CITIZENS ADVISORY COMMITTEE

April 28, 2021

6:30 - 8:00 p.m.

Virtual Location via Zoom

https://bloomington.zoom.us/j/99028934586?pwd=OHdvYk5wTFNDV2ltRVJqUnBrVzlhZz09

Find your local number: https://bloomington.zoom.us/u/avEaSTVf

Clicking on the link will take you to the meeting. You will automatically receive a dial-in number if you want to use your phone for audio and not your computer microphone.

Suggested Time:

~6:30 p.m.

I. Call to Order and Introductions

II. Approval of Meeting Agenda*

III. Approval of Minutes*
   a. March 24, 2021

IV. Communications from the Chair and Vice Chair

V. Reports from Officers and/or Committees

~7:00 p.m.

VI. Reports from the MPO Staff
   a. FY 2021-2022 UPWP - Status Update
   b. BMCMPO FY 2022 - 2026 Transportation Improvement Program Call for Projects
   c. American Job Plan - Indiana Summary

VII. Old Business - None.

VIII. New Business
   a. BMCMPO FY 2020 – 2024 TIP Amendments*
      (1) Bloomington Transit - DES#Pending - Bus Stop Improvements at two (2) locations
      (2) Bloomington Transit - DES#1700763, 1700764, 1700765, 1700766, 1700767 - Acquisition of Four (4) 35-Foot Replacement Battery Electric (EV) Buses
   b. BMCMPO CY 2015 -2019 Crash Report

~7:30 p.m.

IX. Communications from Committee Members *(non-agenda items)*
   a. Topic Suggestions for Future Agendas

X. Upcoming Meetings
   a. Policy Committee - May 14, 2021 at 1:30 p.m. (Virtual)
   b. Technical Advisory Committee - May 26, 2021 at 10:00 a.m. (Virtual)
   c. Citizens Advisory Committee - May 26, 2021 at 6:30 p.m. (Virtual)

~8:00 p.m.

Adjournment

**Action Requested / Public comment prior to vote (limited to five minutes per speaker).*

Auxiliary aids for people with disabilities are available upon request with adequate notice. Please call 812-349-3429 or e-mail human.rights@bloomington.in.gov.

CITIZENS ADVISORY COMMITTEE
Meeting Minutes
March 24, 2021
6:30 - 8:00 p.m.
Virtual Location via Zoom

Suggested Time:

~6:30 p.m. Citizens Advisory Committee minutes are transcribed in a summarized outline manner. Audio recordings of the meeting are available in the Planning & Transportation Department for reference.

Members present: Paul Ash, John Kennedy, Sarah Ryterband, David Walter, and Mary Jane Hall

Guests: None.

Staff present: Pat Martin, Ryan Clemens

I. Call to Order and Introductions: 6:30pm

II. Approval of Meeting Agenda* ****Mary jane Hall moved for approval of the meeting agenda, Paul Ash seconded; motion passes by a unanimous roll call vote.****

~7:00 p.m. **III.** Approval of Minutes* ****Mary Jane Hall motioned to approve the February 24, 2021 meeting minutes. David Walter seconded; motion passes by a unanimous roll call vote.****

IV. Communications from the Chair and Vice Chair - Sarah Ryterband reported that the Bloomington City Council will consider eliminating "right on red" in the downtown through the downtown area.

V. Reports from Officers and/or Committees - None.

~7:30 p.m. VI. Reports from the MPO Staff

a. BMCMPO FY 2022 – 2026 TIP Call for Projects. Pat and Ryan reported on the Call for Projects with a submission deadline of April 30, 2021. A Draft TIP submission will occur in mid-June followed by a 30- public comment period. The final draft will go before the TAC/CAC at the end of August. The Policy Committee should adopt a Final FY 2022 – 2026 TIP on September 10, 2021.
b. American rescue Plan. Pat briefly highlighted the key transportation elements of the legislation from a summary by the National Association of Regional Councils.

VII. Old Business

~8:00 p.m. **a.** BMCMPO Final Draft FY 2022 Unified Planning Work Program.* Pat Martin presented the FY 2022 Final Draft noting the promised addition of $62,500 ($50,000 federal, $12,500 Local match) for *Bloomington Transit Alternative Fuel Assessment & Infrastructure Study*. The draft document submitted for review by INDOT, FHWA, and the FTA had no comments**. ****Mary Jane Hall moved to recommend adoption by the Policy Committee. David Walter seconded; motion passes by a unanimous roll call vote.****

VIII. New Business

a. Coordinated Human Services Public Transportation Plan. Christy Campoll (RLS & Associates http://rlsandassoc.com/) gave a project overview, background of the FTA Section 5310 Program, Needs Assessment Information, the BMCMPO 2012 Coordinated Plan, a general discussion of (1) unmet needs and gaps in service and (2) potential solutions, and next steps that included establishment of a community Focus Group. Discussion ensued.

IX. Communications from Committee Members *(non-agenda items)*

a. Sarah Ryterband noted an upcoming "Complete Streets" webinar and recommended participation.

X. Upcoming Meetings

a. Policy Committee - April 9, 2021 at 1:30 p.m. (Virtual)
b. Technical Advisory Committee - April 28, 2021 at 10:00 a.m. (Virtual)
c. Citizens Advisory Committee - April 28, 2021 at 6:30 p.m. (Virtual)

Adjournment

**Action Requested / Public comment prior to vote (limited to five minutes per speaker*).
Auxiliary aids for people with disabilities are available upon request with adequate notice. Please call 812-349-3429 or e-mail human.rights@bloomington.in.gov.

BRIEFING ROOM

White House Releases State-by-State Fact Sheets to Highlight Nationwide Need for the American Jobs Plan

APRIL 12, 2021 • STATEMENTS AND RELEASES

Today, the White House released state-by-state fact sheets that highlight the urgent need in every state across the country for the investments proposed by President Biden in the American Jobs Plan. The fact sheets highlight the number of bridges and miles of road in each state in poor condition, the percentage of households without access to broadband, the billions of dollars required for water infrastructure, among other infrastructure needs.

Individual fact sheets for each of the 50 states, the District of Columbia and Puerto Rico are linked below.

These fact sheets are the latest in a series from the White House highlighting the benefits of the American Jobs Plan for communities. Additional issue-based fact sheets will be released in the coming days and weeks. Fact sheets on how the American Jobs Plan Advances Racial Equity and the American Jobs Plan Supports Rural America have been released in recent weeks.

The American Jobs Plan is an investment in America that will create millions of good jobs, rebuild our country's infrastructure, and position the United States to out-compete China.

Fact Sheets by State:

Indiana

AMERICAN JOBS PLAN

The Need for Action in Indiana

For decades, infrastructure in Indiana has suffered from a systemic lack of investment. The need for action is clear:

Indiana's infrastructure received a **C-** grade on its Infrastructure Report Card. The American Jobs Plan will make a historic investment in our nation's infrastructure.

- **ROADS AND BRIDGES:** In Indiana there are 1,111 bridges and over 5,478 miles of highway in poor condition. Since 2011, commute times have increased by 4.4% in Indiana and on average, each driver pays $638 per year in costs due to driving on roads in need of repair. The American Jobs Plan will devote more than $600 billion to transform our nations' transportation infrastructure and make it more resilient, including $115 billion repairing roads and bridges.

- **PUBLIC TRANSPORTATION:** Hoosiers who take public transportation spend an extra 88.7% of their time commuting and non-White households are 4.5 times more likely to commute via public transportation. 38% of trains and other transit vehicles in the state are past useful life. The American Jobs Plan will modernize public transit with an $85 billion investment.

- **RESILIENT INFRASTRUCTURE:** From 2010 to 2020, Indiana has experienced 34 extreme weather events, costing the state up to $10 billion in damages. The President is calling for $50 billion to improve the resiliency of our infrastructure and support communities' recovery from disaster.

- **DRINKING WATER:** Over the next 20 years, Indiana's drinking water infrastructure will require $7.5 billion in additional funding. The American Jobs Plan includes a $111 billion investment to ensure clean, safe drinking water is a right in all communities.

- **HOUSING:** In part due to a lack of available and affordable housing, 358,000 renters in Indiana are rent burdened, meaning they spend more than 30% of their income on rent. The President proposes investing over $200 billion to increase housing supply and address the affordable housing crisis.

- **BROADBAND:** 12.4% of Hoosiers live in areas where, by one definition, there is no broadband infrastructure that provides minimally acceptable speeds. And 48.4% of Hoosiers live in areas where there is only one such provider. Even where infrastructure is available, broadband may be too expensive to be within reach. 16% of Indiana households do not have an internet subscription. The American Jobs Plan would invest $100 billion to bring universal, reliable, high-speed, and affordable coverage to every family in America.

- **CAREGIVING:** Across the country, hundreds of thousands of older adults and people with disabilities are in need of home and community-based services. The President's plan will invest $400 billion to help more people access care and improve the quality of caregiving jobs.

- **CHILD CARE:** In Indiana, there is an estimated $518 million gap in what schools need to do maintenance and make improvements and 55% of residents live in a childcare desert. The American Jobs Plan will modernize our nation's schools and early learning facilities and build new ones in neighborhoods across Indiana and the country.

- **MANUFACTURING:** Manufacturers account for more than 27.8% of total output in Indiana, employing 541,000 workers, or 17.1% of the state's workforce. The American Job's Plan will invest $300 billion to retool and revitalize American manufacturers.

- **HOME ENERGY:** In Indiana, an average low-income family spends 8-10% of their income on home energy costs forcing tough choices between paying energy bills and buying food, medicine or other essentials. The American Jobs Plan will upgrade low-income homes to make them more energy efficient through a historic investment in the Weatherization Assistance Program, a new Clean Energy and Sustainability Accelerator to finance building improvements, and expanded tax credits to support home energy upgrades.

- **CLEAN ENERGY JOBS:** As of 2019, there were 86,892 Hoosiers working in clean energy, and the American Jobs Plan invests in creating more good paying union jobs advancing clean energy production by extending and expanding tax credits for clean energy generation, carbon capture and sequestration and clean energy manufacturing.

- **VETERANS HEALTH:** Indiana is home to over 409,836 veterans, 7.6% of whom are women and 46% of whom are over the age of 65. The President is calling for $18 billion to improve the infrastructure of VA health care facilities to ensure the delivery of world-class, state of the art care to veterans enrolled in the VA health care system. This includes improvements to ensure appropriate care for women and older veterans.

To: BMCMPO Technical Advisory Committee & Citizens Advisory Committee

From: Pat Martin, Ryan Clemens

Date: April 21, 2021

Re: FY 2020 - 2024 Transportation Improvement Program (TIP) Amendments

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Bloomington Transit requests two (2) amendment to the BMCMPO FY 2020-2024 TIP. The proposed amendments include:

Bloomington Transit (BT) Bus Stop Improvements – Safety/Mobility/Preservation/Maintenance. This project will improve two (2) transit stop access points and other infrastructure improvements dependent upon assessed engineering needs.

