PRATT ROAD

ROAD SAFETY AUDIT FINDINGS REPORT

July 2025

FINAL REPORT

METROPLAN
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SAFETY ACTION PLAN
CENTRAL ARKANSAS

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Table of Contents

Introduction **1**

Central Arkansas Safety Action Plan 1

Road Safety Audit Process 1

Stakeholder Coordination **3**

Pre-Audit Meeting 3

Field Review 4

Initial Findings Recap 4

Existing Conditions **5**

General Roadway Characteristics 5

Historic Crash Data 6

Existing Plans 7

RSA Observations & Recommendations **7**

Strengths 7

Suggested Improvements 8

Cost Estimates **19**

Prioritization **22**

Appendix A: Crash Diagram Maps **A-1**

Appendix B: Unit Costs **B-1**

Appendix C: Conceptual Layouts **C-1**

List of Tables

Table 1: Pre-Audit Meeting Attendees 3

Table 2: Field Review Participants 4

Table 3: Initial Findings Meeting Attendees 5

Table 4: Field Review Observations and Suggested Improvements 9

Table 5: Example Cost Estimate for Suggested Improvement 19

Table 6: Summary of Suggested Improvement Cost Estimates by Timeframe 20

Table 7: Summary of Suggested Improvement Cost Estimates by Type 21

Table 8: Summary of Suggested Improvement Priorities 22

Introduction

Central Arkansas Safety Action Plan

Metroplan, the Metropolitan Planning Organization (MPO) for Central Arkansas, developed the Central Arkansas Safety Action Plan under the United States Department of Transportation (USDOT) Safe Streets and Roads for All (SS4A) Program. The Central Arkansas Safety Action Plan, adopted in November 2024, is the Region's road map to provide safe streets and roads for all travelers. The purpose of Safety Action Plan is to establish and implement steps that can help Central Arkansas reach zero fatal and serious injuries on the Region's roadways. The Safety Action Plan includes regional safety analysis results and public engagement to identify safety issues, project and policy recommendations, and an implementation plan that prioritizes locations for deployment of safety countermeasures.

The safety analysis, consisting of a review of the historic crash data from 2018 through 2022, included the development of a Regional High Injury Network (HIN). This HIN was created by selecting roadway segments and intersections with the highest density of fatal and serious injury crashes over the five-year analysis period. The HIN was used as a basis for developing project recommendations and identifying locations for more detailed analysis and suggested improvements.

Metroplan had SS4A grant funding remaining after the Central Arkansas Safety Action Plan was completed that Metroplan decided to use to conduct a road safety audits (RSAs) on corridors within each of its four counties. Metroplan staff coordinated with Pulaski County staff to select two corridors within Pulaski County for more detailed analysis and suggested improvements. As a result, the 2.7-mile road segment of Pratt Road, between Arch Street Pike (Highway 367) and Interstate 530, was selected for an RSA. Throughout this document "Pratt Road" or "the study corridor" will be referring to the segment of Pratt Road between Arch Street Pike and Interstate 530, unless otherwise noted. Batesville Pike in Pulaski County was also selected by Pulaski County for an RSA. Results from the Batesville Pike RSA are included in a separate report.

Road Safety Audit Process

An RSA is a formal safety examination of a transportation facility that is performed by an independent, experienced, multidisciplinary RSA team. RSA teams are independent of the owner and operator of the facility and are proactive in nature, focusing not just on locations where crashes have occurred, but also locations that appear to have the potential for crashes. Although RSAs include a formal safety examination, it is important to note that an RSA is not a review for compliance with standards.

The Pratt Road RSA followed the 8-step RSA process as recommended by the FHWA and described in the *FHWA Road Safety Audit Guidelines* document (Publication FHWA-SA-06-06) and the *Road Safety Audit Toolkit for Federal Land Management Agencies and Tribal Governments* document (Publication FHWA-FLH-10-0011). A summary of the 8-step RSA process is provided in **Figure 1**.

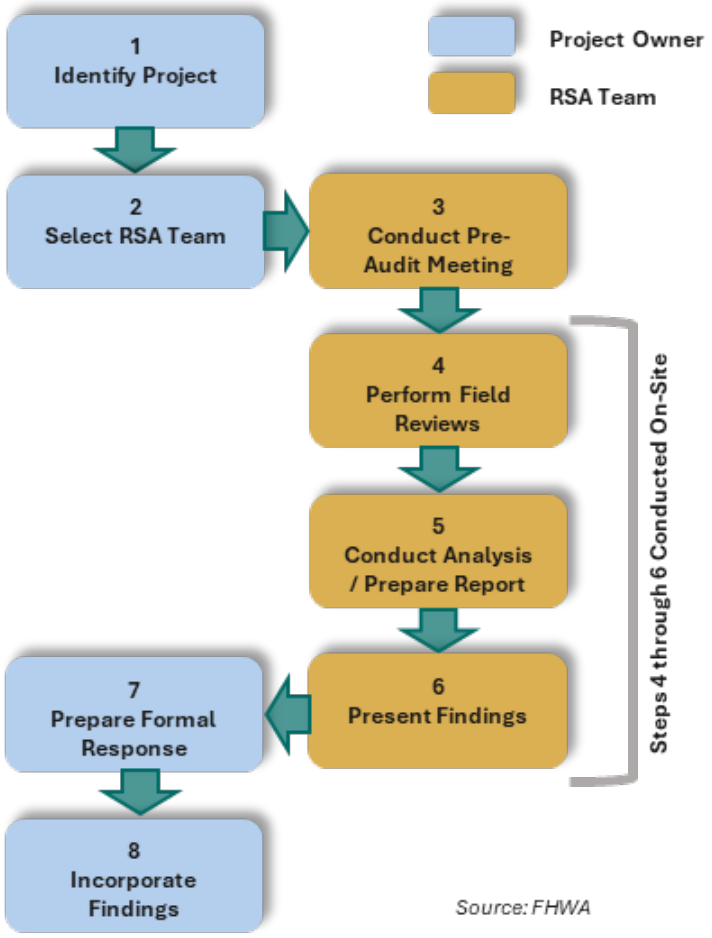


Figure 1: Road Safety Audit Process

The process assigns responsibility of the eight (8) steps to two (2) different groups: Project Owner and RSA team. The Project Owner for the Pratt Road RSA is Pulaski County, however the facilities included in the study are owned by either Pulaski County or the Arkansas Department of Transportation (ARDOT). A description of the eight (8) steps are as follows.

Step 1 – Identify Project: Pratt Road, between Arch Street Pike and Interstate 530, is on the High Injury Network in the Central Arkansas Safety Action Plan developed by Metroplan. Therefore, Metroplan and Pulaski County staff identified a need for an RSA on Pratt Road in order to proactively improve safety.

Step 2 – Select RSA Team: The RSA team was selected by Pulaski County staff during the Pre-Audit meeting. The team included representatives from Metroplan, Pulaski County, and the project consultants.

Step 3 – Conduct Pre-Audit Meeting: A general project Pre-Audit meeting was conducted virtually on March 6, 2025. The purpose of this meeting was to discuss the general RSA process, exchange data, and identify participants to include in subsequent activities.

Step 4 – Perform Field Reviews: The field review included an examination of Pratt Road, between Arch Street Pike and Interstate 530. The RSA team conducted their field review on April 16, 2025. The project consultants also drove and created of a video log of the corridor during both daytime and nighttime conditions.

Step 5 – Conduct Analysis/Prepare Report: Following the field review, the RSA team developed a set of observations to present to representatives of Metroplan and Pulaski County. The RSA team identified suggested corridor-wide safety improvements for Pratt Road, in addition to improvements that applied to specific point locations along the corridor.

Step 6 – Present Findings: The observations and safety concerns that were identified during the RSA field review, as well as the additional suggested improvements developed by the consultant team after the field review, were presented to Metroplan and Pulaski County staff during a virtual RSA Initial Findings meeting conducted on April 29, 2025. The consultant team then created a written report of the findings and provided the report to Metroplan and Pulaski County.

Step 7 – Prepare Formal Response: A formal response to the RSA was not prepared by Pulaski County, however the written report was sent to the County and they were provided with an opportunity to review and comment on the report before it was finalized.

Step 8 – Incorporate Findings: The final step in the RSA process is for Pulaski County, as the owner of the project, to work towards implementing the agreed-upon suggested improvements from the RSA report in coordination with state and local partners.

Stakeholder Coordination

Pre-Audit Meeting

The Pratt Road RSA began with a virtual Pre-Audit meeting on March 6, 2025. This meeting included members of the RSA Team, including representatives from Metroplan and Pulaski County. All meeting attendees are listed in **Table 1**.

Table 1: Pre-Audit Meeting Attendees

Agency	Representative(s)
Pulaski County	Matt Breckenridge Barry Hyde Travis Montgomery Shane Ramsey Tab Townsell
Metroplan	Hans Haustein
Kimley-Horn **(RSA Team Consultant)**	Tom Fowler Kate Reichard
Crafton Tull **(RSA Team Subconsultant)**	Dave Roberts
TEC **(RSA Team Subconsultant)**	Melissa Banks

The purpose of the Pre-Audit meeting was to brief Pulaski County staff that selected Pratt Road for the RSA on the RSA process, as well as review the pre-audit crash data analyses, and obtain information from the County

staff to assist the RSA team in conducting the RSA, such as identifying other Pulaski County staff that should be included for the RSA field review. Pulaski County staff briefed the RSA team on a variety of topics that were useful in conducting the RSA, such as roadway geometry challenges like vertical curves, traffic operations characteristics, crash history, vehicular volume data, and pedestrian and bicycle tendencies.

