

ROAD SAFETY AUDIT

Route 18 (Bedford Street) from
Whitman Street to Central Square

Town of East Bridgewater

May 14, 2014

Prepared For:
MassDOT Highway Division



Prepared By:
BETA Group, Inc.



ENGINEERING SUCCESS **TOGETHER**

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Project Data

A Road Safety Audit for Route 18 (Bedford Street) from Whitman Street to Central Square in the Town of East Bridgewater was held on April 1, 2014 at East Bridgewater High School in East Bridgewater, MA. As indicated in Table 1, the audit team consisted of representatives from Federal, State, Regional and Local agencies and included a cross-section of engineering, planning, legislative and emergency response expertise.

Table 1. Participating Audit Team Members

Audit Team Member	Agency/Affiliation
Bonnie Polin	MassDOT Highway Division – Safety Section
Lisa Schletzbaum	MassDOT Highway Division – Safety Section
Corey O'Connor	MassDOT Highway Division – Safety Section
Frank DePaola	MassDOT Highway Division – Division Administrator
Promise Otaluka	FHWA
Jason Walters	MassDOT Highway Division – District 5
Barbara LaChance	MassDOT Highway Division – District 5 Traffic Operations
Edward C. Feeney	MassDOT Highway Division – District 5 Traffic
Pamela Haznar	MassDOT Highway Division – District 5 Projects
John Haines	East Bridgewater DPW
John Cowan	East Bridgewater Police
Rep. Geoff Diehl	State Representative
Bill McNulty	OCPC
Raymond Guarino	OCPC
David Foley	East Bridgewater Finance
George McCabe	East Bridgewater School Committee
Brian Kiely	East Bridgewater DPW
George Samia	East Bridgewater Town Administrator
Martin Crowley	East Bridgewater Selectman
Timothy Harhen	E. Bridgewater Fire Department
Dave Sheedy	E. Bridgewater Selectman
Charles Kilmer	OCPC
John A. Moretti	East Bridgewater Public Schools - Superintendent
Sen. Tom Kennedy	State Senator
Greg Lucas	BETA Group, Inc.
Justin Curewitz	BETA Group, Inc.

Background

The Federal Highway Administration 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. A Road Safety Audit was scheduled for Route 18 (Bedford Street) from Whitman Street to Central Square due to a number of safety concerns: the intersection of Route 18 and Whitman Street has been identified as a high crash location within the Old Colony Planning Council (OCPC) region; the intersection of Bedford Street and Central Street (Central Square) has previously been identified as a high crash location within the OCPC region; and the Route 18 corridor has been identified as a potential location for roadway and pedestrian safety improvements between Whitman Street and Central Square (MassDOT File No. 607941). The RSA is intended to identify potential short and long term safety improvements that can be made along the corridor, which can then be implemented through general maintenance for short term low cost improvements or incorporated into the future project to the greatest extent practicable.

Project Description

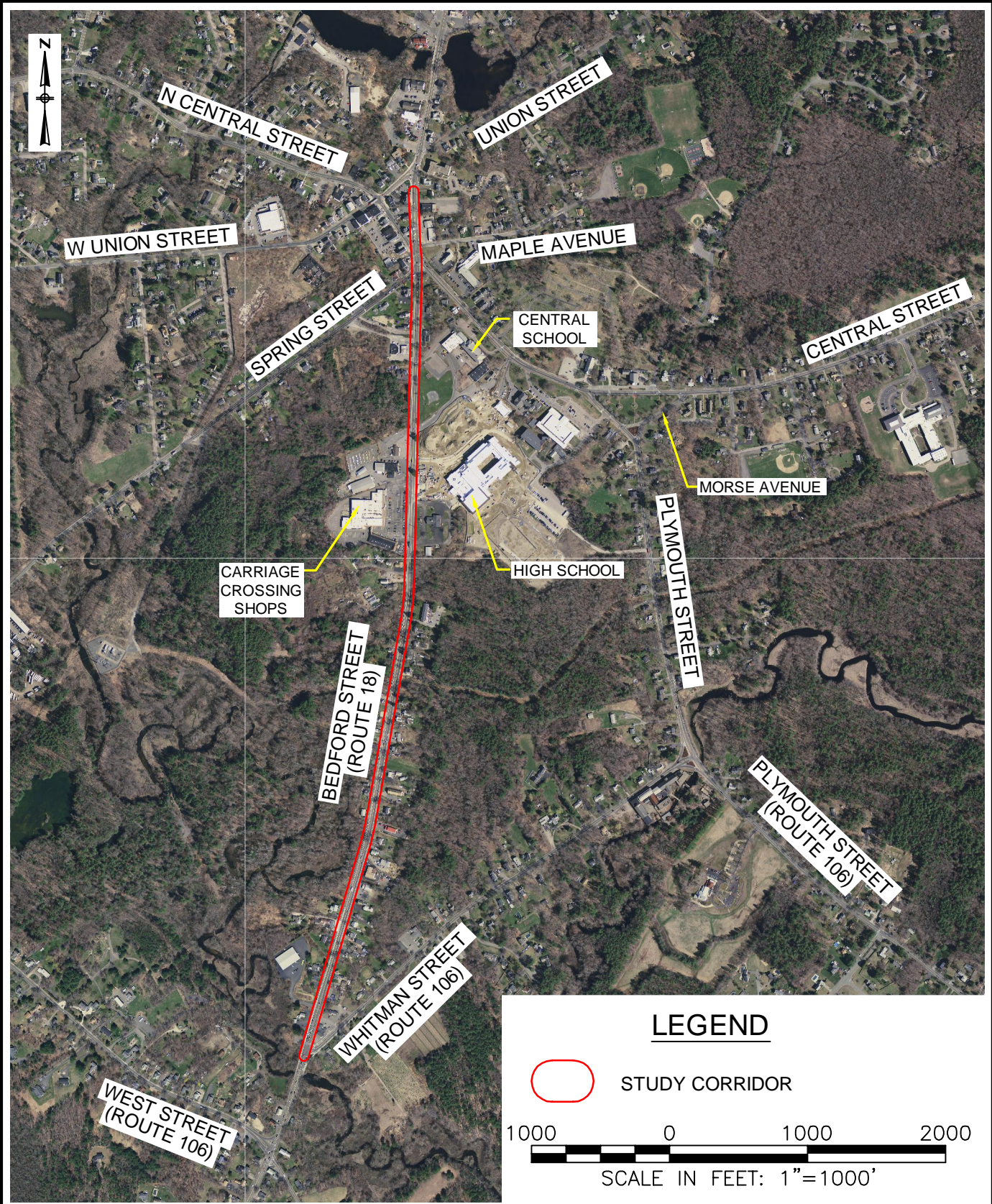
Route 18 (Bedford Street), shown in Figure 1, is an Urban Principal Arterial under State jurisdiction throughout the Town of East Bridgewater. Route 18 follows a north-south alignment and is signed as a north-south route. Route 18 provides a connection from East Bridgewater to Bridgewater and I-495 to the south, and to Whitman and Abington to the north.

Land use along Route 18 is a mix of commercial, residential and institutional. East Bridgewater High School is located along Route 18 with primary access via Plymouth Street to the east, but also has an access road for buses forming an unsignalized intersection with Route 18. The Carriage Crossing shopping center is located across from the high school entrance with two unsignalized driveways intersecting Route 18, and includes an Ocean State Job Lot, CVS/pharmacy, and a 6-screen cinema. Land use is generally more residential in the southern end of the study area near Whitman Street, and more commercial approaching Central Square to the north.

Intersections and roadway segments included in the audit are discussed in detail below, listed from south to north.

Route 18 (Bedford Street) at Whitman Street

Route 18 (Bedford Street) and Whitman Street form a T-intersection under traffic signal control. Route 18 has a 4-way signalized intersection with West Street and East Street approximately 800 feet south of Whitman Street. Route 106 follows West Street west of Bedford Street, has a short concurrency with Route 18 along Bedford Street, then follows Whitman Street east of Bedford Street. Whitman Street is functionally classified as an Urban Minor Arterial and is under Town jurisdiction. It was noted by Town personnel that the intersection was reconstructed and the traffic signal installed in 2005.



Road Safety Audit
Route 18 - Whitman Street to
Central Square
East Bridgewater, MA

Figure 1
Location Map



Route 18 at Whitman Street (looking north)

Route 18 provides two lanes in each direction in the vicinity of Whitman Street, with turns accommodated within shared lanes. A solid white edge line is provided to delineate a shoulder, but widths are not sufficient to safely accommodate bicycles. The northbound Route 18 approach provides two through lanes which continue through the intersection, but signage both encourages through vehicles to merge in advance of the intersection and states that the right lane is for right turns. Additional merge signage is provided on Route 18 north of the intersection, and the two lanes merge into one approximately 320 feet north of Whitman Street. The southbound approach widens from one lane to two lanes at the same point approximately 320 feet north of Whitman Street, and left turns to Whitman Street are accommodated from a lane shared with through vehicles.

Whitman Street westbound approaches Route 18 at an acute angle, with a slight curve at the approach to reduce the approach angle. Whitman Street generally provides one lane in each direction, but widens to provide two lanes at the intersection – a left turn lane and a right turn lane. Arrow and ONLY markings are provided in the right turn lane, but are not provided for the left turn lane.

Commercial properties in the vicinity of the intersection include an empty storefront that formerly housed a dance studio, which has access to Whitman Street only; and Joppa Market, which has access to both Route 18 and Whitman Street. Viking Recreation Center has a driveway on the west side of Route 18 approximately 270 feet north of Whitman Street.

Sidewalks are provided in the vicinity of the intersection along both sides of Route 18 and along the south side of Whitman Street. It was noted that sidewalks were constructed in conjunction with traffic signal installation. A grass area on the southeast corner of the intersection delineated by sidewalk provides channelization for the Whitman Street approach. Crosswalks are provided across the north and east legs of the intersection, and an exclusive pushbutton-activated pedestrian phase is provided.

Crash data provided by the East Bridgewater Police Department and summarized by MassDOT show 33 crashes occurred at the intersection for the three year period from 2011 to 2013. A crash data summary and a collision diagram are included in the Appendix. The most prevalent crash type were angle crashes, including 13 angle crashes between a northbound through vehicle and a vehicle departing Whitman Street. A closer look at these crashes reveals that most involved red light running, and several involved a driver who claimed to not see the red light. It was noted during a review of online imagery that the mast arm for northbound Route 18 traffic was replaced with a temporary post mounted signal. Local officials noted that the traffic signal constructed included a mast arm with overhead signals, and it was surmised that this mast arm was struck, knocked down, and subsequently replaced with a single post-mounted signal head at the mast arm foundation on the right side of the roadway. This signal head was supplemented by an existing post-mounted signal head on the left side of the roadway. Audit participants suggested that signal visibility issues created by the lack of overhead signals contributed to the crash history. MassDOT Highway Division District 5 noted that the mast arm was knocked down in July 2009 and replaced in July 2013. This includes the majority of the crash study period; it should be noted that no angle crashes occurred between a northbound through vehicle and a Whitman Street vehicle following re-erection of the mast arm.



