

MOAB PEDESTRIAN ROAD SAFETY ASSESSMENT

MAIN STREET FROM EMMA BOULEVARD TO 4TH EAST

GRAND COUNTY
UTAH



Prepared for:



Utah Department of Transportation – Region 4

210 West 800 S
Richfield, Utah 84701
(435) 893-4799

Prepared by:

Kimley»Horn

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EXECUTIVE SUMMARY

The Utah Department of Transportation (UDOT) authorized a pedestrian focused Road Safety Assessment (RSA) to be conducted on a portion of State Route 191 (Main Street) in Moab, Utah. The study area was from Emma Boulevard to 4th East. The study area consists of approximately 2 miles of Main Street, an urban roadway segment with two travel lanes in each direction and a Two-Way Left-Turn Lane (TWLTL) median. The speed limit along the corridor is 30 mph north of Uranium Avenue and 35 mph south of Uranium Avenue. The purpose of the RSA was to identify existing or potential road safety issues and suggest countermeasures to mitigate those safety issues.

A total of 202 crashes were reported within the study area during the five-year period from January 1, 2019, through December 31, 2023. Two fatal injury crashes, four serious injury crashes, 30 suspected minor injury crashes, and 29 possible injury crashes occurred along the corridor during the five-year study period. Of the 202 crashes, ten involved pedestrians and nine involved bicyclists.

An RSA field review was completed on Tuesday, May 7, 2024. The goal of the field review was to have a diverse team review existing conditions and identify existing or potential road safety issues and identify opportunities for safety improvements for all road users that can be implemented in the near term with maintenance staff or can be considered for future projects and long-range planning. The RSA Field Review Team strived to look at safety issues from a different perspective and develop suggestions for potential safety enhancements.

A virtual Debriefing Meeting was conducted on Wednesday, May 8, 2024, to review the findings of the RSA Field Review Team during the various field reviews to ensure that all identified issues and suggestions were captured. During this meeting, the RSA Field Review Team determined their support for each of the suggestions. All suggestions from the RSA Field Review Team are summarized **Section 4** of this document and were prioritized as follows:

- **Priority 1:** Short-term suggested improvements that can be implemented in the near-term by UDOT and/or Moab city maintenance staff during their periodic maintenance as appropriate funding is available.
- **Priority 2:** Mid-term suggestions that will require some engineering design that UDOT and/or Moab city should work to acquire funding to implement.
- **Priority 3:** Long-term suggested improvements that are more complex and will require significant engineering design and/or right-of-way acquisition to be considered for future UDOT roadway improvement projects if funding is available.

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LIST OF ACRONYMS

AADT	Annual Average Daily Traffic
PHB	Pedestrian Hybrid Beacon
RSA	Road Safety Assessment
SR	State Route
TWLTL	Two-Way Left-Turn Lane
UDOT	Utah Department of Transportation

1. INTRODUCTION

The Utah Department of Transportation (UDOT) authorized a pedestrian-focused Road Safety Assessment (RSA) to be conducted on a portion of State Route 191 (Main Street) in Moab, Utah. The study area was from Emma Boulevard to 4th East. The study area generally consists of a roadway cross section with two travel lanes in each direction, a two-way left-turn lane (TWLTL), various areas of on-street parking, and no bicycle lane. The Pedestrian RSA was performed in conjunction with an upcoming corridor visioning project occurring at the same location. The purpose of the RSA was to have a diverse team review existing conditions and identify existing or potential road safety issues and suggest countermeasures to mitigate those safety issues. **Figure 1** shows the RSA study area.

1.1. Scope

The RSA field reviews were completed on Tuesday, May 7, 2024. The RSA Field Review Team recognizes that compliance with design standards does not necessarily result in an optimally safe road design, and the failure to comply with standards does not necessarily result in an unsafe design. The goal of this RSA was to identify existing or potential road safety issues and identify opportunities for safety improvements for pedestrians that can be implemented in the near term with maintenance staff or can be considered for future projects and long-range planning. However, the RSA was not intended as a replacement for design quality control or standard compliance checks, a traffic impact or safety impact study, a road safety inventory program, or a traffic safety modeling effort. The assessment is not intended as a means of evaluating design work, checking compliance with standards, investigating crashes, or providing a safety review. Instead, the RSA Field Review Team strived to look at pedestrian safety issues from a different perspective and develop suggestions for potential safety enhancements.

1.2. Statutory Notice

23 U.S.C. § 409: US Code – Section 409: Discovery and admission as evidence of certain reports and surveys

Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential accident sites, hazardous roadway conditions, or railway-highway crossings, pursuant to sections 130, 144, and 148 of this title or for the purpose of developing any highway safety construction improvement project which may be implemented utilizing Federal-aid highway funds shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

1.3. Objectives

The objectives for the Moab Main Street Pedestrian RSA are as follows:

- Identify potential existing and future pedestrian safety issues found within the study area.
- Develop suggested improvements based on reviewed crash data, field observations, and input from the RSA Field Review Team that can be implemented through future UDOT and/or Moab city maintenance, planning, and design projects.

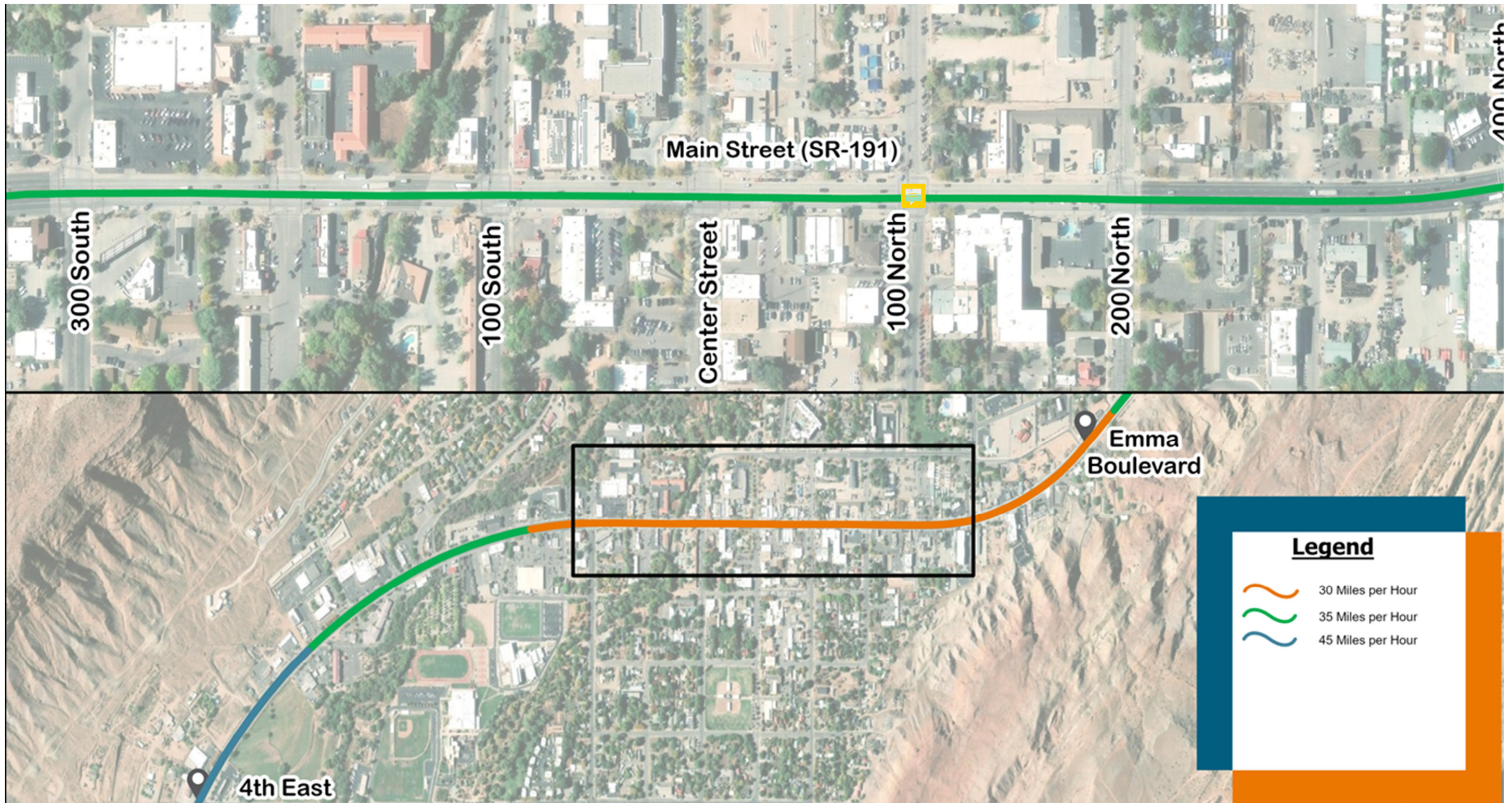


Figure 1 – Overview of Moab RSA Study Area

1.4. Briefing Meeting

A virtual RSA Field Review Team Briefing Meeting was held on Thursday, May 2, 2024. The RSA Team Leaders with Kimley-Horn provided an overview of the RSA process and schedule, existing traffic conditions, crash history, and potential pedestrian-focused safety mitigation measures. **Table 1** provides a summary of the RSA Field Review Team members present.

1.5. Field Review Schedule

A total of four field reviews were performed throughout the day on Tuesday, May 7, 2024, to ensure that the RSA Field Review Team was able to see every aspect of the study area. A summary of the field reviews and participating RSA Field Review Team members are summarized in **Appendix B**.

1.6. Debriefing Meeting

A virtual Debriefing Meeting was held on Wednesday, May 8, 2024, to review findings of the RSA Field Review Team during the various field reviews to ensure that all identified issues and suggestions were captured. Attendees of the Debriefing Meeting are identified in **Table 1**.

The RSA Field Review Team reviewed the observations and suggestions that were recorded during the field reviews. The RSA Field Review Team reviewed each observation and suggestion, and assigned each suggestion to one of the three priority level categories defined as follows:

- **Priority 1:** Short-term suggested improvements that can be implemented in the near-term by UDOT and/or Moab city maintenance staff during their periodic maintenance as appropriate funding is available.
- **Priority 2:** Mid-term suggestions that will require some engineering design that UDOT and/or Moab city should work to acquire funding to implement.
- **Priority 3:** Long-term suggested improvements that are more complex and will require significant engineering design and/or right-of-way acquisition to be considered for future UDOT roadway improvement projects if funding is available.

The suggestions summarized in this report may be considered in future planning for this corridor and implemented based on funding availability. A Priority 1 suggestion that is not able to be implemented due to funding or other considerations should be considered for implementation with the Priority 2 suggestions and Priority 2 suggestions that are not implemented should be considered for implementation with Priority 3 suggestions.

Field Review Team suggestions are noted in ***bold italics*** with the associated priority level in **Section 3**. Suggestions are only one potential method of mitigation as presented by the RSA Field Review Team. Other mitigation strategies should be explored by a Design Team where practicable.

Table 1 – RSA Team Members and Attendance

Name	Agency	Briefing Meeting	Morning Review	Afternoon Review	Evening Review	Night Review	Debriefing Meeting
Jacob Farnsworth	Kimley Horn - Consultant	✓	✓	✓	✓	✓	✓
Jaide Bosen	Kimley Horn - Analyst	✓	✓	✓	✓		✓
Jason Taylor	Moab - City Council Member	✓	✓	✓		✓	✓
Lex Bell	Moab - Chief of Police	✓					✓
Anne Ogden	UDOT Region 4 - Traffic Engineer	✓		✓	✓		✓
Didar Charles	Moab - Assistant City Engineer - GIS	✓					
Joette Langianese	Moab - Mayor	✓		✓			✓
Levi Jones	Moab - Public Works Director/Streets Supervisor	✓	✓	✓	✓	✓	✓
Michael Black	Moab - Community Development Director	✓	✓	✓			✓
Travis Evans	UDOT – Active Transportation & Safety	✓	✓	✓	✓	✓	✓
Colin Topper	Moab - City Council Member	✓	✓	✓		✓	✓
Cory Shurtleff	Moab - Planning Director	✓		✓			✓
Kaitlin Myers	Moab - City Council Member	✓			✓		✓
Mark Jolissaint	Moab - Assistant City Engineer - Lead	✓	✓	✓	✓	✓	✓
Cody Marchant	UDOT Region 4 - Traffic Operations	✓	✓	✓			✓
George H.	UDOT Region 4		✓				
Jared Beard	UDOT Region 4 - Traffic Engineer		✓	✓			✓
Carolyn Conant	Moab - City Planning		✓		✓		✓
James Blanthon	Moab - Assistant Police Chief			✓			
Devin Goode	UDOT Region 4 - Maintenance			✓		✓	✓
Troy Torgerson	UDOT - ITS PM and Signal Engineer		✓	✓			

Name	Agency	Briefing Meeting	Morning Review	Afternoon Review	Evening Review	Night Review	Debriefing Meeting
Tawny Knuteson-Boyd	Moab - City Council Member						✓
Dan Hinkley	UDOT Region 4 - District Engineer						✓
Alexi Lamm	Moab - Sustainability Director					✓	

2. GENERAL INFORMATION

This RSA was conducted on Main Street from Emma Boulevard to 4th East on approximately 2 miles of an urban downtown two-lane roadway segment with a TWLTL median through Moab, Utah. Within the study area, Main Street includes a variety of intersection types, access drives, and active transportation users. The speed limit along the corridor is 30 mph north of Uranium Avenue and 35 mph south of Uranium Avenue.

