TOMPKINS COUNTY
PRIORITY LOCATION PROFILES

JULY 2025

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INTRODUCTION

As described in the previous Network Screening and Systemic Analysis Memo, segments and intersections with high scores in each participating municipality were evaluated based on several factors, including overrepresentation of crashes, vulnerable road user (VRU) crashes and risks, equity priority areas and destinations, and isolated transit stops. Sites were selected and then discussed with representatives of those jurisdictions. The final network contains 11 intersections and 9 segments for a total of 20 priority safety locations.

Each Priority Location Profile is divided into four sections: **Existing Conditions, Crash Analysis, Countermeasure Recommendations, and Cost Estimates.** There are 20 project sites, numbered one through 20. Sites one through 11 are intersections, while sites 12 through 20 are segments. Throughout the profiles, photos taken during field observations and those provided by municipalities are included.

The **Existing Conditions** section includes the project site aerial, key characteristics, key findings, and an existing conditions narrative. Both intersections and segments share similar data points, such as functional classification, Average Annual Daily Traffic (AADT), speed limit, roadway ownership, and adjacent land use. The key differences are that intersections include intersection type, while segments include a description and segment length. The Key Findings section provides a summary of the entire profile. The Existing Conditions section describes the surrounding roadway as well as the project site and its vicinity.

The **Crash Analysis** section presents a summary of crashes that have occurred between 2018 and 2023. The data, derived from New York State Department of Transportation's (NYSDOT) CLEAR crash data set, includes both visual and narrative breakdowns of the crash users. This section highlights the total number of fatal and serious injury crashes and includes a map showing specific crash locations for various user groups (e.g., auto, bicycle, pedestrian, deer/animal, and others). The Crash Data Table includes the segment or intersection Level of Service of Safety (LOSS), a metric which compares the observed crash frequency for a given site to the predicted crash frequency based on traffic volumes. LOSS is represented as a number 1 through 4, with a higher number representing a greater potential for crash reduction.

The **Countermeasure Recommendations** section is divided into two pages: one page featuring a plan view illustration, followed by a narrative that explains each recommended countermeasure. This approach allows for the communication of information both visually and descriptively.

For intersections, the illustration offers a detailed depiction of the layout and signage, as intersection recommendations are more complex due to the localized nature of the site, allowing for more specific recommendations. For segments, the illustration includes icons representing Federal Highway Administration's (FHWA) Proven Safety Countermeasures, where applicable, as these sites typically cover greater distances and require different countermeasure considerations.

The **Cost Estimates** section includes a spreadsheet detailing the breakdown of quantities, units, unit costs, and total costs for each countermeasure, along with assumptions for work zone traffic control, incidentals, inflation, and contingencies, survey, design engineering, and construction management and inspection. The total costs are presented in a range of 20%. These costs were prepared in June of 2025 using NYSDOT Quick Estimator Tool and supported by bid tabulation data provided by the NYSDOT Electronic Pay Item Catalog, along with the current state of the construction market in the upstate New York area. These estimates are to be used for planning purposes only.

The following concepts are advisory in nature and are not intended for construction. Further planning, design, engineering, and cost estimation would be required in each case. These conceptual recommendations do not constitute a commitment for any particular improvement at any particular location and Tompkins County, local municipalities, and/or NYSDOT are not responsible for unimplemented recommendations.

INTERSECTIONS

1. FLORAL AVE/ELM ST/HECTOR ST

INTERSECTION CHARACTERISTICS

FUNCTIONAL CLASSIFICATION Floral Ave	Urban Minor Arterial
FUNCTIONAL CLASSIFICATION Hector St	Urban Minor Arterial
FUNCTIONAL CLASSIFICATION Elm St	Urban Local Street
AADT Floral Ave	5,816
AADT Hector St	2,774
INTERSECTION TYPE	Urban 3-Leg Uncontrolled TT
SPEED LIMIT	30 MPH
OWNERSHIP	City of Ithaca
ADJACENT LAND USE	Developed-Commercial

KEY FINDINGS

At the multi-leg intersection of Floral Ave, Elm St, and Hector St in the City of Ithaca, 24 crashes occurred between 2019-2023, including one that caused a serious injury. Recommended countermeasures include the addition of a raised crosswalk across Floral Ave at Elm St to reduce traffic speeds at the expected pedestrian crossing location to the Cayuga Waterfront Trail.

EXISTING CONDITIONS

The intersection is a four-legged junction located adjacent to the Cayuga Inlet on one side and a residential area on the other. Within a 0.5-mile radius, there are multiple apartment complexes and a community school. Elm St is situated at a higher gradient, sloping gradually downward as it connects with Floral Ave, which features access lanes leading toward the waterfront and bike parking facilities. Elm St intersects Floral Ave at an acute angle, which then connects with Hector St, part of NY-79. East of the intersection, Hector St crosses a bridge over the Cayuga Inlet, linking the west and east sections of Ithaca.

Floral Ave, a minor arterial road, is 22-ft wide but expands to 28-ft near the intersection, with a southbound travel lane of 10-ft and a northbound lane of 15-ft. Elm St is local street which is 22-ft wide with two 11-ft travel lanes, one in each direction. Hector St, also a minor arterial road, is 45-ft wide and includes three 10-ft travel lanes, a center turn-only lane and two bike lanes, each 5-ft wide, with bike boxes at the intersection.

As per field visit observation, the intersection features a small median and crosswalks, although they are inconsistently marked. Ladder-style crosswalks are present, but there is no marked crosswalk across Elm St or the east leg of Hector St. Sidewalks with accessible curb ramps are present. Traffic control includes a stop sign at Elm St, traffic signals at Floral Ave and Hector St, and a pedestrian signal on the south leg of the intersection. Bike parking is available on Floral Ave near the waterfront.

West leg (Elm St)

1. FLORAL AVE/ELM ST/HECTOR ST

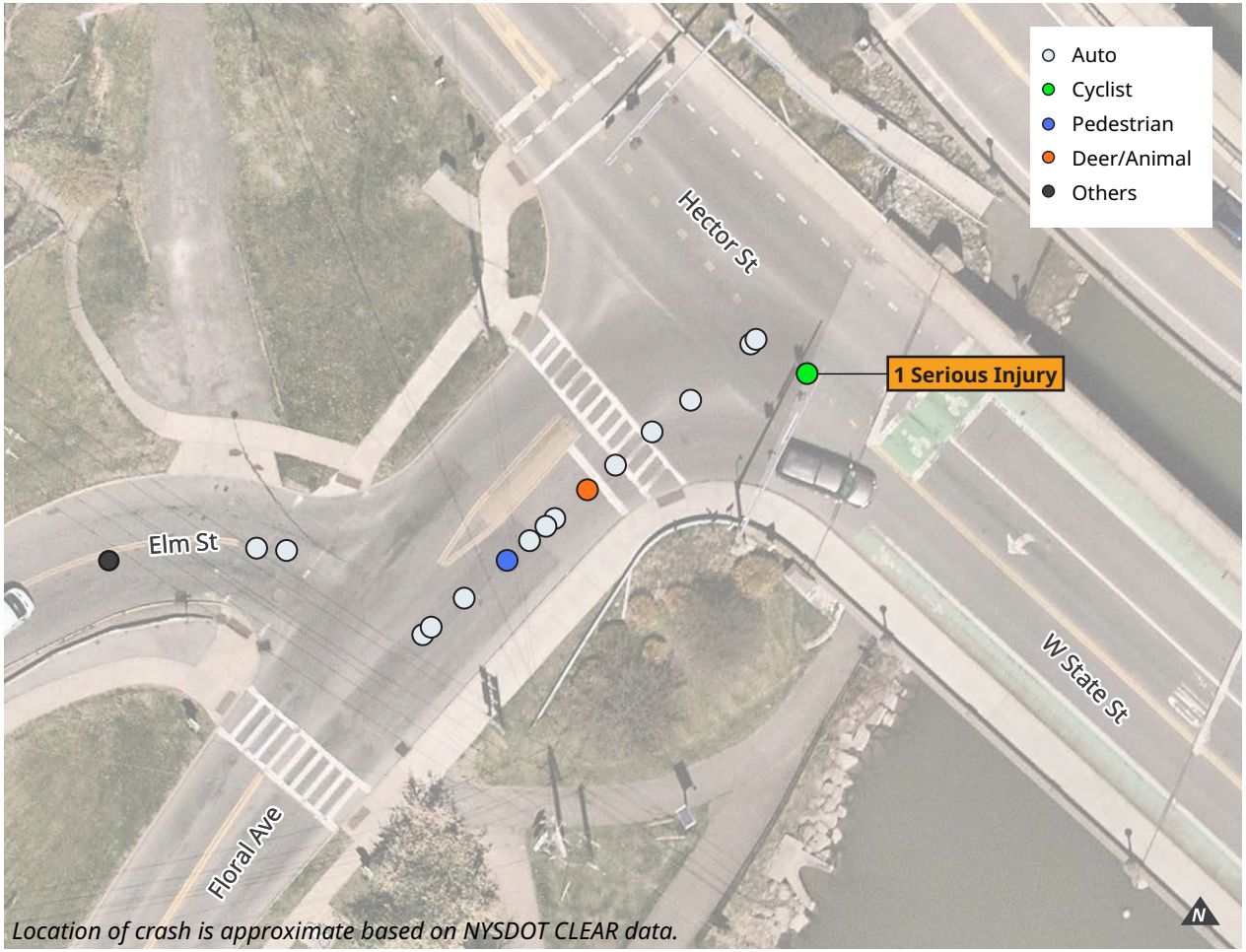
24
Total Crashes

1
Fatal & Serious Injury Crashes

Users Involved

Between 2019 and 2023, 24 crashes occurred at the intersection, with an average frequency of 4.8 crashes per year. Of the 24 crashes, one resulted in a serious injury involving a bicyclist. Contributing factors to the crashes include road user behavior like alcohol involvement and disregard of traffic control devices.

A majority of the crashes that occurred were due to collisions with motor vehicles, one of which resulted in pedestrian injury. Two crashes occurred at the turn of Elm St to Floral Ave. The majority of the crashes occurred on the stretch of Floral Ave between Elm St and Hector St.



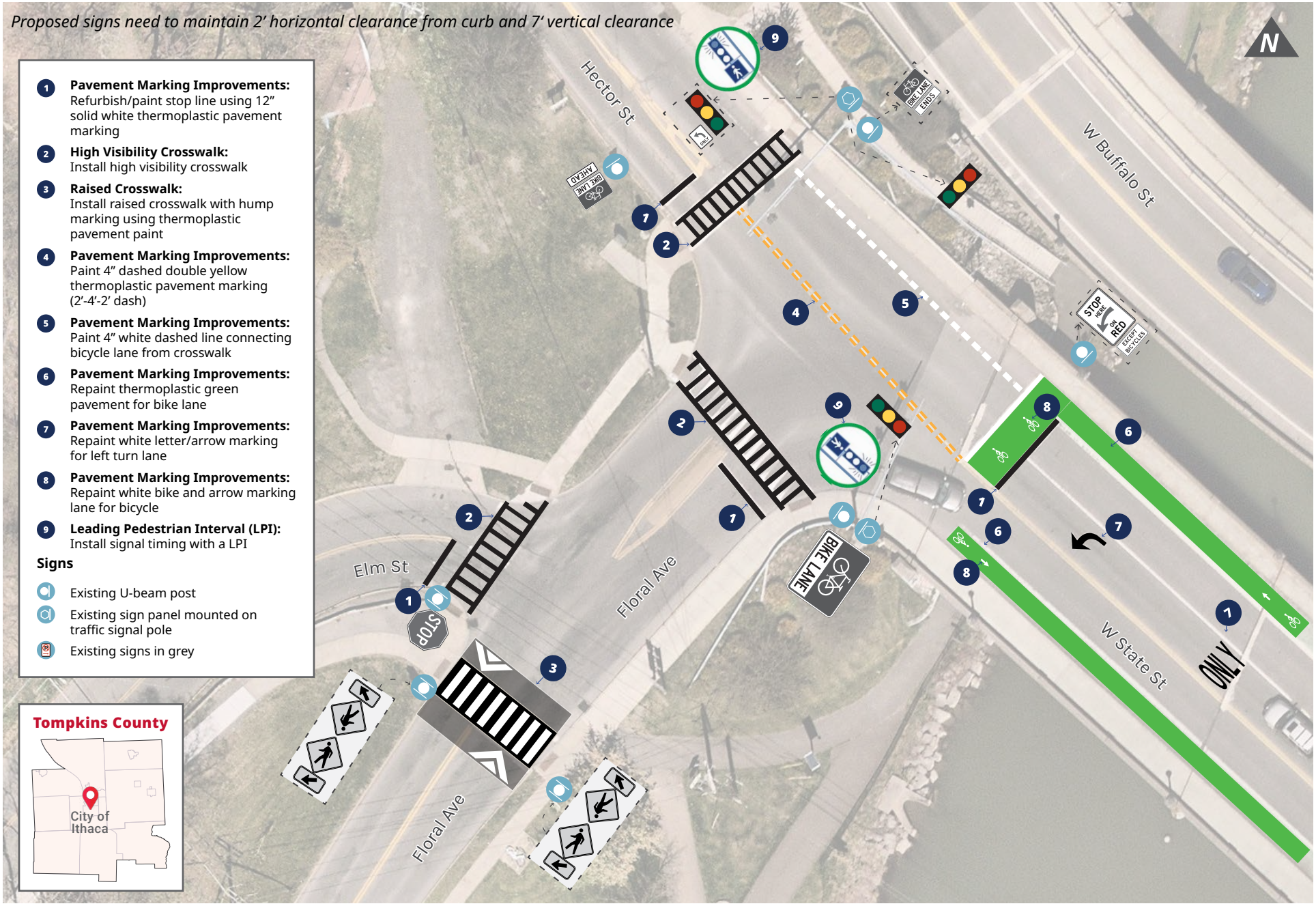
Spatial Distribution of Crashes by User Type

CRASH DATA (2019-2023)

Crash Counts						Injury Counts				Level of Service of Safety (LOSS)
TOTAL CRASH COUNTS	Auto	Cyclist	Pedestrian	Deer/ Animal	Others	TOTAL INJURY COUNTS	Fatal Injuries	Serious Injuries	Other Injuries	
24	20	1	1	1	1	2	0	1	1	4

1. FLORAL AVE/ELM ST/HECTOR ST

Proposed signs need to maintain 2' horizontal clearance from curb and 7' vertical clearance



1. FLORAL AVE/ELM ST/HECTOR ST

Considering the contributing factors to crashes at this intersection such as alcohol impairment and failure to obey traffic control devices, we recommend implementing the following countermeasures.

Raised Crosswalk

Raised crosswalks are ramped speed tables that extend across the entire width of the roadway, often installed at midblock crossing locations. They are visually distinguished using paint markings and/or special paving materials. A raised crosswalk is proposed across Floral Ave to prioritize pedestrians and reduce speeds approaching the intersection. High-visibility crosswalks are proposed here crossing Elm St, Floral Ave, and Hector St to improve pedestrian safety at this complex intersection.

Leading Pedestrian Interval

A leading pedestrian interval (LPI) gives pedestrians the opportunity to enter the crosswalk at an intersection 3-7 seconds before vehicles are given a green indication. Pedestrians can better establish their presence in the crosswalk before vehicles have the light to turn right or left. A LPI is proposed here to provide pedestrians a head start in crossing the street to make them more visible to oncoming traffic.

When evaluating the signal for LPI, it should also be evaluated for Manual of Traffic Control Devices/ Public Right-Of-Way Accessibility Guidelines (MUTCD/PROWAG) compliance and upgrades for Accessible Pedestrian Signal (APS) and Application Programming Interface (API).

Enhanced Sign and Pavement Marking Improvements

A painted stop bar at the intersection reinforces the traffic control device, guiding drivers to stop at the appropriate location. Painted stop bars are recommended at eastbound Hector St, eastbound Elm St, and northbound Floral Ave. Painted dashed lines through the intersection help maintain a drivers lane choice, and are recommended on Hector St across Floral Ave.

West leg (Elm St)

1. FLORAL AVE/ELM ST/HECTOR ST

Cost Estimates

Countermeasure	Quantity	Unit	Unit Cost	Total
LS Type (Ladder) Crosswalk	3	each	$ 2,100.00	$ 6,300.00
Raised Crosswalk - Each	1	each	$ 4,220.00	$ 4,220.00
Raised Crosswalk - Lanes	2	each	$ 2,410.00	$ 4,820.00
Small Single Post-Mounted Signs	6	ft.	$ 622.00	$ 3,732.00
Stop Bar Pavement Markings	99	ft.	$ 3.00	$ 297.00
Pavement Marking Improvements - 4" Dashed Double Yellow Thermoplastic Pavement Marking (2' -4' -2')	46	ft.	$ 4.00	$ 184.00
Repaint Thermoplastic Green Pavement for Bike Lane	1,100	sq. ft.	$ 18.00	$ 19,800.00
Arrow & Only Marking	5	each	$ 250.00	$ 1,250.00
Leading Pedestrian Interval (LPI) signal modifications	2	each	$ 2,000.00	$ 4,000.00

Subtotal	**$ 44,603.00**
Work Zone Traffic Control (WZTC) Estimate (10%)	$ 4,460.30
Incidentals, Inflation and Contingencies Estimate (20%)	$ 8,920.60
Construction Cost	**$ 57,983.90**
Survey (10%)	$ 5,798.39
Design Engineering ($10k + 10%)	$ 15,798.39
Construction Management & Inspection (15%)	$ 8,697.59
Grand Total	**$ 88,278.27**
Less 10%	$ 79,450.44
Plus 10%	$ 97,106.09

Cost estimates were prepared in June of 2025 utilizing bid tabulation data provided by the NYSDOT Electronic Pay Item Catalog, and the NYSDOT Quick Estimator Tool along with the current state of the construction market in the upstate NY area. The most recent year data available was used for each individual unit cost. These estimates are to be used for planning purposes only.

2. VALLEY RD/LOUNSBERRY RD

INTERSECTION CHARACTERISTICS

FUNCTIONAL CLASSIFICATION Lounsberry Road	Rural Major Collector Road
FUNCTIONAL CLASSIFICATION Valley Road	Rural Minor Collector Road
AADT Lounsberry Road	1,222
AADT Valley Road	905
INTERSECTION TYPE	Rural 4-Leg Stop-Controlled Two-Way Stop TT
SPEED LIMIT	35 MPH
OWNERSHIP	Tompkins County
ADJACENT LAND USE	Agricultural/Rural

KEY FINDINGS

The intersection of Valley Rd and Lounsberry Rd in the Town of Caroline is situated just south of Six Mile Creek. Six crashes occurred at the intersection between 2018 and 2023, including one crash that resulted in a serious injury to a bicyclist. In order to calm traffic and reduce speeds at the intersection, advance warning signage and speed feedback signs are recommended, as well as the addition of streetlighting.

EXISTING CONDITIONS

The intersection of Lounsberry Rd and Valley Rd is a four-legged rural junction located in a residential area with hilly terrain. On the north side of the intersection, Six Mile Creek runs under Lounsberry Rd via a small bridge that connects to Valley Rd. Lounsberry Rd, classified as a major collector road, and Valley Rd, a minor collector road, are both 30-ft wide with two 10-ft travel lanes. Valley Rd and Lounsberry Rd includes shoulders on both the side. On the south side of Valley Rd, Lounsberry Rd becomes White Church Rd.

Field observations indicate that the intersection lacks crosswalks and sidewalks, and is controlled by a two-way stop sign across Lounsberry and White Church. A 35-MPH speed limit sign is posted along Valley Rd. The road surface shows minor cracking, and while the pavement markings are somewhat visible, they are faded and lack

Lounsberry Rd Bridge

Historical photo of Lounsberry Rd Bridge

2. VALLEY RD/LOUNSBERRY RD

2
Total Crashes

1
Fatal & Serious Injury Crashes

Users Involved

Between 2019 and 2023, two crashes occurred at the intersection. One of them resulted in a serious injury involving a bicyclist. It occurred at the east leg of Valley Rd. The other crash occurred at the south leg of Lounsberry Rd and involved a motor vehicle. Both crashes were noted to have occurred due to failure to yield right-of-way.

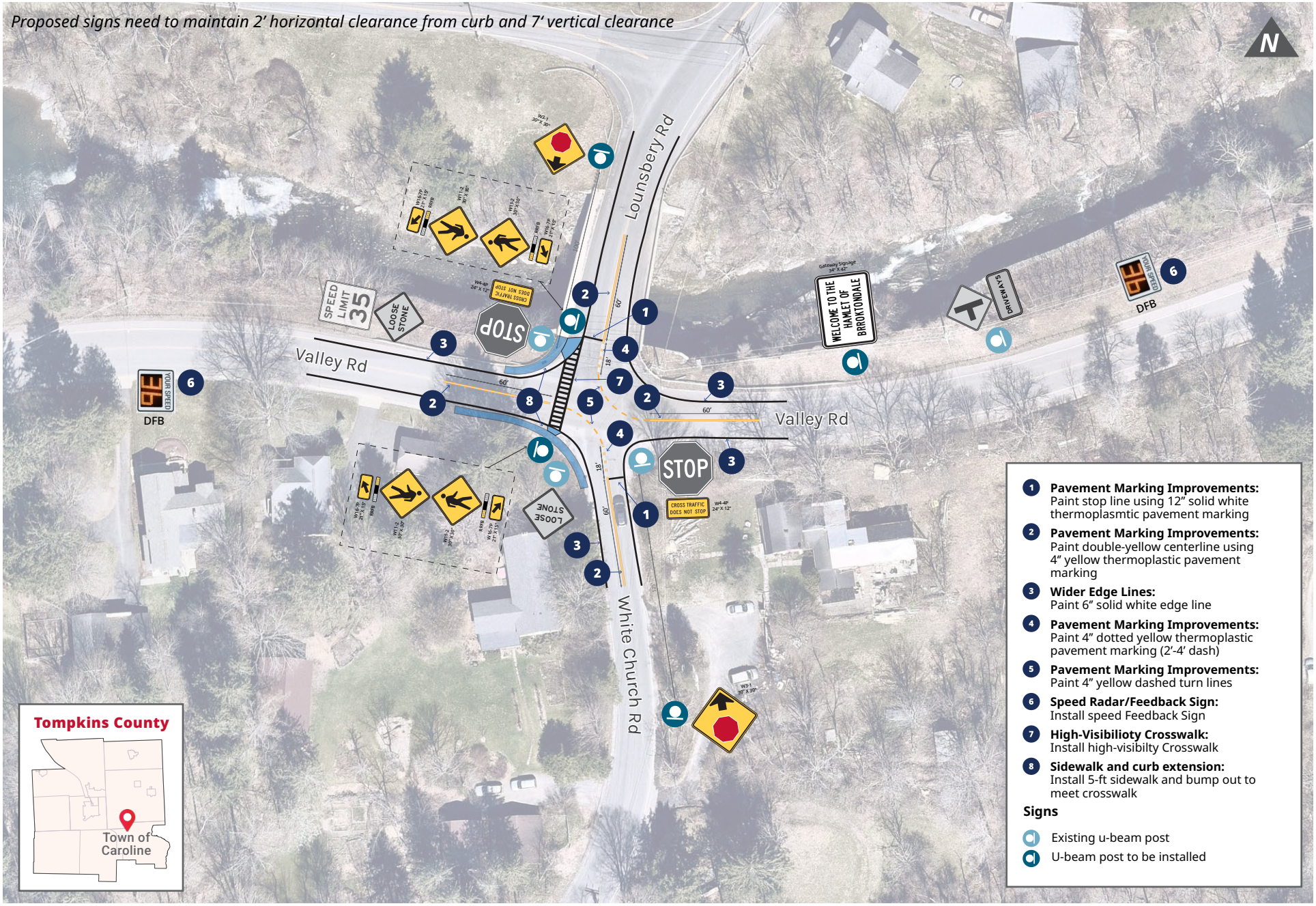
Spatial Distribution of Crashes by User Type

CRASH DATA (2019-2023)

Crash Counts						Injury Counts				Level of Service of Safety (LOSS)
TOTAL CRASH COUNTS	Auto	Cyclist	Pedestrian	Deer/ Animal	Others	TOTAL INJURY COUNTS	Fatal Injuries	Serious Injuries	Other Injuries	
2	1	1	0	0	0	2	0	1	1	2

2. VALLEY RD/LOUNSBERRY RD

Countermeasure Recommendations



2. VALLEY RD/LOUNSBERRY RD

Given that failure to yield has been a contributing factor to crashes at this intersection, we recommend the following countermeasures.

Advance Warning Signage

Advance warning signage includes any sign that alerts drivers to potential hazards or unexpected conditions on the road.

Advance warning signs are recommended near this intersection to alert drivers of the upcoming stop signs and enhance awareness of roadway conditions. Stop-sign subplates that read "Cross Traffic Does Not Stop" are also recommended at the intersection to alert drivers not to expect traffic on Valley Rd to stop.

Speed Radar/Feedback Sign

Speed radar systems monitor vehicle speeds to help reduce speeding and prevent crashes. Feedback signs display real-time speed to drivers, encouraging compliance with posted limits. An FHWA demonstration project found speed feedback signs effective in lowering vehicle speeds and reducing crashes.

Due to the limited number of stop signs and signals, speed radar/feedback signs are recommended to enhance safety, reduce speeding, and minimize roadway departure crashes.

Wider Edge Lines

Wider edge lines enhance the visibility of travel lane boundaries compared to traditional edge lines. Edge lines are considered "wider" when the marking width is increased from the minimum normal line width of 4 inches to the maximum normal line width of 6 inches. Six inch edge lines on rural roadways with posted speed limit of 45-MPH or more is the standard practice of NYSDOT. For further information see EI 18-008.

Wider edge lines are recommended at this intersection due to the presence of curves and turns. These markings help prevent roadway departure crashes and enhance overall safety by improving lane visibility and driver guidance.

High Visibility Crosswalks

High-visibility crosswalks use patterns (i.e., bar pairs, continental, ladder) that are visible to both the driver and pedestrian from farther away compared to traditional transverse line crosswalks.

Enhancing the visibility of pedestrians and bicyclists at the intersection through the implementation of high-visibility crosswalks will ensure pedestrian safety.

Gateway Sign

A non-commercial, civic-oriented sign placed at or near the entrance to a municipality.

A gateway sign is recommended at the westbound approach of Valley Rd entering the Hamlet of Brooktondale.

Add Sidewalk

Sidewalks are paved walkways that are separated from motor vehicles by a curb and gutter. They are intended for pedestrians or people using a wheelchair. Adding sidewalks at this intersection is recommended to ensure safety for pedestrians and connect with new crosswalks.

Reduce Curb Radius

Reconstructing the turning radius to a tighter turn to reduce turning speeds, shorten the crossing distance for pedestrians, and also improve sight distance between pedestrians and motorists.

Valley Rd

2. VALLEY RD/LOUNSBERRY RD

Countermeasure	Quantity	Unit	Unit Cost	Total
Concrete Sidewalk (4" thick)	605	sq. ft.	$ 32.00	$ 19,360.00
LS Type (Ladder) Crosswalk	1	each	$ 2,100.00	$ 2,100.00
Solar Powered Radar Speed Sign	2	each	$ 10,200.00	$ 20,400.00
Concrete Curb Extensions	60	ft.	$ 95.00	$ 5,700.00
Stop Bar Pavement Markings	99	ft.	$ 3.00	$ 297.00
Double Yellow Centerline	480	ft.	$ 4.00	$ 1,920.00
Wider Edge Lines	1,500	ft.	$ 4.00	$ 6,000.00
Dotted Yellow Thermoplastic Pavement Markings	80	ft.	$ 4.00	$ 320.00
Dashed Double Yellow Lines	60	ft.	$ 4.00	$ 240.00
Small Single Post-Mounted Signs	6	each	$ 622.00	$ 3,732.00
Gateway Signage	1	each	$ 622.00	$ 622.00

Subtotal	**$ 60,691.00**
Work Zone Traffic Control (WZTC) Estimate (10%)	$ 6,069.10
Incidentals, Inflation and Contingencies Estimate (20%)	$ 12,138.20
Construction Cost	**$ 78,898.30**
Survey (10%)	$ 7,889.83
Design Engineering ($10k + 10%)	$ 17,889.83
Construction Management & Inspection (15%)	$ 11,834.75
Grand Total	**$116,512.71**
Less 10%	$104,861.43
Plus 10%	$128,163.98

Cost estimates were prepared in June of 2025 utilizing bid tabulation data provided by the NYSDOT Electronic Pay Item Catalog, and NYSDOT Quick Estimator Tool, along with the current state of the construction market in the upstate NY area. The most recent year data available was used for each individual unit cost. These estimates are to be used for planning purposes only.

3. STATION RD/MAPLE AVE/SPENCER RD (NY-34/NY-96)

INTERSECTION CHARACTERISTICS

FUNCTIONAL CLASSIFICATION NY-34	Urban Minor Arterial Road
FUNCTIONAL CLASSIFICATION Station Rd	Rural Minor Arterial
FUNCTIONAL CLASSIFICATION Valley View Rd/ Maple Ave	Urban Local Street
AADT Major Street	3,574
AADT Minor Street	201
INTERSECTION TYPE	Rural 4-Leg Stop-Controlled Two-Way Stop TT
SPEED LIMIT	55 MPH
OWNERSHIP	NYSDOT; Tompkins County; Town of Danby
ADJACENT LAND USE	Agricultural/Rural

KEY FINDINGS

The intersection of NY-34/96 (Elmira Rd) with Station Rd, and the adjoining intersection of Station Rd and Maple Ave skew at angles, and three crashes have occurred here between 2019 and 2023. In order to reinforce the two-way stop control of Station Rd, advance warning signs, stop bars, and marked crosswalks are recommended. Wider edge lines along NY-34/96 are recommended to reduce the risk of roadway departure.

EXISTING CONDITIONS

The intersection is located on NY-34/96 (Elmira Rd), where Station Rd connects to NY-34/96 on the eastern end, and Valley View Rd and Maple Ave merge to form a single access lane on the west side of NY-34/96. The intersection is located in a rural residential area where driveways feed into Station Rd, Valley View Rd, and Maple Ave. There is a church located south of the intersection on NY-34/96.

NY-34/96 is classified as a minor arterial road and is 30-ft wide, with two 10-ft travel lanes and shoulders on both sides. Station Rd, classified as a major collector road, is 22-ft wide with two 9-foot travel lanes and shoulders on both sides. Valley View Rd and Maple Ave are local streets, each 18–20 ft wide, merging into a 22-ft-wide unmarked and unpaved access way.

As per field visit observations, the intersection is two-way stop controlled. NY-34/96 has newly paved, clearly visible pavement markings, although they are inconsistent and slightly faded on Station Rd. A portion of Station Rd adjacent to the newly paved NY-34/96 remains unmarked except for stop bars. Station Rd shows minor cracking, while Valley View Rd and Maple Ave are unpaved. The intersection lacks crosswalks, pedestrian or bicycle facilities, and traffic-calming devices. A light post is present, providing illumination.