Signal Post (June 2012)



Mast Arm (April 2014)

Additional crashes at the intersection include eleven rear-end crashes, occurring both approaching and departing the intersection. Rear-end crashes approaching the intersection include three on Whitman Street, two on Route 18 northbound, and one on Route 18 southbound. Three rear-end crashes occurred departing the intersection northbound; two involved vehicles slowed or stopped to turn left into the Viking Recreation Center, while the third involved a driver reaction to an uninvolved vehicle. One rear-end crash involved a vehicle departing the intersection on Whitman Street. Also of noted are three crashes where vehicles ran off the road. Two of these crashes involved wet roadways.

Route 18 (Bedford Street) from Whitman Street to Carriage Crossing Shops

As previously discussed, Route 18 narrows from four lanes to two lanes approximately 320 feet north of Whitman Street. Route 18 provides a single lane in each direction from this point north for approximately

0.6 miles until approaching the Carriage Crossing Shops and East Bridgewater High School. Land use along this roadway segment is primarily residential with some commercial uses.

Route 18 provides a single lane in each direction in this segment, with a solid white edge line delineating a shoulder that is not wide enough to accommodate bicycles. Sidewalks are provided on both sides of Route 18 at Whitman Street, but the sidewalk on the east side ends at a commercial driveway less than 200 feet north of the intersection. The sidewalk on the west side continues north, but ends approximately 1,000 feet north of Whitman Street. A worn path exists along the west side of Route 18 north of the sidewalk terminus, indicating pedestrian use.

Route 18 (Bedford Street) at Carriage Crossing Shops and East Bridgewater High School

Carriage Crossing Shops is a shopping center located on the west side of Route 18 housing an Ocean State Job Lot store, a CVS/pharmacy, a 6-screen cinema, and several smaller shops. The shopping center has two driveway curb cuts separated by approximately 400 feet. Route 18 widens to provide a short northbound left turn lane at both driveway entrances. The access road from East Bridgewater High School intersects Route 18 from the east approximately 150 feet north of the northern shopping plaza driveway, and additional minor commercial driveways intersect Route 18 on both sides.



Route 18 Southbound at Carriage Crossing Shops

As previously noted, the access road serving the high school intersecting Route 18 is intended for buses only. Drivers using the school's primary parking area and pickup and drop-off must enter and exit via Plymouth Street.

Sporadic segments of sidewalk are provided abutting area businesses along the west side of Route 18, including the Carriage Crossing Shops, but they do not provide a continuous, accessible path. No

sidewalks are provided along the east side of Route 18. A sidewalk is provided along the south side of the school access road which connects to internal walkways on the school grounds. A crosswalk is provided across the school access road, and an unsignalized crosswalk is provided across Route 18 approximately 130 feet north of the school access road. This crosswalk has an advanced warning sign northbound, but does not have an adjacent sidewalk on either side of Route 18. It was noted that a Subway sandwich shop currently under construction on the west side of Route 18 opposite the school driveway is expected to be a destination of pedestrian traffic from the school.

Crash data provided by the East Bridgewater Police Department and summarized by MassDOT show 15 crashes in the area of the Carriage Crossing Shops for the three year period from 2011 to 2013. A crash data summary and a collision diagram are included in the Appendix. It should be noted that the access road to the high school opened in 2013.

The most prevalent crash type were rear-end crashes, comprising 40% of all crashes. Six rear-end crashes occurred traveling southbound on Route 18; two involved slowed traffic, two involved a vehicle slowed or stopped to turn left, and two involved vehicles slowed for a detail officer during construction related to the high school. Also of note are four crashes involving vehicles exiting the shopping plaza; three collided with a southbound vehicle, while the fourth collided with a northbound vehicle.

Four crashes in this roadway segment involved a single vehicle running off the road and hitting a roadside object. Three of these crashes occurred on wet roadways and involved a driver operating under the influence, while the fourth involved a medical emergency.

Route 18 (Bedford Street) at Central Street, Maple Avenue and Spring Street (Central Square)

Route 18 (Bedford Street), Central Street, Maple Avenue and Spring Street form a six-legged intersection under traffic signal control. Route 18 and Central Street form the major intersecting approaches, with Maple Avenue and Spring Street forming minor approaches immediately adjacent to Central Street. Central Street and Spring Street are functionally classified as Urban Minor Arterials, while Maple Avenue is a local road. Central Street, Spring Street and Maple Avenue are under Town jurisdiction.

Route 18 northbound, Central Street eastbound, Spring Street and Maple Avenue all provide single lane approaches to the intersection. Route 18 southbound widens to provide an exclusive left turn lane to Central Street eastbound. Central Street westbound provides two narrow lanes which are unmarked and have no lane control signage, suggesting shared lanes; however, it should be noted that Central Street westbound does not provide two receiving lanes west of the intersection. A triangular concrete island channelizes the right turn from Route 18 northbound to Central Street eastbound, and also accommodates Spring Street traffic bound for Central Street eastbound.



Route 18 at Central Street (Central Square) looking southbound

The traffic signal provides protected/permissive phasing for the southbound left turn, followed by a phase for Route 18 and a phase for Central Street. Separate actuated phases are provided for both Spring Street and Maple Avenue, although it was suggested that the vehicle detection on Spring Street is malfunctioning and the phase is being called every cycle even when no demand exists.

Land use in the vicinity of the intersection is primarily commercial. A Prime gas station on the west side of Route 18 has separate entry and exit driveways that both open into the center of the intersection between the west leg of Central Street and Spring Street; it was noted that this station is quite busy because it is the only full service gas station in the area and features competitive gas prices. An insurance agency is located on the east side of the intersection between the east leg of Central Street and Maple Avenue, and a nursing and rehabilitation facility is located south of the insurance agency on Central Street. Intersection operations are also impacted by Cumberland Farms, which is located approximately 500 feet south of Central Street on the west side of Route 18, and by Central Elementary School, located opposite Cumberland Farms on the east side of Route 18.

Sidewalks are provided along the east side of Route 18 north of the intersection, along both sides of Central Street east of the intersection, and along the south side of Central Street west of the intersection. A sidewalk is also provided along the west side of Route 18 south of the intersection extending to the Cumberland Farms. Two crosswalks are provided across Route 18 in the center of the intersection, and crosswalks are provided across the east leg of Center Street and across both Spring Street and Maple Avenue. An exclusive pushbutton-activated pedestrian phase is provided. A crosswalk across the north leg of the intersection crosses approximately 100 feet north of the southbound stop line, which creates conflicts between pedestrians and queued traffic. A similarly unprotected crosswalk exists approximately 80 feet in advance of the stop line on the west leg of Central Street.

Queuing from the intersection at Central Square affects unsignalized intersections in close proximity to Central Square. West Union Street and Union Street intersect Central Street approximately 400 feet northwest of Central Square, and Union Street continues to an intersection with Route 18 (Bedford Street) approximately 500 feet north of Central Square. Union Street, Central Street and Bedford Street form a triangle, as can be seen in Figure 1.

Crash data provided by the East Bridgewater Police Department and summarized by MassDOT show 50 crashes occurred at the intersection for the three year period from 2011 to 2013. A crash data summary and a collision diagram are included in the Appendix. The most prevalent crash type were rear-end crashes, comprising 64% of all crashes. Of particular note are 23 rear-end crashes on Route 18 northbound. Crashes may be the result of signal visibility deficiencies, or may signify signal clearance violations and variances in driver aggression. Two rear-end crashes occurred northbound departing the intersection, one of which involved a vehicle that stopped for a pedestrian crossing the crosswalk that is located in advance of the southbound stop line on this leg. Three rear-end crashes occurred on the Spring Street approach, two on the Route 18 southbound approach, and one each on the Central Street approaches.

Two rear-end crashes occurred involving vehicles slowed or stopped to make a left turn. One involved a northbound vehicle waiting to turn left into Cumberland Farms, while the other involved a northbound vehicle waiting to turn left onto Central Street. Four angle crashes occurred between left turning vehicles and opposing through vehicles in the intersection – three involving northbound left turns, and one involved a southbound left turning vehicle.

Four crashes involved vehicles entering or departing the Cumberland Farms: the aforementioned rear-end crash, a crash between a southbound through vehicle and a vehicle departing Cumberland Farms, and two crashes involving a southbound through vehicle and a pedestrian crossing Route 18. Two crashes occurred between northbound vehicle and a vehicle departing the Central School, while one involved a westbound vehicle on Central Street and a vehicle departing Sachem Skilled Nursing. Finally, two crashes involved bicyclists within the intersection.

Audit Observations

Following a brief introduction to the RSA process and a summary of existing geometry and crash information, the audit participants were asked to discuss safety issues along Route 18 between Whitman Street and Central Square. The review of existing intersection conditions included a review of aerial photos and Google Street View images, during which time audit participants offered observations on safety issues. A summary of those major safety considerations is as follows:

Route 18 (Bedford Street) at Whitman Street

- Bicycle Accommodation – Accommodation is not provided for bicycles at the intersection. Shoulders, where provided, are of an inadequate width for accommodation.
- Pedestrian Accommodation – Sidewalks, crosswalks and pedestrian pushbuttons are provided at the intersection, but sidewalks end north of the intersection on both sides of Route 18.
- Signage – Several items related to existing signage were noted.
 - Pedestrian warning signage is provided on both Route 18 approaches in advance of Whitman Street. Pedestrian warning signs are not typically posted in advance of crosswalks under full signal control, and may add confusion for drivers suggesting that they should yield for pedestrians despite the traffic signal control.
 - A W4-2 Lane Ends (merge) sign on Route 18 northbound in advance of the intersection incorrectly suggests that drivers must merge before the intersection, when both northbound lanes continue through the intersection. A crash on this approach may have involved drivers changing lanes, although exact details of the crash were not available.
 - The aforementioned pedestrian warning sign, merge sign and a “Right Lane for Right Turn” sign on the northbound approach are closely spaced and create sign clutter for the approaching motorist. The “Right Lane for Right Turn” sign may incorrectly suggest to drivers that the right lane is for right turning traffic only, a message that is supported by the merge sign.
 - No street name signs are provided at the intersection. It should be noted that directional signs are provided for Route 106 on all approaches.



Sign Clutter approaching Whitman Street

- **Drainage** – It was noted that flooding occurs in the southbound lanes during heavy rains, and that a drainage manhole in the center of the intersection was changed to a catch basin to alleviate flooding following completion of intersection improvements. 21% of crashes occurred on wet roadways, which is similar to the percentage distribution of wet roadway crashes along the corridor and at Central Square.
- **Red Light Running** – A history of red light running was noted at the intersection, but the 23 crashes that occurred between northbound through vehicles and westbound left turning vehicles is most likely attributed to the lack of overhead signals facing northbound traffic following a mast arm knockdown in July 2009, especially considering the lack of the same type of crashes in the remainder of 2013 following mast arm re-erection in July of that year. Red light running can also suggest the potential for clearance time deficiencies.
- **Overhead Signals** – In addition to the lack of overhead signals facing Route 18 northbound, audit participants also noted the lack of overhead signals facing the Whitman Street approach. Only one of the 23 crashes between northbound through vehicles and westbound left turning vehicles identified the westbound vehicle as the one that ran the red light.
- **Whitman Street Lane Usage** – It was suggested that vehicles departing Whitman Street use both lanes to turn left to Route 18 southbound, which can be accommodated by the two southbound receiving lanes but is not expected because signage and markings designate the right lane as an exclusive right turn lane to Route 18 northbound. No crashes appear to be attributable to this potential safety concern.
- **Truck Turns** – It was suggested that trucks turning right from Route 18 northbound encroach on the northbound left lane, and that trucks turning left from Whitman Street encroach on the westbound right lane. One crash on Whitman Street involved a bus turning right sideswiping a vehicle turning left onto Route 18 southbound. Trucks cannot turn right from Whitman Street onto Route 18 northbound without encroaching in other lanes.

