

ROAD SAFETY AUDIT

I-95 from Ipswich River to Merrimack River

Boxford, Georgetown, Rowley, Newbury, West Newbury,
and Newburyport

March 2019

Prepared For:
MassDOT



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Background

The Federal Highway Administration (FHWA) defines a Road Safety Audit (RSA) as the formal safety examination of an existing or future road or intersection by an independent, multidisciplinary team. The purpose of an RSA is to identify potential safety issues and possible opportunities for safety improvements considering all roadway users. This RSA evaluates Interstate 95 (I-95) from the Ipswich River (approximately mile marker 71.8) to the Merrimack River (approximately mile marker 87) for a total of 15.2 miles. For the section of I-95 between Boxford and Rowley (between mile marker 71.8 and the Rowley weigh station north of Route 97 (Exit 53) for a total 5.3 miles), all crashes on the I-95 mainline were reviewed; for the remainder of the study area corridor, only center median and median crossover crashes were reviewed.

A key objective of the RSA is to identify short-term, mid-term, and long-term safety improvements that can be implemented at the subject locations and incorporated in potential improvements of these locations.

RSA Process

A Road Safety Audit was completed for the study corridor on Tuesday, January 22, 2019. The RSA was conducted primarily due to concern over cross-over crashes experienced along this segment of I-95. The agenda for the RSA meeting held at the Boxford Communication Department is provided in Appendix A of this report. As shown below in Table 1, the audit team consisted of a multidisciplinary team with representatives from state, regional and local agencies and organizations providing expertise in the engineering, planning, maintenance and emergency response fields. Contact information for the RSA attendees is provided in Appendix B of this report.

Table 1. Participating Audit Team Members

Audit Team Member	Agency/Affiliation
Chris Falcos	MassDOT Traffic Safety
Ana Fill	MassDOT Traffic Safety
Peter Collette	MassDOT District 4 Maintenance
Tim Paris	MassDOT District 4 Projects/Planning
Brian Fallon	MassDOT District 4 Projects
Brian Levine	MassDOT District 4 Traffic
Brian Geiger	Boxford Fire Department
James Riter	Boxford Police Department
Don Cudmore	Georgetown Police Department
Scott Hahl	Georgetown Police Department
Michael Provost	Massachusetts State Police – Newbury Barracks
Deborah Ryan	Massachusetts State Police – Newbury Barracks
Michael Reilly	Newbury Police Department
Steve Mullaney	Massachusetts State Police - AHQ
Don Dupray	Rowley Fire Department
Matthew Simons	Newburyport Police Department
Michael Soltys	Boxford Fire Department
Thomas Fitzgerald	Massachusetts State Police
Jim Terlizzi	Merrimack Valley Planning Commission
Phil Viveiros	McMahon Associates
Conor Murphy	McMahon Associates

Within the email invitation sent on January 10, 2019 to each participant in the RSA, background material was provided. This information included collision diagrams and crash data summaries for the study area locations. During the RSA meeting, these materials were reviewed as a group along with videos of the I-95 northbound and southbound mainline (in lieu of an RSA field visit) given the inability to walk the study area location. Following the viewing of the videos, the team discussed additional concerns and potential solutions for the existing safety issues.

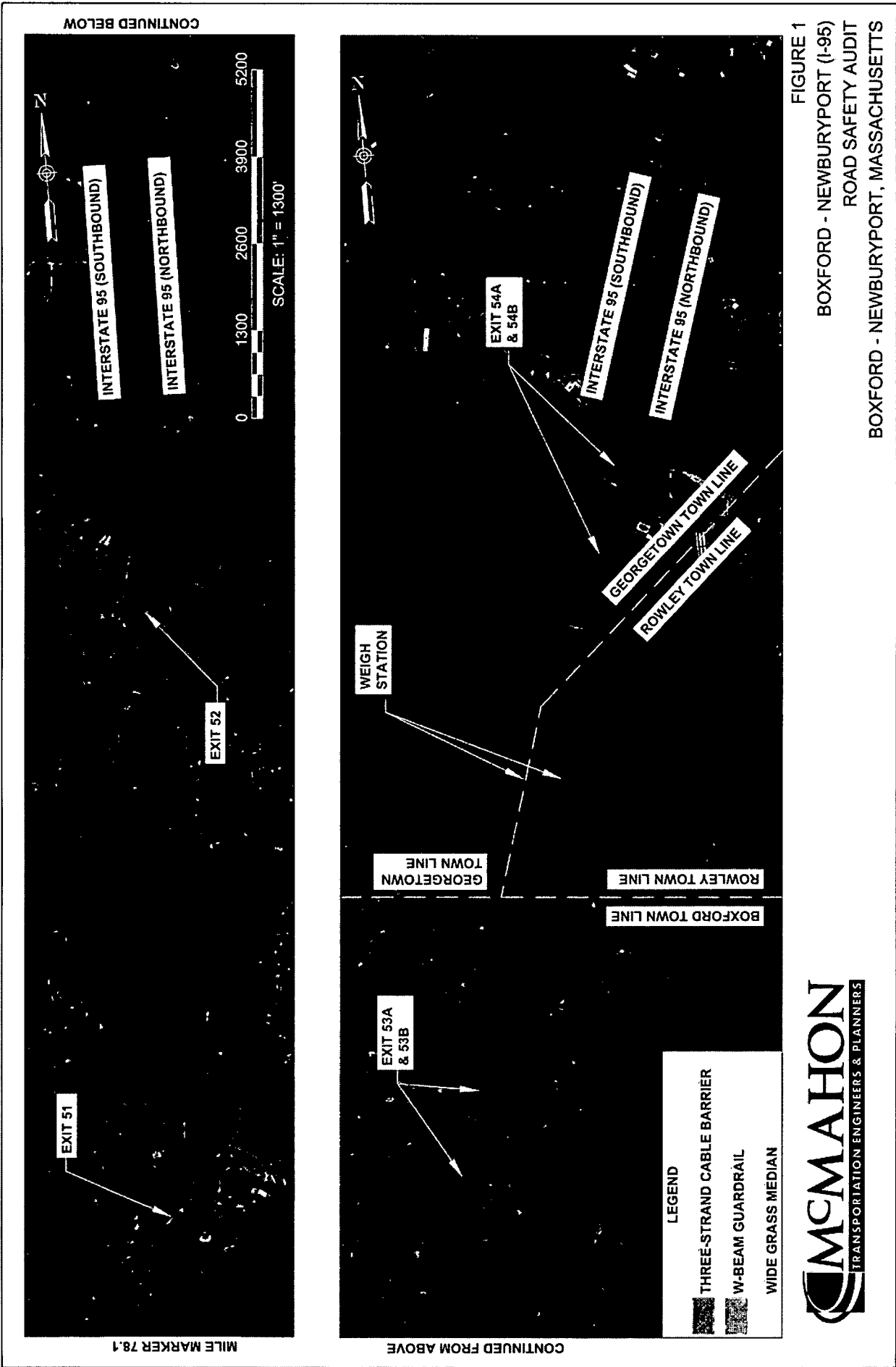
Project Location and Description

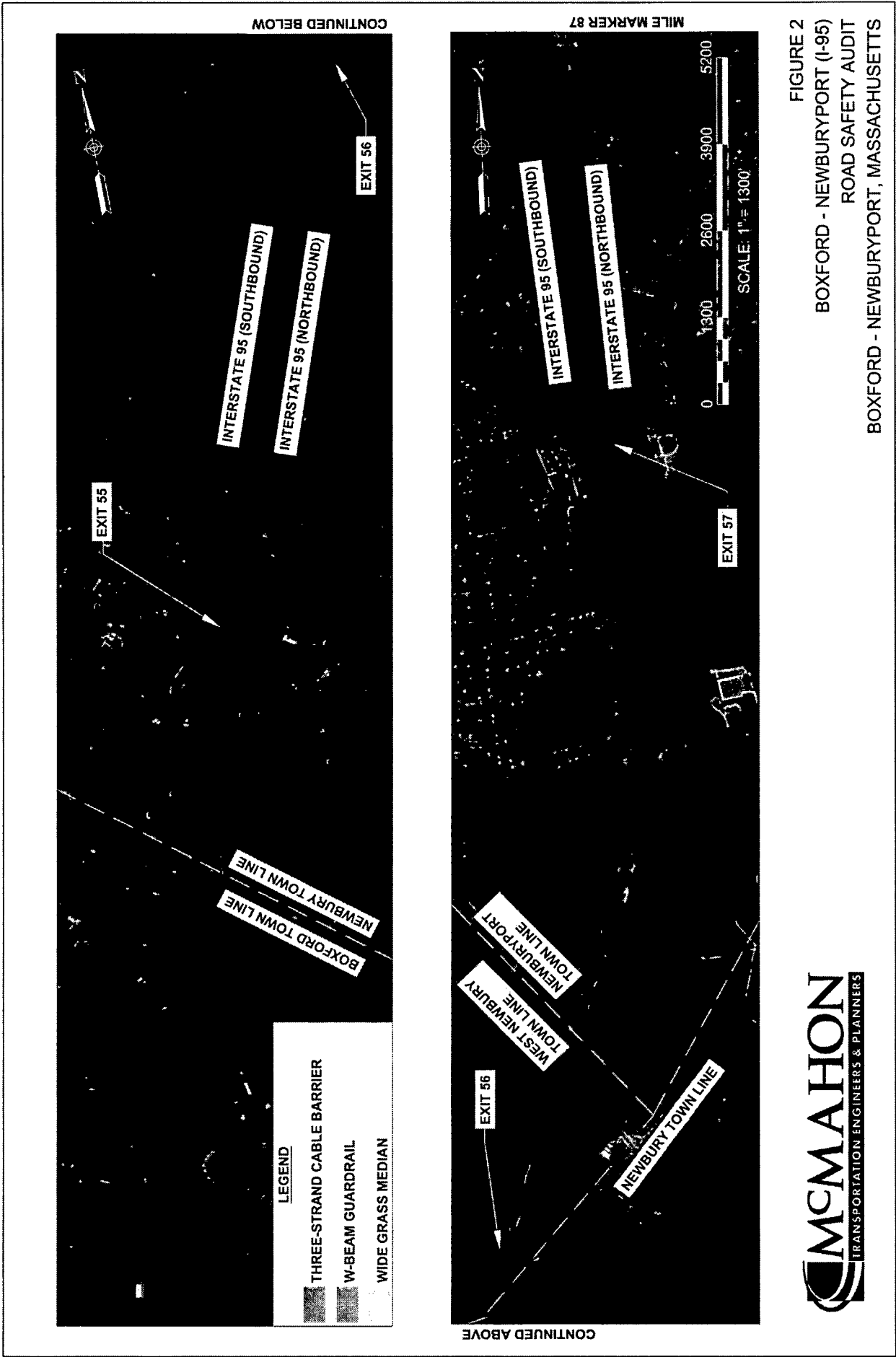
Study Area Roadways

The study area is comprised of Interstate 95 as described below and shown in Figure 1 and Figure 2:

Interstate 95

I-95 is functionally classified as an interstate under MassDOT jurisdiction that generally travels in a north/south direction. I-95 is a limited access highway providing four lanes of travel in each direction. The posted speed limit is 65 mph in both directions of I-95. The median along I-95 typically consists of a wide, grassy median that is 50 feet wide or larger. W-beam guardrail is utilized along specific stretches of the median, typically where underpasses, overpasses, overhead sign pole foundations, and other obstacles exist. Three-strand cable barrier is present along the median around Exit 51 in the study area. The highway is a relatively straight road that has minimal horizontal and vertical curves throughout the study area. The land use surrounding the interstate is primarily large trees outside of the clear zone that provides a consistent atmosphere to the roadway in the study area. Seven interchanges are present along I-95 within the study area, as well as a weigh station on both the northbound and southbound sides of the roadway in Rowley, just north of Route 97 (Exit 53). There is a narrow left-hand shoulder (approximately 4 feet wide) that exists in both the northbound and southbound sides of I-95 within the study area. An adequate right-hand shoulder exists in both directions of I-95 within the study area. Rumble strips are present along shoulders on I-95 in both directions. Sufficient acceleration and deceleration lanes exist at the on- and off-ramps beginning at Exit 54 and continuing north until the end of the study area. The remaining interchanges in the southerly portion of the study area (Exits 51-53) do not have formal acceleration and deceleration lanes, although the right-most lanes in both directions of I-95 in these areas are widened to accommodate the merging and diverging of vehicles on I-95.





Crash Data

Crash data from the Massachusetts State Police was provided for three separate areas of I-95 by MassDOT for this RSA. Crashes for each area were summarized for a three-year period from 2015-2017. A total of 135 crashes were reported in Boxford and Rowley (Exit 51 through the weigh station), including 41 left departure crashes on I-95 during the three-year period reviewed. A total of 43 left departure crashes were reported in Georgetown and Newbury (Exits 54 through 56) on I-95 during the three-year period reviewed. A total of 19 crashes left departure crashes were reported in Newburyport (Exit 57 through the Whittier Bridge) on I-95 during the three-year period reviewed. During the years this crash data was reported, the Whittier Bridge was under construction which included permanent lane closures and work zones on I-95; this may have impacted the number, types, and severity of crashes that were accounted for in this area. A fatal, cross-median crash occurred on October 26, 2018 that is not included in the crashes summarized from 2015-2017.

Of the reported crashes that occurred in Boxford and Rowley, 20 crashes (15%) were rear-end crashes, 9 (7%) were angle crashes, 77 crashes (57%) were single vehicle crashes, 23 crashes (17%) were sideswipe crashes, 3 crashes (2%) were head-on crashes, and 3 crashes (2%) were unknown. Approximately 59% of the Boxford and Rowley crashes occurred during daylight conditions, and approximately 63% occurred during clear or cloudy conditions. Drivers between the ages of 20-29 accounted for 24% of the crashes. Based on the reported data for the Boxford and Rowley segment, there is a steady trend in crashes during the weekdays and weekends ranging from Sunday (10%) to Friday (19%). Three (2%) of the reported crashes resulted in fatalities; two of these were cross-median crashes, while the third fatal crash was a rear-end crash in the right shoulder where speeding was also a factor. Approximately 50% of the crashes occurred between 6:00 AM and 2:00 PM.

Of the reported 41 left departure crashes that occurred in Boxford and Rowley, 27 crashes (66%) were single vehicle crashes, 8 crashes (20%) were sideswipe crashes, 3 crashes (7%) were head-on crashes, 2 crashes (5%) were angle crashes, and 1 crash (2%) was a rear end crash. Approximately 66% of the Boxford and Rowley crashes occurred during daylight conditions, approximately 46% occurred during clear or cloudy conditions, and 32% occurred during snowy conditions. Drivers between the ages of 20-29 accounted for 34% of the left departure crashes. Based on the reported data for the Boxford and Rowley segment, the highest frequency of crashes occurred on Tuesday (22%) and Friday (22%). Two (5%) of the reported crashes resulted in fatalities; one fatal crash involved a vehicle losing control after speeding, while the other fatal crash involved a driver suffering a medical emergency while operating the vehicle.

Of the reported left departure crashes that occurred in Georgetown and Newbury, 3 crashes (7%) were rear-end crashes, 3 (7%) were angle crashes, 31 crashes (72%) were single vehicle crashes, 5 (12%) were sideswipe crashes, and 1 (2%) was a head-on crash. Approximately 67% of Boxford and Rowley left departure crashes occurred during daylight conditions. Drivers between the ages of 20-29 accounted for 26% of the crashes; the next highest group were drivers between the ages of 50-59 (21%). Based on the reported data for the Georgetown and Newbury segment, there is an increase in crashes on Tuesday (26%) and Saturday (21%) compared to the rest of the week (ranging from 9-12% daily). There are two distinct periods with low crash activity, including 2:00 AM to 6:00 AM and 10:00 PM to 12:00 AM. One (2%) of

the reported crashes resulted in a fatality, with no information provided to explain what caused the driver to enter the median.

Of the reported left departure crashes that occurred in Newburyport, 2 crashes (11%) were rear-end crashes, 2 (11%) were angle crashes, 10 crashes (53%) were single vehicle crashes, 4 (21%) were sideswipe crashes, and 1 crash (5%) was unknown. An additional crash involved a northbound vehicle being struck by a tire from a southbound traveling vehicle. Approximately 74% of Newburyport left departure crashes occurred during daylight conditions. Drivers between the ages of 30-39 accounted for 32% of the crashes and drivers between the ages of 60-69 accounted for 29% of the crashes. Based on the reported data for the Newburyport corridor, there is an increase in crashes on Saturday (53%) compared to the rest of the week, while no crashes were reported on Sundays. The highest time period for crash activity is during the afternoon hours of 2:00 PM - 6:00 PM. No crashes were reported between 2:00 AM and 8:00 AM; additionally, no crashes were reported in the months of August and September. No fatalities were reported in this area during the study period. Construction activity related to the Whittier Bridge construction may have impacted various trends in crash data in this area, including higher Saturday crash occurrence.

A detailed crash diagram of each study area segment is provided in Appendix C.

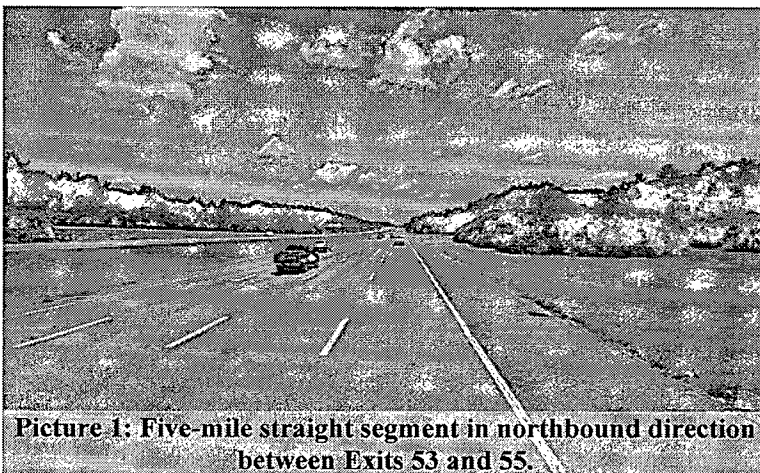
Road Safety Audit Observations and Potential Improvements

During the RSA meeting, a brief introduction of the RSA process and a summary of crash information was presented to the audit participants. Following this brief presentation, the members of the audit team were asked to discuss the existing issues that may affect safety at each of the study area corridors. The audit team then watched videos of the I-95 northbound and southbound mainlines that were taken in lieu of a field visit, given the inability to walk this portion of the study area. Provided below is a list of the safety concerns and the potential enhancements that were identified during the RSA.

Safety Issue #1: Speed

Observations:

Audit team members mentioned that consistently high speeds are apparent along all three study areas identified on I-95. The speed limit along this section of I-95 is 65 mph, but vehicles typically drive at much higher speeds. It was noted by MassDOT that the average daily traffic (ADT) per lane along this section of



Picture 1: Five-mile straight segment in northbound direction between Exits 53 and 55.

I-95 is much lower than similar freeways located similar distances away from Boston. With fewer vehicles traveling along the roadway and an existing cross section of four lanes in each direction, there is little traffic friction and congestion that would naturally slow down vehicles traveling on this roadway.

The alignment of I-95 also leads to higher speeds. Between Exits 51 and 53, there is a 3.6-mile straight segment of road; between Exits 53 and 55, there is a 5-mile straight segment of road; and between Exit 55 and approximately mile marker 84.6, there is a 3.1-mile straight segment of road. In this 12-mile section of I-95, there are only three curves in the roadway that would require a driver to actively adapt to changes in the horizontal alignment of the roadway. Due to this geometry, drivers may feel comfortable traveling at speeds higher than the speed limit.

The landscape across the width of this roadway is extremely consistent along large stretches of this corridor and does not offer many obstacles against which to gauge how fast a driver's vehicle is actually traveling. Therefore, vehicles may tend to travel at higher speeds than planned or expected. Members of the State Police indicated that it is difficult to patrol this area because there is a small number of police details that are typically assigned to this roadway that is approximately 17 miles long in one direction.

Audit team members discussed the belief that higher speeds did not necessarily cause problems during ideal driving conditions, but when crashes have occurred, the severity is more likely to increase due to higher speeds. Audit members also noted that occasional differentials in traveling speed occur along I-95 due to some vehicles attempting to adhere to the speed limit while other vehicles travel above the speed limit, causing last-second lane changes to occur and increasing the likelihood of sideswipe or median departure crashes. High speeds were also observed by audit team members during reduced friction conditions, including snow and rain.

Some members of the local and State Police discussed the public's use of Waze and other crowd sourcing mobile mapping applications that alert other drivers to police vehicles in an area. Audit team members that are members of law enforcement indicated that it is harder to control speeds along I-95 due to members of the public having knowledge of the location of police officers along the roadway. An unintended consequence of this feature in these applications that was mentioned was also that it could be utilized by criminals that might be on the run from the police.

Enhancements:

- Consider increasing enforcement along I-95 and evaluate the feasibility of establishing "Intensive Enforcement Areas" to discourage dangerous driver behavior. Intensive Enforcement Areas are geographic areas that utilize fewer police cruisers traversing a smaller geographic area more frequently to give the appearance of a larger enforcement presence.
- Consider utilizing variable speed messaging signs to inform drivers and encourage better compliance with speed limits, especially during snow and ice conditions.
- Consider installing delineators along sides of the highway to discourage traveling at higher speeds.
- Review agency coordination efforts between local and State Police and mobile mapping applications (Waze, Google Maps, Apple Maps, etc.).

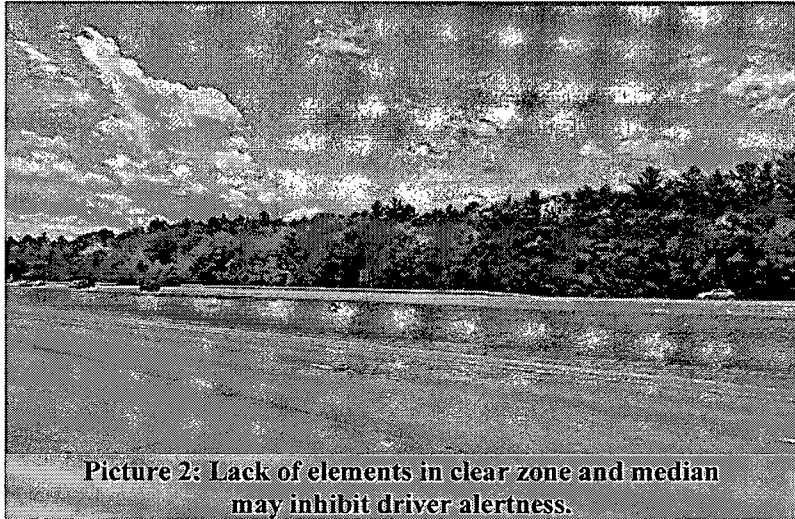
Safety Issue #2: Driver Behavior

Observations:

Audit team members indicated that distracted and drowsy driving contributes to various types of crashes along this section of I-95. As drivers travel and become affected by drowsiness or are otherwise distracted, vehicles may begin to drift towards the highway median. Once drivers realize they are drifting out of the travel lane, the audit team indicated that such drivers will often try to overcompensate for their mistake, which leads to poor decisions and crashes. This issue is exacerbated by an above average amount of debris in the roadway that drivers need to avoid at the last second. Distracted driving, driver fatigue, and driver inattention collectively were cited as a contributing factor in 22 crashes along the study corridor during the period reviewed. Due to the cross section and alignment of the roadway and the existing traffic volumes (discussed in the previous safety issue), drivers may often utilize the cruise control function of their vehicles. Audit participants believed that since the landscape is minimal in nature, drivers tend to get drowsy

while driving and lose control of their vehicles that continue to travel while on cruise control. Also, audit team members discussed the fact that many vehicles travel in the high-speed left lane, rather than only using it for passing, and also that drivers frequently pass other vehicles on the right (rather than the left).