North leg (NY-34/96)

3. STATION RD/MAPLE AVE/SPENCER RD (NY-34/NY-96)

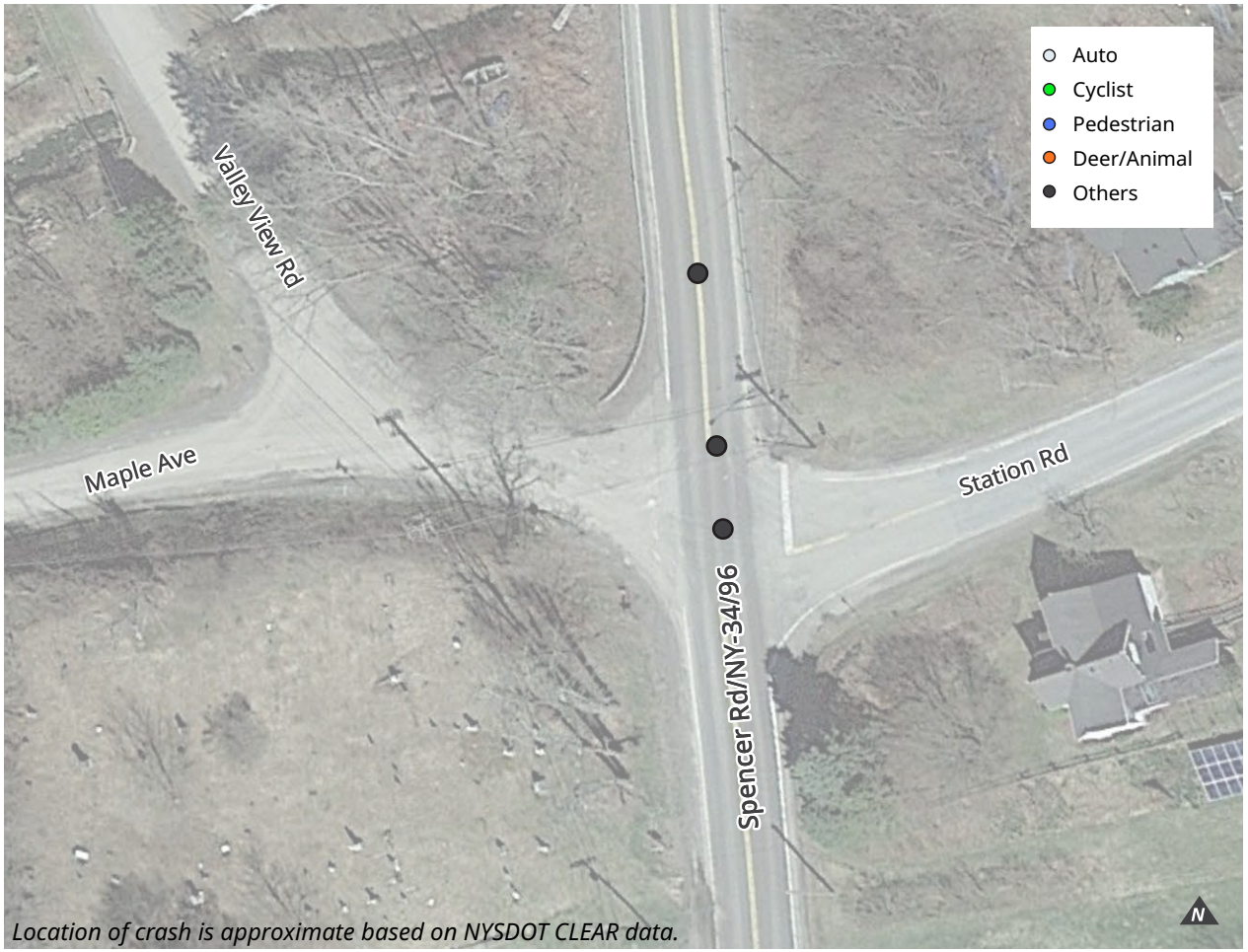
3
Total Crashes

0
Fatal & Serious Injury Crashes

OTHER

Users Involved

Between 2019 and 2023, three crashes occurred at the intersection. The crashes involved collisions with a signpost and guide rail and were attributed to road user behavior, including alcohol involvement and speeding, as well as wet road conditions.

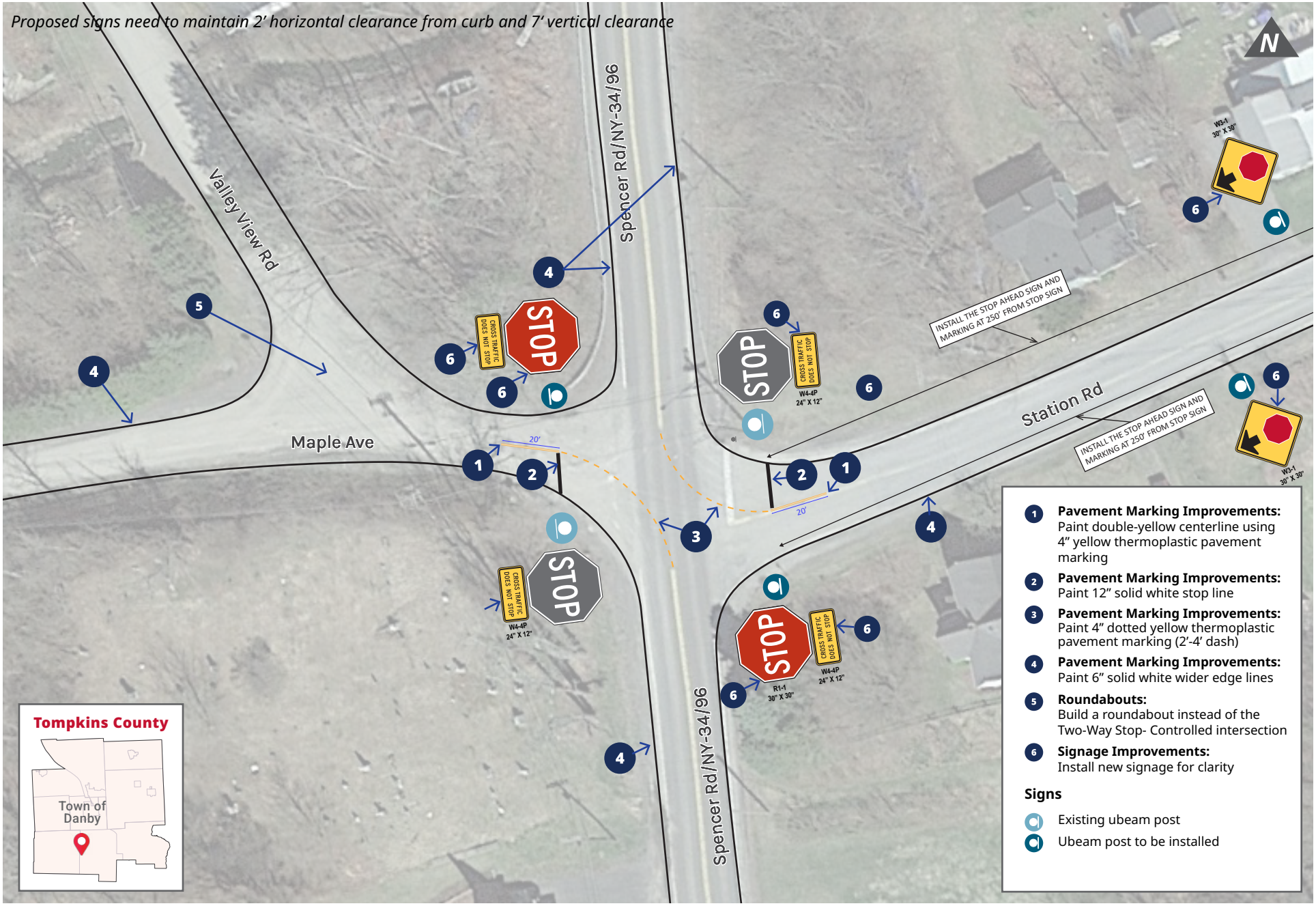


Spatial Distribution of Crashes by User Type

CRASH DATA (2019-2023)

Crash Counts						Injury Counts				Level of Service of Safety (LOSS)
TOTAL CRASH COUNTS	Auto	Cyclist	Pedestrian	Deer/ Animal	Others	TOTAL INJURY COUNTS	Fatal Injuries	Serious Injuries	Other Injuries	
3	0	0	0	0	3	1	0	0	1	2

3. STATION RD/MAPLE AVE/SPENCER RD (NY-34/NY-96)



3. STATION RD/MAPLE AVE/SPENCER RD (NY-34/NY-96)

Given the contributing factors to crashes at this intersection, including alcohol impairment and speeding, we recommend implementing the following countermeasures.

Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections

This countermeasure includes deploying a package of multiple low-cost countermeasures at stop-controlled intersections, including improved signage, upgraded pavement markings, and the installation of duplicate stop signs on both sides of the roadway to enhance visibility and compliance. These countermeasures increase driver awareness and recognition of the intersections and potential conflicts.

Implementing multiple low-cost countermeasures, such as enhanced pavement markings, stop lines, and improved lighting, can significantly increase safety at this complex rural intersection.

Wider Edge Lines

Wider edge lines enhance the visibility of travel lane boundaries compared to traditional edge lines. Edge lines are considered "wider" when the marking width is increased from the minimum normal line width of 4 inches to the maximum normal line width of 6 inches.

Six inch edge lines on rural roadways with posted speed limit of 45-MPH or more is the standard practice of NYSDOT. For further information see EI 18-008.

Wider edge lines are recommended at this intersection since the road has multiple intersection crossings. Wider edge lines are useful in preventing roadway departure crashes and improving safety.

Roundabout

Long term, consideration should be given to addition of a roundabout linking Station Rd, Maple Ave, and Valley View Rd to reduce the overall number of conflicts at the intersection and slow speeds along NY-34/96. Further study is needed to determine the suitability of the site for a roundabout. Accordingly, conceptual designs and cost estimates have not been developed.

Speed Limit Management

Further consideration should be given to speed limit reduction on NY-34/96.

Access road to Maple Ave and Valley View Rd

Intersection

3. STATION RD/MAPLE AVE/SPENCER RD (NY-34/NY-96)

Countermeasure	Quantity	Unit	Unit Cost	Total
Small Single Post-Mounted Signs	6	each	$ 622.00	$ 3,732.00
Double Yellow Centerline	80	ft.	$ 4.00	$ 320.00
Stop Bar Pavement Markings	135	ft.	$ 3.00	$ 405.00
Dotted Yellow Thermoplastic Pavement Markings	123	ft.	$ 4.00	$ 492.00
Wider Edge Lines	1,350	ft.	$ 4.00	$ 5,400.00

Subtotal	**$ 10,349.00**
Work Zone Traffic Control (WZTC) Estimate (10%)	$ 1,034.90
Incidentals, Inflation and Contingencies Estimate (20%)	$ 2,069.80
Construction Cost	**$ 13,453.70**
Survey (10%)	$ 1,345.37
Design Engineering ($10k + 10%)	$ 11,345.37
Construction Management & Inspection (15%)	$ 2,018.06
Grand Total	**$ 28,162.50**
Less 10%	$ 25,346.25
Plus 10%	$ 30,978.74

Cost estimates were prepared in June of 2025 utilizing bid tabulation data provided by the NYSDOT Electronic Pay Item Catalog, and NYSDOT Quick Estimator Tool, along with the current state of the construction market in the upstate NY area. The most recent year data available was used for each individual unit cost. These estimates are to be used for planning purposes only.

4. FREEVILLE RD (NY-38)/SPRINGHOUSE RD

INTERSECTION CHARACTERISTICS

FUNCTIONAL CLASSIFICATION Freeville Rd (NY-38)	Rural Minor Arterial Road
FUNCTIONAL CLASSIFICATION Springhouse Rd	Rural Local Road
AADT Freeville Rd (NY-38)	2,929
AADT Springhouse Rd	1,413
INTERSECTION TYPE	Rural 3-Leg Stop-Controlled Two-Way Stop TT
SPEED LIMIT	35 - 45 MPH
OWNERSHIP	NYSDOT
ADJACENT LAND USE	Developed/ Residential

KEY FINDINGS

The intersection of Freeville Rd and Springhouse Rd (NY-38) has been the site of seven crashes in the five-year period, including one that resulted in a serious injury. Advance warning signage along Springhouse Rd, including the addition of the "Cross-Traffic Does Not Stop" sub-plate are recommended to increase driver awareness. Centerline Audible Roadway Delineators/ Secondary Highway Audible Roadway Delineators (CARDs / SHARDs) along the centerline of Springhouse Rd and along the centerline and edgeline of Freeville Rd are recommended to reduce risk of roadway and lane departure.

EXISTING CONDITIONS

The intersection of Freeville Rd and Springhouse Rd is a rural three-legged junction where Springhouse Rd connects to Freeville Rd from the south, under the jurisdiction of NYSDOT. Freeville Rd, classified as a minor arterial road, is 30-ft wide with two 10-ft travel lanes and shoulders on both sides. Springhouse Rd, a rural local road, is narrower at 20-ft wide with two 10-ft travel lanes and no shoulders. The intersection is situated near Dryden High School, an apartment complex, and commercial buildings, with driveways feeding into Freeville Rd. Springhouse Rd leads to predominantly agricultural areas and is subject to a truck weight limit of 5 tons.

Field visit observations show that the intersection is controlled by two-way stop signs and features "signal ahead" and "school ahead" signage but lacks crosswalks and sidewalks. There was one bicyclist spotted during site observation. There is a trail system to the south of the intersection that is frequently used. There are no traffic calming devices present at the intersection. Pavement markings on both roads are slightly faded but still visible, and the eastern corner of the intersection exhibits minor cracking. Traffic volumes indicate an AADT of 2,929 vehicles for Freeville Rd and 1,413 vehicles for Springhouse Rd.

Limited visibility in snow

4. FREEVILLE RD (NY-38)/SPRINGHOUSE RD

7
Total Crashes

1
Fatal & Serious Injury Crashes

Users Involved

Between 2019 and 2023, the intersection recorded seven crashes, resulting in an average crash frequency of 1.4 crashes per year. One crash resulted in a serious injury, with the primary contributing factor being road user behavior, specifically disregard for traffic control devices.

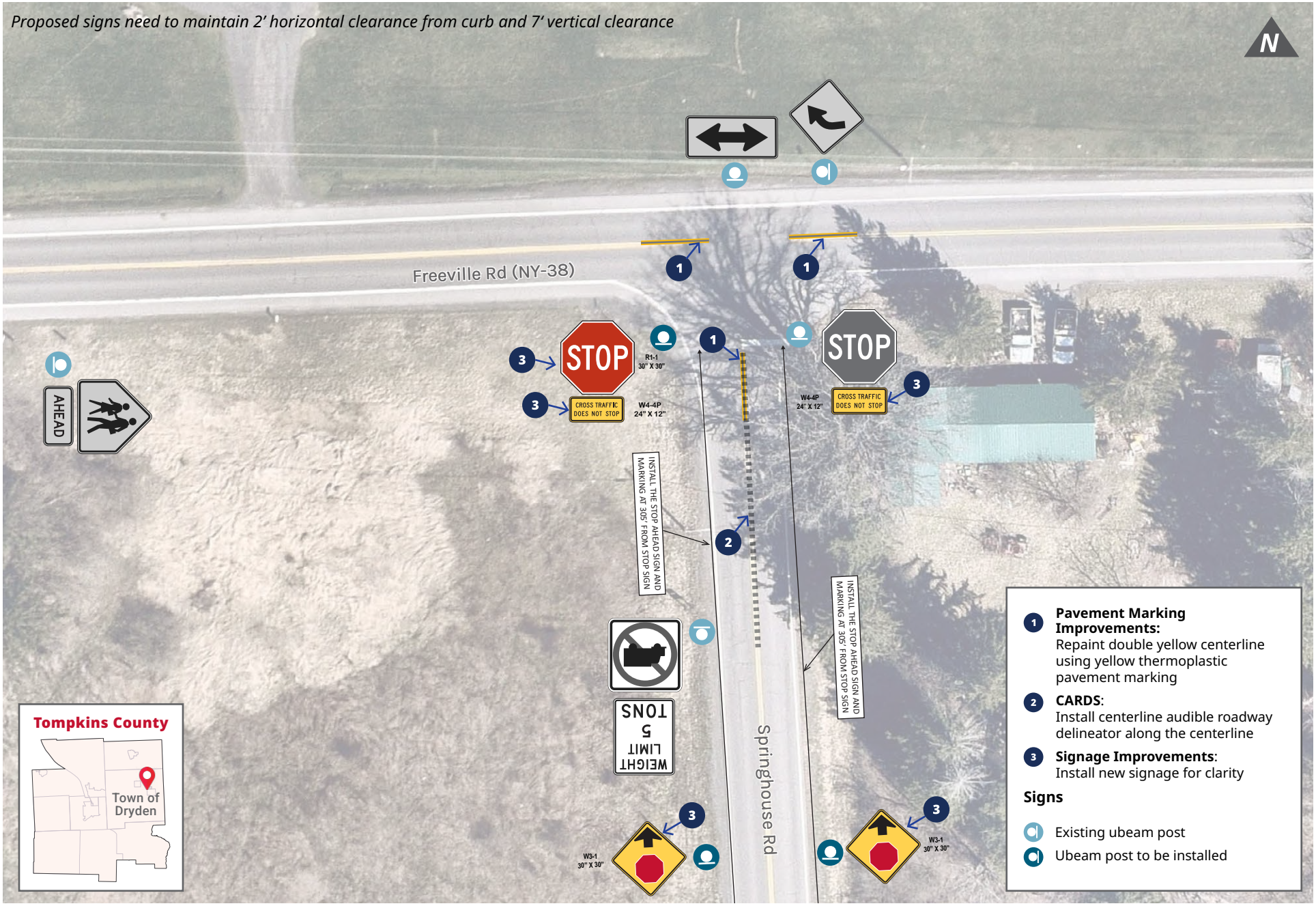
Three of the crashes involved collisions with other motor vehicles, while one crash resulted from a collision with a deer. The primary contributing factors identified were unsafe lane changes, failure to yield the right-of-way, and road user behavior, all of which highlight potential issues related to driver awareness, decision-making, and roadway conditions.

Spatial Distribution of Crashes by User Type

CRASH DATA (2019-2023)

Crash Counts						Injury Counts				Level of Service of Safety (LOSS)
TOTAL CRASH COUNTS	Auto	Cyclist	Pedestrian	Deer/ Animal	Others	TOTAL INJURY COUNTS	Fatal Injuries	Serious Injuries	Other Injuries	
7	3	0	0	1	3	1	0	1	0	4

4. FREEVILLE RD (NY-38)/SPRINGHOUSE RD



4. FREEVILLE RD (NY-38)/SPRINGHOUSE RD

Based on the identified contributing factors to crashes at this intersection—unsafe lane changes, failure to yield, and road user behavior, we recommend the following countermeasures.

Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections

This countermeasure includes deploying a package of multiple low-cost countermeasures, including enhanced signage and pavement markings at stop-controlled intersections, including the duplication. These countermeasures increase driver awareness and recognition of the intersections and potential conflicts. The addition of the Cross Traffic Does Not Stop subplate reminds drivers on Springhouse Rd that traffic on Freeville Rd has the right-of-way.

Centerline Audible Roadway Delineator/Secondary Highway Audible Roadway Delineator (CARDs/SHARDs)

CARDs and SHARDs are designed to alert drivers through vibration and sound when their vehicle veers from the travel lane. CARDs and SHARDs integrate pavement markings over the textured surface to enhance visibility and driver awareness.

Implementing CARDs on the centerline of Springhouse Rd would improve safety by reducing lane departure crashes and enhancing driver attentiveness.

South leg (Freeville Rd)

Given that this intersection is a T-intersection with two-way stop control, the addition of CARDs would serve as a proactive measure to increase driver alertness and encourage safer turning movements. These enhancements would help ensure that vehicles approach and navigate the intersection at an appropriate angle, reducing the risk of collisions.

4. FREEVILLE RD (NY-38)/SPRINGHOUSE RD

Countermeasure	Quantity	Unit	Unit Cost	Total
Small Single Post-Mounted Signs	2	each	$ 622.00	$ 1,244.00
Double Yellow Centerline	80	ft.	$ 4.00	$ 320.00
Centerline Audible Roadway Delineator (CARD)	107	ft.	$ 5.00	$ 535.00

Subtotal	**$ 2,099.00**
Work Zone Traffic Control (WZTC) Estimate (10%)	$ 209.90
Incidentals, Inflation and Contingencies Estimate (20%)	$ 419.80
Construction Cost	**$ 2,728.70**
Survey (10%)	$ 272.87
Design Engineering ($10k + 10%)	$ 10,272.87
Construction Management & Inspection (15%)	$ 409.31
Grand Total	**$ 13,683.75**
Less 10%	$ 12,315.37
Plus 10%	$ 15,052.12

Cost estimates were prepared in June of 2025 utilizing bid tabulation data provided by the NYSDOT Electronic Pay Item Catalog, and NYSDOT Quick Estimator Tool, along with the current state of the construction market in the upstate NY area. The most recent year data available was used for each individual unit cost. These estimates are to be used for planning purposes only.

5. SHELDON RD/W DRYDEN RD

INTERSECTION CHARACTERISTICS

FUNCTIONAL CLASSIFICATION W Dryden Road	Rural Major Collector Road
FUNCTIONAL CLASSIFICATION Sheldon Road	Rural Minor Collector Road
AADT W Dryden Road	2,840
AADT Sheldon Road	582
INTERSECTION TYPE	Rural 4-Leg Stop-Controlled Two-Way Stop TT
SPEED LIMIT	45 MPH
OWNERSHIP	Tompkins County
ADJACENT LAND USE	Rural/Agricultural

KEY FINDINGS

The intersection of Sheldon Rd and West Dryden Rd was the site of a fatal crash in 2024. To reduce speeds approaching the intersection, dynamic speed feedback signs are recommended, along with a roundabout and reduced speed limit along W Dryden Rd. Advance stop warning sign along Sheldon Rd are recommended, along with "Cross-Traffic Does Not Stop" sub-plates.

EXISTING CONDITIONS

The intersection is located in a rural residential area, with a church situated on the northwest corner and driveways from nearby residences feeding into both roads. Sheldon Rd, which is 22-feet wide with two 10-ft travel lanes, is classified as a minor collector road north of the intersection and as a rural local road to the south. W Dryden Rd, a 30-ft-wide major collector road, also features two 10-ft travel lanes, one in each direction.

As per field visit observations, the intersection is controlled by a two-way stop sign with a flasher and includes a 45-MPH speed limit sign and a yield-to-pedestrian sign. While lane markings are present, the roads lack shoulders and crosswalks. There are no sidewalks present alongside the roads on the intersection. The roads are in good condition with minor cracks on the corner of the intersection.

North leg (Sheldon Rd)

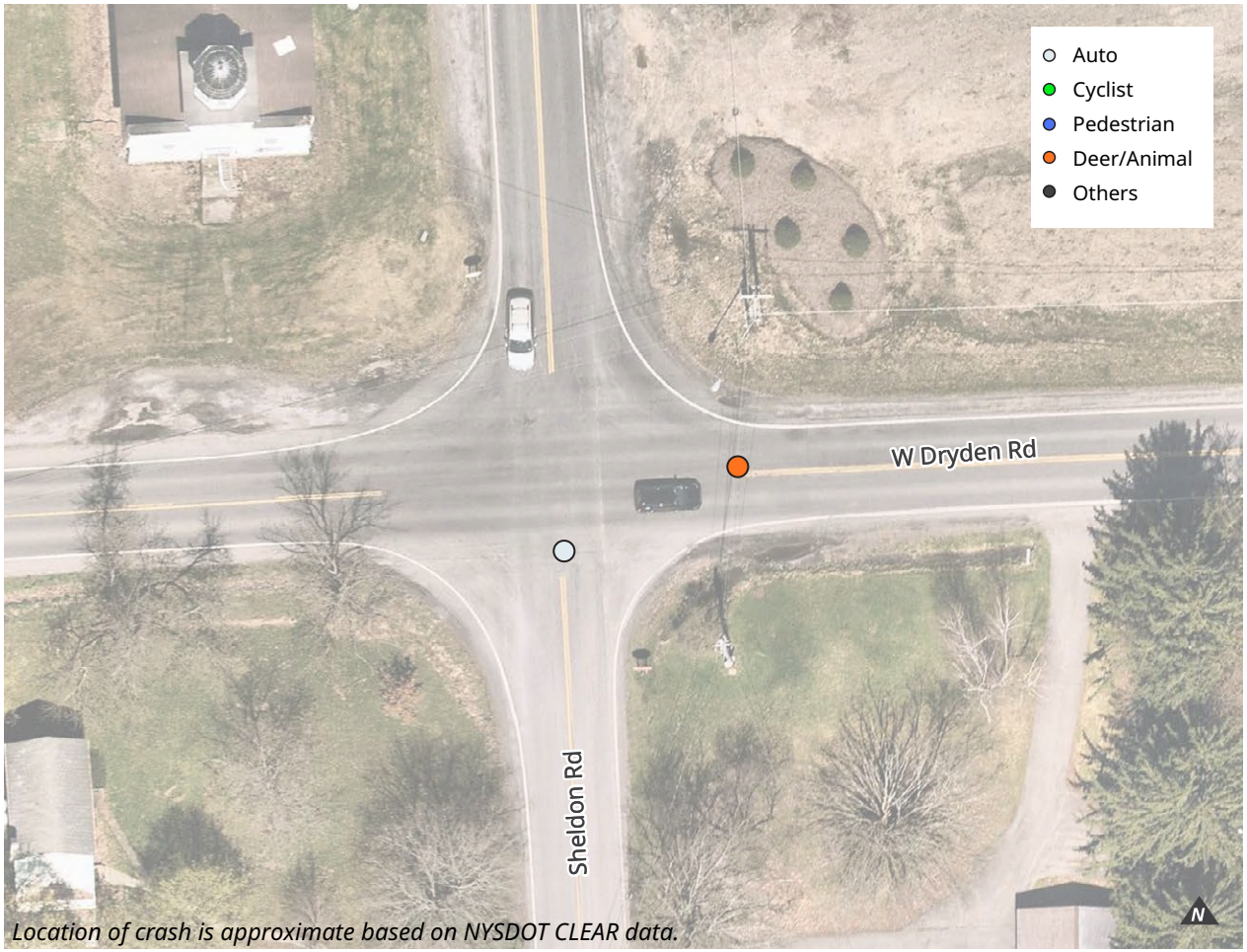
5. SHELDON RD/W DRYDEN RD

2
Total Crashes

1
Fatal & Serious Injury Crashes*

Users Involved

The site was the location of a fatal crash in 2024. Between 2019 and 2023, two crashes were recorded at this intersection. One involved a right-angle collision with a motor vehicle at the center of the intersection due to failure to yield the right-of-way, resulting in a minor injury when a driver failed to stop at the stop sign. The second crash was a collision with a deer, which occurred at dusk on the east leg of W Dryden Rd, leading to property damage.



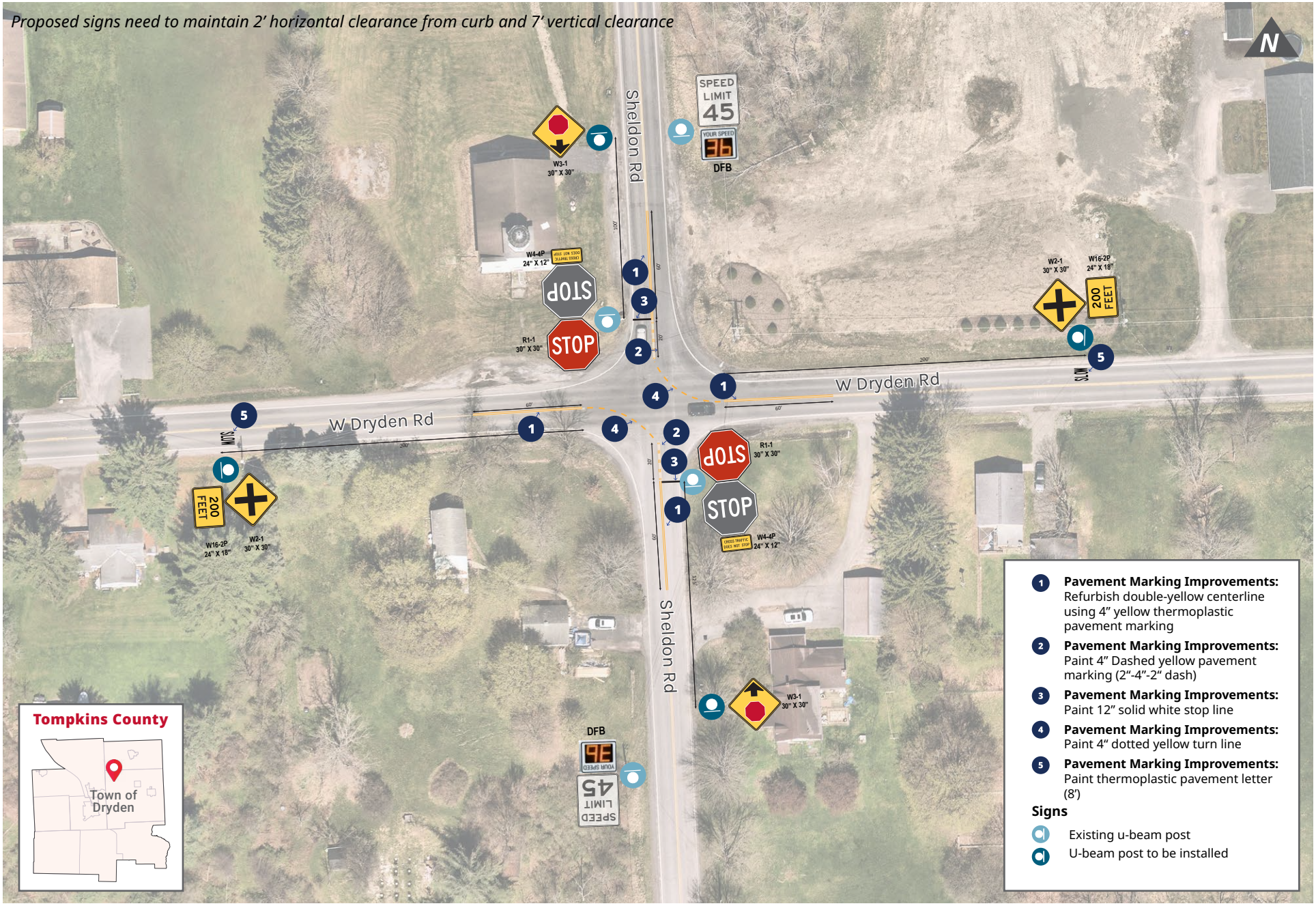
Spatial Distribution of Crashes by User Type

CRASH DATA (2019-2023)

Crash Counts						Injury Counts				Level of Service of Safety (LOSS)
TOTAL CRASH COUNTS	Auto	Cyclist	Pedestrian	Deer/ Animal	Others	TOTAL INJURY COUNTS	Fatal Injuries	Serious Injuries	Other Injuries	
2	1	0	0	1	0	2	0	0	2	2

* A fatal crash occured in 2024, outside of the analysis period for this project and is not represented in the crash location drawing or data table.

5. SHELDON RD/W DRYDEN RD



5. SHELDON RD/W DRYDEN RD

Based on the contributing factors to the crashes at this intersection, including failure to yield, we recommend implementing countermeasures such as enhanced signage, improved pavement markings, and increased visibility measures to reinforce right-of-way rules and reduce the risk of future collisions.

Speed Radar/Feedback Sign

Speed radars measure vehicle speed to help reduce speeding and prevent crashes, with feedback signs displaying real-time speed to alert drivers. An FHWA demonstration project found these signs to be effective in lowering vehicle speeds and reducing crash occurrences.

Due to the limited number of stop signs and signals, a speed radar/feedback sign is recommended in order to ensure safety and reduce speeding and therefore reduce roadway departure crashes.

Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections

This countermeasure includes deploying a package of multiple low-cost countermeasures, including enhanced signage and pavement markings at stop-controlled intersections and the duplication of stop signs on either side of the approach to the intersection.

These countermeasures increase driver awareness and recognition of the intersections and potential conflicts.

Advance stop warning sign along Sheldon Rd are recommended, along with "Cross-Traffic Does Not Stop" sub-plates, and double-sided stop signs to enhance visibility and reinforce the stop condition, ensuring drivers are more aware of the intersection and right-of-way rules.

