Appendix Table of Contents

A. Crawford County Vision Zero Resolution

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

C. High Injury Network Top 10 Locations - Countermeasure Profiles

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

E. Infrastructure & Engineering Countermeasure Toolkit for Systemic Issues

F. Crawford County SAP Coalition Charter

A. Crawford County Vision Zero Resolution

Crawford County

Eric Henry
Chairman
Scott T. Schell
Vice-Chairman
Christopher R. Seeley
Secretary/Treasurer

Commissioners Office
903 Diamond Park
Courthouse
Meadville, Pennsylvania 16335

Brittany Johnston
Chief Clerk
Keith A. Button
Solicitor

Resolution

10 of 2025

ADOPTING A GOAL TO ELIMINATE TRAFFIC DEATHS AND SERIOUS INJURIES BY 2035 AND ENDORSING A SAFE STREETS AND ROADS FOR ALL (SS4A) SAFETY ACTION PLAN AS A COMPREHENSIVE AND HOLISTIC APPROACH TO ACHIEVING THIS GOAL

WHEREAS, Crawford County's comprehensive plan, Crawford Inspired, crafted a community-wide vision that aspires to create a place that appeals to and retains people by focusing on community priorities like the support of healthy living; and

WHEREAS, according to data from the Pennsylvania Department of Transportation (PennDOT), there were 3,675 traffic collisions in Crawford County between 2019 and 2023; and

WHEREAS, during that same period, there were 58 Fatalities and 157 Suspected Serious Injury Crashes in Crawford County; and

WHEREAS, one death or serious injury in Crawford County is one too many, and County officials, Planning Commission, and departmental leadership are dedicated to strategies that aim to reduce and eliminate deaths and serious injuries in the County; and

WHEREAS, Safe Streets and Roads for All (SS4A) is a public health-based traffic safety program to reduce and eventually eliminate traffic deaths and serious

injuries using a data-driven, multi-disciplinary, and safe systems approach that also increases safe, healthy, equitable mobility for all; and

WHEREAS, SS4A recognized that while human error will always occur, a combination of engineering, education, and enforcement measures can reduce collisions and prevent collisions from causing death or serious injuries; and

WHEREAS, simple design solutions, such as road safety audits, traffic calming elements, leading pedestrian intervals, variable speed limits, bicycle lanes, and other Proven Safety Countermeasures, can reduce fatal and serious injury crashes.

NOW, THEREFORE, BE IT RESOLVED BY THE CRAWFORD COUNTY BOARD OF COMMISSIONERS that on the 11 day of June, 2025:

Section 1: That the Crawford County Commissioners hereby adopt a goal of eliminating traffic deaths and serious injuries by 2035 and endorse a Safe Streets and Roads for All (SS4A) Safety Action Plan as a comprehensive and holistic approach to achieving this goal; and

Section 2: That through better planning, engineering, education, and enforcement, the action plan should, without limitation, include the following:

- Crash data and identification of a high injury network (HIN);
- Prioritized project list for implementation;
- Framework for evaluation of outcomes.

Section 3: The project list identified in the SS4A Safety Action Plan will be considered for inclusion in future SS4A Implementation grants and other regional, state, or federal funding programs.

Section 4: The County staff will allocate a section of the Crawford County Planning Annual report to highlight progress toward the SS4A goals, tracking process, and outcome metrics, to be defined in the SS4A Safety Action Plan.

Section 5: District 1 of the Pennsylvania Department of Transportation should be provided copies of the SS4A Safety Action Plan for inclusion as a resource when evaluating design and construction investments proposed across Crawford County.

Section 6: Municipalities across Crawford County should be provided copies of the SS4A Safety Action Plan to encourage collaboration and proactive countermeasures to improve the safety of our transportation network, which local governments have a vital role in maintaining and owning.

CRAWFORD COUNTY BOARD OF COMMISSIONERS

Eric Henry, Chairman

Scott Schell, Vice-Chairman

A T T E S T:

Christopher Seeley, Secretary

Brittany Johnson, Chief Clerk

B. High Injury Network List – Top 20

- With Horse & Buggy Crashes
- Without Horse & Buggy Crashes

High Injury Network Top 20 Locations List – with Horse & Buggy Crashes

Rank	Location	Road Name	Segment Extents	Length (Miles)	KSI* Crashes	VRU** Crashes	Horse & Buggy
1	Conneaut Lake	SR 18	Shady Ave. and Edgeview Ave.	0.3	2	2	0
2	Titusville	SR 27 (Central Ave.)	Diamond St. and Caldwell St.	0.6	1	3	0
3	Buell's Corners	SR 89	Fairview Rd. and Buells Corners Rd.	0.6	3	0	1
4	Titusville	SR 8 (Spring St.)	Schwartz Lane and West Central Ave.	0.5	3	1	0
5	Kerrtown	SR 6 EB (Smock Highway)	Mercer Pike and French Creek Bridge	0.7	2	1	0
6	Kerrtown	SR 6 EB (Smock Highway	Pennsylvania Ave. and Mercer Pike	0.3	2	1	0
7	Meadville	SR 1001 (Park Ave.)	Baldwin St. and North St.	0.3	1	1	0
8	Adamsville	SR 18 (Main St.)	Atlantic Rd. and Salem Harwood	0.5	1	0	2
9	SW Meadville	SR 6 EB (Conneaut Lake Rd.)	Perry Highway and Dawn Drive	0.6	2	1	0
10	SW Meadville	SR 19 (Perry Hwy.)	Krider Rd./Bailey Rd. and Ridge Drive	0.5	2	1	0
11	Meadville	SR 1001 (Park Ave.)	Gasteiger Rd. and Park Ave./Doughty Ave.	0.5	2	1	0
12	Conneaut Lake	SR 322 (State St.)	Water St. and Marshall St.	0.6	2	1	0
13	Meadville	SR 27 (North St.)	Park Ave. and State St.	0.3	0	3	0
14	Meadville	SR 1001 (Park Ave. Extension)	Poplar St. and North St.	0.5	1	1	0
15	SW Meadville	SR 6 EB (Conneaut Lake Rd.)	Dawn Dr. and I-79	0.6	1	1	0
16	S Meadville	SR 322 (Cochranton Rd.)	North of McHenry St.	0.6	1	1	0
17	Meadville	SR 2012 (Chestnut Rd.)	South Main St. and Ernst Pl.	0.5	1	1	0
18	SW Meadville	SR 19 (Perry Highway)	McMath Ave. and Patricia Rd.	0.5	3	0	0
19	S Titusville	SR 8 (Franklin St.)	Dewey Rd. and St. John St.	0.4	1	1	0
20	Conneaut Lake	SR 6 (Water St.)	West of SR 618 and East of Ninth St.	0.7	1	1	0

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

High Injury Network Top 20 Locations List – without Horse & Buggy Crashes

Rank	Location	Road Name	Segment Extents	Length (Miles)	KSI* Crashes	VRU** Crashes	Horse & Buggy
1	Conneaut Lake	SR 18	Shady Ave. and Edgeview Ave.	0.3	2	2	0
2	Titusville	SR 27 (Central Ave.)	Diamond St. and Caldwell St.	0.6	1	3	0
3	Titusville	SR 8 (Spring St.)	Schwartz Lane and West Central Ave.	0.5	3	1	0
4	Kerrtown	SR 6 EB (Smock Highway)	Mercer Pike and French Creek Bridge	0.7	2	1	0
5	Kerrtown	SR 6 EB (Smock Highway	Pennsylvania Ave. and Mercer Pike	0.3	2	1	0
6	Meadville	SR 1001 (Park Ave.)	Baldwin St. and North St.	0.3	1	1	0
7	Adamsville	SR 18 (Main St.)	Atlantic Rd. and Salem Harwood	0.5	1	0	2
8	SW Meadville	SR 6 EB (Conneaut Lake Rd.)	Perry Highway and Dawn Drive	0.6	2	1	0
9	Meadville	SR 1001 (Park Ave. Extension)	Gasteiger Rd. and Park Ave./Doughty Ave.	0.5	2	1	0
10	Conneaut Lake	SR 322 (State St.)	Water St. and Marshall St.	0.6	2	1	0
11	Meadville	SR 27 (North St.)	Park Ave. and State St.	0.3	0	3	0
12	Meadville	SR 1001 (Park Ave. Extension)	Poplar St. and North St.	0.5	1	1	0
13	SW Meadville	SR 6 EB (Conneaut Lake Rd.)	Dawn Dr. and I-79	0.6	1	1	0
14	S Meadville	SR 322 (Cochranton Rd.)	North of McHenry St.	0.6	1	1	0
15	Meadville	SR 2012 (Chestnut Rd.)	South Main St. and Ernst Pl.	0.5	1	1	0
16	SW Meadville	SR 19 (Perry Highway)	McMath Ave. and Patricia Rd.	0.5	3	0	0
17	S Titusville	SR 8 (Franklin St.)	Dewey Rd. and St. John St.	0.4	1	1	0
18	Conneaut Lake	SR 6 (Water St.)	West of SR 618 and East of Ninth St.	0.7	1	1	0
19	Cussewago Twp.	SR 98	North of Center Rd.	0.3	1	1	0
20	Linesville	SR 6 (Penn St.)	Church St. and Erie St.	0.3	1	1	0