Bloomington Transit - Two (2) Bus Stop Improvements (DES#Pending)					
Project Phase	**Fiscal Year**	**Federal Source**	**Federal Funding**	**State Match**	**Total**
PE	2021	FTA 5310	$29,800	$7,450	$37,250
CN	2021	FTA 5310	$119,200	$29,800	$149,000
Totals			**$149,000**	**$37,250**	**$186,250**

Bloomington Transit (BT) Acquisition of four (4) 35-foot Replacement Battery Electric (EV) Buses - Fleet Replacement (DES#2100084). This project is consistent with the *2045 Metropolitan Transportation Plan* and Bloomington Transit goals of fleet replacements with electric vehicles that are less dependent on fossil fuels.

Bloomington Transit (BT) – Acquisition of four (4) 35-foot replacement battery electric (EV) buses (DES#1700763, 1700764, 1700765, 1700766, 1700767)					
Project Phase	**Fiscal Year**	**Federal Source**	**Federal Funding**	**Local Match**	**Total**
PE	2021	FTA 5339	$3,200,000	$800,000	$4,000,000
Totals			**$3,200,000**	**$800,000**	**$4,000,000**

Requested Action

Recommend the proposed projects as amendments to the BMCMPO FY 2020-2024 Transportation Improvement Program for the May 14, 2021 BMCMPO Policy Committee meeting.

PPM/pm

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FY 2020-2024 Transportation Improvement Program
Project Request Form

Mail: Bloomington/Monroe County MPO
401 N. Morton Street, Suite 130
Bloomington, Indiana 47402
Email: martipa@bloomington.in.gov or clemensr@bloomington.in.gov
Fax: (812) 349-3530

Section 1: Local Public Agency Information

- ☐ City of Bloomington
- ☐ Monroe County
- ☐ Town of Ellettsville
- ☐ Indiana University
- ☒ Bloomington Transit
- ☐ Rural Transit
- ☐ INDOT
- ☐ _____

Employee in Responsible Charge (ERC): Lew May
Phone: 812-961-0522
Email: mayl@bloomingtontransit.com

Section 2: Verification

I hereby certify that the information submitted as part of this form is complete and accurate. Furthermore, if applicable, I certify that the project complies with the BMCMPO Complete Streets Policy.

Lew May — 4/13/21

Employee in Responsible Charge (ERC) — Date

Section 3: Project Information

A. Project Name: Bus Stop Improvements

B. Is project already in the TIP?
☐ Yes ☒ No

C. DES # (if assigned): Pending

D. Project Location (detailed description of project termini): City of Bloomington

E. Please identify the primary project type (select only one):
- ☐ Bicycle & Pedestrian
- ☐ Bridge
- ☐ Road – Intersection
- ☐ Road – New/Expanded Roadway

☐ Road – Operations & Maintenance
☐ Road – Reconstruction/Rehabilitation/Resurfacing
☐ Sign
☐ Signal
☒ Transit

F. Project Support (local plans, LRTP, TDP, etc.): GPP, MTP, TDP

G. Allied Projects: N/A

H. Does the Project have an Intelligent Transportation Systems (ITS) component?
☐ Yes ☒ No
If yes, is the project included in the MPO's ITS Architecture?
☐ Yes ☐ No

I. Anticipated Letting Date: 2021

Section 4: Financial Plan

Identify all anticipated costs for all phases of the project, including any costs anticipated in years beyond the scope of this TIP. All phases must incorporate a four percent (4%) per year inflation factor per BMCMPO policy. All CN phases must include an appropriate amount of funding for construction inspection in addition to project construction costs.

Note: Fiscal Year 2021 begins on July 1, 2020, and ends on June 30, 2021.

Phase	Funding Source	FY 2021	FY 2022	FY 2023	FY 2024	Future	*Outlying Years*
PE	5310	$ 29,800	$	$	$	$	$
	Local Match	$ 7,450	$	$	$	$	$
		$	$	$	$	$	$
RW		$	$	$	$	$	$
		$	$	$	$	$	$
		$	$	$	$	$	$
CE		$	$	$	$	$	$
		$	$	$	$	$	$
		$	$	$	$	$	$
CN	5310	$ 119,200	$	$	$	$	$
	Local Match	$ 29,800	$	$	$	$	$
		$	$	$	$	$	$
	Totals:	$ 186,250	$	$	$	$	$

Section 5: Complete Streets Policy

A. Select one of the following:

☐ **Compliant** - This project is subject to the Complete Streets Policy because it involves the new construction or reconstruction of local roadways that will use federal funds through the BMCMPO for any phase of project implementation. *Additional Information items **1-8** (below) must be submitted for Compliant projects.*

☒ **Not Applicable** - This project is not subject to the Complete Streets Policy because it is a transit project, a non-roadway project, a resurfacing activity that does not alter the current/existing geometric designs of the roadway, or is a project that uses federal funds for which the BMCMPO does NOT have programming authority. *No Additional Information items (below) have to be provided for projects to which the Complete Streets Policy does not apply.*

☐ **Exempt** – The LPA is requesting that this project be exempted from the Complete Streets Policy due to certain circumstances or special constraints, as detailed in Section IV of the Complete Streets Policy. Please provide a detailed explanation of why the project should be exempted. *Additional Information items **1, 4-8** (below) must be submitted for Exempt projects.*

Justification for Exemption: _____

B. Additional Information:

Attach to this application form the following information as required by the Complete Streets Policy. If any items are unknown at the time of application, the applicant may indicate that "specific information has not yet been determined." Any required information not provided at the time of this application must be reported to the MPO as soon as it becomes available.

1) Detailed Scope of Work – Provide relevant details about the project that would be sufficient to use when seeking consulting services (detailed project description, vehicular elements, non-vehicular elements, new construction/reconstruction).

2) Performance Standards – List specific performance standards for multimodal transportation, including, but not limited to transit, pedestrian, bicycle, and automobile users, ADA and Universal Design, environmental, utilities, land use, right of way, historic preservation, maintenance of services plan, and any other pertinent design component in relation to current conditions, during implementation/construction, and upon project completion.

3) Measurable Outcomes – Identify measurable outcomes the project is seeking to attain (e.g. safety, congestion and/or access management, level-of-service, capacity expansion, utility services, etc.).

4) Project Timeline – Identify anticipated timelines for consultant selection, public participation, design, right-of-way acquisition, construction period, and completion date.

5) Key Milestones – identify key milestones (approvals, permits, agreements, design status, etc.).

6) Project Cost – Identify any anticipated cost limitations, additional funding sources, project timing, and other important cost considerations not included in the table above.

7) Public Participation Process – Describe the public participation process (types of outreach, number and type of meetings, etc.), and the benchmark goals for the project (participation rates, levels of outreach, levels of accountability and corresponding response methods to input received, etc.).

8) Stakeholder List – Identify the key parties/agencies/stakeholders/interest groups anticipated to be engaged during project development and their respective purpose for being on the list.

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FY 2020-2024 Transportation Improvement Program
Project Request Form

Mail: Bloomington/Monroe County MPO
401 N. Morton Street, Suite 130
Bloomington, Indiana 47402
Email: martipa@bloomington.in.gov or clemensr@bloomington.in.gov
Fax: (812) 349-3530

Section 1: Local Public Agency Information

- ☐ City of Bloomington
- ☐ Monroe County
- ☐ Town of Ellettsville
- ☐ Indiana University
- ☒ Bloomington Transit
- ☐ Rural Transit
- ☐ INDOT
- ☐ _____

Employee in Responsible Charge (ERC): Lew May
Phone: 812-961-0522
Email: mayl@bloomingtontransit.com

Section 2: Verification

I hereby certify that the information submitted as part of this form is complete and accurate. Furthermore, if applicable, I certify that the project complies with the BMCMPO Complete Streets Policy.

Lew May — 4/19/21

Employee in Responsible Charge (ERC) — Date

Section 3: Project Information

A. Project Name: 35 Foot Replacement Battery Electric Buses

B. Is project already in the TIP?
☒ Yes ☐ No

C. DES # (if assigned): 1700763, 1700764, 1700765, 1700766, 1700767

D. Project Location (detailed description of project termini): City of Bloomington

E. Please identify the primary project type (select only one):
- ☐ Bicycle & Pedestrian
- ☐ Bridge
- ☐ Road – Intersection
- ☐ Road – New/Expanded Roadway

☐ Road – Operations & Maintenance
☐ Road – Reconstruction/Rehabilitation/Resurfacing
☐ Sign
☐ Signal
☒ Transit

F. Project Support (local plans, LRTP, TDP, etc.): GPP, MTP, TDP

G. Allied Projects: N/A

H. Does the Project have an Intelligent Transportation Systems (ITS) component?
☐ Yes ☒ No
If yes, is the project included in the MPO's ITS Architecture?
☐ Yes ☐ No

I. Anticipated Letting Date: Fall 2021

Section 4: Financial Plan

Identify all anticipated costs for all phases of the project, including any costs anticipated in years beyond the scope of this TIP. All phases must incorporate a four percent (4%) per year inflation factor per BMCMPO policy. All CN phases must include an appropriate amount of funding for construction inspection in addition to project construction costs.

Note: Fiscal Year 2021 begins on July 1, 2020, and ends on June 30, 2021.

Phase	Funding Source	FY 2021	FY 2022	FY 2023	FY 2024	Future	*Outlying Years*
PE	5339	$ $3,200,000	$	$	$	$	$
	Local	$ $800,000	$	$	$	$	$
		$	$	$	$	$	$
RW		$	$	$	$	$	$
		$	$	$	$	$	$
		$	$	$	$	$	$
CE		$	$	$	$	$	$
		$	$	$	$	$	$
		$	$	$	$	$	$
CN		$	$	$	$	$	$
		$	$	$	$	$	$
		$	$	$	$	$	$
	Totals:	$ $4,000,000	$	$	$	$	$

Section 5: Complete Streets Policy

A. **Select one of the following:**
☐ **Compliant** - This project is subject to the Complete Streets Policy because it involves the new construction or reconstruction of local roadways that will use federal funds through the BMCMPO for any phase of project implementation. *Additional Information items 1-8 (below) must be submitted for Compliant projects.*

☒ **Not Applicable** - This project is not subject to the Complete Streets Policy because it is a transit project, a non-roadway project, a resurfacing activity that does not alter the current/existing geometric designs of the roadway, or is a project that uses federal funds for which the BMCMPO does NOT have programming authority. *No Additional Information items (below) have to be provided for projects to which the Complete Streets Policy does not apply.*

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Justification for Exemption: _____

B. Additional Information:

Attach to this application form the following information as required by the Complete Streets Policy. If any items are unknown at the time of application, the applicant may indicate that "specific information has not yet been determined." Any required information not provided at the time of this application must be reported to the MPO as soon as it becomes available.

1) Detailed Scope of Work – Provide relevant details about the project that would be sufficient to use when seeking consulting services (detailed project description, vehicular elements, non-vehicular elements, new construction/reconstruction).

2) Performance Standards – List specific performance standards for multimodal transportation, including, but not limited to transit, pedestrian, bicycle, and automobile users, ADA and Universal Design, environmental, utilities, land use, right of way, historic preservation, maintenance of services plan, and any other pertinent design component in relation to current conditions, during implementation/construction, and upon project completion.

3) Measurable Outcomes – Identify measurable outcomes the project is seeking to attain (e.g. safety, congestion and/or access management, level-of-service, capacity expansion, utility services, etc.).

4) Project Timeline – Identify anticipated timelines for consultant selection, public participation, design, right-of-way acquisition, construction period, and completion date.

5) Key Milestones – identify key milestones (approvals, permits, agreements, design status, etc.).

