PEDESTRIAN STUDY

MACON-BIBB COUNTY

CRASH*360* PROFILE & REPORT

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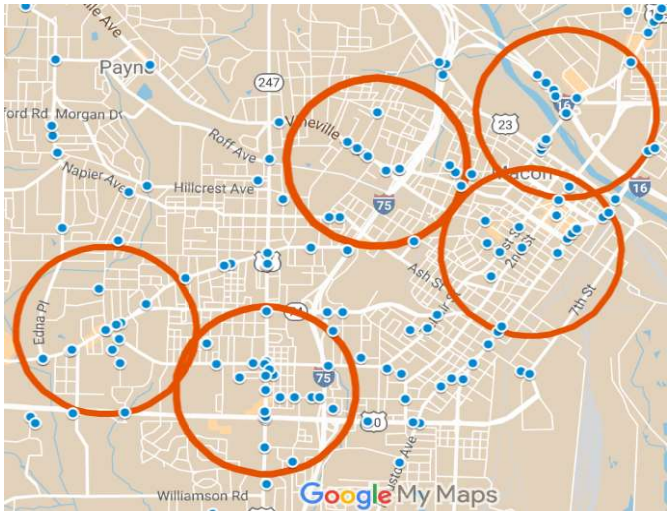
Peachtree
RECOVERY SERVICES

Annual Study 2023

PEDESTRIAN STUDY



CRASH REPORTS

Review 100% of the crash reports from 2023to identify key hot spots for further study

FACTORS

Analyze individual crashes within each hot spot to understand the contributing factors and root causes

SOLUTIONS

Based on contributing factors, identify potential solutions for each hotspot area.

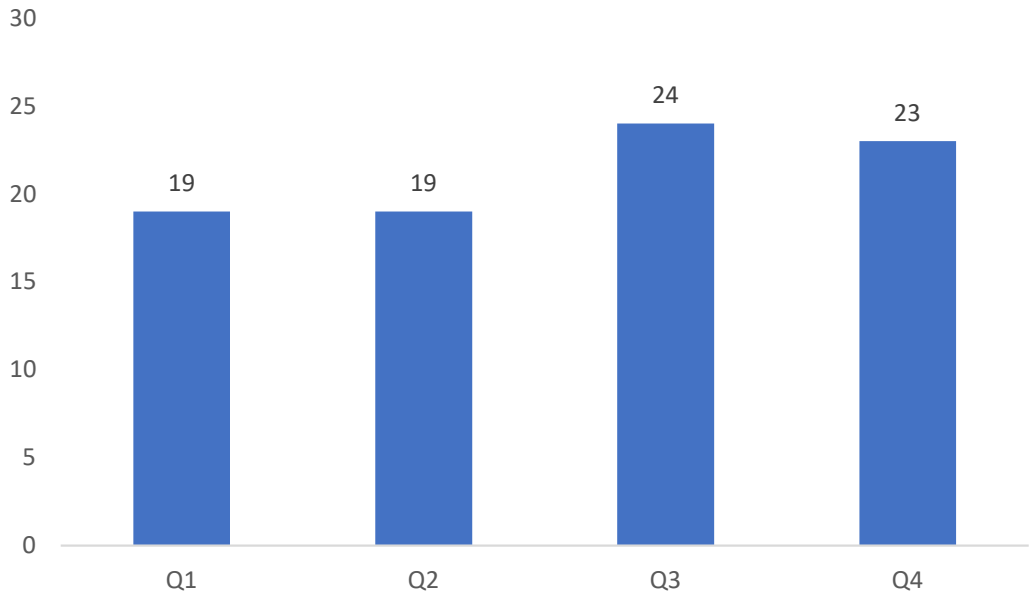
QUICK FACTS

This analysis includes crashes in 2023. The total quantity of crashes involving pedestrians were further analyzed to provide insight into the contributing factors and potential solutions.

