injury Crashes by Human Factor

Environmental and Roadway Conditions

Environmental roadway conditions do not appear to be a significant contributing factor to crash occurrence or severity. Adverse roadway conditions, defined as wet, snow, ice, or less common road conditions, make up a small portion of the overall crashes. Wet roads account for 18% of all crashes and 12% of fatal and suspected serious injury crashes. Ice, snow, slush, standing water, and other conditions combined account for less than 2% of all crashes with no associated severe outcomes. This suggests that most crashes in Jeffersontown occur under typical dry conditions, with no clear pattern indicating that adverse environmental conditions play a substantial role in crash severity.

Roadway Condition	All Crashes			Fatal and Suspected Serious Injury Crashes	
	#	%		#	%
Dry	3,700	81%		44	88%
Wet	947	18%		6	12%
Snow/Slush	35	1%		-	-
Ice	30	1%		-	-
Water (Standing or Moving)	13	<1%		-	-
Other	4	<1%		-	-
Sand-Mud-Dirt-Oil-Gravel	2	<1%		-	-

Table 3-3: 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. Additionally, following the Safe System Approach, the HIN corresponds to the Safe Roads pillar. This pillar focuses on designing roadway environments to mitigate human mistakes and account for injury intolerances, to encourage safe behaviors, and to 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, the outline of the engagement process connection points and tools, an overview of 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 inters ections 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 provid ed 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. The discussion included consideration of the Louisville Metro/Jefferson County High Injury Network and reviewing the intersections on the prioritized list.

Safety Committee

The Jeffersontown Safety Committee, comprised of diverse members from the community, including elected officials, community development and public works staff, police officers, and fire / emergency management services staff. Participants provided valuable feedback and insights into existing safety issues and concerns through two safety committee meetings.

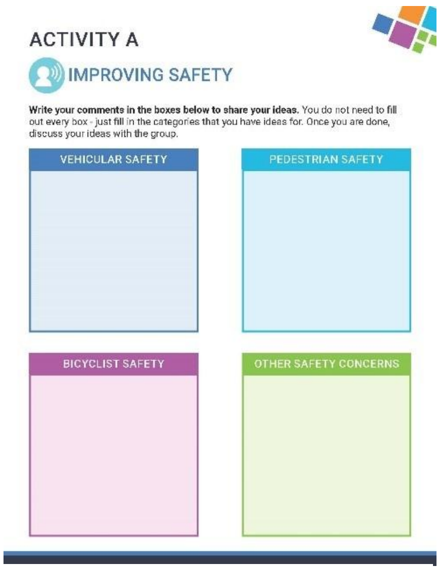


Figure 4-1: Meeting One Brainstorming Exercise

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, lack of sidewalks, and vehicular speed.

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 many of the top ranked HIN corridors. In particular, Taylorsville Road, Hurstbourne Parkway, Stony Brook Drive, and Ruckriegel Parkway were highlighted by several committee members. Bluegrass Parkway (Segment 2), Billtown Road (Segment 9), and Watterson Trial (Segment 13) were noted as not being high local priorities.

Activity B: Potential Corridor Improvements - Most participants noted that all recommendations were appropriate with only minor notes about signage and road markings.

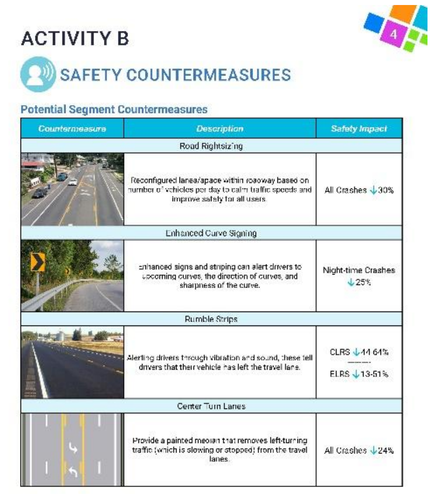


Figure 4-2: Meeting Two Handout: Potential Safety Countermeasures

Activity C: Prioritizing Intersections – The committee agreed with the top signalized and unsignalized intersections with only minor reorganization.

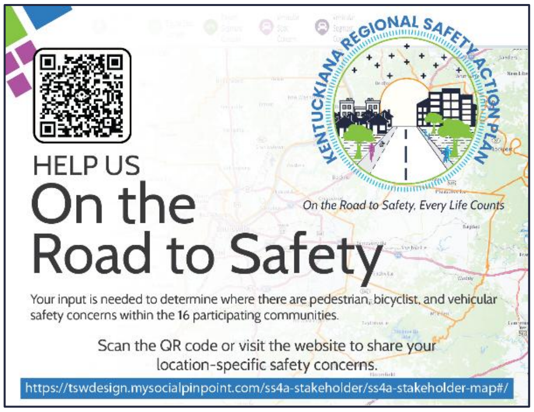
Activity D: Potential Intersection Safety Countermeasures – The committee agreed with the recommended potential countermeasures for both the signalized and unsignalized intersections.

Other discussion focused on the potential for future traffic concerns with new development surrounding the amphitheater.

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 Jeffersontown, 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, with 42 comments located within Jeffersontown. Figure 4-4 provides an example view of the engagement map and a summary of the responses within Jeffersontown.

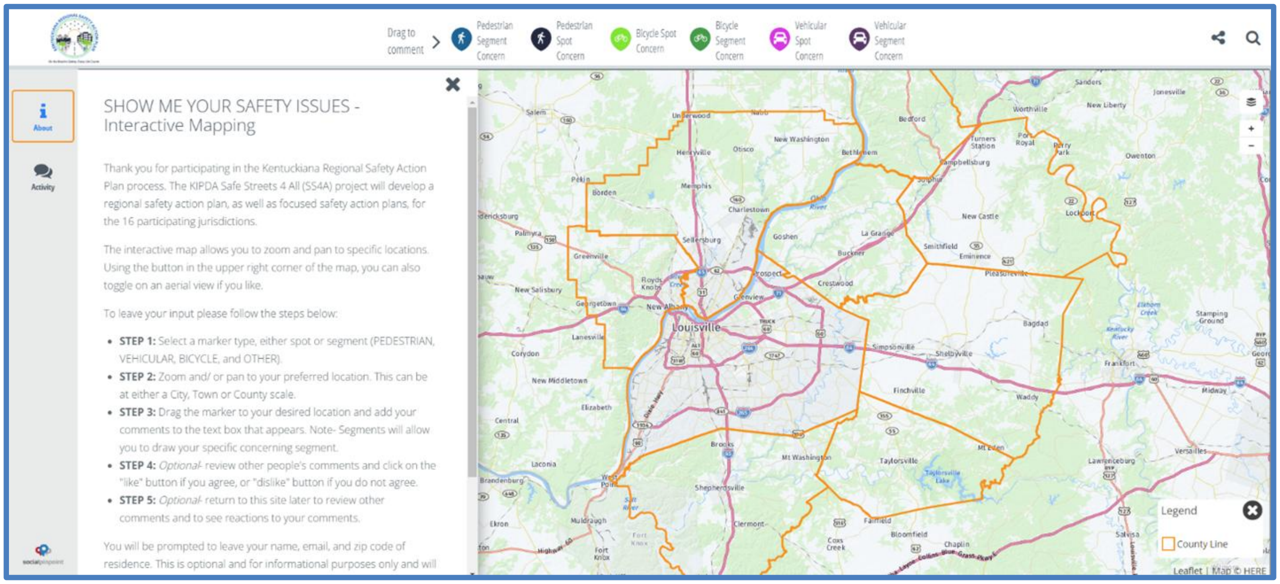


Figure 4-3: Social Pinpoint Online Engagement

Vehicular Safety Concerns

- Signalization
- Narrow roads
- Middle-lane travel
- Speed Limits
- Roadway Width
- Pavement Conditions
- Signage
- Turning lanes

Pedestrian Safety Concerns

- Sidewalk gaps
- Existing sidewalk condition
- Adding crosswalks

Bicycle Safety Concerns

- Separated Protected Bike Lanes
- Protected crossings

Other Safety Concerns

- Street lights
- Implement No-Right on Red

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 Jeffersontown 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 the 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. An example of this is along the State Road 155 corridor and Ruckriegel Parkway.

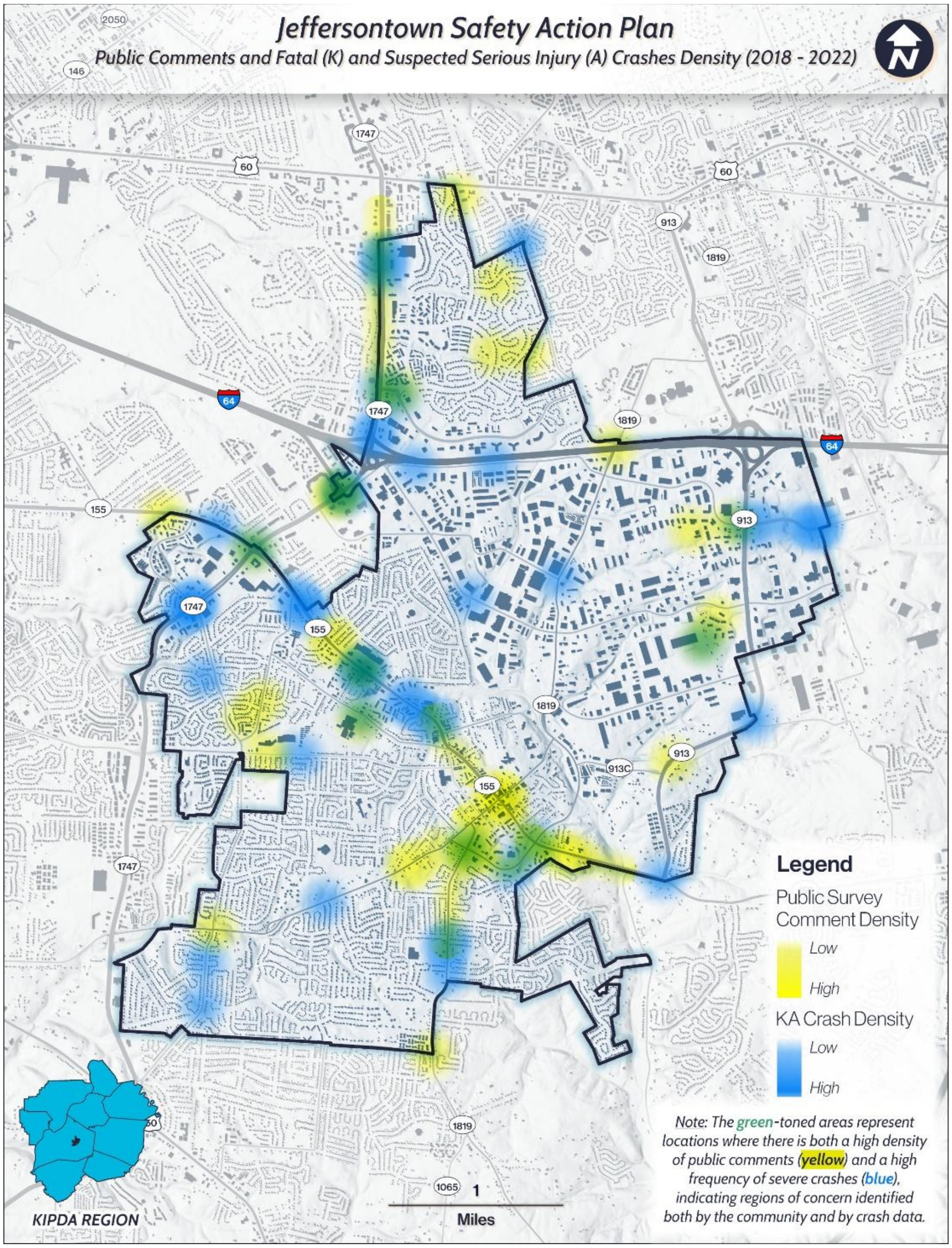


Figure 4-4: Safety Concern Comments and High Severity Crash Density

Survey Two

The project team and committees conducted a second public survey for the Safety Action Plan. Residents within the KIPDA Region, including Jeffersontown, 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, with 41 responses located within Jeffersontown. The respondents prioritized Hurstbourne Pkwy near I-64 and Taylorsville Road (KY 155) from Hurstbourne Pkwy to Ruckriegel. Watterson Trail was also mentioned many times in comments. By far, the top ranked intersection was Hurstbourne and Taylorsville, followed by Hurstbourne at the I-64 WB ramps. The unsignalized intersections were rated as less important than the signalized intersections. The countermeasures with the most support included left turn lanes, center left turn lanes, intersection and highway lighting, and enhanced crosswalk visibility.