6) Project Cost – Identify any anticipated cost limitations, additional funding sources, project timing, and other important cost considerations not included in the table above.

7) Public Participation Process – Describe the public participation process (types of outreach, number and type of meetings, etc.), and the benchmark goals for the project (participation rates, levels of outreach, levels of accountability and corresponding response methods to input received, etc.).

8) Stakeholder List – Identify the key parties/agencies/stakeholders/interest groups anticipated to be engaged during project development and their respective purpose for being on the list.

Bloomington-Monroe County
Metropolitan Planning Organization

Crash Report -

Calendar Years 2015 through 2019 (50% DRAFT)

April 29, 2021

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2015-2019 Crash Report – 50% Draft

Executive Summary

The Bloomington-Monroe County Metropolitan Planning Organization (BMCMPO) 2015-2019 Crash Report represents a continuation of the MPO's effort to provide an analysis of the crash location causes and trends within Monroe County. This report includes an analysis of raw crash data from the Indiana State Police (ISP) Department ARIES data portal (https://www.in.gov/isp/3147.htm) for Calendar Years 2015, 2016, 2017, 2018, and 2019.

This crash report prepared by the BMCMPO staff from the ISP raw data provides relevant generalized information for the MPO Citizen's Advisory Committee (CAC), the Technical Advisory Committee (TAC), and the Policy Committee (PC). The crash report shall additionally achieve distribution to local units of government, Indiana University, and the general public through the BMCMPO website hosted by the Bloomington Planning and Transportation Department.

A summary of the specific calendar year crash trends provided below highlights general information on crash data within Monroe County. Detailed tables, charts, and summaries provided in subsequent chapters highlight information on annual and daily observational trends involving frequency, severity, and other related characteristics of crashes that occurred from 2015 to 2019.

Introduction

Mobility is a defining aspect of life in the United States and around the world. Transportation infrastructure investments have led to new opportunities for trade, travel, recreation, relocation, and economic growth. The BMCMPO receives approximately $3.1 million per year of federal transportation funding allocated from the Indiana Department of Transportation (INDOT) for local transportation network investments. Despite this continued investment, tangible and intangible costs attributable to motor vehicle crashes undermine the effectiveness of the local transportation system.

The BMCMPO Crash Reports demonstrate that motor vehicle crashes contribute to a significant loss of life, property, and productivity in Monroe County. A better understanding of crash trends is attainable through continued efforts in crash reporting and analysis. Targeted infrastructure investments should further improve safety on roads within Monroe County.

The purpose of this Crash Report is twofold. First, the Crash Report provides a consistent and straightforward means to disseminate annual crash data for use by any interested individual or organization. Second, the Crash Report provides another useful tool for civil engineers, transportation planners, and local policy makers when considering both funding and design strategies aimed at reducing the frequency and severity of transportation-related crashes. Specifically, the Indiana Department of Transportation and the BMCMPO require Local Public Agencies (LPAs) to use crash data as part of the Highway Safety Improvement Program (HSIP). This program provides federal funding to target areas with high incidences of crashes. The HSIP primary goal is reducing fatal and incapacitating injury crashes. The implementation of effective mitigation strategies further curtail crashes within Monroe County through annual reporting and analysis.

This Crash Report focuses on a five-year period for Calendar Years 2015, 2016, 2017, 2018, and 2019, with some tables and figures including the Calendar Years 2013 and 2014 to depict a longer time period trend to inform five-year rolling averages. By focusing on a longer time horizon, random variations in annual crashes do not unduly influence the trends reported. For instance, annual variations in bicycle and pedestrian crashes, fatalities and incapacitating injuries, and

location-specific crashes can be significant, even though there may not be an actual change in the likelihood of those crashes. By using a five-year window, identified trends are more likely to be meaningful by using a five-year analyses window. The crash data tabulated from 2019 alone provide a snapshot of the most recent year we have data for at the moment. Furthermore, information from this Crash Report will help inform future crash reports.

Methodology and Data Considerations

The data for the Bloomington-Monroe County Crash Report originates from the "Automated Report and Information Exchange System" (ARIES) of the Indiana State Police (https://www.in.gov/isp/3147.htm). This system maintains statewide crash data from law enforcement agency reports dating back to 2003. The Indiana law enforcement report data are organized by collisions, units (vehicles), and individuals. These data elements, related to one another by a common master field (e.g., Master Record Number) offer independent analysis capability. It is possible to retrieve information regarding collisions (e.g., locations and dates of greatest crash frequency), number of vehicles involved, and individuals involved. It is also possible to perform more complex analyses using attributes from each of these entities.

As with any database, the validity of conclusions resulting from the data is contingent upon accurate and complete data entry. Lack of data information from hit-and-run collisions, confusion surrounding alternate names of roads (e.g., Country Club Drive and Winslow Road, SR 46 and 3rd St., and similar road names being used in multiple jurisdictions like 2nd St. or Walnut Ave.), misspelled or mis-entered street names, GPS errors, and incomplete data entry undoubtedly introduce some error into the results of this report. Therefore, results of the Crash Report should not have a rigid interpretation. With that being mentioned, all efforts were made to correct these issues in the raw data before analysis and inclusion in this Crash Report.

The BMCMPO staff corrected obvious data errors to achieve valid results. Consequently, some minor inconsistencies may be evident when comparing crash reports from prior years. Therefore, the most recently issued Crash Report reflects the best and most accurate crash information. Regardless of methodological changes and slight differences between reports, the overall findings of this report are consistent with those of past years. The most recent report before this Crash Report was the 2013-2015 Crash Report, so methodologically, the raw data for years 2016-2019 have all been analyzed in the same way, with the year 2015 being updated to reflect the processes of the subsequent years.

Collisions are categorically analyzed given the crash type and severity. If a crash included a moped, motorcycle, bus, and bicyclist or pedestrian, the crash was subsequently classified as a "moped/motorcycle", "bus", "bicycle" or "pedestrian" crash, accordingly, regardless of the number of vehicles involved. If the crash involved only motor vehicles, the "crash modal type" classification identified the number of cars: one car, two cars, or three or more cars **(*Tables and figures to be included in Final Report.)**. The "severity" classification of a collision is dependent upon the most severe injury that resulted from a crash. For example, if a crash resulted in a fatality as well as a non-incapacitating injury, the severity of the crash had an assigned classification as "Fatal Injury." Most data methods used in the report are self-explanatory.

Collisions were analyzed using available geographic, road inventory, and traffic count data. Individual crashes were located according to reported geographic coordinates which were available for more than **93%** of all records. A crash frequency was determined for each intersection by tabulating the total number of crashes that occurred within a **250-ft radius** of the center of the intersection. Crash rates were determined from available traffic data from the City of

Bloomington, the Town of Ellettsville, Monroe County, and the Indiana Department of Transportation using standard adjustments and engineering judgment as necessary. **(*Tables and figures to be included in Final Report.)**

When reading the Crash Report, it is important to understand the distinction between "crashes" and "individuals." The term "crash" refers to the characteristics of the crash itself under consideration. For example, a "Fatal Injury" column (e.g., "Crash by Type and Severity, 2015-2019") shows how many crashes resulted in a fatal injury; it would be incorrect, however, to interpret this column as the number of fatalities since more than one fatality can result from a single crash.

Crash Characteristics

This section provides a summary of crash characteristics in Monroe County, including the type and severity of crashes from 2015-2019. These factors reflect trends in the overall safety of the transportation system.

A further breakdown of the Calendar Year 2015-2019 crash totals provides insights into trends involving pedestrians, bicyclists, buses, mopeds/motorcycles, scooters, and crashes that resulted in fatalities. Over the course of the five years analyzed, there were **forty-three (43)** fatal crashes resulting in **forty-eight (48)** fatalities (**Table X**), slightly fewer than the **fifty (50)** fatalities reported from 2014 to 2018. Of the twenty (43) fatal crashes, (X) resulted from two-car crashes, (X) were from one-car crashes, (X) involved mopeds/motorcycles, and (X) involved a pedestrian. For the nine years prior to 2016, there have been no fatalities involving a bicycle or a bus. This has not been the case during this current five-year period. **(*More information to follow. Tables and figures to be included in Final Report.)**

The time distribution of crashes continues to follow a predictable pattern correlating with peak hour and off-peak hour traffic volumes. The greatest number of crashes occurred during weekday rush hours between 4:00 P.M. and 6:00 P.M., with an average slightly greater than one (1) crash per hour for the entire county. There is also a peak from 12:00 P.M. to 1:00 P.M on weekdays. The weekend also follows a similar pattern in terms of frequency of crashes, but the crash rate has a more even distribution through the day and early evening hours. Between the hours of 7:00 PM and 4:00 AM, the weekend experiences a higher crash frequency compared with weekdays. Friday continued to have the highest number of crashes overall, while Sunday had the lowest number of crashes.

State and federal designated highway routes are prominently featured in the list of the highest crash frequency intersections or the total number of crashes over a given time period. Higher traffic volumes on these roads are undeniably the primary factor. INDOT jurisdictional intersections at SR 37 and 3rd Street, SR 45/46 and 10th Street, and SR 37 and Bloomfield Road are consistently high frequency crash locations. These intersections therefore warrant constant monitoring as do several local jurisdictional intersections that exhibit consistently high crash frequencies.

The leading cause of crashes during the Calendar Year 2015-2019 study period was once again a "failure to yield right of way" with **XXXX** incidents. A typical leading cause of this includes "following too closely" and "unsafe backing", although most "unsafe backing" incidents have been omitted in this report due to them not occurring in the public right-of-way, such as within private parking lots. These causes are addressable through education efforts as well as through selective physical improvements. "Running off the right side of the road" and "speeding in adverse weather" additionally present opportunities for physical safety improvements, such as guard rails, rumble strips, and interactive signage. These types of improvements warrant further exploration for crash reductions; however they are designed to decrease the amount of crashes resulting in injuries and fatalities. **(*Tables and figures to be included in Final Report.)**

