WAYNE COUNTY OHIO

Safe Streets and Roads for All

Comprehensive Safety Action Plan

Comprehensive Safety Action Plan

Prepared for: Wayne County Engineer

December 2024

Environmental Design Group

The community impact people.

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EXECUTIVE SUMMARY

The Wayne County Safe Streets and Roads for All (SS4A) Comprehensive Safety Action Plan marks a pivotal step toward reducing traffic fatalities by 85% across Wayne County by 2045. The plan does not only reactively analyze historical data but also proactively identifies systemic factors. This involves categorizing and ranking these safety challenges, evaluating potential treatments in line with FHWA Proven Safety Countermeasures, and strategically prioritizing issues for intervention based on a blend of stakeholder input, equity considerations, and cost-effectiveness. This plan offers a powerful roadmap, addressing the critical safety challenges facing our communities and establishing data-driven strategies to enhance roadway safety for all users.

Within the past decade, Wayne County has witnessed 19,705 crashes, resulting in 148 fatalities and 723 serious injuries. Vehicle crashes make up 99.8% of all crashes and account for 99.0% of all fatal and serious injury (FSI) crashes. Pedestrian crashes, although comprising only 0.7% of all crashes, represent a disproportionately high 4.6% of FSI crashes. Of the 128 pedestrian-related incidents, 32 led to fatalities or serious injuries. Similarly, bicycle crashes, though constituting 0.5% of all crashes, account for 2.6% of FSI crashes. A unique mode of transportation in Wayne County is horse and buggy, which is used by the growing Amish population. The technical term for this mode is Animal Drawn Vehicles (ADVs). This term is used by ODOT and will be used in this report. Over the past ten years, there were 265 crashes involving ADVs, including 30 FSI crashes. Wayne County, being a rich agricultural county, has many roads that are used by farm equipment. Similar to ADVs, these vehicles move considerably slower than other traffic. There were 110 crashes involving farm equipment during the years analyzed. Eight of these resulted in FSI crashes. These statistics underscore the urgency of addressing vulnerable road user safety as a central component of our comprehensive safety strategy.

The Wayne County Comprehensive Safety Action Plan exceeds the minimum requirements as stated by USDOT, integrating robust leadership commitment, a meticulous planning structure, and an exhaustive safety analysis. It identifies high-risk locations through a High-Injury Network and performs systemic safety needs assessments. The plan incorporates community engagement, including the Amish population, and collaboration with stakeholders, ensuring that equity considerations are embedded in every aspect of its development. Underserved communities are prioritized, with targeted interventions to bridge safety disparities.

This plan is not just about identifying problems; it provides a clear path to action. It outlines policy and process changes necessary to prioritize safety and suggests comprehensive projects and strategies shaped by the best available evidence and stakeholder input. These include infrastructure enhancements, behavioral interventions, and operational safety measures. Each recommendation is prioritized with clear timeframes, from immediate to long-term implementation, ensuring sustained progress toward reducing roadway fatalities and serious injuries.

Transparency and accountability are cornerstones of this plan. It establishes mechanisms for measuring progress, with annual public reporting to track advancements toward safety goals. By leveraging detailed data analysis and engaging the community, this plan empowers us to build a transportation system that is safe, equitable, and accessible for all. Through collaborative efforts and a commitment to innovative solutions, we are poised to transform Wayne County into a national leader in roadway safety, demonstrating the power of comprehensive planning in saving lives and enhancing the well-being of our communities.

HOW COMMUNITIES CAN USE THIS PLAN

The Wayne County SS4A Comprehensive Safety Action Plan serves as a valuable resource for county and community leaders looking to enhance roadway safety. By providing a detailed analysis of crash data, identifying high-risk areas, and offering evidence-based strategies, this plan empowers the county and communities within to develop targeted interventions that address local safety concerns. This plan can be used to prioritize projects, secure funding, and engage stakeholders in efforts to reduce traffic fatalities and serious injuries. By implementing the recommended strategies and utilizing available resources, a safer and more accessible transportation system can exist for all road users. Below are recommendations on how to leverage this plan.

Utilizing the SS4A Comprehensive Safety Action Plan for Roadway Safety Improvements

1. Leverage the High Injury Networks and High-Risk Networks

- **Identify Priority Areas:** Use the High Injury Network and High-Risk Network outlined in the plan to pinpoint areas with high concentrations of fatal and serious injury crashes. Prioritize these locations for safety improvements.
- **Targeted Interventions:** Implement targeted interventions such as enhanced signage, intersection improvements, and pedestrian infrastructure in these areas to address the most critical safety concerns.

2. Implement Proven Safety Countermeasures

- **Adopt FHWA Proven Safety Countermeasures:** Utilize strategies from the Federal Highway Administration's Proven Safety Countermeasures, which includes measures like roundabouts, pedestrian crossing enhancements, and road diets to reduce crash severity and frequency.
- **Traffic Calming Measures:** Implement traffic calming measures such as speed humps, curb extensions, and chicanes to reduce vehicle speeds and improve safety for non-motorized users.

3. Engage in Comprehensive Planning and Data Analysis

- **Data-Driven Decision Making:** Utilize crash data and analysis from the plan to inform decision-making and prioritize projects that will have the greatest impact on safety.
- **Community-Specific Solutions:** Work with local stakeholders and community members to develop solutions tailored to specific needs and challenges identified in the plan.

4. Prioritize Equity in Safety Improvements

- **Addressing Underserved Communities:** Focus on improving safety in underserved communities, as identified in the plan, to ensure equitable distribution of resources and enhancements.

5. Pursue Funding Opportunities

- **SS4A Implementation Grants:** Apply for Safe Streets for All Implementation Grants to fund projects and strategies identified in the Action Plan.
- **State and Federal Funding:** Explore additional funding sources such as state safety improvement programs, federal transportation grants, and partnerships with local businesses and organizations.
- See next section for more information on producing a local match for these sources.

ECONOMIC DEVELOPMENT TOOLS TO HELP FUND YOUR LOCAL MATCH

While federal funding for roadway projects can provide a large proportion of funds needed to complete the project, in many cases a 20% local match is required. Funding the local match can be a challenge, particularly on high-cost

projects. The following tools provide some ideas to assist municipalities, townships, and the county creatively fund local matches on future roadway projects.

Tax Increment Financing (TIF) District

Tax Increment Financing ("TIF") is an economic development tool that enables local governments, including municipalities, townships and counties to finance public infrastructure improvements and, in select circumstances, privately owned economic development projects and residential projects.

TIF captures the increase in property value of real property. An existing assessed value is established prior to the TIF's enactment. This sets the taxable value of the property for the life of the TIF. In addition, extensive economic analysis is completed to establish projected future property values based on proposed public improvements within the district. These projections are the basis for the economic development plan that must be completed to justify a TIF. As improvements are made to the public infrastructure in the district and/or development occurs, property values should increase. That projected increase in property value is used to fund the aforementioned public improvements throughout the district.

Ohio Revised Code 5709.40(A)(5) requires that Incentive District TIFs demonstrate one or more of the seven characteristics of economic distress.

What Qualifies as a Public Improvement? Any of the following improvements are eligible for TIF funding:

- Traditional Public Infrastructure Projects: roads, bridges, sidewalk, trail, streetscaping, water & sewer improvements
- Redevelopment Projects: land acquisition & environmental remediation
- New Development: gas, electric & communication facilities

Joint Economic Development Districts (JEDD)

A JEDD is a special-purpose territorial district created by contract between municipal corporations and townships for the purpose of encouraging economic development, creating jobs, and improving the economic welfare of citizens. Typically, such objectives are accomplished by levying an income tax in the district. The tax revenue is shared by the parties to the JEDD and is used to provide additional services, new facilities or enhanced infrastructure in the JEDD, depending on the terms of the contract.

A JEDD agreement enables townships, cities, and villages to cooperatively address concerns associated with economic development, diminishing local revenues, growth, and annexation pressures. A JEDD provides a local-community approach to solving economic development issues by allowing local governments to enter into legal agreements that have the potential to increase revenues and create jobs.

Downtown Revitalization Districts (DRD)

A Downtown Revitalization District (DRD) is one way to leverage future investment within the Historic Town Center to help improve storefronts or infrastructure within the district.

The Ohio General Assembly enacted H.B. 233 which enables municipalities to create Downtown Redevelopment Districts (DRD). A DRD functions similar to a Tax Increment Financing (TIF) District but offers municipalities additional options in funding projects and programs with funds generated by the DRD.

Property owners within the DRD make service payments in lieu of taxes on a tax exemption up to 70% of the increased value of real property over the course of the 10-year DRD period. A DRD may have a 30-year term with approval by the local school board.

An Economic Development Plan must specify the proposed uses of DRD service payments which may include:

- loans or grants to owners of buildings within the DRD for the purpose of rehabilitating historic buildings,
- loans to owners of buildings within the DRD for the purpose of making repairs or improvements to buildings that are not historic buildings,
- contributions to a Special Improvement District (SID), Community Improvement Corporation (CIC) or nonprofit corporation for use to rehabilitate a historic building or promote or enhance the DRD, or
- financing public infrastructure improvements (similar to TIF districts) within the DRD.

A DRD may be used in conjunction with other funding sources as part of a project funding plan. As with a TIF, a DRD can be an excellent source of local match funding for state and federal-funded infrastructure projects. Unlike a TIF, a DRD provides additional flexibility in funding investments to privately-owned structures. For example, DRD proceeds could be directed to storefront renovation loans (or grants for historic buildings), while also funding streetscape enhancements within the public right-of-way.

New Community Authority (NCA)

A new community authority is a new political subdivision under state law created either by a local government or through a public-private partnership between a statutory "developer" and a local government. The developer must own or control the land that is initially included in the new community district. The developer can also be a municipality, county, some townships, or a port authority that owns or controls the land in the proposed new community district.

Traditionally, a private developer files a petition to create the new community authority with the relevant local government's "organizational board of commissioners". Through this process, the local government creates a new political subdivision governed by a board of directors. The organizational board appoints at least three, but as many as six, board members to represent the interests of the residents and businesses in the new community district. The developer appoints an equal number to serve as its representatives. The organizational board also appoints one member to serve as the local government representative. The appointment process ensures public control of the new entity's board.

New community authorities have certain economic development powers. First, they can levy "Community Development Charges" on economic activity in the new community district. These charges can be a uniform fee on each parcel, can be assessed based on the valuation of property in the new community district, or be on the gross receipts or other revenues of businesses in the district. *These spot-specific charges allow the new economic activity to pay for the infrastructure or amenities in the district, instead of burdening existing taxpayers or shifting existing taxes from other priorities.*

New community authorities have the ability to issue revenue bonds to pay for the development of community facilities. The debt issued by the new community authority is separate from and does not impact a local government's debt capacity. New community authorities can also own and operate community facilities. *Community facilities include parks, cultural facilities, streets, sidewalks, water and sewer infrastructure, parking facilities, public buildings, stadiums, day care centers, fitness centers, and many other assets.*

New community authorities can be utilized in addition to traditional public financing on projects. NCAs are often combined with community reinvestment area tax abatements ("CRA") or TIF as part of a project's overall financing strategy. NCAs can be used to create a replacement charge as a way to monetize a tax abatement. For projects with large public infrastructure needs, NCAs can be used to create revenue in addition to a traditional TIF. The flexibility to design charges specific to the economic activity created by the new development can supercharge development possibilities.

1. OVERVIEW

1.1 Wayne County

Wayne County is a diverse county located in north central Ohio southwest of Akron. It is home to approximately 117,000 residents who are spread across three cities, 12 villages, 16 townships, and 21 unincorporated communities. Wayne County is the 13th largest county in Ohio, covering over 550 square miles. Wayne County's rich soil and plentiful water supply have continuously supported a strong agricultural community. In the late 1800s, Wayne County began to expand industrially and today is home to many world-renowned businesses.

Wayne County boasts several higher education institutions. The College of Wooster enrolls nearly 2,000 students and Wayne College, part of the University of Akron system, has nearly 1,500 students. The Ohio State University Agricultural Technical Institute (ATI) branch is in Wooster, providing approximately 460 students with educational tracks in Agricultural related courses.

Wayne County is sometimes called the "Gateway to Ohio's Amish Country." In fact, the world's largest Amish settlement is in Wayne County and the surrounding counties of Holmes and Tuscarawas. Many restaurants, shops, and stores feature authentic Amish products, from food to furniture. This attracts many visitors, mixing motorized vehicles with horses and buggies. This combination of transportation modes can create adverse effects on transportation safety, which will be explored in detail throughout this report.

The greater Wayne County community is fortunate to have four multi-purpose trails currently totaling 21 miles. The County Line Trail and Sippo Valley Trail are completed. The Heartland Trail has two sections completed: 1.3 miles in Orrville and 2.4 miles from Forrer Road to Marshallville. The gap between Forrer Road and Allen Avenue in Orrville is currently in the planning stage. Rails-to-Trails of Wayne County is dedicated to the promotion, development, and conversion of unused railroad and greenway corridors into multi-purpose, non-motorized, public paths.

Figure 1. Wayne County in Regional Context

1.2 Wayne County's Safety Commitment

Highway safety is a priority for the Wayne County Engineer. The county has additional vulnerable users with Amish horse and buggy traffic and farm equipment using public highways. These slow-moving vehicles along with narrow roads, limited sight distance, and tourist traffic create additional safety concerns. Safety improvements are initiated through low-cost projects such as updated signage or removing vegetation to improve sight distance. At other times, larger improvements such as widening to accommodate shoulders, realigning intersections, or constructing roundabouts are needed. These projects may be accomplished by partnering with ODOT, communities, and other stakeholders for financial and technical assistance.

1.3 Safe System Principles

The Safe System Approach is intended to be an effective way to address and mitigate the risks inherent in a complex transportation system. It is an effort to prevent fatal and severe injury crashes and move toward a goal of zero roadway deaths, aligning with "Vision Zero". This approach is a departure from the conventional safety approach because it focuses on both human error and human vulnerability and designs a system with redundancies in place to protect all users. The approach works by building and reinforcing multiple layers of protection to prevent crashes from happening and to minimize harm when crashes do occur. It's a holistic and comprehensive approach and a guiding framework for making transportation networks safer for their users.

The Safe System Approach incorporates the following principles:

- **Death and Serious Injuries are Unacceptable:** Prioritize the elimination of crashes that result in serious injury or death.

- **Humans Make Mistakes:** People will inevitably make decisions that can lead or contribute to crashes, but the transportation system can be designed and operated to accommodate certain types and levels of human mistakes and avoid death and serious injury when a crash occurs.

- **Humans are Vulnerable:** Human bodies have physical limits for tolerating crash forces before death or serious injury occurs and therefore it is critical to design and operate a transportation system that is human-centric and accommodates these vulnerabilities.

- **Responsibility is Shared:** All stakeholders, including all levels of government, industry, non-profit, advocacy, researchers, and the public, are vital to preventing fatalities and serious injuries on roadways.

- **Safety is Proactive**: Tools should be used to identify and address safety issues in the transportation system, rather than a reactive approach which waits for crashes to occur.

- **Redundancy is Crucial:** Reducing risks requires that all parts of the transportation system be strengthened, so that if one part fails, the other parts will still protect people.

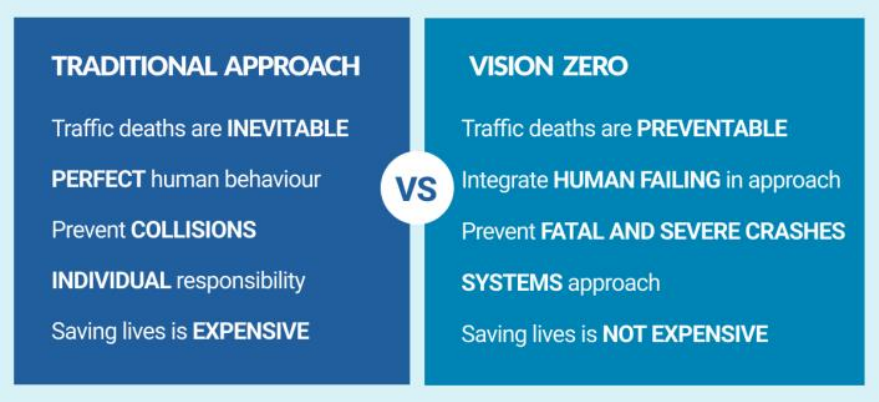


Figure 2. Traditional planning approach vs. Vision Zero

1.4 Elements of a Safe System

In addition to the six principles of the Safe System Approach that guide cultural change, there are five elements that further share the responsibility to promote a holistic approach to transportation safety across the system. The elements are listed below and displayed in the graphic in Figure 3.

- **Safe Road Users:** Encourage safe, responsible driving behavior by people who use roads and create conditions that prioritize people's ability to reach their destination unharmed.

- **Safe Vehicles:** Expand the availability of vehicle systems and features that help to prevent crashes and minimize the impact of crashes on both occupants and non-occupants.

- **Safe Speeds:** Promote safer speeds in all roadway environments through a combination of thoughtful, equitable, context-appropriate roadway design, appropriate speed-limit setting, targeted education, outreach campaigns, and enforcement.

- **Safe Roads:** Design roadway environments to mitigate human mistakes and account for injury tolerances, to encourage safe behaviors, and to facilitate safe travel by the most vulnerable users.

- **Post-Crash Care**: Increase crash survivability with quick access to emergency medical care as part of a safer roadway system. Ensure a safe working environment for first responders and prevent secondary crashes through effective traffic incident management.

Figure 3. FHWA Safe Systems Approach Principles

1.5 The Purpose of this Action Plan

The Safe Streets for All (SS4A) Program heavily emphasizes the development of a Comprehensive Safety Action Plan (Action Plan) as the foundation of any safety or transportation system investments. An Action Plan identifies the most significant roadway safety concerns and develops a holistic, well-defined strategy to prevent roadway fatalities and serious injuries. The development of this Action Plan makes Wayne County eligible to apply for Implementation Grants through the SS4A Program.

1.6 The Need for Safety Improvements

According to crash data obtained from the Ohio Department of Transportation's (ODOT) Transportation Information Mapping System (TIMS), between 2014 and 2023 a total of 136 fatal crashes resulting in 148 fatalities and 560 serious injury crashes resulting in 723 serious injuries occurred in Wayne County. An average of 13.6 crashes per year resulted in death and 56 crashes per year resulted in serious injury. Pedestrian crashes compose 0.7% of all crashes, but 4.6% of all fatal and severe injury (FSI) crashes. There were 128 crashes involving a pedestrian in the years analyzed, and 32 of these resulted in a fatality or serious injury. Bicycle crashes compose 0.5% of all crashes, but 2.6% of all FSI crashes. There were 95 crashes involving a cyclist in the years analyzed, and 18 of these resulted in a fatality or serious injury. In rural areas, fixed object crashes were the leading crash type, resulting in 139 FSI crashes or 28.6% of all FSI crashes. In urban areas, angle crashes were the leading FSI crash type with 53 crashes (25.2%).

Table 1 summarizes crashes by mode and severity in the rural and urban areas of Wayne County.

Table 1. Summary of Crashes by Mode and Severity in Wayne County

Wayne County Crashes (2014-2023)	Rural	Urban	Total
Total Crashes (All Modes, No Freeways or Interstates)	10,494	9,211	19,705
Fatal Crashes	105	31	136
Severe Injury Crashes	381	179	560
Fatal and Severe Injury (FSI) Crashes	486	210	696
Total Pedestrian Related Crashes	33	95	128
Pedestrian Related FSI Crashes	11	21	32
Total Bicycle Related Crashes	34	61	95
Bicycle Related FSI Crashes	10	8	18
Total Animal-Drawn Vehicle (Horse and Buggy) Crashes	254	11	265
Animal-Drawn Vehicle FSI Crashes	29	1	30
Total Farm Equipment-Related Crashes	105	5	110
Farm Equipment-Related FSI Crashes	8	0	8

Each of these crashes represents a preventable tragedy with spillover effects on individuals, families, and communities throughout Wayne County. As state, federal, regional, and local partners strive to realize goals to achieve zero deaths on public roadways, action must be taken to improve traffic safety on roadways.

1.7 Prior Studies

Wayne County and ODOT District 3 have worked together on previous safety studies throughout the county. Many of these studies have led to safety applications for funding and implementation of a project. Two of the townships in the northeast part of the county, Milton and Chippewa, are included in the Akron Metropolitan Area Transportation Study (AMATS) municipal planning organization study area. These two townships are included in safety studies performed by AMATS and have access to federal funding through them.

The county maintains an internal list of safety concerns that is compiled from public input and safety statistics. As funding allows, the county is striving to complete improvements at these locations. Some of these locations are also on the High Injury Network and the priority lists that were compiled for this report. These topics will be discussed in further detail later in this report.

A key study which was referenced for the completion of this report was the ODOT Statewide Amish Travel Study, which was completed in March 2020. The purpose of the study was to identify state routes that Amish horse and buggies use in conjunction with other non-motorized users, such as cyclists and pedestrians, to formulate recommendations to improve safety and pavement preservation along those state roadways. Wayne County is one of five adjoining counties that have the largest Amish population in the state. Studies project that the Amish population nearly doubles every 21 years which will lead to an increase in non-motorized road users. The ODOT Statewide Amish Travel Study focused only on state routes. This Action Plan considers all non-interstate roadways in Wayne County.

2. STAKEHOLDER AND PUBLIC ENGAGEMENT

2.1 Introduction

Any successful planning process relies on a meaningful level of engagement with the public. This allows for better understanding of both safety concerns and opportunities that exist to correct them. This Action Plan's process involved several levels of engagement with the Wayne County Engineer's Office (WCEO), the Safety Action Plan Committee (SAPC), the general public, including the Amish community. Additionally, an interactive safety pin map and an online safety survey were promoted through the WCEO website.

2.2 Taskforce

Throughout the public engagement process, Environmental Design Group worked collaboratively with the WCEO and the SAPC to coordinate the location, time, site needs, and invitations for public engagement events. SAPC is comprised of several community leaders and representatives. The following agencies, organizations, and authorities were included:

Amish Steering Committee of Ohio
Assistant Wayne County Engineer
City of Wooster, City Engineer
City of Wooster, Engineer
Director, Wayne County Department of Planning
East Union Township Trustee
Environmental Design Group - Director of Transportation
Environmental Design Group - Project Manager
Envision, Principal
Marshallville Police Department
ODOT, D3 Planning
ODOT, D3 Project Manager
Ohio State Highway Patrol - Lieutenant
Orrville Police Dept. - Chief
OSU-College of Food, Agricultural and Env. Sciences
Rails to Trails Wayne County
Rails to Trails Wayne County
Rails to Trails Wayne County
Ret. State Highway Patrol
Village of Apple Creek - Mayor
Wayne County Permit and Traffic Safety Supervisor
Wayne County Road and Drainage Engineer
Wayne County EMA Director
Wayne County Engineer
Wayne County Farm Bureau, Director
Wayne County Sheriff's Office, Captain
West Salem Village Administrator
Wooster Township Trustee

Three SAPC meetings took place and are described as follows.

Comprehensive Safety Action Plan Introduction and Kickoff, Monday, April 29, 2024

This meeting included a presentation introducing the Comprehensive Safety Action Plan, the planning structure, the components of the plan, intended schedule to complete the plan, and how the individual members of SAPC could contribute and assist the formation. Members of SAPC were invited to submit their existing policies and procedures, any previous or current safety studies in process, and their localized concerns involving high crash intersections and roadways.

Data Analysis, Systemic Analysis, and Results of Public Engagement, September 17, 2024

This meeting included an in-depth presentation of the data analysis performed as part of the plan, including statistical analysis of crash history, the High Injury and High Risk Networks, and the summarization and key points of public engagement meetings. Members of SAPC were invited to comment, seek clarification, and discuss the findings.

Review of the Draft Comprehensive Safety Action Plan, December 10, 2024

Prior to this meeting, SAPC members received the draft report for review. At the meeting, a final presentation was given as an overview of the nearly complete plan, including the planning structure, completed components, priority lists, strategic project selections, and how to use the plan to achieve improved roadway safety within the communities. Members of SAPC were invited to provide comments and requested inclusions to the plan.

The taskforce has been an integral part of the planning structure, providing direct connection to the communities within Wayne County, insight to the various challenges and unique circumstances throughout the county, and historic knowledge of safety improvement efforts within the region.

2.3 Public Engagement

Gathering public opinion played a crucial role in this planning effort. Although crash data can provide decisionmakers with precise data about what has already happened, it does not convey potential issues, near-misses, and areas of concern. Furthermore, it is not able to provide the necessary information about how and why people are making their transportation decisions. Public engagement, therefore, becomes an important and complementary part of the safety planning process.

The Wayne County Engineer website hosted an informative webpage for the Comprehensive Safety Action Plan at https://wayne-county-engineer.com/safetyactionplan/. This page included a great deal of information on the need, purpose, and process to create the Action Plan. The site provided an interactive map to provide input and a link to an online survey for feedback on existing roadway safety in the county. The Wayne County Engineer Facebook Page introduced the Action Plan project and posted a link to the online survey.

Public feedback from Wayne County residents was gathered through an online map, allowing users to drop points and leave comments, as well as through several public outreach events from July through October 2024. The following events were held:

- Public Meeting, City of Wooster Community Center (241 S Bever St, Wooster, Ohio 44691), July 9, 2024, 6:00pm – 9:00pm
- Public Meeting, Rittman Public Library (75 N Main St, Rittman, Ohio 44270), July 16, 2024, 6:00pm – 8:00pm
- Amish Health and Safety Days, Kidron Community Park (4434 Kidron Rd, Kidron OH), July 30, 2024, 3:00pm – 8:00pm
- Amish Market, Red Tomato Market (16000 E Main St, Mount Eaton, OH 44659), August 3, 2024, 9:00am – 12:00pm
- Amish Safety Committee Meeting for Wayne and Holmes Counties, Meeting Room at a local business (4066 CR 168 Millersburg, Ohio), August 8, 2024, 1:00pm – 2:00pm

- Wayne County Fair, Fairgrounds (199 Vanover Street, Wooster), September 7-11, 2024, all hours of fair admission

At each event, people who attended the meetings or approached the booths were provided a clipboard with location-specific maps and a marker and prompted to draw and make notes of locations where they experienced unsafe conditions, a crash, a near-miss crash, or other roadway safety issues. Several members of the safety plan team were available to listen and ask for more information about public safety concerns. The meeting with the Amish Safety Committee was especially informative on how the Amish operate buggies, buggy and bike operation teaching methods, challenges specific to animal drawn vehicles, and other unique roadway safety issues. At all meetings, a large map of the county and pins were available for participants to physically place a numbered pin and write a note on an adjacent tablet.

Much of the input from the Amish population informed the Amish Travel Plan, Policy recommendations, and Prioritization.

The summarized feedback points from the individual maps, large map points, and online interactive map are presented in Figure 4.

A total of 173 points were collected, a majority of which concerned safety at intersections throughout Wayne County. A total of 52 comments specifically mention sight-distance issues, related to hills, vegetation or crops, and angles of intersections or roads. Seven comments address issues related to horse and buggies, including the difficulty buggies face when crossing roads and the challenges drivers encounter in seeing buggies when approaching over hills or around curves.

Several comments directly or indirectly indicate that poor conditions of the roadway contribute to unsafe conditions, both for vehicles traveling at 55 mph on rural roads and for cyclists and buggies traveling in or near the shoulders. Road users noted that frequent and significant pavement depressions contribute to drivers' loss of control, resulting often in single-vehicle crashes, such as fixed object or run-off road.

Intersections with high amounts of feedback (three or more comments) are shown in Figure 4. The top 3 intersections with safety concerns occur at:

- SR 585 & Apple Creek Rd & Five Points Rd– 20 comments
- US 250 & Mt Hope Rd– 6 comments
- US 30 & Kidron Rd – 5 comments

The Five Points intersection received numerous comments identifying it as a high crash area, characterized by poor visibility, challenging turns, and confusion due to the convergence of multiple roads and inadequate signage. Additionally, five comments specifically suggest the installation of a roundabout at this location. A roundabout is already planned at this intersection and construction is scheduled for 2027.

The intersection at US 250 and Mt Hope Rd has poor visibility due to a hill located east of Mt. Hope Road on US 250. Five out of six comments highlight the visibility issues, while two comments specifically mention difficulties encountered by horse buggies at this location.

The intersection at US 30 and Kidron Road, like other intersections along US 30, has been described as challenging for making turns, primarily due to high vehicle speeds.

Below are several unedited comments from the online survey about roadway safety concerns throughout Wayne County:

- "Please for the love of god and all things holy…GIVE US A ROUNDABOUT!" (Five Points intersection)

- “Trying to make left turns in this intersection is very dangerous. Roundabout makes PERFECT sense here” (Five Points intersection)
- “There are too many roads intersecting here. Signage and traffic directions are confusing.” (Five Points intersection)
- “Just patching will not fix this road. Major issues need addressed not just wait for a new buggy lane that won't happen.” (Kidron Rd)
- “No fishing in the roadway! It's deep.” (Kidron Road)
- “When crossing the highway or making a turn in either direction in a low vehicle there is little to no visibility of oncoming traffic due to the grade and angle of the rd.” (SR 585 & Honeytown Rd)
- “This is a blind intersection- there is no visibility when cars crest the hill coming north on Rt 3. At very least, a mirror on the power pole for motorists on Springville turning onto 3 would be helpful if not flattening that hill.” (SR 3 Columbus Rd & Springville Rd)
- “Turning left off of Kidron road onto US 30 is like playing Russian roulette. The traffic going westbound on US 30 is partially covered by a concrete barrier which you cannot see over to see if there is any traffic in the left lane many times” (US 30 & Kidron Rd)
- “A traffic light at this intersection would be a good idea. Traffic on US 30 is moving fast, and it is difficult to enter 30 westbound or to exit 30 westbound onto Kidron Rd.” (US 30 & Kidron Rd)
- “Cracks throughout whole road. Very unsafe as bicyclists need to swerve or be in center to avoid all problem areas.” (Kidron Rd)
- “Too many near accidents with people trying to turn left from 30 onto Kurzen from the left lane with traffic not slowing down behind them to enable a safe turn.” (US 30 & Kurzen Rd)

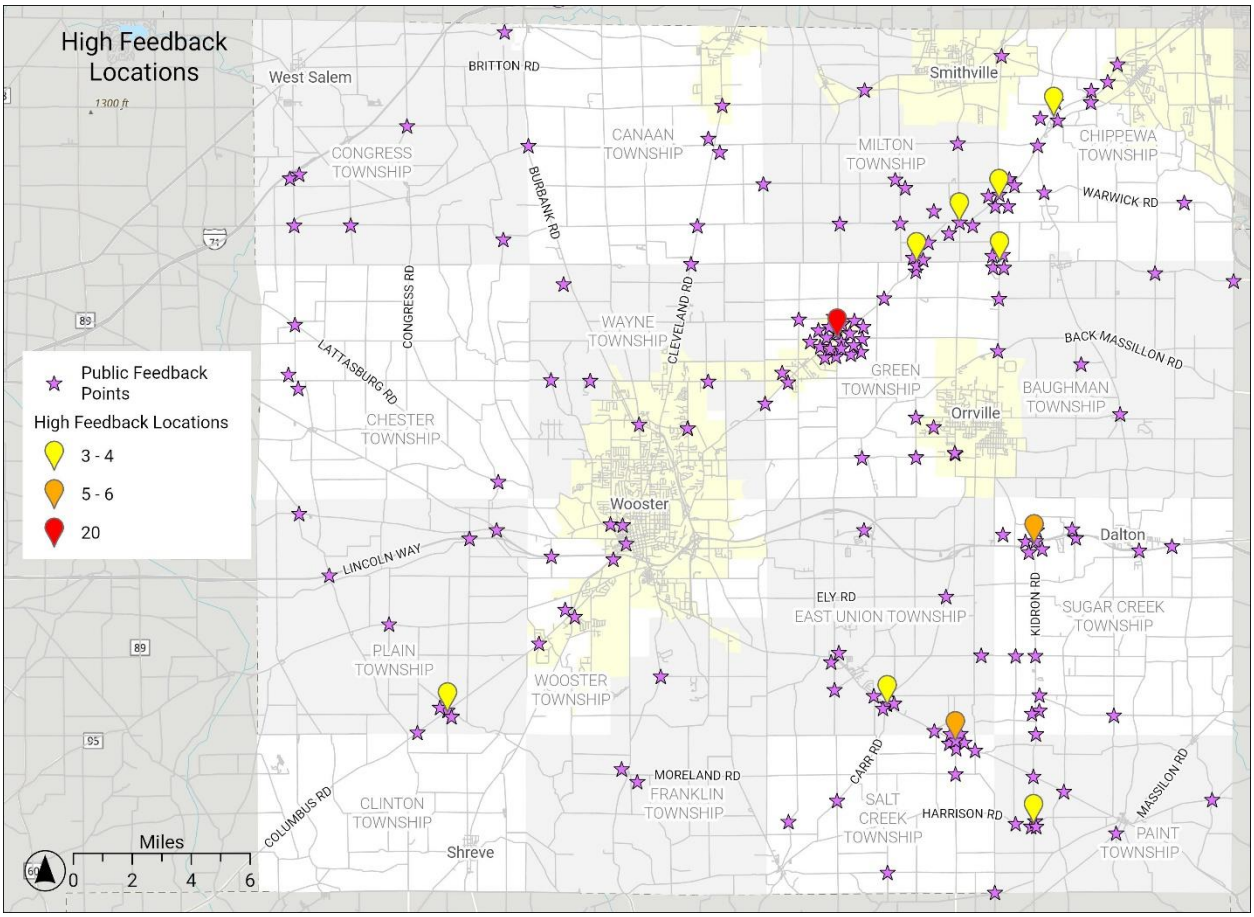


Figure 4. Map of Public Feedback Points

See Figure 5 through Figure 10 for photos and images of Public Engagement efforts.

Figure 5. Horse and Buggy parking at Red Tomato

Figure 6. Bike parking (around outfield fence of baseball field) for Amish Health and Safety Days

Figure 7. Participants at Amish Health and Safety Days

Figure 8. Rittman Public Meeting

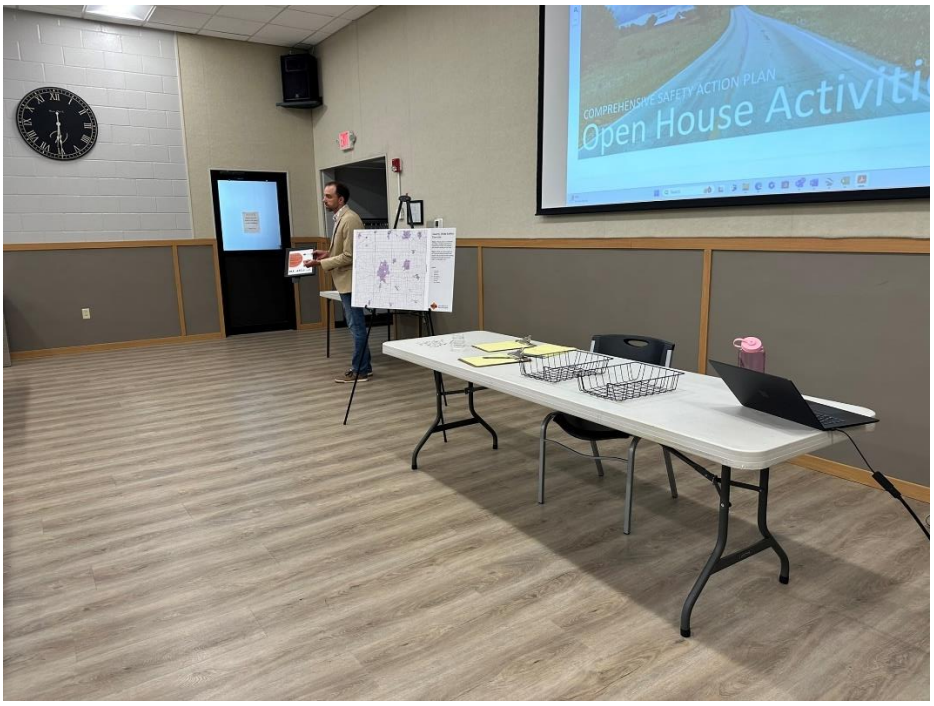


Figure 9. Wooster Public Meeting

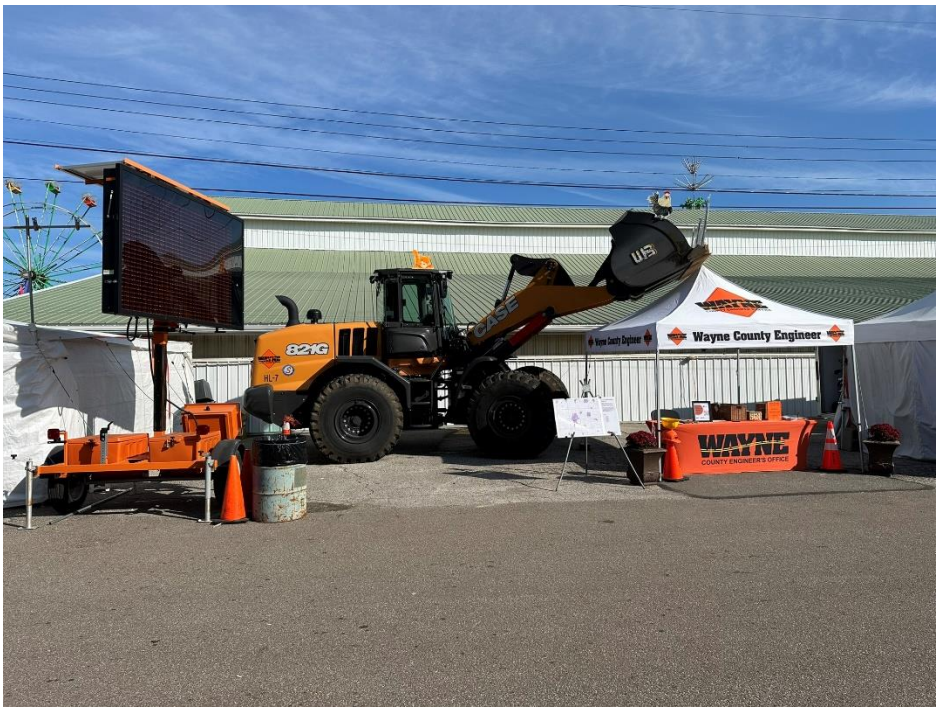


Figure 10. Booth at the Wayne County Fair

Figure 11. Excerpt from Comprehensive Safety Action Plan Webpage

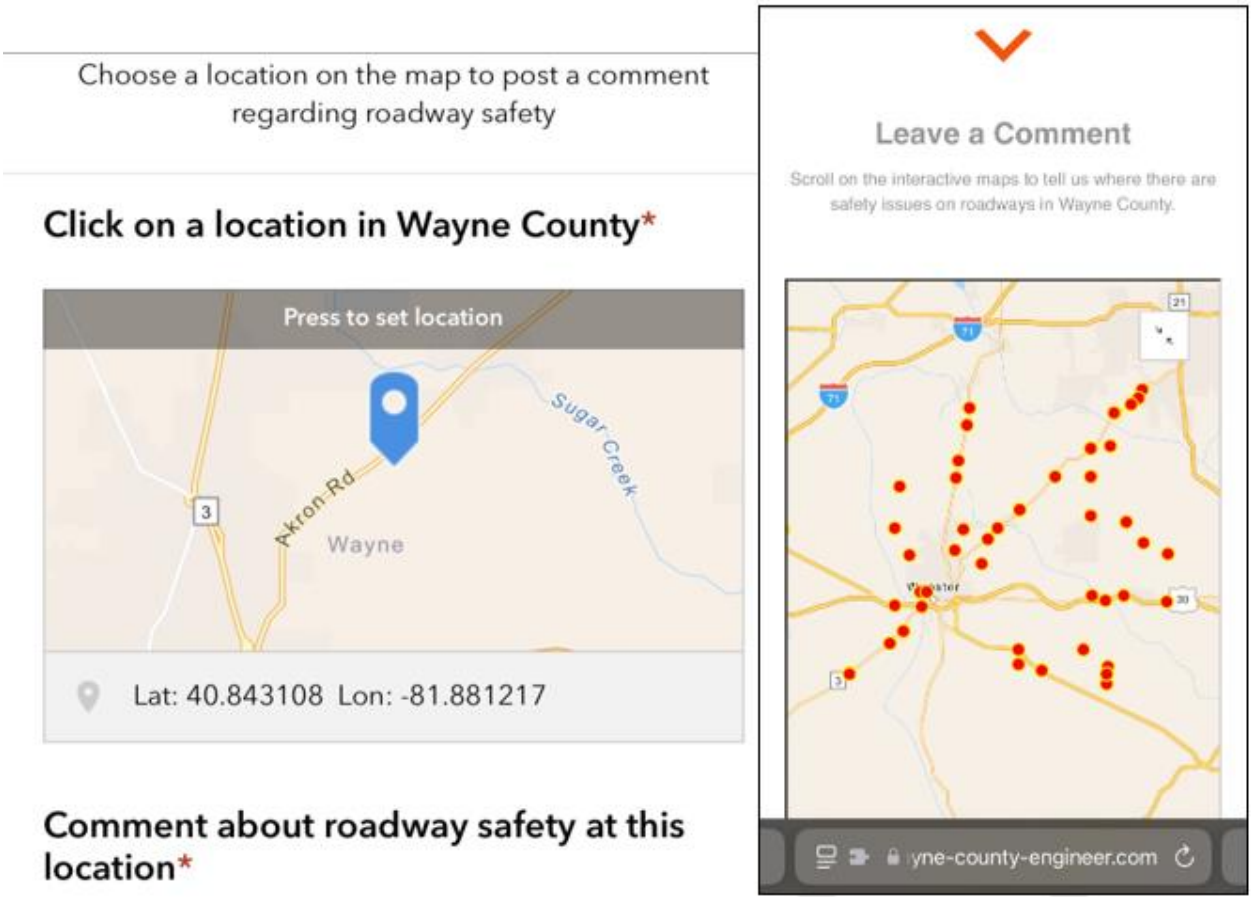


Figure 12. Interactive Map for Existing Safety Feedback on the Wayne County Engineer website

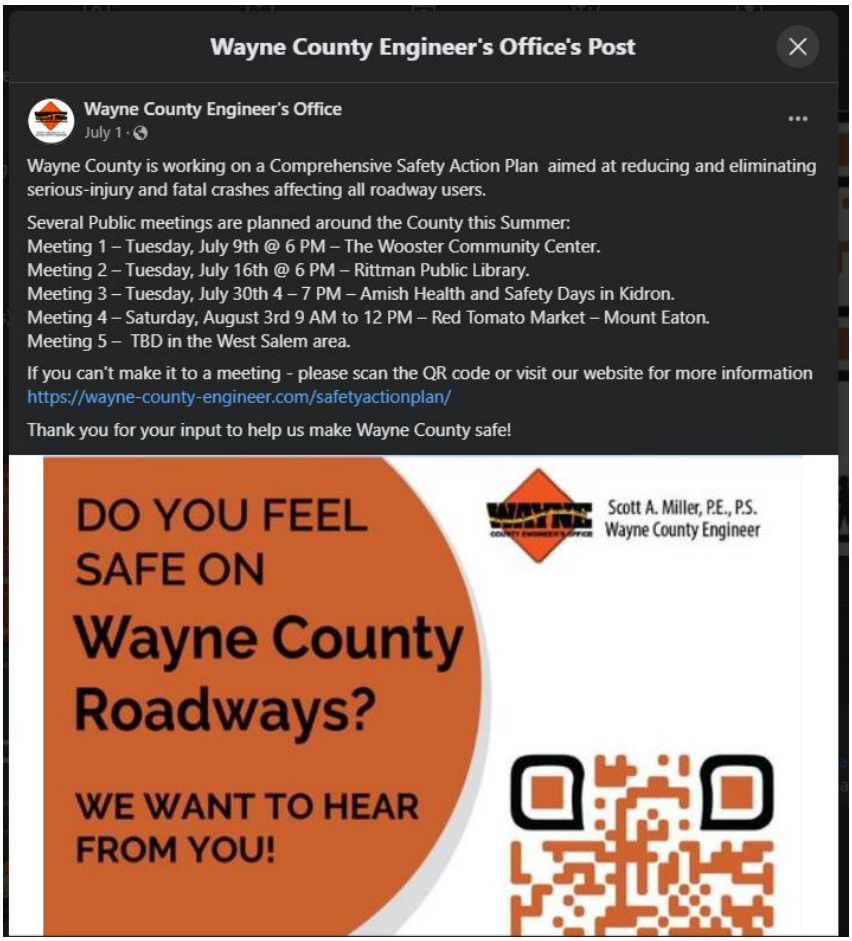


Figure 13. Facebook post on Wayne County Engineer's Office Social Media

3. EXISTING SAFETY ANALYSIS

3.1 Introduction

A statistical analysis has been performed with the focus of fatal and serious injury (FSI) crash data obtained from the Ohio Department of Transportation (ODOT) Transportation Information Mapping System (TIMS). This section identifies FSI crash trends within Wayne County, Ohio over a 10-year period (2014-2023). The purpose of this analysis is to provide a data-driven foundation upon which to develop a Comprehensive Safety Action Plan that addresses the myriad roadway safety challenges present in diverse locations, intersection types, and modal viewpoints throughout Wayne County.

3.2 Summary of Key Findings

Years of Crash Data analyzed: 2014-2023.

Total Crashes: 19,705 (Does not include Freeways and Interstates)

Total Fatal Crashes: 136

Total Fatalities: 148

Total Serious Injury Suspected Crashes: 560

Total Serious Injuries: 723

Total Fatal and Serious Injury (FSI) Crashes: 696

Total Fatalities and Serious Injuries: 871

Injury Severity: Approximately 96.5% of all crashes resulted in minor injury, possible injury, no injury, or property damage only (PDO). The percentage of crashes that resulted in serious injury and fatality was 2.8% and 0.7%, respectively.

Crashes by Mode:

- **Motor Vehicles:** Motor vehicle crashes comprise the majority of all crashes. There were 18,915 crashes that involved one vehicle only or multiple vehicles (vehicle-vehicle) crashes within the years analyzed; 595 of these resulted in fatality or serious injury.
- **Pedestrians:** Crashes involving pedestrians comprise 0.65% of all crashes, and 4.60% of FSI crashes. There were 128 crashes involving pedestrians within the years analyzed; 23 of these resulted in serious injury and nine resulted in a fatality.
- **Bicycles:** Bicycle crashes comprise 0.48% of all crashes, and 2.59% of FSI crashes. There were 95 crashes involving bicycles within the years analyzed; 17 of these resulted in serious injury and one resulted in a fatality.
- **Animal-Drawn Vehicles (ADVs):** Wayne County has a growing Amish population, especially in the southern part of the county. Much of this population still uses horse and buggy as their primary means of travel. ADVs are typically dark in color, and therefore less visible, especially in shadows and at night. Additionally, the significant speed difference between ADVs and motorized vehicles increases collision risks. There were 265 crashes involving an ADV within the years analyzed; 27 of these resulted in a serious injury and 3 resulted in a fatality.
- **Farm Equipment:** Wayne County has a rich agricultural history and is noted for the strength and diversity of its agricultural economy. Wayne County has approximately 1,750 farms totaling about 242,000 acres of farmland. This generates the need for farm equipment to share the road with other users, especially during

planting and harvest seasons. There were 110 crashes involving farm equipment within the years analyzed; 6 resulted in serious injury and 2 resulted in a fatality.

Leading FSI Crash Type: Angle crashes and fixed object crashes combined to account for nearly half (49%) of crashes resulting in fatal or serious injuries and represent the leading FSI crash types. In rural areas, there were slightly more fixed object crashes than angle crashes; in urban areas, angle crashes were more common. Head on crashes were the third most common crash type in both rural and urban areas and accounted for 11.1% of FSI crashes in Wayne County.

Leading FSI Crash Dynamics: Crash dynamics provide insight into why crashes occur. Most angle crashes (64.5%) occur at four-way intersections and 95.7% involve two units. Stop signs are the primary traffic control at intersections where FSI angle crashes occurred most often. The leading contributing factor in these crashes is failure to yield (54.8%) and running a stop sign (25.3%). Most angle crashes occur in daylight conditions (75.3%). Angle crashes involve a high number of younger drivers (38.2%) and older drivers (36%).

Fixed object crashes usually involve only one vehicle that departs from the roadway. Most fixed object crashes (70.7%) occur along a straight section of highway and the remaining 29.3% occur at curves. Fixed object crashes may also involve speed (44.2%), alcohol (24.3%), young drivers (33.2%) and occur in dark conditions (42%). Common fixed objects struck are ditches (24.3%), trees (22.1%) and utility poles (14.4%).

Leading FSI Contributing Factors: Contributing factors are variables that contribute to a crash. Failure to yield is the leading contributing factor to FSI crashes in both rural and urban areas. Failure to yield accounts for 20.8% of FSI crashes in rural areas and 30.5% of FSI crashes in urban areas. In rural areas, the second and third contributing factors are unsafe speed (14.8%) and following too closely (13.4%). In urban areas, the second and third contributing factors are other improper action (17.1%) and following too closely (9.5%).

FSI Safety Emphasis Area Crashes: The Ohio Department of Transportation (ODOT) has identified 16 Emphasis Areas in the State Highway Safety Plan (SHSP) to focus the state's transportation safety improvement efforts on. In Wayne County, roadway departure crashes are the leading Emphasis Area, and account for 46% of FSI crashes. Intersection crashes are the next highest Emphasis Area, and account for 40% of FSI crashes. Young driver crashes are the third highest Emphasis Area with 38% of FSI crashes.

Roadway Characteristics for FSI Crashes: In rural and urban areas, the highest percentage of FSI crashes occur at non-intersection locations. These percentages are 60.9% (rural) and 45.2% (urban). In rural and urban areas, the second highest percentage of FSI crashes occur at four-way intersections. Four-way intersection crashes occur at a rate of 20.8% in rural areas and 30% in urban areas. Most FSI crashes occur on 2-lane roadways: 87% of rural FSI crashes and 68% of urban FSI crashes.

Posted Speed Limits for FSI Crashes: In rural areas, the highest incidence of FSI crashes (87.7%) occur on roads with a posted speed limit of 55 mph. In urban areas, the highest incidence of FSI crashes also occurred on roads with a posted speed limit of 55 mph, but at a lower rate (35.2%). In urban areas, the second and third most crashes occurred on roads with posted speed limits of 35 mph (19.5%) and 25 mph (16.7%).

Environmental Characteristics for FSI Crashes: In both rural and urban areas, the highest percentage of FSI crashes occur during the month of October. June hosted the second highest percentage of FSI crashes. Overall, the highest number of FSI crashes per day of the week occur on Fridays, and FSI crashes peak between 3 PM and 6 PM.

3.3 Crash Analysis Methodology

The methodology for conducting a comprehensive crash analysis included gathering, organizing, analyzing, and interpreting data from various sources including, but not limited to, crash reports and roadway characteristics. A set of summary tables and charts were created to depict the connections among crash data, roadway features, and

contextual factors on a county-wide scale. These statistics provide valuable insight on overarching trends and patterns in FSI crashes, aiding in the identification of variables meriting further investigation, the development of new roadway safety programs, policy adjustments, or the implementation of safety measures for future projects.

Crash Data Overview

Police officers complete the Ohio OH-1 Crash Report Form when investigating a roadway crash. The Report Form prompts responding officers to document information about the involved parties, location, crash factors, and vehicle types involved in the crash. Crash data was obtained from the Ohio Department of Transportation's (ODOT) Transportation Information Mapping System (TIMS) for the most recent 10 years from 2014 through 2023 for Wayne County. This data was used for the descriptive analysis in this memo. The 1,543 crashes that occurred on freeways or freeway ramps were excluded from this analysis. The trends in this analysis are separated by rural and urban areas, as defined by ODOT's Adjusted Urbanized Areas boundaries (shown in Figure 14). Urbanized Areas do not always align with municipal boundaries.

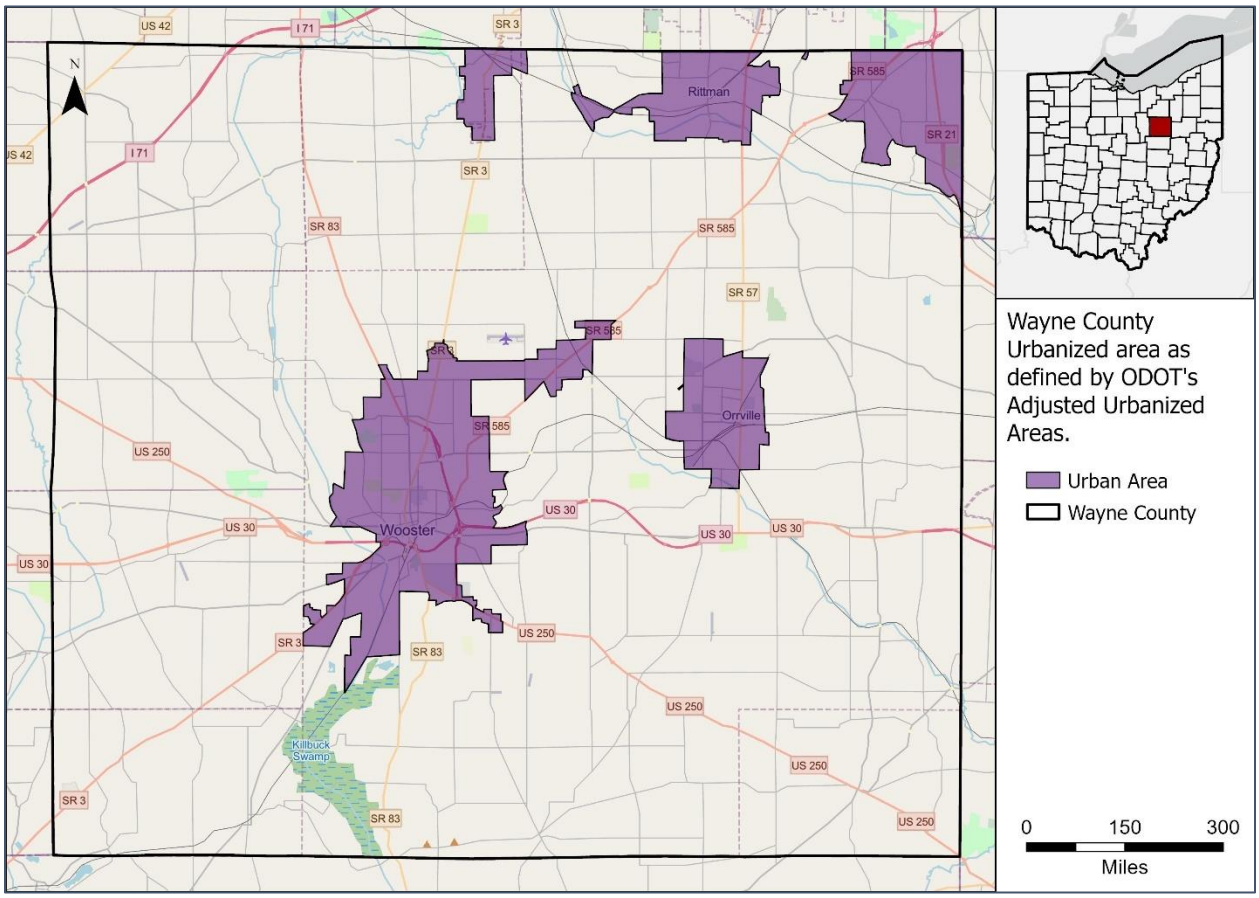


Figure 14. Map of Wayne County (Study Area)

Data Sources

Data was obtained from the Ohio Department of Transportation's (ODOT) Transportation Mapping System (TIMS). Census data was obtained from the U.S. Census Bureau for additional reference.

Study Limitations

Temporal Consistency Limitations

FSI crash and roadway data was analyzed for the years 2014-2023. Current conditions were reflected at the time the data was compiled. However, temporal consistency limitations could arise from changes in roadway conditions, traffic patterns, speed limits, and environmental conditions throughout the data period that might affect the occurrence and characteristics of crashes. These limitations may impact the comparison of data from different time periods or attribute observed changes solely to specific factors. However, it is anticipated that temporal changes will have a negligible impact on this comprehensive analysis of crash data.

Exposure Data

This report does not adjust data for roadway exposure rates. The data presented shows crash density, but does not account for frequency of vehicles, pedestrians, or bicycles at a given location. For example, if a significant number of FSI crashes were reported on a busy major highway, but that highway receives significantly more traffic than a township or municipal road, then the frequency of traffic may account for the higher number of crashes as opposed to potentially challenging roadway traits (such as limited site distance, poor lighting, or uneven road surfaces).

3.4 FSI Crash Analysis Findings

Fatal and Severe Injury Crashes

Between 2014 and 2023, Wayne County had 696 fatal and severe injury crashes. For purposes of this report, interstates and freeways were not included. Most of the FSI crashes, 486 crashes or 69.8%, occurred in rural areas. The remaining 210 crashes (30.2%) of FSI crashes occurred in urban areas. By comparison, 89.4% of Wayne County is considered rural and 10.6% is considered urban according to the Ohio Department of Transportation Adjusted Urbanized Areas.

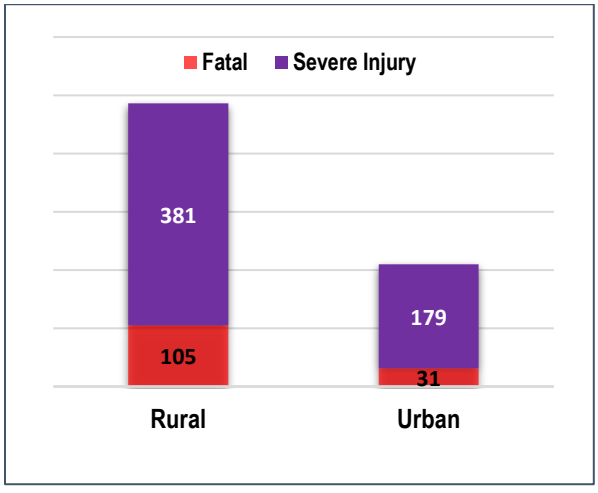


Figure 15. Wayne County Crashes by Area Type and Severity

FSI Crashes Per Year

Figure 16 shows the number of FSI crashes by year in rural and urban areas of Wayne County. Rural FSI crashes are consistently higher than urban FSI crashes. In 2017, the region had the most FSI crashes (86) and the highest percentage of FSI crashes (12.3%) out of all years analyzed. The number of FSI crashes reduced year by year through

2021, which had the lowest FSI crashes (53 or 8.2%). It is suspected that a reduction in traffic from Covid-19 policies may have contributed to this low point. After 2021, FSI crashes slowly increased but remained lower than previous years. Based on the years analyzed, both rural and urban FSI crashes are gradually trending downward.

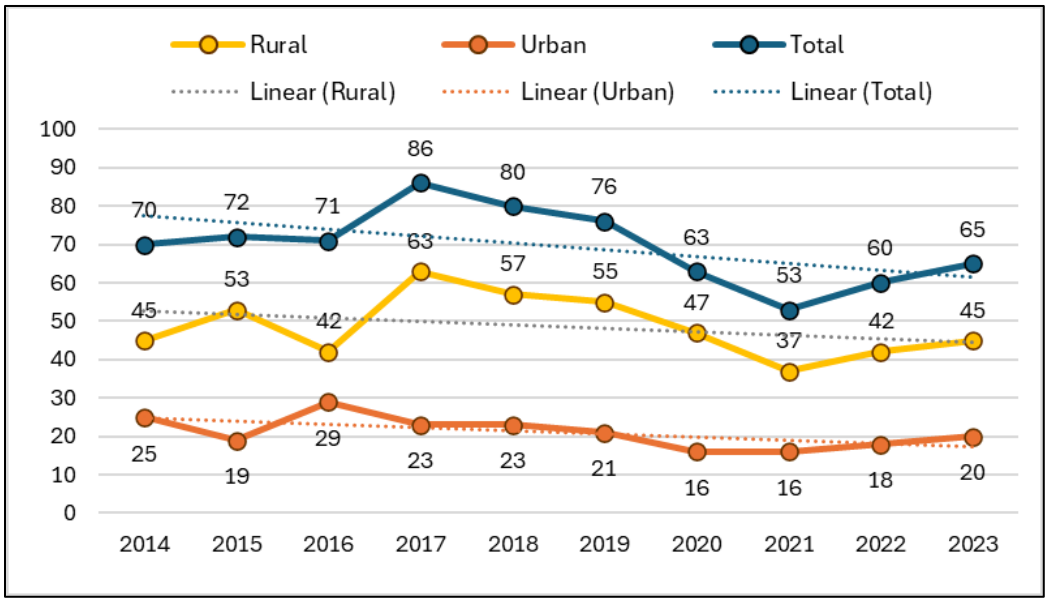


Figure 16. Rural and Urban FSI Crashes by Year (2014-2023)

FSI Crashes by Mode

Table 23 shows FSI crashes by mode for urban and rural areas of Wayne County. Overall, crashes involving at least two vehicles ("vehicle-vehicle") accounted for 56% of all crashes, and 55% of all FSI crashes. Bicycle-vehicle and pedestrian-vehicle crashes are disproportionately represented in FSI crashes. Pedestrian-involved crashes compose 1% of all crashes, but 5% of all FSI crashes. Bicycle-involved crashes compose less than 1% of all crashes, but 3% of all FSI crashes. This reflects the tendency for crashes involving a vulnerable road user (VRU) to be much greater in severity than vehicle-vehicle crashes on average.

Two unique modes included in this analysis are Animal-Drawn Vehicles (ADV's) and Farm Equipment. Much of the growing Amish population in Wayne County use horse and buggy as their primary means of transportation. Animal-Drawn Vehicle crashes account for 1% of all crashes but 4% of FSI crashes. Additionally, Wayne County has a rich agricultural economy. Farm equipment such as tractors and harvesters often require the use of roadways to access agricultural fields during planting and harvest seasons. Crashes involving farm equipment account for less than 1% of all crashes and make up 1% of FSI crashes.

Table 2. FSI Crashes by Mode (2014-2023)

Vehicle and	Rural				Urban				Total			
	FSI	FSI%	Total Crashes	Total Crashes%	FSI	FSI%	Total Crashes	Total Crashes%	FSI	FSI%	Crashes	Crashes%
Another Vehicle(s)	255	52%	4,236	40%	130	62%	6,728	73%	385	55%	10,964	56%
One Vehicle Only	163	34%	5,690	54%	47	22%	2,261	25%	210	30%	7,951	40%
Animal Drawn Vehicle	29	6%	254	2%	1	0%	11	0%	30	4%	265	1%
Other or Unknown	10	2%	140	1%	3	1%	52	1%	13	2%	192	1%
Pedestrian	11	2%	33	0%	21	10%	95	1%	32	5%	128	1%
Bicycle	10	2%	34	0%	8	4%	61	1%	18	3%	95	0%
Farm Equipment	8	2%	105	1%	0	0%	5	0%	8	1%	110	1%
Total	486	100%	10,492	100%	210	100%	9,213	100%	696	100%	19,705	100%

Leading FSI Crash Types

Table 2 and Figure 17 summarize FSI crashes by crash type in rural and urban areas of Wayne County. In rural areas, fixed-object crashes are the leading crash type. A fixed-object crash occurs when a vehicle collides with a stationary object. The majority of fixed object crashes result from a vehicle colliding with a ditch, followed closely by tree collisions. Other types of fixed object crashes may include, but are not limited to, utility pole, culvert, embankment, and guardrail collisions. Angle crashes, however, are the leading crash type in urban areas. Angle crashes often involve vehicles colliding with each other at or near right angles, with one vehicle striking the side of the other. This commonly happens at intersections. Head-on collisions are the third most common crash type in both rural and urban areas.

Table 3. FSI Crash Type by Rural vs. Urban, 2014-2023

Crash Type	Rural		Urban		Total	
	FSI Crashes	FSI %	FSI Crashes	FSI %	FSI Crashes	FSI %
Angle	133	26%	53	23%	186	25%
Fixed Object	139	27%	42	18%	181	24%
Head On	52	10%	25	11%	77	10%
Rear End	35	7%	21	9%	56	8%
Left Turn	27	5%	21	9%	48	6%
Sideswipe - Passing	31	6%	5	2%	36	5%
Pedestrian	11	2%	21	9%	32	4%
Overturning	25	5%	6	3%	31	4%
Pedalcycles	10	2%	8	4%	18	2%
Right Turn	4	1%	5	2%	9	1%
Animal	8	2%	0	0%	8	1%
Parked Vehicle	5	1%	2	1%	7	1%

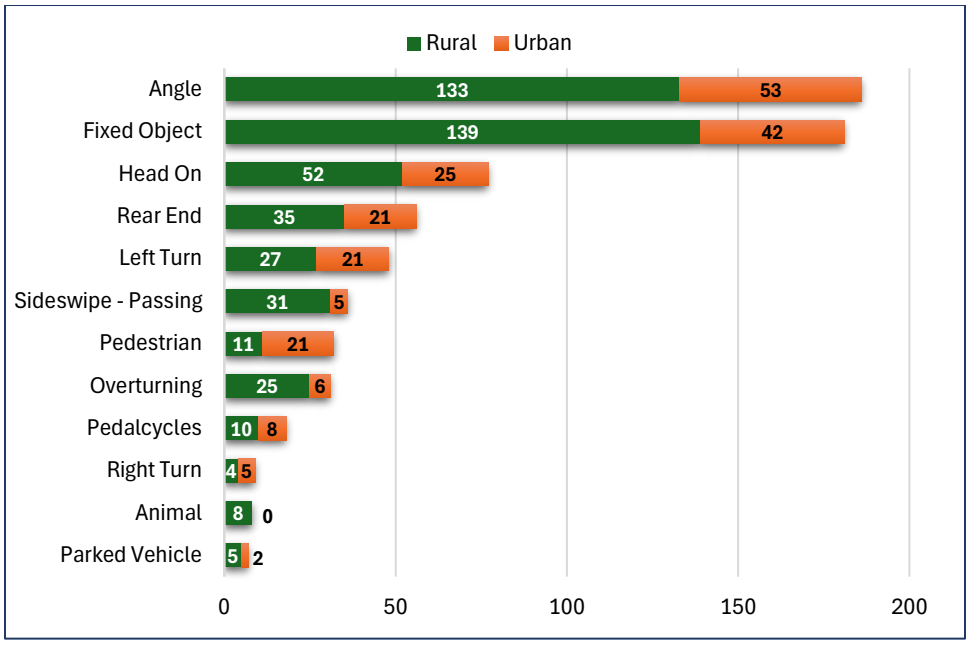


Figure 17. FSI Crash Type by Rural vs. Urban, 2014-2023

Leading FSI Contributing Factors

Figure 18 summarizes the number of FSI crashes by contributing factor in both rural and urban areas of Wayne County. Failure to Yield is the most common contributing factor in both rural and urban areas. In rural areas, Unsafe Speed and Left of Center are the second and third most common contributing factors, respectively. In urban areas, other improper action and following too closely are the second and third most common contributing factors, respectively.

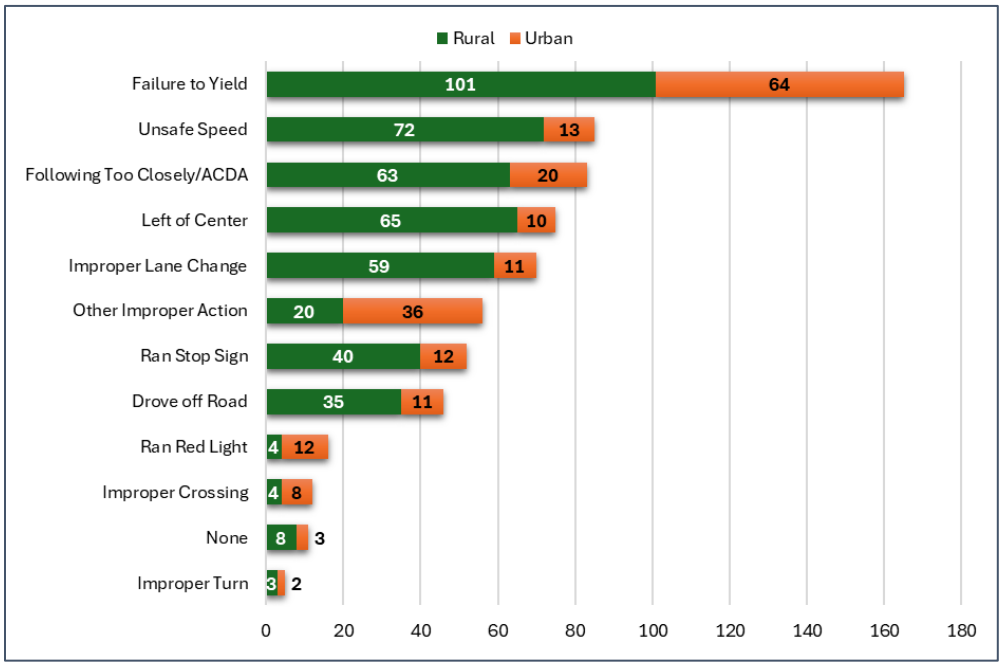


Figure 18. Top Contributing Factors to FSI Crashes, 2014-2023

FSI Crashes by Safety Emphasis Area

The Ohio Department of Transportation (ODOT) has identified sixteen emphasis areas in the State Highway Safety Plan (SHSP) on which to focus the state's transportation safety improvement efforts. Six of these emphasis areas are considered behavior-related, and include road-departure, youth (under 25 years old), speeding, senior (65 years old and older), impairment (drugs or alcohol), and distracted driving. SHSP Emphasis areas result in a disproportionately high number of FSI crashes. Figure 19 below lists the number of FSI crashes by the 16 SHSP Emphasis Areas in both rural and urban areas of Wayne County.