Active and Planned Projects

The transportation plans of all relevant stakeholders, including the Kentucky Transportation Cabinet Enacted Highway Plan (2024-2030) and KIPDA Transportation Improvement Program (TIP), as well as ongoing Jeffersontown projects were coordinated to identify and document project overlaps and stages of project development. This collaborative effort is summarized in the following table and map highlighting the current projects with committed funds that are actively moving forward.

Map No.	KYTC Item (CHAF ID)	Route	Begin	End	Status	Description
1	5-373.20	KY 1819	10.783	11.755	Planned	Reconstruct and widen Watterson Trail (KY 1819) from Plantside Dr to Bluegrass Pkwy
2	5-555.00	KY 1747	10.5	11.995	Planned	Reduce Congestion and improve safety along Hurstbourne Pkwy (KY 1747) from Stony Brook Dr to I-64
3	5-8203.00	KY 1819	6.9	8.1	Committed	Reconstruct Billtown Road from north of Colonnades Place to south of Easum Road
4	5-80258.00	KY 1819	11.76	12.81	Planned	Reduce congestion, improve safety, and enhance mobility on KY 1819 (Watterson Trail) from Bluegrass Pkwy to Blankenbacker Pkwy (KY 913)
5	5-80340.00	KY 1819	10.43	10.79	Planned	Enhance mobility and provide safe access to community facilities along Watterson Trail (KY 1819) to Plantside Dr (MP 10.79)

Table 4-1: Current Highway Plan Projects

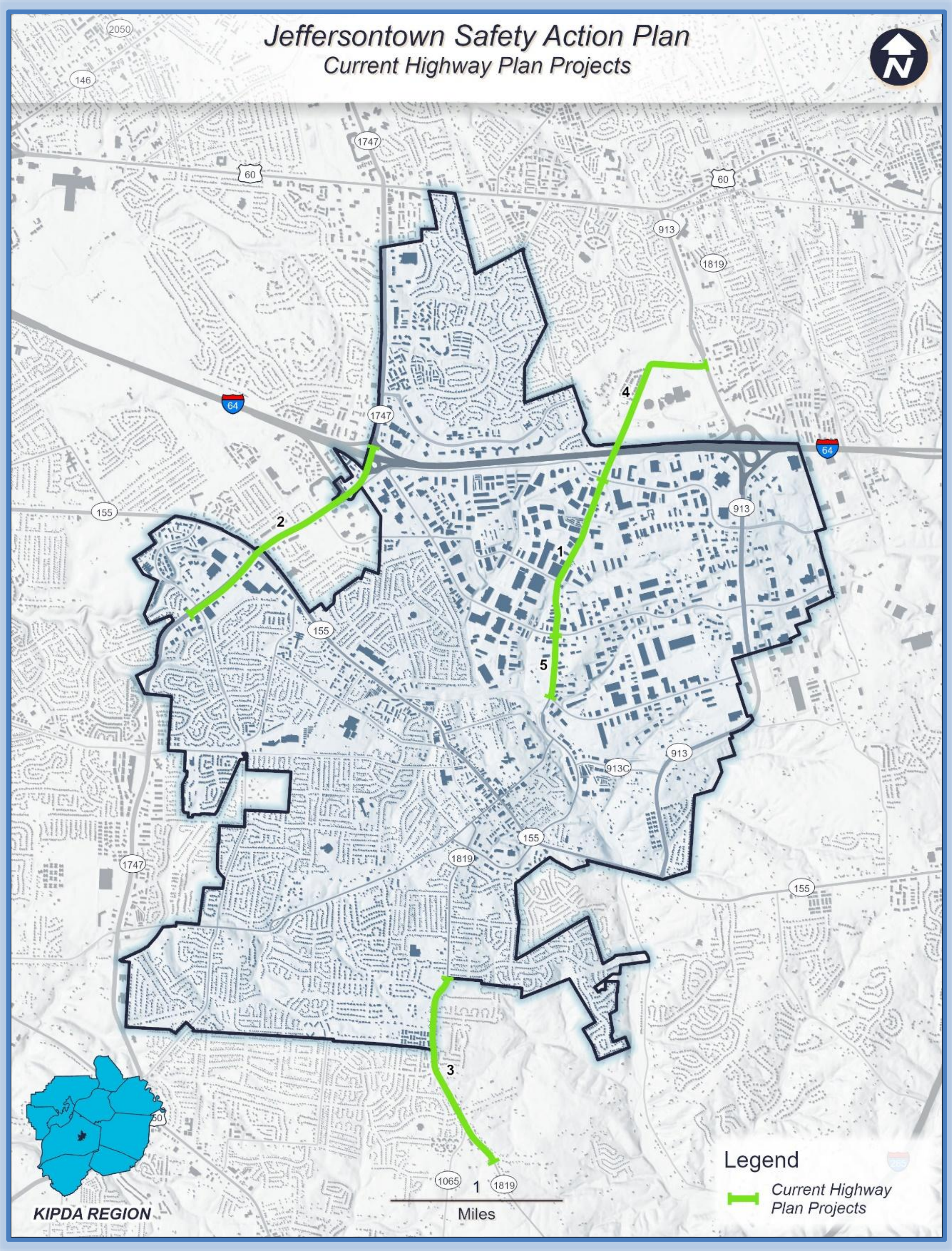


Figure 4-5: Highway Plan Map

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 city.

Areas of Persistent Poverty

The Safe Streets and Roads for All 2025 Notice of Funding Opportunity defines Areas of Persistent Poverty based on the Infrastructure Investment and Jobs Act (IIJA, 49 U.S.C. 6702(a)(1)). It also states that this applies as 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.*

Jeffersontown is not located within a designated Area of Persistent Poverty.

Community Demographic Summary

Four populations were analyzed using the US Census American Community Survey (ACS) data as presented in the next four maps. The 2022 ACS five-year table was used.

Elderly Population

Jeffersontown has approximately 18.0% of its population who are 65 or older. To aid in determining certain roadway countermeasures, elderly population block groups were analyzed. Pedestrian refuge islands, Leading Pedestrian Intervals (LPIs), and raised crosswalks are some of the many countermeasures that benefit the elderly population.

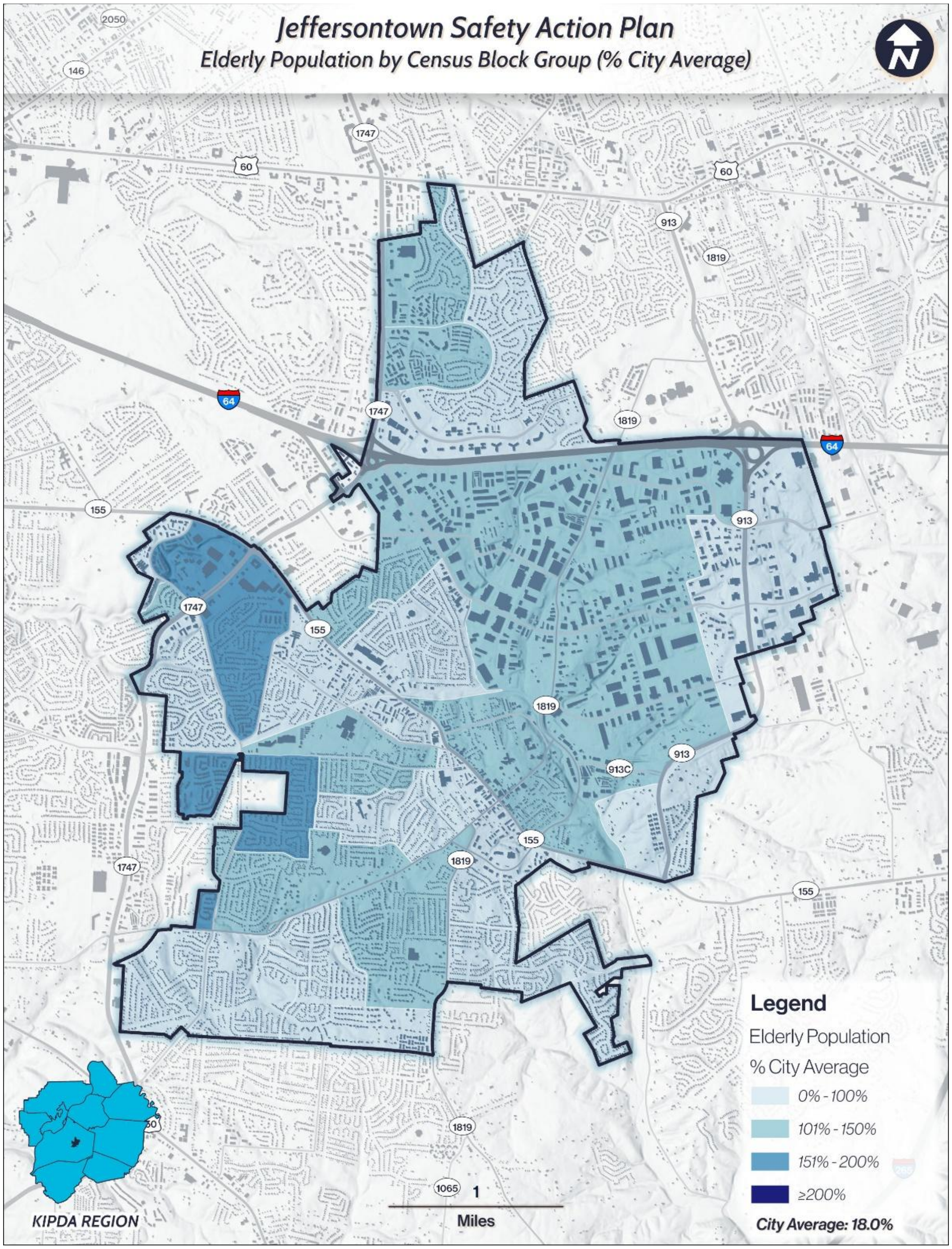


Figure 4-6: Elderly Population by Census Block Group Map

Population Impacted by Disability

Jeffersontown has approximately 21.4% of all households have one or more occupants with a disability. Similar to elderly populations, there are pedestrian safety countermeasures available that can support disabled populations.