Route 18 Corridor

The following items were identified as safety considerations along Route 18 between Whitman Street and Central Square, including in the vicinity of the Carriage Crossing Shops and the East Bridgewater High School.

- **Pedestrian Accommodations** – The lack of consistent pedestrian accommodations along Route 18 was of significant concern to audit participants. Sidewalks are sporadically provided, and do not provide a continuous, accessible path along the roadway edge. Midblock crossings across Route 18 are provided near East Bridgewater High School and near Cumberland Farms and the Central School, but do not have consistent warning



Worn path indicates pedestrian use

signage and do not have receiving sidewalks with wheelchair ramps on both sides of the roadway. A worn path along the west side of Route 18 where no sidewalk is present indicates that pedestrian demand exists along the corridor.

- **Bicycle Accommodation** – Accommodation is not provided for bicycles along Route 18. Shoulders, where provided, are of an inadequate width for accommodation.
- **Central School Entrance** – The access driveway from Route 18 to the Central School has Do Not Enter signage, but vehicles were observed on the day of the audit entering via this driveway, likely to use the Central School parking lot as a cut-through to avoid Central Square. Although no crashes appear to be attributed to this action, it creates a safety concern due to unexpected driver behavior on Route 18 and undesirable cut-through traffic through the school property.
- **Route 18 School Traffic** – It was noted that parents park along the east side of Route 18 as well as in the Carriage Crossing shopping center parking lot to pick up and drop off high school students. This behavior is likely the result of the lack of direct access from Route 18 to designated pick-up/drop-off areas on the east side of the school; the noted bottleneck at the designated pick-up, drop-off area, which some audit participants commented can be 20 minutes; and the desire of parents to continue along Route 18 after picking up or dropping off their student. Vehicles stopped along the east side of Route 18 create a potential obstruction to through traffic, while pickups and drop-offs in the shopping center parking lot require students to cross Route 18 where no crosswalks or warning for drivers are provided. The Carriage Crossing shops are also a destination for students after school, or in the future during the school day if the high school becomes an open campus for some students.
- **Pavement Markings** – Markings are generally faded along the corridor, including crosswalk markings. This reduces adherence and can create confusion over intended lane assignments, and reduces visibility and awareness of pedestrian crossings.
- **Crosswalk Signage** – A tree on Route 18 shadows the existing crosswalk sign, making it difficult to see on sunny mornings.
- **Lighting** - It was suggested that lighting is insufficient along the corridor, especially at pedestrian crossings.
- **Plymouth Street Queuing** – Although not specifically related to Route 18, it was noted that queues extend along Plymouth Street from the high school entrance to Morse Avenue during peak periods due to pickup and drop-off demand.

Route 18 (Bedford Street) at Central Street, Maple Avenue and Spring Street (Central Square)

- **Central Street Lane Configuration** – It was suggested that the two lane Central Street westbound approach has operational impacts created by the lack of lane assignments. The lack of a protected phase for left turns requires left-turning vehicles to wait in the left lane, which in turn requires through vehicles to also wait or shift to the right lane. When no left-turning vehicles are present, through vehicles use both lanes, but then must merge through the intersection to a single receiving

lane westbound. Driver behavior related to lane configuration may be a factor in one sideswipe crash on the westbound approach, as well as in a head-on crash on the west leg of the intersection.

- Intersection Configuration and Driver Confusion – A number of items related to the configuration of the intersection and its potential to contribute to driver confusion.
 - The lack of lane configuration signage was noted to create confusion intersection wide and could lead to sideswipe crashes.
 - The vastness of the intersection creates an uncontrolled environment while traversing the intersection, which can be potentially confusing.
 - A driver traveling northbound through the intersection has three potential left turn destinations within the intersection: Spring Street, the Prime gas station, and Central Street. A following driver may expect a vehicle with its left directional to turn at Central Street, then be surprised when they stop sooner to turn into the gas station. Some of the 23 rear-end crashes on Route 18 northbound at the intersection may be related to this potential confusion.
- Clearance Times – Clearance times were noted to be potentially inadequate due to the history of northbound rear-end crashes. It was also noted that clearance times for Maple Avenue are inadequate because an audit participant that entered the intersection from Maple Avenue during the green interval was still in the intersection when Spring Street received the green.
- Signal Visibility – Three issues related to signal visibility potentially contribute to the history of northbound rear-end crashes.
 - A queued truck can block visibility of the overhead signals for northbound traffic. The uphill grade of Route 18 on the northbound approach exacerbates this concern.
 - Tree branches along the roadway edge potentially obstruct signal visibility when leaves are present.
 - Overhead wires crisscrossing the intersection potentially block visibility of overhead signal indications.
 - The proximity of the northbound facing signals to the northbound stop line results in the signals no longer being visible to drivers once a northbound vehicle passes Spring Street. This may cause confusion for drivers as they travel through the intersection, and drivers waiting to make a permissive left turn onto Central Street have no indication whether the signal is still green or has turned red.
- Traffic Congestion – Queues exist along both Route 18 and Central Street during peak periods. It was noted that southbound queues extend through the unsignalized intersection at Union Street to the East Bridgewater Library, and that northbound queues extend past the High School driveway.

- Gas Station – The Prime gas station within the intersection impacts operations of the intersection. Signage restricts the southern driveway to exit only, but vehicles have been observed entering via this driveway. It was also noted that the competitive pricing and full service create customer demand, and that waiting vehicles have been observed queuing into the intersection. It was also suggested that the R5-1 Do Not Enter and R5-1a Wrong Way signs for the southern driveway of the gas station may be confusing and suggest that they are intended for Spring Street or for Route 18 southbound.
- Signage – The angle of intersection between Route 18 and Central Street creates challenges related to visibility of both signal heads and directional signage. The graphical left turn arrow sign intended for the southbound left turn lane is visible from both the Route 18 southbound and Central Street eastbound approach, which may create confusion for vehicles on the single lane Central Street eastbound approach. It was also noted that directional guide signage for Route 18 intended for Central Street traffic is visible from Route 18.
- Emergency Pre-Emption – The lack of emergency pre-emption was noted as a safety issue, especially when congestion impedes passage by emergency vehicles. It was noted that East Bridgewater has plans to upgrade vehicles with pre-emption emitters, a process that would be expedited if more traffic signals in East Bridgewater had pre-emption capabilities. It was also noted that neighboring towns have emitters.

- Mid-block Crosswalk – Crosswalks on the west leg of Central Street and on the north leg of Route 18 cross mid-approach rather than after the stop line within the intersection limits. This location creates an unexpected condition for approaching drivers, and one rear-end crash departing the intersection was attributed to a vehicle stopping for a pedestrian.



Crosswalk across the north leg of Route 18

- Signal Phasing – It was suggested that the Spring Street phase is active every cycle, even when no demand is present, possibly due to loop damage from recent utility work on the approach. This reduces the efficiency of the traffic signal and may lead to increased driver frustration and aggression on all approaches. The number of approaches and phases creates a long cycle length, making it especially vulnerable to congestion of queuing.

Potential Safety Enhancements

Following review of available materials and a discussion of existing safety issues, audit participants were asked to consider improvements. Audit participants were encouraged to consider both short and long term improvements for each issue. 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	\$10,000–\$50,000
Long-term	>3 years	High	>\$50,000

Route 18 (Bedford Street) at Whitman Street

- Reconfigure the existing roadway pavement and/or widen the roadway to provide wider shoulders accommodating bicycles. It was suggested that the existing pavement width can be reconfigured to provide minimum 11-foot lanes and 5-foot shoulders, which meet MassDOT’s current standards for bicycle accommodation. If this cross section cannot be provided within the existing width, the intersection should be widened. This is a long-term, potentially high cost improvement if widening is required. It is assumed that this improvement can be completed in conjunction with corridor improvements.
- Remove pedestrian warning signs on Route 18 approaching Whitman Street. Pedestrian warning signage is not required and is typically not provided at signalized intersections, because the traffic signal controls vehicle actions during pedestrian actuation. Removal of the sign on the northbound approach would also reduce sign clutter. This is a short-term, low cost improvement.
- Remove the W4-2 Lane Ends (merge) sign on the northbound approach. This sign is not appropriate because drivers do not need to merge in advance of the intersection. This is a short-term, low cost improvement.
- Review traffic distribution and operation to determine if an exclusive right turn lane is warranted. New turning movement counts should be obtained to determine current demand. If an exclusive right turn lane is needed, existing “Right Lane for Right Turn” signage should be replaced with a “Right Lane Must Turn Right” sign, and markings should be revised to warn of the trap lane condition. This is a short-term, low cost improvement that includes traffic counts, traffic analysis, and the potential for signage and marking improvements.
- Install street name signs at the intersection. Street name signs should be provided for both Whitman Street and Bedford Street. This is a short-term, low cost improvement.

- Review drainage to determine if upgrades are necessary. Review of existing drainage is a short-term improvement. If existing drainage is inadequate based on MassDOT stormwater management guidelines, drainage upgrades could be incorporated into the future project as a long-term improvement.
- Study clearance times, and update if necessary. The existing yellow and all red clearance times should be determined from the existing traffic signal controller and compared to minimum requirements calculated based on the latest MassDOT guidance. If existing clearance times are insufficient, clearance times should be increased accordingly. This change in clearance times could reduce the number of rear-end crashes occurring at the intersections. This is a short-term, low cost improvement.
- Consider coordination between Whitman Street and West Street along Route 18. The MUTCD suggests that “traffic control signals within 1/2 mile of one another along a major route or in a network of intersecting major routes should be coordinated, preferably with interconnected controller units.” This is potentially a short-term, low cost improvement, but could accompany additional improvements along the corridor as a long-term improvement.
- Provide overhead signals for the Whitman Street approach. Overhead signals would increase visibility, which could reduce red-light running. This is a long-term, high cost improvement.
- Consider arrow and only markings for the left lane from Whitman Street to Route 18 southbound. Arrow and only markings in both lanes would confirm intended lane assignments. This is a short-term, low cost improvement.
- Review truck turning paths, and consider the need for widening and/or realignment. It was suggested that trucks encroach on adjacent lanes when turning from both Route 18 northbound and Whitman Street. Review of turning paths is a short-term improvement, while widening and/or realignment is a long-term, potentially high cost improvement.