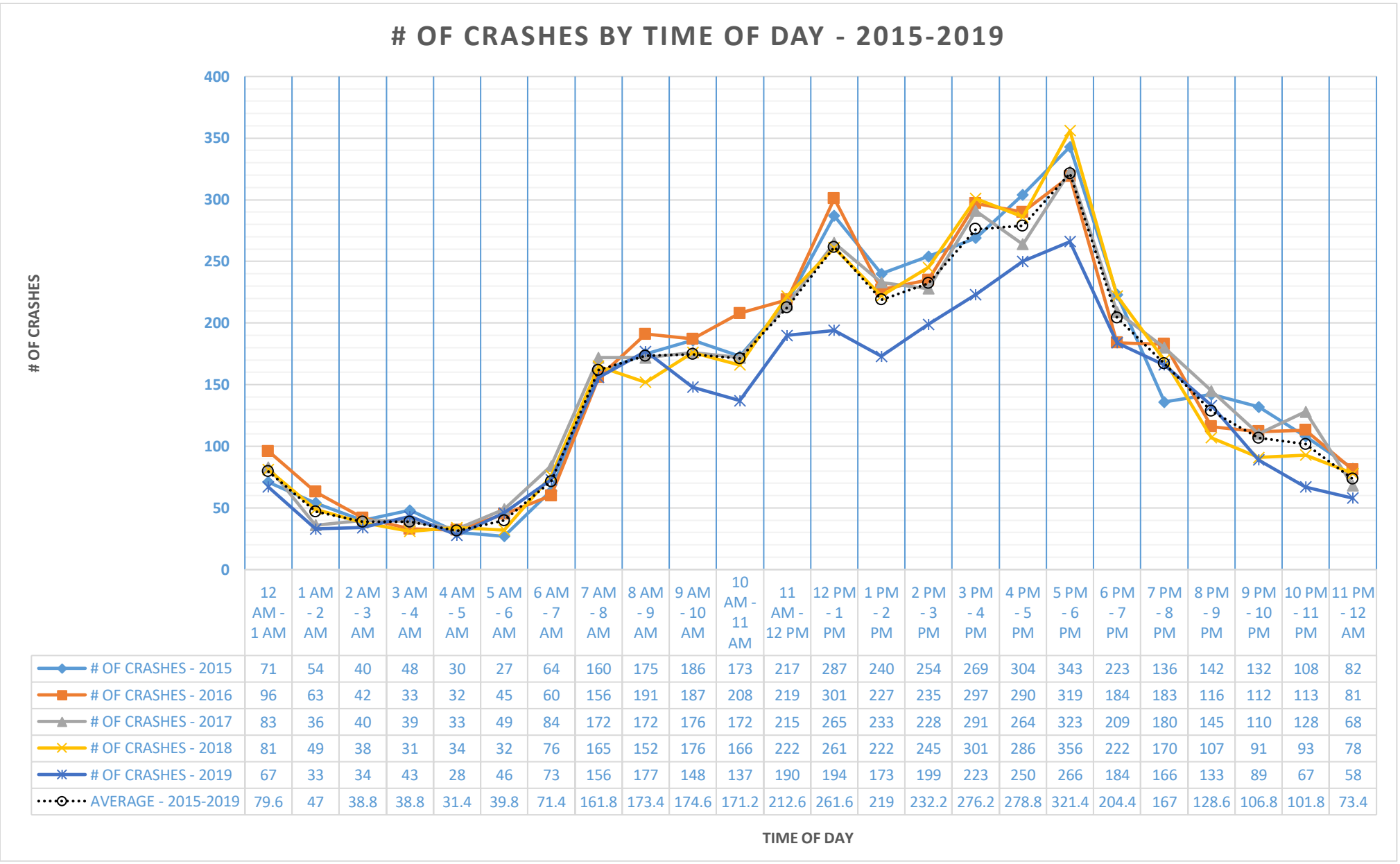
Crashes involving pedestrians and bicyclists are considerably important within the BMCMPO's Metropolitan Planning Area given a relatively high number of urbanized area non-motorized trips, the vulnerability to injury of individuals using these modes, and the BMCMPO's goals for increasing walking and bicycling modal shares. Compared to other types of crashes, those involving pedestrians and bicyclists are much more likely to result in a fatality or an incapacitating injury. Reducing the frequency and severity of these crashes is therefore a priority. **(*Tables and figures to be included in Final Report.)**

Time of Crashes

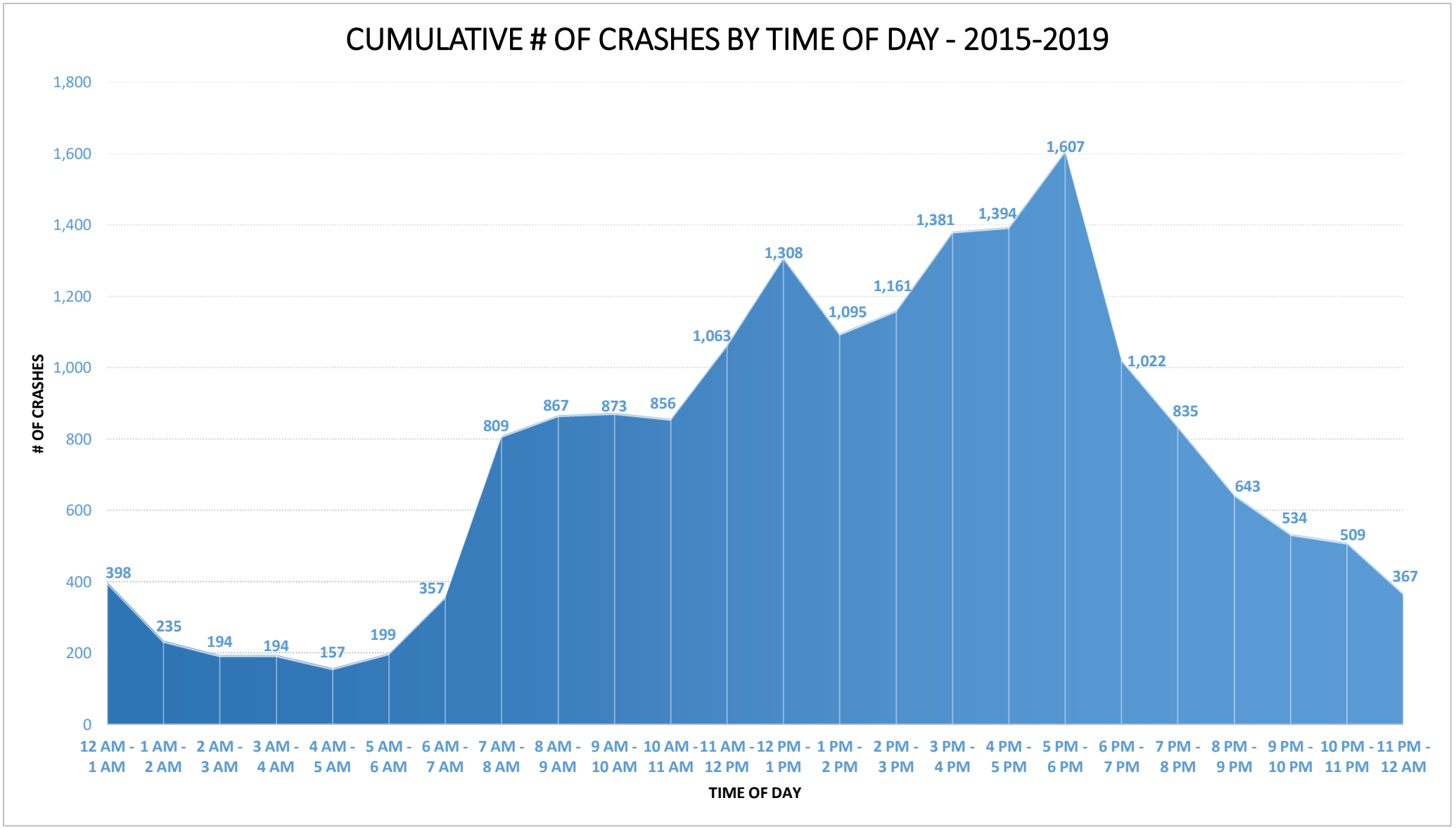
This section summarizes the number of crashes by hour and day. Law enforcement agencies and emergency responders can use these data relating to the timing of crashes for planning purposes. Additionally, decision makers may use this information in an attempt to reduce peak crash times.

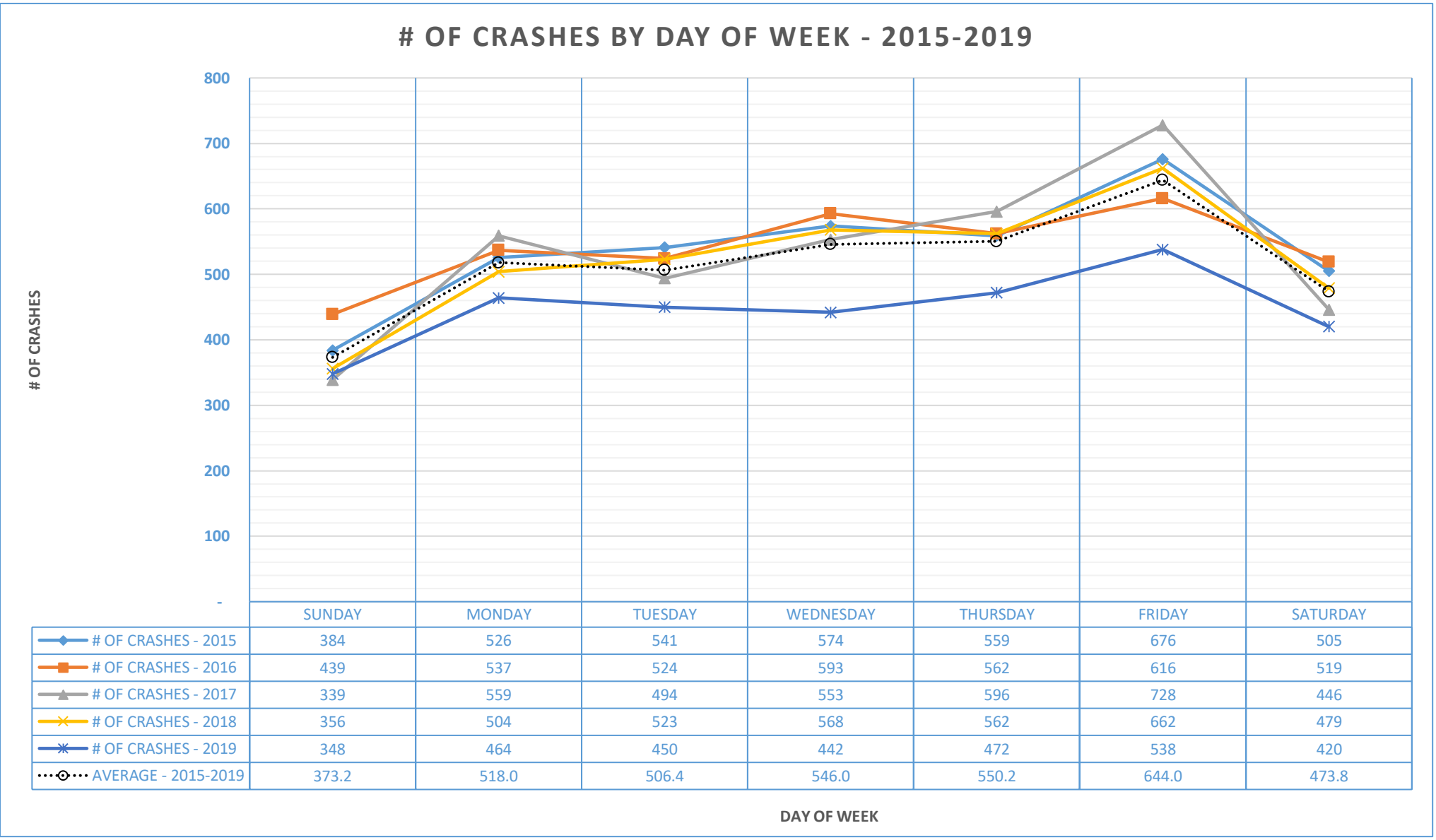
On weekdays, the number of crashes typically peaked in conjunction with the morning rush hour, 7:00 AM to 9:00 AM, and then increased gradually throughout the day until peaking again in conjunction with the evening rush hour, 4:00 PM to 6:00 PM (**Figure X**). There was an additional peak at noon around the lunch hour. The late afternoon was the most likely time for a crash to occur, with more than one per hour.