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

C. High Injury Network Top 10 Locations - Countermeasure Profiles

SR 0018

Sadsbury Township

Crawford County

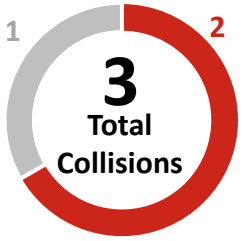
Length of the Corridor

- Access Management - Driveways
- Pedestrian Walkways
- Pedestrian Warning Advanced Signage
- Lighting
- Update Pavement Markings
- Engineering Study for Placement of High Visibility Crosswalk(s) with RRFB
- Engineering Speed Study to Evaluate Posted Speed Limit *(and need for traffic calming)*

Countermeasures

- Access Management - Driveways
- Walkways
- Pedestrian Warning Advanced Signage
- Lighting
- Update Pavement Markings
- Engineering Study for Placement of High Visibility Crosswalk(s) with RRFB
- Engineering Study to Evaluate Posted Speed Limit

Collision History (2019-2023)



- Fatal or Severe Injury
- All Other Injury
- Property Damage Only

	Total Collisions	Fatal or Severe Injury
	1	0
	0	0
	0	0
	2	2

Notable Collision Patterns

- Hit Non-Motorist
- Dark Illumination

Planning References

- N/A

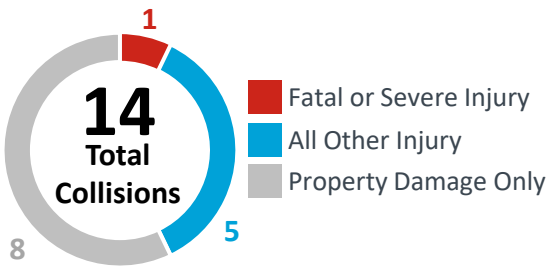
Central Ave (SR 0027)

Titusville
Crawford County

Countermeasures

- High Visibility Crosswalks
- Engineering Study to Identify Traffic Calming Measures for Speed Management
- Rectangular Rapid Flashing Beacon (RRFB)
- Reconfigure Intersection Approach
- Engineering Study for Placement of High Visibility Crosswalk with RRFB (at Murdock Blvd.)

Collision History (2019-2023)



	Total Collisions	Fatal or Severe Injury
	11	0
	0	0
	0	0
	3	1

Notable Collision Patterns

Hit Non-Motorist

Rear End at Crosswalk

Angle at Stop-Controlled

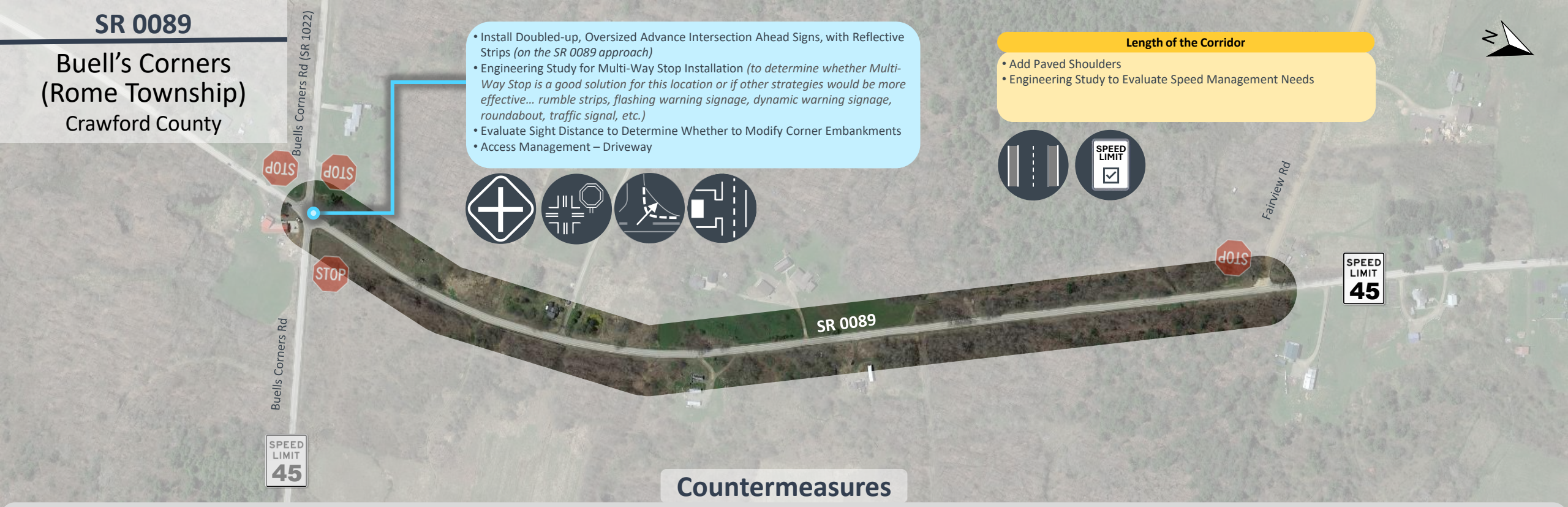
Planning References

- Previous Titusville School District Safe Routes to School Initiatives

SR 0089

Buell's Corners (Rome Township)

Crawford County



- Install Doubled-up, Oversized Advance Intersection Ahead Signs, with Reflective Strips *(on the SR 0089 approach)*
- Engineering Study for Multi-Way Stop Installation *(to determine whether Multi-Way Stop is a good solution for this location or if other strategies would be more effective… rumble strips, flashing warning signage, dynamic warning signage, roundabout, traffic signal, etc.)*
- Evaluate Sight Distance to Determine Whether to Modify Corner Embankments
- Access Management – Driveway

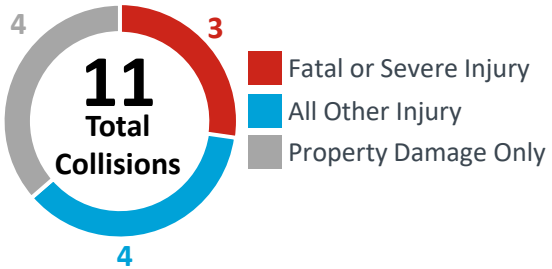
Length of the Corridor

- Add Paved Shoulders
- Engineering Study to Evaluate Speed Management Needs

Countermeasures

- Add Paved Shoulders
- Engineering Study to Evaluate Speed Management Needs
- Install Doubled-up, Oversized Advance Intersection Ahead Signs, with Reflective Strips
- Engineering Study for Multi-Way Stop Installation
- Evaluate Sight Distance to Determine Whether to Modify Corner Embankments
- Access Management – Driveway

Collision History (2019-2023)