Roundabout

Long term, consideration should be given to addition of a roundabout at Sheldon Rd and W Dryden Rd to reduce speeds along both corridors and reduce the number of conflicts at the intersection. Further study is needed to determine the suitability of the site for a roundabout. Accordingly, conceptual designs and cost estimates have not been developed.

South leg (Sheldon Rd)

North leg (Sheldon Rd)

5. SHELDON RD/W DRYDEN RD

Countermeasure	Quantity	Unit	Unit Cost	Total
Small Single Post-Mounted Signs	10	each	$ 622.00	$ 6,220.00
Dashed Double Yellow Line Markings	40	ft.	$ 4.00	$ 160.00
Stop Bar Pavement Markings	99	ft.	$ 3.00	$ 297.00
Double-Yellow Centerline	240	ft.	$ 4.00	$ 960.00
Dotted Yellow Turn Line	120	ft.	$ 4.00	$ 480.00
"SLOW" Pavement Marking	8	each	$ 250.00	$ 2,000.00
Solar Powered Radar Feedback Signs	2	each	$ 10,200.00	$ 20,400.00

Subtotal	**$ 30,517.00**
Work Zone Traffic Control (WZTC) Estimate (10%)	$ 3,051.70
Incidentals, Inflation and Contingencies Estimate (20%)	$ 6,103.40
Construction Cost	**$ 39,672.10**
Survey (10%)	$ 3,967.21
Design Engineering ($10k + 10%)	$ 13,967.21
Construction Management & Inspection (15%)	$ 5,950.82
Grand Total	**$ 63,557.34**
Less 10%	$ 57,201.60
Plus 10%	$ 69,913.07

Cost estimates were prepared in June of 2025 utilizing bid tabulation data provided by the NYSDOT Electronic Pay Item Catalog, and NYSDOT Quick Estimator Tool, along with the current state of the construction market in the upstate NY area. The most recent year data available was used for each individual unit cost. These estimates are to be used for planning purposes only.

6. MECKLENBURG RD (NY-79)/SHEFFIELD RD

INTERSECTION CHARACTERISTICS

FUNCTIONAL CLASSIFICATION Mecklenburg Road	Rural Minor Arterial Road
FUNCTIONAL CLASSIFICATION Sheffield Road	Rural Minor Collector Road
AADT Mecklenburg Road	4,483
AADT Sheffield Road	678
INTERSECTION TYPE	Rural 4-Leg Stop-Controlled Two-Way Stop TT
SPEED LIMIT	55 MPH (NY-79)
OWNERSHIP	NYSDOT
ADJACENT LAND USE	Developed/ Residential

KEY FINDINGS

At the intersection of Mecklenburg Rd and Sheffield Road, 13 crashes occurred over the five-year period, including two crashes that resulted in serious injuries. In order to reduce speeds along Mecklenburg Rd in advance of the intersection, improvements to the bus stop and a crosswalk across Mecklenburd Rd are recommended. To facilitate safety at the bus stops on the east side of the intersection, the addition of sidewalks, marked crosswalks, and rectangular rapid-flashing beacon are advised.

EXISTING CONDITIONS

The intersection is a rural, four-legged stop-controlled junction under the jurisdiction of NYSDOT. It is located on the western side of the Town of Ithaca in a rural residential neighborhood. Mecklenburg Rd is approximately 30-ft wide with two 10-ft wide travel lanes and shoulders on both sides. It is classified as a minor arterial road. Sheffield Rd is narrower at 22-ft with two 10-ft travel lanes (one in each direction), and features stop bars. It is classified as a minor collector road. There are several houses near the intersection with driveways that open into both roads.

As per field visit observations, the pavement marking is slightly faded and the roads are cracked, especially at the corners of the intersection and sides of the roads. Mecklenburg Rd has a bus stop but there are no sidewalks, bike lanes or crosswalks at the intersection. The intersection is surrounded by vegetation and does not leave space for pedestrians. Also, there are no lamp posts at the intersection for visibility in the dark. There are no traffic calming devices present at this intersection.

South leg (Sheffield Rd)

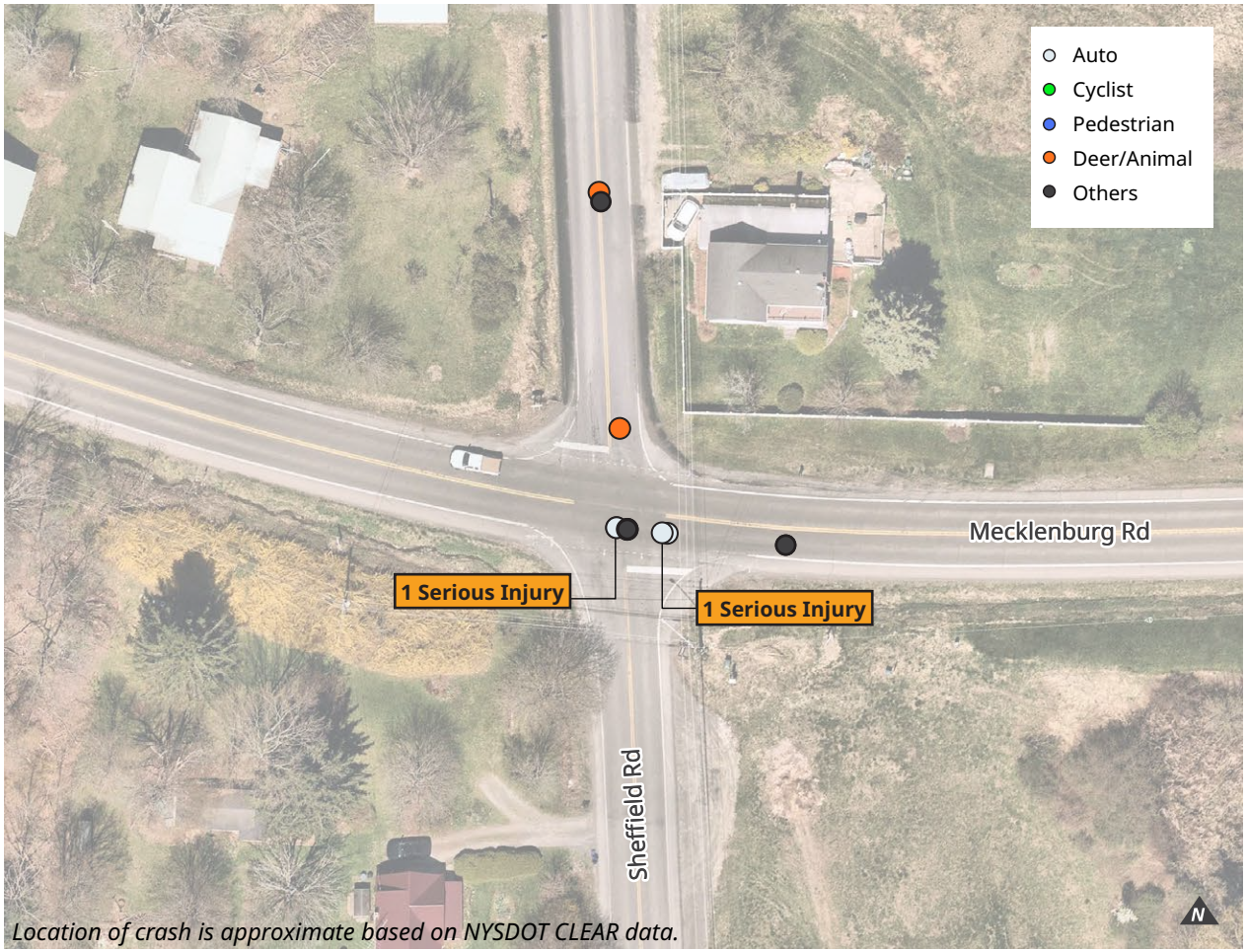
6. MECKLENBURG RD (NY-79)/SHEFFIELD RD

13
Total Crashes

2
Fatal & Serious Injury Crashes

Users Involved

Between 2019 and 2023, 13 crashes were reported, averaging 2.6 crashes per year. Two of these crashes resulted in serious injuries, both of which were right-angle collisions at the center of the intersection caused by failure to yield the right-of-way. Additionally, two crashes involved collisions with deer at the north leg of Sheffield Rd, highlighting potential wildlife-related hazards in the area.

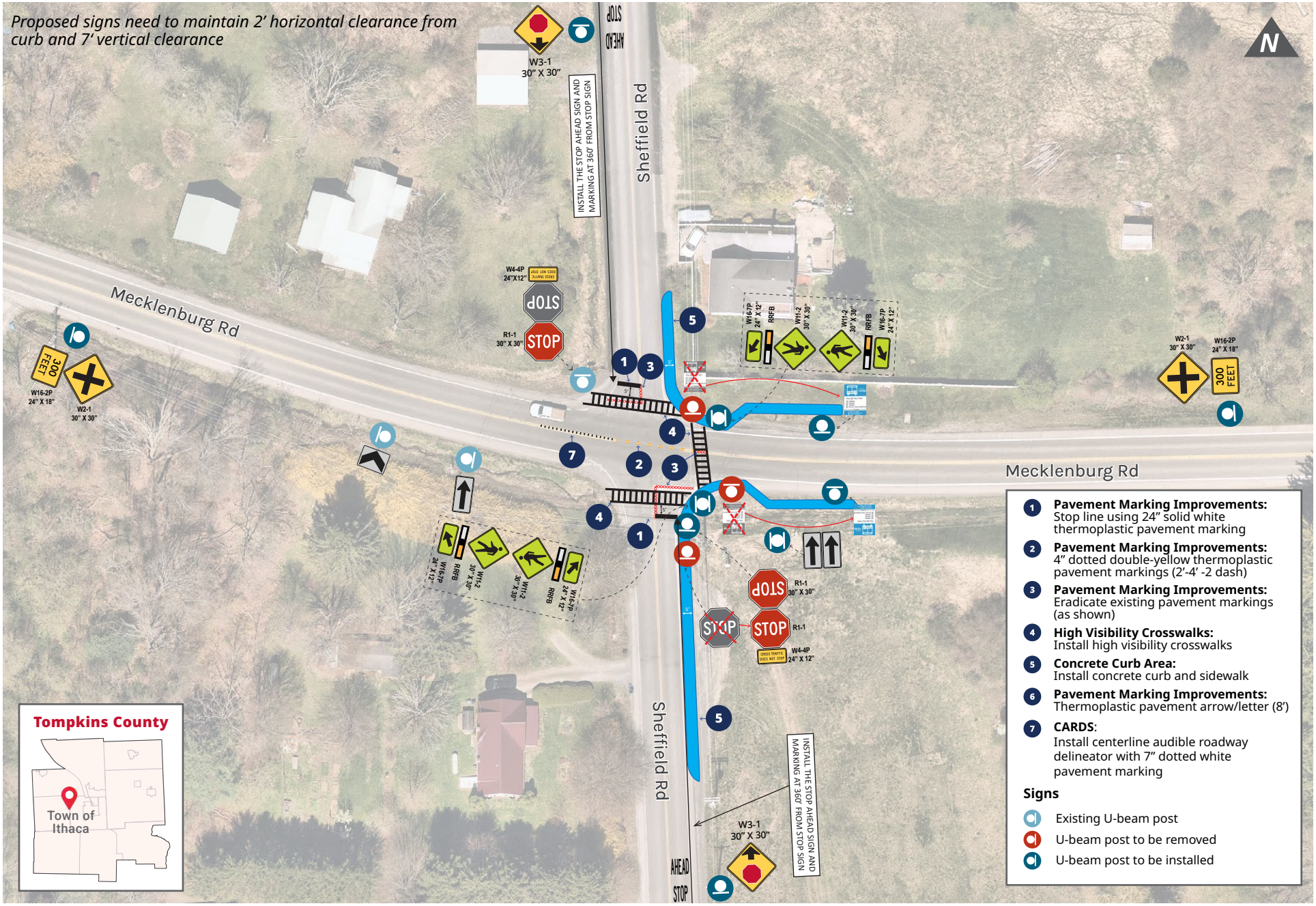


Spatial Distribution of Crashes by User Type

CRASH DATA (2019-2023)

Crash Counts						Injury Counts				Level of Service of Safety (LOSS)
TOTAL CRASH COUNTS	Auto	Cyclist	Pedestrian	Deer/ Animal	Others	TOTAL INJURY COUNTS	Fatal Injuries	Serious Injuries	Other Injuries	
13	6	0	0	2	5	5	0	2	3	4

6. MECKLENBURG RD (NY-79)/SHEFFIELD RD



6. MECKLENBURG RD (NY-79)/SHEFFIELD RD

Considering the contributing factors to crashes at this intersection, including right-angle collisions caused by failure to yield, we propose the following countermeasures.

High Visibility Crosswalks

High-visibility crosswalks use patterns (i.e., bar pairs, continental, ladder) that are visible to both the driver and pedestrian from farther away compared to traditional transverse line crosswalks.

Enhancing visibility of pedestrians and bicyclists at the intersection through the implementation of high visibility crosswalks will ensure pedestrian safety, especially with the presence of bus stops on the east side of the intersection, which are currently not served by a sidewalk or crosswalk.

Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections

Includes deploying a package of multiple low-cost countermeasures, including enhanced signage and pavement markings. These countermeasures increase driver awareness and recognition of the intersections and potential conflicts.

Multiple low-cost countermeasures, such as adding pavement markings, adding stop lines, as well as lighting can all help in improving the safety at this rural residential intersection.

Add Sidewalk

Sidewalks are paved walkways that are separated from motor vehicles by a curb and gutter. They are intended for pedestrians or people using a wheelchair.

Adding sidewalks at this intersection is recommended to ensure safety for pedestrians, especially given the presence of bus stops on the east side of the intersection that are currently not served by a sidewalk or crosswalk.

Rectangular Rapid Flashing Beacon (RRFB)

Rectangular Rapid Flashing Beacons (RRFB) consist of two, rectangular- shaped yellow indications, each with a light-emitting diode (LED)-array-based light source. RRFBs activate with alternating high-frequency flashes to increase pedestrian visibility and alert drivers to their presence at crossings.

RRFBs are recommended at this location to bring awareness to the presence of pedestrians crossing the intersection, especially given the presence of bus stops on the east side of the intersection.

Roundabout

Long term, consideration should be given to the addition of a roundabout linking Mecklenburg Rd and Sheffield Rd to reduce speeds along both corridors and reduce the number of conflicts at the intersection. Further study is needed to determine the suitability of the site for a roundabout. Accordingly, conceptual designs and cost estimates have not been developed.

East leg (Mecklenburg Rd)

6. MECKLENBURG RD (NY-79)/SHEFFIELD RD

Countermeasure	Quantity	Unit	Unit Cost	Total
Concrete Sidewalk (4" thick)	1,600	sq. ft.	$ 32.00	$ 51,200.00
LS Type (Ladder) Crosswalk	3	each	$ 2,100.00	$ 6,300.00
Pavement Markings Improvements - 4" Dashed Double Yellow Thermoplastic Pavement Marking (2' -4' -2')	22	ft.	$ 4.00	$ 88.00
Eradicate Markings	55	ft.	$ 3.00	$ 165.00
Centerline Audible Roadway Delineator (CARD)	40	ft.	$ 5.00	$ 200.00
Single Post-Mounted Signs	6	each	$ 622.00	$ 3,732.00
Rectangular Rapid Flashing Beacon	2	each	$ 13,700.00	$ 27,400.00

Subtotal	**$ 89,085.00**
Work Zone Traffic Control (WZTC) Estimate (10%)	$ 8,908.50
Incidentals, Inflation and Contingencies Estimate (20%)	$ 17,817.00
Construction Cost	**$115,810.50**
Survey (10%)	$ 11,581.05
Design Engineering ($10k + 10%)	$ 21,581.05
Construction Management & Inspection (15%)	$ 17,371.58
Grand Total	**$166,344.18**
Less 10%	$149,709.76
Plus 10%	$182,978.59

Cost estimates were prepared in June of 2025 utilizing bid tabulation data provided by the NYSDOT Electronic Pay Item Catalog, and NYSDOT Quick Estimator Tool, along with the current state of the construction market in the upstate NY area. The most recent year data available was used for each individual unit cost. These estimates are to be used for planning purposes only.

7. PERUVILLE RD (NY-34B)/SCOFIELD RD

INTERSECTION CHARACTERISTICS

FUNCTIONAL CLASSIFICATION Peruville Rd	Rural Major Collector Road
FUNCTIONAL CLASSIFICATION Scofield Rd	Rural Local Road
AADT Peruville Rd	4,492
AADT Scofield Rd	N/A
INTERSECTION TYPE	Rural 4-Leg Stop-Controlled Two-Way Stop TT
SPEED LIMIT	55 MPH
OWNERSHIP	NYSDOT
ADJACENT LAND USE	Rural/Agricultural

KEY FINDINGS

At Peruville Rd and Scofield Rd in the Town of Lansing, nine crashes occurred in the five-year period including three that resulted in serious injuries. Improved pavement markings, including a centerline marking and stop bars on Scofield Rd are recommended, along with "Cross Traffic Does Not Stop" sub-plates.

EXISTING CONDITIONS

The intersection is situated on the eastern side of the Town of Lansing, within a rural agricultural area with a few commercial buildings nearby. The intersection is a four-legged stop-controlled junction under the jurisdiction of NYSDOT. The intersection is controlled by two-way stop signs and has a 45-MPH speed limit. It does not have any traffic signals or crosswalks.

Peruville Rd, the primary road, is approximately 30-ft wide, consisting of two 11-ft travel lanes, one in each direction, and shoulders on both sides. It is classified as a major collector road. Scofield Rd, a rural road, is narrower at 22-ft wide and is unmarked, with the exception of stop lines at the intersection. It is classified as a rural local road. There are no bike lanes or sidewalks on either of the roads.

There is minor cracking on the roads and the pavement markings are slightly faded. Scofield Rd is on a slightly lower grade so the visibility from Scofield Rd towards Peruville Rd is difficult.

Scofield Rd

7. PERUVILLE RD (NY-34B)/SCOFIELD RD

9
Total Crashes

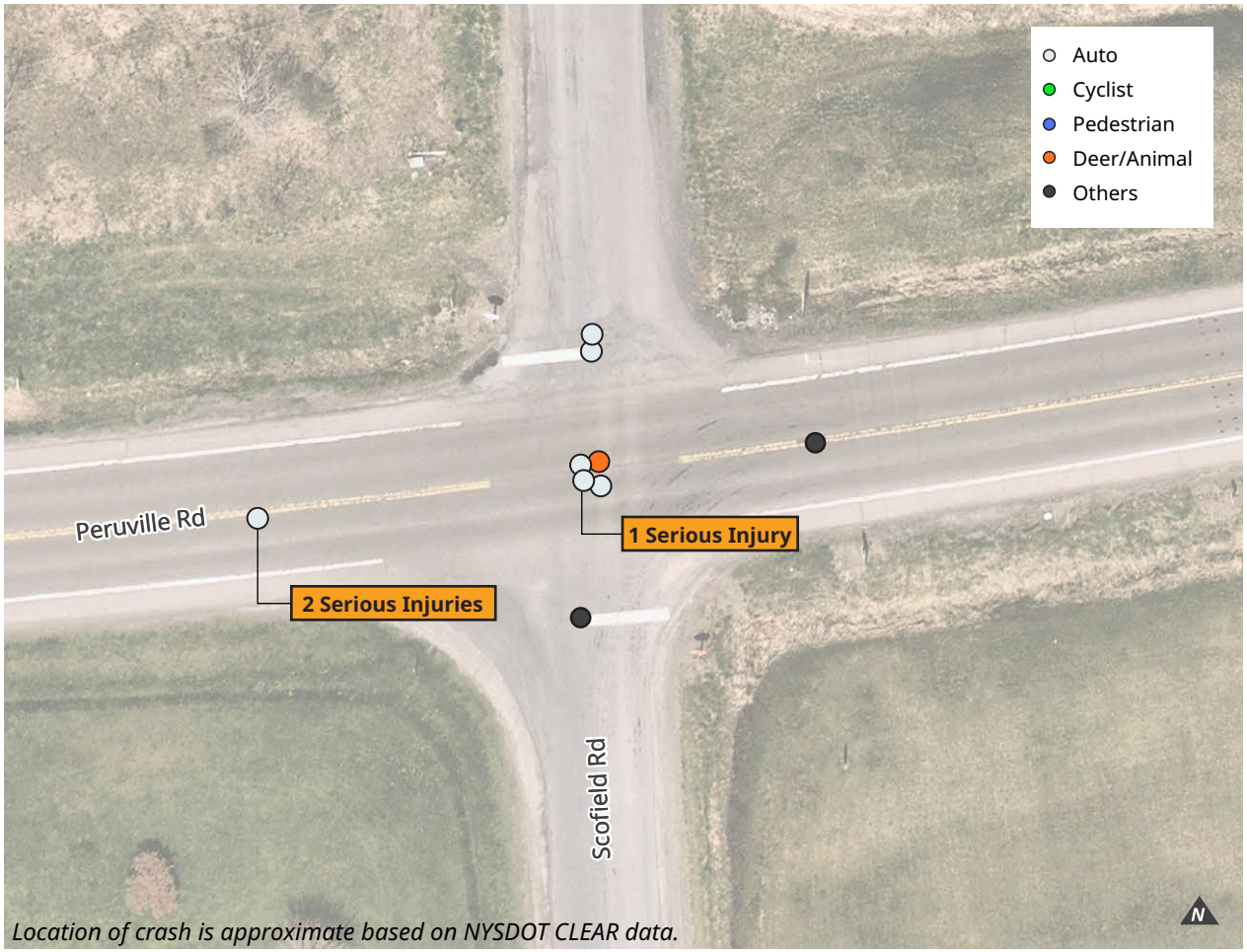
3
Fatal & Serious Injury Crashes

Users Involved

Between 2019 and 2023, the intersection recorded nine crashes, resulting in an average crash frequency of 1.8 crashes per year. Of these incidents, three involved serious injuries—one involving an older driver and the other a younger driver.

One crash resulted in two serious injuries at the west leg of Peruville Rd, while another crash resulted in one serious injury at the center of the intersection. These crashes were motor vehicle collisions.

Four crashes occurred at the center of the intersection and one of them was a collision with a deer. The other two crashes with motor vehicles occurred on the north leg of Scofield Rd.

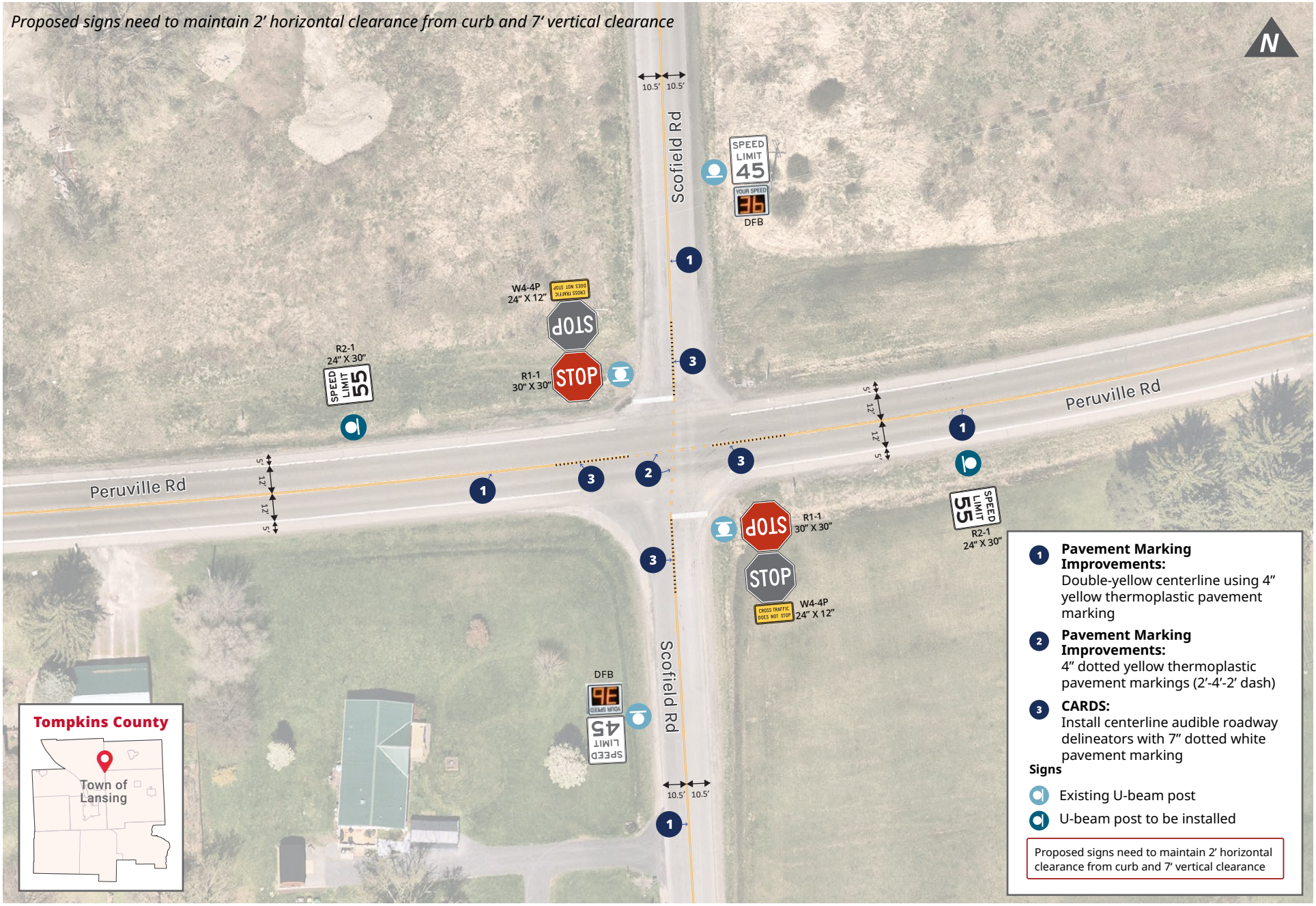


Spatial Distribution of Crashes by User Type

CRASH DATA (2019-2023)

Crash Counts						Injury Counts				Level of Service of Safety (LOSS)
TOTAL CRASH COUNTS	Auto	Cyclist	Pedestrian	Deer/ Animal	Others	TOTAL INJURY COUNTS	Fatal Injuries	Serious Injuries	Other Injuries	
9	6	0	0	1	2	7	0	3	4	4

7. PERUVILLE RD (NY-34B)/SCOFIELD RD



7. PERUVILLE RD (NY-34B)/SCOFIELD RD

Based on the contributing factors to the crashes at this intersection, including serious injury motor vehicle crashes and a collision with a deer, we recommend the following countermeasures.

Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections

Includes deploying a package of multiple low-cost countermeasures, including enhanced signage and pavement markings. These countermeasures increase driver awareness and recognition of the intersections and potential conflicts.

Multiple low-cost countermeasures, such as adding pavement markings, adding stop lines, as well as lighting can all help in improving safety at this rural residential intersection. The addition of double-sided Stop signs and "Cross Traffic Does Not Stop" sub-plates is recommended to alert drivers on Scofield Rd that traffic on Peruville Rd does not stop.

Centerline Audible Roadway Delineators (CARDs)

Centerline Audible Roadway Delineators (CARDs) are designed to alert drivers through vibration and sound when their vehicle veers from the travel lane. In order to reduce speeds at the intersection, CARDs are recommended on Peruville Rd.

Roundabout

Long term, consideration should be given to the addition of a roundabout at Peruville Rd and Scofield Rd to reduce speeds along both corridors and reduce the number of conflicts at the intersection. Further study is needed to determine the suitability of the site for a roundabout. Accordingly, conceptual designs and cost estimates have not been developed.

Speed Radar/Feedback Sign

Speed radars measure vehicle speed to help reduce speeding and prevent crashes, with feedback sign displaying real-time speed to alert drivers. An FHWA demonstration project found these signs to be effective in lowering vehicle speeds and reducing crash occurences.

Due to the limited number of stop signs and signals, a speed radar/feedback sign is recommended in order to ensure safety and reduce speeding and therefore, reduce departure crashes.

Poor road conditions

Limited visibility in snowy weather

7. PERUVILLE RD (NY-34B)/SCOFIELD RD

Countermeasure	Quantity	Unit	Unit Cost	Total
Small Single Post-Mounted Signs	2	each	$ 622.00	$ 1,244.00
Solar Powered Radar Feedback Signs	2	each	$ 10,200.00	$ 20,400.00
Double Yellow Centerline	1,390	ft.	$ 4.00	$ 5,560.00
Centerline Audible Roadway Delineator (CARD)	136	ft.	$ 5.00	$ 680.00
Dotted Yellow Turn Line	20	ft.	$ 4.00	$ 80.00

Subtotal	**$27,964.00**
Work Zone Traffic Control (WZTC) Estimate (10%)	$2,796.40
Incidentals, Inflation and Contingencies Estimate (20%)	$5,592.80
Construction Cost	**$36,353.20**
Survey (10%)	$3,635.32
Design Engineering ($10k + 10%)	$13,635.32
Construction Management & Inspection (15%)	$5,452.98
Grand Total	**$59,076.82**
Less 10%	$53,169.14
Plus 10%	$64,984.50

Cost estimates were prepared in June of 2025 utilizing bid tabulation data provided by the NYSDOT Electronic Pay Item Catalog, and NYSDOT Quick Estimator Tool, along with the current state of the construction market in the upstate NY area. The most recent year data available was used for each individual unit cost. These estimates are to be used for planning purposes only.

8. W DANBY RD (NY-34/NY-96)/DECKER RD

INTERSECTION CHARACTERISTICS

FUNCTIONAL CLASSIFICATION West Danby Road	Urban Minor Arterial Road
FUNCTIONAL CLASSIFICATION Decker Road	Urban Major Collector Road
AADT West Danby Road	6,831
AADT Decker Road	571
INTERSECTION TYPE	Rural 3-Leg Stop-Controlled
SPEED LIMIT	55 MPH
OWNERSHIP	NYSDOT
ADJACENT LAND USE	Developed/ Commercial

KEY FINDINGS

At the intersection of West Danby Rd and Decker Road, eight crashes occurred in the five-year period including two that resulted in serious injuries. Speed and failure to yield were contributing factors to these crashes. To reduce speeds at the approach to the intersection, speed feedback signs are recommended. In order to facilitate access to the bus stop at the southeast corner of the intersection the addition of a sidewalk, a marked crosswalk, and a rectangular rapid flashing beacon are recommended.

EXISTING CONDITIONS

The intersection of West Danby Rd and Decker Rd is a rural three-legged, stop-controlled junction under NYSDOT jurisdiction. West Danby Rd connects to Decker Rd on the west leg, leading to a rural residential area and on the eastern side there is an access road to commercial space that includes a gas station, U-Haul facility, and a church. West Danby Rd, a minor arterial road, features two 11-ft-wide travel lanes, one in each direction, with approximately 5-ft-wide shoulders on both sides. The pavement markings are clearly visible, and the road is in good condition with minor cracks. Decker Rd, in contrast, is narrower, with two 10-ft-wide travel lanes. It is classified as a major collector road. Driveways feed into Decker Rd, which intersects with West Danby Rd on its eastern side.

The field visit observations show that the intersection has no crosswalks. There is a bus stop sign on West Danby Rd and a “bus stop ahead” sign approaching the intersection. There are no sidewalks or bike lanes on the road. There are streetlights illuminating the adjacent business driveways but not the roadway. The access from the gas station is on a slightly lower elevation and limits visibility for those existing the driveway. During the field visit it was noted that the surface of Decker Rd is cracked and covered with gravel with slightly visible markings.