The hourly distribution of weekend crashes exhibits a predictable pattern. Crashes in the late evening and early morning are apparently more common during the weekend, and rush hour peaks were not as prevalent as on weekdays. During the Calendar Year 2013-2015 study period, a greater number of crashes occurred on Fridays than on any other day and the fewest crashes occurred on Sundays (**Figure X**).

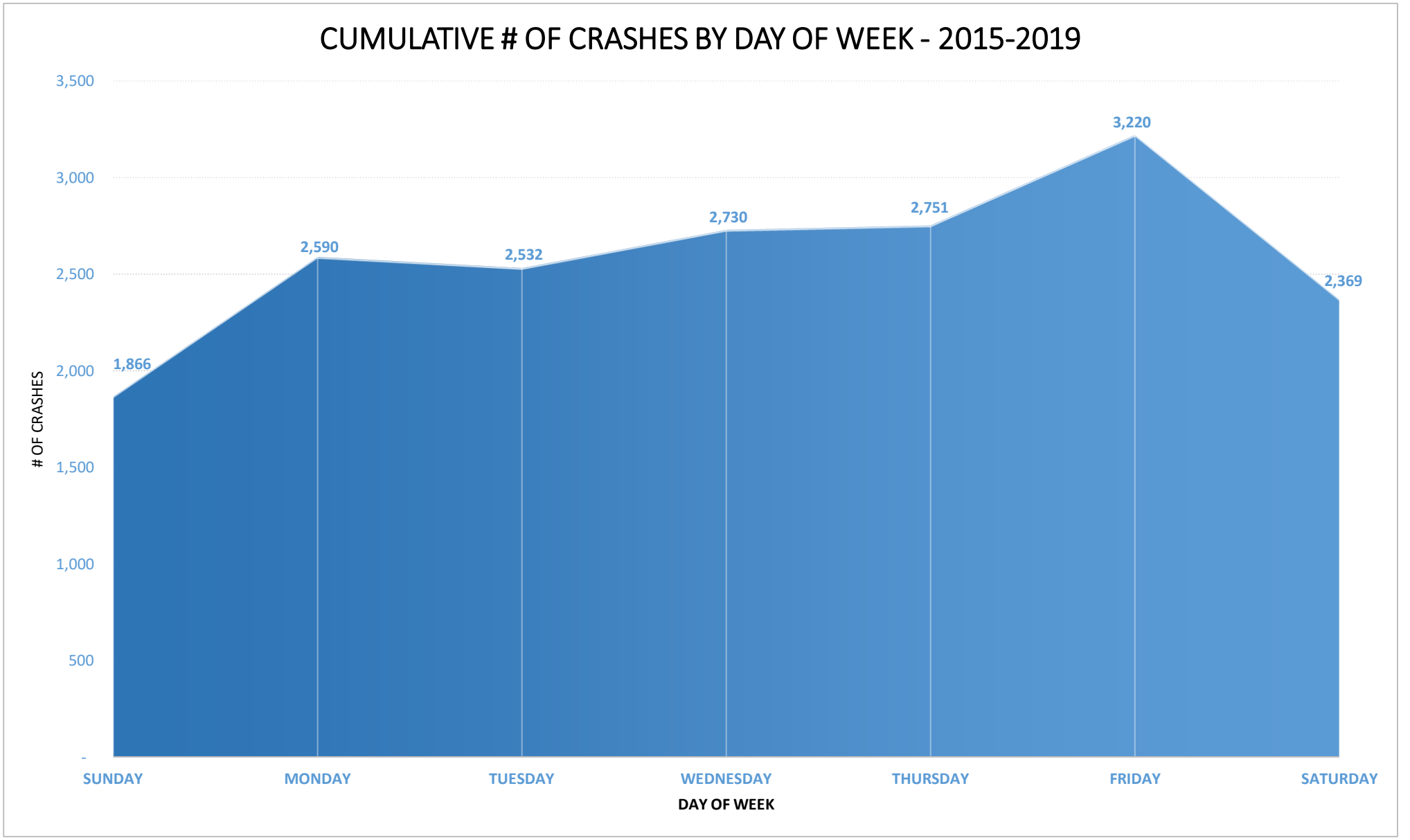


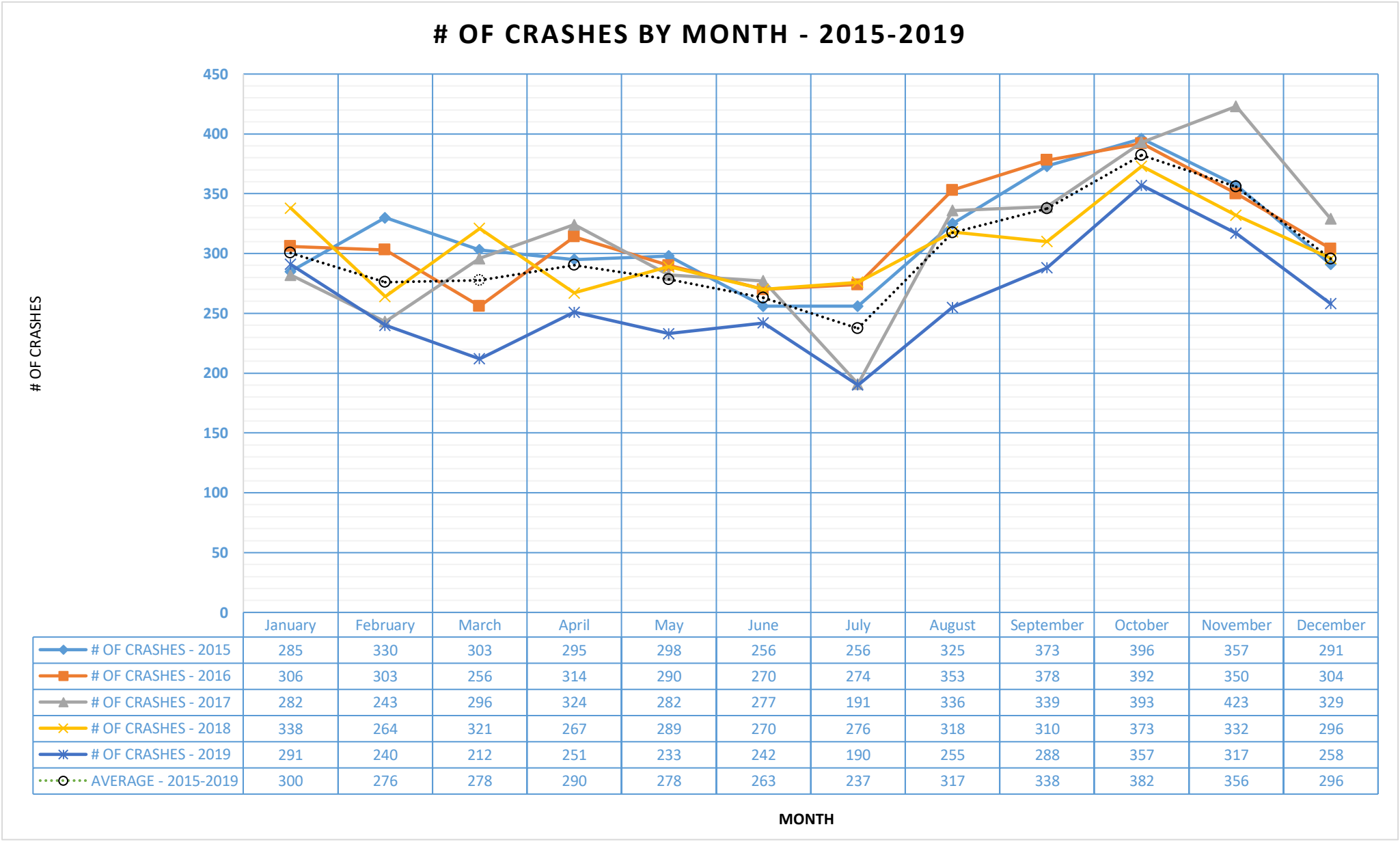
	12 AM - 1 AM	1 AM - 2 AM	2 AM - 3 AM	3 AM - 4 AM	4 AM - 5 AM	5 AM - 6 AM	6 AM - 7 AM	7 AM - 8 AM	8 AM - 9 AM	9 AM - 10 AM	10 AM - 11 AM	11 AM - 12 PM	12 PM - 1 PM	1 PM - 2 PM	2 PM - 3 PM	3 PM - 4 PM	4 PM - 5 PM	5 PM - 6 PM	6 PM - 7 PM	7 PM - 8 PM	8 PM - 9 PM	9 PM - 10 PM	10 PM - 11 PM	11 PM - 12 AM
# OF CRASHES - 2015	71	54	40	48	30	27	64	160	175	186	173	217	287	240	254	269	304	343	223	136	142	132	108	82
# OF CRASHES - 2016	96	63	42	33	32	45	60	156	191	187	208	219	301	227	235	297	290	319	184	183	116	112	113	81
# OF CRASHES - 2017	83	36	40	39	33	49	84	172	172	176	172	215	265	233	228	291	264	323	209	180	145	110	128	68
# OF CRASHES - 2018	81	49	38	31	34	32	76	165	152	176	166	222	261	222	245	301	286	356	222	170	107	91	93	78
# OF CRASHES - 2019	67	33	34	43	28	46	73	156	177	148	137	190	194	173	199	223	250	266	184	166	133	89	67	58
AVERAGE - 2015-2019	79.6	47	38.8	38.8	31.4	39.8	71.4	161.8	173.4	174.6	171.2	212.6	261.6	219	232.2	276.2	278.8	321.4	204.4	167	128.6	106.8	101.8	73.4


CUMULATIVE # OF CRASHES BY TIME OF DAY - 2015-2019
OF CRASHES
1,800
1,600
1,400
1,200
1,000
800
600
400
200
0
398
235
194
194
157
199
357
809
867
873
856
1,063
1,308
1,095
1,161
1,381
1,394
1,607
1,022
835
643
534
509
367
12 AM - 1 AM
1 AM - 2 AM
2 AM - 3 AM
3 AM - 4 AM
4 AM - 5 AM
5 AM - 6 AM
6 AM - 7 AM
7 AM - 8 AM
8 AM - 9 AM
9 AM - 10 AM
10 AM - 11 AM
11 AM - 12 PM
12 PM - 1 PM
1 PM - 2 PM
2 PM - 3 PM
3 PM - 4 PM
4 PM - 5 PM
5 PM - 6 PM
6 PM - 7 PM
7 PM - 8 PM
8 PM - 9 PM
9 PM - 10 PM
10 PM - 11 PM
11 PM - 12 AM
TIME OF DAY