	Total Collisions	Fatal or Severe Injury
	9	3
	1	0
	0	0
	0	0
	1	0

Notable Collision Patterns

- Horse and Buggy
- Angle at Stop-Controlled
- Hit Fixed Object

Planning References

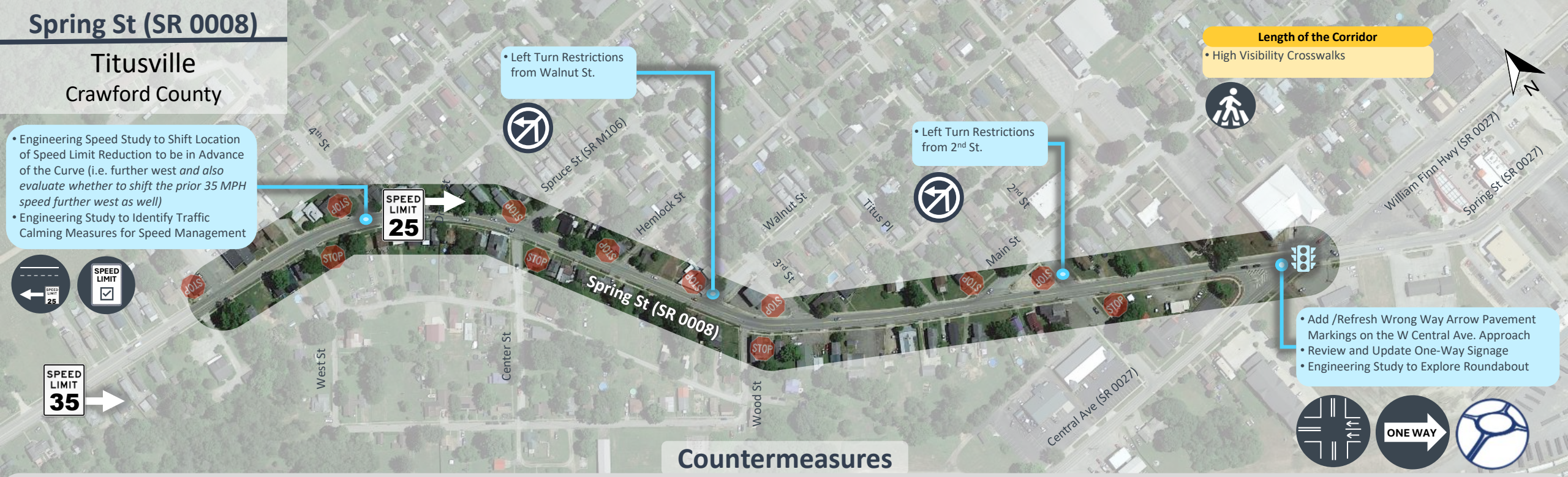
- 2024/2025 - PennDOT District 1-0 Intersection Improvement Activities: removing vegetation to improve corner sight distance on SR 1022, doubled-up solar LED Stop signs with reflective strips, and doubled-up Stop Ahead signs with reflective strips

(note: a second stop sign was unable to be installed on the westbound Buells Corner Rd (SR 1022) approach, due to the current business' driveway access design)

Spring St (SR 0008)

Titusville

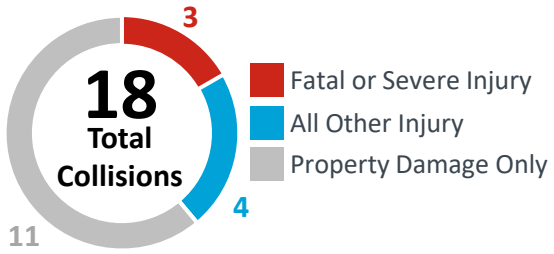
Crawford County



Countermeasures

- High Visibility Crosswalks
- Left-Turn Restrictions
- Engineering Speed Study to Shift Location of Speed Limit Reduction
- Engineering Study to Identify Traffic Calming Measures for Speed Management
- Wrong Way Arrow Pavement Markings
- Review and Update One-Way Signage
- Engineering Study to Explore Roundabout

Collision History (2019-2023)



	Total Collisions	Fatal or Severe Injury
	17	2
	0	0
	1	1
	0	0

Notable Collision Patterns

Rear End Collision

Angle at Stop-Controlled

Head On Collision

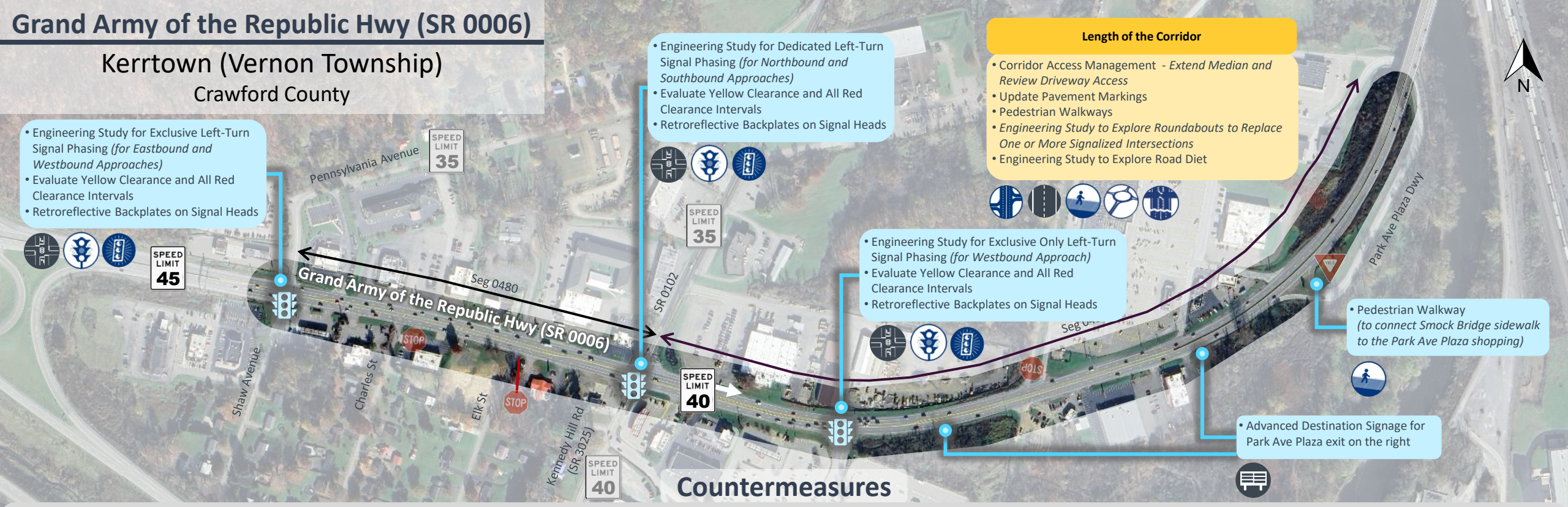
Planning References

- TIP Future Development
  - SR 0008 Highway Restoration
- Erie to Pittsburgh Trail Extension through City of Titusville *(one proposed route option is on/crosses this section of SR 0008)*
- *Northwest of the Project Area: Oil Creek Township is looking to add sidewalks on SR 0008 near Walmart*

Grand Army of the Republic Hwy (SR 0006)

Kerrtown (Vernon Township)

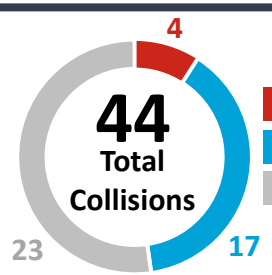
Crawford County



Countermeasures

- Corridor Access Management
- Update Pavement Markings
- Pedestrian Walkways
- Advanced Destination Signage
- *Engineering Study to Explore Roundabouts to Replace One or More Signalized Intersections*
- Dedicated/Exclusive/Exclusive-Only Left-Turn Signal Phasing
- Retroreflective Backplates on Signal Heads
- Evaluate Yellow Clearance and All Red Clearance Intervals
- Engineering Study to Explore Road Diet

Collision History (2019-2023)



- Fatal or Severe Injury
- All Other Injury
- Property Damage Only

	Total Collisions	Fatal or Severe Injury
	42	3
	0	0
	0	0
	2	1

Seg 0480: 20 Collisions
Seg 0490: 24 Collisions

Notable Collision Patterns

- Angle at Signal
- Rear End Collision
- Collisions at Driveways
- Speeding
- Red Light Running

Planning References

- Meadville Traffic/Land Use Study for SR 19/SR 98/ US 6/322 Corridor (Meadville (Vernon) Traffic Land Use Report SR19-98,US6-322.pdf)
- Upcoming CATA Initiative: install a new pull-off bus stop between Shaw Avenue and Charles St.
- PennDOT District 1-0 Network Screening Profile (for the intersection at Pennsylvania Ave./Shaw Ave.)

Park Ave (SR 1001)

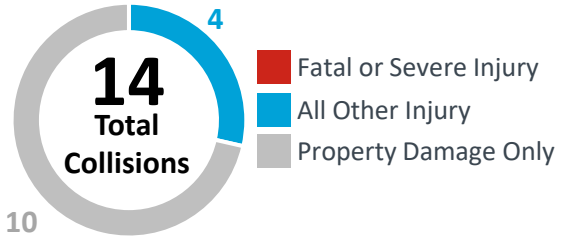
Meadville

Crawford County

Countermeasures

- High Visibility Crosswalks
- Define Travelway (Stripe Shoulder/Parking Lane)
- Engineering Study to Extend 25 MPH Speed Limit
- Evaluate Whether to Add Bicycle Facilities
- Evaluate Yellow Clearance Intervals
- Visually Reduce Corner Curb Radius on All Corners
- Engineering Study to Evaluate Potential Signalization
- Engineering Study to Identify Traffic Calming Measures for Speed Management

Collision History (2019-2023)