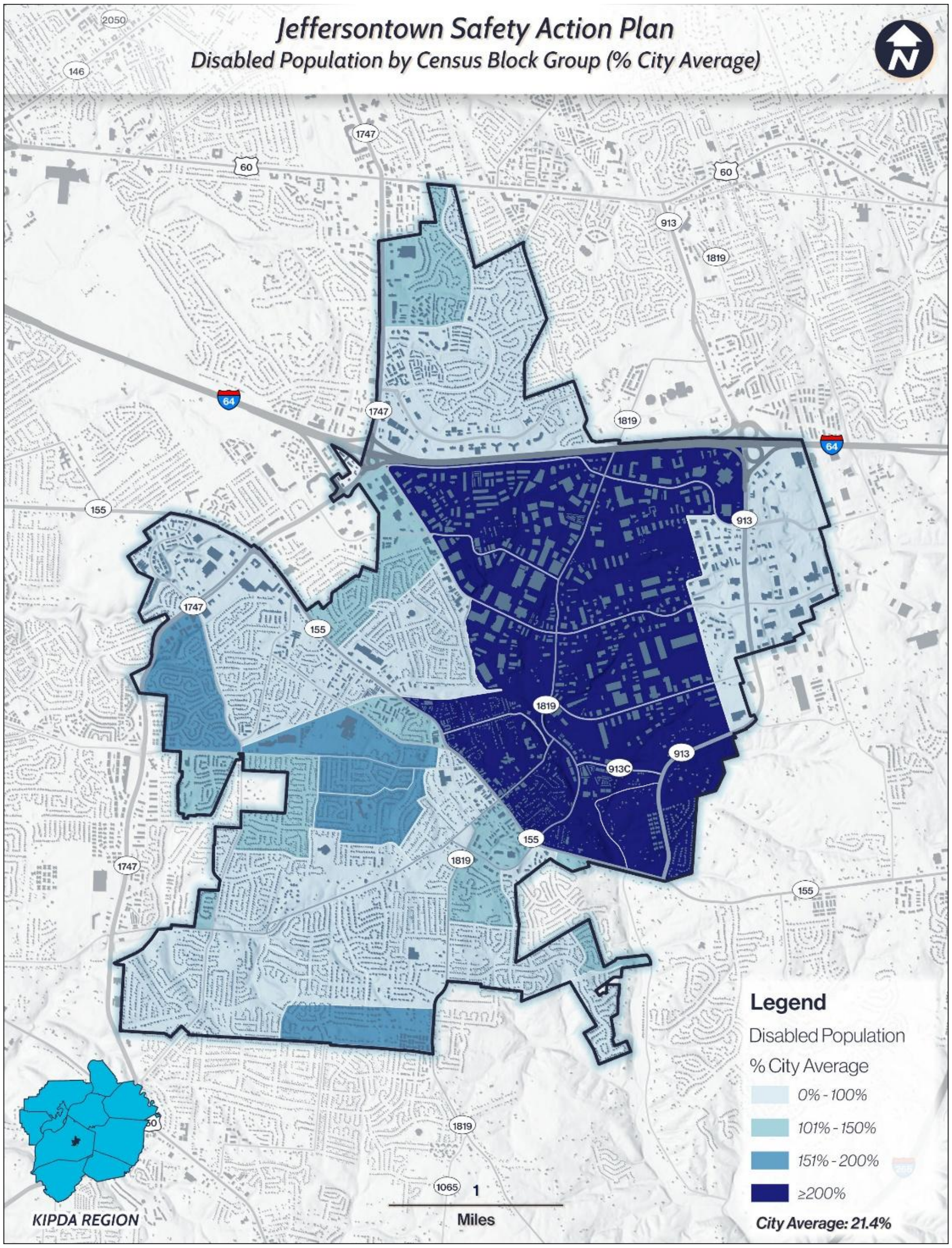


Figure 4-7: Disabled Population by Census Block Group Map

Population Experiencing Poverty

Jeffersontown has approximately 6.2% of all individuals who are below the poverty line. Areas with high poverty rates are often areas of underinvestment with regard to infrastructure and safety.

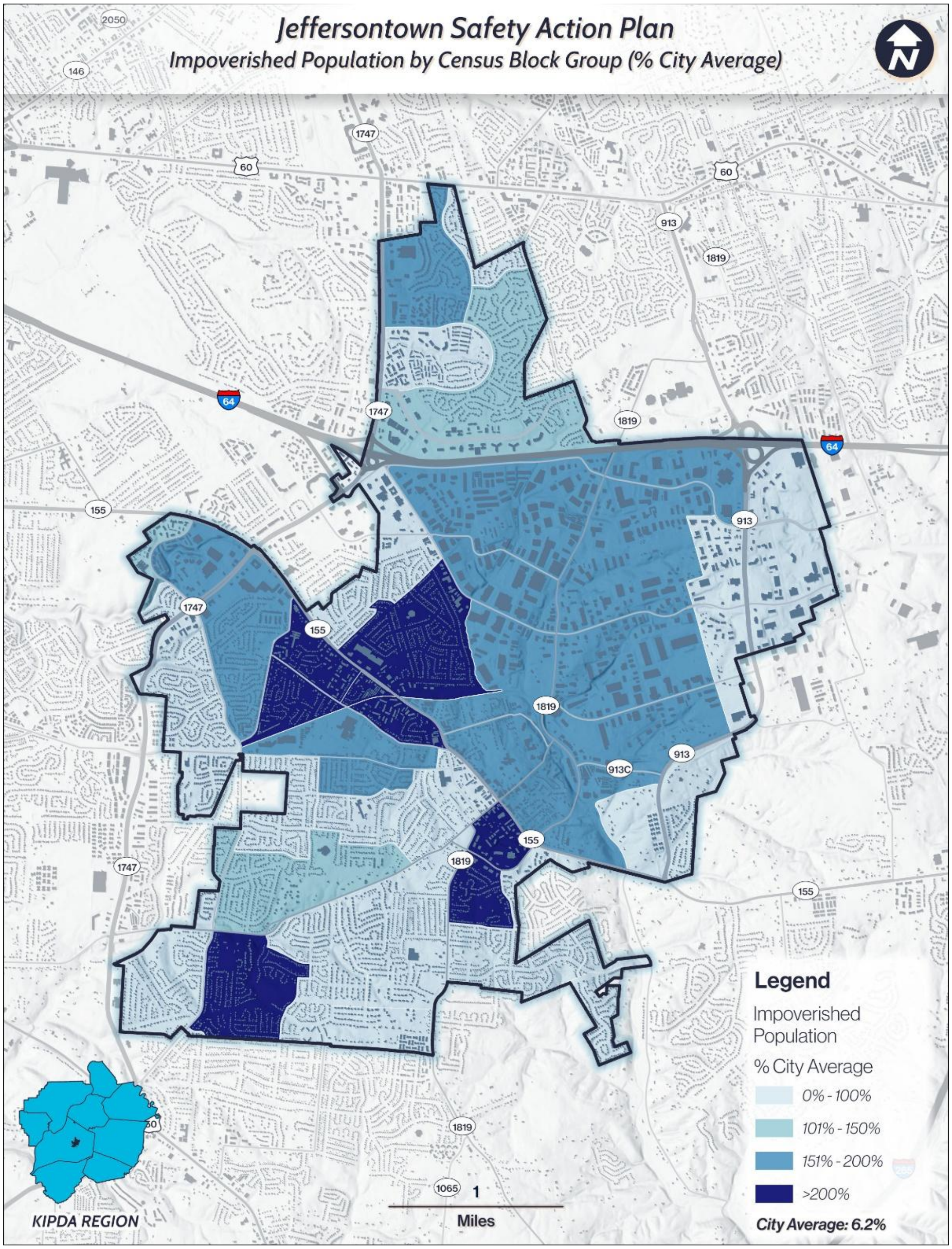


Figure 4-8: Impoverished Population by Census Block Group Map

Minority Population

The minority population of Jeffersontown encompasses all individuals who identify as non-white. Jeffersontown has approximately 22.3% of its population that meets this definition.

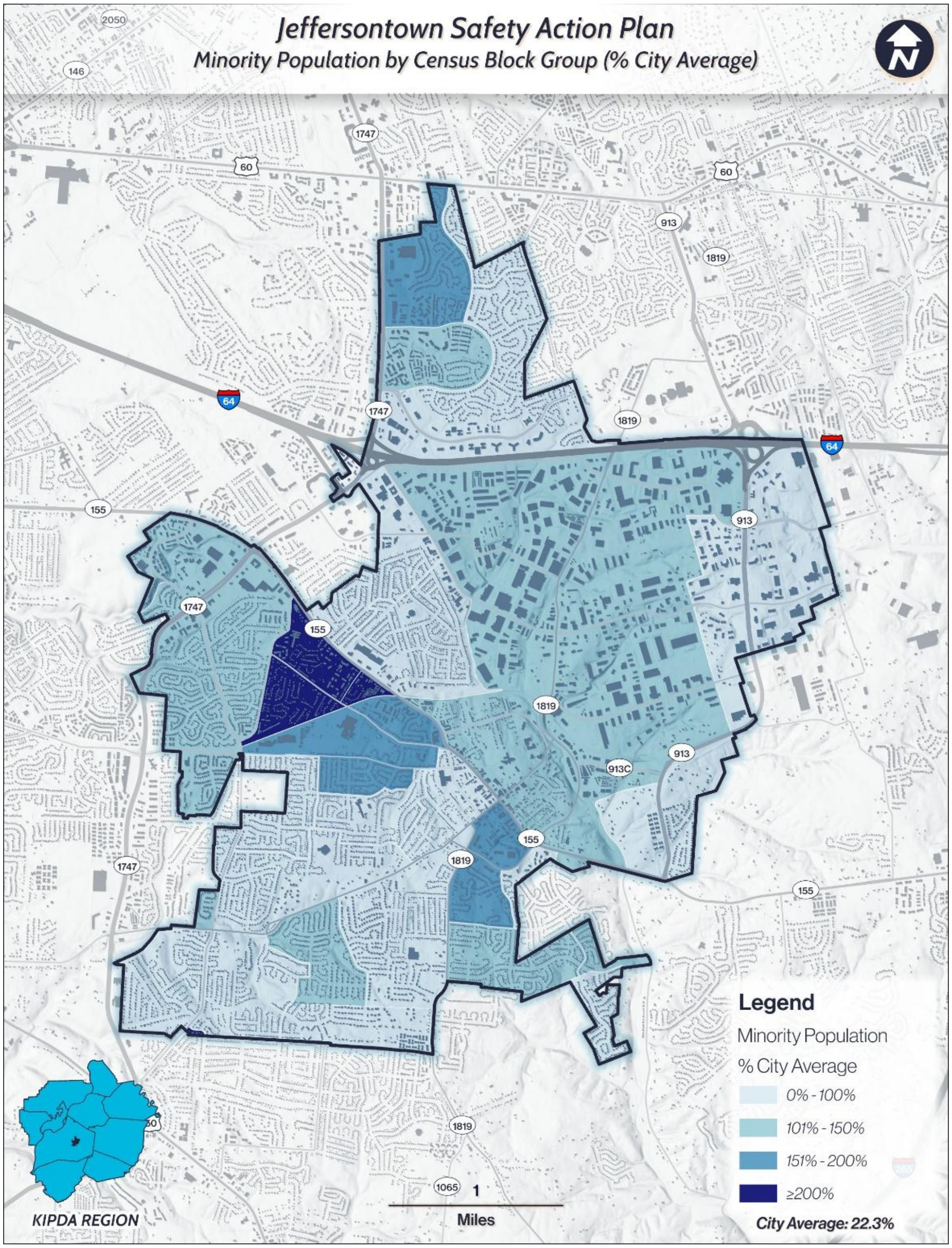


Figure 4-9: Minority Population by Census Block Group Map

5. Policy and Process Changes

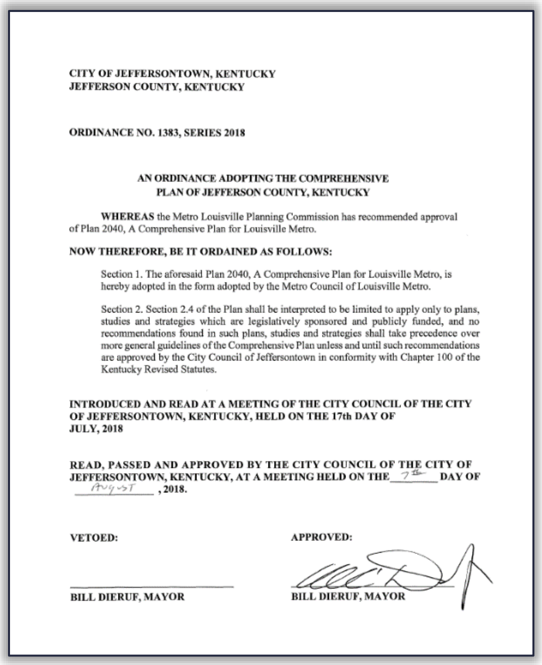
A comprehensive review of the City of Jeffersontown's existing policies, plans, guidelines, and standards has identified key opportunities to enhance transportation safety. The city aims to elevate safety as a priority while also creating a more inclusive and accessible transportation network for all users.