Audit team members indicated that another potential cause of the rear-end crashes along the corridor could be contributed to road rage and erratic or aggressive driving.



Picture 2: Lack of elements in clear zone and median may inhibit driver alertness.

Enhancements:

- Review existing notification programs for alerting MassDOT of the presence of debris in the roadway.
- Evaluate the feasibility of locating a rest area along this stretch of I-95 to help reduce drowsy driving during long trips.
- Consider implementation of the Hands-free proposal from the legislation "An Act Relative to Improving Safety on the Roads of the Commonwealth" to reduce the incidence of driver distraction due to cell phone use.
- Educate the public on the proper use of the left-lane on freeways by issuing more warnings and implementing state-wide educational campaigns.
- Consider increasing police staffing and monitoring of "High Visibility" sectors.
- Consider utilizing existing variable message board signs to inform drivers about proper lane use, using messages such as "Left Lanes for Passing Only".

Safety Issue #3: Secondary Crashes

Observations:

Members of the State Police and local police departments along the I-95 corridor indicated that there is concern for first responders after crashes on I-95, resulting in secondary crashes occurring during the response to the primary crash. When crashes along I-95 become large enough, the number of lanes on the highway occupied by first responders to properly clean up and record the crashes also increases. Audit members indicated that drivers do not expect the upstream crash scene, presence of first responders, and the adjusted lane configuration due to the typical high speeds and low volumes present on I-95. Crashes that require significant lane closures become a safety issue for the first responders as well as drivers trying

to get through the initial crash scene. Several crashes occurring during the review period stemmed from an initial prior crash that was noted as one of the main factors for the second crash. In addition, several crashes were discussed that stemmed from traffic slowing down as a reaction to the initial crash response.

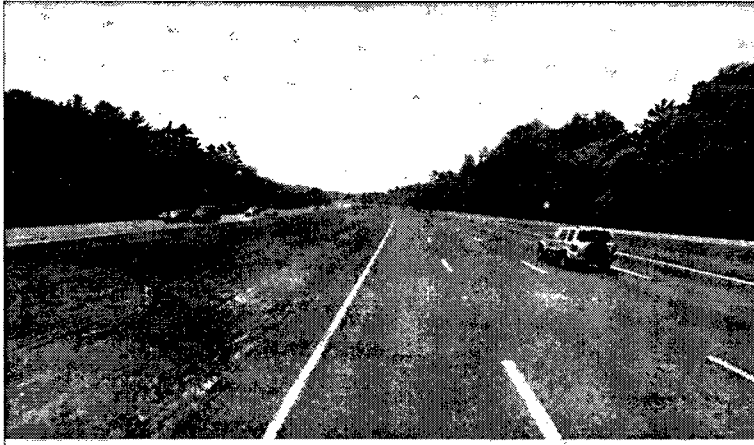
Enhancements:

- Consider increasing the number of variable message boards along the corridor and linking them to queue detection technology (if not already supplied) to provide advance warning to drivers of congested conditions.
- Evaluate coordination with local fire departments to provide assistance to temporarily close lanes during responses to crashes on I-95.
- Consider using truck mounted attenuators at crash sites that involve multiple lane takings for the crash clean up.
- Evaluate additional or alternate messaging options for the “Move Over” campaign to better inform the driving public of the importance of safety for first responders at crash sites and current legislation about work zone speeds.
 - The Move Over Law, which went into effect in 2009, requires drivers approaching a stationary emergency or maintenance vehicle with flashing lights to move to the next adjacent lane and slow down. Failure to comply with this law could result in a fine up to \$100.
 - Current legislation titled, “An Act Relative to Improving Safety on the Roads of the Commonwealth” would set up temporary speed limits in work zones and double the fines for speeding in these zones.

Safety Issue #4: Roadway Geometry and Lighting

Observations:

Throughout the audit meeting, team members consistently mentioned that a majority of the corridor lacks a barrier along the center median from where the existing cable median barrier ends. This lack of barrier contributes to the high number of cross-over crashes along I-95. The group discussed that the section of I-95 with cable median barrier experienced an increase in left departure crashes since the installation of the cable median barrier, but that the barrier reduced the severity of left departure crashes and eliminated cross median crashes altogether. This pattern is consistent with the installation of cable median barriers. Where there is no guardrail and just a wide grassy median, some audit team members described crashes where the geometry of the median was acting like a launching pad and sending vehicles departing from the left lane into the opposite direction of traffic. After reviewing the videos recorded for the audit meeting, the audit team noticed that the left hand shoulder along I-95 is currently very narrow compared to current design standards. The shoulder adjacent to the center median appears to be four feet wide in most areas. This geometry does not allow much leeway to any drivers that may drift to the left while driving in the left lane. This section of I-95 is primarily straight which induces high speeds along the roadway. Some team members also indicated that there is little to no lighting or reflectorized delineators along I-95 through much of the study area.



Picture 3: Narrow shoulder on the left side of I-95 southbound near Exit 51.

Several members of the audit team described several crashes that occurred in areas along I-95 that currently have guardrail installed, but the crashes occurred outside the limits of the guardrail. There are stretches of guardrail along I-95 that do not tie together. Some audit participants suggested that these guardrail sections were likely installed to protect specific elements of the highway (such as sign supports) and not connected to adjacent guardrail sections.

Audit team members also noted several crashes that involved animal strikes; as much of the study area corridor runs through less developed, wooded areas, it was suggested that there is an increased likelihood of the presence of animals trying to cross the highway. For drivers, this is made more challenging by the lack of roadway lighting, which may not provide adequate time for drivers to see an animal in the roadway before reacting to avoid it. There is also a potential lack of fencing along sections of the roadway that could contribute to the presence of animals around I-95.

One audit team member identified the existing exit ramp system that includes multiple exit ramps per interchange as a potential reason for some of the various sideswipe crashes that exist along I-95.

The audit team discussed the northern limit of the study area where there has been considerable construction activity over recent years related to the Whittier Bridge. Audit team members stated that the construction activities resulted in crash trends that may not be prevalent during normal (non-construction) conditions along this section of the corridor.

The audit team discussed snow operations in this area and the contributing factors behind snow related crashes. MassDOT representatives at the audit meeting noted that a salt depot in Boxford was decommissioned several years ago, resulting in salt trucks coming from a greater distance to treat I-95 along this corridor. This increased distance could have negatively impacted the state's ability to effectively treat the roadway during periods of snow and ice. There is also a designated "low salt" area in Rowley and in Boxford that affects the state's ability to protect the roadway from snowy conditions. This is reflected in the crash data, which shows that 21% of the overall crashes and 32% of the left departure crashes in the Boxford/Rowley area occurred during a snow storm.

Enhancements:

- Evaluate existing roadside fencing for vulnerable animal crossing locations and consider installing/repairing fencing in such areas.
- Review engineering design standards and consider regrading median in the southern stretch of the corridor (Boxford and Rowley) to reduce the likelihood of vehicles accelerating should they enter the median.
- Evaluate installation of median barrier (such as cable median barrier) to reduce the severity of left departure crashes.
- Consider widening paved shoulders along the center median and/or regrade the median in such areas to provide better refuge areas for stranded vehicles and allow more opportunity for recovery when vehicles drift to the left.
- Review locations where gaps exist in existing guardrail and provide additional guardrail in such areas.
- Evaluate crash trends when more recent crash data becomes available near the reconstructed Whittier Bridge and consider further improvements in response to these trends (if applicable).
- Evaluate lighting of I-95 corridor (particularly at interchange areas) and/or consider upgrading pavement markings to increase nighttime visibility of the corridor.
- Evaluate adding delineators outside of the roadway to help provide a speed reference for drivers along I-95.
- Evaluate the feasibility of providing protection for signs located within the median along I-95.
- Consider implementing a wrong-way detection system onto I-95 in both directions.
- Evaluate depot location and snow and ice routes
- Consider utilizing variable speed messaging signs to inform drivers and encourage better compliance with speed limit, especially during snow and ice conditions.

Recommendations

After the site visit, audit participants returned to discuss the safety issues and consider various improvements. The audit participants were encouraged to consider both short and long-term improvements for each of the existing safety issues. Each improvement considered has been categorized as short-term, mid-term, or long-term based on the definitions shown in Table 2. Additionally, a cost category has been assigned to each improvement based on the parameters set forth in Table 2.

Table 2. Estimated Time Frame and Costs Breakdown

Time Frame		Costs	
Short-Term	<1 Year	Low	<\$10,000
Mid-Term	1-3 Years	Medium	\$10,001-\$50,000
Long-Term	>3 Years	High	>\$50,000

Summary of Road Safety Audit

A summary of the potential recommendations discussed by the RSA audit team are summarized in Table 3. The recommendations are summarized based on the potential safety payoff, time frame, approximate cost and roadway jurisdiction. The safety payoff is a subjective judgment of the potential effectiveness of the safety recommendations listed below.

Table 3. Potential Safety Enhancement Summary

Safety Issue	Potential Safety Enhancement	Safety Payoff	Time Frame	Cost	Jurisdiction
Speed	Consider increasing enforcement along I-95 and evaluate the feasibility of establishing "Intensive Enforcement Areas" to discourage dangerous driver behavior	Medium	Short-Term	High	MassDOT
Speed	Consider utilizing variable speed messaging signs to inform drivers and encourage better compliance with speed limits, especially during snow and ice conditions	Low	Mid-Term	Medium	MassDOT
Speed	Consider installing delineators along sides of the highway to discourage traveling at higher speeds.	Medium	Mid-Term	Medium	MassDOT
Speed	Review agency coordination efforts between local and State Police and mobile mapping applications (Waze, Google Maps, Apple Maps, etc.)	Low	Mid-Term	Medium	N/A
Driver Behavior	Review existing notification programs for alerting MassDOT of the presence of debris in the roadway	Medium	Short-Term	Low	MassDOT
Driver Behavior	Evaluate the feasibility of locating a rest area along this stretch of I-95 to help reduce drowsy driving during long trips	Low	Long-Term	High	MassDOT
Driver Behavior	Consider implementation of the Hands-free proposal from the legislation "An Act Relative to Improving Safety on the Roads of the Commonwealth" to reduce the incidence of driver distraction due to cell phone use	High	Mid-Term	Low	N/A
Driver Behavior	Educate the public on the proper use of the left lane on freeways by issuing more warnings and implementing state-wide educational campaigns	Low	Mid-Term	Medium	N/A
Driver Behavior	Consider increasing police staffing and monitoring of "High Visibility" sectors	Medium	Short-Term	High	MassDOT
Driver Behavior	Utilize existing video message board signs to inform drivers about proper lane use, using messages such as, "Left Lanes for Passing Only"	Low	Short-Term	Low	MassDOT

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Safety Issue	Potential Safety Enhancement	Safety Payoff	Time Frame	Cost	Jurisdiction
Secondary Crashes	Consider increasing the number of variable message boards along the corridor and linking them to queue detection technology	Medium	Mid-Term	High	MassDOT
Secondary Crashes	Evaluate coordination with local fire departments to provide assistance to temporarily close lanes during responses to crashes on I-95	High	Short-Term	Medium	N/A
Secondary Crashes	Consider using truck mounted attenuators at crash sites that involve multiple lane takings for the crash clean up	Medium	Short-Term	Medium	MassDOT
Secondary Crashes	Evaluate additional or alternate messaging options for the "Move Over" campaign to better inform the driving public of the importance of safety for first responders at crash sites and current legislation about work zone speeds	Medium	Mid-Term	High	MassDOT
Roadway Geometry and Lighting	Evaluate existing roadside fencing for vulnerable animal crossing locations and consider installing/repairing fencing in such areas	Medium	Mid-Term	Medium	MassDOT
Roadway Geometry and Lighting	Review engineering design standards and consider regrading median in the southern stretch of the corridor (Boxford and Rowley) to reduce the likelihood of vehicles accelerating should they enter the median	High	Long-Term	High	MassDOT
Roadway Geometry and Lighting	Evaluate installation of median barrier (such as cable median barrier) to reduce the severity of left departure crashes	High	Short-Term	High	MassDOT
Roadway Geometry and Lighting	Consider widening paved shoulders along the center median and/or regrade the median in such areas to provide better refuge areas for stranded vehicles and allow more opportunity for recovery when vehicles drift to the left	High	Long-Term	High	MassDOT
Roadway Geometry and Lighting	Review locations where gaps exist in existing guardrail and provide additional guardrail in such areas	Medium	Mid-Term	Medium	MassDOT

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Safety Issue	Potential Safety Enhancement	Safety Payoff	Time Frame	Cost	Jurisdiction
Roadway Geometry and Lighting	Evaluate crash trends when more recent crash data becomes available near the reconstructed Whittier Bridge and consider further improvements in response to these trends (if applicable)	Low	Long-Term	Low	MassDOT
Roadway Geometry and Lighting	Evaluate lighting of I-95 corridor (particularly at interchange areas) and/or consider upgrading pavement markings to increase nighttime visibility of the corridor	High	Long-Term	High	MassDOT
Roadway Geometry and Lighting	Evaluate adding delineators outside of the roadway to help provide a speed reference for drivers along I-95	Medium	Mid-Term	Medium	MassDOT
Roadway Geometry and Lighting	Evaluate the feasibility of providing protection for signs located in the median along I-95	Low	Mid-Term	Low	MassDOT
Roadway Geometry and Lighting	Consider implementing a wrong-way driving detection system onto I-95 in both directions	High	Long-Term	High	MassDOT
Roadway Geometry and Lighting	Evaluate snow depot location and ice routes	Medium	Long-Term	High	MassDOT
Roadway Geometry and Lighting	Consider utilizing variable speed messaging signs to inform drivers and encourage better compliance with speed limits, especially during snow and ice conditions	Low	Mid-Term	Medium	MassDOT

Appendix A. RSA Meeting Agenda

Agenda

Road Safety Audit

Boxford to Newburyport, MA

Interstate 95

Meeting Location: Boxford Communication Department

285 Ipswich Road, Boxford, MA

January 22, 2019

8:30 AM – 12:30 PM

Type of meeting:	High crash location – Road Safety Audit
Attendees:	Invited participants to comprise a multidisciplinary team
Please bring:	Thoughts and enthusiasm!!
8:30 AM	Welcome and Introductions
8:45 AM	Discussion of Safety Issues • Crash history, speed regulations, recent and existing projects – all provided in advance • Existing geometries and conditions • Review site condition from videos, photos, street view, aerial maps
10:15 AM	Discussion of Potential Improvements • Discuss observations and finalize safety issue areas • Discuss potential improvements and finalize recommendations
12:30 PM	Adjourn for the Day – but the RSA has not ended

Instructions for Participants:

- Before attending the RSA on January 22, participants are encouraged to drive through the intersection and complete/consider elements on the RSA Prompt List with a focus on safety.
- All participants will be actively involved in the process throughout. Participants are encouraged to come with thoughts and ideas, but are reminded that the synergy that develops and respect for others' opinions are key elements to the success of the overall RSA process.
- After the RSA meeting, participants will be asked to comment and respond to the document materials to assure it is reflective of the RSA completed by the multidisciplinary team.

Appendix B. RSA Audit Team Contact List

Participating Audit Team Members

Date: January 22, 2019 Location: Boxford Police – Communications Department
 285 Ipswich Road, Boxford, MA

Audit Team Members	Agency/ Affiliation	Email Address	Phone Number
Chris Falcos	MassDOT Traffic Safety	Christopher.falcos@state.ma.us	857-369-9639
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Peter Collette	MassDOT District 4 Maintenance	Peter.collette@dot.state.ma.us	781-641-8406
Tim Paris	MassDOT District 4 Projects/Planning	Timothy.paris@dot.state.ma.us	781-641-8325
Brian Fallon	MassDOT District 4 Projects	Brian.fallon@dot.state.ma.us	781-641-8475
Brian Levine	MassDOT District 4 Traffic	Brian.levine@dot.state.ma.us	781-641-8318
Brian Geiger	Boxford Fire Department	bgeiger@town.boxford.ma.us	978-887-5725
James Riter	Boxford Police Department	jriter@town.boxford.ma.us	978-377-5211
Don Cudmore	Georgetown Police Department	dcudmore@georgetownma.com	978-352-5700
Scott Hatch	Georgetown Police Department	shatch@georgetownma.gov	978-352-5700
Michael Provost	Massachusetts State Police – Newbury Barracks	Michael.provost@state.ma.us	978-462-7478
Deborah Ryan	Massachusetts State Police - Newbury Barracks	Deborah.ryan@state.ma.us	978-462-7478
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Steve Mullaney	Massachusetts State Police - AHQ	Stephen.mullaney@pol.state.ma.us	978-538-6022
Don Dupray	Rowley Fire Department	dondupray@gmail.com	978-852-8478
Matthew Simons	Newburyport Police Department	msimons@newburyportpolice.com	978-462-4411
Michael Soltys	Boxford Fire Department	msoltys@town.boxford.ma.us	978-887-5725
Thomas Fitzgerald	Massachusetts State Police	Thomas.fitzgerald@pol.state.ma.us	617-429-5890
Jim Terlizzi	Merrimack Valley Planning Commission	jterlizzi@mvpc.org	978-374-0519
Phil Viveiros	McMahon Associates	pviveiros@mcmahonassociates.com	617-556-0020
Conor Murphy	McMahon Associates	cmurphy@mcmahonassociates.com	617-556-0020

Appendix C. Detailed Crash Data



SEVERITY

TYPE OF CRASH

SYMBOLS

	Head on	
	Rear End	
	Angle	
	Turning Movement	
	Sidewalk	
	Out of Control	
	Night Time Crash	

Boxford and Rowley, MA

Interstate 95

REGION: Merrimack Valley

TIME PERIOD ANALYZED: 2015-2017

SOURCE OF CRASH REPORTS: STATE POLICE DEPARTMENT

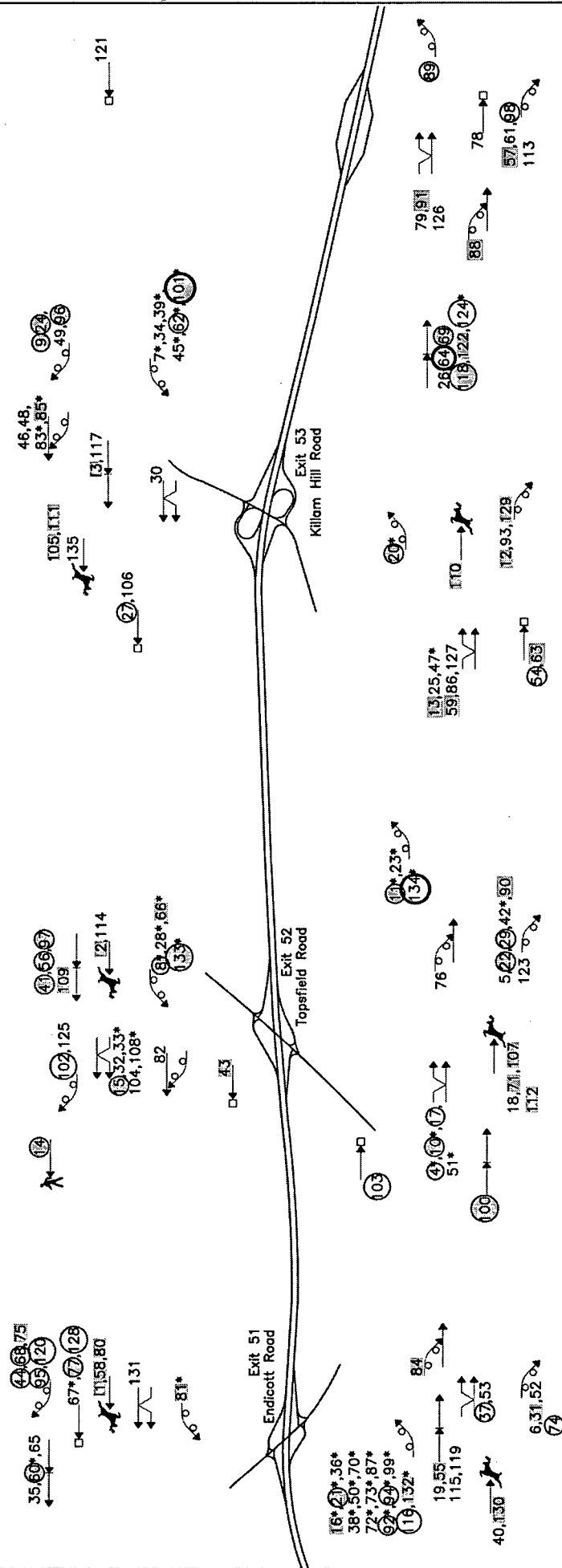
DATE PREPARED: 12/04/2018

PREPARED BY: CF

SHEET 1 OF 3

CRASH DIAGRAM

NOT TO SCALE
Crashes on diagram show approximate locations.
Crashes Denoted with a * involved a vehicle entering the median or crossing the median



Crash Data Summary Table

I-95 in Boxford, Ma

2015 - 2017

Crash Diagram Ref #	Crash Date	Crash Day	Time of Day	Manner of Collision	Injury Status	Light Condition	Weather Condition	Road Surface	Driver Contributing Code	D1 Age	D2 Age	D3 Age	D4 Age	Comments
#	mm/dd/yy	Day	hh:mm	Type	#	Type	Type	Type	Type	#	#	#	#	
1	01/07/15	Wednesday	12:45 AM	Single vehicle crash	5	Dark - roadway not lighted	Clear	Dry	No improper driving	76				V1 was traveling SB on I95 and struck a deer in the right travel lane.
2	01/13/15	Tuesday	6:20 PM	Single vehicle crash	5	Dark - roadway not lighted	Cloudy	Dry	No improper driving	35				V1 was traveling SB on I95 and struck a coyote in the right travel lane.
3	01/17/15	Saturday	6:43 AM	Rear-end	5	Dark - roadway not lighted	Clear	Dry	Followed too closely	40	44			V1 and V2 were both traveling SB on I95 when V1 rear-ended V2. Significant damage to V1.
4	01/26/15	Monday	3:41 PM	Sideswipe, same direction	2	Daylight	Snow	Slush	Failure to keep in proper lane or running off road	27	54			Left Median Event. V1 and V2 (TT) were traveling NB on I95 on the third lane and right lane respectively. V1 lost control and swerved into the front left fender of V2, causing V2 (TT) to lose control and crash into the median taking V1 with it. Final rest on the median just prior to entering SB lanes.
5	01/26/15	Monday	3:54 PM	Single vehicle crash	5	Daylight	Sleet, hail, freezing rain	Snow	No improper driving	36				V1 was traveling NB on I95 when it lost control and spun out into a guardrail during a major snow storm.
6	02/17/15	Tuesday	1:15 PM	Single vehicle crash	5	Daylight	Cloudy	Dry	Inattention	17				V1 was entering I95 from Endicott Street when it hit a snow bank on the right side of the ramp and caused the vehicle to roll over onto its roof.
7	02/20/15	Friday	11:34 AM	Single vehicle crash	5	Daylight	Clear	Dry	Other improper action	26				Left Median Event. V1 was traveling in the left lane and struck snow bank in median. After striking snow bank, vehicle went out of control across the highway and rolled over on the breakdown lane. V1 operator indicated that it was struck by V2 (Unknown) although no indication of a second vehicle was found at the scene.
8	02/24/15	Tuesday	6:00 AM	Single vehicle crash	3	Dawn	Clear	Dry	Failure to keep in proper lane or running off road	20				Left Median Event. V1 was traveling SB on I95 when it crashed into the median.
9	03/18/15	Wednesday	1:40 AM	Single vehicle crash	3	Dark - roadway not lighted	Clear	Dry	No improper driving	26				V1 was traveling SB on I95 prior to Exit 53A when the driver's side rear tire blew out, causing the vehicle to lose control, sending it off the road and into the tree line.
10	03/20/15	Friday	8:30 PM	Angle	3	Dark - roadway not lighted	Snow	Snow	Over-correcting/over-steering	49	22	30		Left Median Event. V1, V2 and V3 were traveling NB on I95. V2 lost traction, causing it to change lanes and collide with V1. V3, in attempt to avoid the collision, swerved to the left coming to final rest in the median.
11	03/20/15	Friday	9:50 PM	Single vehicle crash	3	Dark - roadway not lighted	Snow	Snow	Driving too fast for conditions	20				Left Median Event. V1 was traveling NB on I95, lost control and crashes into snow berm on the left shoulder, causing it to roll over and come to final rest in the median.
12	03/20/15	Friday	9:35 PM	Single vehicle crash	5	Dark - roadway not lighted	Snow	Snow	Driving too fast for conditions	52				V1 was traveling NB on I95 when it lost control on snowy/icy road and drove off the road to the right and comes to final rest against an embankment.
13	03/20/15	Friday	9:25 PM	Angle	99	Dark - roadway not lighted	Snow	Snow	Driving too fast for conditions	57	Unkn own			V1 and V2 were traveling NB on I95 when V2 lost control of the vehicle, spun out, and hit V1. V2 then strikes right side guard rail and continues on travel way, fleeing the scene. V1 exits to the right and comes to rest on top of snow bank. Snow squall conditions with many crashes in a 2 mile stretch.