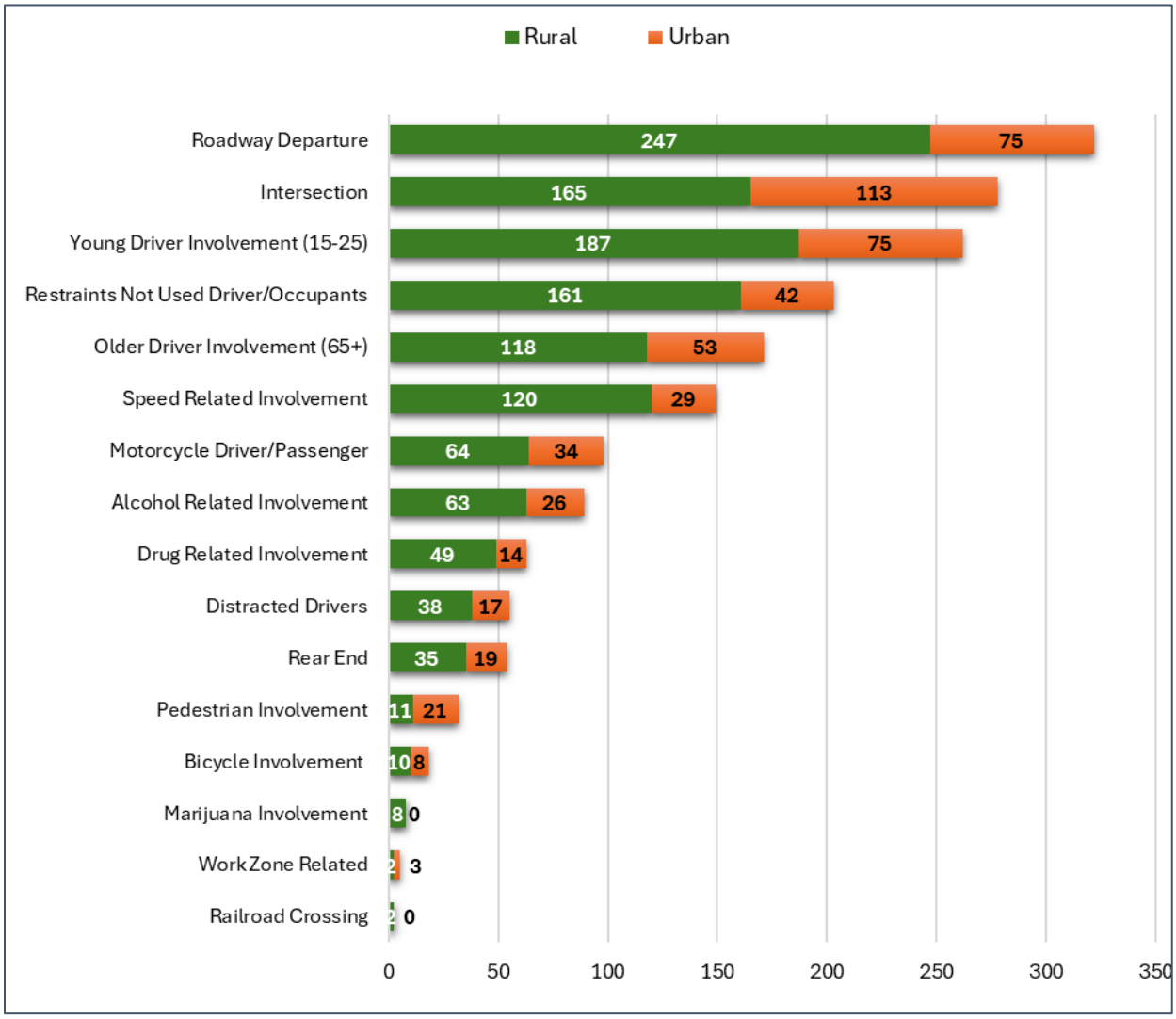


Figure 19. FSI Crashes by Safety Emphasis Area (2014-2023)

Roadway Characteristics of FSI Crashes

FSI Crash Location (Intersection vs. Mid-Block)

Figure 20 depicts FSI crashes by location type in rural and urban areas of Wayne County. Crashes within 250 feet of rural intersections and 150 feet of urban intersections are considered intersection crashes; crashes within 100 feet of

the centerline network but not near intersections are considered mid-block crashes. In both rural and urban areas, the majority of FSI crashes occur at mid-block locations. However, at rural locations, a higher percentage (63%) are at mid-block locations as compared to 48% in urban areas. Crash locations reported as "Unknown" are crashes in which the police did not report the type of location, or the location was hard to determine.

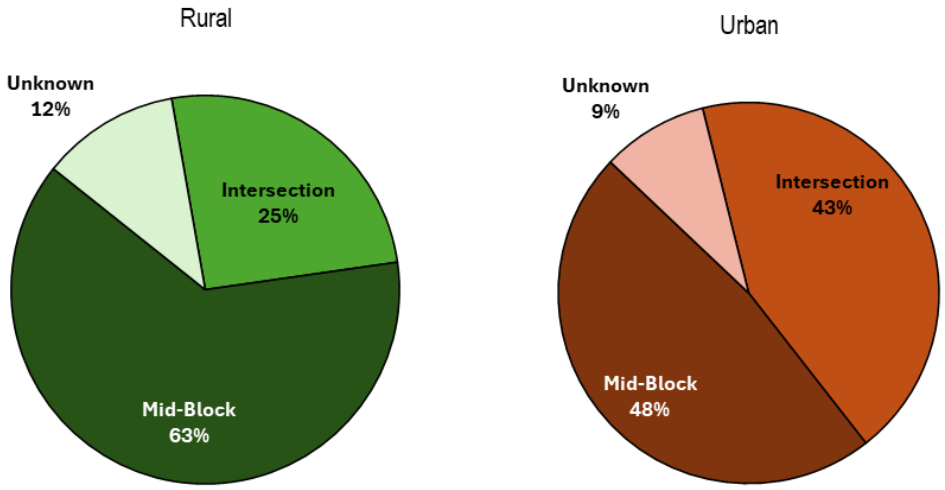


Figure 20. FSI Crashes by Crash Location (2014-2023)

FSI Crashes by Highway Functional Classification

Table 4 summarizes FSI crashes by roadway functional classification in the rural and urban areas of Wayne County. Collector roads, low-to-moderate capacity roads that serve to move traffic from local roads to arterial roads, have the highest share of FSI crashes in rural areas (183 out of 486), while minor arterials have the highest share of FSI crashes (60 out of 210) in urban areas. When considering roadway miles, minor arterial roadways—moderate- to high-capacity roadways that connect towns and cities—have the highest FSI crash density in rural areas at 1.5 FSI crashes per mile while principal arterials have the highest FSI crash density in urban areas at 1.2 FSI crashes per mile.

Table 4. FSI Crashes by Roadway Functional Classification (2014-2023)

Functional Class	Rural			Urban			Total		
	FSI Crashes	Miles	FSI Crashes/Mile	FSI Crashes	Miles	FSI Crashes/Mile	FSI Crashes	Miles	FSI Crashes/Mile
Principal Arterials	63	74.6	0.8	57	49.2	1.2	120	123.8	1.0
Minor Arterials	94	63.2	1.5	60	68.9	0.9	154	132.1	1.2
Collectors	183	390.1	0.5	53	87.6	0.6	236	477.7	0.5
Local	141	1141.5	0.1	39	430.4	0.1	180	1571.9	0.1
Unknown	5			1			6		
Total	486	1669.4	0.3	210	636.1	0.3	696	2305.5	0.3

FSI Crashes by Roadway Jurisdiction

Table 5 summarizes FSI crashes by roadway jurisdictions in the rural and urban areas of Wayne County. In rural areas, state roads have the largest share of FSI crashes (222 of 486 crashes). In urban areas, Municipal roads have the largest share of FSI crashes (107 of 210 crashes). When considering roadway miles, state roadways have the highest FSI crash density in rural areas at 0.8 FSI crashes per mile. In urban areas, municipal and state roadways have the highest FSI crash density at 0.5 FSI crashes per mile.

Table 5. FSI Crashes by Roadway Jurisdiction (2014-2023)

Roadway Jurisdiction	Rural			Urban			Total		
	FSI Crashes	Miles	FSI Crashes/Mile	FSI Crashes	Miles	FSI Crashes/Mile	FSI Crashes	Miles	FSI Crashes/Mile
County	181	630.6	0.3	45	158.6	0.3	226	789.2	0.3
Municipal	14	40.4	0.3	107	196.7	0.5	121	237.1	0.5
Private	0	42.7	0.0	2	68.5	0.0	2	111.2	0.0
State	222	280.4	0.8	47	85.6	0.5	269	366.0	0.7
Township	69	675.3	0.1	9	126.7	0.1	78	802.0	0.1
Total	486	1669.4	0.3	210	636.1	0.3	696	2305.5	0.3

FSI Crashes by Posted Speed Limit

Table 6 summarizes the breakdown of FSI crashes by posted speed limit in Wayne County. The majority of FSI crashes in both rural and urban areas occur at a posted speed limit of 55 miles per hour. The highest density of FSI crashes in rural areas also occur at posted speed limits of 55 miles per hour, with 1.9 FSI crashes per mile. However, in urban areas, the highest density of FSI crashes occur at 40 mph, with 4.0 FSI crashes per mile. Overall, the highest number of crashes occur at posted speed limits of 55 miles per hour, and the highest density of crashes occur at posted speed limits of 40 miles per hour.

Table 6. FSI Crashes by Posted Speed Limit (2014-2023)

Posted Speed Limit	Rural			Urban			Total		
	FSI Crashes	Miles	FSI Crashes/Mile	FSI Crashes	Miles	FSI Crashes/Mile	FSI Crashes	Miles	FSI Crashes/Mile
0-15	11	63.9	0.2	9	34.1	0.3	20	98	0.2
25	1	67.6	0.0	35	358	0.1	36	425.6	0.1
35	13	13.5	1.0	41	20	2.1	54	33.5	1.6
40	1	1.4	0.7	8	2	4.0	9	3.4	2.6
45	25	1285.5	0.0	26	177	0.1	51	1462.5	0.0
50	2	1.88	1.1	7	4	1.8	9	5.88	1.5
55	426	221.2	1.9	74	28	2.6	500	249.2	2.0
60	7	14.4	0.5	10	13	0.8	17	27.4	0.6
Total	486	1669.4	0.3	210	636.1	0.3	696	2305.5	0.3

Environmental Characteristics of FSI Crashes

FSI Crashes by Month of Year

Figure 21 summarizes FSI crashes by month in rural and urban areas of Wayne County. In rural areas, the highest number of FSI crashes occurred in both June and October, each with 52 crashes. In urban areas, the majority of FSI crashes occurred in October, with 25 crashes. Urban areas exhibit lower monthly fluctuations in FSI crashes as compared to rural areas. When considering both rural and urban areas, the summer and fall months between June and October have the highest share of FSI crashes. These are also the most common months for tourism in Wayne County and the surrounding counties.

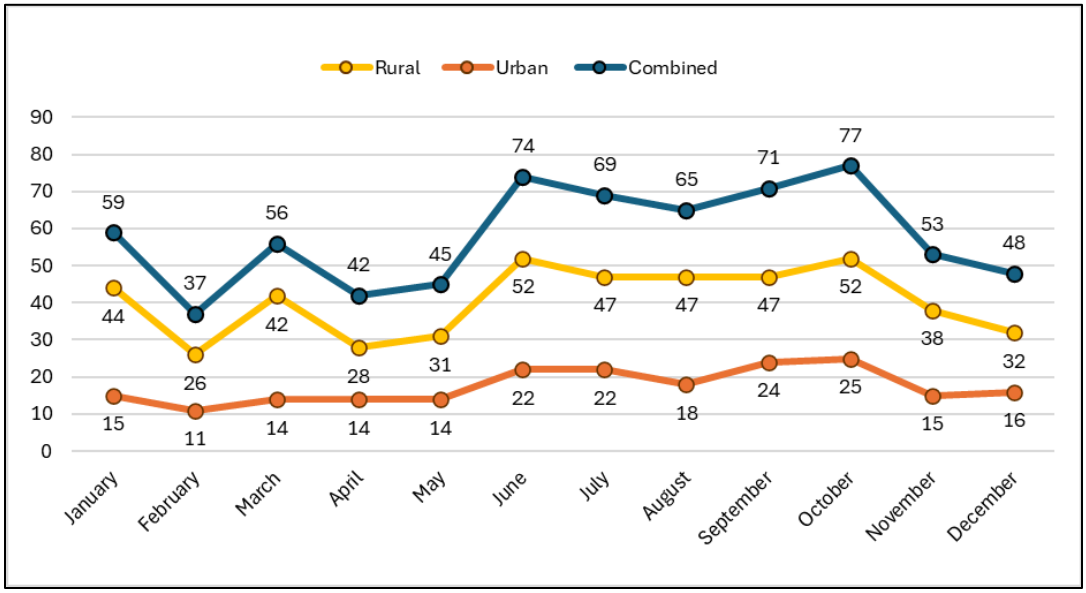


Figure 21. FSI Crashes by Month (2014-2023)

FSI Crashes by Day of Week and Time of Day

Table 7 summarizes FSI crashes by day of week and time of day in rural Wayne County. In rural areas, FSI crashes generally peak on Tuesdays and Thursdays between 3 and 6 PM. Traffic is typically at its peak between 3 and 6 pm, as this represents the time of day when the public commutes from school and/or work. Overall, most crashes occur on Tuesdays and Fridays.

Table 7. Rural FSI Crashes by Day of Week and Time of Day (2014-2023)

	Rural								
	12-3 AM	3-6 AM	6-9 AM	9 AM-12 PM	12-3 PM	3-6 PM	6-9 PM	9 PM-12 AM	Total
Sun	7	5	4	5	9	19	10	5	64
Mon	0	4	7	11	9	16	7	6	60
Tues	2	6	12	12	10	23	8	8	81
Wed	1	4	12	6	13	14	10	4	64
Thurs	1	1	7	6	9	23	11	4	62
Fri	3	4	7	6	13	18	18	14	83
Sat	6	2	10	9	12	13	9	11	72
Total	20	26	59	55	75	126	73	52	486

Similarly, Table 8 summarizes FSI crashes by day of week and time of day in urban Wayne County. In urban areas, FSI crashes also peak on weekdays between 3 and 6 PM, with the highest number of crashes occurring on Fridays between 3 and 6 PM. Overall, most crashes occur on Tuesdays and Fridays.

Table 8. Urban FSI Crashes by Day of Week and Time of Day (2014-2023)

	Urban								
	12-3 AM	3-6 AM	6-9 AM	9 AM-12 PM	12-3 PM	3-6 PM	6-9 PM	9 PM-12 AM	Total
Sun	7	3	0	0	5	4	4	2	25
Mon	0	2	5	1	5	6	6	2	27
Tues	0	3	5	4	8	9	6	1	36
Wed	1	0	6	4	6	8	4	3	32
Thurs	1	1	5	2	3	8	5	5	30
Fri	1	1	2	5	9	10	5	2	35
Sat	5	3	0	2	4	3	6	2	25
Total	15	13	23	18	40	48	36	17	210

FSI Crashes by Weather Condition

Figure 22 depicts FSI crashes by weather conditions in rural and urban Wayne County. In both rural and urban areas, the majority of FSI crashes occur under clear weather conditions. The second most common weather condition for both rural and urban FSI crashes was cloudy.

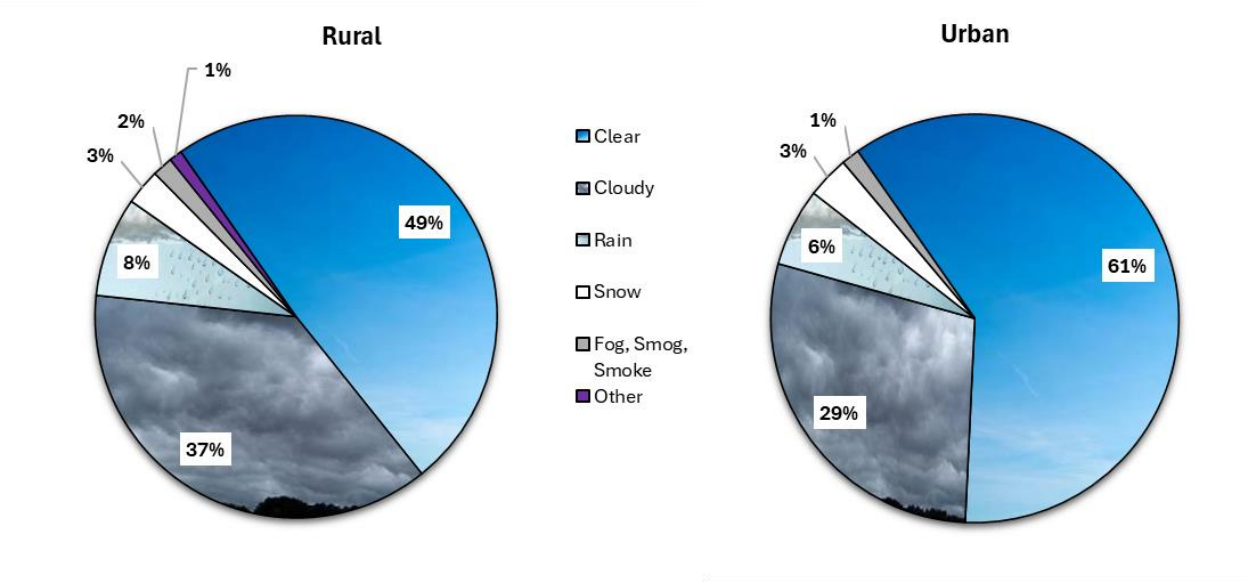


Figure 22. FSI Crashes by Weather Condition (2014-2023)

FSI Crashes by Lighting Condition

Figure 23 depicts FSI crashes by lighting condition in rural and urban Wayne County. In both rural and urban areas, the majority of FSI crashes occur in daylight conditions. The second highest number of FSI crashes occur in dark, unlighted conditions.

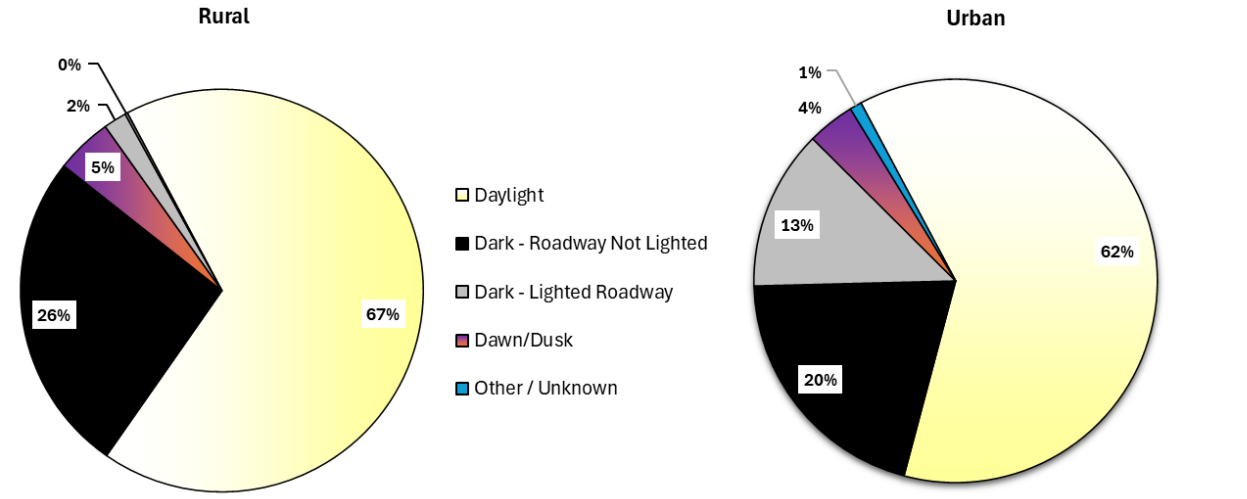


Figure 23. FSI Crashes by Light Condition (2014-2023)

FSI Crashes by Road Surface Condition

Figure 24 depicts FSI crashes by road surface conditions at the time of the crash. In both rural and urban areas, the highest number of FSI crashes occurred on dry road surfaces (78% and 85%), followed by wet road surfaces (16% and 11%).

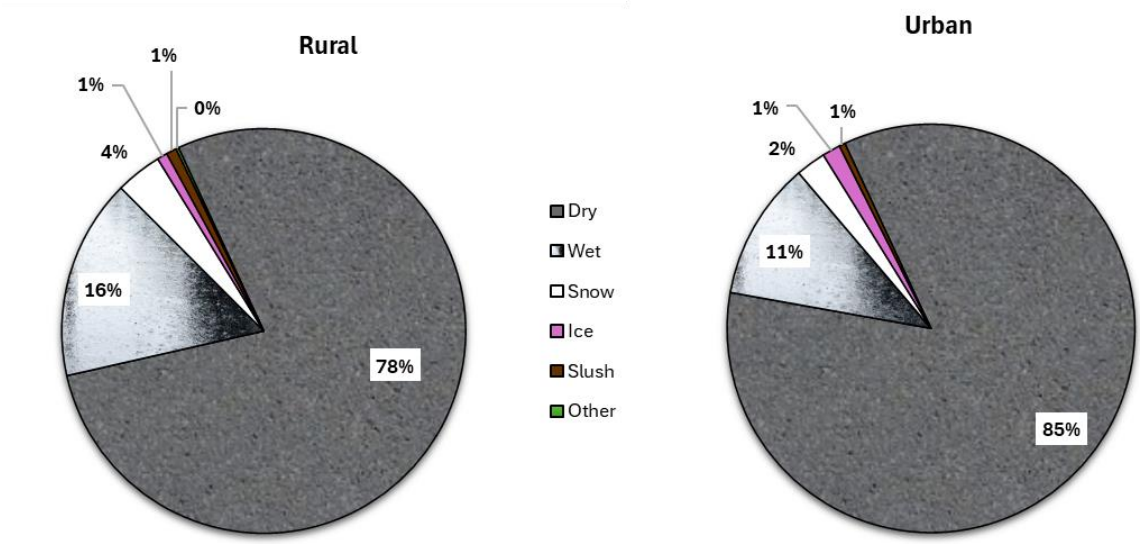


Figure 24. FSI Crashes by Road Surface Condition (2014-2023)

FSI Crashes by At-Fault Age and Gender

Figure 25 summarizes the breakdown of FSI crashes by at-fault gender. In both urban and rural areas, males are the leading at-fault gender group in FSI crashes.

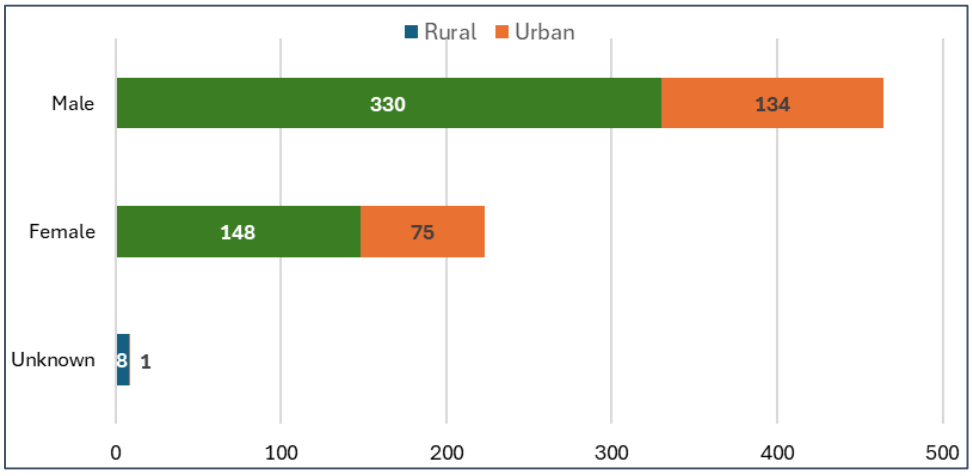


Figure 25. FSI Crashes by At-Fault Gender (2014-2023)

Table 9 summarizes the gender and age breakdown of the at-fault driver in FSI crashes. In rural areas, males between the ages of 20 and 24 were the leading group that were at fault for 50 FSI crashes. In urban areas males between 15 and 19 were the leading group that were at fault for 18 FSI Crashes. The highest number of FSI crashes occurred in rural areas by males between 20 and 24 years old. Overall, males and females between 15 and 24 are responsible for 26% of all FSI crashes.

Table 9. FSI Crashes by Age and Gender (2014-2023)

Age	Rural			Urban		
	Female	Male	Total	Female	Male	Total
<15	3	7	10	1	3	4
15-19	15	45	60	11	18	29
20-24	20	50	70	9	13	22
25-29	17	38	55	7	16	23
30-34	16	35	51	5	14	19
35-39	13	24	37	9	8	17
40-44	5	23	28	4	10	14
45-49	9	25	34	3	9	12
50-54	9	20	29	5	6	11
55-59	9	14	23	3	11	14
60-64	6	15	21	3	6	9
65-69	7	10	17	2	6	8
70-74	7	13	20	5	3	8
75-79	4	11	15	2	4	6
80-84	6	5	11	5	5	10
85-90	2	2	4	2	2	4
>90	0	1	1	0	0	0
Total	148	338	486	76	134	210
Total %	30%	70%		36%	64%	

3.5 Pedestrian-Related Crash Analysis Findings

A total of 128 crashes involving a pedestrian occurred in Wayne County. Pedestrian-related crashes result in a high percentage of injuries (97.7%). Out of 128 crashes, 9 were fatal (7%) and 23 resulted in serious injuries (18%). This accounts for 25% of all pedestrian crashes. All but three of the remaining 96 pedestrian-related crashes resulted in some degree of injury. Due to the high percentage of injury in pedestrian-related crashes, all pedestrian crashes were considered in this analysis. When comparing pedestrian crashes in rural and urban areas, nearly three times as many pedestrian crashes occurred in urban areas than in rural areas. Urban areas contain a higher density of vehicles and pedestrians, which creates more conflicts and is likely to contribute to this difference. Figure 26 depicts pedestrian-related crashes by severity in rural and urban areas.

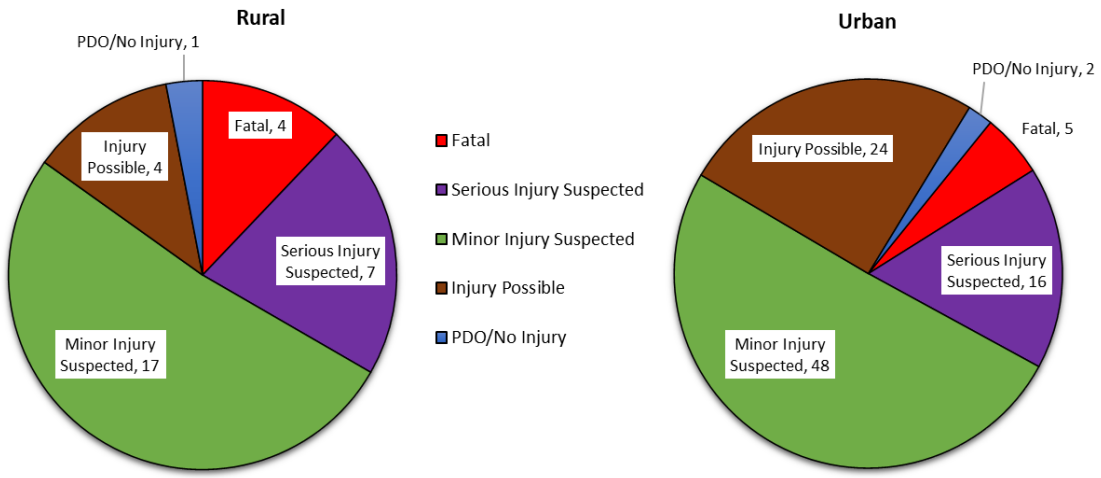


Figure 26. Pedestrian Crashes by Injury (2014-2023)

Pedestrian-Related Crashes Per Year

Figure 27 shows the number of pedestrian-related crashes by year in rural and urban areas of Wayne County. Urban pedestrian-related crashes are consistently higher than those in rural areas. Pedestrian-related crashes that occurred in rural areas remained more constant over the years analyzed while in urban areas there was considerable variance. A sharp rise in urban pedestrian crashes occurred in 2018, which saw the highest number of pedestrian-related crashes (19 crashes) in Wayne County. 2017 had the second-most crashes (17 crashes) and 2019 had the third most crashes (16 crashes). The year with the fewest number of pedestrian-related crashes was 2023, which had a total of 7 crashes. Both rural and urban pedestrian-related crashes were trending downward during the analysis period.

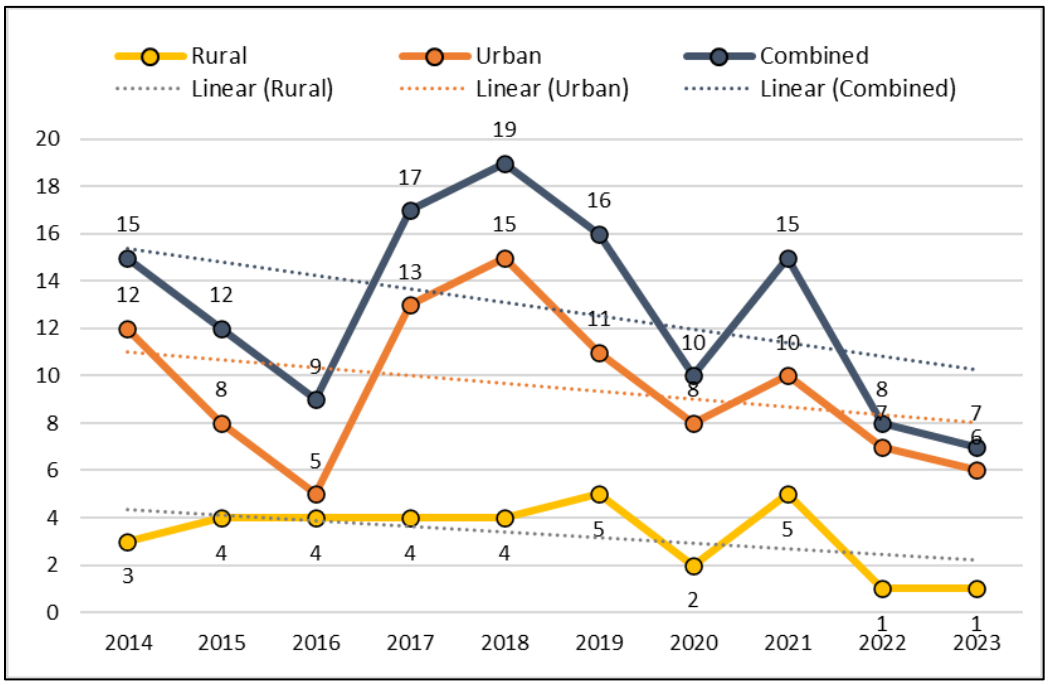


Figure 27. Pedestrian Crashes by Year (2014-2023)

Roadway Characteristics of Pedestrian-Related Crashes

Pedestrian-Related Crash Location (Intersection vs. Mid-Block)

Figure 28 summarizes pedestrian-related crashes by location type in rural and urban areas of Wayne County. Crashes within 150 feet of urban intersections or 250 feet of rural intersections are considered intersection crashes; crashes within 100 feet of the centerline network but not near intersections are considered mid-block crashes. In both rural and urban areas, most pedestrian-related crashes occurred at mid-block locations. However, at rural locations, a higher percentage (85%) of pedestrian-related crashes occurred at mid-block locations, compared to 58% in urban areas.

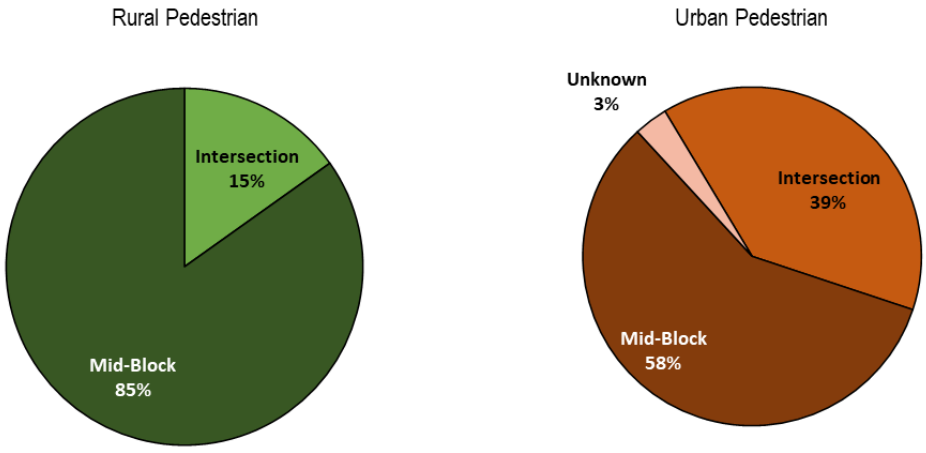


Figure 28. Pedestrian Crashes by Crash Location (2014-2023)

Pedestrian-Related Crashes by Functional Classification

Table 10 summarizes pedestrian-related crashes by roadway functional classification in the urban and rural areas of Wayne County. Collectors have the highest share of pedestrian related crashes in rural areas (19 of 33 crashes), while minor arterials have the highest number in urban areas (36 of 95 crashes). When considering roadway miles, collectors have the highest pedestrian involved crash density in rural areas at 0.5 crashes per mile. In urban areas, minor arterials have the highest pedestrian involved crash density at 0.52 crashes per mile.

Table 10. Pedestrian Crashes by Roadway Functional Classification (2014-2023)

Functional Class	Rural			Urban			Total		
	Pedestrian Crashes	Miles	Crashes/ Mile	Pedestrian Crashes	Miles	Crashes/ Mile	Pedestrian Crashes	Miles	Crashes/ Mile
Principal Arterials	3	74.6	0.04	24	49.2	0.49	27	123.8	0.22
Minor Arterials	2	63.2	0.03	36	68.9	0.52	38	132.1	0.29
Collectors	19	390.1	0.05	20	87.6	0.23	39	477.7	0.08
Local	9	1141.5	0.01	14	430.4	0.03	23	1572	0.01
Unknown	0			1			1		
Total	33	1669.4	0.02	95	636.1	0.15	128	2305.6	0.06

Pedestrian-Related Crashes by Roadway Jurisdiction

Table 11 summarizes pedestrian crashes by roadway jurisdictions in rural and urban areas of Wayne County. In rural areas, county roads have the largest share of pedestrian crashes with 17. In urban areas, municipal roads have the largest share of pedestrian crashes with 84. When considering roadway miles, municipal roads have the highest density of pedestrian involved crashes in both rural and urban areas. Municipal roads have a density of 0.12 crashes per mile in rural areas and 0.43 crashes per mile in urban areas.

Table 11. Pedestrian Crashes by Roadway Jurisdiction (2014-2023)

Roadway Jurisdiction	Rural			Urban			Total		
	Pedestrian Crashes	Miles	Crashes/ Mile	Pedestrian Crashes	Miles	Crashes/ Mile	Pedestrian Crashes	Miles	Crashes/ Mile
County	17	630.6	0.03	4	158.6	0.03	21	789.2	0.03
Municipal	5	40.4	0.12	84	196.7	0.43	89	237.1	0.38
Private	0	42.7	0.00	1	68.5	0.01	1	111.2	0.01
State	7	280.4	0.02	5	85.6	0.06	12	366	0.03
Township	4	675.3	0.01	1	126.7	0.01	5	802	0.01
Total	33	1669.4	0.02	95	636.1	0.15	128	2305.5	0.06

Pedestrian-Related Crashes by Posted Speed Limit

Table 12 summarizes the breakdown of pedestrian crashes by posted speed limit in Wayne County. The majority of crashes in rural areas, 17, occurred at a posted speed limit of 55 miles per hour. In urban areas, the speed limit with the most crashes is 25 mph with 38. The speed limits with the highest density of crashes per mile in rural areas are 0-15 mph, 35 mph, and 55 mph, each with 0.1 pedestrian crash per mile. The speed limit with the most density of crashes in urban areas is 0-15 mph with 0.9 FSI crashes per mile.

Table 12. Pedestrian Crashes by Posted Speed Limit (2014-2023)

Posted Speed Limit	Rural			Urban			Total		
	Pedestrian Crashes	Miles	Pedestrian Crashes/Mile	Pedestrian Crashes	Miles	Pedestrian Crashes/Mile	Pedestrian Crashes	Miles	Pedestrian Crashes/Mile
0-15	9	63.9	0.1	30	34.1	0.9	39	98	0.4
25	3	67.6	0.0	38	358	0.1	41	425.6	0.1
35	2	13.5	0.1	16	20	0.8	18	33.5	0.5
40	0	1.4	0.0	0	2	0.0	0	3.4	0.0
45	2	1285.5	0.0	8	177	0.0	10	1462.5	0.0
50	0	1.88	0.0	1	4	0.3	1	5.88	0.2
55	17	221.2	0.1	1	28	0.0	18	249.2	0.1
60	0	14.4	0.0	1	13	0.1	1	27.4	0.0
Total	33	1669.4	0.0	95	636.1	0.1	128	2305.5	0.1

Environmental Characteristics of Pedestrian-Related Crashes

Pedestrian-Related Crashes by Month of Year

Figure 29 summarizes pedestrian-related crashes by month in rural and urban areas of Wayne County. In rural areas, most pedestrian crashes occurred in August with six. In urban areas, most pedestrian crashes occurred in October with 14. Pedestrian-related crashes appear to spike in October within urban areas of many cities. In October, pedestrians are generally still active due to nice weather. However, there are more hours of darkness in October, which may account for the increase in pedestrian-related crashes.

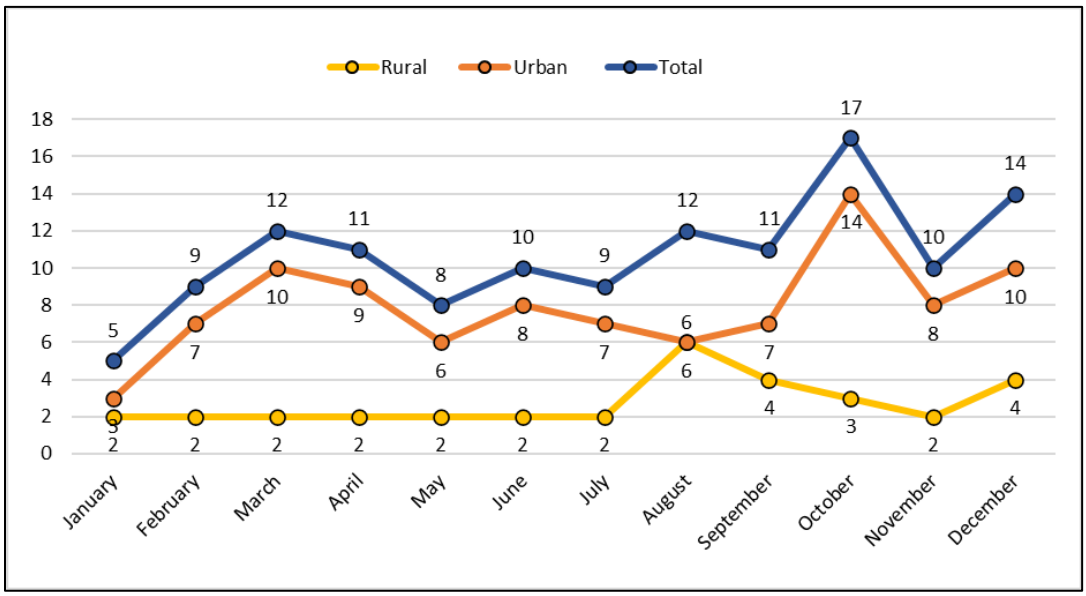


Figure 29. Pedestrian Crashes by Month (2014-2023)

Pedestrian-Related Crashes by Day of Week and Time of Day

Table 13 summarizes pedestrian crashes by day of week and time of day in rural areas of Wayne County. Note that seven crash reports did not indicate a time and therefore the total number of crashes shown in the tables is not equal the total number of crashes in the time period. In rural areas, pedestrian crashes are not concentrated on a certain day and time. Although there are three crashes on Thursdays between 6 and 9 PM, there are five other days and times that had two crashes. Rural pedestrian crashes can best be summed up as occurring between 6-9 pm which is when seven crashes or 27% of rural pedestrian related crashes occurred.

Table 13. Rural Pedestrian Crashes by Day of Week and Time of Day (2014-2023)

	Rural								
	12-3 AM	3-6 AM	6-9 AM	9 AM-12 PM	12-3 PM	3-6 PM	6-9 PM	9 PM-12 AM	Total
Sun	1					1	2		4
Mon							1		1
Tues			2			1	1		4
Wed			2		1	2			5
Thurs		1	1	1	1		3	1	8
Fri		1			1			2	**4**
Sat									0
Total	1	2	5	1	3	4	7	3	26

Similarly, Table 14 summarizes pedestrian-related crashes by day of week and time of day in urban areas of Wayne County. In urban areas, pedestrian crashes generally peak on Wednesday, Thursday, and Friday between 6 and 9 PM.

Table 14. Urban Pedestrian Crashes by Day of Week and Time of Day (2014-2023)

	Urban								
	12-3 AM	3-6 AM	6-9 AM	9 AM-12 PM	12-3 PM	3-6 PM	6-9 PM	9 PM-12 AM	Total
Sun		1		2				2	5
Mon			1	2	5	4	1		13
Tues		1	1	1	2	2	4		11
Wed			2	1	3	2	7	1	16
Thurs			3	1	3	4	6	1	18
Fri	1		1	5		4	6	1	18
Sat		1	1	1		4	3	4	14
Total	1	3	9	13	13	20	27	9	95

Pedestrian-Related Crashes by Lighting Condition

Figure 30 summarizes pedestrian crashes by lighting condition in rural and urban Wayne County. In both rural and urban areas, the majority (52% and 56%, respectively) of pedestrian-related crashes occur in daylight conditions. However, a significantly higher percentage of pedestrian-related crashes occur in darkened conditions (dawn, dusk, or dark) than crashes of other types. Roughly 35% of all Wayne County crashes occurred under darkened conditions, while nearly half of all pedestrian-related crashes occurred under darkened conditions.

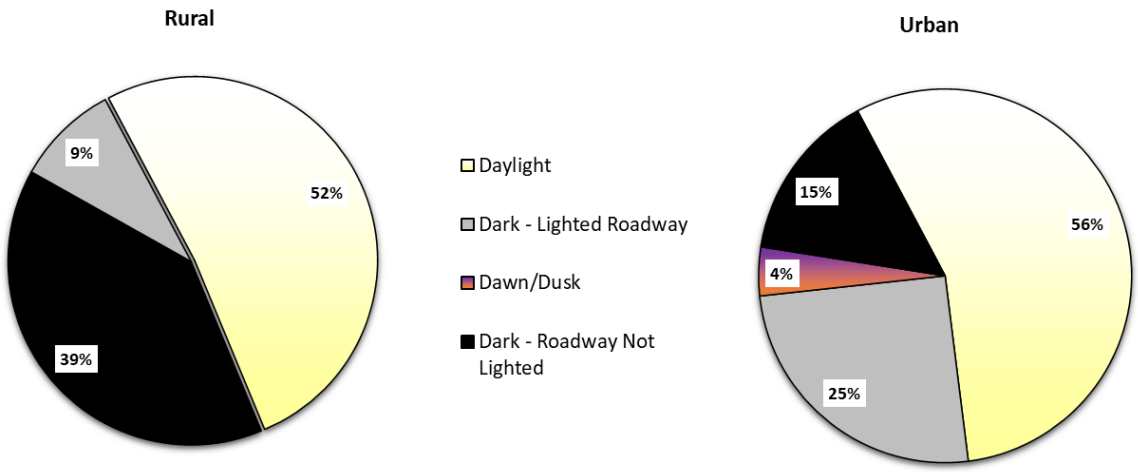


Figure 30. Pedestrian-Related Crashes by Light Condition (2014-2023)

Pedestrian-Related Crashes by Age and Gender

Table 15 summarizes the breakdown of the age and gender of the pedestrian involved. In both rural and urban areas, the age group with the highest number of incidents was less than 15 years old. In both rural and urban areas males were involved in more pedestrian crashes than females. In rural areas the difference between males and females was much higher than in urban areas.

Table 15. Pedestrian-Related Crashes by Age and Gender

Age	Rural			Urban		
	Female	Male	Total	Female	Male	Total
<15	2	4	6	5	8	13
15-19	2	2	4	2	5	7
20-24		5	5	6	5	11
25-29		3	3	3	5	8
30-34		1	1	1	4	5
35-39		2	2	1		4
40-44	2	1	3	5	3	8
45-49			0	2	3	5
50-54		3	3	1	3	4
55-59		4	4	3	5	8
60-64			0	2	2	4
65-69			0	1	4	5
70-74	1	1	2	3	2	5
75-79			0	2		2
80-84			0		1	1
85-90			0	2		2
>90						
Unknown			0			3
Total	7	26	33	39	50	95
Total %	21%	79%		41%	53%	

3.6 Bicycle-Related Crash Analysis Findings

A total of 95 crashes involving a bicycle occurred in Wayne County. Out of the 95 crashes, one resulted in fatality (1%) and 17 resulted in serious injury (18%). All but 10 of the remaining 77 bicycle-related crashes involved some degree of injury. Due to the high percentage of injuries (88.4%) all bicycle crashes were considered in this analysis. Figure 31 depicts the severity of bicycle-related crashes in rural and urban areas.

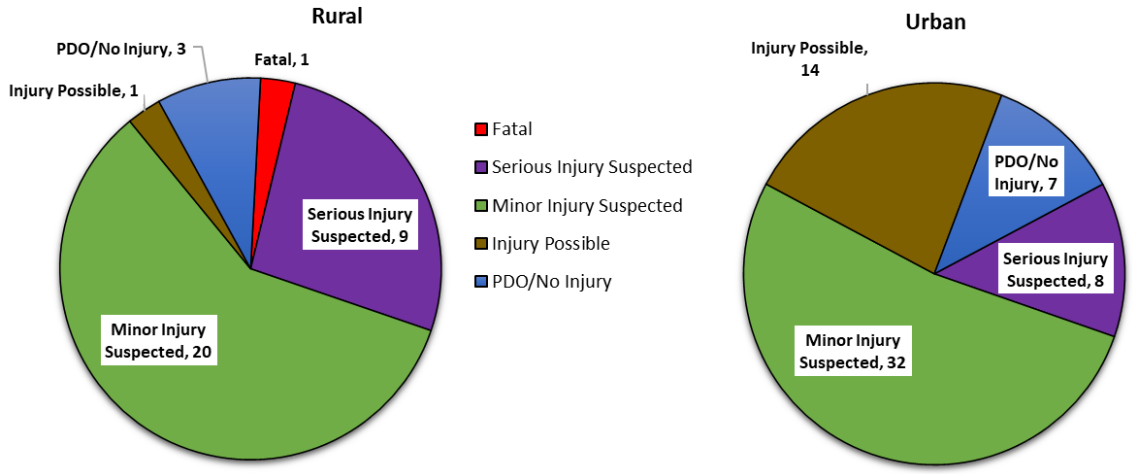


Figure 31. Bicycle-Related Crashes by Injury (2014-2023)

Bicycle-Related Crashes Per Year

Figure 32 depicts the number of bicycle crashes by year in rural and urban areas of Wayne County. Overall, bicycle-related crashes occur at higher rates in urban areas than in rural areas. Bicycle-related crashes peaked in 2015 with 15 crashes. The second-highest number of bicycle-related crashes occurred in 2019 and 2022 with 12 each. 2020 saw the fewest number of bicycle-related crashes; only 5 crashes occurred this year. During the years analyzed, bicycle-related crashes were trending downward in both rural and urban areas.

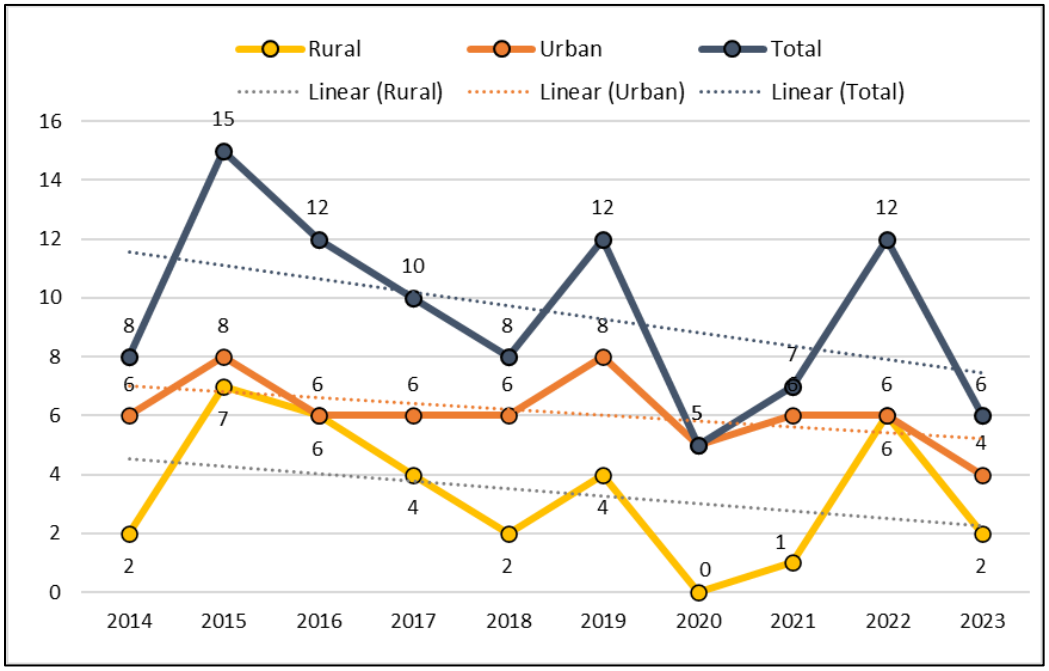


Figure 32. Bicycle-Related Crashes by Year (2014-2023)

Roadway Characteristics of Bicycle-Related Crashes

Bicycle-Related Crash Location (Intersection vs. Mid-Block)

Figure 33 depicts bicycle-related crashes by location type in rural and urban areas of Wayne County. Crashes within 150 feet of urban intersections and 250 feet of rural intersections are considered intersection crashes; crashes within 100 feet of the centerline network but not near intersections are considered mid-block crashes. In rural areas, the majority of bicycle crashes occur at mid-block locations (62%). However, at urban locations, a higher percentage (52%) of bicycle-related crashes occur at intersections. This is trend is similar to statistics involving vehicle-only crashes.

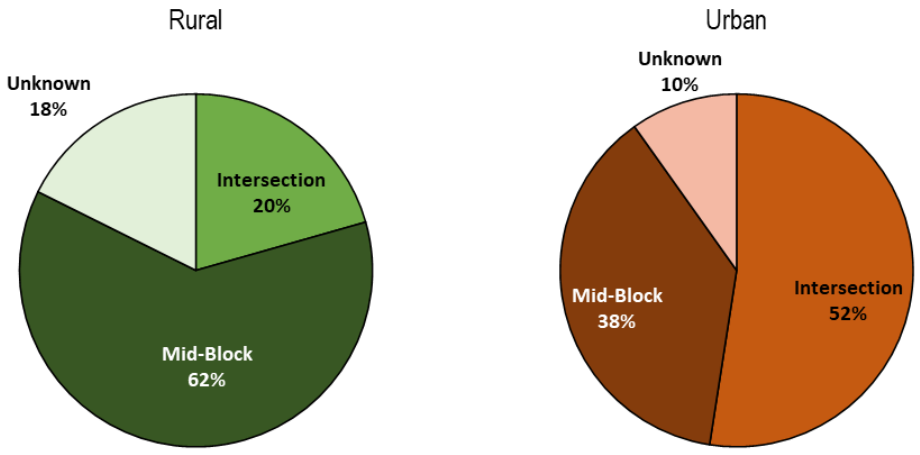


Figure 33. Bicycle-Related Crashes by Crash Location (2014-2023)

Bicycle-Related Crashes by Functional Classification

Table 16 summarizes bicycle-related crashes by roadway functional classification in rural and urban areas of Wayne County. In rural areas, the highest share of bicycle-related crashes occurs on local roads, while in urban areas, the highest number of bicycle-related crashes occur on minor arterial roads. When considering roadway miles, the highest density of bicycle-related crashes per mile in rural areas occur on principal arterial roads. In urban areas, the highest density of bicycle-related crashes per mile occurs on minor arterial roads.

Table 16. Bicycle-Related Crashes by Roadway Functional Classification (2014-2023)

Functional Class	Rural			Urban			Total		
	Bicycle Crashes	Miles	Crashes/ Mile	Bicycle Crashes	Miles	Crashes/ Mile	Bicycle Crashes	Miles	Crashes/ Mile
Principal Arterials	4	74.6	0.05	10	49.2	0.20	14	123.8	0.11
Minor Arterials	0	63.2	0.00	23	68.9	0.33	23	132.1	0.17
Collectors	13	390.1	0.03	9	87.6	0.10	22	477.7	0.05
Local	16	1141.5	0.01	18	430.4	0.04	34	1572.0	0.02
Unknown	1			1			2		
Total	34	1669.4	0.02	61	636.1	0.10	95	2305.6	0.04

Bicycle-Related Crashes by Roadway Jurisdiction

Table 17 summarizes bicycle-related crashes by roadway jurisdiction in rural and urban areas of Wayne County. In rural areas, the majority of bicycle-related crashes occur on county roads. In urban areas, the majority of bicycle-related crashes occur on municipal roads. When considering highway miles, county roadways have the highest density of bicycle related crashes (0.03 crashes per mile) in rural areas, and municipal roadways have the highest density of bicycle-related crashes (0.27 crashes per mile) in urban areas.

Table 17. Bicycle-Related Crashes by Roadway Jurisdiction (2014-2023)

Roadway Jurisdiction	Rural			Urban			Total		
	Bicycle Crashes	Miles	Crashes/ Mile	Bicycle Crashes	Miles	Crashes/ Mile	Bicycle Crashes	Miles	Crashes/ Mile
County	18	630.6	0.03	4	158.6	0.03	22	789.2	0.03
Municipal	1	40.4	0.02	53	196.7	0.27	54	237.1	0.23
Private		42.7	0.00	1	68.5	0.01	1	111.2	0.01
State	7	280.4	0.02	1	85.6	0.01	8	366.0	0.02
Township	8	675.3	0.01	2	126.7	0.02	10	802.0	0.01
Total	34	1669.4	0.02	61	636.1	0.10	95	2305.5	0.04

Bicycle-Related Crashes by Posted Speed Limit

Table 18 summarizes the breakdown of bicycle-related crashes by posted speed limit in Wayne County. The majority of crashes in rural areas occur at a posted speed limit of 55 miles per hour. The highest density of bicycle-related crashes per mile occur at posted speed limits of 40 mph, with 0.7 crashes per mile in rural areas. In urban areas, the majority of bicycle-related crashes occur at posted speed limits of 25 mph (22 crashes) and 35 mph (21 crashes). The highest density of bicycle-related crashes in urban areas occur at 35 mph, with 1.1 crashes per mile.

Table 18. Bicycle-Related Crashes by Posted Speed Limit (2014-2023)

Posted Speed Limit	Rural			Urban			Total		
	Bicycle Crashes	Miles	Bicycle Crashes/Mile	Bicycle Crashes	Miles	Bicycle Crashes/Mile	Bicycle Crashes	Miles	Bicycle Crashes/Mile
0-15	1	63.9	0.0	11	34.1	0.3	12	98	0.1
25	1	67.6	0.0	22	358	0.1	23	425.6	0.1
35	6	13.5	0.4	21	20	1.1	27	33.5	0.8
40	1	1.4	0.7	0	2	0.0	1	3.4	0.3
45	4	1285.5	0.0	1	177	0.0	5	1462.5	0.0
50	0	1.88	0.0	1	4	0.3	1	5.88	0.2
55	21	221.2	0.1	5	28	0.2	26	249.2	0.1
60	0	14.4	0.0	0	13	0.0	0	27.4	0.0
Total	34	1669.4	0.0	61	636.1	0.1	95	2305.5	0.0

Environmental Characteristics of Bicycle-Related Crashes

Bicycle-Related Crashes by Month of Year

Figure 34 summarizes bicycle-related crashes by month in urban and rural Wayne County. In rural areas, most bicycle crashes occurred in May while in urban areas, most bicycle crashes occurred in August. The pleasant weather in May encourages more people to cycle, which may be a factor in the rise of bicycle-related crashes during this month.

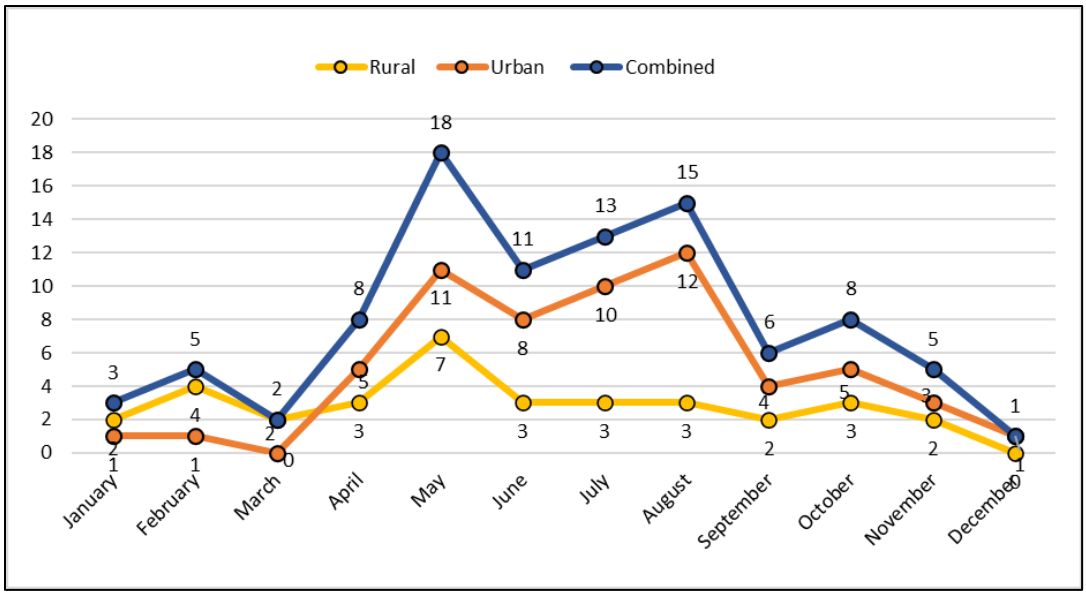


Figure 34. Bicycle-Related Crashes by Month (2014-2023)

Bicycle-Related Crashes by Day of Week and Time of Day

Table 19 summarizes bicycle-related crashes by day of week and time of day in rural Wayne County. In rural areas, bicycle-related crashes generally peak on Wednesdays between 3 and 6 PM.

Table 19. Rural Bicycle-Related Crashes by Day of Week and Time of Day (2014-2023)

	Rural								
	12-3 AM	3-6 AM	6-9 AM	9 AM-12 PM	12-3 PM	3-6 PM	6-9 PM	9 PM-12 AM	Total
Sun			1		1	3		1	6
Mon		1	2			1	2		6
Tues									**0**
Wed						4	3		7
Thurs			1	1		3	2		7
Fri					2	1	2		**5**
Sat					2	1			3
Total		1	4	1	5	13	9	1	34

Table 20 summarizes bicycle-related crashes by day of week and time of day in urban Wayne County. In urban areas, bicycle-related crashes generally peak on Friday between 3 and 6 PM.

Table 20. Urban Bicycle-Related Crashes by Day of Week and Time of Day (2014-2023)

	Urban								
	12-3 AM	3-6 AM	6-9 AM	9 AM-12 PM	12-3 PM	3-6 PM	6-9 PM	9 PM-12 AM	Total
Sun		1	2	2		2	1		8
Mon			1	3	1	4	2		11
Tues	1		1			1	3		6
Wed		1	2	2	1				6
Thurs			1		1	4		1	7
Fri			2		2	7	1	1	13
Sat				2	2	2	3	1	10
Total	1	2	9	9	7	20	10	3	61

Bicycle-Related Crashes by Lighting Condition

Figure 35 summarizes bicycle-related crashes by lighting condition in rural and urban Wayne County. In both rural and urban areas, the majority of bicycle crashes occur in daylight conditions. The remainder of bicycle related crashes occur in some form of darkness. In rural areas, 18% of bicycle related crashes occur on dark roadways without lighting. In urban areas where there are more streetlights, 11% occur on dark roadways with lighting.

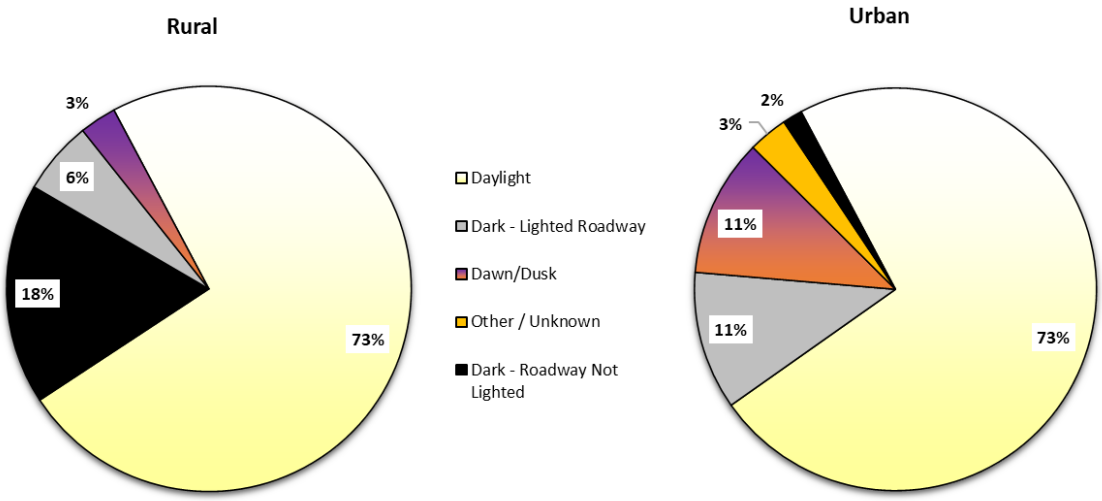


Figure 35. Bicycle-Related Crashes by Light Condition (2014-2023)

Bicycle-Related Crashes by Age and Gender

Table 21 summarizes the breakdown of bicycle-related crashes by age and gender of the bicyclist involved. In both rural and urban areas, the age group with the highest number of incidents was less than 15 years old. In both rural and urban areas, males were involved in more bicycle crashes than females. The percent difference between males and females involved in bicycle-related crashes was nearly the same in both rural and urban areas.

Table 21. Bicycle-Related Crashes by Gender and Age (2014-2023)

Age	Rural			Urban		
	Female	Male	Total	Female	Male	Total
<15		6	6	2	10	12
15-19	1	4	5	2	5	7
20-24	1	3	4	2	3	5
25-29		1	1	2	2	4
30-34		1	1		6	6
35-39	2		2		5	5
40-44	1		1	1	4	5
45-49	1	2	3			0
50-54		1	1	1	1	2
55-59	1	2	3	3		3
60-64		2	2		4	4
65-69		2	2	1	3	4
70-74	1	1	2		1	1
75-79			0			0
80-84			0			0
85-90		1	1			0
>90			0			0
Unknown			0		3	3
Total	8	26	34	14	47	61
Total %	24%	76%		23%	77%	

3.7 Animal-Drawn Vehicle (ADV) Crash Analysis Findings

A total of 265 crashes that involved an Animal-Drawn Vehicle (ADV), or horse and buggy, occurred in Wayne County over the years analyzed. These crashes are unique to the northwest and southeast parts of the country with an Amish population who rely on horse-drawn transportation. Unlike bicycles and pedestrians, animal-drawn vehicles are wider and need more space to maneuver. ADVs are dark in color, making them less visible, especially in shadows and at night. Additionally, the significant speed difference between ADVs and motorized vehicles increases collision risks. The Figure 36 shows the difference in closure rate between two motorized vehicles and a motorized vehicle and an Animal Drawn Vehicle.

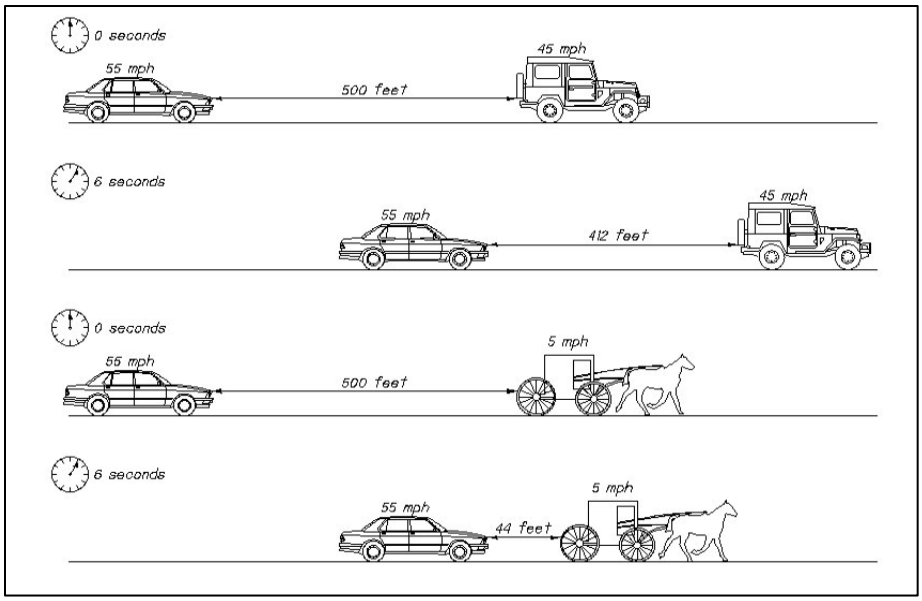


Figure 36. Vehicle Closure Rate Comparison

About half of ADV crashes were Property Damage Only (no injury). However, three fatal crashes and 27 crashes with serious injury occurred. Due to the unique nature of these crashes, all ADV crashes were analyzed. Figure 37 depicts ADV crashes by severity in Wayne County.

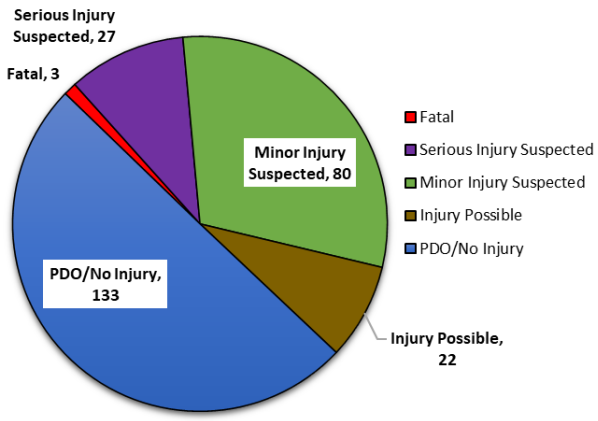


Figure 37. Animal-Drawn Vehicle Crashes by Injury (2014-2023)

Figure 24 below shows that 96% of Animal-Drawn Vehicle crashes occurred in rural areas.; therefore, ADV crashes that occurred in both rural and urban areas were analyzed together.

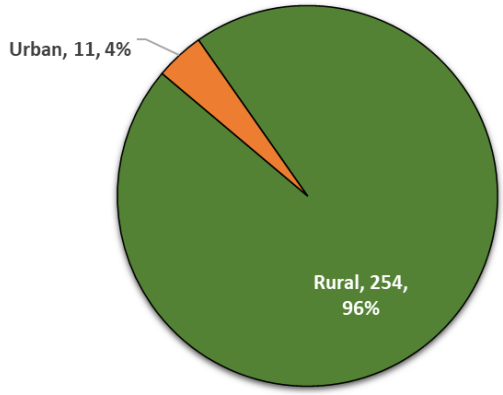


Figure 24. Location (Rural vs Urban) of Animal-Drawn Vehicle Crashes (2014-2023)

Animal-Drawn Vehicle Crashes Per Year

Figure 38 shows the number of Animal-Drawn Vehicle crashes by year in Wayne County. The highest number of crashes occurred in 2019. 2020 and 2023 saw the fewest number of crashes. Despite yearly fluctuations, Animal Drawn Vehicle crashes were trending downward during the analysis period.

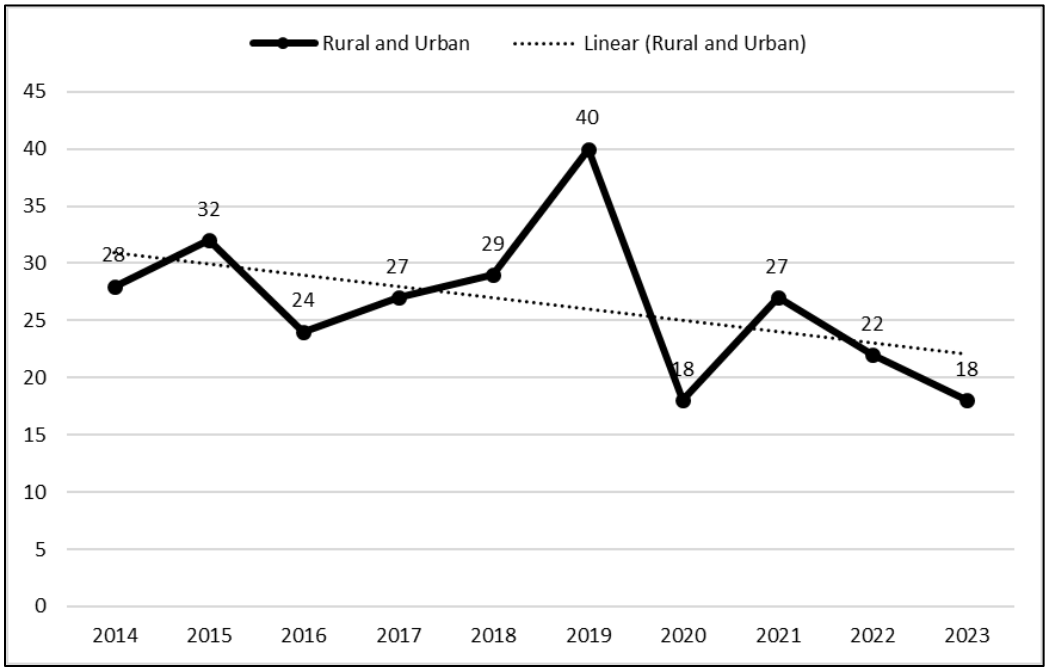


Figure 38. Animal-Drawn Vehicle Crashes by Year (2014-2023)

Animal-Drawn Vehicle Crashes by Type of Crash

The most common crash type was sideswipe-passing which accounted for 62.6% of all ADV crashes. The second most common was angle crashes (15.9%), followed by head on crashes (7.6%). All the Animal Drawn Vehicle crash types are shown in Table 22.

Table 22. Animal Drawn Vehicle Crashes by Crash Type (2014-2023)

Crash Type	Crashes	%
Sideswipe - Passing	166	62.64%
Angle	42	15.85%
Head On	20	7.55%
Left Turn	13	4.91%
Rear End	7	2.64%
Other Non-Vehicle	6	2.26%
Parked Vehicle	5	1.89%
Right Turn	3	1.13%
Animal	1	0.38%
Pedalcycles	1	0.38%
Backing	1	0.38%
Grand Total	265	100.00%

Roadway Characteristics of Animal-Drawn Vehicle Crashes

Animal-Drawn Vehicle Crash Location (Intersection vs. Mid-Block)

Figure 39 summarizes Animal-Drawn Vehicle crashes by location (mid-block or intersection). Crashes within 150 feet of urban intersections and 250 feet of rural intersections are considered intersection crashes; crashes within 100 feet of the centerline network but not near intersections are considered mid-block crashes. The majority of the crashes occur at mid-block locations (68%).

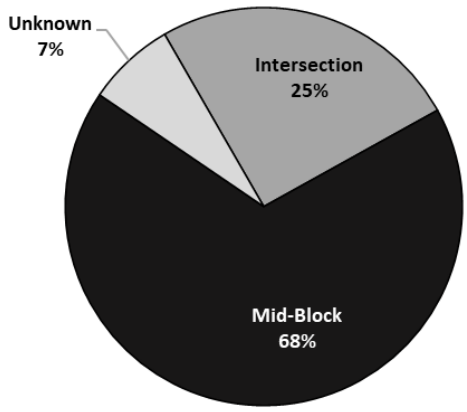


Figure 39. Animal-Drawn Vehicle Crashes by Crash Location, 2014-2023

Animal Drawn Vehicle Crashes by Functional Classification

Table 23 summarizes Animal Drawn Vehicle crashes by roadway functional classification in Wayne County. Animal Drawn Vehicle related crashes occur predominantly on collector roads, followed by local roads. Collector roads have the highest density of ADV crashes with 0.32 crashes per mile. Principal Arterials have the second-highest density of ADV crashes with 0.28 crashes per mile.