Route 18 Corridor

- Provide sidewalks along both sides of Route 18 between Whitman Street and Central Square. The demand for pedestrian facilities is evident by the worn path along the west side of Route 18, as well as by the presence of the high school and commercial abutters. Sidewalks should be provided along both sides of the roadway to achieve adherence with current MassDOT standards. This is considered a long-term, high cost improvement that forms the basis for the proposed reconstruction project.
- Consider pedestrian desire lines, and provide accommodation meeting those desire lines. Current pedestrian travel patterns should be determined to ensure that existing or proposed facilities meet the needs of users. Existing mid-block crossings may be retained or relocated based on demand. Inclusion of revised mid-block crossings is a long-term improvement to be incorporated into the planned project.
- Provide upgraded pedestrian warning signage at existing mid-block crosswalk locations. Signage should include a W11-2 pedestrian warning sign with a downward facing arrow facing traffic in both directions at the crosswalk, and an advance sign with an “AHEAD” plaque in advance of the

crosswalk in both directions at a minimum. If necessary, trees should be trimmed in conjunction with sign placement. Signs should be provided as a short-term, low cost improvement in advance of future sidewalk, crosswalk and signage updates.

- Consider a Rectangular Rapid Flashing Beacon (RRFB) or Pedestrian Hybrid Beacon (HAWK) at proposed mid-block crosswalk location(s). RRFBs are supplemental flashers mounted with pedestrian signage. The HAWK is a pedestrian warning device that remains dark until pedestrian activation. Upon activation, the beacon cycles through flashing yellow, solid yellow, solid red, and flashing red. HAWK implementation is best teamed with education, since there will be a learning curve as drivers learn that flashing red means they can proceed after stopping if no pedestrians are visible. The preferred method of pedestrian control should be determined following further study. This is a long-term, high cost improvement that can be included in the planned project.
- Reapply pavement markings along the corridor, including crosswalk markings. This will increase adherence to intended lane assignments and increase visibility of crosswalk locations. This is a short-term, medium cost improvement.
- Reconfigure the existing roadway pavement and/or widen the roadway to provide wider shoulders accommodating bicycles. It was suggested that the existing pavement width can be reconfigured to provide minimum 11-foot lanes and 5-foot shoulders, which meet MassDOT's current standards for bicycle accommodation. If this cross section cannot be provided within the existing width, the corridor should be widened. This is a long-term, potentially high cost improvement if widening is required. It is assumed that this improvement will be completed in conjunction with sidewalk improvements.
- Relocate Do Not Enter signs at the Central School entrance to be more clearly visible from Route 18. More visible signage is intended to discourage cut-through traffic. This is a short-term, low cost improvement.
- Consider enforcement of one way exit restriction at the Central School driveway at Route 18 if upgraded signage proves ineffective at preventing cut-through traffic. This short-term improvement would increase safety by eliminating additional turns from Route 18 and preventing cut-through traffic through the Central School property. This improvement carries a cost of reduced enforcement elsewhere in the Town.
- Consider the potential to provide a designated pickup and drop-off area accessible from Route 18. It was suggested that an area could be accommodated on school grounds, which school personnel noted was considered and deemed unnecessary during school construction. A widened shoulder could be provided along Route 18 northbound, or other potential improvements could be considered to formalize and control pickup and drop-off. This is a long-term improvement that should be considered in the planned project.
- Upgrade street lighting along the corridor, where feasible. Street lighting should be reviewed as part of the project and upgraded where necessary to provide improved lighting. Lighting should be focused on proposed crosswalk locations.

Route 18 (Bedford Street) at Central Street, Maple Avenue and Spring Street (Central Square)

- Consider reconfiguration of the Central Street westbound approach to provide an exclusive left turn lane and a shared through/right turn lane. This configuration was suggested by an audit participant to prevent blockage of through vehicles by waiting left turning vehicles. It was also suggested that a protected westbound left turn be provided, but noted that this would further degrade overall capacity of the existing traffic signal. This is a short-term, low cost improvement.
- Consider changes to lane configuration based on traffic demand on all approaches. This improvement requires collection of updated turning movement counts to determine current demand. Lane designation signage should be provided on all multi-lane approaches based on intended lane configuration. This is a potential short-term, low cost improvement, but can be done as part of more extensive study and improvement recommendations.
- Study clearance times, and update if necessary. The existing yellow and all red clearance times should be determined from the existing traffic signal controller and compared to minimum requirements calculated based on the latest MassDOT guidance. If existing clearance times are insufficient, clearance times should be increased accordingly. This change in clearance times could reduce the number of rear-end crashes occurring at the intersections. This is a short-term, low cost improvement.
- Provide supplemental signals on the far side of the intersection for the Route 18 northbound approach. This improvement provides additional visibility of signal indications. Supplemental signals should be considered for all approaches, but must be carefully considered due to the potential for confusion from drivers exiting from Spring Street or Maple Avenue. This is a mid-term, medium cost improvement.
- Trim trees to improve signal visibility. Trees should be trimmed as a short-term, low cost improvement during peak growth this summer.
- Consider relocating overhead wires to eliminate obstruction of signal heads. This is a long-term, high cost improvement.
- Update signal timings to reduce congestion at the intersection, and consider phasing improvements aimed at reducing the overall cycle length. Current turning movement counts are necessary prior to implementation of timing improvements. This is a potential short-term, low cost improvement, but can be done as part of more extensive study and improvement recommendations.
- Reduce the southern (exit) driveway of the Prime gas station to discourage entering vehicles. Despite existing Do Not Enter and Wrong Way signage, vehicles currently enter via the southern driveway. Reconfiguration of the sidewalk, driveway and curbing can further discourage this behavior. This is a potential short-term, medium cost improvement that can be incorporated with other planned improvements as a long-term improvement.
- Remove the R5-1a Wrong Way sign from the southern (exit) driveway of the Prime gas station, and add a supplemental black-on-white “EXIT ONLY” plaque to the R5-1 Do Not Enter sign to clarify its intended restriction. This is a short-term, low cost improvement.

- Review signage to ensure it is visible only from the intended approach, and relocate signage that is potentially confusing. This short-term, low cost improvement applies to both overhead signage and ground-mounted destination signage.
- Provide emergency pre-emption at the intersection. This improvement will improve emergency vehicle access through the intersection. This is a mid-term, medium cost improvement.
- Provide upgraded pedestrian warning signage at existing mid-block crosswalk locations. Signage should include a W11-2 pedestrian warning sign with a downward facing arrow facing traffic in both directions at the crosswalk, and an advance sign with an “AHEAD” plaque where one can be accommodated in advance of the crosswalk in both directions. Signs should be provided as a short-term, low cost improvement in advance of future sidewalk, crosswalk and signage updates.
- Consider lighting upgrades at existing mid-block crosswalk locations. Lighting should be focused on the crosswalk location to increase awareness for approaching vehicles. This is a mid-term, medium cost improvement.
- Relocate mid-block crosswalks on the west leg of Central Street and the north leg of Route 18 to be included within the intersection as part of the exclusive pedestrian phase. This likely requires reconfiguration or widening of the island on the northwest corner to accommodate an accessible path and landings meeting ADA requirements. This is a long-term, high cost improvement that can be included with other sidewalk and pedestrian access improvements along Route 18.
- Review signal phasing to ensure that Spring Street is receiving a green indication upon actuation only. It was suggested that loops were damaged but recently replaced. If Spring Street is receiving a green indication every phase, this may be correctable within the existing traffic signal controller, or may require additional work involving loops. This is a short-term, low cost improvement.
- Consider widening the Route 18 northbound approach to provide a right turn lane. The need for this improvement should be weighed along with other lane configuration considerations following traffic data collection and analysis. This is a long-term, potentially high cost improvement.
- Consider Union Street in conjunction with Central Square, and study the potential for more radical adjustment of circulation patterns including the potential for one-way flow. This is a long-term, high cost improvement.

Summary of Road Safety Audit

Table 3 summarizes potential recommendations discussed by the audit team. The recommendations are categorized based on the potential safety payoff, as well as by time frame and cost. The safety payoff is a qualitative judgment of the effectiveness of the potential safety improvements. Each recommendation has a responsibility assigned to it stating whether MassDOT or the Town of East Bridgewater would be responsible for implementing the recommended improvement. The term “Project” refers to improvements that are assumed to be included or could reasonably be accommodated as part of planned improvements.

Table 3. Potential Safety Enhancement Summary

Safety Issue	Safety Enhancement	Responsibility	Safety Payoff	Time Frame	Cost
Route 18 (Bedford Street) at Whitman Street					
Bicycle Accommodation	Reconfigure the existing roadway pavement and/or widen the roadway to provide wider shoulders accommodating bicycles. Minimum 11-foot lanes and 5-foot shoulders should be provided.	Project	High	Long-term	High*
Signage	Remove pedestrian warning signs on Route 18 approaching Whitman Street.	MassDOT	Low	Short-term	\$500
Signage	Remove the W4-2 Lane Ends (merge) sign on the northbound approach.	MassDOT	Medium	Short-term	\$250
Signage	Review traffic distribution and operation to determine if an exclusive northbound right turn lane is warranted. If warranted, replaced "Right Lane for Right Turn" sign with "Right Lane Must Turn Right" sign, and revise markings.	MassDOT	Medium	Short-term	\$10,000
Signage	Install street name signs at the intersection.	MassDOT	Medium	Short-term	\$500
Drainage	Review drainage to determine if upgrades are necessary.	MassDOT	Medium	Short-term (Study)	\$5,000
		Project	Medium	Long-term (Implementation)	TBD*
Red Light Running	Study existing clearance times and make changes, if appropriate.	MassDOT	Medium	Short-term	\$2,000
Red Light Running	Consider coordination between Whitman Street and West Street along Route 18.	MassDOT	Low	Short-term (Study)	TBD
		Project	Medium	Long-term (Implementation)	TBD*
Overhead Signals, Red Light Running	Provide overhead signals for the Whitman Street approach.	MassDOT	Medium	Long-term	High
Whitman St Lane Usage	Consider arrow and only markings for the left lane from Whitman Street to Route 18 southbound.	MassDOT	Low	Short-term	\$3,000
Truck Turns	Review truck turning paths, and consider the need for widening and/or realignment.	MassDOT	Medium	Short-term (Study)	\$3,000
		Project	Medium	Long-term (Implementation)	TBD*

Table 3. Potential Safety Enhancement Summary

Safety Issue	Safety Enhancement	Responsibility	Safety Payoff	Time Frame	Cost
Route 18 Corridor					
Pedestrian Accommodations	Provide sidewalks along both sides of Route 18 between Whitman Street and Central Square.	Project	High	Long-term	High*
Pedestrian Accommodations	Consider pedestrian desire lines, and provide accommodation meeting those desire lines.	Project	High	Long-term	High*
Pedestrian Accommodations	Provide updated pedestrian warning signage at existing mid-block crosswalk locations. Trim trees if necessary.	MassDOT	Medium	Short-term	\$2,000
Pedestrian Accommodations	Consider a Rectangular Rapid Flashing Beacon (RRFB) or Pedestrian Hybrid Beacon (HAWK) at proposed mid-block crosswalk location(s).	Project	Medium	Long-term	RRFB: \$25,000 (per location) HAWK: \$75,000 (per location)
Pavement Markings, Ped. Accomm.	Reapply pavement markings along the corridor, including crosswalk markings.	MassDOT	Medium	Short-term	\$15,000
Bicycle Accommodation	Reconfigure the existing roadway pavement and/or widen the roadway to provide wider shoulders accommodating bicycles. Minimum 11-foot lanes and 5-foot shoulders should be provided.	Project	High	Long-term	High*
Central School Entrance	Relocate Do Not Enter signs at the Central School entrance to be more clearly visible from Route 18.	Town	Medium	Short-term	\$500
Central School Entrance	Consider enforcement of one way exit restriction at the Central School entrance if upgraded signage proves ineffective at preventing cut-through traffic.	Town	Medium	Short-term	\$0 (Reduced enforcement elsewhere)
Route 18 School Traffic	Consider the potential to provide a designated pickup and drop-off area accessible from Route 18. Audit participants recommended an area on school grounds or a widened shoulder along Route 18.	Town/Project	Medium	Long-term	TBD*
Lighting	Upgrade street lighting along the corridor, where feasible.	Project	Medium	Long-term	High*