Field Review

The Pratt Road RSA field review was conducted on April 16, 2025. The RSA team began by meeting at the Pulaski County Road and Bridge Office to brief the Pulaski County staff on the RSA purpose, process, and benefits. The team also discussed pre-audit data analyses and obtained additional information from attendees to assist the RSA team in conducting the RSA. All field review participants are listed in **Table 2**.

Table 2: Field Review Participants

Agency	Representative(s)
Pulaski County	Matt Breckenridge* Shane Ramsey Tab Townsell
Metroplan	Hans Haustein
Kimley-Horn **(RSA Team Consultant)**	Tom Fowler Kate Reichard
Crafton Tull **(RSA Team Subconsultant)**	Brad Peterson
TEC **(RSA Team Subconsultant)**	Finley Vinson

**Matt Breckenridge attended the pre-field review meeting held on the morning of the field review at the Pulaski County Road and Bridge Office.*

After the briefing, the RSA team went to the intersection of Pratt Road and Arch Street Pike to begin observations of Pratt Road. The RSA team then conducted observations from the west end of the study corridor to the east end, stopping at several key points along the way, such as the Varnadore Lane intersection and the Ironton Road intersection. The RSA team members identified safety concerns, strengths, weaknesses, and possible improvements along Pratt Road. Anecdotal experiences, traffic volume data, and past projects were discussed as well.

Initial Findings Recap

Upon completion of the RSA field review, the RSA team developed a set of identified observations and safety concerns to share with Metroplan and Pulaski County staff at the Initial Findings meeting. This meeting was conducted virtually on April 29, 2025. All meeting attendees are listed in **Table 3**.

Table 3: Initial Findings Meeting Attendees

Agency	Representative(s)
Pulaski County	Matt Breckenridge Barry Hyde Shane Ramsey Tab Townsell
Metroplan	Hans Haustein
Kimley-Horn **(RSA Team Consultant)**	Tom Fowler Kate Reichard
TEC **(RSA Team Subconsultant)**	Finley Vinson

During the Initial Findings meeting, the RSA team presented the list of observations and safety concerns identified during the RSA field review. Preliminary suggested safety countermeasures were also discussed with Metroplan and Pulaski County staff. This discussion allowed staff to provide feedback, ask questions, and suggest additional or alternative safety countermeasures.

Existing Conditions

General Roadway Characteristics

Pratt Road, between Arch Street Pike and Interstate 530, is a 2.7-mile corridor in southern Pulaski County. Throughout this document "Pratt Road" or "the study corridor" will be referring to the segment of Pratt Road between Arch Street Pike and Interstate 530, unless otherwise noted. Pratt Road is owned and maintained by Pulaski County, but Arch Street Pike and Interstate 530 are owned and maintained by ARDOT.

Pratt Road generally runs in the east-west direction, as shown in **Figure 2**, and is surrounded by a mix of land uses including single family houses, small businesses, and a large flea market that operates on weekends. Pratt Road provides a connection to Arch Street Pike and Interstate 530 and becomes 145th Street east of Interstate 530, which connects to Highway 365 in Wrightsville. Pratt Road consists of two lanes, with one in each direction.

Figure 2: Pratt Road Study Corridor Extents

The study corridor has a posted speed limit of 30 miles per hour (mph) between Arch Street Pike and east of Sara Drive, and a 40 mph posted speed limit between east of Sara Drive and just west of Ironton Road. For eastbound vehicles, the last speed limit sign along the study corridor is for 40 mph just west of the self-storage business' driveway. The intersection warning signs for Ironton Road posted just west of Ironton Road have supplemental plaques with 35 mph as the speed limit. For westbound vehicles, the posted speed limit is 45 mph until the first speed limit sign within the study corridor reduces the speed limit to 35 mph between just west of Ironton Road and east of Ironton Road. The study corridor does not have a sidewalk or a bike lane along either side of the roadway, except for existing sidewalk along the northeast corner of Pratt Road and Arch Street Pike. There are no transit facilities along Pratt Road.

Average daily traffic (ADT) data provided by ARDOT's Interactive ADT Web App was analyzed along Pratt Road, as well as along Arch Street Pike and Ironton Road. ADT counts were taken most recently in 2023, when approximately 5,200 vehicles were counted on Pratt Road just east of the Arch Street Pike intersection and 5,800 vehicles were counted on Pratt Road just west of Interstate 530. Approximately 9,200 vehicles were counted on Arch Street Pike just south of Pratt Road. Along Ironton Road, approximately 1,000 vehicles were counted just north of Pratt Road and 1,700 vehicles were counted just south of Pratt Road.

Historic Crash Data

The Central Arkansas Safety Action Plan used 2018 through 2022 crash data to develop the HIN, as it was the most recent full five years of data at the time the development of the HIN began. For the RSA, more recent crash data from 2019 through 2023 was analyzed. During this crash data analysis period, there were a total of 100 crashes along the 2.7-mile study corridor of Pratt Road. Detailed crash diagram maps are included in **Appendix A**.

Among the 2019 through 2023 crashes along Pratt Road, two resulted in fatal injuries, seven resulted in suspected serious injuries, and 17 resulted in suspected or potential minor injuries. The crashes occurred primarily at intersections or driveways. Specific locations where clusters of injury crashes occurred include: Arch Street Pike, where four injury crashes occurred including a serious injury crash involving a bicyclist; Ironton Road,

where seven injury crashes occurred including a fatal injury angle crash; and Interstate 530, where four injury crashes occurred including two head-on suspected minor injury crashes. The most common crash manner of fatal and serious injury crashes was crashes involving a single vehicle.

Of all the crashes, over a fifth of them were reported with the road surface condition as wet and nearly a third occurred during nighttime or dawn hours. The most common crash manner for all crashes was rear-end.

Existing Plans

Existing plans for future construction or safety improvements on Pratt Road were not identified during the RSA study.

RSA Observations & Recommendations

Strengths

During the Pratt Road RSA field review, several positive aspects of the study corridor were recognized by the RSA team and are worth noting. It is recommended that efforts be made to ensure these features continue to be strengths during future maintenance and operation of Pratt Road and that these features are incorporated elsewhere along the study corridor and into the design and construction of new Pulaski County roads.

Brushing and Clearing

Brushing and clearing around intersections is generally good**.** Cutting vegetation back from the edge of pavement in the vicinity of intersections improves intersection sight distance from all approaches. The only location where there were concerns related to overgrown brush was at the southeast corner of the intersection of Pratt Road and Ironton Road.

Speed Limit Signage

Five standard speed limit signs were posted along Pratt Road between Arch Street Pike and Interstate 530 for eastbound vehicles, and seven standard speed limit signs were posted for westbound vehicles. A REDUCED SPEED AHEAD sign is posted for westbound vehicles on Pratt Road approaching the point where the speed changes from 40 mph to 30 mph, just east of Sara Drive. Frequent reminders of the speed limit and warnings of a reduction in the speed limit can help with speed limit compliance and improve safety.

However, the posted speed limit was not the same for eastbound and westbound vehicles between Ironton Road and Interstate 530. There were no standard speed limit signs for eastbound vehicles between the self-storage business' driveway and Interstate 530. The only signage between Ironton Road and Interstate 530 was a standard speed limit sign for 35 mph to the east of Ironton Road.

Sign Retroreflectivity

Almost all the roadway signage was observed during the nighttime field review to be retroreflective and easy to see. Retroreflective roadway signage is essential for nighttime sign visibility, particularly along rural corridors with limited or no corridor lighting. An example speed limit sign posted along Pratt Road for eastbound vehicles east of Sara Drive is shown at night in **Figure 3**.

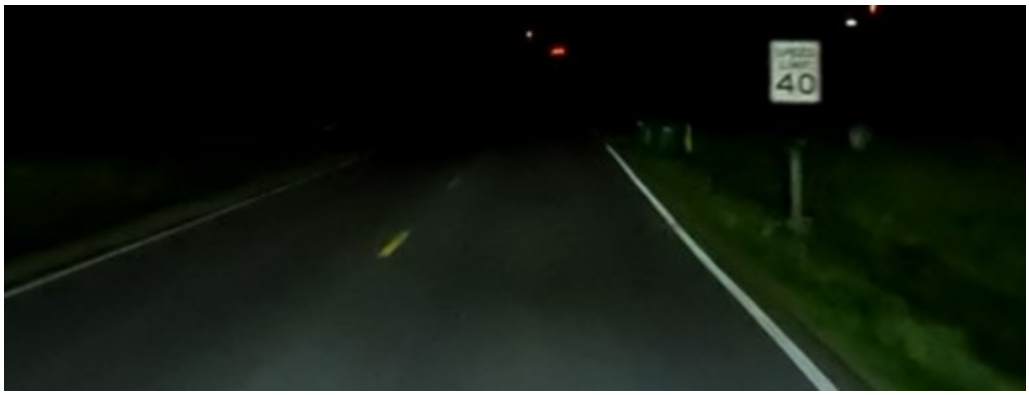


Figure 3: Reflective SPEED LIMIT 40 Sign at Night

Suggested Improvements

The RSA team identified suggested improvements based on the daytime and nighttime field reviews of Pratt Road as well as discussions with the staff representing Metroplan and Pulaski County. Suggested improvements are provided for corridor-wide issues as well as specific locations along the study segment of Pratt Road. The following information is provided for each of the 14 corridor-wide and location-specific suggested improvements in **Table 4**.