Table 23. Animal Drawn Vehicle Crashes by Roadway Functional Classification (2014-2023)

Functional Classification	ADV Crashes	Miles	Crashes/ Mile
Principal Arterials	35	123.7	0.28
Minor Arterials	12	132.1	0.09
Collectors	152	477.7	0.32
Local	64	1572.0	0.04
Unknown	2		
Total	265	2305.5	0.11

Animal-Drawn Vehicle Crashes by Roadway Jurisdiction

Table 24 summarizes Animal-Drawn Vehicle crashes by roadway jurisdictions in Wayne County. The highest number of ADV crashes occur on state roads (114 crashes), followed closely by county roads (106 crashes). The highest density of ADV crashes occur on state roads, which have a density of 0.31 crashes per mile.

Table 24. Animal-Drawn Vehicle Crashes by Roadway Jurisdiction (2014-2023)

Roadway Jurisdiction	ADV Crashes	Miles	Crashes/ Mile
County	106	789.2	0.13
Municipal	13	237.1	0.05
Private	1	111.2	0.01
State	114	366	0.31
Township	31	802	0.04
Total	265	2305.5	0.11

Animal-Drawn Vehicle Crashes by Posted Speed Limit

Table 25 summarizes the breakdown of ADV crashes by posted speed limit in Wayne County. The majority of ADV crashes occurred at a posted speed limit of 55 miles per hour. The highest density of ADV crashes occurred at posted speed limits of 45 mph, with 4.6 crashes per mile.

Table 25. Animal Drawn Vehicle Crashes by Speed Limit (2014-2023)

Posted Speed Limit	Total		
	Crashes	Miles	Crashes/Mile
15	4	98	0.0
20	1	425.6	0.0
25	7	33.5	0.2
35	6	3.4	1.8
40	1	1462.5	0.0
45	27	5.88	4.6
55	218	249.2	0.9
60	1	27.4	0.0
Total	265	2305.5	0.1

Figure 40 ADV Sharing the Road with Other Vehicles

Environmental Characteristics of Animal-Drawn Vehicle Crashes

Animal-Drawn Vehicle Crashes by Month of Year

Figure 41 summarizes Animal-Drawn Vehicle crashes by month in Wayne County. ADV crashes peaked in June (29 crashes) and again in October (29 crashes). ADV crashes remain high during the late fall and early winter. November had 28 crashes, and December had 26 crashes.

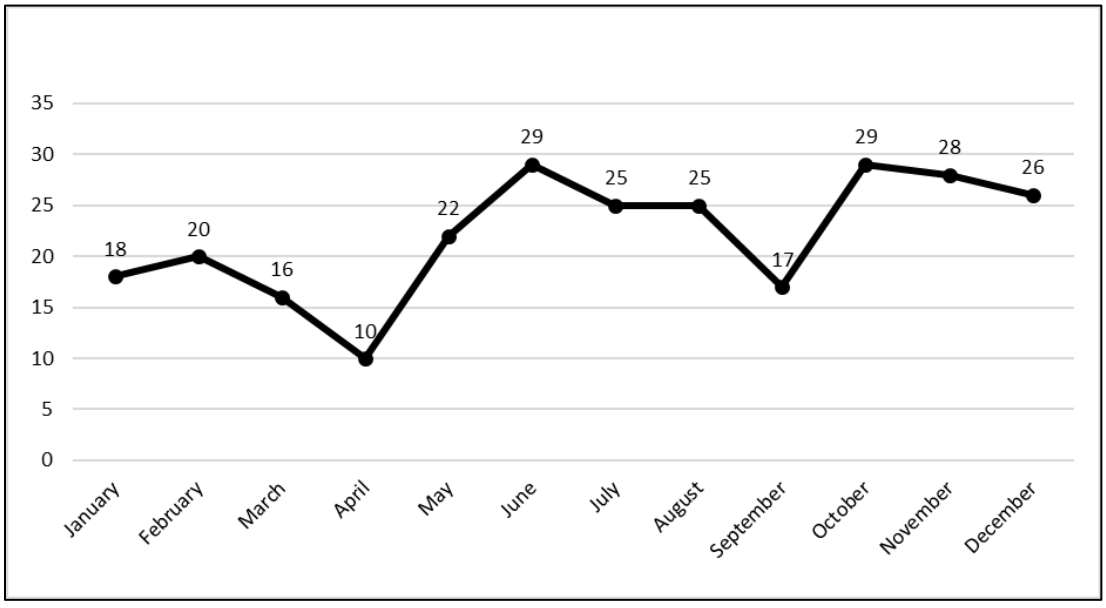


Figure 41. Animal-Drawn Vehicle Crashes by Month (2014-2023)

Animal-Drawn Vehicle Crashes by Day of Week and Time of Day

Table 26 summarizes Animal-Drawn Vehicle crashes by day of week and time of day in Wayne County. Animal Drawn Vehicle crashes generally peak on Fridays between 3 and 6 PM and Sundays between 6 and 9 PM. Overall, the highest number of crashes occur on weekdays between 3 and 6 PM.

Table 26. Rural Animal-Drawn Vehicle Crashes by Day of Week and Time of Day (2014-2023)

	Animal Drawn Vehicle Crashes								
	12-3 AM	3-6 AM	6-9 AM	9 AM-12 PM	12-3 PM	3-6 PM	6-9 PM	9 PM-12 AM	Total
Sun	1		2		10	4	12	7	36
Mon		5	6	5	2	10	9		37
Tues		4	11	4	4	8	6	3	40
Wed		2	5	1	3	11	4	4	30
Thurs		4	7	1	1	11	8	4	36
Fri		4	7	3	3	12	11	6	46
Sat	2		3	4	8	9	8	6	40
Total	2	19	41	18	31	65	58	30	265

Animal-Drawn Vehicle Crashes by Lighting Condition

Figure 42 summarizes Animal-Drawn Vehicle crashes by lighting condition in Wayne County. Most Animal-Drawn Vehicle crashes (57%) occur in daylight conditions.

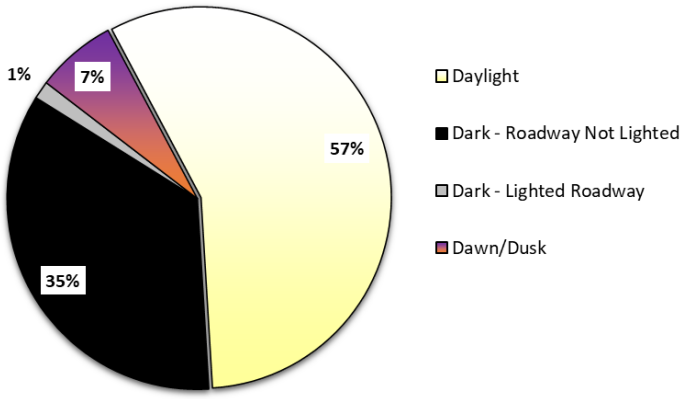


Figure 42. Animal-Drawn Vehicle Crashes by Light Condition (2014-2023)

Animal-Drawn Vehicle Crashes by Age and Gender

Table 27 summarizes the breakdown of Animal-Drawn Vehicles crashes by age and gender of the ADV operator. In both rural and urban areas, the age group with the highest number of incidents was 15-19 years old. In both rural and urban areas, males were involved in nearly 3.5 more Animal-Drawn Vehicle crashes than females.

Table 27. Animal-Drawn Vehicle Crashes by Gender and Age (2014-2023)

Age	Animal Drawn Vehicle		
	Female	Male	Total
<15	4	13	17
15-19	20	58	78
20-24	11	32	43
25-29	5	19	24
30-34	3	20	23
35-39	4	15	19
40-44	6	12	18
45-49	3	9	12
50-54	1	9	10
55-59	1	9	10
60-64	1	4	5
65-69		3	3
70-74		3	3
Total	59	206	265
Total %	22%	78%	

3.8 Farm Equipment-Related Crash Analysis Findings

Wayne County has a rich agricultural economy. Farm equipment such as tractors and harvesters often require the use of roadways to access agricultural fields during planting and harvest seasons. Wayne County had a total of 110 crashes that involved farm equipment. Most of these crashes (62.7%) were considered property damage only (no injury) crashes. However, 2 of these crashes resulted in fatalities and 6 resulted in serious injury. Due to the unique nature of these crashes, all crashes involving farm equipment were analyzed. Figure 43 shows farm equipment crashes by severity.

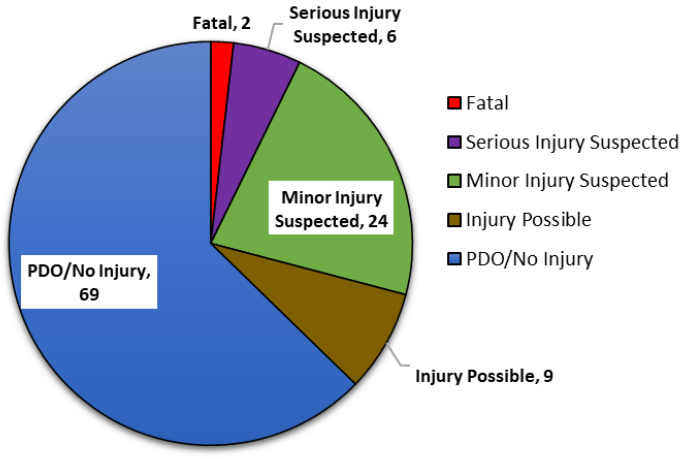


Figure 43. Farm Equipment-Related Crashes by Injury (2014-2023)

Figure 44 below shows that 105 or 95% of the 110 farm equipment crashes occurred in rural areas. These crashes were not separated into rural and urban areas but instead analyzed together.

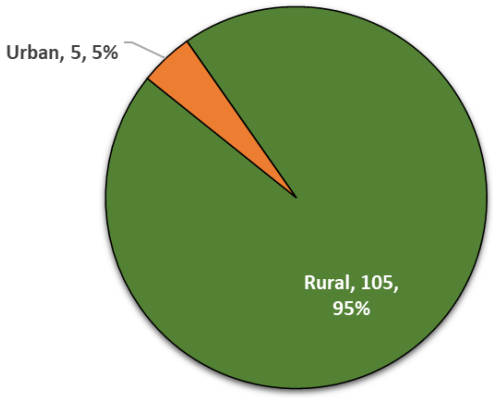


Figure 44. Location (Rural vs Urban) of Farm Equipment-Related Crashes (2014-2023)

Figure 45. Farm Equipment Often Occupies More Than One Lane of Roadway

Farm Equipment-Related Crashes Per Year

Figure 46 shows the number of farm equipment crashes by year in Wayne County. A spike in farm equipment crashes occurred in 2019. Both 2018 and 2022 had the fewest number of crashes. Farm equipment-related crashes were gradually trending upward during the years analyzed.

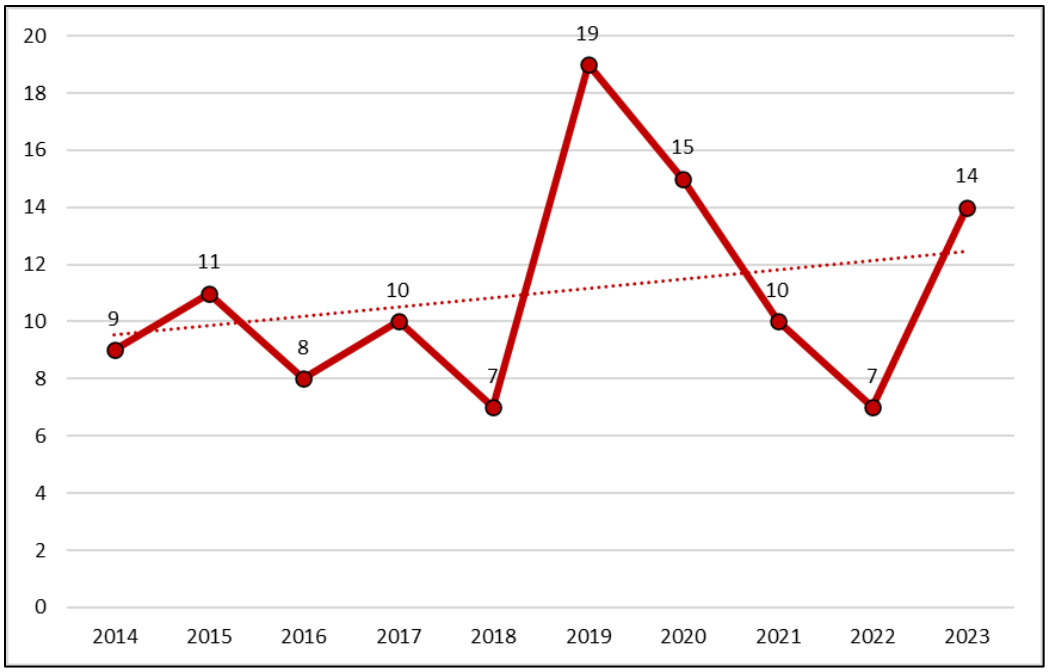


Figure 46. Farm Equipment-Related Crashes by Year (2014-2023)

Farm Equipment-Related Crashes by Type of Crash

Farm equipment-related crashes are most involved in sideswipe-passing crashes, in which a motor vehicle side-swipes farm equipment while passing. This crash type accounted for 36.4% of farm equipment-related crashes. The second most common crash type reported were left turn crashes, which account for 19.1% of farm equipment-related crashes. This type of left turn crash occurs when farm equipment is turning left into a field or driveway while another vehicle moving in the same direction starts to pass it. Many farm equipment crashes involve both sideswipe-passing and left turns. The crash occurs when farm equipment is turning left and into the path of a vehicle passing it while going the same direction. Crash types reported in farm equipment crashes are shown in Table 28 below.

Table 28. Farm Equipment-Related Crashes by Crash Type (2014-2023)

Crash Type	Crashes	%
Sideswipe - Passing	40	36.36%
Left Turn	21	19.09%
Rear End	17	15.45%
Angle	10	9.09%
Fixed Object	7	6.36%
Overturning	4	3.64%
Head On	3	2.73%
Right Turn	2	1.82%
Parked Vehicle	2	1.82%
Other Object	2	1.82%
Train	1	0.91%
Backing	1	0.91%
Grand Total	110	100.00%

Roadway Characteristics of Farm Equipment-Related Crashes

Farm Equipment-Related Crash Location (Intersection vs. Mid-Block)

Figure 47 depicts farm equipment-related crashes by location (mid-block or intersection). Crashes within 150 feet of urban intersections and 250 feet of rural intersections are considered intersection crashes; crashes within 100 feet of the centerline network but not near intersections are considered mid-block crashes. Most of the crashes occur at mid-block locations (68%).

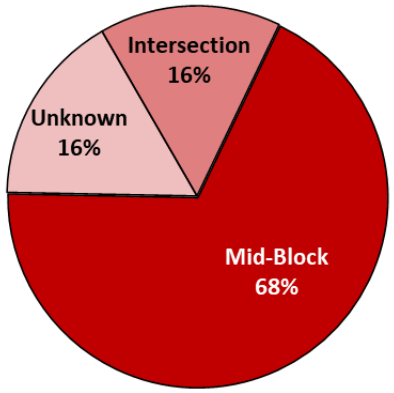


Figure 47. Farm Equipment-Related Crashes by Crash Location (2014-2023)

Farm Equipment-Related Crashes by Functional Classification

Table 29 summarizes farm equipment-related crashes by roadway functional classification in Wayne County. The highest number of farm equipment-related crashes (50 crashes) occur on collector roads, followed by local streets (43 crashes). Collector roads have the highest density of crashes with 0.10 crashes per mile of roadway.

Table 29. Farm Equipment-Related Crashes by Roadway Functional Classification (2014-2023)

Functional Classification	Farm Eq. Crashes	Miles	Crashes/ Mile
Principal Arterials	5	123.7	0.04
Minor Arterials	11	132.1	0.08
Collectors	50	477.7	0.10
Local	43	1572.0	0.03
Unknown	1		
Total	110	2305.5	0.05

Farm Equipment-Related Crashes by Roadway Jurisdiction

Table 30 summarizes farm equipment-related crashes by roadway jurisdiction in Wayne County. Many farm equipment crashes occur on county roads, followed by state roads. However, state and county roads have nearly the same density of farm equipment crashes per mile, with 0.08 and 0.07 crashes, respectively.

Table 30. Farm Equipment Crashes by Roadway Jurisdiction (2014-2023)

Roadway Jurisdiction	Farm Eq. Crashes	Miles	Crashes/ Mile
County	58	789.2	0.07
Municipal	6	237.1	0.03
Private	0	111.2	0.00
State	29	366.0	0.08
Township	17	802	0.02
Total	110	2305.5	0.05

Farm Equipment-Related Crashes by Posted Speed Limit

Table 31 summarizes the breakdown of farm equipment crashes by posted speed limit in Wayne County. The majority of Farm Equipment crashes occur at a posted speed limit of 55 miles per hour.The speed limit with the highest density of farm equipment-related crashes occur at posted speed limits of 35 and 45 mph, each with 0.9 crashes per mile.

Table 31. Farm Equipment-Related Crashes by Posted Speed Limit (2014-2023)

Posted Speed Limit	Total		
	Crashes	Miles	Crashes/Mile
25	3	33.5	0.1
35	3	3.4	0.9
45	5	5.88	0.9
55	99	249.2	0.4
Total	110	2305.5	0.0

Environmental Characteristics of Farm Equipment-Related Crashes

Farm Equipment-Related Crashes by Month of Year

Figure 48 summarizes farm equipment-related crashes by month in Wayne County. Farm equipment crashes peaked during the month of May and remained relatively elevated and constant during the months of June through September. As farming activities taper off during winter months, farm equipment crashes also decreased.

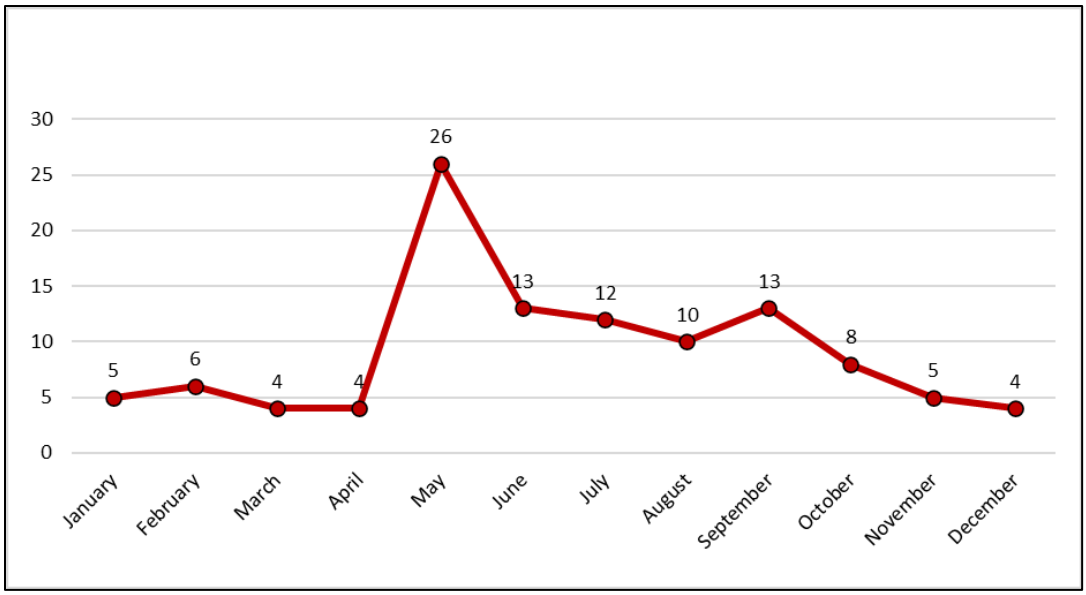


Figure 48. Farm Equipment Crashes by Month (2014-2023)

Farm Equipment-Related Crashes by Day of Week and Time of Day

Table 32 summarizes farm equipment-related crashes by day of week and time of day in Wayne County. Farm equipment crashes generally peak on the weekday afternoon hours. Eight crashes occurred on Fridays between 12 and 3 PM and seven crashes occurred on Tuesdays and Wednesdays between 12 and 3 PM.

Table 32. Rural Farm Equipment Related Crashes by Day of Week and Time of Day (2014-2023)

	Farm Equipment Crashes								
	12-3 AM	3-6 AM	6-9 AM	9 AM-12 PM	12-3 PM	3-6 PM	6-9 PM	9 PM-12 AM	Total
Sun					1	1			2
Mon		1		2	4	5	2	1	15
Tues		1	2	2	7	6	1	1	20
Wed		1	3	5	7	3	2	1	**22**
Thurs			1	1	2	6	3	1	14
Fri	1			3	8	2	2	3	19
Sat	1		2	5	4	2	4		18
Total	2	3	8	18	**33**	25	14	7	110

Farm Equipment-Related Crashes by Lighting Condition

Figure 49 summarizes farm equipment-related crashes by lighting condition in Wayne County. The majority (80%) of Farm Equipment crashes occur in daylight conditions.

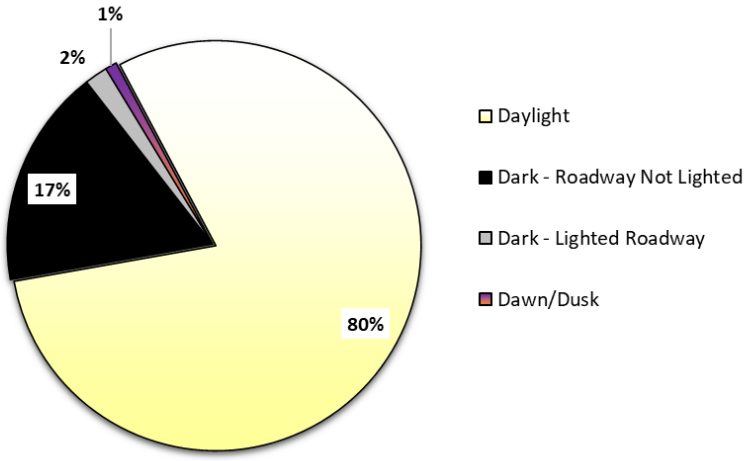


Figure 49. Farm Equipment-Related Crashes by Light Condition (2014-2023)

Farm Equipment-Related Crashes by At-Fault Age and Gender

Table 33 summarizes the age and gender breakdown of farm equipment-related crashes by the at-fault driver. Males between 15 and 29 years old represent the highest at-fault group. Males were involved in significantly more farm equipment crashes than females.

Table 33. Farm Equipment-Related Crashes by Age and Gender (2014-2023)

Age	Farm Equipment		
	Female	Male	Total
<15		2	2
15-19	2	12	14
20-24		13	13
25-29	1	13	14
30-34		5	5
35-39		6	6
40-44		8	8
45-49		6	6
50-54		3	3
55-59		6	6
60-64		12	12
65-69		7	7
70-74		4	4
75-79		1	1
80-84		4	4
Unknown	1	4	5
Total	4	106	110
Total %	4%	96%	

3.9 Animal-Related Crash Analysis Findings

Often animal-related crashes are not considered in an analysis because safety professionals feel little can be done to prevent them. However, in Wayne County, this was the fourth most numerous crash type, causing 2,323 crashes that resulted in one fatality and seven serious injuries. Fortunately, most of these crashes (94.8%) were property damage only (no injury to the vehicle occupants). Many animal-related crashes result in the vehicle swerving to avoid the animal resulting in a roadway departure crash or left of center crash. Figure 50 shows animal crashes by severity.

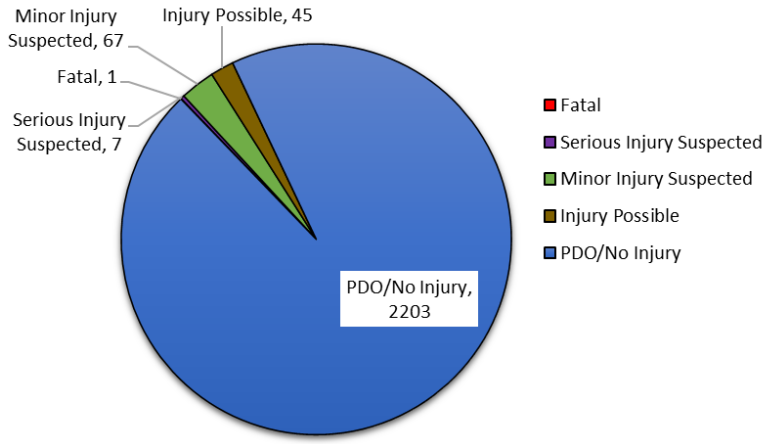


Figure 50. Animal-Related Crashes by Injury (2014-2023)

Figure 51 below shows that 585 (25%) of the 2,323 animal-related crashes occurred in urban areas and 1,738 (75%) occurred in rural areas.

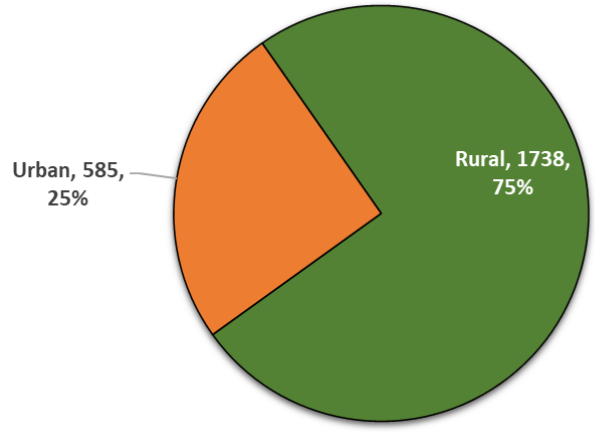


Figure 51. Location (Rural vs Urban) of Animal-Related Crashes (2014-2023)

Figure 52 shows that 2,100 or 90% of animal-related crashes were caused by a deer. Farm animals accounted for 109 and other animals accounted for 114 of the remaining animal-related crashes.

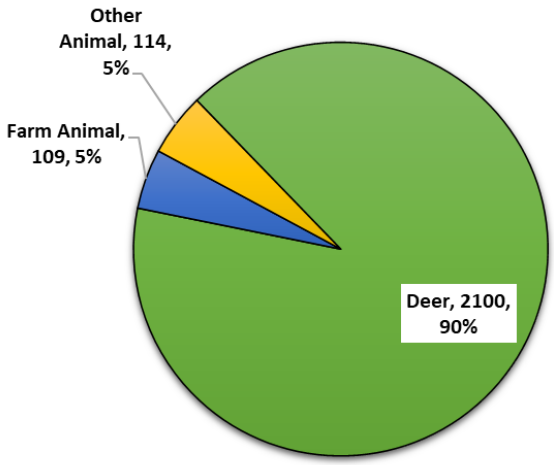


Figure 52. Types of Animals Involved (2014-2023)

Animal-Related Crashes Per Year

Figure 53 shows the number of animal-related crashes by year in Wayne County. The year with the most crashes was 2014 with 326. The year 2021 had the least number of crashes with 144. Over the analysis period animal-related crashes were trending downward.

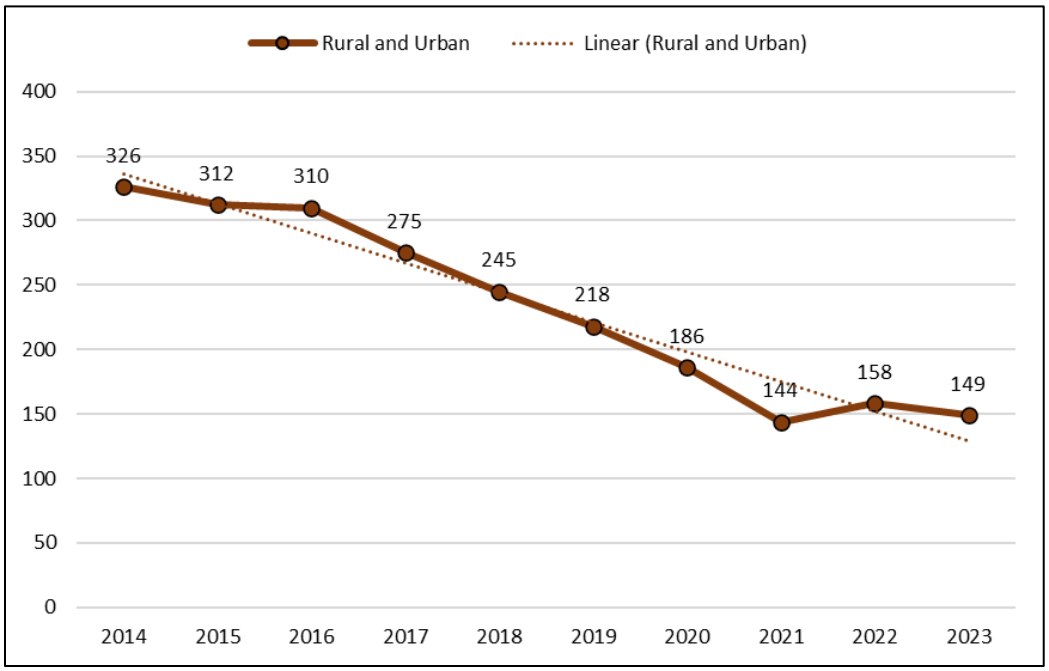


Figure 53. Animal Related Crashes by Year (2014-2023)

Roadway Characteristics of Animal-Related Crashes

Animal-Related crashes by Functional Classification

Table 34 summarizes animal related crashes by roadway functional classification in Wayne County. Collectors have the highest share of animal related crashes (801), while Minor Arterials have the next highest number (587). Principal Arterials and Minor Arterials have the highest density of crashes with 4.47 and 4.44 crashes per mile of roadway.

Table 34. Animal-Related Crashes by Roadway Functional Classification (2014-2023)

Functional Classification	Animal Crashes	Miles	Crashes/ Mile
Principal Arterials	553	123.7	4.47
Minor Arterials	587	132.1	4.44
Collectors	801	477.7	1.68
Local	362	1572.0	0.23
Unknown	2		
Total	2305	2305.5	1.00

Animal-Related Crashes by Roadway Jurisdiction

Table 35 summarizes animal-related crashes by roadway jurisdictions in Wayne County. State roads have the largest share of animal-related crashes with 1,312 followed county roads with 542. State roads have the highest density of Animal-related crashes per mile with 3.58.

Table 35. Animal-Related Crashes by Roadway Jurisdiction (2014-2023)

Roadway Jurisdiction	Animal Crashes	Miles	Crashes/ Mile
County	542	789.2	0.69
Municipal	288	237.1	1.21
Private	2	111.2	0.02
State	1312	366	3.58
Township	174	802	0.22
Total	2318	2305.5	1.01

Animal-Related crashes by Posted Speed Limit

Table 36 summarizes the breakdown of animal-related crashes by posted speed limit in Wayne County. Most animal-related crashes occurred at a posted speed limit of 55 miles per hour (1,680 out of 2,323). The speed limit with the highest density of animal related crashes was 40 mph with 10.6 crashes per mile.

Table 36. Animal-Related Crashes by Posted Speed Limit (2014-2023)

Posted Speed Limit	Total		
	Crashes	Miles	Crashes/Mile
0-15	12	98	0.1
25	13	425.6	0.0
35	162	33.5	4.8
40	36	3.4	10.6
45	125	1462.5	0.1
50	37	5.88	6.3
55	1680	249.2	6.7
60	258	27.4	9.4
Total	2323	2305.5	1.0

Environmental Characteristics of Animal-Related Crashes

Animal-Related Crashes by Month of Year

Figure 54 summarizes animal-related crashes by month in Wayne County. A spike in animal-related crashes occur in November with 502 crashes. Between January and September they remain mostly constant.

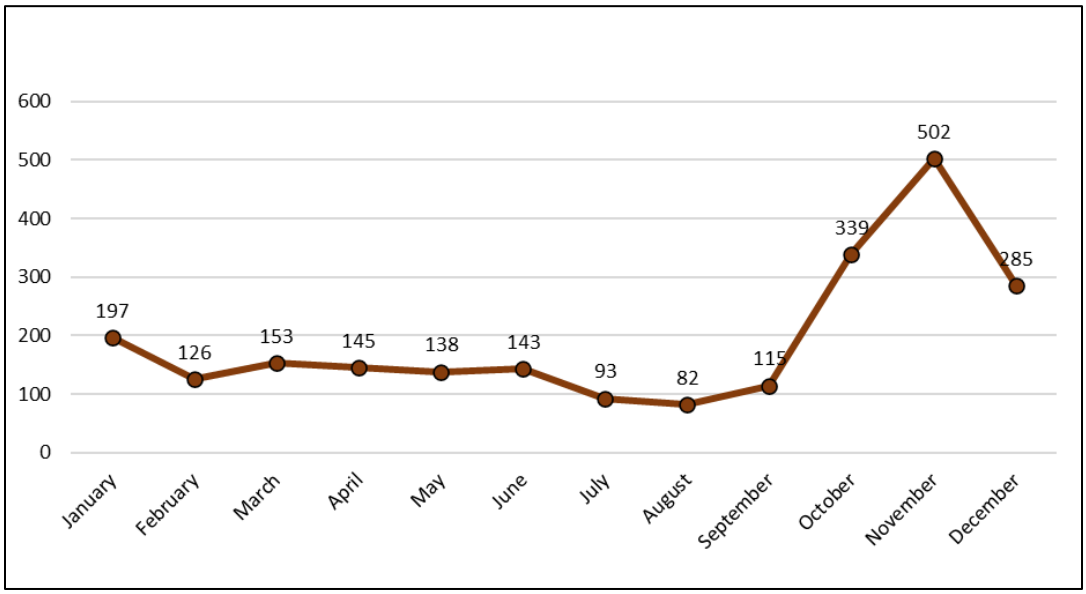


Figure 54. Animal-Related Crashes by Month (2014-2023)

Animal-Related crashes by Day of Week and Time of Day

Table 37 summarizes animal-related crashes by day of week and time of day in Wayne County. Animal-related crashes generally peak in the early morning hours of 6-9 AM and the late evening hours of 6-9 PM. Animal-related crashes

remain constant throughout the week but as traffic volumes decrease during peak hours on weekends, so do animal-related crashes.

Table 37. Animal-Related Crashes by Day of Week and Time of Day (2014-2023)

	Animal Crashes								
	12-3 AM	3-6 AM	6-9 AM	9 AM-12 PM	12-3 PM	3-6 PM	6-9 PM	9 PM-12 AM	Total
Sun	29	23	21	18	20	40	81	47	279
Mon	23	36	94	10	14	39	90	42	348
Tues	19	49	86	8	11	40	75	48	336
Wed	18	46	86	8	11	45	92	53	359
Thurs	21	48	72	12	14	38	77	58	340
Fri	23	48	61	15	8	31	92	74	352
Sat	24	28	33	22	17	24	93	63	304
Total	105	278	453	93	95	257	**600**	385	2318

Animal-Related Crashes by Lighting Condition

Figure 55 summarizes animal-related crashes by lighting condition in Wayne County. The majority of animal-related crashes (77%) occur under darkened conditions.

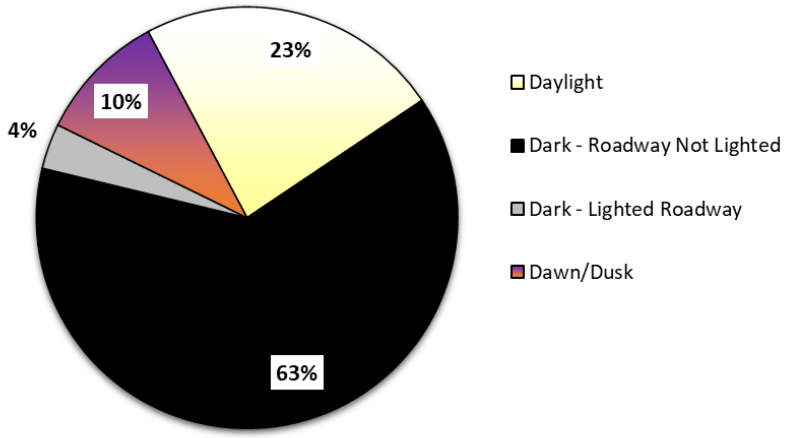


Figure 55. Animal-Related crashes by Light Condition (2014-2023)

3.10 Conclusion

Wayne County is primarily a rural county with a rich agricultural economy and a growing Amish population. The majority (69.3%) of FSI crashes occurred in rural areas, as compared to urban areas (30.7%). The most common crash types in both rural and urban areas were angle and fixed object crashes. Angle crashes occurred more often in urban areas, while fixed object crashes occurred more often in rural areas. Failure to Yield and Unsafe Speed were the two leading contributing factors in crashes in both rural and urban areas.

Pedestrian-related crashes occurred more often in urban areas than in rural areas, likely due to the greater density of both vehicles and pedestrians in urban areas. Over the years analyzed, 128 pedestrian-related crashes occurred in

Wayne County; 95 of these crashes occurred in urban areas, and 33 occurred in rural areas. Nearly 98% of all pedestrian-related crashes resulted in injury; 18% resulted in serious injury and 7% resulted in fatality. Pedestrian-related crashes peaked in October, which is a trend observed statewide. In October, pedestrians are still active due to nice weather; however, there are fewer daylight hours, which may account for the increase in pedestrian-related crashes during this month.

Bicycle-related crashes also occurred more in urban areas than in rural areas. A total of 95 bicycle-related crashes occurred in Wayne County; 61 crashes occurred in urban areas and 34 occurred in rural areas. Similar to pedestrian crashes, bicycle-related crashes have a high rate of injury. Over 88% of bicycle-related crashes resulted in injury; 18% resulted in serious injury and 1% resulted in fatality.

Animal Drawn Vehicles (ADVs) were involved in 265 crashes in Wayne County. Nearly all ADV-related crashes (96%) occurred in rural areas. Approximately half of these crashes resulted in injury. There were 27 ADV crashes that resulted in serious injury and three that resulted in fatality. A sideswipe-passing crash was the most common ADV-related crash type.

Farm equipment-related crashes accounted for 110 crashes in Wayne County over the years analyzed. Over 37% of these crashes resulted in injury; six crashes resulted in serious injury and two resulted in fatality. Farm equipment-related crashes occurred most often in May and remained elevated throughout the summer. Much like ADV crashes, nearly all (95%) farm equipment crashes occurred in rural areas. The most common crash type involving farm equipment was sideswipe-passing. Many farm equipment crashes occur when the equipment turns left into a farm field or driveway while another vehicle going the same direction starts to pass it.

Animal crashes were the fourth highest crash type in Wayne County, accounting for 2,323 crashes. Nearly 95% of these crashes did not result in an injury. However, they were responsible for one fatality and seven serious injuries. Most animal crashes were caused by a deer (2,100 crashes or 90%) while farm animals accounted for 109 crashes (4.6%) and other animals accounted for 124 crashes (5.4%).

4. NETWORK SAFETY ANALYSIS

The Network Safety Analysis utilizes recent crash data to identify high injury and high-risk locations within the study area. Identifying these locations provides opportunities for implementing safety enhancements and will guide the development of future safety improvement plans.

4.1 The High Injury Network

The high injury network identifies roadways or intersections with a history of frequent FSI crashes based on crash data from 2018-2023. It is common practice to focus on a more recent period, such as six years, for HIN analyses. This approach ensures that the analysis uses more current data.

High Injury Segments
High injury roadways refer to specific sections of roads with a history of frequent crashes. Roadways in urban areas were analyzed in 0.1-mile road segments, while roadways in rural areas are assessed in 0.2-mile segments. Urban and rural roads are analyzed in different segment lengths due to their distinct characteristics: rural roads cover larger areas and tend to have more consistent conditions compared to urban roads, which have frequent changes over smaller areas. In this analysis, FSI crashes were assigned to their corresponding road segment to determine the total number of crashes in each segment during the study period. Segments were ranked (ie. Low, medium, high) based on number of crashes per segment. Adjacent segments received a rank of one less, to denote the approach to a high injury segment. This was modified for different modes of travel to accommodate differing numbers of crashes. In this analysis, both all-mode and vehicle high injury roadways were categorized using the same scale, while pedestrian, bike, ADV and farm equipment high injury roadways were grouped together using a different scale. Table 38 illustrates the differences in the categorization of modes of travel, and Figure 56 shows the All-Mode High Injury Roadways map.

Table 38. Differences in Segment Modes of Travel

Mode of transportation			
All Mode, Motor Vehicle		Pedestrian, Bicycle, ADV's, Farm equipment	
Injury Score	Number of FSI Crashes	Injury Score	Number of FI Crashes
Low	1	Lower	1
Medium	2	Higher	2
High	3		

Roadways with multiple high or medium scoring segments include:

- Burbank Rd (SR-83)
- Akron Rd (SR-585)
- Cleveland Rd (SR-3)
- Millersburg Rd (SR-83)
- US-250
- SR-57
- SR-94
- Friendsville Rd (CR-6)
- Back Orrville Rd (CR-23)
- Harrison Rd (CR-2)

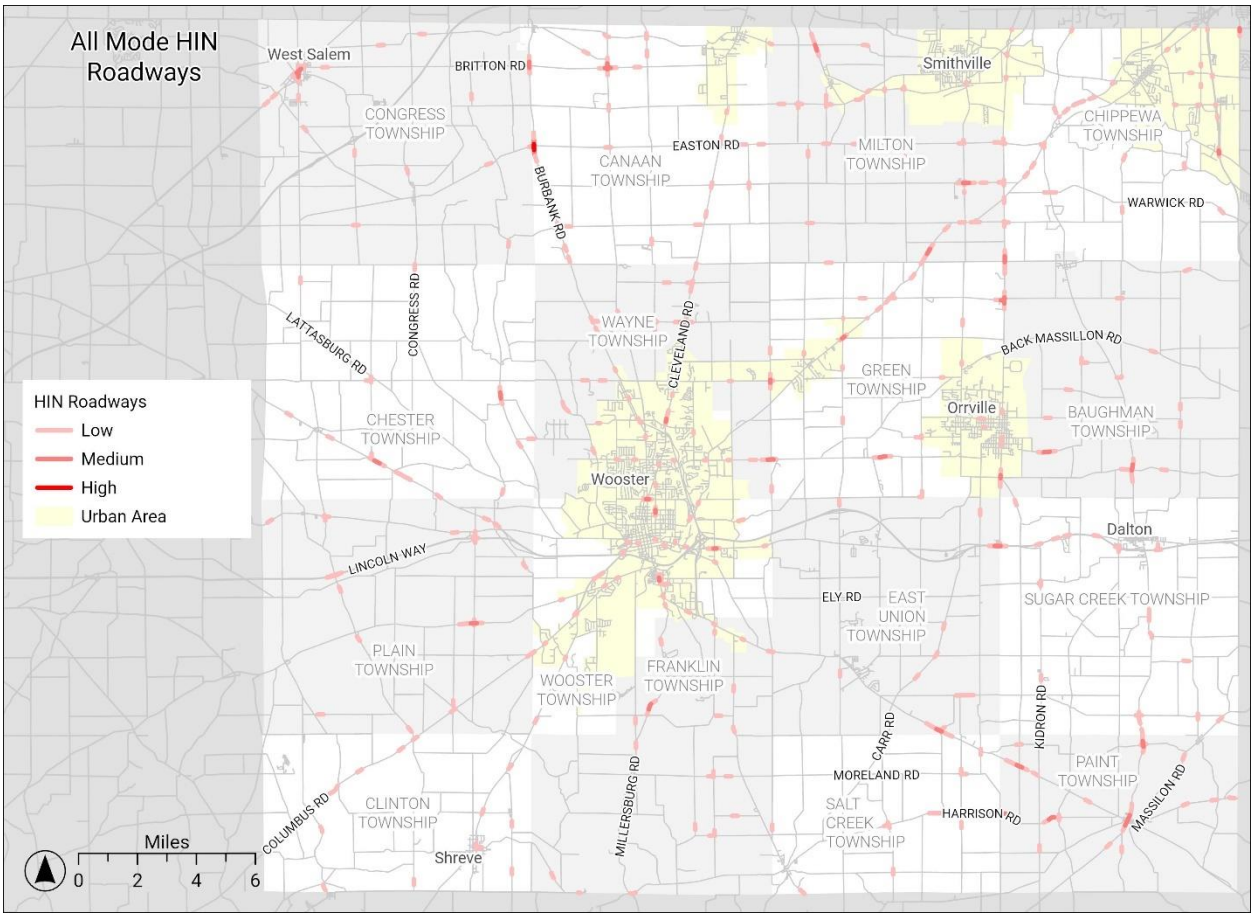


Figure 56. Map of High Injury Roadways

High Injury Intersections

High injury intersections refer to intersections with a history of frequent FSI crashes based on crash data from 2018-2023. Typically, intersections in urban areas are analyzed using a 150-foot buffer, while intersections in rural areas are assessed using a 250-foot buffer.

In this analysis, crashes are assigned to their corresponding intersection to determine the total number of crashes in each intersection during the study period. Intersections are ranked (ie. low, medium, high) based on number of crashes per intersection. This is modified for different modes of travel to accommodate differing numbers of crashes. In this analysis, all-mode, vehicle and ADV high injury roadways are categorized using the same scale, while pedestrian, bike and farm equipment high injury roadways are grouped together. Table 39 illustrates the differences in the categorization of modes of travel, and Figure 57 shows the All-Mode High Injury Intersections map.

Table 39. Differences in Intersection Modes of Travel

Mode of transportation			
All Mode, Motor Vehicle, ADV's		Pedestrian, Bicycle, Farm equipment	
Injury Score	Number of FSI Crashes	Injury Score	Number of FI Crashes
Low	1	Lower	1
Medium	2	Higher	2
High	3-4		

The highest number of crashes at intersections for all modes of transportation occurred at the following intersections:

- W Britton Rd & Friendsville Rd
- SR 21 & Clinton Rd
- E Hutton Rd & SR 3 Cleveland Rd
- S Jefferson Rd & SR 95
- SR 57 & US 30

Interactive web maps of other modes and analyses can be found at **this link** (https://arcg.is/HCWz1). Users can select High Injury Segments or High Injury Intersections, and choose from multiple modes of transportation, such as All Mode, Vehicle, Bicycle, Pedestrian, Animal Drawn Vehicle and Farm Equipment.

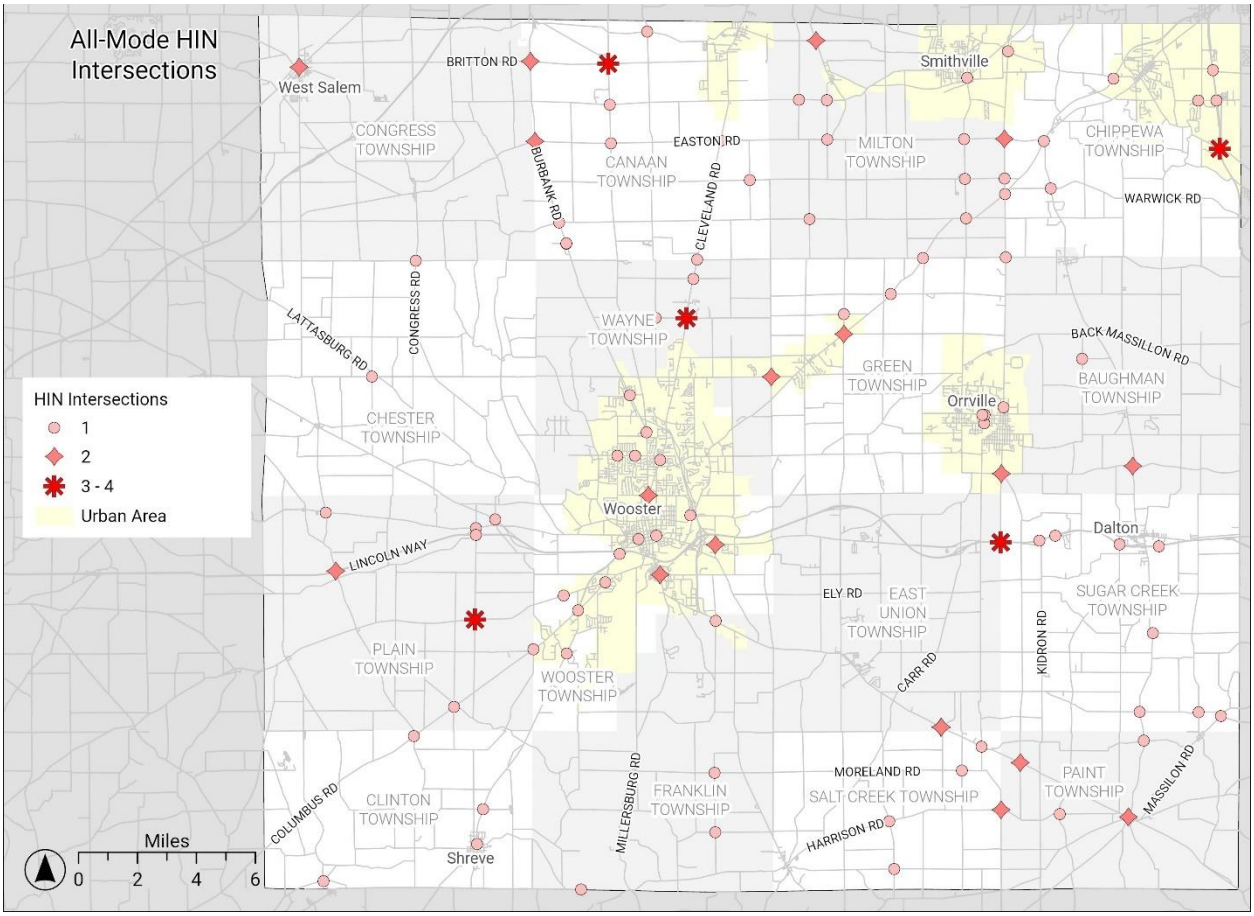


Figure 57. Map of High Injury Intersections

4.2 High Risk Network

The High-Risk Network (HRN) uses crash data and a facility rank analysis to classify road segments as high, medium, or low risk. The facility rank is determined by roadway characteristics associated with a higher frequency of crashes, such as higher speeds and increased traffic. This analysis is combined with historical crash data to create a comprehensive risk score, providing a holistic assessment of roadway safety.

Facility Profile Analysis

Roadways are evaluated through a facility profile analysis, which identifies combinations of roadway characteristics that are linked to a higher risk of crashes. Based on these features, each roadway is assigned a Facility Rank that ranges from 1 to 4: high, medium, low, and minimal. The criteria for assigning these ranks differ between urban and rural roads due to their unique characteristics. Table 40 outlines specific criteria defining each rank.

Table 40. Facility profile analysis rank descriptions

	Facility Rank	Road Functional Class	Speed Limit	ADT
Urban	1- High	3 (Principal Arterial)	>=35	any
	2- Medium	4-6 (Minor Arterial, Major/Minor Collector)	>=35	>3000
	3- Low	4-6 7 (Local)	>=25	<3000 >1000
	4- Minimal	7 (Local)	<=25	<1000
Rural	1- High	3-4 (Principal Arterial, Minor Arterial)	45-55	>3000
	2- Medium	5 (Major Collector)	45-55	<3000
	3- Low	6-7 (Minor Collector, Local)	45-55	<3000
	4- Minimal	6-7	45-55	<1000

Risk Analysis

The risk score assigned to each roadway segment considers both the Facility Rank and FSI Score. The FSI score denotes the number of crashes per mile of a given roadway. This approach combines roadway characteristics correlated with elevated crash frequency and historical crash data to create a comprehensive risk score that is both proactive and reactive in nature. By considering both proactive and reactive factors, this method provides a holistic assessment of roadway safety. Roadways that had no crashes and were missing data crucial to the analysis (e.g. ADT) were not included.

The Risk Score is classified into three categories: high, medium, and low risk. The determination varies for all-mode and vehicle crashes versus pedestrian, bicycle, ADV and farm equipment crashes, considering the differing quantities of crashes associated with each mode. Table 4 provides the criteria for assigning roadway risk scores based on different modes of transportation. By tailoring the risk assessment to specific modes, we can better address safety concerns across various travel types. Figure 58 shows the All-Mode High Risk Network map.

Table 41. Assigning Roadway Risks by Modes of Travel

Mode of Transportation					
All Mode, Motor Vehicle			Pedestrian, Bicycle, ADV's, Farm equipment		
Risk Score	Facility Rank	FSI Score	Risk Score	Facility Rank	FI Score
1- High	1 2	>=2	1- High	1 2	>=1
2- Medium	2 3 4	< 2 >=3 >=3	2- Medium	2 3 4	<1 >=1 >=1
3- Low	3 4	<3 <3	3- Low	3 4	<1 <1

Below are two scenarios that demonstrate how roadway risk score is assigned:

1. Akron Road (SR 585) is classified as high risk between Doylestown and Smithville. This segment is a rural minor arterial road with a speed limit of 55 mph and an average daily traffic (ADT) volume of 11,048 vehicles per day. From 2018 to 2023, this segment experienced 21 all-mode fatal or serious injury (FSI) crashes. It has a Facility Rank of 1 (High) and an FSI Score of 2. According to the Risk Score table, this roadway receives a risk score of 1, indicating High Risk. The roadway characteristics suggest a high risk of crashes, and the significant number of crashes during the study period confirms its high risk ranking.
2. Easton Road (SR 605) is classified as a low risk road. This roadway is a rural minor collector with a speed limit of 55 mph and an average daily traffic (ADT) volume of 2,062 vehicles per day. Between 2018 and 2023, this road experienced 0 all-mode FSI crashes. It has a Facility Rank of 3 (Low) and an FSI Score of 0, indicating Low Risk. The roadway characteristics indicate a low risk of crashes, and the low FSI score confirms this ranking.

Interactive web maps of other modes and analyses can be found at **this link** (https://arcg.is/HCWz1). Users can select High Risk Network, and choose from multiple modes of transportation, such as All Mode, Vehicle, Bicycle, Pedestrian, Animal Drawn Vehicle and Farm Equipment.

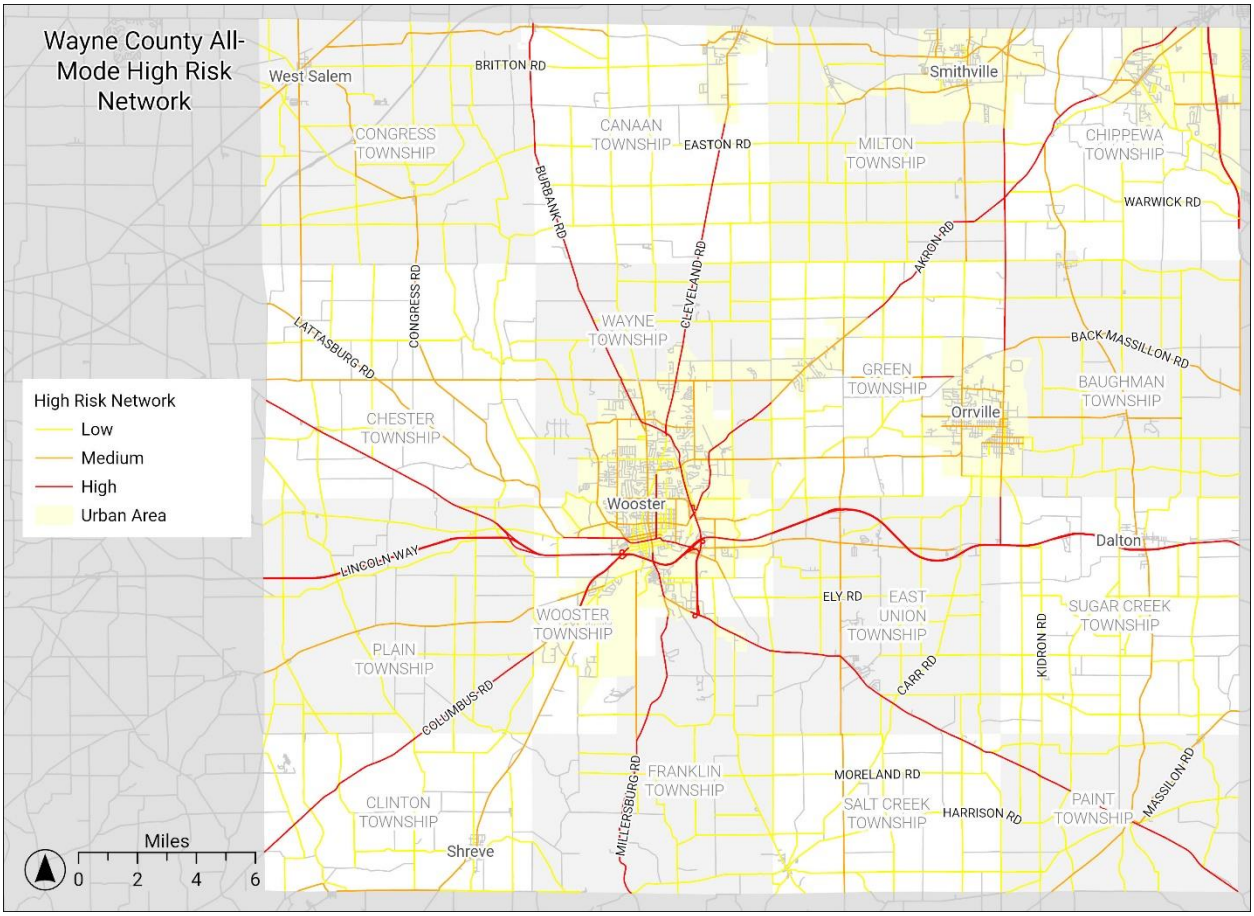


Figure 58. Map of High-Risk Network

5. EQUITY CONSIDERATIONS

5.1 Equity in Transportation

Equity in transportation acknowledges that underserved communities—including rural, isolated, and culturally distinct populations like Amish communities—experience greater exposure to traffic safety issues and often have reduced resilience to adverse impacts. An "underserved community" refers to a group of individuals or a geographic area that lacks access to essential services and opportunities, often due to historical and systemic inequities. These communities—whether urban, rural, isolated, or culturally distinct—often receive limited investment from government, private, or nonprofit sectors, resulting in inadequate infrastructure, education, healthcare, employment opportunities, and transportation options.

In rural and isolated areas, including Amish communities, residents may face disproportionately high rates of crashes, injuries, and fatalities due to road conditions, extended travel distances, and limited emergency response times. For Amish populations, who rely on horse-drawn buggies and other non-motorized modes, these risks are compounded by the lack of road features designed to accommodate slow-moving vehicles. The unique needs of Amish travelers, such as appropriate road signage, wider shoulders, and dedicated buggy lanes where possible, are often overlooked in standard infrastructure planning, increasing crash risk.

Limited access to public transit and active transportation options further restricts mobility in rural areas, increasing dependency on personal vehicles. In Amish communities, however, this dependency often translates to reliance on alternative, slower forms of transportation, which are vulnerable on roadways shared with faster-moving vehicles. For those who do not own or use motorized vehicles, transportation options are further limited, restricting access to healthcare, education, and employment. Additionally, older motorized vehicles (when owned) that lack advanced safety features are more common in rural areas, leaving these communities less resilient to the impacts of traffic incidents, weather events, and infrastructure limitations.

The equitable safety improvement strategy outlined here prioritizes the unique needs of rural and isolated areas, including those of Amish communities. Extensive outreach ensures that those most affected by transportation inequalities, such as rural and Amish residents, have their voices heard, and their feedback is integrated into planning efforts. Tools like the Justice40 data and USDOT's ETC Explorer help identify high-need areas by highlighting cumulative burdens due to underinvestment. This approach not only focuses investments on high-risk areas but also ensures that transportation improvements enhance accessibility and safety for all, particularly those in rural and culturally distinct communities.

Policy recommendations emphasize integrating transportation safety investments with land use and community planning to mitigate risks specific to rural and isolated areas. Proactive measures—such as installing rumble strips, widening shoulders, adding signage specific to horse-drawn vehicles, and improving visibility at night through reflective markers—are prioritized over reactive penalties, with a focus on lowering speeds and enhancing visibility on rural roadways. Further studies and funding allocations specifically target rural areas, including Amish regions, to address their unique safety needs and reduce barriers to accessing services.

This comprehensive, data-informed, and community-focused approach aims to reduce the transportation-related vulnerabilities of rural and isolated areas by creating a more equitable transportation system. This ensures that all community members, regardless of their economic status, geographical location, or cultural practices, have access to safe, reliable, and affordable transportation options.

5.2 Underserved Communities; Greater Exposure and Reduced Resiliency

Underserved communities, including rural, isolated, and culturally distinct communities like the Amish, face significant transportation challenges that increase their exposure to unsafe road conditions and reduce their resilience to transportation-related disruptions. These communities frequently experience inadequate infrastructure, lack of

investment in safety features, and limited access to alternative transportation options. The result is an increased risk of crashes, injuries, and fatalities, which compounds existing social and economic disadvantages. This section examines the unique safety and accessibility issues facing rural, isolated, and Amish areas as well as low-income communities.

Rural and Isolated Areas

Rural and isolated communities face specific transportation challenges that contribute to high crash rates and limited resilience in the face of traffic incidents. Although only about 19% of the U.S. population resides in rural areas, nearly half of all traffic fatalities occur on rural roads, according to the National Highway Traffic Safety Administration (NHTSA). This high fatality rate is attributed to factors like outdated road design, lack of safety features such as median barriers and shoulders, and longer emergency response times. These conditions are exacerbated by limited investment in rural infrastructure, which further heightens the risk of severe crashes.

Amish communities, in particular, rely on horse-drawn buggies and other non-motorized forms of travel, making them highly vulnerable in mixed-traffic scenarios. Unlike motorized vehicles, horse-drawn buggies are slower and often lack modern lighting or reflectors, which increases the risk of collisions, especially at night. Standard road designs and speed limits are not typically adjusted for slow-moving vehicles, leaving Amish road users at significant risk. Additionally, many rural roads lack signs that alert drivers to the presence of buggies, increasing the likelihood of crashes involving these vehicles.

Access to public transportation in rural areas is often minimal or entirely unavailable, leaving residents reliant on personal vehicles. Studies by the American Public Transportation Association (APTA) and the Rural Health Information Hub show that many rural communities have limited or no access to public transit, restricting mobility for residents who cannot drive due to age, disability, or income. For those who do own vehicles, these are frequently older models lacking modern safety features like electronic stability control and advanced braking systems, making crashes more likely to result in serious injuries or fatalities. Research from the Insurance Institute for Highway Safety (IIHS) indicates that the age and safety limitations of vehicles common in rural areas increase crash severity.

Emergency services infrastructure in rural areas is also limited, which further compounds the risk. According to the Centers for Disease Control and Prevention (CDC), average emergency medical response times in rural areas are nearly 50% longer than in urban areas, a critical delay in severe crashes where immediate medical attention is needed. With fewer healthcare facilities and longer distances for emergency medical services (EMS) to travel, crash outcomes are often more severe, underscoring the need for resilient infrastructure and quicker emergency response capabilities in rural areas.

Rural residents who lack personal vehicles, including older adults and individuals with disabilities, face additional barriers. The Transportation Research Board (TRB) reports that rural areas frequently lack pedestrian infrastructure, such as sidewalks and bike lanes, making it difficult and unsafe for non-drivers to access essential services. This limited mobility further isolates rural residents from healthcare, employment, and social services, reinforcing economic and social isolation.

Environmental and infrastructural features of rural roads, including limited signage and lack of shoulders, contribute to high crash rates. According to the Federal Highway Administration (FHWA), rural roads often lack rumble strips, clear signage, and adequate lighting, increasing the likelihood of severe crashes. FHWA's Safe System Approach advocates for targeted investments that address these issues and improve safety for all users, including Amish travelers. Suggested measures include adding signage specific to horse-drawn vehicles, reflective materials, separated facilities, and well-marked buggy pull-off areas to reduce crash risk.

In addition to these safety issues, limited transportation options economically disadvantage rural residents. The USDA Economic Research Service highlights that restricted access to reliable transportation reduces job opportunities,

healthcare access, and educational options for rural residents, which can perpetuate economic isolation and hinder community vitality.

Low-income Communities

Low-income communities, often located in high-density urban neighborhoods, also face heightened exposure to traffic risks and limited resiliency to transportation-related disruptions. Residents in these areas are disproportionately impacted by traffic crashes due to factors like poor infrastructure, high-speed traffic, and inadequate safety measures for pedestrians and cyclists. Many low-income neighborhoods experience a greater concentration of high crash intersections, poorly maintained sidewalks, and a lack of protected bike lanes and pedestrian crossings, leading to high rates of pedestrian and cyclist injuries and fatalities.

Public transit is essential for many low-income households, but access to reliable, frequent, and safe transit options is often limited. Inconsistent or limited transit service can create long commutes, reducing access to jobs, healthcare, and educational opportunities. Residents in these communities are also more likely to rely on active transportation, such as walking and biking, to reach essential services. However, inadequate infrastructure, such as missing crosswalks and poorly lit streets, exposes them to significant safety risks. Research shows that pedestrian and cyclist fatalities are disproportionately high in low-income neighborhoods, reflecting the urgent need for safer infrastructure in these areas.

Low-income households that do own vehicles are more likely to have older models that lack modern safety features, which can increase the risk and severity of crashes. Research from the Insurance Institute for Highway Safety (IIHS) supports that older, less-safe vehicles are commonly found in low-income areas, making crashes more severe and reducing resiliency following crashes. When crashes do occur, the economic impact on low-income families is often more devastating due to limited financial resources for repairs or vehicle replacement. This can result in prolonged loss of mobility, affecting employment and access to necessary services.

Emergency response and medical care can also be less accessible in low-income areas, particularly if these communities are in underserved parts of urban settings. The lack of nearby healthcare facilities and longer wait times for emergency services exacerbate the severity of outcomes in traffic incidents, as immediate medical assistance is crucial in reducing fatalities and long-term injuries.

TRB and FHWA emphasize that targeted investments are necessary to address infrastructure deficits in low-income areas. These communities benefit from Complete Streets initiatives and Proven Safety Countermeasures designed to reduce traffic speeds, improve pedestrian crossings, and enhance bike and pedestrian infrastructure. Policies that prioritize equitable investments and community engagement in low-income neighborhoods can help address these systemic disparities, improve safety outcomes, and enhance residents' quality of life.

Overall, the specific vulnerabilities of rural, isolated, Amish, and low-income communities to unsafe roadways underscore the need for tailored investments and policies that enhance transportation equity. By addressing the distinct needs of these communities, this approach aims to improve safety, resilience, and accessibility, ultimately fostering a more equitable and inclusive transportation system for all.

5.3 Equitable Safety Improvement Strategy

A secure and equitable transportation system must prioritize the safety and accessibility needs of communities that are traditionally underserved, including rural and isolated areas. This strategy allocates investments in ways that prioritize individuals and areas with limited access to safe, multi-modal transportation options. Investments are directed to enhance the safety and resilience of rural infrastructure, such as widening lanes, reinforcing guardrails, improving lighting, and installing traffic-calming measures in high-risk rural zones.

Closing these infrastructure gaps is essential to achieving zero deaths or serious injuries. An equitable funding approach directs a larger portion of transportation funds to these underserved areas, giving them safe, reliable access to essential services comparable to those available in urban areas. By addressing the unique needs of rural and isolated communities, this strategy supports safer and more reliable access to jobs, healthcare, education, food, and other essential services, contributing to a more equitable transportation system for all.

FHWA is adapting its procedures to integrate safety for all users as a standard practice in its federal funding programs. Existing engineering and safety measures—such as systemic safety approaches, Proven Safety Countermeasures, Complete Streets initiatives, and Context-Sensitive Design—are central to addressing the specific needs of underserved communities in transportation projects. This Action Plan is aligned with these principles in the following ways:

1. **Acknowledgement**: This Action Plan asserts that underserved communities, including rural and isolated areas as well as low-income urban neighborhoods, face greater exposure and reduced resilience to traffic safety issues. These factors contribute to a higher frequency of crashes, greater involvement of pedestrians and cyclists in incidents, and a higher degree of severity in crashes. In rural and isolated areas, the lack of safe infrastructure, such as shoulders and traffic calming, increases crash severity, while low-income neighborhoods often contend with limited pedestrian facilities and higher volumes of high-speed traffic.
2. **Focused Outreach**: Tailored outreach strategies to each underserved group ensure inclusivity in gathering community input:
    - **Rural, Isolated, and Amish Areas**: Recognizing the barriers of geographic isolation, the safety action plan team collaborated with local agencies to meet and interact with people in these populations. Hosting booths at Amish Health and Safety Days, a market patronized by many people from Amish communities, and the County Fair engaged rural and Amish residents directly. This enhanced the perspective on local road safety needs and challenges related to limited infrastructure and emergency response.
    - **Low-Income Urban Areas**: In urban low-income areas, outreach is concentrated on high-density neighborhoods within the High Injury Network. Public meetings were held in downtown locations with multiple modes of advertisement. Staff also conducted a meeting with some in low-income communities to gather verbal feedback and understand local needs, roadway safety concerns, and residents' mobility challenges.
3. **Incorporation of Justice40 Data and ETC Explorer**: The Justice40 initiative and the U.S. DOT's Equitable Transportation Community (ETC) Explorer play a critical role in identifying high-need areas for both rural and low-income communities.
    - The Justice40 initiative, established under Executive Order 14008, directs federal investment toward reversing decades of underinvestment in disadvantaged communities. The ETC Explorer uses census and socioeconomic data to assess cumulative burdens in transportation, climate vulnerability, and health. For rural areas, this tool identifies high-risk areas with poor infrastructure and isolation from critical services. In low-income urban areas, the Explorer helps highlight neighborhoods burdened by high crash rates and limited transit options.
    - This data was analyzed for each roadway segment within Wayne County, incorporating crash, injury, and risk data to prioritize interventions for both rural and urban low-income areas.
4. **Intersectionality**: This Action Plan recognizes the compounded vulnerabilities across underserved communities, including rural, Amish, and low-income urban populations, considering factors like geography, income, cultural transportation practices, disability, and English proficiency. For rural areas, isolation amplifies risks for older adults, non-drivers, and those with disabilities, while also affecting Amish

communities, who predominantly use horse-drawn buggies and non-motorized forms of transport. These distinct travel methods increase vulnerability on high-speed roads not designed for slower vehicles. In low-income neighborhoods, residents may face the added challenges of outdated infrastructure, unreliable transit options, and frequent pedestrian hazards. Intersectionality is embedded in the decision-making process to ensure that interventions address the complex and diverse needs of these populations, with specific considerations for Amish road users to enhance their safety in mixed-traffic conditions.

5. **Prioritization**: Both rural and low-income urban areas, including regions with significant Amish populations, appear prominently on High Injury Networks and High-Risk Networks due to elevated crash rates and unique risk factors. Prioritizing improvements in these areas aligns with high Justice40 scores, directing investments to the locations where they are needed most. This prioritization considers not only crash data but also community vulnerabilities, including economic, cultural, and geographic challenges unique to each community. For Amish communities, prioritization also considers the need for slower-speed zones, appropriate signage, and wider shoulders to safely accommodate non-motorized travel modes.