Table 3. Potential Safety Enhancement Summary

Safety Issue	Safety Enhancement	Responsibility	Safety Payoff	Time Frame	Cost
Route 18 (Bedford Street) at Central Street, Maple Avenue and Spring Street (Central Square)					
Central St Lane Configuration	Consider reconfiguration of the Central Street westbound approach to provide an exclusive left turn lane and a shared through/right turn lane.	MassDOT	Medium	Short-term	\$3,000
Traffic Congestion, Lane Configuration and Designation	Consider changes to lane configuration based on traffic demand on all approaches. This requires collection of updated turning movement counts.	MassDOT	Medium	Short-term (Study)	\$8,000
		Project	Medium	Long-term (Implementation)	TBD*
Clearance Times	Study existing clearance times and make changes, if appropriate.	MassDOT	Medium	Short-term	\$2,000
Signal Visibility	Provide supplemental signals on the far side of the intersection for the Route 18 northbound approach. Supplemental signals should be considered for all approaches, but must be carefully considered due to the potential for confusion from drivers exiting from Spring Street or Maple Avenue.	MassDOT	Medium	Mid-term	\$15,000
Signal Visibility	Trim trees to improve signal visibility.	Town	Medium	Short-term	\$500
Signal Visibility	Consider relocating overhead wires to eliminate obstruction of signal heads.	Town	Low	Long-term	High
Traffic Congestion	Update signal timings to reduce congestion at the intersection, and consider phasing improvements aimed at reducing the overall cycle length.	MassDOT	Medium	Short-term	\$5,000
Gas Station	Reduce the southern (exit) driveway of the Prime gas station to discourage entering vehicles.	Project	Medium	Long-term	TBD*
Gas Station	Remove the R5-1a Wrong Way sign from the southern (exit) driveway of the Prime gas station, and add a supplemental black-on-white "EXIT ONLY" plaque to the R5-1 Do Not Enter sign to clarify its intended restriction.	MassDOT	Low	Short-term	\$500
Signage	Review signage to ensure it is visible only from the intended approach, and relocate signage that is potentially confusing.	MassDOT	Medium	Short-term	Low
Emergency Pre-Emption	Provide emergency pre-emption at the intersection.	MassDOT	Medium	Mid-term	\$20,000

Table 3. Potential Safety Enhancement Summary

Safety Issue	Safety Enhancement	Responsibility	Safety Payoff	Time Frame	Cost
Mid-block Crosswalk	Provide upgraded pedestrian warning signage at existing mid-block crosswalk locations.	Town	Medium	Short-term	\$2,000
Mid-block Crosswalk	Consider lighting upgrades at existing mid-block crosswalk locations.	Town	Medium	Mid-term	TBD (Medium)
Mid-block Crosswalk	Relocate mid-block crosswalks on the west leg of Central Street and the north leg of Route 18 to be included within the intersection as part of the exclusive pedestrian phase.	Project	High	Long-term	High*
Signal Phasing	Review signal phasing to ensure that Spring Street is receiving a green indication upon actuation only.	MassDOT	Low	Short-term	TBD (Low)
Lane Configuration and Designation	Consider widening the Route 18 northbound approach to provide a right turn lane.	Project	Medium	Long-term	High*
Traffic Congestion	Consider Union Street in conjunction with Central Square, and study the potential for more radical adjustment of circulation patterns including the potential for one-way flow.	MassDOT	Medium	Long-term	High

* Improvements to be incorporated into the proposed project are assumed to be included as part of the overall project cost.

Appendix A. RSA Meeting Agenda

Agenda

Road Safety Audit

East Bridgewater, MA

Route 18 – Whitman Street to Central Square

Meeting Location: Lecture Hall - East Bridgewater High School
143 Plymouth Street, East Bridgewater, MA

Tuesday, April 1st 2014

9:00 AM – 11:00 AM

Type of meeting: High Crash Location – Road Safety Audit
Attendees: Invited Participants to Comprise a Multidisciplinary Team
Please bring: Thoughts and Enthusiasm!!

9:00 AM **Welcome and Introductions and Discussion of Safety Issues**

- Crash history, Speed Regulations – provided in advance
- Existing Geometries and Conditions

9:45 AM **Site Visit**

- Route 18 from Whiteman Street to Central Square
- As a group, identify areas for improvement

10:30 AM **Discussion of Potential Improvements**

- Discuss observations and finalize safety issue areas
- Discuss potential improvements and finalize recommendations

11:00 AM **Adjourn for the Day – but the RSA has not ended**

Instructions for Participants:

- Before attending the RSA on April 1st, participants are encouraged to drive/walk through the area 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: April 1, 2014

Location: East Bridgewater – Rte 18 (Bedford Street) from Whitman Street to Central Square

Audit Team Member	Agency/Affiliation	Email Address	Phone Number
Greg Lucas	BETA	GLucas@BETA-Inc.com	781-255-1982
Justin Curewitz	BETA	JCurewitz@BETA-Inc.com	781-255-1982
Jason Walters	MassDOT D5	Jason.Walters@state.ma.us	508-884-4370
Corey O'Connor	MassDOT – Safety	Corey.oconnor@state.ma.us	857-368-9638
Bonnie Polin	MassDOT – Safety	Bonnie.Polin@state .ma.us	857-368-9636
Promise Otaluka	FHWA	Promise.Otaluka@state .ma.us	617-494-2598
Lisa Schletzbaum	MassDOT – Safety	Lisa.Schletzbaum@state.ma.us	857-368-9634
Barbara LaChance	MassDOT D5 Traffic Ops	Barbara.Lachance@dot.state.ma.us	508-884-4260
Edward C. Feeney	MassDOT D5 Traffic Ops	Edward.Feeney@state.ma.us	508-884-4242
John Haines	E. Bridgewater DPW	JHaines@ebmass.com	508-378-1620
John Cowan	E. Bridgewater Police	JCowan@ebmass.com	508-378-7316
Frank DePaola	MassDOT – Highway	Frank.Depaola@state.ma.us	857-368-8780
Pamela Haznar	MassDOT D5 Projects	Pamela.Haznar@state.ma.us	508-884-4239
Rep. Geoff Diehl	State Representative	Geoff.Diehl@mahouse.gov	781-252-0512
Bill McNulty	OCPC	WMcnulty@ocpcrpa.org	508-583-1833
Raymond Guarino	OCPC	RGuarino@ocpcrpa.org	508-583-1833
David Foley	E. Bridgewater Finance	dave@markalot.com	781-706-0093
George McCabe	E. Bridgewater School Com	Gmac8@aol.com	
Brian Kiely	E. Bridgewater DPW	BKiely@ebmass.com	508-378-1620
George Samia	Town Administrator	GSamia@ebmass.com	508-378-1600
Martin Crowley	Town of East Bridgewater	CrowleyMartin@hotmail.com	617-270-6186
Timothy Harhen	E. Bridgewater Fire Dept.	THarhen@ebfire.org	508-378-2071
Dave Sheedy	E. Bridgewater Selectman	SDaveJS@verizon.net	508-378-4888
Charles Kilmer	OCPC	CKilmer@ocpcrpa.org	508-583-1833
Sen. Tom Kennedy	State Senator	Thomas.P.Kennedy@masenate.gov	617-722-1200

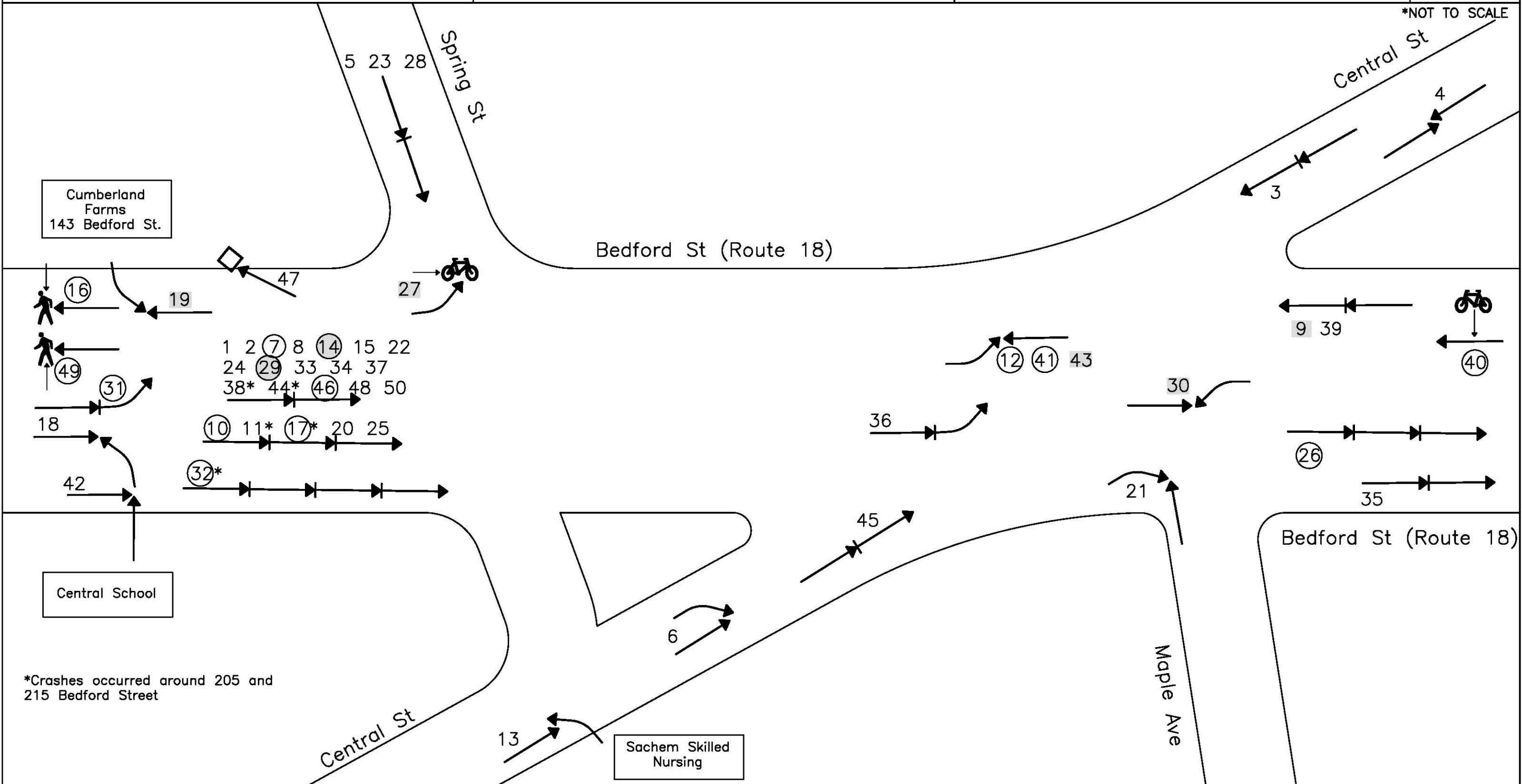
Appendix C. Detailed Crash Data

SYMBOLS	TYPES OF CRASH	SEVERITY
Moving Vehicle	Head on	Injury
Backing Vehicle	Rear End	Fatal
Non-Involved Vehicle	Angle	
Pedestrian	Turning Movement	
Bicycle	Sideswipe	
Animal	Out of Control	
Parked Vehicle	Night Time Crash	
Fixed Object		

East Bridgewater, MA
 Bedford St (Rt 18) at Central St
 REGION: OCPC

TIME PERIOD ANALYZED: 2011 - 2013
 SOURCE OF CRASH REPORTS: East Bridgewater Police Department
 DATE PREPARED: March 21, 2013
 PREPARED BY: CO

COLLISION DIAGRAM



Cumberland Farms
143 Bedford St.

