

Appendix B: RPA Region Sites

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Intersections

This section provides a review of sites identified as candidates for safety improvements in the overall RPA region. These sites were identified as having High (≥ 0.25) KAB or KABCO (≥ 1.0) PCR values. [Note: KABCO is defined as K = fatal, A = Incapacitating injury, B = minor injury, C = possible injury, O = property damage only.] Based on the crash trends and existing features of these sites, potential safety countermeasures have been identified that can serve as a starting point for pursuing improvements.

The data sources utilized to conduct network screening and identify site characteristics included:

- **Potential for Crash Reduction (PCR) Tool:** The Iowa Department of Transportation's (Iowa DOT) PCR Tool is an interactive platform designed to evaluate and compare the safety performance of intersections across the state. By categorizing intersections based on characteristics such as traffic volume and speed limits, the tool helps identify locations where targeted safety interventions can effectively reduce crashes. Locations identified as having High and Medium PCR thresholds for KAB and KABCO crashes were selected as sites where possible safety countermeasures and projects could be identified.
- **The Iowa Crash Analysis Tool (ICAT):** ICAT, developed by the Iowa Department of Transportation, was utilized to assess safety at specific intersections for the years 2018-2022. Detailed crash reports and collision diagrams generated through ICAT provided critical insights into crash characteristics, contributing factors, and patterns at these sites. This data facilitated a comprehensive safety analysis, enabling the identification of key issues and informing the selection of appropriate safety countermeasures to address identified risks effectively.
- **Google Street View:** A feature of Google Maps that allows users to view 360-degree panoramic images of streets and other locations around the world, it was used to visually assess road characteristics at intersection sites, including speed limits, control types, signal phasing, lane configurations, roadway elements, marking and signage.
- **Roadway Asset Management System (RAMS) data:** RAMS is a Linear Reference System (LRS) enabled database used to store roadway data for all public roads in Iowa. This data includes traffic, roadway geometrics, pavement condition, structure and public rail crossing inventory data for every public roadway in the state.
- **Intersection Crash data:** A GIS file containing geographic and demographic information, traffic and infrastructure data, crash data and prediction model results.
- **Speed (non)compliance dashboard:** This dashboard is a tool designed to monitor and analyze vehicle speed compliance within a specific area or jurisdiction. It provides visual representations of data related to vehicle speeds, highlighting instances of compliance and non-compliance with established speed limits. Note that the data comes from a limited sample size of vehicles whose telemetry data is being reported, and the results

should be viewed accordingly. Still, this data source provides a useful point of reference as to what speed trends may be at a site.

Based on the network screening performed, a total of 40 intersections were identified as falling into the High KAB or KABCO PCR categories, and these are reviewed in the remainder of this section. These sites represent the locations with the greatest potential for safety improvements to reduce crashes in the respective cities.

Camanche

9th Avenue and Washington Boulevard

This site is a Four-legged, Undivided, Low Speed, Partial Stop Controlled intersection ([Google Map Link](#)). It has a medium PCR level for KAB crashes, indicating the need for immediate attention and potential countermeasures. The area surrounding the intersection is predominantly commercial, with well-defined curbs, curb ramps, and sidewalks. Overhead lighting is present at the intersection, improving nighttime visibility. The road pavement is in good condition, and pedestrian facilities, including marked crosswalks and pedestrian crossing signs, are available for enhanced safety.



Figure 1: Intersection of 9th Avenue and Washington Boulevard

Crash Summary

Crash reports indicate that a total of 4 crashes have occurred at this intersection over a five-year period (2018-2022), including two KAB crashes and two CO crashes. The predominant manner of collision is broadside (front-to-side), accounting for 100% of the KAB crashes at this site. This suggests a significant issue with right-of-way compliance at the intersection.

The primary contributing factor to KAB crashes is failure to yield right-of-way (FTYROW) from stop signs, which led to broadside crashes at the intersection. The contributing factors for CO

crashes are following too close and running stop sign. The KAB Annual PCR for the intersection is 0.08786, indicating a medium severity level, while the KABCO Annual PCR is 0.098791, which is considered low. Based on statewide rankings, this intersection is ranked 1,241st for KAB crashes and 8,426th for KABCO crashes out of 115,274 intersections statewide. While the overall crash frequency is low, the severity of incidents that do occur at this location is concerning.

Potential Safety Improvements

Based on the crash history, contributing factors, and performance data, the following safety improvements are recommended along with their associated cost levels:

- Provide red pennants on stop signs (Low)
- Install flashing beacons on the stop signs (Low)
- Install retroreflective post strips (Low)

21st Street and US 67/Washington Boulevard

This site is a Three-legged, Divided, Low Speed, Partial Stop Controlled intersection ([Google Map Link](#)). It has a medium PCR level for KAB crashes, indicating the need for immediate attention and potential countermeasures. The area surrounding the intersection consists of a mix of undeveloped, commercial, and residential land-use. A bike trail is located near the intersection, adding another dimension to potential conflict points. Overhead lighting is present but may not provide adequate lighting at night. The road pavement is in good condition, ensuring a stable driving surface.



Figure 2: Intersection of 21st Street and US 67/Washington Boulevard

Crash Summary

Crash data indicate that a total of 9 crashes have occurred at this intersection over a five-year period (2018-2022), including two KAB crashes and seven CO crashes. The predominant manner of KAB collision includes one sideswipe and one non-collision, highlighting a need to evaluate driver behavior and situational awareness at the intersection.

The primary contributing factors to the KAB crashes include failure to yield to an emergency vehicle and losing control, both of which indicate a potential need for driver awareness and increased enforcement. The most significant contributing factor to the CO crashes is failure to yield right-of-way from a stop sign. The KAB Annual PCR for the intersection is 0.062624, indicating a medium severity level, while the KABCO Annual PCR is 0.725893, which is also categorized as medium. Based on statewide rankings, this intersection is ranked 1,535th for KAB crashes and 1,662nd for KABCO crashes out of 115,274 intersections statewide.

Potential Safety Improvements

Based on the crash history, contributing factors, and performance data, the following safety improvements are recommended along with their associated cost levels:

- Install pavement markings on NB-SB approaches to assist with directional wayfinding (Low)
- Provide red pennants on stop signs (Low)
- Provide pavement markings with supplementary messages, such as STOP AHEAD on minor roads (Low)
- Install bicycle crossing signs as there is a bike trail close to the intersection (Low)

US 67 and Mississippi River Trail

This site is a Three-legged, Divided, High Speed, Partial Stop Control intersection ([Google Map Link](#)). It has a medium PCR level for KABCO crashes, indicating the need for immediate attention and potential countermeasures. The surrounding area is largely undeveloped, with sidewalks present only one side of the north-south direction. The intersection lacks well-defined curbs, but overhead lighting is present, however, significant number of crashes occurred at night. The road pavement is in good condition. There are no marked crosswalks to facilitate pedestrian movement.

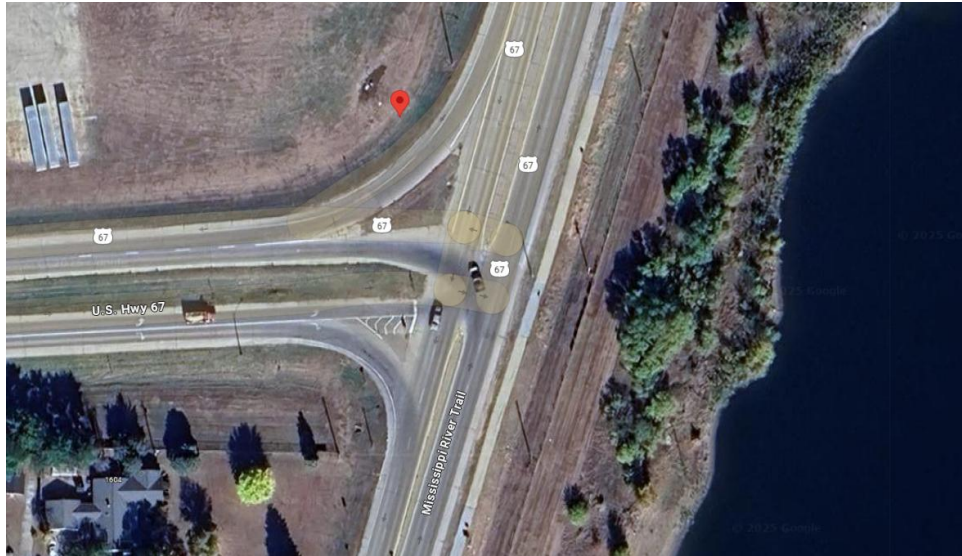


Figure 3: Intersection of US 67 and Mississippi River Trail

Crash Summary

Crash data indicate that a total of 12 crashes have occurred at this intersection over a five-year period (2018-2022). Notably, there have been no KAB crashes at this location; all recorded incidents fall under the CO category. The predominant manner of collision includes non-collision incidents, broadside crashes, and rear-end crashes, which account for the majority of reported crashes.

The primary contributing factors to crashes at this intersection include failure to yield the right-of-way (FTYROW) at stop signs and running stop signs. Other notable contributing factors include following too closely and running off the road, either to the left or straight. The KABCO Annual PCR for this intersection is 0.545969, classifying it as a medium-risk location. Statewide, the intersection is ranked 2,167th for KABCO crashes out of 115,274 intersections.

Potential Safety Improvements

Based on the crash history, contributing factors, and performance data, the following safety improvements are recommended along with their associated cost levels:

- Provide pavement markings with supplementary messages, such as STOP AHEAD on minor road (Low)
- Install flashing beacons on the stop signs (Low)
- Install LED stop and warning signs (Low)
- Provide additional overhead lighting (Moderate)
- Relocate the utility poles (Moderate)
- Consider conversion to an alternative intersection design, such as a roundabout (High)

Washington Boulevard and 4th Avenue

This site is a four-leg, undivided, low-speed, partial stop intersection ([Google Map Link](#)).

Washington Boulevard is the major roadway, while 4th Avenue is a lower-volume roadway with stop control on both approaches. The intersection does not have dedicated turn lanes, and lane markings appear in photographic sources as being faded in multiple areas. The presence of trees and store parking near the intersection obstructs sight distance at the stop-controlled approaches. Crosswalks exist on all approaches; however, only two are clearly painted.

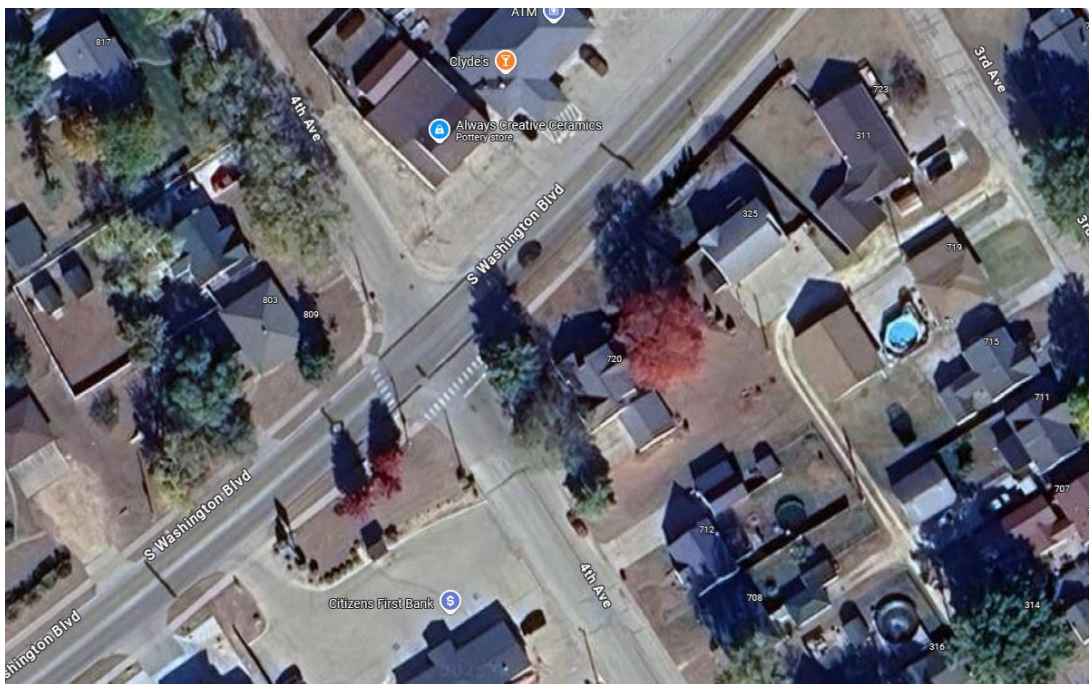


Figure 4: Intersection of Washington Boulevard and 4th Avenue (Image: Google Maps)

Crash Summary

This intersection has experienced multiple crashes, including one KAB crash and four CO crashes in the past few years. The primary manner of collision is broadside, with two crashes occurring between northbound and westbound vehicles, and one crash each involving southbound and eastbound vehicles, and southbound and westbound vehicles. The predominant contributing factor is failure to yield right-of-way (FTYROW) at stop signs. Additionally, a rear-end collision was reported on the eastbound approach, attributed to driver distraction (interior distraction). The KABCO PCR value at this intersection is 0.307382, indicating a moderate severity level. Speed data shows that 14.3 percent of vehicles exceed the speed limit by at least 10 mph on Washington Boulevard, raising concerns about speeding behavior at the location.

Potential Safety Improvements

Based on the crash history at the site and existing roadway conditions, potential safety improvements that have been identified include:

- Improve sight distance by removing visual obstructions (Low)

- Install "STOP AHEAD" warning signs (Low)
- Install dynamic speed feedback signs on Washington Boulevard approaches (Low)
- Repaint lane markings to clearly define through and turn lanes (Low)

Washington Boulevard and 7th Avenue

This site is classified as a four-leg, undivided, low-speed, partial stop intersection ([Google Map Link](#)). Washington Boulevard serves as the primary roadway, while 7th Avenue is a stop-controlled minor street. The intersection pavement markings and signage are in poor condition, particularly on the northbound (NB) and southbound (SB) approaches. Additionally, a gas station entrance is located very close to the intersection, which may contribute to increased traffic conflicts and maneuvering challenges.



Figure 5: Intersection of Washington Boulevard and 7th Avenue (Image: Google Maps)

Crash Summary

This intersection has experienced multiple crash types, including one KAB crash and four CO crashes in recent years. The most common crash type is rear-end collisions, with one occurring on the northbound approach and another involving westbound and southbound vehicles, primarily due to drivers following too closely. A head-on collision between southbound and northbound vehicles was reported, attributed to failure to yield right-of-way (FTYROW) from a parked position. Additionally, a broadside crash occurred at the northbound and westbound approaches due to FTYROW from a stop sign, and a rear-to-rear collision involving southbound and eastbound vehicles was caused by improper backing from the eastbound approach. The

KABCO PCR value for this intersection is 0.261526, indicating a moderate severity level. Speed data shows that 14.3% of vehicles on Washington Boulevard exceed the speed limit by at least 10 mph, raising concerns about speeding behavior in the area.

Potential Safety Improvements

Based on the crash history and existing roadway conditions, potential safety improvements that have been identified include:

- Repaint stop bars and add "STOP AHEAD" warning signs (Low)
- Install dynamic speed feedback signs on Washington Boulevard approaches (Low)

13th Place and 7th Avenue

This site is classified as a three-leg, undivided, low-speed, partial stop intersection ([Google Map Link](#)). 7th Avenue serves as the primary roadway, while 13th Place is a stop-controlled minor street. The intersection pavement markings and signage appear to be in poor condition in photographic data. On-street parking and multiple driveways are present near the intersection, potentially contributing to traffic conflicts.

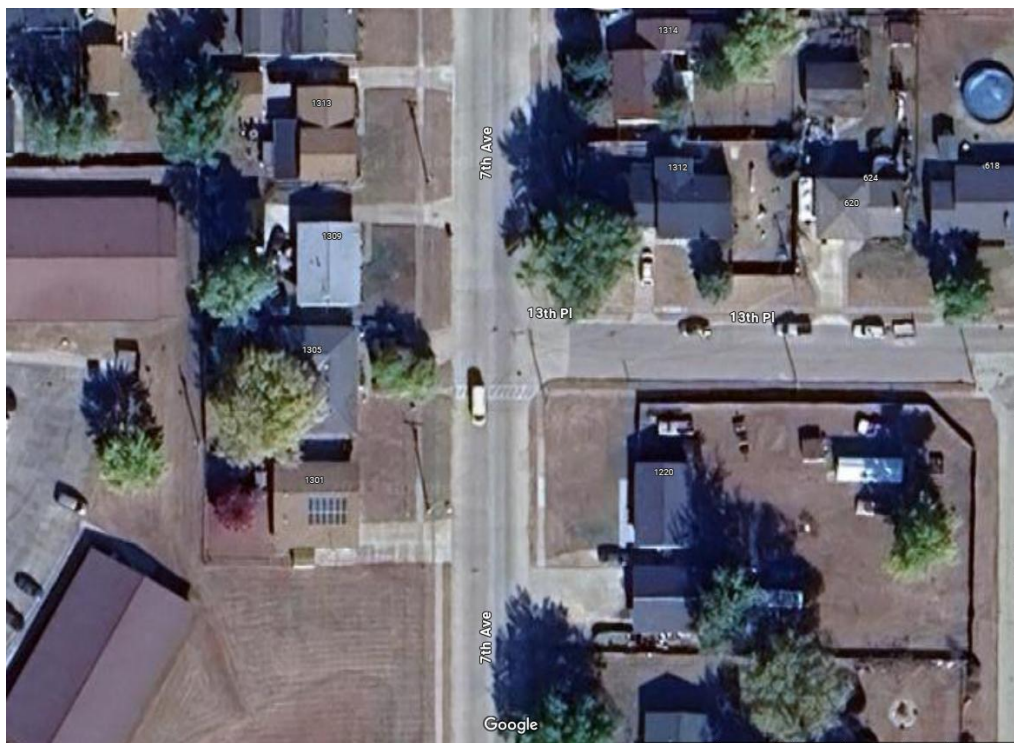


Figure 6: Intersection of 7th Avenue and 13th Place (Image: Google Maps)

Crash Summary

This intersection has experienced several crashes, including one KAB crash and two CO crashes in recent years. The primary manner of collision is sideswipe, with incidents occurring on the westbound (WB) and northbound (NB) approaches, primarily due to driver distraction. Additionally, there have been collisions involving parked vehicles on the northbound approach.

The KABCO PCR value for this intersection is 0.216598, indicating a moderate severity level. Speed data shows that only 1.8 percent of vehicles on the westbound approach exceed the speed limit by at least 10 mph, indicating that speeding is not a significant issue at this location.

Potential Safety Improvements

Based on the crash history and existing roadway conditions, potential safety improvements that have been identified include:

- Repaint lane markings to clearly define travel and parking lanes (Low)
- Implement "No Parking" restrictions near the intersection on the northbound approach to improve sight distance (Low)

Cascade

1st Avenue East, Fox Street Southeast and Industrial Park Road

This site is classified as a four-leg, undivided, low-speed, partial stop intersection ([Google Map Link](#)). 1st Avenue East serves as the primary roadway, while Fox Street Southeast and Industrial Park Road is stop-controlled. The intersection lacks dedicated turn lanes, and pavement markings and signage are in poor condition based on observations from photographic data.

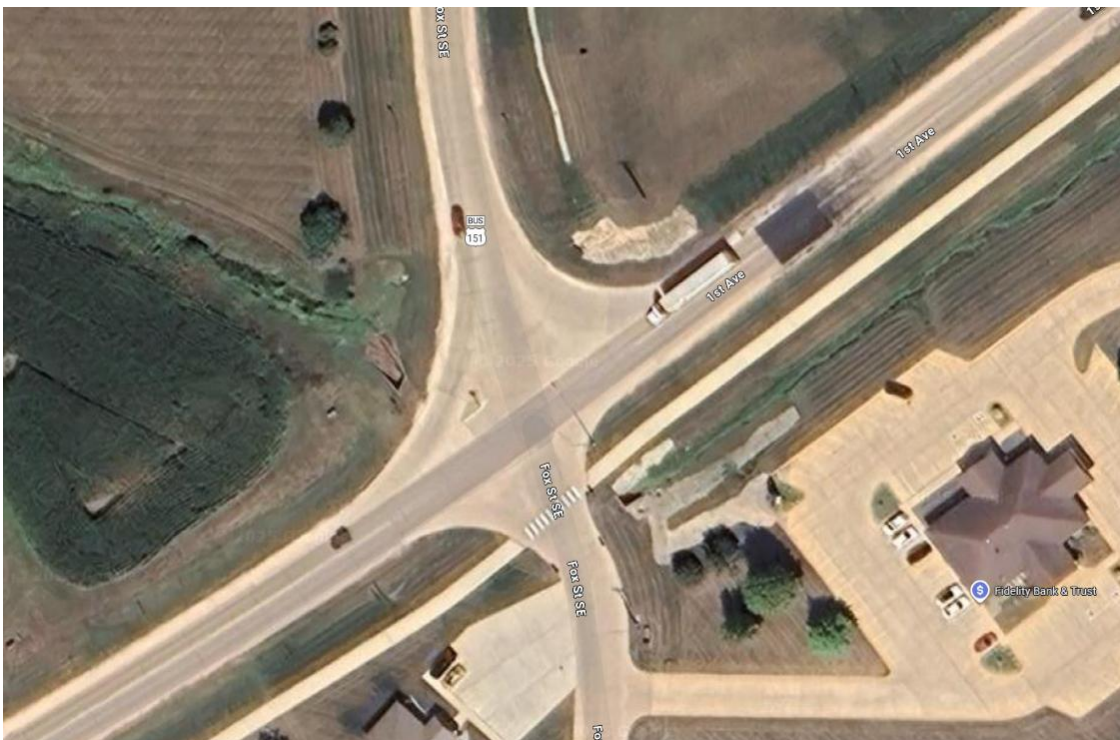


Figure 7: Intersection of 1st Avenue East, Fox Street Southeast, and Industrial Park Road
(Image: Google Maps)

Crash Summary

This intersection has experienced multiple crashes, including four CO crashes in recent years. The primary manner of collision includes broadside and rear-end crashes. Broadside crashes occurred at three different locations: one between southbound (SB) and westbound (WB) vehicles, another between southbound (SB) and eastbound (EB) vehicles, and a third between northbound (NB) and westbound (WB) vehicles, all attributed to failure to yield right-of-way (FTYROW) from a stop sign. A rear-end crash was also reported on the southbound (SB) approach, caused by following too closely. Additionally, one vehicle ran off the road to the right, though no specific contributing factors were recorded. The KABCO PCR value for this intersection is 0.232127, indicating a moderate severity level. Speed data shows that 10.4% of vehicles on the northbound (NB) approach exceed the speed limit by at least 5 mph, suggesting a potential speeding concern in that direction.

Potential Safety Improvements

Based on the crash history and existing roadway conditions, potential safety improvements that have been identified include:

- Conduct friction testing on the southbound approach and apply materials to increase friction if needed (Low-Moderate)
- Repaint lane markings (Low)
- Apply metal pennants (south approach) or flashing beacons (both approaches) to increase conspicuity (Low)

These countermeasures aim to enhance driver awareness, improve roadway visibility, and reduce the likelihood of crashes at this intersection.