2.1. Traffic Data

Two UDOT annual average daily traffic (AADT) stations are located along the corridor within the study area. The traffic count data is presented in **Table 2**.

Table 2 – AADT Data for Study Area

Segment	AADT (2018)	AADT (2019)	AADT (2020)	AADT (2021)	AADT (2022)
Station 019-00775 500 W – Center Street (MP 125.816-127.097)	14,412	14,729	14,051	15,878	16,116
Station 019-0075 Center Street – 4 th East (MP 124.593-125.816)	18,162	18,562	17,708	20,010	20,310

2.2. Crash Data Summary

Crash data were obtained from the UDOT's crash website for the years of 2014 through 2023. A total of 453 crashes were reported within the study area during that time period with 18 of those crashes involving pedestrians and 12 involving bicyclists. Two fatal crashes occurred during this time period.

During the most recent complete five-year period (2019-2023) a total of 202 crashes were reported within the study area. Two fatal injury crashes and four serious injury crashes occurred along the corridor during this five-year study period. Of the 202 crashes, 10 involved pedestrians and 9 involved bicyclists.

Pedestrian and bicycle crashes by location are shown in **Figure 2** through **Figure 5**, respectively. Additional crash summaries and graphics are located in **Appendix A**. Crashes by injury severity within the study area are shown in **Table 3** and **Table 4**.

Table 3 – Crashes by Severity (10 year)

Crash Severity	Overall		Pedestrian	Bicycle
Fatal (K)	2	0.44%	1	0
Suspected Serious Injury (A)	8	1.77%	6	0
Suspected Minor Injury (B)	37	8.17%	4	6
Possible Injury (C)	61	13.47%	4	3
No Injury/PDO (O)	345	76.16%	3	3
Total	453 (100%)		18 (3.98%)	12 (2.65%)

Crash Data: 2014-2023

Table 4 – Crashes by Severity (5 year)

Crash Severity	Overall		Pedestrian	Bicycle
Fatal (K)	2	0.99%	1	0
Suspected Serious Injury (A)	4	1.98%	3	0
Suspected Minor Injury (B)	30	14.85%	3	5
Possible Injury (C)	29	14.36%	2	1
No Injury/PDO (O)	137	67.82%	1	3
Total	202 (100%)		10 (4.96%)	9 (4.46%)

Crash Data: 2019-2023

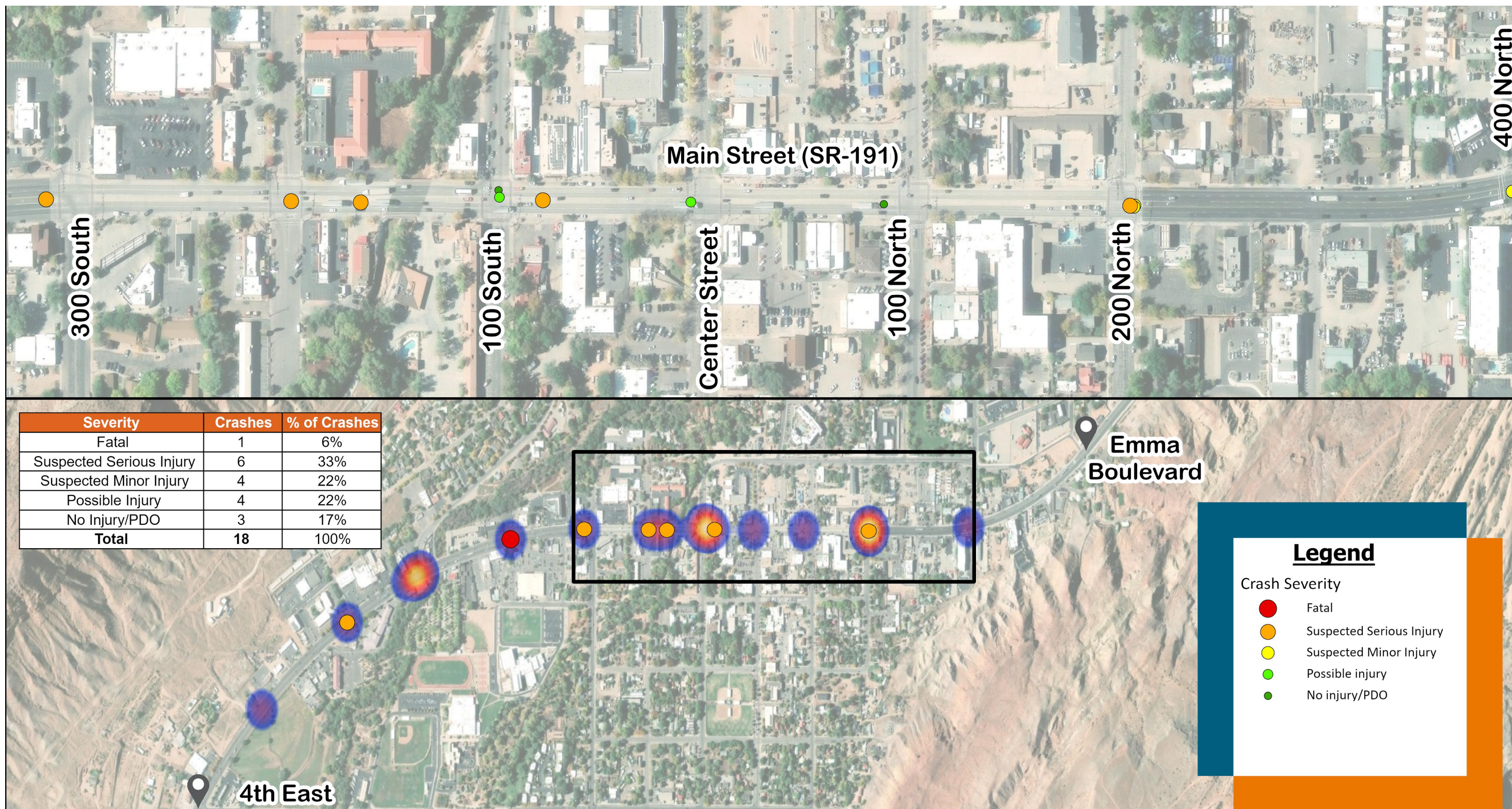


Figure 2 – Study Area Pedestrian Crashes by Severity (2014-2023)

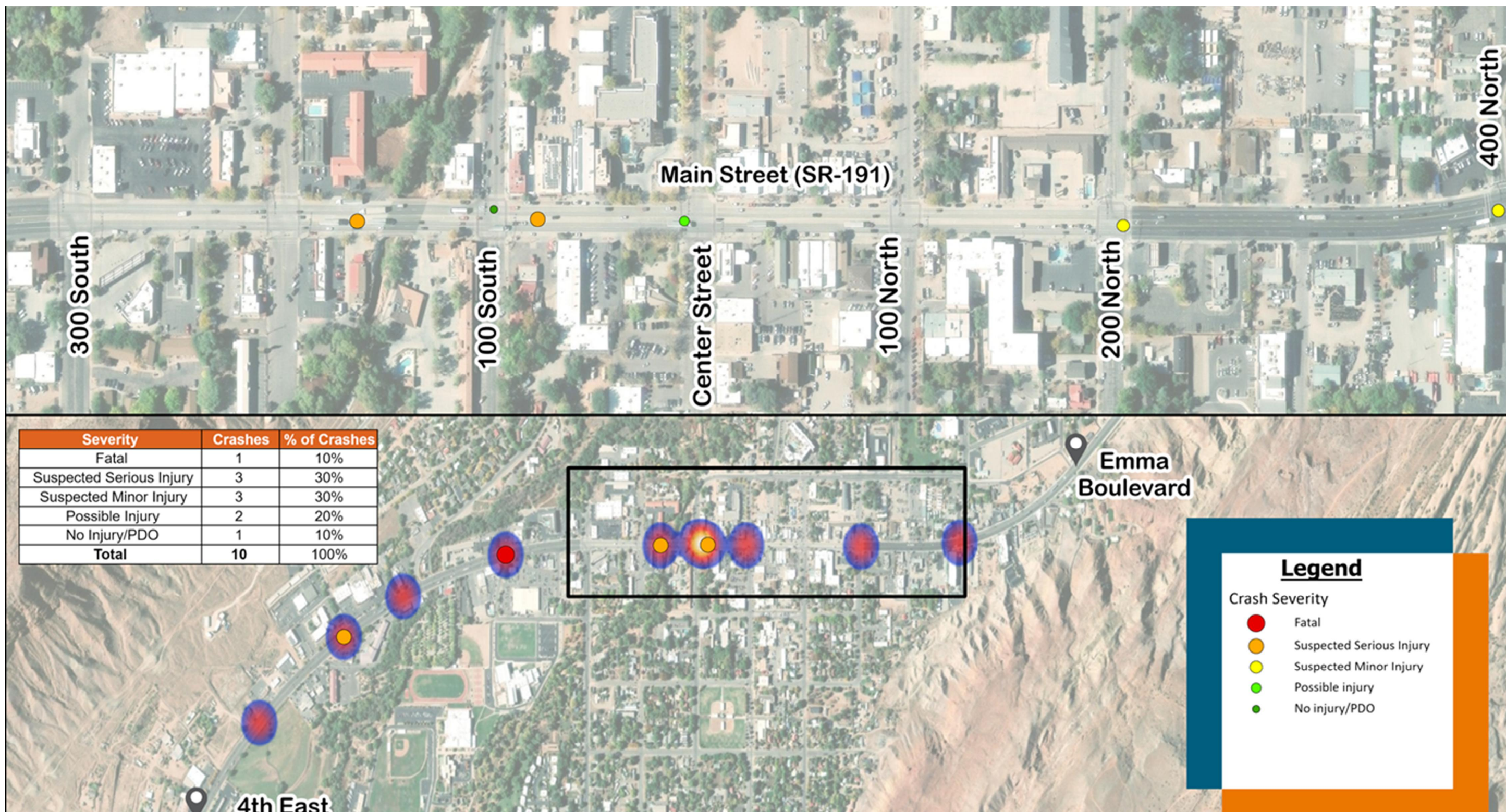


Figure 3 – Study Area Pedestrian Crashes by Severity (2019-2023)