During 2023, Macon Bibb experienced the following quantity of incidents:

- 7855 crashes
  - 1709 Injuries
  - 40 fatalities
  - **85 pedestrians**

TOTAL PEDESTRIAN INCIDENTS



Source: Georgia Dept of Transportation GEARS

CURRENT SITUATION

According to the Governor's Highway Safety Administration, pedestrian crashes are increasing due to numerous factors, including:

Heavier Vehicles

Larger, heavier vehicles that are more likely to seriously injure or kill people on foot in the event of a crash

Road Design

Roads designed to prioritize fast-moving traffic over slower speeds that are safer for pedestrians

Poor Infrastructure

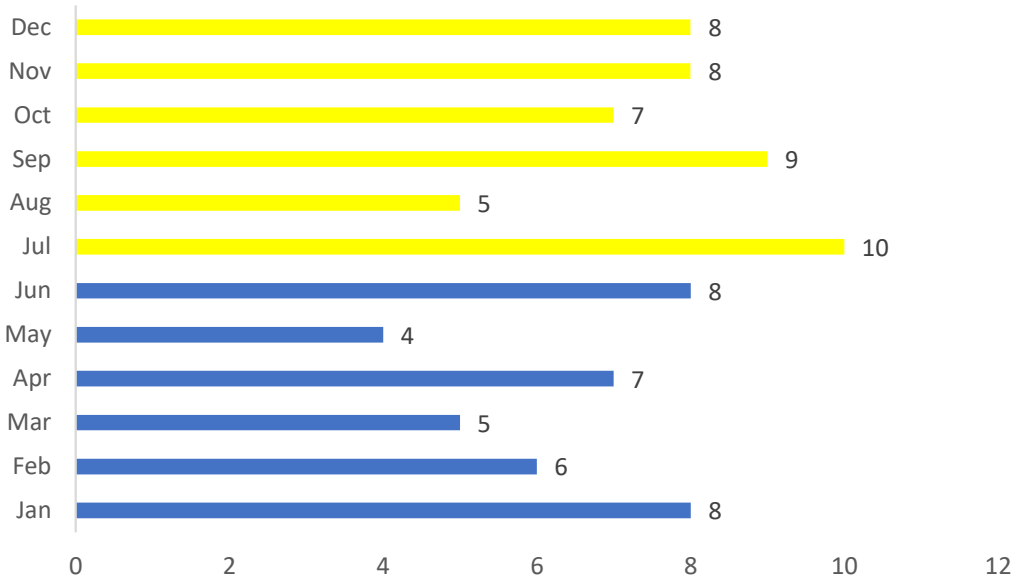
Inadequate infrastructure such as sidewalks, crosswalks and lighting

OVERVIEW OF PEDESTRIAN CRASHES

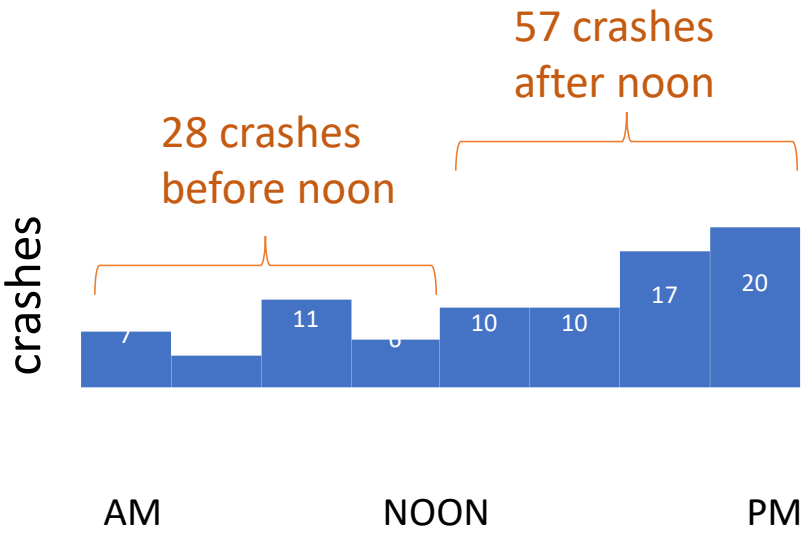
In 2023, Macon Bibb County experienced 85 traffic crashes that involved pedestrians. Of these 301 crashes, there were:

53	INJURIES
15	FATALITIES
17	No Injury

CRASH QUANTITY BY MONTH



WHEN THEY OCCURRED



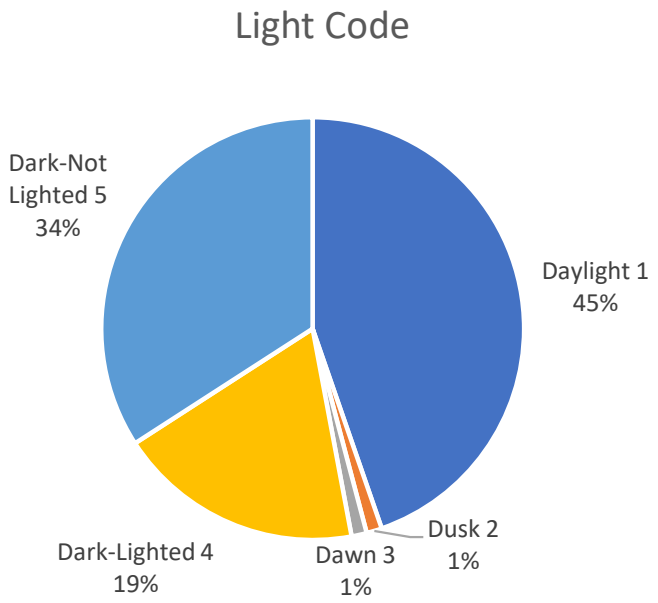
Major Takeaways:

- 67% occurred between Noon and Midnight
- 55% occurred in the last half of the year

OVERVIEW OF PEDESTRIAN CRASHES

CRASH CONDITIONS

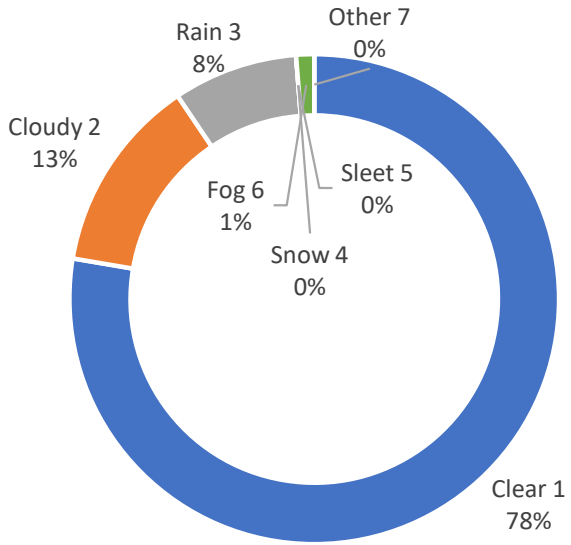
LIGHTING



Major Takeaways

- 34% of crashes occurred in unlit areas
- 45% occurred during normal daylight conditions
- Lighting is a major factor

WEATHER



Major Takeaways

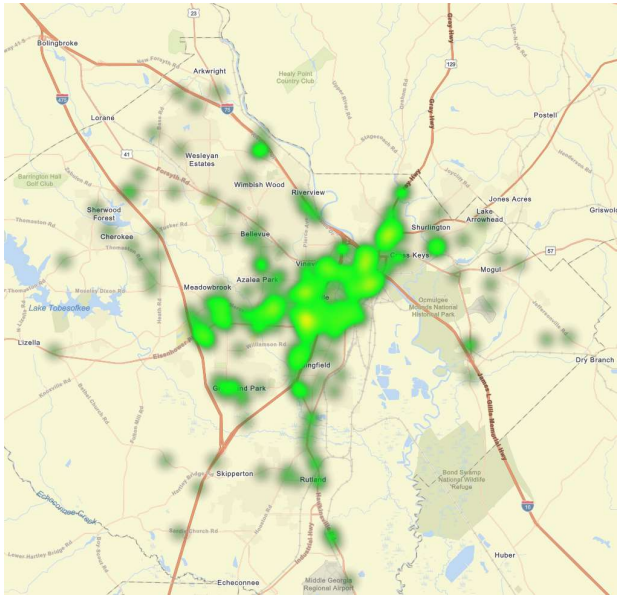
- 78% of crashes occurred during clear skies
- 13% occurred during cloudy skies
- Weather is not a major factor

High Injury Network (HIN)

The location of areas where the majority of severe injury, fatalities and incidents with pedestrians occur are known as High Injury Network (HIN). Once the network is known, then “Hotspots” can be defined and located. This analysis involves development of a heatmap and pin maps for crashes involving pedestrians.