The City of Jeffersontown does not have its own comprehensive plan. The City passed an ordinance in August 2018 to adopt the Jefferson County Comprehensive Plan 2040.

City of Jeffersontown Comprehensive Plan

Link: Ordinance Adopting the Comprehensive Plan of Jefferson County, KY

The City of Jeffersontown passed an ordinance in August of 2018 to adopt Plan 2040, Jefferson County's 2040 Comprehensive Plan. Below is a description of Jefferson County's 2040 Comprehensive Plan.



CITY OF JEFFERSONTOWN, KENTUCKY
JEFFERSON COUNTY, KENTUCKY

ORDINANCE NO. 1383, SERIES 2018

AN ORDINANCE ADOPTING THE COMPREHENSIVE PLAN OF JEFFERSON COUNTY, KENTUCKY

WHEREAS the Metro Louisville Planning Commission has recommended approval of Plan 2040, A Comprehensive Plan for Louisville Metro.

NOW THEREFORE, BE IT ORDAINED AS FOLLOWS:

Section 1. The aforesaid Plan 2040, A Comprehensive Plan for Louisville Metro, is hereby adopted in the form adopted by the Metro Council of Louisville Metro.

Section 2. Section 2.4 of the Plan shall be interpreted to be limited to apply only to plans, studies and strategies which are legislatively sponsored and publicly funded, and no recommendations found in such plans, studies and strategies shall take precedence over more general guidelines of the Comprehensive Plan unless and until such recommendations are approved by the City Council of Jeffersontown in conformity with Chapter 100 of the Kentucky Revised Statutes.

INTRODUCED AND READ AT A MEETING OF THE CITY COUNCIL OF THE CITY OF JEFFERSONTOWN, KENTUCKY, HELD ON THE 17th DAY OF JULY, 2018

READ, PASSED AND APPROVED BY THE CITY COUNCIL OF THE CITY OF JEFFERSONTOWN, KENTUCKY, AT A MEETING HELD ON THE 7th DAY OF August, 2018.

VETOED: ______ BILL DIERUF, MAYOR

APPROVED: BILL DIERUF, MAYOR

The Mobility plan element builds upon the multi-modal policies introduced in the Cornerstone 2020 Comprehensive Plan to effectively connect the community through a safe and accessible transportation system. Other mobility issues addressed in this plan element include promoting nodal density, encouraging transit-oriented development, and reinforcing strategies that encourage "complete streets."

The Mobility plan element contains three overarching goals, supported by a series of objectives and action-oriented policies to achieve the community's vision for a safer, healthier, more livable city.

Goal 1: Implement an accessible, system of alternative transportation modes.

Goal 2: Plan, build, and maintain a safe, accessible and efficient transportation system.

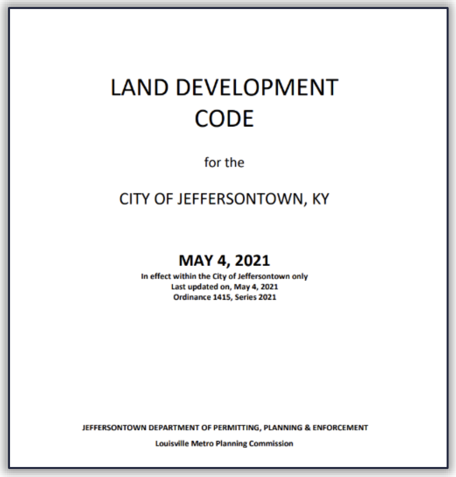
Goal 3: Encourage land use and transportation patterns that connect Louisville Metro and support future growth

There are no recommended changes to this document.

Jeffersontown Land Development Code

Link: Subdivision Ordinance

The purpose of these regulations is to promote the welfare of Jeffersontown residents and visitors by providing for the orderly development of stable, healthful, safe, and desirable residential, commercial, industrial, and public areas throughout the City. The regulations include road design and construction standards and guidelines for pedestrian infrastructure.



LAND DEVELOPMENT CODE

for the

CITY OF JEFFERSONTOWN, KY

MAY 4, 2021

In effect within the City of Jeffersontown only

Last updated on, May 4, 2021

Ordinance 1415, Series 2021

JEFFERSONTOWN DEPARTMENT OF PERMITTING, PLANNING & ENFORCEMENT

Louisville Metro Planning Commission

Future Considerations

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.

Active Transportation Infrastructure: Consider updating active transportation infrastructure requirements for new developments so that safe access is provided for all vulnerable road users. Sidewalks should meet accessibility standards and provide safe crossings at all intersections. Consider incorporating dedicated pathways or multi-use trails in all new developments and requiring connectivity to existing pedestrian and active transportation 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, implementation of best practices, 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 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), that states and municipalities can adjust based on regional differences. The table below 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. Table 6-2 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, 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

** KA Cost = (618*$10,175,024+3,015*$594,471) / (618+3,015) = $2,224,193*
*** KA Value = $2,224,193 / $12,220 = 182*

Table 6-3: KIPA MEPDO Crash Value

Reactive Approach

Methodology

The reactive approach for analyzing crashes includes joining the crash data with roadway data. KYTC provided geographic information system (GIS) files of roadway and traffic data, known as the Highway Information System (HIS) database. HIS data includes roadway characteristics and traffic data for state-owned roadways. Analysts combined the crash data with 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 Signalized Intersections

Jeffersontown experienced 40 fatal and suspected serious injury crashes at intersections, representing 80% of all fatal and suspected serious injury crashes. These crashes occurred at both signalized and unsignalized intersections. Both types of intersections contain multiple conflict points and offer significant opportunities to enhance safety for all users. MEPDO was calculated for each intersection and ranked.

Table 6-4 lists the top 10 signalized intersections by MEPDO. These are the top 10 signalized intersections. Figure 6-1 and Figure 6-2 show the locations of reactive intersection approaches and intersections prioritized by MEPDO.

Ranking	Intersection	K	A	B	C	O	KA	TOTAL	MEPDO
1	S Hurstbourne Pkwy (KY-1747) & Stony Brook Dr	1	2	4	7	52	3	66	724
2	S Hurstbourne Pkwy (KY-1747) & Williamsburg Plz	1	1	7	14	53	2	76	655
3	S Hurstbourne Pkwy (KY-1747) & Taylorsville Rd (KY-155)	0	1	4	19	223	1	247	646
4	Taylorsville Rd (KY-155) & Patti Ln	0	3	2	2	36	3	43	631
5	S Hurstbourne Pkwy (KY-1747) & I-64 WB Ramp	0	1	7	8	257	1	273	620
6	S Hurstbourne Pkwy (KY-1747) & Bluegrass Pkwy Access Rd (KY-6159)	0	2	7	3	71	2	83	568
7	S Hurstbourne Pkwy (KY-1747) & Linn Station Rd	0	1	3	7	95	1	106	389
8	Blankenbaker Pkwy (KY-913) & Bluegrass Pkwy	0	1	1	5	109	1	116	354
9	Billtown Rd (KY-1819) & Ruckriegel Pkwy	0	1	3	6	59	1	69	343
10	Taylorsville Rd (KY-155) & Six Mile Ln	0	1	2	6	49	1	58	318