South leg (W Danby Rd)

8. W DANBY RD (NY-34/NY-96)/DECKER RD

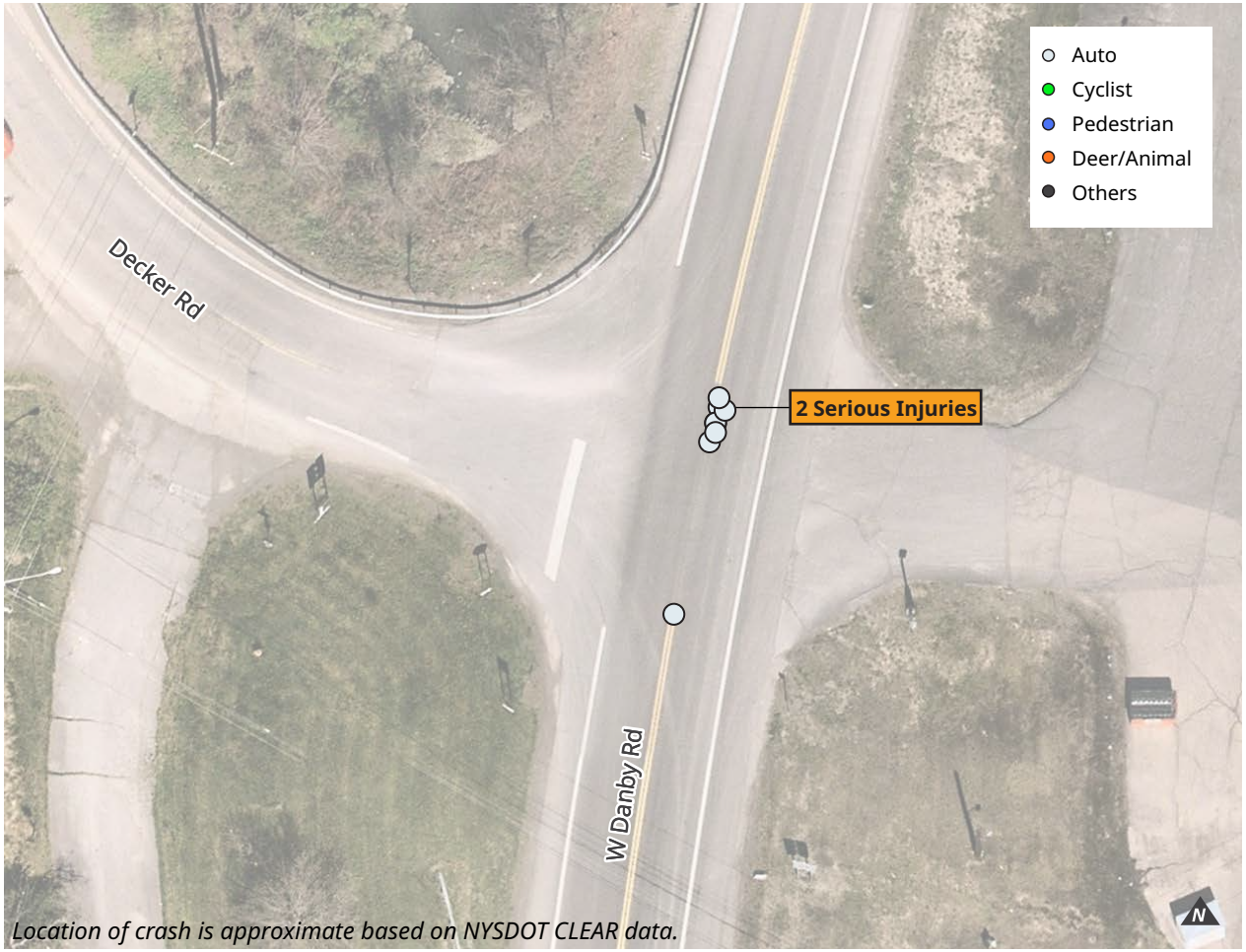
9
Total Crashes

3
Fatal & Serious Injury Crashes

OTHER

Users Involved

Between 2019 and 2023, eight crashes were reported with an average crash frequency of 1.6 per year. One of them resulted in two serious injuries. All of the eight crashes were collisions with motor vehicles. The key contributing factors were speed related and failure to yield right-of-way.

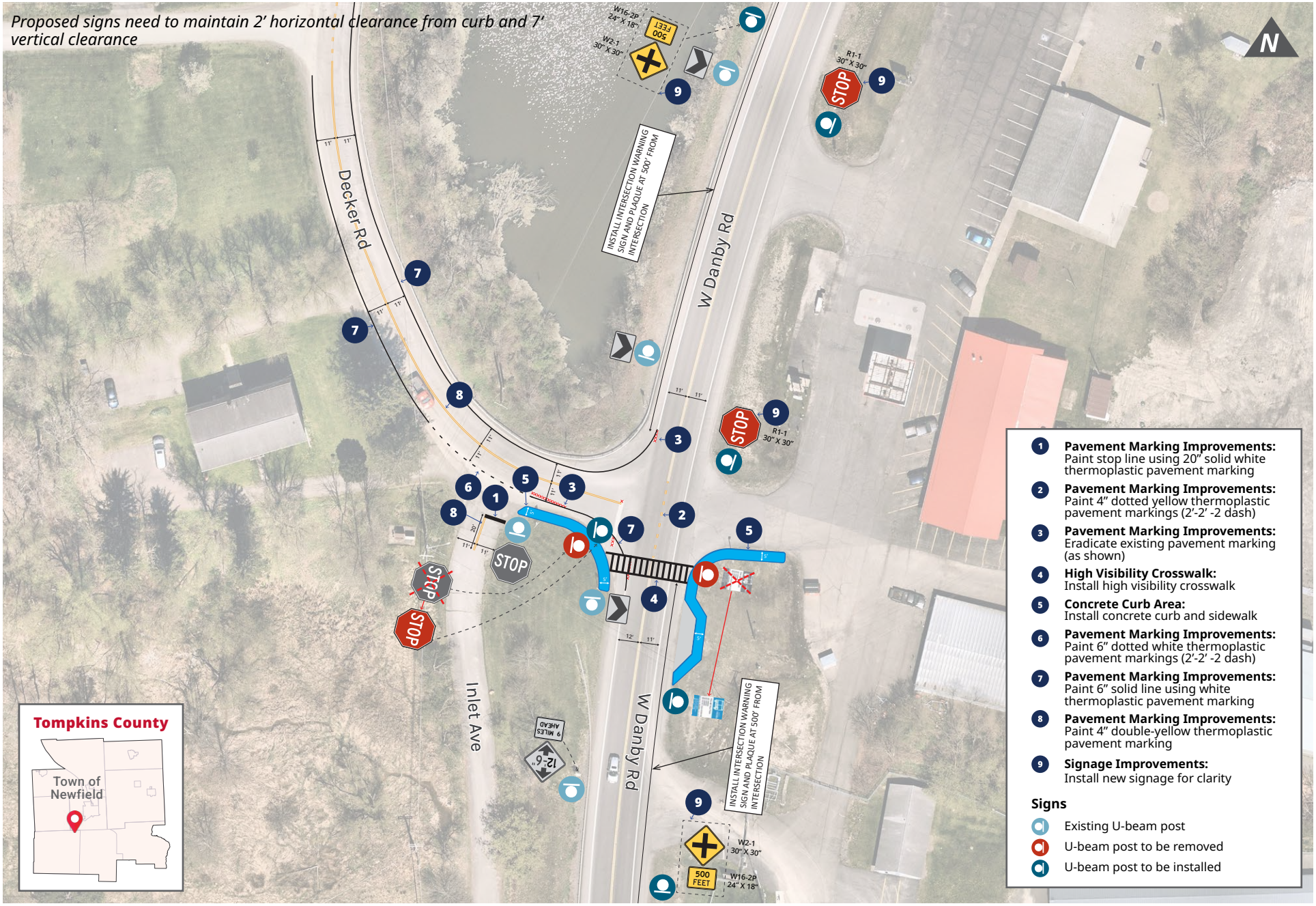


Spatial Distribution of Crashes by User Type

CRASH DATA (2018-2023)

Crash Counts						Injury Counts				Level of Service of Safety (LOSS)
TOTAL CRASH COUNTS	Auto	Cyclist	Pedestrian	Deer/ Animal	Others	TOTAL INJURY COUNTS	Fatal Injuries	Serious Injuries	Other Injuries	
8	8	0	0	0	0	10	0	2	8	4

8. W DANBY RD (NY-34/NY-96)/DECKER RD



8. W DANBY RD (NY-34/NY-96)/DECKER RD

Based on the contributing factors to the crashes at this intersection, including speeding and failure to yield right-of-way, we recommend the following countermeasures.

Systematic Application of Low-Cost Countermeasures at Stop Controlled Intersections

This includes deploying a package of multiple low-cost countermeasures, including enhanced signage and pavement markings. These countermeasures increase driver awareness and recognition of the intersections and potential conflicts.

Pavement marking enhancements are recommended at this location to square up the west leg of the segment and effectively reduce turning radius and speed of turning movements.

High-Visibility Crosswalks

High-visibility crosswalks use patterns (i.e., bar pairs, continental, ladder) that are visible to both the driver and pedestrian from farther away compared to traditional transverse line crosswalks.

A high-visibility marked crosswalk across W Danby Rd is recommended to facilitate access to the bus stop at the southeast corner of the intersection.

Add Sidewalk

Sidewalks are paved walkways that are separated from motor vehicles by a curb and gutter. They are intended for pedestrians or people using a wheelchair. A sidewalk is recommended to facilitate access to and from the bus stop at the southeast corner of the intersection.

North leg (W Danby Rd)

Intersection

8. W DANBY RD (NY-34/NY-96)/DECKER RD

Countermeasure	Quantity	Unit	Unit Cost	Total
Concrete Sidewalk (4" thick)	1,250	sq. ft.	$ 32.00	$ 40,000.00
LS Type (Ladder) Crosswalk	1	each	$ 2,100.00	$ 2,100.00
Small Single Post-Mounted Sign	6	each	$ 622.00	$ 3,732.00
Stop Bar Pavement Marking	50	ft.	$ 3.00	$ 150.00
Dotted Yellow Thermoplastic Pavement Marking	32	ft.	$ 4.00	$ 128.00
Eradicate Existing Pavement Marking	50	ft.	$ 3.00	$ 150.00
Dotted White Line (6")	33	ft.	$ 4.00	$ 132.00
Solid White Line (6")	750	ft.	$ 4.00	$ 3,000.00
Double Yellow Centerline	32	ft.	$ 4.00	$ 128.00

Subtotal	**$ 49,520.00**
Work Zone Traffic Control (WZTC) Estimate (10%)	$ 4,952.00
Incidentals, Inflation and Contingencies Estimate (20%)	$ 9,904.00
Construction Cost	**$ 64,376.00**
Survey (10%)	$ 6,437.60
Design Engineering ($10k + 10%)	$ 16,437.60
Construction Management & Inspection (15%)	$ 9,656.40
Grand Total	**$ 96,907.60**
Less 10%	$ 87,216.84
Plus 10%	$106,598.36

Cost estimates were prepared in June of 2025 utilizing bid tabulation data provided by the NYSDOT Electronic Pay Item Catalog, and NYSDOT Quick Estimator Tool, along with the current state of the construction market in the upstate NY area. The most recent year data available was used for each individual unit cost. These estimates are to be used for planning purposes only.

9. CAYUGA HEIGHTS RD/WYCKOFF RD

INTERSECTION CHARACTERISTICS

FUNCTIONAL CLASSIFICATION Cayuga Heights Rd	Urban Major Collector Road
FUNCTIONAL CLASSIFICATION Wyckoff Rd	Urban Local Road
FUNCTIONAL CLASSIFICATION Kline Rd	Urban Local Road
AADT Cayuga Heights Rd	1,346
AADT Wyckoff Rd	N/A
INTERSECTION TYPE	Urban 4-Leg Stop-Controlled
SPEED LIMIT	30 MPH
OWNERSHIP	Village of Cayuga Heights
ADJACENT LAND USE	Developed/ Residential

KEY FINDINGS

Wyckoff Rd and Kline Rd intersect Cayuga Heights Rd, forming a triangle in the Village of Cayuga Heights. Ten crashes occurred over the five-year period including two that resulted in serious injuries. In this residential area, the addition of sidewalk along Kline Rd and Wyckoff is recommended, along with high visibility crosswalks and a rapid flashing beacon for pedestrian safety at the intersection. To reduce speeds in advance of the intersection, speed feedback signs are recommended.

EXISTING CONDITIONS

The intersections of Wyckoff Rd and Cayuga Heights Rd and Kline Rd are four-legged, stop-controlled junctions located in an urban residential neighborhood. Cayuga Heights Rd is classified as a major collector road, while Wyckoff Rd is an urban local road. The intersection is under the jurisdiction of the Village of Cayuga Heights. Wyckoff Rd and Kline Rd are 20-ft wide and unmarked roads, whereas Cayuga Heights Rd features two 9-ft-wide travel lanes, one in each direction. Wyckoff Rd is slightly offset, creating a subtly angled alignment at the intersection. Kline Rd intersects with Cayuga Heights Rd 100-ft south of Wyckoff Rd. Multiple residential driveways feed into both streets.

As per field visit observations, the Wyckoff Rd and Cayuga Heights Rd intersection features a two-way stop sign, accompanied by a crosswalk sign and a yield-to-pedestrian sign on the approach. High-visibility crosswalks are present on two legs of the intersection. The Kline Rd and Cayuga Heights Rd intersection is also two-way stop controlled and crosswalks are absent from the intersection. During the field visit, it was noted that the single lamp post at the Wyckoff Rd intersection provided inadequate illumination at night. Both roads have sidewalks, but they are incomplete. Sidewalks are present on only one side of Wyckoff St (north), one side of Cayuga Heights Rd and no sidewalks are present on Klein Rd. The pavement markings are clearly visible on Cayuga Heights Rd but lack consistency. Only stop bars are present on Kline Rd and Wyckoff Rd. The roadway shows minor cracking.

North leg (Cayuga Heights Rd)

9. CAYUGA HEIGHTS RD/WYCKOFF RD

10
Total Crashes

2
Fatal & Serious Injury Crashes

OTHER

Users Involved

Between 2019 and 2023, the two intersections recorded ten crashes, with an average crash frequency of two per year. One crash resulted in two serious injuries. The serious injury crash involved a collision with a guide rail, primarily caused by road user behavior.

Eight crashes were collisions with motor vehicles and one of the crashes was collision with bicyclist. The contributing factors involved unsafe speed, failure to yield right-of-way, and obstructed view. All the crashes are located at the center of the intersections.

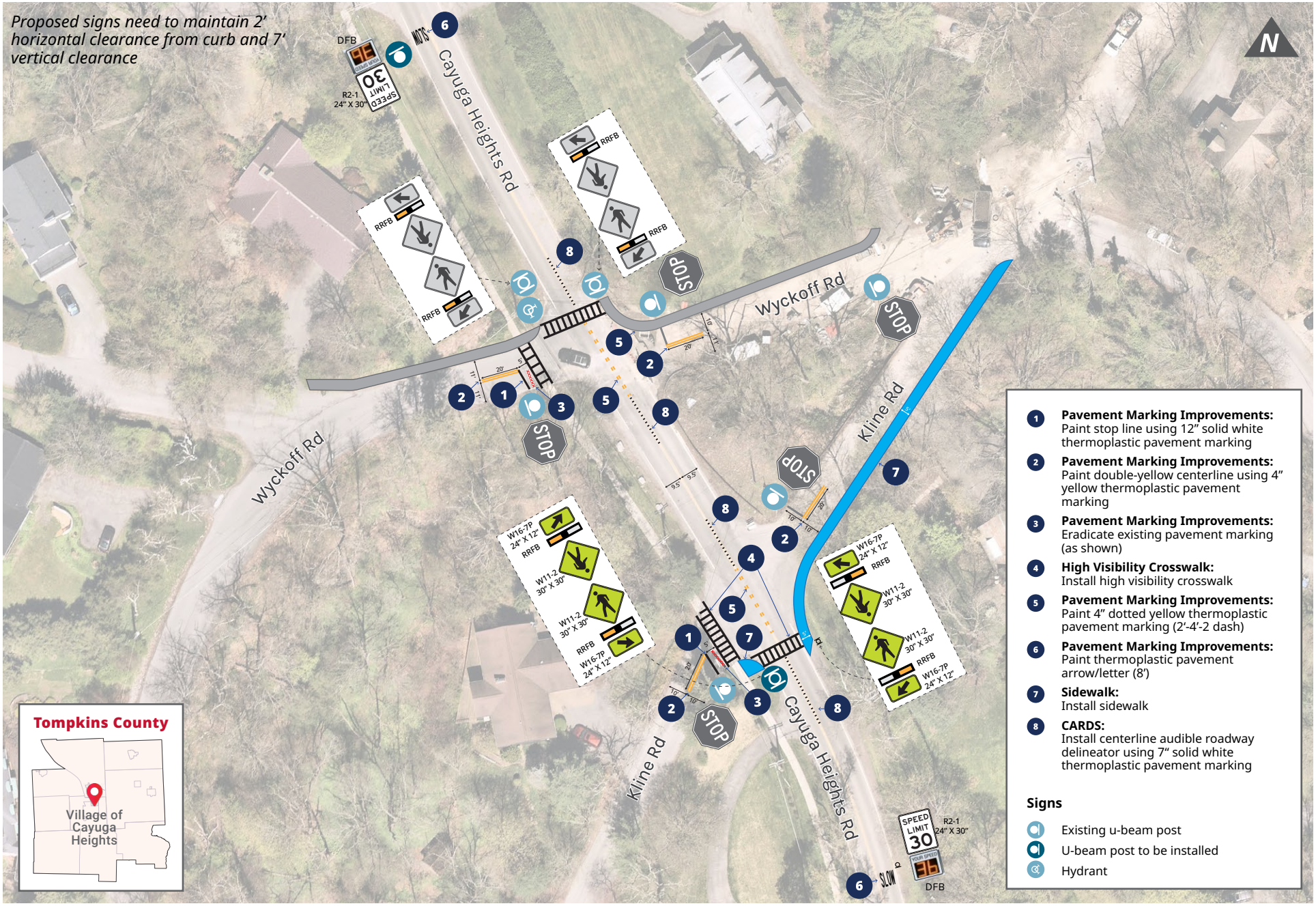
Spatial Distribution of Crashes by User Type

CRASH DATA (2019-2023)

Crash Counts						Injury Counts				Level of Service of Safety (LOSS)
TOTAL CRASH COUNTS	Auto	Cyclist	Pedestrian	Deer/ Animal	Others	TOTAL INJURY COUNTS	Fatal Injuries	Serious Injuries	Other Injuries	
10	8	1	0	0	1	6	0	2	4	3

9. CAYUGA HEIGHTS RD/WYCKOFF RD

Countermeasure Recommendations



9. CAYUGA HEIGHTS RD/WYCKOFF RD

Based on the contributing factors to crashes at this intersection, including speeding, failure to yield the right-of-way, and improper lane changes, we recommend the following countermeasures.

Rectangular Rapid Flashing Beacons RRFB

Rectangular Rapid Flashing Beacons (RRFB) consist of two, rectangular- shaped yellow indications, each with a light-emitting diode (LED)-array-based light source. RRFBs flash with an alternating high frequency when activated to enhance the conspicuity of pedestrians at the crossing to drivers.

An RRFB is recommended at the intersection of Cayuga Heights Rd and Kline Rd, supported by marked crosswalks.

High-Visibility Crosswalk

High-visibility crosswalks use patterns (i.e., bar pairs, continental, ladder) that are visible to both the driver and pedestrian from farther away compared to traditional transverse line crosswalks. Adding it would enhance pedestrian safety of residents of the neighborhood.

Add Sidewalk

Sidewalks are paved walkways that are separated from motor vehicles by a curb and gutter. They are intended for pedestrians or people using a wheelchair. Adding sidewalk would help mobility and accessibility of pedestrians of all abilities in the neighborhood.

Speed Feedback Signs

Feedback signs display speeds recorded by speed radar to the driver.

To reduce speeds at the approach of the intersection, speed feedback signs are recommended along Cayuga Heights Rd in advance of Kline Rd and Wyckoff Rd.

East leg (Wyckoff Rd)

North leg (Cayuga Heights Rd)

9. CAYUGA HEIGHTS RD/WYCKOFF RD

Countermeasure	Quantity	Unit	Unit Cost	Total
Concrete Sidewalk (4" thick)	1,300	sq. ft.	$ 32.00	$ 41,600.00
LS Type (Ladder) Crosswalk	4	each	$ 2,100.00	$ 8,400.00
Small Single Post-Mounted Sign	2	each	$ 622.00	$ 1,244.00
Solar Powered Radar Speed Sign	2	each	$ 10,200.00	$ 20,400.00
Rectangular Rapid Flashing Beacon	4	each	$ 13,700.00	$ 54,800.00
Double Yellow Centerline	160	ft.	$ 4.00	$ 640.00
Eradicate Existing Pavement Marking	24	ft.	$ 3.00	$ 72.00
Dotted Yellow Thermoplastic Pavement Markings	56	ft.	$ 4.00	$ 224.00
"SLOW" Pavement Markings	2	each	$ 250.00	$ 500.00
Centerline Audible Roadway Delineator (CARD)	113	ft.	$ 10.00	$ 1,130.00

Subtotal	**$129,010.00**
Work Zone Traffic Control (WZTC) Estimate (10%)	$ 12,901.00
Incidentals, Inflation and Contingencies Estimate (20%)	$ 25,802.00
Construction Cost	**$167,713.00**
Survey (10%)	$ 16,771.30
Design Engineering ($10k + 10%)	$ 26,771.30
Construction Management & Inspection (15%)	$ 25,156.95
Grand Total	**$236,412.55**
Less 10%	$212,771.30
Plus 10%	$260,053.81

Cost estimates were prepared in June of 2025 utilizing bid tabulation data provided by the NYSDOT Electronic Pay Item Catalog, and NYSDOT Quick Estimator Tool, along with the current state of the construction market in the upstate NY area. The most recent year data available was used for each individual unit cost. These estimates are to be used for planning purposes only.

10. W MAIN ST (NY-13)/NORTH ST

INTERSECTION CHARACTERISTICS

FUNCTIONAL CLASSIFICATION NY-13	Rural Principal Arterials
FUNCTIONAL CLASSIFICATION Main St	Rural Major Collector/ Rural Minor Arterial
AADT NY-13	11,834
AADT Main St	3,896
INTERSECTION TYPE	Rural 4-Leg Signalized
SPEED LIMIT	30 MPH
OWNERSHIP	NYSDOT
ADJACENT LAND USE	Developed/ Commercial

KEY FINDINGS

In the heart of the Village of Dryden, the intersection of Main St and NY-13 serves as the site of commercial activity. This intersection was the site of 27 crashes, including two involving pedestrians, one of which resulted in a serious injury, over the five-year period. To further slow turning vehicle speeds, additional curb extensions are recommended at the northeast, northwest, and southwest corners of the intersection. Additional measures include restricting right turns on red and implementing leading pedestrian intervals to enhance pedestrian safety and reduce conflict points.

EXISTING CONDITIONS

This is a four-legged intersection, situated in a densely populated commercial area, with multiple driveways feeding into all its legs. It is located within 0.5 miles of a school and adjacent to parks like Times Square and Village Green, which are near the north leg of the intersection.

NY-13 is also called North St (north of the intersection) and South St (south of the intersection. Similarly, Main St is W Main St (west of the intersection) and E Main St (east of the intersection). Each leg of the intersection is classified differently: W Main St and North St are principal arterials (other), E Main St is a major collector road, and South St is a minor arterial. W Main St is 45-feet wide, featuring two 11-ft travel lanes, an 8-foot parking lane on the south side, and a gore area on the north. East Main St is 42-ft wide and has three 10-ft-11-ft travel lanes and an 8-ft parking lane, with a curb extension at the intersection on the SE corner. Similarly, North St is 45-ft wide, with two travel lanes (14-ft and 11-ft wide), a gore area extending up to 150-ft, and a dedicated left-turn lane. South St is approximately 45-ft wide but narrows to 35-ft near the intersection due to the curb extension. It features two 14-ft travel lanes, one of which bifurcates into a 10-ft through lane and right-turn lane and a dedicated left-turn lane, along with an 8-ft parking lane.

As per field visit observations, the intersection is controlled by a traffic signal and pedestrian signal and includes a left-turn yield on a flashing yellow sign. There is a two-way stop sign, and a 30-MPH speed limit sign is present. Lane markings and shoulders are visible, but the markings are slightly faded, and the roads exhibit minor cracking. Sidewalks are available, and crosswalks are present on the intersection. The crosswalks feature high-visibility ladder-style markings, which are clearly visible, and accessible curb ramps, though the ramps lack tactile surfaces. Pedestrians were observed crossing the intersection during a field visit, but not always using the crosswalks. The light posts are present on all the legs of the intersection.

10. W MAIN ST (NY-13)/NORTH ST

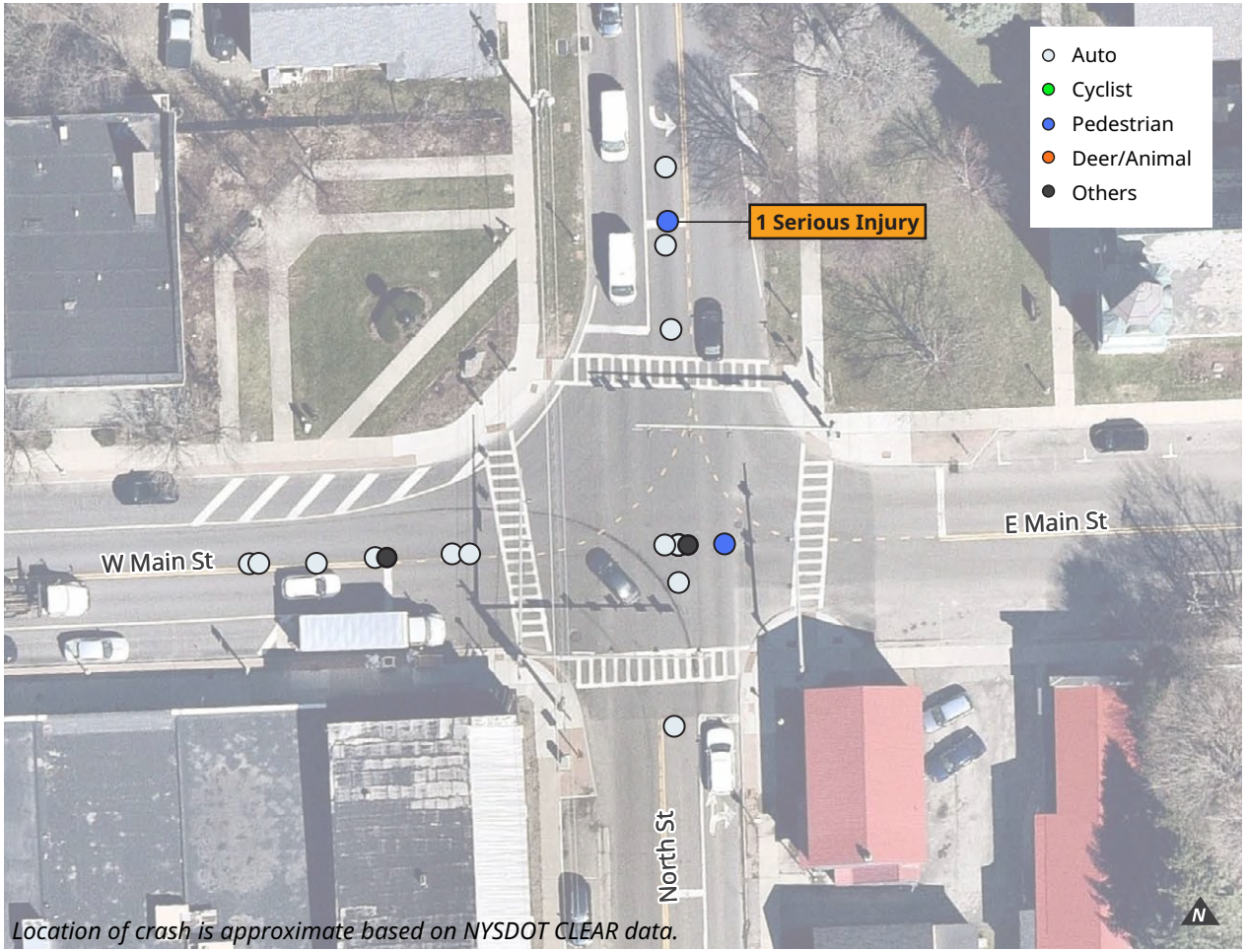
27
Total Crashes

1
Fatal & Serious Injury Crashes

Users Involved

Between 2019 and 2023, the intersection recorded 27 crashes, with an average crash frequency of 5.4 per year. One of the crashes involved a pedestrian collision north of NY-13, resulting in a serious injury. Another pedestrian crash occurred at the center of the intersection.

Motor vehicle crashes have occurred on the west leg of Main St, north leg of NY-13 and center of the intersection. Noted contributing factors are road user behavior and failure to yield right-of-way.



Location of crash is approximate based on NYSDOT CLEAR data.

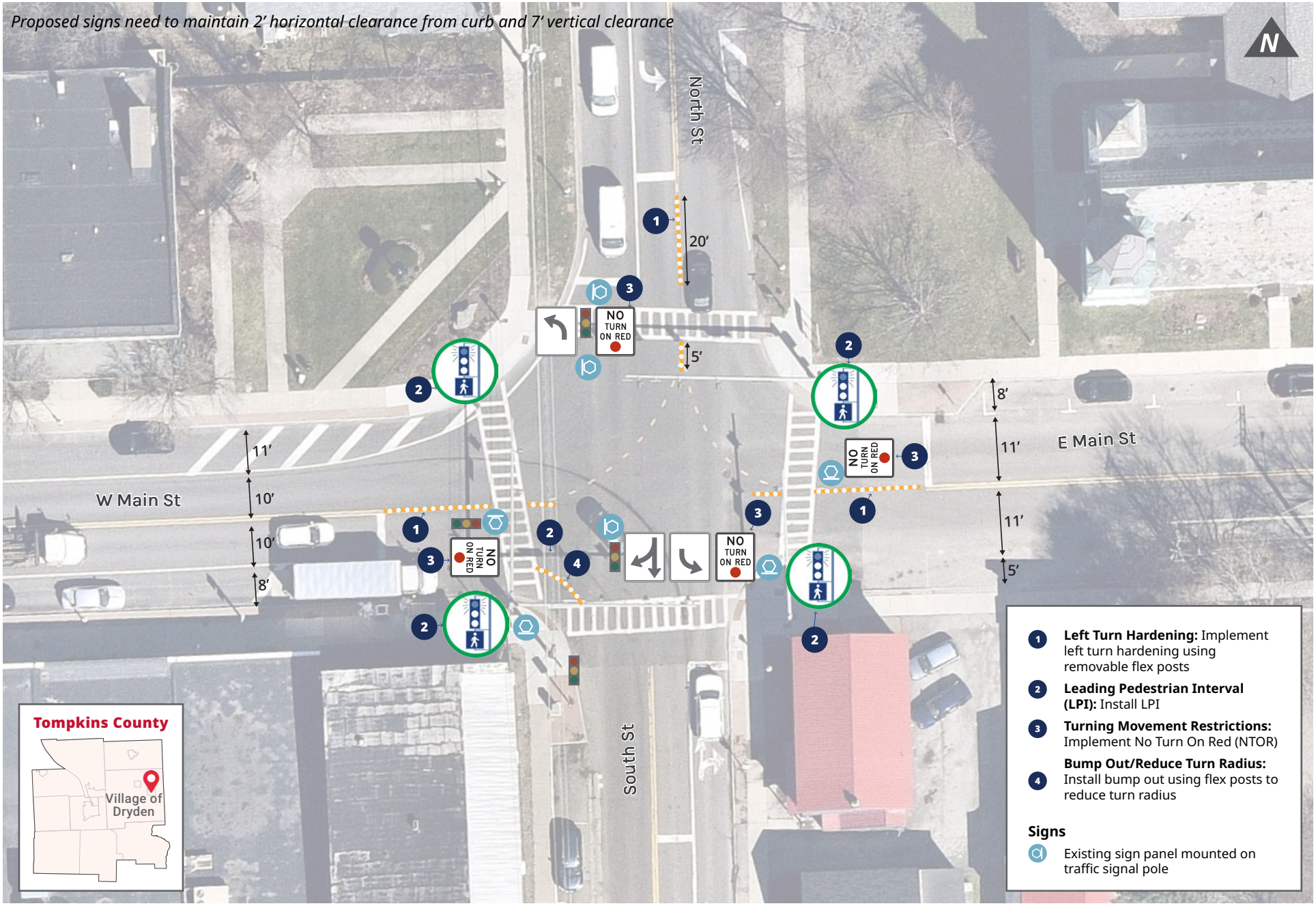
Spatial Distribution of Crashes by User Type

CRASH DATA (2019-2023)

Crash Counts						Injury Counts				Level of Service of Safety (LOSS)
TOTAL CRASH COUNTS	Auto	Cyclist	Pedestrian	Deer/ Animal	Others	TOTAL INJURY COUNTS	Fatal Injuries	Serious Injuries	Other Injuries	
27	23	0	2	0	2	6	0	1	5	2

10. W MAIN ST (NY-13)/NORTH ST

Countermeasure Recommendations



10. W MAIN ST (NY-13)/NORTH ST

Based on the contributing factors to crashes at this intersection, including improper road user behavior and failure to yield the right-of-way, we recommend the following countermeasures.