	Total Collisions	Fatal or Severe Injury
	12	0
	0	0
	2	0
	0	0

Notable Collision Patterns

Angle at Stop-Controlled

Angle at Signal

Bicycle Involved Collision

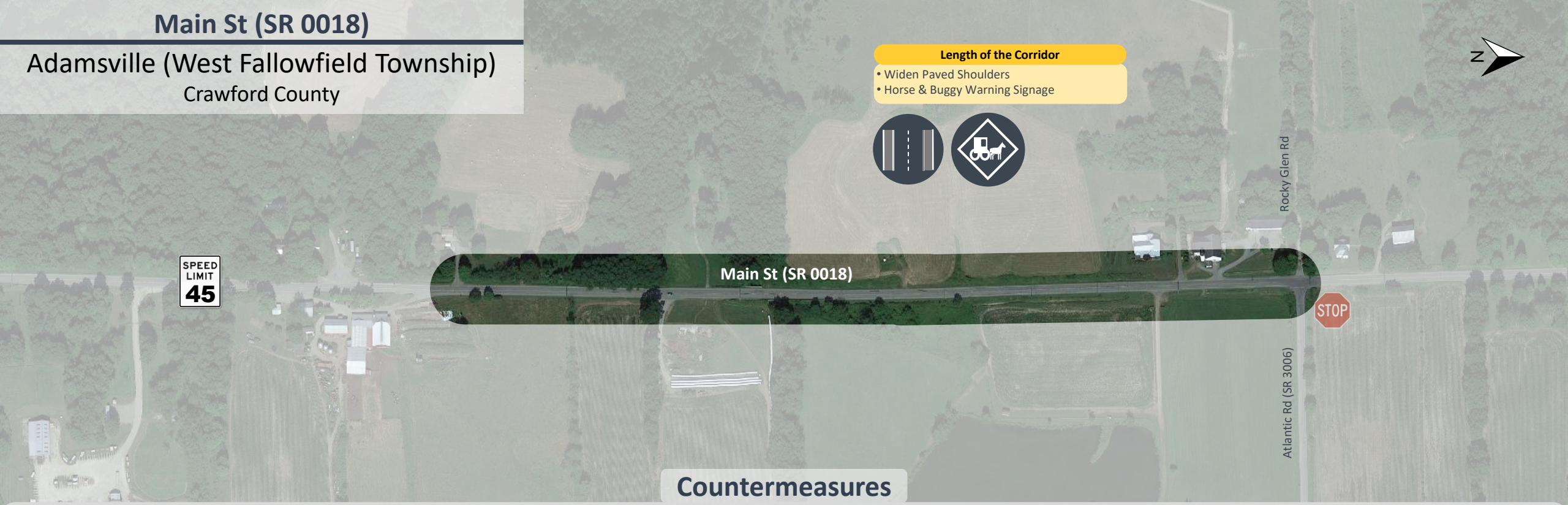
Planning References

- N/A

Main St (SR 0018)

Adamsville (West Fallowfield Township)

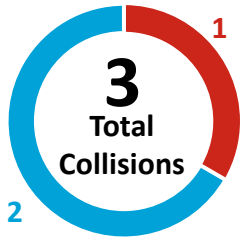
Crawford County



Countermeasures

- Widen Paved Shoulders
- Horse & Buggy Warning Signage

Collision History (2019-2023)



	Total Collisions	Fatal or Severe Injury
	1	0
	0	0
	0	0
	0	0
	2	1

Notable Collision Patterns

Horse and Buggy

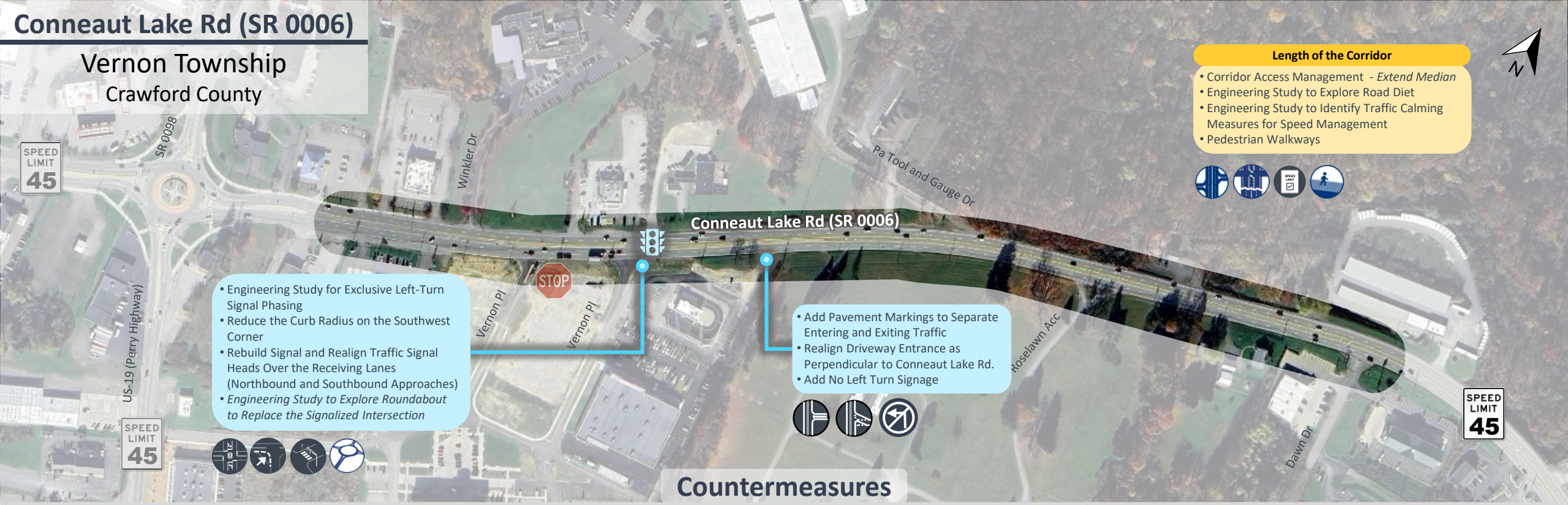
Planning References

- TIP Future Development
  - SR 0018 Highway Restoration
  - Bridge Preservation – Scour Protection

Conneaut Lake Rd (SR 0006)

Vernon Township

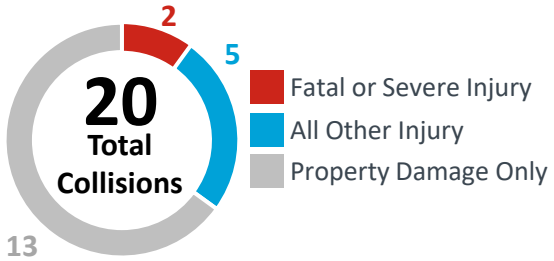
Crawford County



Countermeasures

- Corridor Access Management
- Engineering Study to Explore Road Diet
- Add Pavement Markings to Separate Entering and Exiting Traffic
- Realign Driveway Entrance as Perpendicular to Conneaut Lake Rd.
- Add No Left Turn Signage
- Pedestrian Walkways
- Engineering Study for Exclusive Left-Turn Signal Phasing
- Reduce Curb Radius at Signal
- Rebuild Signal and Realign Traffic Signal Heads Over the Receiving Lanes
- *Engineering Study to Explore Roundabout to Replace the Signalized Intersection*
- Engineering Study to Identify Traffic Calming Measures for Speed Management

Collision History (2019-2023)



	Total Collisions	Fatal or Severe Injury
	18	1
	1	1
	1	0
	0	0

Notable Collision Patterns

Collisions at Driveways | Same Direction Side Swipes | Rear End Collisions | Angle Collisions | Head On Collision