HEATMAP

The heatmap is a graphical representation of the crashes, color-coded to highlight the higher density areas where crashes occur. The highest density areas represent areas that should be addressed first.



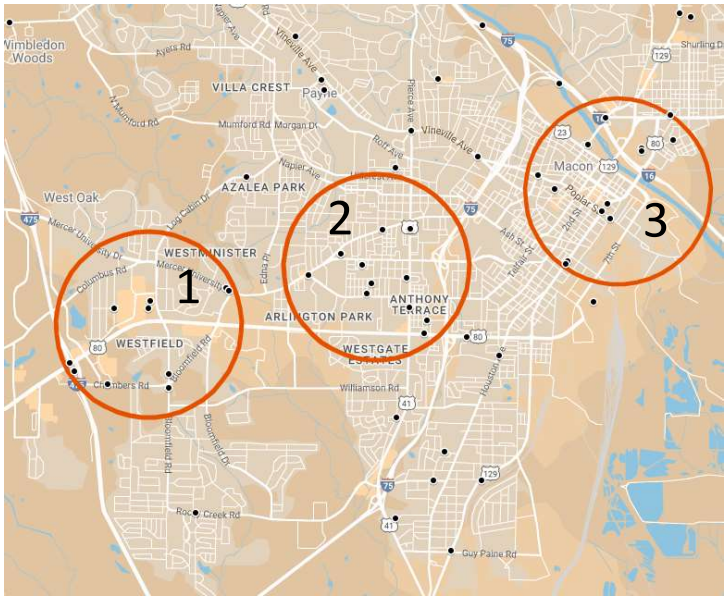
HEATMAP

PIN MAP

HOTSPOT

PIN MAP

The Pin Map shows the location of each individual crash. The “hotspots” are identified as the highest density 1.00km radius circles. Once hotspots are identified, individual hotspot analysis is performed by study of the crashes within the defined area. Three (3) major hotspots were identified.



Hotspot Analysis (HS1)

10

CRASHES INVOLVING PEDESTRIANS

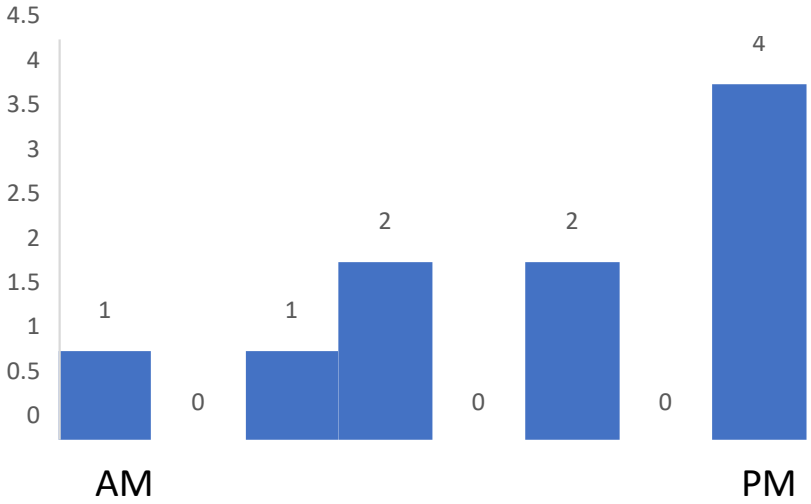
HOTSPOT 1

This location is centered around the intersection of Eisenhower Pkwy and Log Cabin Drive. These crash locations are shown in the figure to the right. Ten crashes were studied in this zone.