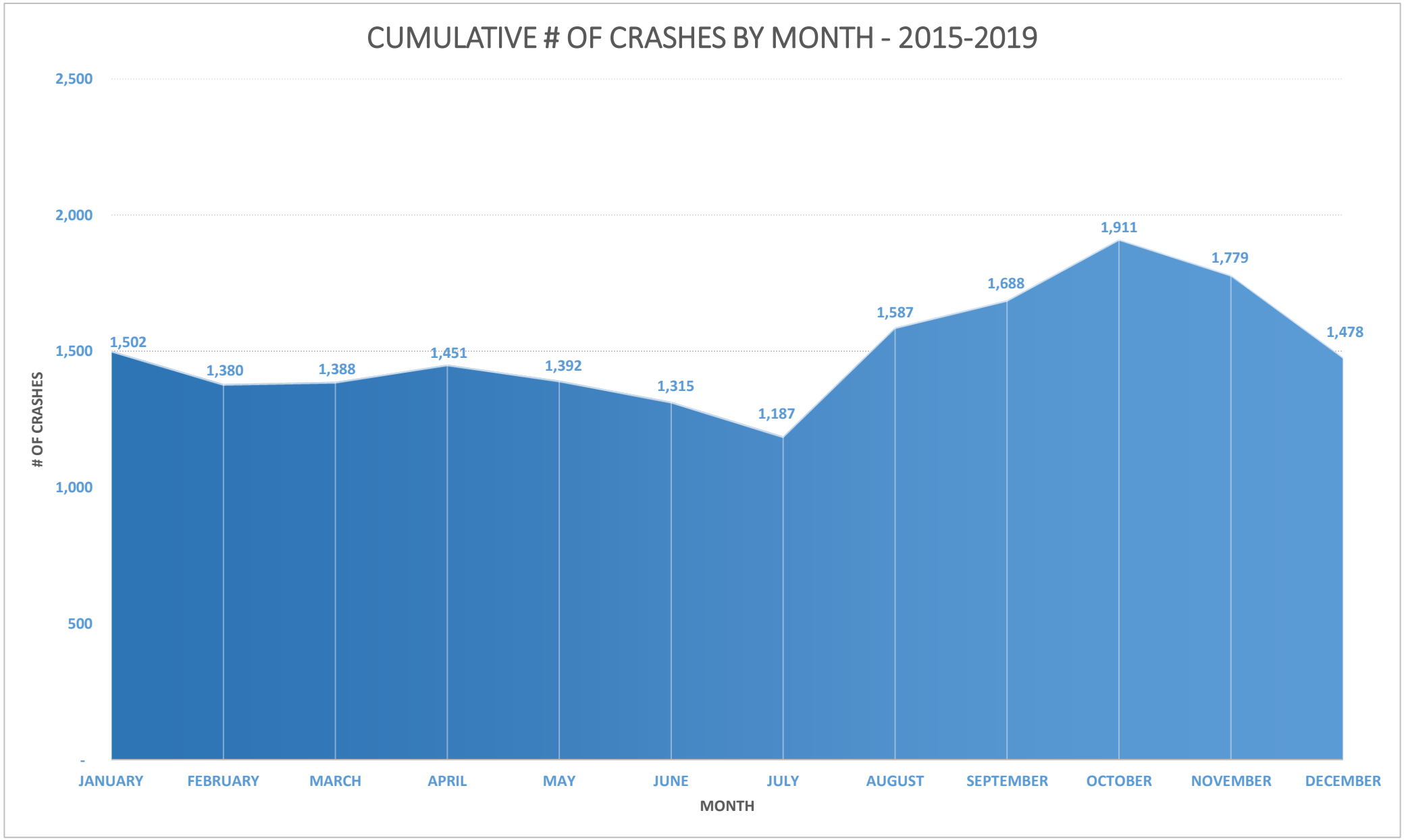


	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
# OF CRASHES - 2015	384	526	541	574	559	676	505
# OF CRASHES - 2016	439	537	524	593	562	616	519
# OF CRASHES - 2017	339	559	494	553	596	728	446
# OF CRASHES - 2018	356	504	523	568	562	662	479
# OF CRASHES - 2019	348	464	450	442	472	538	420
AVERAGE - 2015-2019	373.2	518.0	506.4	546.0	550.2	644.0	473.8


CUMULATIVE # OF CRASHES BY DAY OF WEEK - 2015-2019
3,500
3,000
2,500
2,000
1,500
1,000
500
-
OF CRASHES
1,866
2,590
2,532
2,730
2,751
3,220
2,369
SUNDAY
MONDAY
TUESDAY
WEDNESDAY
THURSDAY
FRIDAY
SATURDAY
DAY OF WEEK



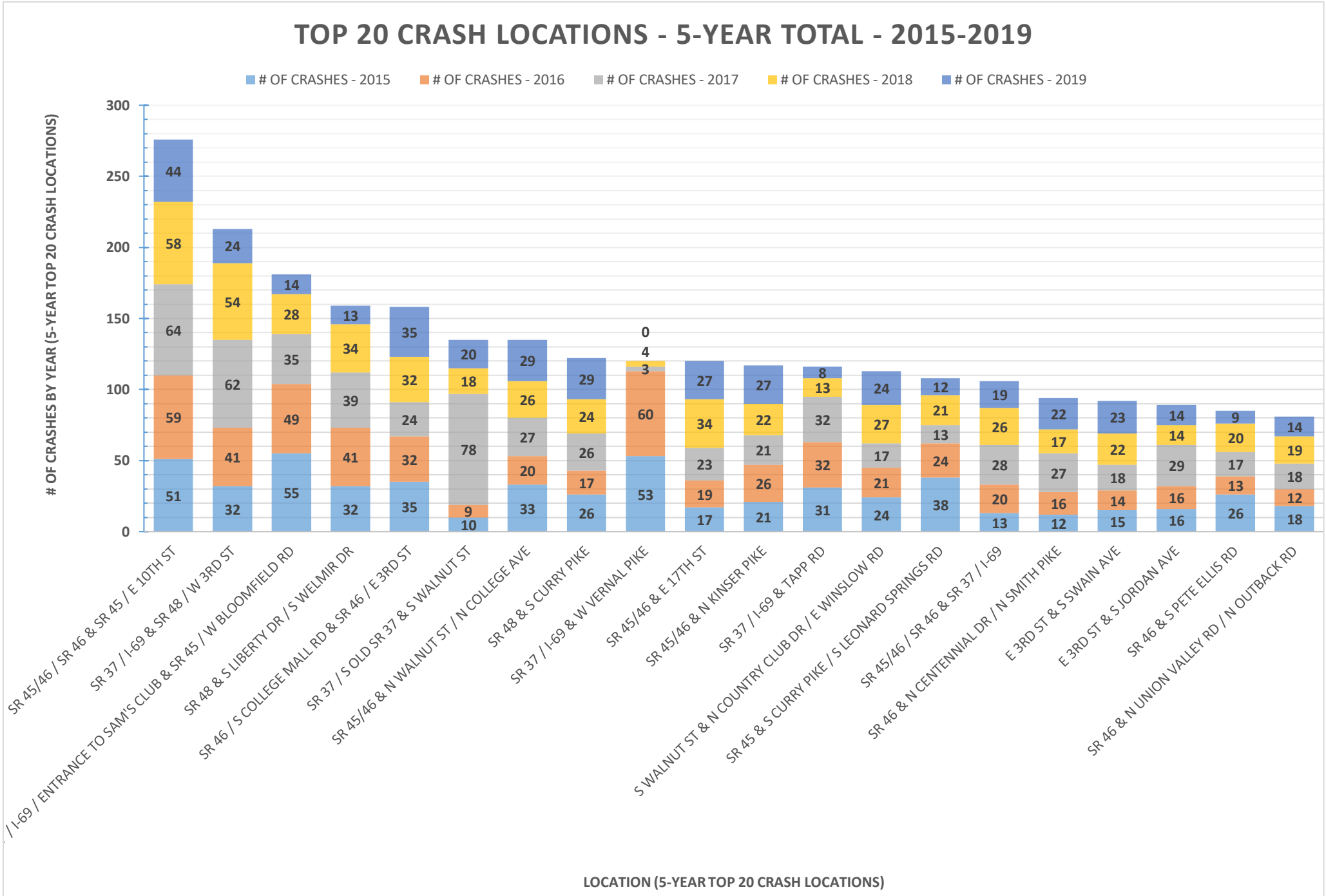
	January	February	March	April	May	June	July	August	September	October	November	December
# OF CRASHES - 2015	285	330	303	295	298	256	256	325	373	396	357	291
# OF CRASHES - 2016	306	303	256	314	290	270	274	353	378	392	350	304
# OF CRASHES - 2017	282	243	296	324	282	277	191	336	339	393	423	329
# OF CRASHES - 2018	338	264	321	267	289	270	276	318	310	373	332	296
# OF CRASHES - 2019	291	240	212	251	233	242	190	255	288	357	317	258
AVERAGE - 2015-2019	300	276	278	290	278	263	237	317	338	382	356	296

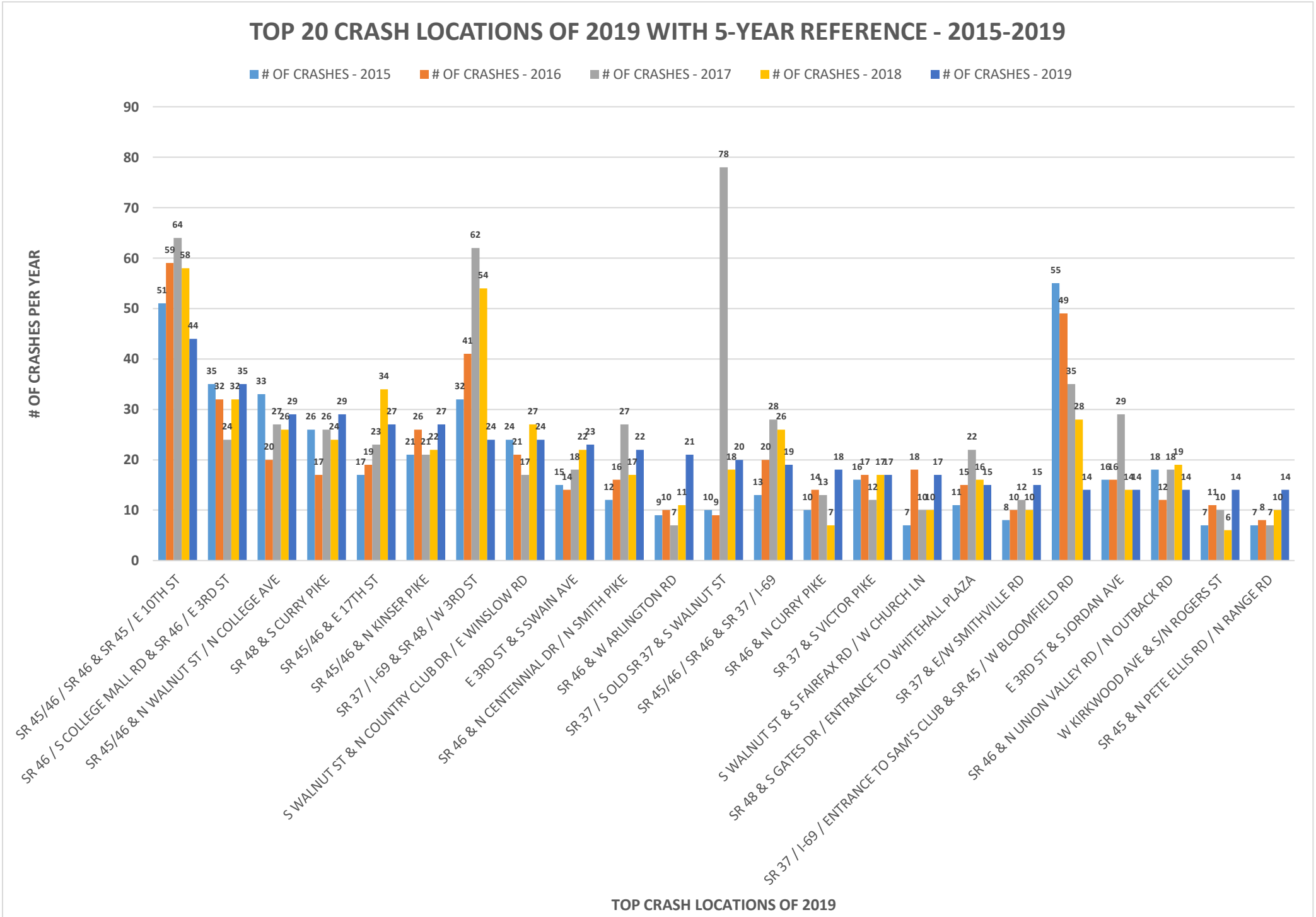

CUMULATIVE # OF CRASHES BY MONTH - 2015-2019
2,500
2,000
1,500
1,000
500
-
OF CRASHES
1,502
1,380
1,388
1,451
1,392
1,315
1,187
1,587
1,688
1,911
1,779
1,478
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER
MONTH