Crash Data Summary Table

I-95 in Boxford, Ma

2015 - 2017

Crash Diagram Ref #	Crash Date mm/dd/yy	Crash Day Day	Time of Day hh:mm	Manner of Collision Type	Injury Status #	Light Condition Type	Weather Condition Type	Road Surface Type	Driver Contributing Code Type	D1 Age #	D2 Age #	D3 Age #	D4 Age #	Comments
14	05/14/15	Thursday	2:27 AM	Single vehicle crash	2	Dark - roadway not lighted	Clear	Dry	Unknown	54	32			V1 (TT) was traveling SB on I95 when it struck a pedestrian on the break down lane. It is unknown the reason the pedestrian was on the roadway.
15	05/25/15	Monday	8:57 PM	Sideswipe, same direction	5	Dark - roadway not lighted	Rain	Wet	Operating vehicle in erratic, reckless, careless, negligent, or aggressive manner	20	22			OUI. V1 was traveling SB on I95 at a high rate of speed during heavy traffic. V1 attempted to pass V2 but sideswiped it. Both vehicles lost control and ran off road right
16	05/29/15	Friday	4:00 AM	Single vehicle crash	5	Dark - roadway not lighted	Clear	Dry	Unknown	18				Left Median Event. V1 was traveling NB on I95 when it swerved to avoid an animal and struck the cable barrier in the median and rode along if for approximately 50 feet before regaining control.
17	06/22/15	Monday	8:16 AM	Single vehicle crash	3	Daylight	Clear	Dry	Inattention	31	36			V1 (motorcycle) and V2 were traveling NB on I95 when V2 switched lanes and struck V1, causing V1 to lose control and the motorcyclist fell on the roadway.
18	07/12/15	Sunday	7:50 AM	Single vehicle crash	5	Daylight	Clear	Dry	No improper driving	31				V1 was traveling NB on I95 and struck a deer on the third travel lane.
19	07/16/15	Thursday	7:15 AM	Sideswipe, same direction	5	Daylight	Clear	Dry	No improper driving	60	Unkn own			V1 and V2 were traveling NB on I95 when V2 sideswiped V1.
20	07/21/15	Tuesday	9:35 PM	Single vehicle crash	4	Dark - roadway not lighted	Clear	Dry	Distractions	23				Left Median Event. V1 was traveling NB on I95 when it lost control, crashed into the median guardrail, and rolled over.
21	07/26/15	Sunday	3:08 AM	Single vehicle crash	4	Dark - roadway not lighted	Clear	Dry	Fatigued/asleep	21				Left Median Event. V1 was traveling NB on I95 when the operator fell asleep, swerved into the median, and struck the guardrail.
22	08/18/15	Tuesday	8:07 PM	Single vehicle crash	2	Dark - roadway not lighted	Clear	Dry	Unknown	24				V1 was traveling NB on I95 when it veered to the right, struck the guardrail and flipped over
23	08/22/15	Saturday	10:10 AM	Single vehicle crash	5	Daylight	Clear	Dry	Other improper action	31				Left Median Event. V1 was traveling NB on I95 when it left the roadway left into the median and proceeded to flip
24	08/27/15	Thursday	3:58 AM	Single vehicle crash	2	Dark - roadway not lighted	Clear	Dry	Over-correcting/over-steering	41	Unkn own			V1 (Flatbed truck) was carrying V2 when it crashed into the ramp at Exit 53 and rolled over, causing V2 to roll over as well.
25	09/10/15	Thursday	7:50 AM	Sideswipe, same direction	5	Daylight	Clear	Dry	Failed to yield right of way	19	30			V1 and V2 (TT) were traveling NB on I95 when V1 sideswiped V2.
26	09/11/15	Friday	4:56 PM	Angle	5	Daylight	Cloudy	Dry	Other improper action	47	32			V1 and V2 were traveling NB on I95. V1 was driving erratically and struck the rear end of V2 and attempted to flee the scene
27	09/23/15	Wednesday	10:00 AM	Angle	3	Daylight	Clear	Dry	Unknown	24	61			V2 was traveling in front of V1 on I95 SB. V2 struck a container in the middle of the roadway after an uninvolved truck in front swerved out of the way. This caused V2 to spin out and then V1 struck V2
28	09/24/15	Thursday	8:59 AM	Single vehicle crash	5	Daylight	Clear	Dry	Unknown	51				Left Median Event. V1 was traveling SB on I95 when it left the roadway left and flipped into the median. V1 was cited for Operating a Truck in the Left Lane
29	09/30/15	Wednesday	2:25 PM	Single vehicle crash	3	Daylight	Rain	Wet	Failure to keep in proper lane or running off road	33				V1 was traveling NB on I95 when it lost control due to heavy rain and spun out into the woods on the right side of the roadway by mile marker 73.

Crash Data Summary Table

I-95 in Boxford, Ma

2015 - 2017

Crash Diagram Ref #	Crash Date	Crash Day	Time of Day	Manner of Collision	Injury Status	Light Condition	Weather Condition	Road Surface	Driver Contributing Code	D1 Age	D2 Age	D3 Age	D4 Age	Comments
#	mm/dd/yy	Day	hh:mm	Type	#	Type	Type	Type	Type	#	#	#	#	
30	09/30/15	Wednesday	11:50 AM	Angle	5	Daylight	Rain	Wet	Failure to keep in proper lane or running off road	69	55			V1 and V2 (SU truck) were traveling SB on I95. V1 attempted to change lanes when it lost control due to heavy rain and sideswiped V2
31	10/01/15	Thursday	10:00 PM	Single vehicle crash	5	Dark - roadway not lighted	Clear	Dry	Inattention	68				V1 was traveling NB on I95 when it drove off the roadway and knocked down the Exit 51 sign at the off ramp.
32	11/23/15	Monday	7:12 AM	Sideswipe, same direction	5	Daylight	Cloudy	Wet	Over-correcting/over-steering	41	56			V1 (TT) and V2 were traveling SB on I95. V2 attempted to change lanes and in the process, lost control and sideswiped V1's trailer
33	11/24/15	Tuesday	1:50 PM	Sideswipe, same direction	5	Daylight	Clear	Dry	Unknown	20	59			Left Median Event. V1 (TT) and V2 were traveling SB on I95 when sideswipe contact was made causing V1 to lose control and spin out into the median
34	11/30/15	Monday	1:36 PM	Single vehicle crash	5	Daylight	Cloudy	Dry	No improper driving	47				V1 (SU Truck) was traveling SB on I95 and had pulled over into the breakdown lane at exit 53 because the vehicle was not running properly. The driver got out to check on the engine and the vehicle proceeded to roll back into the roadway and collided with the median guardrail.
35	12/21/15	Monday	12:05 PM	Rear-end	5	Daylight	Clear	Dry	Followed too closely	17	17			V1 was entering onto I95 SB when it slowed to yield to a vehicle. V2 rear-ended V1 causing V1 to strike the guardrail on right
36	12/29/15	Tuesday	12:02 PM	Single vehicle crash	5	Daylight	Sleet, hail, freezing rain	Slush	Unknown	28				Left Median Event. Uninvolved tow truck was merging left into the median to recover a vehicle when V1 was traveling NB on I95 behind it lost control and left the roadway left hitting the median cable barrier
37	12/29/15	Tuesday	10:33 AM	Sideswipe, same direction	3	Daylight	Snow	Slush	Failure to keep in proper lane or running off road	48	48			V1 (TT) was traveling NB of I95 when V2 lost control due to slush and sideswiped V1.
38	12/29/15	Tuesday	12:45 PM	Single vehicle crash	5	Daylight	Sleet, hail, freezing rain	Slush	Driving too fast for conditions	46				Left Median Event. V1 was traveling NB on I95 when it hydroplaned on slush/standing water on the roadway, causing it to lose control, run off road left and struck the cable median barrier.
39	12/29/15	Tuesday	8:15 AM	Head on	5	Daylight	Sleet, hail, freezing rain	Snow	Unknown	43	51			Left Median Event. V1 and V2 were traveling SB on I95 when V1 spun out for unknown reasons. V2 was unable to stop in time and collided with V1, pushing both vehicles into the median.
40	01/17/16	Sunday	9:08 AM	Sideswipe, same direction	5	Daylight	Clear	Dry	Inattention	27	22			V1 and V2 were traveling NB on I95 when V1 struck a deer and stopped. V2 then sideswiped V1.
41	01/30/16	Saturday	7:40 PM	Rear-end	3	Dark - roadway not lighted	Clear	Dry	Unknown	23	44			V1 entered into the deceleration lane for exit 52 on I95 SB when V2, traveling in an erratic manner, rear ended V1
42	02/16/16	Tuesday	7:11 AM	Single vehicle crash	5	Daylight	Cloudy	Slush	Driving too fast for conditions	29				Left Median Event. V1 was traveling NB on I95 when it lost control due to slush and wet road conditions, and spun out and hit the guardrail on right. V1 then spun around once again, hitting the guardrail and went across the entire NB lanes into the median.
43	02/17/16	Wednesday	7:04 PM	Unknown	5	Dark - roadway not lighted	Clear	Dry	Other improper action	48	55	26	40	V1 (TT) was traveling SB on I95 when its trailer hit the overpass causing debris to fall on the roadway V2, V3, V4 and V5 proceeded to run over/collide with debris. V1 was cited for being over height.
44	02/17/16	Wednesday	5:45 AM	Single vehicle crash	3	Dark - lighted roadway	Clear	Ice	Driving too fast for conditions	23				V1 was traveling on the I95 to Endicott Road Off-Ramp when it struck ice and lost control, causing it to rolled over on its roof to the left of the embankment.

Crash Data Summary Table

I-95 in Boxford, Ma

2015 - 2017

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#	mm/dd/yy	Day	hh:mm	Type	#	Type	Type	Type	Type	#	#	#	#	
45	03/04/16	Friday	8:41 AM	Single vehicle crash	5	Daylight	Snow	Ice	Driving too fast for conditions	21				Left Median Event. V1 was traveling SB on I95 when it ran off road left, lost control and crossed all lanes to the right and into the guardrail.
46	03/04/16	Friday	9:19 AM	Rear-end	5	Daylight	Snow	Ice	Unknown	41	52	51		V1, V2 and V3 were traveling SB on I95. V3 lost control due to icy conditions, V2 collided with V3's side and then V1 rear ended V2.
47	03/04/16	Friday	9:35 AM	Sideswipe, same direction	5	Daylight	Snow	Snow	Driving too fast for conditions	27	65			Left Median Event. V1 and V2 were traveling NB on I95 in the second and third lanes. V1 lost control and sideswiped V2, causing both V1 and V2 to go into the median.
48	03/04/16	Friday	9:00 AM	Sideswipe, same direction	5	Daylight	Snow	Snow	Driving too fast for conditions	65	41			V1 was entering onto I95 SB from Rt 97 during a period of heavy snow fall and at a rate of speed higher than reasonable for the conditions. V2 attempted to avoid V1 but could not and collided with out of control V1.
49	03/04/16	Friday	9:10 AM	Single vehicle crash	5	Daylight	Snow	Ice	Driving too fast for conditions	47				V1 was traveling SB on I95 when it lost control due to snow and hit the guardrail on right.
50	03/21/16	Monday	7:15 AM	Single vehicle crash	5	Daylight	Snow	Snow	Driving too fast for conditions	67				Left Median Event. V1 was traveling NB on I95 in the left lane when it lost control and hit the cable median barrier.
51	03/31/16	Thursday	1:52 PM	Sideswipe, same direction	5	Daylight	Clear	Dry	Unknown	23	44			Left Median Event. V1 and V2 (TT) were traveling NB on I95 when V2 changed lanes, causing V1 to lose control and hit the side of V2, then ended up in the median.
52	04/03/16	Sunday	8:46 AM	Single vehicle crash	5	Daylight	Snow	Slush	Driving too fast for conditions	34				V1 was traveling NB on I95 during a snowstorm when it lost control and ran off the roadway right and overturned.
53	04/04/16	Monday	4:06 PM	Rear-end	5	Daylight	Snow	Slush	Other improper action	78	26			V1 was entering I95 NB from Endicott Street during a snow event. V2, a snowplow part of a larger convoy, was traveling in the breakdown lane. V1 entered the highway and yielded for uninvolved snowplow in first lane and was rear ended by V2.
54	04/18/16	Monday	2:53 PM	Single vehicle crash	3	Daylight	Clear	Dry	Unknown	56				V1 (motorcycle) was traveling on the Off-Ramp from I95 NB to Rt 97 when it lost control and slid off the roadway. Not clear whether V1 was driving too fast or depression on roadway may have been the cause.
55	04/26/16	Tuesday	5:15 AM	Rear-end	5	Dusk	Clear	Dry	Distracted	63	35			V1 and V2 (SU truck) were traveling NB on I95 when V2 rear-ended V1 by being distracted with the radio.
56	05/01/16	Sunday	9:30 AM	Rear-end	3	Daylight	Clear	Dry	Distracted	28	55			V1 and V2 were traveling SB on I95 when V2 rear-ended V1. V2 was distracted by passengers.
57	05/01/16	Sunday	9:20 PM	Single vehicle crash	5	Dark - roadway not lighted	Cloudy	Wet	Unknown	32				V1 was traveling NB on I95 when it lost control on the fourth travel lane when it attempted to avoid hitting a deer, lost control and struck the guardrail on right.
58	06/21/16	Tuesday	4:05 AM	Single vehicle crash	99	Dark - roadway not lighted	Rain	Wet	No Improper driving	28				V1 was traveling SB on I95 in the third lane when it struck a deer.
59	06/23/16	Thursday	9:48 PM	Angle	5	Dark - roadway not lighted	Clear	Dry	No improper driving	39	48			V1 (truck) and V2 were traveling NB on I95 when debris fell from V1 and hit V2.

Crash Data Summary Table

I-95 in Boxford, Ma

2015 - 2017

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#	mm/dd/yy	Day	hh:mm	Type	#	Type	Type	Type	Type	#	#	#	#	
60	07/03/16	Sunday	2:20 AM	Sideswipe, same direction	3	Dark - roadway not lighted	Clear	Dry	Inattention	19	39			Left Median event. V1 and V2 were traveling SB on I95 when V2 sideswiped V1 as V2 attempted to change lanes. V2 then lost control and left roadway left striking a highway guide sign and then the cable median barrier. V2 then flipped over the cable barrier coming to a rest in the median.
61	08/02/16	Tuesday	6:09 AM	Single vehicle crash	5	Daylight	Clear	Dry	No improper driving	40				V1 (SU Truck) was traveling NB on I95 in the right travel lane when the front tire blew, causing V1 to strike the guardrail on right and then go over the guardrail into the tree line
62	08/24/16	Wednesday	5:46 PM	Single vehicle crash	3	Daylight	Clear	Dry	Made an improper turn	49	17			Left Median Event. V1 and V2 were traveling NB on I95 when V2 changed lanes from fourth lane to second lane in attempt to take the Off-Ramp to RT 97 and cutting off V1. V1 attempted to brake but lost control, left the roadway onto the median, and rolled over twice. V2 stopped at the Off-Ramp infield to await the arrival of first responders.
63	09/09/16	Friday	11:02 PM	Single vehicle crash	5	Dark - roadway not lighted	Clear	Dry	Inattention	52				V1 was traveling NB on I95 when it lost control and continued on the exit taper and struck object marker sign. V1 then proceeded to ramp Exit 53A when it came to a controlled stop.
64	09/10/16	Saturday	5:53 PM	Rear-end	1	Daylight	Clear	Dry	Operating vehicle in erratic, reckless, careless, negligent, or aggressive manner	45	22			OUI. V1 was parked off of the breakdown lane on the grassy shoulder on I95 NB. V2 was driving erratically passing vehicles at a rate of speed estimated to be above 100 mph. V2 attempted passing a vehicle through use of breakdown lane. V2 collided with V1. Driver of V2 was attested for OUI and Motor vehicle homicide
65	09/12/16	Monday	1:42 PM	Rear-end	5	Daylight	Clear	Dry	Followed too closely	46	31			V1 and V2 were traveling SB on I95 when V1 slowed down due to tire debris obstructing the road, V2 to rear-end V1.
66	09/21/16	Wednesday	6:55 PM	Single vehicle crash	5	Dark - roadway not lighted	Clear	Dry	Over-correcting/over-steering	16				Left Median Event. V1 was traveling SB on I95 when it swerved to avoid an animal running across the road. V1 swerved into the median, lost control and ended up on the right side of the highway.
67	10/22/16	Saturday	10:57 AM	Single vehicle crash	5	Daylight	Rain	Wet	Exceeded authorized speed limit	20				Left Median Event. V1 was traveling SB on I95 when it took the Off-Ramp at Exit 51 and lost control and hit the exit sign. V1 continued across all lanes partially into the median and then came to a rest in the left travel lane.
68	10/23/16	Sunday	6:15 AM	Single vehicle crash	3	Dark - roadway not lighted	Cloudy	Wet	Driving too fast for conditions	28				V1 was traveling SB on I95 in the first lane and attempted to pass a vehicle on the left but lost control and crashed into the tree line on the right.
69	11/07/16	Monday	7:26 PM	Rear-end	2	Dark - roadway not lighted	Clear	Dry	Disregarded traffic signs, signals, road markings	77	37			V1 (police vehicle during detail shift) was stopped in the left lane of I95 NB with a construction crew putting second lane closure signs up. V2 was traveling NB and did not move for lane closure and rear ended V1 at a high rate of speed.
70	11/09/16	Wednesday	8:02 AM	Single vehicle crash	5	Daylight	Clear	Dry	Illness	59				Left Median Event. V1 was traveling NB on I95 when it crashed ran off road left and into the guardrail where the cable barrier ends. Operator may have an undiagnosed health condition and passed out while operating the vehicle.
71	11/17/16	Thursday	2:00 AM	Single vehicle crash	5	Dark - roadway not lighted	Clear	Dry	No improper driving	Unkown				V1 was traveling NB on I95 and struck a deer on the second travel lane.

Crash Data Summary Table

I-95 in Boxford, Ma

2015 - 2017

Crash Diagram Ref #	Crash Date	Crash Day	Time of Day	Manner of Collision	Injury Status	Light Condition	Weather Condition	Road Surface	Driver Contributing Code	D1 Age	D2 Age	D3 Age	D4 Age	Comments
#	mm/dd/yy	Day	hh:mm	Type	#	Type	Type	Type	Type	#	#	#	#	
72	11/30/16	Wednesday	12:39 PM	Single vehicle crash	5	Daylight	Rain	Wet	No Improper driving	81				Left Median Event. V1 was traveling NB on I95 in the third travel lane when an unknown vehicle changed lanes in front of it, nearly hitting V1. V1 swerved in attempt to avoid unknown vehicle, spun out left into barrier for Fish Brook.
73	12/05/16	Monday	7:35 AM	Single vehicle crash	5	Daylight	Snow	Snow	Driving too fast for conditions	49				Left Median Event. V1 was traveling NB on I95 in the left lane when it lost control due to icy conditions and crashed into the median barrier.
74	12/05/16	Monday	7:20 AM	Single vehicle crash	4	Daylight	Snow	Snow	Driving too fast for conditions	54				V1 was traveling NB on I95 in the left lane when it lost control due to heavy snow conditions, spun, and rolled over off the right side of the road.
75	12/13/16	Tuesday	5:17 AM	Single vehicle crash	5	Dark - roadway not lighted	Sleet, hail, freezing rain	Ice	No Improper driving	25				V1 was traveling SB on I95 in the left lane when it lost control and spun out to the right into an embankment after crossing all lanes.
76	12/17/16	Saturday	1:04 PM	Angle	5	Daylight	Sleet, hail, freezing rain	Ice	Unknown	21	27			V1 and V2 were traveling NB on I95 when V1 lost control, spun out, and crashed into V2.
77	12/17/16	Saturday	5:45 AM	Single vehicle crash	3	Dawn	Snow	Snow	Driving too fast for conditions	25				V1 was traveling SB on I95 when it hit a 'no turn' sign that was located in the second travel lane.
78	12/17/16	Saturday	8:36 AM	Single vehicle crash	5	Daylight	Snow	Snow	Unknown	43				V1 was traveling NB and entering Rowley Weigh Station when it went off the road to the left due to snowy road conditions and hit a fence post.
79	12/20/16	Tuesday	1:35 PM	Sideswipe, same direction	5	Daylight	Clear	Dry	Failure to keep in proper lane or running off road	52	55			V1 and V2 were traveling NB on I95 when V2 and V1 sideswiped.
80	01/03/17	Tuesday	1:18 AM	Single vehicle crash	5	Dark - roadway not lighted	Clear	Dry	No Improper driving	51				V1 was traveling NB on I95 and struck a deer in the third travel lane.
81	01/06/17	Friday	7:45 AM	Single vehicle crash	5	Dawn	Snow	Snow	No improper driving	37				Left Median Event. V1 was traveling SB on I95 at a rate of speed estimated to be 35 mph due to the heavy snow conditions. V1 lost control and ran off road left into median guardrail.
82	01/06/17	Friday	7:05 AM	Angle	5	Daylight	Snow	Slush	Unknown	50	45	45		V1, V2 and V3 were traveling SB on I95 during slushy conditions. V1 was rear-ended by V2 and lost control and spun out, causing V1 to hit V3.
83	01/06/17	Friday	7:50 AM	Angle	5	Daylight	Snow	Snow	No Improper driving	18	38			Left Median Event. V1 and V2 were traveling SB on I95 when V1 lost control due to snowy conditions and hit V2 which ended up in the median.
84	01/24/17	Tuesday	1:08 AM	Sideswipe, same direction	99	Dark - roadway not lighted	Sleet, hail, freezing rain	Ice	Unknown	19	62			V1 and V2 (TT) were traveling NB on I95 when V1 lost control due to icy conditions when it was attempting to pass V2 and sideswiped V2.
85	01/24/17	Tuesday	5:12 AM	Sideswipe, same direction	5	Dark - roadway not lighted	Sleet, hail, freezing rain	Ice	Driving too fast for conditions	21	26			Left Median Event. V1 was traveling SB on I95 and attempted to pass V2 in inclement weather when it lost control and struck V2. Both vehicles ended up in the median.
86	02/07/17	Tuesday	3:12 PM	Sideswipe, same direction	5	Daylight	Snow	Snow	Driving too fast for conditions	68	34			V1 and V2 were traveling NB on I95 when V2 lost control due to heavy snow and sideswiped V1.
87	02/11/17	Saturday	12:05 PM	Single vehicle crash	5	Daylight	Snow	Snow	Driving too fast for conditions	71				Left Median Event. V1 was traveling NB on I95 when it lost control due to heavy snow and struck the guardrail on left.