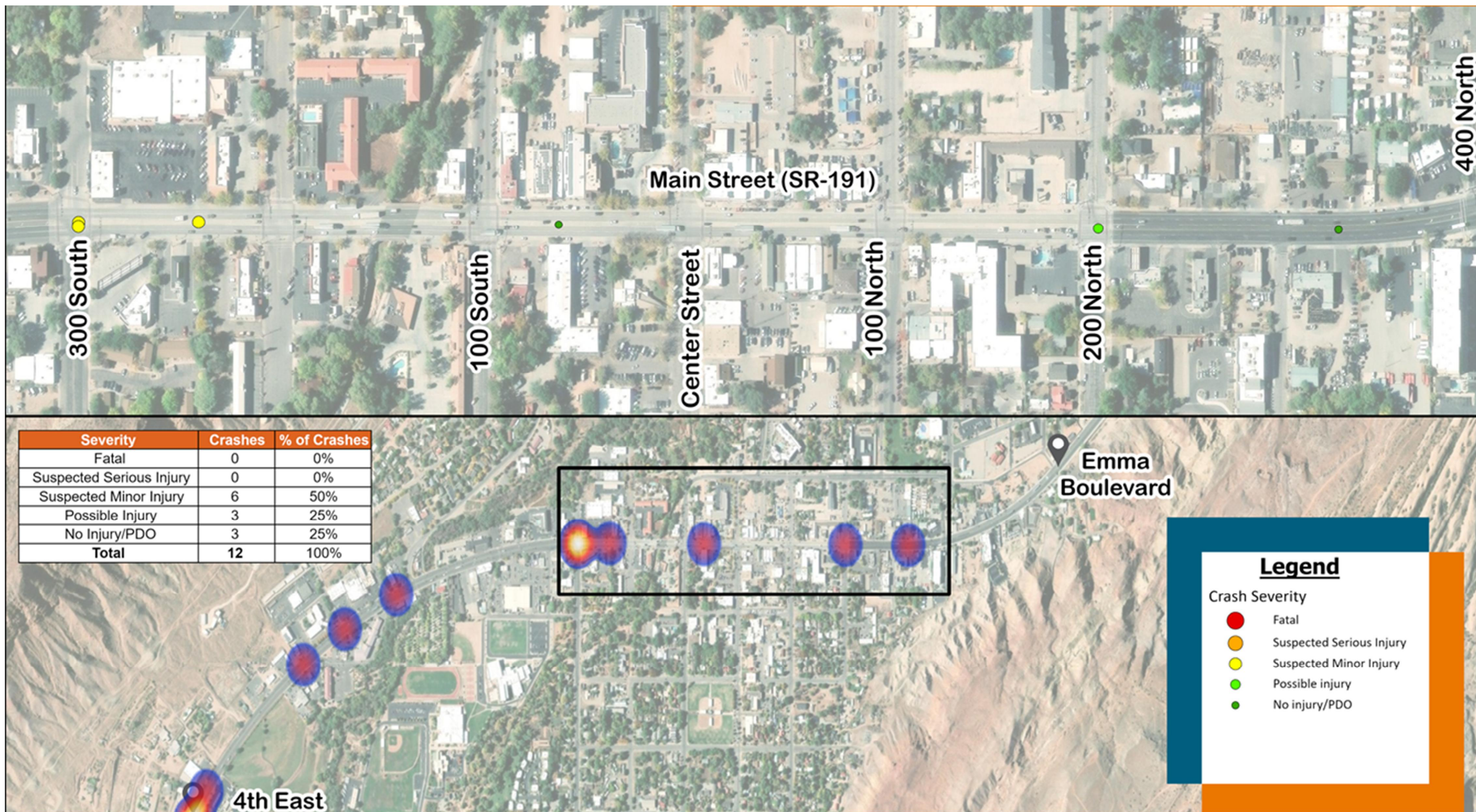


Figure 4 – Study Area Bicycle Crashes by Severity (2014-2023)

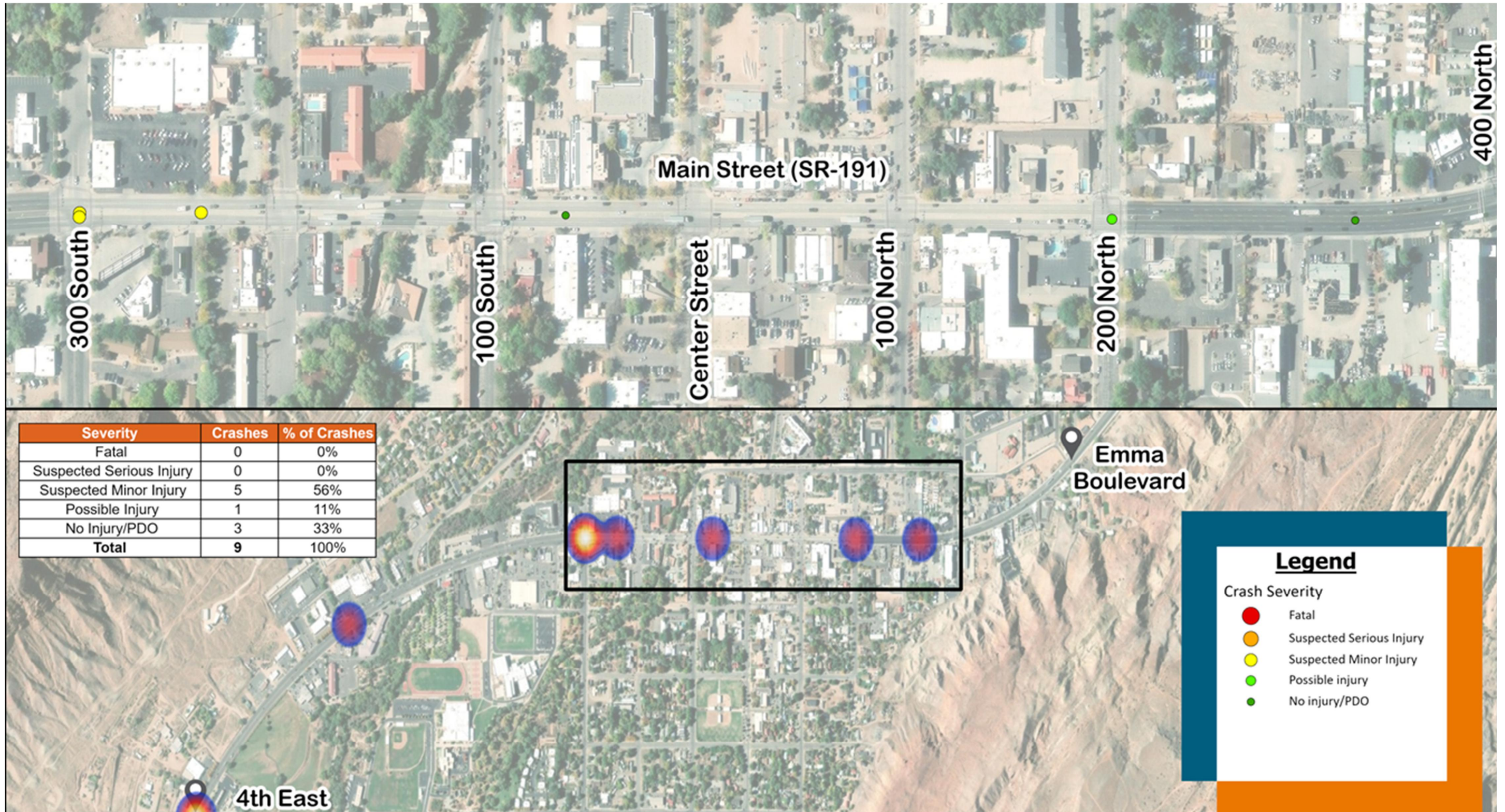


Figure 5 – Study Area Bicycle Crashes by Severity (2014-2023)

3. FIELD OBSERVATIONS AND SUGGESTIONS

This section summarizes the RSA Field Review Team's observations and suggestions that pertain to the entire study area of the Moab Main Street RSA. Field observations and suggestions are divided into intersections, sidewalks, lighting, roadway segments, and corridor wide observations. All suggestions are listed by location in ***bold italics*** along with their assigned priority level. Those suggestions that would be Moab's responsibility to implement will be noted as such throughout the report.

3.1. Main Street Entire Corridor Observations

The following subsections include observed issues (listed in no particular order) and provides prioritized suggestions identified by the RSA Field Review Team members specific to the entire study area corridor of Main Street from Emma Boulevard to 4th East.

3.1.1. Issue #1 – Bicyclists on Sidewalk

The RSA Field Review Team observed several bicyclists on the sidewalk, interfering with pedestrian traffic. Signs exist through sections of the corridor discouraging bikes on the sidewalk; however, there is not a consistent network of bicycle facilities along Main Street. It was also noted that most bicyclists will avoid Main Street because they feel unsafe. See **Photograph 1**.

Priority 2: Consider installing buffered or protected bike lanes. Likely would require the removal of on-street parking and/or reduced shoulder width (UDOT/Moab)



Photograph 1 – Bicyclists on Sidewalk

3.1.2. Issue #2 – Uneven and Missing Sidewalks

Along Main Street several sections of sidewalk were observed to be uneven, damaged, or missing. The goal to complete the sidewalk network would be ideal for all active transportation users. Specific locations noted to have sidewalk damage include surrounding the Walker Stores, the Moab Information Center, Fiesta Mexican driveway, and areas near the City Market. See **Photograph 2** and **Photograph 3**.

Priority 1: Repair locations with broken or uneven sidewalks (Moab)

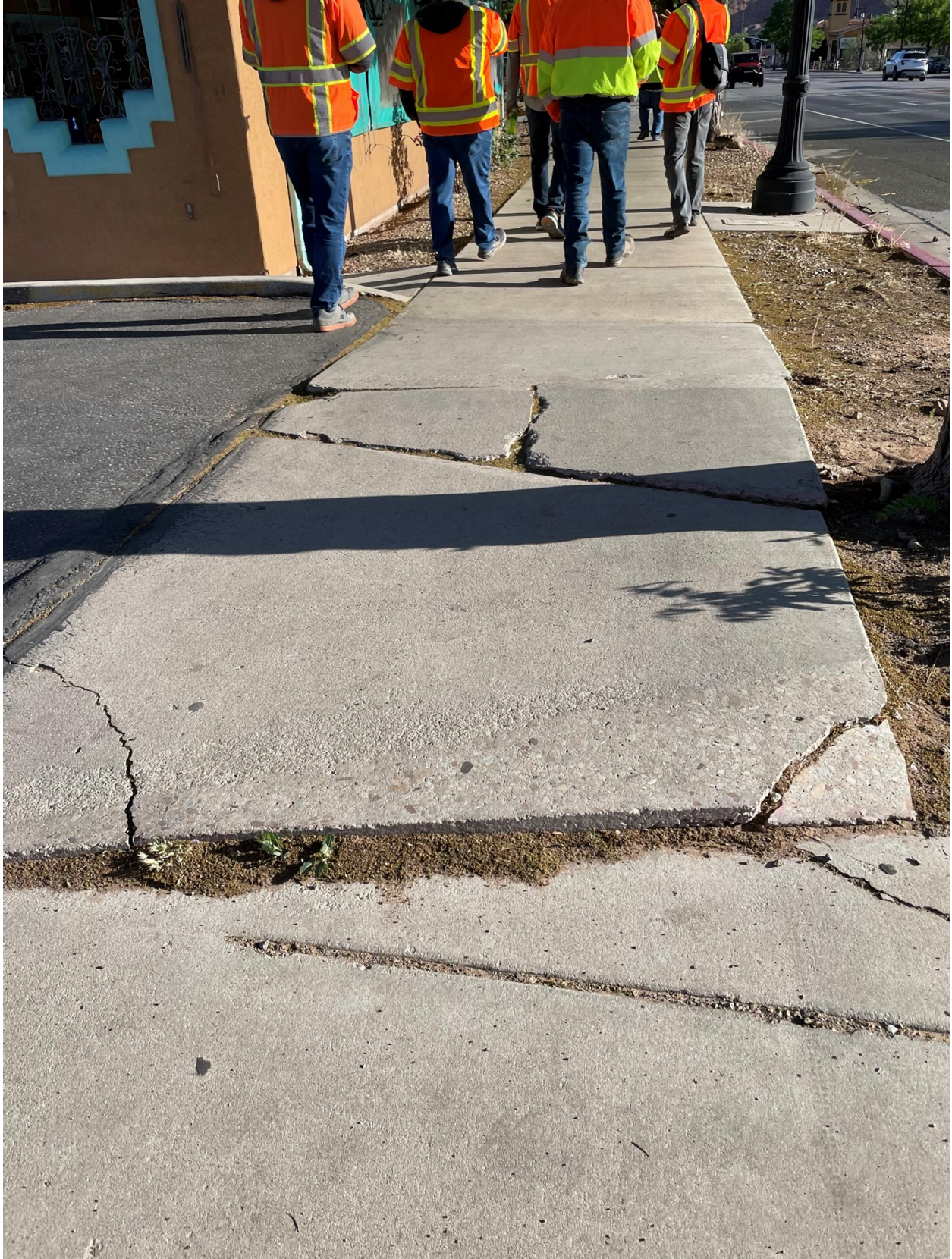
Priority 1: Repair sidewalks where tree roots have upheaved or broken in sections (Moab)

Priority 2: Consider Safe Sidewalks funding to complete the sidewalk network where gaps are present. (Safe Sidewalk funding can only be used to construct new sidewalks) (Moab)

Priority 3: Investigate less disruptive tree species to install near the sidewalk and gutter (Moab) 



Photograph 2 – Missing Sidewalk



Photograph 3 – Uneven and Damaged Sidewalk

3.1.3. Issue #3 – Vehicle and Pedestrian Conflicts

Pedestrian traffic along Main Street can become extremely heavy during peak times. When pedestrians have the opportunity to cross at minor streets, left and right turning vehicles are often unable to make their turning movement. Right and left turning vehicles do not always check for crossing pedestrians before turning and these types of collisions were identified as an issue. See Photograph 4.