- **Location:** Location is defined as either a corridor-wide improvement which is applied to large parts or the entirety of the Pratt Road RSA study segment, between Arch Street Pike and Interstate 530, or a specific location along the study segment. For location-specific suggested improvements, road segment or intersection details are provided.
- **Observations:** A summary of the observations made by the RSA team and relevant crash data is provided for each suggested improvement.
- **Suggested Improvements:** Suggested improvements are provided for a range of implementation timeframes identified below. Generally, immediate suggested improvements are considered to be lower-cost countermeasures that address immediate safety issues, such as signing a sharp turn that requires a reduction in speed. Long-term suggested improvements are generally higher-cost improvements that may require additional capital programming or development of engineering plans, such as the reconfiguration of an intersection.
    - Immediate: Less than 1 year
    - Short-Term: 1 – 2 years
    - Mid-Term: 2 – 5 years
    - Long-Term: 5+ years
- **Cost Estimates for Suggested Improvements:** An opinion of probable cost for each suggested improvement is provided. The cost estimation methodology is described in the following section and a list of the unit costs for individual pay items used to develop the cost estimates is provided in **Appendix B**.
- **Photos:** Photos, when available, have been provided to assist the reader in visualizing the described observations and suggested improvements.
- **Conceptual Layouts:** A note is included in the recommendation table if a conceptual layout was developed for the recommendation. Conceptual layouts are included in **Appendix C**.

Table 4: Field Review Observations and Suggested Improvements

1. Speed Enforcement and Signage

Location: Corridor-Wide

Observations

- Speeding was noted as a concern along the corridor and county staff would like to see more speed enforcement.
- Posted speed limit is not the same for eastbound and westbound traffic between Ironton Road and Interstate 530.
- There are no speed limit signs posted for EB traffic and only one sign for westbound traffic between Ironton Road and Interstate 530.

Immediate Improvements

- Add additional speed limit signs in both directions between Ironton Road and Interstate 530.

Short-Term Improvements

- Increase presence of Pulaski County Sheriff speed enforcement.

Cost Estimate
Immediate: $2,000

Note: The cost estimate assumes three speed limit signs on Pratt Road. Cost for additional enforcement is not included.

Figure 4: Pratt Road speed limit sign.

2. Warning Signage

Location: Corridor-Wide

Observations

- Vertical curves limit sight distance at several locations along the corridor. This creates potential safety issues when the vertical curve limits site distance in advance of an intersection or driveway.
- Crash data showed that 66% of all fatal and serious injury crashes, and almost half of all crashes, were at or near intersections.

Immediate Improvements

- Add warning signage at locations where vertical curves limit sight distance in advance of intersections or roads.

Cost Estimate
Immediate: $6,600

Note: The cost estimate assumes ten warning signs with one sign in each direction prior to a vertical curve.

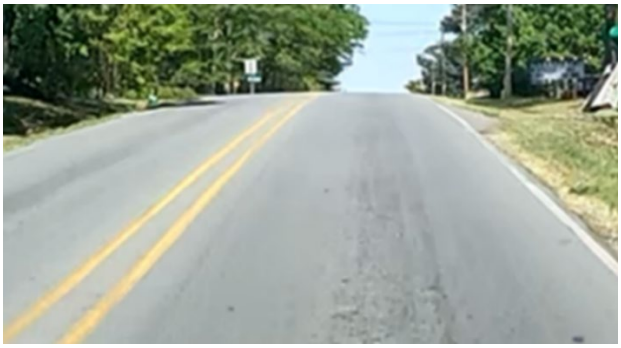


Figure 5: Steep uphill grade, eastbound approach of Pratt Road to Varnadore Lane limits visibility of the Varnadore Lane intersection and nearby driveways.

Figure 6: Example MUTCD standard warning signage for vertical curves and T-intersections.

3. Retroreflective Object Markers

Location: Corridor-Wide

Observations

- Reflective object markers exist at several driveways and fixed objects but are not consistently used throughout the corridor at all driveways and fixed objects.
- Of the nine fatal and serious injury crashes recorded along the corridor during the five-year RSA study period, four were reported as Dark – Not Lighted.

Immediate Improvements

- Add reflective object markers to all fixed objects if possible, along the Pratt Road.

Cost Estimate

Immediate: $12,400

Figure 7: Mailbox near McDonald's driveway does not have a reflective object marker for westbound vehicles.

4. Wider Striping and Shoulders

Location: Corridor-Wide

Observations

- Pulaski County staff noted existing plans to restripe and install raised pavement markers along Pratt Road.
- The crash data analyzed showed that almost half of the roadway departure crashes occurred at night.
- During a separate field review of Batesville Pike in Pulaski County, the RSA consultant team noted that Batesville Pike just north of the Pulaski County line has 6-inch striping, centerline rumble strips, raised pavement markers in the center, and 1 to 2-feet wide paved shoulders on each side. The wider striping was more visible at night and the paved shoulders provided a recovery area for vehicles if they start to depart the road.

Mid-Term Improvements

- Restripe centerline and edge line with 6-inch pavement markings to increase pavement marking visibility.
- Install raised reflective pavement markers along the centerline to increase the visibility of the centerline.
- Add centerline rumble strips to alert drivers that may cross the centerline.
- Where possible add a paved shoulder to provide more recovery area for vehicles.

Cost Estimate

Mid-Term: $1,511,900

Note: The cost estimate includes a 4-foot shoulder along both sides of Pratt Road.

Figure 8: Eastbound on Pratt Road approaching I-530 does not have pavement markings.

5. Intersection Lighting

Location: Corridor-Wide

Observations

- Lighting does not exist on corridor. As a general policy, Pulaski County does not add lighting on county roads other than at some intersections.
- Out of nine fatal and suspected serious injury crashes identified on the corridor during the five-year RSA study period, four occurred during periods that were reported as dark - not lighted.

Mid-Term Improvements

- Add safety lighting at the following intersections with Pratt Road: Arch Street Pike, Ironton Road, and I-530

Cost Estimate

Mid-Term: $197,400

Note: Arch Street Pike and I-530 are state routes. Any improvements at this intersection will require coordination with ARDOT.

Figure 9: Video showing lighting lack of lighting on westbound Pratt Road west of Ironton Road.

6. Shared-Use Path

Location: Corridor-Wide

Observations

- Several pedestrians were observed walking near the travel way at night along the westbound lane of Pratt Road near Sailor Lane.
- There were three fatal or serious injury crashes involving pedestrians or bicyclist within the five-year RSA study period. All three occurred at night.

Long-Term Improvements

- Add a shared-use path on the north or south side of Pratt Road to provide a safer location for pedestrians and bicyclists.

Cost Estimate

Long-Term: $5,292,000

Figure 10: Video showing pedestrians walking eastbound along the westbound lane of Pratt Road near Sailor Lane.

7. Pavement Markings

Location: Arch Street Pike Intersection

Observations

- Extra pavement exists between the northbound receiving lane on Arch Street Pike and the westbound right-turn raised channelizing island on Pratt Road. This pavement may be confusing to northbound through, eastbound left-turn, and westbound right-turn drivers. Northbound through and eastbound left-turn drivers may think there are two receiving lanes on Arch Street Pike at the north leg of the intersection and westbound right-turn drivers may think there are two oncoming lanes.
- Westbound through and left-turn vehicles were observed stopping past where the stop bar should be, limiting sight distance for westbound right-turn vehicles and blocking the southbound left-turn movement.
- Stop bars do not exist for any of the approaches to the intersection.

Short-Term Improvements

- Restripe westbound right-turn channelization to guide right-turn vehicles to merge with northbound through traffic.
- Stripe hatch pavement markings in the extra space between the northbound receiving lane on Arch Street Pike and the westbound right-turn raised channelizing island.
- Add stop bars at all approaches.

Cost Estimate

Short-Term: $3,900

*Note: A conceptual drawing of these improvements is included in **Appendix C**. Any improvements at this intersection will require coordination with ARDOT as Arch Street Pike is a state route.*

Figure 11: Extra pavement exists between the northbound receiving lane on Arch Street Pike and the raised westbound right-turn channelization median for Pratt Road.

8. Retroreflective Backplates

Location: Arch Street Pike Intersection

Observations

- Traffic signal heads at the intersection of Pratt Road and Arch Street Pike do not have backplates.
- Backplates with retroreflective striping can improve safety by increasing the visibility of traffic signals.

Immediate Improvements

- Add retroreflective backplates to all traffic signal heads at the intersection of Pratt Road and Arch Street Pike.

Cost Estimate

Immediate: $4,200

Note: Arch Street Pike is a state route. Any improvements at this intersection will require coordination with ARDOT.

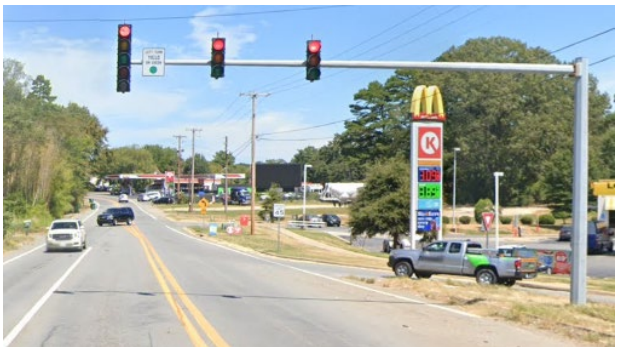


Figure 12: Traffic signal heads at Pratt Road and Arch Street Pike with no backplates.