Crash Data Summary Table

I-95 in Boxford, Ma

2015 - 2017

Crash Diagram Ref #	Crash Date	Crash Day	Time of Day	Manner of Collision	Injury Status	Light Condition	Weather Condition	Road Surface	Driver Contributing Code	D1 Age	D2 Age	D3 Age	D4 Age	Comments
#	mm/dd/yy	Day	hh:mm	Type	#	Type	Type	Type	Type	#	#	#	#	
88	02/12/17	Sunday	11:49 PM	Sideswipe, same direction	5	Dark - roadway not lighted	Snow	Snow	Driving too fast for conditions	58	36			V1 and V2 (TT) were traveling NB on I95 when V1 lost control and sideswiped V2.
89	02/13/17	Monday	11:05 AM	Single vehicle crash	4	Daylight	Snow	Ice	Driving too fast for conditions	25				Left Median Event. V1 was traveling NB on I95 when it lost control due to melting ice on roadway, left the roadway to the left and rolled over into the median.
90	02/15/17	Wednesday	2:39 AM	Single vehicle crash	5	Dark - roadway not lighted	Clear	Dry	Failure to keep in proper lane or running off road	18				V1 was traveling NB on I95 when it crossed the first travel lane and struck the guardrail on right, causing it to cross the rest of the travel lanes and come to rest in the fourth travel lane.
91	02/15/17	Wednesday	5:25 PM	Sideswipe, same direction	5	Dark - roadway not lighted	Rain	Wet	Inattention	50	17			Left Median Event. V1 and V2 were traveling NB on I95 near Weigh Station when V1 sideswiped V2 pushing it into the median and then fled the scene.
92	02/16/17	Thursday	7:51 AM	Single vehicle crash	3	Daylight	Snow	Wet	Driving too fast for conditions	24				Left Median Event. V1 was traveling NB on I95 in the far left lane when it lost control due to snowy conditions, drove off road left, struck the guardrail in the median and then rolled over.
93	02/16/17	Thursday	8:45 AM	Single vehicle crash	5	Daylight	Snow	Snow	Driving too fast for conditions	40				V1 was traveling NB on I95 in the third lane when it lost control due to snowy conditions and struck the guardrail on right.
94	02/25/17	Saturday	3:40 PM	Single vehicle crash	2	Daylight	Rain	Wet	Driving too fast for conditions	28				Left Median Event. V1 was traveling NB on I95 when it lost control when hydroplaning, left roadway to the left and rolled over into the median.
95	03/12/17	Sunday	11:18 AM	Single vehicle crash	2	Daylight	Clear	Dry	Operating vehicle in erratic, reckless, careless, negligent, or aggressive manner	30				V1 was traveling SB on I95 in an erratic manner when it proceeded to Exit 51 Off-Ramp and hit drove off road right into a tree.
96	03/15/17	Wednesday	5:50 AM	Single vehicle crash	4	Dawn	Clear	Ice	No improper driving	30				V1 and V2 were traveling SB on I95 when V2 changed lanes abruptly in front of V1 causing V1 to lose control and spin out right into a snowbank.
97	03/24/17	Friday	6:13 AM	Rear-end	2	Dawn	Cloudy	Dry	Unknown	65	46			V1 was traveling SB on I95 in an erratic manner, driving around vehicles when it rear ended V2. V1 lost control and drove off road right into the tree line.
98	04/01/17	Saturday	6:35 AM	Single vehicle crash	3	Daylight	Sleet, hail, freezing rain	Snow	No improper driving	20				V1 was traveling NB on I95 in the second lane when it suddenly applied brakes to avoid colliding with an unknown vehicle that suddenly changed lanes from the first lane to the second lane. V1 lost control due to snowy conditions and ran off road right into the tree line.
99	04/06/17	Thursday	1:22 PM	Single vehicle crash	5	Daylight	Rain	Wet	No improper driving	34				Left Median Event. V1 was traveling NB on I95 in the third lane when it lost control due to heavy rain, ran off the road left and struck the cable median barrier in the median.
100	04/08/17	Saturday	11:14 PM	Rear-end	2	Dark - roadway not lighted	Clear	Dry	Unknown	Unkn own	68	24		V1 and V2 (TT) were traveling NB on I95. Traffic was extremely heavy due to an earlier fatal crash north of this incident. V1 followed too closely and rear-ended V2, causing V1 to drive off the roadway and into the tree line. Driver of V1 had to be air lifted due to life threatening injuries.

Crash Data Summary Table

I-95 in Boxford, Ma

2015 - 2017

Crash Diagram Ref #	Crash Date	Crash Day	Time of Day	Manner of Collision	Injury Status	Light Condition	Weather Condition	Road Surface	Driver Contributing Code	D1 Age	D2 Age	D3 Age	D4 Age	Comments
#	mm/dd/yy	Day	hh:mm	Type	#	Type	Type	Type	Type	#	#	#	#	
101	04/08/17	Saturday	9:52 PM	Head on	1	Dark - roadway not lighted	Cloudy	Dry	Unknown	38	64	43		Cross Median Crash. V1 was traveling SB on I95. Witnesses stated V1 was racing another vehicle. V1 ran off road left and crossed the median to the other side, spun backwards into the third lane of I95 NB and struck the front of V2. V1 then spun around again and struck V3. V3 ran off road right into the tree line due to the impact with V1
102	04/10/17	Monday	5:30 AM	Single vehicle crash	3	Daylight	Clear	Dry	Exceeded authorized speed limit	16				V1 was traveling SB on I95 in the second travel lane and it drifted towards the median before self-correcting, causing it to drive across all three lanes and flip on its side into the grass.
103	04/18/17	Tuesday	9:00 AM	Single vehicle crash	3	Daylight	Clear	Dry	Failure to keep in proper lane or running off road	57				V1 was traveling NB on I95 when it ran off road right, collided with a guardrail, and continued on until it hit a sign post.
104	04/20/17	Thursday	4:30 PM	Sideswipe, same direction	5	Daylight	Clear	Dry	Failed to yield right of way	16	24			V1 and V2 were traveling SB on I95 when V1 sideswiped V2 when it tried to switch lanes to take the exit. V1 continued on with out stopping.
105	04/24/17	Monday	11:19 PM	Single vehicle crash	5	Dark - roadway not lighted	Cloudy	Dry	No improper driving	68				V1 was traveling SB on I95 when it struck a deer.
106	04/30/17	Sunday	7:03 PM	Unknown	5	Daylight	Cloudy	Dry	Other improper action	36	35			V1 and V2 were traveling SB on I95 when a mattress fell out of V1's trailer onto the roadway in front of V2, which did not have time to avoid it.
107	05/08/17	Monday	12:55 AM	Single vehicle crash	5	Dark - lighted roadway	Clear	Dry	No improper driving	27				V1 was traveling NB on I95 when it struck a deer.
108	05/23/17	Tuesday	6:10 AM	Sideswipe, same direction	5	Daylight	Cloudy	Dry	Other improper action	30	57			Left Median Event. V1 and V2 were traveling SB on I95 when V1 was forced to merge onto V2's lane due to avoid a collision with unknown vehicle that tried to merge onto V1's lane. V1 sideswiped V2, both vehicles ended up in the center median.
109	06/01/17	Thursday	4:20 AM	Rear-end	5	Dawn	Clear	Dry	Operating vehicle in erratic, reckless, careless, negligent, or aggressive manner	64	35			V1 and V2 were traveling SB on I95 when V2 rear-ended V1 when it tried to switch lanes while traveling at a unreasonably high rate of speed.
110	06/09/17	Friday	12:05 AM	Single vehicle crash	5	Dark - roadway not lighted	Unknown	Dry	No improper driving	37				V1 was traveling NB on I95 when it struck a deer.
111	06/10/17	Saturday	11:35 PM	Single vehicle crash	5	Dark - roadway not lighted	Clear	Dry	No improper driving	33				V1 was traveling SB on I95 when it struck a deer.
112	06/16/17	Friday	8:14 PM	Single vehicle crash	5	Dusk	Clear	Dry	No improper driving	53				V1 was traveling NB on I95 when it struck a deer.
113	06/22/17	Thursday	5:28 PM	Single vehicle crash	5	Daylight	Clear	Dry	No improper driving	47				V1 was traveling NB on I95 when V2 (motorcycle) sped and changed lanes into V1's lane, causing V1 to swerve to avoid the collision and lose control. V1 spun across the roadway to the right and ended up in the ditch.
114	06/30/17	Friday	6:22 AM	Single vehicle crash	5	Daylight	Clear	Dry	No improper driving	29				V1 was traveling SB on I95 when three deer ran from the median. V1 struck one of the deer.
115	07/11/17	Tuesday	8:35 AM	Rear-end	5	Daylight	Rain	Wet	Other improper action	56	48			V1 and V2 were traveling NB on I95. V1 was changing lanes erratically to take Exit 51 ramp, causing V2 to rear-end V1.

Crash Data Summary Table

I-95 in Boxford, Ma

2015 - 2017

Crash Diagram Ref #	Crash Date	Crash Day	Time of Day	Manner of Collision	Injury Status	Light Condition	Weather Condition	Road Surface	Driver Contributing Code	D1 Age	D2 Age	D3 Age	D4 Age	Comments
#	mm/dd/yy	Day	hh:mm	Type	#	Type	Type	Type	Type	#	#	#	#	
116	07/28/17	Friday	2:30 PM	Single vehicle crash	3	Daylight	Clear	Dry	No improper driving	21				V1 was traveling NB on I95 when it lost control and briefly rolled over to the driver's side.
117	08/04/17	Friday	7:28 AM	Rear-end	5	Daylight	Clear	Dry	Followed too closely	60	67			V1 was entering I95 SB from Exit 53 On-Ramp when it rear-ended V2 that was traveling SB on I95.
118	08/09/17	Wednesday	9:45 PM	Rear-end	3	Dark - roadway not lighted	Clear	Dry	Distracted	Unknown	56	19		V1, V2 and V3 were traveling NB on I95 in a construction zone when V3 rear-ended V2. V2 then rear-ended V1. Operator of V3 was distracted by cell phone while trying to make a call.
119	08/13/17	Sunday	11:23 AM	Rear-end	5	Daylight	Clear	Dry	Other improper action	48	53			V1 and V2 were traveling NB on I95 when V1 rear-ended V2.
120	08/18/17	Friday	7:13 PM	Single vehicle crash	3	Dusk	Rain	Wet	Operating defective equipment	24				V1 was traveling SB on I95 when it lost control for unknown reasons and crashed into the wood line to the right of the roadway.
121	08/24/17	Thursday	6:00 AM	Unknown	99	Daylight	Unknown	Dry	Operating defective equipment	58	Unknown	39		V1 and V2 (TT) were traveling SB on I95 when V1 struck a tire that fell off V2. V2 was carrying tires and lost three tires driving down I95. Investigation found that the TT unit had been driving on the wrong number of axles and the tires were not properly tied down.
122	08/31/17	Thursday	9:35 PM	Rear-end	5	Dark - roadway not lighted	Cloudy	Dry	Unknown	58	27			V1 and V2 were traveling NB on I95. A witness stated that V1 could not keep to one lane and kept drifting/weaving into adjacent lanes before it rear-ended V2, causing V2 to hit the guardrail on right. Operator of V1 was given field sobriety test and was found to be intoxicated
123	09/06/17	Wednesday	1:14 PM	Single vehicle crash	5	Daylight	Clear	Dry	No improper driving	68				V1 was traveling NB on I95 when it lost control due to a mechanical defect and struck the guardrail on the right side of the roadway.
124	9/7/17	Thursday	10:06 AM	Rear-end	4	Daylight	Clear	Dry	Operating vehicle in erratic, reckless, careless, negligent, or aggressive manner	56	45			Left Median Event. V1 and V2 were traveling NB on I95 when V2, traveling at a high rate of speed, drifted over and rear-ended V1. V1 spun out into the median and V2 left the scene of the crash
125	9/14/17	Thursday	11:56 AM	Single vehicle crash	5	Daylight	Clear	Dry	Fatigued/asleep	73				V1 was traveling SB on I95 when the operator fell asleep and drove into a traffic sign on the right side of the roadway.
126	9/25/17	Monday	12:05 PM	Sideswipe, same direction	5	Daylight	Clear	Dry	Other improper action	43	56			V1 (TT) and V2 (TT) were traveling NB on I95 entering an active work zone with the two left lanes closed. V1 attempted to overtake V2 but attempted a last minute lane change as traffic slowed to avoid collision with other vehicles. V1 sideswiped V2 pushing V2 into the guardrail on the right side of the road.
127	10/20/17	Friday	6:04 PM	Sideswipe, same direction	5	Daylight	Clear	Dry	Fatigued/asleep	42	23			V1 and V2 were traveling NB on I95 when V2 drifted off for unknown reason into V1's lane and side-swiped V1.
128	10/28/17	Saturday	2:30 PM	Rear-end	3	Daylight	Clear	Dry	Unknown	58	62	58		V1, V2 and V3 were traveling SB on I95 when V1's rear tire blew out, causing V1 to collide with the yield sign from Exit 51 on ramp that landed in the roadway. This caused V2 and V3 to brake abruptly to avoid the sign. V3 struck the rear of V2.
129	11/15/17	Wednesday	4:30 AM	Single vehicle crash	5	Dark - lighted roadway	Clear	Dry	Failure to keep in proper lane or running off road	20				V1 was traveling NB on I95 when a deer ran in front of it. V1 swerved to the right in an attempt to avoid the deer, lost control, and struck trees in the woods.
130	11/19/17	Sunday	5:06 PM	Single vehicle crash	5	Dark - roadway not lighted	Clear	Dry	No improper driving	50				V1 was traveling NB on I95 when it struck a deer.
131	12/16/17	Saturday	8:45 AM	Sideswipe, same direction	5	Daylight	Clear	Dry	Failure to keep in proper lane or running off road	55	33			V1 and V2 were traveling SB on I95 when V2 struck the trailer of V1 spun out.

Crash Data Summary Table

I-95 in Boxford, Ma

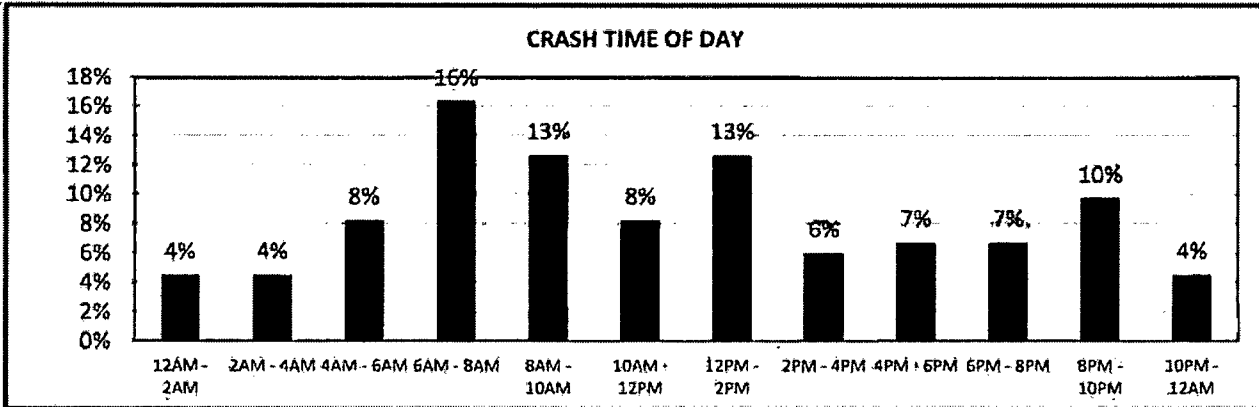
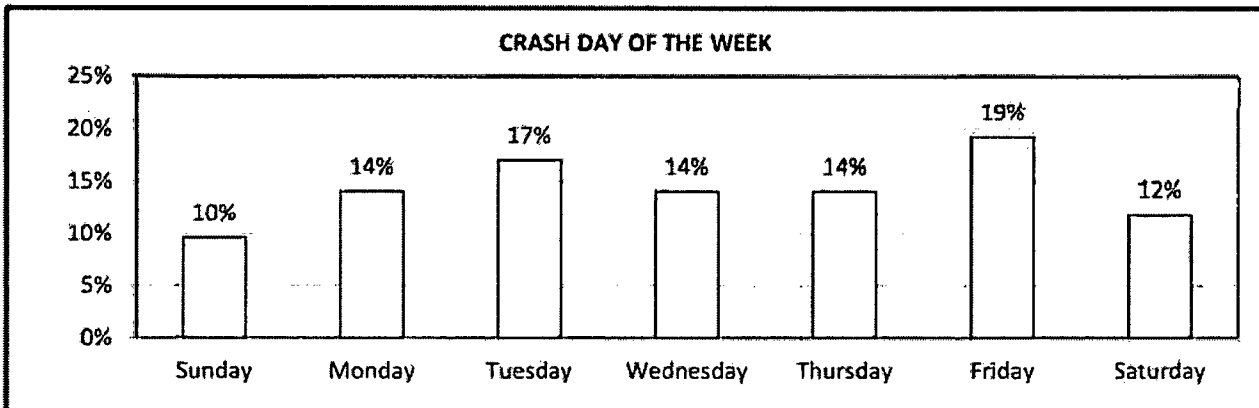
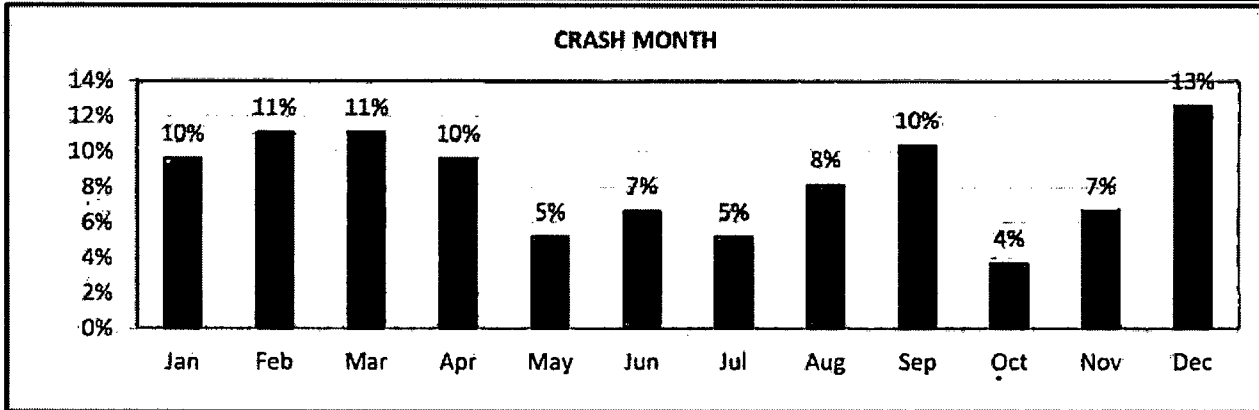
2015 - 2017

Crash Diagram Ref #	Crash Date mm/dd/yy	Crash Day Day	Time of Day hh:mm	Manner of Collision Type	Injury Status #	Light Condition Type	Weather Condition Type	Road Surface Type	Driver Contributing Code Type	D1 Age #	D2 Age #	D3 Age #	D4 Age #	Comments
#														
132	12/22/17	Friday	7:55 PM	Single vehicle crash	5	Dark - roadway not lighted	Snow	Snow	Driving too fast for conditions	26				Left Median Event. V1 was traveling NB on I95 when it lost control due to snowy conditions. V1 ran off road left into the Cable Median Barrier.
133	12/27/17	Wednesday	5:57 PM	Single vehicle crash	3	Dark - roadway not lighted	Clear	Dry	Distracted	17				Left Median Event. V1 was traveling SB on I95 and became distracted by emergency vehicles on the opposite side of the highway due to an earlier crash. V1 drifted off the road to the left and when the vehicle hit the snow in the median, it proceeded to roll over several times until it came to a rest next to the NB lanes
134	12/27/17	Wednesday	1:31 PM	Head on	1	Daylight	Clear	Dry	Wrong side or wrong way	32	54	68		Cross Median Crash. V1 was traveling NB on I95 when it crossed the median for unknown reason and came into the SB direction going the opposite way, sideswiped V2 and collided head on with V3. It was found the Operator of V1 suffered catastrophic medical issue while operating V1 causing it to drift over.
135	12/29/17	Friday	12:09 PM	Single vehicle crash	5	Daylight	Clear	Dry	No improper driving	34				V1 was traveling SB on I95 and struck a coyote in the left travel lane.

*Courtesy Crash - A term used to describe a crash that occurs subsequent to a non-involved mainline driver who gives the right of way, contrary to the rules of the road, to another driver.

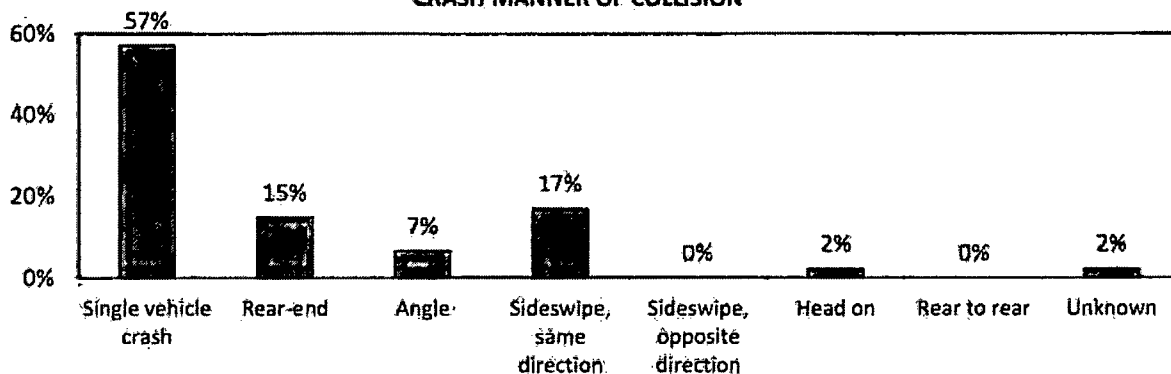
Summaries based on crash reports obtained from the MUNICIPALITY/STATE Police Department.