Table 6-4: Prioritized Signalized Intersections by MEPDO

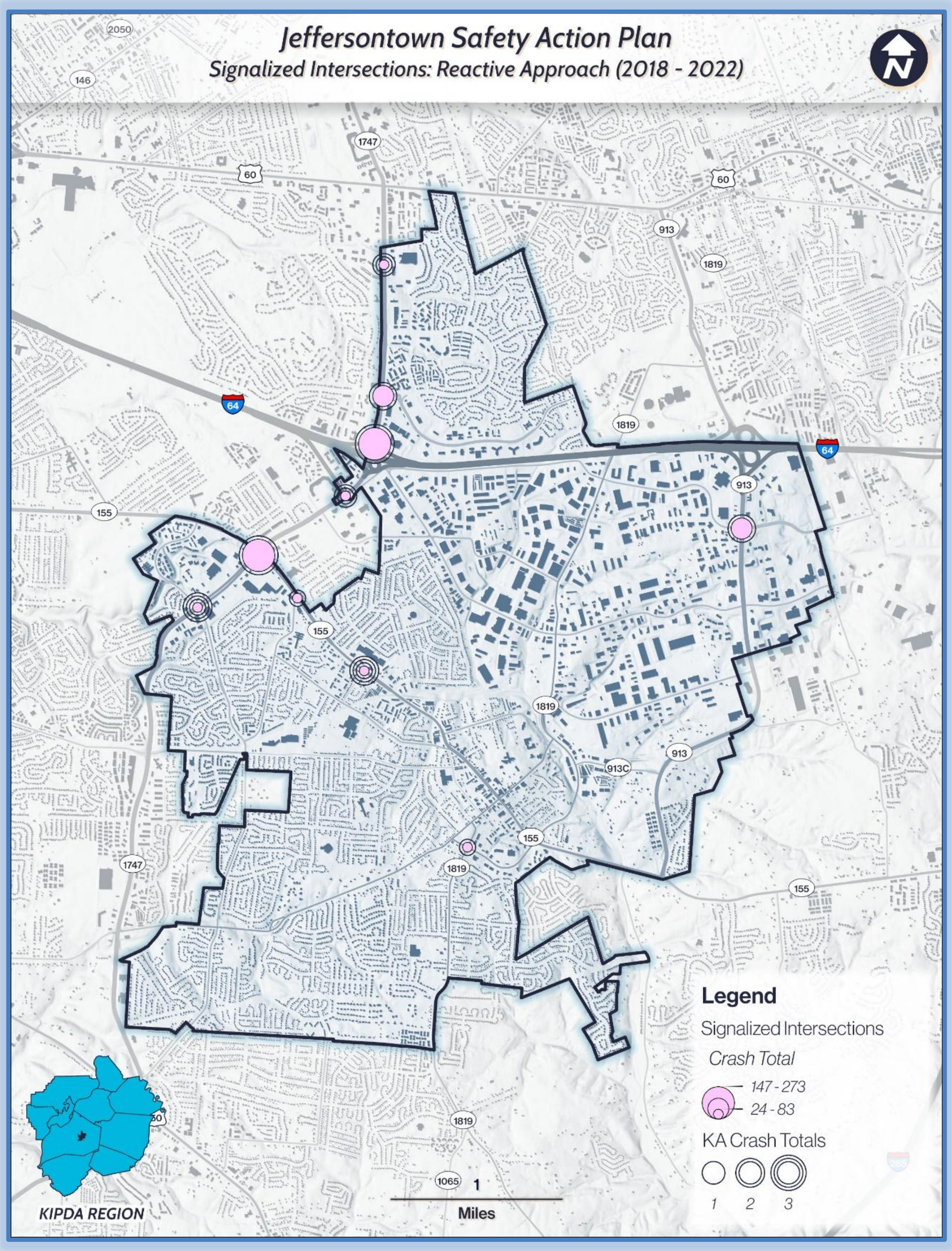


Figure 6-1: Intersections: Reactive Approach Map

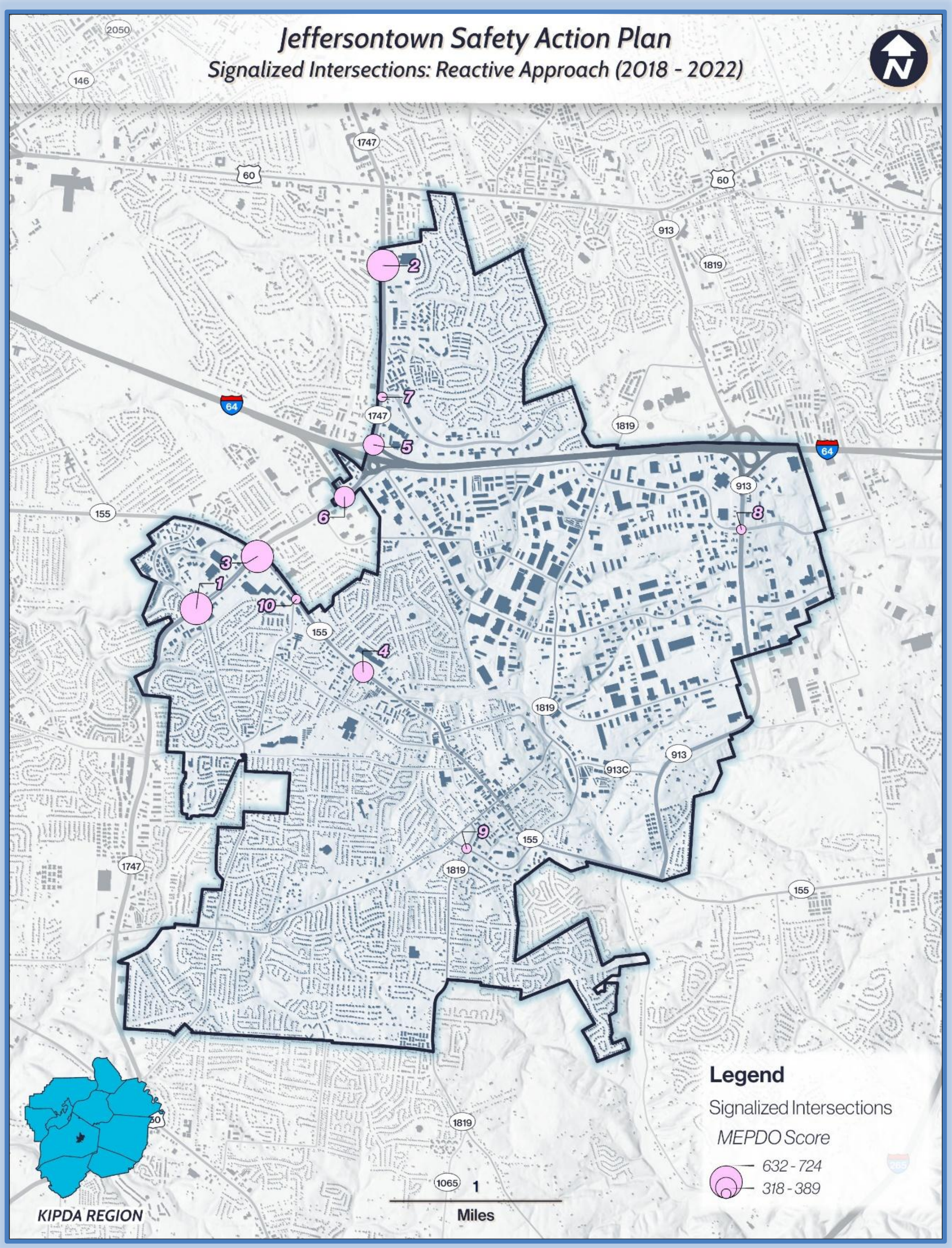


Figure 6-2: Intersections Prioritized by EPDO Map

Prioritized Unsignalized Intersections

Jeffersontown experienced 21 fatal and suspected serious injury crashes at unsignalized intersections, representing 42% of all fatal and suspected serious injury crashes. MEPDO was calculated for each intersection and ranked.

Table 6-5 lists the top 10 unsignalized intersections by MEPDO. These top 10 intersections account for 12 of the 21 fatal and suspected serious injury crashes that occurred at unsignalized intersections. Figure 6-3 and Figure 6-4 show the locations of unsignalized reactive intersection approaches and intersections prioritized by MEPDO.

Ranking	Intersection	K	A	B	C	O	KA	TOTAL	MEPDO
1	Taylorsville Rd (KY-155) & Tree Ln	0	2	2	3	31	2	38	453
2	Bluegrass Pkwy & Tucker Station Rd	0	2	1	4	18	2	25	435
3	Bluegrass Pkwy & Alliant Ave	0	1	1	5	33	1	40	278
4	Blairwood Rd & N Hurstbourne Pkwy (KY-1747)	0	1	0	1	68	1	70	260
5	Taylorsville Rd (KY-155) & Snively Ave	0	1	2	4	8	1	15	258
6	S Hurstbourne Pkwy (KY-1747) & Wessex Pl	0	1	2	2	22	1	27	253
7	S Hurstbourne Pkwy (KY-1747) & Biggin Hill Ln	0	1	0	1	16	1	18	208
8	Blankenbaker Pkwy (KY-913) & Rehl Rd	0	1	1	0	10	1	12	207
9	Taylorsville Rd (KY-155) & Cherian Dr	1	0	0	1	9	1	11	201
10	Billtown Rd (KY-1819) & St. Rene Rd	0	1	0	1	6	1	8	198