9. Flashing Yellow Arrow Left-Turn Signal Head

Location: Arch Street Pike Intersection

Observations

- Left-turn signal heads on Arch Street Pike use green balls for permissive left-turns rather than flashing yellow arrows.
- Studies have shown that flashing yellow arrow are generally safer than green balls for permissive left-turns because the flashing yellow arrow more clearly communicates that you need to yield before turning, reducing potential confusion and accidents

Mid-Term Improvements

- Replace existing left-turn signal heads on Arch Street Pike a with flashing yellow arrow signal heads.

Cost Estimate

Mid-Term: $8,200

Note: Arch Street Pike is a state route. Any improvements at this intersection will require coordination with ARDOT.

Figure 13: Left-turn signal head on southbound Arch Street Pike with a green ball and sign for left-turn vehicles to yield on green.

10. Pedestrian Infrastructure

Location: Arch Street Pike Intersection

Observations

- Sidewalk exists only along the north side of Pratt Road at the northeast corner of the intersection with Arch Street Pike.
- The existing sidewalk on the raised channelization island for westbound right-turn movement is in poor condition and does not lead to crosswalks or connect to other pedestrian infrastructure across Pratt Road or Arch Street Pike.
- No crosswalk pavement markings or pedestrian signals exist at this intersection.

Mid-Term Improvements

- Provide safe pedestrian crossing infrastructure including sidewalks at all corners, crosswalks, directional ramps, and pedestrian pushbuttons and signals.

Cost Estimate

Mid-Term: $154,800

*Note: A conceptual drawing of these improvements is included in **Appendix C**. Any improvements at this intersection will require coordination with ARDOT as Arch Street Pike is a state route.*

Figure 14: Existing sidewalk on the raised concrete channelization island for right-turns from westbound Pratt Road to northbound Arch Street Pike.

11. Access Management

Location: McDonald's Driveway Intersection

Observations

- Pratt Road backs up during breakfast and dinner rush with people turning into McDonald's driveway from both the eastbound and westbound direction.
- Eastbound left-turning vehicles into McDonald's along Pratt Road block eastbound through traffic, which then queues into the Arch Street Pike intersection.
- Westbound traffic crests a hill shortly before the McDonald's drive thru. Drivers traveling eastbound on Pratt Road cannot see the queues for traffic turning right into McDonald's until after they crest the hill.
- Site distance turning left out of McDonalds is 430-feet (AASHTO left-turn vehicle intersection sight distance at 30 mph is 330-feet). However, speeding on Pratt Road can make the sight distance less than adequate when westbound vehicles on Pratt Road are speeding.

Mid-Term Improvements

- Add a queue detector on westbound Pratt Road with a warning and flashing beacon before the crest of the hill. The warning sign and beacon will create an active warning to drivers of queues when they exist.
- Restrict the McDonald's driveway on Pratt Road to right-in-right-out only to eliminate queues on Pratt Road in the eastbound direction. Add a concrete median to direct right-in and right-out traffic.

Cost Estimate

Mid-Term: $97,000

*Note: A conceptual drawing of these improvements is included in **Appendix C**. Any improvements at this intersection will require coordination with ARDOT as Arch Street Pike is a state route.*

Figure 15: Eastbound vehicle on Pratt Road turning left into McDonald's driveway.

Figure 16: Sight distance looking eastbound along Pratt Road is limited from the McDonald's driveway due to a hill on Pratt Road to the east of the driveway.

12. Intersection Redesign

Location: Ironton Road Intersection

Observations

- A signal warrant was conducted at this intersection several years ago, but it did not meet warrants. The RSA team looked at recent crash data to evaluate signal warrants based on crashes, but the intersection still does not appear to meet signal warrants.
- Long vehicles making the westbound right-turn movement from Pratt Road onto northbound Ironton Road were observed crossing into the southbound lane of Ironton Road. Tire marks are on the pavement following this path.
- Pulaski County representatives noted a desire to add a roundabout at this intersection. If a roundabout is added lighting should also be added as Pratt Road is not lighted and increased visibility for the roundabout will be needed.
- Crashes that occurred during the five-year RSA study period included: one fatal crash angle crash, three serious injury crashes (including one head-on and one rearend crash), one minor injury angle crash, and two potential minor injury angle crashes. These types of crashes can be addressed with the implementation of a roundabout.
- NB Ironton and SB Ironton both have 545-feet of sight distance looking to the east (AASHTO left-turn vehicle intersection sight distance at 35 mph is 390-feet, right-turn intersection sight distance is 335-feet).

Mid-Term Improvements

- Option 1: Pave more of the northeast corner to provide sufficient space for wide right-turning large vehicles from westbound Pratt Road onto northbound Ironton Road.

Long-Term Improvements

- Option 2: Realign Ironton Road approaches to intersect Pratt Road at a 90-degree intersection.
- Option 3: Construct a roundabout at Pratt Road and Ironton Road. Consider visibility of the roundabout in the westbound direction along Pratt Road, vehicles traveling at higher than posted speeds along Pratt Road, and the need for lighting to increase visibility.

Cost Estimate

Mid-Term (Option 1): $36,000
Long-Term (Option 2): $570,000
Long-Term (Option 3): $1,540,000

*Note: A conceptual drawing of Option 3, roundabout, is included in **Appendix C**. Costs for Option 3 do not include right-of way acquisition and utility relocation.*

Figure 17: Photo from northbound Ironton Road stop bar looking east along Pratt Road.

Figure 18: Tire marks from large vehicles on westbound Pratt Road turning right onto northbound Ironton Road but swinging wide and entering the southbound Ironton Road lane.

13. Special Event Signage

Location: Pratt Road Flea Market Driveway

Observations

- Queues form on Pratt Road on the weekend from vehicles going to the flea market parking lot.
- Sight distance out of the flea market appears to be sufficient in both directions.
- Vehicles were observed parking on the side of Pratt Road during the flea market, but the parking lot is large enough to accommodate most attendees.
- One fatal pedestrian crash and one serious injury pedestrian crash occurred near the flea market during the five-year RSA study period, however both occurred during a weekday night and do not appear to be related to the flea market since it is only held during weekends in the daytime.

Immediate Improvements

- Consider adding special event signage that can be used only during the periods when the flea market is active to warn of potential stopped traffic ahead. Flip down static signs in each direction would provide a low-cost solution to providing temporary warnings.

Cost Estimate

Immediate: $1,400

Figure 19: Pratt Road Flea Market parking lot.

14. Separation of Opposing Direction Vehicles

Location: Interstate 530 Intersection

Observations

- Two head on minor injury crashes and two angle minor injury crashes occurred during the five-year RSA study period.
- The existing raised concrete islands are only raised a few included above pavement and many of the edges are in disrepair. Vegetation is growing in cracks of the raised concrete islands which is creating more damage to the islands.

Short-Term Improvements

- Option 1: Add delineators along the centerline to separate opposing direction vehicles.
- Option 2: Install centerline rumble strips and raised reflective pavement markers to separate opposing direction vehicles. This recommendation is included in the corridor-wide recommendations.

Mid-Term Improvements

- Option 3: Construct a raised concrete median in the centerline and reconstruct the raised concrete islands.

Cost Estimate

Short-Term (Option 1): $5,400
Short-Term (Option 2): Cost accounted for in the corridor-wide recommendations.
Mid-Term (Option 3): $82,500

Note: Option 1 cost estimate assumes approximately 300 of delineators added to the centerline. Option 2 cost estimate assumes approximately 300-feet of raised concrete median is added in the centerline.

Figure 20: Raised concrete islands are nearly flush with the pavement.

Figure 21: Corners of raised concrete islands are in disrepair and vegetation appears to be causing additional damage.

Cost Estimates

An opinion of probable cost was developed for each of the suggested improvements. Estimated quantities for developing costs were derived through a combination of observations from the RSA field review, reference to aerial imagery, and engineering judgement. The quantities that were used in the cost estimates are preliminary and are not based on engineering design. The RSA team relied on several guidance documents to develop quantities including the *FHWA Manual on Uniform Traffic Control* (MUTCD) as well as ARDOT standards.

The cost estimates provide Pulaski County with a planning level cost for high-level budgeting and should only be considered approximate. Cost estimates utilize unit pricing based on average unit costs seen on similar road and safety projects. These costs will vary based on local construction costs, size of the project, mobilization costs, and other factors. The unit costs for the pay items used for developing the cost estimates for each suggested improvement are presented in **Appendix B**.

An example of a cost estimate calculation worksheet that was prepared for one of the suggested improvements is provided in **Table 5**. To account for engineering, mobilization, traffic control, and other costs associated with construction, cost estimates were increased by 40 percent. The 40 percent factor used is inclusive of all costs beyond the unit cost used for the suggested improvement costed items.

Table 5: Example Cost Estimate for Suggested Improvement

11. Access Management (McDonald's Driveway)										
Itemized Recommendation Costs										
			Immediate		Short-Term		Mid-Term		Long-Term	
Improvement	Unit	Unit Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost
Install Standard Sign	Per Sign	$ 470		$ -		$ -	1	$ 470		$ -
Add Warning Signage with Queue Detector (with Flashing Beacon)	Per Approach	$ 55,000		$ -		$ -	1	$ 55,000		$ -
Add High Visibility Crosswalk Pavement Markings	Per Crossing	$ 3,000		$ -		$ -	1	$ 3,000		$ -
Construct Raised Concrete Median	Square Yard	$ 270		$ -		$ -	40	$ 10,800		$ -
Engineering, Mobilization, Traffic Control, Etc.	40%			$ -		$ -		$ 27,710		$ -
Recommendation Cost Summary										
Total Cost by Timeframe			Immediate		Short-Term		Mid-Term		Long-Term	
				$ -		$ -		$ 97,000		$ -
Total Recommendation Cost				$						97,000

A summary of all suggested improvement cost estimates is provided in **Table 6**. A view of the cost aggregated by type of cost (Signing, Pavement Markings and Striping, and Other) is provided in **Table 7**. This view is provided should the County want to address all signing or pavement marking and striping improvements through a corridor-wide type project.