Crash Data Summary Charts I-95 in Boxford, Ma

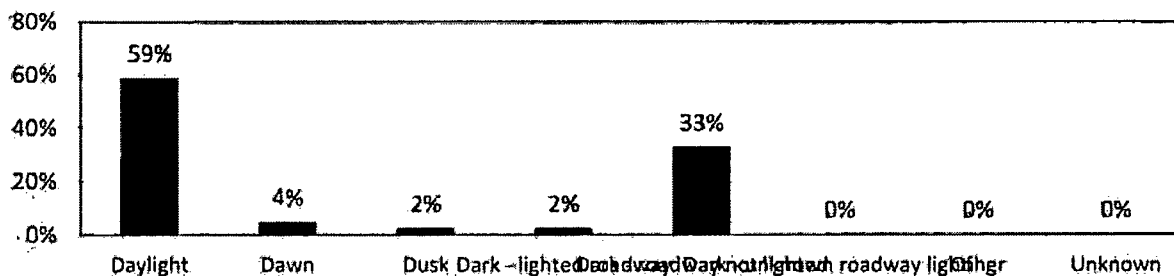


Crash Data Summary Charts I-95 in Boxford, Ma

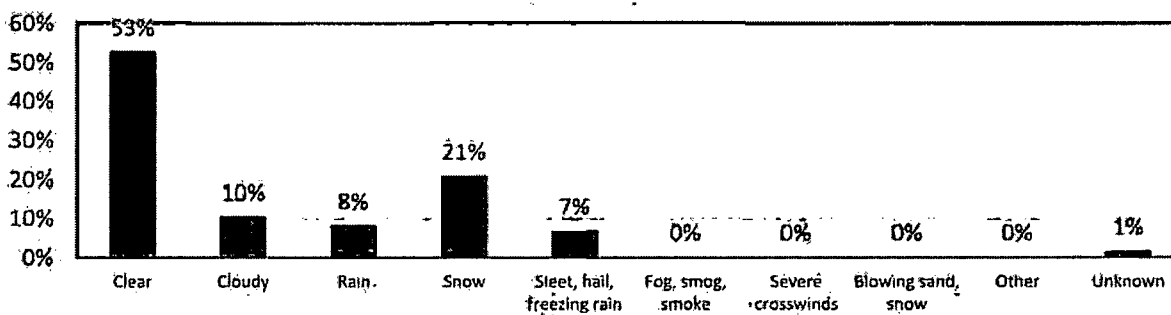
CRASH MANNER OF COLLISION



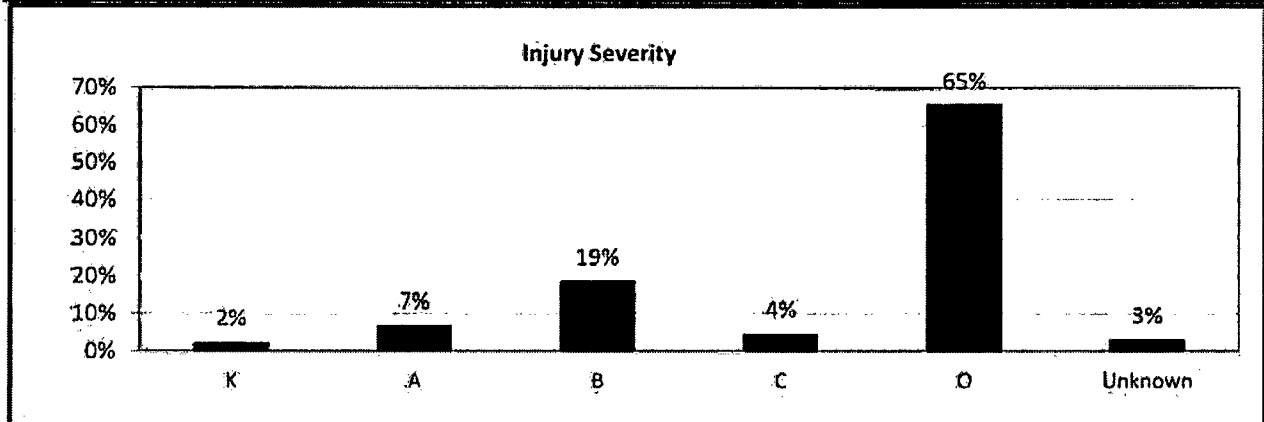
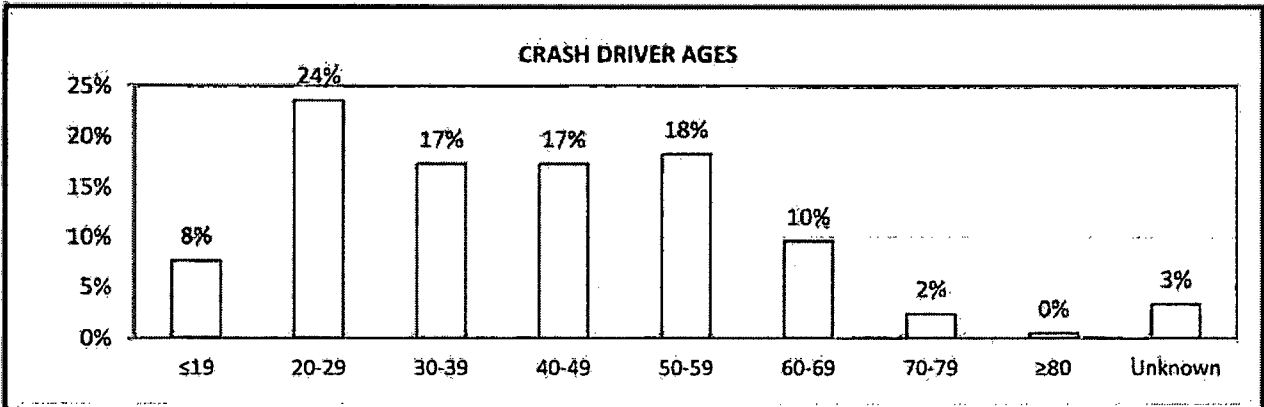
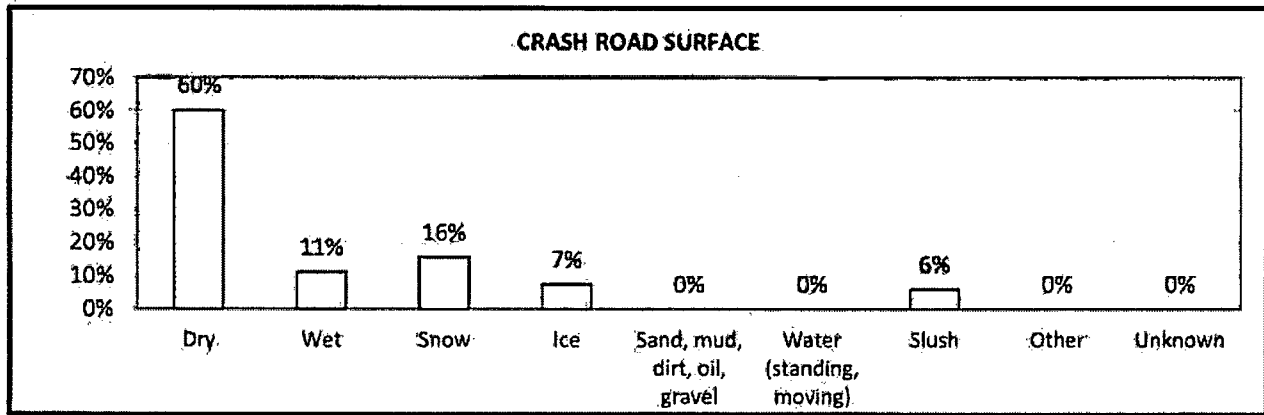
CRASH LIGHT CONDITION



CRASH WEATHER CONDITION



Crash Data Summary Charts I-95 in Boxford, Ma



K=Fatality
 A=Incapacitating Injury
 B=Non-Incapacitating Injury
 C=Possibly Injury
 O=Property Damage Only

This is a summary of Left Departure and Cross median crashes included in the Boxford to Rowley Total Crash Table

Crash Data Summary Table

I-95 Left Departure Crashes in Boxford, Ma

2015 - 2017

Crash Diagram Ref #	Crash Date mm/dd/yy	Crash Day	Time of Day h:mm	Manner of Collision	Injury Status	Light Condition	Weather Condition	Road Surface	Driver Contributing Code	D1 Age	D2 Age	D3 Age	D4 Age	Comments
#	mm/dd/yy	Day	h:mm	Type	#	Type	Type	Type	Type	#	#	#	#	
4	01/26/15	Monday	3:41 PM	Sideswipe, same direction	2	Daylight	Snow	Slush	Failure to keep in proper lane or running off road	27	54			Left Median Event. V1 and V2 (TT) were traveling NB on I95 on the third lane and right lane respectively. V1 lost control and swerved into the front left fender of V2, causing V2 (TT) to lose control and crash into the median taking V1 with it. Final rest on the median just prior to entering SB lanes.
7	02/20/15	Friday	11:34 AM	Single vehicle crash	5	Daylight	Clear	Dry	Other improper action	26				Left Median Event. V1 was traveling in the left lane and struck snow bank in median. After striking snow bank, vehicle went out of control across the highway and rolled over on the breakdown lane. V1 operator indicated that it was struck by V2 (Unknown) although no indication of a second vehicle was found at the scene.
8	02/24/15	Tuesday	6:00 AM	Single vehicle crash	3	Dawn	Clear	Dry	Failure to keep in proper lane or running off road	20				Left Median Event. V1 was traveling SB on I95 when it crashed into the median.
10	03/20/15	Friday	8:30 PM	Angle	3	Dark - roadway not lighted	Snow	Snow	Over-correcting/over-steering	49	22	30		Left Median Event. V1, V2 and V3 were traveling NB on I95. V2 lost traction, causing it to change lanes and collide with V1. V3, in attempt to avoid the collision, swerved to the left coming to final rest in the median.
11	03/20/15	Friday	9:50 PM	Single vehicle crash	3	Dark - roadway not lighted	Snow	Snow	Driving too fast for conditions	20				Left Median Event. V1 was traveling NB on I95, lost control and crashes into snow berm on the left shoulder, causing it to roll over and come to final rest in the median.
16	05/29/15	Friday	4:00 AM	Single vehicle crash	5	Dark - roadway not lighted	Clear	Dry	Unknown	18				Left Median Event. V1 was traveling NB on I95 when it swerved to avoid an animal and struck the cable barrier in the median and rode along if for approximately 50 feet before regaining control.
20	07/21/15	Tuesday	9:35 PM	Single vehicle crash	4	Dark - roadway not lighted	Clear	Dry	Distracted	23				Left Median Event. V1 was traveling NB on I95 when it lost control, crashed into the median guardrail, and rolled over.
21	07/26/15	Sunday	3:08 AM	Single vehicle crash	4	Dark - roadway not lighted	Clear	Dry	Fatigued/asleep	21				Left Median Event. V1 was traveling NB on I95 when the operator fell asleep, swerved into the median, and struck the guardrail.
23	08/22/15	Saturday	10:10 AM	Single vehicle crash	5	Daylight	Clear	Dry	Other improper action	31				Left Median Event. V1 was traveling NB on I95 when it left the roadway left into the median and proceeded to flip
28	09/24/15	Thursday	8:59 AM	Single vehicle crash	5	Daylight	Clear	Dry	Unknown	51				Left Median Event. V1 was traveling SB on I95 when it left the roadway left and flipped into the median. V1 was cited for Operating a Truck in the Left Lane
33	11/24/15	Tuesday	1:50 PM	Sideswipe, same direction	5	Daylight	Clear	Dry	Unknown	20	59			Left Median Event. V1 (TT) and V2 were traveling SB on I95 when sideswipe contact was made causing V1 to lose control and spin out into the median
36	12/29/15	Tuesday	12:02 PM	Single vehicle crash	5	Daylight	Sleet, hail, freezing rain	Slush	Unknown	28				Left Median Event. Uninvolved tow truck was merging left into the median to recover a vehicle when V1 was traveling NB on I95 behind it lost control and left the roadway left hitting the median cable barrier
38	12/29/15	Tuesday	12:45 PM	Single vehicle crash	5	Daylight	Sleet, hail, freezing rain	Slush	Driving too fast for conditions	46				Left Median Event. V1 was traveling NB on I95 when it hydroplaned on slush/standing water on the roadway, causing it to lose control, run off road left and struck the cable median barrier.
39	12/29/15	Tuesday	8:15 AM	Head on	5	Daylight	Sleet, hail, freezing rain	Snow	Unknown	43	51			Left Median Event. V1 and V2 were traveling SB on I95 when V1 spun out for unknown reasons. V2 was unable to stop in time and collided with V1, pushing both vehicles into the median.

Crash Data Summary Table

I-95 Left Departure Crashes in Boxford, Ma

2015 - 2017

Crash Diagram Ref #	Crash Date	Crash Day	Time of Day	Manner of Collision	Injury Status	Light Condition	Weather Condition	Road Surface	Driver Contributing Code	D1 Age	D2 Age	D3 Age	D4 Age	Comments
#	mm/dd/yy	Day	hh:mm	Type	#	Type	Type	Type	Type	#	#	#	#	
42	02/16/16	Tuesday	7:11 AM	Single vehicle crash	5	Daylight	Cloudy	Slush	Driving too fast for conditions	29				Left Median Event. V1 was traveling NB on I95 when it lost control due to slush and wet road conditions, and spun out and hit the guardrail on right. V1 then spun around once again, hitting the guardrail and went across the entire NB lanes into the median.
45	03/04/16	Friday	8:41 AM	Single vehicle crash	5	Daylight	Snow	Ice	Driving too fast for conditions	21				Left Median Event. V1 was traveling SB on I95 when it ran off road left, lost control and crossed all lanes to the right and into the guardrail.
47	03/04/16	Friday	9:35 AM	Sideswipe, same direction	5	Daylight	Snow	Snow	Driving too fast for conditions	27	65			Left Median Event. V1 and V2 were traveling NB on I95 in the second and third lanes. V1 lost control and sideswiped V2, causing both V1 and V2 to go into the median.
50	03/21/16	Monday	7:15 AM	Single vehicle crash	5	Daylight	Snow	Snow	Driving too fast for conditions	67				Left Median Event. V1 was traveling NB on I95 in the left lane when it lost control and hit the cable median barrier.
51	03/31/16	Thursday	1:52 PM	Sideswipe, same direction	5	Daylight	Clear	Dry	Unknown	23	44			Left Median Event. V1 and V2 (TT) were traveling NB on I95 when V2 changed lanes, causing V1 to lose control and hit the side of V2, then ended up in the median.
60	07/03/16	Sunday	2:20 AM	Sideswipe, same direction	3	Dark - roadway not lighted	Clear	Dry	Inattention	19	39			Left Median event. V1 and V2 were traveling SB on I95 when V2 sideswiped V1 as V2 attempted to change lanes. V2 then lost control and left roadway left striking a highway guide sign and then the cable median barrier. V2 then flipped over the cable barrier coming to a rest in the median.
62	08/24/16	Wednesday	5:46 PM	Single vehicle crash	3	Daylight	Clear	Dry	Made an improper turn	49	17			Left Median Event. V1 and V2 were traveling NB on I95 when V2 changed lanes from fourth lane to second lane in attempt to take the Off-Ramp to RT 97 and cutting off V1. V1 attempted to brake but lost control, left the roadway onto the median, and rolled over twice. V2 stopped at the Off-Ramp infield to await the arrival of first responders.
66	09/21/16	Wednesday	6:55 PM	Single vehicle crash	5	Dark - roadway not lighted	Clear	Dry	Over-correcting/over-steering	16				Left Median Event. V1 was traveling SB on I95 when it swerved to avoid an animal running across the road. V1 swerved into the median, lost control and ended up on the right side of the highway.
67	10/22/16	Saturday	10:57 AM	Single vehicle crash	5	Daylight	Rain	Wet	Exceeded authorized speed limit	20				Left Median Event. V1 was traveling SB on I95 when it took the Off-Ramp at Exit 51 and lost control and hit the exit sign. V1 continued across all lanes partially into the median and then came to a rest in the left travel lane.
70	11/09/16	Wednesday	8:02 AM	Single vehicle crash	5	Daylight	Clear	Dry	Illness	59				Left Median Event. V1 was traveling NB on I95 when it crashed ran off road left and into the guardrail where the cable barrier ends. Operator may have an undiagnosed health condition and passed out while operating the vehicle.
72	11/30/16	Wednesday	12:39 PM	Single vehicle crash	5	Daylight	Rain	Wet	No improper driving	81				Left Median Event. V1 was traveling NB on I95 in the third travel lane when an unknown vehicle changed lanes in front of it, nearly hitting V1. V1 swerved in attempt to avoid unknown vehicle, spun out left into barrier for Fish Brook.
73	12/05/16	Monday	7:35 AM	Single vehicle crash	5	Daylight	Snow	Snow	Driving too fast for conditions	49				Left Median Event. V1 was traveling NB on I95 in the left lane when it lost control due to icy conditions and crashed into the median barrier.

Crash Data Summary Table

I-95 Left Departure Crashes in Boxford, Ma

2015 - 2017

Crash Diagram Ref #	Crash Date	Crash Day	Time of Day	Manner of Collision	Injury Status	Light Condition	Weather Condition	Road Surface	Driver Contributing Code	D1 Age	D2 Age	D3 Age	D4 Age	Comments
#	mm/dd/yy	Day	hh:mm	Type	#	Type	Type	Type	Type	#	#	#	#	
81	01/06/17	Friday	7:45 AM	Single vehicle crash	5	Dawn	Snow	Snow	No improper driving	37				Left Median Event. V1 was traveling SB on I95 at a rate of speed estimated to be 35 mph due to the heavy snow conditions. V1 lost control and ran off road left into median guardrail.
83	01/06/17	Friday	7:50 AM	Angle	5	Daylight	Snow	Snow	No improper driving	18	38			Left Median Event. V1 and V2 were traveling SB on I95 when V1 lost control due to snowy conditions and hit V2 which ended up in the median
85	01/24/17	Tuesday	5:12 AM	Sideswipe, same direction	5	Dark - roadway not lighted	Sleet, hail, freezing rain	Ice	Driving too fast for conditions	21	26			Left Median Event. V1 was traveling SB on I95 and attempted to pass V2 in inclement weather when it lost control and struck V2. Both vehicles ended up in the median.
87	02/11/17	Saturday	12:05 PM	Single vehicle crash	5	Daylight	Snow	Snow	Driving too fast for conditions	71				Left Median Event. V1 was traveling NB on I95 when it lost control due to heavy snow and struck the guardrail on left.
89	02/13/17	Monday	11:05 AM	Single vehicle crash	4	Daylight	Snow	Ice	Driving too fast for conditions	25				Left Median Event. V1 was traveling NB on I95 when it lost control due to melting ice on roadway, left the roadway to the left and rolled over into the median
91	02/15/17	Wednesday	5:25 PM	Sideswipe, same direction	5	Dark - roadway not lighted	Rain	Wet	Inattention	50	17			Left Median Event. V1 and V2 were traveling NB on I95 near Weigh Station when V1 sideswiped V2 pushing it into the median and then fled the scene.
92	02/16/17	Thursday	7:51 AM	Single vehicle crash	3	Daylight	Snow	Wet	Driving too fast for conditions	24				Left Median Event. V1 was traveling NB on I95 in the far left lane when it lost control due to snowy conditions, drove off road left, struck the guardrail in the median and then rolled over.
94	02/25/17	Saturday	3:40 PM	Single vehicle crash	2	Daylight	Rain	Wet	Driving too fast for conditions	28				Left Median Event. V1 was traveling NB on I95 when it lost control when hydroplaning, left roadway to the left and rolled over into the median.
99	04/06/17	Thursday	1:22 PM	Single vehicle crash	5	Daylight	Rain	Wet	No improper driving	34				Left Median Event. V1 was traveling NB on I95 in the third lane when it lost control due to heavy rain, ran off the road left and struck the cable median barrier in the median.
101	04/08/17	Saturday	9:52 PM	Head on	1	Dark - roadway not lighted	Cloudy	Dry	Unknown	38	64	43		Cross Median Crash. V1 was traveling SB on I95. Witnesses stated V1 was racing another vehicle. V1 ran off road left and crossed the median to the other side, spun backwards into the third lane of I95 NB and struck the front of V2. V1 then spun around again and struck V3. V3 ran off road right into the tree line due to the impact with V1
108	05/23/17	Tuesday	6:10 AM	Sideswipe, same direction	5	Daylight	Cloudy	Dry	Other improper action	30	57			Left Median Event. V1 and V2 were traveling SB on I95 when V1 was forced to merge onto V2's lane due to avoid a collision with unknown vehicle that tried to merge onto V1's lane. V1 sideswiped V2, both vehicles ended up in the center median.
124	09/07/17	Thursday	10:06 AM	Rear-end	4	Daylight	Clear	Dry	Operating vehicle in erratic, reckless, careless, negligent, or aggressive manner	56	45			Left Median Event. V1 and V2 were traveling NB on I95 when V2, traveling at a high rate of speed, drifted over and rear-ended V1. V1 spun out into the median and V2 left the scene of the crash
132	12/22/17	Friday	7:55 PM	Single vehicle crash	5	Dark - roadway not lighted	Snow	Snow	Driving too fast for conditions	26				Left Median Event. V1 was traveling NB on I95 when it lost control due to snowy conditions. V1 ran off road left into the Cable Median Barrier.

Crash Data Summary Table

I-95 Left Departure Crashes in Boxford, Ma

2015 - 2017

Crash Diagram Ref #	Crash Date mm/dd/yy	Crash Day Day	Time of Day hh:mm	Manner of Collision Type	Injury Status #	Light Condition Type	Weather Condition Type	Road Surface Type	Driver Contributing Code Type	D1 Age #	D2 Age #	D3 Age #	D4 Age #	Comments
133	12/27/17	Wednesday	5:57 PM	Single vehicle crash	3	Dark - roadway not lighted		Dry	Distracted	17				Left Median Event. V1 was traveling SB on I95 and became distracted by emergency vehicles on the opposite side of the highway due to an earlier crash. V1 drifted off the road to the left and when the vehicle hit the snow in the median, it proceeded to roll over several times until it came to a rest next to the NB lanes
134	12/27/17	Wednesday	1:31 PM	Head on	1	Daylight	Clear	Dry	Wrong side or wrong way	32	54	68		Cross Median Crash. V1 was traveling NB on I95 when it crossed the median for unknown reason and came into the SB direction going the opposite way, sideswiped V2 and collided head on with V3. It was found the Operator of V1 suffered catastrophic medical issue while operating V1 causing it to drift over.