Delhi

Franklin Street and IA 38/3rd Street

This site is classified as a four-leg, undivided, low-speed, partial stop controlled intersection ([Google Map Link](#)). IA 38/3rd Street serves as the primary roadway, while Franklin Street is the stop-controlled minor street. On-street parking is present at the intersection, which may contribute to traffic conflicts. Pedestrian infrastructure at the intersection includes sidewalks, curb ramps and marked crosswalks on both Franklin Street approaches. Decorative street lamps are present in three of the four corners of the intersection to provide lighting.



Figure 8: Intersection of Franklin Street and IA 38/3rd Street (Image: Google Maps)

Crash Summary

This intersection has experienced four crashes, all classified as CO crashes in recent years. The primary manner of collision includes broadside, sideswipe, rear-to-rear, and rear-to-side crashes. A broadside crash occurred between eastbound (EB) and northbound (NB) vehicles, attributed to failure to yield right-of-way (FTYROW) from the stop sign on the eastbound approach, occurring under snowy conditions. A sideswipe crash was reported between southbound (SB) and northbound (NB) vehicles, caused by driver distraction, occurring under icy conditions. Additionally, a rear-to-rear collision involved a southbound (SB) vehicle and a backing vehicle, with the contributing factor classified as "other", while a rear-to-side crash occurred between eastbound (EB) and southbound (SB) vehicles, attributed to failure to keep in the proper lane. The KABCO PCR value for this intersection is 0.290834, indicating a moderate severity level. Speed data shows that 65.3% of vehicles on the northbound (NB) and southbound (SB) approaches exceed the speed limit by at least 10 mph+, suggesting a significant speeding issue on these approaches.

Potential Safety Improvements

Based on the crash history and existing roadway conditions, potential safety improvements that have been identified include:

- Employ temporary or permanent speed feedback signs on the northbound (NB) and southbound (SB) approaches to increase speed awareness and compliance (Low)
- Review speed limit sign placement and determine if it needs to be revised/adjusted (Low)
- Restrict parking on west leg of Franklin Street to improve sight distances (Low)

These countermeasures aim to enhance driver awareness, improve roadway conditions, and reduce the risk of crashes at this intersection.

D5X and X31

This site, which was identified when meeting with the city as one of concern, is a three leg, partial stop controlled intersection ([Google Map Link](#)). X31 serves as the primary roadway, while D5X is the stop-controlled minor street. This is a tee intersection, and approach rumble strips are present on D5X. Overhead lighting is present, and it appears from photographic data that an oversized stop sign is in place.



Figure 9: Intersection of D5X and X31 (Image: Google Maps)

Crash Summary

This intersection has experienced a few crashes in recent years. One was KAB, while three were CO crashes. The primary manner of collision included single vehicle, angle and broadside. Three crashes were some form of FTYROW. It was indicated that the concern at this intersection is with drivers sliding through the intersection during wet/snowy weather. None of the four crashes was specifically cited as occurring in such conditions, although one was characterized as “other”.

Potential Safety Improvements

Based on the crash history and existing roadway conditions, potential safety improvements that have been identified include:

- Apply high-friction surface treatment on the stop-controlled leg (Medium)

- Add a stop bar on D5X to help drivers detect intersection during approach (Low)
- Revise winter maintenance strategies for this intersection if needed [Or maintain past changes if implemented, as they appear to have addressed weather-related crashes] (Low)

These countermeasures aim to enhance driver awareness, improve roadway conditions, and reduce the risk of crashes at this intersection.

DeWitt

11th Street and 8th Avenue

This site is a Four-legged, Undivided, Low Speed, Partial Stop Controlled intersection ([Google Map Link](#)). It has a medium PCR level for KAB crashes, indicating the need for immediate attention and potential countermeasures. The intersection has curbs, curb ramps, and sidewalks, but lacks marked crosswalks for pedestrian safety. The road delineation and pavement are in good condition, ensuring clear visibility of the roadway.

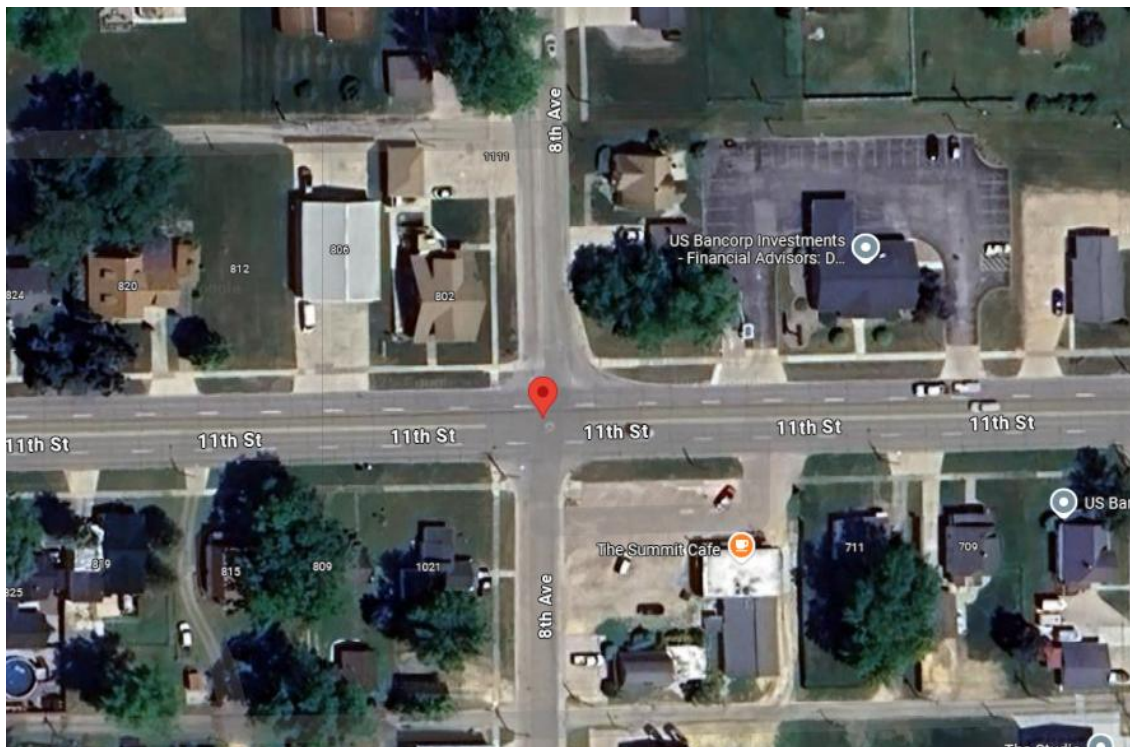


Figure 10: Intersection of 11th Street and 8th Avenue

Crash Summary

Crash data indicate that a total of 9 crashes have occurred at this intersection over a five-year period (2018-2022), including three KAB crashes and six CO crashes. The predominant manner of collision is broadside (front-to-side), accounting for two of the three KAB crashes. The remaining KAB crash was a sideswipe collision, suggesting potential issues with lane-changing maneuvers. The predominant manner of collision for CO crashes are angle collision (oncoming left turn).

The primary contributing factors to KABCO crashes are improper lane changing, failure to yield the right-of-way from a stop sign, and failure to yield the right-of-way while making a left turn. The KAB Annual PCR for the intersection is 0.168256, indicating a medium severity level, while the KABCO Annual PCR is 0.639871, which is considered high. Based on statewide rankings, this intersection is ranked 594th for KAB crashes and 1,889th for KABCO crashes out of 115,274 intersections statewide. While the overall crash frequency is moderate, the nature of these crashes highlights safety concerns are present.

Potential Safety Improvements

Based on the crash history, contributing factors, and performance data, the following safety improvements are recommended along with their associated cost levels:

- Provide a stop bar on minor road approaches (Low)
- Provide red pennant flags on stop signs (Low)
- Investigate conversion of the intersection to all-way stop-control (Low)
- Install LED border stop signs (Low)
- Provide channelized left-turn lanes on the intersection approaches (Moderate)

11th Street and 3rd Avenue

This site has a medium PCR level for KABCO crashes, indicating the need for immediate attention and potential countermeasures. It is a Four-legged, Undivided, Low Speed, Partial Stop Controlled intersection ([Google Map Link](#)). The area is a mixture of a commercial and residential area. The intersection has well-defined curbs, curb ramps, and sidewalks. Overhead lighting is present at the intersection, enhancing nighttime visibility. The road pavement is in good condition. There are no marked crosswalks present.



Figure 11: Intersection of 11th street and 3rd Avenue**Crash Summary**

Crash reports indicate that a total of 10 crashes have occurred at this intersection over a five-year period (2018-2022), including one KAB crash and nine CO crashes. The predominant manner of collision includes broadside (50%), angle-oncoming left turn (20%), sideswipe same direction (20%), and rear-end (10%). The primary contributing factors to the crashes at this intersection are failure to yield right-of-way (FTYROW) from stop signs and while making left turns, improper or erratic lane changes, driving too fast for conditions, and making improper turns. The KAB Annual PCR for the intersection is 0.031871, indicating a low severity level, while the KABCO Annual PCR is 0.908251, which is considered medium. Based on statewide rankings, this intersection is ranked 2,641st for KAB crashes and 1,309th for KABCO crashes out of 115,274 intersections statewide.

Potential Safety Improvements

Based on the crash history, contributing factors, and performance data, the following safety improvements are recommended along with their associated cost levels:

- Provide left-turn lanes at intersection (Moderate)
- Provide red pennant flags on stop signs (Low)
- Install flashing beacons on the stop signs (Low)
- Investigate conversion of intersection to all-way stop control (Low)
- Provide marked crosswalks for pedestrians (Low)

11th Street and 5th Avenue

This site is a Four-legged, Undivided, Low Speed, Partial Stop Controlled intersection in a predominantly residential area ([Google Maps Link](#)). It has a medium PCR level for KABCO crashes, indicating the need for immediate attention and potential countermeasures. The intersection has well-defined curbs, curb ramps, and sidewalks. Overhead lighting is present, improving nighttime visibility. The road pavement is in good condition. There is a marked crosswalk on one approach of the intersection, while the other three approaches lack crosswalks.

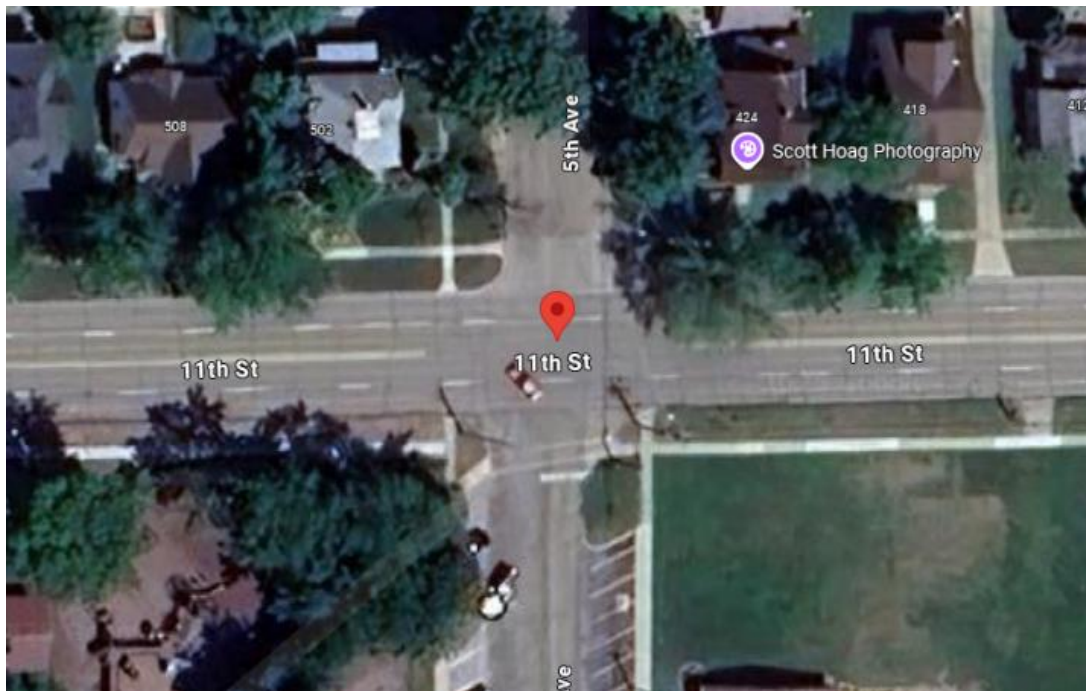


Figure 12: Intersection of 11th Street and 5th Avenue

Crash Summary

Crash data indicate that a total of 8 crashes have occurred at this intersection over a five-year period (2018-2022). The predominant manner of collision includes broadside (50%), sideswipe same direction (25%), angle-oncoming left turn (12.5%), and other. The primary contributing factors to the crashes at this intersection are failure to yield right-of-way (FTYROW) from stop signs and while making left turns, improper or erratic lane changes, driver distraction, and making improper turns. The KAB Annual PCR for the intersection is -0.012938, indicating no severe crashes, while the KABCO Annual PCR is 0.65976, which is considered medium. Based on statewide rankings, this intersection is ranked 109,913th for KAB crashes and 1,820th for KABCO crashes out of 115,274 intersections statewide.

Potential Safety Improvements

Based on the crash history, contributing factors, and performance data, the following safety improvements are recommended along with their associated cost levels:

- Provide red pennants or flashing beacons on stop signs (Low)
- Provide a stop bar on SB approach (Low)
- Investigate conversion of intersection to all-way stop control and implement if needed (Low)
- Provide left-turn lanes at intersection (Medium)

11th Street and Maynard Way

This site is a Four-legged, Undivided, Low Speed, signalized intersection ([Google Map Link](#)). It has a medium PCR level for KABCO crashes, indicating the need for immediate attention and potential countermeasures. The area is predominantly a commercial area. The intersection has well-defined curbs, curb ramps, and sidewalks. Overhead lighting is present at the intersection. The pavement is in good condition. Additionally, there are marked crosswalks present on three approaches of the intersection.



Figure 13: Intersection of 11th Street and Maynard Way

Crash Summary

Crash data indicate that a total of 10 crashes have occurred at this intersection over a five-year period (2018-2022), with no KAB crashes. The predominant manner of collision includes broadside (40%), rear-end (40%), head-on (10%), and sideswipe (10%). The primary contributing factors to crashes at this intersection are running a traffic signal, driver distraction (both inattentive and adjusted), failure to keep in the proper lane, following too closely, and failure to yield right-of-way (FTYROW) from driveways. The KAB Annual PCR for the intersection is -0.036856, indicating no severity level, while the KABCO Annual PCR is 0.499686, which is considered medium. Based on statewide rankings, this intersection is ranked 112,780th for KAB crashes and 2,380th for KABCO crashes out of 115,274 intersections statewide.

Potential Safety Improvements

Based on the crash history, contributing factors, and performance data, the following safety improvements are recommended along with their associated cost levels:

- Review signal timings and optimize signal timing all-red clearance interval (Low)
- Add crosswalk markings to approach where they are missing (Low)

11th Street and 11th Avenue

This site is classified as a four-leg, undivided, low-speed, traffic-controlled intersection ([Google Map Link](#)). The intersection is signalized, but pavement markings and signage appear poor in photographic data, particularly on the northbound (NB) and southbound (SB) approaches. Driveways are present near the intersection on all approaches, which may contribute to additional traffic conflicts.



Figure 14: Intersection of 11th Street and 11th Avenue (Image: Google Maps)

Crash Summary

This intersection has experienced multiple crashes, including one KAB crash and six CO crashes in recent years. The primary manner of collision includes angle, broadside, head-on, and non-collision crashes. Angle crashes occurred on the eastbound (EB) and westbound (WB) approaches, attributed to failure to yield right-of-way (FTYROW) while making a left turn, with one westbound driver operating the vehicle in a reckless or negligent manner. Broadside crashes were reported at two locations: one between northbound (NB) and eastbound (EB) vehicles, and another between westbound (WB) and northbound (NB) vehicles, both due to eastbound drivers running the traffic signal. A head-on collision occurred between westbound (WB) and eastbound

(EB) vehicles, caused by failure to yield while making a left turn. Additionally, a non-collision incident involved an eastbound (EB) vehicle running off the road to the right on a wet surface. The KABCO PCR value for this intersection is 0.218069, indicating a moderate severity level. Speed data shows that 8.3% of vehicles on the northbound (NB) and southbound (SB) approaches, and 3.9% on the eastbound (EB) and westbound (WB) approaches, exceed the speed limit by at least 10 mph, suggesting a mild speeding concern on all approaches.

Potential Safety Improvements

Based on the crash history and existing roadway conditions, potential safety improvements that have been identified include:

- Evaluate signal phasing and implement protected left-turn phasing (Low)
- Enhance traffic signal visibility by adding reflective borders (Low)
- Convert signals to overhead mast arms on the northbound (NB) and southbound (SB) approaches (Medium/High)
- Upgrade and repaint lane markings (Low)

These countermeasures aim to improve signal visibility, enhance driver compliance, and reduce the risk of collisions at this intersection.

6th Avenue and 8th Street

This site is a four-leg, undivided, low-speed, partial stop-controlled intersection ([Google Map Link](#)). 6th Avenue serves as the primary roadway, while 8th Street is stop-controlled on both approaches. The intersection lacks dedicated turn lanes, and pavement markings for stop bars and lane configurations are in poor condition based on photographic data. Additionally, on-street parking is present on all approaches, which may contribute to sight distance issues and traffic conflicts.

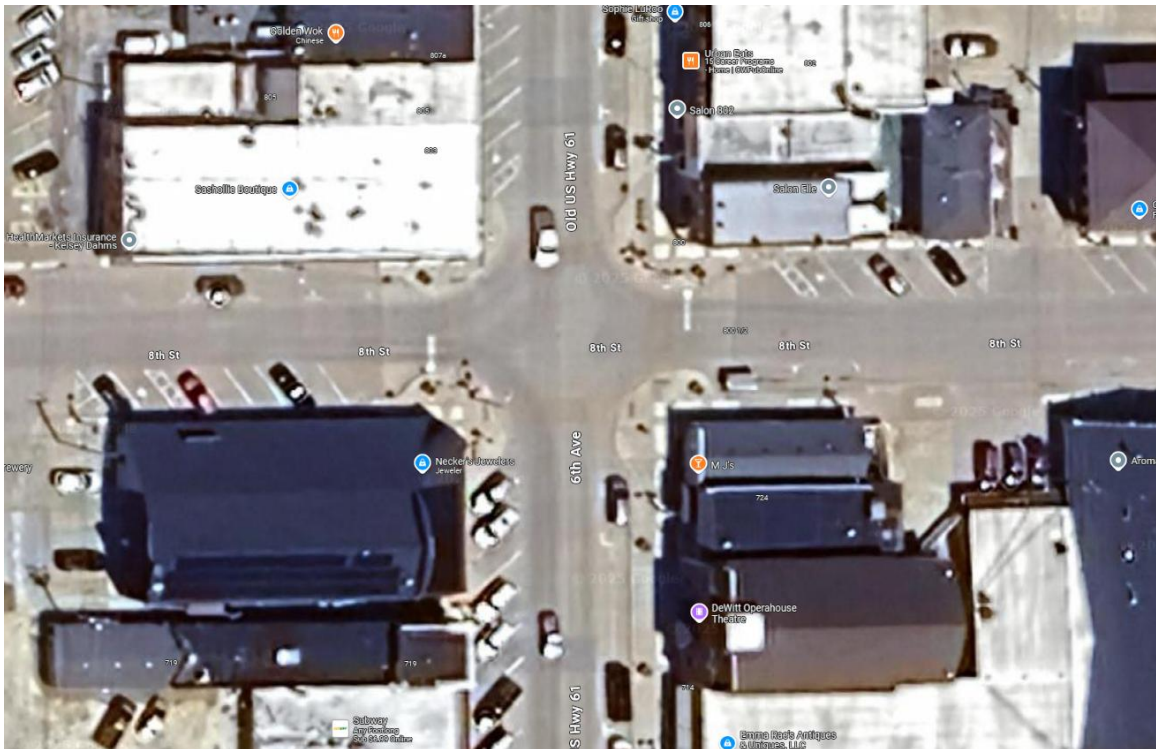


Figure 15: Intersection of 6th Avenue and 8th Street (Image: Google Maps)

Crash Summary

This intersection has experienced multiple crashes, including one KAB crash and four CO crashes in recent years. The primary manners of collision include rear-to-side, sideswipe, rear-end, and backing incidents. Rear-to-side collisions involved northbound (NB) and southbound (SB) vehicles, as well as northbound (NB) and eastbound (EB) vehicles, with contributing factors such as failure to yield right-of-way (FTYROW) and improper backing, including incidents with parked vehicles, one of which occurred under wet roadway conditions. A sideswipe collision occurred on the westbound (WB) approach during a vehicle's attempt to enter a parked position. A rear-end collision on the northbound (NB) approach was attributed to driver distraction due to exterior factors. Additionally, a backing incident between westbound (WB) and eastbound (EB) vehicles involved a legally parked vehicle under icy or frosty conditions. The KABCO PCR value for this intersection is 0.251327, indicating a moderate severity level.

Potential Safety Improvements

Based on the crash history and existing roadway conditions, potential safety improvements that have been identified include:

- Investigate the parking layout near the intersection by conducting a parking study (low cost)
- Implement parking restrictions near the intersection if the parking study recommends this is an option (Low)

- Install parking guidance signage (Low)
- Repaint all pavement markings to improve roadway markings and lane clarity (Low)
- Restrict parking on one approach, such as the northbound (NB) approach, due to multiple conflicts occurring there (Low)

These countermeasures aim to enhance driver awareness, improve traffic flow, and reduce the risk of collisions at this intersection.

Dyersville

1st Avenue East and 2nd Street Northeast/Southeast

This site is a Four-legged, Undivided, Low Speed, Traffic Signal Controlled intersection ([Google Map Link](#)). It has a medium PCR level for KAB crashes, indicating the need for immediate attention and potential countermeasures. The area surrounding the intersection is predominantly commercial. The intersection has well-defined curbs, curb ramps, and sidewalks. Overhead lighting is present, and the road pavement appears to be in good condition. Additionally, there are marked crosswalks providing facilities for pedestrian safety, but no pedestrian signal is present at this intersection.