Priority 1: Expand the no parking area near intersections to increase intersection sight visibility (Moab)

Priority 2: Consider the application of leading pedestrian intervals with no right-turn on red signage. Evaluate the effect to through movements. (UDOT) – Further evaluation needed

Priority 3: Consider installing bulbouts at intersections. Evaluate the ability for larger vehicles to make turning movements. (UDOT)

Priority 3: Evaluate providing a protected/permissive left turn phase for vehicles using a flashing yellow arrow signal head (UDOT) – Further evaluation needed



Photograph 4 – Pedestrians Crossing Minor Leg of Intersection

3.1.4. Issue #4 – Crosswalk Visibility

Due to the high traffic and pedestrian volumes along Main Street, it is imperative that all crosswalks are extremely visible to road users. Several intersections and driveways exist along the corridor and it can be unclear to traveling vehicles which locations are established crossing areas where pedestrians should be expected. Multiple schools are also accessed by crossing Main Street. See **Photograph 5**.

Priority 2: Consider high visibility crosswalks, including ladder striping (UDOT)

Priority 2: Consider widening crosswalks to at least 10 feet (UDOT/Moab)



Photograph 5 – Example Location for High Visibility Crosswalk Enhancements

3.1.5. Issue #5 – Empty or Unpaved Areas Between the Curb and Sidewalks

The RSA Field Review Team noted that there were several sections in which the space between the curb and existing sidewalk was empty or unpaved. Empty portions currently have no landscaping or useable pavement/pavers that pedestrians could utilize. The existing sidewalk could be expanded in these areas. See **Photograph 6**.

Priority 1: Consider paving with concrete to convert to sidewalk, providing additional sidewalk width as a short-term solution (Moab)



Photograph 6 – Example Location for Additional Sidewalk Width

3.1.6. Issue #6 – Pedestrian Obstructions

Encroachments into the sidewalk right-of-way were noted as an issue, obstructing the travel path for pedestrians and bicyclists. Signs, sale racks, and other similar items were observed blocking portions of the sidewalk. If continuous, unobstructed sidewalks are desired, there may also need to be removal of existing obstacles like light poles and pavement furniture. See **Photograph 7**.

Priority 1: Work with local businesses to address right of way infringements and sidewalk obstructions (Moab)



Photograph 7 – Non-Permanent Obstruction

3.1.7. Issue #7 – Pedestrian Crossing Times

It was observed at several intersections that the pedestrian crossing time may not be sufficient. The crossing times felt short for large numbers of pedestrians crossing Main Street and the minor side streets during peak periods.

Priority 1: Evaluate if there is sufficient crossing time at all Main Street intersections (UDOT)

3.1.8. Issue #8 – Vehicles Making Right Turns in the Shoulder

The RSA Field Review Team observed vehicles using the roadway shoulder at intersections to make right turning movements. Multiple intersections do not have a striped right turn lane and the right turning vehicles conflict with pedestrians crossing the minor streets. See **Photograph 8**.

Priority 2: Stripe a right turn lane or install bulbouts to restrict turning in the shoulder. Some portions of the curb are already painted red and bulbouts would not reduce existing parking. (UDOT)



Photograph 8 – Example Location for Right-Turn Lane or Bulbout

3.1.9. Issue #9 – Bicycle Facilities at Intersections

Several intersections in the study area of Main Street do not have any bicycle travel facilities present. As bicyclist are encouraged to use the road instead of the sidewalk, it is important that the interaction between vehicles and bicycles at intersections is clear. The following intersections currently have video detection that could be used for bicycle detection: 100 South, 200 North, and 400 North.

Priority 2: Paint green bike boxes/lanes in conflict zones on the minor street and along Main Street if bicycle lanes are added (UDOT/Moab) – Further evaluation needed

3.1.10. Issue #10 – High Vehicle Speeds

Main Street (SR 191) is the primary route for all users through the city of Moab. The speed limit transitions from 35 mph, 30 mph, back to 35 mph, and up to 45 mph within the study area. Despite speed limit transitions, high vehicle speeds were noted as an issue along the corridor. Vehicles traveling at high speeds can make the area feel less safe to vulnerable users, especially in the downtown area.

Priority 1: Consider conducting a speed study along the entire corridor (UDOT)

3.1.11. Issue #11 – Access Driveways

Along Main Street there are multiple minor streets, access driveways, and other intersections with the corridor. Most access driveways are full movement accesses where vehicles turning left onto Main Street are vulnerable to opposing vehicles and often experience delays. Vehicles hoping to turn left onto Main Street also experience conflicts with groups of pedestrians as they cross access driveways. See **Photograph 9**.

Priority 3: Evaluate locations for median installation along the entire corridor to reduce left turn conflicts (UDOT/Moab)



Photograph 9 – Segment with Multiple Access Drives

3.1.12. Issue #12 – Dim Luminaires

During the nighttime field review, the RSA Field Review Team noted some of the existing luminaires were dim and certain intersections didn't have sufficient lighting. Moab city has been conducting a lighting study on the Main Street corridor and the results of that study should inform additional improvements. With any transition to LED lights, the range and spacing of new lights should be reevaluated before installation. See **Photograph 10**.

Priority 1: Moab to continue working with Rocky Mountain Power to transition all lights to LEDs (Moab)

Priority 2: Consider undermast arm lighting at intersections in addition to regular intersection lights at locations that appear dim. (UDOT/Moab) – Further evaluation needed



Photograph 10 – Dim Sidewalk Section

3.1.13. Issue #13 – Lack of Traveler Information

As Main Street (SR 91) is the primary route for recreational vehicles, freight, and public transportation it is susceptible to frequent congestions. There is currently no system in place notifying motorists of the traffic conditions downtown when entering Moab. Alerting drivers of any potential slowdowns, detours, or closures will promote better speed compliance and driver awareness.

Priority 3: Consider installing overhead variable message signs (VMS) before entering Moab (northbound & southbound) to alert motorists of potential issues (UDOT)

3.2. Downtown Moab Area, Roadway Segment Observations

The following subsections include observed issues (listed in no particular order) and provides prioritized suggestions identified by the RSA Field Review Team members specific to area of Main Street in the downtown area, from 200 North to 200 South.

3.2.1. Issue #1 – Safety for All Road Users

The ultimate goal for Moab's Main Street is for the corridor to feel safe for all users. An extra emphasis is placed on the large number of pedestrians using the facility and accommodating bicyclists. The nature of Main Street now is crowded with traffic congestion and on-street parking. As Moab completes the Main Street Vision project, additional studies and funding sources may be available to assist in any improvements. See **Photograph 11**.

Priority 2: Continue moving forward with the Main Street Vision project to determine an ideal cross section of Main Street (UDOT/Moab)

Priority 2: Consider applying for SS4A funding to complete a Demonstration Project that could include removed on-street parking, temporary medians, access management, protected or buffered bike lanes, and complete/wider sidewalks (UDOT/Moab)

Priority 2: Consider conducting/updating a parking study similar to the dispersed parking study to move more parking off of Main Street (UDOT/Moab)

Priority 2: Collect pedestrian counts to determine a pedestrian Level of Service (LOS) along Main Street and ensure all walkways are unobstructed. Evaluate what obstructions should be removed to improve pedestrian LOS. (Moab)



Photograph 11 – Typical Downtown Interaction

3.2.2. Issue #2 – Left Turning Queues

Vehicles attempting to turn left off of Main Street often experience delays and can create queues that extend to downstream intersections. The congestion along Main Street is partially due to high levels of opposing traffic traveling north and south as noted by the Field Review Team. It was noted that at several intersections left turns are only made after the signal has turned to the all red phase. In the urgency to turn left, vehicles were observed turning into pedestrians crossing the minor streets.

Priority 2: Evaluate if left turns are removed at specific locations if protected left turns can be added at other locations. (UDOT) – Further evaluation needed

Priority 3: Consider installing medians to restrict left turns at specific intersection locations and provide pedestrian refuge islands. (UDOT/Moab)

3.2.3. Issue #3 – Sidewalk Obstructions

The RSA Field Review Team observed several locations where objects were obstructing the walking path. Obstructions included utilities, light posts, trees, and local business's items. As there is no on-street bicycle network, bicyclists often use the sidewalk, further limiting the space on the walkway. See **Photograph 12**.

Priority 1: Evaluate sidewalk obstructions that can be removed or relocated (Moab)



Photograph 12 – Example Sidewalk Obstructions

3.2.4. Issue #4 – Downtown Wayfinding

Moab city is the gateway to some of Utah's southern national parks and a center for tourism and active transportation users. Main Street (SR 191) services recreational vehicles, freight, and public transportation so it is imperative that sufficient wayfinding is in place to reduce congestion and confusion. To remove additional parking off of Main Street would require additional wayfinding elements to public parking areas, alternative on-street parking locations, and transit facilities. The downtown maps are an existing structure that have the potential to be updated and used by all to locate these areas. It should also be considered to improve the digital wayfinding elements by adding significant areas to digital maps. See **Photograph 13**.

Priority 2: Consider ways to update digital wayfinding (Moab)

Priority 2: Consider wayfinding elements marking public parking areas, on-street parking, preferred bike routes, and transit facilities. Include these items on the downtown maps. (Moab)



Photograph 13 – Moab Downtown Map

3.2.5. Issue #5 – Underutilized Micro-transit

Moab city council members noted that the recently implemented micro-transit system is underutilized by residents and visitors. The micro-transit system includes an on-demand service and one Main Street fixed route. However, the transit stops were observed to be hard to notice from the walkway and the roadway. There are also no existing elements along Main Street with maps of the service area. An easily accessible micro-transit system has the potential to remove traffic and parking on Main Street. See **Photograph 14**.

Priority 1: Improve visibility of micro-transit stop signs (Moab)

Priority 2: Include transit routes and stop locations on downtown maps (Moab)

Priority 3: Consider partnering with hotels/local businesses to coordinate bus routes or alternative transportation for visitors (Moab)



Photograph 14 – Moab Area Transit Stop Signage

3.3. Emma Boulevard & Main Street Intersection Observations

The following subsections include observed issues (listed in no particular order) and provides prioritized suggestions identified by the RSA Field Review Team members specific to the Pedestrian Hybrid Beacon (PHB) at the intersection of Emma Boulevard and Main Street.

3.3.1. Issue #1 – Short Pedestrian Crossing Time

The RSA Field Review Team noted that the pedestrian crossing times did not seem to be sufficient to cross the five lane cross section of Main Street. The crossing is wide, and vehicles were observed speeding through the intersection. See **Photograph 15**.

Priority 1: Evaluate pedestrian crossing time and updated as needed (UDOT)



Photograph 15 – PHB Crossing at Emma Boulevard

3.3.2. Issue #2 – Vehicles Speeding Through the Intersection

This intersection is where the speed limit changes from 35 mph to 30 mph entering Moab from the north. Despite this speed change, vehicles were observed traveling at high speeds through the PHB or being confused by its signage. See **Photograph 16**.

Priority 2: Install in-pavement speed limit markings to remind drivers of the speed transition (UDOT)



Photograph 16 – Example Speed Limit Pavement Markings

3.3.3. Issue #3 – Burnt Out Luminaires

During the nighttime visit it was observed that some luminaires at the intersection were burnt out.

Priority 1: Replace luminaires (Moab/Rocky Mountain Power)

3.3.4. Issue #4 – Underutilized Parking

Existing parking near the church building is underutilized by residents and visitors. In order to remove excessive parking along Main Street, public parking areas should be easier to navigate to and clearly marked.

Priority 2: Include wayfinding to parking along Emma Boulevard (Moab)

3.3.5. Issue #5 – Lacking Bicycle Facilities

The intersection of Emma Boulevard and Main Street is one of the first intersections between Moab city and Arches National Park. Therefore, there is a large number of cyclists and other non-motorists that travel along Main Street. There are no clearly marked bicycle lanes north of this intersection, so cyclists are forced to use the shoulder or the sidewalk. See **Photograph 17**.

Priority 3: Evaluate ability to include bike lanes on Main Street to the north and south of Emma Boulevard (UDOT/Moab)



Photograph 17 – Bicyclist using the Shoulder and Sidewalk South of Emma Boulevard

3.3.6. Issue #6 – “Trucks Use Left Lane” Signage

The “Trucks Use Left Lane” signage surrounding the intersection of Emma Boulevard and Main Street is small and less visible to truck drivers. The PHB at the intersection is a potential location for additional truck signage but already includes several signs for drivers to obey the PHB. Extra consideration should be taken to not create “driver overload” with too much sign clutter on the PHB mast arm. See **Photograph 18**.