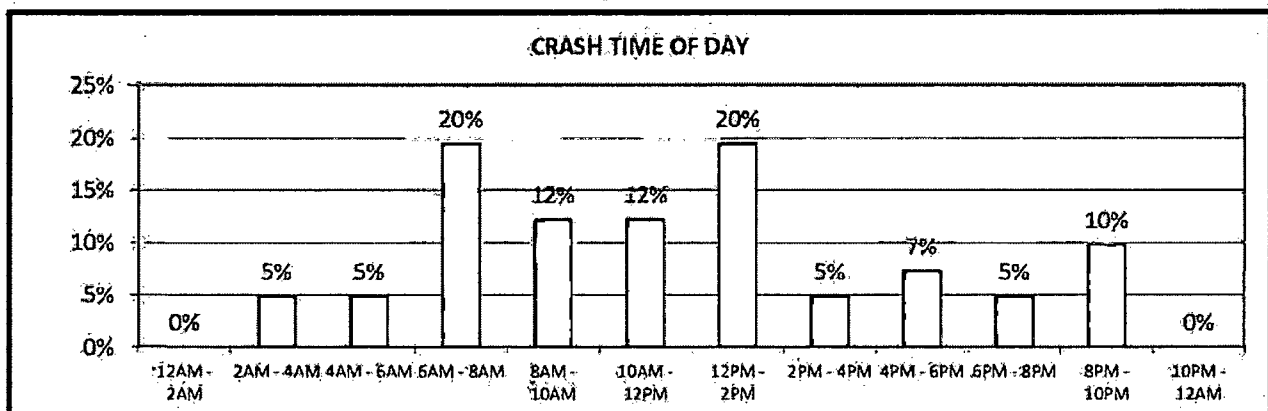
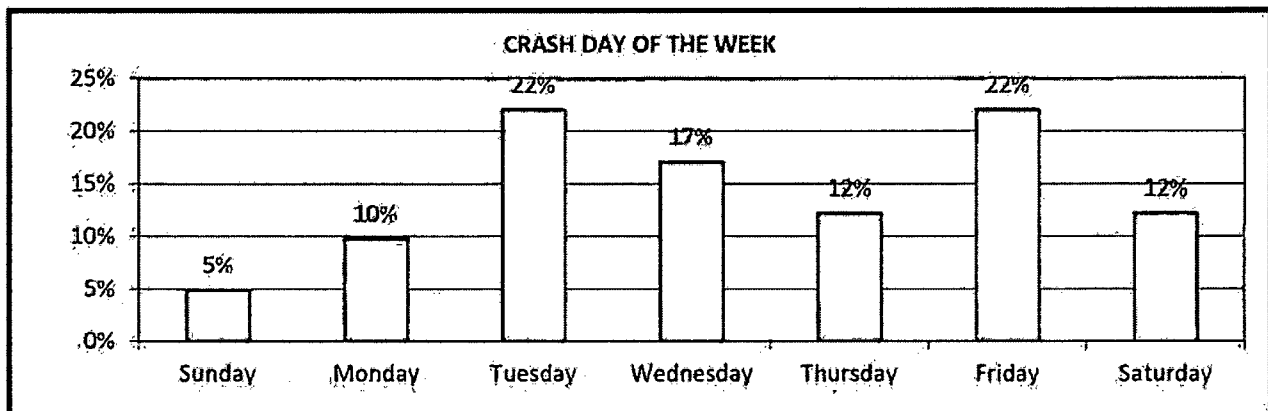
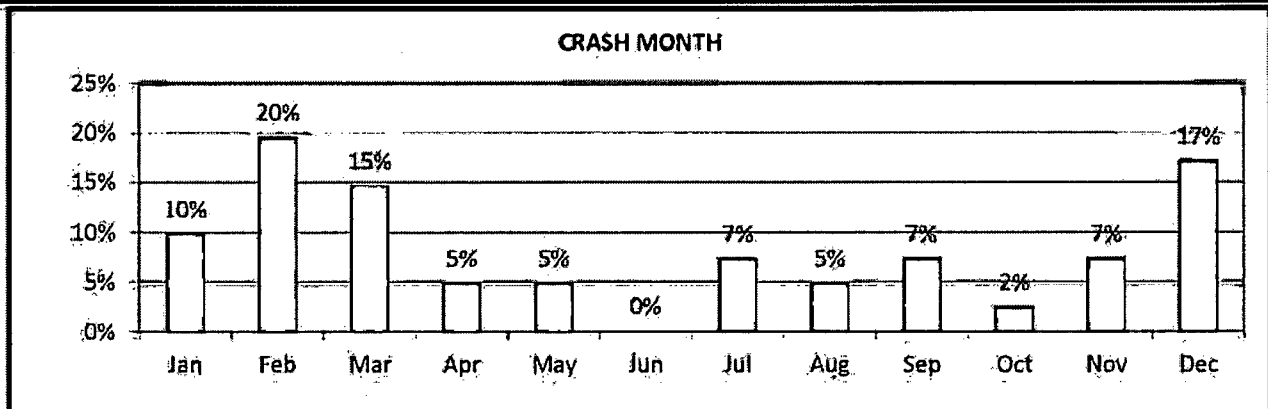
*Courtesy Crash - A term used to describe a crash that occurs subsequent to a non-involved mainline driver who gives the right of way, contrary to the rules of the road, to another driver.

Summaries based on crash reports obtained from the STATE Police Department.

These graphs only show the trends for Left Departure and Cross Median Crashes in Boxford to Rowley

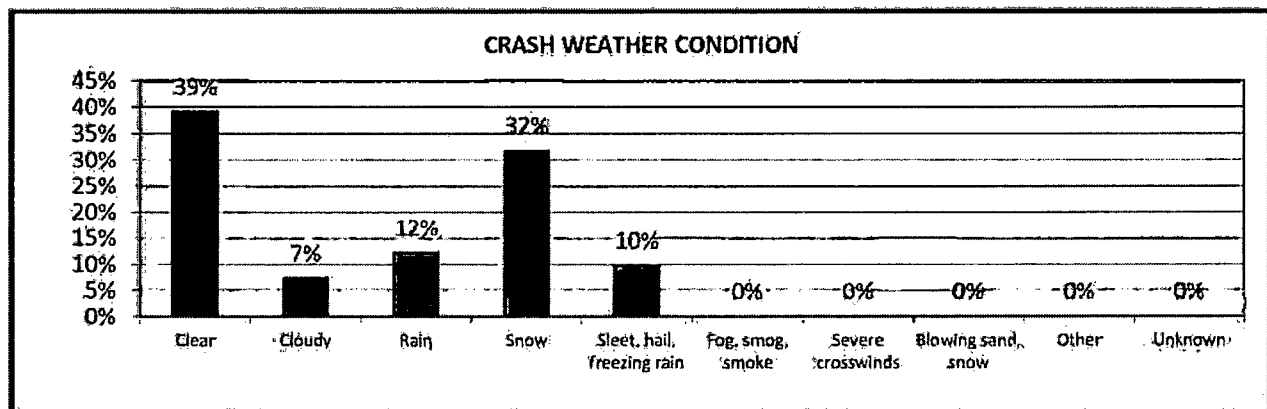
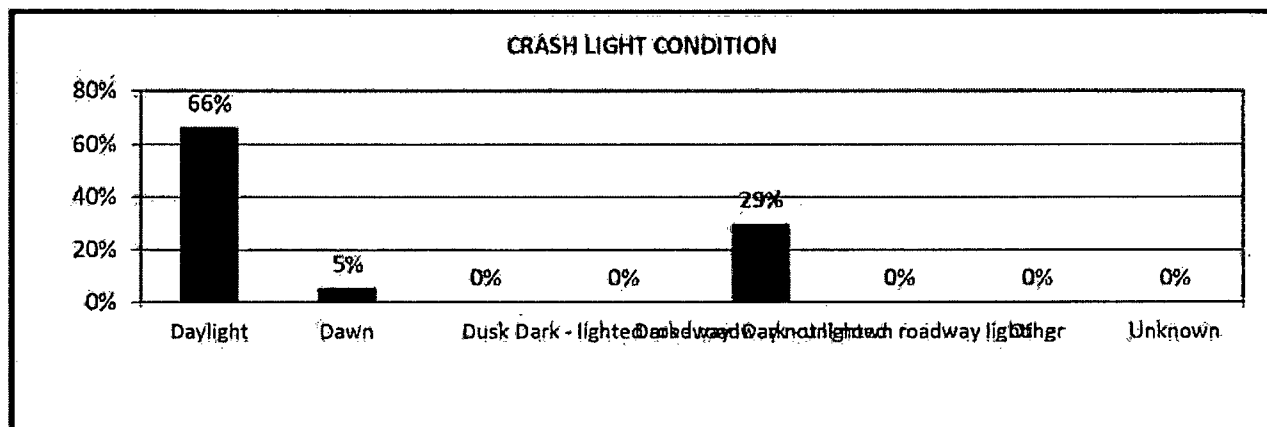
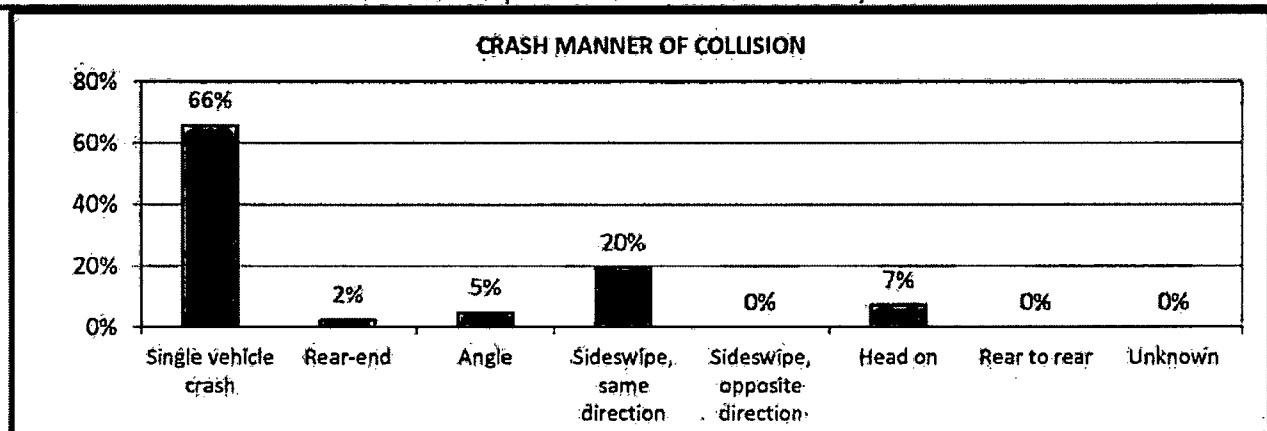
Crash Data Summary Charts

1-95 Left Departure Crashes in Boxford, Ma



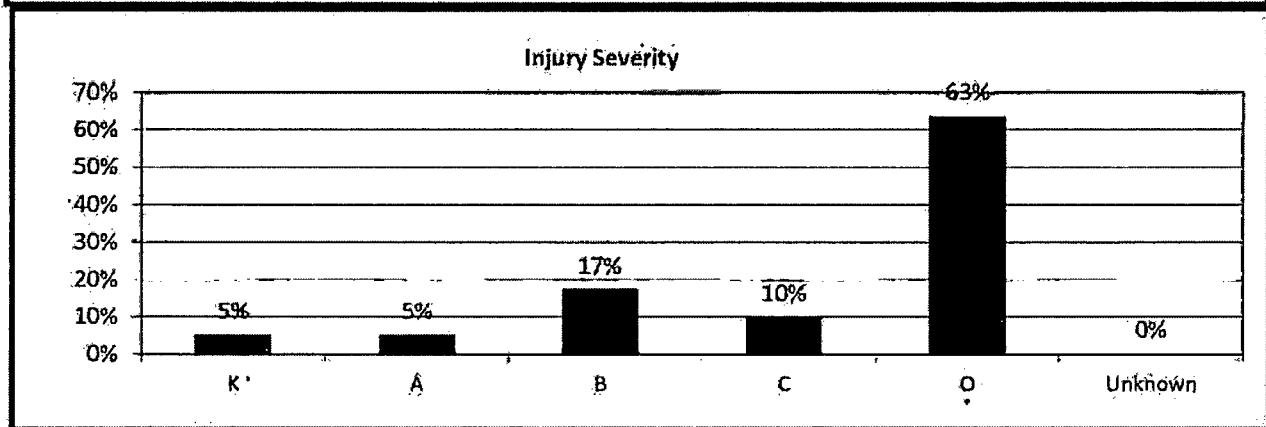
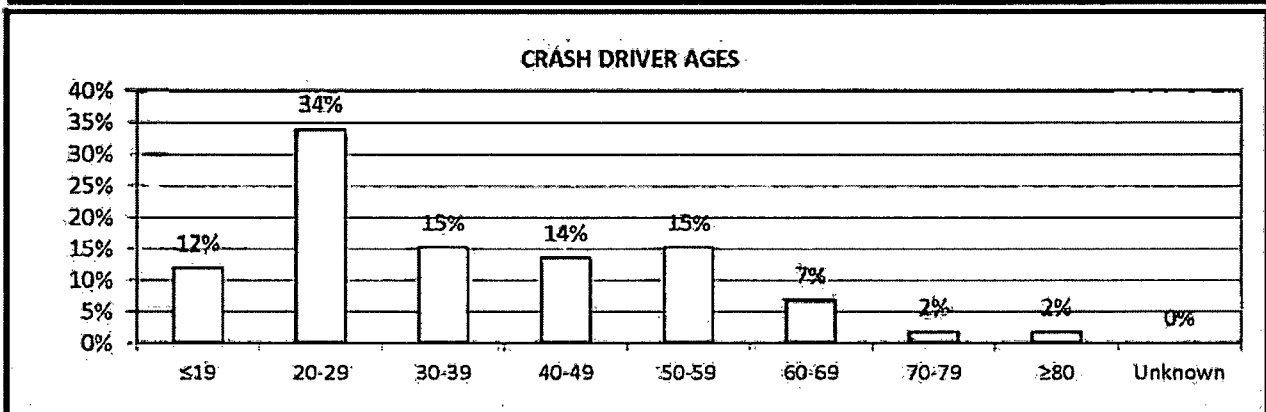
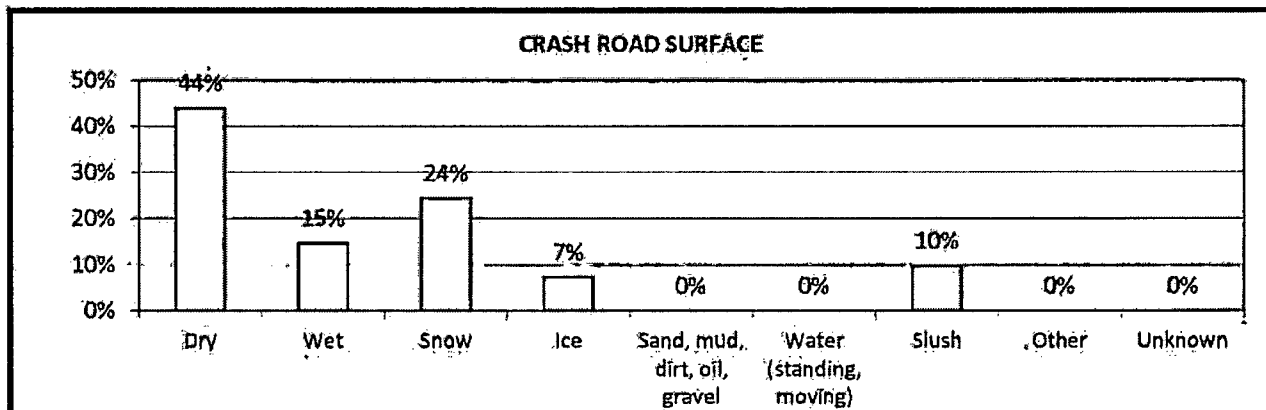
These graphs only show the trends for Left Departure and Cross Median Crashes in Boxford to Rowley

Crash Data Summary Charts I-95 Left Departure Crashes in Boxford, Ma



These graphs only show the trends for Left Departure and Cross Median Crashes in Boxford to Rowley

Crash Data Summary Charts I-95 Left Departure Crashes in Boxford, Ma



K=Fatality
A=Incapacitating Injury
B=Non-Incapacitating Injury
C=Possibly Injury
O=Property Damage Only



CRASH DIAGRAM

SYMBOLS		TYPE OF CRASH		SEVERITY	
	Moving Vehicle		Head on		Injury
	Backing Vehicle		Rear End		
	Non-involved Vehicle		Angle		
	Involved Non-involved		Turning Movement		Fatal
	Bicycle		Sideswipe		
	Animal		Out of Control		Property Damage Only
	Direction of Motion		Night Time		
	Parked Vehicle		Crash		
	Fixed Object				

Georgetown and Newbury, MA

Left Departure Crashes on Interstate 1-95

REGION: Merrimack Valley

TIME PERIOD ANALYZED: 2015-2017

SOURCE OF CRASH REPORTS: STATE POLICE DEPARTMENT

DATE PREPARED: 12/04/2018

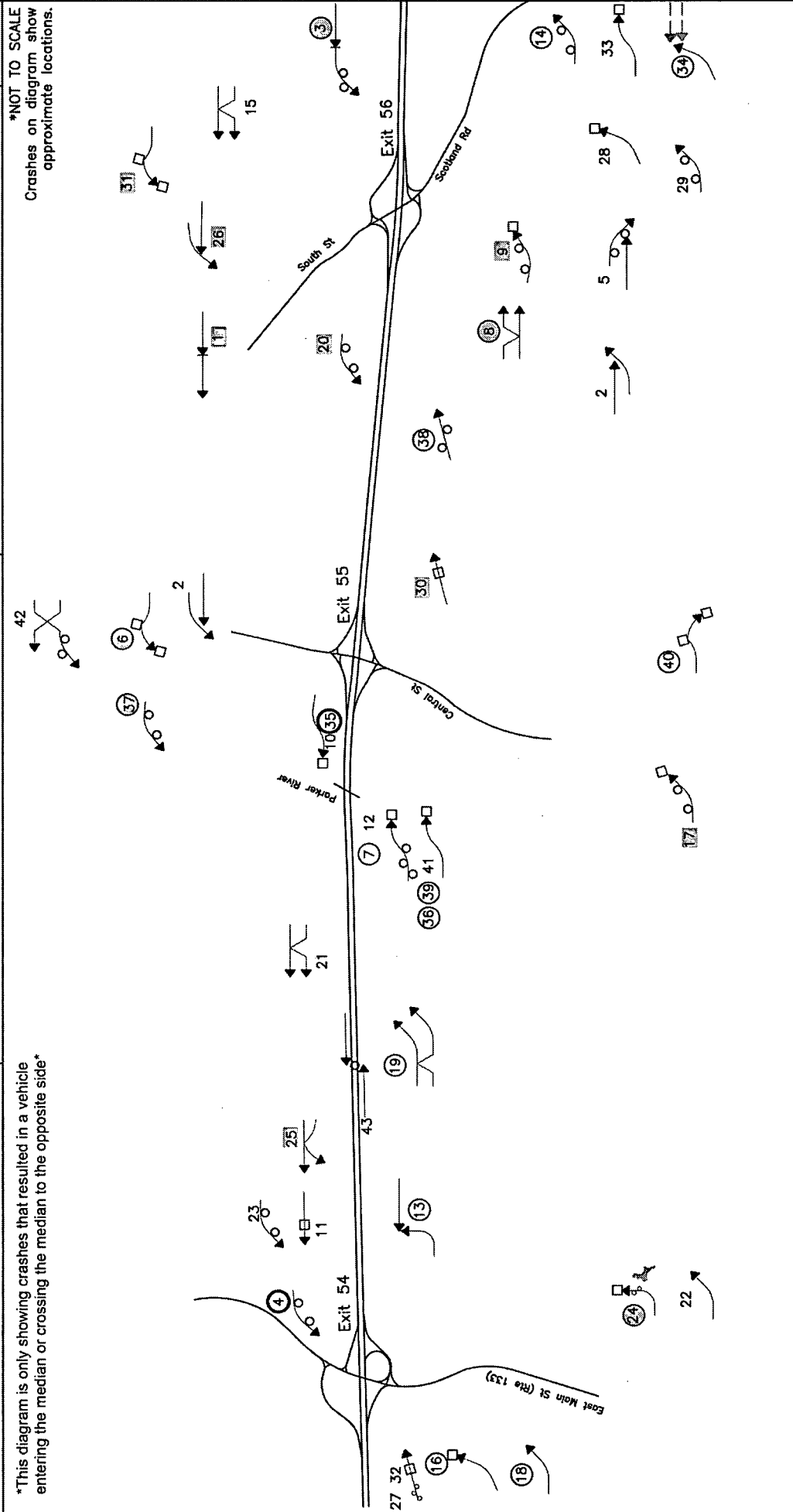
PREPARED BY: CF

SHEET 2 OF 3



This diagram is only showing crashes that resulted in a vehicle entering the median or crossing the median to the opposite side

***NOT TO SCALE**
Crashes on diagram show approximate locations.



Crash Data Summary Table

Route I-95 Left Departure crashes in Georgetown and Newbury

2015 - 2017

Crash Diagram Ref #	Crash Date	Crash Day	Time of Day	Manner of Collision	Injury Status	Light Condition	Weather Condition	Road Surface	Driver Contributing Code	D1 Age	D2 Age	D3 Age	Comments
#	mm/dd/yy	Day	hh:mm	Type	#	Type	Type	Type	Type	#	#	#	
1	01/02/15	Friday	1:15 AM	Rear-end	5	Dark - roadway not lighted	Clear	Dry	Operating vehicle in erratic, reckless, careless, negligent, or aggressive manner	32	58		Operator of V1 was lost and attempted to change the address on his GPS. V1 rear ended V2 at a high rate of speed which pushed both vehicles into the median
2	02/07/15	Saturday	8:35 AM	Sideswipe, same direction	5	Daylight	Cloudy	Dry	Failure to keep in proper lane or running off road	54	52		V1 was approaching V2 when it attempted to pass on the left. V1 lost control and collided with V2's front quarter panel and then ricocheted into a snow bank in the median
3	05/30/15	Saturday	3:50 AM	Rear-end	2	Dark - roadway not lighted	Clear	Dry	Operating vehicle in erratic, reckless, careless, negligent, or aggressive manner	25	40		V1 was traveling in excess of 100 MPH and collided with V2 in the 2nd lane causing V2 to roll over into the median. Operator of V1 was arrested for OUI.
4	06/20/15	Saturday	4:35 PM	Single vehicle crash	1	Daylight	Clear	Dry	Failure to keep in proper lane or running off road	48			Passenger of V1 grabbed the wheel of vehicle and steered it left because she saw a uninvolvement vehicle swerve into their lane. The Driver of V1 attempted to regain control but the vehicle had entered the median and flipped. The passenger passed due to injuries sustained
5	07/08/15	Wednesday	11:13 AM	Angle	5	Daylight	Clear	Dry	No Improper driving	22	69		Multiple vehicles came upon debris in the roadway causing uninvolvement vehicle to cut to the left causing V1 in third lane to do the same. V1 entered the median, lost control and reentered the highway. V2 crashed into V1
6	08/14/15	Friday	8:08 PM	Single vehicle crash	3	Dark - roadway not lighted	Clear	Dry	Fatigued/asleep	57			Operator of V1 fell asleep at the wheel, drove into the median guardrail and then was redirected across the highway into the breakdown lane
7	08/26/15	Wednesday	9:20 AM	Single vehicle crash	3	Daylight	Clear	Dry	Failure to keep in proper lane or running off road	68			For unknown reason operator of V1 swerved to the left and drove into the median. V1 proceeded to collide with angled guardrail, pass over it and come to rest at the barrier of Parker River
8	12/14/15	Monday	9:15 PM	Sideswipe, same direction	3	Dark - roadway not lighted	Rain	Wet	Made an improper turn	22	32		V2 changed lanes and side swiped V1. Both vehicles lost control and crashed into the Median barrier at the overpass at exit 56
9	12/29/15	Tuesday	1:10 AM	Single vehicle crash	5	Dark - roadway not lighted	Snow	Snow	Driving too fast for conditions	44			V1 was driving too fast for the conditions present (Heavy snow fall), lost control and crashed into the median guardrail
10	01/05/16	Tuesday	12:35 PM	Single vehicle crash	5	Daylight	Cloudy	Dry	Over-correcting/over-steering	64			V1 swerved off road for unknown reason, drove into guardrail on opposite side of road and came to rest against the barrier for the Parker River
11	01/28/16	Thursday	3:41 PM	Single vehicle crash	5	Daylight	Cloudy	Dry	Unknown	29			V1 drifted into the median (possibly fell asleep) and while attempting to self correct struck the guardrail protecting the overhead guide sign
12	02/16/16	Tuesday	1:20 PM	Single vehicle crash	5	Daylight	Fog, smog, smoke	Wet	Inattention	58			Cross Median Event - V1 left the roadway to the left into the median and almost crossed into the opposite side of the hwy before self correcting and colliding into the angle guardrail before Parker River
13	04/17/16	Sunday	1:40 PM	Head on	2	Daylight	Clear	Dry	Failure to keep in proper lane or running off road	50	25	46	Cross Median Crash - V2 was traveling NB on I95 when uninvolvement vehicle started entering into its lane. V2 attempted evasive maneuvers, but held down the gas pedal rather than brake. V2 shot across the median, struck guardrail and went over it and collided with V3 traveling SB. SB V1 attempted to avoid the collision and swerved right, losing control and hitting guardrail on left
14	04/19/16	Tuesday	6:56 AM	Single vehicle crash	3	Daylight	Clear	Dry	No Improper driving	27			V1 was traveling NB on I95 in the left lane when its tire blew out causing it to roll over into the median
15	6/11/16	Saturday	1:38 PM	Sideswipe, same direction	5	Daylight	Clear	Dry	Inattention	18	72	55	Cross Median Event - SB V1 sideswiped V2 which pushed V2 into V3. V1 proceeded to cross the median to NB side.