TIME

AM: 10%

PM: 90%



LOCATION

State Road **60%**

City Road **40%**

70% Roadway

20% Intersection

10% Parking Lot

Major Takeaways

- 60% of crashes occur on State Maintained Roadways
- 90% of crashes occur between noon and midnight

Hotspot Analysis (HS1)

10

CRASHES INVOLVING PEDESTRIANS

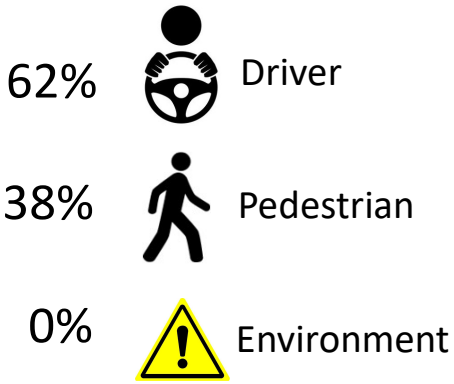
CONTRIBUTING FACTORS

With pedestrian crashes, the determination of contributing factors involves three key areas: driver, pedestrian and environment. Factors for each area include, but are not limited to:

Driver Factors: speed, non-driving activity, distraction, vehicle type (e.g. SUV, truck)

Pedestrian Factors: Alcohol, Drugs, Speed, Jaywalking, Herd mentality, improper crossing

Environment Factors: Lack of crossing devices, no median, poor lighting, poorly timed signals, no sidewalks



Time	Driver	Pedestrian
1:56:00 PM	Inattention	
9:53:00 AM	Inattention	
4:18:00 PM	Inattention	
8:03:00 PM	Visibility	
4:23:00 PM	Inattention	
10:48:00 PM		Emotional
10:02:00 PM	Inattention	
7:39:00 PM		Inattention
11:39:00 PM		Improper Crossing
10:23:00 PM	Speed	

Hotspot Analysis (HS1)

10
CRASHES INVOLVING PEDESTRIANS

CRASH PROFILE

The crash profile is a basic characterization of the hotspot area.

- ROADWAY
- INATTENTION
- IN/Xing/EM
- AFTERNOON
- STATE ROAD
- 80/Log Cabin Dr.

RECOMMENDATIONS

- Due to the quantity of crashes along a stretch of SR74 (from this study and previous), the following recommendations are provided.

1) Investigate status of existing street lighting along SR74 from the intersection of Atwood Drive down to the intersection of Bloomfield Road.
2) Consider lighted crosswalks or RRFBs.
3) Perform foot traffic study to evaluate where pedestrians are crossing 74 for consideration of the installation of additional crosswalks in or near areas where pedestrians are crossing naturally.

COMMON TECHNOLOGY SOLUTIONS

- Motion sensing LED lighting

Illuminates street area when pedestrians are present. Can also increase brightness when pedestrians are near, providing greater visibility for drivers.

- Rectangular Rapid Flashing Beacon

Research has shown higher motorist yielding rates at crosswalks and maintains higher rates years after installation.

Hotspot Analysis (HS2)

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CRASHES INVOLVING PEDESTRIANS

HOTSPOT 2

This location is centered around the intersection of Mercy University Blvd and Pansy Drive. crash locations are shown in the figure to the right. Eleven crashes were studied in this zone.

TIME

AM: 18%

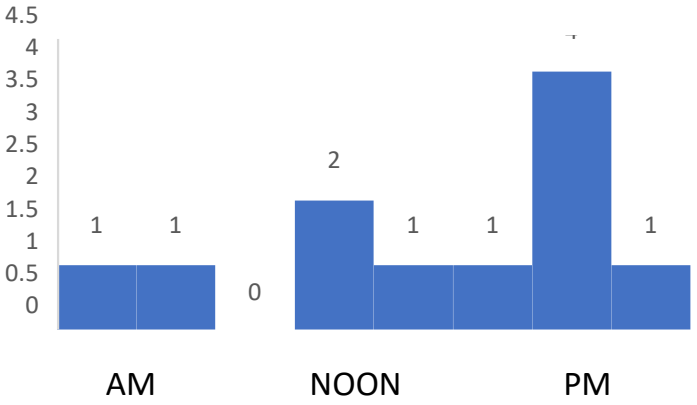
PM: 82%

LOCATION

State Road	City Road
36%	64%

55% Roadway

45% Intersection



Major Takeaways

- 64% of crashes occur on local roadways
- 82% of crashes occur between noon and midnight

Hotspot Analysis (HS2)

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CRASHES INVOLVING PEDESTRIANS