Priority 1: Increase the size of the sign (UDOT) – Further evaluation needed

Priority 2: Consider mounting the sign overhead on the HAWK to be more visible to trucks (UDOT) – Further evaluation needed



Photograph 18 – Existing Truck Signage

3.4. 400 North Lighting Observation

The following subsection includes an observed issue and prioritized suggestion identified by the RSA Field Review Team members specific to the lighting condition north of 400 North by the Maverik gas station.

3.4.1. Issue #1 – Dim Street Lighting

The RSA Field Review Team noted the street lighting in this section seemed dim and could be improved with better or additional lighting in the area.

Priority 2: Upgrade luminaires (Moab)

3.5. 300 North & Main Street Intersection Observations

The following subsections include observed issues (listed in no particular order) and provides prioritized suggestions identified by the RSA Field Review Team members specific to the intersection of 300 North and Main Street.

3.5.1. Issue #1 – Burnt Out Luminaire

The RSA Field Review Team noted the streetlight near just north of the intersection of 300 North and needs replacing.

Priority 1: Replace luminaire (Moab/Rocky Mountain Power)

3.5.2. Issue #2 – Light Post in the Sidewalk

The RSA Field Review Team members noted that the light post on the west sidewalk on the west side of Main Street in front of Jenn's Jeep Rentals is located in the middle of the sidewalk and obstructing the walkway. This section of sidewalk is not ADA compliant due to the obstruction. See **Photograph 19**.

Priority 2: Relocate light post (Moab)



Photograph 19 – Light Pole Obstruction

3.6. 200 North & Main Street Intersection Observations

The following subsections include observed issues (listed in no particular order) and provides prioritized suggestions identified by the RSA Field Review Team members specific to the intersection of 200 North and Main Street.

3.6.1. Issue #1 – School Crossing

The intersection of 200 North and Main Street was noted as a main crossing location for children walking to school. The crosswalk crosses a total of five lanes and the speed limit through the intersection is 30 mph.

Priority 1: Consider employing crossing guards at intersections used access to school (Moab)

3.6.2. Issue #2 – Raised Curb

On the southwest corner of this intersection there is a portion of raised curb around the signal post. The curb was put in place with the installation of the signal post and cannot be removed. As the raised curb is near the pedestrian ramps, it presents a tripping hazard and an obstruction to the travel way. See **Photograph 20**.

Priority 1: Paint the raised curb (Moab)



Photograph 20 – Raised Sidewalk Lip

3.7. 100 North & Main Street Intersection Observations

The following subsections include observed issues (listed in no particular order) and provides prioritized suggestions identified by the RSA Field Review Team members specific to the intersection of 100 North and Main Street.

3.7.1. Issue #1 – Gaps for Left Turning Vehicles

The traffic at this intersection was observed to be consistent enough that vehicles desiring to make a left turn off of Main Street were unable to find any gaps in the opposing traffic. The permissive phasing only allowed one to two cars to turn left after the signal head turns red.

Priority 2: Consider Flashing Yellow Arrows and activating protected left turns when longer queues are detected (UDOT)

3.7.2. Issue #2 – Lighting

The existing lighting was observed to be dim in nighttime conditions.

Priority 2: Consider undermast arm lighting with regular intersection lighting (UDOT/Moab) – Further evaluation needed

3.7.3. Issue #3 – Decorative Lighting

The RSA Field Review Team noted that the decorative lighting on the northwest and southeast corners of the intersection were burnt out. See **Photograph 21**.

Priority 1: Replace luminaire (Moab/Rocky Mountain Power)



Photograph 21 – Burnt Out Decorative Lighting on Northwest Corner

3.8. Center Street & Main Street Intersection Observation

The following subsection includes an observed issue and prioritized suggestion identified by the RSA Field Review Team members specific to the intersection of Center Street and Main Street.

3.8.1. Issue #1 – Burnt Out Luminaire

The luminaire on the northeast corner of the intersection was observed to be burnt out. See **Photograph 22**.

Priority 1: Replace luminaire (Moab/Rocky Mountain Power)



Photograph 22 – Burnt Out Luminaire on Northeast Corner

3.11. 100 South to 200 South Roadway Segment Observations

The following subsections include observed issues (listed in no particular order) and provides prioritized suggestions identified by the RSA Field Review Team members specific to the Main Street segment from 100 South to 200 South.

3.11.1. Issue #1 – Narrow Sidewalk

The bridge over Mill Creek was observed to have a narrow sidewalk on both sides of Main Street. The sidewalk approaching the bridge is wider but then narrows to approximately four feet across the bridge. The narrow sidewalk cannot accommodate pedestrian and bicycle traffic. See **Photograph 24**.

Priority 3: Widen the sidewalk across the bridge to match the surrounding sections. Reduce shoulder width to provide additional sidewalk width. (UDOT/Moab)

3.11.2. Issue #2 – Low Bridge Rail

The RSA Field Review Team observed that the guardrail across the bridge was short in height, especially for any bicyclists. See **Photograph 24**.

Priority 2: Install a taller safety rail (UDOT/Moab)



Photograph 24 – Narrow Sidewalk and Low Bridge Rail on Existing Bridge Structure

3.11.3. Issue #3 – Low Profile of Underpass Path

The underpass trail was observed to have a low profile in relation to the Mill Creek. If any changes were to be made to the path, the clearance between the Main Street bridge and users must be considered.

Priority 2: Contact the UDOT structures department to evaluate the possibility of raising the path's profile without encroaching on the freeboard clearance under the bridge (UDOT/Moab)

3.11.4. Issue #4 – Missing Sidewalks

Along Main Street there are several sections of missing sidewalk on the west side of the corridor between 100 South to 300 South. These segments of incomplete sidewalks may be eligible for Safe Sidewalks funding. See **Photograph 25**.

Priority 2: Install sidewalk. Consider Safe Sidewalks funding to complete the sidewalk network where there are gaps (Safe Sidewalk funding can only be used to construct new sidewalks) (Moab)



Photograph 25 – Missing Sidewalk Section

3.11.5. Issue #5 – Burnt Out Luminaire

The luminaire on the southeast corner of the intersection was observed to be burnt out.

Priority 1: Replace luminaire (Moab/Rocky Mountain Power)

3.12. 300 South & Main Street Intersection Observations

The following subsections include observed issues (listed in no particular order) and provides prioritized suggestions identified by the RSA Field Review Team members specific to the intersection of 300 South and Main Street.

3.12.1. Issue #1 – Gaps for Left Turning Vehicles

The traffic at this intersection was observed to be consistent enough that vehicles desiring to make a left turn off of Main Street were unable to find any gaps in the opposing traffic. The permissive phasing only allowed one to two cars to turn left after the signal head turns red.

Priority 2: Consider Flashing Yellow Arrows and activating protected left turns when longer queues are detected (UDOT)

3.12.2. Issue #2 – Light Post Location

It was noted that a light post on the southeast corner of the intersection has been frequently hit by vehicles and eventually removed. See **Photograph 26**.

Priority 2: Consider relocating the decorative light pole when replacing (Moab)

Priority 3: Install bulbouts to distance vehicles from pedestrians and lighting equipment (UDOT/Moab)



Photograph 26 – Missing Decorative Lighting Location

3.12.3. Issue #3 – Lighting

The existing lighting was observed to be dim in nighttime conditions.

Priority 2: Consider undermast arm lighting at this location and on the north leg with overhead power lines (UDOT/Moab) – Further evaluation needed

3.13. 300 South to Uranium Avenue Roadway Segment Observation

The following subsections include observed issues (listed in no particular order) and provides prioritized suggestions identified by the RSA Field Review Team members specific to the Main Street segment from 300 South to Uranium Avenue.

3.13.1. Issue #1 – Dim Lighting

The RSA Field Review Team noted that the lighting along this segment was dim in nighttime conditions.

Priority 2: Consider installing pedestrian level lighting (Moab)

3.13.2. Issue #2 – Burnt Out Luminaires

The RSA Field Review Team noted streetlights were burnt out near Moab Cyclery and the City Market gas station. See **Photograph 27**.

Priority 1: Replace luminaires (Moab/Rocky Mountain Power)



Photograph 27 – Burnt Out Luminaire Near Moab Cyclery

3.14. Uranium Avenue & Main Street Intersection Observation

The following subsection includes an observed issue and prioritized suggestion identified by the RSA Field Review Team members specific to the intersection of Uranium Avenue and Main Street.

3.14.1. Issue #1 – School Crossing

The intersection of Uranium Avenue and Main Street was noted as a main crossing location for children walking to school. The crosswalk crosses a total of five lanes and the speed limit through the intersection is 35 mph. See **Photograph 28**.

Priority 1: Consider employing crossing guards at intersections used access to school (Moab)



Photograph 28 – Existing Crossing at Uranium Avenue

4. SUMMARY OF SUGGESTIONS

A summary of all suggestions by the RSA Field Review Team for the study area is provided in the following section based on priority. Those suggestions not supported by the RSA Field Review Team are not included in this section of the report. The Field Review Team Issues/Suggestion Matrix by location is found in **Appendix B**. The different priority levels are defined as follows:

- **Priority 1:** Short-term suggested improvements that can be implemented in the near-term by UDOT and/or Moab city maintenance staff during their periodic maintenance as appropriate funding is available.
- **Priority 2:** Mid-term suggestions that will require some engineering design that UDOT and/or Moab city should work to acquire funding to implement.
- **Priority 3:** Long-term suggested improvements that are more complex and will require significant engineering design and/or right-of-way acquisition to be considered for future UDOT roadway improvement projects if funding is available.

4.1. Priority 1 Suggestions

Suggested short-term improvements that can be implemented in the near term by UDOT and/or Moab city maintenance staff during their periodic maintenance as appropriate funding is available.

Entire Corridor – Main Street

- 3.1.2 Repair locations with broken or uneven sidewalks (Moab). Refer to page 13.
- 3.1.2 Repair sidewalks where tree roots have upheaved or broken in sections (Moab). Refer to page 13.
- 3.1.3 Expand the no parking area near intersections to increase intersection sight visibility (Moab). Refer to page 15.
- 3.1.5 Consider paving with concrete to convert to sidewalk, providing additional sidewalk width as a short-term solution (Moab). Refer to page 17.
- 3.1.6 Work with local businesses to address right of way infringements and sidewalk obstructions (Moab). Refer to page 18.
- 3.1.7 Evaluate if there is sufficient crossing time at all Main Street intersections (UDOT). Refer to page 19.
- 3.1.10 Consider conducting a speed study along the entire corridor (UDOT). Refer to page 20.
- 3.1.12 Moab to continue working with Rocky Mountain Power to transition all lights to LEDs (Moab). Refer to page 21.

Downtown Moab Area

- 3.2.3 Evaluate sidewalk obstructions that can be removed or relocated (Moab). Refer to page 24.
- 3.2.5 Improve visibility of micro-transit stop signs (Moab). Refer to page 26.

Emma Boulevard & Main Street Intersection

- 3.3.1 Evaluate pedestrian crossing time and updated as needed (UDOT). Refer to page 27.
- 3.3.3 Replace luminaires (Moab/Rocky Mountain Power). Refer to page 28.
- 3.3.6 Increase the size of the sign (UDOT). Refer to page 30.

300 North & Main Street Intersection

- 3.5.1 Replace luminaire (Moab/Rocky Mountain Power). Refer to page 31.

200 North & Main Street Intersection

- 3.6.1 Consider employing crossing guards at intersections used access to school (Moab). Refer to page 32.
- 3.6.2 Paint the raised curb (Moab). Refer to page 32.

100 North & Main Street Intersection

- 3.7.3 Replace luminaire (Moab/Rocky Mountain Power). Refer to page 33.

Center Street & Main Street Intersection

- 3.8.1 Replace luminaire (Moab/Rocky Mountain Power). Refer to page 34.

100 South & Main Street Intersection

- 3.10.1 Replace luminaire (Moab/Rocky Mountain Power). Refer to page 35.

100 South to 200 South Roadway Segment

- 3.11.5 Replace luminaire (Moab/Rocky Mountain Power). Refer to page 37.

300 South to Uranium Avenue Roadway Segment

- 3.13.2 Replace luminaires (Moab/Rocky Mountain Power). Refer to page 39.

Uranium Avenue & Main Street Intersection

- 3.14.1 Consider employing crossing guards at intersections used access to school (Moab). Refer to page 40.