Crash Data Summary Table

Route I-95 Left Departure crashes in Georgetown and Newbury

2015 - 2017

Crash Diagram Ref #	Crash Date	Crash Day	Time of Day	Manner of Collision	Injury Status	Light Condition	Weather Condition	Road Surface	Driver Contributing Code	D1 Age	D2 Age	D3 Age	Comments
#	mm/dd/yy	Day	hh:mm	Type	#	Type	Type	Type	Type	#	#	#	
16	06/29/16	Wednesday	7:00 PM	Single vehicle crash	3	Daylight	Clear	Dry	Illness	73			V1 was traveling NB in the right lane when the operator suffered an unknown medical condition. V1 drifted across the highway, through the median, across all lanes of SB direction and finally collided with heavy brush near the top of the embankment of Pingree Farm Rd Overpass
17	07/15/16	Friday	9:30 PM	Single vehicle crash	5	Dark - roadway not lighted	Clear	Dry	Distracted	36			V1 was traveling NB on I95 in the left lane when it ran off the road left for unknown reasons and collided with the inside of the guardrail after attempting to self correct
18	07/21/16	Thursday	7:03 PM	Single vehicle crash	4	Daylight	Clear	Dry	Operating vehicle in erratic, reckless, careless, negligent, or aggressive manner	34			V1 was driving erratically and faster than posted speed limit when it lost control while changing lanes and rolled over into the median
19	09/04/16	Sunday	5:10 PM	Sideswipe, same direction	3	Daylight	Clear	Dry	Over-correcting/over-steering	55	20		V1 and V2 were traveling NB on 95. V2 attempted to pass V2 from the right and started moving into V1's lane before it was clear. V2 sideswiped V1 causing V2 to go into the median
20	09/05/16	Monday	9:47 PM	Single vehicle crash	5	Dark - roadway not lighted	Rain	Wet	No Improper driving	57			V1 traveling SB on I95 started to hydroplane due to heavy rain. V1 lost control and spun out into median where it rolled over.
21	09/18/16	Sunday	11:49 AM	Rear-end	5	Daylight	Rain	Wet	Operating vehicle in erratic, reckless, careless, negligent, or aggressive manner	30	22		V1 was traveling above the speed limit, lost control and entered the median. V1 attempted to self correct at which point V1 collided with V2
22	11/17/16	Thursday	12:39 PM	Single vehicle crash	5	Daylight	Clear	Dry	Fatigued/asleep	24			Operator of V1 fell asleep at the wheel and lost control. V1 swerved into median and flipped over
23	12/05/16	Monday	6:54 AM	Single vehicle crash	5	Daylight	Snow	Snow	Driving too fast for conditions	40			V1 was driving the speed limit during a light snow storm (no snow sticking to roadway). V1 lost control and flipped onto its side after entering the median
24	01/21/17	Saturday	12:25 AM	Single vehicle crash	4	Dark - roadway not lighted	Unknown	Dry	Failure to keep in proper lane or running off road	30			Cross Median Event. V1 was traveling NB on I95 when operator witnessed an animal in the roadway. V1 swerved out of the way, lost control, crossed the median and all 4 lanes of I95 SB and collided with the tree line
25	2/7/17	Tuesday	6:03 PM	Angle	5	Dark - roadway not lighted	Snow	Snow	Over-correcting/over-steering	24	26		V1 was traveling SB on I95 at a reduced speed due to heavy snow fall when it lost control and collided with V2 (snow plow) traveling in the breakdown lane. V1 then ricochets off V2 and crosses all 4 lanes into the median
26	02/07/17	Tuesday	5:31 PM	Angle	5	Dark - roadway not lighted	Snow	Snow	Unknown	Unkno wn	Unkno wn		V1 was accelerating onto the hwy from exit 56 and lost control due to the weather conditions and high rate of acceleration. V1 proceeded to spin and collides with TT unit and then is pushed into the median.
27	02/07/17	Tuesday	1:50 PM	Single vehicle crash	5	Daylight	Sleet, hail, freezing rain	Slush	Driving too fast for conditions	24			V1 was traveling in the 3rd lane and attempted to change lanes to the 4th. At this point, V1 hit slush and proceeded to lose control, crashing into the median guardrail and sliding down into the median
28	02/07/17	Tuesday	2:42 PM	Single vehicle crash	5	Daylight	Sleet, hail, freezing rain	Slush	Driving too fast for conditions	16			Cross Median Event. V1 was traveling in the left lane when it encountered slush causing operator to lose control of the vehicle. V1 crossed the median and all lanes of the opposite side of the hwy, finally coming to rest at the tree line
29	02/17/17	Friday	4:01 PM	Single vehicle crash	99	Daylight	Clear	Dry	Unknown	Unkno wn	43		V2 was traveling NB when uninformed V1 changed lanes in V2 path at a high rate of speed. V2 swerved out of the way and subsequently lost control and went into the median.
30	03/04/17	Saturday	10:07 PM	Single vehicle crash	5	Dark - roadway not lighted	Clear	Dry	Fatigued/asleep	19			Operator of V1 fell asleep and drove off the road on the left and collided with a speed limit sign.

Crash Data Summary Table

Route I-95 Left Departure crashes in Georgetown and Newbury

2015 - 2017

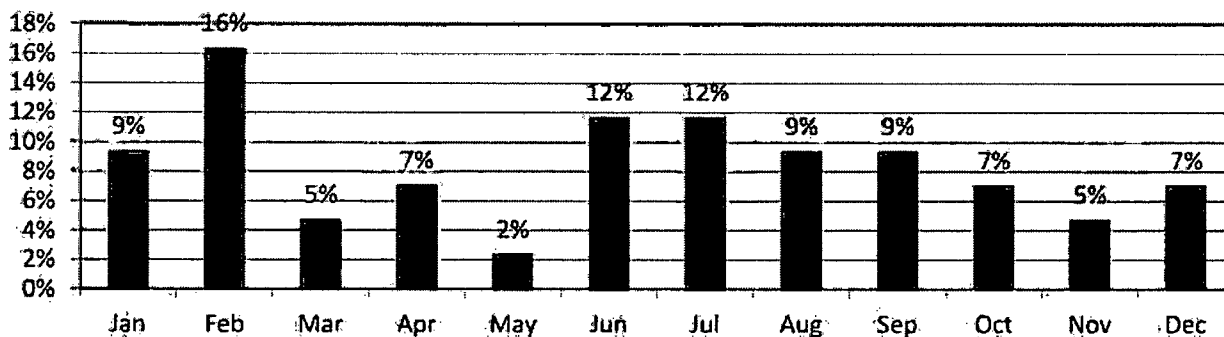
Crash Diagram Ref #	Crash Date	Crash Day	Time of Day	Manner of Collision	Injury Status	Light Condition	Weather Condition	Road Surface	Driver Contributing Code	D1 Age	D2 Age	D3 Age	Comments
#	mm/dd/yy	Day	hh:mm	Type	#	Type	Type	Type	Type	#	#	#	
31	03/07/17	Tuesday	5:11 PM	Single vehicle crash	5	Dusk	Cloudy	Wet	No improper driving	58			V1 was traveling in the left lane when it had an alleged "mechanical defect" and swerved left into the guardrail and then was redirected to the other side and collided with the guardrail on the right
32	04/01/17	Saturday	7:05 AM	Single vehicle crash	5	Daylight	Snow	Snow	Driving too fast for conditions	33			V1 was traveling NB when it encountered slush and lost control. V1 swerved into the guardrail on the left, bounced off and went into the median
33	06/21/17	Wednesday	8:51 AM	Single vehicle crash	5	Daylight	Clear	Dry	Failure to keep in proper lane or running off road	46			V1 was traveling NB in the 3rd lane when it drifted left into the median, hitting a traffic barrel, almost went into SB traffic before recentering and then collided with a sign. At no point did the driver apply the brakes
34	06/27/17	Tuesday	7:39 AM	Single vehicle crash	3	Daylight	Clear	Dry	Failure to keep in proper lane or running off road	29	52	45	Cross Median Event. V1 was traveling NB on I95 when it started to drift towards the median. Operator of V1 overcorrected causing the vehicle to slide and flip onto the SB side of I95. V2 and V3 were traveling SB when this occurred and made evasive maneuvers and successfully avoided a collision with V1
35	7/14/17	Friday	2:50 PM	Single vehicle crash		Daylight	Clear	Dry	Failure to keep in proper lane or running off road	67			Cross median Event. Operator of V1 drifted across the highway for unknown reason, entered the median, entered the NB side of the highway, and then collided with trees after rolling over several times
36	07/22/17	Saturday	4:59 AM	Single vehicle crash	3	Daylight	Clear	Dry	Operating vehicle in erratic, reckless, careless, negligent, or aggressive manner	40			V1 was traveling on the left side of the roadway when it drifted off the road to the left, traveled in the median for roughly 100 yards and collided with the angled guardrail at Parker River
37	08/03/17	Thursday	12:45 AM	Single vehicle crash	3	Dark - roadway not lighted	Clear	Dry	Operating vehicle in erratic, reckless, careless, negligent, or aggressive manner	27			OUI V1 drove off the road into median.
38	08/22/17	Tuesday	10:28 AM	Single vehicle crash	3	Daylight	Clear	Dry	No improper driving	61			MC1 was traveling on I95 NB when the rear tire of the MC started to wobble. Operator of V1 attempted to pull over into the median at which point the MC spun out.
39	09/18/17	Monday	2:14 PM	Single vehicle crash	4	Daylight	Cloudy	Dry	Fatigued/asleep	44			V1 was traveling NB on I95 when it left the roadway left, collided with the SB side guardrail and then collided with the barrier for Parker River
40	10/01/17	Sunday	10:15 AM	Single vehicle crash	3	Daylight	Clear	Dry	Over-correcting/over-steering	21			Operator of V1 became distracted with an electronic device causing V1 to run off road left into guardrail. V1 proceeded to bounce off and went across all four lanes to the right and collided with another guardrail and went over/through it.
41	10/15/17	Sunday	7:34 PM	Single vehicle crash	5	Dark - roadway not lighted	Clear	Dry	Other improper action	20	59		Operator of V1 fell asleep at the wheel and collided with the guardrail that protects Parker River, bounced off and collided with the guardrail again further down. V2 ran over debris from V1 and sustained undercarriage damage
42	10/26/17	Thursday	9:55 AM	Sideswipe, same direction	5	Daylight	Clear	Dry	Disregarded traffic signs, signals, road markings	65	39		V1 traveling SB on I95 clipped the front of TT unit causing V1 to spin out and end up in the median.
43	11/04/17	Saturday	11:20 AM	Single vehicle crash	5	Daylight	Clear	Dry	Operating defective equipment	57	49		Cross Median Event. V1 traveling SB on I95 lost its front tire during travel. Tire from V1 continued on across the median and into the NB travel way where it collided with V2 causing significant front end damage

*Courtesy Crash - A term used to describe a crash that occurs subsequent to a non-involved mainline driver who gives the right of way, contrary to the rules of the road, to another driver.
Injury levels: 5=Property Damage only, 4=Possible Injury, 3=Non-incapacitating Injury, 2=Incapacitating Injury, 1=Fatal Injury
Summaries based on crash reports obtained from the STATE Police Department.

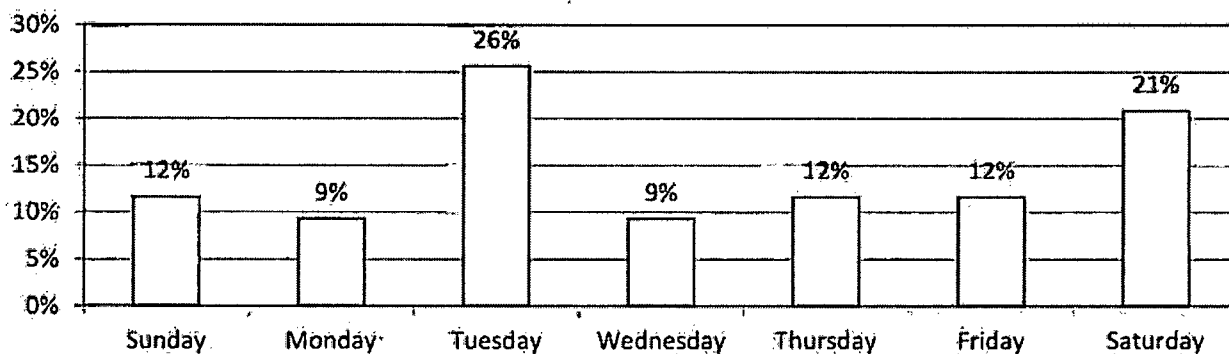
Crash Data Summary Charts

Route I-95 Left Departure crashes in Georgetown and Newbury

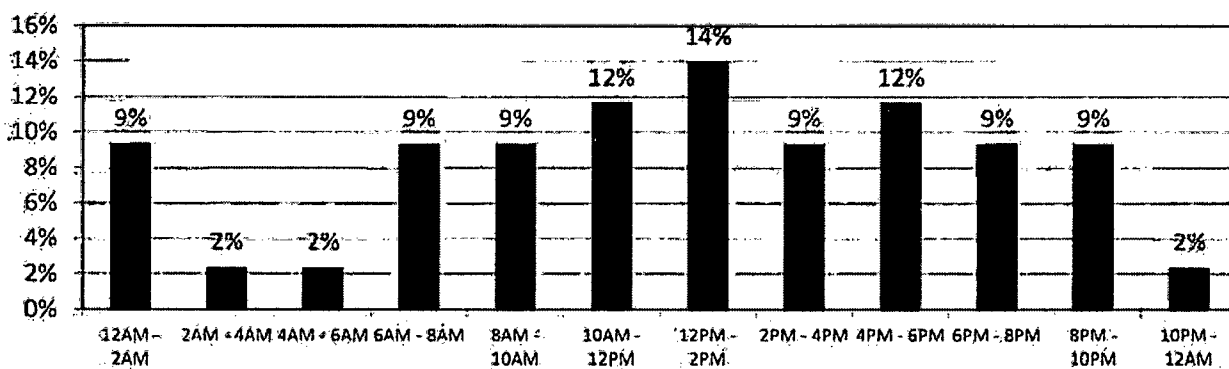
CRASH MONTH



CRASH DAY OF THE WEEK



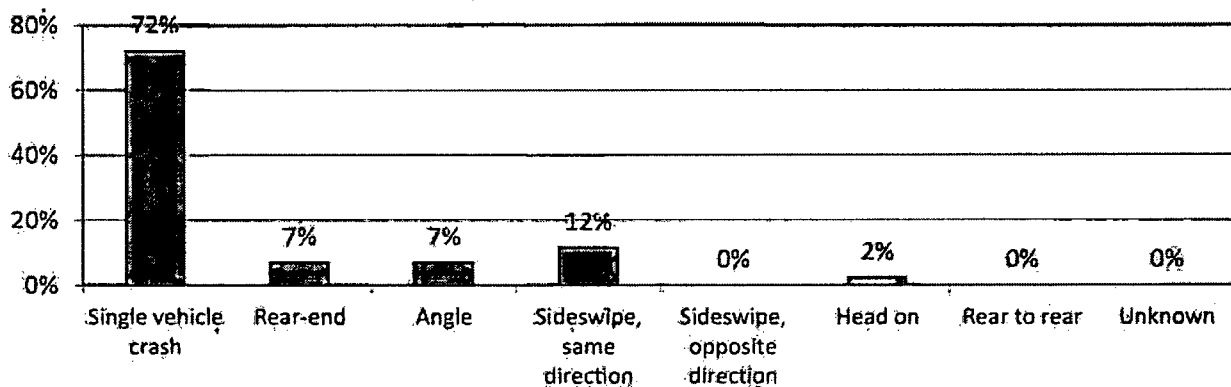
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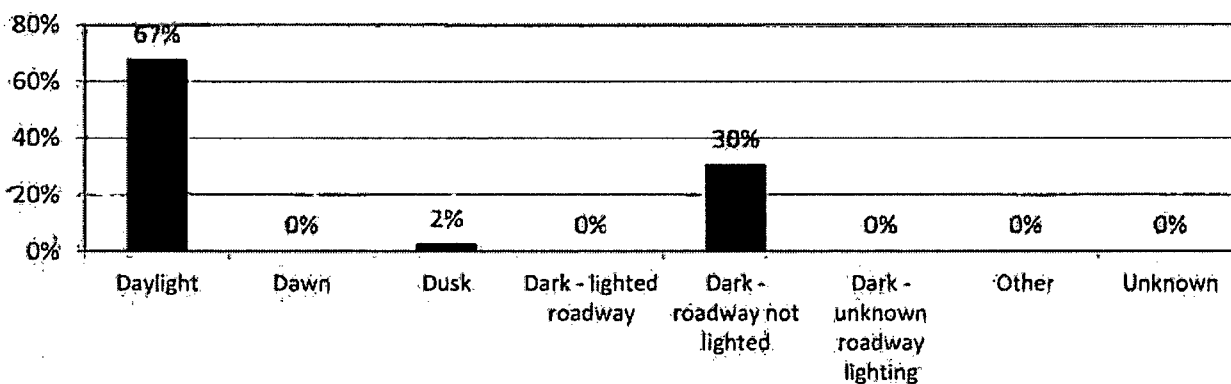
Crash Data Summary Charts

Route I-95 Left Departure crashes in Georgetown and Newbury

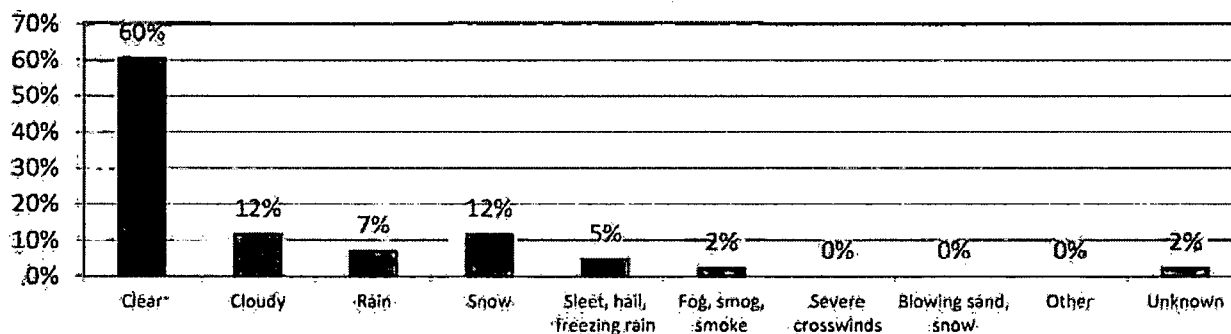
CRASH MANNER OF COLLISION



CRASH LIGHT CONDITION



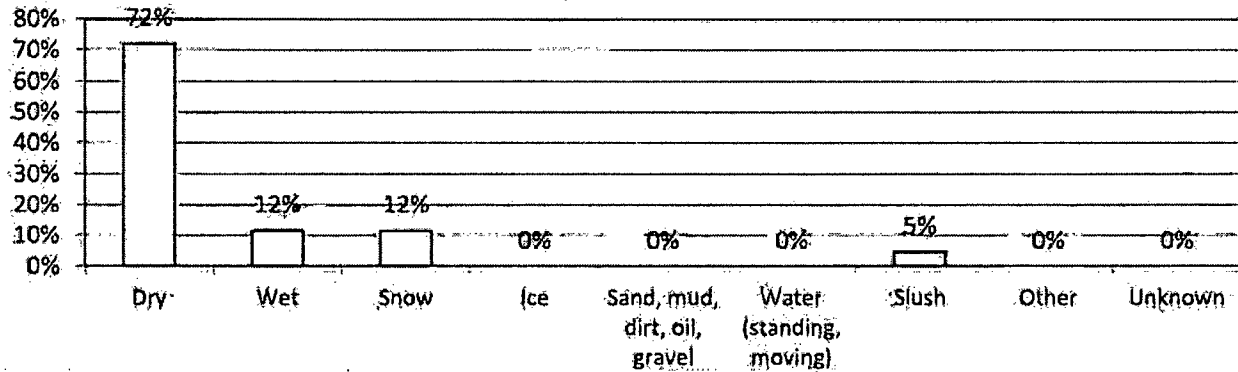
CRASH WEATHER CONDITION



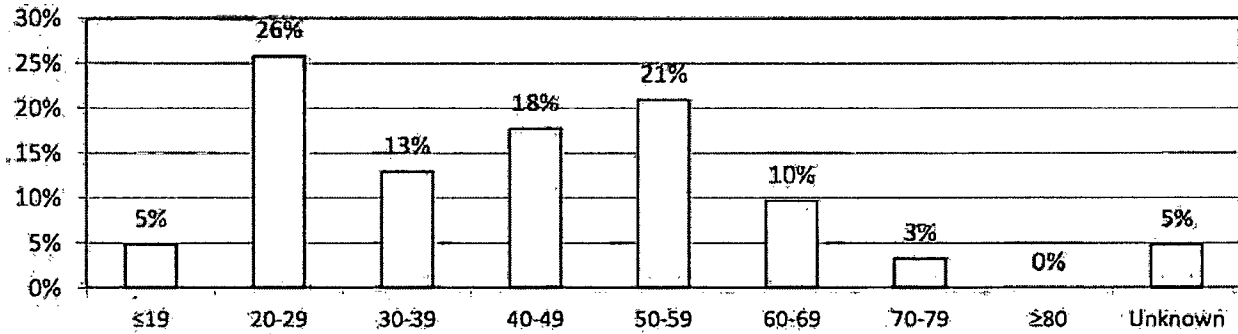
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Route I-95 Left Departure crashes in Georgetown and Newbury

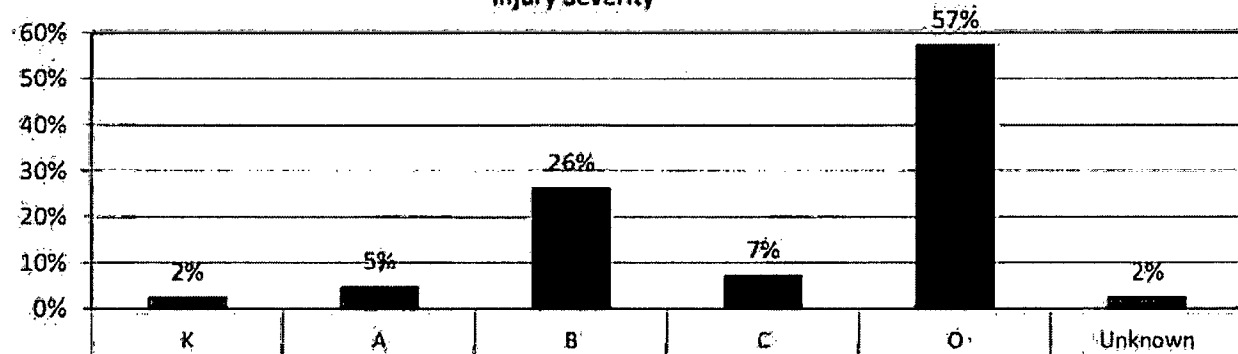
CRASH ROAD SURFACE



CRASH DRIVER AGES



Injury Severity



K=Fatality
 A=Incapacitating Injury
 B=Non-Incapacitating Injury
 C=Possibly Injury
 O=Property Damage Only



CRASH DIAGRAM

SEVERITY

TYPE OF CRASH		SEVERITY	
	Head on		Injury
	Rear End		Fatal
	Angle		Property Damage Only
	Turning Movement		
	Sidewalk		
	Out of Control		
	Night Time Crash		