Central School

Sachem Skilled Nursing

*Crashes occurred around 205 and 215 Bedford Street

Crash Data Summary Table
 Bedford Street (Route 18) at Central Street, East Bridgewater, MA
 2011 - 2013

Crash Diagram Ref #	Crash Date <i>m/d/y</i>	Crash Day	Time of Day	Manner of Collision <i>Type</i>	Light Condition <i>Type</i>	Weather Condition <i>Type</i>	Road Surface <i>Type</i>	Driver Contributing Code <i>Type</i>	Ages				Comments
									D1	D2	D3	D4	
1	1/31/11	Monday	8:46 AM	Rear-end	Daylight	Clear	Dry	Followed too closely	19	20			V1 claims that V2 stopped abruptly causing V1 to hit it.
2	2/3/11	Thursday	2:07 PM	Rear-end	Daylight	Clear	Dry	Unknown	19	21			V2 hit V1 while queuing for stop light.
3	4/27/11	Wednesday	10:59 AM	Rear-end	Daylight	Cloudy	Dry	Followed too closely	48	24			V1 at red light, V2 rear-ended it.
4	5/2/11	Monday	5:00 PM	Single Vehicle Crash	Daylight	Clear	Dry	Unknown	47	unk			V1 (EB) claims that V2 (WB, hit and run) struck the front of her car.
5	6/14/11	Tuesday	12:37 PM	Rear-end	Daylight	Rain	Wet	Fatigued/asleep	61	40			V1 stopped at red light. V2 "may have fallen asleep for a moment" and struck V1.
6	6/27/11	Monday	5:22 PM	Angle	Daylight	Clear	Dry	Failed to yield right of way	20	23			V2 changed lanes into V1.
7	9/10/11	Saturday	9:07 AM	Rear-end	Daylight	Clear	Dry	Unknown	31	36			V2 stopped in traffic for red light, V1 rear-ended it.
8	10/28/11	Friday	3:29 PM	Rear-end	Daylight	Clear	Dry	Followed too closely	68	39			V1 stopping for traffic at red light, V2 rear-ended it.
9	10/31/11	Monday	10:13 PM	Rear-end	Dark - lighted roadway	Clear	Dry	Unknown	19	unk			V1, at red light, was rear-ended by V2. V2 fled the scene.
10	12/13/11	Tuesday	2:06 PM	Rear-end	Daylight	Clear	Dry	Inattention	18	55	21		V3 rear-ended V2 into V1. V3 claims that brakes failed to work.
11	12/20/11		3:24 PM	Rear to Rear	Daylight	Other	Dry	Followed too closely	18	58	26		V1 rear-ended V2 into V3. V1 claims foot slipped off brake.
12	2/23/12	Thursday	2:54 PM	Head on	Daylight	Clear	Dry	Failed to yield right of way	33	25			Uninvolved SB left turning vehicle blocked V1's (NB) view of V2 (SB).
13	3/30/12	Friday	7:30 AM	Angle	Daylight	Clear	Dry	Failed to yield right of way	18	16			Courtesy Crash.* V2 exiting Sachem Skilled Nursing, V1 passed queue, over double yellow and hit V2.
14	4/5/12	Thursday	9:22 PM	Rear-end	Dark - lighted roadway	Clear	Dry	Inattention	23	18			V1 stopped in traffic, V2 did not. V2 may have been traveling at a high rate of speed.
15	4/7/12	Saturday	1:51 PM	Rear-end	Daylight	Clear	Dry	Unknown	24	28			V2 stopped at red light, V1 rear-ended it
16	5/18/12	Friday	3:48 PM	Single Vehicle Crash	Daylight	Clear	Dry	No Improper Driving	61				Pedestrian) began to cross the street toward Central School without looking.
17	6/7/12	Thursday	5:15 PM	Rear-end	Daylight	Rain	Wet	Followed too closely	19	59	37		V1 failed to stop for traffic hitting V2 into V3.
18	7/14/12	Saturday	9:54 AM	Head on	Daylight	Clear	Dry	No Improper Driving	75	48			V1 slowed to allow V2 to enter traffic but when SB traffic did not allow V2 to enter V1 proceeded forward just as V2 proceeded into its path.
19	7/17/12	Tuesday	11:56 PM	Angle	Dark - lighted roadway	Clear	Dry	No Improper Driving	24	21			V2 claims that witness vehicle traveling NB allowed him to enter traffic. V2 did not see V1 traveling SB.
20	8/8/12	Wednesday	11:29 AM	Rear-end	Daylight	Clear	Dry	Inattention	77	55	31		V3 did not see stopped traffic.
21	8/22/12	Wednesday	8:18 AM	Angle	Daylight	Clear	Dry	Disregarded traffic signs, signals, road markings	67	51			V2 (SB off central St) claims that light turned red while proceeding through intersection.
22	9/16/12	Sunday	12:39 PM	Rear-end	Daylight	Clear	Dry	Inattention	44	91			V2 did not see V1 stopped in traffic.
23	9/19/12	Wednesday	5:14 PM	Rear-end	Daylight	Other	Dry	Inattention	23	27			V2 stopped as signal changed from green to yellow, V1 did not.
24	10/9/12	Tuesday	12:49 PM	Rear-end	Daylight	Cloudy	Dry	Inattention	23	48			V1 stopped in traffic, V2 hit it.
25	10/16/12	Tuesday	2:15 PM	Rear-end	Daylight	Clear	Dry	Inattention	69	60	57		V3 could not stop in time and hit V2 into V3.

Crash Data Summary Table

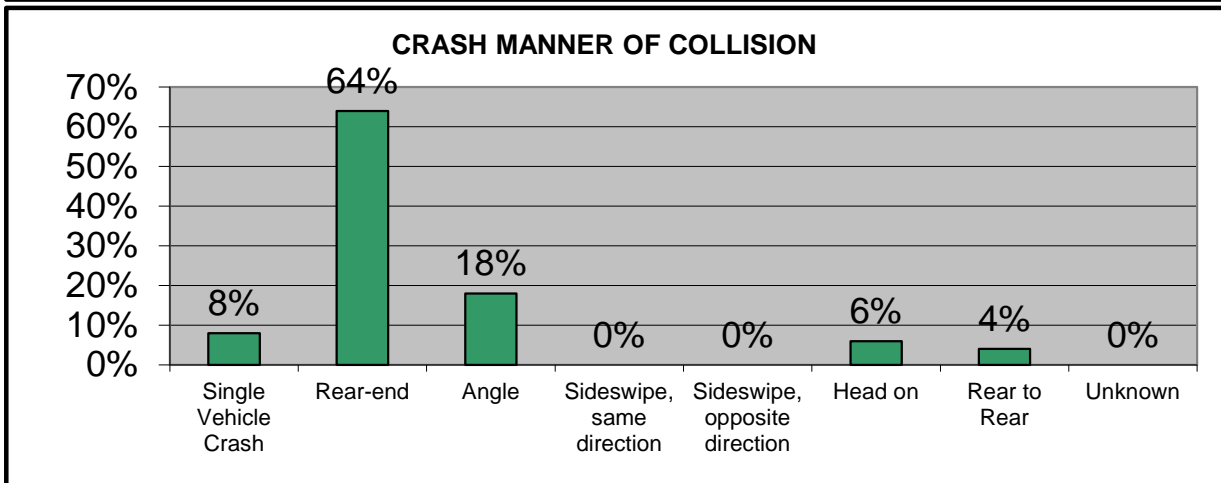
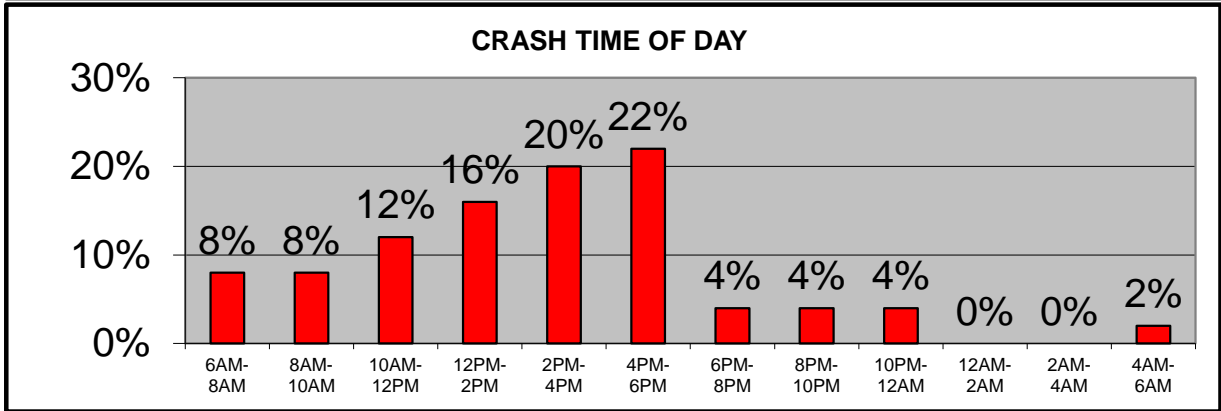
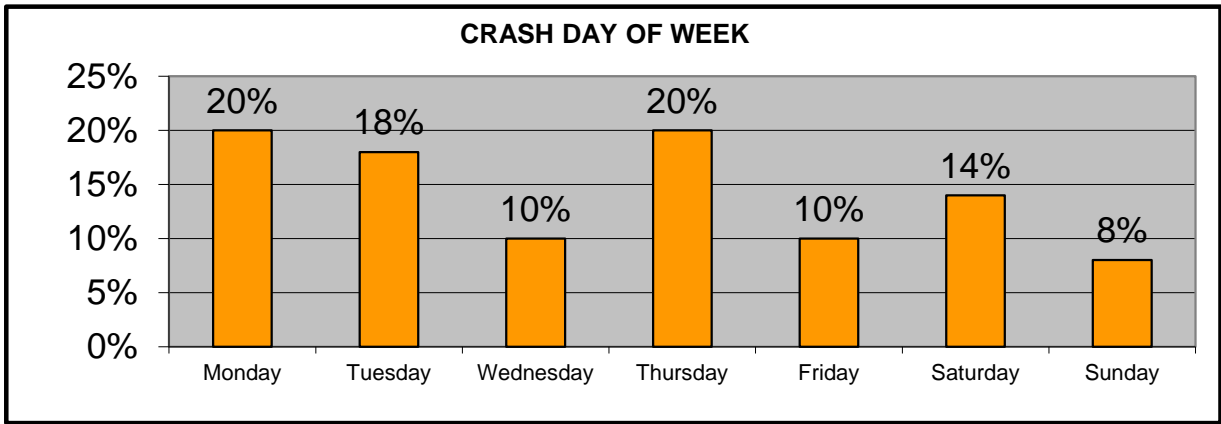
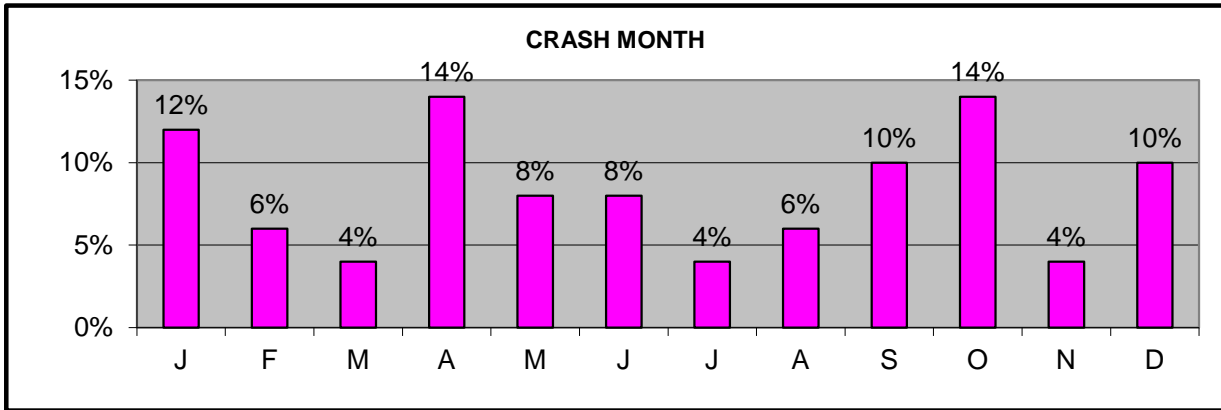
Bedford Street (Route 18) at Central Street, East Bridgewater, MA
2011 - 2013