4.2. Priority 2 Suggestions

Suggested mid-term improvements that should be considered by UDOT and/or Moab city for inclusion in upcoming projects if funding is available. Priority 1 suggestions should also be considered for implementation with Priority 2 suggestions if they have not already been implemented due to funding or other considerations.

Entire Corridor – Main Street

- 3.1.1 Consider installing buffered or protected bike lanes. Likely would require the removal of on-street parking and/or reduced shoulder width (UDOT/Moab). Refer to page 12.
- 3.1.2 Consider Safe Sidewalks funding to complete the sidewalk network where gaps are present. (Safe Sidewalk funding can only be used to construct new sidewalks) (Moab). Refer to page 13.
- 3.1.3 Consider the application of leading pedestrian intervals with no right-turn on red signage. Evaluate the effect to through movements. (UDOT). Refer to page 15.

- 3.1.4 Consider high visibility crosswalks, including ladder striping (UDOT). Refer to page 16.
- 3.1.4 Consider widening crosswalks to at least 10 feet (UDOT/Moab). Refer to page 16.
- 3.1.8 Stripe a right turn lane or install bulbouts to restrict turning in the shoulder. Some portions of the curb are already painted red and bulbouts would not reduce existing parking. (UDOT). Refer to page 19.
- 3.1.9 Paint green bike boxes/lanes in conflict zones on the minor street and along Main Street if bicycle lanes are added (UDOT/Moab). Refer to page 20.
- 3.1.12 Consider undermast arm lighting at intersections in addition to regular intersection lights at locations that appear dim. (UDOT/Moab). Refer to page 21.

Downtown Moab Area

- 3.2.1 Continue moving forward with the Main Street Vision project to determine an ideal cross section of Main Street (UDOT/Moab). Refer to page 23.
- 3.2.1 Consider applying for SS4A funding to complete a Demonstration Project that could include removed on-street parking, temporary medians, access management, protected or buffered bike lanes, and complete/wider sidewalks (UDOT/Moab). Refer to page 23.
- 3.2.1 Consider conducting/updating a parking study similar to the dispersed parking study to move more parking off of Main Street (UDOT/Moab). Refer to page 23.
- 3.2.1 Collect pedestrian counts to determine a pedestrian Level of Service (LOS) along Main Street and ensure all walkways are unobstructed. Evaluate what obstructions should be removed to improve pedestrian LOS. (Moab). Refer to page 23.
- 3.2.2 Evaluate if left turns are removed at specific locations if protected left turns can be added at other locations. (UDOT). Refer to page 24.
- 3.2.4 Consider ways to update digital wayfinding (Moab). Refer to page 25.
- 3.2.4 Consider wayfinding elements marking public parking areas, on-street parking, preferred bike routes, and transit facilities. Include these items on the downtown maps. (Moab). Refer to page 25.
- 3.2.5 Include transit routes and stop locations on downtown maps (Moab). Refer to page 26.

Emma Boulevard & Main Street Intersection

- 3.3.2 Install in-pavement speed limit markings to remind drivers of the speed transition (UDOT). Refer to page 28.
- 3.3.4 Include wayfinding to parking along Emma Boulevard (Moab). Refer to page 28.
- 3.3.6 Consider mounting the sign overhead on the HAWK to be more visible to trucks (UDOT). Refer to page 30.

400 North Lighting

- 3.4.1 Upgrade luminaires (Moab). Refer to page 31.

300 North & Main Street Intersection

- 3.5.2 Relocate light post (Moab). Refer to page 31.

100 North & Main Street Intersection

- 3.7.1 Consider Flashing Yellow Arrows and activating protected left turns when longer queues are detected (UDOT). Refer to page 33.
- 3.7.2 Consider undermast arm lighting with regular intersection lighting (UDOT/Moab). Refer to page 33.

Center Street to 100 South Roadway Segment

- 3.9.1 Consider relocating the decorative light pole when replacing (Moab). Refer to page 35.

100 South to 200 South Roadway Segment

- 3.11.2 Install a taller safety rail (UDOT/Moab). Refer to page 36.
- 3.11.3 Contact the UDOT structures department to evaluate the possibility of raising the path's profile without encroaching on the freeboard clearance under the bridge (UDOT/Moab). Refer to page 37.
- 3.11.4 Install sidewalk. Consider Safe Sidewalks funding to complete the sidewalk network where there are gaps (Safe Sidewalk funding can only be used to construct new sidewalks) (Moab). Refer to page 37.

300 South & Main Street Intersection

- 3.12.1 Consider Flashing Yellow Arrows and activating protected left turns when longer queues are detected (UDOT). Refer to page 38.
- 3.12.2 Consider relocating the decorative light pole when replacing (Moab). Refer to page 38.
- 3.12.3 Consider undermast arm lighting at this location and on the north leg with overhead power lines (UDOT/Moab). Refer to page 38.

300 South to Uranium Avenue Roadway Segment

- 3.13.1 Consider installing pedestrian level lighting (Moab). Refer to page 39.

4.3. Priority 3 Suggestions

Suggested improvements that should be considered by UDOT as those long-term recommendations which will require significant engineering design and/or right-of-way acquisition and are to be considered for a future UDOT roadway improvement project if funding is available.

Entire Corridor – Main Street

- 3.1.2 Investigate less disruptive tree species to install near the sidewalk and gutter (Moab). Refer to page 13.
- 3.1.3 Consider installing bulbouts at intersections. Evaluate the ability for larger vehicles to make turning movements. (UDOT). Refer to page 15.
- 3.1.3 Evaluate providing a protected/permissive left turn phase for vehicles using a flashing yellow arrow signal head (UDOT). Refer to page 15.
- 3.1.11 Evaluate locations for median installation along the entire corridor to reduce left turn conflicts (UDOT/Moab). Refer to page 20.

- 3.1.13 Consider installing overhead variable message signs (VMS) before entering Moab (northbound & southbound) to alert motorists of potential issues (UDOT). Refer to page 22.

Downtown Moab Area

- 3.2.2 Consider installing medians to restrict left turns at specific intersection locations and provide pedestrian refuge islands. (UDOT/Moab). Refer to page 24.
- 3.2.5 Consider partnering with hotels/local businesses to coordinate bus routes or alternative transportation for visitors (Moab). Refer to page 26.

Emma Boulevard & Main Street Intersection

- 3.3.5 Evaluate ability to include bike lanes on Main Street to the north and south of Emma Boulevard (UDOT/Moab). Refer to page 29.

100 South to 200 South Roadway Segment

- 3.11.1 Widen the sidewalk across the bridge to match the surrounding sections. Reduce shoulder width to provide additional sidewalk width. (UDOT/Moab). Refer to page 36.

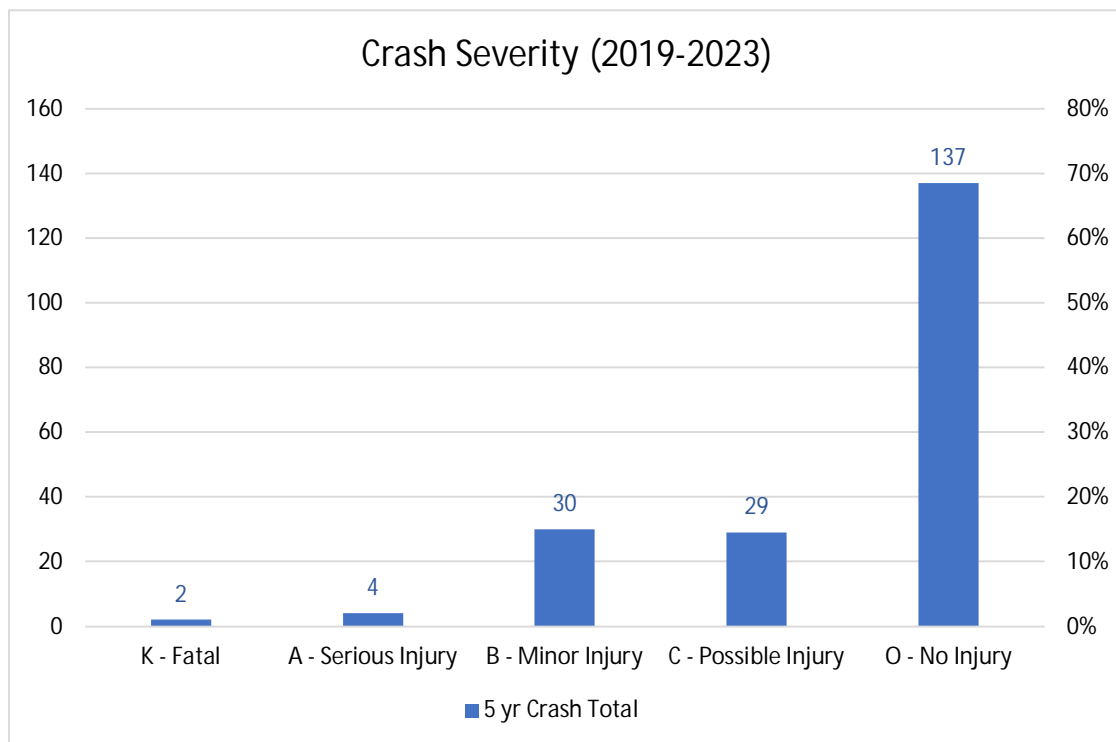
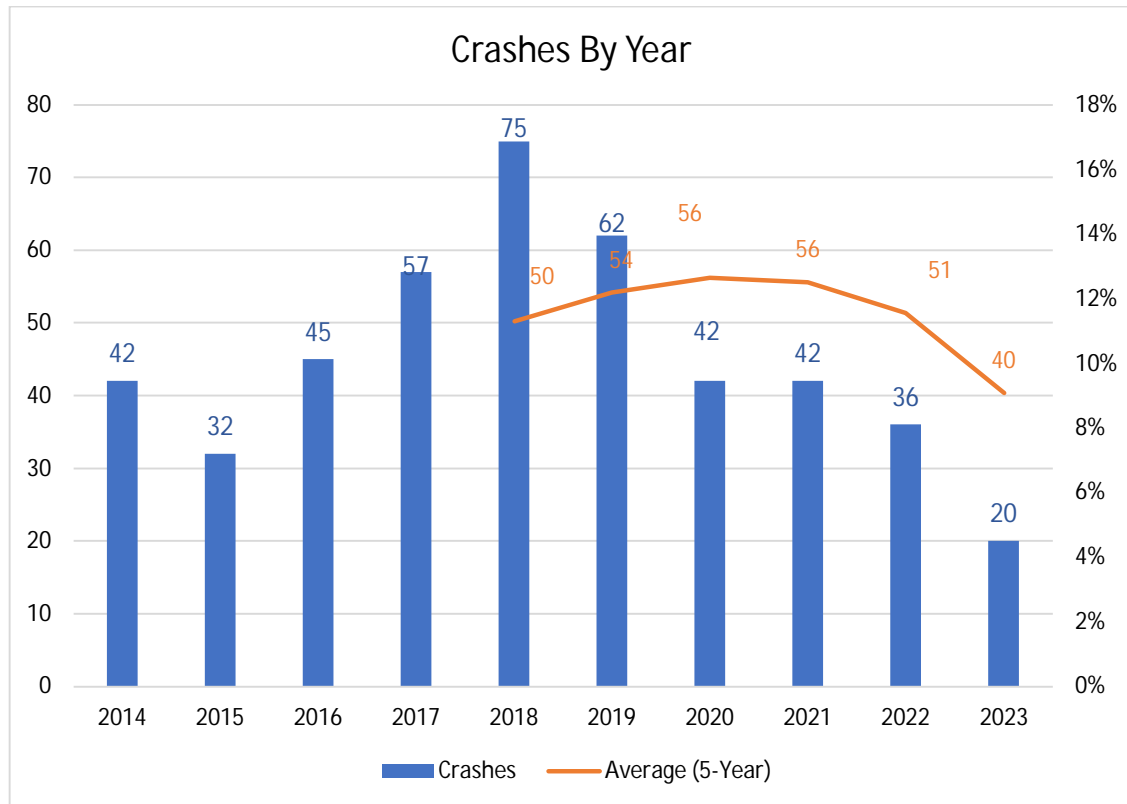
300 South & Main Street Intersection

- 3.12.2 Install bulbouts to distance vehicles from pedestrians and lighting equipment (UDOT/Moab). Refer to page 38.