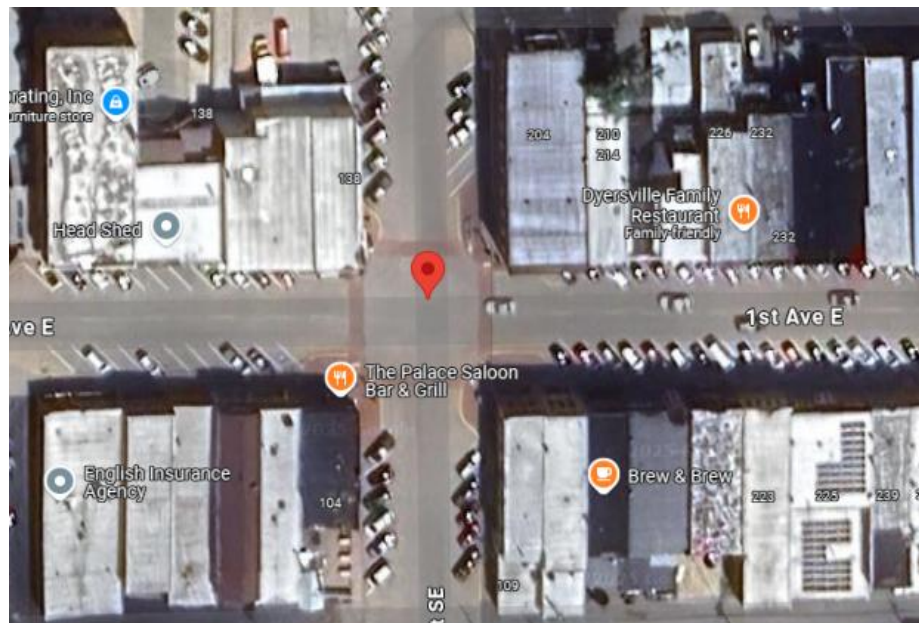


Figure 16: Intersection of 1st Avenue East and 2nd Street Northeast/Southeast

Crash Summary

Crash data indicate that a total of six crashes have occurred at this intersection over a five-year period (2018-2022), including two KAB crashes and four CO crashes. The predominant manner of collision includes non-collision crashes (single vehicle), rear-end, broadside, and rear-to-side crashes. Both KAB crashes were non-collision crashes, suggesting single-vehicle incidents.

The primary contributing factors to KAB crashes at this intersection include failure to yield right-of-way to a pedestrian, while the cause of the second KAB crash is unknown. The predominant contributing factor for CO crashes is improper backing. The KAB Annual PCR for this intersection is 0.079564, while the KABCO Annual PCR is 0.428994, indicating a medium crash frequency. Based on statewide rankings, this intersection is ranked 1347th for KAB crashes and 2709th for KABCO crashes out of 115,274 intersections statewide, highlighting its status as a moderate-risk location.

Potential Safety Improvements

Based on the crash history, contributing factors, and performance data, the following safety improvements are recommended along with their associated cost levels:

- Install pedestrian crossing signs (Low)
- Install overhead traffic signal structure (High)
- Optimize signal timing clearance (Low)
- Install retroreflective backplate border around signals to increase conspicuity (Low)
- Add high visibility crosswalks (Low)
- Restrict/remove parking in close proximity to the intersection (Low/Medium)
- Consider use of larger signal heads to increase conspicuity (Medium)
- Install pedestrian signals with a Leading Pedestrian Interval (LPI) (Medium)

23rd Avenue Southeast and IA 136/9th Street Southeast

This site is a Four-legged, Undivided, Low Speed, Partial Stop Controlled intersection ([Google Map Link](#)). It has a medium PCR level for KAB crashes, indicating the need for potential countermeasures. The surrounding area is mostly undeveloped, with no curbs or sidewalks. There is no overhead lighting at the intersection, which may impact nighttime visibility. The road pavement is in good condition. Additionally, there are no marked crosswalks, and it is unclear if any pedestrian traffic is present in the area.



Figure 17: Intersection of 23rd Avenue Southeast and IA 136/9th Street Southeast

Crash Summary

Crash reports indicate that a total of 2 crashes have occurred at this intersection over a five-year period (2018-2022), all of which resulted in KAB-level severity. The predominant manner of collision is broadside (front-to-side), accounting for 100% of the crashes at this site. This suggests a significant issue with right-of-way compliance at the intersection.

One of the contributing factors to the KAB crashes is failure to yield right-of-way (FTYROW) at stop signs, which led to broadside crashes at the intersection. Another contributing factor is operating a vehicle in a reckless manner. The KAB Annual PCR for the intersection is 0.057766, indicating a medium severity level, while the KABCO Annual PCR is 0.026671, which is considered low. Based on statewide rankings, this intersection is ranked 1,579th for KAB crashes and 19,191st for KABCO crashes out of 115,274 intersections statewide, highlighting its significance as a medium-risk location.

Potential Safety Improvements

Based on the crash history, contributing factors, and performance data, the following safety improvements are recommended along with their associated cost levels:

- Provide red pennant flags on stop signs (Low)
- Provide pavement markings with supplementary messages, such as STOP AHEAD on minor road (Low)
- Install flashing beacons at stop-controlled intersection (Low)
- Consider oversized Stop Ahead warning signs and add metal pennants to increase conspicuity (Low)

6th Street Southeast and 8th Avenue Southeast

This site is a four-leg, undivided, low-speed, partial stop intersection ([Google Map Link](#)). 8th Avenue Southeast serves as the primary roadway, while 6th Street Southeast is a stop-controlled minor roadway. The current markings and signage appear to be in poor condition based on photographic data.

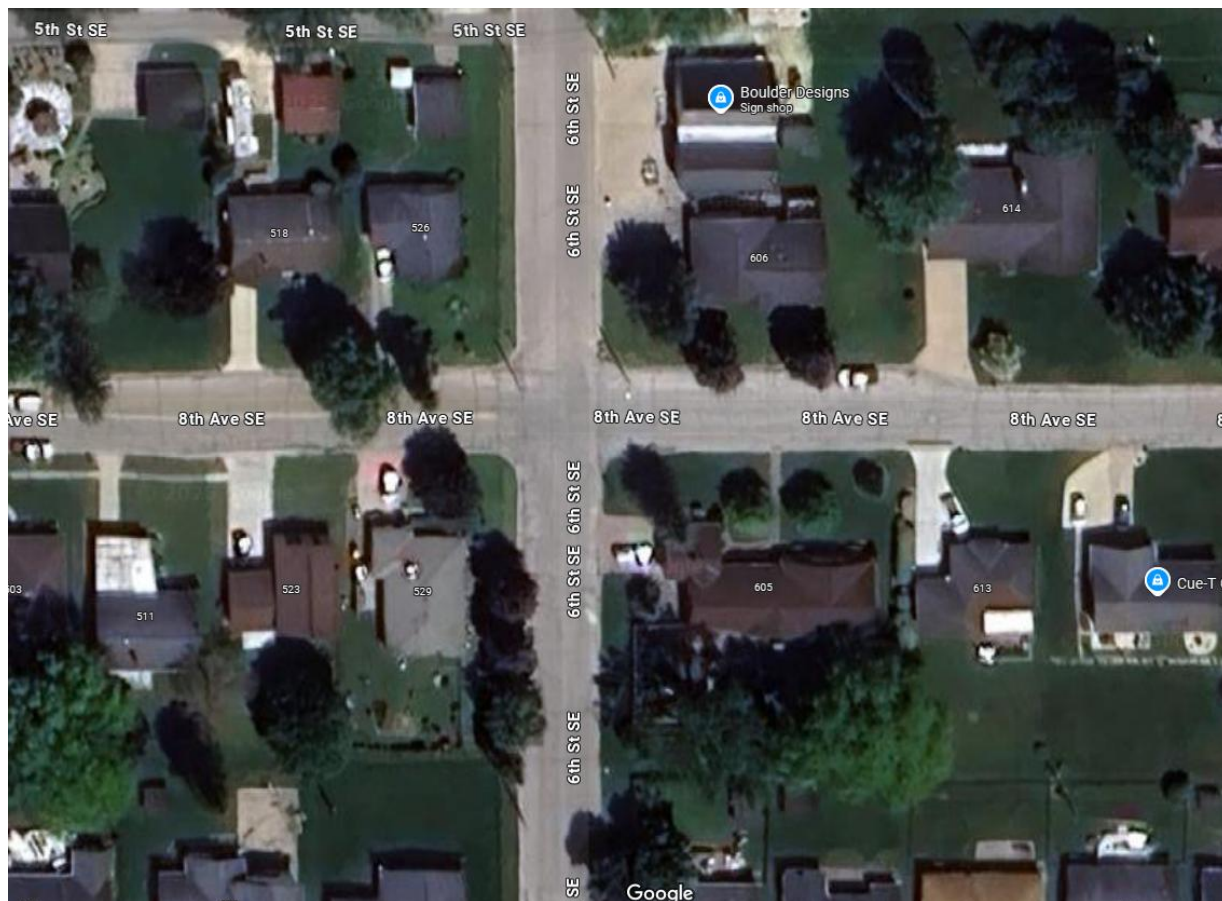


Figure 18: Intersection of 6th Street Southeast and 8th Avenue Southeast (Image: Google Maps)

Crash Summary

This intersection has experienced several crashes, including one KAB crash and four CO crashes. The primary manner of collision includes broadside and sideswipe incidents. Two broadside collisions occurred between the southbound (SB) and westbound (WB) vehicles and between the southbound (SB) and eastbound (EB) vehicles, both due to failure to yield right-of-way (FTYROW) from a stop sign and driver distraction. A sideswipe crash occurred on the eastbound (EB) and westbound (WB) approaches, attributed to reckless driving, loss of control, and operating the vehicle in a careless or negligent manner. The KABCO PCR value for this intersection is 0.401754, indicating a moderate severity level. Speed data reveals that 2.3% of vehicles on the eastbound and westbound approaches exceed the speed limit by at least 10 mph, which indicates a minor potential safety concern may be present.

Potential Safety Improvements

Based on the crash history and existing roadway conditions, potential safety improvements have been identified:

- Repaint lane markings and stop bars (Low)
- Upgrade stop signs by installing larger, retroreflective signs to improve visibility (Low)
- Implement speed management and traffic calming measures (Medium)
- Convert the intersection to an all-way stop (Low)

These measures aim to improve visibility, reduce speeding, and increase driver awareness to help reduce collisions and improve overall safety at this intersection.

IA 136/9th Street Southeast and US 52/9th Street Southeast

This site is a four-leg, undivided, low-speed, partial stop intersection between IA 136/9th Street Southeast and the entrance and exit ramps of US 20 eastbound ([Google Map Link](#)). IA 136 serves as the primary roadway (north-south approaches), while the exist portion of the ramps (west approach) is stop-controlled. The fourth (east) approach of the intersection is a driveway serving a visitor center and factory for a toy manufacturer. This approach is also stop-controlled. No pedestrian facilities are present at the intersection

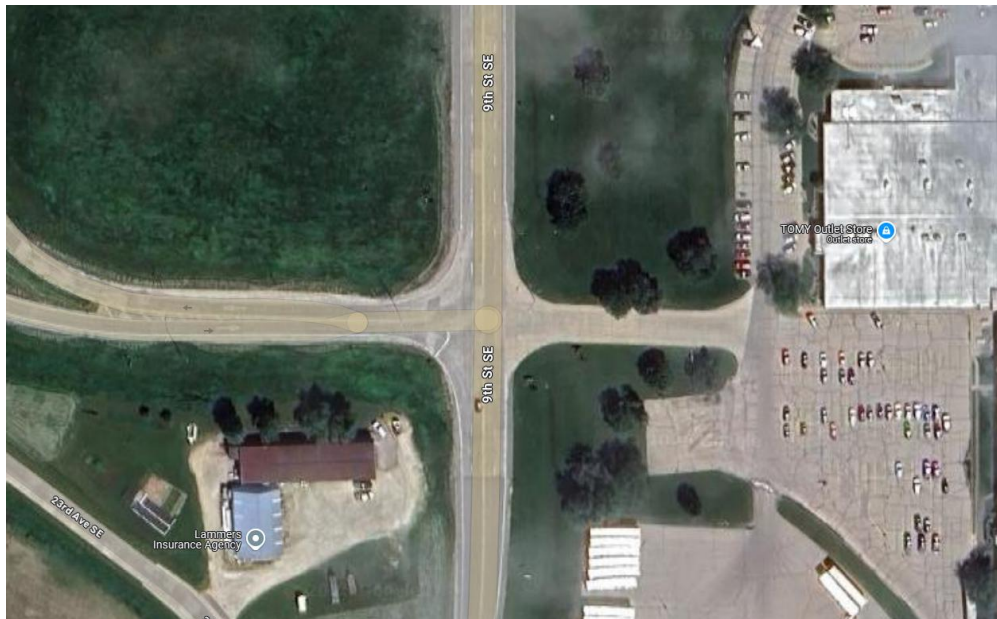


Figure 19: Intersection of IA 136/9th Street Southeast and US 20 eastbound ramps (Image: Google Maps)

Crash Summary

This intersection has experienced several crashes, including one KAB crash and four CO crashes. The primary manner of collision includes broadside and angle collisions. A broadside crash occurred between the eastbound (EB) and southbound (SB) vehicles, caused by failure to

yield right-of-way (FTYROW) when making a left turn from the EB approach, which is stop-controlled. A similar FTYROW-related crash occurred between EB and SB vehicles, as well as between EB and westbound (WB) vehicles, both originating from the stop-controlled EB approach. A non-collision incident was reported on the EB approach, where the driver was traveling too fast for conditions in icy weather. The KABCO PCR value for this intersection is 0.302275, indicating a relatively low severity level. Speed data shows that 34.5% of vehicles on the EB approach exceed the speed limit by at least 10 mph, indicating a significant speeding concern. This needs to be viewed with caution however, given that this is an exit ramp from a high-speed roadway, and drivers in such situations typically perform delayed braking until they reach the end of such ramp facilities.

Potential Safety Improvements

Based on the crash history and existing roadway conditions, several safety improvements have been identified:

- Use transverse rumble strips on the EB approach (Low)
- Use signage to alert EB drivers that cross traffic does not stop (Low)
- Refresh pavement markings, clearly defining stop bars and edgelines (Low)

These measures aim to improve driver awareness, reduce speeding, and enhance overall safety at this intersection.

5th Street Northwest and Beltline Road

This site is a four-leg, undivided, low-speed, partial stop-controlled intersection ([Google Maps Link](#)). Beltline Road serves as the primary roadway, while 5th Street Northwest is a stop-controlled minor street. There are parking lot entrances near the intersection, which may contribute to potential traffic conflicts. No pedestrian facilities are present at the intersection.



Figure 20: Intersection of 5th Street Northwest and Beltline Road (Image: Google Maps)

Crash Summary

This intersection has experienced four crashes, all of which were non-injury (CO). The primary manner of collision included broadside and rear-end crashes. A broadside collision occurred between the northbound (NB) and westbound (WB) vehicles, and another between the southbound (SB) and eastbound (EB) vehicles, both due to failure to yield right-of-way (FTYROW) from the stop-controlled approach on 5th Street Northwest. A rear-end crash was also reported on the southbound (SB) approach, caused by driver distraction, which was an interior driver distraction. The KABCO PCR value for this intersection is 0.278161, indicating a relatively low severity level. Speed data reveals that 1.5% of vehicles on the eastbound and westbound approaches exceeded the speed limit by at least 10 mph, indicating that speeding is not a significant issue overall.

Potential Safety Improvements

Based on the crash history and existing roadway conditions, several safety improvements have been identified:

- Install LED-bordered signs (Low)
- Add intersection ahead warning signs on Beltline Road (Low)
- Install transverse rumble strips on stop-controlled approaches (Low)

These measures aim to enhance driver awareness, reduce distractions, and improve overall safety at this intersection.

9th Street Southeast and 10th Avenue Southeast

This site is a three-leg, undivided, low-speed, partial stop intersection ([Google Maps Link](#)). 9th Street Southeast serves as the primary roadway, while 10th Avenue Southeast is a stop-controlled minor roadway. The intersection faces concerns related to on-street parking, which may hinder visibility and contribute to traffic conflicts. Additionally, the stop sign is located a significant distance from the intersection, which may be causing drivers to make improper decisions.

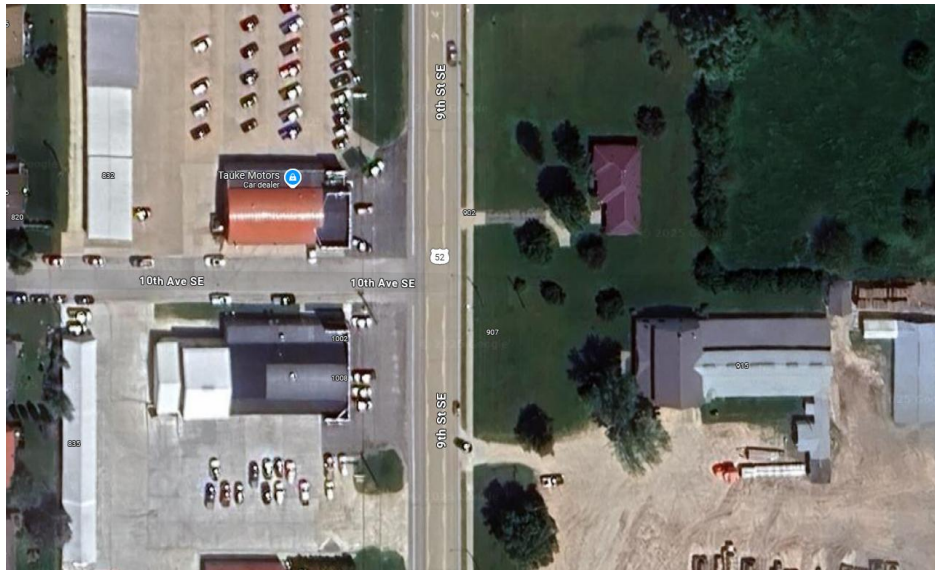


Figure 21: Intersection of 10th Avenue Southeast and 9th Street Southeast (Image: Google Maps)

Crash Summary

This intersection has experienced three rear-end collisions, all resulting in non-injury crashes (CO). The primary contributing factors include following too closely and loss of control. A rear-end crash occurred on the northbound (NB) approach, attributed to following too closely and wet roadway conditions. A similar rear-end collision occurred on the southbound (SB) approach, caused by loss of control under the same wet conditions. The KABCO PCR value for this intersection is 0.205976, indicating a relatively low severity level. Speed data shows no significant instances of speeding at this location, but photographic data suggest poor marking and signage are present. Combined with the stop sign being far from the intersection, these may be contributing to the crash occurrence.

Potential Safety Improvements

Based on the crash history and current roadway conditions, several safety improvements have been identified:

- Use pavement markings to define lanes and edgelines, and refresh stop bars and lane markings overall (Low)

- Evaluate the need for traffic signalization (Low)
- Relocate the stop sign closer to the intersection on the westbound (WB) approach, possibly by employing a small concrete island on the roadside (Low/Medium)
- Provide traffic calming on intersection approaches (Medium)

These measures aim to improve visibility, reduce rear-end collisions, and enhance overall safety at this intersection.

Farley

Old Castle Road and US 20/US 52

This site is a complex intersection involving a four-lane, divided highway with a speed limit of 65 mph and a two-lane municipal roadway with varying speed limits (25 mph on the north approach and 45 mph on the south approach) ([Google Map Link](#)). The east approach of US 20 has channelized right and left-turn lanes, while the west approach features a channelized left-turn lane. Olde Castle Road includes channelized right-turn lanes on both approaches. The median crossover area is narrow, limiting vehicle storage to a single passenger vehicle. Notably, the intersection lacks stop or yield signs, and there is no signage warning that cross traffic does not stop. However, overhead lighting is present.

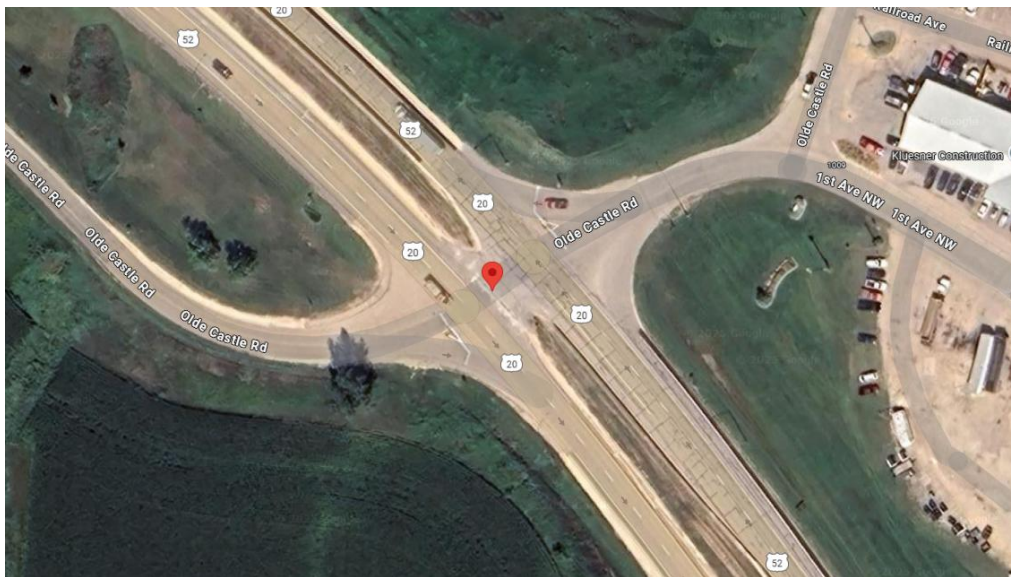


Figure 22: Old Castle Road and US 20/US 52 (Google Maps)

Crash Summary

Crash reports indicate that a total of 15 crashes have occurred at this intersection over a five-year period (2018-2022), including three KAB crashes and twelve CO crashes. The predominant manner of collision is broadside (front-to-side), accounting for two of the three KAB crashes, while the remaining KAB crash was a rear-end collision. The primary contributing factors to KAB crashes include exceeding the authorized speed limit, failure to yield the right-of-way while making a left turn. Other contributing factors for CO crashes are failure to yield the right-

of-way from stop sign, following too close, crossed centerline, driver distraction, running stop sign. The KAB Annual PCR for this intersection is 0.151726, indicating a medium severity level, while the KABCO Annual PCR is 1.453354, which is considered high. Based on statewide rankings, this intersection is ranked 655th for KAB crashes and 763rd for KABCO crashes out of 115,274 intersections statewide, highlighting it as a notable safety concern.

Potential Safety Improvements

Based on the crash history, contributing factors, and performance data, the following safety improvements are recommended along with their associated cost levels:

- Add intersection ahead warning signs and flashing beacons on US 20/US 52 (Low)
- Cross traffic does not stop warning plaques could be added to the stop sign assemblies on both Olde Castle Road approaches (Low)
- Install flashing beacons on the stop signs (Low)
- Extend the length of the westbound left turn lane on US 20/US 52 (Medium)
- Install an intersection collision warning system (Medium)
- Close the intersection and create an overpass (High)

Manchester

North/South 8th Street and IA 13/West Main Street

This site is a Four-legged, Undivided, Low Speed, Partial Stop Controlled intersection ([Google Map Link](#)). It has a medium PCR level for KAB crashes, indicating the need for potential countermeasures. West Main Street is a three-lane roadway with a two-way left-turn lane, while 8th Street is a two-lane roadway with stop control on the north and south approaches. The speed limit on West Main Street is 35 mph, while 8th Street is unposted but presumed to be 25 mph due to its residential nature. This intersection serves as one of three hospital access points along West Main Street, adding to its importance for emergency vehicle access. Overhead lighting is present, and curb and gutter are installed along both roadways. Sidewalks are available on the south side of West Main Street and on the north side along the east approach. A crosswalk and pedestrian crossing signage are located on the east approach to facilitate pedestrian movement.