Crash Locations

This section addresses the spatial distribution of crashes in Monroe County highlighting locations of high crash frequency, crash rates, and crash severity **(Table X)**. This identification process used a stepwise approach: (1) ranking the sum total of all CY 2015-2019 all Monroe County intersection crash locations into the "Top 50 Crash Locations," (2) adjusting these crash locations with traffic volume data thereby deriving five-year crash rates, and (3) a derivation of intersection severity rates. **(*Additional tables and figures to be included in Final Report.)**

The methodology used in this report does not identify locations which have a higher than expected (i.e. statistically significant) crash totals, crash rates, or severity indices. Future crash reports should therefore consider a comparative analysis of intersections with similar operating characteristics. The BMCMPO staff shall additionally explore a network solution for calculating crash rates at lower crash frequency locations.


TOP 20 CRASH LOCATIONS - 5-YEAR TOTAL - 2015-2019
OF CRASHES - 2015
OF CRASHES - 2016
OF CRASHES - 2017
OF CRASHES - 2018
OF CRASHES - 2019
OF CRASHES BY YEAR (5-YEAR TOP 20 CRASH LOCATIONS)
300
250
200
150
100
50
0
SR 45/46 / SR 46 & SR 45 / E 10TH ST: 51, 59, 64, 58, 44
SR 37 / I-69 & SR 48 / W 3RD ST: 32, 41, 62, 54, 24
/ I-69 / ENTRANCE TO SAM'S CLUB & SR 45 / W BLOOMFIELD RD: 55, 49, 35, 28, 14
SR 48 & S LIBERTY DR / S WELMIR DR: 32, 41, 39, 34, 13
SR 46 / S COLLEGE MALL RD & SR 46 / E 3RD ST: 35, 32, 24, 32, 35
SR 37 / S OLD SR 37 & S WALNUT ST: 10, 9, 78, 18, 20
SR 45/46 & N WALNUT ST / N COLLEGE AVE: 33, 20, 27, 26, 29
SR 48 & S CURRY PIKE: 26, 17, 26, 24, 29
SR 37 / I-69 & W VERNAL PIKE: 53, 60, 3, 4, 0
SR 45/46 & E 17TH ST: 17, 19, 23, 34, 27
SR 45/46 & N KINSER PIKE: 21, 26, 21, 22, 27
SR 37 / I-69 & TAPP RD: 31, 32, 32, 13, 8
S WALNUT ST & N COUNTRY CLUB DR / E WINSLOW RD: 24, 21, 17, 27, 24
SR 45 & S CURRY PIKE / S LEONARD SPRINGS RD: 38, 24, 13, 21, 12
SR 45/46 / SR 46 & SR 37 / I-69: 13, 20, 28, 26, 19
SR 46 & N CENTENNIAL DR / N SMITH PIKE: 12, 16, 27, 17, 22
E 3RD ST & S SWAIN AVE: 15, 14, 18, 22, 23
E 3RD ST & S JORDAN AVE: 16, 16, 29, 14, 14
SR 46 & S PETE ELLIS RD: 26, 13, 17, 20, 9
SR 46 & N UNION VALLEY RD / N OUTBACK RD: 18, 12, 18, 19, 14
LOCATION (5-YEAR TOP 20 CRASH LOCATIONS)


TOP 20 CRASH LOCATIONS OF 2019 WITH 5-YEAR REFERENCE - 2015-2019
OF CRASHES - 2015
OF CRASHES - 2016
OF CRASHES - 2017
OF CRASHES - 2018
OF CRASHES - 2019
OF CRASHES PER YEAR
0
10
20
30
40
50
60
70
80
90
SR 45/46 / SR 46 & SR 45 / E 10TH ST
SR 46 / S COLLEGE MALL RD & SR 46 / E 3RD ST
SR 45/46 & N WALNUT ST / N COLLEGE AVE
SR 48 & S CURRY PIKE
SR 45/46 & E 17TH ST
SR 45/46 & N KINSER PIKE
SR 37 / I-69 & SR 48 / W 3RD ST
S WALNUT ST & N COUNTRY CLUB DR / E WINSLOW RD
E 3RD ST & S SWAIN AVE
SR 46 & N CENTENNIAL DR / N SMITH PIKE
SR 46 & W ARLINGTON RD
SR 37 / S OLD SR 37 & S WALNUT ST
SR 45/46 / SR 46 & SR 37 / I-69
SR 46 & N CURRY PIKE
SR 37 & S VICTOR PIKE
S WALNUT ST & S FAIRFAX RD / W CHURCH LN
SR 48 & S GATES DR / ENTRANCE TO WHITEHALL PLAZA
SR 37 / I-69 / ENTRANCE TO SAM'S CLUB & SR 45 / W BLOOMFIELD RD
SR 37 & E/W SMITHVILLE RD
E 3RD ST & S JORDAN AVE
SR 46 & N UNION VALLEY RD / N OUTBACK RD
W KIRKWOOD AVE & S/N ROGERS ST
SR 45 & N PETE ELLIS RD / N RANGE RD
TOP CRASH LOCATIONS OF 2019

TOP 50 CRASHES BY LOCATION (5-YEAR RANKS, AVERAGES, TOTALS, AND PROGRESS)					
Intersection	INTERSECTION RANK - 2015-2019	AVERAGE INTERSECTION RANK - 2015-2019	5-YEAR TOTAL # OF CRASHES RANK - 2015-2019	5-YEAR AVERAGE # OF CRASHES - 2015-2019	5-YEAR TOTAL # OF CRASHES - 2015-2019
SR 45/46 / SR 46 & SR 45 / E 10TH ST	1	1.8	1	55.2	276
SR 37 / I-69 & SR 48 / W 3RD ST	2	4.6	2	42.6	213
SR 37 / I-69 / ENTRANCE TO SAM'S CLUB & SR 45 / W BLOOMFIELD RD	4	6.8	3	36.2	181
SR 48 & S LIBERTY DR / S WELMIR DR	6	8.4	4	31.8	159
SR 46 / S COLLEGE MALL RD & SR 46 / E 3RD ST	3	6.0	5	31.6	158
SR 45/46 & N WALNUT ST / N COLLEGE AVE	5	7.6	6	27.0	135
SR 37 / S OLD SR 37 & S WALNUT ST	25	32.4	6	27.0	135
SR 48 & S CURRY PIKE	7	11.0	8	24.4	122
SR 45/46 & E 17TH ST	9	11.8	9	24.0	120
SR 37 / I-69 & W VERNAL PIKE	115	119.4	9	24.0	120
SR 45/46 & N KINSER PIKE	8	11.2	11	23.4	117
SR 37 / I-69 & TAPP RD	16	22.8	12	23.2	116
S WALNUT ST & N COUNTRY CLUB DR / E WINSLOW RD	9	11.8	13	22.6	113
SR 45 & S CURRY PIKE / S LEONARD SPRINGS RD	12	17.0	14	21.6	108
SR 45/46 / SR 46 & SR 37 / I-69	11	15.0	15	21.2	106
SR 46 & N CENTENNIAL DR / N SMITH PIKE	15	22.0	16	18.8	94
E 3RD ST & S SWAIN AVE	13	20.0	17	18.4	92
E 3RD ST & S JORDAN AVE	14	21.8	18	17.8	89
SR 46 & S PETE ELLIS RD	20	27.4	19	17.0	85
SR 46 & N UNION VALLEY RD / N OUTBACK RD	18	24.6	20	16.2	81
SR 37 & S VICTOR PIKE	17	23.4	21	15.8	79
SR 48 & S GATES DR / ENTRANCE TO WHITEHALL PLAZA	21	28.0	21	15.8	79
SR 45 & S LIBERTY DR / S HICKORY LEAF DR	22	30.0	23	15.6	78
S WALNUT ST & E/W GRIMES LN	19	26.8	24	15.0	75
E 10TH ST & N JORDAN AVE	23	30.6	25	14.6	73
S WALNUT ST & E RHORER RD / W GORDON PIKE	31	41.0	26	14.4	72

E 10TH ST & N UNION ST	24	31.6	27	14.0	70
E/W 10TH & N COLLEGE AVE	30	40.8	28	14.0	70
W 2ND ST & S PATTERSON DR	25	32.4	29	13.2	66
N CURRY PIKE & W VERNAL PIKE	27	35.6	30	12.8	64
SR 45/46 & N RANGE RD	28	35.8	30	12.8	64
SR 37 / I-69 & E/W SAMPLE RD	44	52.0	30	12.8	64
SR 46 & N CURRY PIKE	34	43.6	33	12.4	62
S WALNUT ST & S FAIRFAX RD / W CHURCH LN	37	46.4	33	12.4	62
W OLD SR 37 & N WALNUT ST / N SR 37 BUSINESS	29	38.0	33	12.4	62
SR 46 & N HARTSTRAIT RD	32	41.2	36	12.2	61
W 17TH ST & N KINSER PIKE / N MADISON ST	36	45.4	37	11.8	59
SR 46 & W ARLINGTON RD	46	56.2	38	11.6	58
E COVENANTER DR & S COLLEGE MALL RD	33	41.4	38	11.6	58
W 3RD ST & S COLLEGE AVE	45	54.8	40	11.4	57
SR 45/46 & N DUNN ST	35	44.6	40	11.4	57
N/S COLLEGE AVE & W KIRKWOOD AVE	39	47.4	40	11.4	57
SR 46 & N/S SALE ST (2 INTERSECTIONS)	38	46.6	43	11.2	56
SR 37 & E/W DILLMAN RD	49	58.8	43	11.2	56
SR 37 & E/W SMITHVILLE RD	40	49.2	45	11.0	55
E/W 3RD ST & S WALNUT ST	66	78.6	46	10.8	54
W 2ND ST & S COLLEGE AVE	41	50.6	46	10.8	54
E/W 7TH ST & N WALNUT ST	43	51.0	46	10.8	54
W 3RD ST / S ADAMS ST & S PATTERSON DR	42	50.8	49	10.6	53
N/S WALNUT ST & E/W KIRKWOOD AVE	48	58.0	49	10.6	53
SR 46 & KINGSTON DR S	61	73.4	51	9.8	49
E 3RD ST & S HIGHLAND AVE	54	64.4	51	9.8	49
SR 37 & E/W MONROE DAM RD	65	77.6	51	9.8	49