Table 6-5: Prioritized Unsignalized Intersections by MEPDO

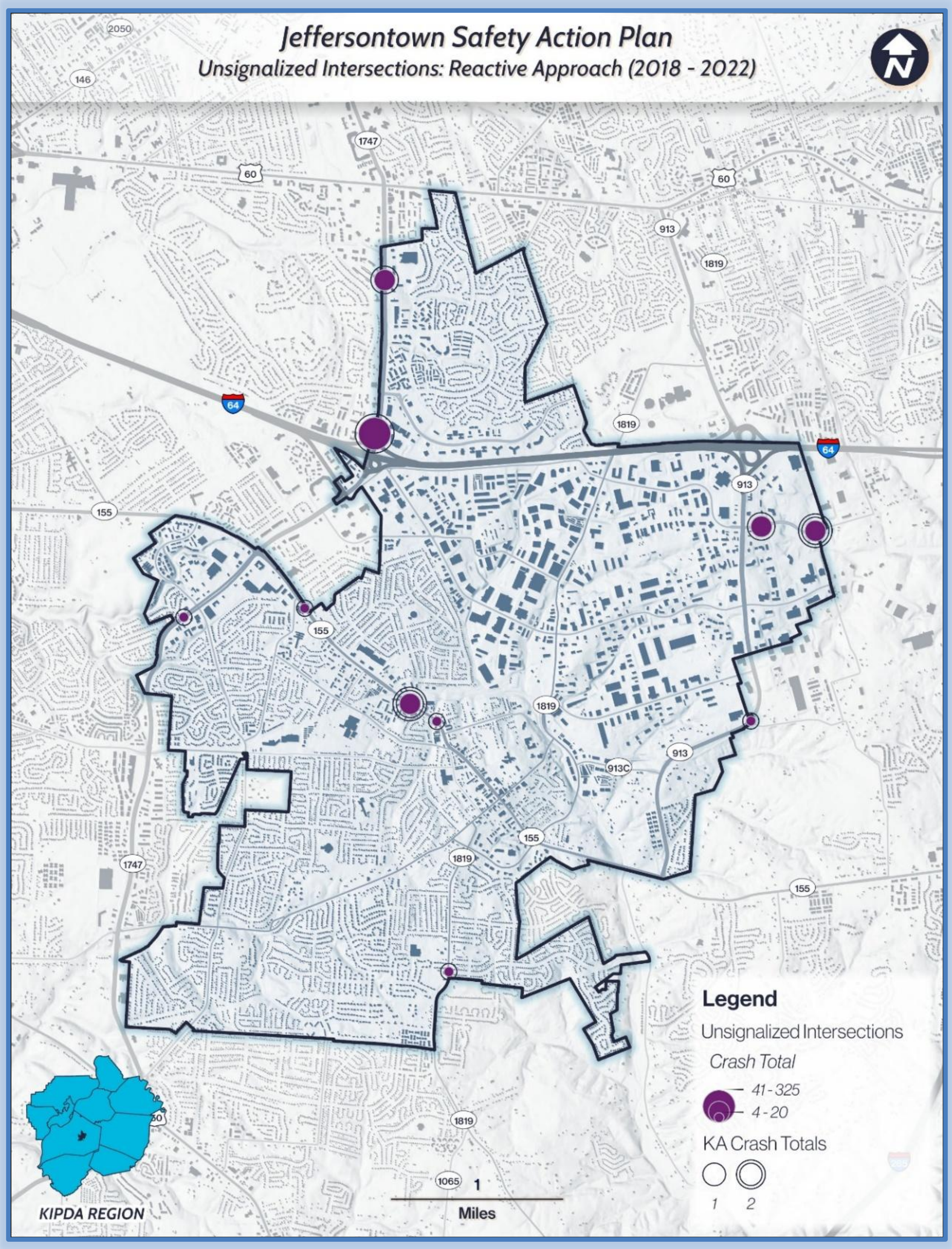


Figure 6-3: Unsignalized Intersections: Reactive Approach Map

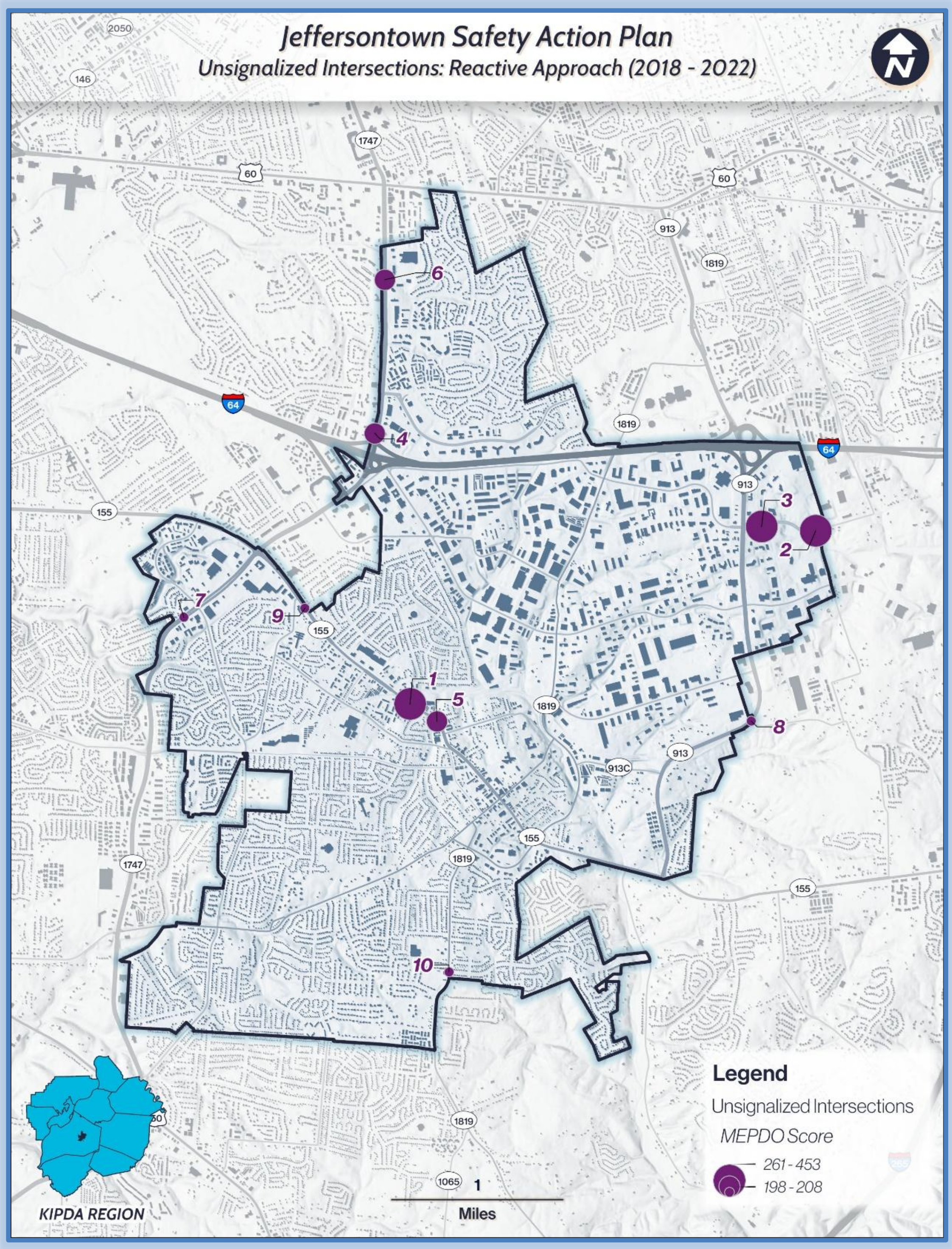


Figure 6-4: Unsignalized Intersections Prioritized by MEPDO Map

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. Jeffersontown's HIN was developed using detailed crash data analysis and GIS mapping to pinpoint corridors with the highest concentration of severe crashes. Table 6-6 lists the HIN corridors. Figure 6-5, Figure 6-6, and Figure 6-7 illustrate Jeffersontown'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	Hurstbourne Pkwy (KY-1747)	I-64 EB Off-Ramp	Linn Station Rd	0.89	2,302	2,592
2	Bluegrass Pkwy	Blankenbaker Pkwy (KY-913)	Tucker Station Rd	0.46	1,075	2,322
3	Hurstbourne Pkwy (KY-1747)	Fenwick Creek Dr	Taylorsville Rd	1.20	1,930	1,611
4	Taylorsville Rd (KY-155)	Merioneth Dr	Cardwell Way	1.75	2,751	1,568
5	Taylorsville Rd (KY-155)	Watterson Trl	Merioneth Dr	0.83	1,289	1,560
6	Hurstbourne Pkwy (KY-1747)	Linn Station Rd	Whittington Pkwy	0.76	1,170	1,534
7	Taylorsville Rd (KY-155)	Ruckriegel Pkwy (KY-1819)	Watterson Trl	0.41	610	1,506
8	Blankenbaker Pkwy (KY-913)	Plantside Drive	I-64 Eastbound Ramps	0.92	913	995
9	Billtown Road (KY-1819)	Fairground Rd	Ruckriegel Pkwy	1.22	918	755
10	Stony Brook Dr	Roman Dr	Watterson Trl	0.59	418	706
11	Ruckriegel Pkwy (KY-1819)	Billtown Rd	Watterson Trl	1.27	788	619
12	Taylorsville Rd (KY-155)	Blankenbaker (KY-913)	Ruckriegel Pkwy (KY-1819)	0.78	401	516
13	Watterson Trl (KY-1819)	Plantside Dr	Moser Rd	1.18	496	420
14	Bluegrass Pkwy	Embassy Square Blvd	Watterson Trl (KY-1819)	1.49	536	360
15	Watterson Trl	Stillmeadow Dr	Rivanna Dr	1.09	320	293
16	Galene Dr	Stony Brook Dr	College Dr	1.22	340	278
17	Plantside Dr	Bluegrass Pkwy	Watterson Trl (KY-1819)	1.45	402	276
18	Linn Station Rd	Timberwood Circle	Moser Rd	1.32	351	267