Figure 23: Intersection of North/South 8th Street and IA 13/West Main Street (Google Maps)

Crash Reports Summary

Crash reports indicate that a total of six crashes have occurred at this intersection over a five-year period (2018-2022), including three KAB crashes and three CO crashes. The predominant manner of collision varies, with KAB crashes including angle, rear-end, and non-collision types. This intersection includes a diverse nature of crash types.

The primary contributing factors to KAB crashes are following too closely, failure to yield the right-of-way while making a left turn, and making improper turns. The KAB Annual PCR for the intersection is 0.162459, indicating a medium severity level, while the KABCO Annual PCR is 0.225274, also classified as medium. Based on statewide rankings, this intersection is ranked 615th for KAB crashes and 4,625th for KABCO crashes out of 115,274 intersections statewide. While the overall crash frequency is moderate, the severity of incidents that do occur at this location is a concern.

Potential Safety Improvements

Based on the crash history, contributing factors, and performance data, the following safety improvements are recommended along with their associated cost levels:

- Install flashing beacons in conjunction with the pedestrian crossing signage (Low)
- Convert pedestrian signage to a Rectangular Rapid Flashing Beacon that can be activated by pedestrians if crossing volumes call for it (Low)
- Perform a sight distance study to determine if utility poles around the intersection block sight distances (Low)

- Work with utility to relocate utility poles if sight distance blockages exist [note, these also present a roadside hazard in the event of a crash] (Moderate/High)

East/West Main Street and North/South Franklin Street

Site Description

This site is a Four-legged, Undivided, Low Speed, Traffic Signal Controlled intersection ([Google Map Link](#)). It has a high PCR level for KABCO crashes, indicating the need for immediate attention and potential countermeasures. The area surrounding the intersection is predominantly commercial, with well-defined curbs, curb ramps, and sidewalks. Overhead lighting is present at the intersection, improving nighttime visibility. The road pavement is in good condition, and pedestrian facilities, including marked crosswalks and pedestrian signals, are available for enhanced safety.

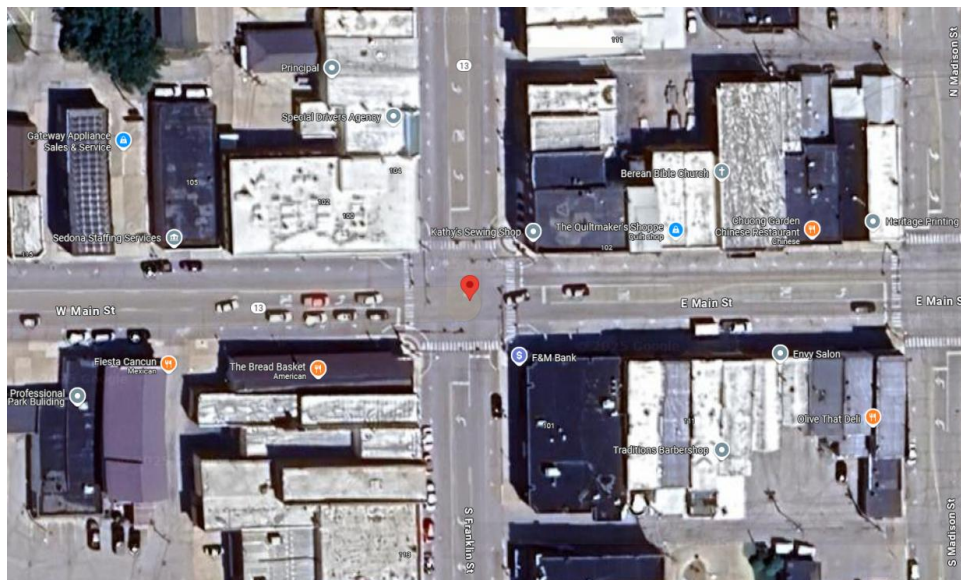


Figure 24. East/West Main Street and North/South Franklin Street (Google Maps)

Crash Summary

Crash reports indicate that a total of 25 crashes have occurred at this intersection over a five-year period (2018-2022), including one KAB crash and 24 CO crashes. The predominant manner of collision includes sideswipe (same direction), rear-end, and broadside (front-to-side) crashes, accounting for most of the incidents.

The primary contributing factors to most of the KABCO crashes included following too closely, failing to yield right-of-way from parking, making improper turns, and driver distraction. The KAB Annual PCR for the intersection is -0.09442, which is low, while the KABCO Annual PCR is 1.311347, which is considered high. Based on statewide rankings, this intersection is ranked 114,234th for KAB crashes and 872nd for KABCO crashes out of 115,274 intersections statewide. While the frequency of severe crashes is low, the overall number of crashes at this location indicates a safety concern.

Potential Safety Improvements

Based on the crash history, contributing factors, and performance data, the following safety improvements are recommended along with their associated cost levels:

- Restrict or eliminate parking on intersection WB approach (Low)
- Install bicycle facilities, either as shared lanes or designated bicycle lanes, where feasible (Moderate to High)
- Provide pedestrian/bicycle signs on roadside (Low)
- Optimize signal timing clearance (Low)

East/West Fayette Street and IA 13/North Franklin Street

This site is a Four-legged, Undivided, Low Speed, Partial Stop Controlled intersection ([Google Map Link](#)). It has a medium PCR level for KABCO crashes, indicating the need for potential countermeasures. The surrounding area is predominantly commercial, with well-defined curbs, curb ramps, and sidewalks. Overhead lighting is present, improving nighttime visibility. The pavement appears to be in good condition, and marked crosswalks provide enhanced safety for non-motorists.



Figure 25: Intersection of East/West Fayette Street and IA 13/North Franklin Street

Crash Summary

Crash reports indicate that a total of 12 crashes have occurred at this intersection over a five-year period (2018-2022), including one KAB crash and eleven CO crashes. The predominant manner of collision is rear-end, accounting for most crashes at this site. Other reported crash types include angle, sideswipe, broadside, and non-collision incidents.

The primary contributing factors to KABCO crashes include following too closely, failing to yield right-of-way from stop sign, failing to yield right-of-way from parking, failing to yield right-of-way to pedestrian and many more. The KAB Annual PCR for the intersection is 0.02052, indicating a low severity level, while the KABCO Annual PCR is 0.824255, which is considered medium. Based on statewide rankings, this intersection is ranked 4,193rd for KAB crashes and 1,446th for KABCO crashes out of 115,274 intersections statewide. While the severity level for KAB crashes is low, the frequency of crashes remains a concern.

Potential Safety Improvements

Based on the crash history, contributing factors, and performance data, the following safety improvements are recommended along with their associated cost levels:

- Provide red pennant flags or flashing beacons on stop signs (Low)
- Investigate conversion to all-way stop control (Low)
- Provide curb bulb-outs to reduce pedestrian crossing distance and provide better visibility of approaching vehicles (Medium)

North 13th Street and West Main Street/IA 13

This site is a Four-legged, Undivided, Low Speed, Partial Stop Controlled intersection ([Google Map Link](#)). It has a medium PCR level for KABCO crashes, indicating the need for potential countermeasures. The intersection has well-defined curbs except for the south leg. However, the intersection lacks curb ramps and sidewalks. Overhead lighting is available to enhance visibility. The road pavement is in good condition. There are no marked crosswalks providing facilities for pedestrian safety.



Figure 26: Intersection of North 13th Street and West Main Street/IA 13 (Google Maps)

Crash Summary

Crash reports indicate that a total of nine crashes have occurred at this intersection over a five-year period (2018-2022). All the crashes are CO crashes. The predominant manner of collision is non-collision type, followed by rear-end and broadside crashes. The primary contributing factors to the crashes include operating vehicles in a reckless manner, driver distraction, driving too fast for conditions, following too closely, failure to yield right-of-way from a stop sign, and making improper turns. The KAB Annual PCR for the intersection is -0.019112, while the KABCO Annual PCR is 0.758219, indicating a medium severity level. Based on statewide rankings, this intersection is ranked 111,207th for KAB crashes and 1,600th for KABCO crashes out of 115,274 intersections.

Potential Safety Improvements

Based on the crash history, contributing factors, and performance data, the following safety improvements are recommended along with their associated cost levels:

- Relocate the utility poles; if relocation is not feasible, install retro-reflective marking tape to poles (significant number of crashes involve collisions with poles) (Low/Moderate)
- Provide red pennant flags on stop signs (Low)
- Install pavement markings on NB approach (Low)
- Install appropriate lane configuration signage (Low)

East Delaware Street and South Franklin Street

This site is a Three-legged, Undivided, Low Speed, Partial Stop Controlled intersection ([Google Map Link](#)). It has a medium PCR level for KABCO crashes, indicating the need for potential countermeasures. The area surrounding the intersection is predominantly a commercial area. The intersection has well-defined curbs, curb ramps, and sidewalks. Overhead lighting is present at the intersection, improving nighttime visibility. The pavement appears to be in good condition, and marked crosswalks are available to enhance pedestrian safety.



Figure 27: Intersection of East Delaware Street and South Franklin Street

Crash Reports Summary

Crash reports indicate that a total of eight crashes have occurred at this intersection over a five-year period (2018-2022), including one KAB crash related to pedestrian and seven CO crashes. The predominant manner of collision is sideswipe (same direction), accounting for 50% of crashes, followed by broadside (front-to-side), non-collision (single vehicle), and rear-end (front-to-rear) crashes. The primary contributing factors to KABCO crashes include failure to yield right-of-way (FTYROW) from parking, improper turns, and unknown causes. The KAB Annual PCR for the intersection is 0.007087, indicating a low severity level, while the KABCO Annual PCR is 0.64835, which is considered medium. Based on statewide rankings, this intersection is ranked 6,618th for KAB crashes and 1,855th for KABCO crashes out of 115,274 intersections.

Potential Safety Improvements

Based on the crash history, contributing factors, and performance data, the following safety improvements are recommended along with their associated cost levels:

- Install pedestrian crossing signs (Low)
- Add missing crosswalk to south approach (Low)
- Convert all crosswalks to enhanced to increase visibility (Low)
- Restrict or eliminate parking on intersection approaches (Low)

Quaker Mill Drive and North Franklin Street

This site is a three-leg, undivided, low-speed, partial stop intersection ([Google Map Link](#)). North Franklin Street serves as the primary roadway, while Quaker Mill Drive is a stop-controlled minor street. Curb and gutter are present, and some pedestrian infrastructure (sidewalks and curb ramps) is present, although it is incomplete. Quaker Mill Drive does not have a stop bar present, and overhead lighting is not provided.



Figure 28: Intersection of Quaker Mill Drive and IA 13/North Franklin Street, Manchester, IA
(Image: Google Maps)

Crash Summary

This intersection has experienced multiple crashes, including two KAB crashes and four CO crashes in recent years. The primary manners of collision include rear-end, angle, and broadside crashes. Rear-end collisions were reported on the northbound (NB) and southbound (SB) approaches, primarily due to drivers following too closely, with one incident occurring under wet roadway conditions. Angle crashes occurred between northbound (NB) and southbound (SB) vehicles, attributed to failure to yield right-of-way (FTYROW) while making a left turn, with additional factors including driver distraction from exterior sources, occurring under wet and dark-lighted conditions. Additionally, a broadside crash involving westbound (WB) and southbound (SB) vehicles was recorded, also due to failure to yield while making a left turn. The KABCO PCR value for this intersection is 0.418088, indicating a moderate severity level. Speed data shows that 33.3% of vehicles on the northbound (NB) and southbound (SB) approaches exceed the speed limit by 5 mph+ while approaching the intersection. Similarly, 48.2% on the westbound (WB) approach exceed the speed limit by at least 5 mph+ when approaching the intersection to stop, suggesting a significant speeding issue.

Potential Safety Improvements

Based on the crash history and existing roadway conditions, potential safety improvements that have been identified include:

- Install dynamic speed feedback signs on west approach (Low)
- Install pavement markings for left-turn paths (Low)
- Install stop bar pavement marking on west approach (Low)
- Install street lighting at the intersection (Medium)
- Complete missing pedestrian infrastructure, mainly additional sidewalks and crosswalk markings (Medium)
- Check pavement surface friction and use friction enhancing treatments if needed (Medium)

These countermeasures aim to reduce speeding, improve visibility, enhance driver awareness, and minimize the risk of crashes at this intersection.

East Main Street and North/South Brewer Street

This site is classified as a four-leg, undivided, low-speed, partial stop intersection ([Google Map Link](#)). East Main Street serves as the primary roadway, while North Brewer Street and South Brewer Street are stop-controlled minor streets. Extensive pedestrian infrastructure is present, including sidewalks, curb ramps, and marked crosswalks on all approaches. On-street lighting is also present.

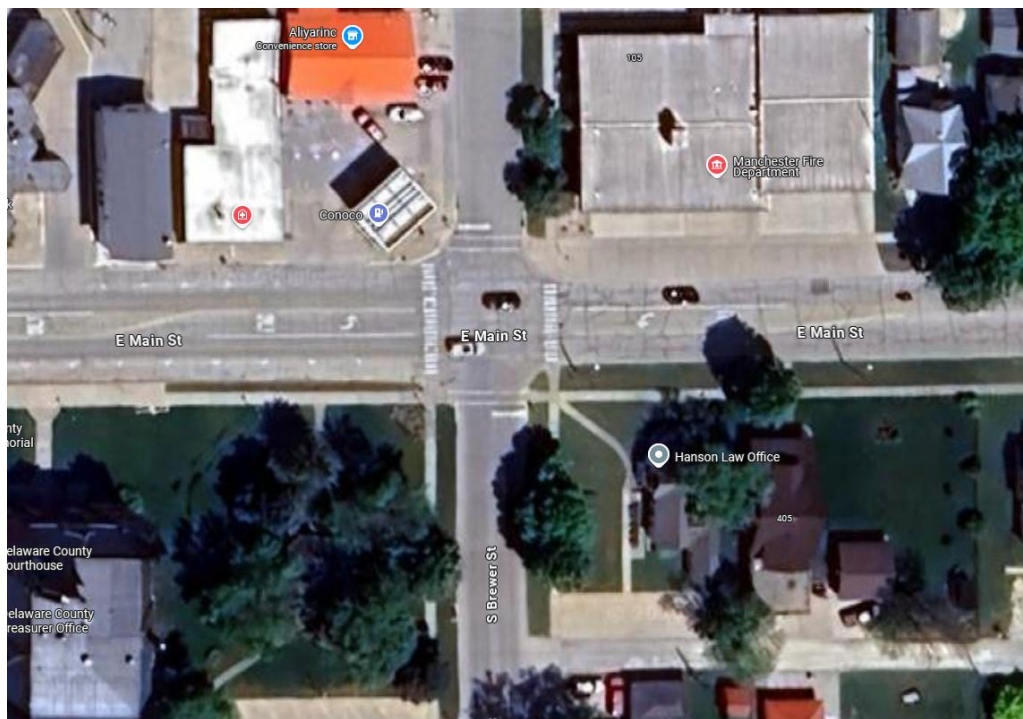


Figure 29: Intersection of East Main Street and North/South Brewer Street (Image: Google Maps)

Crash Summary

This intersection has experienced six crashes, all classified as CO crashes in recent years. The primary manners of collision include broadside, rear-to-side, and sideswipe crashes. Broadside crashes occurred at three locations: between southbound (SB) and eastbound (EB) vehicles, eastbound (EB) and northbound (NB) vehicles, and westbound (WB) and northbound (NB) vehicles, primarily due to failure to yield right-of-way (FTYROW) from the stop sign, particularly from the southbound approach. One of these crashes occurred under wet roadway conditions. Rear-to-side crashes were reported on the eastbound (EB) and westbound (WB) approaches, with contributing factors including failure to keep in the proper lane and interior driver distraction. Additionally, a sideswipe crash occurred on the westbound (WB) approach, attributed to FTYROW from a parked position. The KABCO PCR value for this intersection is 0.352933, indicating a moderate severity level. Speed data shows that 10.2% of vehicles on the eastbound (EB) and westbound (WB) approaches, and 14.1% on the southbound (SB) approach, exceed the speed limit by at least 10 mph+, suggesting a moderate speeding concern, particularly for southbound traffic.

Potential Safety Improvements

Based on the crash history and existing roadway conditions, potential safety improvements that have been identified include:

- Improve stop sign compliance by installing flashing LED stop signs (e.g., SB) and using "CROSS TRAFFIC DOES NOT STOP" signage (Low)
- Use optical speed bars prior to the intersection to encourage drivers to slow down (Low)
- Consider deployment of speed feedback sign trailers or installation of permanent speed feedback signs to encourage speed limit compliance (Low)

These countermeasures aim to improve compliance with stop signs, reduce speeding, and enhance driver awareness at this intersection, thereby reducing crash risks.

West Marion Street and IA 13

This site is classified as a three-leg, undivided, low-speed, partial stop intersection ([Google Map Link](#)). IA 13 serves as the primary roadway, while West Marion Street is a stop-controlled minor street. The intersection lacks dedicated turn lanes, and pavement markings and signage are in poor condition based on photographic data. Overhead lighting is not present. The placement of the stop sign on Marion Street appears to be set back a good deal from the curb, which may affect detection by approaching drivers.

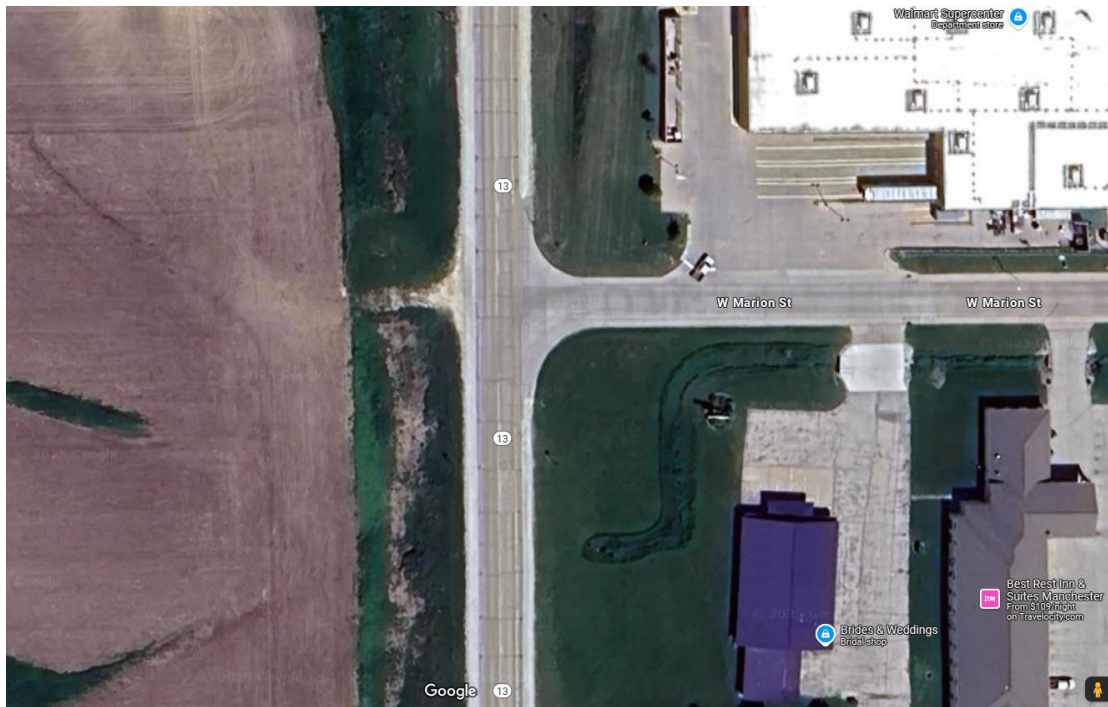


Figure 30: Intersection of West Marion Street and IA 13 (Image: Google Maps)

Crash Summary

This intersection has experienced multiple crashes, including two KAB crashes and three CO crashes in recent years. The primary manner of collision included rear-end, broadside, angle, and non-collision incidents. Rear-end crashes were reported on the southbound (SB) and northbound (NB) approaches, caused by drivers following too closely, with one occurring under dark-lighted conditions. A broadside crash between southbound (SB) and eastbound (EB) vehicles was due to failure to yield right-of-way (FTYROW). An angle crash was also reported on the southbound (SB) approach, attributed to following too closely. Additionally, a non-collision incident involving a northbound (NB) vehicle was caused by reckless or negligent driving behavior. The KABCO PCR value for this intersection is 0.352858, indicating a moderate severity level. Speed data shows that only 3.6% of eastbound (EB) vehicles exceed the speed limit by at least 10 mph+, suggesting that speeding is not a major issue at this location.

Potential Safety Improvements

Based on the crash history and existing roadway conditions, potential safety improvements that have been identified include:

- Install advance "STOP AHEAD" warning signs (Low)
- Review the placement of the stop sign and relocated if needed (Low)
- Add/repaint pavement markings (Low)
- Improve road signage (Low)
- Add dedicated turn lanes on IA 13 (Medium/High)
- Add overhead lighting (Medium)

These countermeasures aim to enhance driver awareness, improve intersection visibility, and reduce the likelihood of crashes at this location.

East Fayette Street and North Brewer Street

This site is classified as a four-leg, undivided, low-speed, partial stop intersection ([Google Map Link](#)). North Brewer Street serves as the primary roadway, while East Fayette Street is stop-controlled on both approaches. Pedestrian infrastructure is present, specifically sidewalks, curb ramps, and marked crosswalks on the east and west approaches. The intersection is located in a residential area or the city.



Figure 31: Intersection of East Fayette Street and North Brewer Street (Image: Google Maps)

Crash Summary

This intersection has experienced multiple crashes, including one KAB crash and four CO crashes in recent years. The primary manners of collision include broadside and non-collision incidents. Broadside crashes were recorded in two directions: two between southbound (SB) and eastbound (EB) vehicles, and two between northbound (NB) and eastbound (EB) vehicles. Contributing factors included failure to yield right-of-way (FTYROW) from the eastbound approach and running a stop sign, with incidents occurring under wet and snowy conditions. Additionally, two non-collision incidents were recorded on the northbound (NB) and eastbound (EB) approaches, caused by driver distraction due to passengers. Sight distance limitations were noted on the eastbound (EB) approach, potentially contributing to some of the stop-sign

compliance issues. Speed data shows that 1.4% of vehicles on the northbound (NB) and southbound (SB) approaches exceed the speed limit by at least 15 mph, suggesting that speeding is not a major concern at this location.

Potential Safety Improvements

Based on the crash history and existing roadway conditions, potential safety improvements that have been identified include:

- Use "CROSS TRAFFIC DOES NOT STOP" warning signs (Low)
- Improve sight distance at the intersection by removing potential visual obstructions on the eastbound (EB) approach (Low)
- Check pavement surface friction and use friction enhancing treatments if needed (Medium)

These countermeasures aim to enhance driver awareness, improve compliance with stop signs, and reduce the likelihood of crashes at this intersection.

Seely Street and North Franklin Street

This site is classified as a three-leg, undivided, low-speed, partial stop intersection ([Google Map Link](#)). North Franklin Street serves as the primary roadway, while Seely Street is a stop-controlled minor street. Pedestrian infrastructure is present, specifically sidewalks, curb ramps, and crosswalks. The area is residential in nature. An overhead street light is present.