Table 6: Summary of Suggested Improvement Cost Estimates by Timeframe

No.	Suggested Improvement	Cost Estimate by Implementation Timeframe			
		Immediate	Short-Term	Mid-Term	Long-Term
1	Speed Enforcement	$2,000	-	-	-
2	Warning Signage	$6,600	-	-	-
3	Retroreflective Object Markers	$12,400	-	-	-
4	Wider Striping and Shoulders	-	-	$1,511,900	-
5	Intersection Lighting	-	-	$197,400	-
6	Shared-Use Path	-	-	-	$5,292,000
7	Pavement Markings (Arch Street Pike)	-	$3,900	-	-
8	Retroreflective Backplates (Arch Street Pike)	$4,200	-	-	-
9	Flashing Yellow Arrow Left-Turn Signal Head (Arch Street Pike)	-	-	$8,200	-
10	Pedestrian Infrastructure (Arch Street Pike)	-	-	$154,800	-
11	Access Management (McDonald's Driveway)	-	-	$97,000	-
12	Intersection Redesign (Ironton Road) *Option 1 – Additional Pavement* *Option 2 – Realignment* *Option 3 – Roundabout*	-	-	 *$36,000* 	 *$570,000* *$1,540,000*
13	Special Event Signage (Pratt Road Flea Market Driveway)	$1,400	-	-	-
14	Separation of Opposing Direction Vehicles (Interstate 530) *Option 1 – Centerline Delineators* *Option 2 – Rumble Strips* *Option 3 – Concrete Median and Islands*	-	 *$5,400* 	-	 *NA* *$82,500*

Table 7: Summary of Suggested Improvement Cost Estimates by Type

No.	Suggested Improvement	Cost Estimate by Type		
		Signing	Pavement Markings	Other
1	Speed Enforcement	$2,000	-	-
2	Warning Signage	$6,600	-	-
3	Retroreflective Object Markers	$12,400	-	-
4	Wider Striping and Shoulders	-	$71,000	$1,441,000
5	Intersection Lighting	-	-	$197,400
6	Shared-Use Path	-	-	$5,292,000
7	Pavement Markings (Arch Street Pike)	-	$3,900	-
8	Retroreflective Backplates (Arch Street Pike)	-	-	$4,200
9	Flashing Yellow Arrow Left-Turn Signal Head (Arch Street Pike)	-	-	$8,200
10	Pedestrian Infrastructure (Arch Street Pike)	-	$18,900	$135,900
11	Access Management (McDonald's Driveway)	$77,700	$4,200	$15,200
12	Intersection Redesign (Ironton Road) *Option 1 – Additional Pavement* *Option 2 – Realignment* *Option 3 – Roundabout*	-	-	 *$36,000* *$570,000* *$1,540,000*
13	Special Event Signage (Pratt Road Flea Market Driveway)	$1,400	-	-
14	Separation of Opposing Direction Vehicles (Interstate 530) *Option 1 – Centerline Delineators* *Option 2 – Rumble Strips* *Option 3 – Concrete Median and Islands*			 *$5,400* *NA* *$82,500*

Prioritization

Suggested improvements are categorized as high, medium, or low priorities. Prioritization is based on the RSA team's assessment of each safety issue and the impact that the suggested improvements is expected to have on improving safety. Engineering judgement regarding the potential for future crash rate reduction and crash severity reduction were considered when prioritizing the suggested improvements.

While all the suggested improvements are considered important and expected to have a positive impact on safety, it is recommended that Pulaski County consider focusing on high priority recommendations first as they may yield the greatest impact on safety along Pratt Road. **Table 8** organizes each suggested improvement by implementation priority (high, medium, or low). The County may use this prioritization if fiscal constraints and personnel availability prohibit the County from implementing all the suggested improvements in a timely manner.

Table 8: Summary of Suggested Improvement Priorities

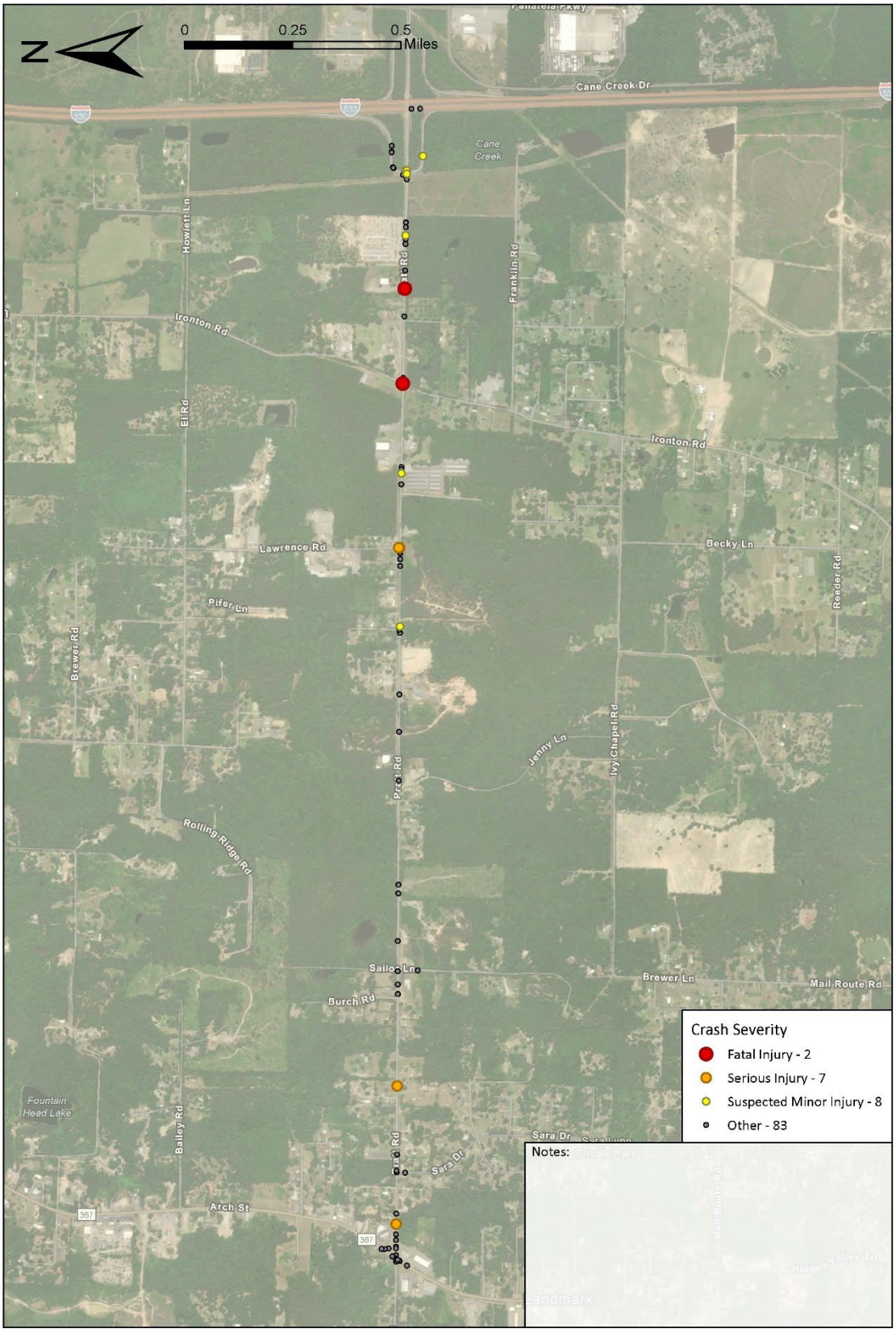
No.	Suggested Improvement	Improvement Timeframe
High Priority Suggested Improvements		
1	Speed Enforcement	Immediate
2	Warning Signage	Immediate
3	Retroreflective Object Markers	Immediate
8	Retroreflective Backplates (Arch Street Pike)	Immediate
9	Flashing Yellow Arrow Left-Turn Signal Head (Arch Street Pike)	Mid-Term
11	Access Management (McDonald's Driveway)	Mid-Term
Medium Priority Suggested Improvements		
4	Wider Striping and Shoulders	Mid-Term
6	Shared-Use Path	Long-Term
7	Pavement Markings (Arch Street Pike)	Short-Term
12	Intersection Redesign (Ironton Road)	Mid-Term/Long-Term
14	Separation of Opposing Direction Vehicles (Interstate 530)	Short-Term/Mid-Term
Low Priority Suggested Improvements		
5	Intersection Lighting	Mid-Term
10	Pedestrian Infrastructure (Arch Street Pike)	Mid-Term
13	Special Event Signage (Pratt Road Flea Market Driveway)	Immediate

Appendix A: Crash Diagram Maps

SITE: PRATT RD

Arch Street Pike/Hwy 367 to IH 530 (2.7 Miles)