6. **Recommendations**:

    - **Infrastructure**:

        - *Rural and Isolated Areas*: Infrastructure improvements in rural areas focus on widening shoulders, adding rumble strips, improving lighting, and installing guardrails to reduce crash severity. Additionally, enhanced signage and road markings specific to Amish travel—such as “Share the Road” signs, buggy lane markings where feasible, and reflective markers for nighttime visibility—are emphasized to alert motor vehicle drivers to the presence of horse-drawn vehicles. These proactive safety measures aim to improve overall rural road safety while also catering to the unique transportation needs of Amish communities.

        - *Low-Income Urban Areas*: In urban low-income neighborhoods, Complete Streets concepts are prioritized to improve pedestrian and cycling infrastructure, with a focus on protected crosswalks, traffic-calming measures, and dedicated bike lanes. Safer pedestrian routes near schools and transit stops are emphasized to protect vulnerable road users.

    - **Policy**: Integrating transportation safety with housing and land use policies is crucial to minimizing the risk of displacement in both rural and urban areas. Equitable data analysis informs policy updates, ensuring that investments in safety improvements support community stability and accessibility. Policies are designed to avoid unintended consequences, such as increased property values leading to displacement in urban areas or restrictive land use that limits access to services in rural areas, including those with Amish populations who rely on traditional agricultural practices and cultural autonomy.

    - **Supplemental Study Funding**: Funds for additional safety studies should be allocated to municipalities in rural, Amish, and low-income urban areas that may lack capital to conduct their own studies. This ensures that even smaller or financially constrained communities receive detailed data and tailored recommendations for safety improvements. For Amish communities, these studies can include assessments of buggy-specific road safety measures, potential areas for reduced speed limits, and shared road signage to improve coexistence with motor vehicles.

    - **Amish and Bike Travel Maps**: As part of the effort to create this Action Plan, two maps have been established identifying common and needed travel routes used by the Amish (through both buggy and bike modalities) and cyclists, respectively. These maps enable localities to prioritize buggy and bike safety improvement countermeasures in capital improvements and maintenance. These maps and the associated roadway NLFID’s and SLM’s are in Appendices A and B.

Neglecting equity in decision-making can have severe consequences, such as heightened risks of fatal and severe injuries, particularly in communities reliant on multi-modal transportation systems. Disregard for the specific safety needs of rural, Amish, and low-income urban populations can erode trust in government processes and deter community engagement. Moreover, without accurate data and appropriate prioritization, funds may be inefficiently allocated, failing to address safety objectives in the areas most in need. This Action Plan therefore directs equitable investment in the safety needs of rural, isolated, low-income urban, and Amish communities to help prevent transportation-related fatalities and injuries.

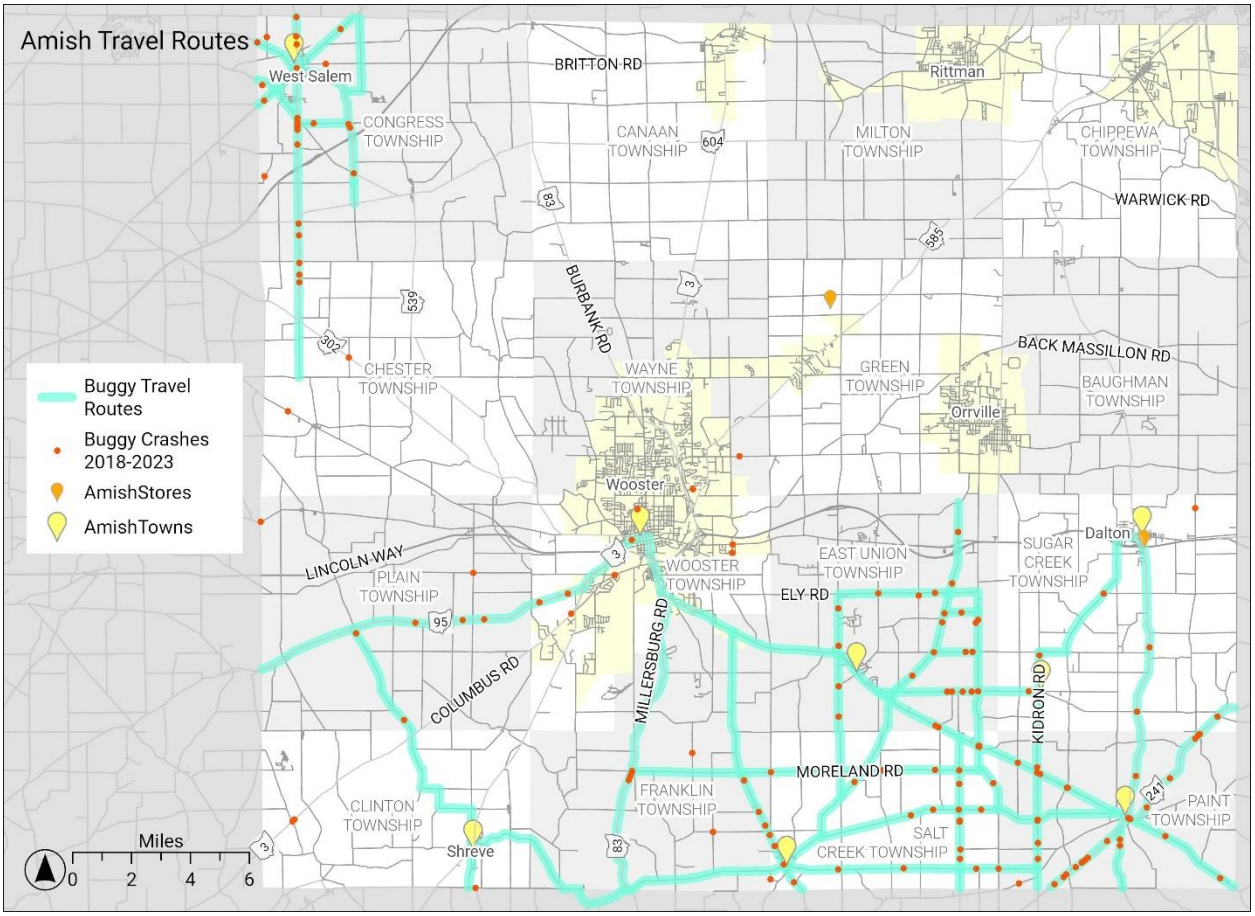


Figure 59. Amish Travel Map

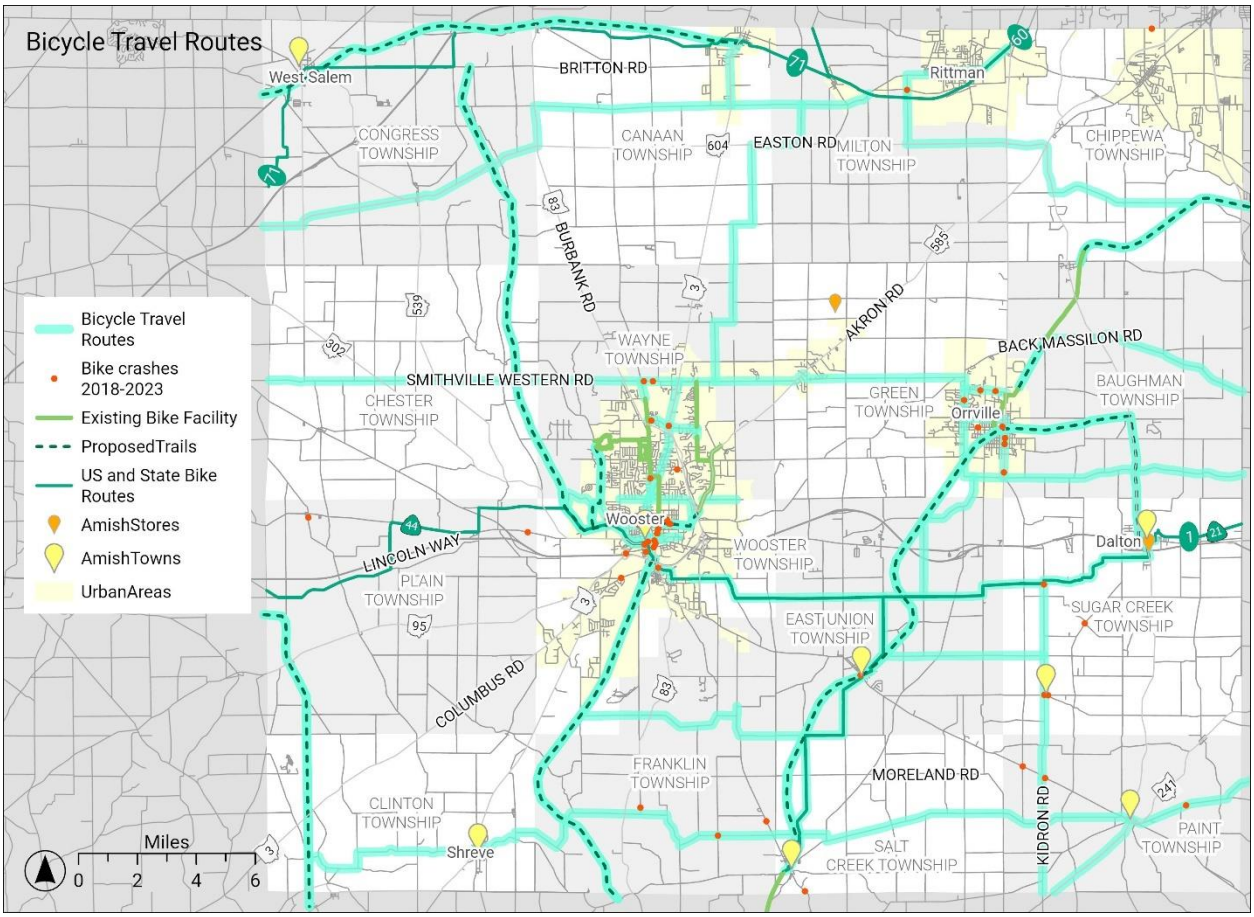


Figure 60. Bike Travel Map

6. POLICY RECOMMENDATIONS

An effective policy directs staff and decision makers to consistently plan, design, build, operate, and maintain the transportation system in a way that prioritizes safety and progress toward the goal of eliminating traffic-related deaths and serious injuries. Policies can take many forms; they can be brief or may contain extraordinary detail, but they should be more than just an expression of support. An effective policy outlines the path to turning a policy into practice and a realized goal.

Throughout the development of this Action Plan, there have been countermeasures that are repeatedly recommended for specific crash types. As future plans and projects are developed, these same countermeasures could be applied to all highways as a proactive measure to improve safety and prevent crashes. Listed below are some of the safety improvements that should be considered with all new projects and systematically applied to roadways on the High Injury and High Risk Networks.

- Widen shoulders on all new resurfacing or reconstruction projects. Wider shoulders not only provide a recovery zone for vehicles that stray off the highway but also provide a refuge for slow moving vehicles, bicycles, and pedestrians. For roadways on the Amish Travel Plan, widen shoulders to at least eight feet to serve as buggy lanes.

- Increase the frequency of resurfacing projects and prioritize rural segments on the High Injury and High Risk Networks. Reduced pavement depressions and smoother surfaces contribute to the reduction of Fixed Object crashes.

- In areas of slow-moving vehicle traffic and no buggy/bicycle lanes yet, construct pull off areas. This is especially important on grades where speeds are even more reduced and sight distance might be limited.

- Provide bicycle lanes or buffered bicycle lanes wherever practicable.

- Widen pavement edge lines and centerlines and install Raised Pavement Markings (RPMs). This is especially important on curves and in areas known to have recurring fog.

- Provide edge line and centerline rumble strips when resurfacing. (Edgeline rumble strips are not recommended in areas of high horse and buggy traffic.)

- For roadways on the Amish and Bike Travel Plans, replace chip and seal roads with asphalt pavement to provide a more stable surface and shoulders and to allow for the use of enhanced road markings.

- Enhance warning signage in areas of high Amish Buggy traffic and Farm Equipment traffic.

- Provide chevron signage on curves.

- Provide larger double stop signs with reflective signpost sleeves at intersections with a history of crashes due to running stop signs or police records indicating common citations in the area. Include plaques that indicate if cross traffic does not stop. Solar powered flashing signs are preferred.

- Consider constructing roundabouts where appropriate.

- Consider a policy or a revised policy addressing private business signs at intersections, to be outside the clear zone and not to impede driver sight distance triangles.

- Consider a policy or a revised policy to clear vegetation that is affecting sight distance at intersections. In some cases, this may involve acquiring corners of farm fields. Note that the placement of a buggy driver is

significantly farther back than the driver of a motorized vehicle and therefore clearing a greater distance from the intersection point may be necessary on an Amish Travel Route.

- Support education for drivers of motorized vehicles and non-motorized vehicles and how different modes of transportation should interact with each other while sharing roadways.

  Encourage the use of safety lights, turn signals, and Slow Moving Vehicle (SMV) emblems on farm equipment and horse and buggies.

The Ohio Farm Bureau is a grassroots membership organization that is committed to supporting farming communities. They are involved everywhere from events hosted by county Farm Bureaus to the halls of local, state, and federal government, advocating for policy that supports the future of farming. They monitor policy issues that impact agriculture in Ohio, including the safety of their members. The Wayne County chapter of the Ohio Farm Bureau has been an active part of the SS4A Action Plan. They have provided relevant sections of their state policy book that is related to safety. The entire list of policies is included in Appendix C. The following policies were highlighted by them to be most relevant and potentially adoptable by communities in the county. Note that these policies are copied from the materials and not necessarily reflect the terminology that would typically be used for safety studies or action plans (i.e. “dangerous” instead of “high crash”). The Ohio Farm Bureau Federation supports:

- The Ohio Department of Transportation placing flashing stop signs at dangerous rural intersections of state routes.
- The placement of reflective tape on all stop sign posts.
- Placement of stop signs at intersections should have an indication whether it is a two-way, four-way, or some other intersection configuration.
- Stop ahead signs, rumble strips or blinkers at dangerous intersections. We encourage the Ohio Department of Transportation to consider local input and give more emphasis to installation of traffic lights at dangerous rural intersections.
- More liberal use of reduced speed limits on rural roads where road topography warrants such speed limit reduction.
- The use of yellow “Prepare to Stop When Flashing” sign to warn of upcoming traffic lights on high-speed highways or dangerous intersections.
- The standards required to install traffic safety improvements being based on accident/incident rates.
- State and local road authorities and utilities giving consideration to the movement of farm equipment when placing traffic roundabouts, safety guardrails, utilities and signage along roadways.
- The mowing of roadways to control noxious weeds, improve safety, and sustain a clear line of vision on the highway right-of-way for any intersection.
- Further research by state and local transportation authorities to determine areas of high vehicle/buggy/pedestrian/bicycle/farm equipment traffic and accident rates and the prioritization of those roadways for construction of buggy/pedestrian/bicycle lanes and widening for farm equipment.

- Minimum sizing of roundabouts and other nontraditional intersections so as not to impede truck or farm equipment. All proposed roundabouts in unincorporated areas should be engineered and constructed with the minimum radius needed to accommodate modern farm equipment and tractor/trailers of maximum legal length and width safely and without obstruction. Graduated curbing should be used on all roundabouts.

- Revising the qualification standards specified in the Association of State Highway and Transportation manual so Ohio counties can benefit from grants and matching funds for road construction. Current standards are inappropriate for conditions in Ohio and make the construction cost prohibitive.

- The positioning of mailboxes and newspaper boxes according to the Federal Postal Regulations and encourage placing them on the same side of the road. We support enforcement, by either the county engineer or county zoning inspector, of the minimum set back requirement where applicable for mail and paper boxes along state, county and township roads. If there is not a setback distance, then one should be established. We propose a standard three feet from the edge of the road setback for mailboxes to facilitate the movement of large equipment.

7. STRATEGY AND PROJECT SELECTION

7.1 FHWA Proven Safety Countermeasures

FHWA's Proven Safety Countermeasures (PSC) initiative is a collection of 28 countermeasures and strategies effective in reducing roadway fatalities and serious injuries on our Nation's highways. Transportation agencies are strongly encouraged to consider widespread implementation of PSCs to accelerate the achievement of local, State, and National safety goals. These strategies are designed for all road users and all kinds of roads—from rural to urban, from high-volume freeways to less traveled two-lane State and county roads, from signalized crossings to horizontal curves, and everything in between. Each countermeasure addresses at least one safety focus area – speed management, intersections, roadway departures, or pedestrians/bicyclists – while others are crosscutting strategies that address multiple safety focus areas. Each of the countermeasures and the safety focus group that it addresses is listed below. The last group of countermeasures, titled Crosscutting, addresses multiple safety focus areas.

Speed Management

Appropriate Speed Limits for All Road Users

Speed Safety Cameras

Variable Speed Limits

Roadway Departure

Enhanced Delineation for Horizontal Curves

Longitudinal Rumble Strips and Stripes on Two-Lane Roads

Median Barriers

Roadside Design Improvements at Curves

SafetyEdge℠

Wider Edge Lines

Pedestrian/Bicyclist

Bicycle Lanes

Crosswalk Visibility Enhancements

Leading Pedestrian Interval

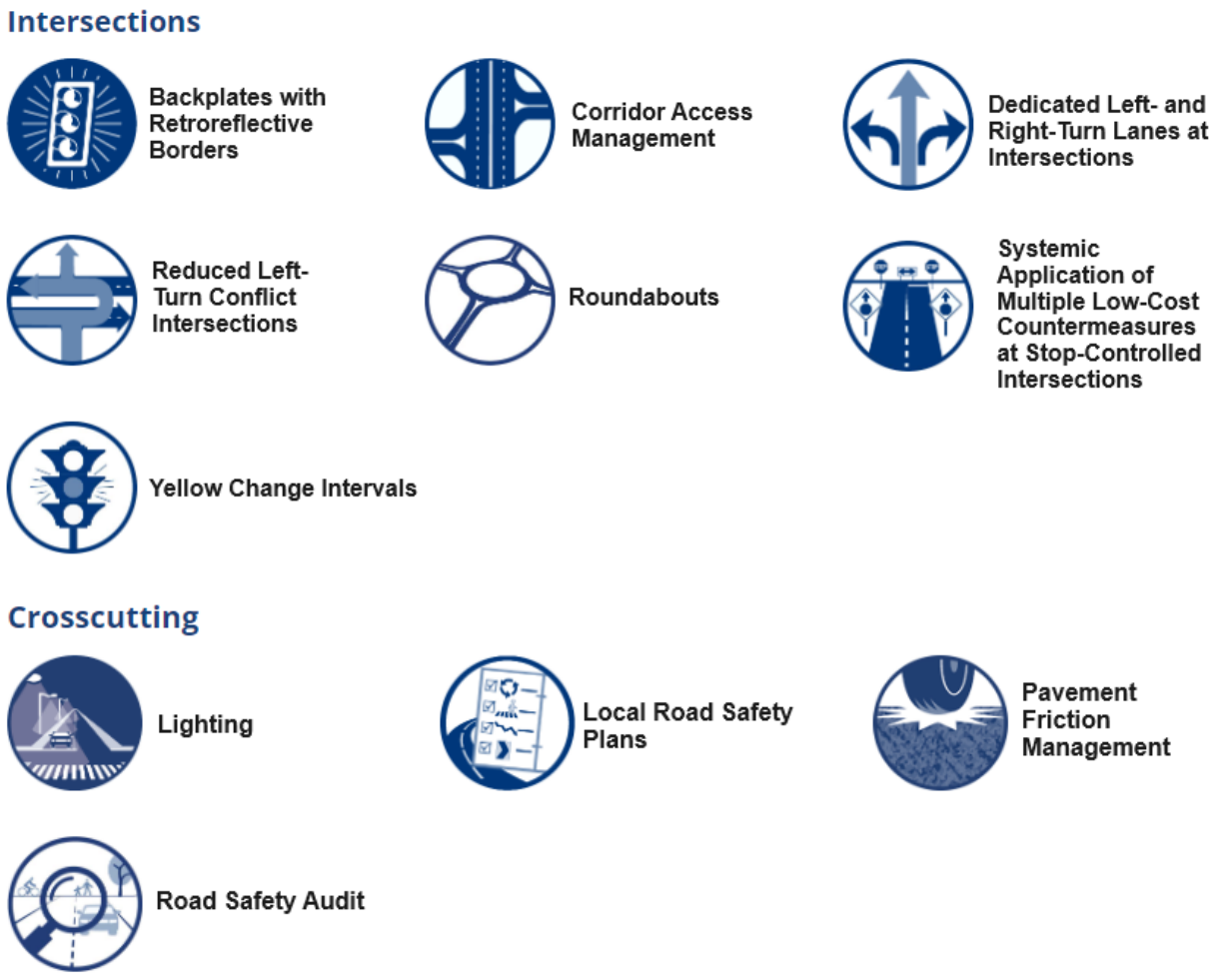
Medians and Pedestrian Refuge Islands in Urban and Suburban Areas

Pedestrian Hybrid Beacons

Rectangular Rapid Flashing Beacons (RRFB)

Road Diets (Roadway Reconfiguration)

Walkways



7.2 Project Identification and Recommended Countermeasures

Herein is the identification of a comprehensive set of projects and strategies—shaped by data, the best available evidence and noteworthy practices, and stakeholder input and equity considerations—that will address the safety problems described in this Action Plan. These strategies and countermeasures focus on a Safe System Approach and effective interventions and consider multidisciplinary activities.

The methodology for determining and prioritizing safety improvement projects in Wayne County takes into account the following items:

- High Injury Network Score
- Roadway Facility (Segment or Intersection)
- Mode (All Modes, Pedestrians, Bikes, ADVs, Farm Equipment)
- Urban or Rural determination
- Equity Scores
- High Risk Network

After systematic analysis of the crash history, the High Injury Network was created, as described earlier in this report. This network can be separated into the following modes: All, Pedestrian, Bicycle, ADV, and Farm Equipment. Each

roadway segment and intersection is scored for these modes based on fatal and severe crashes. The pedestrian, bicycle, ADV, and Farm Equipment modes represent a smaller proportion of traffic volume and in most cases, locations of these crashes are based on only a few crashes. For these modes the segment and intersection score is based on fatalities and all injuries. Lastly, for All Modes, which is mostly motor vehicles, rural and urban locations are considered separately due to the vast differences in traffic volumes and setting characteristics.

Each of these priority lists were sorted by High Injury Network score and a "cut off line" was established. Note that all high injury locations are good locations for scrutiny and safety improvement, but due to the vast quantity of segments and intersections on the network and the expected time frame of this Action Plan, the scope must be narrowed.

The twelve distinct Priority Lists (with bottom line cut-off):

- All Modes, Intersections, Rural (at least 2 FSI crashes)
- All Modes, Intersections, Urban (at least 2 FSI crashes)
- All Modes, Segments, Rural (at least 2 FSI crashes)
- All Modes, Segments, Urban (at least 2 FSI crashes)
- Bicycle, Intersections, (at least 1 FI crash)
- Bicycle, Segments, (at least 1 FI crash)
- Pedestrian, Intersections, (at least 1 FI crash)
- Pedestrian, Segments, (at least 1 FI crash)
- Animal Drawn Vehicle, Intersections, (at least 1 FI crash)
- Animal Drawn Vehicle, Segments, (at least 1 FI crash)
- Farm Equipment, Intersections, (at least 1 FI crash)
- Farm Equipment, Segments, (at least 1 FI crash)

The following columns were added for prioritization analysis:

- Justice40 Zero Vehicle Households
- Justice40 Percent of Population Below 200% Poverty
- Justice40 Transportation Cost Burden Score
- Poverty Score

The priority lists were scored based on FSI crashes, equity scores, and percent of other injuries to determine a final ranking of the locations.

7.3 Outcomes of Priority Lists

ALL MODES AND PEDESTRIAN PRIORITY LISTS

A high-level review of each location on these priority lists was performed, including review of 6-year crash history, geometry, existing conditions, traffic volumes, aerial views, available streetviews, (some) on-site visual observation, and available information on past, current, or future improvements. In many cases, this review points to an applicable FHWA Proven Safety Countermeasure as the recommendation. In some cases, other known countermeasures are applicable and recommended. In other cases, more study is needed. These projected outcomes are indicated in the All Modes and Pedestrian priority lists.

BICYCLE AND ANIMAL DRAWN VEHICLE PRIORITY LISTS

With locations on the other priority lists localized safety improvement countermeasures on not applicable or appropriate. In some cases, a series of crashes involving these elements indicates that an overarching countermeasure may be the most productive means of improving safety along a roadway. For example, a roadway with several locations on the animal drawn vehicle priority list that also connects many known Amish-focused destinations

may be recommended for a multi-mile buggy lane construction project. See the next section for Selected Projects which address many priority list locations comprehensively.

These lists can also an assist municipalities in the application of policy, education, enforcement, and systemic safety measures. This includes:

Public Awareness and Education:

- **Safety Campaigns:** Conducting public awareness campaigns to educate both drivers and cyclists about safe road-sharing practices can improve behavior and reduce crash risks.

Network-Wide Infrastructure Enhancements:

- **Dedicated Bicycle Lanes:** Implementing on-road bike facilities, such as dedicated bicycle lanes, can provide safer spaces for cyclists and reduce crash risks.
- **Protected Intersections:** Designing intersections with features that protect cyclists, such as dedicated signal phases and physical barriers, can enhance safety at conflict points.

An especially helpful result of these specific priority lists is for the visualization and creation of the Bicycle Travel Map and Amish Buggy Travel Map. Along with other resources such as Amish villages and stores, current and planned bike ways, and destinations to job centers/entertainment/recreation, connecting routes can be established. These maps serve as master planning documents for the County and municipalities such that infrastructure for vulnerable road users can be planned, funded, and built.

FARM EQUIPMENT PRIORITY LISTS

In terms of Farm Equipment, these priority lists can assist municipalities in the application of policy, education, enforcement, and systemic safety measures. This includes:

Enhanced Signage and Delineation:

- **Advance Warning Signs:** Install signs alerting drivers to the presence of slow-moving vehicles, such as farm equipment, especially in areas with high agricultural activity.
- **Pavement Markings:** Use clear lane markings to guide both motorists and farm equipment operators, reducing confusion and potential collisions.

Roadway Design Improvements:

- **Wider Shoulders:** Expand road shoulders to provide space for farm equipment to travel without impeding regular traffic flow.
- **Turn Lanes:** Add dedicated turn lanes at intersections frequently used by farm vehicles to facilitate safer turning movements.

Public Awareness and Education:

- **Driver Education Programs:** Conduct campaigns to educate motorists about sharing the road safely with farm equipment, emphasizing patience and caution.
- **Farm Equipment Visibility:** Encourage farmers to equip their machinery with reflective materials and proper lighting to enhance visibility.

Policy and Enforcement:

- **Regulations:** Establish and enforce laws regarding the operation of farm equipment on public roads, including time-of-day restrictions and required safety features.
- **Law Enforcement Training:** Train law enforcement officers to recognize and address issues related to farm equipment on roadways.

The sorted priority lists with recommendations for safety improvement (where applicable) are provided in Appendix D.

7.4 Selected Projects

Several projects have been identified through inspection of the priority lists and travel maps. The selected projects are described in this section with discussion on crash history, setting, potential countermeasures, and recommendations. Selected Project sheets and cost estimates are in Appendices E and F. The final list of selected projects are:

- SR 83 – Burbank Road (south of Steiner Road to just north of SR 604)
- SR 585 - Akron Road (Railroad overpass to Moine Road)
- SR 301 – Elyria Road (Northwestern School District lot to SR 604 Pleasant Home Road)
- Kidron Road (Hackett Road to Wayne County Line)
- SR 3 – Columbus Road (Heyl Road to Columbus Road Extension)
- SR 241 – Massillon Road (CR 37 Winesburg Road to Wayne County Line (toward Kidron Road))
- Back Orrville Road (Geyers Chapel Road to Honeytown Road)
- Britton Road and Friendsville Road
- SR 95 – Blachleyville Road and Jefferson Road
- US 30 and SR 57 – Wadsworth Road
- SR 3 – Cleveland Road and Hutton Road
- US 250 – Dover Road and Fountain Nook Road
- US 250 – Dover Road and Kohler Road
- Kansas Road and Harrison Road
- SR 83 – Burbank Road and Britton Road
- Seville Road and Doylestown Road
- US 250 – Dover Road and SR 241/SR 94
- SR 301 – Main Street (SR 539 to US 42)

SR 83 – Burbank Road (south of Steiner Road to just north of SR 604) Google Maps Link

This rural 1.70-mile, two-lane roadway segment experienced 32 crashes from 2018 to 2023, with 44% resulting in injury and seven of those resulting in a fatal serious injury. Nearly half of the crashes were fixed object, head on, or sideswipes. These types of crashes are due to driving off the road, unsafe speeds, driving left of center, and swerving to avoid. Several of the crashes due to a driver's loss of control occurred at a curve on the roadway.

This corridor is on the priority lists for rural segments and farm equipment crashes.

The safety improvement countermeasures that would address the crash pattern on this corridor are those that assist the driver in maintaining control of the vehicle and recovering in the case of an avoidance measure. Multiple FHWA Proven Safety Countermeasures can be applied. According to FHWA, installing shoulder rumble strips can lead to a 13% to 51% reduction in run-off-road fatal and injury crashes. Enhanced delineation for horizontal curves via sequential dynamic chevron signage results in a 60% reduction in fatal and injury crashes.

The recommendations of this Comprehensive Safety Action Plan are to widen the shoulders to four feet wide, install edge line rumble strips, install raised pavement markers on edge lines, and add sequential dynamic chevron signage on the curve approximately 1000 feet south of SR 604. For a comprehensive safety improvement, the limits of the widening and edge line work should extend beyond this priority route and encompass the 9-mile length of Burbank Road from the southern border of the Village of Burbank to Smithville Western Road.

See Selected Project SR 83 – Burbank Road (Smithville Western Road to Southern border of Village of Burbank).

SR 585 - Akron Road (Railroad overpass to Moine Road) Google Maps Link

This rural 1.25-mile, two-lane roadway segment experienced 36 crashes from 2018 to 2023, with 44% resulting in injury and five of those resulting in a fatal serious injury. The most common crash type was the rear end followed by the left turn and angle crashes (specifically turning left onto SR 94). The third most common crash type was a combination of the fixed object, head on, and sideswipe/passing crash. Many of these crashes are the result of high speeds yielding to either (1) an inability to slow down in time for traffic waiting to turn and (2) a drivers' loss of control.

This corridor is on the rural segment priority list.

The safety improvement countermeasures that would address the crash pattern on this corridor are those that assist the driver in maintaining control of the vehicle and provide a safer means of waiting to turn left at SR 94. Multiple FHWA Proven Safety Countermeasures can be applied. According to FHWA, installing centerline rumble strips can reduce head-on and opposite-direction sideswipe fatal and injury crashes by 44% to 64%. Similarly, shoulder rumble strips can lead to a 13% to 51% reduction in run-off-road fatal and injury crashes. A dedicated left turn lane can result in a 28-48% reduction in total crashes at an intersection.

The recommendations of this Comprehensive Safety Action Plan are to widen/repair the shoulders to 4-foot wide, where necessary, install edge line and centerline rumble strips, install raised pavement markers on edge lines, and construct a left turn lane on the northbound approach to SR 94. For a comprehensive safety improvement, the limits of the widening and edge line work should extend beyond this priority route and encompass the 2.4-mile length of SR 535 from SR 604 to Moine Road.

See Selected Project SR 585 – Akron Road (SR 604 – Easton Road to Moine Road).

SR 301 – Elyria Road (Northwestern School District lot to SR 604 Pleasant Home Road) Google Maps Link

This rural 1.6-mile, two-lane roadway segment experienced five animal drawn vehicle crashes from 2018 to 2023, with 100% causing injury and two crashes resulting in a serious injury. All five crashes were rear ends due to a motorized vehicle driver's failure to slow and maneuver around a horse drawn buggy.

This roadway segment is on the Amish Travel Map. The southern portion of this roadway segment is within the Northwestern School Zone.

This roadway is hilly with 10-foot wide lanes and almost no shoulders in many areas. The downgrades increase speeds, with hill crests and valleys preventing sight of objects ahead, while the narrow width provides little room for slower traffic to reside. Due to the proximity of Northwestern High School, this segment likely receives a larger proportion of young drivers. Young drivers are an emphasis area on ODOT's Strategic Highway Safety Plan as these drivers tend to exhibit higher speeds, take more risks, are more likely to engage in distracted driving, and make fewer correct reactive decisions due to a lack of experience.

The safety improvement countermeasure that best fits this crash pattern is one which provides space accommodation for non-motorized transportation, reducing conflict with high speed motorized traffic.

The recommendation of this Comprehensive Safety Action Plan is to construct buggy lanes on both sides of SR 301. In the interim, it is recommended that certain safety improvement countermeasures be constructed: hill climbing and descending lanes, buggy pull offs where appropriate, and warning signage at vertical crests. For a more comprehensive safety improvement, buggy lanes should be constructed for the full length of SR 301 on the Amish Travel Map. This would entail 7.5 miles of roadway from South Street in West Salem to Smithville Western Road.

See Selected Project SR 301/CR 72 – Elyria Road (Smithville Western Road to South Street).

Kidron Road (Hackett Road to Wayne County Line) Google Maps Link

The 6.1-mile two-lane roadway experienced 11 crashes involving animal drawn vehicles or bicycle riders from 2018 to 2023, with 64% causing injury and two causing serious injuries (one involving a bicycle and one involving a buggy). Five of the crashes were rear ends due to a motorized vehicle driver's failure to slow and maneuver around a horse drawn buggy. Three crashes were angle crashes, where the driver of a motorized vehicle, after stopping at stop sign, failed to yield to buggies or a cyclist. Two crashes were due to a driver of a motorized vehicle going left of center as a crash avoidance maneuver and hitting a horse and buggy head on. One crash involved a semi-truck passing a cyclist on the left while the cyclist was making a left turn.

This segment of Kidron Road from Hackett Road to the southern Wayne County Line envelopes several critical segments indicated on the High Injury Network for bicycles and animal drawn vehicles. The entire segment is on the Amish Travel Map, the Bike Travel Map, and the High Risk Network for both bicycles and animal drawn vehicles.

This roadway is hilly with 10-foot wide lanes and almost no shoulders in many areas. The downgrades increase speeds, with hill crests and valleys preventing sight of objects ahead, while the narrow width provides little room for slower traffic to reside. This roadway was mentioned several times during public engagement as a safety concern for the Amish as it is highly traveled. The highest frequency of bike, buggy, and pedestrian traffic occurs in the center of Kidron, where two additional (three total) injury causing bike and buggy crashes occurred on CR 79 Emerson Road. There is also a great deal of industrial, business, and tourist traffic throughout the center of town with no direct drives or access points. On the south side of Kidron center, on Kidron Road, a 700-foot length of roadway has paved, unrestricted access to many businesses on both sides of the street. The potential for vehicle conflicts with vulnerable road users has several layers of risk.

The safety improvement countermeasure(s) that best fit this crash pattern are those that slow and calm traffic, provide space accommodation for non-motorized transportation, and reduce conflict with motorized traffic. According to FHWA, high-visibility crosswalks can reduce pedestrian injury crashes up to 40%.

The recommendation of this Comprehensive Safety Action Plan is to construct buggy lanes on both sides of Kidron Road, from the southern Wayne County line to Hackett Road. In the town of Kidron, traffic calming elements should be constructed, including sidewalk on both sides, high visibility crosswalks (including pushbuttons, pedestrian signal heads, and leading pedestrian intervals at signals), curb to narrow the roadway, drives and curbs to establish and manage access to the businesses and industry, and a mini-roundabout at the intersection of Kidron Road and Emerson Road. It is also recommended that the speed limit be reduced to 25 mph utilizing provisions in the Ohio Revised Code for Business Districts. With these traffic calming measures in place, buggy lanes may be reduced to 4-foot shoulders within the curbed length as additional traffic calming and to enable buggies and bikes to traverse the mini-roundabout at the same speed and visibility as motorized vehicles.

Constructing six miles of buggy lanes may be difficult to fund in one project. In the case of project phasing, the following order is suggested: (1) widen shoulders to 4-foot wide while performing full width needs such as culvert extensions, utility relocations, guardrail adjustments, and right of way acquisitions, (2) incorporate traffic calming elements in Kidron Center, and (3) widen the 4-foot shoulders to full buggy lanes.

See Selected Project Kidron Road (Southern Border of Wayne County to Hackett Road).

SR 3 – Columbus Road (Heyl Road to Columbus Road Extension) Google Maps Link

This short 0.38-mile, divided four-lane highway experienced 17 crashes from 2018 to 2023 including three fatal or serious injury crashes. Six of the crashes involved a loss of driver control resulting in fixed object crashes, sideswipe while passing, and rear end crashes that did not occur directly at an intersection. Several of these crashes involved vehicles passing through the median. Many of the crashes appear to be speed-related, although it is unclear if another co-contributor was a speed differential. When some vehicles travel much slower or faster than the average traffic flow, the likelihood of collisions rises due to increased interactions and overtaking maneuvers. The presence of intersections on a roadway that looks and feels like a limited access highway – 12-foot lanes, wide grassy median, 10-foot right side shoulder, and a higher speed limit – results in varying speeds exhibited as some drivers are traveling through at high speeds while other drivers are slowing to stop or are working up to match the speed of through traffic from an intersection. Six crashes occurred directly at the intersection of Columbus Road Extension – which only has three approaches – and five at the intersection of Heyl Road. These are unsignalized intersections without left turn lanes or acceleration/deceleration lanes. Drivers have difficulty judging the speeds of oncoming traffic, selecting an appropriate length of gap, and making their maneuver in the time available.

This segment is just south of Wooster and the US 30 interchange with SR 3 and north of a residential area. It is considered urban although it does have some rural characteristics. This segment is on the urban priority list.

The safety improvement countermeasures that would address the crash pattern on this corridor are installing cable median barriers, an FHWA Proven Safety Countermeasure, and removing the unsignalized intersection with Columbus Road Extension. According to FHWA, median barriers installed on rural four lane freeways resulted in a 97% reduction in cross-median crashes.

Eliminating the intersection with Columbus Road Extension would prevent all crashes due to the intersection and would significantly reduce the speed differential in this area. The roadway segment of Columbus Road Extension has three drives on the 1,200-foot length between SR 3 and Heyl Road. The detour resulting from permanent removal of this intersection would be minimal.

Removing the intersection of Heyl Road would similarly improve safety by preventing intersection related crashes and significantly reducing the speed differential. This would direct traffic to the signalized intersection with Blachleyville Road, less than a half mile south of Heyl Road, or north to US 30. This may result in a longer detour for traffic on the west side of SR 3, but a minimal detour for residential traffic on the east side. Some discussion with the ten home

owners on Heyl Road between SR 3 and Fry Road may reveal this option as favorable, despite the extra travel distance, as it would significantly reduce the traffic on Heyl Road.

The recommendations of this Comprehensive Safety Action Plan is to construct median barriers on SR 3 between Blacheyville Road and US 30 and to remove the intersection of Columbus Road Extension. Consideration should be given to increasing the length of the median barriers farther south and the removal of the Heyl Road intersection.

See Selected Project SR 3 – Columbus Road (Heyl Road to Columbus Road Extension).

SR 241 – Massillon Road (CR 37 Winesburg Road to Wayne County Line (toward Kidron Road)) Google Maps Link

This rural 2.3-mile, two-lane roadway segment experienced nine animal drawn vehicle crashes from 2018 to 2023, with 67% causing injury and one crash resulting in a serious injury. Seven of the nine crashes were rear ends due to a motorized vehicle driver's failure to slow and maneuver around a horse drawn buggy. One crash was due to a buggy driver's failure to yield to oncoming traffic when making a left turn, and one crash was due to a motorized vehicle passing a buggy on the left, while the buggy driver was attempting to turn left.

This roadway segment is on animal drawn vehicle priority list, the Amish Travel Map, and the Bike Travel Map.

This roadway is hilly with 10-foot wide lanes and almost no shoulders in many areas. The downgrades increase speeds, with hill crests and valleys preventing sight of objects ahead, while the narrow width provides little room for slower traffic to reside.

The safety improvement countermeasure that best fits this crash pattern is one which provides space accommodation for non-motorized transportation, reducing conflict with high speed motorized traffic. In 2018, the U.S. Department of Transportation awarded a $9.6 million grant to Ohio to enhance safety for Amish travelers. The grant aimed to widen roads, create buggy lanes, post signs, and install buggy detectors, among other safety measures. Buggy lanes are a widely acknowledged safety improvement countermeasure for non-motorized transportation. Providing these lanes will reduce the potential for rear end crashes with buggies and cyclists.

The recommendation of this Comprehensive Safety Action Plan is to construct buggy lanes on both sides of SR 241. In the interim, it is recommended that certain safety improvement countermeasures be constructed: hill climbing and descending lanes, buggy pull offs where appropriate, and warning signage at vertical crests.

See Selected Project SR 241 – Massillon Road (CR 37 Winesburg Road to Wayne County Line (toward Kidron Road)).

Back Orrville Road (Geyers Chapel Road to Honeytown Road) Google Maps Link

This rural 1.10-mile, two-lane roadway segment experienced 19 crashes from 2018 to 2023, with 42% resulting in injury and four of those resulting in a fatal serious injury. The most common crash type was the fixed object crash, followed by sideswipe/passing and head on crashes. Many of these crashes are the result of high speeds yielding to a drivers' loss of control.

This corridor is on the rural segment priority list.

This roadway is hilly with 10-foot wide lanes and almost no shoulders in many areas. The downgrades increase speeds while the narrow width provides little room for error or recovery.

The safety improvement countermeasures that would address the crash pattern on this corridor are those that assist the driver in maintaining control of the vehicle. Multiple FHWA Proven Safety Countermeasures can be applied. According to FHWA, installing centerline rumble strips can reduce head-on and opposite-direction sideswipe fatal and injury crashes by 44% to 64%. Similarly, shoulder rumble strips can lead to a 13% to 51% reduction in run-off-road fatal and injury crashes.

The recommendations of this Comprehensive Safety Action Plan are to widen the shoulders to four feet wide, install edge line and centerline rumble strips, and install raised pavement markers on edge lines. Consideration should be given to moving this roadway to the resurfacing priority list and widening the shoulders with the resurfacing.

See Selected Project Back Orrville Road (Geyers Chapel Road to Honeytown Road).

Britton Road and Friendsville Road Google Maps Link

This minor road stop-controlled intersection experienced 12 crashes from 2018 to 2023, with 83% of the crashes causing injury and four crashes resulting in serious injuries. All but one of the crashes were angle crashes due to either failure to yield (eight crashes) or running the stop sign (three crashes). One crash was a fixed object crash, where a westbound driver ran off the road. The drivers that failed to yield to traffic on Britton Road did so from both the northbound and southbound approaches of Friendsville Road.

This intersection is on the rural intersection priority list.

Review of the site shows potential sight obstructions due to roadside objects (utility poles), vegetation (trees, crops), and vertical curves in the Britton Road alignment. At other intersections with similar characteristics, rurality, and topography, the speed of vehicles on the non-stop-controlled roadway plays a part in the drivers' misjudging available gap lengths and failing to yield appropriately. Some safety improvement countermeasures have already been applied to this intersection included "Cross Traffic Does Not Stop" signage, double stop signs, and a red spinning accent on top of the stop sign.

The safety improvement countermeasure that best fits this crash pattern is one which reduces the likelihood of crashes due to failure to yield or running the stop sign. A roundabout is an FHWA Proven Safety Countermeasure which is predicted to reduce fatal and injury crashes of two-way stop-controlled intersections by 82%.

The recommendation of this Comprehensive Safety Action Plan is to construct a roundabout at this location. Between the publishing of this report and the construction of the roundabout, sight-obstructing items should be removed from the right of way such as signs, utilities, and fences.

See Selected Project Britton Road and Friendsville Road Intersection.

SR 95 – Blachleyville Road and Jefferson Road Google Maps Link

This minor road stop-controlled intersection experienced five crashes from 2018 to 2023, with 80% of the crashes causing injury and three crashes resulting in fatal or serious injuries. All five crashes were due to failure to yield or run stop sign on the part of the driver on stop-controlled Jefferson Road. The fatal crash occurred due to a driver running the stop sign with no apparent distractions. He stated he did not see the stop sign. There are no other enhancements to the stop sign to promote conspicuity.

This intersection is on the rural intersection priority list.

The safety improvement countermeasure that best fits this crash pattern is one which reduces the likelihood of crashes due to failure to yield or running the stop sign. A roundabout is an FHWA Proven Safety Countermeasure which is predicted to reduce fatal and injury crashes of two-way stop-controlled intersections by 82%.

The recommendation of this Comprehensive Safety Action Plan is to construct a roundabout at this location. Between the publishing of this report and the construction of the roundabout, interim safety improvement countermeasures should be installed including double stop signs using large and flashing signs, doubled “Stop Ahead” signs, retroreflective sheeting on sign posts, a properly placed stop bar, and “Cross Traffic Does Not Stop” signs at the stop signs.

See Selected Project SR 95 – Blachleyville Road and Jefferson Road Intersection.

US 30 and SR 57 – Wadsworth Road Google Maps Link

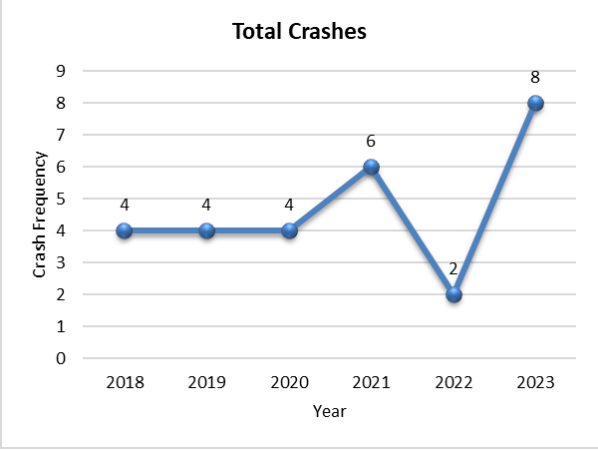
This signalized, intersection on a four-lane divided highway experienced 28 crashes from 2018 to 2023, with 36% resulting in injury and three crashes resulting in fatal or serious injuries. The most common crash type was rear ends with 12 (42%), followed by Angle/Right Turn/Left Turn crashes with 10 (36%). Two of the three crashes that resulted in serious injury were due to a driver running the red light and the third was a rear end. Running the red light resulted in five out of the total 28 crashes.

This intersection is on the rural intersection priority list.

The speed limit on US 30 is 55 mph at this intersection, but it is 60 mph approximately 2000 feet west of the intersection. The roadway appears the same in both portions, which is to say 12-foot wide lanes, approximately 10-foot wide right shoulder, and a grassy divided median. Signalized intersections on roadways that look and feel like limited access highways are challenging. Drivers have difficulty anticipating and reacting to the red phase of the signal, which results in rear end crashes at the back of queue. Or, as in four of the five run red light crashes, drivers on US 30 did not stop for the red light at all. In addition to higher speeds causing longer reaction time distances, this could be the result of the dilemma zone.

The dilemma zone is an area on the approach to the intersection where a driver sees the phase change from green to yellow and determines that they cannot comfortably stop in time for the red light, yet they cannot make it through the intersection without running the red light. Some drivers stop abruptly and some run the light, causing both rear ends and run red light crashes. Traffic engineers aim to reduce the size of this dilemma zone through signal phase timing to reduce the likelihood of crashes, however, the calculations are based on anticipated speeds. If the speeds exhibited do not match the posted speed or design speed, the dilemma zone is not accurate. Adding or increasing all red time could reduce the likelihood of crash due to a run red light that occurs at the end of the yellow phase.

This intersection has undergone some recent safety improvements as recently as 2021, such as replacing the signal including back plates, lengthening the westbound right turn lane, adding a southbound right turn lane, and adding a westbound left turn lane. The crash history shows only two crashes occurred in 2022, eight occurred in 2023. Oscillating crash totals is common, particularly after constructed improvements, as the crash frequency regresses to a mean crash frequency.



If the average crash frequency increases or remains the same as the preconstruction rate, the safety improvement countermeasure(s) that best fits this crash pattern are those that reduce the dilemma zone and decrease the opportunities and resulting severe crashes from running the red light. The Restricted Crossing U-turn (R-CUT), an FHWA Proven Safety Countermeasure, reduces left-turn conflicts at intersections and could also reduce the need for a

signalized stop on the eastbound approach altogether. Signalized intersections converted to signalized R-CUTs show a 22% reduction in fatal and injury crashes.

The recommendations of this Comprehensive Safety Action Plan are to first check and reduce the dilemma zone and add all red time, then evaluate the 2022 – 2024 (3-year) crash history in May 2025. If the crash rate has not improved significantly, the recommendation is to install a signalized R-CUT at this location, with the signal remaining on the westbound approach and removed on the eastbound approach. The southern leg of this intersection serves only as the drive for a golf course. An acceleration and deceleration lane could be provided to assist traffic entering and exiting this property. Note that there are already paved crossings near the subject intersection, improving the feasibility of the proposed countermeasure. A 2022 safety study performed for ODOT District 3 studied this intersection in-depth and concluded with a similar recommendation, although that study named the improvement as a Superstreet.

See Selected Project US 30 and SR 57 – Wadsworth Road Intersection.

SR 3 – Cleveland Road and Hutton Road Google Maps Link

This minor road stop-controlled intersection experienced seven crashes from 2018 to 2023, with 57% of the crashes causing injury and three crashes resulting in serious injuries. Four of the crashes were angle crashes due to either failure to yield (three crashes) or running the stop sign (one crash). The next most frequent crash was backing, when a driver stopped on Hutton Road backed into the vehicle behind them to create more room for a vehicle on SR 3. This may indicate obstructed sightlines as stop-controlled traffic pulled closer and into the intersection potentially to get a better view of traffic on SR 3.

This intersection is on the rural intersection priority list.

Review of the site shows potential sight obstructions due to roadside objects (utility poles), vegetation (trees), embanked earth, and vertical curves in the SR 3 alignment. At other intersections with similar characteristics, rurality, and topography, the speed of vehicles on the non-stop-controlled roadway plays a part in the drivers' misjudging available gap lengths and failing to yield appropriately.

The safety improvement countermeasure that best fits this crash pattern is one which reduces the likelihood of crashes due to failure to yield or running the stop sign. A roundabout is an FHWA Proven Safety Countermeasure which is predicted to reduce fatal and injury crashes of two-way stop-controlled intersections by 82%.

The recommendation of this Comprehensive Safety Action Plan is to construct a roundabout at this location. Between the publishing of this report and the construction of the roundabout, interim safety improvement countermeasures should be installed including double stop signs using large and flashing signs, doubled "Stop Ahead" signs, retroreflective sheeting on sign posts, a properly placed stop bar, and "Cross Traffic Does Not Stop" signs at the stop signs. Sight-obstructing items should be removed from the right of way such as signs, utilities, and fences.

See Selected Project SR 3 – Cleveland Road and Hutton Road Intersection.

US 250 – Dover Road and Fountain Nook Road Google Maps Link

This minor road stop-controlled intersection experienced three crashes from 2018 to 2023, with 67% of the crashes causing injury and two crashes resulting in fatal or serious injuries. The fatal crash was a head on crash due to a driver traveling left of center. The crash resulting in serious injuries was due to failure to yield by a driver on Fountain Nook Road. The remaining crash involved an animal drawn vehicle, which is said to have ran the stop sign and come into contact with the trailer of a vehicle traveling on US 250.

This intersection is on the rural intersection and animal drawn vehicle priority lists.

Review of the site shows the intersection is skewed and there are potential sight obstructions due to roadside objects (fences, signs, utility boxes, and utility poles), vegetation (trees), embanked earth, and vertical curves in the US 250 alignment. At other intersections with similar characteristics, rurality, and topography, the speed of vehicles on the non-stop-controlled roadway plays a part in the drivers' misjudging available gap lengths and failing to yield appropriately. There are buggy lanes on US 250. Other than an additional stop sign on the northbound approach, there are no safety improvement countermeasures at this location.

The safety improvement countermeasure that best fits this crash pattern is one which reduces the likelihood of crashes due to failure to yield or running the stop sign. A roundabout is an FHWA Proven Safety Countermeasure which is predicted to reduce fatal and injury crashes of two-way stop-controlled intersections by 82%, however, the short term countermeasures may be more appropriate and deliver an improvement in crash severity and frequency. The crash pattern also shows left turning failure to yield crashes from drivers on US 250. Highly skewed intersections cause left turning movements to be longer in distance and time of completion, meaning the left turning vehicle is exposed to oncoming traffic for a longer amount of time. Drivers do not typically factor in this extra time when selecting a gap to perform the movement. An intersection realignment to remove the skew could address this problem.

The recommendations of this Comprehensive Safety Action Plan are to install double stop signs using large and flashing signs. A "Cross Traffic Does Not Stop" sign should be placed on each of the stop sign posts. Sight-obstructing items should be removed from the right of way such as signs, utilities, and fences. Additional study of this location is recommended to determine if a roundabout would be the most appropriate countermeasure, or if realigning the

northbound and southbound approaches would produce a similar benefit. This selected project assumes the realignment for planning purposes.

See Selected Project US 250 – Dover Road and Fountain Nook Road Intersection.

US 250 Dover Road and Kohler Road Google Maps Link

This minor road stop-controlled intersection experienced five crashes from 2018 to 2023, with 60% of the crashes causing injury and two crashes resulting in serious injuries. Four crashes were due to failure to yield, with two on behalf of southbound drivers from the stop-controlled approach, one due to an eastbound driver turning left into a westbound bicyclist in the bike lane (on a bike with a light), and one from a westbound animal drawn vehicle turning left in front of oncoming traffic. This location is also on the Bicycle Priority List and the Animal Drawn Vehicle Priority List. US 250 is on the Amish Travel Map as well.

Review of the site shows the intersection is skewed and there are potential sight obstructions due to roadside objects (fences, signs, and utility poles), vegetation (trees), embanked earth, and a vertical crest in the US 250 alignment, east of the intersection. At other intersections with similar characteristics, rurality, and topography, the speed of vehicles on the non-stop-controlled roadway plays a part in the drivers' misjudging available gap lengths and failing to yield appropriately. There are no safety improvement countermeasures on the stop-controlled approaches at this location.

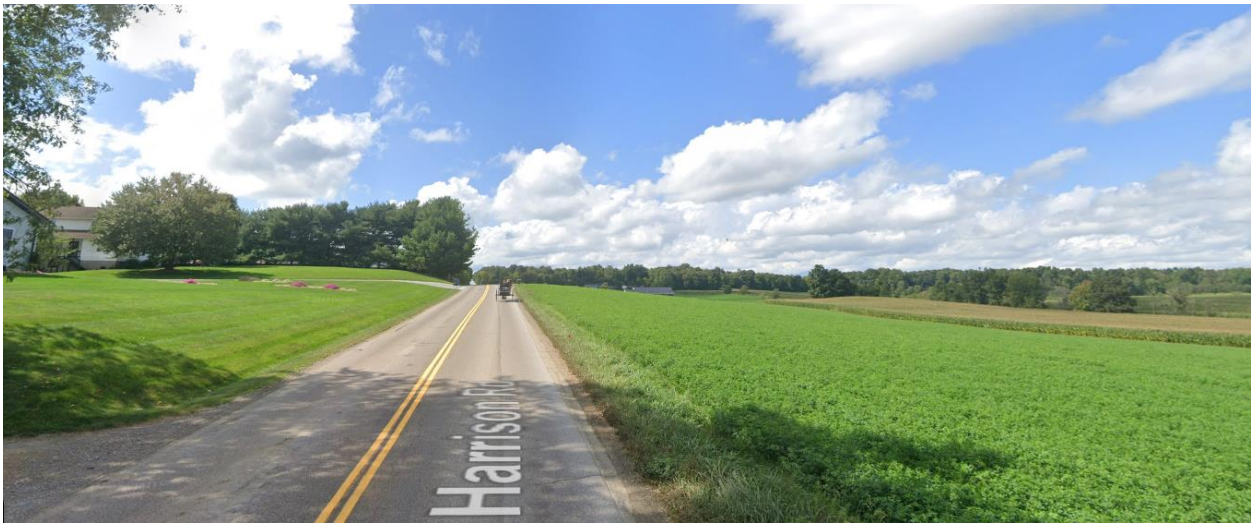
The safety improvement countermeasure that best fits this crash pattern is one which reduces the likelihood of crashes due to failure to yield in both north-south and east-west directions. The systemic application of multiple low-cost countermeasures at stop-controlled intersections is an FHWA Proven Safety Countermeasure. The predicted safety benefits of these countermeasures sum to a 27% reduction in fatal and injury crashes at rural intersections with a cost-benefit ratio of 12 to 1.

The recommendations of this Comprehensive Safety Action Plan are to install double stop signs using large and flashing signs, doubled "Stop Ahead" signs, retroreflective sheeting on sign posts, a properly placed stop bar, and "Cross Traffic Does Not Stop" signs at the stop signs. Sight-obstructing items should be removed from the right of way such as signs, utilities, and fences. Additional study of this location is recommended to determine the potential for reducing instances of failure to yield by traffic on US 250.

See Selected Project US 250 Dover Road and Kohler Road.

Kansas Road and Harrison Road Google Maps Link

This minor road stop-controlled intersection experienced four crashes from 2018 to 2023, with 75% of the crashes causing injury and two crashes resulting in fatal injuries. All four crashes were angle crashes, with two due to failure to yield and two due to a run stop sign. One fatal crash was due to failure to yield and the other was due to a run stop sign. This intersection is on the Amish Travel Map and several buggies can be seen from google streetview alone.



Review of the site shows potential sight obstructions due to roadside objects (utility poles and fencing), vegetation (trees, crops), embanked earth, and a vertical crest in the alignment of Harrison Road just west of the intersection. At other intersections with similar characteristics, rurality, and topography, the speed of vehicles on the non-stop-controlled roadway plays a part in the drivers' misjudging available gap lengths and failing to yield appropriately. There are double stop signs on the Kansas Road approaches, however, it is unclear if these were posted before or after the run stop sign crashes.

The safety improvement countermeasure that best fits this crash pattern is one which reduces the likelihood of crashes due to failure to yield or running the stop sign. A roundabout is an FHWA Proven Safety Countermeasure which is predicted to reduce fatal and injury crashes of two-way stop-controlled intersections by 82%.

The recommendation of this Comprehensive Safety Action Plan is to construct a roundabout at this location. Between the publishing of this report and the construction of the roundabout, interim safety improvement countermeasures should be installed including double stop signs using large and flashing signs, doubled "Stop Ahead" signs, retroreflective sheeting on sign posts, a properly placed stop bar, and "Cross Traffic Does Not Stop" signs at the stop signs. Sight-obstructing items should be removed from the right of way such as signs, utilities, and fences.

See Selected Project Kansas Road and Harrison Road Intersection.

SR 83 – Burbank Road and Britton Road Google Maps Link

This minor road stop-controlled intersection experienced 11 crashes from 2018 to 2023, with 64% of the crashes causing injury and two crashes resulting in fatal or serious injuries. Five of the crashes were angle crashes due to failure to yield (three crashes) or run stop sign (two crashes). Three crashes were rear end crashes and fourth would have been a rear end, if not for a driver's crash avoidance maneuver which resulted in a sideswipe instead. Three of the rear ends or would be rear end crashes were when drivers on SR 83 failed to stop for drivers waiting to make a turn onto Britton Road and one was due to a driver on the eastbound approach failing to stop for a vehicle at the stop sign.

This intersection is on the rural intersection priority list.

Review of the intersection shows potential sight obstructions due to roadside objects (utility poles and business signs), vegetation (tall grasses, crops), and embanked earth. At other intersections with similar characteristics, rurality, and topography, the speed of vehicles on the non-stop-controlled roadway plays a part in the drivers' misjudging available gap lengths and failing to yield appropriately. Two separate sets of tire marks can be seen on the northbound approach as evidence of drivers applying the brakes forcefully, perhaps to avoid a rear end or a driver on Britton Road failing to yield to major road traffic.

The eastbound approach has dual stop signs, but there were no additional safety improvement countermeasures noted at this intersection.

The safety improvement countermeasure that best fits this crash pattern is one which reduces the likelihood of crashes due to failure to yield, running the stop sign, or speeds too high to allow a driver to stop for a stopped vehicle ahead. A roundabout is an FHWA Proven Safety Countermeasure which is predicted to reduce fatal and injury crashes of two-way stop-controlled intersections by 82%.

The recommendation of this Comprehensive Safety Action Plan is to construct a roundabout at this location. Between the publishing of this report and the construction of the roundabout, interim safety improvement countermeasures should be installed including double stop signs using large and flashing signs. A "Cross Traffic Does Not Stop" sign should be placed on each of the stop sign posts. Sight-obstructing items should be removed from the right of way such as signs, utilities, and vegetation.

See Selected Project SR 83 – Burbank Road and Britton Road Intersection.

Seville Road and Doylestown Road Google Maps Link

This minor road stop-controlled intersection experienced 15 crashes from 2018 to 2023, with 53% of the crashes causing injury and three crashes resulting in serious injuries. All but two of the crashes were angle crashes due to either failure to yield (12 crashes) or running the stop sign (one crash). The drivers that failed to yield did so from both eastbound and westbound directions and collided with vehicles from both the northbound and southbound approaches.

This intersection is on the rural intersection priority list.

Review of the site shows potential sight obstructions due to roadside objects (utility poles and posts), vegetation (trees, crops), and a building close to the roadway. At other intersections with similar characteristics, rurality, and topography, the speed of vehicles on the non-stop-controlled roadway plays a part in the drivers' misjudging available gap lengths and failing to yield appropriately. Some safety improvement countermeasures have already been applied to this intersection included "Cross Traffic Does Not Stop" signage and a solar powered lighted stop sign.

The safety improvement countermeasure that best fits this crash pattern is one which reduces the likelihood of crashes due to failure to yield or running the stop sign. A roundabout is an FHWA Proven Safety Countermeasure which is predicted to reduce fatal and injury crashes of two-way stop-controlled intersections by 82%.

The recommendation of this Comprehensive Safety Action Plan is to construct a roundabout at this location. Between the publishing of this report and the construction of the roundabout, sight-obstructing items should be removed from the right of way such as shrubs, utilities, and fences.

See Selected Project Seville Road and Doylestown Road Intersection.

US 250 – Dover Road and SR 241/SR 94 Google Maps Link

This signalized intersection between two relatively high AADT, two-lane roadways experienced five crashes from 2018 to 2023, with 33% of the crashes causing injury and two crashes resulting in serious injuries. Two angle crashes were the result of running the red light and two fixed object crashes were the result of a driver's loss of control of their vehicle – one of the two reports did indicate unsafe speed. A police officer directing traffic at night was the vulnerable road user involved in the pedestrian crash. Due to that crash, this location appears on the Pedestrian Priority list as well as the rural intersection priority list.

It appears that drivers have difficulty anticipating and reacting to the red phase of the signal, which results in rear end crashes at the back of queue or a run red light. In addition to higher speeds causing longer reaction time distances, this could be the result of the dilemma zone.

The dilemma zone is an area on the approach to the intersection where a driver sees the phase change from green to yellow and determines that they cannot comfortably stop in time for the red light, yet they cannot make it through the intersection without running the red light. Some drivers stop abruptly and some run the light, causing both rear ends and run red light crashes. Traffic engineers aim to reduce the size of this dilemma zone through signal phase timing to reduce the likelihood of crashes, however, the calculations are based on anticipated speeds. If the speeds exhibited do not match the posted speed or design speed, the dilemma zone is not accurate. Adding or increasing all red time could reduce the likelihood of crash due to a run red light that occurs at the end of the yellow phase.

The safety improvement countermeasure that best fits the crash pattern is one which reduces the likelihood of a run red light or a driver's loss of control. In both cases, traffic calming and/or speed management may provide the improvements. Additionally, signal improvements such as addressing the dilemma zone and adding signal backplates may reduce the crash frequency.

The recommendations of this Comprehensive Safety Action Plan is to apply traffic calming in the form of high visibility pedestrian crosswalks (including pushbuttons, pedestrian signal heads, and leading pedestrian intervals), add intersection lighting, install signal back plates, add or increase all red time, and reduce the dilemma zone through signal timing adjustments.

See Selected Project US 250 – Dover Road and SR 241/SR 94 Intersection.

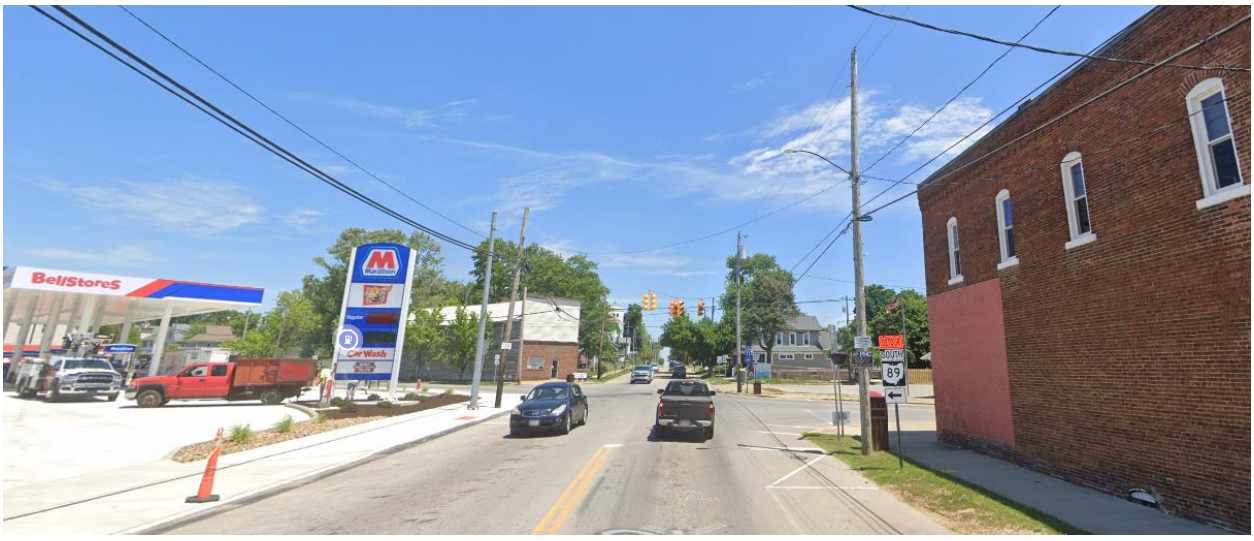
SR 301 – Main Street (SR 539 to US 42) **Google Maps Link**

This 330-foot urban segment experienced 25 crashes from 2018 to 2023, with 20% causing injury and three crashes resulting in fatal or serious injuries. The end points of this 330-foot urban segment SR 3 Main Street are the intersections with SR 539 and US 40 and these intersections are where most of the crashes occurred. There was a pedestrian crash at both intersections with one at US 42 resulting in a fatality for a pedestrian near the crosswalk and one at SR 539 resulting in serious injury of a pedestrian within the crosswalk. Of the 23 motorized vehicle crashes, 11 were angle, left turn, or right turn crashes, four were fixed object crashes and three were sideswipe-passing crashes.

The intersections of SR 539 and US 40 are both on the pedestrian priority list. The intersection with US 40 is on the rural intersection list.

These intersections are two points of a triangle at the center of the Village of West Salem which hosts several businesses, a gas station, the post office, a barber shop, and other commerce. A dollar store is located just south of the triangle. Pedestrian traffic is common in this downtown area. Streetview photos show on street parking is relatively unused. The crash history indicates that vehicle speeds may be as issue as several drivers lost control of their vehicles on this segment and other drivers may have trouble judging available gaps in traffic.

The US 40 intersection is signalized with traditional signal heads on span wires. Recent construction photos show that a previous corner entrance to the gas station at US 40 has been removed with new sidewalk, curb ramps, and landscaping taking its place. This intersection is highly skewed with similarly skewed, long crosswalks.



The intersection of SR 539 is two-way minor-road stop-controlled, with SR 301 as the uncontrolled approach. The crosswalk marked with high visibility on the SR 539 southbound approach but much of the paint has worn away. This is similar for many of the pavement markings in the segment, including the transverse parallel crosswalks at US 40.

The safety improvement countermeasure(s) that provide traffic calming as well as space and visibility to vulnerable road users. Multiple FHWA Proven Safety Countermeasures can be applied including crosswalk visibility enhancements (pavement markings, bumpouts), rectangular rapid flashing beacons, and signal backplates.

The recommendations of this Comprehensive Safety Action Plan are to construct bumpouts at the two intersections, add/repaint high visibility crosswalks, add pedestrian pushbuttons and signals with leading pedestrian intervals in the signal timing at SR 301 and US 40, install an RRFB at the south approach to the intersection with SR 539, and to add signal backplates at US 40. For a more comprehensive approach, the intersection of US 40 and SR 539, the third point in the triangle, should receive the same traffic calming, pedestrian safety improvements including bumpouts, pavement

markings, and a rectangular rapid flashing beacon on the southbound approach. As the existing signals are hung by span wires, it is possible that the additional of signal backplates may not be supported. In this case, the signal may need to be upgraded with mast arm supports and new wiring.

See Selected Project SR 301 – Main Street, SR 539, and US 42 Intersections.

Planning-level estimates of costs for recommendations are included but should be verified after project termini are selected and greater examination is performed.

Additional Locations for Potential Projects – City of Wooster

Additional locations for potential projects have been identified through inspection of the priority lists and travel maps in the City of Wooster. Like the aforementioned selected projects, these additional project locations are described in this section with discussion on crash history, setting, potential countermeasures, and recommendations. The additional projects are:

- SR 3 – Cleveland Road (Milltown Road to Smithville Western Road)
- West Liberty Street (Larwill Street/Old Lincoln Way to Columbus Road)
- Bowman Street (Bever Street to Palmer Street)
- SR 83 – Burbank Road (Friendsville Road to Walmart Drive)

SR 3 – Cleveland Road (Milltown Road to Smithville Western Road) Google Maps Link

This 1.05-mile, two-lane corridor experienced 144 crashes from 2018 to 2023, with 27% causing injury and five fatal or serious injury crashes. Half of the crashes were rear ends due to not assured clear distance ahead. Most of these crashes were due to traffic stopped to make a turn onto a side street or business. The next most common contributing circumstance was left of center or drove off road. Most of these crashes resulted in head on collisions and fixed object crashes. One crash involved a pedestrian walking on the side of the road and one crash involved a bicycle rider. Speed is likely a strong contributor to many of these crashes, providing drivers little time to react, causing loss of control, and increasing the severity of injuries as a result. This corridor is on the urban segment and pedestrian priority lists. It is also on the Bicycle Travel Map.

The safety improvement countermeasures that would address the crash pattern on this corridor are traffic calming, adding a center left turn lane, and bicycle/pedestrian infrastructure. Multiple FHWA Proven Safety Countermeasures can be applied to improve safety for drivers, pedestrians, and cyclists. A dedicated left turn lane can result in a 28-48% reduction in total crashes at an intersection.

Additional study is needed to determine the appropriate countermeasures for this segment. The applicability of certain countermeasures may depend upon other plans within the city.

West Liberty Street (Larwill Street/Old Lincoln Way to Columbus Road) Google Maps Link

This 0.18-mile, two-lane roadway segment in the City of Wooster experienced eight crashes (exclusive of the Columbus Road and Old Lincoln Way intersections) with two of those resulting in serious injuries. Most of the crashes were due to failure to yield from either Vanover Street or the Gas Station on the southeast corner of Vanover Street and West Liberty Street. The second most common crash was in relation to the curve west of Columbus Road, either by loss of control or due to sight obstructions resulting from the horizontal alignment. There was a crash resulting from a pedestrian crossing West Liberty Road close to Vanover Street, without a marked crosswalk. Many of these crashes may be the result of higher than expected speeds – either such that drivers are unable to judge the available gaps and failing to yield to traffic on West Liberty Street, or drivers on West Liberty Street are unable to react and slow/stop in time for slowing traffic or to maneuver the curve. This segment is on the urban segment and pedestrian priority lists.