Figure 32: Intersection of Seely Street and IA 13/North Franklin Street (Image: Google Maps)

Crash Summary

This intersection has experienced multiple crashes, including one KAB crash and three CO crashes in recent years. The primary manners of collision include sideswipe and rear-end crashes. Sideswipe crashes occurred between southbound (SB) and northbound (NB) vehicles, as well as between westbound (WB) vehicles and a parked vehicle. This crash was attributed to failure to yield right-of-way (FTYROW) while making a left turn, with one incident occurring under snowy conditions. Rear-end crashes were reported on the northbound (NB) approach, caused by drivers following too closely. The KABCO PCR value for this intersection is 0.223923, indicating a moderate severity level. Speed data shows that 7.9% of eastbound (EB) vehicles and 4.9% of northbound (NB) and southbound (SB) vehicles exceed the speed limit by at least 10 mph+, indicating that speeding is not a major concern at this location.

Potential Safety Improvements

Based on the crash history and existing roadway conditions, potential safety improvements that have been identified include:

- Enhance signage for lane assignment (Low)
- Employ speed feedback sign trailers or portable speed signs periodically to encourage speed compliance (Low)
- Improve and repaint road markings (Low)

These countermeasures aim to improve lane discipline, enhance driver awareness, and reduce the likelihood of crashes at this intersection.

Maquoketa

Summit Street and South Main Street

This site is a Four-legged, Undivided, Low Speed, All-Way Stop Controlled intersection ([Google Map Link](#)). It has a high PCR level for KABCO crashes, indicating the need for immediate attention and potential countermeasures. The area surrounding the intersection is predominantly residential, with well-defined curbs, curb ramps, and sidewalks. There are some obstructions within the sight triangles around the intersection, creating visibility issues. Overhead lighting is present at the intersection, improving nighttime visibility. The road pavement appears to be in good condition based on photographic data, and there are marked crosswalks providing facilities for pedestrian safety.



Figure 33: Intersection of Summit Street and South Main Street

Crash Summary

Crash reports indicate that a total of 13 crashes have occurred at this intersection over a five-year period (2018-2022), with no KAB crashes and 13 CO crashes. The predominant manner of collision is broadside (front-to-side), accounting for the majority of crashes. Other crash types include rear-end and angle collisions, suggesting potential issues with stop.

The primary contributing factors to crashes at this intersection include running a stop sign, failure to yield right-of-way from a stop sign, following too closely and failure to yield right-of-way while making left turn. The KAB Annual PCR for the intersection is -0.057158, indicating no KAB severity level, while the KABCO Annual PCR is 1.084819, which is considered high. Based on statewide rankings, this intersection is ranked 113,549th for KAB crashes and 1,076th for KABCO crashes out of 115,274 intersections statewide. While no severe crashes have been recorded, the high frequency of CO crashes suggests a recurring traffic safety issue.

Potential Safety Improvements

Based on the crash history, contributing factors, and performance data, the following safety improvements are recommended along with their associated cost levels:

- The city could work with the property owners that have retaining walls on their land to lower those walls and open up the intersection sight triangle (through terracing the walls or other means) (Medium)
- Install flashing beacons at stop-controlled intersection (Low)

- The pavement markings and crosswalks at the intersection could be repainted (Low)
- Convert the intersection to signals (High)

North Jones Avenue and West Platt Street

This is a three-leg, undivided, low-speed, partial stop intersection ([Google Maps Link](#)). West Platt Street serves as the primary roadway, while North Jones Avenue is a stop-controlled minor street. The intersection features dedicated turning lanes on the eastbound (EB) and westbound (WB) approaches, but there are concerns regarding sight distance, espRPally on the southbound (SB) approach, where visibility appears to be insufficient.

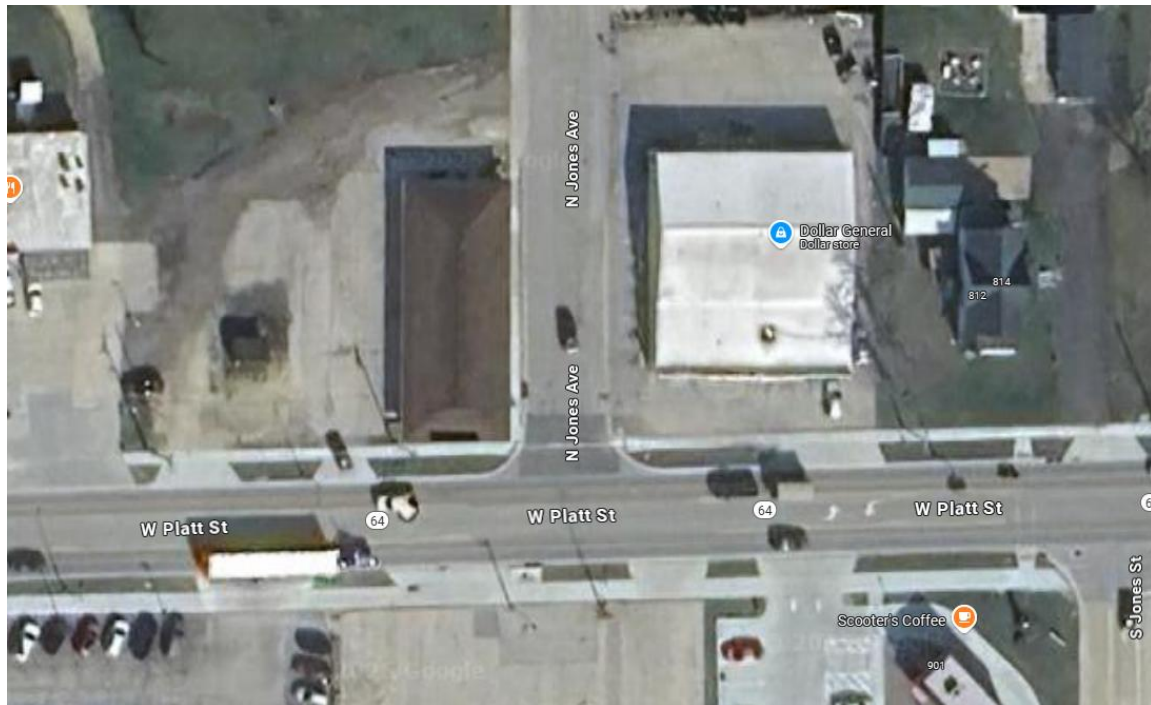


Figure 34: Intersection of North Jones Avenue and West Platt Street (Image: Google Maps)

Crash Summary

This intersection has experienced two broadside collisions resulting in a non-injury crash (CO). The primary contributing factor in each was running the stop sign/failure to yield right-of-way (FTYROW) at the southbound (SB) approach, and wet roadway conditions may have played a role in at least one crash. The KABCO PCR value for this intersection is 0.460706, indicating a moderate severity level. Speed data shows that 19.6% of vehicles on the EB and WB approaches exceed the speed limit by at least 10 mph+, while only 0.8% of vehicles on the SB approach exceed the speed limit, highlighting speeding as a concern on the through roadway.

Potential Safety Improvements

Based on the crash history and existing roadway conditions, several safety improvements have been identified:

- Improve signage and stop sign visibility (Low)
- Evaluate intersection sight distance, espRPALLY on the SB approach. Determine what, if any changes can be made to improve sight distance give the presence of surrounding structures (Low)
- Enhance pavement markings on the SB approach (Low)
- Employ a speed feedback sign (temporary or permanent) along West Platt Street to encourage speed compliance.

These measures aim to improve visibility, reduce the risk of collisions, and enhance safety at this intersection.

US 61 Ramps and 200th Avenue

This site is a three-leg, undivided, low-speed, partial stop intersection ([Google Map Link](#)). 200th Avenue is the through route, while the northbound exit ramp from US 61 is stop controlled. No pedestrian infrastructure is present at the intersection. Overhead lighting is present in the northeast, southeast and southwest quadrants of the intersection.

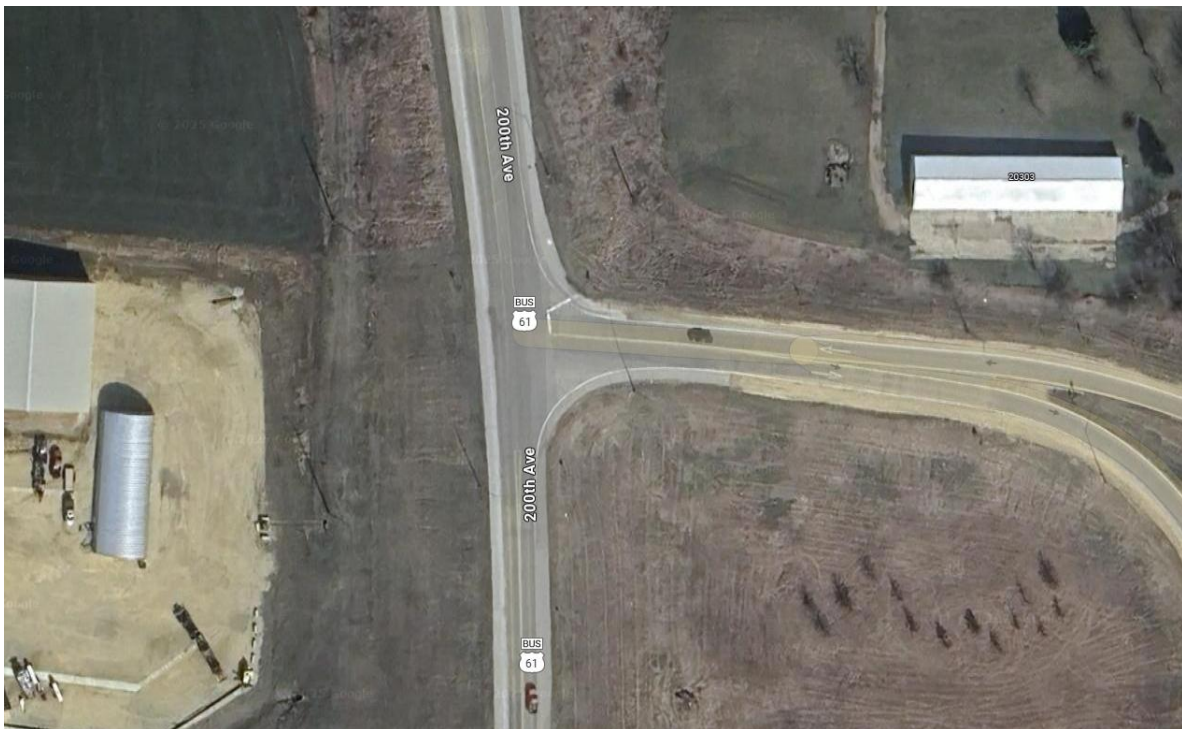


Figure 35: Intersection of US 61 Ramps and 200th Avenue (Google Maps Image)

Crash Summary

This intersection has experienced a series of crashes over time, including one KAB crash and five CO crashes. The primary manner of collision included rear-end, angle, and non-collision incidents. A rear-end crash occurred on the westbound (WB) and southbound (SB) approaches, caused by driving too fast for conditions and loss of control due to icy roads. An angle crash occurred between the southbound (SB) and northbound (NB) vehicles, attributed to failure to

yield right-of-way (FTYROW) when making a left turn from the SB approach. There was also a non-collision incident on the WB approach where the driver ran off the road and lost control, as well as an FTYROW-related incident between the WB and NB vehicles, stemming from the stop sign at the intersection. The crash history highlights issues with speed, road conditions, and compliance with stop sign rules, although the specific speed data for this site is not available. The KABCO PCR value for this intersection is 0.448894, indicating a moderate severity level.

Potential Safety Improvements

Based on the crash history and roadway conditions, several safety improvements have been identified:

- Evaluate sight distance and consider a possible control change to signalization (Medium)
- Improve stop sign visibility with pennants or a flashing beacon (Low)
- Conduct a speed study on 200th Avenue to determine if speeding is an issue (Low)

These measures aim to improve visibility, reduce collisions, and enhance driver compliance at this intersection.

South Vermont Street and West Summit Street

This site is a four-leg, undivided, low-speed, All-Way stop control intersection ([Google Maps Link](#)). The stop signs along Summit Street have flashing LED borders. Pedestrian crossing signage is also present at the intersection along Summit Street. There appear to be poor pavement markings based on photographic data and may be potentially limited sight distance on the south approach due to a house in the southeast quadrant. The site is located in a residential area, and both roadways are presumed to be low speed (i.e. 25 mph).



Figure 36: Intersection of South Vermont Street and West Summit Street (Image: Google Maps)

Crash Summary

This intersection has experienced five crashes, all resulting in non-injury incidents (CO). The primary manner of collision includes broadside, head-on, and rear-end collisions. A broadside collision occurred between the northbound (NB) and eastbound (EB) vehicles, caused by failure to yield right-of-way (FTYROW) at the stop sign on the NB approach. A head-on collision was recorded between the eastbound (EB) and westbound (WB) vehicles, also due to FTYROW at the stop sign on the WB approach. Additionally, a rear-end crash occurred between the northbound (NB) and eastbound (EB) vehicles, stemming from failure to yield right-of-way (FTYROW) on the NB approach. The crash history suggests that visibility issues and failure to yield are significant factors contributing to the crashes. Speed data reveals that 2.8% of vehicles on the EB and WB approaches exceed the speed limit by at least 10 mph+, so speeding does not appear to be a concern at this location. The KABCO PCR value for this intersection is 0.390991, indicating a moderate severity level.

Potential Safety Improvements

Based on the crash history and existing roadway conditions, several safety improvements have been identified:

- Add metal pennants to increase conspicuity on the north and south approaches (Low)
- Repaint existing pavement markings and consider using enhanced crosswalk markings (Low)

These measures aim to improve driver awareness, reduce FTYROW-related crashes, and enhance safety at this intersection.

17th Street, David Street, and South Main Street

This site is a four-leg, undivided, low-speed, partial stop intersection ([Google Map Link](#)). South Main Street serves as the primary through roadway, while David Street and 17th Street are stop-controlled minor roadways. The intersection appears to have a stop compliance issue, as several collisions have been attributed to running stop signs and failure to yield right-of-way (FTYROW) at the stop-controlled approaches. Dedicated left turn lanes are provided on the west, north and south approaches, while the east and south approaches have dedicated right turn lanes. Pedestrian facilities are present on the east and north sides of the intersection, including sidewalks and crosswalks. Overhead lighting is present in the southeast and northwest quadrants.

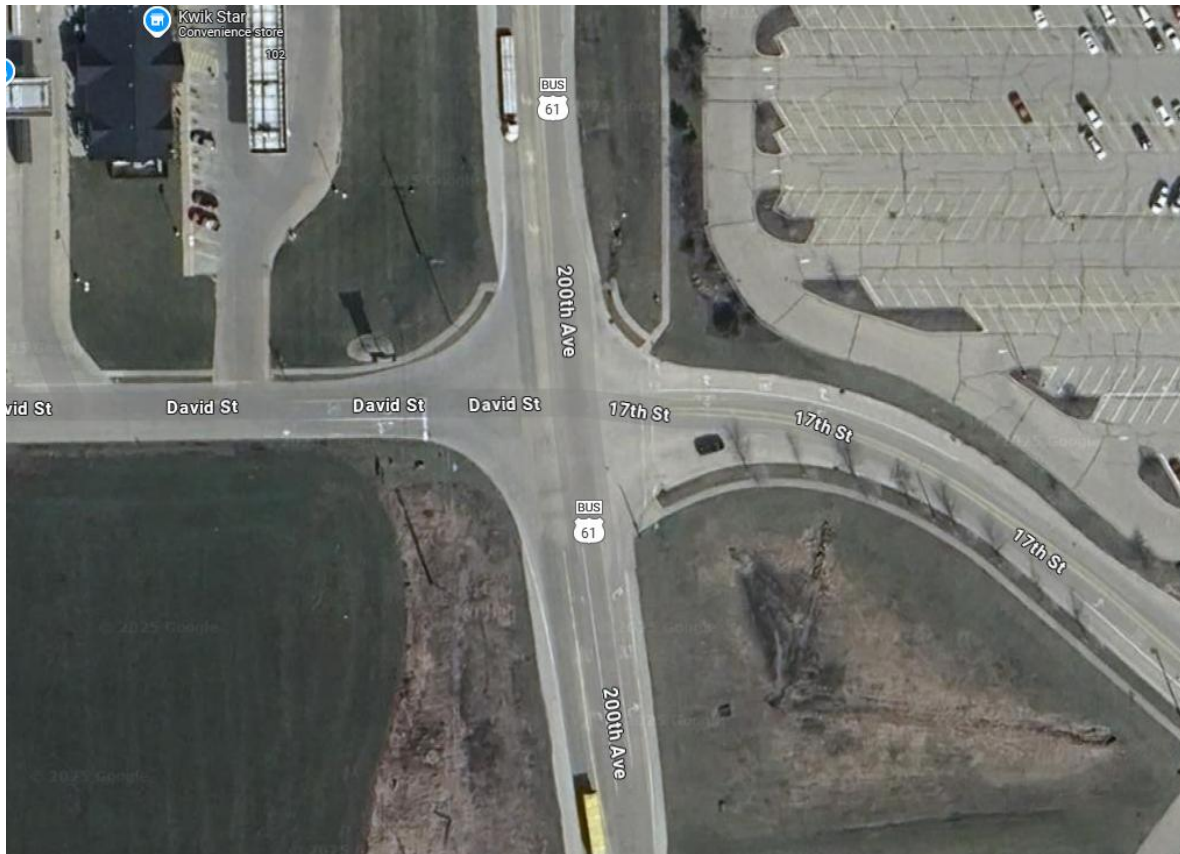


Figure 37: Intersection of 17th Street, David Street, and South Main Street (Image: Google Maps)

Crash Summary

This intersection has experienced a range of crashes, including one KAB crash and four CO crashes. The primary manner of collision includes broadside and angle crashes. Broadside crashes were recorded between the eastbound (EB) and westbound (WB) vehicles, as well as between the northbound (NB) and southbound (SB) vehicles, all due to failure to yield right-of-way (FTYROW) from the stop sign. Additionally, an angle crash occurred between the NB and SB vehicles, attributed to driver distraction. The KABCO PCR value for this intersection is 0.328009, indicating a moderate severity level. Speed data shows that 4.7% of vehicles on the NB and SB approaches, and 4.2% on the EB and WB approaches exceed the speed limit by at least 10 mph+. This suggests that speeding could also contribute to crash risk at this location.

Potential Safety Improvements

Based on the crash history and existing roadway conditions, the primary safety improvement identified is:

- Employ enforcement to ensure better compliance to stop signs (Low)
- Employ temporary or permanent speed feedback signage to encourage speed compliance (Low)

- Install signalization (High)

These would aim to improve driver compliance, reduce FTYROW crashes, and enhance overall safety at this intersection.

Carlisle Street and South Main Street

This site is a four-leg, undivided, low-speed, signalized intersection ([Google Map Link](#)). The intersection is signal-controlled, and pedestrian facilities are located to an extent along all approaches. Notably, the westbound (WB) approach is adjacent to a Walmart parking lot, which could contribute to traffic conflicts and disruptions. Overhead lighting is present in all four quadrants.



Figure 38: Intersection of Carlisle Street and South Main Street (Image: Google Maps)

Crash Summary

This intersection has experienced several crashes, including one KAB crash and three CO crashes. The primary manner of collision includes rear-end and broadside crashes. A rear-end crash occurred on the westbound (WB) and southbound (SB) approaches, caused by driving too fast and following too closely. A broadside crash occurred between the northbound (NB) and eastbound (EB) vehicles, attributed to running a traffic signal. The KABCO PCR value for this intersection is 0.305375, indicating a moderate severity level. Speed data shows that 4.4% of vehicles on the NB and SB approaches exceed the speed limit by at least 5 mph+, though speeding does not appear to be a significant issue at this location.

Potential Safety Improvements

Based on the crash history and existing roadway conditions, the following safety improvements have been identified:

- Install advanced warning signs to increase awareness of traffic signal presence (Low)
- Review signal timings to determine if changes to clearance intervals are needed (Low)

These measures aim to improve traffic signal compliance, reduce rear-end and broadside collisions, and enhance overall safety at the intersection.

East Maple Street and South Eliza Street

This site is a four-leg, undivided, low-speed, partial stop intersection ([Google Map Link](#)). East Maple Street serves as the primary roadway, while South Eliza Street is a stop-controlled minor roadway. There is on-street parking near the intersection, which could contribute sight distance impacts. There are also potentially poor markings based on photographic data. Pedestrian infrastructure at the site consists of sidewalks and curb ramps. Overhead lighting is present. The site is presumed to be low speed on all approaches given the residential character of the area.

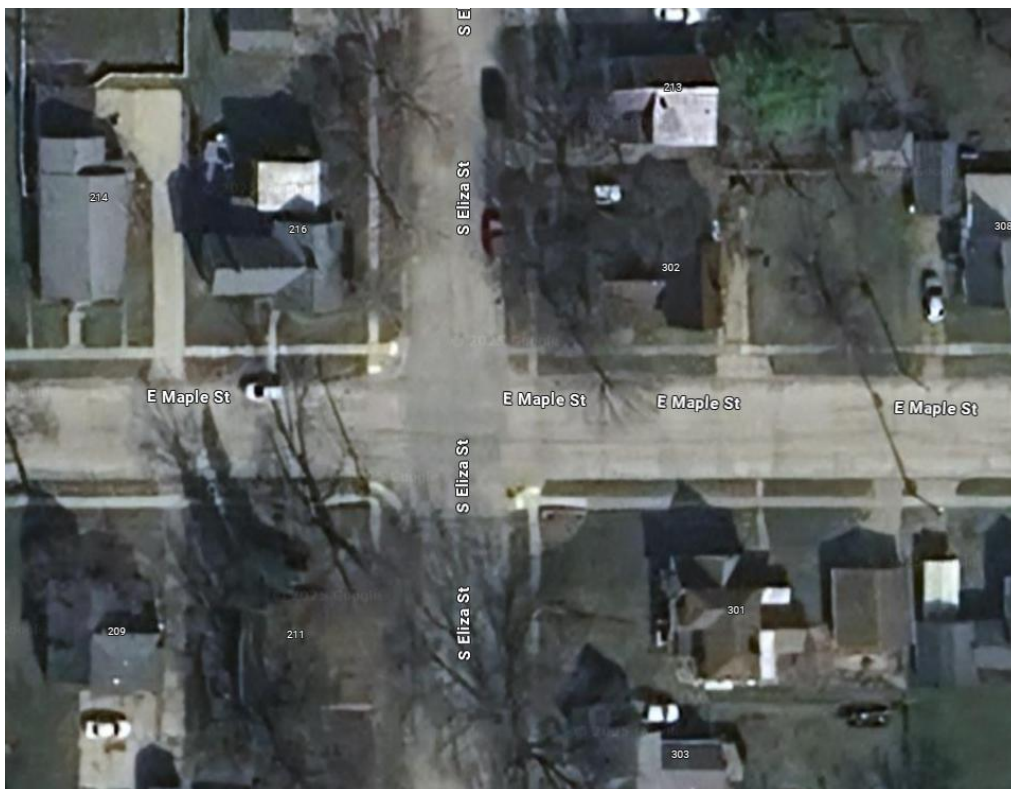


Figure 39: Intersection of East Maple Street and South Eliza Street (Image: Google Maps)

Crash Summary

This intersection has experienced one non-injury (CO) crash. The primary manner of collision was sideswipe. This crash was caused by failure to yield right-of-way (FTYROW) at the stop

sign and swerving/evasive action. The KABCO PCR value for this intersection is 0.273518, indicating a relatively low severity level. Speed data shows that 4.7% of vehicles on the EB and WB approaches exceed the speed limit by at least 5 mph+, suggesting that speeding is not an issue at this location.