Crash Diagram Ref #	Crash Date <i>m/d/y</i>	Crash Day	Time of Day	Manner of Collision <i>Type</i>	Light Condition <i>Type</i>	Weather Condition <i>Type</i>	Road Surface <i>Type</i>	Driver Contributing Code <i>Type</i>	Ages				Comments
									D1	D2	D3	D4	
26	11/20/12	Tuesday	7:52 AM	Rear to Rear	Daylight	Clear	Dry	No Improper Driving	26	20	69		V1 hit V2 into V1 while traveling through green light
27	12/6/12	Thursday	5:12 PM	Angle	Dark - lighted roadway	Cloudy	Dry	No Improper Driving	44				Bicyclist was traveling NB in SB lane and had faulty brakes.
28	12/17/12	Monday	3:03 PM	Rear-end	Daylight	Rain	Wet	Unknown	48	41			V2 hit V1 while queuing for stop light. V2 claims foot slipped off pedal.
29	1/3/13	Thursday	6:45 PM	Rear-end	Dark - lighted roadway	Clear	Dry	Followed too closely	51	19			V2 failed to stop for queued traffic.
30	1/13/13	Sunday	6:42 PM	Angle	Dark - lighted roadway	Cloudy	Wet	Failed to yield right of way	18	18			
31	1/16/13	Wednesday	1:49 PM	Rear-end	Daylight	Sleet, Hail, Freezing Rain	Wet	Followed too closely	52	22			V1 turning left into 143 Bedford St, V2 was unable to stop.
32	1/24/13	Thursday	3:22 PM	Rear-end	Daylight	Clear	Dry	Failed to yield right of way	69	45	73	22	V1, V2 and V3 stopped in traffic, V4 did not stop in time.
33	1/26/13	Saturday	11:19 AM	Rear-end	Daylight	Clear	Dry	Inattention	50	50			V2 could not stop in time.
34	2/24/13	Sunday	4:28 PM	Rear-end	Daylight	Snow	Wet	Inattention	17	31			V1 looked down at GPS and did not have time to stop.
35	3/9/13	Saturday	10:29 AM	Rear-end	Daylight	Clear	Wet	Unknown	69	21			V1 stopped for pedestrian in x-walk, V2 rear-ended V1.
36	4/2/13	Tuesday	4:51 PM	Rear-end	Daylight	Clear	Dry	Inattention	57	41			V1 slowing to turn left onto Central St, V2 rear ended it.
37	4/23/13	Tuesday	4:26 PM	Rear-end	Daylight	Clear	Wet	Followed too closely	21	49			V1 failed to stop for traffic hitting V2.
38	4/25/13	Thursday	7:19 AM	Rear-end	Daylight	Rain	Wet	Followed too closely	17	33			V1 failed to stop.
39	4/29/13	Monday	5:25 PM	Rear-end	Daylight	Clear	Dry	Unknown	23	unk			V1 stopped in traffic, V2 attempted a U-turn but rear-ended V1 in the process then fled.
40	5/6/13	Monday	11:10 AM	Angle	Daylight	Clear	Dry	No Improper Driving	45				V1 proceeded through green light, Bicyclist ran into the side of V1. V1 did not yield or look before entering roadway.
41	5/13/13	Monday	2:51 PM	Angle	Daylight	Clear	Dry	Failed to yield right of way	45	24			
42	6/10/13	Monday	4:59 PM	Angle	Daylight	Clear	Dry	Failed to yield right of way	66	38			
43	8/31/13	Saturday	8:39 PM	Head on	Dark - lighted roadway	Clear	Dry	No Improper Driving	47	78			
44	9/13/13	Friday	4:16 AM	Rear-end	Daylight	Cloudy	Dry	No Improper Driving	46	18			
45	9/15/13	Sunday	12:10 PM	Rear-end	Daylight	Clear	Dry	Inattention	64	20			V1 stopped in intersection to allow emergency vehicles proceed through, V2 did not realize V1 stopped.
46	10/17/13	Thursday	1:44 PM	Rear-end	Daylight	Clear	Dry	Inattention	59	40			V2 looked down for a second and rear-ended V1.
47	10/25/13	Friday	6:55 AM	Single Vehicle Crash	Daylight	Clear	Dry	No Improper Driving	51				V1 swerved out of the way of an unknown vehicle pulling out of the daycare.
48	10/31/13	Thursday	10:58 AM	Rear-end	Daylight	Cloudy	Dry	No Improper Driving	18	22			V1 stopped in traffic, V2 did not.
49	11/2/13	Saturday	1:21 PM	Single Vehicle Crash	Daylight	Clear	Dry	No Improper Driving	35				NB traffic stopped and left a gap for the crosswalk. Pedestrian crossed through gap into SB lane where she was hit by V1. V1 then veered right off the road and struck signs and utility pole #70.
50	12/2/13	Monday	4:00 PM	Rear-end	Daylight	Cloudy	Wet	Unknown	18	71			V2 stopped at red light, V1 rear-ended it

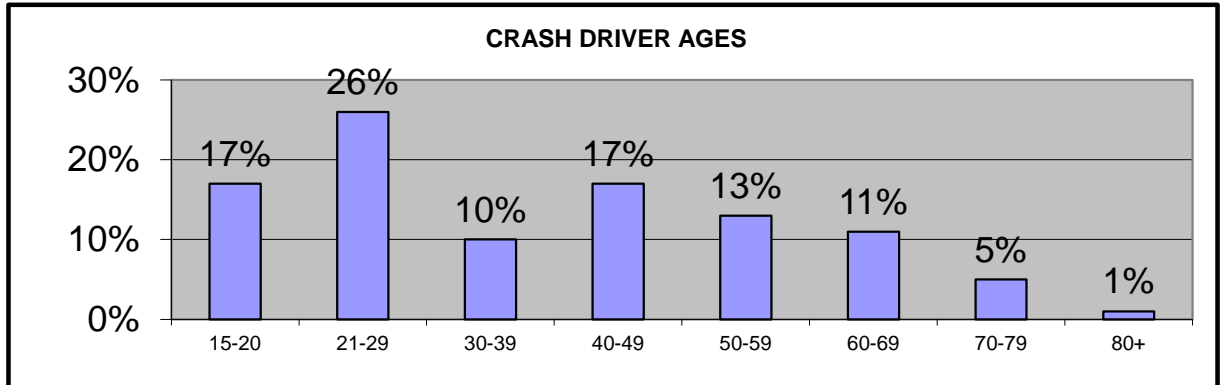
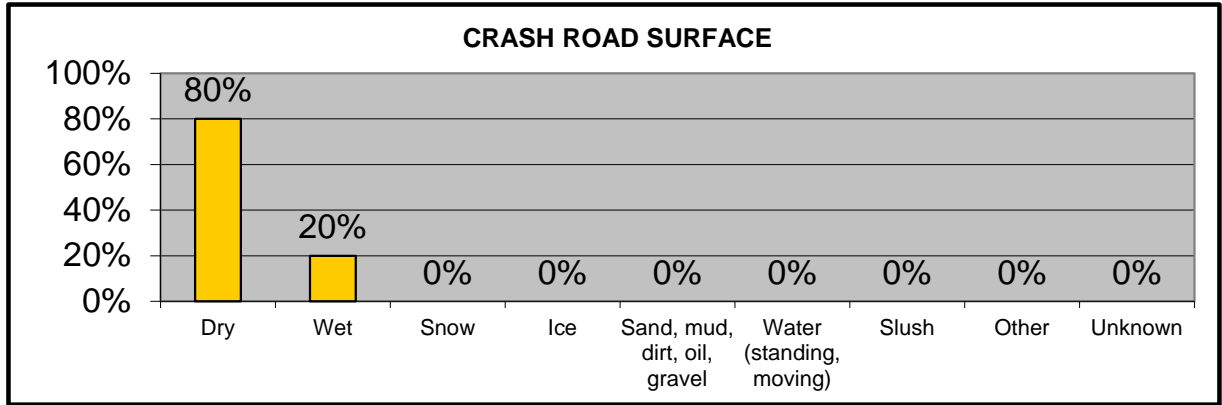
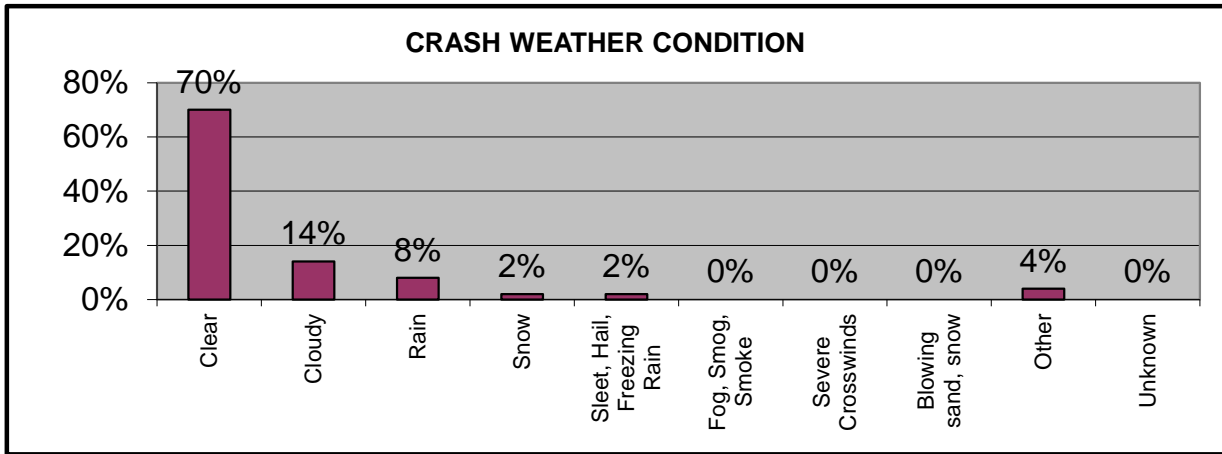
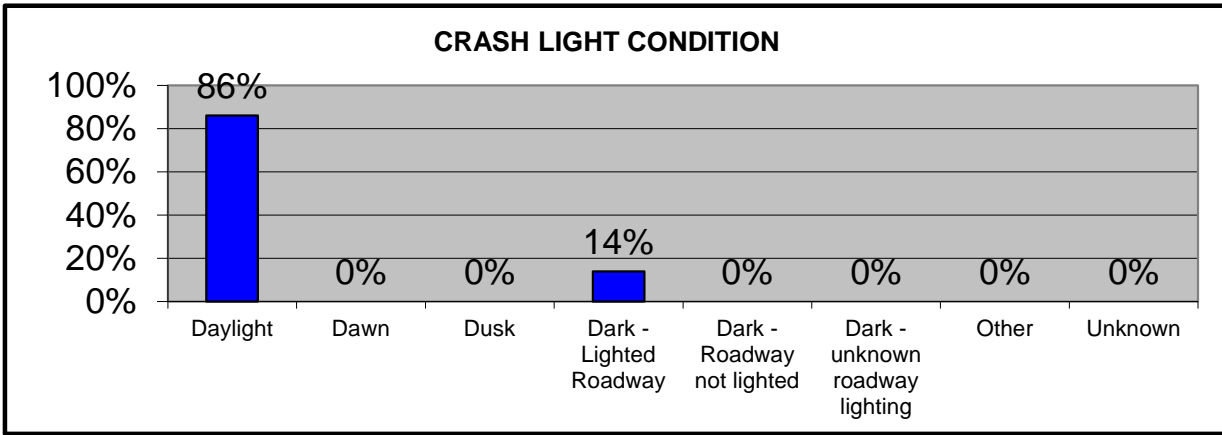
*Courtesy Crash - A term used to describe a crash that occurs subsequent to a non-involved mainline driver who gives the right of way, contrary to the rules of the road, to another driver.