The safety improvement countermeasures that would address the crash pattern on this corridor are those that calm traffic, assist the driver in maintaining control at the curve, and reduce vehicle-vehicle and vehicle-pedestrian conflicts. Multiple FHWA Proven Safety Countermeasures can be applied to improve safety for road users. Enhanced delineation for horizontal curves via sequential dynamic chevron signage results in a 60% reduction in fatal and injury crashes. Reducing driveway density results in a reduction of up to 23% of crashes.

Specific countermeasures to achieve these goals include installing traffic calming and pedestrian safety improvement elements – specifically a rectangular rapid flashing beacon protected crossing between Vanover Street intersections – and marking high visibility crosswalks at Vanover Street, Old Lincoln Way, and Columbus Road intersections. The

crosswalk at the northbound approach to Old Lincoln Way can be improved with the addition of pedestrian signal heads, pushbuttons, and leading pedestrian intervals. Furthermore, safety improvements can be achieved by installing chevron signage at the curve, removing of two of the four Wayne County Auditor/Administration Office driveways on West Liberty Street, and converting the 90-foot wide gas station drive to a less wide, right-in-right-out drive.

Bowman Street (Bever Street to Palmer Street) Google Maps Link

This 3,800-foot urban corridor, with three signalized intersections and eight two-way minor-road stop-controlled intersections, experienced 105 crashes from 2018 to 2023, with 17% causing injury. Five injury-causing crashes involved bicycles and four of those crashes occurred when a cyclist was using the sidewalk. The most common crash type was the angle crash (33% of crashes) followed by the rear end crash (23%), the fixed object crash (11%), and the sideswipe-passing crash (10%). This corridor is on the High Rist Network for pedestrians and bicyclists, as well as on the Bike Travel Map.

The safety improvement countermeasures that will best address the crash pattern are those that provide safer spaces for non-motorized traffic and contribute to traffic calming along the corridor. The existing wide lanes may repurpose outside lane space for bike lanes. Complete streets include several FHWA Proven Safety Countermeasures such as bike lanes, crosswalk visibility enhancements, walkways, leading pedestrian intervals, and protected pedestrian crossings. Not only do these enhancements accommodate vulnerable road users, they also serve as traffic calming, reducing the speeds of motorized traffic and reducing the likelihood and severity of crashes for motorized vehicles well.

Specific countermeasures to achieve these goals include converting this corridor into a complete street by adding bike lanes (through pavement markings and some portions of roadway widening), high visibility crosswalks, pedestrian pushbuttons and signal heads, leading pedestrian intervals at signals, and rectangular rapid flashing beacons at Gasche Street and Washington Street.

SR 83 – Burbank Road (Friendsville Road to Walmart Drive) Google Maps Link

This 0.4-mile, multi-lane roadway experienced three pedestrian crashes from 2018 – 2023, with one causing injury and two resulting in a serious injury. Two crashes involved the pedestrian crossing mid-block and one crash involved the pedestrian in the crosswalk (as a driver turned left into their path). This segment is on the pedestrian priority list.

The safety improvement countermeasures that best fit this crash pattern are those that enable pedestrians to safety cross from one side of the street to the other without excessive backtracking, waiting through several signal phases, or triple exposure to vehicular traffic.

Specific countermeasures to achieve these goals include providing marked crosswalks, with pedestrian pushbuttons and pedestrian head signals, on all four approaches of Burbank Road intersections with Milltown Road, the Walmart entrance, and the ALDI entrance. Leading Pedestrian Intervals can also be included in the signal phasing when a pedestrian pushbutton is activated.

7.5 Additional Equitable Project Identification

Other means of equitably improving roadway safety for all users involves allocating funding towards safety initiatives that proactively address issues in underserved areas. Two of those measures are through investment in Public Transit and Traffic Calming measures.

Public Transit

Wayne County Transit (WCT) was previously provided by the Stark Area Regional Transit Authority (SARTA). However, due to budget limitations, the service was discontinued on August 31, 2024. The county is building a new public transit system. The City of Wooster, the Wayne County Commissioners, and Community Action of Wayne/Medina (CAW/M) are

working with the Ohio Department of Transportation (ODOT) to reorganize how transit is governed, operated, and funded in Wayne County. The City of Wooster will establish a new combined city and county transit system as quickly as possible. However, this could take a year or more.

Traffic Calming to Improve Walking and Biking

According to USDOT and FHWA, traffic calming involves physical design and other measures to improve safety for motorists, pedestrians, and cyclists. It often focuses on reducing vehicle speeds and improving conditions for non-motorized street users. Traffic calming can be performed as a part of resurfacing and improvement projects or as standalone upgrade projects to equitably improve the safety of Vulnerable Road Users.

The National Association of City Transportation Officials (NACTO) describes traffic calming as the combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behavior, and improve conditions for non-motorized street users.

Examples of Traffic Calming Elements

- **Speed Humps and Speed Tables** - Raised areas across the roadway designed to reduce vehicle speeds and encourage safer driving habits by requiring drivers to slow down to cross them safely. These are effective in reducing speed over a short distance.
- **Traffic Circles and Roundabouts** - Circular intersections without traffic signals that reduce conflict points and vehicle speeds, improving safety for all road users by managing the flow of traffic efficiently.
- **Narrowed Roadways and Reduced Lanes (Road Diets)** - Reduction in the number of lanes or lane width, which slows down traffic and creates additional space for pedestrians and cyclists, contributing to a safer street environment by reducing vehicle speeds.
- **Curb Extensions (Bulb-outs)** - Sidewalk extensions into the street that reduce the roadway width at intersections or mid-block crossings. They slow turning vehicles and shorten pedestrian crossing distances, increasing pedestrian visibility and safety.
- **Raised Crosswalks** - Pedestrian crossings elevated to the level of the sidewalk, improving pedestrian visibility and naturally reducing vehicle speeds at crossings, making it safer for pedestrians to cross the street.
- **Median Islands (Pedestrian Refuge Islands)** - Raised islands in the center of the road at crosswalks, providing a safe place for pedestrians to stop midway across the street, thereby facilitating safer crossings.
- **Gateway Treatments** - Visual and physical cues, such as signs or narrowed roadways, indicating entry into a residential or traffic-calmed area. These treatments signal drivers to reduce speed and be more cautious as they enter different zones.

These traffic calming elements aim to improve safety for all road users by reducing vehicle speeds and enhancing conditions for pedestrians and cyclists.

7.6 Recommendation Timeframes

The identified projects and strategies are prioritized in a list that provides time ranges for when the strategies and countermeasures will be deployed (e.g., short-, mid-, and long-term timeframes based on project complexity and funding). This list is found in Appendix D.

Short Term Project Recommendations

All project locations are to meet at least one of the two criteria: (1) they are part of the High Injury Network and/or (2) contain safety recommendations for bicycle or pedestrian improvements. These projects should rank high on the prioritized lists.

Medium Term Project Recommendations

Mid-term project recommendations are projects that are not currently funded but will be considered in the mid-term future of FY 2028 through FY 2035. These projects are located on the High Injury Network.

Long Term Project Recommendations

Projects considered long-term project recommendations are High Injury Network locations and are anticipated to be completed between FY 2036 and FY 2050. Many of these projects are larger and more complex and require additional time for planning, funding, designing and construction.

7.7 Non-Infrastructure Safety Improvement Countermeasures

FSI Safety Emphasis Area Crashes: The Ohio Department of Transportation (ODOT) has identified 16 Emphasis Areas in the State Highway Safety Plan (SHSP) to focus the state's transportation safety improvement efforts on. In Wayne County, young driver crashes are the third highest Emphasis Area with 38% of FSI crashes. Young drivers tend to exhibit higher speeds, take more risks, are more likely to engage in distracted driving, and make fewer correct reactive decisions due to a lack of experience.

See Figure 61 for a map showing locations of crashes that involved a young driver and resulted in a fatal or serious injury.

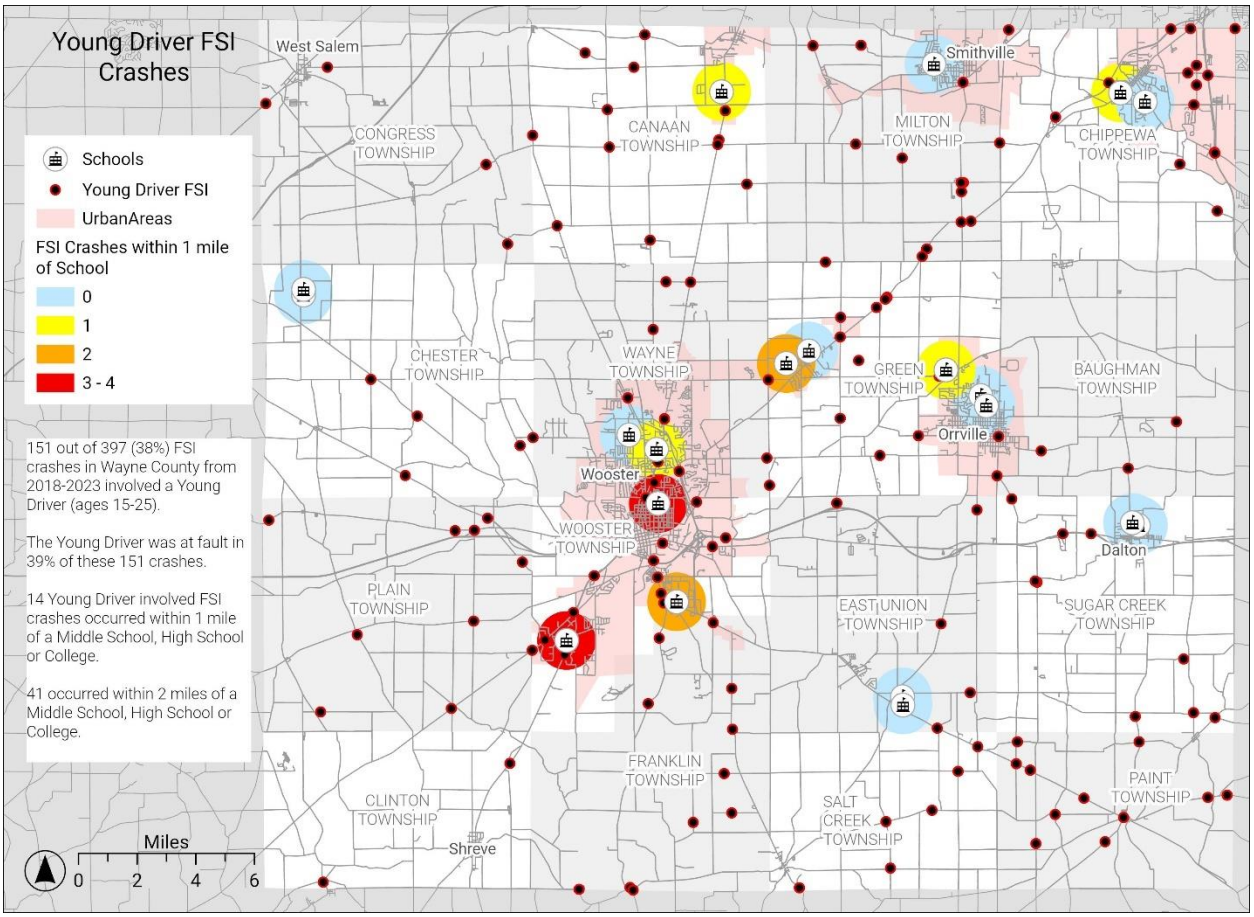


Figure 61. Fatal/Serious Injury Crashes where a young driver was involved.

In addition to improving roadway safety by design, there are non-infrastructure based countermeasures that can help.

Addressing high rates of fatal and severe crashes among young drivers requires a multifaceted approach that combines policy implementation, education, and community engagement. Here are several effective strategies:

1. Graduated Driver Licensing (GDL) Systems:

Implementing comprehensive GDL systems introduces driving privileges in stages, allowing young drivers to gain experience under less risky conditions. These systems typically include learner, intermediate, and full-privilege stages, each with specific restrictions. Research indicates that GDL systems can lead to significant reductions in fatal crashes among 16-year-old drivers. This may occur on the state level rather than the county level.

2. Parental Involvement and Supervision:

Encouraging active parental involvement in the learning process can enhance driving skills and safety awareness. Parents setting and enforcing driving rules, monitoring practice hours, and modeling safe driving behavior contribute to reducing crash risks. This could be a cause led by the school systems.

3. Zero Tolerance for Alcohol:

Strict enforcement of minimum legal drinking age laws and zero-tolerance policies for drivers under 21 can deter impaired driving. Maintaining and enforcing these laws is recommended to help prevent drinking and driving among young drivers.

4. Driver Education and Training:

While traditional driver education imparts essential skills, integrating programs that focus on hazard recognition, decision-making, and risk management can further enhance young drivers' safety. However, it's important to note that driver education alone has not proven to prevent motor vehicle crashes among young drivers.

5. Public Awareness Campaigns:

Implementing targeted campaigns that address common risk factors—such as distracted driving, speeding, and seatbelt non-use—can raise awareness and promote safer driving behaviors among teens. Programs like "Teens in the Driver Seat" have been effective in educating young drivers about the risks associated with driving.

6. Technological Interventions:

Utilizing in-vehicle technologies, such as speed limiters and monitoring systems, can provide real-time feedback and promote adherence to safe driving practices. These technologies can assist in monitoring driving behavior and providing immediate feedback to young drivers.

7. Policy Measures:

Implementing policies that restrict high-risk behaviors, such as limiting the number of passengers for novice drivers and enforcing nighttime driving curfews, can mitigate crash risks. For example, some jurisdictions have introduced laws restricting probationary drivers from carrying more than one passenger to reduce distractions and potential crashes.

Combining these strategies can create a supportive environment that fosters safer driving habits among young drivers, ultimately reducing the incidence of fatal and severe crashes.

7.8 Supplemental Study, Planning, and Demonstration

A region of this size has ample opportunity to improve safety through direct implementation of infrastructure safety improvement countermeasures, but also through additional study, demonstration of potential safety improvement countermeasures, and planning. The following recommendations are to enhance the effectiveness of this plan, using data and equity considerations for selection.

SUPPLEMENTAL STUDY AND PLANNING

Supplemental Planning studies are designed to inform the enhancement of a Comprehensive Safety Action Plan by developing new strategies to address roadway safety issues holistically. These studies focus on consolidating multiple local or regional plans into a comprehensive document and creating complementary safety plans focused on specific issues like speed management and accessibility for individuals with disabilities. They also involve conducting road safety audits, performing equity analyses to ensure fair implementation, collecting and analyzing crash and behavior data, engaging stakeholders to build support for initiatives, and providing regular progress reporting to maintain transparency and accountability. These activities are crucial for crafting effective and inclusive safety action plans that meet the unique needs of each community. By leveraging the Comprehensive Safety Action Plan, these supplemental planning activities allow communities to dive deeper into specific challenges, ultimately getting closer to implementing true safety improvements and reducing roadway fatalities and serious injuries.

Rural Roadway Safety Plan

Cost: Approximately $50,000 each

A Rural Roadway Safety Plan focuses on addressing the unique safety challenges faced by rural roads, which often have higher rates of fatal crashes compared to urban roads. These plans provide several benefits, including targeted safety improvements, improved data collection and analysis, enhanced road user safety, increased funding opportunities, and greater community engagement and awareness. By identifying high-risk locations and implementing specific interventions, such as better signage, improved visibility, and speed management, rural safety plans aim to reduce crashes and fatalities on rural roads. Rural roads ranked high on the High Injury Network and many of the region's rural townships lack resources and staff capacity to address critical safety issues alone. Completing a Rural Safety Action Plan would address the High Injury Network in townships like those shown.

ODOT provides a template to assist communities in completing these plans. An image of the template is provided in Figure 62.

Figure 62. Local Road Safety Plan template provided by ODOT

The recommendations of this Comprehensive Safety Action Plan are to perform Rural Roadway Safety Plans at the following entities:

- *TOWNSHIP (Number of High Injury Locations on Top Priority Lists)*
- PAINT TOWNSHIP (15)
- MILTON TOWNSHIP (11)
- BAUGHMAN TOWNSHIP (9)
- SALT CREEK TOWNSHIP (9)
- CHESTER TOWNSHIP (8)
- CONGRESS TOWNSHIP (8)
- EAST UNION TOWNSHIP (8)
- SUGAR CREEK TOWNSHIP (7)
- FRANKLIN TOWNSHIP (6)
- CANAAN TOWNSHIP (5)
- GREEN TOWNSHIP (5)

- PLAIN TOWNSHIP (5)
- WAYNE TOWNSHIP (5)
- WOOSTER TOWNSHIP (5)
- CHIPPEWA TOWNSHIP (3)
- CLINTON TOWNSHIP (3)

Corridor Safety Studies

Cost: Approximately $50,000 - $250,000 each

Corridor studies are a vital component of the Wayne County Comprehensive Safety Action Plan and play a crucial role in enhancing roadway safety through the Safe System Approach. These studies analyze specific road segments to identify high-risk areas, determine the factors contributing to crashes, and develop targeted strategies to improve safety for all users. By focusing on road segments with a high frequency of crashes, particularly those on priority lists like the High Injury Network, corridor studies identify locations where safety improvements are most needed. Utilizing comprehensive crash data and roadway attribute information, these studies ensure that safety interventions are evidence-based and targeted for maximum impact.

Corridor studies allow for the development of tailored solutions that address each corridor's unique characteristics, including roadway design changes, traffic calming measures, improved signage, and enhanced pedestrian, cyclist, and ADV infrastructure. These studies help prioritize safety improvement projects by identifying critical areas and recommending cost-effective interventions, ensuring efficient resource allocation for significant safety benefits. Additionally, the findings and recommendations from corridor studies can be integrated into broader transportation planning efforts, incorporating safety considerations into long-term infrastructure development and policy decisions.

The corridor study process involves collaboration with local stakeholders, fostering support for safety initiatives and addressing community needs and concerns. By conducting corridor studies and implementing their recommendations, communities within Wayne County can systematically improve roadway safety, reduce the frequency and severity of crashes, and work towards the goal of zero traffic fatalities and serious injuries by 2040.

This plan recommends a focus on segments with multiple entries on priority lists:

- *ROADWAY, Limits, Approximate length in miles, Number of FSI Crashes*
  - *Community (City, Village, or Township)*

- US 250 ASHLAND RD, From Ashland County Line to US 30 West Interchange,10.7 miles, 8 FSI Crashes
  - Chester Township
  - Plain Township

- US 250 DOVER RD, From US 30 East Interchange to Stark County Line, 9.9 miles, 13 FSI Crashes
  - Wooster Township
  - Franklin Township
  - East Union Township
  - Apple Creek
  - Salt Creek Township
  - Paint Township
  - Mt. Eaton

Note that ODOT District 3 has funded or obtained safety and or traffic impact studies for individual intersections/locations: Southeast Local School District in Apple Creek, Kansas Road, Carr Road, and Kidron Road.

- SR 3 S COLUMBUS RD, From Ashland County Line to the US 30 West Interchange, 12.04 miles, 16 FSI Crashes
    - Clinton Township
    - Plain Township
    - Wooster Township
    - Wooster

- SR 3 CLEVELAND RD, From SR 83 Interchange to Sterling Rd, 8.6 miles, 15 FSI Crashes
    - Wooster
    - Wayne Township
    - Canaan Township

- SR 83 BURBANK RD, From SR 3 Interchange to West Salem Rd, 11.3 miles, 19 FSI Crashes
    - Wooster
    - Wayne Township
    - Canaan Township

- SR 301 MAIN ST/ELYRIA RD, From West Salem South Corp. Line to West Salem North Corp. Line, 1.4 miles, 4 FSI Crashes
    - West Salem
    - Congress Township

- SR 585 AKRON RD, From Apple Creek/5 Points Rd to Doylestown Rd, 9.9 miles, 24 FSI Crashes
    - Green Township
    - Milton Township
    - Chippewa Township

- SR 57 S MAIN ST, From Church Rd to Orrville North Corp. Line, 3.2 miles, 5 FSI Crashes
    - Green Township
    - Baughman Township
    - Orrville

- SR 57 WADSWORTH RD, From Fox Lake Rd to Eastern Rd, 7.0 miles, 13 FSI Crashes
    - Green Township
    - Baughman Township
    - Milton Township
    - Chippewa Township
    - Rittman

- STERLING RD, From Milton west township line to Blough Rd, 1.7 miles, 8 FSI Crashes
    - Milton Township

- SR 604 EASTON RD, From Friendsville Rd to SR 585, 11.1 miles, 11 FSI Crashes
    - Cannan Township
    - Milton Township

    - Chippewa Township

- LIBERTY ST, From Old Lincoln Way/Larwill St to Pittsburg Ave, 1.0 mile, 4 FSI Crashes, 7 Bike and Pedestrian Injury Crashes.
    - Wooster

- NORTH ST, From Liberty St to Spink Ave, 0.9 miles, 4 FSI Crashes, 3 Pedestrian Injury Crashes.
    - Wooster

- BOWMAN AVE, From Woodland Ave to Palmer St, 1.3 miles, 7 Bike and Pedestrian Injury Crashes.
    - Wooster

- BEALL AVE, From Liberty St to Cleveland Rd, 1.6 miles, 3 FI Pedestrian Crashes 7 additional Bike and Pedestrian Injury Crashes.
    - Wooster

UPDATE EXISTING OR CREATE NEW SCHOOL TRAVEL PLANS to improve and seek Safe Routes to School Funding for Pedestrian Facilities:

Cost: Approximately $25,000 to update an existing plan, up to $100,000 to create a new plan.

A School Travel Plan (STP) is a strategic document that outlines a community's plans to enhance active transportation—such as walking and biking—for students traveling to and from school. Developed through a collaborative process involving local stakeholders, an STP assesses current conditions and proposes both infrastructure and non-infrastructure solutions to improve safety and accessibility. By focusing on the safety of young pedestrians and cyclists, an STP contributes to the broader goals of the Comprehensive Safety Action Plan by addressing specific high-risk areas and creating safer, more accessible routes for students.

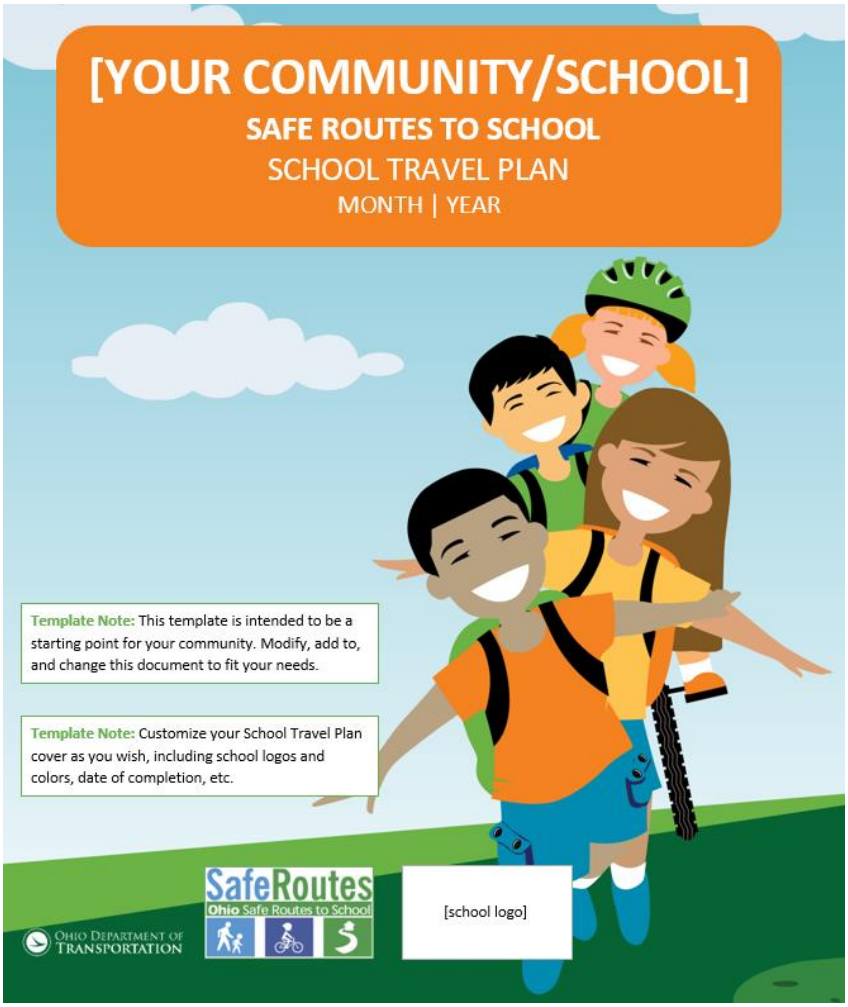


Figure 63. Front page of the School Travel Plan template provided by ODOT to assist communities in completing their plan

Implementing an STP can lead to targeted interventions such as improved crosswalks, better signage, and educational programs. These efforts align with the Safe System Approach by creating environments that are forgiving of human error and protect vulnerable road users. By reducing the likelihood and severity of crashes involving students, STPs help foster a safer transportation environment for the entire community.

Integrating STPs with the Comprehensive Safety Action Plan also ensures that resources are allocated efficiently, prioritizing safety improvements where they are most needed. The process of developing an ODOT School Travel Plan can be found on their webpage which provides more information about Ohio's STP guidelines. A template is provided as shown in Figure 63. The following locations have appeared multiple times on the High Injury Network and High-Risk Network highlighting the need for focused interventions to enhance student safety and support the goals of this Comprehensive Safety Action Plan, and have previously completed an STP that can be updated. The year in parentheses shows when the STP was completed:

- Rittman (2012)
- Triway Local Schools (Create New Plan)
- Wooster (2015)
- Orrville (Create New Plan)

Lighting Plan

Cost: Approximately $25,000 each

A lighting plan significantly enhances pedestrian safety by increasing visibility and reducing the risk of crashes between vehicles and pedestrians. Improved street lighting allows drivers to detect pedestrians more easily at night or in low-light conditions, reducing the likelihood of crashes. Well-lit crosswalks and sidewalks make pedestrians more visible from a distance, encouraging drivers to slow down and remain attentive. Adequate lighting at pedestrian crossings and intersections highlights areas where pedestrians are likely to cross, providing a visual cue for drivers to be cautious. Additionally, good lighting enhances contrast, allowing drivers to distinguish pedestrians from the background more effectively, which in turn improves drivers' reaction times. Studies have demonstrated that enhanced street lighting leads to a significant reduction in pedestrian crashes, underscoring the critical role of visibility in pedestrian safety.

For all road users, improved lighting reduces nighttime crashes, which tend to be more severe than those occurring during the day. Enhanced lighting at intersections and curves helps prevent crashes by illuminating potential hazards and guiding drivers safely through complex traffic environments. Well-designed lighting minimizes glare, reducing eye strain and increasing driver comfort and focus. Uniform lighting along roadways helps drivers maintain a steady pace, reducing abrupt stops or maneuvers that could lead to crashes. Proper lighting also benefits vulnerable road users such as cyclists and pedestrians by making them more visible to drivers and illuminating potential obstacles. Moreover, well-lit areas tend to deter crime and unsafe behavior, fostering a sense of security that encourages more people to walk or cycle, thereby enhancing community safety. Overall, a comprehensive lighting plan is often very effective in reducing crash rates and increasing safety for pedestrians and all road users.

This plan recommends that lighting improvements be considered for Pedestrian High Injury Priority Intersections and Segments and All Intersections on High Injury Priority lists.

Parking Studies

Cost: Varies depending on size and scope of study.

A parking study is an analysis of a community's parking needs. It typically includes an inventory of existing parking, an evaluation of current parking conditions, and projections of future parking demand. Parking studies are conducted to inform decisions about land use, transportation infrastructure, and parking management.

There are many different types of parking studies, but they all share a common goal: to understand the complex relationship between parking, land use, and safety. A well-designed parking study can help decision-makers identify problems and opportunities, set goals, and make informed decisions about how to best use limited resources.

Parking studies often include a few key components:

- An inventory of existing parking facilities and spaces
- An analysis of current parking conditions and utilization
- A projection of future parking demand
- Recommendations for improving parking management

In the Wayne County area there are several communities that have on-street parking. Some of these same communities also have a need for bicycle and pedestrian safety improvements. Using the on-street parking space for buffered bicycle lanes might be a more beneficial use of the street. Sometimes parking and bicycle lanes can co-exist by eliminating parking on only one side of the street.

DEMONSTRATION

Demonstration projects are temporary safety improvements designed to test proposed strategies or project approaches. They help inform the development or update of comprehensive safety action plans by measuring potential benefits through data collection and evaluation. These projects do not involve permanent roadway reconstruction.

Eligible demonstration activities include:

1. **Feasibility Studies:** Using quick-build strategies with temporary materials like planters or temporary speed humps to inform future permanent projects.
    - Behavioral or Operational Activity Pilot Programs: Testing small-scale initiatives such as education campaigns, pop-up safety demonstrations, or pilot programs for community engagement on traffic safety.
2. **New Technology Pilot Programs**: Implementing and evaluating new technologies that demonstrate safety benefits, such as adaptive signal timing or safety cameras. In Wayne County, devices on ADVs and Farm Equipment that make them more visible and that indicate they are turning would be highly recommended.

Demonstration Projects should:

- Measure benefits through pre- and post-demonstration results.
- Support the overall goals of the comprehensive safety action plans.
- Utilize commercially available technologies not yet adopted in the community for new technology pilots.

These demonstration projects play a crucial role in identifying effective strategies and informing the development of comprehensive plans to improve roadway safety.

Crosswalk Improvements (Visibility, curb extensions, and Pedestrian Refuge Enhancements at Intersections on Pedestrian/Bike Priority Lists)

Cost: Approximately $25,000 - $100,000 each

Some communities in Wayne County are unfamiliar with high-visibility midblock crossings and some communities may be reluctant to install them. Demonstration projects can test out a project's success and serve as a regional example to other communities considering similar improvements.

Pedestrian Crossing Study and Solar Powered Pedestrian Beacons

Cost: Approximately $25,000 to $250,000 each

An example of an enhanced pedestrian crosswalk with a rectangular rapid flashing beacon (RRFB) is shown in Figure 64.

Figure 64. Example of a High-Visibility Crosswalk with RRFBs

Plans and associated cost estimates to test RRFBs and/or high visibility crosswalk markings are in Appendices E and F for intersections that scored high on the High Injury Network for pedestrians and bicycles and were in underserved or rural areas.

Note that in some cases, deeper inspection into the crash history lead to recommendations for crossings or treatment and related intersections or nearby schools.

Protected or Buffered Bike Lanes as determined from Corridor Studies

Cost: Depends on lengths and application

Recommended along roadway segments on the high injury network (pedestrians and bicycles) and equity priority lists.

Traffic Calming Elements

Cost: Depends on items and application

Recommended on urban segments with the highest poverty score on the high injury priority list.

Specific project examples that may make good demonstration projects based on the priority lists of this Comprehensive Safety Action Plan are as follows.

Complete Street Demonstration West Liberty Street from Old Lincoln Way to Spink Road

A portion of this corridor is recommended for a Selected Project, however, it is recommended at the larger 1-mile corridor incorporate additional traffic calming and complete street element. Many are already incorporated at various points, but bike infrastructure is a key element that is lacking. The City may consider a demonstration project to

incorporate bike lanes, add center medians where feasible, install additional protected crossings, and fit in more traffic calming bumpouts.

West Salem Village Center Traffic Calming and Pedestrian Improvements

The village center "triangle" comprised of the intersections of SR 301 – Main Street, SR 539, and US 42 is recommended for a Selected Project, however, similar safety improvements could be applied through low cost measures first. This would allow safety improvements to begin sooner with less time needed for design, funding, and application. This would also allow the Village to trial certain elements to get a better understanding of their needs. Bumpouts could be created with paint and ground-mounted delineators. Pavement markings and RRFBs could be placed as indicated with demonstration funds. The Village could broaden the scope for traffic calming and high visibility crosswalks to include more locations along SR 301 – Main Street, SR 539, and US 42 for even more predicted safety benefits.

8. LEADERSHIP COMMITMENT, PROGRESS, AND TRANSPARENCY

8.1 Leadership Commitment

The Wayne County Engineer has made an official public commitment through the Board of Wayne County Commissioners via Resolution 2024-640, passed on December 4, 2024, to an eventual goal of zero roadway fatalities and serious injuries. The commitment includes a goal and timeline for reducing and then eliminating roadway fatalities and serious injuries achieved through target dates. The complete resolution can be found in Appendix G; however, the commitment is stated below:

NOW, THEREFORE, BE IT RESOLVED by the Board of Commissioners of Wayne County, Ohio, that:

Section 1. The Board hereby adopts a goal to reduce fatalities and severe injury crashes 85% by 2045 with an eventual goal of eliminating roadway fatalities and serious injuries by 2050 and endorses development, implementation, and monitoring of Vision Zero as a comprehensive and holistic approach to achieving this goal.

Section 2. The Board of Wayne County Commissioners hereby agrees to commit significant time and resources to achieving this goal.

Section 3. The Board of Wayne County Commissioners hereby continues to implement and evaluate the Transportation Safety Action Plan and Vision Zero and agrees to build upon existing education, enforcement, engineering, and policy strategies to reach this goal.

Section 4. The Board of Wayne County Commissioners is hereby dedicated to regularly reporting and assessing the progress, challenges, and successes of the Vision Zero commitment with current data and measurable metrics.

Section 5. The Board of Wayne County Commissioners hereby strives to improve the health and well-being of all travelers on Wayne County roads. The development of the Comprehensive Safety Action Plan and Vision Zero goal will address critical safety concerns and promote specific strategies towards zero deaths while prioritizing equity.

8.2 Progress and Transparency

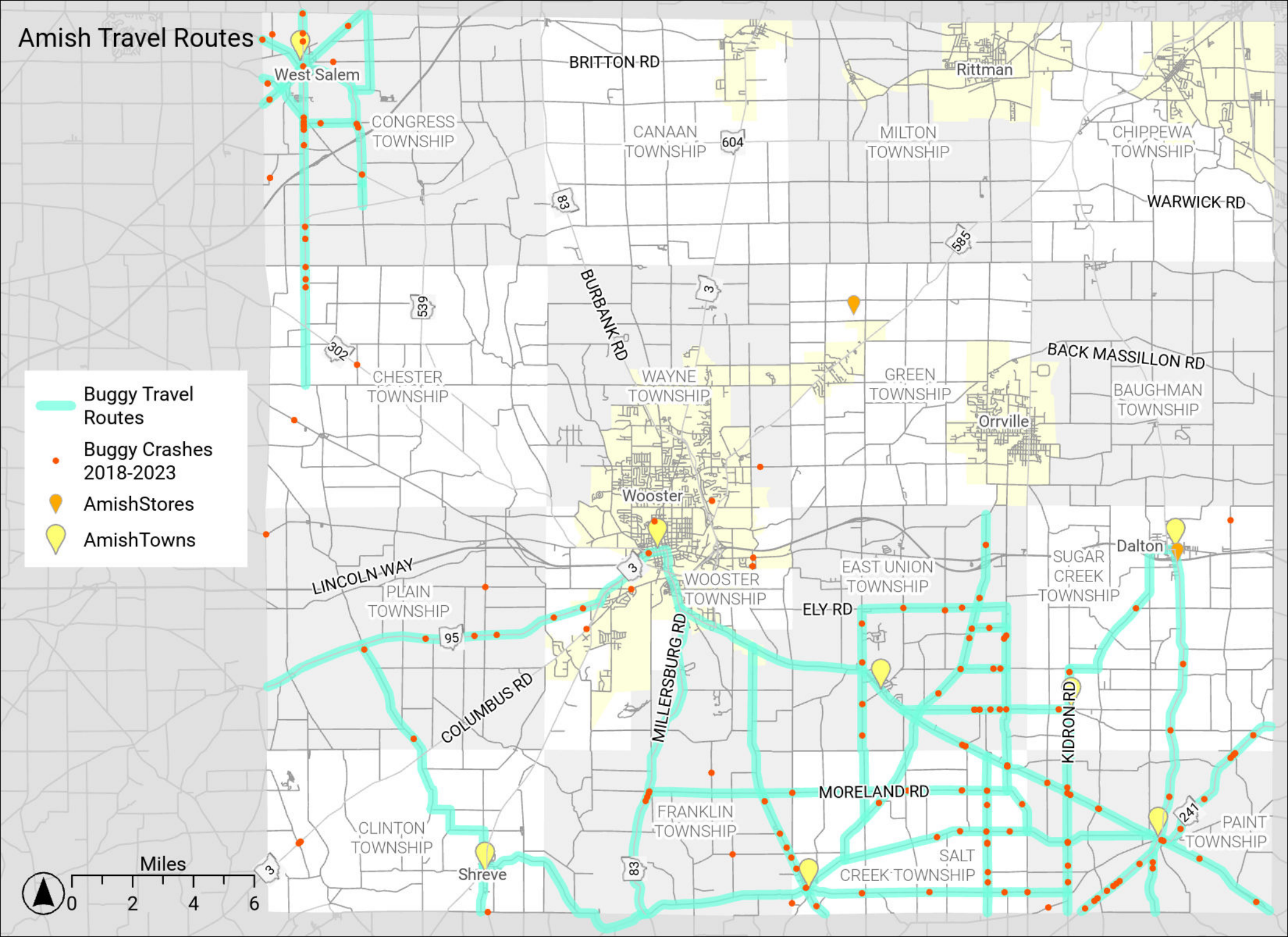
This SS4A Comprehensive Safety Action Plan includes recommendations that should positively impact transportation for all users. As Wayne County begins to implement recommendations from the Action Plan, it is critical that the agency measure its progress in a fully transparent way. Wayne County will measure progress towards a Vision Zero goal and provide transparency to the public in the following ways:

1. Issue a Press Release upon completion of the Comprehensive Safety Action Plan and maintain access to the document on the Wayne County Engineer's Office website.
2. Maintain updated priority lists, indicating project location, recommendation (study/demonstration/implementation), potential funding sources, predicted fiscal year of study/demonstration/implementation completion, and a measure of progress.
3. Measures of progress will be tracked, including funding secured, funding expended on study/demonstration/implementation, studies or projects performed, and items constructed or improved (miles of sidewalk/bike, lanes/road diet, number of intersections, etc.).
4. Crash statistics will be tracked by segment or intersection on the High Injury Network.
5. Measures of progress will be reported to the SAPC members and member communities annually.

CONCLUSION

This Comprehensive Safety Action Plan is pivotal for advancing the Vision Zero objective in Wayne County, aiming to eliminate all traffic-related deaths and serious injuries by 2050. This plan emphasizes a comprehensive approach that extends beyond mere infrastructural improvements to include educational and public engagement strategies focused on transportation safety. Each project and strategy outlined, regardless of its timeline, holds critical importance and the potential to prevent fatalities among drivers (including those of horse and buggy and farm equipment), passengers, cyclists, and pedestrians alike. The recommendations within this Action Plan serve as a detailed guide to help Wayne County improve the roadway safety of the county.

APPENDIX A – AMISH TRAVEL ROUTES MAP AND NLFIDS

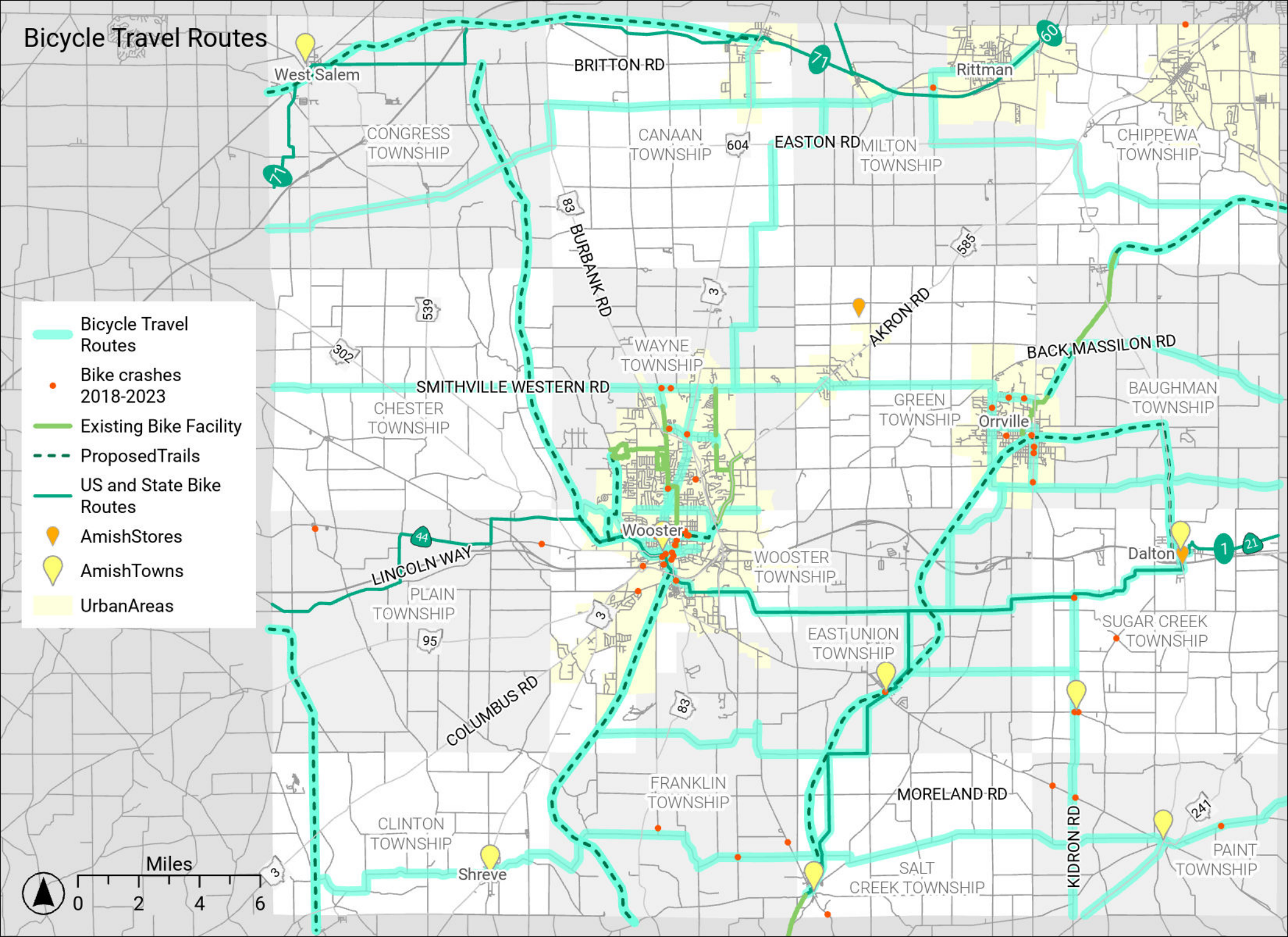

Amish Travel Routes
Buggy Travel Routes
Buggy Crashes 2018-2023
AmishStores
AmishTowns
West Salem
BRITTON RD
Rittman
CONGRESS TOWNSHIP
CANAAN TOWNSHIP
604
MILTON TOWNSHIP
CHIPPEWA TOWNSHIP
WARWICK RD
83
585
BURBANK RD
3
539
302
CHESTER TOWNSHIP
WAYNE TOWNSHIP
GREEN TOWNSHIP
BACK MASSILLON RD
BAUGHMAN TOWNSHIP
Orrville
Wooster
Dalton
LINCOLN WAY
PLAIN TOWNSHIP
95
WOOSTER TOWNSHIP
EAST UNION TOWNSHIP
SUGAR CREEK TOWNSHIP
ELY RD
MILLERSBURG RD
COLUMBUS RD
KIDRON RD
MORELAND RD
FRANKLIN TOWNSHIP
CLINTON TOWNSHIP
Shreve
SALT CREEK TOWNSHIP
241
PAINT TOWNSHIP
Miles
0
2
4
6

Amish Travel Routes

West Salem	NLFID	Start SLM	end SLM
301	SWAYSR00301**C	7.787	0.005
	CWAYCR00072**C	1.452	0.028
42	SWAYUS00042**C	0.007	3.299
Winter Rd	CWAYCR00088**C	0.009	1.15
	MWAYMR00599**C	0.075	0.003
Wiley Rd	TWAYTR00053**C	0.005	0.914
Ruff Rd	CWAYCR00102**C	0.002	1.304
Congress St	SWAYSR00539**C	13.421	9.906
	CWAYCR00128**C	2.258	1.485
Fair Rd	TWAYTR00232**C	1.862	0.003
Shilling Rd	TWAYTR00125**C	0.002	0.44
SW of Wooster			
95	SASDSR00095**C	13.495	8.712
3	SWAYSR00003**C	10.816	12.011
S Columbus Ave	MWAYMR00693**C	0.016	0.523
Liberty St	SWAYSR00302**C	2.01	1.526
S Bever St	SWAYSR00302**C	1.509	1.059
Madison Ave	SWAYSR00302**N	1.044	0.819
	SWAYSR00302**C	0.812	0.067
Millersburg Rd	SWAYSR00083**C	8.054	0.027
S Elyria Rd	CWAYCR00149**C	7.216	2.596
Wells Rd	TWAYTR00082**C	0.009	0.476
Critchfield Rd	TWAYTR00138**C	1.59	1.095
Force Rd	TWAYTR00289**C	0.007	0.836
S Jefferson Rd	CWAYCR00157**C	2.028	0.005
Wood St	MWAYMR00559**C	0.087	0.155
	MWAYMR00558**C	0.007	0.261
Shreve Eastern Rd	CWAYCR00008**C	0.361	3.192
	CHOLCR00001**C	3.262	3.657
SE of Wooster			
Dover	SWAYSR00083**C	8.095	8.793
250	SWAYUS00250**C	14.364	30.297
Fredricksburg Rd	CWAYCR00501**C	6.286	0.003
	CWAYCR00010**C	0.814	0.008
Carr Rd	CWAYCR00084**C	1.02	0.004
	CWAYCR00094A*C	10.047	0.01
Kidron Rd	CWAYCR00052**C	8.016	0.001
94	SWAYSR00094**C	7.386	0.006
	SWAYSR00241**C	2.711	0.003

Winesburg Rd	CWAYCR00037**C	1.546	0.005
Massilon Rd	SWAYSR00241**C	2.868	7.124
Arnold Rd	TWAYTR00131**C	1.638	4.059
Moreland Rd	CWAYCR00077**C	1.434	1.002
Kansas Rd	TWAYTR00179**C	7.929	2.036
Apple Creek Rd	CWAYCR00044**C	5.245	3.74
	CWAYCR00044**C	3.725	0.007
Ely Rd	CWAYCR00044**C	5.245	6.375
Harrison Rd	CWAYCR00002**C	0.096	13.19
Salt Creek Rd	CWAYCR00109**C	0.009	2.671
Mt Hope Rd	TWAYTR00363**C	1.858	0.017
Emerson Rd	CWAYCR00079**C	0.016	4.161
Hackett Rd	CWAYCR00188**C	1.506	2.633
Lautenschlager Rd	TWAYTR00158**C	1.891	2.745

APPENDIX B – BICYCLE TRAVEL ROUTES MAP AND NLFIDS


Bicycle Travel Routes
Bicycle Travel Routes
Bike crashes 2018-2023
Existing Bike Facility
ProposedTrails
US and State Bike Routes
AmishStores
AmishTowns
UrbanAreas
West Salem
BRITTON RD
Rittman
CONGRESS TOWNSHIP
CANAAN TOWNSHIP
EASTON RD
MILTON TOWNSHIP
CHIPPEWA TOWNSHIP
BURBANK RD
AKRON RD
BACK MASSILON RD
WAYNE TOWNSHIP
SMITHVILLE WESTERN RD
CHESTER TOWNSHIP
GREEN TOWNSHIP
Orrville
BAUGHMAN TOWNSHIP
Wooster
Dalton
LINCOLN WAY
WOOSTER TOWNSHIP
PLAIN TOWNSHIP
EAST UNION TOWNSHIP
SUGAR CREEK TOWNSHIP
COLUMBUS RD
FRANKLIN TOWNSHIP
MORELAND RD
CLINTON TOWNSHIP
Shreve
SALT CREEK TOWNSHIP
KIDRON RD
PAINT TOWNSHIP
Miles
0 2 4 6

Bike Travel Routes

North of Wooster	NLFID	Start SLM	End SLM
Easton Rd	SASDSR00604**C	3.374	7.558
N Elyria Rd	SWAYSR00301**C	2.545	2.655
Burbank Rd	SWAYSR00083**C	22.323	23.345
Sterling Rd	CWAYCR00059**C	2.049	3.649
Cleveland Rd	SWAYSR00003**C	26.252	28.067
Rittman Ave	TWAYTR00059**C	0.956	1.438
	MWAYMR01019**C	0.004	0.503
Metzger Ave	MWAYMR00471**C	0.228	0.301
W Ohio Ave	MWAYMR01020**C	0.006	0.616
Ohio Street	CWAYCR00057A*C	3.921	4.99
Blough Rd	TWAYTR00200**C	2.289	0.528
Easton Rd	SWAYSR00604**C	17.054	20.655
N Mt Eaton Rd	SWAYSR00094**C	18.203	16.982
Warwick Rd	CWAYCR00116**C	1.057	4.807
W Smithville Western Rd	CWAYCR00086**C	0.007	12.134
Main St (Akron Rd)	SWAYSR00585**C	4.787	5.197
S Summit St	CWAYCR00073**C	2.785	2.546
Smucker Rd	CWAYCR00502**C	0	3.028
	CWAYCR00207**C	0	0.809
	CWAYCR00029**C	3.235	3.46
N Crown Hill Rd	TWAYTR00047**C	1.017	0
S Crown Hill Rd	CWAYCR00047A*C	1.517	0
Church Rd	CWAYCR00007**C	0.003	7.236
(Orrville)			
Hostetler Rd	MWAYMR01034**C	0.003	1.076
High Street	CWAYCR00502**C	5.584	6.118
57 (Main St)	SWAYSR00057**C	3.241	1.755
McQuaid Rd	CWAYCR00416**C	4.189	2.241
N Swinehart Rd	TWAYTR00145**C	3.538	1.523
Back Massilon Rd	CWAYCR00029**C	5.935	11.323
Eby Rd	TWAYTR00073**C	5.805	4.806
E Easton Rd	SWAYSR00604**C	14.332	16.453
Irvin Rd	TWAYTR00064**C	2.019	0.009
E Pleasant Home Rd	CWAYCR00048**C	11.845	11.342

Greyers Chapel Rd	TWAYTR00068**C	8.717	6.211
E Hutton Rd	CWAYCR00078**C	2.782	2.3
Hoffman Rd	TWAYTR00171**C	1.509	0.003
South of Wooster			
Kidron Rd	CWAYCR00052**C	8.934	0.001
Hackett Rd	CWAYCR00188**C	0.012	4.208
Seacrest Rd	CWAYCR00359**C	0.806	1.681
Sylvan Rd	CWAYCR00012**C	1.98	1.44
Ely Rd	TWAYTR00163**C	0.005	6.378
S Kansas Rd	TWAYTR00179**C	7.932	8.178
Arnold Rd	TWAYTR00131**C	0.002	4.661
Henry St	MWAYMR00119**C	0.001	0.107
S Mill St	SWAYSR00094**C	6.947	7.387
Main St (Old Lincoln Way)	SWAYUS00030*AC	1.145	1.373
S Millborne Rd	CWAYCR00142**C	1.846	0.016
High St	MWAYMR00017**C	0.413	0
E Main St (250)	SWAYUS00250**C	18.901	19.023
Bank St	TWAYTR00436**C	0.577	0
S Apple Creek Rd	CWAYCR00044**C	2.888	1.727
Buss Rd	TWAYTR00165**C	2.698	1.714
Cutler Rd	TWAYTR00205**C	2.632	0.16
(Fredricksburg)			
Henry St	CWAYCR00094A*C	0.838	0
Jackson St	MWAYMR01029**C	0.085	0
S Mill St	CWAYCR00501**C	0.051	0.03
W Clay St	CWAYCR00002**C	4.157	4.025
W Messner Rd	TWAYTR00049**C	0.351	1.15
Fredricksburg Rd	CWAYCR00501**C	4.443	3.697
Buss Rd	TWAYTR00165**C	0.009	2.696
Metcalf Rd	TWAYTR00009**C	0.062	2.153
McFadden	CWAYCR00003**C	0.527	1
S Funk Rd	CWAYCR00016**C	0.007	0.404
Brown rd	TWAYTR00316**C	0.007	2.948
(Shreve)			
Liberty St	MWAYMR00535**C	0.001	0.164
Main St	CWAYCR00157**C	1.022	1.135
W Wood St	MWAYMR00559**C	0.085	0.158

E Wood St	MWAYMR00558**C	0.011	0.263
Shreve Eastern Rd	CWAYCR00008**C	0.361	1.112
Cemetery Rd	CWAYCR00075**C	0.004	0.164
Force Rd	CWAYCR00289**C	0.005	1.188
Valley Rd	CWAYCR00076**C	0.001	1.066
W Clark Rd	CWAYCR00204**C	0.002	2.422
James Rd	CWAYCR00090**C	2.148	1.262
Graber Rd	CWAYCR00159**C	0.004	2.534
	TWAYTR00159**C	0.005	0.612
S Carr Rd	CWAYCR00094A*C	0.855	1.534
Leaman Rd	TWAYTR00084**C	0.174	0
Harrison Rd	CWAYCR00002**C	5.385	15.505
Lomas Rd SW	TWAYTR00118**C	0.009	0.467
241	SHOLSR00241**C	0.006	2.71
Wooster			
McAfee Rd	TWAYTR00192**C	0.761	0.004
Old Mansfield Rd	MWAYMR01032**C	0.225	0.933
Silver Rd	TWAYTR00004**C	2.639	3.941
Mechanicsburg Rd	CWAYCR00022**C	1.201	0.006
North St	MWAYMR00824**C	0.008	0.906
Spink St	MWAYMR00895**C	0.091	0.005
Bowman St	MWAYMR01033**C	0.01	1.761
Liberty St	CWAYCR00022**C	0.589	0.005
Liberty St	SWAYSR00302**C	2.254	1.528
Liberty St	CWAYCR00030A*C	10.203	10.484
Theodore St	MWAYMR00911**C	0.008	0.137
Rebecca St	MWAYMR00861**C	0.01	0.242
Wayne Ave	MWAYMR01015**C	0.009	2.269
Long Rd	MWAYMR00788**C	0.012	0.852
Cleveland Rd	SWAYSR00003**C	19.038	17.908
Cleveland Rd	CWAYCR00003A*C	5.603	3.986
Quinby Ave/ Market St	CWAYCR00003A*C	3.97	2.488
Madison Ave	MWAYMR01014**C	0.012	0.156
Burbank	MWAYMR01026**C	0.944	0.007
Milltown Rd	CWAYCR00184**C	1.545	2.848
Friendsville Rd	CWAYCR00006**C	1.292	0.854

APPENDIX C – OHIO FARM BUREAU POLICIES

Motor Vehicle/Road Safety 242

We support:

1. The Ohio Department of Transportation placing flashing stop signs at dangerous rural intersections of state routes.
2. The placement of reflective tape on all stop sign posts.
3. Placement of stop signs at intersections should have an indication whether it is a two-way, four-way, or some other intersection configuration.
4. Stop ahead signs, rumble strips or blinkers at dangerous intersections. We encourage the Ohio Department of Transportation to consider local input and give more emphasis to installation of traffic lights at dangerous rural intersections.
5. Red and white stripes on all truck beds, semi-trucks and trailers, and amber tape on farm equipment so they are more visible in hazy and foggy conditions.
6. Keeping highway white lines painted and installing more surface reflectors at intersections and on hills and curves.
7. The development and use of educational materials and testing, including in drivers' education courses, related to signage, lighting, signaling, passing agricultural equipment and safe driving practices.
8. That all newly manufactured cars be equipped with daytime front and rear running lamps to ensure driver safety.
9. Legislation requiring the proper use of additional accessory highway lights that are typically mounted below the standard headlights. These unfocused high intensity lights should be used to provide additional wide range illumination only when the high beams are in use.
10. More liberal use of reduced speed limits on rural roads where road topography warrants such speed limit reduction.
11. The Ohio Bureau of Motor Vehicles clearly display the county names on all Ohio license plates.
12. The use of yellow "Prepare to Stop When Flashing" signs to warn of upcoming traffic lights on high-speed highways or dangerous intersections.
13. The standards required to install traffic safety improvements being based on accident/incident rates.
14. State and local road authorities and utilities giving consideration to the movement of farm equipment when placing traffic roundabouts, safety guardrails, utilities and signage along roadways.
15. Local governments and utilities to trim trees in the public right-of-way vertically allowing the entire right-of-way to be safe and usable and encourage any new placement of trees be setback to prevent future encroachment of the right-of-way.
16. Ohio Department of Motor Vehicles to allow options for renewing vehicle registration for commercial vehicles and farm trucks to be conducted via U.S. Mail or the internet.
17. The mowing of roadways to control noxious weeds, improve safety, and sustain a clear line of vision on the highway right-of-way for any intersection.
18. Liability protection of landowners when maintaining road rights of way on their property.
19. School zone signs clearly designating which times restricted hours are in effect.
20. The proper use of safety belts and child restraint seats.
21. The use of hands-free communication devices when operating a motor vehicle.
22. Joggers, pedestrians and cyclists wearing some kind of reflective cloth after night or evening while on all roads and streets.
23. Flashing yellow lights on frequently stopping vehicles for use during predawn and early evening hours.
24. Further research by state and local transportation authorities to determine areas of high vehicle/buggy/pedestrian/bicycle/farm equipment traffic and accident rates and the

prioritization of those roadways for construction of buggy/pedestrian/bicycle lanes and widening for farm equipment.
25. The requirement that buggies have visible unobscured LED lighting on the rear to allow oncoming motorists to easily recognize buggies in their lane.
26. Inclusion of farm equipment safety on roundabouts in the driver's education curriculum.

We encourage operators and passengers of motorcycles, bicycles, mopeds, snowmobiles and all-terrain vehicles to use helmets during operation.

Railroads and Crossing Safety 243

We support:
1. Adequate lighting with stop signs or mechanical warning devices at all railroad crossings. Visibility should be maintained including weed and brush removal and control. Railroad cars should not be parked on sidings where the safe view of the crossing is compromised. All railroad cars should have reflective Department of Transportation tape placed on both sides to improve night visibility.
2. Regular inspection of railroad crossings, including pothole repair. Timely removal of railroad crossing signs when railroad tracks have been closed. Any problems should be repaired in a timely manner.
3. Amending the Ohio Revised Code to allow state, county, township and municipal highway departments to erect stop signs at unlighted and non-gated railroad crossings.
4. Increasing the amount railroads pay for safety improvements to crossings from the current 10% to 50% of the project cost.
5. Improvement of railroad crossing approach ramps and road width allowances to allow for the safe crossing of large farm equipment and low clearance highway vehicles.
6. Enforcing the maintenance of line fences on existing railroads and along abandoned right-of-ways, pursuant to Ohio Revised Code Section 4959.02 (A), even when the railroad property is sold or transferred.
7. Ensuring vehicle traffic is not impeded by rail traffic at multiple intersections within the same area at the same time.
8. Effective placement of additional sidings and other infrastructure, the use of increased fines or other practices to limit impeding state routes, vital thoroughfares and emergency service routes by stopped trains.

Slow Moving Vehicles 244

We support:
1. The use of safety lights and official Slow Moving Vehicles (SMV) emblems as required in the Ohio Revised Code and approved by American Society of Agricultural Engineers (ASAE) on farm machinery, including all horse drawn vehicles used on public roadways.
2. Proper use of the Speed Indicator Symbol (SIS) for farm equipment designed to travel faster than 25 miles per hour.
3. Replacing all old-style farm machinery caution signs with the newer signs that include the SMV sign.
4. The inclusion of information on the SIS system signage and its meaning in drivers' education curriculum.

We oppose SMV signs being used for non-SMV purposes, such as driveway markers.

TRANSPORTATION

Highways 261

We support:

1. The option of three-shift labor to expedite any contracted highway construction and repair project.
2. The use of alternative dust and ice control methods such as corn by-products, sand or limestone chips and reduce the use of salt, brine compounds and/or calcium chloride on federal, state, county and township highway systems in Ohio when feasible, to prevent contamination and long term effects on potable water used for drinking, livestock and irrigation.
3. Minimum sizing of roundabouts and other nontraditional intersections so as not to impede truck or farm equipment. All proposed roundabouts in unincorporated areas should be engineered and constructed with the minimum radius needed to accommodate modern farm equipment and tractor/trailers of maximum legal length and width safely and without obstruction. Graduated curbing should be used on all roundabouts.
4. The state assuming responsibility for all bridges on the state highway system, regardless of location. Ohio Department of Transportation should make the repair and replacement of bridges, including the resizing of bridges for drainage, a priority. We support the use of properly treated wood, especially poplar, in repairing or rebuilding of bridges 40 feet or less in length.
5. Revising the qualification standards specified in the Association of State Highway and Transportation manual so Ohio counties can benefit from grants and matching funds for road construction. Current standards are inappropriate for conditions in Ohio and make the construction cost prohibitive.
6. Existing roads and right of ways being used wherever possible for the construction of any proposed highways.
7. The positioning of mailboxes and newspaper boxes according to the Federal Postal Regulations and encourage placing them on the same side of the road. We support enforcement, by either the county engineer or county zoning inspector, of the minimum set back requirement where applicable for mail and paper boxes along state, county and township roads. If there is not a setback distance, then one should be established. We propose a standard three feet from the edge of the road setback for mailboxes to facilitate the movement of large equipment.
8. The widening of state, county and township road berms and the widening of overpasses during new construction or reconstruction. At minimum, berms should be returned to the width prior to construction. Access roads should remain open and be maintained until the project is complete.
9. The installation of rumble strips along the centerline and roadsides for state highways and maintaining fog lines on the edges of all paved roads.
10. Routine road and bridge maintenance which includes prioritizing funding for township and county road and bridge repairs.
11. A review of the current state funding formula for maintenance and repair of bridges on county roads. The state is responsible for prioritizing funding for projects (rather than the county) and the current formula penalizes counties that have a good bridge maintenance program.