Left Turn Hardening & Bump Outs

Hardened left turns and centerlines made with removable flexible posts placed along the yellow centerline at an intersection block the diagonal path through the intersection and encourage drivers to turn left at a slower speed. Since the intersection has a high volume of both pedestrians and motor vehicles, hardening the left turn can encourage drivers to lower the speed and reduce potential of conflict with pedestrians while turning left. The removable flex posts must be removed seasonally to allow for winter snow plowing.

Temporary bump outs, made with removable flex posts, can extend the sidewalk or curb line, which reduces the crossing distance for pedestrians and reduce the speed of turning vehicles. The removable flex posts must be removed seasonally to allow for winter snow plowing.

Leading Pedestrian Interval

A leading pedestrian interval (LPI) gives pedestrians the opportunity to enter the crosswalk at an intersection 3-7 seconds before vehicles are given a green indication. Pedestrians can better establish their presence in the crosswalk before vehicles have priority to turn right or left. The intersection is 42-ft to 45-ft wide, which requires a longer walking distance for pedestrians, adding LPI would give priority to pedestrians and additional time to reach the sidewalk.

When evaluating the signal for LPI, it should also be evaluated for Manual of Uniform Traffic Control Devices/ Public Right-Of-Way Accessible Guidelines (MUTCD/PROWAG) compliance and upgrades for Accessible Pedestrian Signal (APS) and Application Programming Interface (API).

West leg (W Main St)

Intersection

10. W MAIN ST (NY-13)/NORTH ST

Countermeasure	Quantity	Unit	Unit Cost	Total
Small Single Post-Mounted Sign	7	each	$ 622.00	$ 4,354.00
Tactical Curb Extensions (removable flexible posts)	6	each	$ 136.00	$ 816.00
Left Turn Hardening (removable flexible posts)	45	each	$ 136.00	$ 6,120.00
Leading Pedestrian Interval (LPI)	4	each	$ 2,000.00	$ 8,000.00

Subtotal	**$ 19,290.00**
Work Zone Traffic Control (WZTC) Estimate (10%)	$ 1,929.00
Incidentals, Inflation and Contingencies Estimate (20%)	$ 3,858.00
Construction Cost	**$ 25,077.00**
Survey (10%)	$ 2,507.70
Design Engineering ($10k + 10%)	$ 12,507.70
Construction Management & Inspection (15%)	$ 3,761.55
Grand Total	**$ 43,853.95**
Less 10%	$ 39,468.56
Plus 10%	$ 48,239.35

Cost estimates were prepared in June of 2025 utilizing bid tabulation data provided by the NYSDOT Electronic Pay Item Catalog, and NYSDOT Quick Estimator Tool, along with the current state of the construction market in the upstate NY area. The most recent year data available was used for each individual unit cost. These estimates are to be used for planning purposes only. Cost estimates for ongoing operations and maintenance are not included.

11. E SHORE DR/CAYUGA HEIGHTS RD

INTERSECTION CHARACTERISTICS

FUNCTIONAL CLASSIFICATION East Shore Dr	Urban Minor Arterial
FUNCTIONAL CLASSIFICATION Cayuga Heights Rd	Urban Major Collector
AADT East Shore Dr	6,999
AADT Cayuga Heights Rd	793
INTERSECTION TYPE	Urban 4-Leg Stop-Controlled
SPEED LIMIT	30 MPH
OWNERSHIP	NYSDOT
ADJACENT LAND USE	Rural/Residential

KEY FINDINGS

East Shore Dr and Cayuga Heights Rd is an acutely angled intersection where seven crashes have occurred between 2019 and 2023. In order to improve limited visibility of the intersection, T-intersection and enhanced signage and pavement markings are recommended.

EXISTING CONDITIONS

The intersection of East Shore Dr and Cayuga Heights Rd is a two-legged stop-controlled intersection, situated in a rural residential area.

Cayuga Heights Rd joins East Shore Dr at an acute angle. East Shore Dr is a two-lane road with two 10-ft lanes and a 6-ft wide shoulder. Cayuga Heights Rd is a two-lane road with 11-ft travel lanes and 4-6-ft shoulders on both sides. Cayuga Heights Rd is slightly elevated before it joins East Shore Dr at its level.

Cayuga Heights Rd and East Shore Dr are stop-controlled at the intersection. There is a curve ahead sign on East Shore Dr in the northbound direction. A residential driveway opens into East Shore Dr 100 feet north of the intersection and has a two-way traffic sign on the East Shore Dr for northbound traffic. There is a stop sign near the intersection for northbound traffic from Cayuga Heights Rd. The lane markings are present but are slightly faded. The shoulder lane markings on Cayuga Heights Rd are not clearly visible. There are no sidewalks or crosswalks present at the intersection. West of the intersection is a gravel lot. There is a streelight present at the intersection.

Intersection (Google Maps)

VILLAGE OF LANSING

11. E SHORE DR/CAYUGA HEIGHTS RD

7
Total Crashes

0
Fatal & Serious Injury Crashes

Users Involved

Between 2019 and 2023, the intersection experienced seven crashes, with an average crash frequency of 1.4 per year. Five crashes out of seven were deer or animal related crashes. One of those resulted in possible injury. The other crashes resulted in vehicle damage. The contributing factors, apart from animal action, involved are alcohol impairment and failure to yield.

Spatial Distribution of Crashes by User Type

CRASH DATA (2019-2023)

Crash Counts						Injury Counts				Level of Service of Safety (LOSS)
TOTAL CRASH COUNTS	Auto	Cyclist	Pedestrian	Deer/ Animal	Others	TOTAL INJURY COUNTS	Fatal Injuries	Serious Injuries	Other Injuries	
7	0	0	0	5	2	1	0	0	1	2

11. E SHORE DR/CAYUGA HEIGHTS RD

11. E SHORE DR/CAYUGA HEIGHTS RD

Based on the contributing factors to crashes at this intersection, including crashes related to deer and other animals and failure to yield, we recommend the following countermeasures.

Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections

This countermeasure includes deploying a package of multiple low-cost countermeasures, including enhanced signage and pavement markings, at stop-controlled intersections, including the duplication of stop signs on both sides of the sign. These countermeasures increase driver awareness and recognition of the intersections and potential conflicts.

Multiple low-cost countermeasures, such as enhancing pavement markings, adding stop lines and adding deer crossing signs, can all help in improving the safety at this complex, rural intersection.

T - Intersection

Long term, consideration should be given to relocation of the intersection to provide better sightlines for drivers and encourage slower turning speeds at the intersection. Consideration should be given to relocating the intersection further to the south by roughly 150 feet.

While some re-grading of the area and the roadway will be required, keeping the location within roughly 150 feet of the existing intersection reduces the overall impacts while still allowing for adequate turning radius for vehicles. Existing northbound traffic on East Shore Dr faces challenges turning right onto Cayuga Heights Rd, while northbound Cayuga Heights traffic faces limited visibility of traffic on East Shore Dr.

The T-intersection encourages turns to be made at slower speeds and increases visibility for all users. In the existing condition, large vehicles (except for local deliveries) are restricted from Cayuga Heights Rd. The proposed condition keeps those restrictions, but improves the ability of larger vehicles to access Cayuga Heights Rd if needed.

South leg (East Shore Dr) (Google Maps)

Cayuga Heights Rd (Google Maps)

11. E SHORE DR/CAYUGA HEIGHTS RD

Countermeasure	Quantity	Unit		Unit Cost		Total
Small Single Post-Mounted Signs	13	each	$	622.00	$	8,086.00
Stop Bar Pavement Marking	11	ft.	$	3.00	$	33.00
Eradicate Existing Pavement Marking	300	ft.	$	3.00	$	900.00
White Edge Lines	700	ft.	$	4.00	$	2,800.00
Double Yellow Centerline	473	ft.	$	4.00	$	1,892.00
Vegetation Area	1,600	sq. ft.	$	2.00	$	3,200.00
Solid White Line (6")	720	ft.	$	4.00	$	2,880.00
Pavement removal & regrading	9,700	sq. ft.	$	2.00	$	19,400.00
Pavement Reconstruction & Realignment	8,000	sq. ft.	$	20.00	$	160,000.00

Subtotal	**$**	**199,191.00**
Work Zone Traffic Control (WZTC) Estimate (10%)	$	19,919.10
Incidentals, Inflation and Contingencies Estimate (20%)	$	39,838.20
Construction Cost	**$**	**258,948.30**
Survey (10%)	$	25,894.83
Design Engineering ($10k + 10%)	$	35,894.83
Construction Management & Inspection (15%)	$	38,842.25
Grand Total	**$**	**359,580.21**
Less 10%	$	323,622.18
Plus 10%	$	395,538.23

Cost estimates were prepared in June of 2025 utilizing bid tabulation data provided by the NYSDOT Electronic Pay Item Catalog, and NYSDOT Quick Estimator Tool, along with the current state of the construction market in the upstate NY area. The most recent year data available was used for each individual unit cost. These estimates are to be used for planning purposes only.

SEGMENTS

12. MEADOW ST (NY-13 NB) Between W Seneca St & W Green St

SEGMENT CHARACTERISTICS

FUNCTIONAL CLASSIFICATION	Urban Principal Arterial - Other
DESCRIPTION	Urban Multi-Lane Undivided Free Access Two or More Lane One-Way
LENGTH	630 FT
AADT	33,198
SPEED LIMIT	30 MPH
OWNERSHIP	NYSDOT
ADJACENT LAND USE	Commercial

KEY FINDINGS

In downtown Ithaca, the section of NY-13 (Meadow St) between West Seneca St and West Green St was the site of 146 crashes over the five-year period. Five crashes resulted in serious injuries, four of which involved pedestrians, and one which involved a bicyclist. The segment is broken up by numerous wide driveways on both sides of the roadway. Improved high-visibility crosswalks and leading pedestrian intervals are recommended to increase pedestrian safety. Long term, a roadway reconfiguration that removes one general purpose travel lane and allows for the addition of protected bike lanes is recommended.

EXISTING CONDITIONS

The NY-13 NB segment, also called Meadow Street, approximately 630-ft long, runs between West Seneca St and West Green St. It is situated in a commercial area with numerous establishments and parking, with driveways opening directly onto the roadway.

This northbound segment features three signalized intersections: West Seneca St at the northern end, West State St in the center, and West Green St at the southern end. The roadway width varies between 44-ft and 48-ft, with the southern portion comprising three travel lanes ranging from 10-ft to 14-ft, transitioning into four lanes ranging from 11-ft to 14-ft as it approaches West Seneca Street.

As per field visit observations, the lane markings are present but accompanied by severe surface cracking. Pedestrian signals are provided at the West Seneca St and West Green St intersections, but not at West State St. Sidewalks are present but damaged, while crosswalks are inconsistently marked, with some intersection legs lacking crosswalks. During a site visit in December 2024, the segment exhibited moderate congestion.

The West Seneca and NY-13 NB intersection has ladder style crosswalk on east and west legs but has parallel line crosswalk on north and south legs. The crosswalk markings are partially visible. Similar conditions are present on the other two intersections.

Green St and Meadow St intersection

12. MEADOW ST (NY-13 NB) Between W Seneca St & W Green St

146
Total Crashes

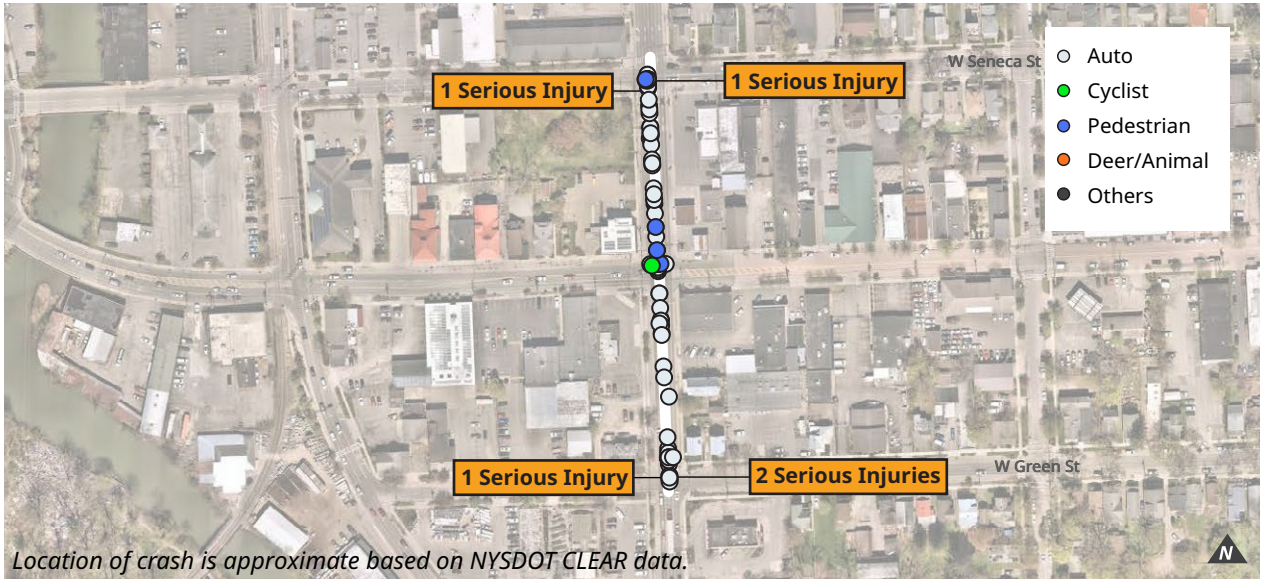
5
Fatal & Serious Injury Crashes

OTHER

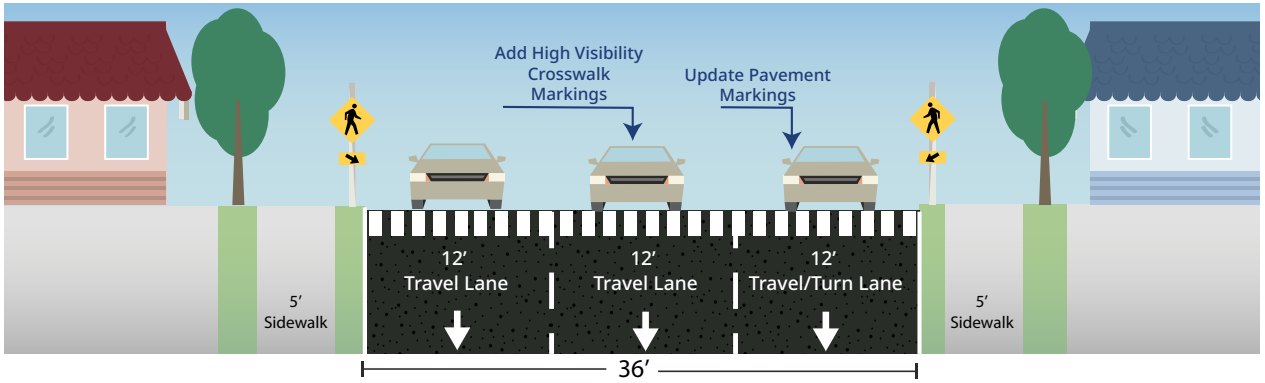
Users Involved

Between 2019 and 2023, 146 crashes occurred, with an average crash frequency of 29.2 per year or slightly over one crash per week. Out of 146 crashes,137 involved motor vehicles and four of these were serious injury crashes: three at the intersection of W Green St, and one W Seneca St. The contributing factors involved obstructed view, disregard of traffic control devices, and failure to yield right-of-way.

One of the serious injuries involved a pedestrian at W Seneca St, caused by a driver's failure to yield at the right-of-way and inattention. Additionally, a crash involving a bicyclist occurred at the intersection of W State St due to failure to yield the right-of-way.



Spatial Distribution of Crashes by User Type



Proposed Typical Section

CRASH DATA (2019-2023)

Crash Counts						Injury Counts				Level of Service of Safety (LOSS)
TOTAL CRASH COUNTS	Auto	Cyclist	Pedestrian	Deer/ Animal	Others	TOTAL INJURY COUNTS	Fatal Injuries	Serious Injuries	Other Injuries	
146	137	1	4	0	4	35	0	5	30	4

12. MEADOW ST (NY-13 NB) Between W Seneca St & W Green St

Countermeasure Recommendations

Meadow St (NY-13NB) / W. Seneca St

Meadow St (NY-13NB) / W. Green St

W Seneca St

N Meadow St

W State St

S Meadow St

W Green St

W Green St

N

- **Crosswalk Visibility Enhancements:** Install high-visibility crosswalks, signage, and pavement markings
- **Leading Pedestrian Interval (LPI):** Install LPI
- **Road Safety Audit:** Consider conducting a road safety

12. MEADOW ST (NY-13 NB) Between W Seneca St & W Green St

Based on the contributing factors to the crashes at this segment, including failure to yield the right-of-way, driver inattention, and disregard for traffic control devices, we recommend the following countermeasures.

Crosswalk Visibility Enhancements

These include high-visibility crosswalks and signage and pavement markings. They can help make crosswalks and the pedestrians, bicyclists, wheelchair and other mobility device users, and transit users using them more visible to drivers. These enhancements can also assist users in deciding where to cross.

Leading Pedestrian Interval

A leading pedestrian interval (LPI) gives pedestrians the opportunity to enter the crosswalk at an intersection 3-7 seconds before vehicles are given a green indication. Pedestrians can better establish their presence in the crosswalk before vehicles have priority to turn right or left. One of the pedestrian crashes occurred due to failure to yield right-of-way, LPI can give more time to pedestrian to cross the road and improve safety.

When evaluating the signal for LPI, it should also be evaluated for MUTCD/PROWAG compliance and upgrades for Accessible Pedestrian Signal (APS) and Application Programming Interface (API).

Road Safety Audit

A Road Safety Audit (RSA) examines the performance of a road or intersection by an independent, multidisciplinary team. An RSA can identify potential safety issues and opportunities for improvement for all roadway users and develop a formal report that can be used to implement actions that will improve safety. Cost estimates have not been developed for an RSA.

Bicycle Lanes

A bicycle lane is an exclusive lane designed especially for users on bicycles or other low-speed mobility devices. Separated bicycle lanes are recommended on roadways with higher vehicle volumes and speeds, such as arterials. NY-13 NB segment is included in as a recommended bikeway in the City of Ithaca's Active Transportation Plan and long term, should be evaluated for a bicycle facility. As further conceptual planning and design would be required, a cost estimate has not been developed for the bicycle facility. Close consideration should be given to the presence of driveways on both sides of the street in bicycle facility design.

Green St and Meadow St intersection

South leg (Meadow St)

12. MEADOW ST (NY-13 NB) Between W Seneca St & W Green St

Countermeasure	Quantity	Unit	Unit Cost	Total
LS Type (Ladder) Crosswalk	6	each	$ 2,100.00	$ 12,600.00
Leading Pedestrian Signal (LPI)	3	each	$ 2,000.00	$ 6,000.00

Subtotal	**$ 18,600.00**
Work Zone Traffic Control (WZTC) Estimate (10%)	$ 1,860.00
Incidentals, Inflation and Contingencies Estimate (20%)	$ 3,720.00
Construction Cost	**$ 24,180.00**
Survey (10%)	$ 2,418.00
Design Engineering ($10k + 10%)	$ 12,418.00
Construction Management & Inspection (15%)	$ 3,627.00
Grand Total	**$ 42,643.00**
Less 10%	$ 38,378.70
Plus 10%	$ 46,907.30

Cost estimates were prepared in June of 2025 utilizing bid tabulation data provided by the NYSDOT Electronic Pay Item Catalog, and NYSDOT Quick Estimator Tool, along with the current state of the construction market in the upstate NY area. The most recent year data available was used for each individual unit cost. These estimates are to be used for planning purposes only.

13. 76 RD Between Yaple Rd & Smith Rd

SEGMENT CHARACTERISTICS

FUNCTIONAL CLASSIFICATION	Rural Minor Arterial
DESCRIPTION	Rural Two-Lane Undivided Free Access Two-Lane Two-Way
LENGTH	2 mi
AADT	N/A
SPEED LIMIT	35 MPH
OWNERSHIP	Tompkins County
ADJACENT LAND USE	Rural/Agricultural

KEY FINDINGS

Seventy Six Rd between Yaple Rd and Smith Rd in the Town of Caroline was the site of four crashes including two that resulted in serious injuries during the five year period. Adding speed feedback signs, wider edge lines, and additional warning signage in advance of the stop-controlled intersections at Yaple Rd and Smith Rd is recommended.

EXISTING CONDITIONS

Seventy-Six Rd is a rural road surrounded by agricultural land. The segment is a two- mile long stretch from Yaple Rd (north) to Smith Rd (south). The segment is classified as minor arterial and the Yaple Rd and Smith Rd are both local roads.

Seventy Six Rd is two lane road of about 20-22-ft width. The travel lanes are approximately 10-11-ft wide.

As per the field visit observation, there is minimal signage along the entire segment. The lanes are marked, and no shoulders are present on the segment. The edge of pavement is in poor condition, with sections partially visible, and the road surface exhibits signs of infrequent and minor cracking. There are no pedestrian facilities or traffic calming features.

North leg (Seventy Six Rd)

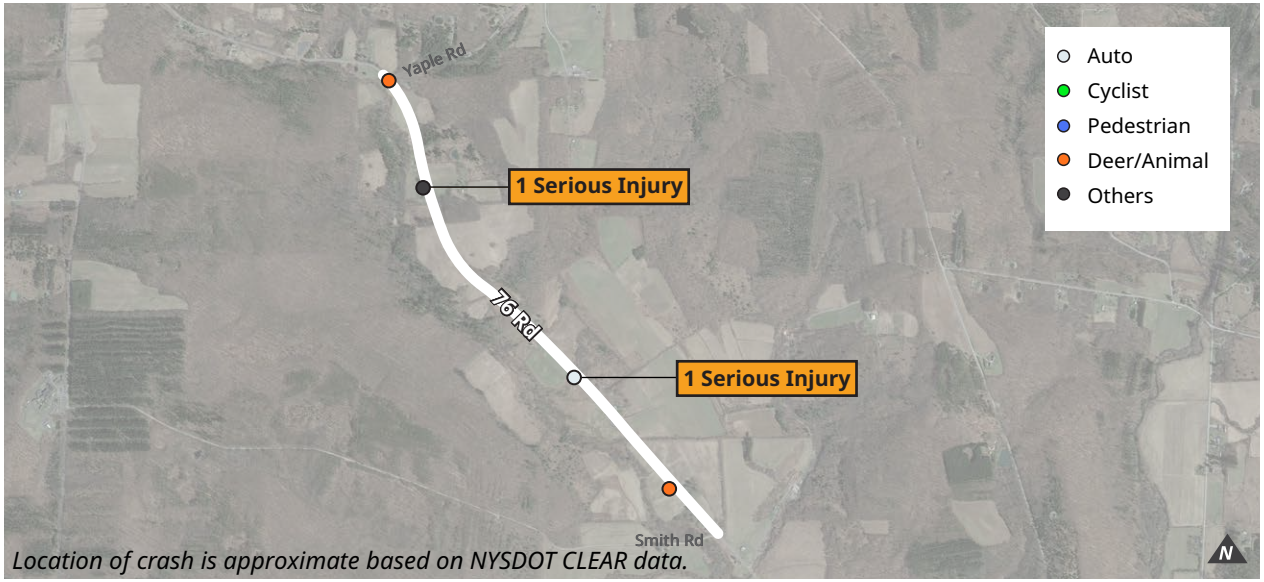
13. 76 RD Between Yaple Rd & Smith Rd

4
Total Crashes

2
Fatal & Serious Injury Crashes

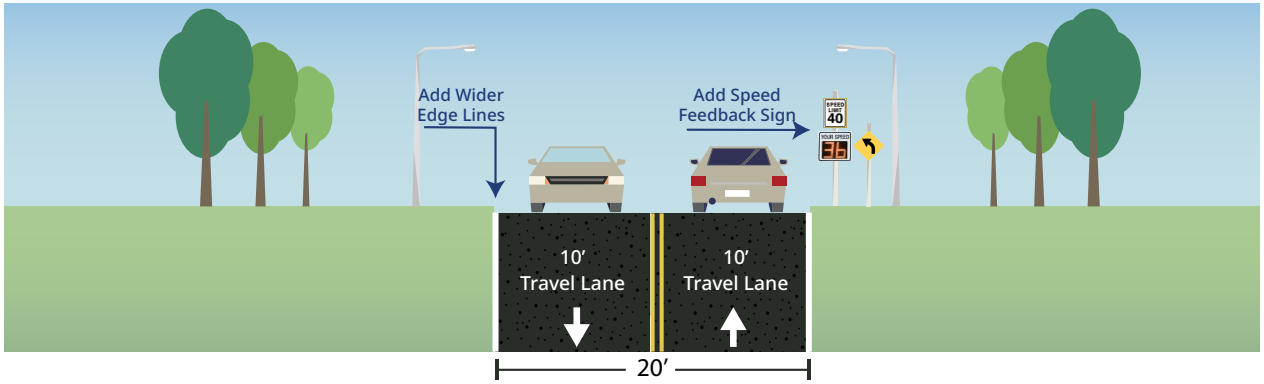
Users Involved

Between 2019 and 2023, four crashes occurred along this segment, with an average crash frequency of 0.8 per year. Two out of four crashes were serious injury crashes. One serious injury crash involved motor vehicle collision, and one involved collision with a tree. The contributing factors for motor vehicle crash were failure to keep right and disregard of traffic control devices.



Location of crash is approximate based on NYSDOT CLEAR data.

Spatial Distribution of Crashes by User Type



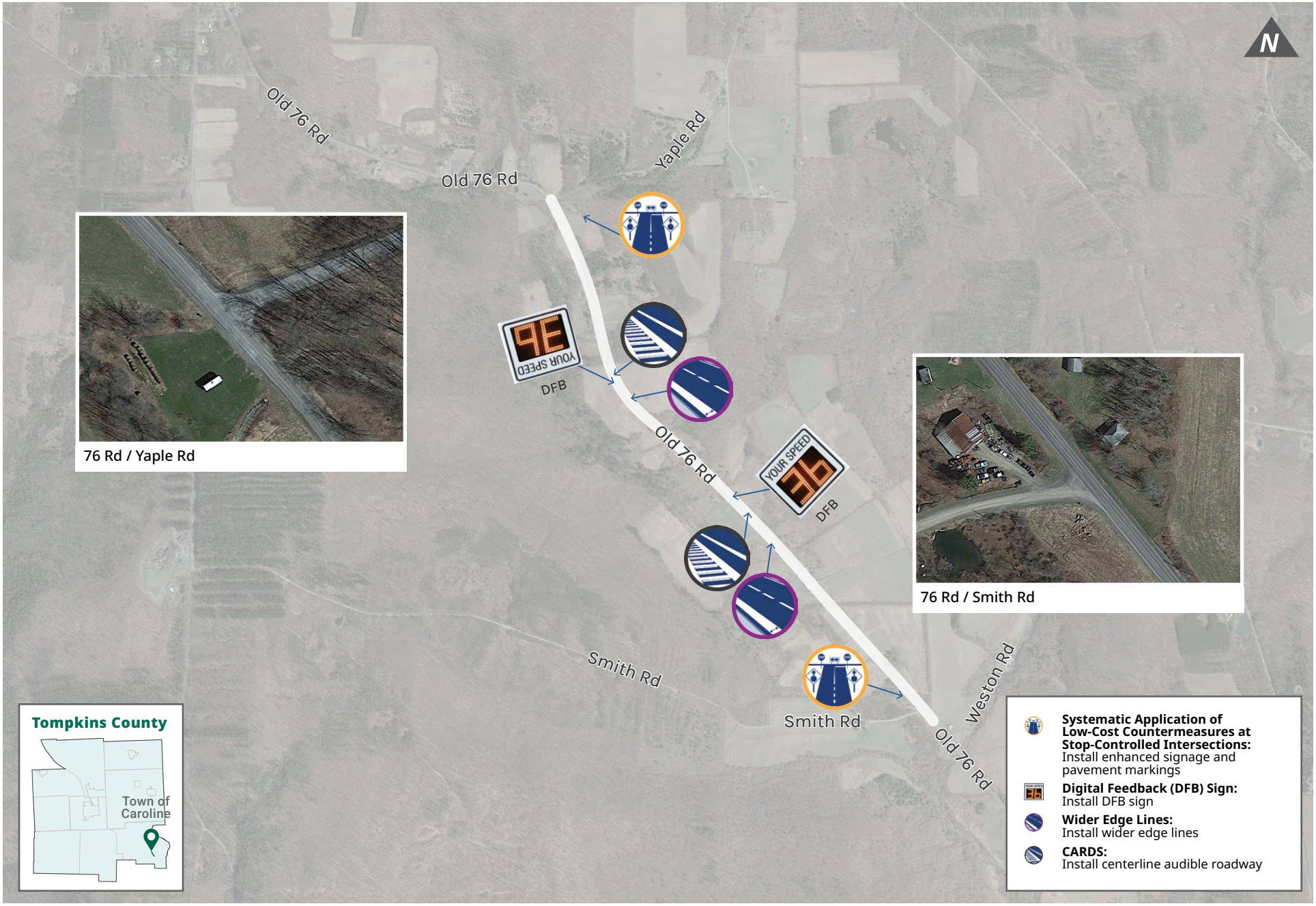
Proposed Typical Section

CRASH DATA (2019-2023)

Crash Counts						Injury Counts				Level of Service of Safety (LOSS)
TOTAL CRASH COUNTS	Auto	Cyclist	Pedestrian	Deer/ Animal	Others	TOTAL INJURY COUNTS	Fatal Injuries	Serious Injuries	Other Injuries	
4	1	0	0	2	1	2	0	2	0	2

13. 76 RD Between Yaple Rd & Smith Rd

Countermeasure Recommendations



13. 76 RD Between Yaple Rd & Smith Rd

Based on the contributing factors to the crashes at this segment, including failure to keep right and disregard for traffic control devices, we recommend the following countermeasures.

Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections

Includes deploying a package of multiple low-cost countermeasures, including enhanced signage and pavement markings. These countermeasures can help increase driver awareness and recognition of the intersections on Seventy Six Rd and potential conflicts.

Speed Feedback Signs

Feedback signs display speeds recorded by speed radar to the driver.

Seventy Six Rd is a narrow corridor and speed feedback signs would help to reduce vehicle speeds and enhance safety.