Potential Safety Improvements

Based on the crash history and existing roadway conditions, the following safety improvements have been identified:

- Improve stop sign visibility with metal pennants (Low)
- Add pavement markings, primarily crosswalks, if needed [crosswalks could help some drivers detect the intersection and increase stop compliance] (Low)
- Restrict parking close to the intersection to improve sight distances (Low)

These countermeasures aim to reduce the risk of FTYROW crashes, improve traffic control, and enhance overall safety at this intersection.

Wheatland

130th Avenue and US 30

This site is a Four-legged, Undivided, High Speed, Partial Stop Controlled intersection ([Google Map Link](#)). It has a medium PCR level for KAB crashes, indicating the need for immediate attention and potential countermeasures. There are no curbs or sidewalks in this intersection. The road delineation and pavement are in good condition based on photographic data. However, the lighting appears to be insufficient to adequately illuminate the entire intersection, which may contribute to visibility concerns during nighttime conditions.



Figure 40: Intersection of 130th Avenue and US 30 (Google Maps)

Crash Summary

Crash reports indicate that a total of 10 crashes have occurred at this intersection over a five-year period (2018-2022), including three KAB crashes and seven CO crashes. The predominant manner of collision is broadside (front-to-side), accounting for the majority of KABCO crashes. Additionally, non-collision (single vehicle) and rear-end collisions were also reported.

The primary contributing factors to KAB crashes at this intersection include failing to yield the right-of-way at a stop sign, making improper turns, and running a stop sign. Other contributing factors including CO crashes are followed too close and operator inexperience.

The KAB Annual PCR for the intersection is 0.196756, indicating a medium severity level, while the KABCO Annual PCR is 1.013736, which is considered high. Based on statewide rankings, this intersection is ranked 459th for KAB crashes and 1,175th for KABCO crashes out of 115,274 intersections statewide.

Potential Safety Improvements

Based on the crash history, contributing factors, and performance data, the following safety improvements are recommended along with their associated cost levels:

- Provide pavement markings with supplementary messages, such as STOP AHEAD on various approaches (Low)
- Provide red pennant flags on stop signs (Low)
- Install flashing beacons or LED-borders on stop-controlled approaches, as a significant amount of night crashes took place at this intersection (Low)
- Provide left-turn lanes at intersections on NB-SB approaches (Moderate)
- Provide lane configuration signing and pavement markings on NB-SB approaches (Low)

Segments

Overview

The section provides a review of roadway segments identified as candidates for safety improvements in the RPA region. The segments covered in this section are those classified as having High (≥ 0.25) KAB or High (≥ 1.0) and Medium ($\geq 0.20 < 1.0$) KABCO PCR values. [Note: KABCO is defined as K = fatal, A = Incapacitating injury, B = minor injury, C = possible injury, O = property damage only.] Based on the crash trends and existing features of these segments, potential safety countermeasures have been identified that can serve as a starting point for pursuing improvements. The same data sources identified in the Intersections section of this plan were employed to conduct network screening.

Camanche

Highway 67 South of Camanche

This segment of Highway 67 was identified as a safety candidate for review based on its segment-level PCR values. The roadway consists of 1.32 mile, two-lane rural highway with shoulders travelling north- south through the city. The speed limit along the segment is 55 mph, and the surrounding land use includes the area rural farmlands and open spaces. This segment includes occasional stop-controlled intersections and has a history of non-collision crashes.

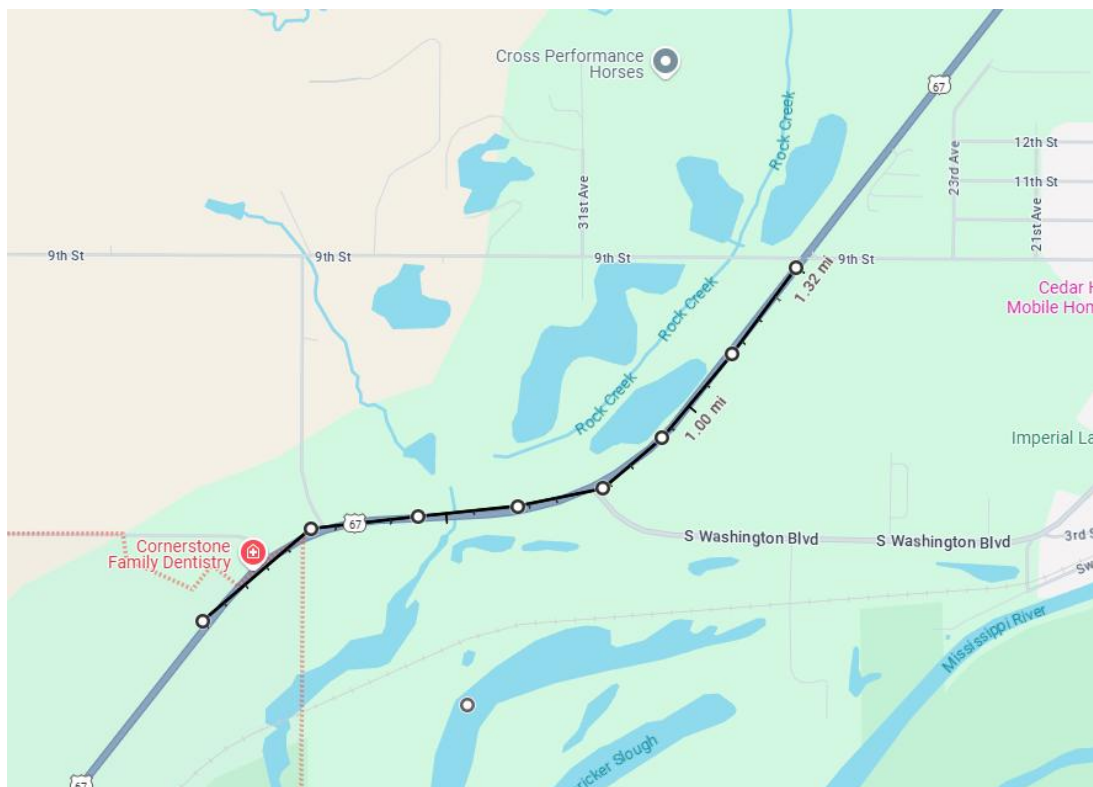


Figure 41: Highway 67 ([Google Map Link](#))

Crash Summary

A total of 27 crashes were recorded along the Highway 67 corridor in Camanche from 2018 to 2024. Crash severities included one suspected serious injury, 3 possible injuries, and 24 property damage only crashes. The corridor experiences a mix of crash types, with 14 non-collision (single-vehicle) incidents, 9 crashes where the manner of collision was not reported, and 4 broadside (front-to-side) collisions. The segment identified ranks 141 out of 5,032 similar segments based on the KABCO Annual PCR of 1.920685.

Key contributing factors to crashes along this segment include 19 animal-related incidents, highlighting the presence of wildlife given the close proximity to the Mississippi River. Additional contributing factors include 2 instances of failure to stop at stop-controlled intersections, 1 loss of control resulting in a single-vehicle crash, and 1 incident involving exceeding the authorized speed. A review of available speed data indicated that 9.3 percent of vehicles exceeded the speed limit by 10 mph+.

Potential Safety Improvements

Based on the crash history and contributing factors, the following safety improvements are recommended:

- Install LED flashing stop signs at intersections to increase visibility and reduce violations (Low).
- Add “Stop Ahead” warning signs with reflective or illuminated features to alert drivers approaching intersections (Low).
- Add intersection ahead warning signs along US 67 as needed (Low)
- Install wildlife fencing in targeted, high-risk areas to reduce animal-related crashes (Medium).
- Install/retain animal crossing warning signs where appropriate (Low).
- Enhance roadway lighting at intersections to improve visibility during low-light conditions (Medium).

Highway 67 on Border of Camanche

This is an approximately 1.81-mile corridor traveling north-south along the edge of Camanche. The segment was identified as a safety candidate for review based on segment-level PCR values. The roadway consists of a two-lane highway with paved shoulders. The speed limit along this corridor is **not posted**, and surrounding land uses include some farmlands, wooded areas and a few residential properties.

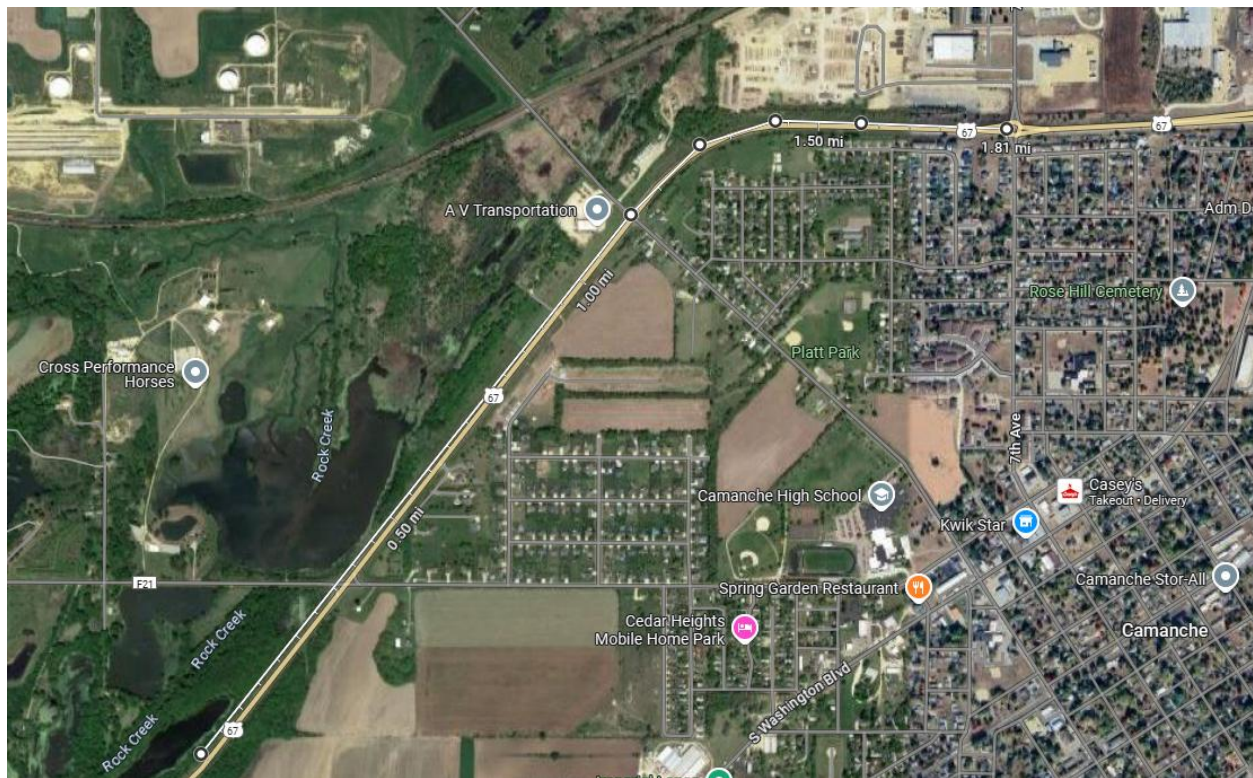


Figure 42: Highway 67 ([Google Map Link](#))

Crash Summary

The crash history along this segment includes a mix of broadside and sideswipe collisions, as well as animal-related crashes. Driver distraction was noted as a contributing factor in some incidents. A total of 21 crashes were recorded along the corridor from 2018 to 2024, including a fatal crash in 2024. Crash severities included one suspected serious injury, 3 suspected minor injuries, 6 possible injuries, and 11 property damage only crashes. The corridor experiences a variety of crash types, including 10 broadside collisions, 3 non-collision (single-vehicle) incidents, and 3 rear-end collisions at intersections. The segment ranks 141 out of 5,032 similar segments based on the KABCO Annual PCR of 1.920685.

Key contributing factors to crashes along this segment include 5 incidents of failure to yield right-of-way (FTROW) from stop signs, 4 crashes involving vehicles running stop signs, and 2 cases of driver distraction. Additionally, 2 animal-related crashes were recorded. Potential safety improvements could include enhanced stop sign visibility, driver awareness programs, and wildlife management strategies.

Potential Safety Improvements

Based on the crash history and contributing factors, the following safety improvements are recommended:

- Review signage and pavement markings at intersections to improve visibility and compliance (Low).
- Consider installing flashing beacons at high-risk intersections to increase driver awareness (Low-Medium).
- Retain/install wildlife crossing signs and evaluate the feasibility of fencing in high-risk areas (Moderate).
- Conduct vegetation management along roadways to improve driver visibility and reduce sudden animal crossings (Low).
- Install/enhance (oversized) speed limit signs (Low)
- Install speed feedback signs in areas where speeding contributes to crash risk (Low).

Delaware

US 20 Corridor

This is an approximately 1.21-mile corridor traveling east-west through the City of Delaware ([Google Map Link](#)). This corridor was identified as a safety candidate for review based on its segment-level PCR values. The roadway consists of a four-lane divided highway, two lanes in each direction, with wide shoulders. The speed limit is 65 mph, and the segment passes through rural and open areas.



Figure 43: Highway 20 corridor (Google Maps)

Crash Summary

A total of 20 crashes were recorded along this corridor from 2018 to 2024. Crash severities included two suspected serious injury, 2 suspected minor injury, 2 possible injuries, and 16 property damage only crashes. The predominant crash types included nine non-collision (single-vehicle) incidents, two rear-end crashes, and eight crashes with an unspecified manner of collision. Key contributing factors to crashes along this corridor include driver distraction, driving too fast for conditions, and loss of control. Additionally, 16 animal-related crashes represent a significant portion of the non-collision incidents, further indicating the need for improved wildlife management strategies. The segment ranks 71 out of 5,032 similar segments based on the KABCO Annual PCR of 2.280625. A review of available speed data indicate that 12.4% of vehicles exceeded the speed limit by 10 mph+, which high speeds often occurring during weekends and dawn hours.

Potential Safety Improvements

Based on the crash history and contributing factors, the following safety improvements are recommended:

- Install wildlife fencing as needed (Medium)
- Conduct speed studies to determine extent of speed along the corridor (Low).
- Install speed feedback signs to encourage compliance with speed limits and reduce speed-related crashes (Low).

Durango

Highway 3

This is an approximately 0.3-mile corridor traveling in an approximately east- west manner ([Google Map Link](#)). The segment was identified as a safety candidate for review based on non-animal related segment-level PCR values. The roadway is a rural, two-lane highway passing through the city. The speed limit along this corridor is 45 mph, and surrounding land uses include residential areas and woodlands.

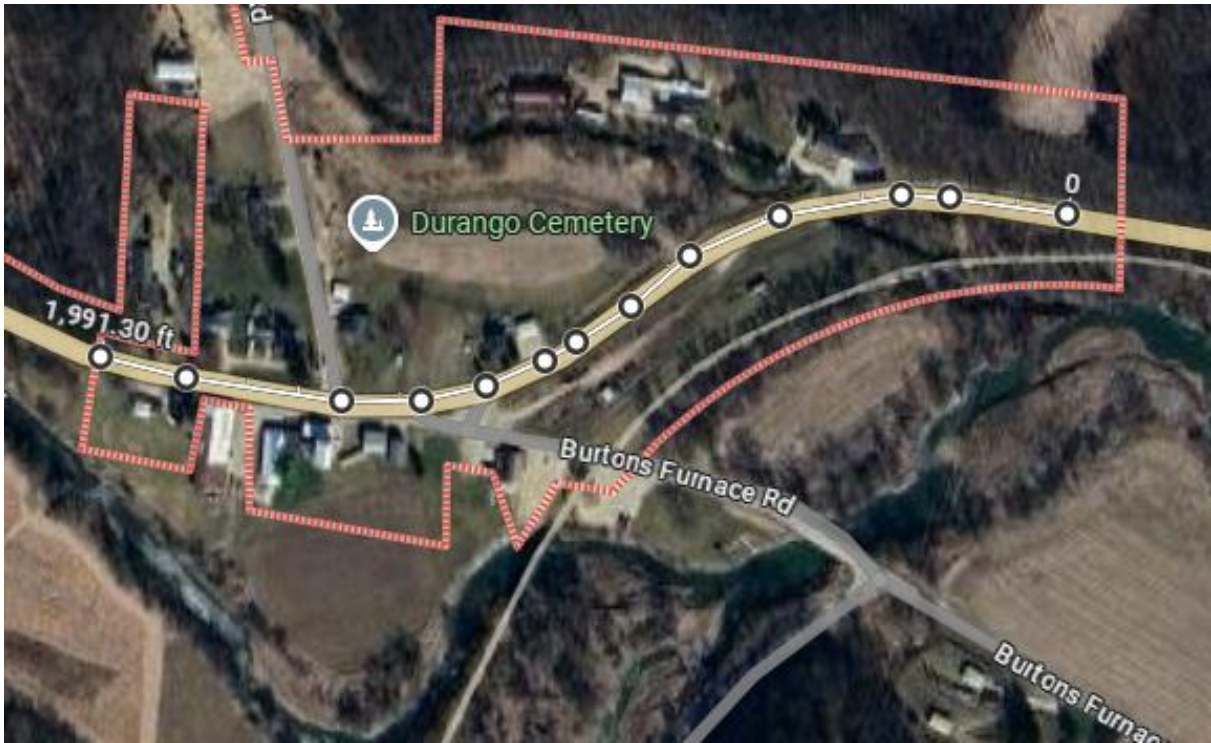


Figure 44: Highway 3 corridor (Google Maps)



Figure 45: Highway 3 roadway view (Google Maps)

Crash Summary

A total of six crashes occurred along the Highway 52 corridor over the past five years. No crashes involved fatalities or serious injuries, and all recorded incidents resulted in property damage only. The predominant crash type in this segment involves animal-vehicle collisions, with all six crashes attributed to this crash type. This indicates a possible need for wildlife mitigation strategies. The segment ranks 393 out of 5032 similar segments based on the KABCO Annual PCR value of 0.447509. Based on speed data from speed compliance dashboard, 4.2% of vehicles exceeded the speed limit by 10 mph+. This indicates that speeding is not a significant factor within the segment.

Potential Safety Improvements

Based on the crash history and contributing factors, the following safety improvements are recommended:

- Investigate the use of wildlife fencing along the segment (Medium)
- Clear roadside vegetation (trees) to improve driver visibility and reduce the likelihood of animal-vehicle collisions (Low).
- Install roadside delineators (retroreflective buttons on posts) to delineate curves (Low)
- Install fencing as needed to contain falling rock (Low/Medium)

Vulnerable Road Users

This section describes the factors and the screening process used to identify locations for potential safety improvements for non-motorists (namely bicyclists and pedestrians). Between 2014 to 2023, a total of 351 non-motorist crashes occurred among Iowa cities in the RPA region, with 170 crashes occurring from 2019 to 2023. The annual frequency of non-motorist crashes is fairly consistent. During both the five and ten-year analysis periods, approximately 76 percent of the non-motorist crashes cited above occurred in the City of Dubuque. In the City of Dubuque, 59 percent of the non-motorists were pedestrians, also representing 80 percent of the fatal and serious injuries between 2019 and 2023.

To best support improvement recommendations, particularly with respect to traditional safety funding opportunities, e.g. Iowa traffic safety improvement program (TSIP), emphasis was placed on site-specific vulnerable road user (VRU) crash experience and outcomes. The network screening performed to identify sites is discussed in the following section. This is then followed by a discussion of the specific sites identified by screening and the prospective countermeasures that could be applied to improve VRU safety.

Network Screening

Iowa DOT Composite Scores

In 2020, the Iowa DOT Systems Planning Bureau released “Statewide Bicycle and Pedestrian Systemic Safety Analysis 2020” (<https://iowadot.gov/iowainmotion/files/Statewide-Bike-and-Pedestrian-Safety-Analysis.pdf>). The purpose of this analysis was to “gain a better understanding of the crash risk of particular roadway and intersection features for pedestrians and bicyclists in Iowa”, with the goal of facilitating more efficient use of resources. Several datasets, including crash data (2009 to 2018), roadway and jurisdictional data and intersection data, were utilized to develop composite risk scores for every intersection and segment in Iowa. Attributes considered in both segment and intersection analyses included: average annual daily traffic (AADT), number of lanes and speed limit. Median type, parking type (urban only), shoulder type, shoulder rumble and shoulder width were also considered in segment analysis, while intersection analysis included intersection angle, intersection type, number of legs and traffic control. Composite scores were segregated by user type (pedestrian, bicyclist), facility type (intersection, segment) and location (urban, rural). Composite scores were presented in an interactive web map (<https://iowadot.maps.arcgis.com/apps/Cascade/index.html?appid=a47f7eacb1f04f21b4116ba1aac80b45>) as well as downloadable GIS datasets.

The following roadway characteristics were associated with the both urban segments and intersections with the highest risk to non-motorists.

- Speed limits between 25 and 35 mph
- Traffic volumes more than 3,000
- More than five lanes

Additional higher risk segmental characteristics included diagonal parking and hard surface medians without barriers. At intersections, five or more entering legs and skew angles of between 45 and 90 degrees also increased risk.

The Iowa DOT is currently (2025) updating the aforementioned analysis, but the results are not yet available. Most recently, the Iowa DOT published “Iowa’s Vulnerable Road User Safety Assessment” (https://iowadot.gov/traffic/pdfs/Iowa-VRU-Safety-Assessment_Final_Report.pdf), which was a requirement of the Bipartisan Infrastructure Law. The assessment reviewed and highlighted statewide safety challenges and identified specific projects. It also leveraged the “Statewide Bicycle and Pedestrian Systemic Safety Analysis 2020”. Several projects in high-risk rural and urban locations were identified; however, no projects were within the RPA region.

Unfortunately, due to a lack of comprehensive asset inventory, the analysis was unable to take into consideration the presence of absence of various VRU-related safety features, such as dedicated facilities (sidewalks, paths, bike lanes), crosswalks, traffic control devices, signing and markings.

The urban composite risk scores were used to identify the highest risk (top 20 percent) intersections and segments for pedestrians and bicyclists in the system. These locations were then spatially integrated with the 2014 to 2023 non-motorist crashes for network screening.

Crash Proximity

To identify localized areas of high non-motorist crash density, non-motorist crashes (2014 to 2023) were spatially grouped using a 250 feet spatial proximity. A distance of 250 feet was utilized because it is consistent with the general distance used for intersection crash analysis and is also reasonable to apply to segments, as groupings may be extended longitudinally and cumulatively beyond 250 feet. Crashes were then classified based on whether their general area grouping (defined by the ten-year period) was also represented in the most recent years of data.