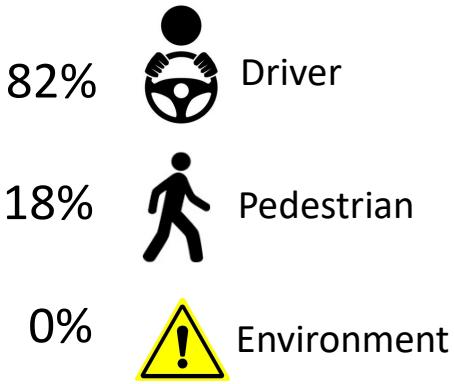
CONTRIBUTING FACTORS

With pedestrian crashes, the determination of contributing factors involves three key areas: driver, pedestrian and environment. Factors for each area include, but are not limited to:

Driver Factors: speed, non-driving activity, distraction, vehicle type (e.g. SUV, truck)

Pedestrian Factors: Alcohol, Drugs, Speed, Jaywalking, Herd mentality, improper crossing

Environment Factors: Lack of crossing devices, no median, poor lighting, poorly timed signals, no sidewalks



Time	Driver	Pedestrian
11:02:00 PM	Inattention	
2:14:00 PM	Aggressive	
7:11:00 PM	Inattention	
2:38:00 PM	Inattention	
8:50:00 AM	Inattention	
7:13:00 PM	Speed	
5:19:00 PM	Inattention	
1:41:00 PM	Inattention	
7:18:00 PM	Visibility	
8:19:00 PM		Inattention
5:36:00 AM		Improper Crossing

Hotspot Analysis (HS2)

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CRASHES INVOLVING PEDESTRIANS

CRASH PROFILE

The crash profile is a basic characterization of the hotspot area.

- ROADWAY
- INATTENTION
- Inattention
  Improper XING
- AFTERNOON
- CITY ROAD
- Mercer Univ/
  Pansy Ave

RECOMMENDATIONS

- Numerous issues are in a Residential area with no sidewalks.
  - Install motion sensing street lights in the area around Grosso Ave and Lilly Ave.
- Consider evaluating street lighting in the area of Sapp St and Moseley Ave.

COMMON TECHNOLOGY SOLUTIONS

- Motion sensing LED lighting

Illuminates street area when pedestrians are present. Can also increase brightness when pedestrians are near, providing greater visibility for drivers.

Hotspot Analysis (HS3)

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CRASHES INVOLVING PEDESTRIANS

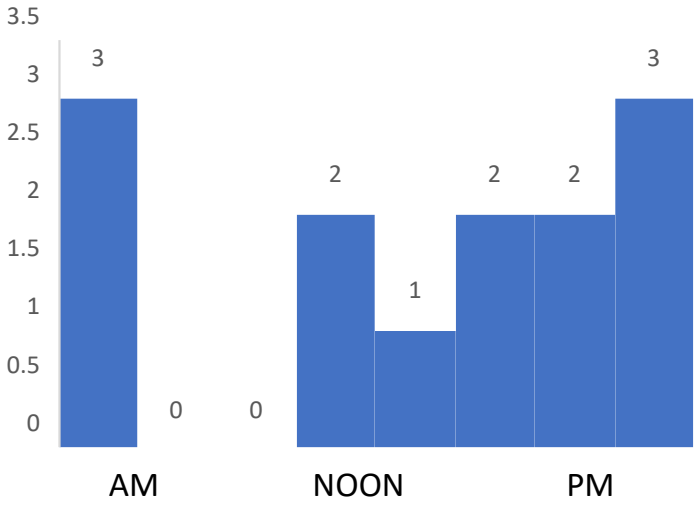
HOTSPOT 3

This location is centered around the intersection of Broadway and Walnut Street. All crash locations are shown in the figure to the right. Thirteen crashes were studied in this zone.