Wider Edge Lines

Wider edge lines enhance the visibility of travel lane boundaries compared to traditional edge lines. It is recommended to increase the edge lines are from traditional 4 inches width to width of 6 inches to enhance visibility of travel lanes to the driver.

South leg (Seventy Six Rd)

Six inch edge lines on rural roadways with posted speed limit of 45-MPH or more is the standard practice of NYSDOT. For further information see EI 18-008.

13. 76 RD Between Yaple Rd & Smith Rd

Cost Estimates

Countermeasure	Quantity	Unit	Unit Cost	Total
Small Single Post-Mounted Signs	6	each	$ 622.00	$ 3,732.00
Solar Powered Radar Feedback Signs	2	each	$ 10,200.00	$ 20,400.00
Edge Lines 6"	29,230	ft.	$ 3.00	$ 87,690.00
Centerline Audible Roadway Delineator (CARD)	9,500	ft.	$ 5.00	$ 47,500.00

Subtotal	**$159,322.00**
Work Zone Traffic Control (WZTC) Estimate (10%)	$ 15,932.20
Incidentals, Inflation and Contingencies Estimate (20%)	$ 31,864.40
Construction Cost	**$207,118.60**
Survey (10%)	$ 20,711.86
Design Engineering ($10k + 10%)	$ 30,711.86
Construction Management & Inspection (15%)	$ 31,067.79
Grand Total	**$289,610.11**
Less 10%	$260,649.10
Plus 10%	$318,571.12

Cost estimates were prepared in June of 2025 utilizing bid tabulation data provided by the NYSDOT Electronic Pay Item Catalog, and NYSDOT Quick Estimator Tool, along with the current state of the construction market in the upstate NY area. The most recent year data available was used for each individual unit cost. These estimates are to be used for planning purposes only.

14. DANBY RD (NY-96B) Between Miller Rd & Michigan Hollow Rd

SEGMENT CHARACTERISTICS

FUNCTIONAL CLASSIFICATION	Rural Major Collector Road
DESCRIPTION	Rural Two-Lane Undivided Free Access Two-Lane Two-Way
LENGTH	1.3 mile
AADT	5,474
SPEED LIMIT	40 MPH
OWNERSHIP	NYSDOT
ADJACENT LAND USE	Rural/Agricultural

KEY FINDINGS

NY-96B (Danby Rd) between Miller Rd and Michigan Hollow Rd in the Town of Danby was the site of 46 crashes, five of which resulted in serious injuries over the five-year period. In order to reduce speeds through the corridor, speed feedback signs are recommended. Additional streetlighting at key intersections is recommended to improve night-time visibility.

EXISTING CONDITIONS

The segment of NY-96B (also known as Danby Rd), approximately 1.3-miles long, is situated in an agricultural area and extends from W Miller Rd to Michigan Hollow Rd. This segment includes seven intersections and features a road width ranging from 40-ft to 50-ft feet, with two travel lanes and shoulders, one in each direction, each approximately 11-ft wide. South of the Hornbrook Rd intersection, NY-96B widens and splits the northbound travel lane into a through lane and an 11-ft-wide right-turn lane, which transitions into a gore area north of the intersection. Similarly, north of the Gunderman Rd intersection, a right-turn lane is present for southbound traffic, transitioning into a gore area beyond the intersection. Similar configurations are observed near the Bald Hill Rd intersection for the southbound travel lane.

Signage along the road includes advance warning signs, deer crossing signs, and an horse and buggy sign crossing sign. A bus stop is located at the intersection of Gunderman Rd and NY-96B. There are no pedestrian facilities along the segment or any traffic calming devices. There are no crosswalks or sidewalks present at any of the intersections. For illumination in dark conditions, light posts are present at some intersections.

As per the field visit, the lane markings and shoulders are present and clearly visible, and the pavement markings are in excellent condition. The road surface was newly paved as of November 2024 and is in excellent condition. During the site observation, a jogger was noted running along the shoulder of NY-96B. There are no sidewalks or crosswalks or other pedestrian facilities at any of the intersections.

North leg (Danby Rd)

14. DANBY RD (NY-96B) Between Miller Rd & Michigan Hollow Rd

46
Total Crashes

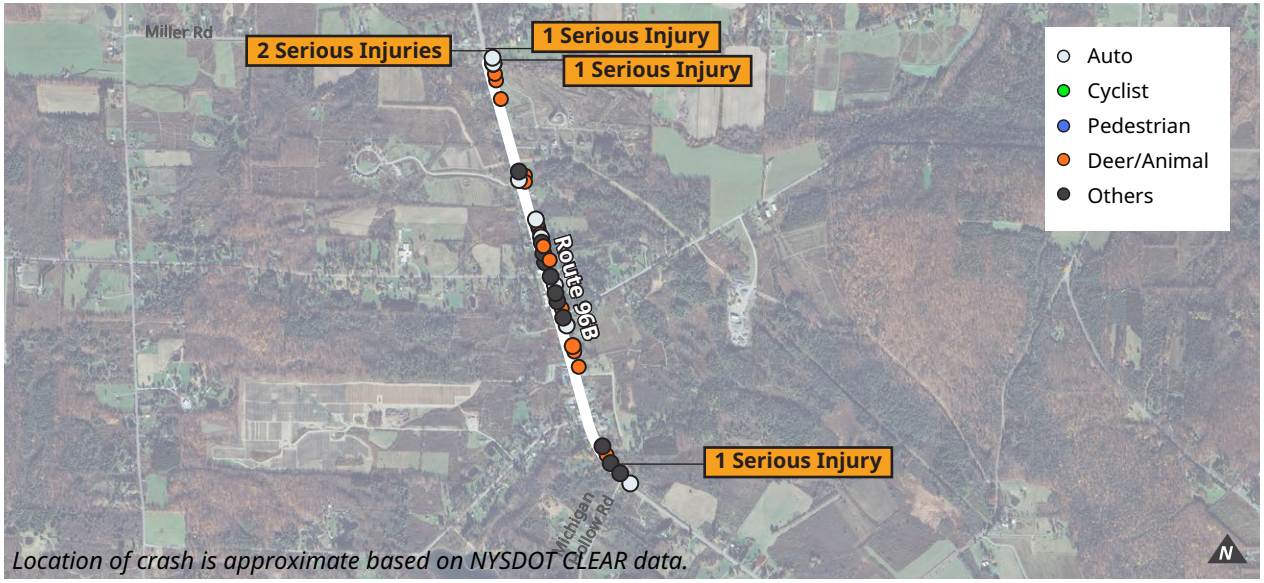
5
Fatal & Serious Injury Crashes

OTHER

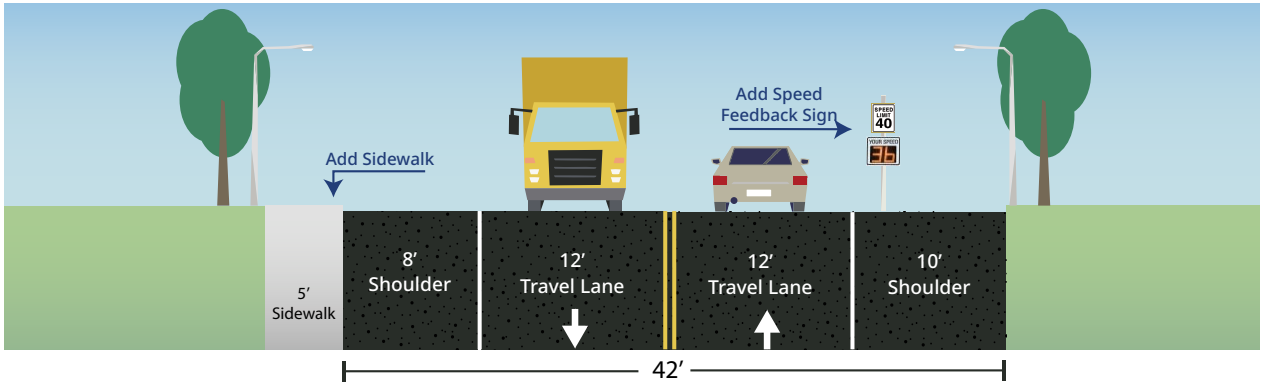
Users Involved

Between 2019 and 2023, 46 crashes occurred at this segment, with an average crash frequency of 9.2 per year.

Out of 46 crashes occurred at the segment, there were five serious injuries. The serious injury crash at Michigan Hollow Rd intersection occurred due to speeding and failure to yield right-of-way. Eleven crashes involved collisions with motor vehicles and three of them resulted in serious injuries. The contributing factors involved unsafe speed, unsafe lane change and road user behavior. Out of 19 animal related crashes, 16 were collisions with a deer. The serious injury crashes were concentrated near the intersections of Miller Rd and Michigan Hollow Rd.



Spatial Distribution of Crashes by User Type



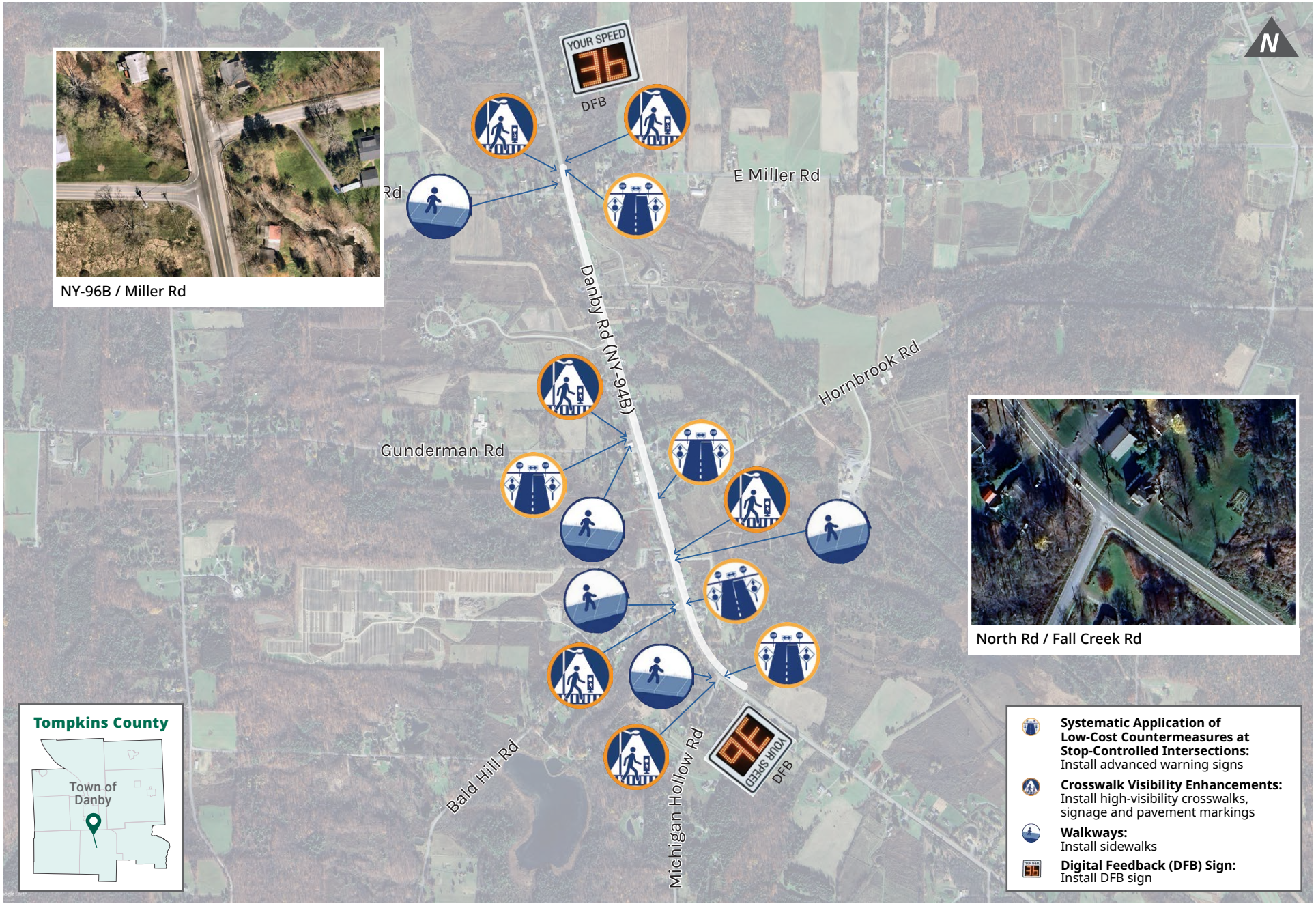
Proposed Typical Section

CRASH DATA (2019-2023)

Crash Counts						Injury Counts				Level of Service of Safety (LOSS)
TOTAL CRASH COUNTS	Auto	Cyclist	Pedestrian	Deer/ Animal	Others	TOTAL INJURY COUNTS	Fatal Injuries	Serious Injuries	Other Injuries	
46	11	0	0	19	16	6	0	5	1	3

14. DANBY RD (NY-96B) Between Miller Rd & Michigan Hollow Rd

Countermeasure Recommendations



NY-96B / Miller Rd

North Rd / Fall Creek Rd

- **Systematic Application of Low-Cost Countermeasures at Stop-Controlled Intersections:** Install advanced warning signs
- **Crosswalk Visibility Enhancements:** Install high-visibility crosswalks, signage and pavement markings
- **Walkways:** Install sidewalks
- **Digital Feedback (DFB) Sign:** Install DFB sign

14. DANBY RD (NY-96B) Between Miller Rd & Michigan Hollow Rd

Based on the contributing factors to the crashes along this segment, including speeding, unsafe lane changes, and failure to yield the right-of-way, we recommend the following countermeasures.

Systematic Application of Low-Cost Countermeasures at Stop-Controlled Intersections

This includes deploying a package of multiple low-cost countermeasures, including enhanced signage and pavement markings. These countermeasures increase driver awareness and recognition of the intersections and potential conflicts. Adding advance warning signs is recommended along this segment in order to better alert drivers of roadway changes.

Crosswalk Visibility Enhancements

These include high-visibility crosswalks, lighting, and signage and pavement markings. They can help make crosswalks and the pedestrians, bicyclists, wheelchair and other mobility device users, and transit users using them more visible to drivers. This recommendation is selected for this segment due to the number of intersections along this route. Crosswalk enhancements improve the safety for pedestrians and reduce the speed of vehicles.

South leg (Danby Rd)

Add Sidewalk

Sidewalks are paved walkways that are separated from motor vehicles by a curb and gutter. They are intended for pedestrians or people using a wheelchair. This recommendation is selected for this segment since no sidewalk currently exists along the roadway. Adding a sidewalk at locations where there are bus stops will improve the pedestrian and transit rider experience.

Speed Feedback Sign

Feedback signs display speeds recorded by speed radars to the driver. This is recommended along this segment in order to slow drivers and improve safety for both pedestrians and vehicles.

Bike Lanes

Long term, consideration should be given to addition of bike lanes along Danby Rd. Further study is needed to determine the suitability of the road for bike lanes. Accordingly, conceptual designs and cost estimates have not been developed.

14. DANBY RD (NY-96B) Between Miller Rd & Michigan Hollow Rd

Countermeasure	Quantity	Unit		Unit Cost	Total
Concrete Sidewalk (4" thick, 5' wide) (assumed at 100 linear feet at 10 bus stops)	1,000	ft.	$	160.00	$160,000.00
LS Type (Ladder) Crosswalk	6	each	$	2,100.00	$ 12,600.00
Small Single Post-Mounted Signs	14	each	$	622.00	$ 8,708.00
Solar Powered Radar Speed Sign	2	each	$	10,200.00	$ 20,400.00

Subtotal	**$201,708.00**
Work Zone Traffic Control (WZTC) Estimate (10%)	$ 20,170.80
Incidentals, Inflation and Contingencies Estimate (20%)	$ 40,341.60
Construction Cost	**$262,220.40**
Survey (10%)	$ 26,222.04
Design Engineering ($10k + 10%)	$ 36,222.04
Construction Management & Inspection (15%)	$ 39,333.06
Grand Total	**$363,997.54**
Less 10%	$327,597.79
Plus 10%	$400,397.29

Cost estimates were prepared in June of 2025 utilizing bid tabulation data provided by the NYSDOT Electronic Pay Item Catalog, and NYSDOT Quick Estimator Tool, along with the current state of the construction market in the upstate NY area. The most recent year data available was used for each individual unit cost. These estimates are to be used for planning purposes only.

15. NORTH RD Between Fall Creek Rd & Cortland Rd (NY-13)

SEGMENT CHARACTERISTICS

FUNCTIONAL CLASSIFICATION	Rural Minor Collector Road
DESCRIPTION	Rural Two-Lane Undivided Free Access Two-Lane Two-Way
LENGTH	2.4 mile
AADT	1,302
SPEED LIMIT	40 MPH
OWNERSHIP	Tompkins County
ADJACENT LAND USE	Rural/Agricultural

KEY FINDINGS

North Rd between Fall Creek Rd and NY-13 (Cortland Rd) was the site of 31 crashes including three that resulted in serious injuries. In order to reduce speeds along the corridor, speed feedback signs are recommended. At two-way stop-controlled intersections along the corridor, additional warning signs are recommended.

EXISTING CONDITIONS

North Rd is a 2.4-mile-long minor collector road extending from the intersection of Fall Creek Rd to NY-13. The segment is primarily surrounded by agricultural land, with residential and commercial driveways connecting to it. There are six intersections along the segment, including intersections with Dutcher Rd, Annee Ln, and Mott Rd. The road width ranges from 24-ft to 26-ft, with two 10-ft-wide travel lanes, one in each direction.

As per field visit observations, the lane markings are present, but they are slightly faded, and the road surface shows infrequent minor cracking. The intersections lack traffic signals but have various signage, including two-way stop signs at Fall Creek Rd and Malloryville Rd, as well as signal-ahead, turn-ahead, and intersection-ahead signs.

Notably, Dutcher Rd intersects North Rd at an acute angle, lacks pavement markings, and has no crosswalk or sidewalk, though a stop sign is present. Similar conditions are observed at Annee Ln and Mott Rd, where markings are faded or absent. At its southern terminus, North Rd intersects NY-13 at an acute angle and merges directly into it. No pedestrian facilities are present at any intersection.

South leg (North Rd)

15. NORTH RD Between Fall Creek Rd & Cortland Rd (NY-13)

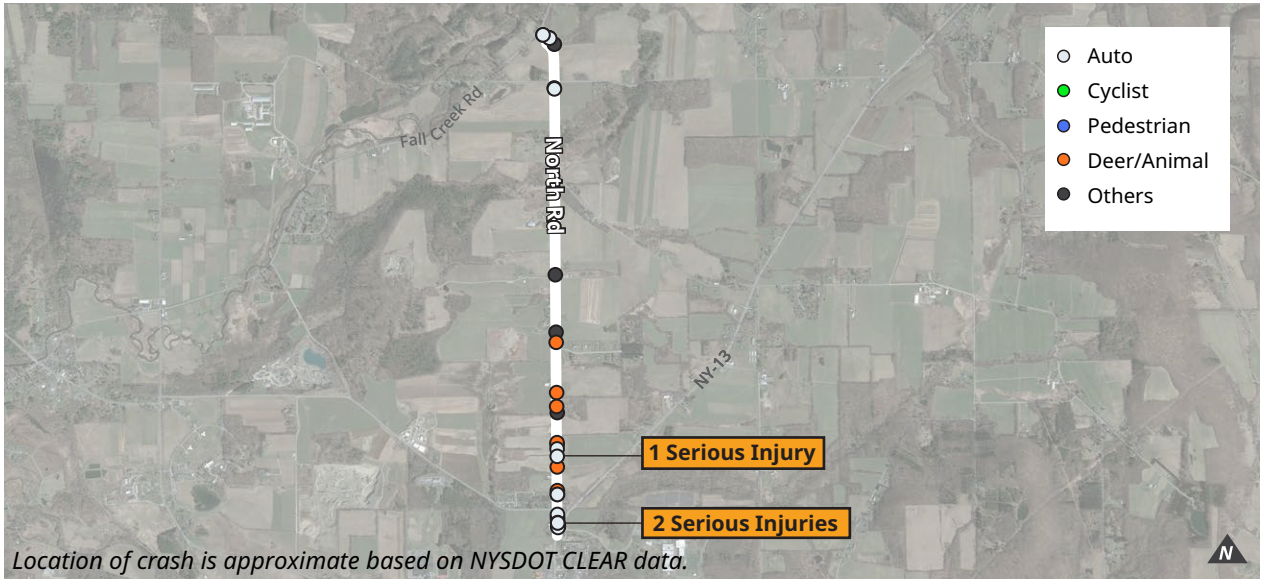
31
Total Crashes

3
Fatal & Serious Injury Crashes

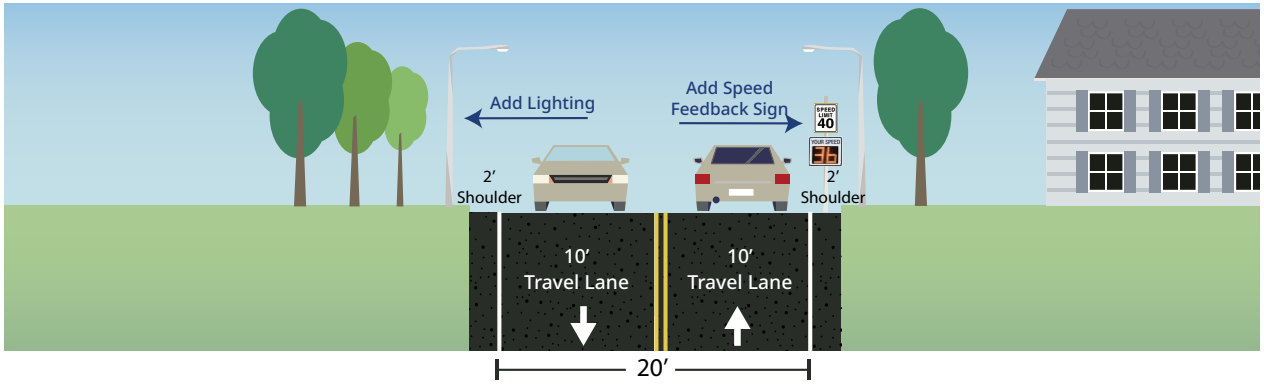
Users Involved

Between 2019 and 2023, 31 crashes occurred at the segment, with an average frequency of 6.2 per year. Three crashes resulted in serious injuries. Two serious injuries occurred at the intersection of North Rd and NY-13. The contributing factors involved obstructed view and unsafe backing and turning movement.

The crashes are mainly concentrated near various intersections on the segment such as Malloryville Rd, Annee Lane, Mott Rd, Fall Creek Rd, and NY-13.



Spatial Distribution of Crashes by User Type



Proposed Typical Section

CRASH DATA (2019-2023)

Crash Counts						Injury Counts				Level of Service of Safety (LOSS)
TOTAL CRASH COUNTS	Auto	Cyclist	Pedestrian	Deer/ Animal	Others	TOTAL INJURY COUNTS	Fatal Injuries	Serious Injuries	Other Injuries	
31	16	0	0	9	6	5	0	3	2	4

15. NORTH RD Between Fall Creek Rd & Cortland Rd (NY-13)

Countermeasure Recommendations

North Rd / Fall Creek Rd

North Rd / NY-13

Fall Creek Rd

E Malloryville Rd

DFB

YOUR SPEED

Fall Creek Rd

North Rd

Dutcher Rd

Annee Ln

Mott Rd

Cortland Rd (NY-13)

Tompkins County

Systematic Application of Low-Cost Countermeasures at Stop-Controlled Intersections:
Enhance signage

Lighting:
Improve lighting

Digital Feedback (DFB) Sign:
Install DFB sign

15. NORTH RD Between Fall Creek Rd & Cortland Rd (NY-13)

Based on the contributing factors to the crashes along this segment, including obstructed views, unsafe backing, and improper turning movements, we recommend the following countermeasures.

Systematic Application of Low-Cost Countermeasures at Stop-Controlled Intersections

Includes deploying a package of multiple low-cost countermeasures, including enhanced signage and pavement markings. These countermeasures increase driver awareness and recognition of the intersections and potential conflicts. This recommendation is added to enhance signage on the route to reduce distraction and improve alertness of drivers on the segment.

Lighting

The goal of lighting should be to illuminate with the road to make it easier for a driver to visually identify pedestrians and other objects on/alongside the road. This involves carefully placing the luminaires in forward locations to avoid a silhouette effect of the pedestrian. This recommendation is to improve safety for drivers and pedestrians along the segment.

Dutcher Rd and North Rd intersection

In accordance with NYSDOT policies, the local municipality must take on recurring electricity costs for new lighting. Fixtures different from NYSDOT standard fixtures, such as cobra-style lighting, would prequire a betterment from the municipality.

Speed Feedback Sign

Speed radars measure vehicle speed to reduce speeding and crashes. Feedback signs display the recorded speed to the driver. This is recommended to reduce speeding along the corridor.

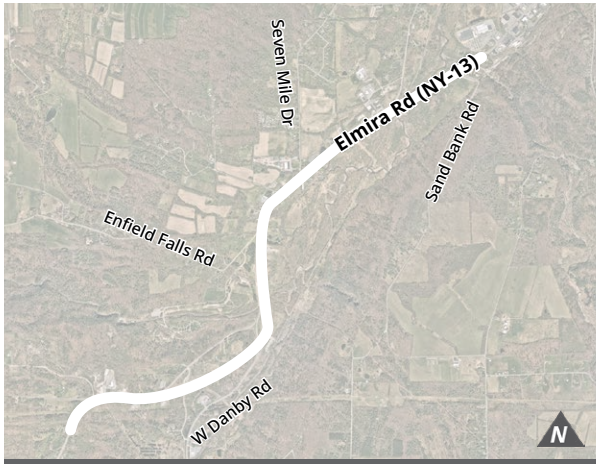
15. NORTH RD Between Fall Creek Rd & Cortland Rd (NY-13)

Countermeasure	Quantity	Unit	Unit Cost	Total
Small Single Post-Mounted Signs	12	each	$ 622.00	$ 7,464.00
Solar Powered Radar Speed Sign	4	each	$ 10,200.00	$ 40,800.00
Streetlighting	4	each	$ 8,220.00	$ 32,880.00

Subtotal	**$ 81,144.00**
Work Zone Traffic Control (WZTC) Estimate (10%)	$ 8,114.40
Incidentals, Inflation and Contingencies Estimate (20%)	$ 16,228.80
Construction Cost	**$105,487.20**
Survey (10%)	$ 10,548.72
Design Engineering ($10k + 10%)	$ 20,548.72
Construction Management & Inspection (15%)	$ 15,823.08
Grand Total	**$152,407.72**
Less 10%	$137,166.95
Plus 10%	$167,648.49

Cost estimates were prepared in June of 2025 utilizing bid tabulation data provided by the NYSDOT Electronic Pay Item Catalog, and NYSDOT Quick Estimator Tool, along with the current state of the construction market in the upstate NY area. The most recent year data available was used for each individual unit cost. These estimates are to be used for planning purposes only.

16. ELMIRA RD (NY-13) From the Town of Newfield Line to City of Ithaca Line



SEGMENT CHARACTERISTICS

FUNCTIONAL CLASSIFICATION	Urban Principal Arterial/Rural Principal Arterial
DESCRIPTION	Rural Two-Lane Undivided Free Access Two-Lane Two-Way
LENGTH	2.4 mile
AADT	17,437
SPEED LIMIT	45/55 MPH
OWNERSHIP	NYSDOT
ADJACENT LAND USE	Developed/ Commercial

KEY FINDINGS

NY-13 (Elmira Rd) in the Town of Ithaca was the site of 166 crashes, including eight that resulted in serious injury and one that resulted in a fatality over the five-year period. In order to reduce speeds along the corridor, speed feedback signs are recommended. To improve safety for bus riders and pedestrians, bus stop improvements are recommended at stops along the corridor.

EXISTING CONDITIONS

The segment of NY-13 (also known as Elmira Rd) connects City of Ithaca to Town of Newfield via Town of Ithaca. It is lined with commercial establishments like car services and hotels, and proximate to Buttermilk Falls State Park and Robert H. Treman State Park.

The road width varies significantly along the corridor, ranging from 75-ft near the Five Mile Drive intersection to 35-ft to 40-ft further south. At the northern end, the segment features four travel lanes of 11-ft which widens to five travel lanes, including two through lanes, a center turn lane, and shoulders on both sides near the Five Mile Dr intersection. Approximately 700-ft south of the intersection, the road narrows to 50-ft and further reduces to 35-ft to 40-ft as it continues southward until Enfield Falls Rd, transitioning into a two-lane configuration with one travel lane in each direction.

South of Enfield Falls Rd, NY-13 expands to 60-ft to 65-ft with four travel lanes of 11-ft, two in each direction and shoulders on both sides.

NY-13 gets bifurcated into northbound and southbound roads for 0.8-miles before merging again. Both north and southbound roads further bifurcate into NY-13 and West Danby Rd (or NY-34). Decker Rd intersects with both northbound and southbound roads and NY-13 road further connects to more commercial driveways.

There are multiple bus stops along the segment, including at Buttermilk Falls Rd, Brewery Ln, Seven Mile Dr, Enfield Falls Rd, and one bus stop each at the bifurcated northbound and southbound NY-13 road. The bus stops are only marked with signs and lack a shelter or level standing area. The segment lacks sidewalk or other pedestrian facilities and no crosswalks are available for pedestrians to access the bus stop.

As per the field visit observations, the segment includes six intersections, with a traffic signal only at the Five Mile Dr intersection. Signage along the segment includes stop signs, deer crossing, speed limit, state park, driveway, bus stop, and truck signs. Lane markings are present and mostly clearly visible but are slightly faded at some sections. Additionally, the segment lacks sufficient light posts for illumination, posing challenges for visibility in the dark.