School Proximity

Public and private school locations obtained from the Iowa Open Data portal were spatially integrated with the 2014 to 2023 non-motorist crashes for network screening. Distances of both 0.25 miles (typical for safe routes to school assessment) and 0.5 miles were employed. School locations and operational status were not verified.

Composite Screening

Screening was prioritized based on how many of the following qualifying criteria were satisfied.

- High urban intersection composite risk – pedestrians
- High urban intersection composite risk – bicyclists
- High urban segment composite risk – pedestrians
- High urban segment composite risk – bicyclists
- Part of crash grouping (ten-year analysis period)
- Part of crash grouping (five-year analysis period)
- Proximity to public school – 0.25 miles

- Proximity to public school – 0.5 miles
- Proximity to private school – 0.25 miles
- Proximity to private school – 0.5 miles

Overlap may exist among criteria, e.g. crashes within 0.25 and 0.5 miles of a school. Screening hierarchy was established based on crash year, crash grouping (more than one crash within five-year analysis period) and the total number of conditions satisfied, with the maximum being ten. In general, locations satisfying at least seven criteria were reviewed.

Given the limited number of fatal crashes, all sites involving a non-motorist fatal crash were included in the review. Some discretion was also used as other potential locations of interest became apparent during the review process or through discussions with local agencies. This section may not address all areas with possible safety concerns or opportunities for improvement.

Some of the sites presented in this section may also be discussed as part of the potential crash reduction (PCR) screening process. However, this section focused only on non-motorist crash experience.

Maquoketa

Intersection of North Main Street and Iowa 64 (Platt Street)

This signalized intersection is located in a low speed, commercial area. Platt Street is a state route, Iowa 64, and Main Street is a municipal road. Each approach has one through/right turn lane and a dedicated left turn lane. On-street parking is allowed downstream from the intersection approaches, longitudinally offset from the intersection with crosshatch pavement markings. On-street is also allowed upstream of the intersection but at a greater distance. Traffic volumes are approximately 6,900 along Platt Street and 3,700 to 5,000 along Main Street.

Pedestrian signal heads and activation buttons are present at the intersection. The north approach along Main Street approach has sharrows on the pavement. Pedestrian crossings are brick – a contrast in material and color from the adjacent PCC pavement.



Figure 46: Intersection of North Main Street and Iowa 64 (Platt Street), Westbound (Image Source: [Google Maps](#))

This location both had a fatal crash and satisfied the general screening criteria. The fatal crash occurred on June 23, 2020 at 9:01 involving a pedestrian and a westbound left turning vehicle that did not yield. Two other crashes occurred at this intersection, one of which involved a westbound, right turning vehicle. This location also satisfied eight of the ten evaluation criteria. Distance to private schools was not met.

Since this is an intersection with a primary road, any potential improvements should be done in collaboration with the Iowa DOT. Possible low-cost safety improvements may include.

- If not already present, add a leading pedestrian interval.
- Add transverse crosswalk markings, parallel to the brick crosswalks, to improve intersection conspicuity particularly at nighttime.
- Consider centerline hardening to reduce left turn speeds.
- Add painted bulb-outs (curb extensions) to provide pedestrians with more refuge, shortening the crossing distance and reduce vehicle speeds.

Manchester

Intersection of N Franklin Street (Iowa 13) and W Acres Street

The intersection is four-leg with two approaches offset. Three of the approaches have a dedicated left turn lane. Major approach AADT is approximately 8,300, with minor approach volumes of approximately 400 to 2,200 vpd. All approaches are low speed, 25 to 35 mph. The intersection is signalized with three marked crossings with pedestrian signal heads and activation buttons. Pedestrian signing is also present.



Figure 47: Intersection of N Franklin Street (Iowa 13) and W Acres Street (Image Source: [Google](#))

Five screening criteria, four of which were related to higher risk facilities, were satisfied at this location. However, a fatal crash also occurred. The fatal crash occurred September 6, 2015 at 21:56 and involved a pedestrian under the influence. This is the only crash at this intersection. Given the circumstances, and existing safety features at the intersection, no treatment strategies are recommended.

Downtown Manchester

The downtown Manchester area was defined by grouping eight non-motorist crashes during 2014 to 2013. The area includes three blocks in the low speed, commercial business district.

- E Main Street from S Franklin Street to S Madison Street
- S Franklin Street from E Delaware Street to E Main Street
- N Franklin Street (Iowa 13) from E Main Street to E Fayette Street

Five non-motorist crashes within this area occurred between 2019 and 2023. Crash experience included one incapacitating injury crash, one non-incapacitating injury crash and three possible injury crashes. Four crashes occurred at intersections.

Nine of ten screening criteria were satisfied for crashes at this location, including crash grouping. Three additional crashes occurred in this area from 2014 to 2018. Only 2019 to 2023 crashes are discussed in this section.

Intersection of Franklin Street and Main Street

This intersection is signalized, with maximum traffic volumes of 9,300 on the west leg and 8,200 on the north leg, both of which are Iowa 13. Each approach has dedicated left turn lanes, with

staggered (setback) left turn stop lines. The position of these stop lines better facilitate right turns of heavy vehicles as well as improve sightlines for through and right turning vehicles.

On-street parking is allowed on all approaches, both upstream and downstream of the intersection. The parking is longitudinally offset from the intersection. The intersection currently has many pedestrian safety features, including sidewalks, lighting, pedestrian signals, activation buttons, marked crosswalks and painted bulb-outs.



Figure 48: Intersection of Franklin Street and Main Street (Image Source: [Google](#))

Between 2019 and 2023, two crashes occurred at the intersection of Franklin Street (Iowa 13) and Main Street. One crash involved an eight-year-old bicyclist crossing Main Street. The bicyclist was crossing the road at the crosswalk when they were struck by a westbound vehicle moving straight. Limited details regarding bicyclist and vehicle contributing circumstances were provided in the coded crash data. The other crash involved a southbound, right turning vehicle striking two elderly non-motorists reported as having no contributing circumstances.

Possible safety improvements may include a leading pedestrian interval could be considered, if not already in operation. The interval may be time of day dependent.

Intersection of Franklin Street and Delaware Street

The intersection of Franklin Street and Delaware Street is a three-leg intersection with marked crossings located along the north approach (Franklin Street) prior to Delaware Street and across Delaware Street. Sidewalks are immediately adjacent to the curb on both sides of the road.



Figure 49: Intersection of Franklin Street and Delaware Street (Image Source: [Google](#))

A worker was struck at this intersection in August 2021. While the crash history at this site does not point towards any specific patterns that should be addressed, potential safety improvements have still been identified at this intersection. Those potential improvements include:

- Because the Franklin Street traffic is uncontrolled at this intersection, install pedestrian crossing signs (W11-2) in advance of the Franklin St crosswalk. Position signs in a manner as to not be obscured by parked vehicles.
- Improve lighting at the Franklin Street crosswalk.

Intersection of Main Street and Madison Street

This intersection is signalized, with maximum traffic volumes of 6,300 on the west leg and 1,500 on the north leg, both of which are Iowa 13. Each approach has dedicated left turn lanes, with staggered (setback) left turn stop lines. On-street parking is allowed on all approaches, both upstream and downstream of the intersection. The parking is longitudinally offset from the intersection. The intersection currently has many pedestrian safety features, including sidewalks, lighting, pedestrian signals and marked crosswalks. No pedestrian activation buttons are present.



Figure 50: Intersection of Main Street and Madison Street (Image Source: [Google](#))

A crash occurred at this intersection during the morning of August 6, 2020. A northbound, left turning vehicle failed to yield and struck a pedestrian crossing at the crosswalk. Potential improvements at this intersection include the following. All improvements depend on pedestrian volumes.

- A leading pedestrian interval could be considered, if not already in operation. This phase may be time of day dependent.
- Add a pedestrian activation button.
- Add painted bulb-outs (curb extensions) to provide pedestrians with more refuge, shortening the crossing distance and reduce vehicle speeds.

Main Street (Midblock): Franklin Street to Madison Street

The cross-section of this location along Main Street includes on-street parking (both sides), one through lane in each direction and a center left turn lane. Sidewalks are immediately adjacent to the curb on both sides of the road. Traffic volume is approximately 6,300.

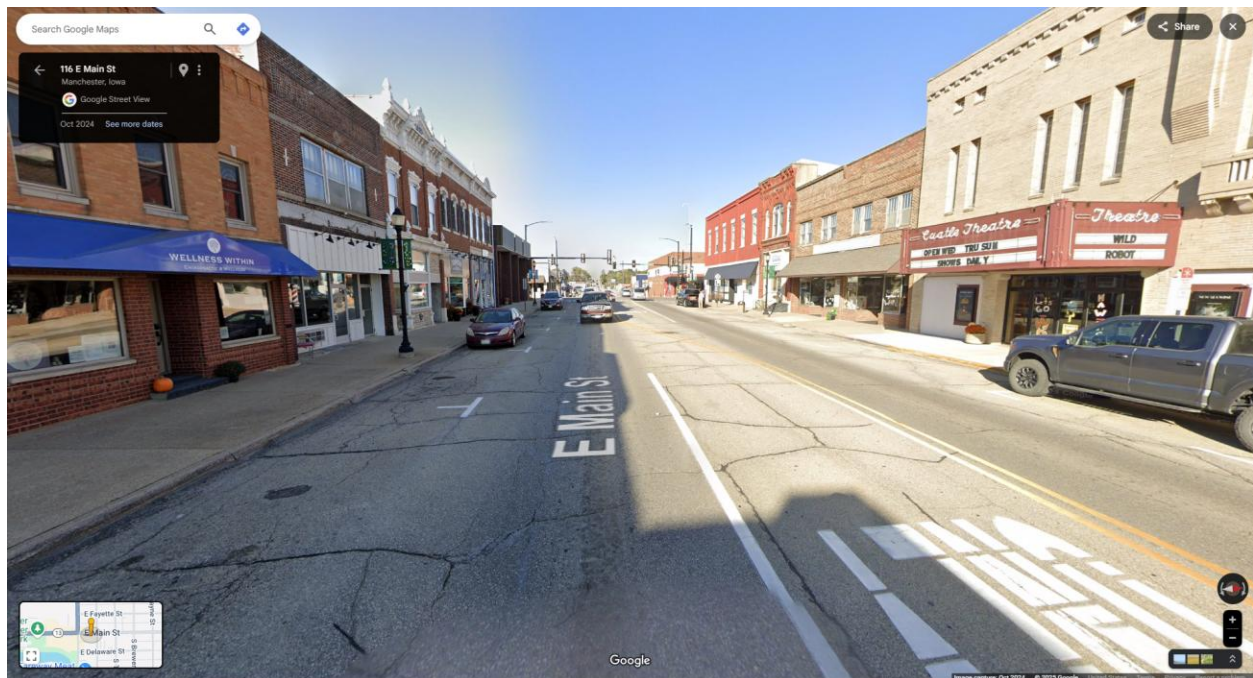


Figure 51: Main Street (Midblock): Franklin Street to Madison Street (Image Source: [Google](#))

On October 13, 2019 at 20:40, a 13-year-old pedestrian was struck while crossing the street mid-block. Other than possibly improving lighting along the corridor, there are limited engineering improvements that may be made to limit improper crossing at this location. However, this location is between two intersections of interest, demonstrating the high non-motorist activity along the corridor.

City of Farley

A fatal crash occurred at 2:56 on April 6, 2014 on the eastbound US 20 ramp. The non-motorist was under the influence. There were no other crashes at this location during the ten-year analysis period. Given the circumstances of the crash and character of the roadway (it is not designed to accommodate non-motorists), engineering countermeasures are somewhat limited and not necessarily appropriate.

Other Locations Shared by Agencies

During discussions with agencies, city officials also shared non-motorist related concerns.

Delhi

Improvements may be made to the existing pedestrian crossings near Maquoketa Valley Middle and High Schools. Simple, low cost improvements may include the following.

- Add pedestrian crossing signs at existing crossings.
- Add pedestrian signage in advance of the schools along South Street and 3rd Street.

Bellevue

Iowa 62 Near Bellevue High School

There are existing local concerns along Iowa 62 near Bellevue High School, particularly with respect to pedestrians crossing between the high school and Family Dollar Store on the south side of the road. West of the high school, the road cross-section includes a through lane in each direction of travel and paved shoulders. The cross-section then changes to curb and gutter. Traffic volumes are approximately 2,700 vpd.

Evidence was provided by the City of Bellevue of a near miss of pedestrians crossing the road at this location. As shown in the image below, two pedestrians can be seen crossing the road from south to north. A pedestrian crosses directly in front of the westbound sedan. Brake lights are visible.



Figure 52: Iowa 62 Near Bellevue High School - Pedestrian Near Miss (Image Source: City of Bellevue)

A new elementary school is being constructed east of the high school which is increasing the concerns of some, particularly with respect to vehicle speed at this location. The roadway is 45 mph, except when the school zone is active. The speed limit drops to 35 mph and is indicated by flashing beacons at the regulatory speed limit sign. No sidewalks exist to the west of the high school. East of the school, a sidewalk is located on the north side of the road. Pedestrian crossing signs are located approximately 900 feet to the west of the west high school entrance, and approximately 600 feet east of the east high school entrance. No other pedestrian signs are located near the school.

Speed may be an issue at this location, particularly west of the hospital. For example, connected vehicle data for one month, summarized along Iowa 62 from near the school to one-mile west, indicated that approximately 34 percent of vehicles (1,700 vehicles total) were traveling five mph or more over 55 mph. Unfortunately, the currently available data does not provide additional granularity in near the high school.

Since this is a primary road, any improvements would have to be done in conjunction with the Iowa DOT. Possible safety improvements at this location include the following.

- Increase pedestrian signage closer to the schools.
- Monitor vehicle speeds near the schools and consider adding speed feedback signs along the corridor, particularly in the eastbound direction after transitioning from 55 mph.
- Monitor pedestrian crossing activity and consider adding a marked crossing in an appropriate location (such as the west high school driveway) serving the development north and south of Iowa 62. Development north of Iowa 62 includes schools, senior housing and residential – all of which may want to access the development to the south (Family Dollar, Community Center) by biking or walking.
- Permanently reduce the regulatory speed limit in the area to 35 mph.
- Extend the existing sidewalk west to west high school entrance.

Intersection of Court St and US 52

The City of Bellevue also commented about the intersection of Court Street and US 52, particularly with respect to high commercial and tourist activity in the area and no marked pedestrian crossing of US 52. Along US 52, proximate crossings (from south to north) are located at Vine Street, Chestnut Street and Market Street. The distance between the Chestnut Street and Market Street crossings is approximately 1,250 feet. Court Street is located approximately equidistance between these crossings. Pedestrian signing exists in advance of and at these aforementioned crossings.

The intersection of Court Street and US 52 is partial stop controlled from Court Street. Court Street has two through lanes and on-street parking on each side. Parking is longitudinally offset from the intersection with painted curbs. The traffic volume along Court Street is approximately 610 vpd. Sidewalks are also located on both sides of the street. The speed limit is 25 mph. The crossing of Court Street is not marked with signs or pavement markings.

US 52 also has two through lanes, a speed limit of 25 mph and on-street parking on both sides of the road. On-street parking is continuous along the east side and longitudinally offset from the intersection with painted curbs. The traffic volume is approximately 2,900.



Figure 53: Intersection of Court Street and US 52, Eastbound (Image Source: [Google](#))



Figure 54: Intersection of Court Street and US 52, Northbound (Image Source: [Google](#))

Since this is a primary road, any improvements would have to be done in conjunction with the Iowa DOT. Possible safety improvements at this location include the following.

- Increase pedestrian signage closer to the intersection with Court Street, so motorists are made aware of possible improper crossing.
- Monitor pedestrian crossing activity and consider adding a marked crossing of US 52 at the intersection of Court Street.

Goose Lake

The City of Goose Lake noted a concern about an incomplete sidewalk north of Iowa 136, near Northeast Middle-High School. This is, in part, due to students crossing the road near the gas station/convenience store with a driveway approximately 300 feet to the west. The nearest marked crossing (via signage only) from the aforementioned sidewalk termini is approximately 1,200 feet to the west and approximately 600 to 900 feet from the gas station/convenience store driveways. A sidewalk runs parallel to Iowa 136 on the southside beginning at the west driveway.

Iowa 136 has two through lanes and narrow paved shoulders between the school and gas station/convenience store, with additional unpaved shoulders near the school. Traffic volume is approximately 1,900 vpd. The speed limit east, west and adjacent to the school is 45 mph, except when the school zone is active. The speed limit drops to 35 mph and is indicated by flashing beacons at the regulatory speed limit sign. In the eastbound direction, the speed limit is reduced to 30 mph between the school and gas station/convenience store. The speed limit in the westbound direction is also 30 mph beginning near the corporate limits. Pedestrian signs are located in advance of the school in both directions of travel.



Figure 55: Iowa 136 Near Northeast Middle-High School (Image Source: [Google](#))

Since this is a primary road, any improvements would have to be done in conjunction with the Iowa DOT. Possible safety improvements at this location include the following.

- Add pedestrian signage between the school and gas station/convenience store in the westbound direction and closer to the gas station/convenience store in the eastbound direction.
- Extend the sidewalk along the northside of Iowa 136 to Emma Court or perpendicular to the east gas station/convenience. Monitor pedestrian crossing activity and consider adding a marked crossing in this general area.

Maquoketa

The City of Maquoketa has interest in possibly creating a new trail along Apple Street, connecting all city parks and the Jackson County Fairground. Crossing improvements may also be warranted at the intersection of Main Street and Apple Street. Currently, the intersection is partial stop controlled from Apple Street. Sidewalks are present in both directions of travel along all approaches. Crosswalks are painted, but there are no additional safety features.



Figure 56: Intersection of Main Street and Apple Street (Image Source: [Google](#))

Possible safety improvements at this location include the following.

- Add pedestrian signage at/near the marked crossings.
- Designate Apple St corridor, or portion, as allowing bicyclists to use full lane, including appropriate periodic sharrow on the pavement R4-11 regulatory signs (bicycles may use full lane).

Graf

The City of Graf shared concerns about vehicle speeds entering town. Although speed feedback signs are located northbound and southbound while entering the town on Graf Road, they are currently not working. The City of Graf also mentioned that children may be walking along Graf Road to the bus stop on Graf Court or crossing the road to Graf Park located on the east side of the road.

Traffic volume is approximately 400 vpd along Graf Road. It has two through lanes and no shoulders. The speed limit is 25 mph transitioning from 40 mph northbound and 45 mph southbound. Pedestrian signage is present entering Graf both northbound and southbound. Heritage Trail is located parallel to the east of Graf Road. At some locations, the trees are located between the road and trail.



Figure 57: Graf Road, Northbound (Image Source: [Pathweb](#))



Figure 58: Graf Road, Southbound (Image Source: [Pathweb](#))

Since this is a secondary road, any improvements would have to be done in conjunction with Dubuque County. Possible low cost safety improvements at this location include the following.

- Add pedestrian signage in advance of Graf Park and Graf Court.
- Monitor pedestrian volumes and assess whether a marked crossing may be warranted near Graf Court, connecting to Heritage Trail, or the Graf Park entrance.
- Step down the speed limit prior to the 25-mph speed limit change.
- Repair or replace existing speed feedback signs.

Wheatland

The City of Wheatland shared non-motorist infrastructure background, possible needs and concerns. A general concern was discontinuous or missing infrastructure. Two priorities and concerns along Toronto Street included the following.

- Adding a sidewalk along Toronto St between Lincoln Way and Vine Street.
- Adding a marked crosswalk across Toronto Street at the intersection of Park Street, near Calamus Wheatland High School. Elementary school student pick up is located at the high school. Possible safety improvements may include extending the sidewalk along Toronto Street and adding a signed and painted crosswalk.



Figure 59: Intersection of Toronto Street and Lincoln Way (Image Source: [Google](https://www.google.com/maps))



Figure 60: Intersection of Toronto Street and Park Street (Image Source: [Google](#))

Another concern noted by the city was non-motorist traffic across and along US 30 near Dollar General. **Error! Reference source not found..** US 30 has paved and unpaved shoulders at this location, and traffic of approximately 2,600. The speed limit is 50 mph.

Since this is a primary, any improvements would have to be done in conjunction with the Iowa DOT. A possible low cost safety improvements at this location may include monitoring pedestrian and bicyclist volumes and assess whether non-motorist signage may be appropriate along US 30 in advance of Dollar General. Motorists may not expect such activity in the area.



Figure 61: US 30 Near Dollar General (Image Source: [Google](#))

Miles

Among several non-motorist related topics discussed with the City of Miles was a possible crossing near the gas station/convenience store located on the southwest corner of the intersection of Ferry Road and Iowa 64. Ferry Road has two through lanes at this location and an AADT of approximately 1,300 vehicles. A sidewalk is located on the east side of Ferry Road only. The city indicated that pedestrians generally use the steps connecting Ferry Road to the east sidewalk to access the road and cross midblock.



Figure 62: Ferry Road Approaching Intersection with Iowa 64 (Image Source: [Google](#))

Possible low cost safety improvements at this location may include.

- Adding pedestrian signage along Ferry Road, near the intersection with Section Road. This may help make drivers more aware of possible unexpected non-motorist activity within this block.
- Monitoring pedestrian crossing activity along this block and assess whether a marked crosswalk may be warranted. The crosswalk would likely need to be located midblock, south of the gas station/convenience as there is no east/west sidewalk near Iowa 64.

Potential Systematic and Systemic Safety Improvements

Given the random nature and limited extent of VRU crashes, targeted improvements throughout agencies is also recommended, including locations without crash experience. Citizen feedback consistently referred to the lack of non-motorist -- particularly pedestrian -- infrastructure, including both sidewalks and marked crossings. Recommended priorities include the following.

1. Locations with characteristics identified by the Iowa DOT “Statewide Bicycle and Pedestrian Systemic Safety Analysis 2020” as higher risk, focusing on areas without infrastructure or inadequate infrastructure to support non-motorist demand.
2. Locations with high non-motorist activity both adjacent to and crossing roads, such as near schools, commercial and residential areas on opposite sides of the road, etc.
3. Locations with gaps in non-motorist infrastructure, such as discontinuous sidewalks both longitudinally and crossing roads.
4. Locations with no non-motorist infrastructure.

5. Locations with sight distance issues.

Roadway Conversion Candidate Sites

Overview

This summary provides an overview of candidate corridors identified for potential 4-to-3 lane conversions across various communities in the RPA region. The identification process followed the Iowa Department of Transportation's (Iowa DOT) statewide Road Diet Screening Guidance for Potential Lane Reconfiguration¹, which outlines strategies for enhancing safety and operations on four-lane undivided roadways. Converting such corridors to three lanes, two through lanes with a center two-way left-turn lane (TWLTL), has been shown to reduce crashes, calm traffic, and improve access control. For 4-to-3 lane conversions, emphasis was placed on corridors with moderate to high crash rates, multiple access points, and mid-block turning activity, where the addition of a center two-way left-turn lane could enhance safety and mobility.

Corridors were initially filtered using data from the Roadway Asset Management System (RAMS) based on the following Iowa DOT thresholds:

- Existing four-lane undivided roadway geometry,
- A minimum corridor length of 0.3 miles,
- Average annual daily traffic (AADT) volumes generally under 15,000 vehicles and not less than 6,000, and
- Documented history of rear-end, angle, or turning-related crashes.