APPENDIX D – PRIORITY LISTS

TABLE S-1 HIGH PRIORITY ALL MODE RURAL SEGMENTS

Rank	Political Unit	Street Name	From	To	Length (Miles)	J40: Zero Vehicle Households	J40: % Pop. Below 200% Poverty	J40: Transportation Cost Burden Score	Poverty Score	Total Crashes (2018-2023)	Percent Injury Crashes	FSI Crashes (2018-2023)	Appears on another priority list	Majority Crash Type	Potential Countermeasures to Consider	Timeframe	Link to Map
1	Cannan Township	**SR 83 Burbank Rd**	0.20 S of Steiner Rd	0.30 N of SR 604	1.70	4.30	26.50	0.12	1	32	44%	**7**	Farm Equipment	14 fixed object (44%)	See Selected Project SR 83 – Burbank Road (Smithville Western Road to Southern border of Village of Burbank)	Short	Google Maps
2	Chippewa Township	**SR 585 Akron Rd**	RR Overpass	Monie Rd	1.25	5.10	15.50	0.13	1	36	44%	**5**		14 rear end (39%), 5 left turn (19%)	See Selected Project SR 585 – Akron Road (SR 604 – Easton Road to Moine Road)	Medium	Google Maps
3	Wayne Township/Green Township	**Back Orville Rd**	Geyers Chapel Rd	Honeytown Rd (South Jct.)	1.10	7.60	26.10	0.16	2	19	42%	**4**	ADV and Farm Equipment	6 fixed object (30%), 5 animal (25%)	See Selected Project Back Orville Road (Geyers Chapel Road to Honeytown Road)	Short	Google Maps
4	Paint Township	**US 250 Dover Rd**	Kohler Rd	Kidron Rd	0.52	63.30	42.20	0.14	1	5	80%	**3**	Bicycle	2 fixed object (40%)	Edgeline (outside the amish travel map) and centerline rumble strips, install raised pavement markers.	Short	Google Maps
5	Milton Township	**SR 585 Akron Rd**	Fulton Rd	Yoder Rd	0.54	1.40	25.10	0.14	1	15	27%	**3**	Pedestrian	4 rear end (27%), 3 animal (20%)	Edgeline (outside the amish travel map) and centerline rumble strips, install raised pavement markers. Deer crossing signs.	Short	Google Maps
6	Milton Township	**Sterling Rd**	Seville Rd/Kauffman Rd	Rittman Rd	0.73	1.40	25.10	0.14	1	11	64%	**3**		8 fixed object (67%)	Edgeline (outside the amish travel map) and centerline rumble strips, install raised pavement markers.	Short	Google Maps
7	Chester Township	**Overton Rd**	Mcafee Rd	Smithville Western	0.45	2.20	16.90	0.14	1	4	75%	**2**	Pedestrian	1 pedestrian (25%), 1 fixed object (25%)	Widen shoulders, provide edgeline lane makings.	Short	Google Maps
8	East Union Township	**Emerson Rd**	Mt Hope Rd	Kansas Rd	0.50	28.20	32.10	0.14	1	5	40%	**2**	ADV	2 fixed object (40%)	Widen bridge over Little Sugar Creek, replace chip & seal with asphalt, widen shoulders, provide edgeline lane markings.	Medium	Google Maps
9	Paint Township	**Harrison Rd**	Kidron Rd	Zuercher Rd	0.50	63.30	42.20	0.14	1	5	40%	**2**		All were fixed object crashes	Widen shoulders, provide edgeline lane makings, additional chevrons.	Short	Google Maps
10	Franklin Township	**SR 83 Millersburg Rd**	800 feet north of Messner Rd	0.20 mile north	0.20	12.00	29.10	0.14	2	8	38%	**2**		3 fixed object (38%)	Install chevrons at curves, edgeline (outside the amish travel map) and centerline rumble strips with raised pavement markers.	Short	Google Maps
11	Clinton Township	**SR 3 Columbus Rd**	Funk Rd	0.22 miles SW	0.22	4.30	28.90	0.17	1	11	55%	**2**		6 fixed object (55%)	Install chevrons at curves, edgeline (outside the amish travel map) and centerline rumble strips, edgeline raised pavement markers, additional reflectors to guardrails.	Short	Google Maps
12	Cannan Township	**SR 83 Burbank Rd**	Armstong Rd	300 feet N of Leatherman Blvd	0.50	4.30	26.50	0.12	1	8	63%	**2**		5 fixed object (63%)	Widen shoulders, edgeline rumble strips (outside the amish travel map), install raised pavement markers (raised pavement markers)	Short	Google Maps
13	Baughman Township	**Burkhart Rd**	Paradise Ext	Tannerville Rd	1.00	15.90	24.00	0.16	1	5	40%	**2**		1 fixed object (25%), 1 overturning (25%)	Widen roadway, provide shoulders, provide lane markings, chevrons at curve, widen narrow bridge.	Medium	Google Maps
14	Baughman Township	**SR 57 Wadsworth Rd**	Hidden Lake Dr	400 feet N of Fulton Rd	0.50	3.20	22.70	0.14	1	12	58%	**2**		6 rear end (50%), 3 angle (25%)	Provide 2-way left turn lane.		Google Maps
15	Green Township	**SR 585 Akron Rd**	800 feet SW of Egypt Rd	Fox Lake Rd	0.38	3.20	22.70	0.14	1	19	47%	**2**		10 fixed object (53%)	Widen shoulders, edgeline rumble strips (outside the amish travel map), install raised pavement markers (raised pavement markers)	Short	Google Maps
16	Green Township	**Back Orville Rd**	Millborne Rd	Orr Rd	0.70	3.20	22.70	0.14	1	28	46%	**2**		22 fixed object (79%)	Widen shoulders, edgeline rumble strips (outside the amish travel map), install raised pavement markers (raised pavement markers), additional chevrons.	Short	Google Maps
17	Milton Township	**SR 585 Akron Rd**	Steiner Rd	0.62miles NE	0.62	1.30	20.00	0.13	1	13	46%	**2**		4 fixed object (31%)	Has recently been resurfaced with new lane markings. Monitor	N/A	Google Maps
18	Chester Township	**US 250 Ashland Rd**	Firestone Rd	0.40 mile SE	0.40	2.20	16.90	0.14	1	12	50%	**2**		5 animal (42%), 3 head on (25%)	Install edgeline and centerline raised pavement markers.	Short	Google Maps

TABLE S-2 HIGH PRIORITY ALL MODE URBAN SEGMENTS

Rank	Political Unit	Street Name	From	To	Length (Miles)	J40: Zero Vehicle Households	J40: % Pop. Below 200% Poverty	J40: Transportation Cost Burden Score	Poverty Score	Total Crashes (2018-2023)	Percent Injury Crashes	FSI Crashes (2018-2023)	Appears on another priority list	Majority Crash Type	Potential Countermeasures to Consider	Timeframe	Links to Map
1	Wooster	**SR 3 Cleveland Ave**	Milltown Rd	Smithville Western	1.05	7.60	26.10	0.16	3	51	24%	**5**	Pedestrian	28 rear end (55%)	See Selected Project SR 3 – Cleveland Road (Milltown Road to Smithville Western Road	Medium	Google Maps
3	Wooster Township	**SR 3 Columbus Ave**	Heyl Rd	Columbus Ave Extension	0.38	11.20	25.50	0.14	1	17	35%	**3**	Pedestrian	3 fixed object (17%), 1 pedestrian (11%)	See Selected Project SR 3 – Columbus Road (Heyl Road to Columbus Road Extension).	Long	Google Maps
2	Wooster	**W. Liberty St**	Columbus Ave	Larwill St/Old Lincoln Way	0.18	11.20	25.50	0.14	2	8	25%	**2**	Pedestrian	3 angle (38%)	See Selected Project West Liberty Street (Larwill Street/Old Lincoln Way to Columbus Road)	Short	Google Maps

TABLE S-3 ANIMAL DRAWN VEHICLE (ADV) SEGMENTS

Rank	Political Unit	Street Name	From	To	Length (Miles)	J40: Zero Vehicle Households	J40: % Pop. Below 200% Poverty	J40: Transportation Cost Burden Score	Poverty Score	Total ADV Crashes (2018-2023)	ADV Injury Crashes (2018-2023)	Speed Limit	Shoulder Type	Shoulder Width	Number of Lanes	Lane Width (feet)	Total ADT	Priority Route Segment	Timeframe	Links to Map
1	Paint Township	**SR 241 Massillon Rd**	CR 37 Winesburg Rd	Wayne County Line (near Kidron Rd)	2.7	63.3	42.2	0.16	1	9	**6***	55	Asphalt/Gravel	Narrow	2	10	3670	Yes	Medium	Google Maps
2	Chester Township	**SR 301 N. Elyria Rd**	NW School District north parking lot	SR 604 Pleasant Home Rd	1.6	2.1	27.7	0.12	1	5	**5***	55	Combination	Narrow	2	10-12	2676	Yes	Medium	Google Maps
3	Paint Township, Sugar Creek Township	**SR 241 Massillon Rd**	Wood St	Elton Rd	0.84	63.3	42.2	0.16	1	4	**3***	45	Asphalt	Moderate	2	10	4201	Yes	Medium	Google Maps
4	Salt Creek Township	**CR 363 Mt Hope Rd**	Salt Creek Rd	Harrison Rd	1.4	63.3	42.2	0.16	1	4	**2***	45	Gravel	Narrow	2	10	716	Yes	Medium	Google Maps
5	Paint Township	**CR 37 Winesburg Rd**	SR 241 Massillon Rd	0.63 miles S of SR 241 Massillon Rd	0.63	63.3	42.2	0.16	1	2	**2***	45			2	9	1822	No	Medium	Google Maps
6	Congress Township	**US 42**	CR 700	0.25 mile NE of CR 700	0.25	2.1	27.7	0.12	1	2	**2***	60	Asphalt	Moderate	4	11	2339	Yes	Medium	Google Maps
7	Paint Township	**Kidron Rd**	0.30 S of Cunningham Rd	0.25 mile N of Cunningham Rd	0.55	63.3	42.2	0.16	1	2	**1***	45	Gravel	Narrow	2	10	1553	Yes	Medium	Google Maps
8	Salt Creek Township	**CR 2 Harrison Rd**	Maurer Rd	Fountain Nook Rd	1.05	63.3	42.2	0.16	1	2	**1***	45	Gravel	Narrow	2	10	1122	Yes	Short/Medium	Google Maps
9	East Union Township	**CR 79 Emerson Rd**	10456 Emerson Rd	Kansas Rd	0.72	28.2	32.1	0.14	1	5	**1***	45	Chip & Seal	Narrow	2	9	1733	Yes	Medium	Google Maps
10	East Union Township	**Carr Rd**	Lautenschlager Rd	0.35 mile S of Lautenschlager Rd	0.35	28.2	32.1	0.14	1	2	**1***	45	Chip & Seal	Narrow	2	10	1818	Yes	Medium	Google Maps
11	Congress Township	**Britton Rd**	0.13 mile E of RR tracks	0.38 mile E of RR tracks	0.25	2.1	27.7	0.12	1	1	**1***	45	Grass	Narrow	2	9	370	No	Medium	Google Maps
12	Plain Township	**SR 95 Blachleyville Rd**	S Firestone Rd	S Columbus Rd	4.9	2.2	17.8	0.13	1	5	**1***	55	Asphalt	Moderate	2	10	1143	Yes	Medium	Google Maps
13	Plain Township	**S Elyria Rd**	SR 95 Blachleyville Rd	0.25 mile S of SR 95 Blachleyville Rd	0.25	2.2	17.8	0.13	1	1	**1***	45	Gravel	Narrow	2	9	803	Yes	Short/Medium	Google Maps
14	Chester Township	**US 250 Ashland Rd**	10300 Ashland Rd	10800 Ashland Rd	0.35	2.2	16.9	0.14	1	1	**1***	55	Asphalt	Moderate	2	12	4900	No	Short	Google Maps
15	Mt Eaton	**US 250 Dover Rd**	SR 241/SR 94	Canton St	0.14	63.3	42.2	0.16	1	2	**2**	35	Asphalt	Wide	2	19	8512	Yes	Short	Google Maps
16	Salt Creek Township, Fredericksburg, Franklin Township	**Fredericksburg Rd**	Deer Run Rd	Moreland Rd	3.2	12	29.1	0.14	1	7	**2**	45	Gravel	Narrow	2	10	2317	Yes	Medium	Google Maps
17	Franklin Township	**SR 83 Millersburg Rd**	Moreland Rd	0.27 mile S of Moreland Rd	0.27	12	29.1	0.14	1	4	**2**	40	Asphalt/Gravel	Moderate	2	12	4331	Yes	Medium	Google Maps
18	Congress Township	**SR 301 N. Elyria Rd**	CR 70 West Salem Rd	0.40 mile N of CR 70 West Salem Rd	0.4	2.1	27.7	0.12	1	2	**2**	55	Gravel	Narrow	2	10	2184	Yes	N/A	Google Maps
19	Congress Township	**SR 301 N. Elyria Rd**	Massie Rd	Wiley Rd	0.79	2.1	27.7	0.12	1	6	**1**	55	Asphalt	Moderate	2	10	3376	Yes	Medium	Google Maps
20	Congress Township	**Congress Rd**	I-71 SB Ramps	Ruff Rd	0.26	2.1	27.7	0.12	1	2	**1**	55	Asphalt	Moderate	2	11	2023	Yes	Medium	Google Maps

* Denotes a Severe Injury

TABLE S-4 BICYCLE INVOLVED SEGMENTS

Rank	Political Unit	Street Name	From	To	Length (Miles)	J40: Zero Vehicle Households	J40: % Pop. Below 200% Poverty	J40: Transportation Cost Burden Score	Poverty Score	Injury Bicycle Crashes	Lighting Condition at time of crash	Bike Lanes/Shoulders	On Street Parking	Bicycle Priority Route	Rural/Urban	Timeframe	Links to Map
1	Wooster Township	**Old Columbus Rd**	Heyl Rd	Frank Dr	0.1	11.2	25.5	0.14	2	**1***	Daylight	Narrow shoulders	No	No	Urban	Medium	Google Maps
2	Wooster	**SR 3 Columbus Rd**	US 30 EB Ramps	US 30 WB Ramps	0.2	11.2	25.5	0.14	2	**1***	Daylight	Shoulders that narrow on bridge	No	No	Urban	Short	Google Maps
3	Sugar Creek Township	**Kidron Rd**	500 feet south of Heritage Green Ln	0.20 mile north	0.2	13.1	30.6	0.12	1	**1***	Daylight	Narrow shoulders	No	Yes	Rural	Medium	Google Maps
4	Paint Township	**Harrison Rd**	Arney Rd	0.20 mile east	0.2	63.3	42.2	0.14	1	**1***	Daylight	Narrow shoulders	No	Yes	Rural	Short/Medium	Google Maps
5	Salt Creek Township	**Fryburg Rd**	Deer Run Dr	0.20 mile SE	0.2	63.3	42.2	0.14	1	**1***	Dawn/Dusk	Narrow shoulders	No	No	Rural	Medium	Google Maps
6	Wayne Township	**Smithville Western Rd**	Friendsville Rd	Canaan Center Rd	0.4	2.1	24.9	0.15	2	**2**	Daylight (both)	Narrow shoulders	No	Yes	Rural	Medium	Google Maps
7	Orrville	**Hostetler Rd**	Congress St	Sterling Ave	0.19	16.5	52.7	0.2	4	**1**	Daylight	Narrow shoulders	No	Yes	Urban	Short	Google Maps
8	Wooster	**Walnut St**	South St	Liberty St	0.08	11.2	25.5	0.14	4	**1**	Daylight	None	Yes	No	Urban	Medium	Google Maps
9	Wooster	**Diamond Alley**	Bever St	450 feet east	0.08	11.2	25.5	0.14	4	**1**	Daylight	Very narrow alley	No	No	Urban	Short	Google Maps
10	Wooster	**Burbank Rd**	Bayberry Rd	Elm Dr	0.12	1.9	22.1	0.12	3	**1**	Daylight	Very narrow shoulders	No	Yes	Urban	Short/Medium	Google Maps
11	Green Township	**SR 57**	Church Rd	0.20 mile north	0.2	15.9	24	0.16	2	**1**	Dark	Narrow shoulders	No	Yes	Urban	Medium	Google Maps
12	Sugar Creek Township	**Emerson Rd**	Kidron Rd	Jerico Rd	0.1	13.1	30.6	0.12	1	**1**	Daylight	Narrow shoulders	No	Yes	Rural	Short/Medium	Google Maps
13	Plain Township	**Old Lincoln Way**	Address 3140	0.10 mile east (near A	0.1	2.2	17.9	0.13	1	**1**	Dark	Shoulders (Deteriorating)	No	No	Rural	Medium	Google Maps

* Denotes a serious injury

TABLE S-5 PEDESTRIAN INVOLVED SEGMENTS

Rank	Political Unit	Street Name	From	To	Length (Miles)	J40: Zero Vehicle Households	J40: % Pop. Below 200% Poverty	J40: Transportation Cost Burden Score	Poverty Score	Pedestrian Crashes with Fatality or Injury	Light Condition(s)	Sidewalks and/or shoulders	Rural/Urban	Timeframe	Links to Map
1	Wooster	**SR 83**	500 feet NW of Friendsville Rd	Wal-Mart south entrance drive	0.25	7.6	26.1	0.14	1	3*	2-Dusk, 1-Dark	Sidewalks	Urban	Short/Medium	Google Maps
2	Wooster	**Pittsburgh Ave**	Bauer Rd	US 30 WB entrance ramp	0.12	10.3	36.3	0.22	4	1*	Dark	Shoulders	Urban	Short	Google Maps
3	Wooster	**SR 3 Cleveland Rd**	400 feet north of Milltown Rd	0.10 mile north	0.1	7.6	26.1	0.16	3	1*	Dark	Shoulders	Urban	Medium	Google Maps
4	Wayne Township	**Smithville Western Rd**	Geyers Chapel Rd	0.20 mile east	0.2	7.6	26.1	0.16	2	1*	Daylight	Narrow shoulders	Rural	Medium	Google Maps
5	Wooster Township	**SR 3**	Heyl Rd	0.20 mile NE	0.2	11.2	25.5	0.14	2	1*	Dark-lighted roadway	Shoulders	Rural	Medium/Long	Google Maps
6	Wooster	**Liberty St (W)**	Larwill/Old Lincoln Way	0.12 mile SE	0.1	11.2	25.5	0.14	2	1*	Dark-lighted roadway	Sidewalks	Urban	Short	Google Maps
7	Paint Township	**SR 94 Mt Eaton Rd**	Western Rd	0.20 mile north	0.2	63.3	42.2	0.14	1	1*	Daylight	Narrow shoulders	Rural	Short	Google Maps
8	Wooster	**SR 83**	US 250 SB ramps	Gossard Dr	0.21	10.3	36.3	0.22	1	1*	Daylight	Shoulders	Urban	Short	Google Maps
9	Wooster	**Payne Dr**	Gerlaugh Dr	Thorne Rd	0.08	10.3	36.3	0.22	1	1*	Dark-lighted roadway	Neither	Urban	Short/Medium	Google Maps
10	Milton Township	**Eby Rd**	SR 604 Easton Rd	0.50 mile south	0.5	1.4	25.1	0.14	1	1*	Daylight	Very narrow shoulders	Rural	Medium	Google Maps
11	Milton Township	**SR 585**	Fulton Rd	0.20 mile NE	0.2	1.4	25.1	0.14	1	1*	Daylight	Narrow shoulders	Rural	Medium	Google Maps
12	Chester Township	**Overton Rd**	McAfee Rd	0.20 mile north	0.2	2.2	16.9	0.14	1	1*	Dark	Very narrow shoulders	Rural	Medium	Google Maps
13	Wooster	**Beall Ave**	Larwill St/High St	Bowman St	0.22	13.9	38.6	0.19	5	2	Daylight, Dark-lighted roadway	Sidewalks	Urban	Short	Google Maps
14	Wooster	**Beall Ave**	University St	0.10 mile north	0.1	13.6	3.3	0.19	2	2	Daylight, Dark-lighted roadway	Sidewalks	Urban	Short	Google Maps
15	Wooster	**Bowman St (E)**	Buckeye St	Bever St	0.08	13.9	38.6	0.19	5	1	Daylight	Sidewalks	Urban		Google Maps
16	Wooster	**Emerick St**	Saybolt Ave	Arnold Ct	0.06	11.2	25.5	0.14	5	1	Daylight	Sidewalks	Urban		Google Maps
17	Wooster	**High St**	Beall Ave	Spink St	0.1	13.9	38.6	0.19	4	1	Daylight	Sidewalks	Urban	Short	Google Maps
18	Wooster	**Market St (N)**	Larwill St	Bixler Ct	0.1	13.9	38.6	0.19	4	1	Daylight	Sidewalks	Urban	Short	Google Maps
19	Wooster	**Liberty St (W)**	Market St	Buckeye St	0.07	11.2	25.5	0.14	4	1	Daylight	Sidewalks	Urban		Google Maps
20	Wooster	**Old Columbus Rd**	Frank Dr	Prairie Lane	0.4	11.2	25.5	0.14	2	1	Dark	Narrow shoulders		Medium	Google Maps

* Denotes a severe injury or fatality

TABLE S-6 FARM EQUIPMENT INVOLVED SEGMENTS

Rank	Political Unit	Street Name	From	To	Length (Miles)	J40: Zero Vehicle Households	J40: % Pop. Below 200% Poverty	J40: Transportation Cost Burden Score	Poverty Score	Farm Equip Crashes with Injury	Light Condition(s)	Timeframe	Links to Map
1	Clinton Township	**SR 226 Shreve Rd**	Old Shreve Rd (south intersection)	0.20 mile north	0.2	4.3	28.9	0.17	1	**1***	Daylight	Short	Google Maps
2	Congress Township	**Stratton Rd**	200 feet south of Palmer Rd	0.20 mile south	0.2	2.1	27.7	0.12	1	**1***	Dark	Short	Google Maps
3	Sugar Creek Township	**Hackett Rd**	At the RR tracks		0.1	13.1	26.5	0.12	1	**1***	Daylight	Medium	Google Maps
4	Sugar Creek Township	**Zuercher Rd**	Wenger Rd	0.20 mile SW	0.2	9.8	37.6	0.16	1	**1**	Daylight		Google Maps
5	Franklin Township	**Moreland Rd**	Nonpariel Rd	0.20 mile east	0.2	12	29.13	0.14	1	**1**	Daylight		Google Maps
6	Baughman Township	**Coal Bank Rd**	Back Massillon Rd	Fulton Rd	1.8	3.5	18.9	0.13	1	**1**	Daylight (both)		Google Maps
7	Baughman Township	**SR 94 Mt Eaton Rd**	Rudy Rd	0.20 mile north	0.2	3.5	18.9	0.13	1	**1**	Dark	Short	Google Maps
8	Chester Township	**SR 301 Elyria Rd**	Howman Rd	0.30 mile south	0.3	2.2	16.9	0.14	1	**1**	Daylight		Google Maps

* Denotes a serious injury

TABLE I-1 HIGH PRIORITY ALL MODES RURAL INTERSECTIONS

Rank	Political Unit	Street Name	Intersecting Street Name	J40: Zero Vehicle Households	J40: % Pop. Below 200% Poverty	J40: Transportation Cost Burden Score	Poverty Score	Traffic Control	Skew Angle	Total Crashes (2018-2023)	Percent Injury Crashes	FSI Crashes (2018-2023)	Listed on another priority list	Majority Crash Type	Potential Countermeasures to Consider	Timeframe	Link to Map
1	Canaan Township	**Britton Rd**	**Friendsville Rd**	4.3	26.5	0.12	1	Dual stop signs on Friendsville Rd	No	12	83%	**4**		11 angle, 1 fixed-object	See Selected Project Britton Road and Friendsville Road Intersection	Medium	Google Maps
2	Plain Township	**SR 95 Blachleyville Rd**	**Jefferson Rd**	2.2	17.9	0.13	1	Single stop signs on Jefferson Rd	No	5	80%	**3**		All crashes were angle	See Selected Project SR 95 – Blachleyville Road and Jefferson Road Intersection	Short/Medium	Google Maps
3	East Union Township/Sugar Creek Township	**US 30**	**SR 57 Wadsworth Rd**	9.8	37.6	0.16	1	Signals	No	28	36%	**3**		12 rear end (42%), 5 angle (18%)	See Selected Project US 30 and SR 57 – Wadsworth Road Intersection	Medium	Google Maps
4	Wayne Township	**SR 3 Cleveland Rd**	**Hutton Rd**	2.1	31	0.15	2	Dual stop signs WB, single stop sign EB on Hutton	Slight	7	57%	**3**		4 angle crashes (44%)	See Selected Project SR 3 – Cleveland Road and Hutton Road Intersection	Short/Medium	Google Maps
5	East Union Township	**US 250 Dover Rd**	**Fountain Nook Rd**	28.2	32.1	0.14	1	Single stop signs on Fountain Nook	Slight	3	67%	**2**	ADV	2 angle, 1 head-on	See Selected Project US 250 – Dover Road and Fountain Nook Road Intersection	Medium	Google Maps
6	Paint Township	**US 250 Dover Rd**	**Kohler Rd**	63.3	42.2	0.14	1	Single stop signs on Kohler Rd	Moderate	5	60%	**2**	Bicycle, ADV	2 angle (40%), technically two left turn (40%) although one was with a pedalcycle	Additional stop signs with larger, flashing signs. Add "cross traffic does not stop" placards. Remove sight-blocking objects from right of way, including fence and vegetation. See Selected Project US 250 Dover Road and Kohler Road as an example. Additional study needed.	Short	Google Maps
7	Mt Eaton	**US 250 Dover Rd**	**SR 241/SR 94**	63.3	42.2	0.14	1	Signals	No	9	33%	**2**	Pedestrian	3 angle (33%)	See Selected Project US 250 – Dover Road and SR 241/SR 94 Intersection	Short	Google Maps
8	Clinton Township/Ripley Township	**SR 226**	**S Elyria Rd**	4.3	28.9	0.17	1	Dual stop signs on Elyria Rd	No	5	100%	**2**		3 angle (60%)	Appears to have newer "Stop Ahead" signs and double stop signs with reflective sleves. Monitor intersection.	N/A	Google Maps
9	Chippewa Township/Milton Township	**SR 604 Easton Rd**	**SR 57 Wadsworth Rd**	1.3	20	0.13	1	Dual stop signs on SR 604 Easton Rd	Slight	27	78%	**2**		25 angle (92%)	Roundabout completed in 2024.	Medium	Google Maps
10	Paint Township/Salt Creek Township	**Kansas Rd**	**Harrison Rd**	63.3	42.2	0.14	1	Dual stop signs on Kansas Rd	No	4	75%	**2**		All crashes were angle	See Selected Project Kansas Road and Harrison Road Intersection	Short/Medium	Google Maps
11	Baughman Township	**SR 94 Mt Eaton Rd**	**Church Rd**	3.5	18.9	0.13	1	Dual stop signs on Church Rd	No	17	65%	**2**		10 angle (59%)	Appears to have newer safety improvements, monitor intersection.	N/A	Google Maps
12	Congress /Canaan Township	**SR 83 Burbank Rd**	**Britton Rd**	4.3	26.5	0.12	1	Dual stop signs EB, single stop sign WB on Britton	Slight	11	64%	**2**		5 angle crashes (45%)	See Selected Project SR 83 – Burbank Road and Britton Road Intersection	Short/Medium	Google Maps
13	Plain Township	**US 30**	**S. Elyria Rd**	2.2	17.8	0.13	1	Dual stop signs on Elyria Rd	No	11	64%	**2**		5 angle (45%)	Convert to R-Cut intersection	Medium	Google Maps
14	Canaan Township	**SR 604 Easton Rd**	**SR 83 Burbank Rd**	4.3	26.5	0.12	1	Dual stop signs on SR 604 Easton Rd	Slight	13	62%	**2**		9 angle crashes (69%)	Construct roundabout.See Selected Project SR 3 – Cleveland Road and Hutton Road Intersection as an example.	Medium	Google Maps
15	Milton Township	**Seville Rd**	**Doylestown Rd**	1.4	25.1	0.14	1	Single flashing stop signs on Doylestown	Moderate	15	53%	**2**		13 angle (87%)	See Selected Project Seville Road and Doylestown Road Intersection	Short/Medium	Google Maps
16	Baughman/Chippewa/Green/Milton Twps	**SR 57 Wadsworth Rd**	**Fulton Rd**	1.3	20	0.13	1	Single stop signs on Fulton Rd	No	9	44%	**2**		4 angle, 2 sideswipe	Double up stop signs with larger, flashing signs. Add "cross traffic does not stop" placards. See Selected Project US 250 Dover Road and Kohler Road as an example. Construct roundabout.	Short/Medium	Google Maps
17	Baughman Township	**SR 57 Wadsworth Rd**	**Fox Lake Rd**	3.2	22.7	0.14	1	Fox Lake Rd legs are offset. Single stop signs on Fox Lake Rd	No	5	40%	**2**		2 angle, 2 rear-end, 1 animal	Double up stop signs with larger, flashing signs. Add "cross traffic does not stop" placards. Add stop ahead signs. See Selected Project US 250 Dover Road and Kohler Road as an example.	Short	Google Maps
18	West Salem	**SR 301 Main St**	**US 42 Buckeye St**	2.1	21.7	0.12	1	Signals	Significant	18	22%	**2**	Pedestrian	4 left turn (22%), 3 fixed object (16%), 3 angle (16%)	See Selected Project SR 301 – Main Street, SR 539, and US 42 Intersections	Short	Google Maps

TABLE I-2 HIGH PRIORITY ALL MODES URBAN INTERSECTIONS

Rank	Political Unit	Street Name	Intersecting Street Name	J40: Zero Vehicle Households	J40: % Pop. Below 200% Poverty	J40: Transportation Cost Burden Score	Poverty Score	Traffic Control	Skew Angle	Total Crashes (2018-2023)	Percent Injury Crashes	FSI Crashes (2018-2023)	Listed on Another Priority List	Majority Crash Type	Potential Countermeasures to Consider	Timeframe	Link to Map
1	Chippewa Township	**SR 21**	**Clinton Rd**	5.1	15.5	0.13	1	Dual stop signs on Clinton Rd	Yes	20	70%	**4**		9 angle (45%), 4 rear end (20%)	RCUT safety project in progress. Monitor after completion.	N/A	Google Maps
2	Wooster	**Beall Ave**	**E University St**	13.6	3.26	0.19	4	Stop signs	No	8	25%	**2**	Pedestrian	2 pedestrian, 2 right turn, 2 Fixed Object	See Selected Project Beall Avenue and University Street Intersection	Short	Google Maps
3	Wooster	**SR 302 Madison Ave**	**Secrest Rd**	10.3	36.3	0.22	3	Single stop signs on Secrest	No	11	44%	**2**		4 rear end (44%), 2 sideswipe-passing (22%), 2 fixed object (22%)	Convert inside southbound lane on SR 302 Madison Ave to center turn lane from US 30 ramps south, and then a designated left turn lane at Seacrest Rd	Medium	Google Maps
4	Wooster Township	**Old Lincoln Way**	**Hillcrest St**	10.3	36.3	0.22	3	Signal	No	88	38%	**2**		3 right turn (38%), 2 angle (25%)	Restrict right turn on red movement. Improve lighting. Additional study needed.	Medium	Google Maps
5	Wooster	**Wayne Ave**	**Bever St**	23.7	36.4	0.17	3	Single stop signs on Wayne Ave	No	12	25%	**2**		8 angle (73%)	Install double flashing stop signs and "cross traffic does not stop" placards on Wayne Ave. Clear/cut vegetation blocking sight distance triangles. Construct roundabout.	Short	Google Maps
6	Green/Baughman Township	**SR 57 Wadsworth Rd**	**Church Rd**	15.9	24	0.16	2	Signal, RR track run diagonal through the intersection	Slight (east leg)	10	50%	**2**		5 rear end (50%)	Improve lighting. Additional study to check signal timing, dilemma zone, all red time, and determine other safety improvements.	Medium	Google Maps
7	Wooster	**US 30**	**SR 3 Ramps**	11.2	25.5	0.14	2	Single stop signs on ramps	No	27	37%	**2**	Bicycle	5 left turn (18%), 4 sideswipe-passing (15%), 4 angle (15%),	Double up stop signs. Consider reducing to one lane in each direction with center turn lane south of US 30 and north through the ramp intersections. Signal warrant study. Additional safety study.	Short	Google Maps
8	Green/Wayne Township	**Smithville Western Rd**	**Honeytown Rd**	7.6	26.1	0.16	1	Dual stop signs on Honeytown SB, single stop sign NB	No	14	79%	**2**		11 angle (79%)	Roundabout is planned in 2026. Monitor after completion.	N/A	Google Maps
9	Wooster Township	**SR 3/SR 226**	**Old Columbus Rd**	11.2	25.5	0.14	1	Stop signs	Yes	24	42%	**2**		13 angle (54%)	Consider redesigning the intersection. Feasibility/safety study needed for best options.	Medium/Long	Google Maps
10	Green Township	**SR 585**	**Applecreek Rd/Five Points Rd**	3.2	22.7	0.14	1	Dual stop signs on Applecreek Rd, single on Five Points Rd	Yes	27	36%	**2**		8 sideswipe-passing (30%), 5 right turn (19%)	Roundabout is planned in 2028. Monitor after completion	N/A	Google Maps

TABLE I-3 ANIMAL DRAWN VEHICLE (ADV) INTERSECTIONS

Rank	Political Unit	Street Name	Intersecting Street	J40: Zero Vehicle Households	J40: % Pop. Below 200% Poverty	J40: Transportation Cost Burden Score	Poverty Score	Traffic Control	Skew Angle	Total ADV Crashes (2018-2023)	ADV Injury Crashes (2018-2023)	Crash Type	Priority Route Segment	Potential Countermeasures to Consider	Timeframe	Links to Map
1	Salt Creek Township	**US 250 Dover Rd**	**Kansas Rd**	63.3	42.2	0.14	1	Single stop signs on Kansas Rd	Yes	4	**2***	3 Angle, 1 Sideswipe-Passing	Yes	Consider realigning Kansas Rd to "Tee" into US250 to the west. This would increase sight distance on Kansas.	Medium	Google Maps
2	Salt Creek Township	**Moreland Rd**	**Mt Hope Rd**	63.3	42.2	0.14	1	Dual stop signs on Mt Hope Rd	No	1	**1***	Angle	Yes	Convert to 4-way stop if warranted, flashing stop signs.	Short	Google Maps
3	Paint Township	**US 250 Dover Rd**	**Kohler Rd**	63.3	42.2	0.14	1	Single stop signs on Kohler Rd	Yes	1	**1***	Left Turn	Yes	See Selected Project US 250 Dover Road and Kohler Road	Short	Google Maps
4	Franklin Township	**Graber Rd**	**Nonpariel Rd**	12	29.1	0.14	1	Single stop signs on Nonpariel Rd	No	1	**1***	Angle	No	Dual flashing stop signs on Nonpariel Rd. Convert to 4-way stop if warranted. Increase intersection sight distance by acquiring right of way at intersection corners (less cemetery). Fence and tree restrict sight distrance on Nonparieal Road.	Short/Medium	Google Maps
5	Paint Township	**Harrison Rd**	**Kidron Rd**	63.3	42.2	0.14	1	Dual stop signs on Harrison Rd	East leg only	2	**2**	2 Angle	Yes	Consider 4-way stop. This was problem location mentioned by Amish.	Short	Google Maps
6	Paint Township	**US 250 Dover Rd**	**Zuercher Rd**	63.3	42.2	0.14	1	Single stop signs on Zuercher Rd	North leg only	2	**2**	2 Angle	Yes	Is on crest of vertical curve. Increase intersection sight distance by acquiring right of way at intersection's eastern corners. Can't see oncoming traffic headed west on US 250.	Medium	Google Maps
7	Congress Township	**SR 301 Elyria Rd**	**Jeffrey Rd**	2.1	27.7	0.12	2	Dual stop signs on West Salem Rd	North leg only	2	**2**	Angle	Yes	Intersection now has double stop signs with post reflectors, monitor intersection.	N/A	Google Maps
8	Salt Creek Township	**Harrison Rd**	**Mt Hope Rd**	63.3	42.2	0.14	1	Four way stop, dual stop signs on each approach	No	1	**1**	Angle	Yes	Increase intersection sight distance by acquiring right of way at intersection corners. Billboards at two approaches limit sight distance.	Medium	Google Maps
9	Paint Township	**US 250 Dover Rd**	**Kidron Rd**	63.3	42.2	0.14	1	Traffic signal	Yes	1	**1**	Right Turn	Yes	Realign intersection to eliminate skew angle. Conduct additional study to determine other countermeasures.	Medium	Google Maps
10	East Union Township	**Emerson Rd**	**S Kansas Rd**	28.2	32.1	0.14	1	Single stop signs on Kansas Rd	No	1	**1**	Angle	Yes	Dual flashing stop signs on Kansas Rd	Short	Google Maps
11	East Union Township	**Ely Rd**	**Millborne Rd**	28.2	32.1	0.14	1	Single stop signs on Ely Rd	No	1	**1**	Angle	Yes	Increase intersection sight distance by acquiring right of way at intersection's eastern corners. Cant see oncoming traffic on Millborne	Medium	Google Maps
12	Clinton Tpwnship	**SR 3 Columbus Rd**	**Snoddy Rd**	4.3	28.9	0.17	1	Single stop signs on Snoddy Rd	Slight	2	**1**	Angle, Head On	No	Additional stop signs on Snoddy Rd	Short	Google Maps

* Denotes a Serious Injury crash.

TABLE I-4 BICYCLE INVOLVED INTERSECTIONS

Rank	Political Unit	Street Name	Intersecting Street	J40: Zero Vehicle Households	J40: % Pop. Below 200% Poverty	J40: Transportation Cost Burden Score	Poverty Score	Injury Bicycle Crashes	Traffic Control	Lighting Condition(s)	Bike Lanes/Shoulders	On Street Parking	Bicycle Priority Route	Urban/Rural	Potential Countermeasures to Consider	Timeframe	Links to Map
1	Orrville	**SR 57 S Main St**	**Paradise St**	16.5	52.7	0.2	4	**1***	Single stop signs on Paradise St	Dark-lighted roadway	Curbs, no bike lanes	On Paradise St	Yes	Urban	Improve lighting, additional study needed.	Short	Google Maps
2	Paint Township	**US 250 Dover Rd**	**Kohler Rd**	63.3	42.2	0.14	1	**1***	Single stop signs on Kohler Rd	Daylight	Shoulders on US 250	No	No	Rural	See Selected Project US 250 Dover Road and Kohler Road.	Short	Google Maps
3	Wooster	**Bowman St (E)**	**Bever St (N)**	13.9	38.6	0.19	4	**1**	Signal	Daylight	Curbs, no bike lanes	On Bever St	Yes	Urban	See Selected Project Bowman Street (Cornerstone Elementary School to Palmer Street) and Phase 2.	Medium	Google Maps
4	Wooster	**Bowman St (E)**	**Beall Ave**	13.9	38.6	0.19	4	**1**	Signal	Daylight	Bike lanes on Beall	No	Yes	Urban	See Selected Project Bowman Street (Cornerstone Elementary School to Palmer Street) and Phase 2.	Medium	Google Maps
5	Wooster	**Bowman St (E)**	**Gashe St**	13.9	38.6	0.19	4	**1**	Single stop signs on Gashe St	Dark-lighted roadway	Curbs, no bike lanes	No	Yes	Urban	See Selected Project Bowman Street (Cornerstone Elementary School to Palmer Street) and Phase 2.	Medium	Google Maps
6	Wooster	**Bowman St (E)**	**Alley bet Gasche and Lincoln**	13.9	38.6	0.19	4	**1**	No stop control	Dawn/Dusk	Curbs, no bike lanes	No	Yes	Urban	See Selected Project Bowman Street (Cornerstone Elementary School to Palmer Street) and Phase 2.	Medium	Google Maps
7	Wooster	**Bowman St (W)**	**Grant St (N)**	11.2	25.5	0.14	4	**1**	Single stop signs on all four legs	Daylight	Curbs, no bike lanes	On Grant st	Yes	Urban	See Selected Project Bowman Street (Cornerstone Elementary School to Palmer Street) and Phase 2.	Medium	Google Maps
8	Wooster	**Liberty St**	**Market St**	11.2	25.5	0.14	4	**1**	Signal	Daylight	Curbs, no bike lanes	Yes	Yes	Urban	See Selected Project West Liberty Street (Larwill Street/Old Lincoln Way to Columbus Road) Phase 2 recommendation.	Medium	Google Maps
9	Wooster	**Liberty St (E)**	**Bever St**	11.2	25.5	0.14	4	**1**	Signal	Daylight	Curbs, no bike lanes	Yes	Yes	Urban	See Selected Project West Liberty Street (Larwill Street/Old Lincoln Way to Columbus Road) Phase 2 recommendation.	Medium	Google Maps
10	Orrville	**Market St (W)**	**Vine St**	16.5	52.7	0.22	4	**1**	Signal	Daylight	Curbs, no bike lanes	Yes	No	Urban	Additional study needed.		Google Maps
11	Wooster	**Spring St**	**Belmont Ave**	13.9	38.6	0.19	4	**1**	Single yeild signs on Spring St	Daylight	No	Part-time on Belmont	No	Urban	Replace yeild signs with stop signs on Spring St.	Short	Google Maps
12	Wooster	**Alley bet College and Beall**	**Alley bet Larwill and Nold**	13.9	38.6	0.19	4	**1**	None	Dawn/Dusk	No	No	No	Urban	Remove obstructions as much as possible.	Short	Google Maps
13	Orrville	**Crown Hill Rd (N)**	**Meadow Lane**	3	34	0.13	3	**1**	Single stop sign on Meadow Lane	Daylight	No	Yes	Yes	Urban	Bike did not have brakes. Community bicycle inspections and repairs.	Short	Google Maps
14	Orrville	**Hostetler Rd**	**Matthew Rd**	3	34	0.13	3	**1**	Single stop sign on Matthew Rd	Dawn/Dusk	Curbs, no bike lanes	No	Yes	Urban	Improve lighting, additional study needed.	Short	Google Maps
15	Wooster	**Portage Rd**	**Allandale Dr**	23.7	36.4	0.17	3	**1**	Single stop sign on Allandale	Daylight	No	No	No	Urban	Bike lanes on Portage Rd.	Short	Google Maps
16	Milton Township	**Sterling Ave**	**Blough Rd**	5.4	38.6	0.17	2	**1**	Single stop signs on Blough Rd	Daylight	No	No	Yes	Rural	Additional study needed.		Google Maps
17	Wooster	**Walnut St (S)**	**Mulberry St**	11.2	25.5	0.14	2	**1**	Single stop signs on Mulberry	Daylight	No	On Walnut	No	Urban	Building very close to corner, install convex safety mirrors.	Short	Google Maps
18	Orrville	**Market St (W)**	**Mohican Ave**	0	18.2	0.14	2	**1**	Single stop sign on Mohican Ave	Daylight	Curbs, no bike lanes	Yes	No	Urban	Additional study needed.		Google Maps
19	Franklin Township	**Graber Rd**	**Nonpariel Rd**	12	29.1	0.14	1	**1**	Single stop signs on Nonpariel Rd	Daylight	No Streetview	No	Yes	Rural	Additional study needed.		Google Maps
20	Sugar Creek Township	**Zuercher Rd**	**Goudy Rd (South Intersection)**	13.1	30.6	0.12	1	**1**	Single stop sign on Goudy Rd	Daylight	Narrow & poor cond.	No	No	Rural	Additional study needed.		Google Maps

*Denotes a serious injury or fatality

TABLE I-5 PEDESTRIAN INVOLVED INTERSECTIONS

Rank	Political Unit	Street Name	Intersecting Street	J40: Zero Vehicle Households	J40: % Pop. Below 200% Poverty	J40: Transportation Cost Burden Score	Poverty Score	Fatal and Injury Pedestrian Crashes	Traffic Control	Sidewalks	Crosswalks	Ped Signals	Light Condition(s)	Urban/Rural	Potential Countermeasures to Consider	Timeframe	Links to Map
1	Wooster	**Beall Ave**	**University Ave**	13.6	3.26	0.19	2	**2***	Single stop signs on University Ave	Yes	Yes	No	Dark-lighted roadway (both)	Urban	See Selected Project Beall Avenue and University Street Intersection	Short	Google Maps
2	Wooster	**Beall Ave**	**Winter St**	23.7	36.4	0.17	3	**1***	Signal	Yes	Yes	Yes	Dark-lighted roadway	Urban	See Selected Project Beall Avenue and Winter Street Intersection	Short	Google Maps
3	West Salem	**SR 301**	**US 42 Buckeye St**	2.1	27.7	0.12	2	**1***	Signal	Yes	Very worn	No	Dark-lighted roadway	Rural	See Selected Project SR 301 – Main Street, SR 539, and US 42 Intersections	Short/Medium	Google Maps
4	West Salem	**SR 301 Main St**	**SR 539 Congress Rd**	2.1	27.7	0.12	2	**1***	Stop signs on SR 532 Congress Rd	Yes	Yes (worn)	No	Dark-lighted roadway	Rural	See Selected Project SR 301 – Main Street, SR 539, and US 42 Intersections	Short	Google Maps
5	Mt Eaton	**US 250 Dover Rd**	**SR 241/SR 94**	63.3	42.2	0.14	1	**1***	Signal	Yes	No	No	Dark-lighted roadway	Rural	See Selected Project US 250 – Dover Road and SR 241/SR 94 Intersection		Google Maps
6	Wooster	**SR 83 Dover Rd**	**SR 302 Madison Ave**	10.3	36.3	0.22	1	**1***	Signal	Not along streets	On Dover only	On Dover only	Dark-lighted roadway	Urban	High visibility crosswalks with leading pedestrian intervals. Construct connecting sidewalks.	Medium	Google Maps
7	Wooster	**Wildwood Dr**	**Melrose Dr**	7.6	26.1	0.16	1	**1***	Single stop sign on Wildwood Dr	Yes	Yes	No	Daylight	Urban	High visibility crosswalks	Short	Google Maps
8	Orrville	**E High St**	**N Walnut St**	16.5	52.7	0.22	4	**2**	Single stop signs on Walnut St	Yes	Yes	No	Dark-lighted roadway	Urban	High visibility crosswalks	Short	Google Maps
9	Wooster	**Beall Ave**	**Wayne Ave**	23.7	36.4	0.17	3	**2**	Signal	Yes	Yes	Yes	Dawn-Dusk; Dark-lighted roadway	Urban	Consider raised intersection similar to Selected Project Beall Avenue and University Street Intersection	Short	Google Maps
10	Wooster	**North St (E)**	**Bever St**	13.9	38.6	0.2	5	**1**	Signal	Yes	Yes	Yes	Daylight	Urban	High visibility crosswalks and leading pedestrian intervals	Short	Google Maps
11	Wooster	**Liberty St (E)**	**Unnamed Alley**	13.9	38.6	0.2	5	**1**	No stop control	On Liberty only	No	No	Daylight	Urban	Building very close to corner, stop sign for alley, install convex safety mirrors.	Short	Google Maps
12	Wooster	**Bowman St (W)**	**Emerick St**	11.2	25.5	0.14	5	**1**	Single stop sign on Emerick	Yes	Yes	No	Dark-lighted roadway	Urban	Improve lighting. Phase 2 for Selected Project Bowman Street (Cornerstone Elementary School to Palmer Street)	Short	Google Maps
13	Rittman	**S Main St**	**Ohio Ave**	8.1	50.4	0.24	4	**1**	Signal	Yes	Yes	Yes	Daylight	Urban	High visibility crosswalks and leading pedestrian intervals, pedestrian pushbuttons	Short	Google Maps
14	Wooster	**North St (E)**	**Strawberry Alley**	13.9	38.6	0.2	4	**1**	No stop control	No	No	No	Daylight	Urban	Surveyor walked in front of vehicle		Google Maps
15	Wooster	**N Market St**	**Larwill St**	11.2	25.5	0.14	4	**1**	Signal	Yes	Yes	Yes	Daylight	Urban	High visibility crosswalks and leading pedestrian intervals	Short	Google Maps
16	Wooster	**N Market St**	**Liberty St**	11.2	25.5	0.14	4	**1**	Signal	Yes	Yes	Yes	Daylight	Urban	High visibility crosswalks and leading pedestrian intervals. Consider Phase 2 discussed in Selected Project West Liberty Street (Larwill Street/Old Lincoln Way to Columbus Road). Demonstration Project.	Short	Google Maps
17	Wooster	**Liberty St (W)**	**Columbus Rd**	11.2	25.5	0.14	4	**1**	Signal	Yes	Yes	Yes	Daylight	Urban	High visibility crosswalks and leading pedestrian intervals. Consider Phase 2 discussed in Selected Project West Liberty Street (Larwill Street/Old Lincoln Way to Columbus Road). Demonstration Project.	Short	Google Maps
18	Wooster	**North St (W)**	**Walnut St (N)**	11.2	25.5	0.14	4	**1**	Signal	Yes	Yes	Yes	Daylight	Urban	High visibility crosswalks and leading pedestrian intervals	Short	Google Maps
19	Wooster	**Liberty St (E)**	**Bever St**	11.2	25.5	0.14	4	**1**	Signal	Yes	Yes	Yes	Daylight	Urban	High visibility crosswalks and leading pedestrian intervals. Consider Phase 2 discussed in Selected Project West Liberty Street (Larwill Street/Old Lincoln Way to Columbus Road). Demonstration Project.	Short	Google Maps
20	Wooster	**Portage Rd**	**Melrose Dr**	7.6	26.1	0.16	2	**1**	Signal	Yes	Yes	Yes	Daylight	Urban	High visibility crosswalks on all approaches and leading pedestrian intervals	Short	Google Maps
21	Wooster	**Milltown**	**Friendsville Rd**	2.1	24.9	0.15	2	**1**	Signal	Yes	Yes	Yes	Dark-lighted roadway	Urban	See Selected Project SR 83 – Burbank Road (Friendsville Road to Walmart Drive)	Short	Google Maps

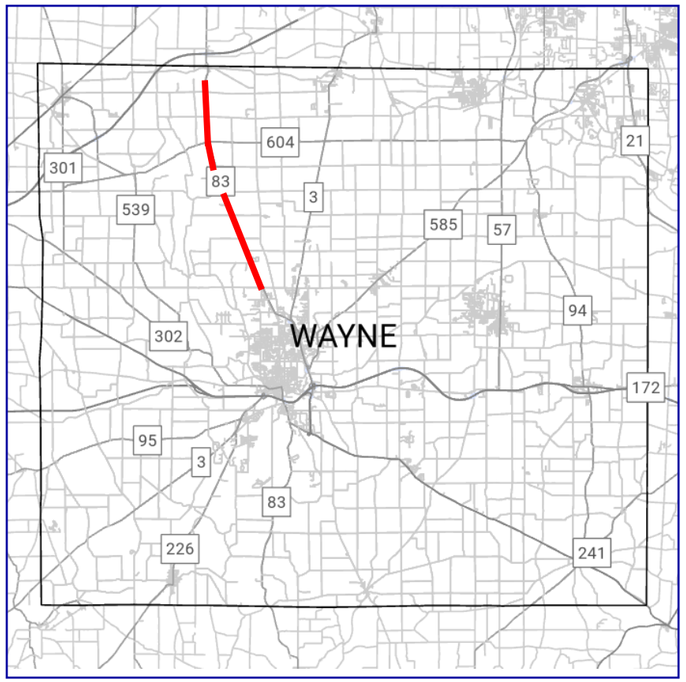
* Denotes a severe/fatal injury

TABLE I-6 FARM EQUIPMENT INVOLVED INTERSECTIONS

Rank	Political Unit	Street Name	Intersecting Street	J40: Zero Vehicle Households	J40: % Pop. Below 200% Poverty	J40: Transportation Cost Burden Score	Poverty Score	Fatal and Injury Farm Equip Crashes	Traffic Control	Light Condition(s)	Potential Countermeasures to Consider	Timeframe	Links to Map
1	Shreve	**N Market St**	**Wood St**	4.3	28.9	0.17	2	**1***	Single stop signs on Wood St	Daylight	Trim pine tree in front of stop sign	Short	Google Maps
2	Wayne Township	**SR 3 Cleveland Rd**	**Fox Lake Rd**	2.1	31	0.15	1	**1***	Single stop signs on Fox Lake Rd	Daylight	Double stop signs on Fox Lake Rd	Short	Google Maps
3	Milton Township	**Sterling Rd**	**Miller Rd**	1.4	25.1	0.14	1	**1***	Single stop signs on Miller Rd	Daylight	12 year old operating tractor, ran stop sign. Education needed.		Google Maps
4	Salt Creek Township	**Moreland Rd**	**Apple Creek Rd**	63.3	42.2	0.14	1	**1**	Dual stop signs on Moreland Rd	Daylight	Additional study needed.		Google Maps
5	Milton Township	**SR 604 Easton Rd**	**Seville Rd**	1.4	25.1	0.14	1	**1**	Single stop sign on Seville Rd	Daylight	Stop lights and turn signals needed on farm equipment.		Google Maps
6	Baughman Township	**SR 57 Wadsworth Rd**	**5 Points Rd**	3.2	22.7	0.14	1	**1**	Single stop sign on 5 Points Rd	Dark	Stop lights and turn signals needed on farm equipment.		Google Maps
7	Baughman Township	**Back Massillon Rd**	**Coal Bank Rd**	3.5	18.9	0.13	1	**1**	Single stop signs on Coal Bank Rd	Daylight	Stop lights and turn signals needed on farm equipment.		Google Maps
8	Chester Township	**US 250 Ashland Rd**	**N Firestone Blvd**	2.2	16.9	0.14	1	**1**	Single stop sign on N Firestone	Daylight	Stop lights and turn signals needed on farm equipment.		Google Maps
9	Chester Township	**SR 302 Lattasburg Rd**	**N Firestone Rd**	2.2	16.9	0.14	1	**1**	Single stop signs on N Firestone Rd	Dark	Stop lights and turn signals needed on farm equipment.		Google Maps

* Denotes a severe injury or fatality

APPENDIX E – SELECTED PROJECTS



WAYNE COUNTY, OHIO

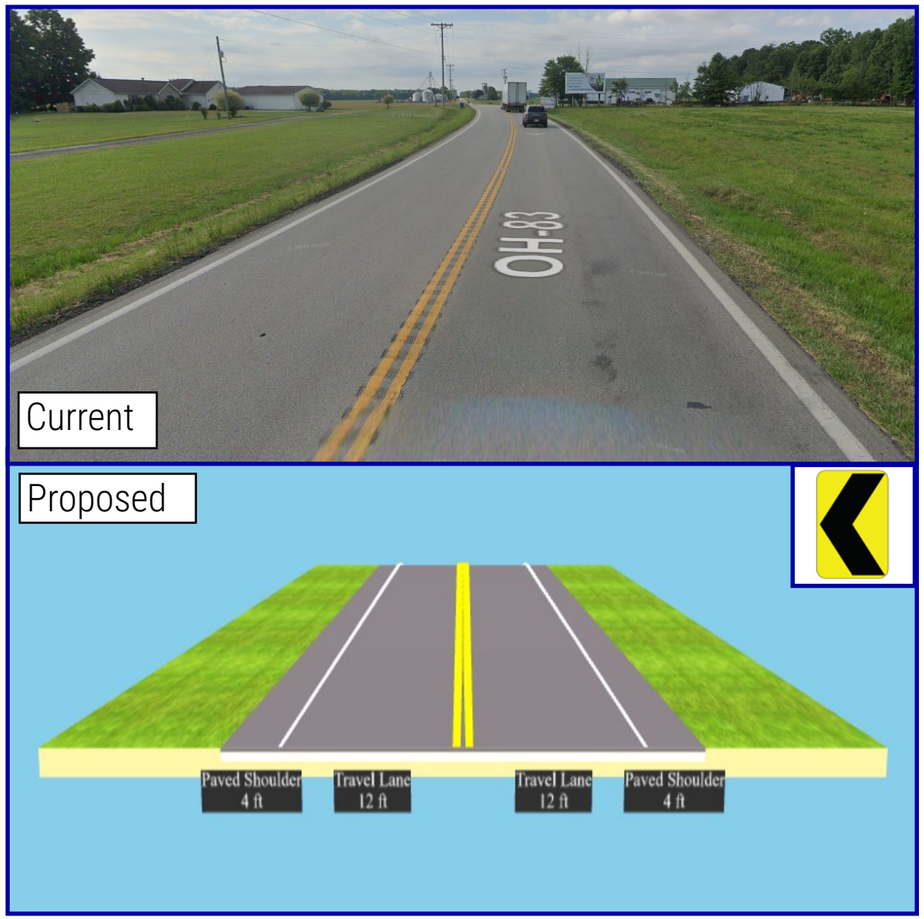
COMPREHENSIVE SAFETY ACTION PLAN

Safety Countermeasure Plan

SR 83—Burbank Road (Smithville Western Road to Southern border of Village of Burbank)

NLFID: SWAYSR00083**C

SLM: 16.315—25.145



Project Description:

The recommendations of this Comprehensive Safety Action Plan are to widen the shoulders to four feet wide, install edge line rumble strips, install raised pavement markers on edge lines, and add sequential dynamic chevron signage on the curve approximately 1000 feet south of SR 604. For a comprehensive safety improvement, the limits of the widening and edge line work should extend beyond the priority route and encompass the 9-mile length of Burbank Road from the southern border of the Village of Burbank to Smithville Western Road.

Total Budget

Design Fee:

$595,600

Right-of-Way Cost:

$100,000

Construction Costs:

$10,775,000

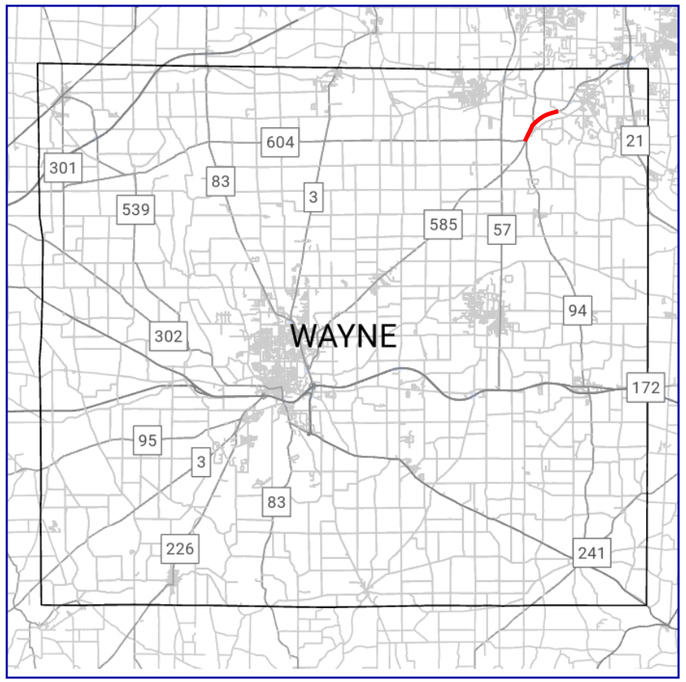
Notes:

This roadway is ranked as high risk on the High Risk Network. The portion of SR 83 from Easton Road to Sterling Road is on the Bicycle Travel Route. This corridor is on the priority lists for rural segments and farm equipment crashes.

Prepared by:

Environmental Design Group

The community impact people.



WAYNE COUNTY, OHIO

COMPREHENSIVE SAFETY ACTION PLAN

Safety Countermeasure Plan

SR 585—Akron Road
(SR 604—Easton Road to Moine Road)

NLFID: SWAYSR00585**C

SLM: 13.850-15.808

Project Description:

The recommendations of this Comprehensive Safety Action Plan are to widen/repair the shoulders to four feet wide, where necessary, install edge line and centerline rumble strips, install raised pavement markers on edge lines, and construct a left turn lane on the northbound approach to SR 94. For a comprehensive safety improvement, the limits of the widening and edge line work should extend beyond the priority route and encompass the 2-mile length of SR 535 from SR 604 to Moine Road.

Total Budget

Design Fee:

$67,000

Right-of-Way Cost:

$0

Construction Costs:

$771,200

Notes:

This roadway is ranked as high risk on the High Risk Network. This corridor is on the rural segment priority list.

Prepared by:

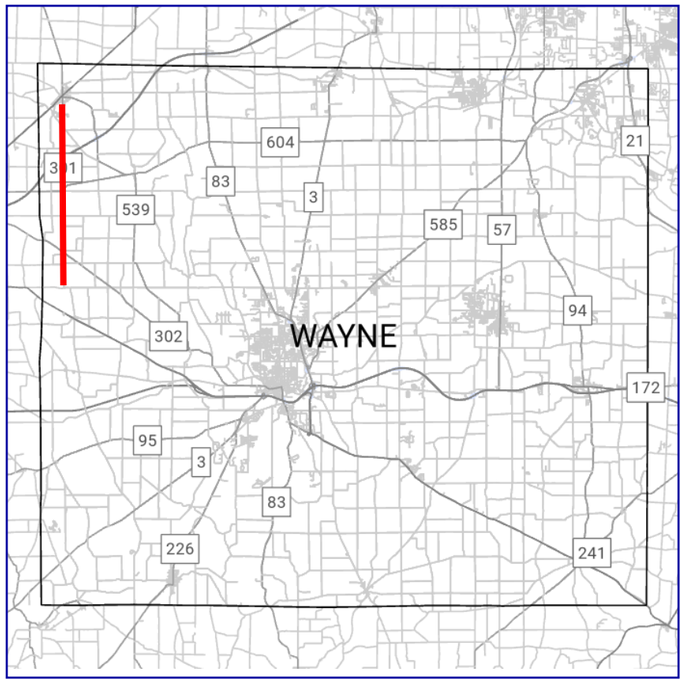
Environmental Design Group

The community impact people.

WAYNE COUNTY, OHIO

COMPREHENSIVE SAFETY ACTION PLAN

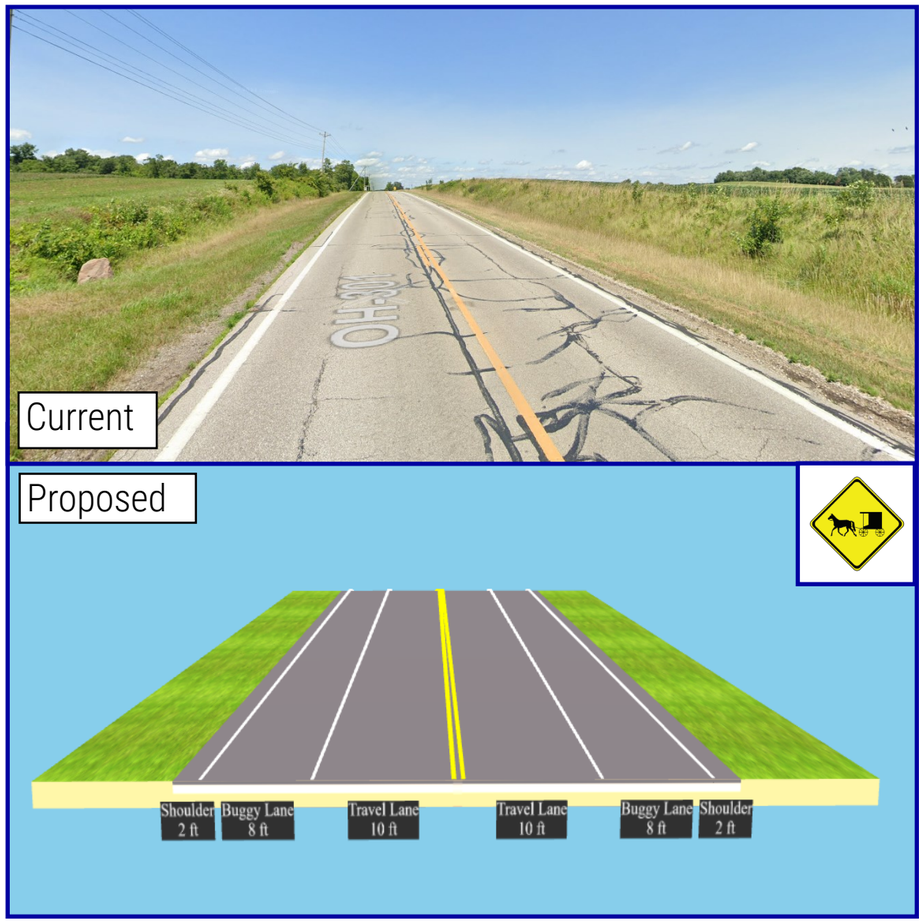
Safety Countermeasure Plan



SR 301/CR 72—Elyria Road (Smithville Western Road to South Street)

NLFID: CWAYCR00072**C; SWAYSR00301**C

SLM: 0.0—1.456; 0.0—6.129



Project Description:

The recommendation of this Comprehensive Safety Action Plan is to construct buggy lanes on both sides of SR 301.

For a more comprehensive safety improvement, buggy lanes should be constructed for the full length of SR 301 on the Amish Travel Map. This would entail 7.5 miles of roadway from South Street in West Salem to Smithville Western Road.

Total Budget

Design Fee:

$1,065,000

Right-of-Way Cost:

$300,000

Construction Costs:

$15,522,000

Notes:

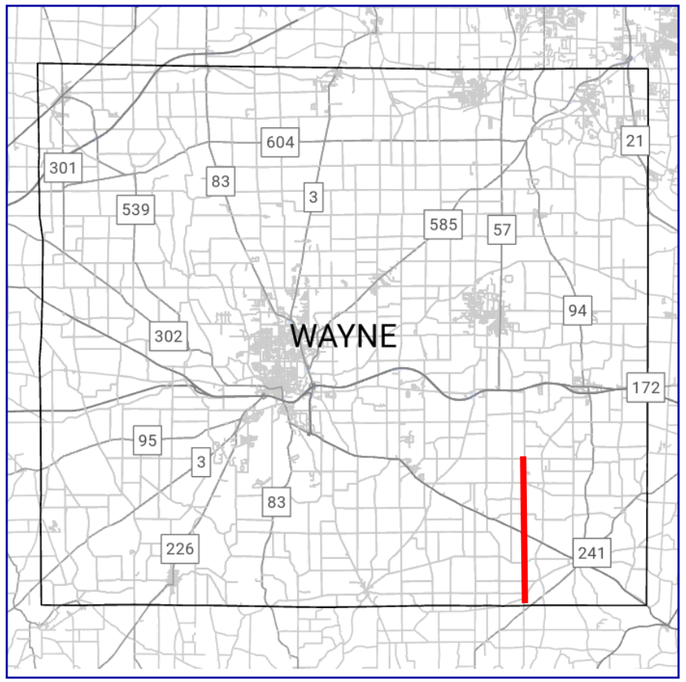
This roadway is ranked as medium risk on the High Risk Network and is on the Amish Travel Route. The southern portion of this roadway segment is within the Northwestern School Zone.

Costs do not include widening of SR301 bridge over I-71. This option may add $1.5-$2 million.

Prepared by:

Environmental Design Group

The community impact people.



WAYNE COUNTY, OHIO

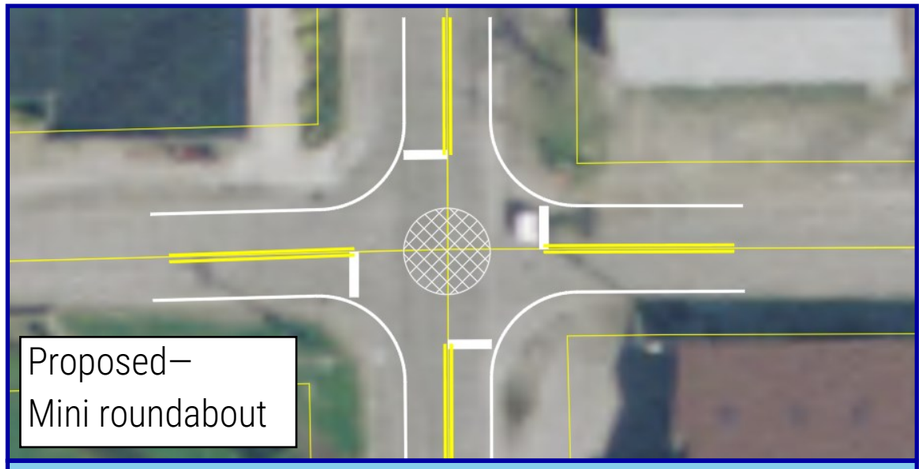
COMPREHENSIVE SAFETY ACTION PLAN

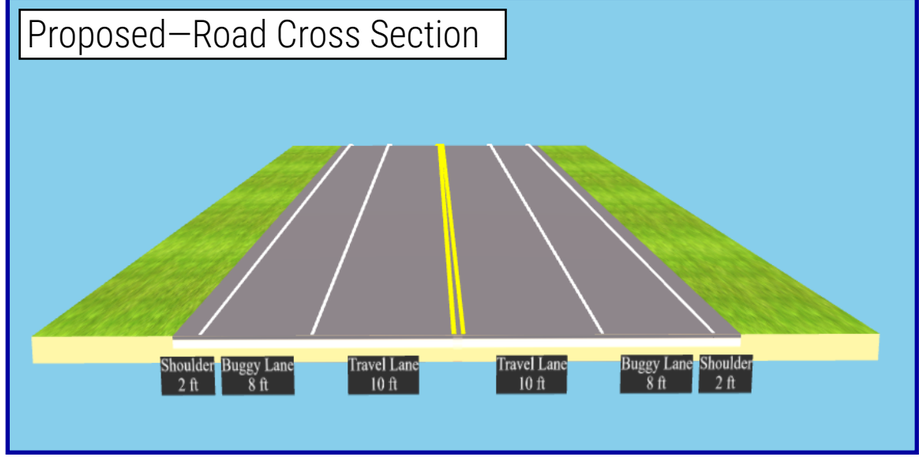
Safety Countermeasure Plan

Kidron Road (Southern Border of Wayne County to Hackett Road)

NLFID: CWAYCR00052**C

SLM: 0.00–6.089





Project Description:

The recommendation of this Comprehensive Safety Action Plan is to construct buggy lanes on both sides of Kidron Road, from the southern Wayne County line to Hackett Road. In the town of Kidron, traffic calming elements should be constructed, including sidewalk on both sides, high visibility crosswalks (including pushbuttons, pedestrian signal heads, and leading pedestrian intervals at signals), curb to narrow the roadway, drives and curbs to establish and manage access to the businesses and industry, and a mini-roundabout at the intersection of Kidron Road and Emerson Road. It is also recommended that the speed limit be reduced to 25 mph utilizing provisions in the Ohio Revised Code for Business Districts. With these traffic calming measures in place, buggy lanes may be reduced to 4-foot shoulders within the curbed length as additional traffic calming and to enable buggies and bikes to traverse the mini-roundabout at the same speed and visibility as motorized vehicles.

Constructing six miles of buggy lanes may be difficult to fund in one project. In the case of project phasing, the following order is suggested: (1) widen shoulders to 4-foot wide while performing full width needs such as culvert extensions, utility relocations, guardrail adjustments, and right of way acquisitions, (2) incorporate traffic calming elements in Kidron Center, and (3) widen the 4-foot shoulders to full buggy lanes.

Total Budget

Design Fee:

$818,000

Right-of-Way Cost:

$100,000

Construction Costs:

$12,056,000

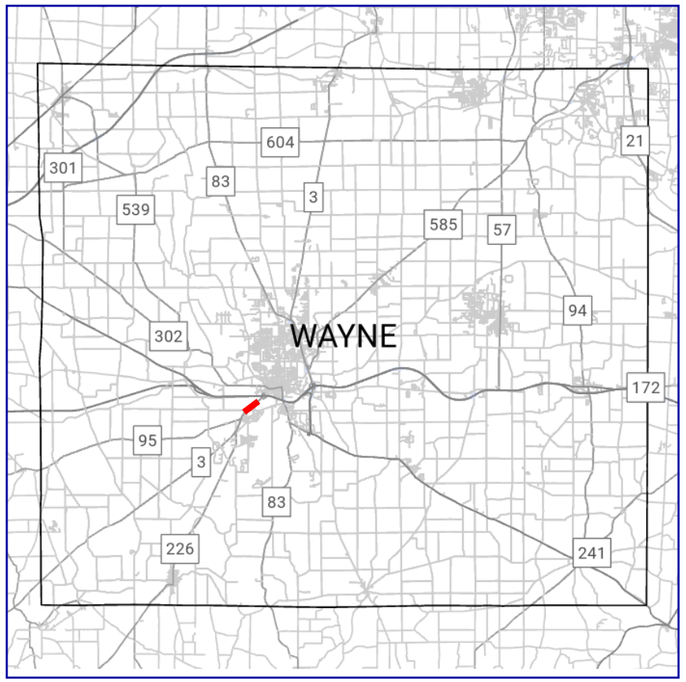
Notes:

This segment of Kidron Road from Hackett Road to the southern Wayne County Line envelopes several critical segments indicated on the High Injury Network for bicycles and animal drawn vehicles. The entire segment is on the Amish Travel Map, the Bike Travel Map, and the High Risk Network for both bicycles and animal drawn vehicles.

Prepared by:

Environmental Design Group

The community impact people.



WAYNE COUNTY, OHIO

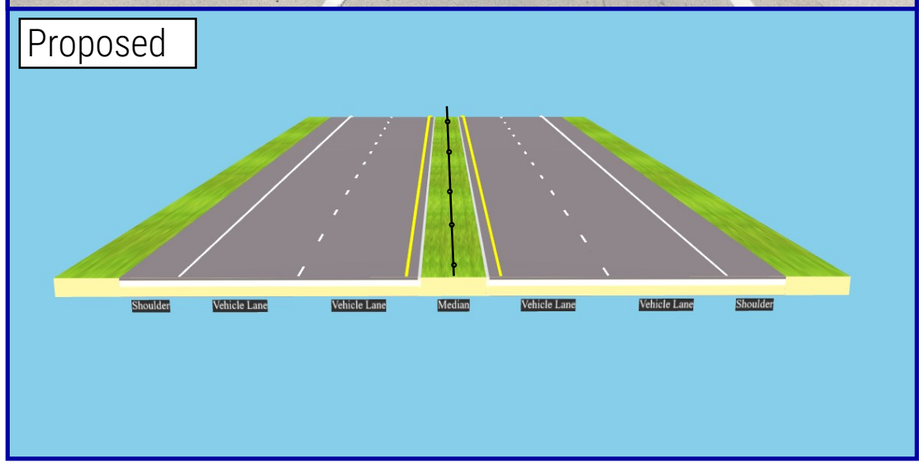
COMPREHENSIVE SAFETY ACTION PLAN

Safety Countermeasure Plan

SR 3—Columbus Road (Heyl Road to Columbus Road Extension)

NLFID: SWAYSR00003**C

SLM: 11.253—11.606



Project Description:

The recommendations of this Comprehensive Safety Action Plan is to construct median barriers on SR 3 between Blachleyville Road and US 30 and to remove the intersection of Columbus Road Extension. Consideration should be given to increasing the length of the median barriers farther south and the removal of the Heyl Road intersection.

Total Budget

Design Fee:

$13,600

Right-of-Way Cost:

$0

Construction Costs:

$156,900

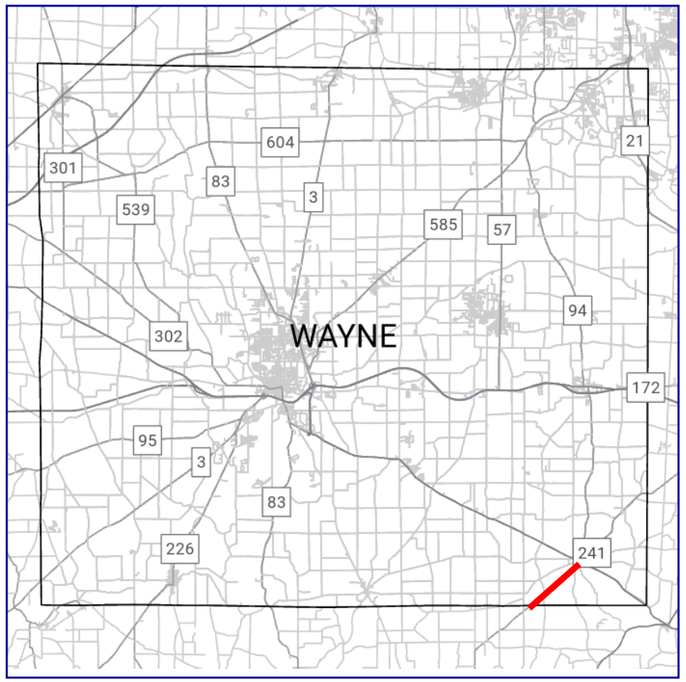
Notes:

This roadway is ranked as high risk on the High Risk Network. This segment is on the urban priority list.

Prepared by:

Environmental Design Group

The community impact people.



WAYNE COUNTY, OHIO

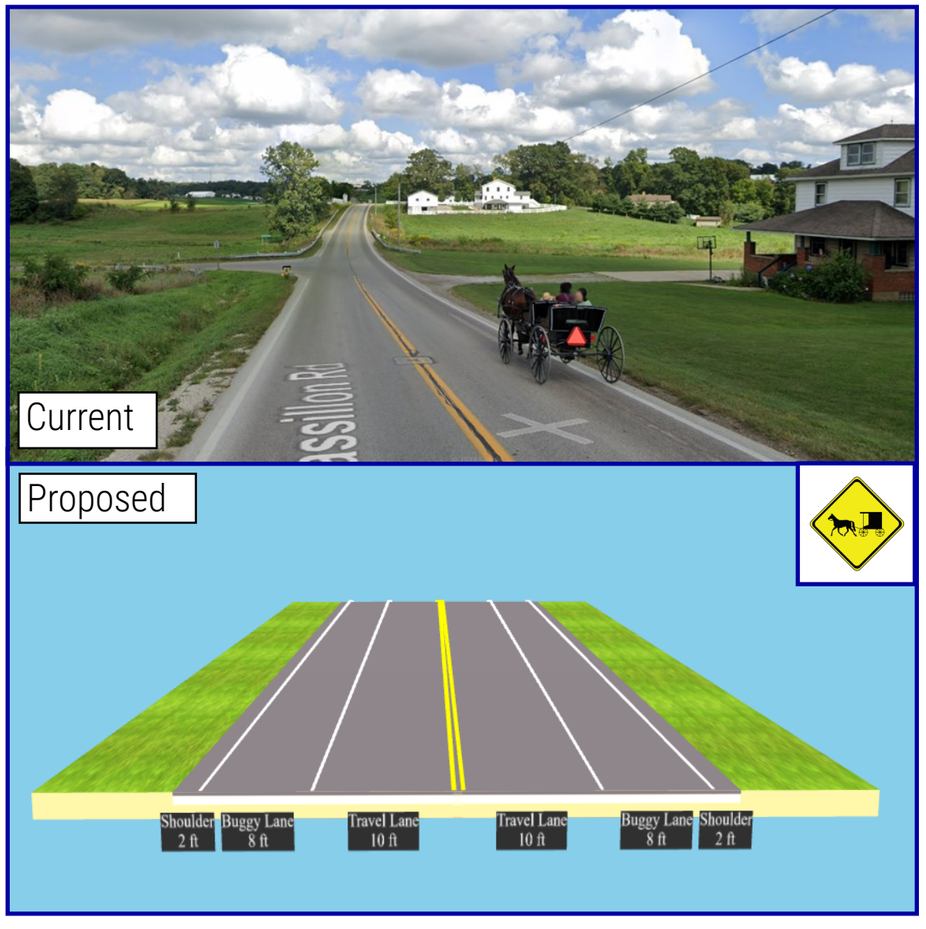
COMPREHENSIVE SAFETY ACTION PLAN

Safety Countermeasure Plan

SR 241—Massillon Road (CR 37—Winesburg Road to Wayne County Line (toward Kidron Road))

NLFID: SWAYSR00241**C

SLM: 0.00—2.358



Project Description:

The recommendation of this Comprehensive Safety Action Plan is to construct buggy lanes on both sides of SR 241. In the interim, it is recommended that certain safety improvement countermeasures be constructed: hill climbing and descending lanes, buggy pull offs where appropriate, and warning signage at vertical crests.