SYMBOLS

	Moving Vehicle
	Backing Vehicle
	Non-Involved Vehicle
	Involved Non-Involved
	Pedestrian
	Bicycle
	Animal
	Direction of Motion
	Parked Vehicle
	Fixed Object

Newburyport, MA

Left Departure Crashes on Interstate 95

REGION: Merrimack Valley

TIME PERIOD ANALYZED: 2015-2017

SOURCE OF CRASH REPORTS: STATE POLICE DEPARTMENT

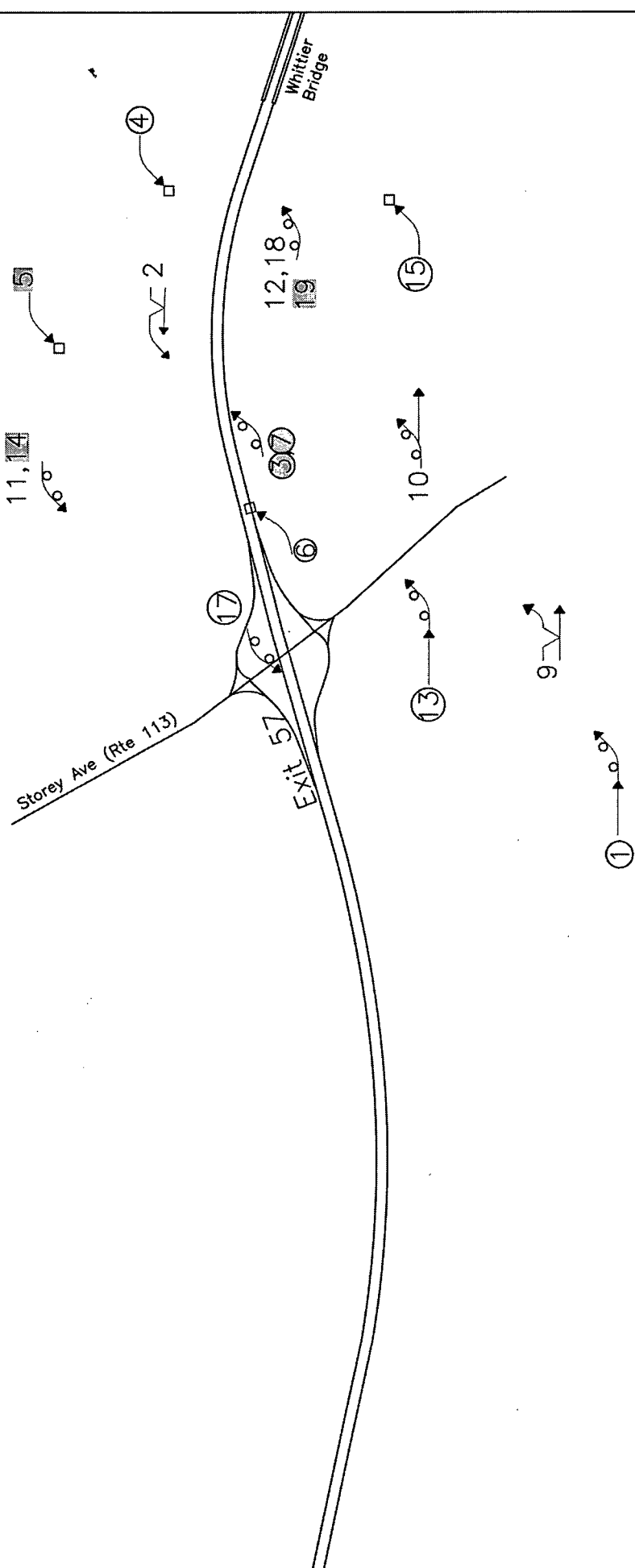
DATE PREPARED: 12/04/2018

PREPARED BY: CF

SHEET 3 OF 3

This diagram is only showing crashes that resulted in a vehicle entering the median or crossing the median to the opposite side

*NOT TO SCALE
Crashes on diagram show approximate locations.



Crash Data Summary Table

I-95 Left Departure Crashes in Newburyport

2015 - 2017

Crash Diagram Ref #	Crash Date	Crash Day	Time of Day	Manner of Collision	Injury Status	Light Condition	Weather Condition	Road Surface	Driver Contributing Code	D1 Age	D2 Age	Comments
#	mm/dd/yy	Day	hh:mm	Type	#	Type	Type	Type	Type	#	#	
1	03/11/15	Wednesday	3:55 PM	Rear-end	4	Daylight	Clear	Dry	No improper driving	37	53	V1 was passing uninvolved veh when it lost braking power. Operator of V1 tried to steer off road to the left, hit snow, lost control, rear ended V2 and rolled over into the median
2	03/16/15	Monday	8:45 AM	Angle	5	Daylight	Clear	Slush	Failure to keep in proper lane or running off road	68	31	V1 was traveling south on I95 when it slid on slushy road conditions. V1 proceeded to spin and hit V2 and then continued into the median barrier
3	05/01/15	Friday	10:35 PM	Single vehicle crash	2	Dark - roadway not lighted	Clear	Dry	Failure to keep in proper lane or running off road	33		V1 was traveling north on I95 and started drifting left. Operator of V1 attempted to self correct and ended up losing control. V1 proceeded into the grassy median, and operator had to swerve right to avoid crossing into the opposite side of the hwy
4	05/19/15	Tuesday	6:26 PM	Single vehicle crash	4	Daylight	Cloudy	Dry	Unknown	32		Operator of V1 stated that veh was having problems with power steering and when they hit a bump, the vehicle went into the median barrier
5	06/20/15	Saturday	1:45 AM	Single vehicle crash	5	Dark - roadway not lighted	Clear	Dry	Unknown	34		V1 drifted to the left for unknown reason and collided with the median barrier
6	10/05/15	Monday	11:30 AM	Sideswipe, same direction	3	Daylight	Clear	Dry	Failed to yield right of way	33	65	V1 was entering into the highway and possibly lost control or was rear ended by Unknown veh when it collided with the median barrier and spun around 180 Degrees and sideswiped V2 in the 2nd lane
7	11/07/15	Saturday	11:20 PM	Single vehicle crash	4	Dark - roadway not lighted	Clear	Dry	Fatigued/asleep	27		Operator of V1 was traveling North on I95 when driver fell asleep and drifted into the median. V1 traveled in the median, struck an orange traffic barrel and multiple other construction material before finally flipping on its side.
8	12/19/15	Saturday	2:30 PM	Unknown	5	Daylight	Clear	Dry	No improper driving	83	63	Cross Median Event. V1 was traveling I95 SB when its left wheel came off and rolled over the median into the opposite side of the hwy and struck V2
9	01/16/16	Saturday	10:34 AM	Sideswipe, same direction	5	Daylight	Snow	Snow	Driving too fast for conditions	Unkno wn	31	V1 was traveling NB on I95 during a snow storm. V1 was passing on the left of a TT unit and attempted to shift over to give it more room and lost control when it hit snow building up between the lanes. V1 hit TT unit and then went off road left into the median
10	02/06/16	Saturday	9:55 AM	Rear-end	5	Daylight	Cloudy	Other	Followed too closely	Unkno wn	29	V1 was slowing due to traffic up ahead when it was rear ended by V2. the collision pushed V1 into the median barrier
11	02/06/16	Saturday	1:31 AM	Single vehicle crash	5	Daylight	Snow	Snow	Driving too fast for conditions	65		V1 was traveling SB on I95 during a light snow storm. V1 lost control and became stuck in the median
12	02/06/16	Saturday	10:05 AM	Single vehicle crash	5	Daylight	Clear	Ice	No improper driving	64		V1 was traveling NB on I95 when it hit a large patch of ice causing the operator to lose control. The veh spun out and collided with the median barrier causing heavy front end damage
13	07/07/16	Thursday	4:07 PM	Sideswipe, same direction	4	Daylight	Clear	Dry	History heart/epilepsy/fainting	31	61	Operator of V2 had a medical condition that caused the operator to lose control of the veh at which point it collided with V1 causing V1 to flip and go into the median.
14	07/09/16	Saturday	8:40 PM	Single vehicle crash	5	Dark - lighted roadway	Rain	Wet	No improper driving	21		Operator of V1 stated he lost control of the vehicle due to the weather conditions and collided with the median barrier
15	12/24/16	Saturday	2:40 PM	Single vehicle crash	3	Daylight	Rain	Wet	Unknown	16		V1 left the roadway left for unknown reason and collided with the crash attenuator with its passenger side

Crash Data Summary Table I-95 Left Departure Crashes in Newburyport 2015 - 2017												
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#	mm/dd/yy	Day	hh:mm	Type	#	Type	Type	Type	Type	#	#	
16	01/09/17	Monday	3:40 PM	Angle	3	Daylight	Clear	Dry	Failure to keep in proper lane or running off road	20	64	Cross Median Crash. Operator of V1 was traveling North on I95 when operator noticed the front end started to shake. Operator stated the vehicle then went off the road to the left and entered the opposite side of the hwy where it proceeded to collide with V2
17	04/08/17	Saturday	5:41 PM	Single vehicle crash	3	Daylight	Cloudy	Dry	Over-correcting/over-steering	55		V1 was traveling SB on I95 when it lost control for unknown reason, spun out and collided with guardrail in the median
18	06/08/17	Thursday	12:32 PM	Sideswipe, same direction	5	Daylight	Clear	Dry	Failure to keep in proper lane or running off road	35	67	V1 lost control and collided with V2. Then the vehicle proceeded to collided with the median barrier, then the barrier on the right of the road and again back to the median barrier
19	10/31/17	Tuesday	8:03 PM	Single vehicle crash	5	Dark - lighted roadway	Cloudy	Dry	No improper driving	50		V1 lost control and lightly hit the barriers on either side of the highway before coming to a stop in the breakdown lane

*Courtesy Crash - A term used to describe a crash that occurs subsequent to a non-involved mainline driver who gives the right of way, contrary to the rules of the road, to another driver.

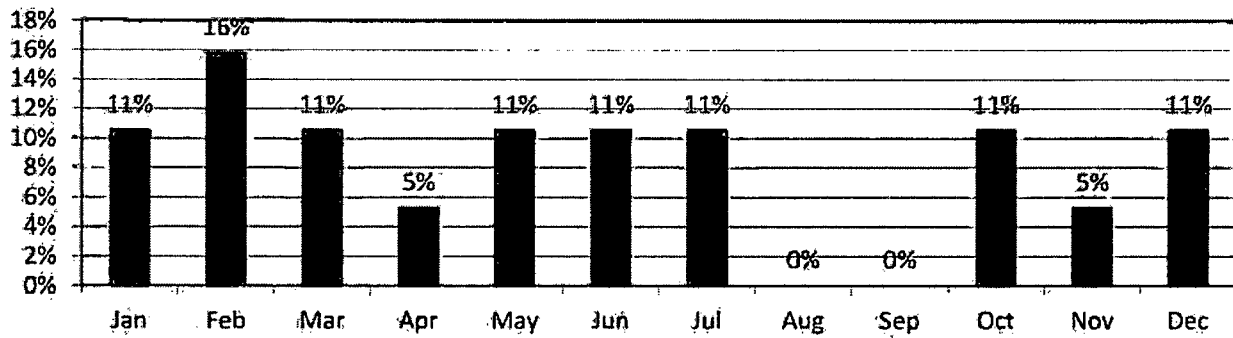
Injury levels: 5=Property Damage only, 4=Possible Injury, 3=Non-Incapacitating Injury, 2=Incapacitating Injury, 1=Fatal Injury

Summaries based on crash reports obtained from the MUNICIPALITY/STATE Police Department.

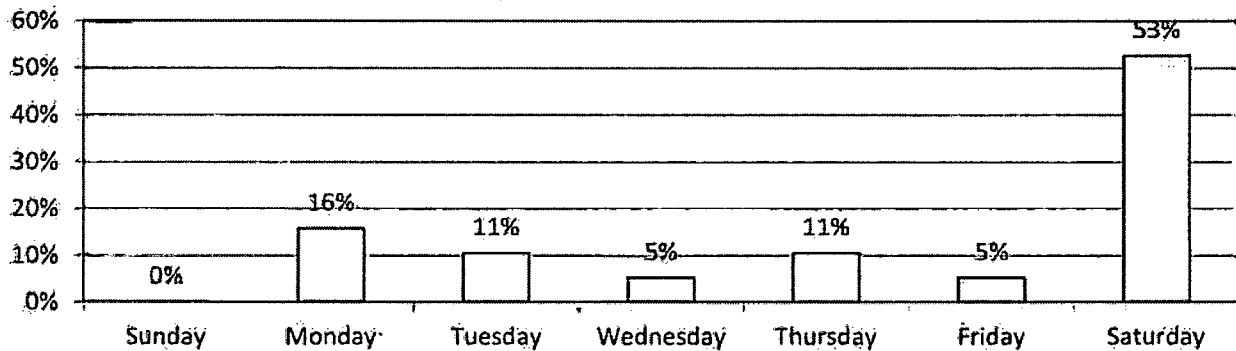
Crash Data Summary Charts

I-95 Left Departure Crashes in Newburyport

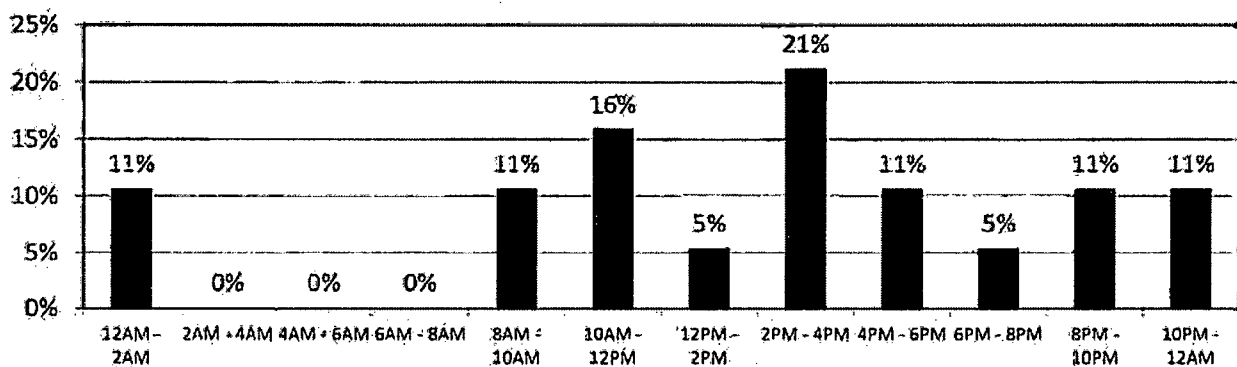
CRASH MONTH



CRASH DAY OF THE WEEK

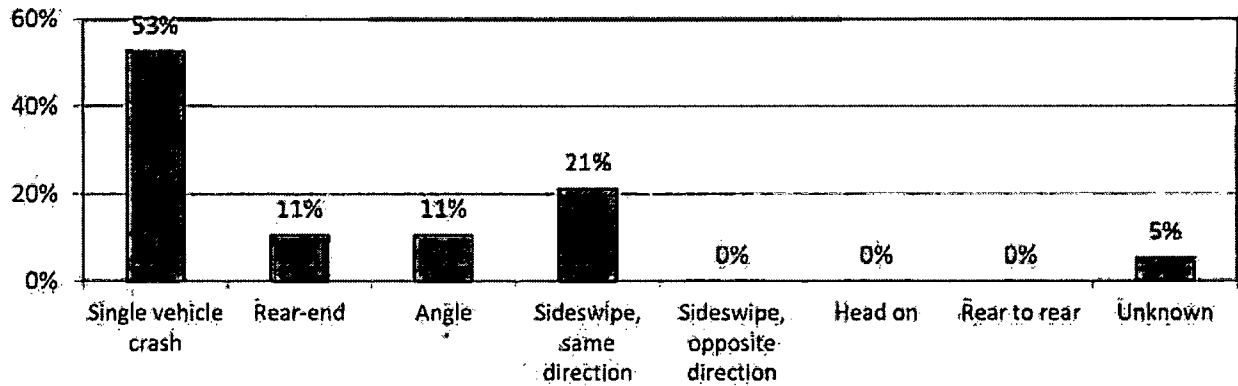


CRASH TIME OF DAY

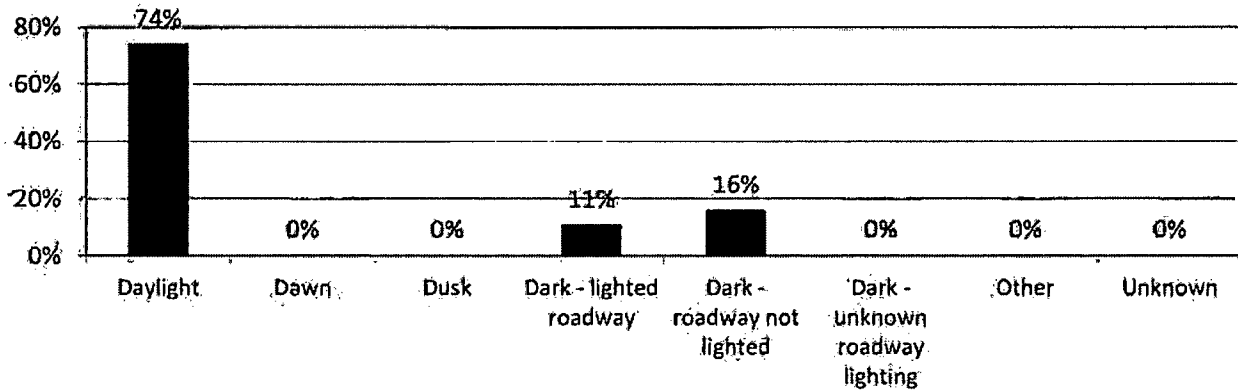


Crash Data Summary Charts I-95 Left Departure Crashes in Newburyport

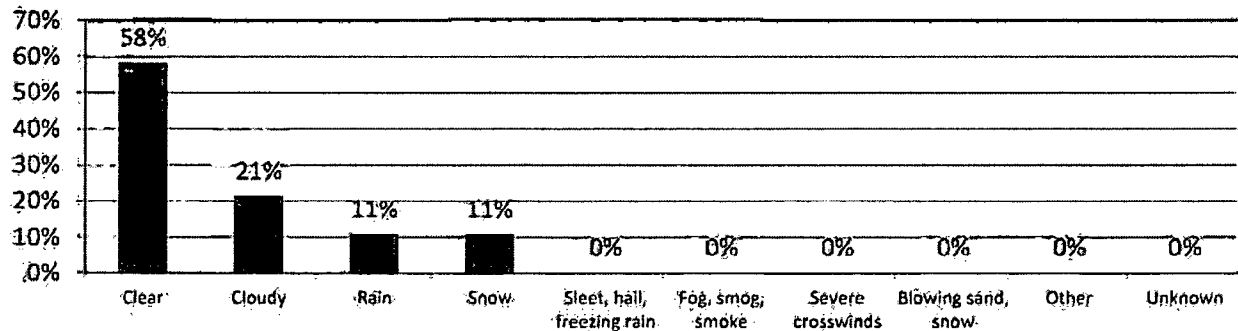
CRASH MANNER OF COLLISION



CRASH LIGHT CONDITION



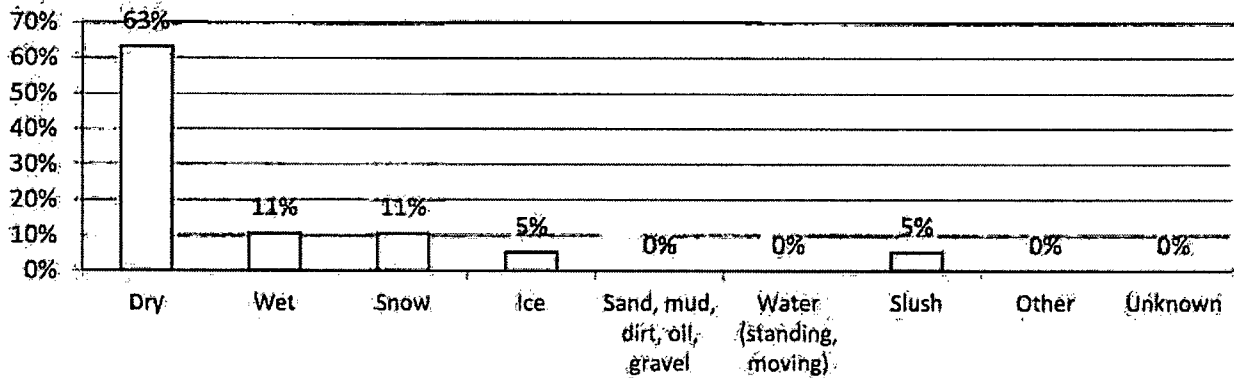
CRASH WEATHER CONDITION



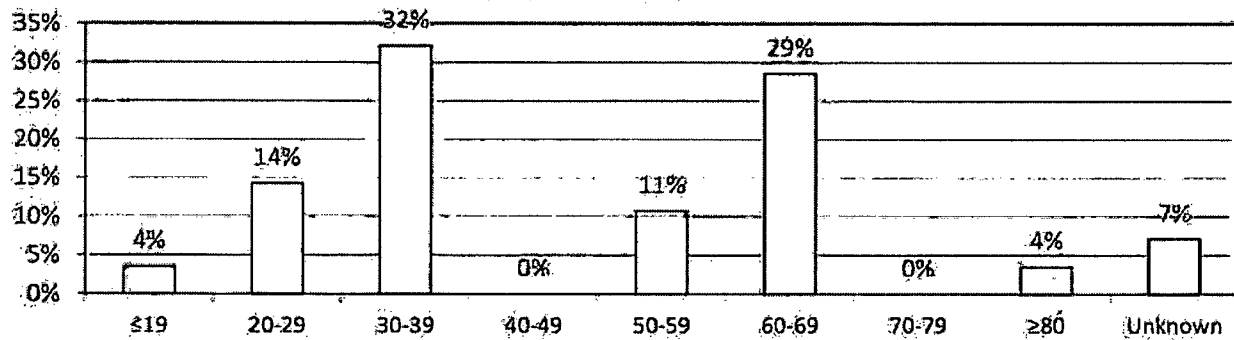
Crash Data Summary Charts

I-95 Left Departure Crashes in Newburyport

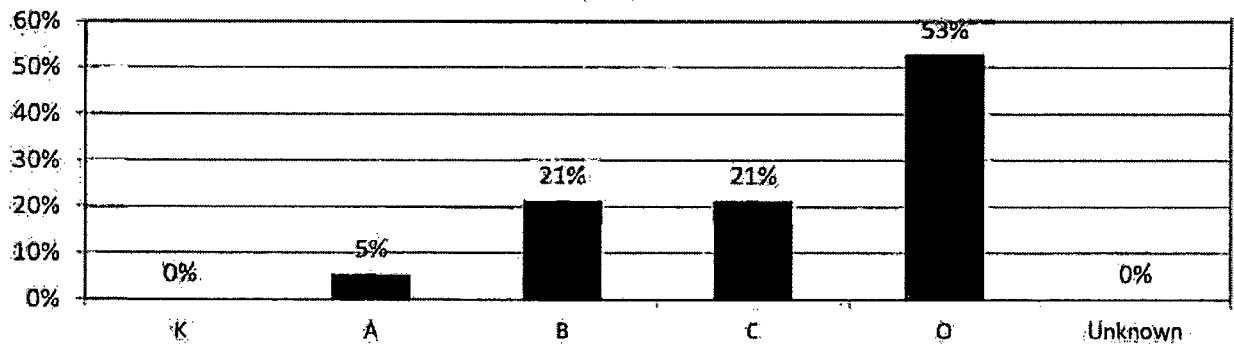
CRASH ROAD SURFACE



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