Table 6-6: Prioritized Corridors - High Injury Network

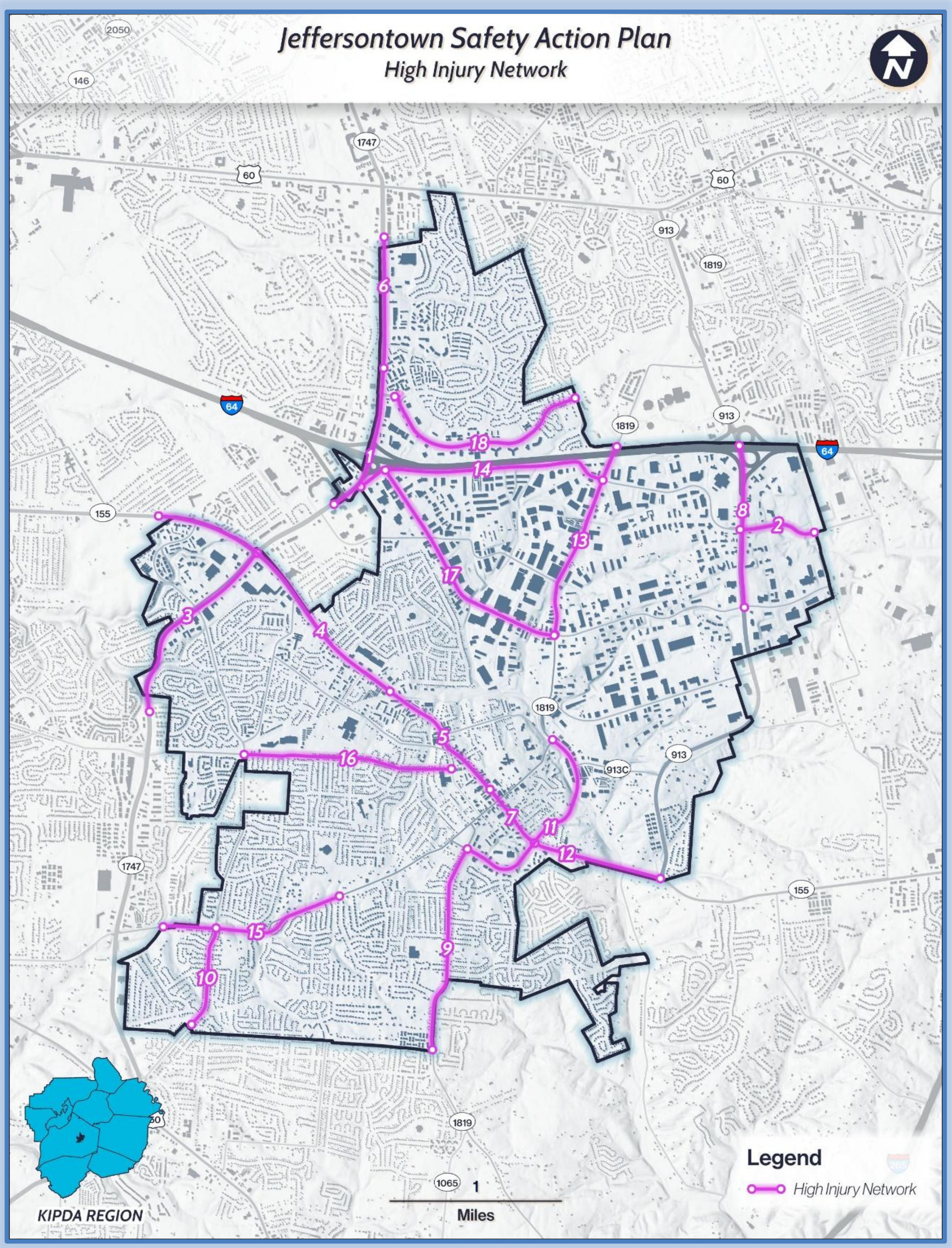


Figure 6-5: High Injury Network

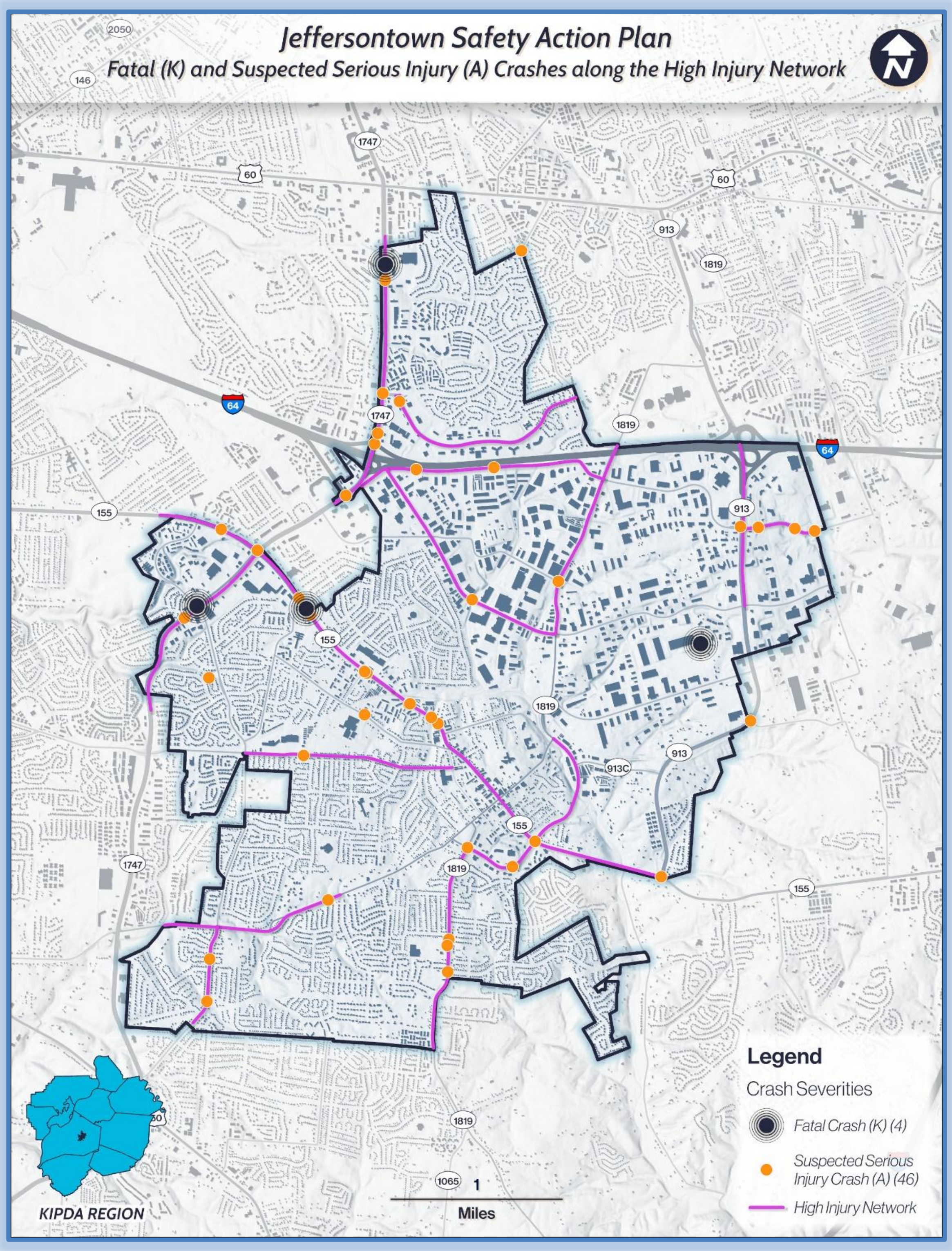


Figure 6-6: High Injury Network and Fatal and Suspected Serious Injury Crashes

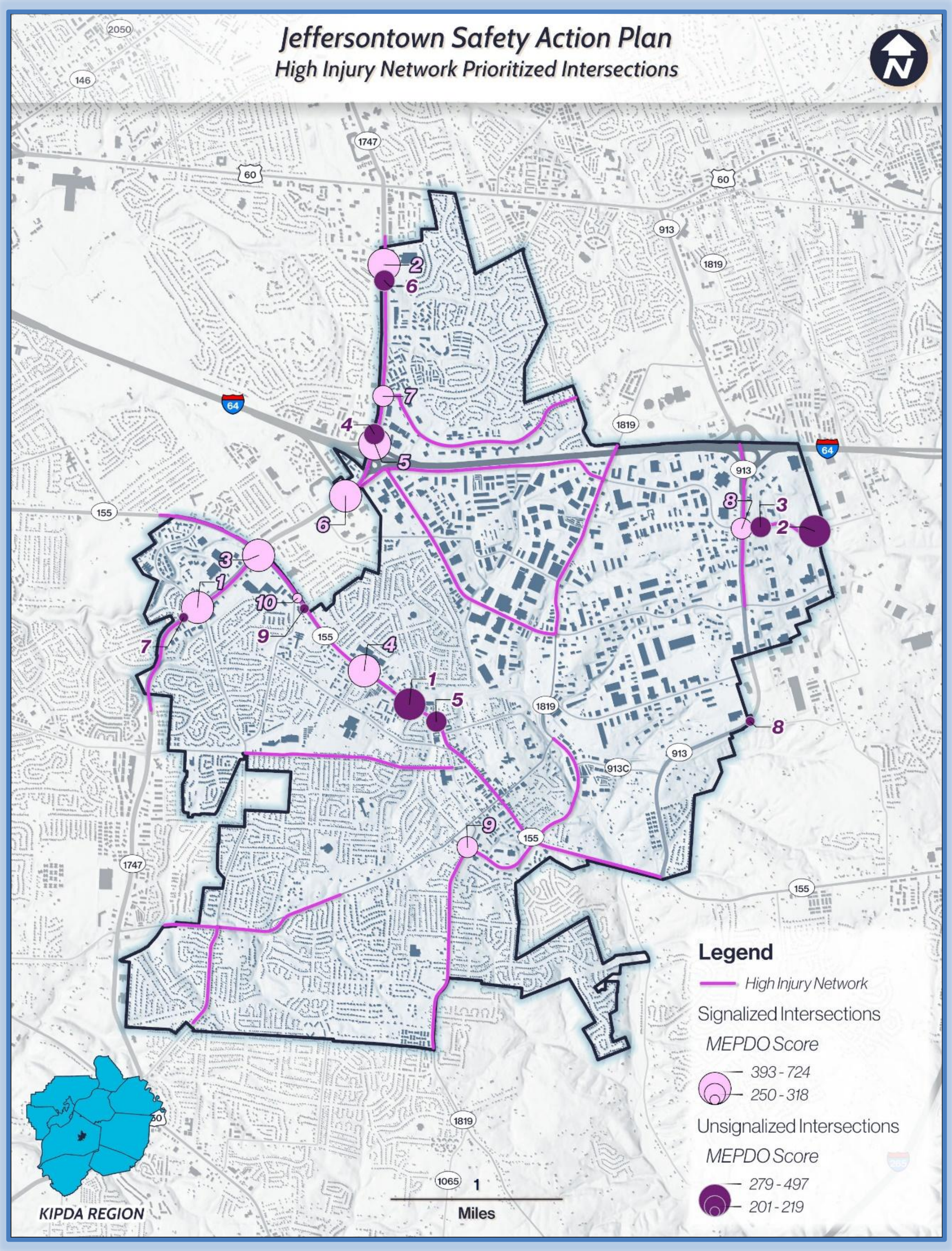


Figure 6-7: High Injury Network and Prioritized Intersections

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 Safety Committee and the public, and are guided by 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.

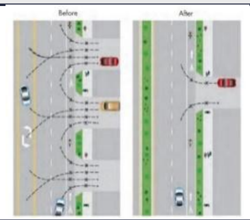
Additional information on potential safety countermeasures can be found using these links:

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
Enhanced Delineation for Horizontal Curves			
	High visibility markings and delineators around curves provide drivers with better information about curves.	Severe crashes ↓15-18%	FHWA
Access Management (segment treatments)			
	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
Roadway Reconfiguration (Right Sizing or Road Diet)			
	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
Dynamic Speed Feedback Signs			
	Provide positive and negative feedback to drivers regarding their speed.	All Crashes ↓5%	FHWA (pg 5) FHWA Clearing house

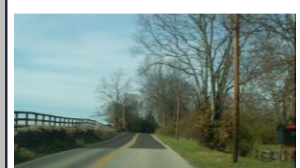
Countermeasure	Description	Safety Impact	Links
Roadside Design Improvements at Curves			
	Includes treatments that improve horizontal curves, giving drivers the opportunity to recover safely or reducing crash severity.	Single Vehicle or All Crashes ↓8-44%	FHWA
Medians and Pedestrian Refuge Islands			
	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
Shoulder Treatment – Safety Edge			
	Shoulder edge upgrades to improve recoverability for roadway departures.	Severe ↓11% Run-Off-Road ↓21% Head-On ↓19%	FHWA
Pavement Friction Management			
	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 6-7: Example Segment Countermeasures

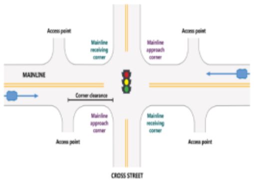
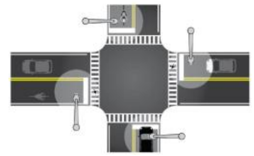
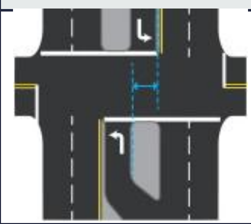
Countermeasure	Description	Safety Impact	Links	Countermeasure	Description	Safety Impact	Links
Example Intersection Countermeasures							
Access Management (intersection treatments)				**Intersection Lighting**			
	This refers to the design and control of access points including intersections which can 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 6-8: Example Intersection Countermeasures

Potential Intersection Strategies

Table 6-9 and Table 6-10 list the prioritized signalized and unsignalized intersections, respectively, based on their MEPDO values. Each intersection was evaluated, and relevant safety countermeasures were identified as potential improvements.

Intersections – Reactive Approach															
Ranking	Intersection	Potential Countermeasures													
		Alt. Intersection (RCUT & Other)	Cycle Length and Clearance Intervals	Roundabout	Reflective Backplates	Crosswalk Visibility Enhancement	Enhanced Markings / Striping	Enhanced Signing	Lighting	Offset Left Turn Lanes	Access Management / tighten intersection	SPUI	Re-Build Signal	Speed Management	Right In / Right Out
Signalized															
1	S Hurstbourne Pkwy (KY-1747) & Stony Brook Dr	X	X		X	X	X	X						X	
2	S Hurstbourne Pkwy (KY-1747) & Williamsburg Plz	X	X		X		X	X		X					
3	S Hurstbourne Pkwy (KY-1747) & Taylorsville Rd (KY-155)		X			X	X	X	X			X			
4	Taylorsville Rd (KY-155) & Patti Ln		X		X		X	X			X		X		
5	S Hurstbourne Pkwy (KY-1747) & I-64 WB Ramp		X				X	X							
6	S Hurstbourne Pkwy (KY-1747) & Bluegrass Pkwy Access Rd (KY-6159)		X		X		X	X		X					
7	S Hurstbourne Pkwy (KY-1747) & Linn Station Rd		X		X		X	X		X					
8	Blankenbaker Pkwy (KY-913) & Bluegrass Pkwy	X	X		X		X	X		X					
9	Billtown Rd (KY-1819) & Ruckriegel Pkwy		X	X	X		X	X							
10	Taylorsville Rd (KY-155) & Six Mile Ln		X	X	X		X	X							

Table 6-9: Potential Signalized Intersection Strategies

Intersections – Reactive Approach															
Ranking	Intersection	Potential Countermeasures													
		Alt. Intersection (RCUT & Other)	Cycle Length and Clearance Intervals	Roundabout	Reflective Backplates	Crosswalk Visibility Enhancement	Enhanced Markings / Striping	Enhanced Signing	Lighting	Offset Left Turn Lanes	Access Management / tighten intersection	SPUI	Re-Build Signal	Speed Management	Right In / Right Out
Unsignalized															
1	Taylorsville Rd (KY-155) & Tree Ln						X	X	X		X			X	X
2	Bluegrass Pkwy & Tucker Station Rd			X			X	X	X		X				
3	Bluegrass Pkwy & Alliant Ave			X			X	X			X				
4	Blairwood Rd & S Hurstbourne Pkwy (KY-1747) - sig						X	X							
5	Taylorsville Rd (KY-155) & Snively Ave						X	X	X		X			X	X
6	S Hurstbourne Pkwy (KY-1747) & Wessex Pl	X					X	X			X				X
7	S Hurstbourne Pkwy (KY-1747) & Biggin Hill Ln	X					X	X			X				X
8	Blankenbaker Pkwy (KY-913) & Rehl Rd	X		X			X	X			X				X
9	Taylorsville Rd (KY-155) & Cherian Dr	X					X	X			X				X
10	Billtown Rd (KY-1819) & St. Rene Rd			X			X	X	X					X	

Table 6-10: Potential Unsignalized Intersection Strategies

Potential High Injury Network Corridor Strategies

The table below outlines potential safety improvement strategies for routes along the HIN. The list of improvements was developed using proven safety countermeasures aimed at reducing and eventually eliminating severe crashes. These routes would need to be studied further to guide implementation efforts.