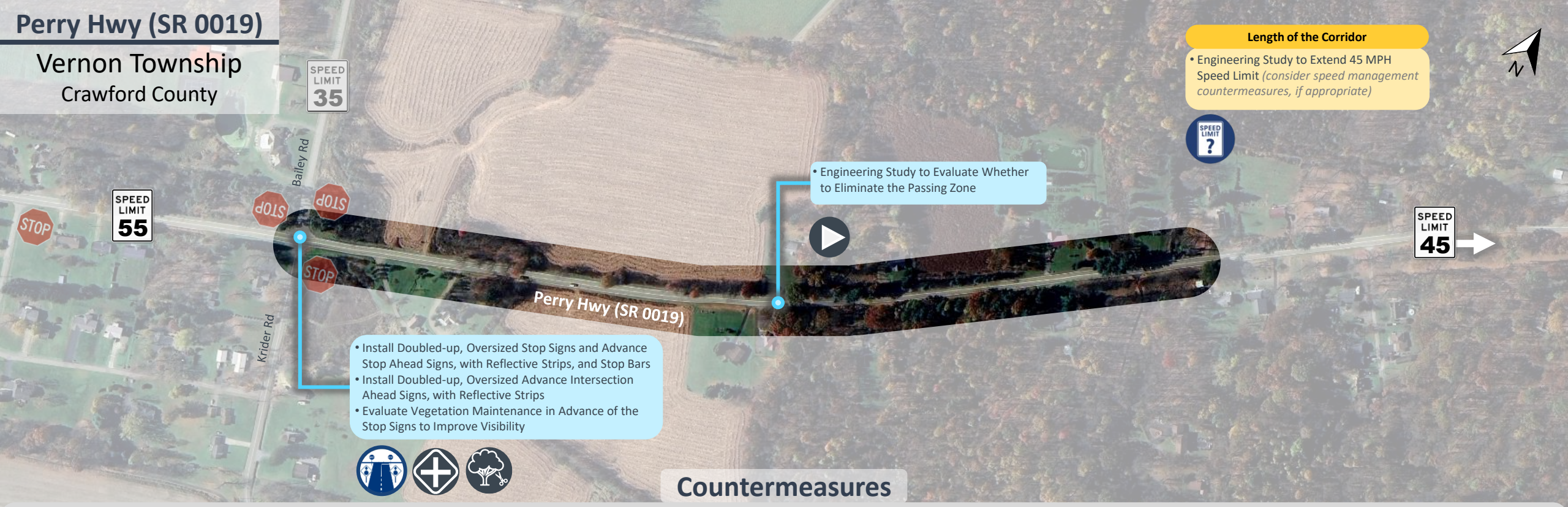
Planning References

- Meadville Traffic/Land Use Study for SR 19/SR 98/ US 6/322 Corridor (Meadville (Vernon) Traffic Land Use Report SR19-98,US6-322.pdf)

Perry Hwy (SR 0019)

Vernon Township

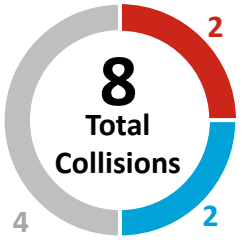
Crawford County



Countermeasures

- Engineering Study to Extend 45 MPH Speed Limit
- Engineering Study to Evaluate Whether to Eliminate the Passing Zone
- Install Doubled-up, Oversized Stop Signs and Advance Stop Ahead Signs, with Reflective Strips, and Stop Bars
- Install Doubled-up, Oversized Advance Intersection Ahead Signs, with Reflective Strips
- Evaluate Vegetation Maintenance in Advance of the Stop Signs to Improve Visibility

Collision History (2019-2023)



- Fatal or Severe Injury
- All Other Injury
- Property Damage Only

	Total Collisions	Fatal or Severe Injury
Motor Vehicle	7	1
Motorcycle	0	0
Bicycle	0	0
Pedestrian	1	1

Notable Collision Patterns

- Angle at Stop-Controlled
- Hit Fixed Object
- Deer Related

Planning References

- TIP in Development
  - SR 0019 Highway Resurfacing
- Ernst Trail extension crossing of SR 0019 located about a half mile south of this segment *(discussions amongst trail advocates that a vertically separated crossing would reduce conflicts between drivers and trail users)*

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

Crawford County Safety Action Plan - High Injury Network Top 10 Locations

Project Profiles Table

Location Information				Countermeasure Information		Implementation Information				
Top 10 Rating	**Project Area**	**Jurisdiction**	**Location**	**Countermeasure**	**FHWA Proven Safety Countermeasure**	**Implementation Horizon**	**Lead Organization**	**Supporting Organization(s)**	**2025 Planning Level Cost Estimate Range***	**Potential Funding Sources**
1	SR 18 Segment 0120 (between Shady Ave. and Edgeview Ave.)	Conneaut Lake	Length of Corridor	•Access Management - Driveways		Medium Term / Long Term	Conneaut Lake	Crawford County, PennDOT	High/Very High	Multimodal Transportation Fund
				•Pedestrian Walkways	Yes	Medium Term	Conneaut Lake	Crawford County, PennDOT	High	Multimodal Transportation Fund, Transportation Alternatives Set Aside Funding
				•Pedestrian Warning Advanced Signage		Short Term	PennDOT		Low	
				•Lighting	Yes	Medium Term	PennDOT		Medium	Multimodal Transportation Fund
				•Update Pavement Markings		Short Term	PennDOT		Low	
				•Engineering Study for Placement of High Visibility Crosswalk(s) with RRFB	Yes	Short Term	Conneaut Lake	Crawford County, PennDOT	Low	ARLE Funding
				•Engineering Speed Study to Evaluate Posted Speed Limit (and need for traffic calming)	Yes	Short Term	PennDOT	Conneaut Lake, Crawford County	Low	
2	SR 27 Segment 0490 Central Ave. (between Diamond St. and Caldwell St.)	Titusville	Length of Corridor	•High Visibility Crosswalks	Yes	Short Term	Titusville	Crawford County, PennDOT	Low	ARLE Funding, Multimodal Transportation Fund
				•Engineering Study to Identify Traffic Calming Measures for Speed Management	Yes	Medium Term	Titusville	Crawford County, PennDOT	Low	
			Intersection at Drake St.	•Access Management – Driveway (Gas Station on NE Corner)		Medium Term / Long Term	Titusville	Crawford County, PennDOT	Medium	
			Intersection at Kerr St.	•Rectangular Rapid Flashing Beacon (RRFB)	Yes	Short Term	Titusville	Crawford County, PennDOT	Low	ARLE Funding, Multimodal Transportation Fund
			Intersection at Murdock Blvd.	•Reconfigure Intersection Approach for Main St.		Medium Term	PennDOT	Titusville, Crawford County	Very High	Multimodal Transportation Fund
				•Engineering Study for Placement of High Visibility Crosswalk with RRFB (at Murdock Blvd.)	Yes	Short Term	Titusville	Crawford County, PennDOT	Low	ARLE Funding
3	SR 89 Segment 0220 (between Fairview Rd. and Buells Corners Rd.)	Buell's Corners	Length of Corridor	•Add Paved Shoulders		Medium Term	PennDOT		High/Very High	
				•Engineering Study to Evaluate Speed Management Needs	Yes	Short Term	PennDOT	Buells Corner, PennDOT	Low	
			Intersection at Buells Corners Rd. (SR 1022)	•Doubled-up, Oversized Advance Intersection Ahead Signs, with Reflective Strips (on the SR 0089 approach)	Yes	Short Term	PennDOT		Low	
				•Engineering Study for Multi-Way Stop Installation (to determine whether Multi-Way Stop is a good solution for this location or if other strategies would be more effective… rumble strips, flashing warning signage, dynamic warning signage, roundabout, traffic signal, etc.)		Short Term	Crawford County	Buells Corner, PennDOT	Low	
				•Evaluate Whether to Modify Corner Embankments to Improve Sight Distance		Short Term	PennDOT		Low	
				•Access Management – Driveway		Medium Term / Long Term	Crawford County	Buells Corner, PennDOT	High	
4	SR 8 Segment 0040 Spring St. (between Schwartz Lane and West Central Ave.)	Titusville	Length of Corridor	•High Visibility Crosswalks	Yes	Short Term	Titusville	Crawford County, PennDOT	Low	ARLE Funding, Multimodal Transportation Fund
			Northeastern End	•Engineering Speed Study to Shift Location of Speed Limit Reduction to be in Advance of the Curve (i.e. further west and also evaluate whether to shift the prior 35 MPH speed further west as well)		Short Term	PennDOT	Titusville, Crawford County	Low	
				•Engineering Study to Identify Traffic Calming Measures for Speed Management	Yes	Medium Term	PennDOT	Titusville, Crawford County	Low	
			Intersection at Walnut St.	Left Turn Restrictions from Walnut St.		Short Term	PennDOT	Titusville, Crawford County	Low	
			Intersection at 2nd St.	Left Turn Restrictions from 2nd St.		Short Term	PennDOT	Titusville, Crawford County	Low	
			Intersection at Central Ave./ William Finn Hwy. (SR 27)	•Add /Refresh Wrong Way Arrow Pavement Markings on the W Central Ave. Approach		Short Term	PennDOT		Low	
				•Review and Update One-Way Signage		Short Term	PennDOT		Low	
				•Engineering Study to Explore Roundabout	Yes	Long Term	Crawford County	Titusville, PennDOT	Medium	