TIME

AM: 38%

PM: 62%



LOCATION

State Road	City Road
46%	54%

75% Roadway

8% Intersection

17% Parking Lot

Major Takeaways

- 75% of crashes occur on roadways
- 62% of crashes occur between noon and midnight

Hotspot Analysis (HS2)

13

CRASHES INVOLVING PEDESTRIANS

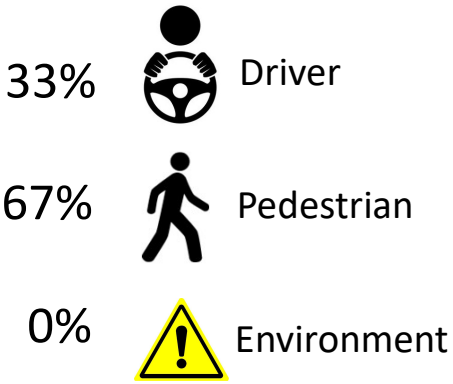
CONTRIBUTING FACTORS

With pedestrian crashes, the determination of contributing factors involves three key areas: driver, pedestrian and environment. Factors for each area include, but are not limited to:

Driver Factors: speed, non-driving activity, distraction, vehicle type (e.g. SUV, truck)

Pedestrian Factors: Alcohol, Drugs, Speed, Jaywalking, Herd mentality, improper crossing

Environment Factors: Lack of crossing devices, no median, poor lighting, poorly timed signals, no sidewalks



Time	Driver	Pedestrian
12:15:00 AM	Alcohol/Drugs	
10:22:00 PM	Inattention	
8:17:00 PM		Improper Crossing
10:14:00 AM	Inattention	
12:05:00 AM		Improper Crossing
10:04:00 AM		Improper Crossing
4:08:00 PM	Misjudge	
5:12:00 PM		Misjudge
12:00:00 AM		Improper Crossing
11:22:00 PM		Alcohol/Drugs
6:43:00 PM		Ignore devices
9:52:00 PM		Improper Crossing
12:56:00 PM	Misjudge	

Hotspot Analysis (HS3)

13

CRASHES INVOLVING PEDESTRIANS

CRASH PROFILE

The crash profile is a basic characterization of the hotspot area.

- ROADWAY
- INATTENTION
- IMPROPER CROSSING
- AFTERNOON
- CITY ROAD
- Broadway/Walnut St.

RECOMMENDATIONS

- Martin Luther King Jr. Blvd
  - Consider lighted crosswalks
  - Install motion sensing LED street lighting
  - Perform foot traffic study to ascertain where pedestrians are normally crossing between Cherry Street and Poplar Street

COMMON TECHNOLOGY SOLUTIONS

- Motion sensing LED lighting

Illuminates street area when pedestrians are present. Can also increase brightness when pedestrians are near, providing greater visibility for drivers.

- Reflective painting

Repaint existing walkways to clearly identify them.

- Mid-block crossing

Install mid-block if further analysis warrants it

ACTIONS\FURTHER STUDY

- Consider recommendations on city streets
- Provide data and suggestions to GDOT on state roads
  - If city seeks to install these solutions on state roads, GDOT will need to review data and provide approvals
- Consider foot traffic studies in hot spot areas to assist in location of safety solutions

RECOMMENDATIONS (SUMMARY)

HOTSPOT #1

- Due to the quantity of crashes along a stretch of SR74 (from this study and previous), the following recommendations are provided.

1) Investigate status of existing street lighting along SR74 from the intersection of Atwood Drive down to the intersection of Bloomfield Road.
2) Consider lighted crosswalks or RRFBs.
3) Perform foot traffic study to evaluate where pedestrians are crossing 74 for consideration of the installation of additional crosswalks in or near areas where pedestrians are crossing naturally.

HOTSPOT #2

- Numerous issues are in a Residential area with no sidewalks.
    - Install motion sensing street lights in the area around Grosso Ave and Lilly Ave.
- Consider evaluating street lighting in the area of Sapp St and Moseley Ave.

HOTSPOT #3

- Martin Luther King Jr. Blvd
    - Consider lighted crosswalks
    - Install motion sensing LED street lighting
    - Perform foot traffic study to ascertain where pedestrians are normally crossing between Cherry Street and Poplar Street

These recommendations are provided as suggestions and should be verified by traffic engineering and GDOT prior to implementation.

RECOMMENDATIONS (Actions)

1. Consider pedestrian motion studies, using data, in these areas since incidents occur year over year.
2. Consider creating safety action plan for each Hotspot due to frequency of crashes annually. This would include more detailed solutions, budgets and timeframes.