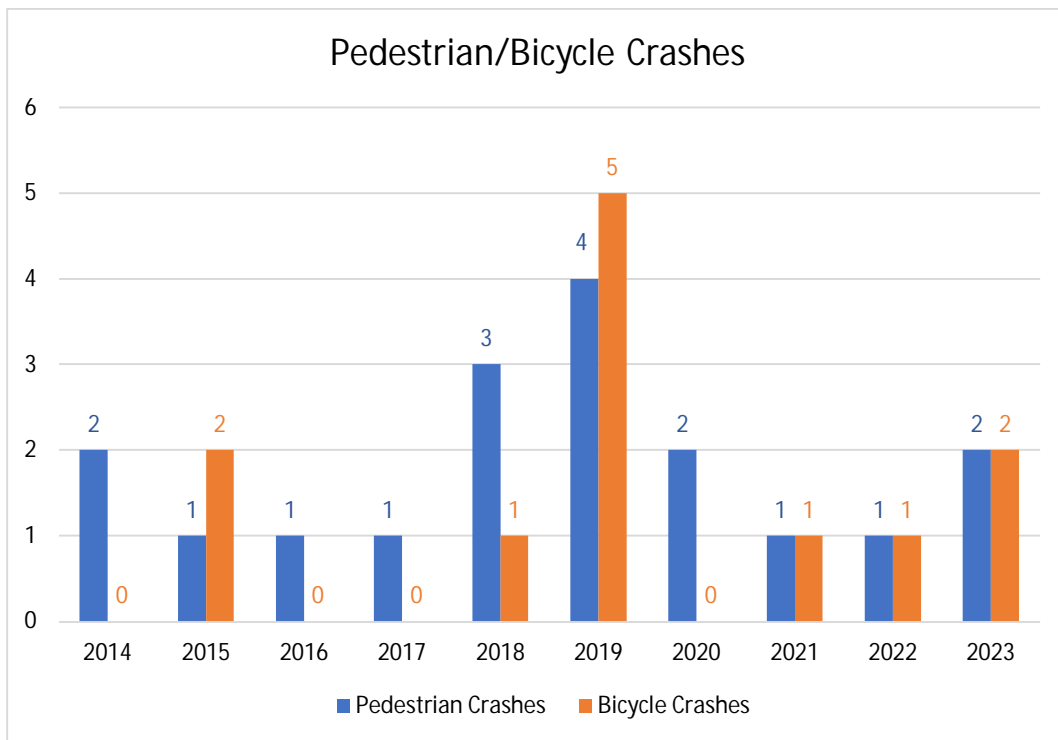
APPENDIX A

CRASH DATA SUMMARY FIGURES AND GRAPHS

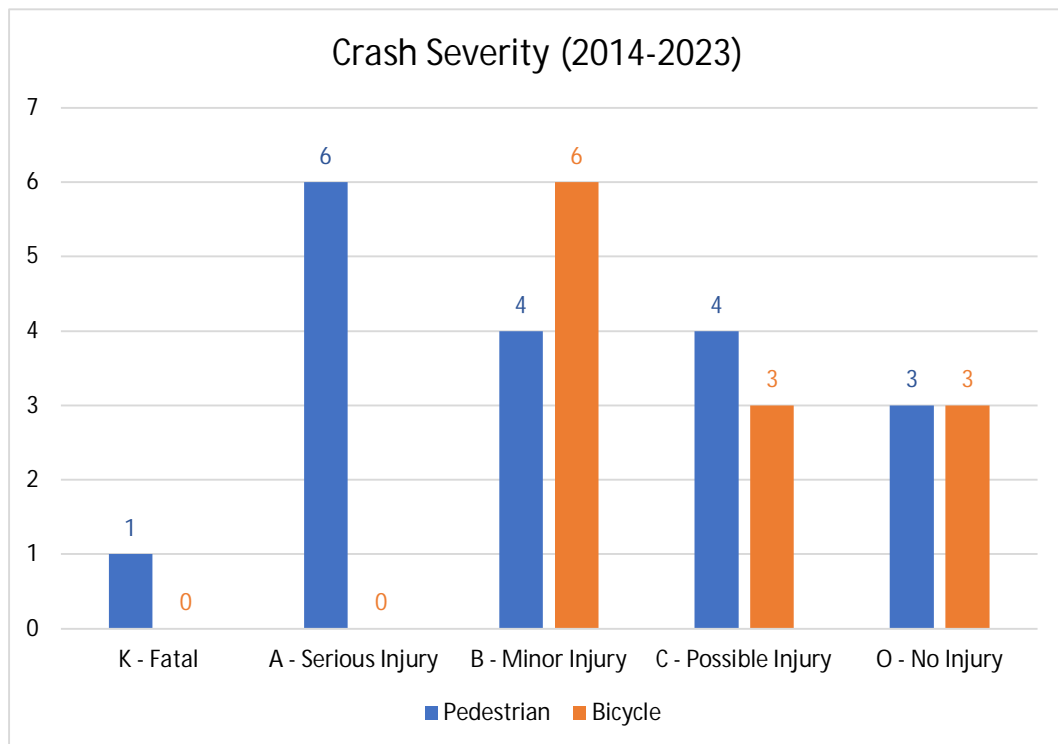
Moab Main Street - Pedestrian Road Safety Assessment Crash Data Summaries



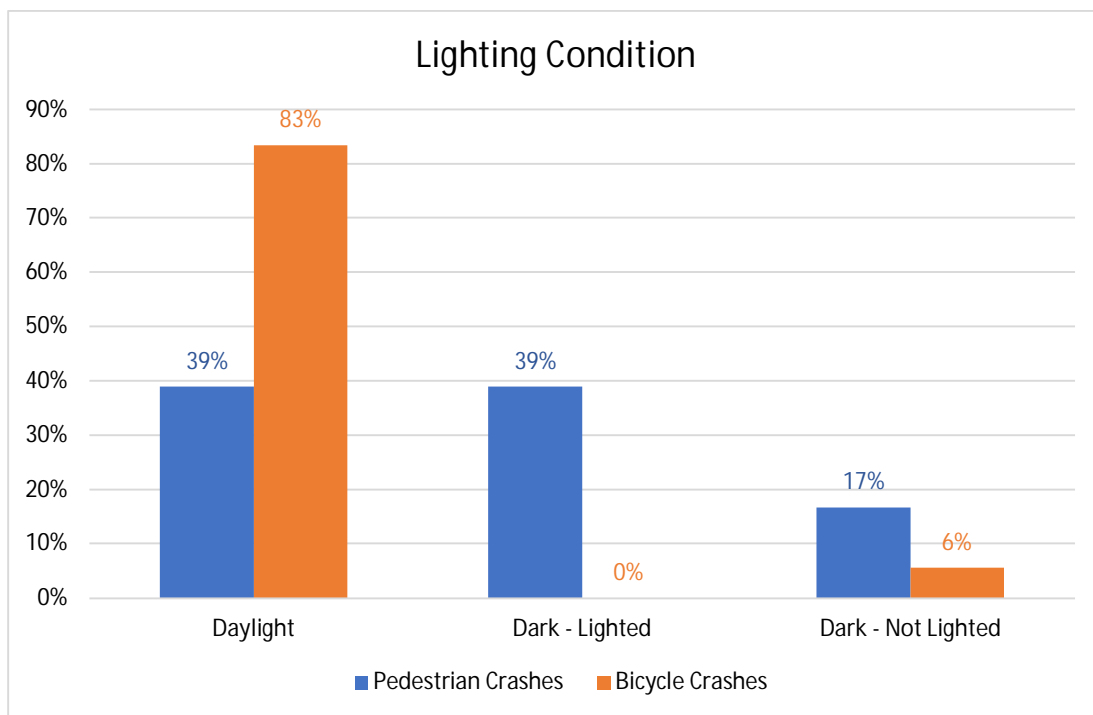
Pedestrian and Bicycle Crashes (2014 – 2023)



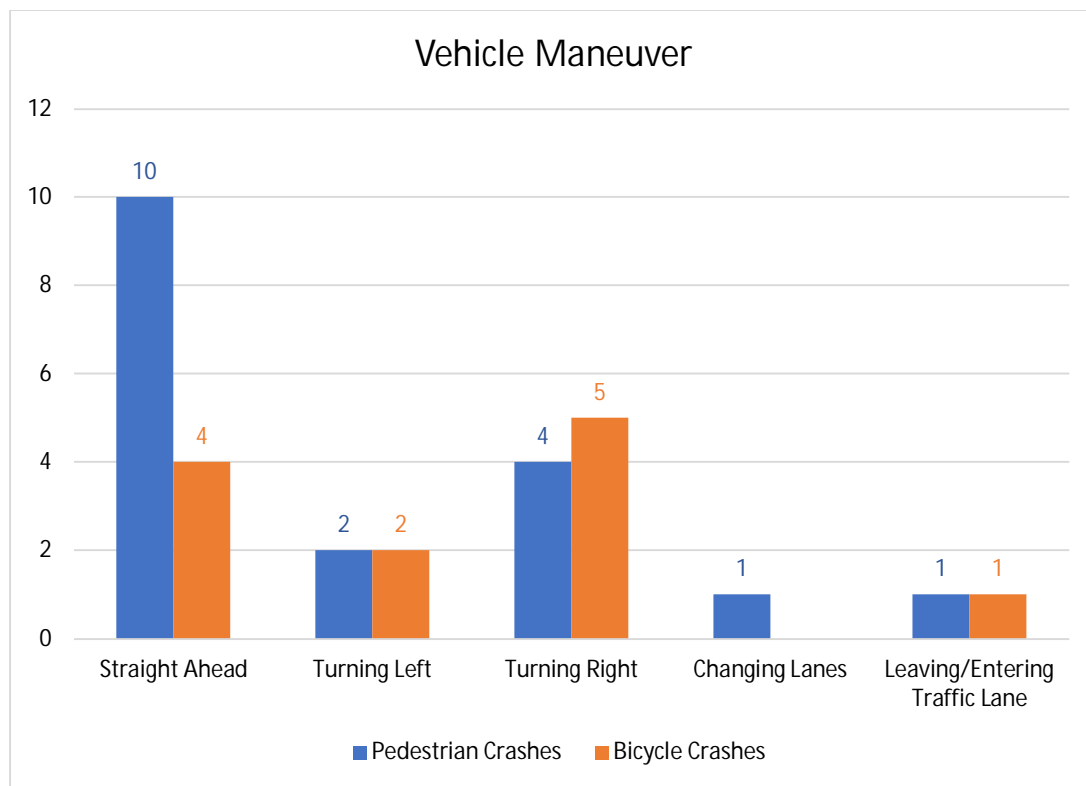
Pedestrian and Bicycle Crash Severity (2014 – 2023)



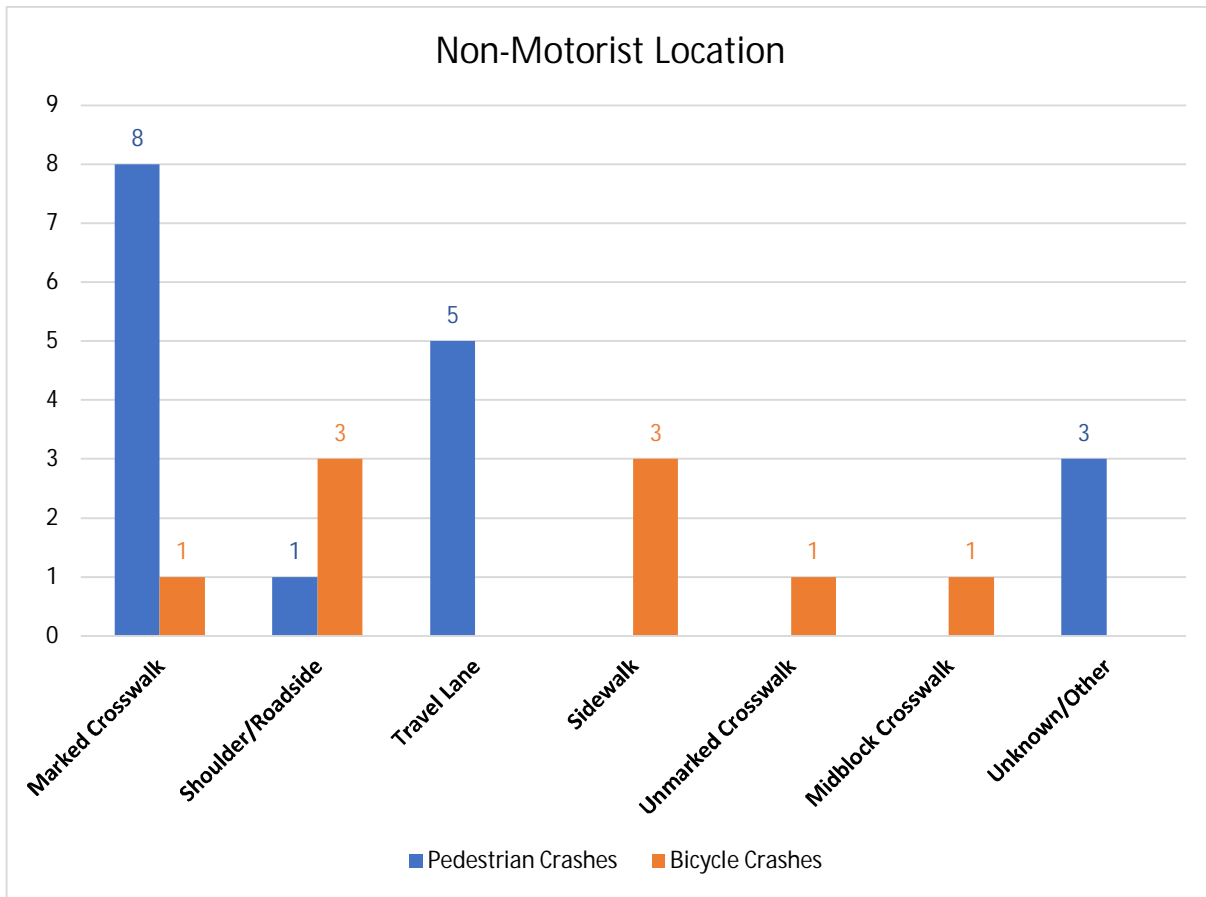
Pedestrian and Bicycle Crash Light Condition (2014 – 2023)