Total Budget

Design Fee:

$476,900

Right-of-Way Cost:

$100,000

Construction Costs:

$5,385,000

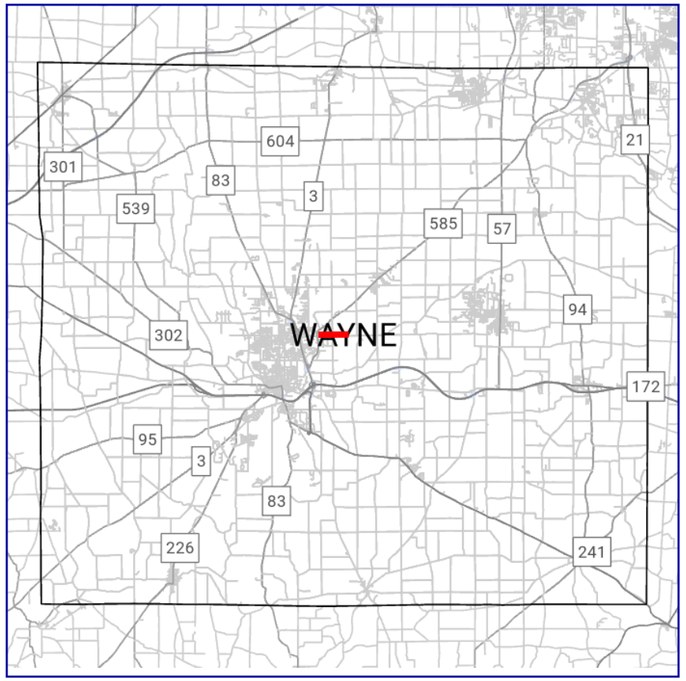
Notes:

This roadway is ranked as medium risk on the High Risk Network, is on the animal drawn vehicle priority list, and is on both the Amish and Bicycle Travel Routes.

Prepared by:

Environmental Design Group

The community impact people.



WAYNE COUNTY, OHIO

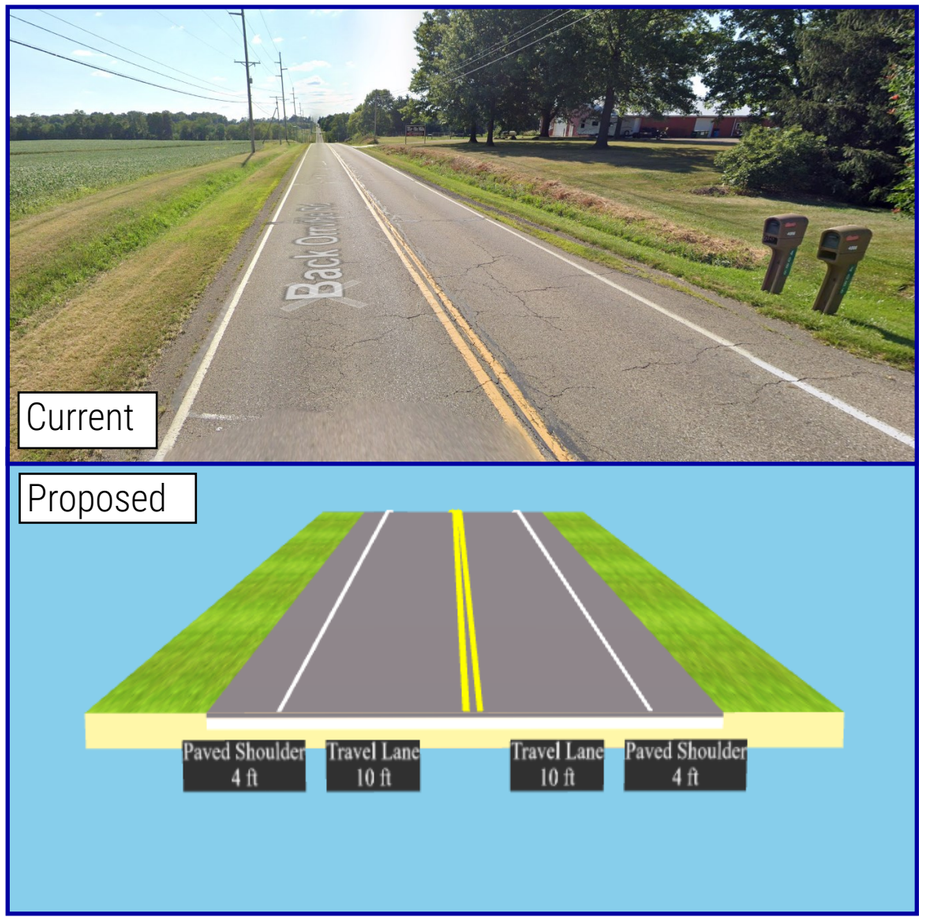
COMPREHENSIVE SAFETY ACTION PLAN

Safety Countermeasure Plan

Back Orrville Road (Greyers Chapel Road to Honeytown Road)

NLFID: CWAYCR00023**C

SLM: 2.005–3.181



Project Description:

The recommendations of this Comprehensive Safety Action Plan are to widen the shoulders to four feet wide, install edge line and centerline rumble strips, and install raised pavement markers on edge lines. Consideration should be given to moving this roadway to the resurfacing priority list and widening the shoulders with the resurfacing.

Total Budget

Design Fee:

$145,200

Right-of-Way Cost:

$25,000

Construction Costs:

$2,038,000

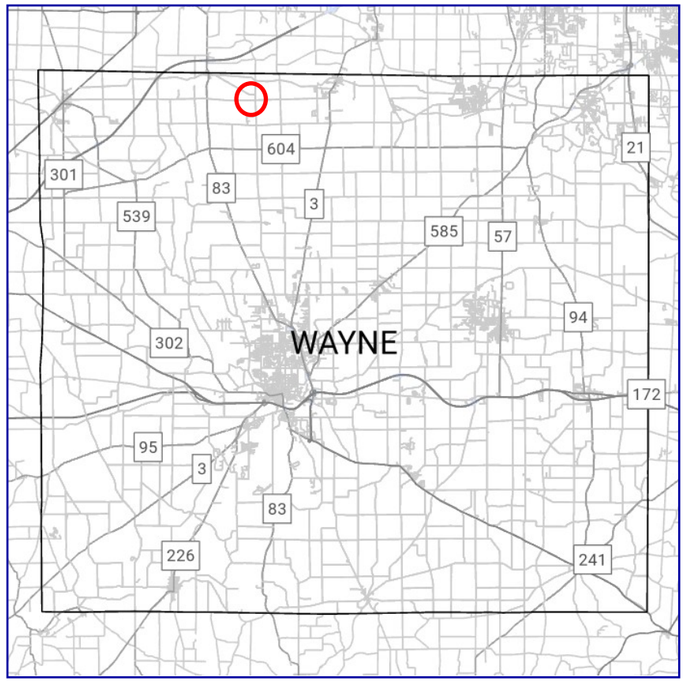
Notes:

This roadway is ranked as medium risk on the High Risk Network. This corridor is on the rural segment priority list.

Prepared by:

Environmental Design Group

The community impact people.



WAYNE COUNTY, OHIO

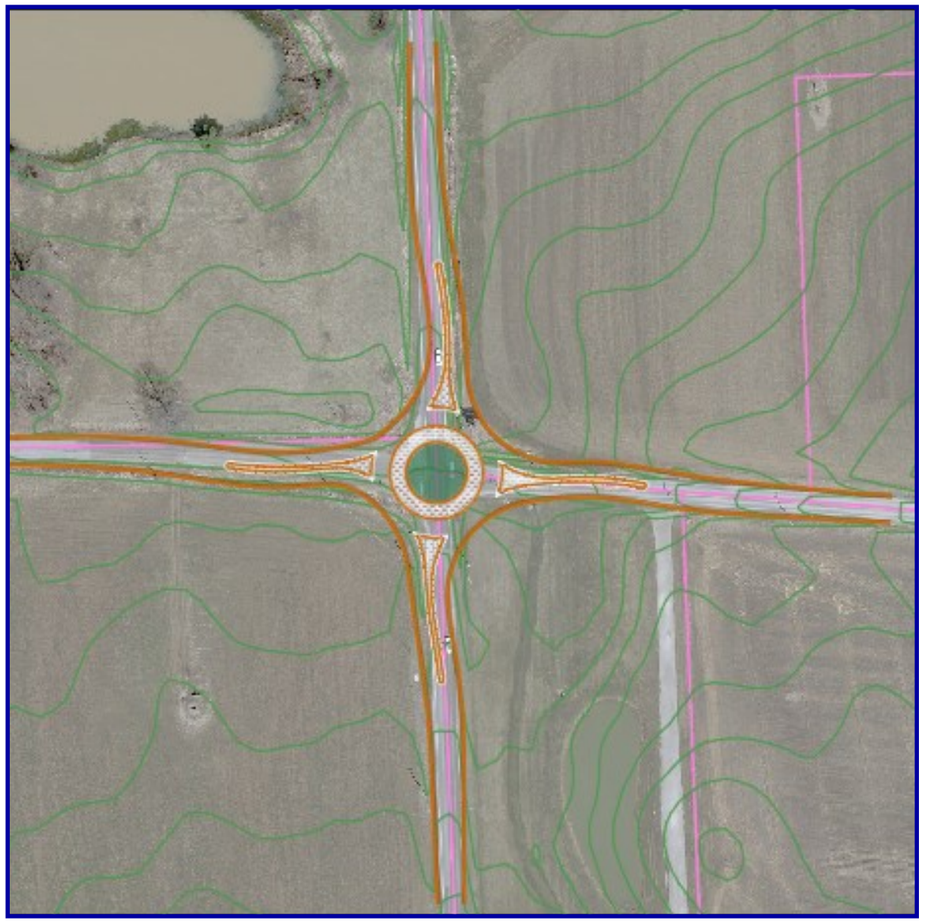
COMPREHENSIVE SAFETY ACTION PLAN

Safety Countermeasure Plan

Britton Road and Friendsville Road Intersection

NLFID: Britton Rd—TWAYTR00178**C

SLM: 7.632



Project Description:

The recommendation of this Comprehensive Safety Action Plan is to construct a roundabout at this location. Between the publishing of this report and the construction of the roundabout, sight-obstructing items should be removed from the right of way such as signs, utilities, and fences.

Total Budget

Design Fee:

$301,800

Right-of-Way Cost:

$100,000

Construction Costs:

$1,999,000

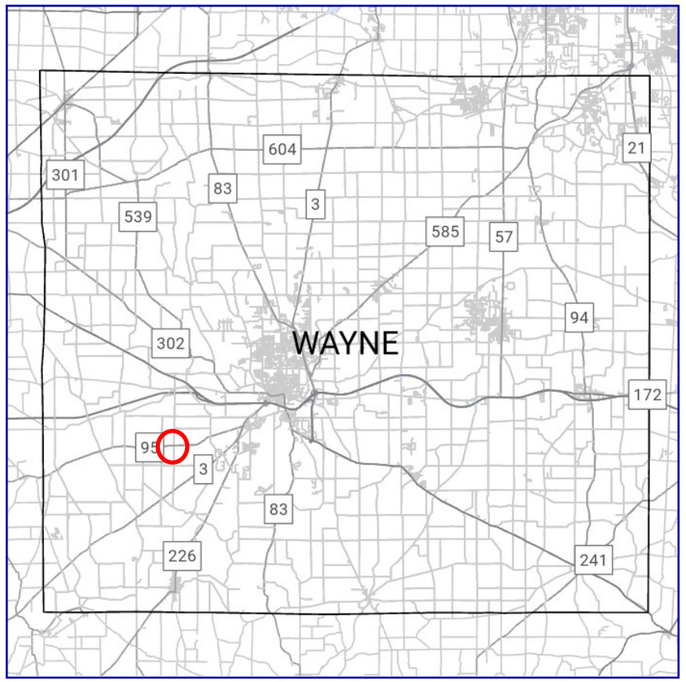
Notes:

This intersection is on the rural intersection priority list.

Prepared by:

Environmental Design Group

The community impact people.



WAYNE COUNTY, OHIO

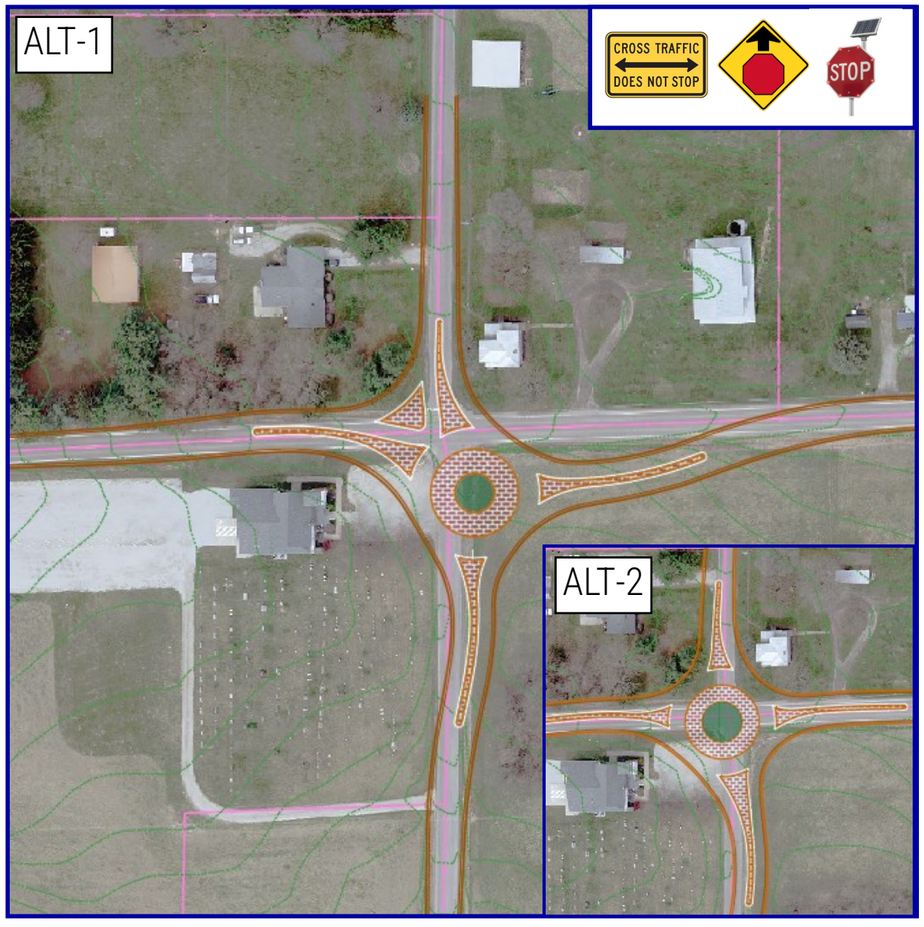
COMPREHENSIVE SAFETY ACTION PLAN

Safety Countermeasure Plan

SR 95—Blachleyville Road and Jefferson Road Intersection

NLFID: SR 95—SWAYSR00095**C

SLM: 5.428



Project Description:

The recommendation of this Comprehensive Safety Action Plan is to construct a roundabout at this location. Between the publishing of this report and the construction of the roundabout, interim safety improvement countermeasures should be installed including double stop signs using large and flashing signs, doubled “Stop Ahead” signs, retroreflective sheeting on sign posts, a properly placed stop bar, and “Cross Traffic Does Not Stop” signs at the stop signs.

Total Budget

Design Fee:

$360,800

Right-of-Way Cost:

$150,000

Construction Costs:

$2,317,000

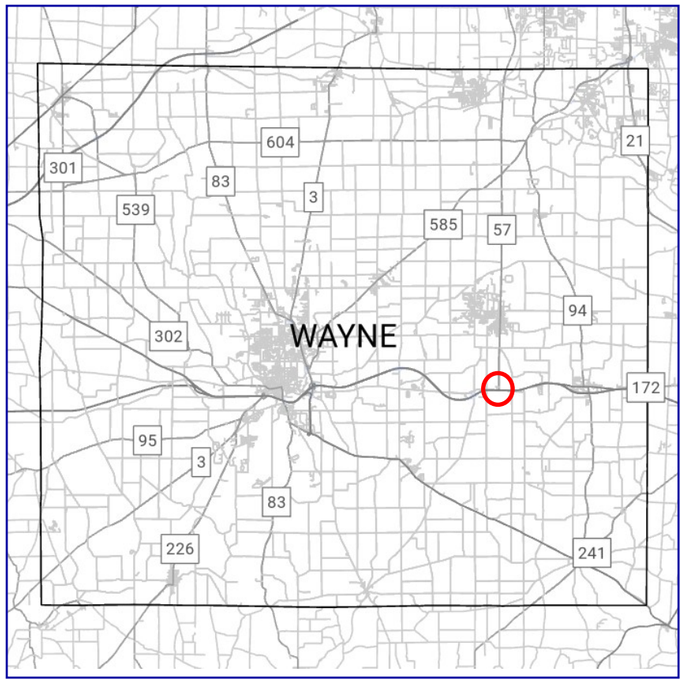
Notes:

This roadway is ranked as medium risk on the High Risk Network. This intersection is on the rural intersection priority list.

Prepared by:

Environmental Design Group

The community impact people.



WAYNE COUNTY, OHIO

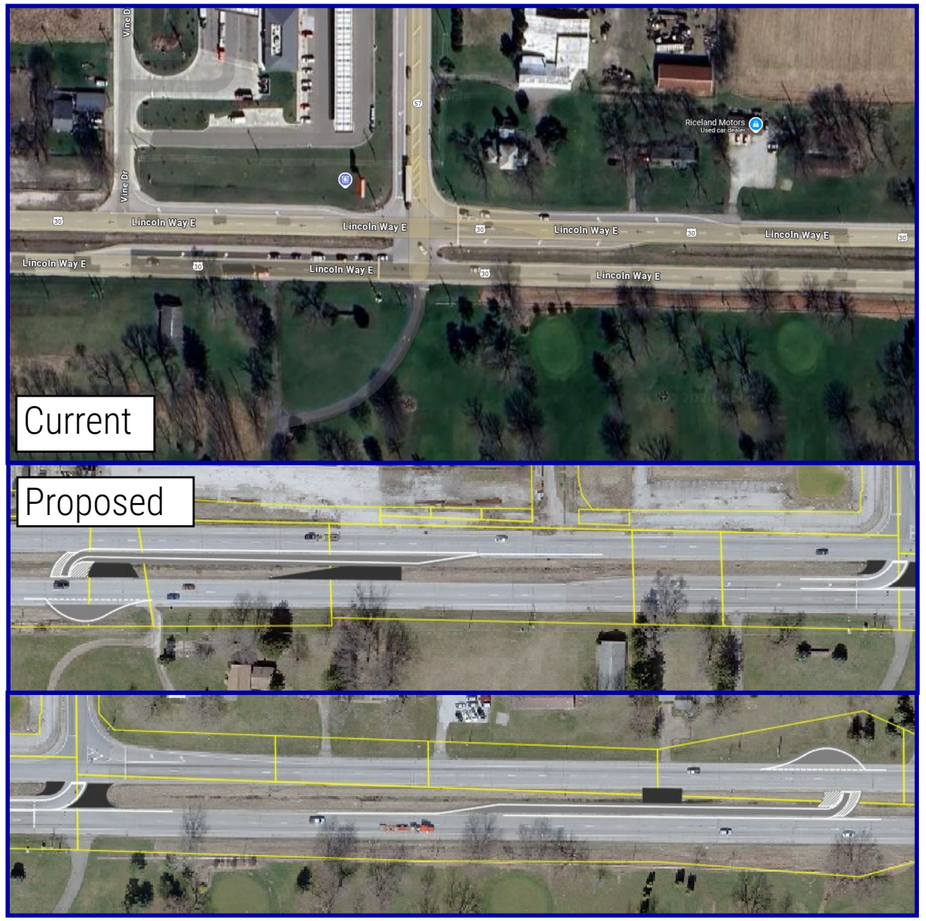
COMPREHENSIVE SAFETY ACTION PLAN

Safety Countermeasure Plan

US 30 and SR 57—Wadsworth Road Intersection

NLFID: US 30—SWAYUS00030**C,

SLM: 20.153



Project Description:

The recommendations of this Comprehensive Safety Action Plan are to first check and reduce the dilemma zone and add all red time, then evaluate the 2022 – 2024 (3-year) crash history in May 2025. If the crash rate has not improved significantly, the recommendation is to install a signalized R-CUT at this location, with the signal remaining on the westbound approach and removed on the eastbound approach. The southern leg of this intersection serves only as the drive for a golf course. An acceleration and deceleration lane could be provided to assist traffic entering and exiting this property. Note that there are already paved crossings near the subject intersection, improving the feasibility of the proposed countermeasure. A 2022 safety study performed for ODOT District 3 studied this intersection in-depth and concluded with a similar recommendation, although that study named the improvement as a Superstreet.

Total Budget

Design Fee:

$322,000

Right-of-Way Cost:

$50,000

Construction Costs:

$2,805,000

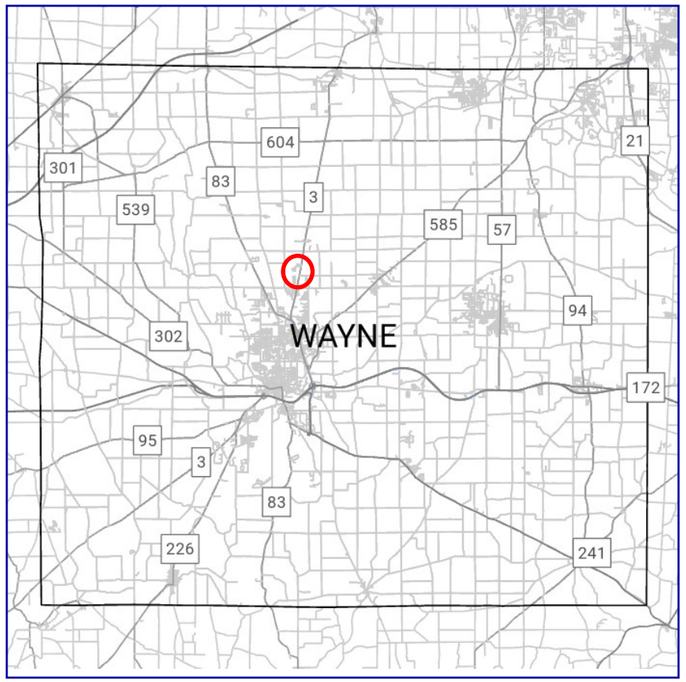
Notes:

This roadway is ranked as high risk on the High Risk Network. This intersection is on the rural intersection priority list.

Prepared by:

Environmental Design Group

The community impact people.



WAYNE COUNTY, OHIO

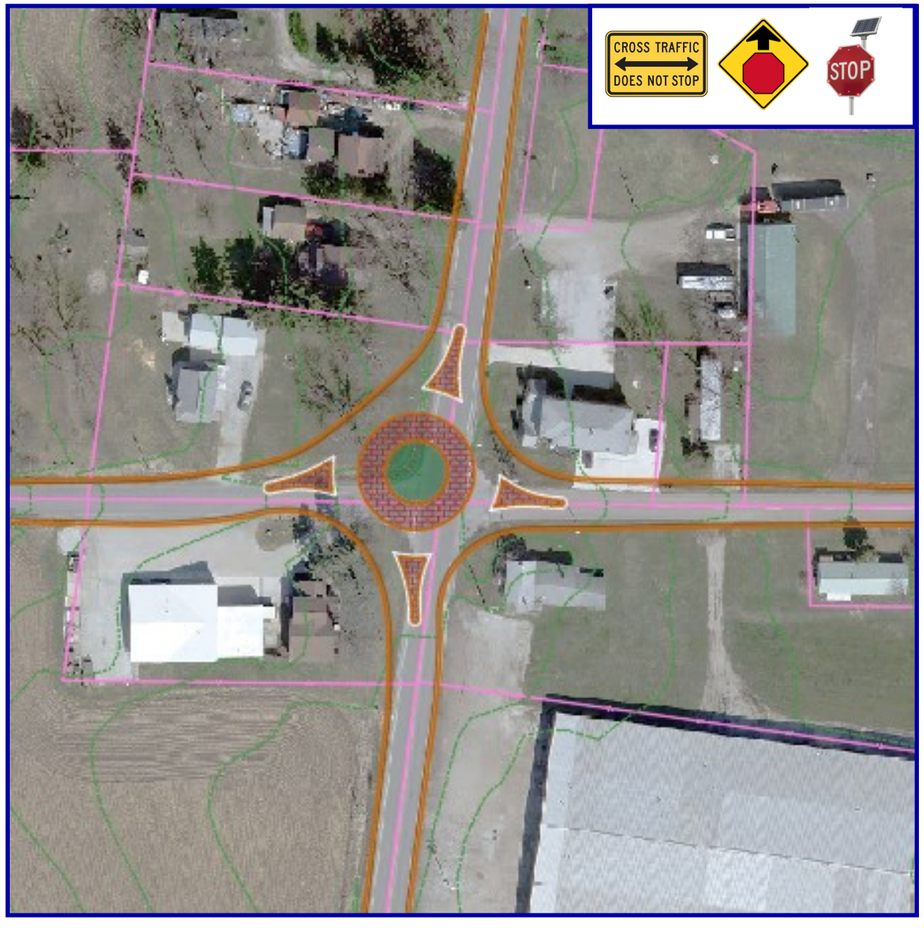
COMPREHENSIVE SAFETY ACTION PLAN

Safety Countermeasure Plan

SR 3—Cleveland Road and Hutton Road Intersection

NLFID: SR 3—SWAYSR00003**C

SLM: 20.585



Total Budget

Design Fee:

$305,000

Right-of-Way Cost:

$200,000

Construction Costs:

$1,774,000

Project Description:

The recommendation of this Comprehensive Safety Action Plan is to construct a roundabout at this location. Between the publishing of this report and the construction of the roundabout, interim safety improvement countermeasures should be installed including double stop signs using large and flashing signs, doubled “Stop Ahead” signs, retroreflective sheeting on sign posts, a properly placed stop bar, and “Cross Traffic Does Not Stop” signs at the stop signs. Sight-obstructing items should be removed from the right of way such as signs, utilities, and fences.

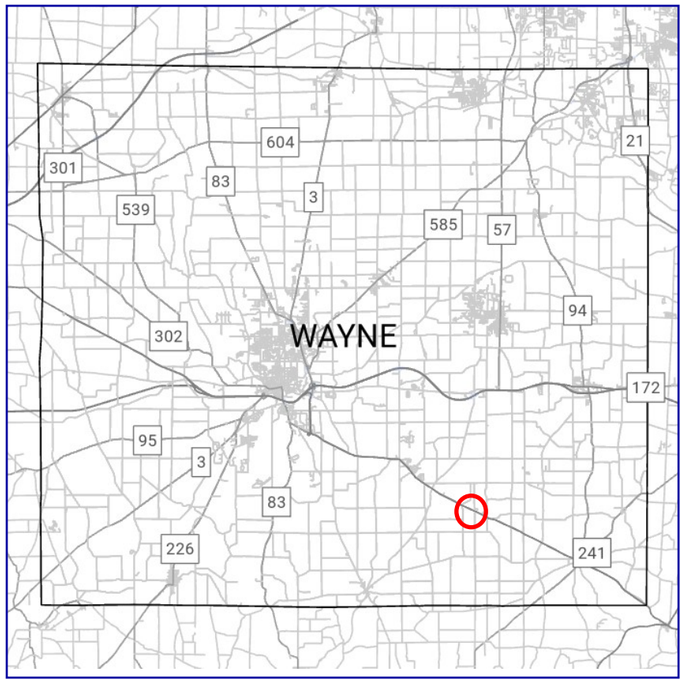
Notes:

This roadway is ranked as high risk on the High Risk Network. This intersection is on the rural intersection priority list.

Prepared by:

Environmental Design Group

The community impact people.



WAYNE COUNTY, OHIO

COMPREHENSIVE SAFETY ACTION PLAN

Safety Countermeasure Plan

US 250—Dover Road and Fountain Nook Road Intersection

NLFID: US 250—SWAYUS00250**C

SLM: 21.561

Project Description:

The recommendations of this Comprehensive Safety Action Plan is to install double stop signs using large and flashing signs. A “Cross Traffic Does Not Stop” sign should be placed on each of the stop sign posts. Sight-obstructing items should be removed from the right of way such as signs, utilities, and fences. Additional study of this location is recommended to determine if a roundabout would be the most appropriate countermeasure, or if realigning the northbound and southbound approaches would produce a similar benefit. The cut sheet and cost show the realignment for planning purposes.

Total Budget

Design Fee:

$42,500

Right-of-Way Cost:

$50,000

Construction Costs:

$307,000

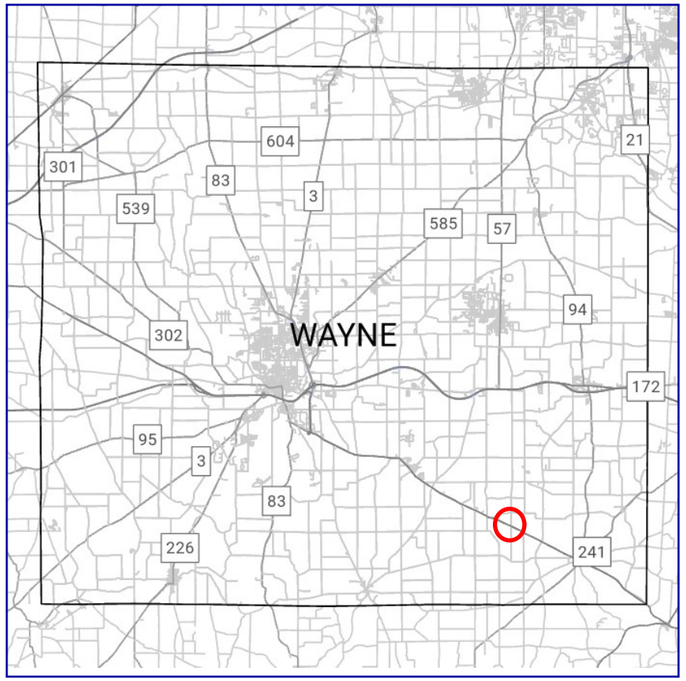
Notes:

This roadway is ranked as high risk on the High Risk Network, and is on the Buggy Travel Route. This intersection is on the rural intersection and animal drawn vehicle priority lists.

Prepared by:

Environmental Design Group

The community impact people.



WAYNE COUNTY, OHIO

COMPREHENSIVE SAFETY ACTION PLAN

Safety Countermeasure Plan

US 250—Dover Road and Kohler Road Intersection

NLFID: US 250 —SWAYUS00250**C

SLM: 23.798

Project Description:

The recommendations of this Comprehensive Safety Action Plan are to install double stop signs using large and flashing signs, doubled “Stop Ahead” signs, retroreflective sheeting on sign posts, a properly placed stop bar, and “Cross Traffic Does Not Stop” signs at the stop signs. Sight-obstructing items should be removed from the right of way such as signs, utilities, and fences. Additional study of this location is recommended to determine the potential for reducing instances of failure to yield by traffic on US 250.

Total Budget

Design Fee:

$0

Right-of-Way Cost:

$0

Construction Costs:

$2000

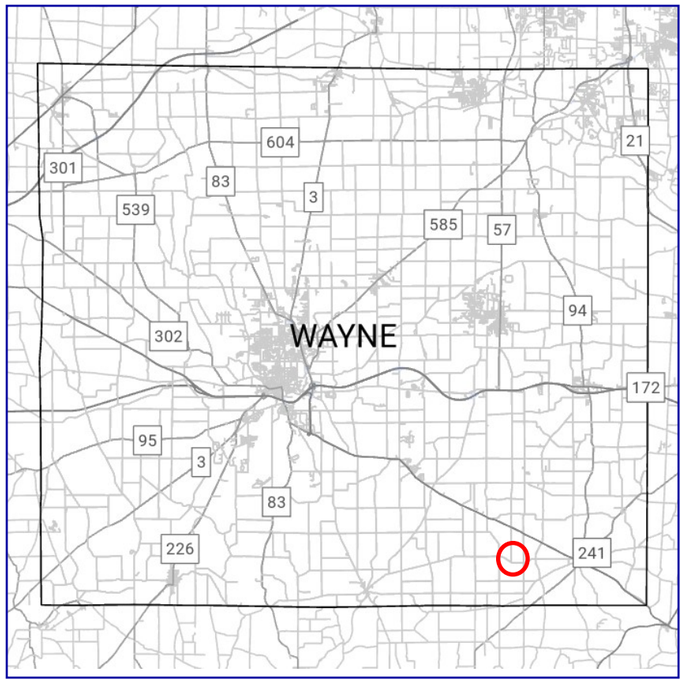
Notes:

This roadway is ranked as high risk on the High Risk Network, and is on the Buggy Travel Route. This location is also on the Bicycle Priority List and the Animal Drawn Vehicle Priority List

Prepared by:

Environmental Design Group

The community impact people.



WAYNE COUNTY, OHIO

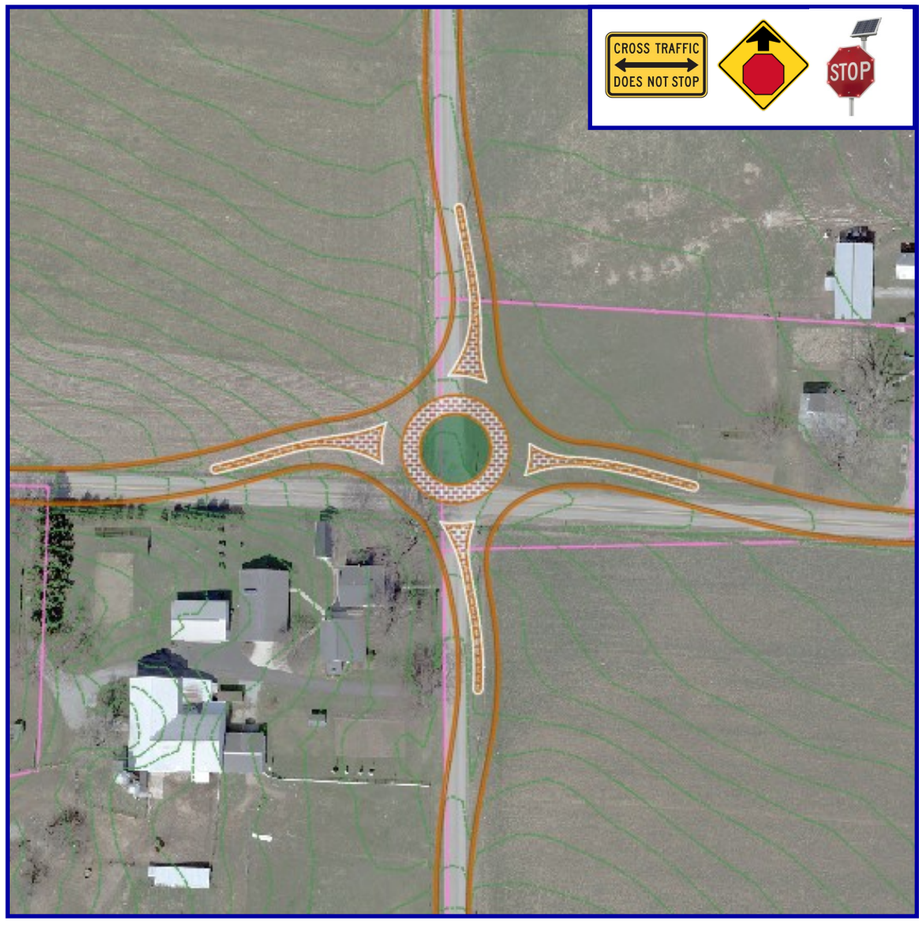
COMPREHENSIVE SAFETY ACTION PLAN

Safety Countermeasure Plan

Kansas Road and Harrison Road Intersection

NLFID: Kansas Rd—TWAYTR00179**C

SLM: 2.032



Project Description:

The recommendation of this Comprehensive Safety Action Plan is to construct a roundabout at this location. Between the publishing of this report and the construction of the roundabout, interim safety improvement countermeasures should be installed including double stop signs using large and flashing signs, doubled “Stop Ahead” signs, retroreflective sheeting on sign posts, a properly placed stop bar, and “Cross Traffic Does Not Stop” signs at the stop signs. Sight-obstructing items should be removed from the right of way such as signs, utilities, and fences.

Total Budget

Design Fee:

$312,800

Right-of-Way Cost:

$150,000

Construction Costs:

$2,017,000

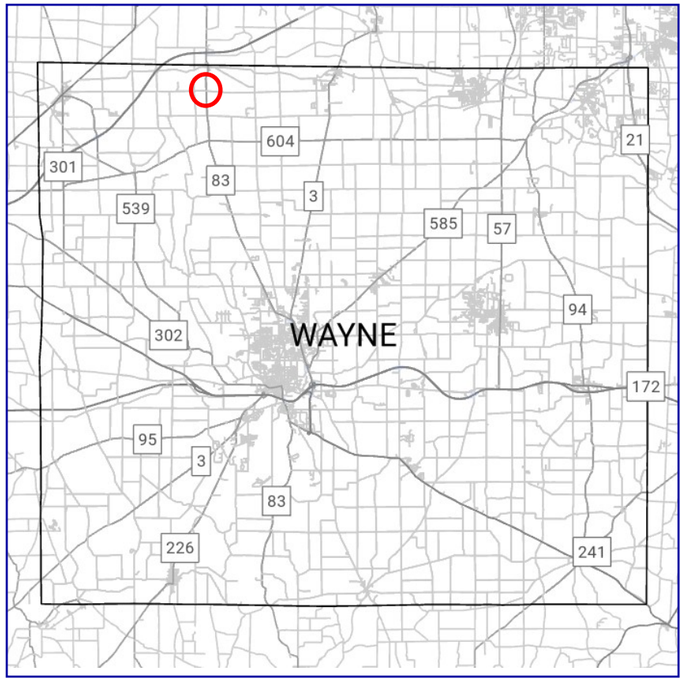
Notes:

This roadway is on both the Bicycle and Buggy Travel Routes.

Prepared by:

Environmental Design Group

The community impact people.



WAYNE COUNTY, OHIO

COMPREHENSIVE SAFETY ACTION PLAN

Safety Countermeasure Plan

SR 83—Burbank Road and Britton Road Intersection

NLFID: SR 83—SWAYSR00083**C

SLM: 24.368

Project Description:

The recommendation of this Comprehensive Safety Action Plan is to construct a roundabout at this location. Between the publishing of this report and the construction of the roundabout, interim safety improvement countermeasures should be installed including double stop signs using large and flashing signs. A “Cross Traffic Does Not Stop” sign should be placed on each of the stop sign posts. Sight-obstructing items should be removed from the right of way such as signs, utilities, and vegetation.

Total Budget

Design Fee:

$313,800

Right-of-Way Cost:

$100,000

Construction Costs:

$2,073,000

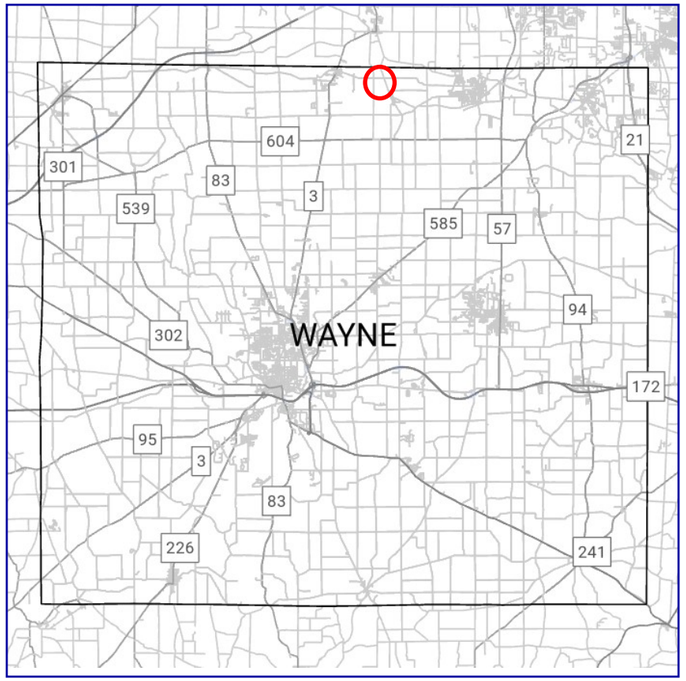
Notes:

This roadway is ranked as high risk on the High Risk Network. This intersection is on the rural intersection priority list.

Prepared by:

Environmental Design Group

The community impact people.



WAYNE COUNTY, OHIO

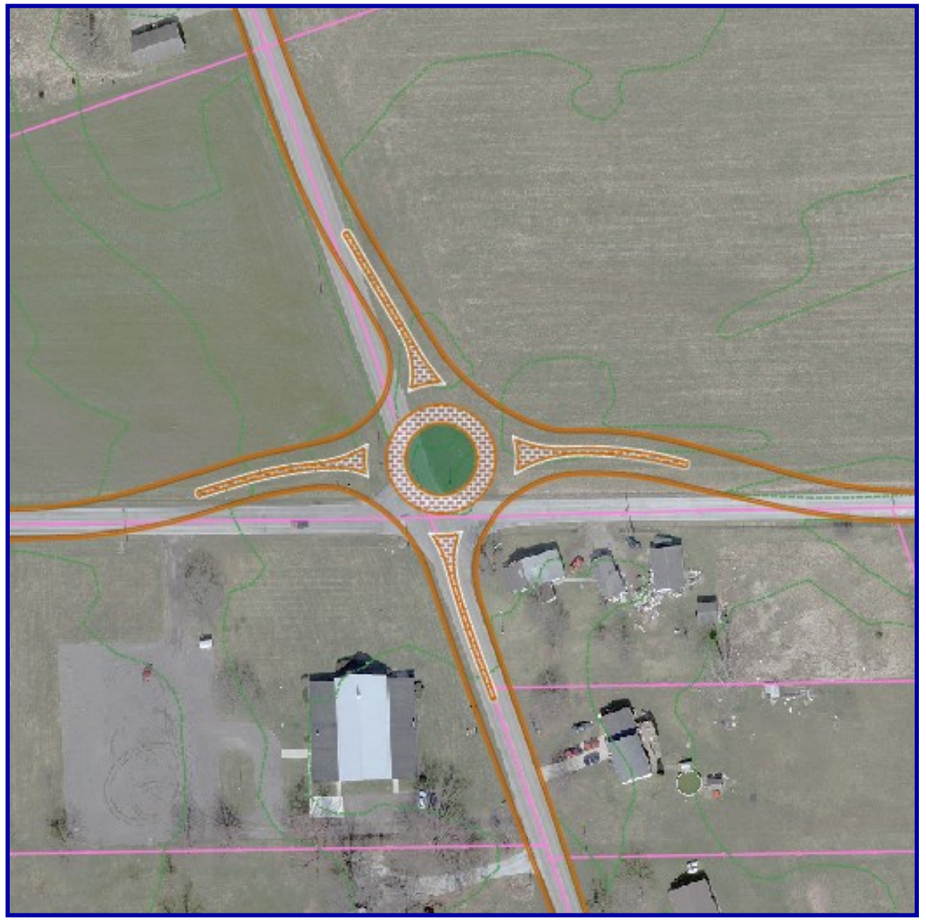
COMPREHENSIVE SAFETY ACTION PLAN

Safety Countermeasure Plan

Seville Road and Doylestown Road Intersection

NLFID: Seville Road—CWAYCR00060**C

SLM: 2.794



Project Description:

The recommendation of this Comprehensive Safety Action Plan is to construct a roundabout at this location. Between the publishing of this report and the construction of the roundabout, sight-obstructing items should be removed from the right of way such as shrubs, utilities, and fences.

Total Budget

Design Fee:

$314,300

Right-of-Way Cost:

$125,000

Construction Costs:

$2,052,000

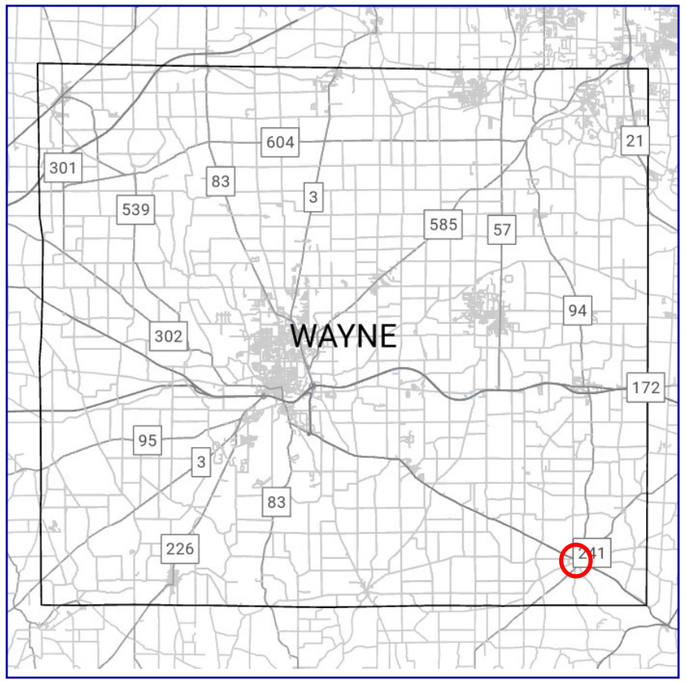
Notes:

This roadway is ranked as medium risk on the High Risk Network. This intersection is on the rural intersection priority list.

Prepared by:

Environmental Design Group

The community impact people.



WAYNE COUNTY, OHIO

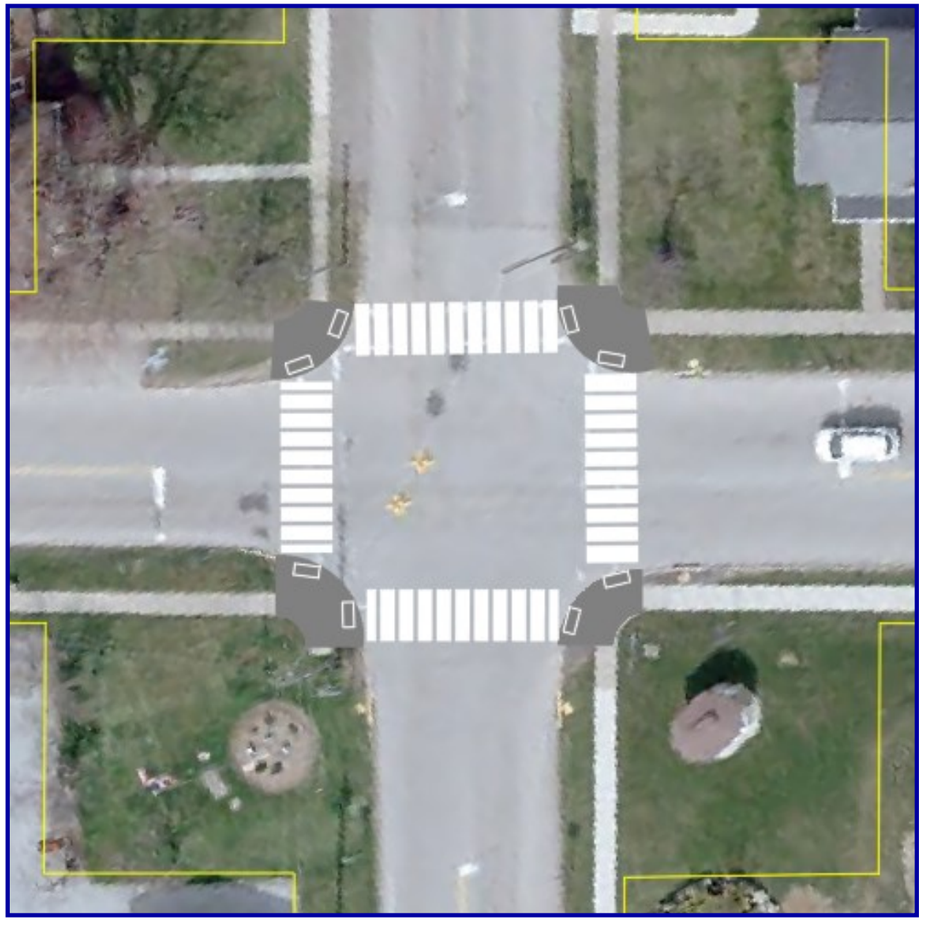
COMPREHENSIVE SAFETY ACTION PLAN

Safety Countermeasure Plan

US 250—Dover Road and SR 241/SR 94 Intersection

NLFID: US 250—SWAYUS00250**C

SLM: 27.054



Project Description:

The recommendations of this Comprehensive Safety Action Plan is to apply traffic calming in the form of high visibility pedestrian crosswalks (including pushbuttons, pedestrian signal heads, and leading pedestrian intervals), add intersection lighting, install signal back plates, add or increase all red time, and reduce the dilemma zone through signal timing adjustments. Installing backplates may result in replacement of span wire setting to mastarms with signal replacement.

Total Budget

Design Fee:

$37,000

Right-of-Way Cost:

$20,000

Construction Costs:

$533,200

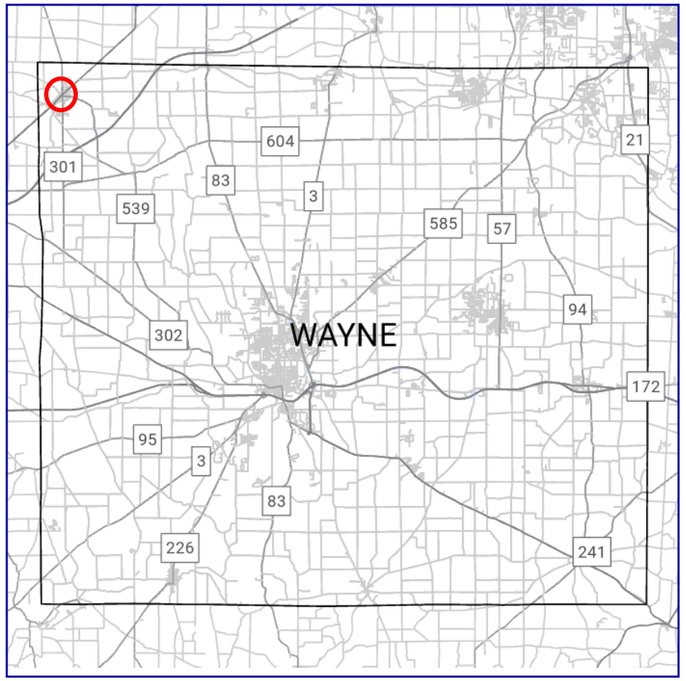
Notes:

This roadway is ranked as high risk on the High Risk Network, and is on both the Bicycle and Buggy Travel Routes. This intersection is on the pedestrian priority list.

Prepared by:

Environmental Design Group

The community impact people.



WAYNE COUNTY, OHIO

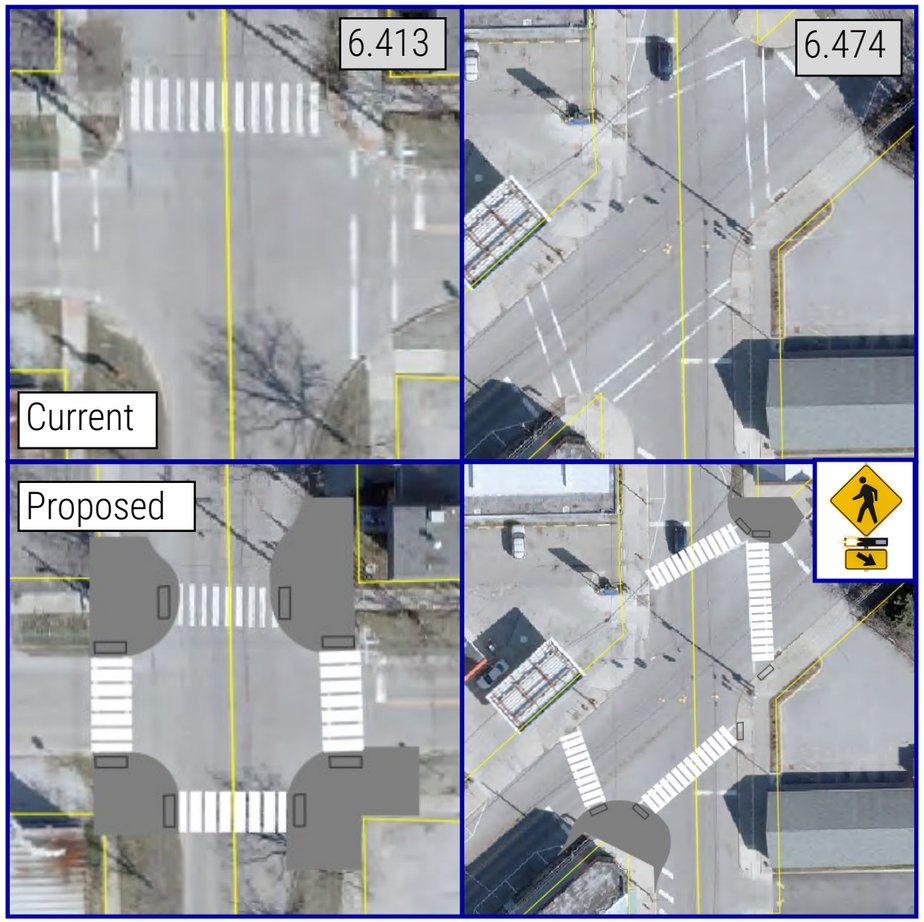
COMPREHENSIVE SAFETY ACTION PLAN

Safety Countermeasure Plan

SR 301—Main Street, SR 539, and US 42 Intersections

NLFID: SR 301—SWAYSR00301**C, US 42—SWAYUS00042**C

SLM: SWAYSR00301**C: 6.413, 6.474, SWAYUS00042**C: 1.315



Project Description:

The recommendations of this Comprehensive Safety Action Plan are to construct bumpouts at the two intersections, add/repaint high visibility crosswalks, add pedestrian pushbuttons and signals with leading pedestrian intervals in the signal timing at SR 301 and US 40, install an RRFB at the south approach to the intersection with SR 539, and to add signal backplates at US 40. For a more comprehensive approach, the intersection of US 40 and SR 539, the third point in the triangle, should receive the same traffic calming, pedestrian safety improvements including bumpouts, pavement markings, and a rectangular rapid flashing beacon on the southbound approach. As the existing signals are hung by span wires, it is possible that the additional of signal backplates may not be supported. In this case, the signal may need to be upgraded with mast arm supports and new wiring.

Total Budget

Design Fee:

$52,750

Right-of-Way Cost:

$0

Construction Costs:

$714,400

Notes:

This roadway is ranked as medium risk on the High Risk Network and is on the Amish Travel Route. The intersections of SR 539 and US 40 are both on the pedestrian priority list. The intersection with US 40 is on the rural intersection list.

The proposed countermeasures for the third intersection (SWAYUS00042**C: 1.315) are similar to those depicted on SR 301 (SWAYSR00301**C: 6.413, 6.474).

Prepared by:

Environmental Design Group

The community impact people.

APPENDIX F – COST OPINIONS FOR SELECTED PROJECTS

SR 83 - BURBANK ROAD SAFETY IMRPOVEMENTS
WAYNE COUNTY ENGINEER
OPINION OF PROBABLE COST
December 31, 2024

Environmental Design Group

	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
Demolition & Site Preparation					
1	Clearing and Grubbing	1	LS	$45,000.00	$45,000.00
2	Pavement Removed	20722	SY	$12.00	$248,664.00
3	Removal of Ground Mounted Sign and Reerection	45	EACH	$70.00	$3,150.00
4	Remove and Reerect Existing Light Pole	450	EACH	$800.00	$360,000.00
5	Mailbox Relocated	90	EACH	$85.00	$7,650.00
6	Fire Hydrant Removed and Reset	0	EACH	$4,600.00	$0.00
7	Guardrail Removed and Rebuilt	915	FT	$22.00	$20,130.00
				Subtotal	**$684,594.00**
Earthwork & Erosion Control					
8	Excavation	16992	CY	$20.00	$339,840.00
9	Embankment	35917	CY	$20.00	$718,340.00
10	Proof Rolling	234	HOUR	$300.00	$70,200.00
11	Erosion Control	1	LS	$150,000.00	$150,000.00
				Subtotal	**$1,278,380.00**
Drainage					
12	8" Conduit, Type B	0	FT	$50.00	$0.00
13	Catch Basin, No. 3	0	EACH	$4,500.00	$0.00
14	Extend Culverts	1	LS	$2,250,000.00	$2,250,000.00
				Subtotal	**$2,250,000.00**
Pavement					
15	Subgrade Compaction	77704	SY	$3.00	$233,112.00
16	8" Non-Reinforced Concrete Pavement, Stamped and Dyed	0	SF	$20.00	$0.00
17	12" Non-Reinforced Concrete Pavement, Stamped and Dyed	0	SF	$35.00	$0.00
18	Aggregate Base	12088	CY	$80.00	$967,040.00
19	Asphalt Concrete Surface Course, Type 1, (449), PG64-22	2159	CY	$210.00	$453,390.00
20	Asphalt Concrete Intermediate Course, Type 2, (449)	3274	CY	$180.00	$589,320.00
21	6" Concrete Drive Apron	1500	SY	$125.00	$187,500.00
22	4" Concrete Walk, 6' wide	0	SF	$10.00	$0.00
23	6" Concrete Median	0	SY	$100.00	$0.00
24	Curb Ramp	0	EACH	$1,300.00	$0.00
25	Curb Removed	0	FT	$10.00	$0.00
26	Curb, Type 6	0	FT	$30.00	$0.00
				Subtotal	**$2,430,362.00**
Traffic Control					
27	Crosswalk Line, 24" Type 1	0	FT	$35.00	$0.00
28	Stop Line, 24" White	0	FT	$5.00	$0.00
29	Edge Line/Channelizing Line, 4" White (Broken and Solid)	93245	FT	$1.00	$93,245.00
30	Edge Line/Channelizing Line, 4" Yellow (Broken and Solid)	0	FT	$2.00	$0.00
31	Center Line, 4" Yellow (Broken and Solid, Double)	46623	FT	$1.00	$46,623.00
32	Rumble Strips, Edge Line (Asphalt Concrete)	93245	FT	$4.00	$372,980.00
33	Raised Pavement Marker	933	EACH	$8.00	$7,464.00
34	Lane Arrow	0	EACH	$75.00	$0.00
35	Sequential Dynamic Chevron Signage	1	LS	$16,000.00	$16,000.00
36	Pedestrian Hybrid Beacon	0	EACH	$120,000.00	$0.00
37	Signal Updates (Mastarms, Supports, Signal Heads, Backplates, Wiring, Detectors, Signage)	0	EACH	$275,000.00	$0.00
38	Ground Rod	0	EACH	$310.00	$0.00
39	Signal Head Type D2 Countdown	0	EACH	$700.00	$0.00
40	Accessible Push Button	0	EACH	$960.00	$0.00
41	Pedestal Foundation	0	EACH	$1,400.00	$0.00
42	Pedestal 8' Transformer Base	0	EACH	$950.00	$0.00
				Subtotal	**$536,312.00**
Utilities					
43	Luminaire and Arm (added to existing electric pole)	0	EACH	$5,000.00	$0.00
44	Light Pole, Conventional	0	EACH	$3,500.00	$0.00
				Subtotal	**$0.00**
Right-of-Way Acquisition					
45	Right-of-Way	1	LS	$100,000.00	$100,000.00
				Subtotal	**$100,000.00**
Landscaping					
46	Seeding and Mulching, Class 1	82885	SY	$2.00	$165,770.00
				Subtotal	**$165,770.00**
Incidentals					
47	Maintaining Traffic	1	$	$223,362.54	$223,362.54
48	Construction Layout Stakes and Surveying	1	$	$111,681.27	$111,681.27
49	General Conditions	1	$	$148,908.36	$148,908.36
50	Bonds and Insurance	1	$	$223,362.54	$223,362.54
51	Mobilization/Demobilization	1	$	$74,454.18	$74,454.18

SR 83 - BURBANK ROAD SAFETY IMRPOVEMENTS
WAYNE COUNTY ENGINEER
OPINION OF PROBABLE COST
December 31, 2024

Environmental Design Group

	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
52	Design and Documents	1	$	$595,633.44	$595,633.44
				Subtotal	**$1,377,402.33**
				Total	**$8,822,820.33**
	Contingency (30%)				$2,646,846.10
Total Construction Cost					**$11,469,666.43**
	2025 Total Construction Cost (ODOT Inflation Factor 5.2%)				$12,066,089.08
	2026 Total Construction Cost (ODOT Inflation Factor 4.9%)				$12,657,327.45
	2027 Total Construction Cost (ODOT Inflation Factor 4.0%)				$13,163,620.55

SR 585 - AKRON ROAD SAFETY IMPROVEMENTS
WAYNE COUNTY ENGINEER
OPINION OF PROBABLE COST
December 31, 2024

Environmental Design Group

	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
Demolition & Site Preparation					
1	Clearing and Grubbing	1	LS	$20,000.00	$20,000.00
2	Pavement Removed	1378	SY	$15.00	$20,670.00
3	Removal of Ground Mounted Sign and Reerection	0	EACH	$70.00	$0.00
4	Remove and Reerect Existing Light Pole	0	EACH	$800.00	$0.00
5	Mailbox Relocated	0	EACH	$85.00	$0.00
6	Fire Hydrant Removed and Reset	0	EACH	$4,600.00	$0.00
7	Guardrail Removed and Rebuilt	1625	FT	$22.00	$35,750.00
				Subtotal	**$76,420.00**
Earthwork & Erosion Control					
8	Excavation	75	CY	$20.00	$1,500.00
9	Embankment	75	CY	$20.00	$1,500.00
10	Proof Rolling	8	HOUR	$300.00	$2,400.00
11	Erosion Control	1	LS	$26,000.00	$26,000.00
				Subtotal	**$31,400.00**
Drainage					
12	8" Conduit, Type B	0	FT	$50.00	$0.00
13	Catch Basin, No. 3	0	EACH	$4,500.00	$0.00
14	Extend Culverts	1	LS	$200,000.00	$200,000.00
				Subtotal	**$200,000.00**
Pavement					
15	Subgrade Compaction	2582	SY	$3.00	$7,746.00
16	8" Non-Reinforced Concrete Pavement, Stamped and Dyed	0	SF	$20.00	$0.00
17	12" Non-Reinforced Concrete Pavement, Stamped and Dyed	0	SF	$35.00	$0.00
18	Aggregate Base	402	CY	$80.00	$32,160.00
19	Asphalt Concrete Surface Course, Type 1, (449), PG64-22	72	CY	$210.00	$15,120.00
20	Asphalt Concrete Intermediate Course, Type 2, (449)	109	CY	$180.00	$19,620.00
21	6" Concrete Drive Apron	0	SY	$125.00	$0.00
22	4" Concrete Walk, 6' wide	0	SF	$10.00	$0.00
23	6" Concrete Median	0	SY	$100.00	$0.00
24	Curb Ramp	0	EACH	$1,300.00	$0.00
25	Curb Removed	0	FT	$10.00	$0.00
26	Curb, Type 6	0	FT	$30.00	$0.00
				Subtotal	**$74,646.00**
Traffic Control					
27	Crosswalk Line, 24" Type 1	0	FT	$35.00	$0.00
28	Stop Line, 24" White	10	FT	$5.00	$50.00
29	Edge Line/Channelizing Line, 4" White (Broken and Solid)	670	FT	$2.00	$1,340.00
30	Edge Line/Channelizing Line, 4" Yellow (Broken and Solid)	0	FT	$2.00	$0.00
31	Center Line, 4" Yellow (Broken and Solid, Double)	205	FT	$3.00	$615.00
32	Rumble Strips, Center Line (Asphalt Concrete)	10328	FT	$4.00	$41,312.00
33	Rumble Strips, Edge Line (Asphalt Concrete)	20656	FT	$4.00	$82,624.00
34	Raised Pavement Marker	207	EACH	$15.00	$3,105.00
35	Lane Arrow	3	EACH	$75.00	$225.00
36	Solar Powered RRFB (ea. set of two double-sided posts)	0	EACH	$16,000.00	$0.00
37	Pedestrian Hybrid Beacon	0	EACH	$120,000.00	$0.00
38	Signal Updates (Mastarms, Supports, Signal Heads, Backplates, Wiring, Detectors, Signage)	0	EACH	$275,000.00	$0.00
39	Ground Rod	0	EACH	$310.00	$0.00
40	Signal Head Type D2 Countdown	0	EACH	$700.00	$0.00
41	Accessible Push Button	0	EACH	$960.00	$0.00
42	Pedestal Foundation	0	EACH	$1,400.00	$0.00
43	Pedestal 8' Transformer Base	0	EACH	$950.00	$0.00
				Subtotal	**$129,271.00**
Utilities					
44	Luminaire and Arm (added to existing electric pole)	0	EACH	$5,000.00	$0.00
45	Light Pole, Conventional	0	EACH	$3,500.00	$0.00
				Subtotal	**$0.00**
Right-of-Way Acquisition					
46	Right-of-Way	0	LS	$0.00	$0.00
				Subtotal	**$0.00**
Landscaping					
47	Seeding and Mulching, Class 1	2066	SY	$2.00	$4,132.00
				Subtotal	**$4,132.00**
Incidentals					
48	Maintaining Traffic	1	$	$15,476.07	$15,476.07
49	Construction Layout Stakes and Surveying	1	$	$7,738.04	$7,738.04
50	General Conditions	1	$	$10,317.38	$10,317.38
51	Bonds and Insurance	1	$	$15,476.07	$15,476.07

SR 585 - AKRON ROAD SAFETY IMPROVEMENTS
WAYNE COUNTY ENGINEER
OPINION OF PROBABLE COST
December 31, 2024

Environmental Design Group

	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
52	Mobilization/Demobilization	1	$	$12,896.73	$12,896.73
53	Design and Documents	1	$	$67,062.97	$67,062.97
				Subtotal	**$128,967.25**
				Total	**$644,836.25**
	Contingency (30%)				$193,450.88
Total Construction Cost					**$838,287.13**
	2025 Total Construction Cost (ODOT Inflation Factor 5.2%)				$881,878.06
	2026 Total Construction Cost (ODOT Inflation Factor 4.9%)				$925,090.08
	2027 Total Construction Cost (ODOT Inflation Factor 4.0%)				$962,093.68

SR 301 / CR 72 - ELYRIA ROAD SAFETY IMPROVEMENTS
WAYNE COUNTY ENGINEER
OPINION OF PROBABLE COST
December 31, 2024

Environmental Design Group

	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
Demolition & Site Preparation					
1	Clearing and Grubbing	1	LS	$37,925.00	$37,925.00
2	Pavement Removed	17800	SY	$15.00	$267,000.00
3	Removal of Ground Mounted Sign and Reerection	25	EACH	$70.00	$1,750.00
4	Remove and Reerect Existing Light Pole	200	EACH	$800.00	$160,000.00
5	Mailbox Relocated	130	EACH	$85.00	$11,050.00
6	Fire Hydrant Removed and Reset	0	EACH	$4,600.00	$0.00
7	Guardrail Removed and Rebuilt	7757	FT	$22.00	$170,654.00
				Subtotal	**$648,379.00**
Earthwork & Erosion Control					
8	Excavation	106797	CY	$20.00	$2,135,940.00
9	Embankment	53399	CY	$20.00	$1,067,980.00
10	Proof Rolling	361	HOUR	$300.00	$108,300.00
11	Erosion Control	1	LS	$360,000.00	$360,000.00
				Subtotal	**$3,672,220.00**
Drainage					
12	8" Conduit, Type B	0	FT	$50.00	$0.00
13	Catch Basin, No. 3	0	EACH	$4,500.00	$0.00
14	Extend Culverts	1	LS	$1,300,000.00	$1,300,000.00
				Subtotal	**$1,300,000.00**
Pavement					
15	Subgrade Compaction	120147	SY	$3.00	$360,441.00
16	8" Non-Reinforced Concrete Pavement, Stamped and Dyed	0	SF	$20.00	$0.00
17	12" Non-Reinforced Concrete Pavement, Stamped and Dyed	0	SF	$35.00	$0.00
18	Aggregate Base	19283	CY	$80.00	$1,542,640.00
19	Asphalt Concrete Surface Course, Type 1, (449), PG64-22	3709	CY	$210.00	$778,890.00
20	Asphalt Concrete Intermediate Course, Type 2, (449)	5408	CY	$180.00	$973,440.00
21	6" Concrete Drive Apron	3612	SY	$125.00	$451,500.00
22	4" Concrete Walk, 6' wide	0	SF	$10.00	$0.00
23	6" Concrete Median	0	SY	$100.00	$0.00
24	Curb Ramp	0	EACH	$1,300.00	$0.00
25	Curb Removed	0	FT	$10.00	$0.00
26	Curb, Type 6	0	FT	$30.00	$0.00
				Subtotal	**$4,106,911.00**
Traffic Control					
27	Crosswalk Line, 24" Type 1	0	FT	$35.00	$0.00
28	Stop Line, 24" White	264	FT	$5.00	$1,320.00
29	Edge Line/Channelizing Line, 4" White (Broken and Solid)	160196	FT	$2.00	$320,392.00
30	Edge Line/Channelizing Line, 4" Yellow (Broken and Solid)	0	FT	$2.00	$0.00
31	Center Line, 4" Yellow (Broken and Solid, Double)	40049	FT	$3.00	$120,147.00
32	Rumble Strips, Center Line (Asphalt Concrete)	0	FT	$8.00	$0.00
33	Raised Pavement Marker	0	EACH	$15.00	$0.00
34	Lane Arrow	0	EACH	$75.00	$0.00
35	Solar Powered RRFB (ea. set of two double-sided posts)	0	EACH	$16,000.00	$0.00
36	Pedestrian Hybrid Beacon	0	EACH	$120,000.00	$0.00
37	Signal Updates (Mastarms, Supports, Signal Heads, Backplates, Wiring, Detectors, Signage)	0	EACH	$275,000.00	$0.00
38	Ground Rod	0	EACH	$310.00	$0.00
39	Signal Head Type D2 Countdown	0	EACH	$700.00	$0.00
40	Accessible Push Button	0	EACH	$960.00	$0.00
41	Pedestal Foundation	0	EACH	$1,400.00	$0.00
42	Pedestal 8' Transformer Base	0	EACH	$950.00	$0.00
				Subtotal	**$441,859.00**
Utilities					
43	Luminaire and Arm (added to existing electric pole)	0	EACH	$5,000.00	$0.00
44	Light Pole, Conventional	0	EACH	$3,500.00	$0.00
				Subtotal	**$0.00**
Right-of-Way Acquisition					
45	Right-of-Way	1	LS	$300,000.00	$300,000.00
				Subtotal	**$300,000.00**
Landscaping					
46	Seeding and Mulching, Class 1	88998	SY	$2.00	$177,996.00
				Subtotal	**$177,996.00**
Incidentals					
47	Maintaining Traffic	1	$	$319,420.95	$319,420.95
48	Construction Layout Stakes and Surveying	1	$	$159,710.48	$159,710.48
49	General Conditions	1	$	$212,947.30	$212,947.30
50	Bonds and Insurance	1	$	$319,420.95	$319,420.95
51	Mobilization/Demobilization	1	$	$266,184.13	$266,184.13