16. ELMIRA RD (NY-13) From the Town of Newfield Line to City of Ithaca Line

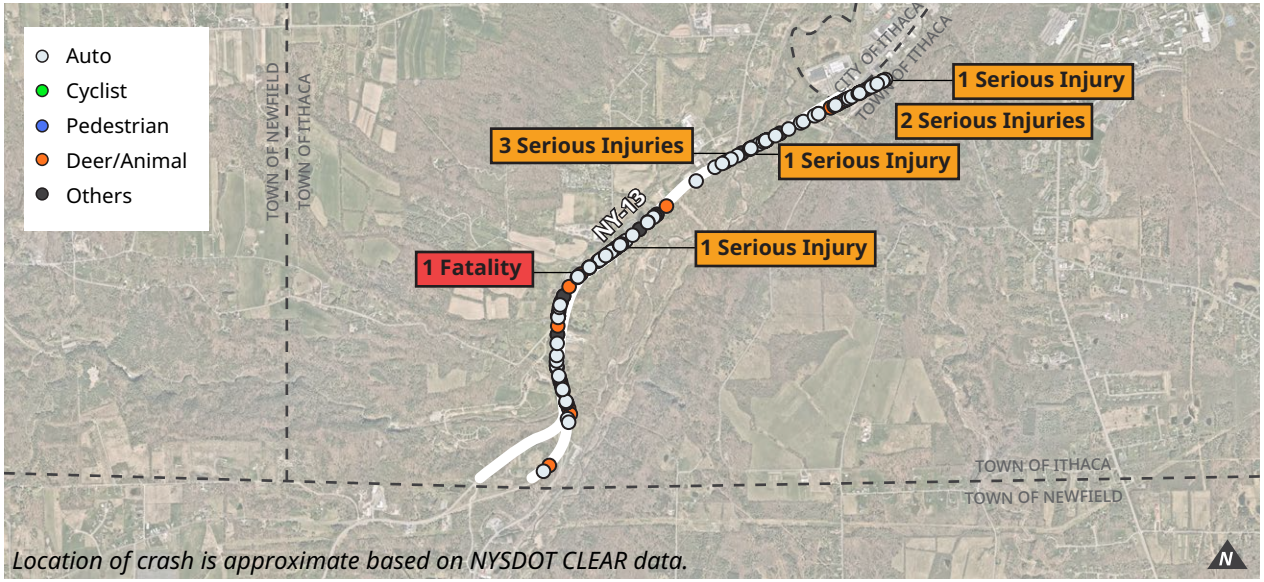
166
Total Crashes

9
Fatal & Serious Injury Crashes

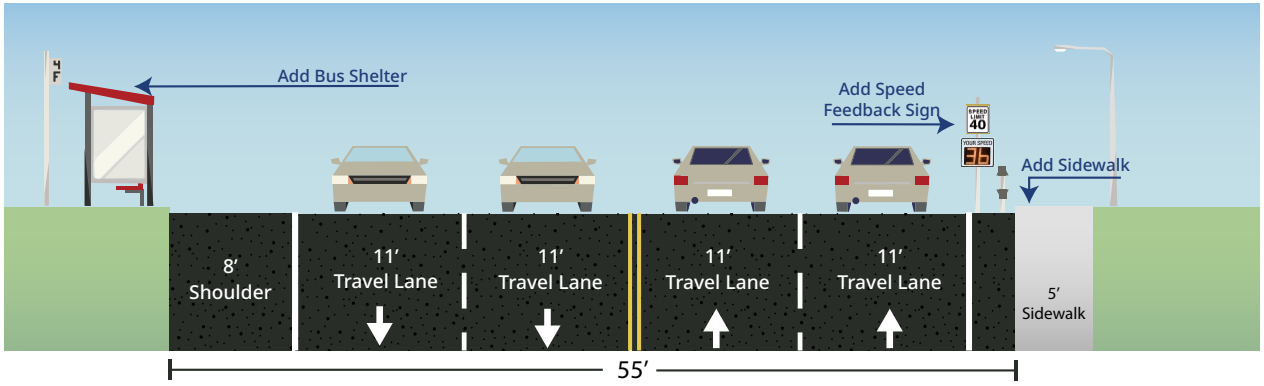
Users Involved

Between 2019 and 2023, 166 crashes occurred at the segment, with an average frequency of 33.2 per year. Out of 116 crashes, eight resulted in serious injuries and one crash resulted in a fatality.

The contributing factors to serious injuries include aggressive driving, unsafe speed and failure to yield right-of-way. In the fatal crash, improper lane usage and failure to yield the right-of-way were identified as contributing factors. All crashes resulting in serious injuries and the fatality exclusively involved motor vehicles, with no deer or other animals cited as contributing factors. One of the serious injury crashes — a collision with a sign post — occurred under dark conditions.



Spatial Distribution of Crashes by User Type



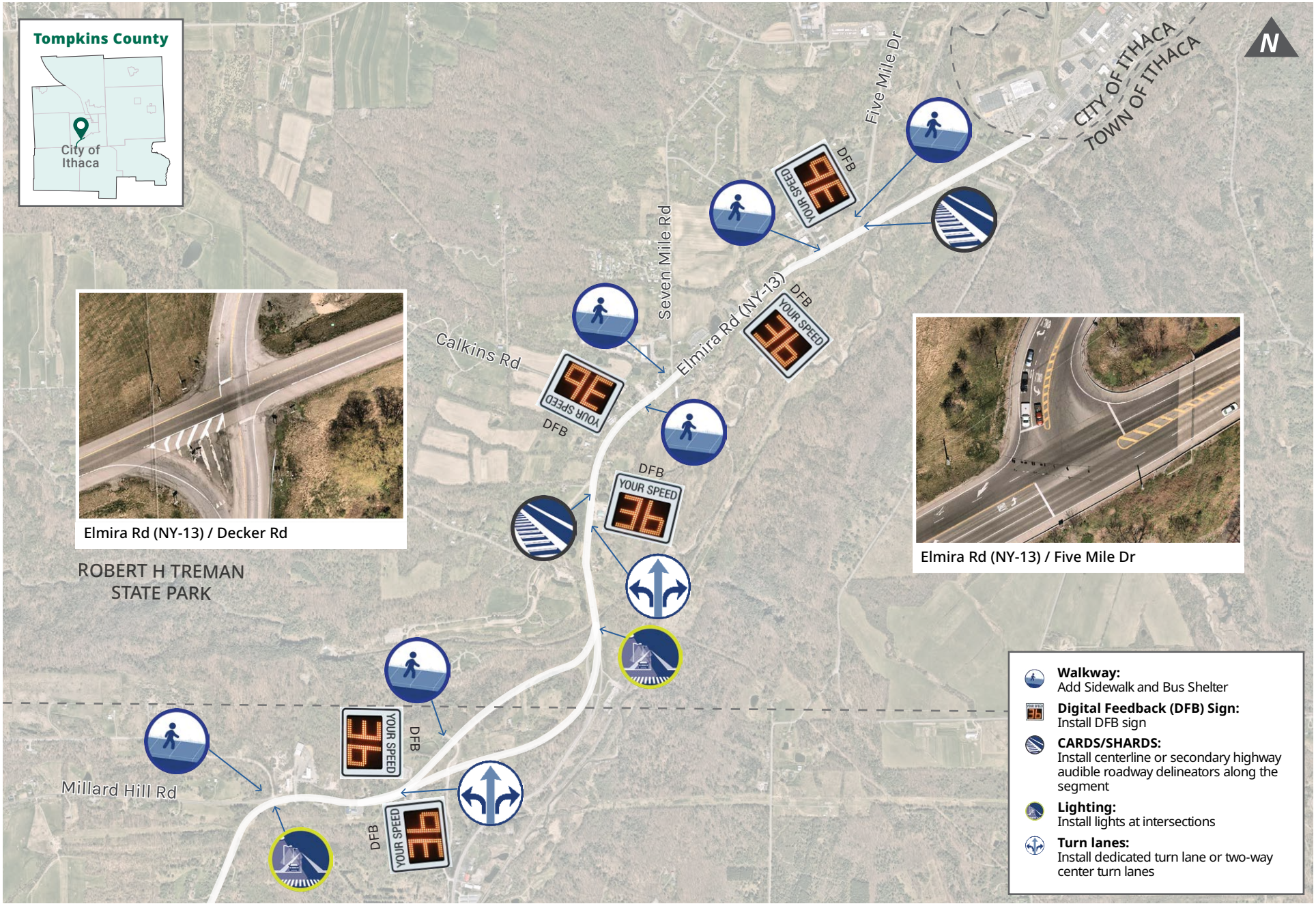
Proposed Typical Section

CRASH DATA (2019-2023)

Crash Counts						Injury Counts				Level of Service of Safety (LOSS)
TOTAL CRASH COUNTS	Auto	Cyclist	Pedestrian	Deer/ Animal	Others	TOTAL INJURY COUNTS	Fatal Injuries	Serious Injuries	Other Injuries	
166	116	0	0	32	18	36	1	8	27	3

16. ELMIRA RD (NY-13) From the Town of Newfield Line to City of Ithaca Line

Countermeasure Recommendations



16. ELMIRA RD (NY-13) From the Town of Newfield Line to City of Ithaca Line

Based on the contributing factors to the crashes along this segment, including aggressive driving, speeding, and failure to keep right, we recommend the following countermeasures.

Sidewalk

Sidewalks are paved walkways that are separated from motor vehicles by a curb and gutter. They are intended for pedestrians or people using a wheelchair. There are multiple commercial establishments and bus stops along the corridor. Adding sidewalks along NY-13 will improve the safety of pedestrians along the corridor and accessibility to bus stops. Sidewalks are recommended where bus stops are present to ensure level landing and accessibility to and from the bus.

Speed Feedback Sign

These include portable or permanently installed speed display signs, which are intended to encourage the driver to slow down by showing drivers that they are speeding. Speeding was noted as a contributing factor to many of the crashes within this segment, and speed feedback signs can be helpful in reducing speeding-related crashes.

Centerline Audible Roadway Delineators/Shoulder Highway Audible Roadway Delineators (CARDs/SHARDs)

CARDs and SHARDs are designed to alert drivers through vibration and sound when their vehicle veers from the travel lane. CARDs and SHARDs integrate pavement markings over the textured surface to enhance visibility and driver awareness. SHARDs are recommended at locations where there are currently guardrails to prevent fixed object crashes.

Bus Stop Improvements

A bus pull-off area, located on the far-side of the intersection and equipped with an ADA-compliant landing can improve bus operations and rider experience.

Bus shelters ensure space for pedestrians to wait for the bus sheltered from the elements. They must be accessible to all and have signage and lighting. Multiple bus stops are present along the NY-13 segment without supportive access, seating, or shelter.

North leg (Elmira Rd)

South leg (Elmira Rd)

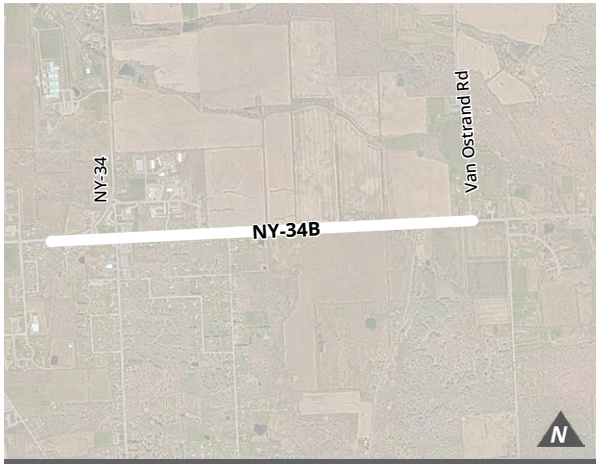
16. ELMIRA RD (NY-13) From the Town of Newfield Line to City of Ithaca Line

Countermeasure	Quantity	Unit		Unit Cost	Total
Concrete Sidewalk (4"thick)	5,250	sq. ft.	$	32.00	$168,000.00
Solar Powered Speed Radar Sign	6	each	$	10,200.00	$ 61,200.00
Centerline/Secondary Highway Audible Roadway Delineator (CARD/SHARD)	4,000	ft.	$	1.00	$ 4,000.00
Streetlighting	2	each	$	8,220.00	$ 16,440.00
Prefabricated Bus Shelter	7	each	$	25,300.00	$177,100.00
Dedicated Turn Lanes or Two-way Center Turn Lanes	2,100	ft.	$	4.00	$ 8,400.00

Subtotal	**$435,140.00**
Work Zone Traffic Control (WZTC) Estimate (10%)	$ 43,514.00
Incidentals, Inflation and Contingencies Estimate (20%)	$ 87,028.00
Construction Cost	**$565,682.00**
Survey (10%)	$ 56,568.20
Design Engineering ($10k + 10%)	$ 66,568.20
Construction Management & Inspection (15%)	$ 84,852.30
Grand Total	**$773,670.70**
Less 10%	$696,303.63
Plus 10%	$851,037.77

Cost estimates were prepared in June of 2025 utilizing bid tabulation data provided by the NYSDOT Electronic Pay Item Catalog, and NYSDOT Quick Estimator Tool, along with the current state of the construction market in the upstate NY area. The most recent year data available was used for each individual unit cost. These estimates are to be used for planning purposes only.

17. PERUVILLE RD (NY-34B) Between Auburn Rd (NY-34) & Van Ostrand Rd



SEGMENT CHARACTERISTICS

FUNCTIONAL CLASSIFICATION	Urban Major Collector Road
DESCRIPTION	Urban Two-Lane Undivided Free Access Two-Lane Two-Way
LENGTH	1.2 miles
AADT	4,558
SPEED LIMIT	45-55 MPH
OWNERSHIP	NYSDOT
ADJACENT LAND USE	Rural/Agricultural

KEY FINDINGS

NY-34B (Peruville Rd) between NY-34 (N Triphammer Rd) and Van Ostrand Rd was the site of 59 crashes including three that resulted in serious injuries over the five-year period. The addition of streetlights at key intersections, speed feedback signs, and advanced warning signage is recommended to increase visibility and reduce speeds throughout the corridor.

EXISTING CONDITIONS

The segment, approximately 1.2 miles long, is located in a rural area characterized by a mix of commercial and agricultural land uses. It stretches from NY-34 on the east to Van Ostrand Rd on the west, with five intersections and numerous unpaved driveways opening onto the road. The roadway width varies between 34-ft and 32-ft, featuring two 11-ft-wide travel lanes and shoulders on both sides, though the shoulder width is inconsistent throughout the segment.

As per field visit observations, the segment includes a traffic signal at the North Triphammer Rd intersection and a two-way stop sign at Van Ostrand intersection. Signage along the road includes signal-ahead signs, and speed limits set at 45-MPH for westbound traffic and 55-MPH for eastbound traffic.

Lane markings are present but slightly faded, with signs of infrequent minor cracking on the road surface. Sidewalks are present but inconsistent and interrupted by drainage pipe openings along the roadside. There are no crosswalks at any intersection. The segment is a flat, straight roadway with decent sightlines, providing generally good visibility for drivers.

Intersection of Van Ostrand Rd & Peruville Rd

17. PERUVILLE RD (NY-34B) Between Auburn Rd (NY-34) & Van Ostrand Rd

59
Total Crashes

3
Fatal & Serious Injury Crashes

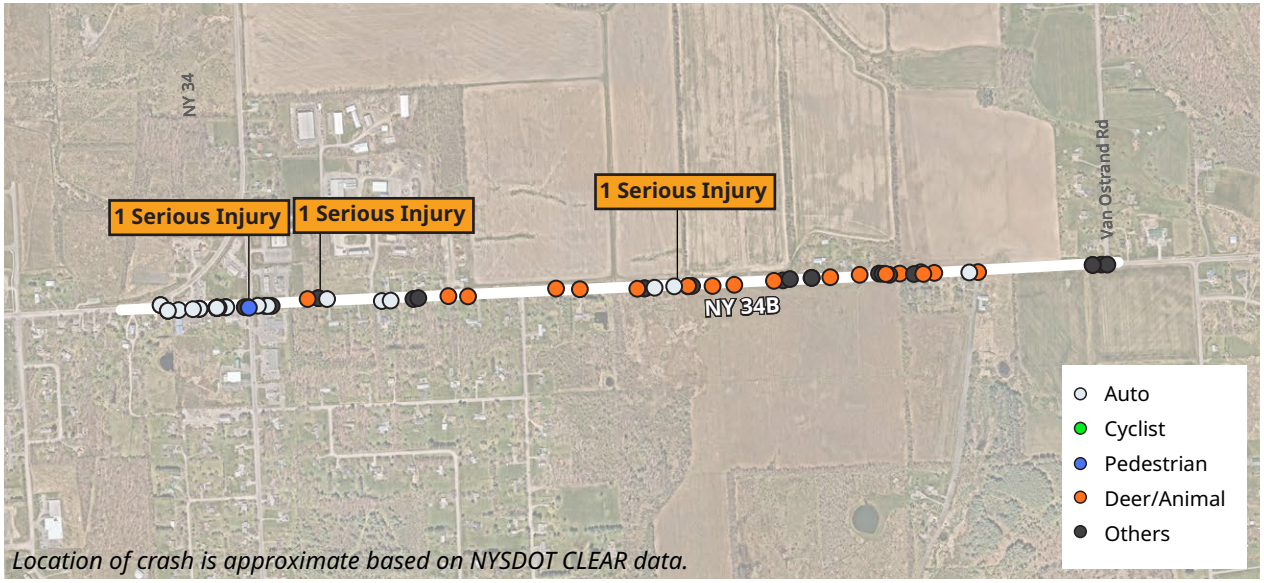
OTHER

Users Involved

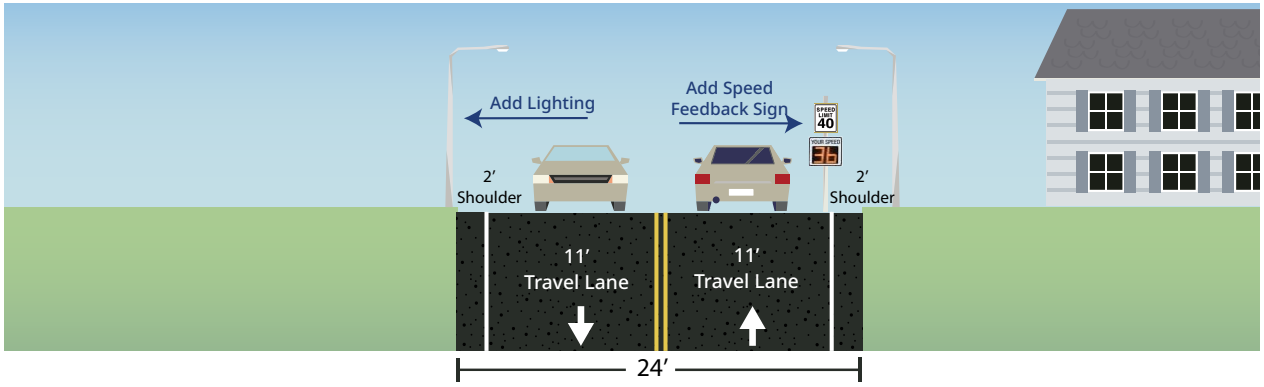
Between 2019 and 2023, 59 crashes occurred along the segment, with an average frequency of 11.8 per year. Three of these crashes resulted in serious injuries.

One of the serious injury crashes involved collision with a pedestrian at the intersection of NY-34B and N Triphammer Rd, and the contributing factor was the lack of pedestrian infrastructure. The other two serious injury crashes occured were collisions between motor vehicles. The contributing factor in these crashes was failure to keep right.

Contributing factors for other crashes include unsafe speed, wet road, failure to yield right-of-way, and road user behavior.



Spatial Distribution of Crashes by User Type



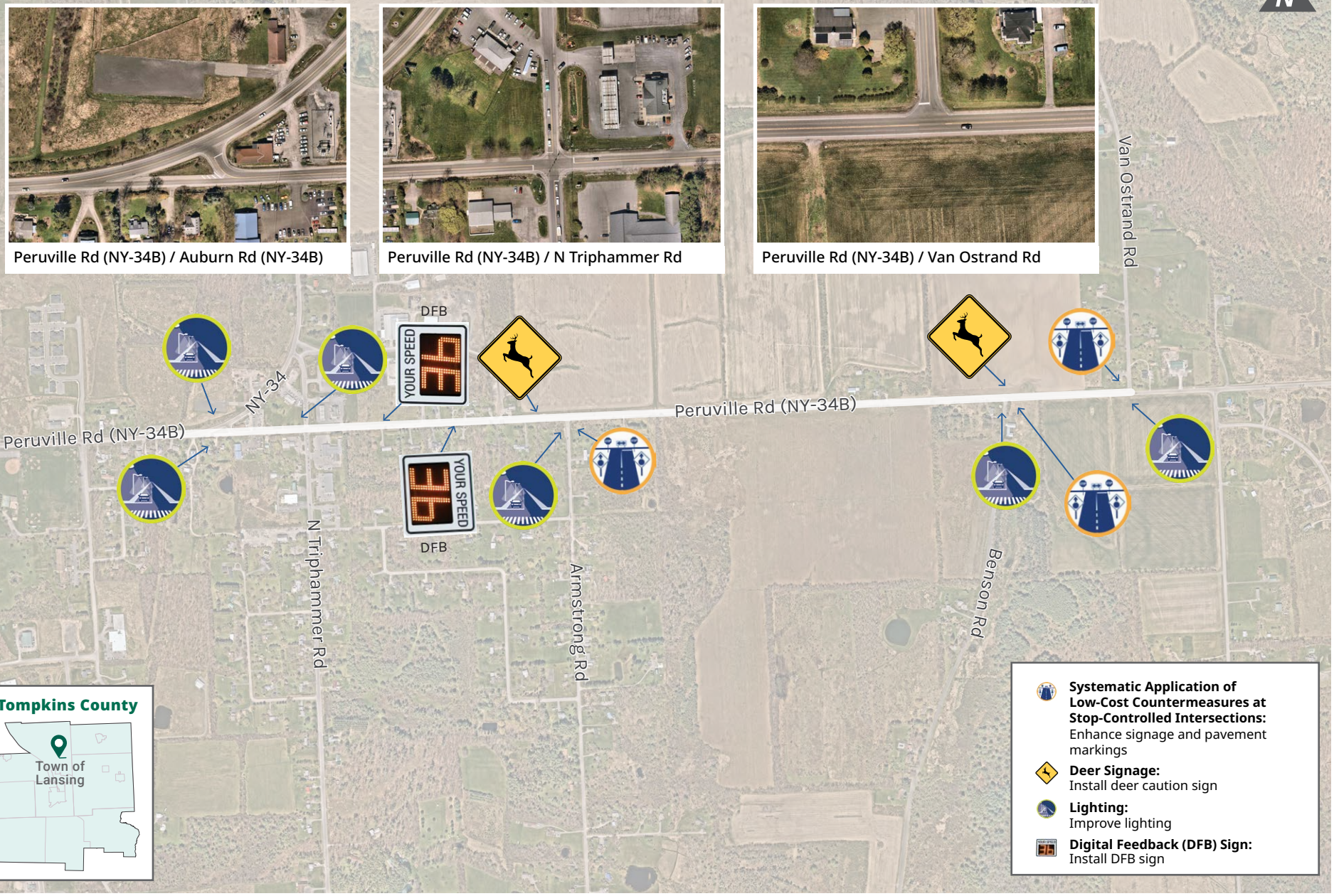
Proposed Typical Section

CRASH DATA (2019-2023)

Crash Counts						Injury Counts				Level of Service of Safety (LOSS)
TOTAL CRASH COUNTS	Auto	Cyclist	Pedestrian	Deer/ Animal	Others	TOTAL INJURY COUNTS	Fatal Injuries	Serious Injuries	Other Injuries	
59	27	0	1	18	13	8	0	3	5	4

17. PERUVILLE RD (NY-34B) Between Auburn Rd (NY-34) & Van Ostrand Rd

Countermeasure Recommendations



17. PERUVILLE RD (NY-34B) Between Auburn Rd (NY-34) & Van Ostrand Rd

Based on the contributing factors to the crashes along this segment, including speeding, failure to yield the right-of-way, and failure to keep right, we recommend the following countermeasures.

Systematic Application of Low-Cost Countermeasures at Stop-Controlled Intersections

Includes deploying a package of multiple low-cost countermeasures, including enhanced signage and pavement markings. These countermeasures increase driver awareness and recognition of the intersections and potential conflicts. This is recommended since the segment is situated in a commercial area with both motor vehicle and foot traffic, and on the east side, it is surrounded by agricultural land. Additionally, many driveways feed into the segment.

Deer Crossing Signage

Deer crossing signage alerts drivers and raises awareness about potential wildlife encounters, helping to prevent collisions with deer and other animals. The installation of these signs is especially recommended for this segment of NY-34B, which has a history of frequent crashes involving deer and other wildlife.

Road Safety Audit

A Road Safety Audit (RSA) examines the performance of a road or intersection by an idenpendent, multidisciplinary team. An RSA can identify potential safety issues and opportunities for improvement for all roadway users and develop a formal report that can be used to implement actions that will improve safety. A pedestrian-focused RSA can identify issues to improve conditions for pedestrians along Peruville Rd. Cost estimates for an RSA have not been developed.

Speed Feedback Sign

These include portable or permanently installed speed display signs, which are intended to encourage the driver to slow down by showing drivers that they are speeding. Speeding was noted as a contributing factor to many of the crashes within this segment, and speed feedback signs can be helpful in reducing speeding related crashes. Speed Feedback Signs are recommended on the sections of Peruville Rd with a speed limit less than or equal to 45-MPH.

East leg (Peruville Rd)

Lighting

The goal of lighting should be to illuminate with positive contrast to make it easier for a drivers to visually identify obstacles in the roadway and other roadway users. This involves carefully placing the luminaires in forward locations. In accordance with NYSDOT policies, the local municipality must take on recurring electricity costs for new lighting. Fixtures different from NYSDOT standard fixtures, such as cobra-style lighting, would require a betterment from the municipality.

17. PERUVILLE RD (NY-34B) Between Auburn Rd (NY-34) & Van Ostrand Rd

Cost Estimates

Countermeasure	Quantity	Unit	Unit Cost	Total
Small Single Post-Mounted Signs	8	each	$ 622.00	$ 4,976.00
Solar Powered Radar Speed Sign	2	each	$ 10,200.00	$ 20,400.00
Street Lighting	6	each	$ 8,220.00	$ 49,320.00
Enhanced Pavement Marking	600	ft.	$ 4.00	$ 2,400.00

Subtotal	**$ 77,096.00**
Work Zone Traffic Control (WZTC) Estimate (10%)	$ 7,709.60
Incidentals, Inflation and Contingencies Estimate (20%)	$ 15,419.20
Construction Cost	**$100,224.80**
Survey (10%)	$ 10,022.48
Design Engineering ($10k + 10%)	$ 20,022.48
Construction Management & Inspection (15%)	$ 15,033.72
Grand Total	**$145,303.48**
Less 10%	$130,773.13
Plus 10%	$159,833.83

Cost estimates were prepared in June of 2025 utilizing bid tabulation data provided by the NYSDOT Electronic Pay Item Catalog, and NYSDOT Quick Estimator Tool, along with the current state of the construction market in the upstate NY area. The most recent year data available was used for each individual unit cost. These estimates are to be used for planning purposes only.

18. ELMIRA RD (NY-13) Between Protts Hill Rd & Main St

SEGMENT CHARACTERISTICS

FUNCTIONAL CLASSIFICATION	Rural Principle Arterial (Other)
DESCRIPTION	Rural Two-Lane Undivided Free Access Two-Lane Two-Way
LENGTH	1 mile
AADT	7,928
SPEED LIMIT	55 MPH
OWNERSHIP	NYSDOT
ADJACENT LAND USE	Developed/ Commercial

KEY FINDINGS

This segment of NY-13 (Elmira Rd) was the site of 42 crashes, three of which resulted in serious injuries during the five-year period. Advance warning signage, improved pavement markings, and high-visibility crosswalks are recommended along the corridor.

EXISTING CONDITIONS

The one-mile segment, located in a scattered commercial area, extends from Protts Hill Rd in the north to Main St in the south, connecting to Main St via a roundabout at the intersection of Trumbulls Corner Rd. Multiple unpaved paths and driveways open onto the segment. The road width varies from 40-ft near Protts Hill Rd to 45-ft near Main St, expanding to 60-ft near the roundabout. The segment primarily consists of two travel lanes, each approximately 10-ft to 11-ft wide, with shoulders on both sides.

The roundabout, situated at the intersection of NY-13 Northbound and Trumbulls Corner Rd, has a diameter of 86-ft and features medians on all four approach roads to manage and separate northbound and southbound traffic. The roundabout includes gore areas, yield markings, and through and right-turn markings to guide traffic flow.

Multiple yield signs are present near the roundabout. Outside of the roundabout, side streets approaches are stop-sign controlled.

As per field visit observations, the lane markings are clearly visible, and the road surface is in excellent condition, with no cracking. No sidewalks are present at any intersection, including Bank St, which meets the segment at an acute angle. During the field visit, a significant volume of construction truck traffic was observed.

Roundabout

18. ELMIRA RD (NY-13) Between Protts Hill Rd & Main St

42
Total Crashes

3
Fatal & Serious Injury Crashes

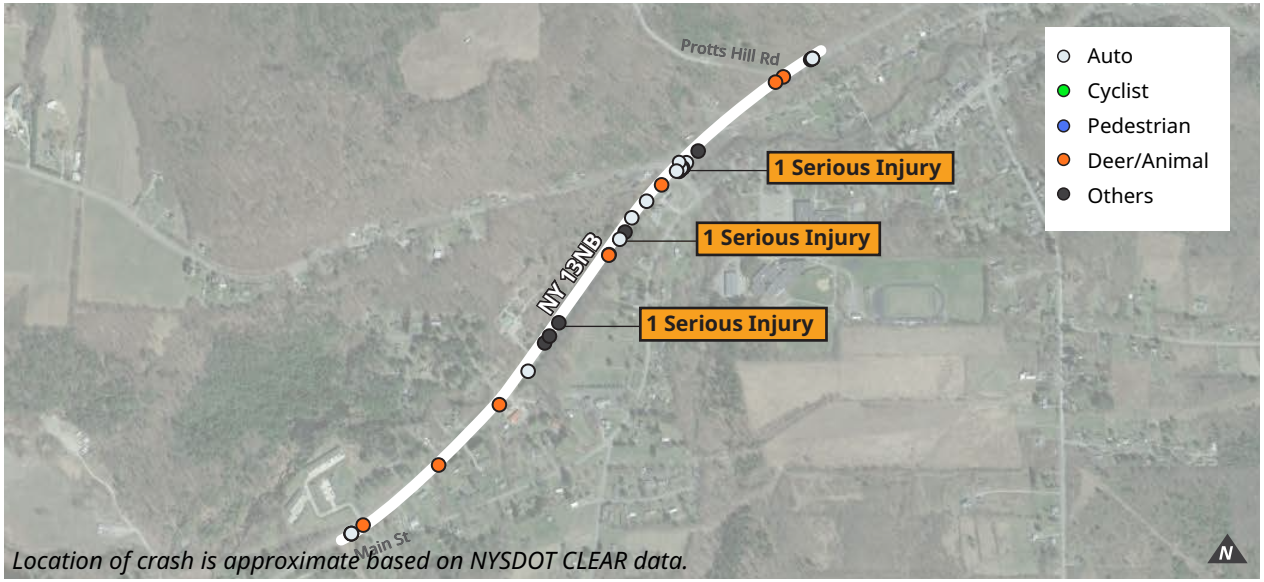
OTHER

Users Involved

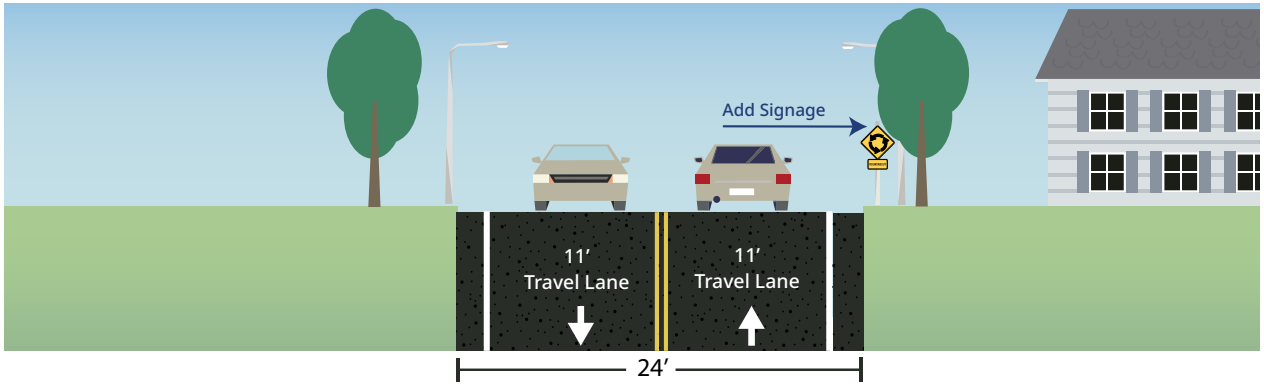
Between 2019 and 2023, 42 crashes occurred at the segment, with an average frequency of 8.4 per year. Out of 42 crashes, three of them resulted in serious injuries.

There were 18 crashes involved collisions with motor vehicles and seven involved collisions with deer/animals.

One of the serious injury crashes occurred near the intersection of Trumbull Corners Rd and NY-13 and other motor vehicle crashes are also concentrated near the intersection. The deer-related crashes are spread out across the segment.