Pedestrian and Bicycle Crash Vehicle Maneuver (2014 – 2023)



Pedestrian and Bicycle Crash Non-Motorist Location (2014 – 2023)



APPENDIX B

FIELD REVIEW TEAM SUGGESTION MATRIX

MOAB - MAIN STREET RSA
Field Review Team - Issues/Suggestion Matrix *

Location	Issues	Suggestions	Agency	Priority Level	Field Review Team Support
Entire Corridor Emma Boulevard to Uranium Avenue	Bicyclists using the sidewalk or avoiding Main Street	Consider installing buffered or protected bike lanes. Likely would require the removal of on-street parking and/or reduced shoulder width	UDOT/Moab	Priority 2	Yes
	Sections of uneven or incomplete sidewalk. Specifically: - Surrounding the Walker Stores - Moab Information Center - Fiesta Mexican driveway - Areas of upheaving from trees (near City Market)	Consider Safe Sidewalks funding to complete the sidewalk network where gaps are present. (Safe Sidewalk funding can only be used to construct new sidewalks)	Moab	Priority 2	Yes
		Repair locations with broken or uneven sidewalks	Moab	Priority 1	Yes
		Repair sidewalks where tree roots have upheaved or broken in sections	Moab	Priority 1	Yes
		Investigate less disruptive tree species to install near the sidewalk and gutter	Moab	Priority 3	Yes
	Large groups of pedestrians crossing minor streets and conflicting with right turning vehicles	Consider the application of leading pedestrian intervals with no right-turn on red signage. Evaluate the effect to through movements.	UDOT	Priority 2	Further Evaluation Needed
		Consider installing bulbouts at intersections. Evaluate the ability for larger vehicles to make turning movements	UDOT	Priority 3	Yes
		Evaluate providing a protected/permissive left turn phase for vehicles using a flashing yellow arrow signal head.	UDOT	Priority 3	Further Evaluation Needed
		Expand the no parking area near intersections to increase intersection sight visibility	Moab	Priority 1	Yes
	Crosswalk Visibility	Consider high visibility crosswalks, including ladder striping	UDOT	Priority 2	Yes
		Consider wider crosswalks	UDOT/Moab	Priority 2	Yes
	Sections between the curb and existing sidewalks are empty/unpaved	Consider paving with concrete to convert to sidewalk, providing additional sidewalk width as a short term solution	Moab	Priority 1	Yes
	Encroachments into the sidewalk right of way - Pedestrian Obstructions	Work with local businesses to address right of way infringements and sidewalk obstructions (This includes signs, sale racks, and other items)	Moab	Priority 1	Yes
	Short pedestrian crossing times	Evaluate if there is sufficient crossing time at all Main Street intersections	UDOT	Priority 1	Yes
	Vehicles observed using shoulders to make right turns, no striped right turn lanes at several intersections	Stripe a right turn lane or install bulbouts to restrict turning in the shoulder. This curb is already painted red and bulbouts would not reduce existing parking.	UDOT	Priority 2	Yes
	Bicycle travel facilities not present at intersections	Paint green bike boxes/lanes in conflict zones on the minor street and along Main Street if bicycle lanes are added	UDOT/Moab	Priority 2	Further Evaluation Needed
	High vehicle speeds around heavy pedestrian activity	Consider conducting a speed study along the entire corridor	UDOT	Priority 1	Yes
	High number of access driveways	Evaluate locations for median installation along the entire corridor to reduce left turn conflicts	UDOT/Moab	Priority 3	Yes
	Dim luminaires	Moab to continue working with Rocky Mountain Power to transition all lights to LEDs	Moab	Priority 1	Yes
		Consider undermast arm lighting at intersections in addition to regular intersection lights at locations that appear dim.	UDOT/Moab	Priority 2	Further Evaluation Needed
	Lack of information for traveling public/vehicles about	Consider installing overhead variable message signs (VMS) before entering Moab (northbound & southbound) to	UDOT	Priority 3	Yes

MOAB - MAIN STREET RSA Field Review Team - Issues/Suggestion Matrix *					
Location	Issues	Suggestions	Agency	Priority Level	Field Review Team Support
Segment Downtown Area (200 North to 200 South)	Ultimate goal to make downtown feel safer for pedestrians and more accessible for bicyclists. Congestion and on street parking crowds the area.	Continue moving forward with the Main Street Vision project to determine an ideal cross section of Main Street	UDOT/Moab	Priority 2	Yes
		Consider applying for SS4A funding to complete a Demonstration Project that could include: - Removed on street parking - Temporary medians and access management - Protected or buffered bike lane - Complete/wider sidewalks	UDOT/Moab	Priority 2	Yes
		Consider conducting/updating a parking study similar to the dispersed parking to move parking off of Main Street	UDOT/Moab	Priority 2	Yes
		Collect pedestrian counts to determine a pedestrian Level of Service (LOS) along Main Street and ensure all walkways are unobstructed. Evaluate what obstructions should be removed to improve pedestrian LOS.	Moab	Priority 2	Yes
	Left turn queue and vehicles turning into pedestrians	Consider installing medians to restrict left turns at specific intersection locations and provide pedestrian refuge islands.	UDOT/Moab	Priority 3	Yes
		Evaluate if left turns are removed at specific locations if protected lefts turns can be added at other locations.	UDOT	Priority 2	Further Evaluation Needed
	Sidewalk obstructions	Evaluate sidewalk obstructions that can be removed or relocated	Moab	Priority 1	Yes
	Navigating downtown for parking and transit is unclear	Consider ways to update digital wayfinding	Moab	Priority 2	Yes
		Consider wayfinding elements marking pubic parking areas, on street parking, preferred bike routes, and transit facilities. Include these items on the downtown maps.	Moab	Priority 2	Yes
	Micro transit not well utilized by visitors	Improve visibility of signage for micro transit stops	Moab	Priority 1	Yes
		Include transit routes and stop locations on downtown maps	Moab	Priority 2	Yes
		Consider partnering with hotels/local businesses to coordinate bus routes or alternative transportation for visitors	Moab	Priority 3	Yes
Intersection - PHB Minnie Lee Avenue/Emma Boulevard & Main Street	Short pedestrian crossing time	Evaluate pedestrian crossing time and updated as needed	UDOT	Priority 1	Yes
	Vehicles speeding through the intersection	Install in pavement speed limit markings to remind drivers of the speed transition	UDOT	Priority 2	Yes
	Luminaire burnt out	Replace luminaires	Moab/Rocky Mountain Power	Priority 1	Yes
	Under utilized parking near the church buildings	Include wayfinding to parking along Emma Boulevard	Moab	Priority 2	Yes
	No clearly marked bicycle lanes north of this intersection	Evaluate ability to include bike lanes on Main Street to the north and south of Emma Boulevard	UDOT/Moab	Priority 3	Yes
	"Trucks Use Left Lane" signage not clearly visible	Increase the size of the sign	UDOT	Priority 1	Further Evaluation Needed
		Consider mounting the sign overhead on the HAWK to be more visible to trucks	UDOT	Priority 2	Further Evaluation Needed
Lighting Maverik (near 400 North)	Street lighting appears dim	Upgrade luminaires	Moab	Priority 2	Yes
Sidewalk Jenn's Jeep Rentals (300 North east side)	Light post on the west sidewalk obstructing the walkway, not ADA compliant	Relocate light post	Moab	Priority 2	Yes
Lighting North of 300 North (traveling north bound)	Streetlight burnt out	Replace luminaire	Moab/Rocky Mountain Power	Priority 1	Yes
Intersection 200 North & Main Street	Main crossing location for children walking to school	Consider employing crossing guards at intersections used access to school	Moab	Priority 1	Yes
	Raised curb area on the south east corner (around the signal and light posts), presents a tripping hazard	Paint the raised curb	Moab	Priority 1	Yes

MOAB - MAIN STREET RSA Field Review Team - Issues/Suggestion Matrix *					
Location	Issues	Suggestions	Agency	Priority Level	Field Review Team Support
Intersection 100 North & Main Street	Left turning vehicles unable to find gaps to turn	Consider Flashing Yellow Arrows and activating protected left turns when longer queues are detected	UDOT	Priority 2	Yes
	Existing lighting is dim	Consider undermast arm lighting with regular intersection lighting	UDOT/Moab	Priority 2	Further Evaluation Needed
	Decorative lighting on the north west and south east corners are burnt out	Replace luminaire	Moab/Rocky Mountain Power	Priority 1	Yes
Intersection Center Street & Main Street	North east luminaire is burnt out	Replace luminaire	Moab/Rocky Mountain Power	Priority 1	Yes
Segment Center Street to 100 South	Light pole on the east sidewalk hit by vehicles and removed	Consider replacing decorative light pole	Moab	Priority 2	Yes
Intersection 100 South & Main Street	South east luminaire is burnt out	Replace luminaire	Moab/Rocky Mountain Power	Priority 1	Yes
Segment 100 South to 200 South	Narrow sidewalk across the bridge	Widen the sidewalk across the bridge to match the surrounding sections. Reduce shoulder width to provide additional sidewalk width.	UDOT/Moab	Priority 3	Yes
	Low bridge rail	Install a taller safety rail	UDOT/Moab	Priority 2	Yes
	Path under the bridge has a low profile	Contact the structures department to evaluate the possibility of raising the path's profile without encroaching on the freeboard clearance under the bridge	UDOT/Moab	Priority 2	Yes
	Missing sidewalks in sections of the west side	Install sidewalk. Consider Safe Sidewalks funding to complete the sidewalk network where there are gaps	Moab	Priority 2	Yes
	South east luminaire is burnt out	Replace luminaire	Moab/Rocky Mountain Power	Priority 1	Yes
Intersection 300 South & Main Street	Left turning vehicles unable to find gaps to turn	Consider Flashing Yellow Arrows and activating protected left turns when longer queues are detected	UDOT	Priority 2	Yes
	Light post on south east corner frequently hit and has been removed	Install bulbouts to distance vehicles from pedestrians and lighting equipment	UDOT/Moab	Priority 3	Yes
		Consider relocating and replacing decorative light pole	Moab	Priority 2	Yes
	Dim lighting at the intersection	Consider undermast arm lighting at this location and on the north leg with overhead power lines	UDOT/Moab	Priority 2	Yes
Segment 300 South to Uranium Avenue	Lighting along the sidewalk is dim	Consider installing pedestrian level lighting	Moab	Priority 2	Yes
Lighting Moab Cyclery (near 300 South)	Burnt out luminaire	Replace luminaire	Moab/Rocky Mountain Power	Priority 1	Yes
Lighting City Market Gas Station	Burnt out luminaire	Replace luminaire	Moab/Rocky Mountain Power	Priority 1	Yes
Intersection Uranium Avenue & Main Street	Main crossing location for children walking to school	Consider employing crossing guards at intersections used access to school	Moab	Priority 1	Yes
*This matrix only documents the identified issues and suggestions from the field review team and their support of those suggestions. It is not intended to be used as a recommended list of projects and does not reflect the recommendations of Kimley-Horn or UDOT.					