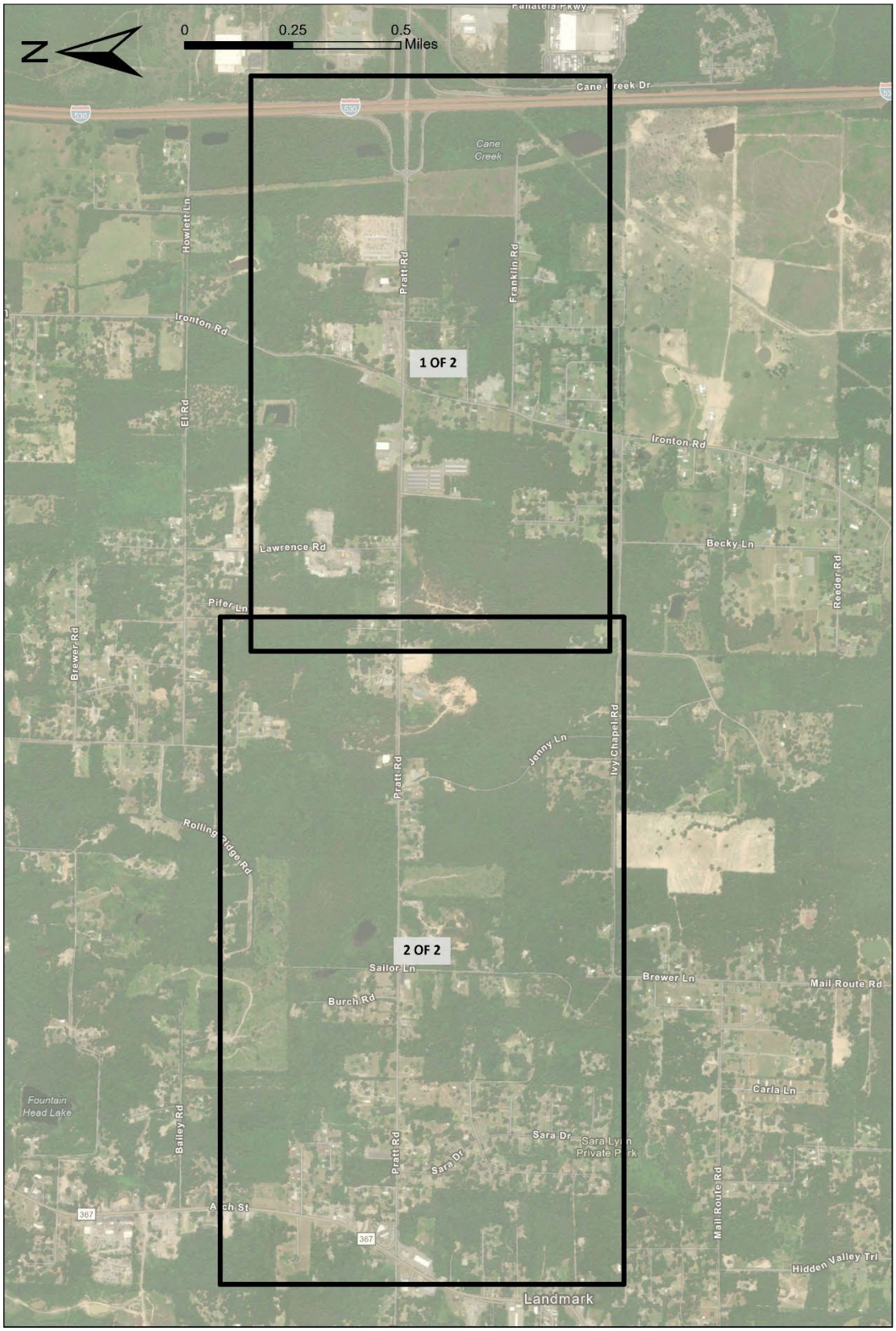
2019 - 2023 Crash Data: 9 KA Crash Count (100 Total Crash Count)



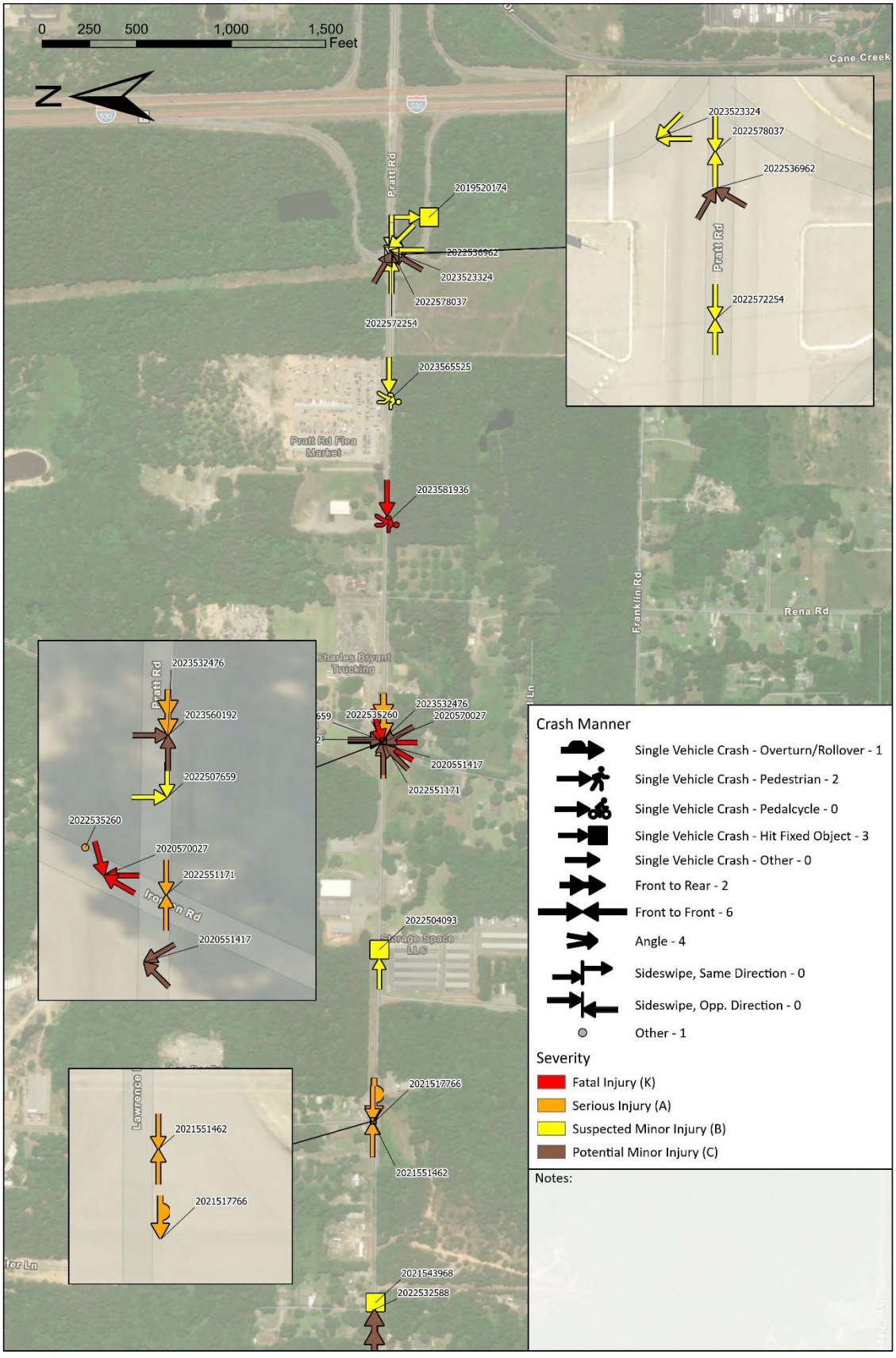
SITE: PRATT RD

Arch Street Pike/Hwy 367 to IH 530 (2.7 Miles)