Further analysis was conducted using ArcGIS Pro, incorporating statewide crash data (2018–2024), functional classification, access point density, and land use patterns. Candidate corridors with frequent commercial driveways, recurring turning conflicts, or constrained intersection spacing were prioritized. Google Street View and local imagery were also reviewed to verify geometric features and the presence or absence of on-street parking, which can influence the feasibility of lane reallocation.

This screening process serves as a replicable framework for evaluating 4-to-3 lane conversions, balancing traffic operations with opportunities for safety improvement in mid-volume corridors.

DeWitt

11th Street

The study corridor spans approximately 2.16 miles, running east-west through the city of DeWitt ([Google Maps Link](#)). It is currently a four-lane urban roadway considered for transition into a three-lane configuration beyond the last signalized intersection. The corridor land uses include commercial with some residential. The posted speed limit is 35 mph, and the corridor serves a mix of commercial and residential land uses, with several private driveways and business access points along the route. The segment includes a combination of stop-controlled and signalized

¹ Office of Systems Planning and Office of Traffic and Safety. Statewide Screening for Potential Lane Reconfiguration. Ames, Iowa Department of Transportation, May, 2017.

intersections. ADT along the corridor is 8,300 vehicles, and the DOT Road Diet AADT Classification of this corridor is that it is in the medium volume range.



Figure 63:11th Street corridor, De Witt (Google Maps)



Figure 64: 11th Street corridor StreetView, DeWitt (Google Street View)



Figure 65: 11th Street corridor segment merge from 3-lane roadway (Google Street View)

Crash Summary

Between 2018 and 2024, a total of 130 crashes were reported along the 2.16-mile segment of 11th Street. The highest concentration of crash activity occurred during the late afternoon, particularly between 3:00 and 4:00 PM. Of these incidents, 51 occurred at intersections, highlighting critical conflict points along the corridor.

The majority of the crashes were property damage only, with 99 such cases recorded. There were also 19 crashes resulting in possible or unknown injuries, 10 involving suspected minor injuries, and two involving suspected serious injuries.

Broadside collisions were the most prevalent crash type, accounting for 46 crashes, followed by 23 rear-end crashes and 21 sideswipe collisions in the same direction. Other notable crash types included 18 angle crashes involving oncoming left-turn movements, 11 single-vehicle (non-collisions), and six head-on crashes.

Several contributing factors were identified in the crash reports. Failure to yield the right-of-way emerged as a major issue, with 31 crashes involving drivers turning left without yielding and 22 involving failure to yield at stop-controlled intersections. Additional factors included 15 crashes caused by improper or erratic lane changes, several instances of speeding-related loss of control, driver distraction, and five crashes attributed to running red lights.

Conclusions and Recommendations

These patterns suggest operational and visibility issues along the corridor, particularly at intersections and access points, making the corridor a strong candidate for safety interventions such as lane reconfiguration. Such a reconfiguration would remove left-turning traffic from through traffic streams, reducing potential conflicts.

South 6th Street

The South 6th Street corridor in DeWitt spans approximately 0.53 miles, running in a north-south direction from Lake Street toward Highway 30 ([Google Maps Link](#)). The roadway is 24 feet wide and carries an Average Annual Daily Traffic (AADT) of 5,900 vehicles, qualifying it for consideration under Iowa DOT's road diet screening thresholds. The segment is situated in a predominantly commercial area, particularly near Lake Street, where numerous driveways provide direct access to local businesses. Notably, this segment experiences frequent truck traffic, further emphasizing the need for organized turn accommodations.

The current two-lane undivided configuration results in multiple turning movements across travel lanes, and the lack of dedicated left-turn facilities can contribute to sudden stops and rear-end risk, especially with commercial vehicles navigating in and out of driveways. The relatively narrow width would require a targeted feasibility assessment, but there may be opportunities to reallocate space or modestly widen shoulders to accommodate a three-lane cross-section, including a center two-way left-turn lane.



Figure 66: South 6th Street corridor, DeWitt (Google Maps)

Crash Summary

Between 2018 and 2024, a total of 14 crashes were recorded along South 6th Street. While the overall crash frequency is modest, the pattern of collision types and contributing factors indicates a need for operational improvements. The corridor experienced one suspected serious injury crash, one minor injury, one possible injury, and 11 property-damage-only crashes.

The most frequent crash types were rear-end collisions (four) and broadside crashes (six). Rear-end crashes are often associated with stop-and-go conditions caused by turning vehicles, particularly when those vehicles must slow or stop in the through lane. Broadside crashes

typically stem from unprotected turning movements or misjudgments at unsignalized driveways or side streets, which is consistent with the corridor's business-access environment.

Among the top contributing factors, driver distraction was cited in three crashes, and failure to yield while making a left turn appeared in two crashes. Other contributing causes included running stop signs and following too closely, both of which are indicative of traffic conflicts exacerbated by insufficient lane separation or turning space.

Conclusions and Recommendations

Given the commercial land use, presence of driveways, and pattern of turning-related crashes, South 6th Street is a candidate for a two-to-three lane conversion. A TWLTL would improve access management by removing turning vehicles from through traffic and reducing delay-related crashes. While the current 24-foot width presents some constraints, the existing right-of-way should be further evaluated for opportunities to re-stripe or slightly expand the corridor, particularly in areas with available shoulder or frontage space.

Truck volumes and driveway access further underscore the value of a dedicated turn lane to separate slow-turning vehicles from general traffic. Implementing a road diet on this segment could provide benefits to traffic flow and safety, particularly for business patrons and freight movements.

Manchester

East Main Street

This corridor runs east to west along East Main Street in Manchester, extending from South Franklin Street to 190th Avenue ([Google Maps Link](#)). The segment spans a width of approximately 40 feet and generally maintains an Average Annual Daily Traffic (AADT) of 6,000, although traffic volumes vary across different parts of the corridor. The roadway meets the minimum AADT threshold for consideration under the Iowa DOT's screening methodology for potential lane conversions.

The land use context along this stretch is primarily residential, with a moderate number of driveway access points along both sides of the corridor. Some intersections along the corridor already include dedicated left-turn lanes, indicating a recognition of turning movement needs at key locations. The relatively generous pavement width of 40 feet suggests that a reconfiguration to a three-lane cross-section, consisting of two through lanes and a center two-way left-turn lane, would be geometrically feasible without major infrastructure modifications.



Figure 67: East Main Street, Manchester (Google Maps)

Crash Summary

Over the most recent six-year period, a total of 51 crashes were recorded along this corridor. These included one suspected serious injury crash and one suspected minor injury crash, with six additional crashes resulting in possible or unknown injuries. The remaining 43 crashes were classified as property damage only.

In terms of contributing circumstances, the most common crash causes were failure to yield the right-of-way from stop signs (10 occurrences), following too closely (five), and lane departures and improper lane keeping (four). There were also three crashes caused by drivers running traffic signals and two involving unsafe passing maneuvers.

The most frequent collision types included broadside crashes (17), rear-end crashes (nine), and sideswipes in the same direction (11). While rear-end crashes were not dominant in this corridor, the pattern of turning- and angle-related crashes suggests that a center turn lane may help reduce conflicts associated with driveways and unsignalized intersections.

Conclusions and Recommendations

The existing cross-section and land use characteristics make East Main Street a viable candidate for a two-to-three lane conversion. The roadway's width is sufficient to accommodate a center turn lane without requiring extensive reconstruction or right-of-way acquisition. Although crash patterns do not overwhelmingly point to rear-end collisions, the frequency of turning-related conflicts, particularly broadside crashes, supports the consideration of a TWLTL to improve safety and traffic flow at midblock access points.

Given these findings, a road diet conversion could be recommended for further feasibility analysis, including community input and review of operational impacts at higher volume segments. A three-lane configuration may better serve the corridor's residential context by facilitating safer and more predictable left-turn movements while preserving traffic capacity.

Roadway Issues

Cascade

1st Avenue West and Buchanan Street

The comment submitted for this location was that it is difficult to see coming off Buchanan Street as a driver cannot see to the west or east very well. A combination of a curve and two hills (to the south) add to the complexity at the intersection. This is a difficult location in that there are buildings/businesses located in each quadrant that limit sight distance. Potential safety countermeasures may include:

- Investigate whether all-way stop control is needed at the intersection and implement (Low)
- Restrict parking adjacent to the intersection to increase sight distances (Low)

DeWitt

10th Street and 6th Avenue intersection

A comment was received for this intersection indicating that there is poor visibility for east-west traffic on 10th Street. Potential safety countermeasures may include:

- Investigate whether all-way stop control is needed at the intersection and implement (Low)
- Restrict parking adjacent to the intersection along 6th Avenue to increase sight distances (Low)
- Investigate the construction of a mini-roundabout at this intersection and construct if feasible (High)

Lake Street and 6th Avenue intersection

A comment was received for this intersection indicating northbound traffic drives north in southbound lane when trains are present. Drivers making this maneuver are trying to get to Lake Street to head west. Potential safety countermeasures may include:

- Consider installation of plastic tubular markers along the centerline of 6th Avenue approaching the intersection/crossing to discourage drivers from traveling in the wrong lane (Low)

Lake Street and 9th Avenue intersection

A comment was received that indicated that long vehicles have to stop in conflict with the railroad crossing arms as traffic on Lake Street is not stop-controlled. The railroad continues to increase the elevation of the crossing, which challenges low or long vehicles. Potential safety countermeasures may include:

- Restrict heavy vehicle use of 9th Avenue (Low)
- Install low vehicle crossing warning signs (Low)
- Investigate alignment change on Lake Street (move roadway slightly south within existing right of way) to provide more space for long vehicles past the crossing (High)

1st Street and 11th Avenue intersection

A comment was received that indicated that pedestrians and drivers would benefit from a stop sign at this intersection. It is a strange intersection and oftentimes cars go flying by on 1st Street. They [crosstraffic] are hard to see for drivers coming down 11th Avenue because it is a bit curvy there. A stop sign on 11th Avenue at that corner would provide safety to all people involved. Potential safety countermeasures may include:

- Perform study to determine whether a stop sign on 11th Avenue is warranted and if necessary install (Low)
- Investigate squaring up the intersection into a t-configuration (High)

Dyersville*Olde Hawkeye Road and Wuchter Road*

The comment submitted for this location was that the turn (presumably the right turn when heading east on Old Hawkeye Road)) to get to US 20 is not well marked and could use flashing lights and other treatments to get drivers attention. Many drivers go straight, passing through the intersection instead of turning right and end up getting in the dead-end portion of the roadway unable to turn around. [Note – flashing beacons are not used in conjunction with Route types of signs such as those presently posted in advance of and at the intersection.] Potential safety countermeasures may include:

- Investigate approaches to increase conspicuity/visibility or current US route marker signs and implement when practical (Low)
- Increase the size of the existing Dead End sign at the intersection and add metal pennants or a flashing beacon to increase conspicuity (Low)
- Work with the property owner in the southwest corner of the intersection to clear brush/trees and create a larger sight triangle (Low)
- Consider conversion of the intersection into a curve, with the dead end portion narrowed down to provide the appearance of a driveway (which it primarily acts as now) (High)

Greeley*Highway 38 and Jet Road intersection*

The comment received for this site indicated that there have been a couple crashes at this intersection, including one that was fatal. The city believes the vicinity of this intersection would be a good location for flashing speed signs. Potential safety countermeasures may include:

- Install permanent speed feedback signs in appropriate locations along Highway 38 to address speeding (Low)
- Enhance existing stop ahead warning sign on Jet Road with metal pennants or flashing beacon (Low)
- Install overhead destination lighting to provide nighttime indication of intersection presence (Medium)
- Investigate feasibility of realigning Jet Road slightly to create a more squared up intersection and construct (High)

Hopkinton

Culver Road and NW 4th Street intersection

A comment was received about this intersection that indicated that a three way stop is in place during school hours, but that the intersection needs to be redesigned so that it is easier to navigate for drivers. The roadway is too narrow on NW 4th Street. Potential safety countermeasures may include:

- Depending on right of way ownership, consider “squaring up” NW 4th Street to form a t-intersection (Medium)
- Reconfigure pedestrian crossings if intersection is changed (Low)
- Employ enhanced crosswalk patterns (Low)
- The current “flip down” stop signs are not something that is shown in or compliant with the MUTCD². Additionally, the placement of the signs is not standard for an intersection. The signing employed at the school crossing should be changed to a traditional “roll out” stop sign (Low)

Hopkinton

Marion Street and SW Mill Street intersection

A comment was received regarding speeds of vehicles entering the city northbound. Specifically, as traffic enters it is exceeding the speed limit (also true for southbound traffic speeding up leaving the city). Potential safety countermeasures may include:

- Consider installing permanent or employing temporary speed feedback signs for northbound traffic in this area (Low)
- Apply optical speed bars to pavement to produce a response from drivers to slow down (Low)

Epworth

Main Street and Center Avenue intersection

A pair of comments were received regarding this intersection. The first comment stated that traffic headed north/south on Center Ave have a stop sign at Main Street, but with the angle of the street and on street parking, drivers cannot see if cars are coming without pulling most of the way into the intersection. The second comment echoed that sentiment, stating that this intersection should be a four-way stop, both because of vehicle traffic and vehicles not yielding to pedestrians. Potential safety countermeasures may include:

- Investigate and implement (if feasible) conversion to all-way stop control at the intersection (Low)
- Determine if parking restrictions around the intersection are necessary to provide additional sight distance (Low)

² With respect to compliance, when “flipped closed” the stop signs no longer appear reasonably similar to a stop sign in shape. The intent of signing is to present the same shape consistently to breed respect from drivers, and presenting the shape of half a stop sign fails to do that.

Main Street between Center Avenue and 1st Avenue SW

A comment was received that indicated that extended pickup trucks parking along Main Street have become a safety hazard. These vehicles are about 1-2 feet longer than the parking slots and drivers on Main Street cannot see a vehicle backing out next to these trucks. It also is dangerous for pedestrians. No safety solutions are available to address this type of issue, short of reconfiguring the style/layout of parking spaces along Main Street.

Center Avenue and Frontage Road intersection

A comment was received about this intersection that indicated that traffic is concerning during school arrival and dismissal times, especially heading east from the high school. Traffic does not flow well, and this would be an ideal intersection for a roundabout. Potential safety countermeasures may include:

- Investigate conversion of the intersection to a roundabout and construct if feasible (High)

General (no specific location)

A general comment was received about roadway and pedestrian safety in the city. This comment indicated that intersections in Epworth are unsafe for pedestrians and drivers. While there are not multiple lanes, a car will pass around another that is waiting to turn left. Before and after school, this is dangerous. Traffic lines up along the highway and it is difficult to get out after dropping kids off the elementary school. With a college, high school, and elementary school within a mile of each other, there should be a roundabout at Center Avenue and Frontage Road (Jacoby). Safety treatments for other locations are discussed in other portions of this section and will be not provided here.

Manchester*US 20 and Highway 13 interchange*

A comment was received for this interchange that crash history and the continued increase in traffic volumes are a concern. The speed limit along Highway 13 at 55 mph, with significant turning movements to and from the US 20 ramps. Potential safety countermeasures may include:

- Add dedicated left turn lanes to Highway 13 to separate turning movements to the US 20 ramps from through traffic (High)
- Determine whether a speed zone (speed limit reduction) on Highway 13 is needed and implement (Low)

Highway 13 and Honey Creek Road intersection

A comment was received about this intersection being terrible roadway geometry. A similar sentiment was echoed by the city during a plan meeting. Potential safety countermeasures may include:

- Investigate if an alternative intersection design is feasible. For example, it appears adequate right of way is available to convert this location into a roundabout. Construct alternative intersection if possible (High)

- Determine if lower speed limits are needed along Highway 13 (currently 45 mph) and implement if necessary (Low)

Pedestrian Issues

Sherill

Sherill Road

Two comments were received for Sherill Road as it passes through the city. The first comment for this segment is that there is no shoulder on the roadside and limited sidewalks in town. Additionally, during the winter the snow is not cleared/shoveled. The second comment indicated that speed and the lack of sidewalks are safety concerns in the vicinity of Durango Road. Potential safety countermeasures may include:

- Complete the build-out of sidewalk infrastructure along Sherrill Road (Medium-High)
- Enact (or enforce existing) snow removal ordinance on sidewalks (Low)
- Consider installing permanent or employing temporary speed feedback signs along Sherrill Road (Low)

Delaware

Highway 38 (south of the city)

The issue submitted for this location indicated that this corridor is dangerous for bicyclists to ride along and the question was asked whether widening the shoulders would be an option. The site is located outside of city limits, and any improvements such as paved shoulders would fall to the county. Delaware County will be receiving a County Road Safety Plan, and if paved shoulders are suggested for this corridor, they should be pursued, with the benefits to bicyclists considered when pursuing funding.

Maquoketa

Briggs Elementary/Little Bear Park area

The comment received for this location indicated that there is high child congestion during school times. Drivers and children (pedestrians) are together in organized chaos. Apple Street would benefit from having a safe pedestrian path (running) east-west. Quarry Street has a small width for the area given the same congestion issues. Cardinal Elementary is shutting down and consolidating into Briggs and will compound the problem. This location and the Apple Street pedestrian corridor were identified as locations with possible safety issues during a meeting with the city, and prospective safety strategies that could be implemented are discussed in the crash screening section of the plan.

New Vienna

1st Street East

The comment received for this location was that there is no sidewalk along 1st Street East from East 2nd Avenue to the sidewalk along Main Street. There are several people who walk along the

road and children ride their bikes to the park along this corridor. This site was also identified as lacking sidewalks during a meeting with the city. Potential safety countermeasures may include:

- Complete the buildout of sidewalks along this corridor (Medium)
- Install pedestrian-related signage as needed (Low)

Calamus

US 30 corridor

The comment received for this location was that residents would like to bike, walk, or even utilize a multiuse trail to drive a golf cart back and forth to the Golf Course or the neighboring community of Wheatland. A bike path would need to be constructed to improve safety along Highway 30. The area west of the Golf Course would connect to Wheatland, and could utilize the multi-mile abandoned stretch of Old Lincoln Highway to connect both communities and the golf course. Potential safety countermeasures may include:

- Investigate the construction of a multi-use trail along US 30 between Calamus and the golf course to the west and construct if feasible (High)

Delhi

No specific location noted

The comment received for what is assumed to be multiple locations in the city was that existing crosswalks are just painted lines with no safety devices alerting traffic to a pedestrian or bicyclist. Potential safety countermeasures may include:

- Install pedestrian signing as needed (Low)
- Employ enhanced crosswalk patterns (Low)
- Install Rectangular Rapid Reflecting Beacon signs in select locations to facilitate pedestrian/bike crossing (Medium)

Hopkinton

Highway 38 and Carter Street intersections

A pair of comments were received for this intersection connected to school-related pedestrian crossings. The first comment indicated that a roll out stop sign is placed there, but that it would be ideal to have something different used. The second comment stated that there needs to be flashing lights and stop signs put in for students to cross the highway safely. Potential safety countermeasures may include:

- Employ enhanced crosswalk patterns (Low)
- Install Rectangular Rapid Reflecting Beacon signs in conjunction with the roll out stop signs to facilitate pedestrian crossings (Medium)

Marion Street between 3rd Street and SW 1st Street

A comment was received indicating that there is a lack of sidewalks along Marion Street on either side of roadway. In addition, at the intersection of Marion Street and Broadway Street, it

was indicated that stairs exist here (northeast corner) from the walking trail that need to be cut down so the trail can continue. Potential safety countermeasures may include:

- Complete the buildout of sidewalks along this corridor (Medium)
- Install crosswalk markings as needed (Low)
- Remove the existing stairs and perform grading to bring the sidewalks into the intersection at roadway level (Medium)

Walnut Street and 3rd Street intersection

A comment was received indicating that there are steps (on the north side of the intersection), making the site inaccessible to wheelchairs (redesign needed). In reviewing the site, Google StreetView captured a sidewalk/ramp being built in July, 2024 (comment was submitted in February, 2024).

DeWitt

11th Street and Westwood Drive intersection

A pair of comments were received regarding pedestrian issues at this intersection. The first indicated that a local resident in a wheelchair wants to cross the four-lane roadway at this location and that there is no signal. The second comment pointed out that this intersection is very dangerous for residents living to the north and south (of 11th Street). The speed limit is 55 mph. It is very dangerous for children since there is no safe way to cross. This is also the only way to walk/bike into town since there is no other way to cross the creek (to the east) other than the pedestrian walkway across the bridge on the south side of 11th Street. Potential safety countermeasures may include:

- Consider installation of a Pedestrian Hybrid Beacon (PHB) to facilitate crossings in the vicinity of this intersection (High).
- Investigate options for a separated pedestrian crossing (overpass/underpass) at the intersection and construct if feasible (High)
- Construct a roundabout at the intersection in conjunction with other safety projects along the corridor discussed elsewhere in the plan (High)

Manchester

Franklin Street corridor

A comment was received that indicated that there is no off-street shared use trail along Franklin Street (Highway 13) for bicycle use. Traffic volumes and speeds make it undesirable for use by bicycles, espRPAlly for younger users. Potential safety countermeasures may include:

- Investigate the feasibility of converting the existing sidewalk on one side of the roadway to a shared use trail and construct if this is an option (High)

Stiles Street and Clearview Drive intersection

A comment was received indicating that families frequently use the unmarked crosswalk on Stiles St. near Clearview Dr. to access the walking trail for walks and bike rides and to participate in and view events at Beckman Sports Complex. When school is in session kids use the crosswalk to walk to and from school. This crosswalk needs to be more visible to motorists to

make it safer for pedestrians to cross. Enhancements such as a striped crosswalk and signage to indicate to motorist that they are approaching a crosswalk would help make the crosswalk safer for pedestrians. Also, reducing the speed of motorist from 35 mph would also make this crossing safer. This is espRPAlly true for southbound traffic because they are accelerating from 25 mph to 35 mph as they come out of the curve and transition to the straight away. A few changes at this crosswalk can make a big difference to the safety of all pedestrians trying to use it. Potential safety countermeasures may include:

- Install crosswalks and pedestrian warning signage at this intersection and Sunrise Drive to reach the bike trail (Low)
- Employ enhanced crosswalk patterns (Low)
- Deploy temporary speed feedback signs periodically or during events to alert drivers of speeds and encourage compliance (Low)
- Install Rectangular Rapid Reflecting Beacon signs at one crossing (if constructed) to facilitate pedestrian/bike crossing (Medium)

Sageville

Highway 3 Segment

A comment was received indicating that it is dangerous to have road [pedestrian] crossing on a highway when traffic is moving at a speed of at least 50+ mph. If a car actually does stop for a pedestrian or bicyclist to cross, there is likely to be a car behind them that is not aware (or doesn't think a car will actually stop on a highway), which will lead to an accident involving cars and or pedestrians. Potential safety countermeasures to address this may include:

- Install pedestrian crossing warning signage (Low)
- Install enhanced visibility crosswalks (Low)
- Install Rectangular Rapid Reflecting Beacon signs to facilitate pedestrian/bike crossing and warn traffic (Medium)