Rank	Route Name	Begin and End Limits	Length	Potential Project Strategies
1*	Hurstbourne Pkwy (KY-1747)	I-64 EB Off-Ramp to Linn Station Road	0.89	Innovative intersections, enhanced pedestrian crossings, I-64 interchange improvements
2	Bluegrass Pkwy	Blankenbaker Pkwy (KY-913) to Tucker Station Road	0.46	Innovative intersections, lighting, enhanced pedestrian crossing
3	Hurstbourne Pkwy (KY-1747)	Fenwick Creek Dr to Taylorsville Rd	1.20	RCUT Corridor, innovative intersections, enhanced pedestrian crossings, lighting **Planned Project:** 5-555.00 - Reduce congestion and improve safety along Hurstbourne Pkwy (KY 1747) from Stony Brook Dr to I-64
4*	Taylorsville Rd (KY-155)	Merioneth Dr to Cardwell Way	1.75	Access management, innovative intersections, enhanced pedestrian crossings, lighting
5*	Taylorsville Rd (KY-155)	Watterson Trl to Merioneth Dr	0.83	Road rightsizing, enhanced pedestrian crossings, innovative intersections
6	Hurstbourne Pkwy (KY-1747)	Linn Station Road to Whittington Pkwy	0.76	RCUT Corridor, innovative intersections, enhanced pedestrian crossings, lighting
7*	Taylorsville Rd (KY-155)	Ruckriegel Pkwy (KY-1819) to Watterson Trl	0.41	Curb bump outs, bicycle facilities, innovative intersections, enhanced pedestrian crossings
8*	Blankenbaker Pkwy (KY-913)	Plantside Drive to I-64 Eastbound Ramps	0.92	Innovative intersections, lighting, enhanced pedestrian crossings, access management
9	Billtown Road (KY-1819)	Fairground Rd to Ruckriegel Pkwy	1.22	Innovative intersections, enhanced pedestrian crossings, connected pedestrian facilities, enhanced striping, turn lanes **Committed Project:** 5-8203.00 - Reconstruct Billtown Road from north of Colonnades Place to south of Easum Road
10*	Stony Brook Dr	Roman Drive to Watterson Trl	0.59	Innovative intersections, enhanced pedestrian crossings, lighting, connected pedestrian facilities
11*	Ruckriegel Pkwy (KY-1819)	Billtown Rd to Watterson Trl	1.27	Innovative intersections, access management, lighting.
12	Taylorsville Rd (KY-155)	Blankenbaker (KY-913) to Ruckriegel Pkwy (KY-1819)	0.78	Innovative intersections, pedestrian facilities, lighting.

Rank	Route Name	Begin and End Limits	Length	Potential Project Strategies
13	Watterson Trl (KY-1819)	Plantside Drive to Moser Rd	1.18	Turn lanes, widen for two-way-left-turn-lane, innovative intersections, connected pedestrian facilities **Committed Project:** 5-8203.00 - Reconstruct Billtown Road from north of Colonnades Place to south of Easum Road
14	Bluegrass Pkwy	Embassy Square Blvd to Watterson Trail (KY-1819)	1.49	Innovative intersections, enhanced pedestrian crossing, turn lanes, lighting
15	Watterson Trl	Stillmeadow Dr to Rivanna Dr	1.09	Innovative intersections, pedestrian facilities, turn lanes, lighting, widen for TWLTL and shared-use path
16	Galene Dr	Stony Brook Dr to College Dr	1.22	Innovative intersections, enhanced pedestrian crossings, curb bump outs, refuge islands, lighting
17	Plantside Drive	Bluegrass Pkwy to Watterson Trl (KY-1819)	1.45	Innovative intersections, enhanced pedestrian crossings, turn lanes, lighting, access management
18	Linn Station Rd	Timberwood Circle to Moser Rd	1.32	Innovative intersections, turn lanes, enhanced pedestrian crossings, lighting, access management

** Corridors noted as local priorities*

Table 6-11: 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 Jeffersontown's roadway network were identified by analyzing crash and roadway data. The major safety challenges appear to be at intersections and key challenges are related to driver inattention/distraction, failure to follow traffic rules, and control and judgment errors.

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 – Intersection Safety Improvements

Given the driver errors that are leading to severe crashes in Jeffersontown, it is recommended that the city consider countermeasures that could either reduce the likelihood of the error or reduce the severity of the crash when the error occurs.

The types of countermeasures that could reduce the likelihood of the errors include citywide implementation of backplates on signals, upgraded intersection lighting, upgraded intersection striping, smaller intersection turning radii (with truck aprons where needed).

Improvements that would reduce the severity of the crashes when they occur include the implementation of roundabouts, lane narrowing (using striping only), speed feedback signs, and other designs and operational measures that help reduce vehicles speeds.

Strategy 2 – Modifications to Wide Arterials and Collectors

Roadway width, number of lanes (including turn lanes), and the presence of nearby driveways are some of the factors that can contribute to driver control and judgement errors. If possible, the city could work with KYTC and others to simplify and narrow some of the wider streets and highways. This would not include the elimination of lanes, but rather a reallocation of the width and possible new access control measures. The implementation of RCUT intersections is one example of this approach. These intersections are much simpler for drivers to navigate, leading to substantial reductions in both total and severe crashes.

Strategy 3 – Vulnerable Road User Safety Upgrades

Many of the countermeasures listed above would benefit pedestrians and bicyclists. In particular, improved crosswalk striping and intersection lighting would be beneficial. Other upgrades could include completion of missing sidewalk connections and lighting along roadways, especially near side-streets and driveways.

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 agreed on joint application for SS4A grant funding for one of top HIN segments	Chapter 6; Table 6-9	Work with KYTC to identify and agree on a project and match funding	Infrastructure
	3	Begin outreach and education initiative with young and older drivers	Chapter 3	Collaborate with school district, public agencies, and non-profits	Behavioral
	4	Implement initial low-cost Speed Management strategies on HIN corridors	Chapters 3, 4 and 6; Systemic Sec.	Work with law enforcement and KYTC to identify key corridors	Operational
	5	Continue to support targeted speed and traffic control enforcement	Chapter 3 and 4	Work with law enforcement and KYTC 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 KYTC to identify a promising project and funding	Infrastructure
	7	Implement high priority HIN segment project	Chapter 3 and Chapter 6	Work with KYTC to identify a promising project and funding	Infrastructure
	8	Implement high priority intersection project	Chapter 3 and Chapter 6	Work with KYTC 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 citywide safety outreach; Consider focusing on driver inattention/distraction, failure to follow traffic rules, seat belt usage, and impaired driving	Chapter 3	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 partnership with KYTC (District 5 and HSIP) to identify and 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 partnership with KYTC (District 5 and HSIP) to identify and 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 partnership with KYTC (District 5 and HSIP) to identify and 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 6-12: Implementation Action Plan Timeline

7. Progress and Transparency

The City of Jeffersontown, 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 City 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 City.

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 City 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 City 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 city-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

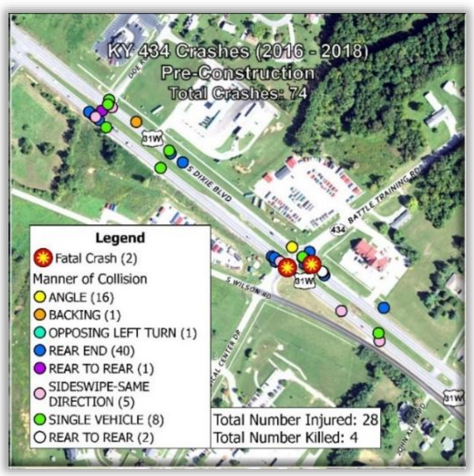
This performance measure tracks the number of safety-focused improvement projects constructed from the potential improvements listed in **Chapter 6. Strategy and Project Selection**. The total number of safety improvements implemented at the intersection and along the corridors identified on the HIN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

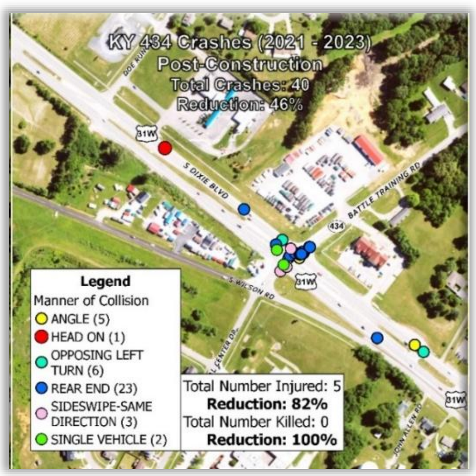
Crash Trends at Project Locations

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.



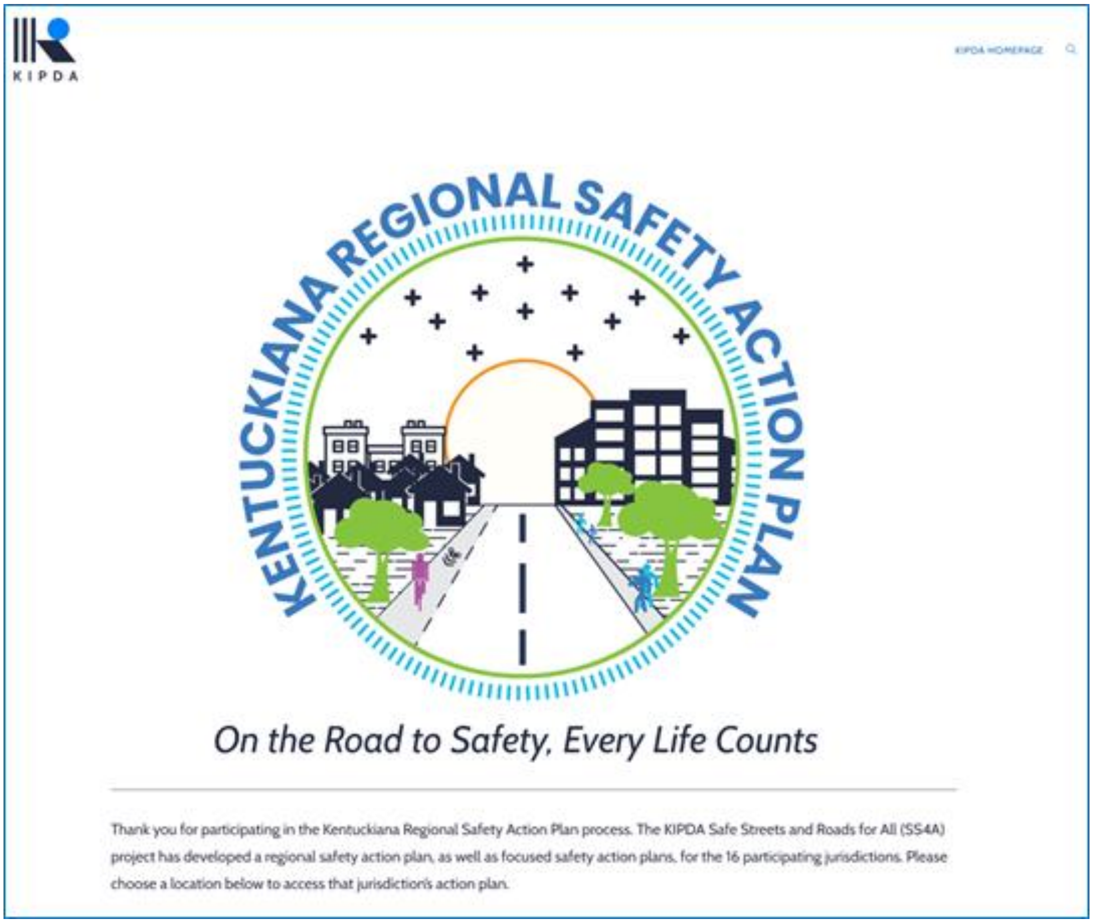


Geospatial representation of crash trends for specific projects is an effective method to demonstrate their impact to the community. Illustrating pre and post-construction crash data, with a focus on the decrease in fatal and suspected serious injury crashes, clearly communicates safety improvements.

PRE-CONSTRUCTION ⟶ **POST-CONSTRUCTION**

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 Jeffersontown 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

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
													(7%/yr compounded)	
Cost Percentages ==>		*5%*	*15%*	*20%*	*10%*	*12%*			*15%*	*50%*			*61%*	*61%*
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