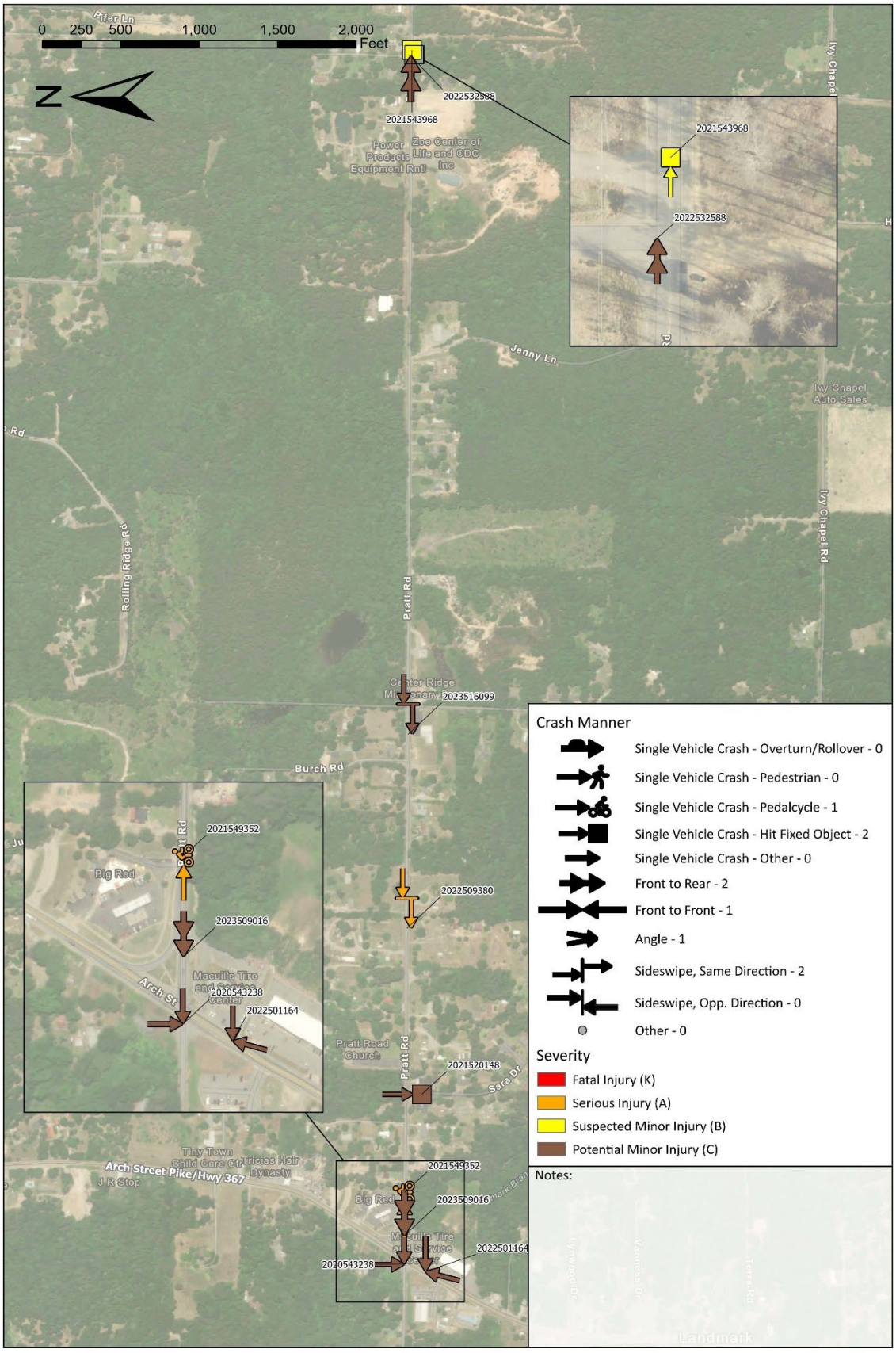
2019 - 2023 Crash Data: 9 KA Crash Count (100 Total Crash Count)



SITE: PRATT RD (1 OF 2)



SITE: PRATT RD (2 OF 2)



PRATT ROAD

SUMMARY TABLE

2019-2023 Crash Data: 9 KA Crash Count (100 Total Crash Count)

Crash Severity	Crash Manner	Lighting Condition	Surface Condition
(K) FATAL INJURY - 2	SINGLE VEHICLE CRASH - 3 (26)	DAYLIGHT - 5 (69)	DRY - 7 (76)
(A) SUSPECTED SERIOUS INJURY - 7	FRONT-TO-REAR - 1 (35)	DAWN - 0 (3)	WET/WATER - 2 (21)
(B) SUSPECTED MINOR INJURY - (8)	FRONT-TO-FRONT - 2 (12)	DUSK - 0 (0)	SNOW - 0 (0)
(C) POTENTIAL MINOR INJURY - (9)	ANGLE - 1 (12)	DARK - LIGHTED - 0 (6)	SLUSH - 0 (0)
(O) NO APPARENT INJURY - (74)	SIDESWIPE, SAME DIRECTION - 1 (8)	DARK - NOT LIGHTED - 4 (18)	ICE/FROST - 0 (1)
	SIDESWIPE, OPP. DIRECTION - 0 (3)	DARK - OTHER/UNKNOWN - 0 (4)	UNKNOWN - 0 (2)
	OTHER - 0 (2)		

KABC Crash Detail Table

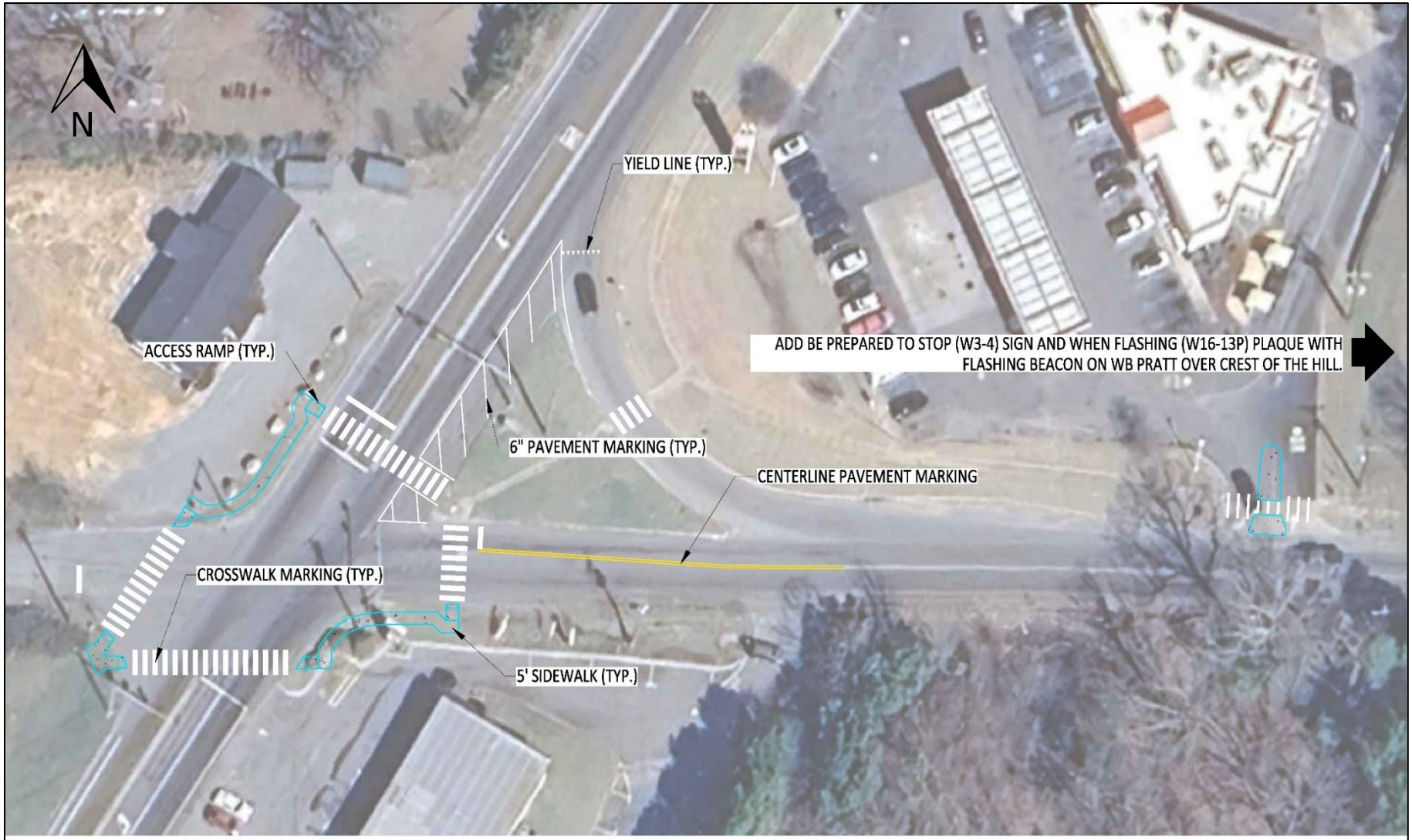
State Case Number	Crash Date	Crash Day	Crash Time*	Crash Severity	Crash Manner	Lighting Condion	Surface Condition
2019520174	2019-04-23	TUE	08:50	SUSPECTED MINOR INJURY	SINGLE VEHICLE CRASH - COLLISION WITH CULVERT	DARK - NOT LIGHTED	DRY
2020543238	2020-09-01	TUE	14:19	POTENTIAL MINOR INJURY	FRONT-TO-FRONT	DAYLIGHT	WET
2020551417	2020-10-10	SAT	11:05	POTENTIAL MINOR INJURY	ANGLE	DAYLIGHT	WET
2020570027	2020-12-31	THU	15:45	FATAL INJURY	ANGLE	DAYLIGHT	WET
2021517766	2021-03-29	MON	21:27	SUSPECTED SERIOUS INJURY	SINGLE VEHICLE CRASH - OVERTURN/ROLLOVER	DARK - NOT LIGHTED	DRY
2021520148	2021-04-13	TUE	06:30	POTENTIAL MINOR INJURY	SINGLE VEHICLE CRASH - COLLISION WITH TREE	DAYLIGHT	DRY
2021543968	2021-07-24	SAT	17:25	SUSPECTED MINOR INJURY	SINGLE VEHICLE CRASH - COLLISION WITH DITCH	DAYLIGHT	DRY
2021549352	2021-08-18	WED	21:25	SUSPECTED SERIOUS INJURY	SINGLE VEHICLE CRASH - COLLISION WITH PEDALCYCLE	DARK - NOT LIGHTED	DRY
2021551462	2021-08-27	FRI	07:00	SUSPECTED SERIOUS INJURY	FRONT-TO-FRONT	DAYLIGHT	DRY
2022501164	2022-01-08	SAT	11:35	POTENTIAL MINOR INJURY	ANGLE	DAYLIGHT	WET
2022504093	2022-01-22	SAT	17:42	SUSPECTED MINOR INJURY	SINGLE VEHICLE CRASH - COLLISION WITH DITCH	DARK - LIGHTED	DRY
2022507659	2022-02-10	THU	07:35	SUSPECTED MINOR INJURY	FRONT-TO-FRONT	DAYLIGHT	DRY
2022509380	2022-02-15	TUE	15:10	SUSPECTED SERIOUS INJURY	SIDESWIPE, SAME DIRECTION	DAYLIGHT	DRY
2022532588	2022-06-02	THU	15:53	POTENTIAL MINOR INJURY	FRONT-TO-REAR	DAYLIGHT	WET
2022535260	2022-06-13	MON	10:28	SUSPECTED SERIOUS INJURY	OTHER	DARK - NOT LIGHTED	DRY
2022536962	2022-06-22	WED	17:05	POTENTIAL MINOR INJURY	ANGLE	DAYLIGHT	DRY
2022551171	2022-08-31	WED	07:59	SUSPECTED SERIOUS INJURY	FRONT-TO-FRONT	DAYLIGHT	DRY
2022572254	2022-11-08	TUE	06:27	SUSPECTED MINOR INJURY	FRONT-TO-FRONT	DAWN	DRY
2022578037	2022-12-16	FRI	17:43	SUSPECTED MINOR INJURY	FRONT-TO-FRONT	DARK - NOT LIGHTED	DRY
2023509016	2023-02-13	MON	12:00	POTENTIAL MINOR INJURY	FRONT-TO-REAR	DAYLIGHT	DRY
2023516099	2023-03-18	SAT	10:28	POTENTIAL MINOR INJURY	SIDESWIPE, SAME DIRECTION	DAYLIGHT	DRY
2023523324	2023-04-20	THU	16:58	SUSPECTED MINOR INJURY	ANGLE	DAYLIGHT	DRY
2023532476	2023-05-30	TUE	17:45	SUSPECTED SERIOUS INJURY	FRONT-TO-REAR	DAYLIGHT	DRY
2023560192	2023-10-05	THU	12:41	POTENTIAL MINOR INJURY	FRONT-TO-FRONT	DAYLIGHT	WET
2023565525	2023-10-26	THU	19:50	SUSPECTED MINOR INJURY	SINGLE VEHICLE CRASH - COLLISION WITH OTHER NON-MOTORIST	DARK - NOT LIGHTED	WET
2023581936	2023-04-20	THU	23:42	FATAL INJURY	SINGLE VEHICLE CRASH - COLLISION WITH PEDESTRIAN	DARK - NOT LIGHTED	WET