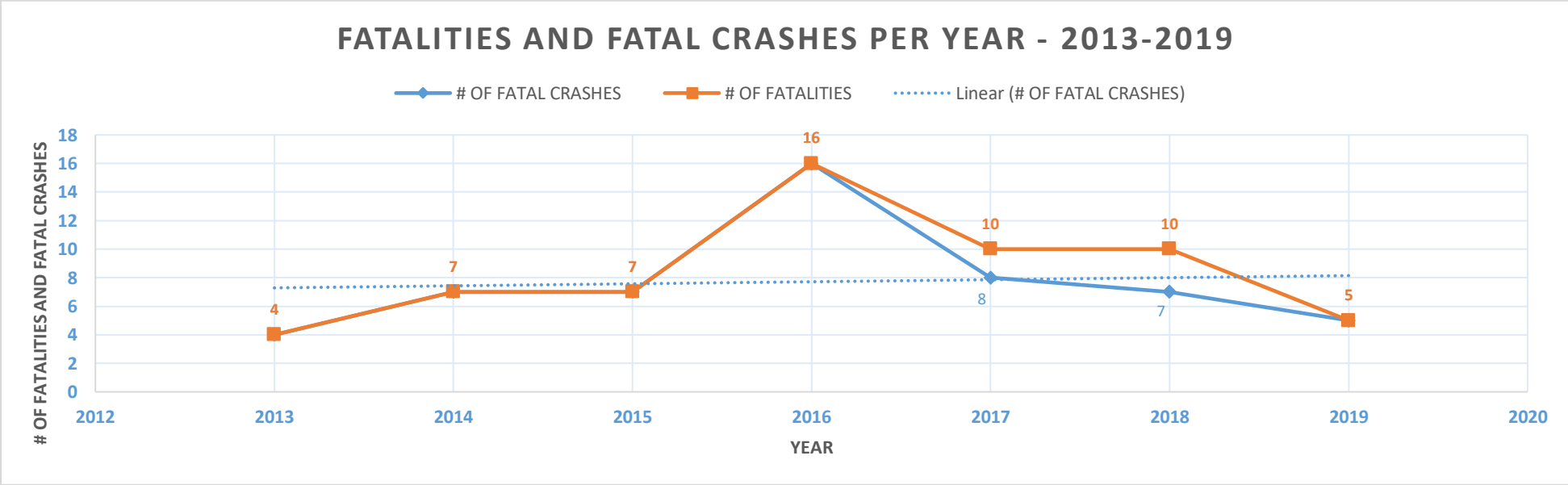
Crash Factors

This section summarizes the primary crash factors from 2015 to 2019. An understanding of these causes informs infrastructure investments, enforcement activities, and educational efforts. Traffic law enforcement and road design can address unsafe speeds, while guardrail, rumble strips, or safety education can mitigate the tendency of motorists to drive off the road. Similarly, enforcement and education could reduce the number of crashes attributable to alcohol potentially leading to a decrease of weekend/late night hit and run crashes.

Table XX illustrates the Top 10 Primary Crash Factors for 2015-2019 by Severity. **(*Tables and figures to be included in Final Report.)** Failure to Yield Right-of-Way was once again the most common cause of crashes, contributing to nearly XXXX crashes from 2015 to 2019. Following Too Closely and Unsafe Backing were additional significant crash factors. While failing to yield right of way was the most frequent crash cause, running off the road to the right was more dangerous based on the percentage of crashes that resulted in fatality or incapacitating injury. **Table XX** shows the Top 10 Primary Crash Factors for 2015-2019 ranked in order of percent of incapacitating injury resulting from the crash. Of the most during the time period, which resulted in XXXX (X) fatal crashes and the highest percentage of incapacitating injury.

The frequency of crashes ranked by primary factor provides information about which crashes happen most often. The percentage comparison reveals which primary factors for crashes have previously resulted in injury and which are less likely to result in injury. For example, unsafe backing ranked third as a primary factor in a crash, but comparing likelihood of injury, 98% of crashes from unsafe backing result in no injury.

Fatalities



FATAL CRASH PRIMARY FACTORS - 2015			
RANK	PRIMARY FACTOR	FATAL INJURY	% OF TOTAL
1	RAN OFF ROAD - RIGHT	4	57%
2	UNSAFE SPEED	1	14%
2	DISREGARD SIGNAL / REG SIGN	1	14%
2	LEFT OF CENTER	1	14%
TOTAL		6	100%

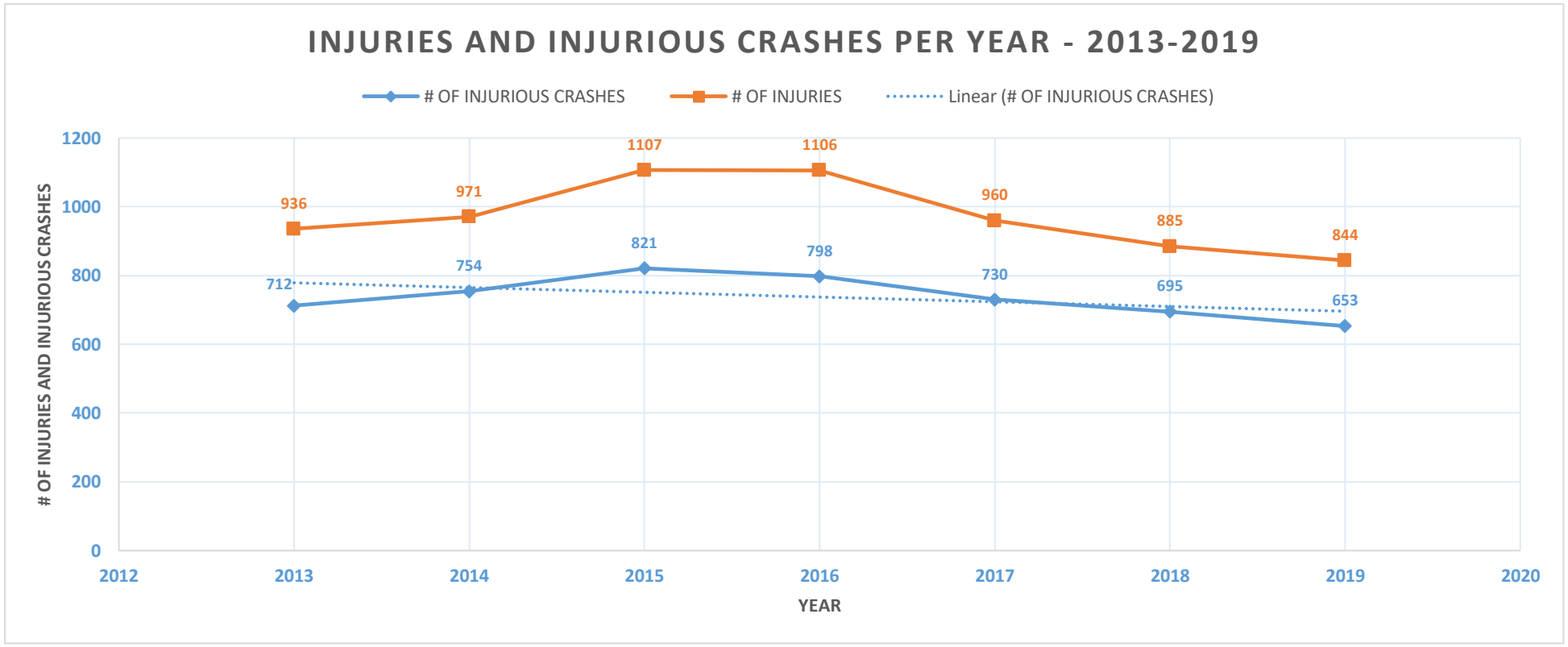
FATAL CRASH PRIMARY FACTORS - 2016			
RANK	PRIMARY FACTOR	FATAL INJURY	% OF TOTAL
1	RAN OFF ROAD - RIGHT	4	25%
1	LEFT OF CENTER	4	25%
3	UNSAFE SPEED	3	19%
4	SPEED TOO FAST - WEATHER CONDITIONS	2	33%
5	DISREGARD SIGNAL / REG SIGN	1	6%
5	PEDESTRIAN ACTION	1	6%
5	FAILURE TO YIELD RIGHT-OF-WAY	1	6%
TOTAL		16	100%

FATAL CRASH PRIMARY FACTORS - 2017			
RANK	PRIMARY FACTOR	FATAL INJURY	% OF TOTAL
1	RAN OFF ROAD - RIGHT	3	33%
1	DRIVER DISTRACTED	3	33%
3	ANIMAL/OBJECT IN ROADWAY	1	10%
3	OVERCORRECTING/OVERSTEERING	1	10%
3	FAILURE TO YIELD RIGHT-OF-WAY	1	10%
3	LEFT OF CENTER	1	10%
TOTAL		10	100%

FATAL CRASH PRIMARY FACTORS - 2018			
RANK	PRIMARY FACTOR	FATAL INJURY	% OF TOTAL
1	LEFT OF CENTER	5	50%
2	FAILURE TO YIELD RIGHT-OF-WAY	1	10%
2	IMPROPER LANE USAGE	1	10%
2	UNSAFE BACKING	1	10%
2	ENGINE FAILURE OR DEFECTIVE	1	10%
2	PEDESTRIAN ACTION	1	10%
TOTAL		10	100%

FATAL CRASH PRIMARY FACTORS - 2019			
RANK	PRIMARY FACTOR	FATAL INJURY	% OF TOTAL
1	REAR-END - CAR TO BICYCLIST	1	20%
2	PEDESTRIAN ACTION	1	20%
3	RAN OFF ROAD - RIGHT	1	20%
4	RAN OFF ROAD - LEFT	1	20%
5	DRIVER ILLNESS	1	20%
TOTAL		5	100%

FATAL CRASH PRIMARY FACTORS - 2015-2019			
RANK	PRIMARY FACTOR	FATAL INJURY	% OF TOTAL
1	RAN OFF ROAD - RIGHT	11	23%
1	LEFT OF CENTER	11	23%
3	UNSAFE SPEED	4	9%
4	PEDESTRIAN ACTION	3	6%
4	FAILURE TO YIELD RIGHT-OF-WAY	3	6%
4	DRIVER DISTRACTED	3	6%
7	DISREGARD SIGNAL / REG SIGN	2	4%
7	SPEED TOO FAST - WEATHER CONDITIONS	2	4%
9	ANIMAL/OBJECT IN ROADWAY	1	2%
9	OVERCORRECTING/OVERSTEERING	1	2%
9	IMPROPER LANE USAGE	1	2%
9	UNSAFE BACKING	1	2%
9	ENGINE FAILURE OR DEFECTIVE	1	2%
9	REAR-END - CAR TO BICYCLIST	1	2%
9	RAN OFF ROAD - LEFT	1	2%
9	DRIVER ILLNESS	1	2%
TOTAL		**47**	**100%**


INJURIES AND INJURIOUS CRASHES PER YEAR - 2013-2019
OF INJURIOUS CRASHES
OF INJURIES
Linear (# OF INJURIOUS CRASHES)
OF INJURIES AND INJURIOUS CRASHES
1200
1000
800
600
400
200
0
2012
2013
2014
2015
2016
2017
2018
2019
2020
YEAR
936
971
1107
1106
960
885
844
712
754
821
798
730
695
653