Spatial Distribution of Crashes by User Type



Proposed Typical Section

CRASH DATA (2019-2023)

Crash Counts						Injury Counts				Level of Service of Safety (LOSS)
TOTAL CRASH COUNTS	Auto	Cyclist	Pedestrian	Deer/ Animal	Others	TOTAL INJURY COUNTS	Fatal Injuries	Serious Injuries	Other Injuries	
42	18	0	0	7	17	7	0	3	4	4

18. ELMIRA RD (NY-13) Between Protts Hill Rd & Main St

18. ELMIRA RD (NY-13) Between Protts Hill Rd & Main St

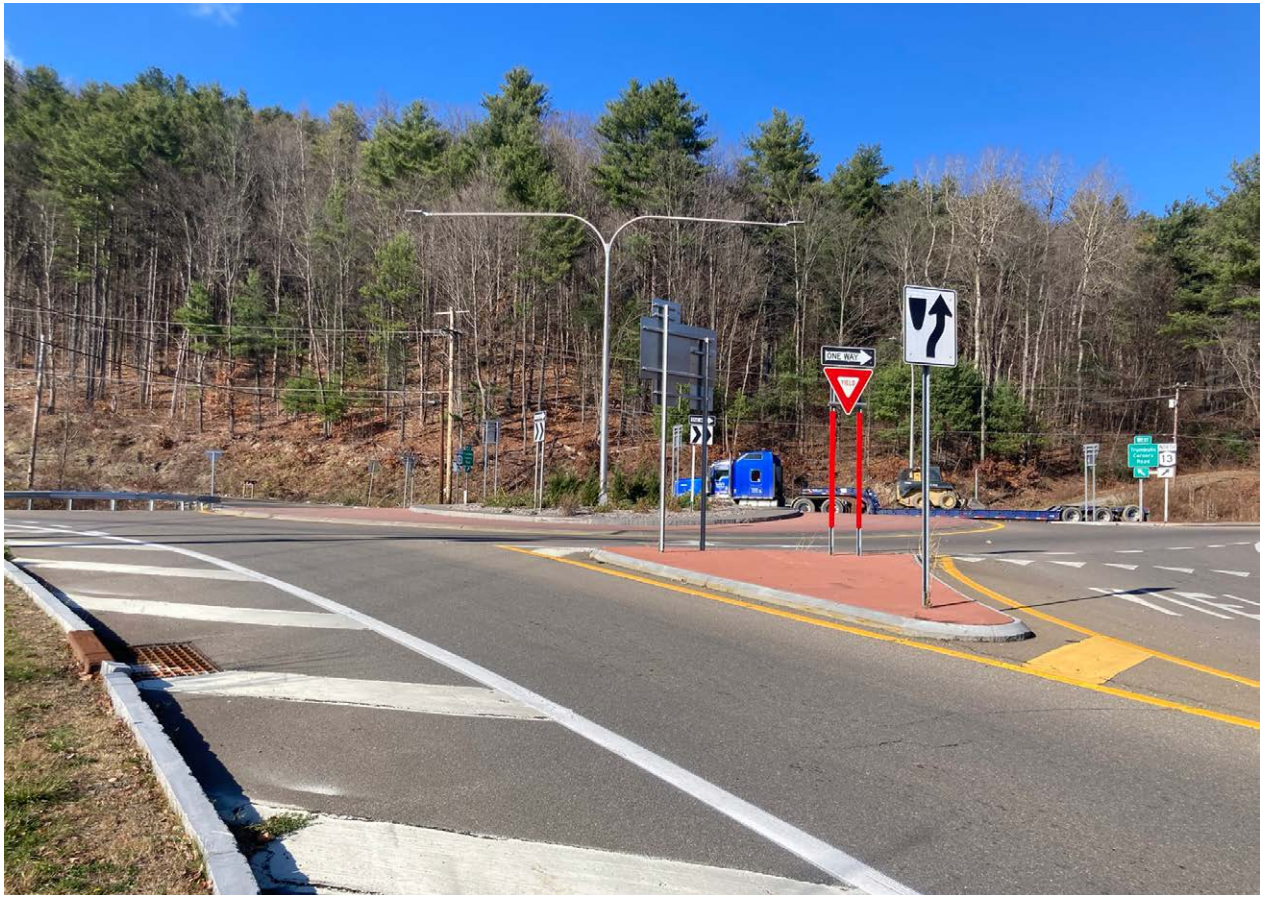
Based on the contributing factors to the crashes along this segment, including improper turning movements, improper lane usage, and disregard for traffic control devices, we recommend the following countermeasures.

Systemic Application of Low-Cost Countermeasures at Stop-Controlled Intersections

Includes deploying a package of multiple low-cost countermeasures, including enhanced signage and pavement markings. These countermeasures increase driver awareness and recognition of the intersections and potential conflicts. Advance warning signage is recommended at the intersections of Main St and NY-13, Bank St and NY-13, and Protts Hill St and NY-13.

Deer Crossing Signage

Deer crossing signage alerts drivers and raises awareness about potential wildlife encounters, helping to prevent collisions with deer and other animals. The installation of these signs is especially recommended for the segment of NY-34B, which has a history of frequent crashes involving deer and other wildlife.



Main St & Trumbulls Corner Rd

18. ELMIRA RD (NY-13) Between Protts Hill Rd & Main St

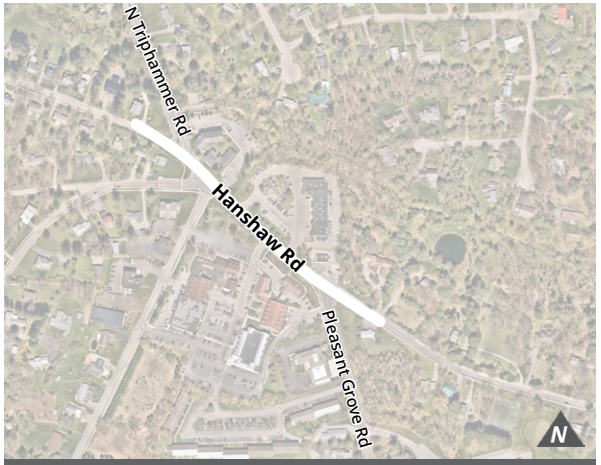
Cost Estimates

Countermeasure	Quantity	Unit	Unit Cost	Total
LS Type (Ladder) Crosswalk	3	each	$ 2,100.00	$ 6,300.00
Small Single Post-Mounted Signs	10	each	$ 622.00	$ 6,220.00

Subtotal	**$ 12,520.00**
Work Zone Traffic Control (WZTC) Estimate (10%)	$ 1,252.00
Incidentals, Inflation and Contingencies Estimate (20%)	$ 2,504.00
Construction Cost	**$ 16,276.00**
Survey (10%)	$ 1,627.60
Design Engineering ($10k + 10%)	$ 11,627.60
Construction Management & Inspection (15%)	$ 2,441.40
Grand Total	**$ 31,972.60**
Less 10%	$ 28,775.34
Plus 10%	$ 35,169.86

Cost estimates were prepared in June of 2025 utilizing bid tabulation data provided by the NYSDOT Electronic Pay Item Catalog, and NYSDOT Quick Estimator Tool, along with the current state of the construction market in the upstate NY area. The most recent year data available was used for each individual unit cost. These estimates are to be used for planning purposes only.

19. HANSHAW RD Between N Triphammer Rd and Pleasant Grove Rd



SEGMENT CHARACTERISTICS

FUNCTIONAL CLASSIFICATION	Urban Minor Arterial Road
DESCRIPTION	Urban Two-Lane Undivided Free Access Two-Lane Two-Way
LENGTH	0.1 mile
AADT	1,368
SPEED LIMIT	30 MPH
OWNERSHIP	Village of Cayuga Heights
ADJACENT LAND USE	Developed/ Commercial

KEY FINDINGS

Hanshaw Rd is key commercial corridor in the Village of Cayuga Heights. This segment was the site of 143 crashes, five of which resulted in serious injuries, and two of which involved pedestrians over the five-year period. Increased advanced warning signage on the approach streets of Triphammer, Upland, and Pleasant Grove Roads are recommended, along with geometric modifications to slow the speed of turning vehicles.

EXISTING CONDITIONS

The 0.1 mile segment of Hanshaw Rd is located in a dense residential and commercial neighborhood, with a golf course adjacent to the southern side. Multiple commercial driveways open directly onto the segment and intersecting roads, contributing vehicular traffic to Hanshaw Rd. The road width varies from 32-ft on the western end to 30-ft on the eastern end and includes two travel lanes, each 10-ft to 11-ft wide, with shoulders on both sides. At the western end, Hanshaw Rd intersects North Triphammer Rd at an acute angle, approximately 100-ft west of where Triphammer Rd and East Upland Rd form a mirrored K-shaped intersection with Hanshaw Rd. Further east, the road intersects Pleasant Grove Rd.

Traffic signals and pedestrian signals are present but not at all intersections, and no bike signals or bike lanes are provided.

Additional signage includes two-way stop signs at the North Triphammer Rd intersection, speed limit signs, yield-to-pedestrian signs, and signal-ahead signs. Few light posts are present on the segment for illumination in dark.

As per the field visit observations, the lane markings are clearly visible, and the road surface shows infrequent minor cracking, especially on the sides and corners of the intersection. Sidewalks run along the entire segment of Hanshaw Rd, however, at some sections there are drainage pipes openly present along the sidewalk. Additionally, crosswalks are present but at some legs of the Triphammer Rd and East Upland Rd intersection, as well as along Hanshaw Rd between East Upland Rod and Pleasant Grove Rd. These crosswalks are ladder-style with slightly faded markings and accessible curb ramps, though the ramps lack tactile surfaces.

West leg (Hanshaw Rd)

19. HANSHAW RD Between N Triphammer Rd and Pleasant Grove Rd

27
Total Crashes

1
Fatal & Serious Injury Crashes

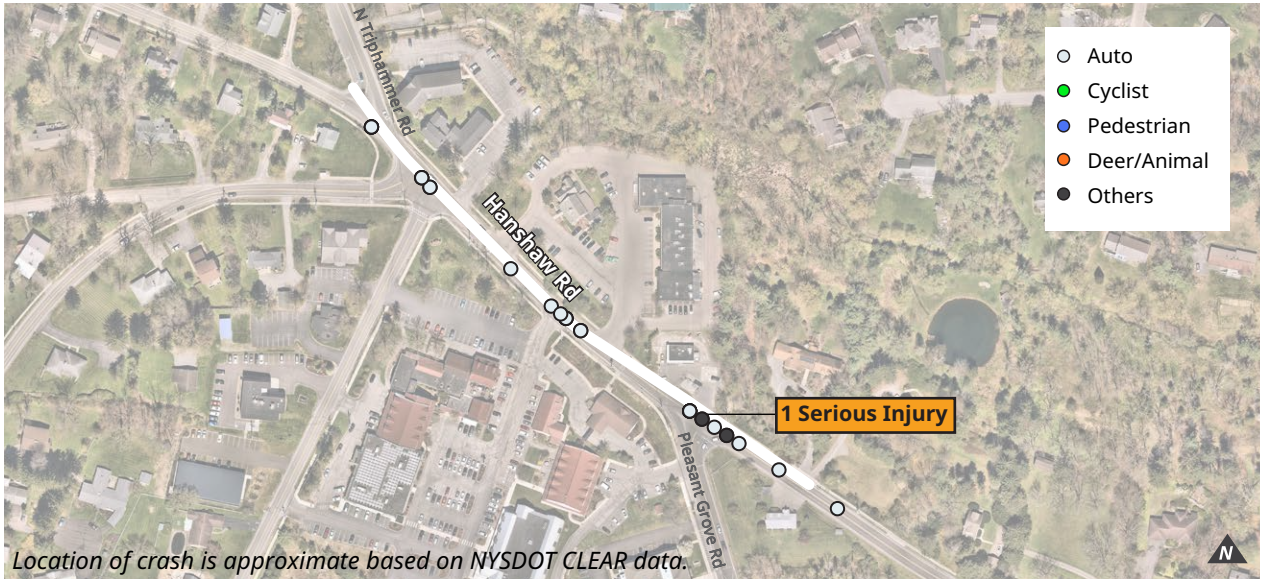
OTHER

Users Involved

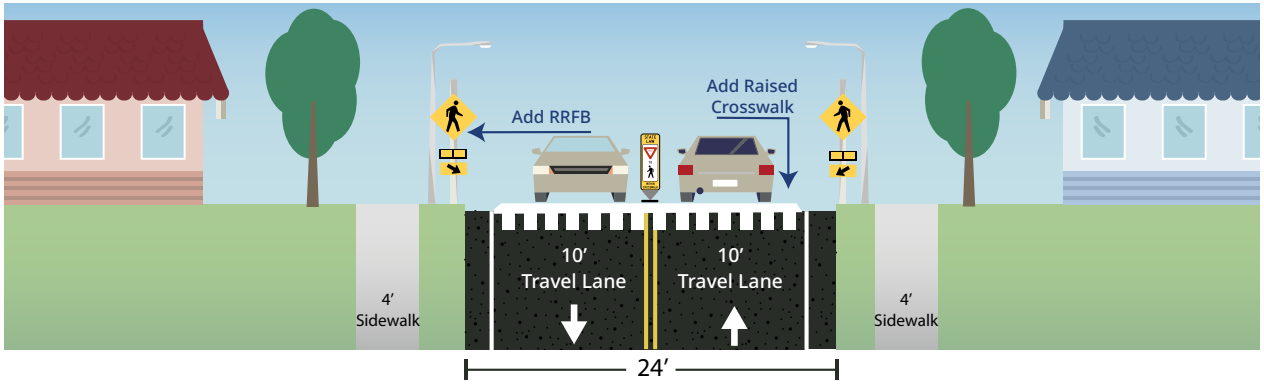
Between 2019 and 2023, 27 crashes occurred at the segment, with an average frequency of 5.4 per year. Twenty-seven crashes occurred on the segment at Hanshaw Rd out of which one resulted in a serious injury.

A serious injury crash occurred at the intersection at Pleasant Grove Dr and Hanshaw Rd. The contributing factor was improper road user behavior. The contributing factors for other crashes include improper turning and backing movement, driver inattention, and failure to yield right-of-way.

Most crashes involved collision with motor vehicles and were concentrated near the intersection or approach of the intersection.



Spatial Distribution of Crashes by User Type



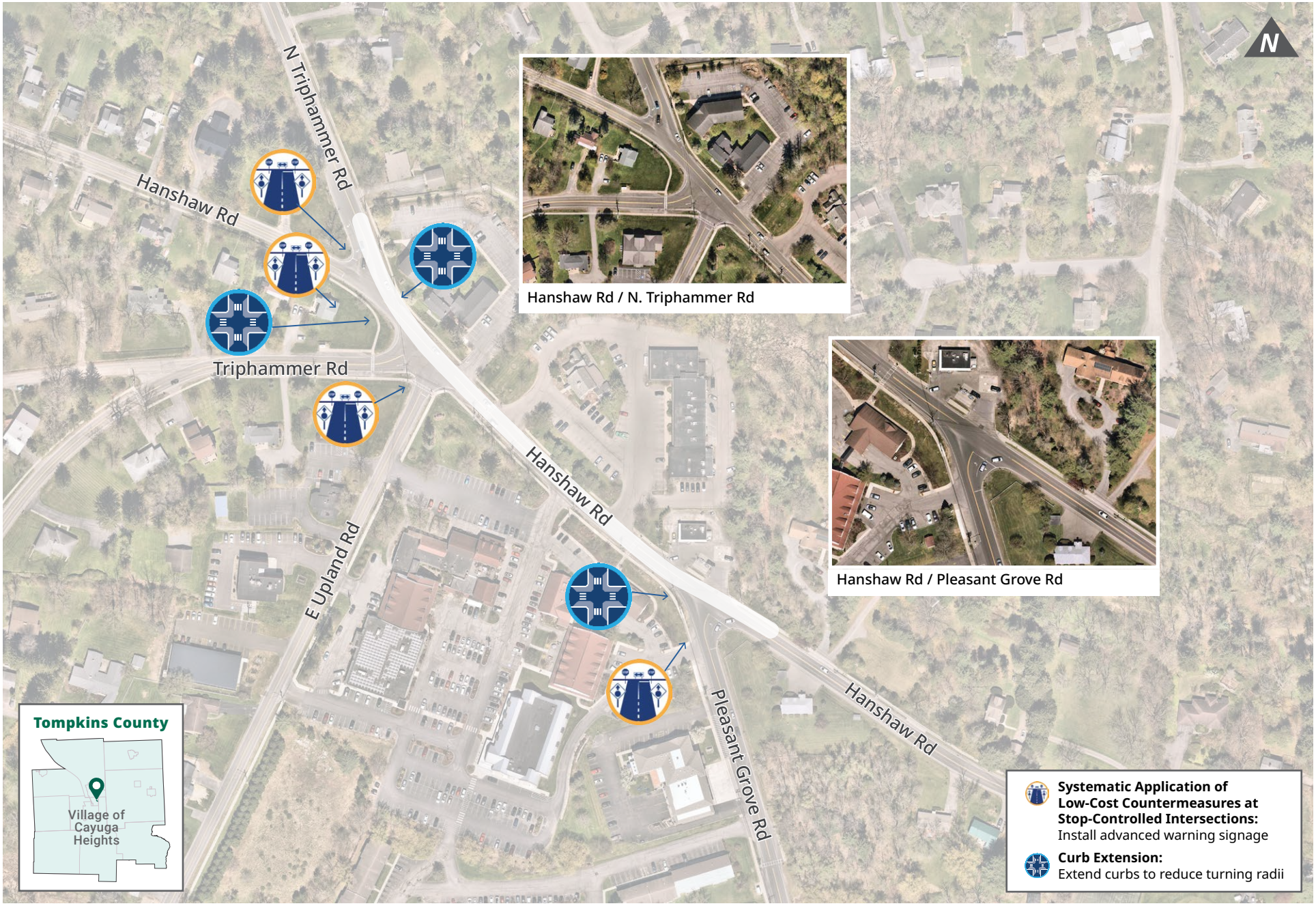
Proposed Typical Section

CRASH DATA (2019-2023)

Crash Counts						Injury Counts				Level of Service of Safety (LOSS)
TOTAL CRASH COUNTS	Auto	Cyclist	Pedestrian	Deer/ Animal	Others	TOTAL INJURY COUNTS	Fatal Injuries	Serious Injuries	Other Injuries	
27	24	0	0	0	3	5	0	1	4	3

19. HANSHAW RD Between N Triphammer Rd and Pleasant Grove Rd

Countermeasure Recommendations



19. HANSHAW RD Between N Triphammer Rd and Pleasant Grove Rd

Based on the contributing factors to crashes along this segment, including improper turning movements, driver inattention, and failure to yield the right-of-way, we recommend the following countermeasures.

Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections

Includes deploying a package of multiple low-cost countermeasures, including enhanced signage and pavement markings. These countermeasures increase driver awareness and recognition of the intersections and potential conflicts. Increased advance warning signage on the approach streets Triphammer, Upland, and Pleasant Grove Roads is recommended to encourage reduced speeds.

Reduce Curb Radius

Reconstructing the turning radius to a tighter turn can reduce turning speeds, shorten the crossing distance for pedestrians, and improve sight distance between pedestrians and motorists. Geometric modifications are recommended to slow the speed of turning vehicles.

Corridor Access Management

Access management refers to the design, application, and control of entry and exit points along a roadway. Access management along a corridor can simultaneously enhance safety for all modes, facilitate walking and biking, and reduce trip delay and congestion.

Consideration should be given to reducing the number of conflicts between vehicles, pedestrians and bicyclists along Hanshaw Rd by limiting turning movements such as right-in/right-out only or restricting certain left-turn maneuvers. Given that there are multiple commercial plazas whose driveways feed into Hanshaw Rd, access management may decrease potential conflict points. Further consideration may be given to reducing, consolidating, or spacing the driveways along the Hanshaw Rd. Further study is needed to determine an access management strategy. Accordingly conceptual designs and cost estimates have not been developed.

Intersection of Hanshaw Rd & E Upland Rd

19. HANSHAW RD Between N Triphammer Rd and Pleasant Grove Rd

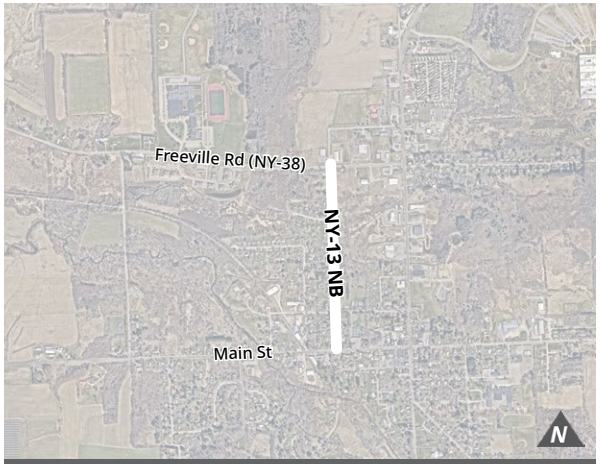
Cost Estimates

Countermeasure	Quantity	Unit	Unit Cost	Total
Small Single Post-Mounted Signs	6	each	$ 622.00	$ 3,732.00
Curb Geometry Modifications at 4 locations	200	ft.	$ 95.00	$ 19,000.00
Concrete Sidewalk (for curb extensions) (4" thick)	1,050	sf.	$ 32.00	$ 33,600.00

Subtotal	**$ 56,332.00**
Work Zone Traffic Control (WZTC) Estimate (10%)	$ 5,633.20
Incidentals, Inflation and Contingencies Estimate (20%)	$ 11,266.40
Construction Cost	**$ 73,231.60**
Survey (10%)	$ 7,323.16
Design Engineering ($10k + 10%)	$ 17,323.16
Construction Management & Inspection (15%)	$ 10,984.74
Grand Total	**$108,862.66**
Less 10%	$ 97,976.39
Plus 10%	$119,748.93

Cost estimates were prepared in June of 2025 utilizing bid tabulation data provided by the NYSDOT Electronic Pay Item Catalog, and NYSDOT Quick Estimator Tool, along with the current state of the construction market in the upstate NY area. The most recent year data available was used for each individual unit cost. These estimates are to be used for planning purposes only.

20. NORTH ST (NY-13 NB) Between Freeville Rd (NY-38) & W Main St



SEGMENT CHARACTERISTICS

FUNCTIONAL CLASSIFICATION	Rural Principal Arterial (Other)
DESCRIPTION	Rural Two-Lane Undivided Free Access Two-Lane Two-Way
LENGTH	0.5 mile
AADT	11,283
SPEED LIMIT	30 MPH
OWNERSHIP	NYSDOT
ADJACENT LAND USE	Developed/ Commercial

KEY FINDINGS

This segment of NY-13 (North St) in the Village of Dryden was the site of 81 crashes, 11 of which resulted in serious injuries over the five-year period. Two crashes involved pedestrians and two crashes involved bicyclists.

Along the corridor, high visibility marked crosswalks, improved streetlighting at key intersections, and advanced warning signage for two-way stop-controlled side streets are recommended.

EXISTING CONDITIONS

The half-mile segment is located in a rural area with commercial establishments lining the road, many of which have driveways directly feeding into the segment. It extends from the intersection of NY-13 and NY-38 (Freeville Rd) in the north to the intersection of NY-13 and Main St in the south, encompassing at least six intersections. The road width varies from 30-ft to 50-ft, widening near intersections and as it transitions northward.

The segment primarily features two travel lanes with shoulders, though it expands to three lanes in some sections, incorporating a center turn lane and a buffered median. Lane widths range from 11-ft to 14-ft, with buffer areas present at the NY-38/Freeville Rd intersection and between Pratt Rd and the Main St intersection. A gore area is located near the Main St intersection, particularly in front of large driveways, some of which provide spots for on-street parking.

As per field visit observations, traffic signals are present at several intersections, but there is no additional signage apart from speed limit signs. Lane markings are slightly faded, and the road surface exhibits minor, infrequent cracking. Sidewalks are present along both sides of the segment. Curb extensions with pedestrian signals are provided at the Main St and NY-13 intersection. Crosswalks, primarily in zebra or ladder styles, are present at most intersection legs, with markings that are clearly visible. Some intersections also feature parallel line crosswalks, while most curbs have accessible ramps with tactile surfaces. One crosswalk at the NY-38/Freeville Rd intersection spans approximately 80-ft.

A bus stop sign is located near the Dryden Food Market, which lacks a shelter or a crosswalk for pedestrians to safely access buses traveling in either direction. Both drivers and pedestrians were observed using the segment during the site visit.

20. NORTH ST (NY-13 NB) Between Freeville Rd (NY-38) & W Main St

81
Total Crashes

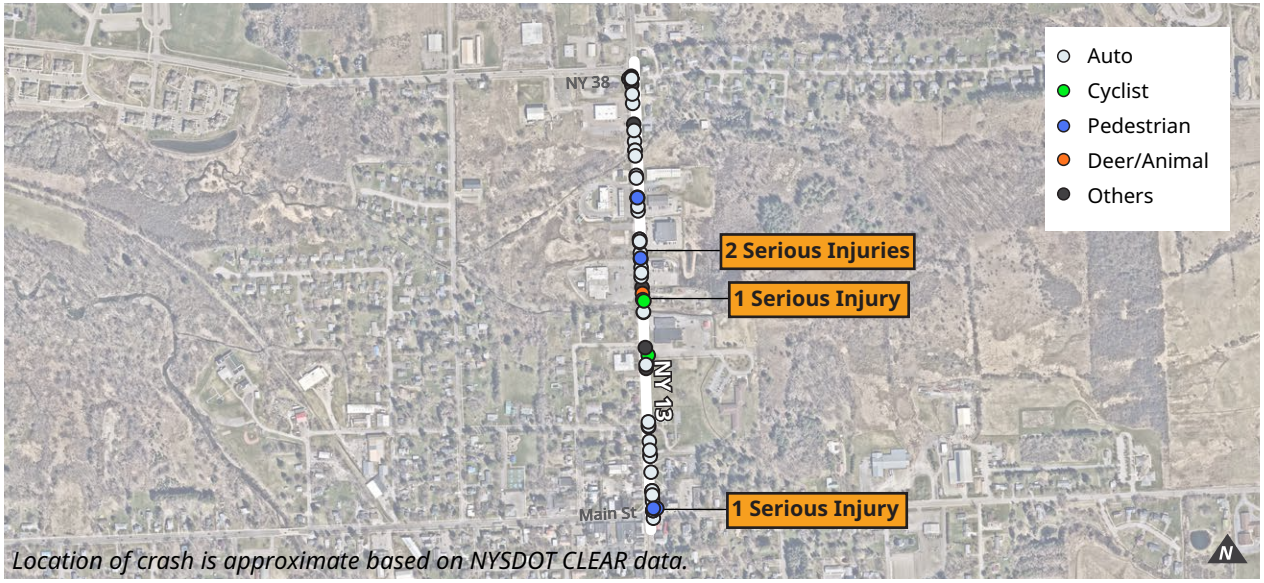
4
Fatal & Serious Injury Crashes

OTHER

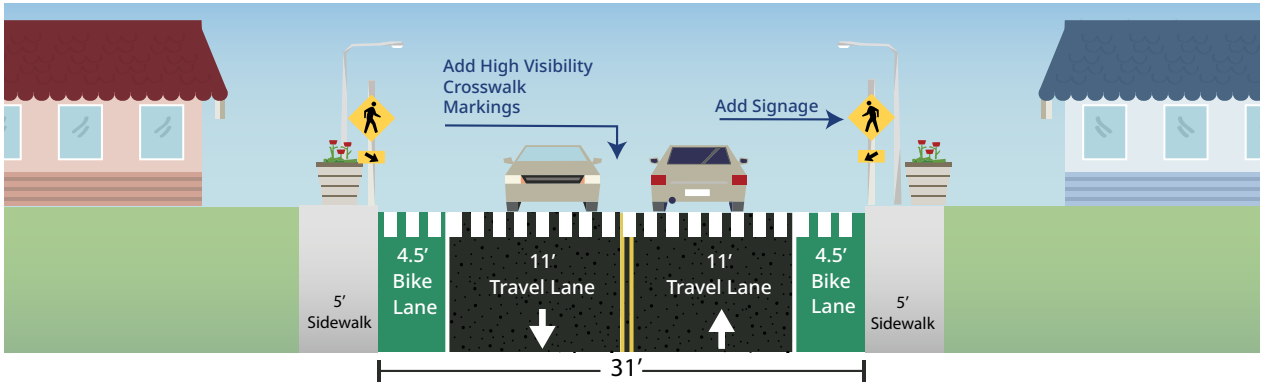
Users Involved

Between 2019 and 2023, 81 crashes occurred on the segment, with an average frequency of 16.2 per year. Eleven of these crashes resulted in serious injuries.

Four crashes involving pedestrians were reported at four separate locations along the segment. A crash at the intersection of Main St resulted in serious injury to a pedestrian due to failure to yield right-of-way. Additionally, one of the two collisions with bicyclists resulted in a serious injury. The bicyclist serious injury occurred due to driver inattention and failure to yield right-of-way. Another serious injury occurred involving a collision with a tree due to improper road user behavior.



Spatial Distribution of Crashes by User Type



East Main St

CRASH DATA (2019-2023)

Crash Counts						Injury Counts				Level of Service of Safety (LOSS)
TOTAL CRASH COUNTS	Auto	Cyclist	Pedestrian	Deer/ Animal	Others	TOTAL INJURY COUNTS	Fatal Injuries	Serious Injuries	Other Injuries	
81	62	2	4	2	11	15	0	4	11	4

20. NORTH ST (NY-13 NB) Between Freeville Rd (NY-38) & W Main St

Countermeasure Recommendations

20. NORTH ST (NY-13 NB) Between Freeville Rd (NY-38) & W Main St

Based on the contributing factors to crashes, including failure to yield the right-of-way, driver inattention, and poor road conditions, we recommend the following countermeasures.

Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections

Includes deploying a package of multiple low-cost countermeasures, including enhanced signage and pavement markings. These countermeasures increase driver awareness and recognition of the intersections and potential conflicts.

Advance warning signage for two-way stop-controlled side streets is recommended to ensure safety, especially given the proximity to a school and local businesses.

High-Visibility Crosswalks

High-visibility crosswalks use patterns (i.e., bar pairs, continental, ladder) that are visible to both the driver and pedestrian from farther away compared to traditional transverse line crosswalks. High-visibility marked crosswalks are recommended at the intersections of Main St and NY-13 and Freeville Rd and NY-13 to increase pedestrian safety.

North leg (North St)

Bike Lanes

Future consideration should be given to provision of bike lanes on both North Street and Main Street. Given that the cross-section of both North St, South Street, West Main, and East Main all vary, further study would be required to determine a suitable bikeway design as well as connectivity beyond the segment and intersection. The addition of bike lanes may require reconfiguration or relocation of parking. Conceptual designs and cost estimates have not been developed for bike lanes at this location.

20. NORTH ST (NY-13 NB) Between Freeville Rd (NY-38) & W Main St

Countermeasure	Quantity	Unit	Unit Cost	Total
LS Type (Ladder) Crosswalk	6	each	$ 2,100.00	$ 12,600.00
Small Single Post-Mounted Signs	4	each	$ 622.00	$ 2,488.00

Subtotal	**$ 15,088.00**
Work Zone Traffic Control (WZTC) Estimate (10%)	$ 1,508.80
Incidentals, Inflation and Contingencies Estimate (20%)	$ 3,017.60
Construction Cost	**$ 19,614.40**
Survey (10%)	$ 1,961.44
Design Engineering ($10k + 10%)	$ 11,961.44
Construction Management & Inspection (15%)	$ 2,942.16
Grand Total	**$ 36,479.44**
Less 10%	$ 32,831.50
Plus 10%	$ 40,127.38

Cost estimates were prepared in June of 2025 utilizing bid tabulation data provided by the NYSDOT Electronic Pay Item Catalog, and NYSDOT Quick Estimator Tool, along with the current state of the construction market in the upstate NY area. The most recent year data available was used for each individual unit cost. These estimates are to be used for planning purposes only.