**Note that some crashes were reported in military time and some crashes were reported using a 12-hour clock system without indicating AM or PM. Therefore, crashes with a time reported as 1300 and later can be assumed to be PM, but crashes with a time reported as earlier than 1300 may have occurred in the AM or PM. Please utilize the date and lighting condition columns to help determine if the crash occurred in the AM or PM.*

Appendix B: Unit Costs

Item	Unit Cost	Unit	Notes
Add High Visibility Crosswalk Pavement Markings	$3,000	Per Crossing	
Add/Improve Pavement Markings	$930	Per Approach Lane	
Convert 4-inch Striping to 6-inch Striping (2 lane)	$18,500	Per Mile (Full Road Width)	This cost estimate assumes two edge lines and centerline.
Add/Restripe Stop Bars	$230	Per Approach lane	
Add Raised Reflective Pavement Markers Along Centerline	$260	Per Mile	This cost estimate assumes the pavement markers are not for a two way left-turn lane but rather for a single yellow centerline stripe.
Add Reflective Object Markers (small for mailboxes/poles)	$40	Per Marker	
Add Reflective Object Markers (large for culverts)	$150	Per Marker	
Install Standard Sign	$470	Per Sign	This cost estimate includes signs such as no parking signs, warning signs, or speed limit signs.
Add Warning Signage with Queue Detector (with Flashing Beacon)	$55,000	Per Approach	
Install Delineators for Bike Lane	$64,000	Per Mile	This cost estimate assumes 20-foot spacing between each delineator.
Add Sidewalk	$700,000	Per Mile (one side)	This cost estimate assumes the reconstruction of existing driveways but does not include costs for right-of-way acquisition, utility relocation, or site modifications.
Add Side Path	$1,400,000	Per Mile (one side)	This cost estimate is based on the assumption of an urban area that includes driveway crossings.
Add Pedestrian Refuge Medium/Island	$20,000	Per Crossing	
Add Longitudinal Rumble Strips	$1,200	Per Mile	This cost estimate assumes installation with fresh asphalt.
Construct Raised Concrete Median	$270	Square Yard	
Add 4' Shoulder	$190,000	Per Mile	
Update Traffic Signal Timings	$4,000	Per Intersection	
Add Retroreflective Backplates	$300	Per Backplate	
Update Left-Turn Signal to Flashing Yellow Arrow	$2,900	Per Approach	This cost estimate assumes the existing cabinet and controller are capable of Flashing Yellow Arrow operation.
Add Pedestrian Signal at Signalized Intersection	$10,000	Per Crossing	This cost estimate assumes one signal on each side of the crossing and would require four signals to cover all legs of a four-way intersection.
Add Intersection Lighting	$47,000	Per Intersection	This cost estimate assumes the use of two existing utility poles for intersection lighting.

Appendix C: Conceptual Layouts

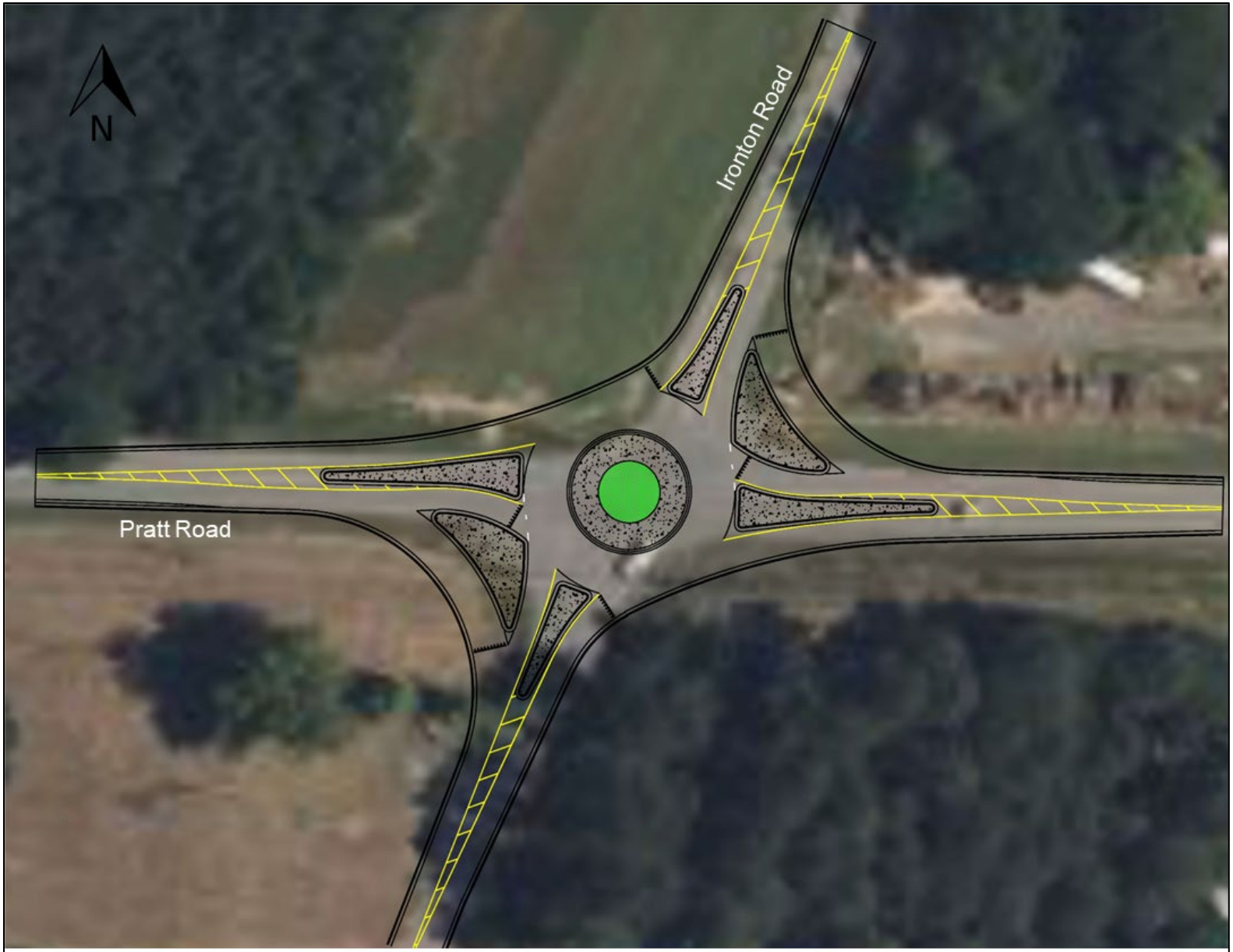


REFERENCE NOTES SCHEDULE PRATT & ARCH RD

SYMBOL	CODE	DESCRIPTION	QTY
03 CONCRETE			
	03-01	SIDEWALK	707 SF
	03-02	ADA RAMP	275 SF
	03-03	CONC MEDIAN	288 SF

GENERAL NOTES:
-ADD RETROREFLECTIVE BACKPLATES TO ALL TRAFFIC SIGNAL HEADS.
-REPLACE EXISTING NORTHBOUND AND SOUTHBOUND LEFT TURN SIGNAL HEADS WITH FLASHING YELLOW ARROWS.

Conceptual Layout of Suggested Improvements at Pratt Road and Arch Road Pike



Pratt Road and Ironton Road
Proposed Roundabout

Conceptual Layout of Proposed Roundabout at Pratt Road and Ironton Road