Crawford County Safety Action Plan - High Injury Network Top 10 Locations

Project Profiles Table -- Continued

Location Information				Countermeasure Information		Implementation Information				
Top 10 Rating	**Project Area**	**Jurisdiction**	**Location**	**Countermeasure**	**FHWA Proven Safety Countermeasure**	**Implementation Horizon**	**Lead Organization**	**Supporting Organization(s)**	**2025 Planning Level Cost Estimate Range***	**Potential Funding Sources**
5 & 6	SR 6 EB Segment 0490 Smock Highway (between Pennsylvania Ave. and the French Creek Bridge)	Kerrtown	Length of Corridor	•Corridor Access Management - Extend Median and Review Driveway Access		Medium Term / Long Term	Crawford County	Kerrtown, PennDOT	High/Very High	
				•Update Pavement Markings		Short Term	PennDOT		Medium	
				•Pedestrian Walkways	Yes	Medium Term	Kerrtown	Crawford County, PennDOT	Very High	Multimodal Transportation Fund, Transportation Alternatives Set Aside Funding
				•Engineering Study to Explore Roundabouts to Replace One or More Signalized Intersections	Yes	Long Term	Crawford County	Kerrtown, PennDOT	Medium	
				•Engineering Study to Explore Road Diet	Yes	Medium Term	Crawford County	Kerrtown, PennDOT	Medium	
			Intersection at Pennsylvania Ave./ Shaw Ave.	•Engineering Study for Exclusive Left-Turn Signal Phasing (for Eastbound and Westbound Approaches)		Medium Term	Kerrtown	PennDOT	Low	Green Light-Go Funding
				•Evaluate Yellow Clearance and All Red Clearance Intervals	Yes	Short Term	Kerrtown	PennDOT	Low	Green Light-Go Funding
				•Retroreflective Backplates on Signal Heads	Yes	Short Term	Kerrtown	PennDOT	Low	ARLE Funding
			Intersection at Mercer Pike (SR 101) / Kennedy Hill Rd. (SR 3025)	•Engineering Study for Dedicated Left-Turn Signal Phasing (for Northbound and Southbound Approaches)	Yes	Medium Term	Kerrtown	PennDOT	Low	Green Light-Go Funding
				•Evaluate Yellow Clearance and All Red Clearance Intervals	Yes	Short Term	Kerrtown	PennDOT	Low	Green Light-Go Funding
				•Retroreflective Backplates on Signal Heads	Yes	Short Term	Kerrtown	PennDOT	Low	ARLE Funding
			Home Depot Driveway Entrance	•Engineering Study for Exclusive Only Left-Turn Signal Phasing (for Southbound Approach)	Yes	Medium Term	Kerrtown	PennDOT	Low	Green Light-Go Funding
				•Evaluate Yellow Clearance and All Red Clearance Intervals	Yes	Short Term	Kerrtown	PennDOT	Low	Green Light-Go Funding
				•Retroreflective Backplates on Signal Heads	Yes	Short Term	Kerrtown	PennDOT	Low	ARLE Funding
			Between Home Depot Driveway and Park Ave. Plaza Driveway Exit	•Advanced Destination Signage for Park Ave Plaza exit on the right		Short Term	PennDOT		Low	
			Park Ave. Plaza Driveway Exit	•Pedestrian Walkway (to connect Smock Bridge sidewalk to the Park Ave Plaza shopping)	Yes	Medium Term	Kerrtown	Crawford County, PennDOT	High/Very High	Multimodal Transportation Fund
7	SR 1001 Segment 0030 Park Ave. (between Baldwin St. and North St.)	Meadville	Length of Corridor	•High Visibility Crosswalks	Yes	Short Term	Meadville	Crawford County, PennDOT	Low	ARLE Funding, Multimodal Transportation Fund
				•Engineering Study to Extend 25 MPH Speed Limit	Yes	Short Term	PennDOT	Meadville, Crawford County	Low	
				•Evaluate Whether to Add Bicycle Facilities	Yes	Medium Term	Meadville	Crawford County, PennDOT	Low	ARLE Funding, Multimodal Transportation Fund
				•Engineering Study to Identify Traffic Calming Measures for Speed Management	Yes	Medium Term	PennDOT	Meadville, Crawford County	Low	
			Intersection at North St. (SR 27)	•Evaluate Yellow Clearance Intervals	Yes	Short Term	Meadville	Crawford County, PennDOT	Low	Green Light-Go Funding
				•Visually Reduce Corner Curb Radius on All Corners (through pavement marking and/or colored surface treatments)"		Short Term	PennDOT	Meadville, Crawford County	Low	ARLE Funding
			Intersection at Randolph St.	•Engineering Study to Evaluate Potential Signalization (or Simply Increased Stop Sign Visibility Measures)		Medium Term	Meadville	Crawford County, PennDOT	Low	ARLE Funding
8	SR 18 Segment 0030 Main St. (between Atlantic Rd. and Salem Hardwood Location	Adamsville	Length of Corridor	•Widen Paved Shoulders		Medium Term	PennDOT		High/Very High	
				•Horse & Buggy Warning Signage		Short Term	PennDOT		Low	

Crawford County Safety Action Plan - High Injury Network Top 10 Locations

Project Profiles Table -- Continued

Location Information				Countermeasure Information		Implementation Information				
Top 10 Rating	**Project Area**	**Jurisdiction**	**Location**	**Countermeasure**	**FHWA Proven Safety Countermeasure**	**Implementation Horizon**	**Lead Organization**	**Supporting Organization(s)**	**2025 Planning Level Cost Estimate Range***	**Potential Funding Sources**
9	SR 6 EB Segment 0450 Conneaut Lake Rd. (between Perry Highway and Dawn Dr.)	Vernon Township	Length of Corridor	•Corridor Access Management - Extend Median		Medium Term	PennDOT		High	
				•Engineering Study to Explore Road Diet	Yes	Medium Term	Crawford County	PennDOT	Medium	
				•Engineering Study to Identify Traffic Calming Measures for Speed Management	Yes	Medium Term	Crawford County	PennDOT	Low	
			Intersection at Vernon Pl.	•Engineering Study for Exclusive Left-Turn Signal Phasing	Yes	Medium Term	Vernon Twp.	PennDOT	Low	Green Light-Go Funding
				•Reduce the Curb Radius on the Southwest Corner		Medium Term	PennDOT	Vernon Twp., Crawford County	Medium	ARLE Funding
				•Rebuild Signal and Realign Traffic Signal Heads Over the Receiving Lanes (Northbound and Southbound Approaches)		Medium Term	Vernon Twp.	PennDOT	Medium	ARLE Funding
				•Engineering Study to Explore Roundabout to Replace the Signalized Intersection	Yes	Long Term	Crawford County	Vernon Twp., PennDOT	Medium	
			Chipotle & Sears Appliance Center Driveway	•Add Pavement Markings to Separate Entering and Exiting Traffic		Short Term	Vernon Twp.	PennDOT	Low	
				•Realign Driveway Entrance as Perpendicular to Conneaut Lake Rd.		Medium Term	Vernon Twp.	PennDOT	High	
				•Add No Left Turn Signage		Short Term	PennDOT		Low	
10	SR 19 Segment 0180 Perry Highway (between Krider Rd./Bailey Rd. and Ridge Dr.)	Vernon Township	Length of Corridor	•Engineering Study to Extend 45 MPH Speed Limit (consider speed management countermeasures, if appropriate)	Yes	Short Term	PennDOT		Low	
			Intersection at Krider Rd./ Bailey Rd.	•Doubled-up, Oversized Stop Signs and Advance Stop Ahead Signs, with Reflective Strips, and Stop Bars	Yes	Short Term	PennDOT		Low	
				•Doubled-up, Oversized Advance Intersection Ahead Signs, with Reflective Strips	Yes	Short Term	PennDOT		Low	
				Evaluate Vegetation Maintenance in Advance of the Stop Signs to Improve Visibility		Short Term	PennDOT		Low	
			Passing Zone	•Engineering Study to Evaluate Whether to Eliminate the Passing Zone		Short Term	PennDOT		Low	

**Reference Table for 2025 Planning Level Cost Estimate Range:*

Low	< $50k
Medium	$50k - $500k
High	$500k - $1M
Very High	> $1M

E. Infrastructure & Engineering Countermeasure Toolkit for Systemic Issues

INFRASTRUCTURE & ENGINEERING COUNTERMEASURE TOOLKIT FOR SYSTEMIC ISSUES

Developed for the Crawford County Safety Action Plan

Table of Contents

Introduction **2**
Purpose 2
Systemic Issues Included 2
Infrastructure Countermeasures **2**
Impaired Driving Crashes 4
Single Vehicle Run-Off-The-Road Crashes 5
Speeding-Related Crashes 6
Curved Road Crashes 7
Unsignalized Intersection Crashes 8
Non-Motorist Crashes 9
Motorcycle Crashes 10
Wet & Dark Road Conditions 11
Implementation Best Practices **12**
Transportation Planning & PennDOT Connects Meetings 12

Introduction

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

Purpose

This toolkit provides a menu of effective infrastructure and engineering countermeasures that can be applied systemically to address safety concerns, along with recommended implementation best practices for moving safety efforts forward. The goal is to provide consistent guidance for local officials and planning partners as the County works to tackle systemic safety issues.