SR 301 / CR 72 - ELYRIA ROAD SAFETY IMPROVEMENTS
WAYNE COUNTY ENGINEER
OPINION OF PROBABLE COST
December 31, 2024

Environmental Design Group

	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
52	Design and Documents	1	$	$1,064,736.50	$1,064,736.50
				Subtotal	**$2,342,420.30**
				Total	**$12,989,785.30**
	Contingency (30%)				$3,896,935.59
Total Construction Cost					**$16,886,720.89**
	2025 Total Construction Cost (ODOT Inflation Factor 5.2%)				$17,764,830.38
	2026 Total Construction Cost (ODOT Inflation Factor 4.9%)				$18,635,307.06
	2027 Total Construction Cost (ODOT Inflation Factor 4.0%)				$19,380,719.35

KIDRON ROAD SAFETY IMPROVEMENTS
WAYNE COUNTY ENGINEER
OPINION OF PROBABLE COST
December 31, 2024

Environmental Design Group

	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
Demolition & Site Preparation					
1	Clearing and Grubbing	1	LS	$30,000.00	$30,000.00
2	Pavement Removed	7145	SY	$15.00	$107,175.00
3	Removal of Ground Mounted Sign and Reerection	60	EACH	$70.00	$4,200.00
4	Remove and Reerect Existing Light Pole	260	EACH	$800.00	$208,000.00
5	Mailbox Relocated	120	EACH	$85.00	$10,200.00
6	Fire Hydrant Removed and Reset	0	EACH	$4,600.00	$0.00
7	Guardrail Removed and Rebuilt	3110	FT	$22.00	$68,420.00
				Subtotal	**$427,995.00**
Earthwork & Erosion Control					
8	Excavation	85734	CY	$20.00	$1,714,680.00
9	Embankment	42867	CY	$20.00	$857,340.00
10	Proof Rolling	286	HOUR	$300.00	$85,800.00
11	Erosion Control	1	LS	$260,000.00	$260,000.00
				Subtotal	**$2,917,820.00**
Drainage					
12	8" Conduit, Type B	500	FT	$50.00	$25,000.00
13	Catch Basin, No. 3	10	EACH	$4,500.00	$45,000.00
14	Extend Culverts	1	LS	$300,000.00	$300,000.00
				Subtotal	**$370,000.00**
Pavement					
15	Subgrade Compaction	95117	SY	$3.00	$285,351.00
16	8" Non-Reinforced Concrete Pavement, Stamped and Dyed	112	SF	$20.00	$2,240.00
17	12" Non-Reinforced Concrete Pavement, Stamped and Dyed	0	SF	$35.00	$0.00
18	Aggregate Base	15258	CY	$80.00	$1,220,640.00
19	Asphalt Concrete Surface Course, Type 1, (449), PG64-22	2931	CY	$210.00	$615,510.00
20	Asphalt Concrete Intermediate Course, Type 2, (449)	4277	CY	$180.00	$769,860.00
21	6" Concrete Drive Apron	6667	SY	$125.00	$833,375.00
22	4" Concrete Walk, 6' wide	6000	SF	$10.00	$60,000.00
23	6" Concrete Median	0	SY	$100.00	$0.00
24	Curb Ramp	0	EACH	$1,300.00	$0.00
25	Curb Removed	0	FT	$10.00	$0.00
26	Curb, Type 6	1500	FT	$30.00	$45,000.00
				Subtotal	**$3,831,976.00**
Traffic Control					
27	Crosswalk Line, 24" Type 1	252	FT	$35.00	$8,820.00
28	Stop Line, 24" White	360	FT	$5.00	$1,800.00
29	Edge Line/Channelizing Line, 4" White (Broken and Solid)	128600	FT	$2.00	$257,200.00
30	Edge Line/Channelizing Line, 4" Yellow (Broken and Solid)	0	FT	$2.00	$0.00
31	Center Line, 4" Yellow (Broken and Solid, Double)	32150	FT	$3.00	$96,450.00
32	Rumble Strips, Center Line (Asphalt Concrete)	0	FT	$8.00	$0.00
33	Raised Pavement Marker	0	EACH	$15.00	$0.00
34	Lane Arrow	0	EACH	$75.00	$0.00
35	Solar Powered RRFB (ea. set of two double-sided posts)	0	EACH	$16,000.00	$0.00
36	Pedestrian Hybrid Beacon	0	EACH	$120,000.00	$0.00
37	Signal Updates (Mastarms, Supports, Signal Heads, Backplates, Wiring, Detectors, Signage)	0	EACH	$275,000.00	$0.00
38	Ground Rod	6	EACH	$310.00	$1,860.00
39	Signal Head Type D2 Countdown	6	EACH	$700.00	$4,200.00
40	Accessible Push Button	6	EACH	$960.00	$5,760.00
41	Pedestal Foundation	6	EACH	$1,400.00	$8,400.00
42	Pedestal 8' Transformer Base	6	EACH	$950.00	$5,700.00
				Subtotal	**$390,190.00**
Utilities					
43	Luminaire and Arm (added to existing electric pole)	0	EACH	$5,000.00	$0.00
44	Light Pole, Conventional	0	EACH	$3,500.00	$0.00
				Subtotal	**$0.00**
Right-of-Way Acquisition					
45	Right-of-Way	1	LS	$100,000.00	$100,000.00
				Subtotal	**$100,000.00**
Landscaping					
46	Seeding and Mulching, Class 1	71445	SY	$2.00	$142,890.00
				Subtotal	**$142,890.00**
Incidentals					
47	Maintaining Traffic	1	$	$245,426.13	$245,426.13
48	Construction Layout Stakes and Surveying	1	$	$122,713.07	$122,713.07
49	General Conditions	1	$	$163,617.42	$163,617.42
50	Bonds and Insurance	1	$	$245,426.13	$245,426.13
51	Mobilization/Demobilization	1	$	$204,521.78	$204,521.78

KIDRON ROAD SAFETY IMPROVEMENTS
WAYNE COUNTY ENGINEER
OPINION OF PROBABLE COST
December 31, 2024

Environmental Design Group

	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
52	Design and Documents	1	$	$818,087.10	$818,087.10
				Subtotal	**$1,799,791.62**
				Total	**$9,980,662.62**
	Contingency (30%)				$2,994,198.79
Total Construction Cost					**$12,974,861.41**
	2025 Total Construction Cost (ODOT Inflation Factor 5.2%)				$13,649,554.20
	2026 Total Construction Cost (ODOT Inflation Factor 4.9%)				$14,318,382.35
	2027 Total Construction Cost (ODOT Inflation Factor 4.0%)				$14,891,117.65

SR 3 - COLUMBUS ROAD SAFETY IMPROVEMENTS
WAYNE COUNTY ENGINEER
OPINION OF PROBABLE COST
December 31, 2024

Environmental Design Group

	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
Demolition & Site Preparation					
1	Clearing and Grubbing	1	LS	$5,000.00	$5,000.00
2	Pavement Removed	1028	SY	$15.00	$15,420.00
3	Removal of Ground Mounted Sign and Reerection	0	EACH	$70.00	$0.00
4	Remove and Reerect Existing Light Pole	0	EACH	$800.00	$0.00
5	Mailbox Relocated	0	EACH	$85.00	$0.00
6	Fire Hydrant Removed and Reset	0	EACH	$4,600.00	$0.00
7	Guardrail Removed and Rebuilt	0	FT	$22.00	$0.00
				Subtotal	**$20,420.00**
Earthwork & Erosion Control					
8	Excavation	0	CY	$20.00	$0.00
9	Embankment	0	CY	$20.00	$0.00
10	Proof Rolling	0	HOUR	$300.00	$0.00
11	Erosion Control	1	LS	$4,000.00	$4,000.00
				Subtotal	**$4,000.00**
Drainage					
12	8" Conduit, Type B	0	FT	$50.00	$0.00
13	Catch Basin, No. 3	0	EACH	$4,500.00	$0.00
14	Extend Culverts	1	LS	$0.00	$0.00
				Subtotal	**$0.00**
Pavement					
15	Subgrade Compaction	0	SY	$3.00	$0.00
16	8" Non-Reinforced Concrete Pavement, Stamped and Dyed	0	SF	$20.00	$0.00
17	12" Non-Reinforced Concrete Pavement, Stamped and Dyed	0	SF	$35.00	$0.00
18	Aggregate Base	0	CY	$80.00	$0.00
19	Asphalt Concrete Surface Course, Type 1, (449), PG64-22	0	CY	$210.00	$0.00
20	Asphalt Concrete Intermediate Course, Type 2, (449)	0	CY	$180.00	$0.00
21	6" Concrete Drive Apron	0	SY	$125.00	$0.00
22	4" Concrete Walk, 6' wide	0	SF	$10.00	$0.00
23	6" Concrete Median	0	SY	$100.00	$0.00
24	Curb Ramp	0	EACH	$1,300.00	$0.00
25	Curb Removed	0	FT	$10.00	$0.00
26	Curb, Type 6	0	FT	$30.00	$0.00
				Subtotal	**$0.00**
Traffic Control					
27	Crosswalk Line, 24" Type 1	0	FT	$35.00	$0.00
28	Stop Line, 24" White	0	FT	$5.00	$0.00
29	Edge Line/Channelizing Line, 4" White (Broken and Solid)	300	FT	$2.00	$600.00
30	Edge Line/Channelizing Line, 4" Yellow (Broken and Solid)	150	FT	$2.00	$300.00
31	Center Line, 4" Yellow (Broken and Solid, Double)	0	FT	$3.00	$0.00
32	Rumble Strips, Center Line (Asphalt Concrete)	0	FT	$8.00	$0.00
33	Raised Pavement Marker	0	EACH	$15.00	$0.00
34	Lane Arrow	0	EACH	$75.00	$0.00
35	Solar Powered RRFB (ea. set of two double-sided posts)	0	EACH	$16,000.00	$0.00
36	Pedestrian Hybrid Beacon	0	EACH	$120,000.00	$0.00
37	Signal Updates (Mastarms, Supports, Signal Heads, Backplates, Wiring, Detectors, Signage)	0	EACH	$275,000.00	$0.00
38	Ground Rod	0	EACH	$310.00	$0.00
39	Signal Head Type D2 Countdown	0	EACH	$700.00	$0.00
40	Accessible Push Button	0	EACH	$960.00	$0.00
41	Pedestal Foundation	0	EACH	$1,400.00	$0.00
42	Pedestal 8' Transformer Base	0	EACH	$950.00	$0.00
43	Cable Barrier	3880	FT	$20.00	$77,600.00
				Subtotal	**$78,500.00**
Utilities					
43	Luminaire and Arm (added to existing electric pole)	0	EACH	$5,000.00	$0.00
44	Light Pole, Conventional	0	EACH	$3,500.00	$0.00
				Subtotal	**$0.00**
Right-of-Way Acquisition					
45	Right-of-Way	1	LS	$0.00	$0.00
				Subtotal	**$0.00**
Landscaping					
46	Seeding and Mulching, Class 1	1028	SY	$2.00	$2,056.00
				Subtotal	**$2,056.00**
Incidentals					
47	Maintaining Traffic	1	$	$3,149.28	$3,149.28
48	Construction Layout Stakes and Surveying	1	$	$1,574.64	$1,574.64
49	General Conditions	1	$	$2,099.52	$2,099.52
50	Bonds and Insurance	1	$	$3,149.28	$3,149.28

SR 3 - COLUMBUS ROAD SAFETY IMPROVEMENTS
WAYNE COUNTY ENGINEER
OPINION OF PROBABLE COST
December 31, 2024

Environmental Design Group

	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
51	Mobilization/Demobilization	1	$	$2,624.40	$2,624.40
52	Design and Documents	1	$	$13,646.88	$13,646.88
				Subtotal	**$26,244.00**
				Total	**$131,220.00**
	Contingency (30%)				$39,366.00
Total Construction Cost					**$170,586.00**
	2025 Total Construction Cost (ODOT Inflation Factor 5.2%)				$179,456.47
	2026 Total Construction Cost (ODOT Inflation Factor 4.9%)				$188,249.84
	2027 Total Construction Cost (ODOT Inflation Factor 4.0%)				$195,779.83

SR 241 - MASSILLON ROAD SAFETY IMPROVEMENTS
WAYNE COUNTY ENGINEER
OPINION OF PROBABLE COST
December 31, 2024

Environmental Design Group

	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
Demolition & Site Preparation					
1	Clearing and Grubbing	1	LS	$12,500.00	$12,500.00
2	Pavement Removed	5398	SY	$15.00	$80,970.00
3	Removal of Ground Mounted Sign and Reerection	25	EACH	$70.00	$1,750.00
4	Remove and Reerect Existing Light Pole	12	EACH	$800.00	$9,600.00
5	Mailbox Relocated	30	EACH	$85.00	$2,550.00
6	Fire Hydrant Removed and Reset	0	EACH	$4,600.00	$0.00
7	Guardrail Removed and Rebuilt	5431	FT	$22.00	$119,482.00
				Subtotal	**$226,852.00**
Earthwork & Erosion Control					
8	Excavation	32384	CY	$20.00	$647,680.00
9	Embankment	16192	CY	$20.00	$323,840.00
10	Proof Rolling	129	HOUR	$300.00	$38,700.00
11	Erosion Control	1	LS	$120,000.00	$120,000.00
				Subtotal	**$1,130,220.00**
Drainage					
12	8" Conduit, Type B	0	FT	$50.00	$0.00
13	Catch Basin, No. 3	0	EACH	$4,500.00	$0.00
14	Extend Culverts	1	LS	$600,000.00	$600,000.00
				Subtotal	**$600,000.00**
Pavement					
15	Subgrade Compaction	42768	SY	$3.00	$128,304.00
16	8" Non-Reinforced Concrete Pavement, Stamped and Dyed	0	SF	$20.00	$0.00
17	12" Non-Reinforced Concrete Pavement, Stamped and Dyed	0	SF	$35.00	$0.00
18	Aggregate Base	6864	CY	$80.00	$549,120.00
19	Asphalt Concrete Surface Course, Type 1, (449), PG64-22	1320	CY	$210.00	$277,200.00
20	Asphalt Concrete Intermediate Course, Type 2, (449)	1925	CY	$180.00	$346,500.00
21	6" Concrete Drive Apron	723	SY	$125.00	$90,375.00
22	4" Concrete Walk, 6' wide	0	SF	$10.00	$0.00
23	6" Concrete Median	0	SY	$100.00	$0.00
24	Curb Ramp	0	EACH	$1,300.00	$0.00
25	Curb Removed	0	FT	$10.00	$0.00
26	Curb, Type 6	0	FT	$30.00	$0.00
				Subtotal	**$1,391,499.00**
Traffic Control					
27	Crosswalk Line, 24" Type 1	0	FT	$35.00	$0.00
28	Stop Line, 24" White	0	FT	$5.00	$0.00
29	Edge Line/Channelizing Line, 4" White (Broken and Solid)	57024	FT	$2.00	$114,048.00
30	Edge Line/Channelizing Line, 4" Yellow (Broken and Solid)	0	FT	$2.00	$0.00
31	Center Line, 4" Yellow (Broken and Solid, Double)	14256	FT	$3.00	$42,768.00
32	Rumble Strips, Center Line (Asphalt Concrete)	0	FT	$8.00	$0.00
33	Raised Pavement Marker	0	EACH	$15.00	$0.00
34	Lane Arrow	0	EACH	$75.00	$0.00
35	Solar Powered RRFB (ea. set of two double-sided posts)	0	EACH	$16,000.00	$0.00
36	Pedestrian Hybrid Beacon	0	EACH	$120,000.00	$0.00
37	Signal Updates (Mastarms, Supports, Signal Heads, Backplates, Wiring, Detectors, Signage)	0	EACH	$275,000.00	$0.00
38	Ground Rod	0	EACH	$310.00	$0.00
39	Signal Head Type D2 Countdown	0	EACH	$700.00	$0.00
40	Accessible Push Button	0	EACH	$960.00	$0.00
41	Pedestal Foundation	0	EACH	$1,400.00	$0.00
42	Pedestal 8' Transformer Base	0	EACH	$950.00	$0.00
				Subtotal	**$156,816.00**
Utilities					
43	Luminaire and Arm (added to existing electric pole)	0	EACH	$5,000.00	$0.00
44	Light Pole, Conventional	0	EACH	$3,500.00	$0.00
				Subtotal	**$0.00**
Right-of-Way Acquisition					
45	Right-of-Way	1	LS	$100,000.00	$100,000.00
				Subtotal	**$100,000.00**
Landscaping					
46	Seeding and Mulching, Class 1	31680	SY	$2.00	$63,360.00
				Subtotal	**$63,360.00**
Incidentals					
47	Maintaining Traffic	1	$	$110,062.41	$110,062.41
48	Construction Layout Stakes and Surveying	1	$	$55,031.21	$55,031.21
49	General Conditions	1	$	$73,374.94	$73,374.94
50	Bonds and Insurance	1	$	$110,062.41	$110,062.41
51	Mobilization/Demobilization	1	$	$91,718.68	$91,718.68

SR 241 - MASSILLON ROAD SAFETY IMPROVEMENTS
WAYNE COUNTY ENGINEER
OPINION OF PROBABLE COST
December 31, 2024

Environmental Design Group

	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
52	Design and Documents	1	$	$476,937.11	$476,937.11
				Subtotal	**$917,186.75**
				Total	**$4,585,933.75**
	Contingency (30%)				$1,375,780.13
Total Construction Cost					**$5,961,713.88**
	2025 Total Construction Cost (ODOT Inflation Factor 5.2%)				$6,271,723.00
	2026 Total Construction Cost (ODOT Inflation Factor 4.9%)				$6,579,037.42
	2027 Total Construction Cost (ODOT Inflation Factor 4.0%)				$6,842,198.92

BACK ORRVILLE ROAD SAFETY IMRPOVEMENTS
WAYNE COUNTY ENGINEER
OPINION OF PROBABLE COST
December 31, 2024

Environmental Design Group

	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
Demolition & Site Preparation					
1	Clearing and Grubbing	1	LS	$6,000.00	$6,000.00
2	Pavement Removed	2582	SY	$15.00	$38,730.00
3	Removal of Ground Mounted Sign and Reerection	5	EACH	$70.00	$350.00
4	Remove and Reerect Existing Light Pole	25	EACH	$800.00	$20,000.00
5	Mailbox Relocated	25	EACH	$85.00	$2,125.00
6	Fire Hydrant Removed and Reset	1	EACH	$4,600.00	$4,600.00
7	Guardrail Removed and Rebuilt	2160	FT	$22.00	$47,520.00
				Subtotal	**$119,325.00**
Earthwork & Erosion Control					
8	Excavation	3442	CY	$20.00	$68,840.00
9	Embankment	6884	CY	$20.00	$137,680.00
10	Proof Rolling	30	HOUR	$300.00	$9,000.00
11	Erosion Control	1	LS	$22,000.00	$22,000.00
				Subtotal	**$237,520.00**
Drainage					
12	8" Conduit, Type B	0	FT	$50.00	$0.00
13	Catch Basin, No. 3	0	EACH	$4,500.00	$0.00
14	Extend Culverts	1	LS	$100,000.00	$100,000.00
				Subtotal	**$100,000.00**
Pavement					
15	Subgrade Compaction	9680	SY	$3.00	$29,040.00
16	8" Non-Reinforced Concrete Pavement, Stamped and Dyed	0	SF	$20.00	$0.00
17	12" Non-Reinforced Concrete Pavement, Stamped and Dyed	0	SF	$35.00	$0.00
18	Aggregate Base	1506	CY	$80.00	$120,480.00
19	Asphalt Concrete Surface Course, Type 1, (449), PG64-22	269	CY	$210.00	$56,490.00
20	Asphalt Concrete Intermediate Course, Type 2, (449)	408	CY	$180.00	$73,440.00
21	6" Concrete Drive Apron	778	SY	$125.00	$97,250.00
22	4" Concrete Walk, 6' wide	0	SF	$10.00	$0.00
23	6" Concrete Median	0	SY	$100.00	$0.00
24	Curb Ramp	0	EACH	$1,300.00	$0.00
25	Curb Removed	0	FT	$10.00	$0.00
26	Curb, Type 6	0	FT	$30.00	$0.00
				Subtotal	**$376,700.00**
Traffic Control					
27	Crosswalk Line, 24" Type 1	0	FT	$35.00	$0.00
28	Stop Line, 24" White	0	FT	$5.00	$0.00
29	Edge Line/Channelizing Line, 4" White (Broken and Solid)	11616	FT	$1.00	$11,616.00
30	Edge Line/Channelizing Line, 4" Yellow (Broken and Solid)	0	FT	$2.00	$0.00
31	Center Line, 4" Yellow (Broken and Solid, Double)	5808	FT	$1.00	$5,808.00
32	Rumble Strips, Edge Line (Asphalt Concrete)	11616	FT	$4.00	$46,464.00
33	Rumble Strips, Center Line (Asphalt Concrete)	5808	FT	$4.00	$23,232.00
34	Raised Pavement Marker	117	EACH	$15.00	$1,755.00
35	Lane Arrow	0	EACH	$75.00	$0.00
36	Solar Powered RRFB (ea. set of two double-sided posts)	0	EACH	$16,000.00	$0.00
37	Pedestrian Hybrid Beacon	0	EACH	$120,000.00	$0.00
38	Signal Updates (Mastarms, Supports, Signal Heads, Backplates, Wiring, Detectors, Signage)	0	EACH	$275,000.00	$0.00
39	Ground Rod	0	EACH	$310.00	$0.00
40	Signal Head Type D2 Countdown	0	EACH	$700.00	$0.00
41	Accessible Push Button	0	EACH	$960.00	$0.00
42	Pedestal Foundation	0	EACH	$1,400.00	$0.00
43	Pedestal 8' Transformer Base	0	EACH	$950.00	$0.00
				Subtotal	**$88,875.00**
Utilities					
44	Luminaire and Arm (added to existing electric pole)	0	EACH	$5,000.00	$0.00
45	Light Pole, Conventional	0	EACH	$3,500.00	$0.00
				Subtotal	**$0.00**
Right-of-Way Acquisition					
46	Right-of-Way	1	LS	$25,000.00	$25,000.00
				Subtotal	**$25,000.00**
Landscaping					
47	Seeding and Mulching, Class 1	10326	SY	$2.00	$20,652.00
				Subtotal	**$20,652.00**
Incidentals					
48	Maintaining Traffic	1	$	$29,042.16	$29,042.16
49	Construction Layout Stakes and Surveying	1	$	$484,036.00	$484,036.00
50	General Conditions	1	$	$19,361.44	$19,361.44
51	Bonds and Insurance	1	$	$29,042.16	$29,042.16

BACK ORRVILLE ROAD SAFETY IMRPOVEMENTS
WAYNE COUNTY ENGINEER
OPINION OF PROBABLE COST
December 31, 2024

Environmental Design Group

	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
52	Mobilization/Demobilization	1	$	$24,201.80	$24,201.80
53	Design and Documents	1	$	$145,210.80	$145,210.80
				Subtotal	**$730,894.36**
				Total	**$1,698,966.36**
	Contingency (30%)				$509,689.91
Total Construction Cost					**$2,208,656.27**
	2025 Total Construction Cost (ODOT Inflation Factor 5.2%)				$2,323,506.39
	2026 Total Construction Cost (ODOT Inflation Factor 4.9%)				$2,437,358.21
	2027 Total Construction Cost (ODOT Inflation Factor 4.0%)				$2,534,852.54

BRITTON ROAD AND FRIENDSVILLE ROAD INTERSECTION
WAYNE COUNTY ENGINEER
OPINION OF PROBABLE COST
December 31, 2024

Environmental Design Group

	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
Demolition & Site Preparation					
1	Clearing and Grubbing	1	LS	$5,000.00	$5,000.00
2	Pavement Removed	4524	SY	$14.00	$63,336.00
				Subtotal	**$68,336.00**
Earthwork & Erosion Control					
3	Excavation	2415	CY	$18.00	$43,470.00
4	Embankment	1017	CY	$18.00	$18,306.00
5	Proof Rolling	2	HOUR	$300.00	$600.00
6	Erosion Control	1	LS	$15,000.00	$15,000.00
				Subtotal	**$77,376.00**
Drainage					
7	Enclosed Storm Sewer	1	LS	$200,000.00	$200,000.00
8	BMP - Manufactured System	1	EACH	$28,000.00	$28,000.00
				Subtotal	**$228,000.00**
Pavement					
9	Subgrade Compaction	6595	SY	$3.50	$23,082.50
10	9" Non-Reinforced Concrete Pavement, Class QC 1P	435	SY	$140.00	$60,900.00
11	Aggregate Base, 3" Aggregate Base	37	CY	$85.00	$3,145.00
12	Aggregate Base, 5" Aggregate Base	916	CY	$85.00	$77,860.00
13	Asphalt Concrete Base, PG64-22, (449), PG64-22 [T=5"]	916	CY	$200.00	$183,200.00
14	Asphalt Concrete Surface Course, Type 2, (449) [T=1 1/2"]	275	CY	$380.00	$104,500.00
15	Asphalt Concrete Intermediate Course, Type 2, (449) [T=3"]	550	CY	$275.00	$151,250.00
16	Non-Tracking Tack Coat	462	GAL	$3.50	$1,617.00
17	Combination Curb and Gutter, Type 2	3360	FT	$35.00	$117,600.00
18	Combination Curb and Gutter, Type 9	296	FT	$28.00	$8,288.00
19	Curb, Type 6	1508	FT	$30.00	$45,240.00
20	6" Concrete Traffic Island, As Per Plan, Class QC1	461	SY	$115.00	$53,015.00
				Subtotal	**$829,697.50**
Traffic Control					
21	Signing	1	LS	$20,000.00	$20,000.00
22	Pavement Markings	1	LS	$10,000.00	$10,000.00
				Subtotal	**$30,000.00**
Utilities					
23	Lighting	1	LS	$65,000.00	$65,000.00
				Subtotal	**$65,000.00**
Right-of-Way Acquisition					
24	Right-of-Way	1	LS	$100,000.00	$100,000.00
				Subtotal	**$100,000.00**
Landscaping					
25	Landscaping	1	LS	$9,000.00	$9,000.00
				Subtotal	**$9,000.00**
Incidentals					
26	Maintaining Traffic	1	LS	$2,000.00	$2,000.00
27	Construction Layout Stakes and Surveying, As Per Plan	1	LS	$30,000.00	$30,000.00
28	General Conditions	1	LS	$26,248.19	$26,248.19
29	Bonds and Insurance	1	LS	$39,372.29	$39,372.29
30	Mobilization/Demobilization	1	LS	$40,000.00	$40,000.00
31	Design, Geotech, ROW Plans, and Documents	1	LS	$301,854.19	$301,854.19
				Subtotal	**$439,474.66**
				Total	**$1,846,884.16**
	Contingency (30%)				$554,065.25
Total Construction Cost					**$2,400,949.41**
	2025 Total Construction Cost (ODOT Inflation Factor 5.2%)				$2,525,798.78
	2026 Total Construction Cost (ODOT Inflation Factor 4.9%)				$2,518,595.93
	2027 Total Construction Cost (ODOT Inflation Factor 4.0%)				$2,496,987.38

SR 95 - BLACHLEYVILLE ROAD AND JEFFERSON ROAD INTERSECTION
WAYNE COUNTY ENGINEER
OPINION OF PROBABLE COST
December 31, 2024

Environmental Design Group

	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
Demolition & Site Preparation					
1	Clearing and Grubbing	1	LS	$15,000.00	$15,000.00
2	Pavement Removed	4703	SY	$14.00	$65,842.00
				Subtotal	**$80,842.00**
Earthwork & Erosion Control					
3	Excavation	3322	CY	$18.00	$59,796.00
4	Embankment	3904	CY	$18.00	$70,272.00
5	Proof Rolling	2	HOUR	$300.00	$600.00
6	Erosion Control	1	LS	$15,000.00	$15,000.00
				Subtotal	**$145,668.00**
Drainage					
7	Enclosed Storm Sewer	1	LS	$200,000.00	$200,000.00
8	BMP - Manufactured System	1	EACH	$28,000.00	$28,000.00
				Subtotal	**$228,000.00**
Pavement					
9	Subgrade Compaction	7573	SY	$3.50	$26,505.50
10	9" Non-Reinforced Concrete Pavement, Class QC 1P	523	SY	$140.00	$73,220.00
11	Aggregate Base, 3" Aggregate Base	44	CY	$85.00	$3,740.00
12	Aggregate Base, 5" Aggregate Base	1052	CY	$85.00	$89,420.00
13	Asphalt Concrete Base, PG64-22, (449), PG64-22 [T=5"]	1052	CY	$200.00	$210,400.00
14	Asphalt Concrete Surface Course, Type 2, (449) [T=1 1/2"]	316	CY	$380.00	$120,080.00
15	Asphalt Concrete Intermediate Course, Type 2, (449) [T=3"]	632	CY	$275.00	$173,800.00
16	Non-Tracking Tack Coat	531	GAL	$3.50	$1,858.50
17	Combination Curb and Gutter, Type 2	3732	FT	$35.00	$130,620.00
18	Combination Curb and Gutter, Type 9	305	FT	$28.00	$8,540.00
19	Curb, Type 6	1770	FT	$30.00	$53,100.00
20	6" Concrete Traffic Island, As Per Plan, Class QC1	558	SY	$115.00	$64,170.00
				Subtotal	**$955,454.00**
Traffic Control					
21	Signing	1	LS	$20,000.00	$20,000.00
22	Pavement Markings	1	LS	$10,000.00	$10,000.00
				Subtotal	**$30,000.00**
Utilities					
23	Lighting	1	LS	$65,000.00	$65,000.00
				Subtotal	**$65,000.00**
Right-of-Way Acquisition					
24	Right-of-Way	1	LS	$150,000.00	$150,000.00
				Subtotal	**$150,000.00**
Landscaping					
25	Landscaping	1	LS	$9,000.00	$9,000.00
				Subtotal	**$9,000.00**
Incidentals					
26	Maintaining Traffic	1	LS	$2,000.00	$2,000.00
27	Construction Layout Stakes and Surveying, As Per Plan	1	LS	$30,000.00	$30,000.00
28	General Conditions	1	LS	$31,379.28	$31,379.28
29	Bonds and Insurance	1	LS	$47,068.92	$47,068.92
30	Mobilization/Demobilization	1	LS	$40,000.00	$40,000.00
31	Design, Geotech, ROW Plans, and Documents	1	LS	$360,861.72	$360,861.72
				Subtotal	**$511,309.92**
				Total	**$2,175,273.92**
	Contingency (30%)				$652,582.18
Total Construction Cost					**$2,827,856.10**
	2025 Total Construction Cost (ODOT Inflation Factor 5.2%)				$2,974,904.61
	2026 Total Construction Cost (ODOT Inflation Factor 4.9%)				$2,966,421.04
	2027 Total Construction Cost (ODOT Inflation Factor 4.0%)				$2,940,970.34

US 30 AND SR 57 - WADSWORTH ROAD INTERSECTION
WAYNE COUNTY ENGINEER
OPINION OF PROBABLE COST
December 31, 2024

Environmental Design Group

	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
Demolition & Site Preparation					
1	Clearing and Grubbing	1	LS	$15,000.00	$15,000.00
2	Pavement Removed	11423	SY	$15.00	$171,345.00
3	Removal of Ground Mounted Sign and Reerection	5	EACH	$70.00	$350.00
4	Remove and Reerect Existing Light Pole	2	EACH	$800.00	$1,600.00
5	Mailbox Relocated	2	EACH	$85.00	$170.00
6	Fire Hydrant Removed and Reset	0	EACH	$4,600.00	$0.00
7	Guardrail Removed and Rebuilt	0	FT	$22.00	$0.00
				Subtotal	**$188,465.00**
Earthwork & Erosion Control					
8	Excavation	593	CY	$20.00	$11,860.00
9	Embankment	1030	CY	$20.00	$20,600.00
10	Proof Rolling	40	HOUR	$300.00	$12,000.00
11	Erosion Control	1	LS	$100,000.00	$100,000.00
				Subtotal	**$144,460.00**
Drainage					
12	8" Conduit, Type B	0	FT	$50.00	$0.00
13	Catch Basin, No. 3	0	EACH	$4,500.00	$0.00
14	Drainage, Misc.	1	LS	$200,000.00	$200,000.00
				Subtotal	**$200,000.00**
Pavement					
15	Subgrade Compaction	13054	SY	$3.00	$39,162.00
16	8" Non-Reinforced Concrete Pavement, Stamped and Dyed	0	SF	$20.00	$0.00
17	12" Non-Reinforced Concrete Pavement, Stamped and Dyed	0	SF	$35.00	$0.00
18	Aggregate Base	2176	CY	$80.00	$174,080.00
19	Asphalt Concrete Surface Course, Type 1, (449), PG64-22	446	CY	$210.00	$93,660.00
20	Asphalt Concrete Intermediate Course, Type 2, (449)	630	CY	$180.00	$113,400.00
21	6" Concrete Drive Apron	0	SY	$125.00	$0.00
22	4" Concrete Walk, 6' wide	0	SF	$10.00	$0.00
23	6" Concrete Median	0	SY	$100.00	$0.00
24	Curb Ramp	0	EACH	$1,300.00	$0.00
25	Curb Removed	0	FT	$10.00	$0.00
26	Curb, Type 6	0	FT	$30.00	$0.00
				Subtotal	**$420,302.00**
Traffic Control					
27	Crosswalk Line, 24" Type 1	0	FT	$35.00	$0.00
28	Stop Line, 24" White	42	FT	$5.00	$210.00
29	Edge Line/Channelizing Line, 4" White (Broken and Solid)	8800	FT	$2.00	$17,600.00
30	Edge Line/Channelizing Line, 4" Yellow (Broken and Solid)	4400	FT	$2.00	$8,800.00
31	Center Line, 4" Yellow (Broken and Solid, Double)	0	FT	$3.00	$0.00
32	Rumble Strips, Center Line (Asphalt Concrete)	0	FT	$8.00	$0.00
33	Raised Pavement Marker	0	EACH	$15.00	$0.00
34	Lane Arrow	9	EACH	$75.00	$675.00
35	Solar Powered RRFB (ea. set of two double-sided posts)	0	EACH	$16,000.00	$0.00
36	Pedestrian Hybrid Beacon	0	EACH	$120,000.00	$0.00
37	Signal Updates (Mastarms, Supports, Signal Heads, Backplates, Wiring, Detectors, Signage)	3	EACH	$275,000.00	$825,000.00
38	Ground Rod	0	EACH	$310.00	$0.00
39	Signal Head Type D2 Countdown	0	EACH	$700.00	$0.00
40	Accessible Push Button	0	EACH	$960.00	$0.00
41	Pedestal Foundation	0	EACH	$1,400.00	$0.00
42	Pedestal 8' Transformer Base	0	EACH	$950.00	$0.00
				Subtotal	**$852,285.00**
Utilities					
43	Luminaire and Arm (added to existing electric pole)	4	EACH	$5,000.00	$20,000.00
44	Light Pole, Conventional	4	EACH	$3,500.00	$14,000.00
				Subtotal	**$34,000.00**
Right-of-Way Acquisition					
45	Right-of-Way	1	LS	$50,000.00	$50,000.00
				Subtotal	**$50,000.00**
Landscaping					
46	Seeding and Mulching, Class 1	2223	SY	$2.00	$4,446.00
				Subtotal	**$4,446.00**
Incidentals					
47	Maintaining Traffic	1	$	$56,818.74	$56,818.74
48	Construction Layout Stakes and Surveying	1	$	$28,409.37	$28,409.37
49	General Conditions	1	$	$37,879.16	$37,879.16
50	Bonds and Insurance	1	$	$56,818.74	$56,818.74
51	Mobilization/Demobilization	1	$	$47,348.95	$47,348.95

US 30 AND SR 57 - WADSWORTH ROAD INTERSECTION
WAYNE COUNTY ENGINEER
OPINION OF PROBABLE COST
December 31, 2024

Environmental Design Group

	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
52	Design and Documents	1	$	$321,972.86	$321,972.86
				Subtotal	**$549,247.82**
				Total	**$2,443,205.82**
	Contingency (30%)				$732,961.75
Total Construction Cost					**$3,176,167.57**
	2025 Total Construction Cost (ODOT Inflation Factor 5.2%)				$3,341,328.28
	2026 Total Construction Cost (ODOT Inflation Factor 4.9%)				$3,505,053.37
	2027 Total Construction Cost (ODOT Inflation Factor 4.0%)				$3,645,255.50

SR 3 - CLEVELAND ROAD AND HUTTON ROAD INTERSECTION
WAYNE COUNTY ENGINEER
OPINION OF PROBABLE COST
December 31, 2024

Environmental Design Group

	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
Demolition & Site Preparation					
1	Clearing and Grubbing	1	LS	$15,000.00	$15,000.00
2	Pavement Removed	4180	SY	$14.00	$58,520.00
				Subtotal	**$73,520.00**
Earthwork & Erosion Control					
3	Excavation	1370	CY	$18.00	$24,660.00
4	Embankment	2999	CY	$18.00	$53,982.00
5	Proof Rolling	2	HOUR	$300.00	$600.00
6	Erosion Control	1	LS	$15,000.00	$15,000.00
				Subtotal	**$94,242.00**
Drainage					
7	Enclosed Storm Sewer	1	LS	$200,000.00	$200,000.00
8	BMP - Manufactured System	1	EACH	$28,000.00	$28,000.00
				Subtotal	**$228,000.00**
Pavement					
9	Subgrade Compaction	5083	SY	$3.50	$17,790.50
10	9" Non-Reinforced Concrete Pavement, Class QC 1P	426	SY	$140.00	$59,640.00
11	Aggregate Base, 3" Aggregate Base	36	CY	$85.00	$3,060.00
12	Aggregate Base, 5" Aggregate Base	706	CY	$85.00	$60,010.00
13	Asphalt Concrete Base, PG64-22, (449), PG64-22 [T=5"]	706	CY	$200.00	$141,200.00
14	Asphalt Concrete Surface Course, Type 2, (449) [T=1 1/2"]	212	CY	$380.00	$80,560.00
15	Asphalt Concrete Intermediate Course, Type 2, (449) [T=3"]	424	CY	$275.00	$116,600.00
16	Non-Tracking Tack Coat	356	GAL	$3.50	$1,246.00
17	Combination Curb and Gutter, Type 2	2535	FT	$35.00	$88,725.00
18	Combination Curb and Gutter, Type 9	261	FT	$28.00	$7,308.00
19	Curb, Type 6	621	FT	$30.00	$18,630.00
20	6" Concrete Traffic Island, As Per Plan, Class QC1	177	SY	$115.00	$20,355.00
				Subtotal	**$615,124.50**
Traffic Control					
21	Signing	1	LS	$20,000.00	$20,000.00
22	Pavement Markings	1	LS	$10,000.00	$10,000.00
				Subtotal	**$30,000.00**
Utilities					
23	Lighting	1	LS	$65,000.00	$65,000.00
				Subtotal	**$65,000.00**
Right-of-Way Acquisition					
24	Right-of-Way	1	LS	$200,000.00	$200,000.00
				Subtotal	**$200,000.00**
Landscaping					
25	Landscaping	1	LS	$9,000.00	$9,000.00
				Subtotal	**$9,000.00**
Incidentals					
26	Maintaining Traffic	1	LS	$2,000.00	$2,000.00
27	Construction Layout Stakes and Surveying, As Per Plan	1	LS	$30,000.00	$30,000.00
28	General Conditions	1	LS	$24,397.73	$24,397.73
29	Bonds and Insurance	1	LS	$36,596.60	$36,596.60
30	Mobilization/Demobilization	1	LS	$40,000.00	$40,000.00
31	Design, Geotech, ROW Plans, and Documents	1	LS	$304,971.63	$304,971.63
				Subtotal	**$437,965.95**
				Total	**$1,752,852.45**
	Contingency (30%)				$525,855.74
Total Construction Cost					**$2,278,708.19**
	2025 Total Construction Cost (ODOT Inflation Factor 5.2%)				$2,397,201.01
	2026 Total Construction Cost (ODOT Inflation Factor 4.9%)				$2,390,364.89
	2027 Total Construction Cost (ODOT Inflation Factor 4.0%)				$2,369,856.51

US 250 - DOVER ROAD AND FOUNTAIN NOOK ROAD INTERSECTION
WAYNE COUNTY ENGINEER
OPINION OF PROBABLE COST
December 31, 2024

Environmental Design Group

	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
Demolition & Site Preparation					
1	Clearing and Grubbing	1	LS	$10,000.00	$10,000.00
2	Pavement Removed	912	SY	$15.00	$13,680.00
3	Removal of Ground Mounted Sign and Reerection	4	EACH	$70.00	$280.00
4	Remove and Reerect Existing Light Pole	3	EACH	$800.00	$2,400.00
5	Mailbox Relocated	0	EACH	$85.00	$0.00
6	Fire Hydrant Removed and Reset	0	EACH	$4,600.00	$0.00
7	Guardrail Removed and Rebuilt	0	FT	$22.00	$0.00
				Subtotal	**$26,360.00**
Earthwork & Erosion Control					
8	Excavation	1335	CY	$20.00	$26,700.00
9	Embankment	668	CY	$20.00	$13,360.00
10	Proof Rolling	5	HOUR	$300.00	$1,500.00
11	Erosion Control	1	LS	$8,000.00	$8,000.00
				Subtotal	**$49,560.00**
Drainage					
12	8" Conduit, Type B	0	FT	$50.00	$0.00
13	Catch Basin, No. 3	0	EACH	$4,500.00	$0.00
14	Extend Culverts	1	LS	$50,000.00	$50,000.00
				Subtotal	**$50,000.00**
Pavement					
15	Subgrade Compaction	1617	SY	$3.00	$4,851.00
16	8" Non-Reinforced Concrete Pavement, Stamped and Dyed	0	SF	$20.00	$0.00
17	12" Non-Reinforced Concrete Pavement, Stamped and Dyed	0	SF	$35.00	$0.00
18	Aggregate Base	270	CY	$80.00	$21,600.00
19	Asphalt Concrete Surface Course, Type 1, (449), PG64-22	55	CY	$210.00	$11,550.00
20	Asphalt Concrete Intermediate Course, Type 2, (449)	74	CY	$180.00	$13,320.00
21	6" Concrete Drive Apron	28	SY	$125.00	$3,500.00
22	4" Concrete Walk, 6' wide	0	SF	$10.00	$0.00
23	6" Concrete Median	0	SY	$100.00	$0.00
24	Curb Ramp	0	EACH	$1,300.00	$0.00
25	Curb Removed	0	FT	$10.00	$0.00
26	Curb, Type 6	0	FT	$30.00	$0.00
				Subtotal	**$54,821.00**
Traffic Control					
27	Crosswalk Line, 24" Type 1	0	FT	$35.00	$0.00
28	Stop Line, 24" White	24	FT	$5.00	$120.00
29	Edge Line/Channelizing Line, 4" White (Broken and Solid)	970	FT	$2.00	$1,940.00
30	Edge Line/Channelizing Line, 4" Yellow (Broken and Solid)	0	FT	$2.00	$0.00
31	Center Line, 4" Yellow (Broken and Solid, Double)	485	FT	$3.00	$1,455.00
32	Rumble Strips, Center Line (Asphalt Concrete)	0	FT	$8.00	$0.00
33	Raised Pavement Marker	0	EACH	$15.00	$0.00
34	Lane Arrow	0	EACH	$75.00	$0.00
35	Solar Powered RRFB (ea. set of two double-sided posts)	0	EACH	$16,000.00	$0.00
36	Pedestrian Hybrid Beacon	0	EACH	$120,000.00	$0.00
37	Signal Updates (Mastarms, Supports, Signal Heads, Backplates, Wiring, Detectors, Signage)	0	EACH	$275,000.00	$0.00
38	Ground Rod	0	EACH	$310.00	$0.00
39	Signal Head Type D2 Countdown	0	EACH	$700.00	$0.00
40	Accessible Push Button	0	EACH	$960.00	$0.00
41	Pedestal Foundation	0	EACH	$1,400.00	$0.00
42	Pedestal 8' Transformer Base	0	EACH	$950.00	$0.00
				Subtotal	**$3,515.00**
Utilities					
43	Luminaire and Arm (added to existing electric pole)	0	EACH	$5,000.00	$0.00
44	Light Pole, Conventional	0	EACH	$3,500.00	$0.00
				Subtotal	**$0.00**
Right-of-Way Acquisition					
45	Right-of-Way	1	LS	$50,000.00	$50,000.00
				Subtotal	**$50,000.00**
Landscaping					
46	Seeding and Mulching, Class 1	1078	SY	$2.00	$2,156.00
				Subtotal	**$2,156.00**
Incidentals					
47	Maintaining Traffic	1	$	$7,092.36	$7,092.36
48	Construction Layout Stakes and Surveying	1	$	$3,546.18	$3,546.18
49	General Conditions	1	$	$4,728.24	$4,728.24
50	Bonds and Insurance	1	$	$7,092.36	$7,092.36
51	Mobilization/Demobilization	1	$	$5,910.30	$5,910.30

US 250 - DOVER ROAD AND FOUNTAIN NOOK ROAD INTERSECTION
WAYNE COUNTY ENGINEER
OPINION OF PROBABLE COST
December 31, 2024

Environmental Design Group

	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
52	Design and Documents	1	$	$42,554.16	$42,554.16
				Subtotal	**$70,923.60**
				Total	**$307,335.60**
	Contingency (30%)				$92,200.68
Total Construction Cost					**$399,536.28**
	2025 Total Construction Cost (ODOT Inflation Factor 5.2%)				$420,312.17
	2026 Total Construction Cost (ODOT Inflation Factor 4.9%)				$440,907.46
	2027 Total Construction Cost (ODOT Inflation Factor 4.0%)				$458,543.76

KANSAS ROAD AND HARRISON ROAD INTERSECTION
WAYNE COUNTY ENGINEER
OPINION OF PROBABLE COST
December 31, 2024

Environmental Design Group

	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
Demolition & Site Preparation					
1	Clearing and Grubbing	1	LS	$15,000.00	$15,000.00
2	Pavement Removed	4603	SY	$14.00	$64,442.00
				Subtotal	**$79,442.00**
Earthwork & Erosion Control					
3	Excavation	1507	CY	$18.00	$27,126.00
4	Embankment	3299	CY	$18.00	$59,382.00
5	Proof Rolling	2	HOUR	$300.00	$600.00
6	Erosion Control	1	LS	$15,000.00	$15,000.00
				Subtotal	**$102,108.00**
Drainage					
7	Enclosed Storm Sewer	1	LS	$200,000.00	$200,000.00
8	BMP - Manufactured System	1	EACH	$28,000.00	$28,000.00
				Subtotal	**$228,000.00**
Pavement					
9	Subgrade Compaction	6264	SY	$3.50	$21,924.00
10	9" Non-Reinforced Concrete Pavement, Class QC 1P	435	SY	$140.00	$60,900.00
11	Aggregate Base, 3" Aggregate Base	37	CY	$85.00	$3,145.00
12	Aggregate Base, 5" Aggregate Base	870	CY	$85.00	$73,950.00
13	Asphalt Concrete Base, PG64-22, (449), PG64-22 [T=5"]	870	CY	$200.00	$174,000.00
14	Asphalt Concrete Surface Course, Type 2, (449) [T=1 1/2"]	261	CY	$380.00	$99,180.00
15	Asphalt Concrete Intermediate Course, Type 2, (449) [T=3"]	522	CY	$275.00	$143,550.00
16	Non-Tracking Tack Coat	439	GAL	$3.50	$1,536.50
17	Combination Curb and Gutter, Type 2	3214	FT	$35.00	$112,490.00
18	Combination Curb and Gutter, Type 9	296	FT	$28.00	$8,288.00
19	Curb, Type 6	1503	FT	$30.00	$45,090.00
20	6" Concrete Traffic Island, As Per Plan, Class QC1	413	SY	$115.00	$47,495.00
				Subtotal	**$791,548.50**
Traffic Control					
21	Signing	1	LS	$20,000.00	$20,000.00
22	Pavement Markings	1	LS	$10,000.00	$10,000.00
				Subtotal	**$30,000.00**
Utilities					
23	Lighting	1	LS	$65,000.00	$65,000.00
				Subtotal	**$65,000.00**
Right-of-Way Acquisition					
24	Right-of-Way	1	LS	$150,000.00	$150,000.00
				Subtotal	**$150,000.00**
Landscaping					
25	Landscaping	1	LS	$9,000.00	$9,000.00
				Subtotal	**$9,000.00**
Incidentals					
26	Maintaining Traffic	1	LS	$2,000.00	$2,000.00
27	Construction Layout Stakes and Surveying, As Per Plan	1	LS	$30,000.00	$30,000.00
28	General Conditions	1	LS	$27,201.97	$27,201.97
29	Bonds and Insurance	1	LS	$40,802.96	$40,802.96
30	Mobilization/Demobilization	1	LS	$40,000.00	$40,000.00
31	Design, Geotech, ROW Plans, and Documents	1	LS	$312,822.66	$312,822.66
				Subtotal	**$452,827.58**
				Total	**$1,907,926.08**
	Contingency (30%)				$572,377.82
Total Construction Cost					**$2,480,303.90**
	2025 Total Construction Cost (ODOT Inflation Factor 5.2%)				$2,609,279.71
	2026 Total Construction Cost (ODOT Inflation Factor 4.9%)				$2,601,838.80
	2027 Total Construction Cost (ODOT Inflation Factor 4.0%)				$2,579,516.06

SR 83 - BURBANK ROAD AND BRITTON ROAD INTERSECTION
WAYNE COUNTY ENGINEER
OPINION OF PROBABLE COST
December 31, 2024

Environmental Design Group

	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
Demolition & Site Preparation					
1	Clearing and Grubbing	1	LS	$15,000.00	$15,000.00
2	Pavement Removed	5676	SY	$14.00	$79,464.00
				Subtotal	**$94,464.00**
Earthwork & Erosion Control					
3	Excavation	4291	CY	$18.00	$77,238.00
4	Embankment	1767	CY	$18.00	$31,806.00
5	Proof Rolling	2	HOUR	$300.00	$600.00
6	Erosion Control	1	LS	$15,000.00	$15,000.00
				Subtotal	**$124,644.00**
Drainage					
7	Enclosed Storm Sewer	1	LS	$200,000.00	$200,000.00
8	BMP - Manufactured System	1	EACH	$28,000.00	$28,000.00
				Subtotal	**$228,000.00**
Pavement					
9	Subgrade Compaction	6378	SY	$3.50	$22,323.00
10	9" Non-Reinforced Concrete Pavement, Class QC 1P	435	SY	$140.00	$60,900.00
11	Aggregate Base, 3" Aggregate Base	37	CY	$85.00	$3,145.00
12	Aggregate Base, 5" Aggregate Base	886	CY	$85.00	$75,310.00
13	Asphalt Concrete Base, PG64-22, (449), PG64-22 [T=5"]	886	CY	$200.00	$177,200.00
14	Asphalt Concrete Surface Course, Type 2, (449) [T=1 1/2"]	266	CY	$380.00	$101,080.00
15	Asphalt Concrete Intermediate Course, Type 2, (449) [T=3"]	532	CY	$275.00	$146,300.00
16	Non-Tracking Tack Coat	447	GAL	$3.50	$1,564.50
17	Combination Curb and Gutter, Type 2	3401	FT	$35.00	$119,035.00
18	Combination Curb and Gutter, Type 9	296	FT	$28.00	$8,288.00
19	Curb, Type 6	1500	FT	$30.00	$45,000.00
20	6" Concrete Traffic Island, As Per Plan, Class QC1	417	SY	$115.00	$47,955.00
				Subtotal	**$808,100.50**
Traffic Control					
21	Signing	1	LS	$20,000.00	$20,000.00
22	Pavement Markings	1	LS	$10,000.00	$10,000.00
				Subtotal	**$30,000.00**
Utilities					
23	Lighting	1	LS	$65,000.00	$65,000.00
				Subtotal	**$65,000.00**
Right-of-Way Acquisition					
24	Right-of-Way	1	LS	$100,000.00	$100,000.00
				Subtotal	**$100,000.00**
Landscaping					
25	Landscaping	1	LS	$9,000.00	$9,000.00
				Subtotal	**$9,000.00**
Incidentals					
26	Maintaining Traffic	1	LS	$2,000.00	$2,000.00
27	Construction Layout Stakes and Surveying, As Per Plan	1	LS	$30,000.00	$30,000.00
28	General Conditions	1	LS	$27,284.17	$27,284.17
29	Bonds and Insurance	1	LS	$40,926.26	$40,926.26
30	Mobilization/Demobilization	1	LS	$40,000.00	$40,000.00
31	Design, Geotech, ROW Plans, and Documents	1	LS	$313,767.96	$313,767.96
				Subtotal	**$453,978.38**
				Total	**$1,913,186.88**
	Contingency (30%)				$573,956.06
Total Construction Cost					**$2,487,142.94**
	2025 Total Construction Cost (ODOT Inflation Factor 5.2%)				$2,616,474.38
	2026 Total Construction Cost (ODOT Inflation Factor 4.9%)				$2,609,012.95
	2027 Total Construction Cost (ODOT Inflation Factor 4.0%)				$2,586,628.66

SEVILLE ROAD AND DOYLESTOWN ROAD INTERSECTION
WAYNE COUNTY ENGINEER
OPINION OF PROBABLE COST
December 31, 2024

Environmental Design Group

	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
Demolition & Site Preparation					
1	Clearing and Grubbing	1	LS	$15,000.00	$15,000.00
2	Pavement Removed	5006	SY	$14.00	$70,084.00
				Subtotal	**$85,084.00**
Earthwork & Erosion Control					
3	Excavation	3681	CY	$18.00	$66,258.00
4	Embankment	500	CY	$18.00	$9,000.00
5	Proof Rolling	2	HOUR	$300.00	$600.00
6	Erosion Control	1	LS	$15,000.00	$15,000.00
				Subtotal	**$90,858.00**
Drainage					
7	Enclosed Storm Sewer	1	LS	$200,000.00	$200,000.00
8	BMP - Manufactured System	1	EACH	$28,000.00	$28,000.00
				Subtotal	**$228,000.00**
Pavement					
9	Subgrade Compaction	6631	SY	$3.50	$23,208.50
10	9" Non-Reinforced Concrete Pavement, Class QC 1P	435	SY	$140.00	$60,900.00
11	Aggregate Base, 3" Aggregate Base	37	CY	$85.00	$3,145.00
12	Aggregate Base, 5" Aggregate Base	921	CY	$85.00	$78,285.00
13	Asphalt Concrete Base, PG64-22, (449), PG64-22 [T=5"]	921	CY	$200.00	$184,200.00
14	Asphalt Concrete Surface Course, Type 2, (449) [T=1 1/2"]	277	CY	$380.00	$105,260.00
15	Asphalt Concrete Intermediate Course, Type 2, (449) [T=3"]	553	CY	$275.00	$152,075.00
16	Non-Tracking Tack Coat	465	GAL	$3.50	$1,627.50
17	Combination Curb and Gutter, Type 2	3525	FT	$35.00	$123,375.00
18	Combination Curb and Gutter, Type 9	296	FT	$28.00	$8,288.00
19	Curb, Type 6	1492	FT	$30.00	$44,760.00
20	6" Concrete Traffic Island, As Per Plan, Class QC1	377	SY	$115.00	$43,355.00
				Subtotal	**$828,479.00**
Traffic Control					
21	Signing	1	LS	$20,000.00	$20,000.00
22	Pavement Markings	1	LS	$10,000.00	$10,000.00
				Subtotal	**$30,000.00**
Utilities					
23	Lighting	1	LS	$65,000.00	$65,000.00
				Subtotal	**$65,000.00**
Right-of-Way Acquisition					
24	Right-of-Way	1	LS	$125,000.00	$125,000.00
				Subtotal	**$125,000.00**
Landscaping					
25	Landscaping	1	LS	$9,000.00	$9,000.00
				Subtotal	**$9,000.00**
Incidentals					
26	Maintaining Traffic	1	LS	$2,000.00	$2,000.00
27	Construction Layout Stakes and Surveying, As Per Plan	1	LS	$30,000.00	$30,000.00
28	General Conditions	1	LS	$27,328.42	$27,328.42
29	Bonds and Insurance	1	LS	$40,992.63	$40,992.63
30	Mobilization/Demobilization	1	LS	$40,000.00	$40,000.00
31	Design, Geotech, ROW Plans, and Documents	1	LS	$314,276.83	$314,276.83
				Subtotal	**$454,597.88**
				Total	**$1,916,018.88**
	Contingency (30%)				$574,805.66
Total Construction Cost					**$2,490,824.54**
	2025 Total Construction Cost (ODOT Inflation Factor 5.2%)				$2,620,347.42
	2026 Total Construction Cost (ODOT Inflation Factor 4.9%)				$2,612,874.95
	2027 Total Construction Cost (ODOT Inflation Factor 4.0%)				$2,590,457.53

US 250 - DOVER ROAD AND SR 241/SR 94 INTERSECTION
WAYNE COUNTY ENGINEER
OPINION OF PROBABLE COST
December 31, 2024

Environmental Design Group

	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
Demolition & Site Preparation					
1	Clearing and Grubbing	1	LS	$3,000.00	$3,000.00
2	Pavement Removed	207	SY	$15.00	$3,105.00
3	Removal of Ground Mounted Sign and Reerection	0	EACH	$70.00	$0.00
4	Remove and Reerect Existing Light Pole	0	EACH	$800.00	$0.00
5	Mailbox Relocated	0	EACH	$85.00	$0.00
6	Fire Hydrant Removed and Reset	0	EACH	$4,600.00	$0.00
7	Guardrail Removed and Rebuilt	0	FT	$22.00	$0.00
				Subtotal	**$6,105.00**
Earthwork & Erosion Control					
8	Excavation	8	CY	$20.00	$160.00
9	Embankment	0	CY	$20.00	$0.00
10	Proof Rolling	1	HOUR	$300.00	$300.00
11	Erosion Control	1	LS	$3,000.00	$3,000.00
				Subtotal	**$3,460.00**
Drainage					
12	8" Conduit, Type B	0	FT	$50.00	$0.00
13	Catch Basin, No. 3	0	EACH	$4,500.00	$0.00
14	Extend Culverts	1	LS	$0.00	$0.00
				Subtotal	**$0.00**
Pavement					
15	Subgrade Compaction	80	SY	$3.00	$240.00
16	8" Non-Reinforced Concrete Pavement, Stamped and Dyed	0	SF	$20.00	$0.00
17	12" Non-Reinforced Concrete Pavement, Stamped and Dyed	0	SF	$35.00	$0.00
18	Aggregate Base	14	CY	$80.00	$1,120.00
19	Asphalt Concrete Surface Course, Type 1, (449), PG64-22	3	CY	$210.00	$630.00
20	Asphalt Concrete Intermediate Course, Type 2, (449)	4	CY	$180.00	$720.00
21	6" Concrete Drive Apron	0	SY	$125.00	$0.00
22	4" Concrete Walk, 6' wide	432	SF	$10.00	$4,320.00
23	6" Concrete Median	0	SY	$100.00	$0.00
24	Curb Ramp	8	EACH	$1,300.00	$10,400.00
25	Curb Removed	24	FT	$10.00	$240.00
26	Curb, Type 6	0	FT	$30.00	$0.00
				Subtotal	**$17,670.00**
Traffic Control					
27	Crosswalk Line, 24" Type 1	146	FT	$35.00	$5,110.00
28	Stop Line, 24" White	60	FT	$5.00	$300.00
29	Edge Line/Channelizing Line, 4" White (Broken and Solid)	0	FT	$2.00	$0.00
30	Edge Line/Channelizing Line, 4" Yellow (Broken and Solid)	0	FT	$2.00	$0.00
31	Center Line, 4" Yellow (Broken and Solid, Double)	0	FT	$3.00	$0.00
32	Rumble Strips, Center Line (Asphalt Concrete)	0	FT	$8.00	$0.00
33	Raised Pavement Marker	0	EACH	$15.00	$0.00
34	Lane Arrow	0	EACH	$75.00	$0.00
35	Solar Powered RRFB (ea. set of two double-sided posts)	0	EACH	$16,000.00	$0.00
36	Pedestrian Hybrid Beacon	0	EACH	$120,000.00	$0.00
37	Signal Updates (Mastarms, Supports, Signal Heads, Backplates, Wiring, Detectors, Signage)	1	EACH	$275,000.00	$275,000.00
38	Ground Rod	8	EACH	$310.00	$2,480.00
39	Signal Head Type D2 Countdown	8	EACH	$700.00	$5,600.00
40	Accessible Push Button	8	EACH	$960.00	$7,680.00
41	Pedestal Foundation	8	EACH	$1,400.00	$11,200.00
42	Pedestal 8' Transformer Base	8	EACH	$950.00	$7,600.00
				Subtotal	**$314,970.00**
Utilities					
43	Luminaire and Arm (added to existing electric pole)	2	EACH	$5,000.00	$10,000.00
44	Light Pole, Conventional	0	EACH	$3,500.00	$0.00
				Subtotal	**$10,000.00**
Right-of-Way Acquisition					
45	Right-of-Way	1	LS	$20,000.00	$20,000.00
				Subtotal	**$20,000.00**
Landscaping					
46	Seeding and Mulching, Class 1	34	SY	$2.00	$68.00
				Subtotal	**$68.00**
Incidentals					
47	Maintaining Traffic	1	$	$11,168.19	$11,168.19
48	Construction Layout Stakes and Surveying	1	$	$5,584.10	$5,584.10
49	General Conditions	1	$	$7,445.46	$7,445.46
50	Bonds and Insurance	1	$	$11,168.19	$11,168.19
51	Mobilization/Demobilization	1	$	$9,306.83	$9,306.83

US 250 - DOVER ROAD AND SR 241/SR 94 INTERSECTION
WAYNE COUNTY ENGINEER
OPINION OF PROBABLE COST
December 31, 2024

Environmental Design Group

	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
52	Design and Documents	1	$	$37,227.30	$37,227.30
				Subtotal	**$81,900.06**
				Total	**$454,173.06**
	Contingency (30%)				$136,251.92
Total Construction Cost					**$590,424.98**
	2025 Total Construction Cost (ODOT Inflation Factor 5.2%)				$621,127.08
	2026 Total Construction Cost (ODOT Inflation Factor 4.9%)				$651,562.30
	2027 Total Construction Cost (ODOT Inflation Factor 4.0%)				$677,624.80

SR 301 - MAIN STREET, SR 539, AND US 42 INTERSECTIONS
WAYNE COUNTY ENGINEER
OPINION OF PROBABLE COST
December 31, 2024

Environmental Design Group

	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
Demolition & Site Preparation					
1	Clearing and Grubbing	1	LS	$3,000.00	$3,000.00
2	Pavement Removed	556	SY	$15.00	$8,340.00
3	Removal of Ground Mounted Sign and Reerection	57	EACH	$70.00	$3,990.00
4	Remove and Reerect Existing Light Pole	4	EACH	$800.00	$3,200.00
5	Mailbox Relocated	0	EACH	$85.00	$0.00
6	Fire Hydrant Removed and Reset	1	EACH	$4,600.00	$4,600.00
7	Guardrail Removed and Rebuilt	0	FT	$22.00	$0.00
				Subtotal	**$23,130.00**
Earthwork & Erosion Control					
8	Excavation	8	CY	$20.00	$160.00
9	Embankment	0	CY	$20.00	$0.00
10	Proof Rolling	2	HOUR	$300.00	$600.00
11	Erosion Control	1	LS	$5,000.00	$5,000.00
				Subtotal	**$5,760.00**
Drainage					
12	8" Conduit, Type B	200	FT	$50.00	$10,000.00
13	Catch Basin, No. 3	4	EACH	$4,500.00	$18,000.00
14	Extend Culverts	0	LS	$0.00	$0.00
				Subtotal	**$28,000.00**
Pavement					
15	Subgrade Compaction	367	SY	$3.00	$1,101.00
16	8" Non-Reinforced Concrete Pavement, Stamped and Dyed	0	SF	$20.00	$0.00
17	12" Non-Reinforced Concrete Pavement, Stamped and Dyed	0	SF	$35.00	$0.00
18	Aggregate Base	62	CY	$80.00	$4,960.00
19	Asphalt Concrete Surface Course, Type 1, (449), PG64-22	13	CY	$210.00	$2,730.00
20	Asphalt Concrete Intermediate Course, Type 2, (449)	18	CY	$180.00	$3,240.00
21	6" Concrete Drive Apron	0	SY	$125.00	$0.00
22	4" Concrete Walk, 6' wide	0	SF	$10.00	$0.00
23	6" Concrete Bumpout	417	SY	$100.00	$41,700.00
24	Curb Ramp	14	EACH	$1,300.00	$18,200.00
25	Curb Removed	125	FT	$10.00	$1,250.00
26	Curb, Type 6	210	FT	$30.00	$6,300.00
				Subtotal	**$79,481.00**
Traffic Control					
27	Crosswalk Line, 24" Type 1	406	FT	$35.00	$14,210.00
28	Stop Line, 24" White	24	FT	$5.00	$120.00
29	Edge Line/Channelizing Line, 4" White (Broken and Solid)	0	FT	$2.00	$0.00
30	Edge Line/Channelizing Line, 4" Yellow (Broken and Solid)	0	FT	$2.00	$0.00
31	Center Line, 4" Yellow (Broken and Solid, Double)	0	FT	$3.00	$0.00
32	Rumble Strips, Center Line (Asphalt Concrete)	0	FT	$8.00	$0.00
33	Raised Pavement Marker	0	EACH	$15.00	$0.00
34	Lane Arrow	0	EACH	$75.00	$0.00
35	Solar Powered RRFB (ea. set of two double-sided posts)	2	EACH	$16,000.00	$32,000.00
36	Pedestrian Hybrid Beacon	0	EACH	$120,000.00	$0.00
37	Signal Updates (Mastarms, Supports, Signal Heads, Backplates, Wiring, Detectors, Signage)	1	EACH	$275,000.00	$275,000.00
38	Ground Rod	8	EACH	$310.00	$2,480.00
39	Signal Head Type D2 Countdown	8	EACH	$700.00	$5,600.00
40	Accessible Push Button	8	EACH	$960.00	$7,680.00
41	Pedestal Foundation	8	EACH	$1,400.00	$11,200.00
42	Pedestal 8' Transformer Base	8	EACH	$950.00	$7,600.00
				Subtotal	**$355,890.00**
Utilities					
43	Luminaire and Arm (added to existing electric pole)	6	EACH	$5,000.00	$30,000.00
44	Light Pole, Conventional	0	EACH	$3,500.00	$0.00
				Subtotal	**$30,000.00**
Right-of-Way Acquisition					
45	Right-of-Way	1	LS	$5,188.59	$5,188.59
				Subtotal	**$5,188.59**
Landscaping					
46	Seeding and Mulching, Class 1	32	SY	$2.00	$64.00
				Subtotal	**$64.00**
Incidentals					
47	Maintaining Traffic	1	$	$15,825.41	$15,825.41
48	Construction Layout Stakes and Surveying	1	$	$7,912.70	$7,912.70
49	General Conditions	1	$	$10,550.27	$10,550.27
50	Bonds and Insurance	1	$	$15,825.41	$15,825.41
51	Mobilization/Demobilization	1	$	$13,187.84	$13,187.84

SR 301 - MAIN STREET, SR 539, AND US 42 INTERSECTIONS
WAYNE COUNTY ENGINEER
OPINION OF PROBABLE COST
December 31, 2024

Environmental Design Group

	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
52	Design and Documents	1	$	$52,751.36	$52,751.36
				Subtotal	**$116,052.99**
				Total	**$643,566.58**
	Contingency (20%)				$128,713.32
Total Construction Cost					**$772,279.90**
	2025 Total Construction Cost (ODOT Inflation Factor 5.2%)				$812,438.45
	2026 Total Construction Cost (ODOT Inflation Factor 4.9%)				$852,247.94
	2027 Total Construction Cost (ODOT Inflation Factor 4.0%)				$886,337.85

APPENDIX G – WAYNE COUNTY COMMISSIONERS RESOLUTION FOR VISION ZERO

Resolution *No.* 2024-640

Board of Wayne County Commissioners

Ron Amstutz *Jonathan Hofstetter* *Dave McMillen*

Adopted: December 4, 2024

Subject: **Official Public Commitment for the Comprehensive Safety Action Plan for the United States Department of Transportation (U.S. DOT) Safe Streets and Roads for All Grant (SS4A) through the Wayne County Engineer**

It was moved by Commissioner Amstutz and seconded by Commissioner Hofstetter that the following resolution be adopted:

WHEREAS, Wayne County received approval of a grant application for a county-wide Safety Action Plan from the U.S. Department of Transportation on January 31, 2023; and

WHEREAS, pursuant to Resolution 2023-400 dated July 26, 2023, the Board of Commissioners of Wayne County, Ohio (Board), granted authorization for the Wayne County Engineer to accept U.S. DOT Safe Streets and Road for All Grant (SS4A) funds with an estimated total project cost of $256,000.00 with 80% ($204,800.00) being federal funding reimbursement and 20% ($51,200.00) being the local share to be paid for by License Plate Fees, Gas Tax Money, and Local Subdivisions; and

WHEREAS, Environmental Design Group has been leading the Safety Action Plan (Plan) Committee through the different required components listed in the guide since the beginning of this year, and the Plan is anticipated to be completed by the end of the year; and

WHEREAS, one of the steps in the Plan preparation is an official public commitment from the Commissioners. The proposed commitment is to reduce fatalities and severe injury crashes 85% by 2045 with an eventual goal of eliminating roadway fatalities and serious injuries by 2050.

NOW, THEREFORE, BE IT RESOLVED by the Board of Commissioners of Wayne County, Ohio, that:

Section 1. The Board hereby adopts a goal to reduce fatalities and severe injury crashes 85% by 2045 with an eventual goal of eliminating roadway fatalities and serious injuries by 2050 and endorses development, implementation, and monitoring of Vision Zero as a comprehensive and holistic approach to achieving this goal.

Section 2. The Board of Wayne County Commissioners hereby agrees to commit significant time and resources to achieving this goal.

Section 3. The Board of Wayne County Commissioners hereby continues to implement and evaluate the Transportation Safety Action Plan and Vision Zero and agrees to build upon existing education, enforcement, engineering, and policy strategies to reach this goal.

Section 4. The Board of Wayne County Commissioners is hereby dedicated to regularly reporting and assessing the progress, challenges, and successes of the Vision Zero commitment with current data and measurable metrics.

Section 5. The Board of Wayne County Commissioners hereby strives to improve the health and well-being of all travelers on Wayne County roads. The development of the Comprehensive Safety Action Plan and Vision Zero goal will address critical safety concerns and promote specific strategies towards zero deaths while prioritizing equity.

Section 6. The Board of Wayne County Commissioners hereby incorporates into this resolution all of the aforesaid recitals, and they are rendered to be findings by the Board.

Section 7. The Board of Wayne County Commissioners also finds that all formal actions of its Board concerning and relating to the passage of this Resolution were passed in an open meeting of this Board that was properly noticed.

The vote is as follows: Ron Amstutz yea Jonathan Hofstetter yea Dave McMillen excused absence

CERTIFICATE

I, Jamie L. Imhoff, Clerk of the Board of County Commissioners, Wayne County, Ohio, hereby certify that the above is a true and correct copy of the resolution adopted and journalized by said Board on said date.

Jamie L. Imhoff, Clerk