Some of these countermeasures may already have been applied at specific locations within the County, but there may be additional, systemic opportunities that could be explored.

Systemic Issues Included

These systemic trends represent issues that are present across the county's transportation system, not limited to a specific location:

- Impaired driving crashes
- Single vehicle run-off-the-road crashes
- Speeding-related crashes
- Curved road crashes
- Unsignalized intersection crashes
- Non-motorist crashes
- Motorcycle crashes
- Wet & dark road condition crashes

Infrastructure Countermeasures

There are a variety of infrastructure strategies that can be applied systemically to a transportation system.

Systemic applications can take a few different forms:

- Large projects to apply the same countermeasure in multiple locations across a region (for example, a project that installs the same countermeasure treatment or combination of treatments at all unsignalized intersections across a High Injury Network corridor that meet specific criteria).
- One-by-one implementation of the same strategy over time in multiple locations across a region (for example, applying the same countermeasure at all locations that meet the criteria whenever the location receives its regular roadway maintenance – like resurfacing or restriping – or receives other un-related upgrades).
- Default infrastructure solutions: another way to think about these systemic countermeasures is to consider them "default" infrastructure solutions. Instead of identifying where to apply them, it's determined where *not* to apply them (for example, defaulting to high-visibility crosswalk pavement markings when installing a new crosswalk).

For Any of these Systemic Applications:

For each location under consideration, it is recommended that a transportation/traffic engineer evaluate the relevant infrastructure and engineering countermeasure list(s) to identify which countermeasures are most appropriate for the specific location context and site characteristics.

Local officials and planning partners will also need to coordinate closely with the relevant roadway owners.

FHWA Proven Safety Countermeasures

The Federal Highway Administration (FHWA) maintains a list of 'Proven Safety Countermeasures' (PSCs) that are proven to offer significant, measurable impacts on safety. These countermeasures are data-driven and broadly applicable to many different roadway types and contexts.

Note: while there are currently 28 countermeasures included in their list, FHWA updates the list regularly (as more data comes to light), so it's best to review it regularly to see if any have been added or removed.

FHWA strongly encourages transportation agencies to consider widespread implementation of these PSCs to accelerate the achievement of safety goals. The PSCs for each systemic issue are highlighted within this toolkit to draw emphasis to these countermeasures.

FHWA has a variety of different resources that provide more information on these PSCs:

- Website: https://highways.dot.gov/safety/proven-safety-countermeasures
- Resources Website: https://highways.dot.gov/safety/proven-safety-countermeasures/proven-safety-countermeasures-resources
- Proven Safety Countermeasure Booklet: https://highways.dot.gov/sites/fhwa.dot.gov/files/Proven%20Safety%20Countermeasures%20Booklet_0.pdf
- Overview Video: https://www.youtube.com/watch?v=bxrMmdaLdko
- And more!

Image Source: FHWA Proven Safety Countermeasure Booklet (2021).

Impaired Driving Crashes

Impaired Driving is a significant transportation safety issue in Crawford County. They represent 13% of all non-interstate crashes and 30% of the fatal and serious injury non-interstate crashes.

Recommended countermeasures for this crash type include:

- Safety Edge*
- Add or Widen Shoulders / Provide Clear Zone*
- Centerline and/or Shoulder Rumble Strips*
- Median and/or Shoulder Barriers (if warrants are met)

**FHWA Proven Safety Countermeasure*

Single Vehicle Run-Off-The-Road Crashes

Single vehicle run-off-the-road crashes are a significant transportation safety issue in Crawford County. They represent 50% of all non-interstate crashes and 53% of the fatal and serious injury non-interstate crashes.

Recommended countermeasures for this crash type include:

- Enhanced Curve Delineation*
- High-Friction Surface Treatment*
- Safety Edge*
- Add or Widen Shoulders / Provide Clear Zone*
- Wider Edge Lines*
- Shoulder Rumble Strips*
- Speed Management / Appropriate Speed Limits*
- Barriers (if warrants are met)

**FHWA Proven Safety Countermeasure*

Speeding-Related Crashes

Speeding is a significant transportation safety issue in Crawford County. Speeding-related crashes represent 23% of all non-interstate crashes and 27% of the fatal and serious injury non-interstate crashes.

Recommended countermeasures for this crash type include:

- Speed Management / Appropriate Speed Limits*
- Traffic Calming Infrastructure
- Active ITS Device – Dynamic Speed Feedback Sign

**FHWA Proven Safety Countermeasure*

Curved Road Crashes

Curved road crashes are a significant transportation safety issue in Crawford County. They represent 20% of all non-interstate crashes and 24% of the fatal and serious injury non-interstate crashes.

Recommended countermeasures for this crash type include:

Hit-Fixed-Object Crashes

- Enhanced Curve Delineation*
- High-Friction Surface Treatment*
- Safety Edge*
- Add or Widen Shoulders / Provide Clear Zone*
- Wider Edge Lines*
- Shoulder Rumble Strips*
- Speed Management / Appropriate Speed Limits*
- Active ITS Device – Dynamic Speed Feedback Sign
- Barriers (if warrants are met)

**FHWA Proven Safety Countermeasure*

Head-On Crashes

- Centerline rumble strips*
- Median Barriers (if warrants are met)

**FHWA Proven Safety Countermeasure*

Unsignalized Intersection Crashes

Curved road crashes are a significant transportation safety issue in Crawford County. They represent 23% of all non-interstate crashes and 22% of the fatal and serious injury non-interstate crashes.

Recommended countermeasures for this crash type include:

- Doubled-Up (Left and Right), Oversized Stop Signs with Retroreflective Sheeting on Sign Posts*
- Doubled-Up (Left and Right), Oversized Warning Signs with Retroreflective Sheeting on Sign Posts*
- Update Edge Line Striping*
- Properly Placed Stop Bar*
- Removal of Vegetation or Obstructions in Sight Lines*
- Double Arrow Warning Sign at T-intersections*
- Lighting*
- Active ITS Device – Approaching Vehicle Detection/Warnings
- Roundabouts*

**FHWA Proven Safety Countermeasure*

Non-Motorist Crashes

Non-motorist crashes are a systemic transportation safety issue in Crawford County. While they represent only 2% of all non-interstate crashes, they account for 8% of the fatal and serious injury non-interstate crashes.

Recommended countermeasures for this crash type include:

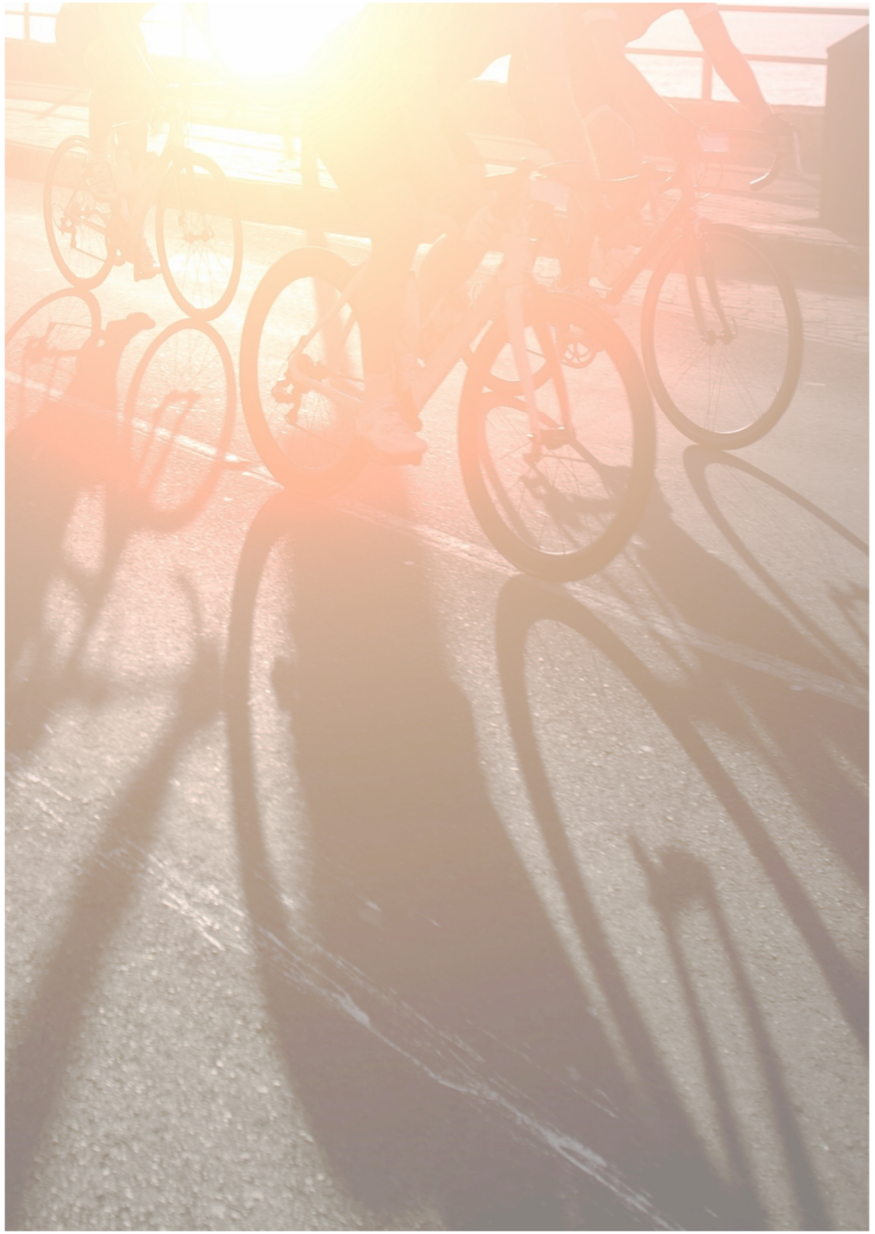
Pedestrians Crashes:

- Walkways*
- Medians and Pedestrian Refuge Islands in Urban and Suburban Areas*
- Crosswalk Visibility Enhancements*
- Rectangular Rapid Flashing Beacons (RRFB)*
- Leading Pedestrian Interval*
- Lighting*
- Speed Management / Appropriate Speed Limits*

Bicyclist Crashes:

- Road Diets*
- Bicycle Lanes*

**FHWA Proven Safety Countermeasure*



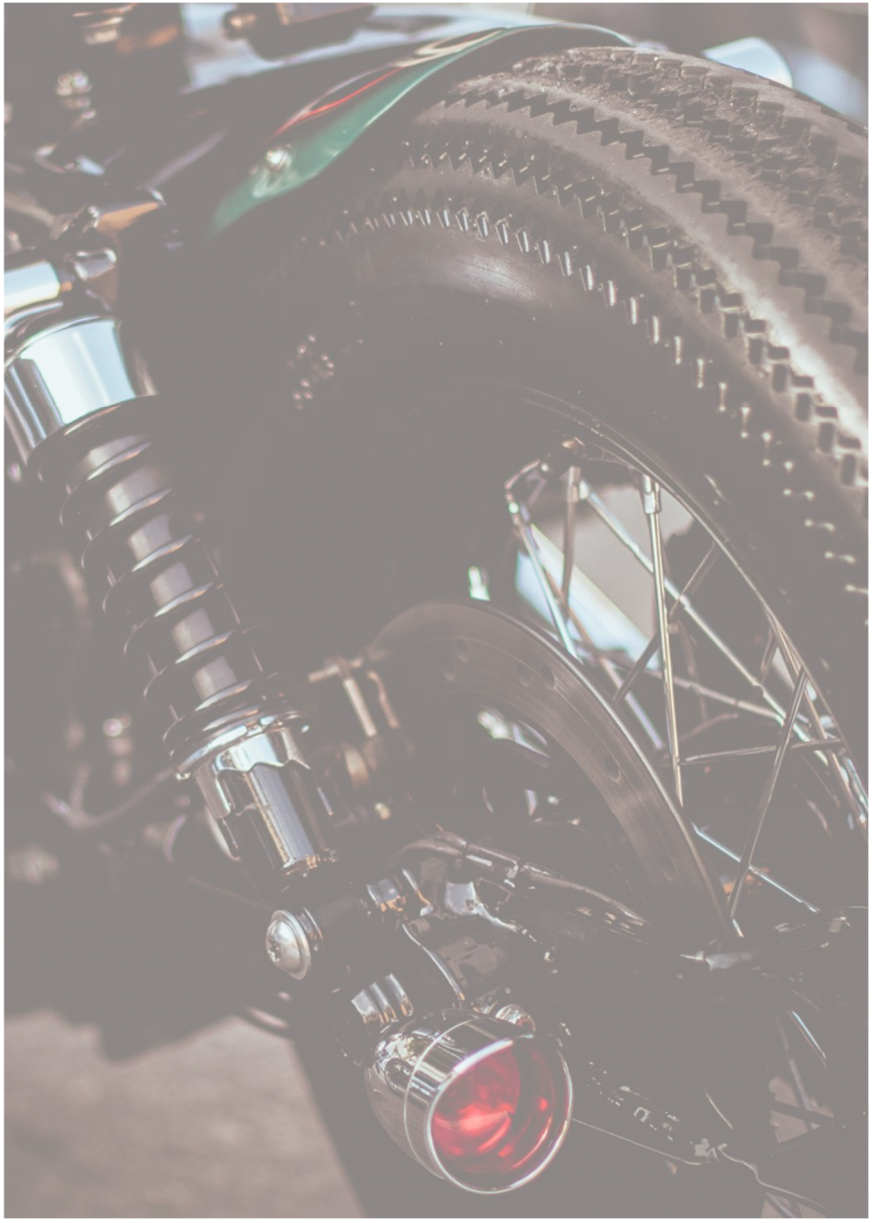
Motorcycle Crashes

Motorcycle crashes are a systemic transportation safety issue in Crawford County. While they represent only 4% of all non-interstate crashes, they account for 14% of the fatal and serious injury non-interstate crashes.

Recommended countermeasures for this crash type include:

- High-Friction Surface Treatment*
- Enhanced Curve Delineation*
- Add or Widen Shoulders / Provide Clear Zone*
- Active ITS Device – Dynamic Speed Feedback Sign
- Speed Management / Appropriate Speed Limits*

**FHWA Proven Safety Countermeasure*



Wet & Dark Road Conditions

Crashes with wet and/or dark road conditions are a systemic transportation safety issue in Crawford County. Crashes with wet road conditions account for 18% of all non-interstate crashes and 18% of the fatal and serious injury non-interstate crashes. Crashes with dark conditions crashes account for 26% of all non-interstate crashes and 25% of the fatal and serious injury non-interstate crashes.

Recommended countermeasures for this crash type include:

- Reflectors / Delineators*
- Retroreflective Pavement Markings
- Retroreflective Traffic Signal Backplates*
- Lighting*
- High-Friction Surface Treatment*

**FHWA Proven Safety Countermeasure*

Implementation Best Practices

These best practices highlight strategies that local officials can leverage to help advance safety countermeasures on the roadways within their purview.

Transportation Planning & PennDOT Connects Meetings

Before the Meeting

Review the Safety Action Plan (SAP) and identify whether the project/study location:

- falls within the High Injury Network (https://tmp-map.s3.amazonaws.com/ss4a/crawford-sap.html)
- has any characteristics that relate to the systemic issues identified in this Toolkit

If the location does meet either of the above criteria, note it. Either way, consider the safety needs of the location and write them down before the meeting.

During the Meeting

Share whether the location is a part of the SAP's High Injury Network (HIN) and/or has characteristics that relate to the systemic issues. Highlight what you consider to be safety needs at the location.

If applicable, ask whether there are opportunities to incorporate relevant safety countermeasures into the project and/or study.

After the Meeting

Collaborate with the project/study team, as needed, to facilitate the incorporation of relevant safety countermeasures into the project and/or study.

F. Crawford County SAP Coalition Charter

Crawford County Safety Action Plan

Implementation Coalition Charter

DRAFT as of June 5, 2025

PURPOSE/MISSION

The Federal Highway Administration (FHWA) strongly recommends that municipalities use a collaborative process for planning that involves all the relevant stakeholders that are involved with improving roadway safety for all users on the transportation network. To this end, Crawford County has formed a Coalition to support the implementation of its safety action plan. This group will be chaired by the county planning director. The Coalition members' responsibilities are highlighted below:

SUPPORTING ACTIVITIES

1. Support and advise Crawford County in the Safety Action Plan's implementation and future updates.
2. Advise the Crawford County Planning Department on safety-related priorities, issues, projects, and funding needs.
3. Serve as a forum for discussion of the Safe Streets and Roads for All (SS4A) requirements and prepare Crawford County for future funding opportunities.
4. Invite representatives of recent safety improvement projects to present success stories to the Coalition as potential best practices that could be replicated in other parts of the county.
5. Serve as the county's voice in communicating roadway safety improvement needs to Crawford County (and by extension, the Northwest RPO)
6. Provide guidance in maintaining the County's High Injury Network (HIN) based on a data driven approach.
7. Assist the County Planning Department in maintaining a directory of notable contacts and stakeholders for safety planning.
8. Inform Crawford County on matters related to the development of the Data Hub as it pertains to safety data and analytical needs.
9. Provide comment and input on safety issues countywide that are raised by municipal officials and residents.