Summary based on Crash Reports obtained from the East Bridgewater Police Department

Crash Data Summary Tables and Charts
 Bedford Street (Route 18) at Central Street, East Bridgewater, MA



Crash Data Summary Tables and Charts
 Bedford Street (Route 18) at Central Street, East Bridgewater, MA



SYMBOLS	TYPES OF CRASH	SEVERITY
Moving Vehicle	Head on	Injury
Backing Vehicle	Rear End	Fatal
Non-Involved Vehicle	Angle	
Pedestrian	Turning Movement	
Bicycle	Sideswipe	
Animal	Out of Control	
Parked Vehicle	Night Time Crash	
Fixed Object		

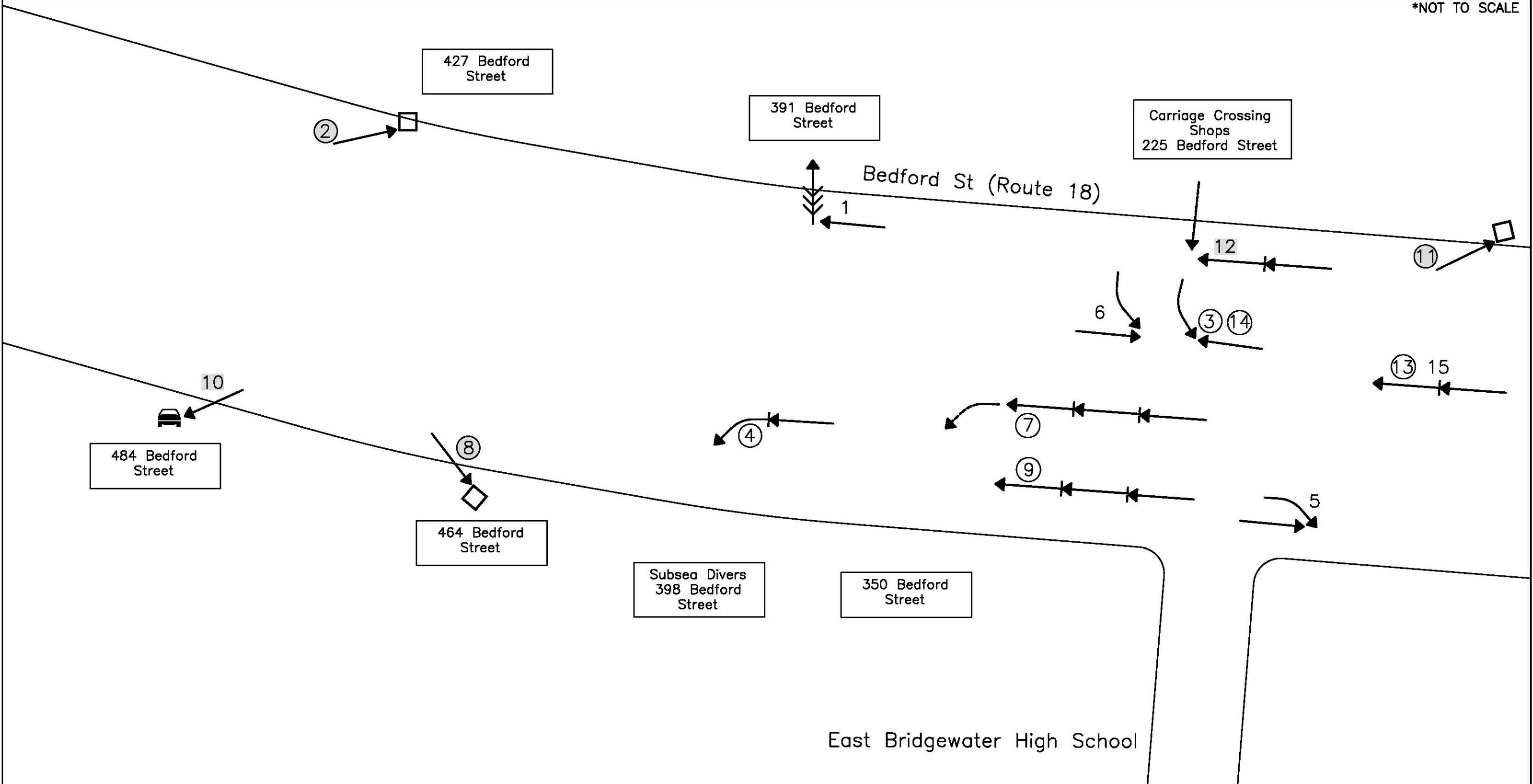
East Bridgewater, MA

Bedford St (Rt 18) Corridor from Central St to Whitman St
REGION: OCPC

TIME PERIOD ANALYZED: 2011 - 2013
SOURCE OF CRASH REPORTS: East Bridgewater Police Department
DATE PREPARED: March 21, 2013
PREPARED BY: CO

COLLISION DIAGRAM

*NOT TO SCALE



Crash Data Summary Table

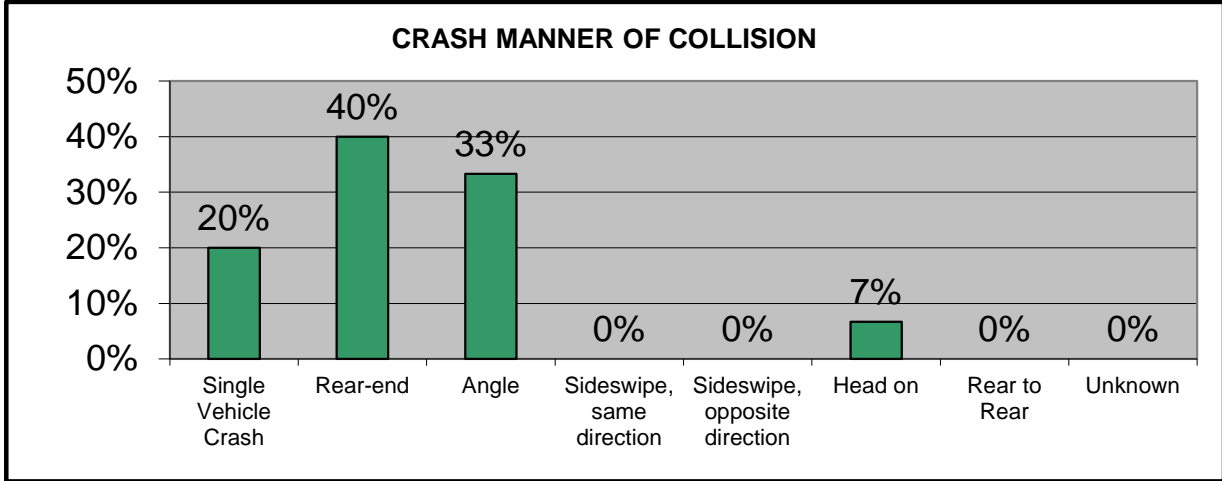
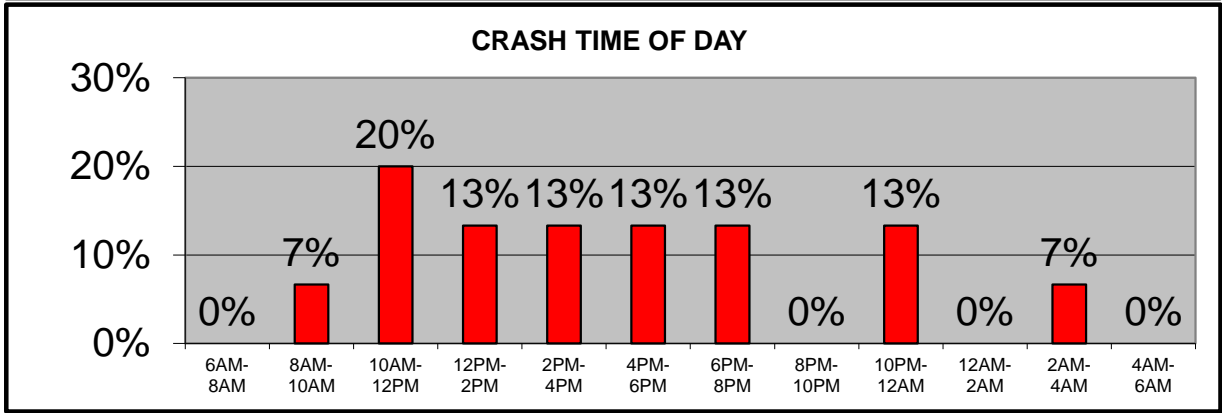
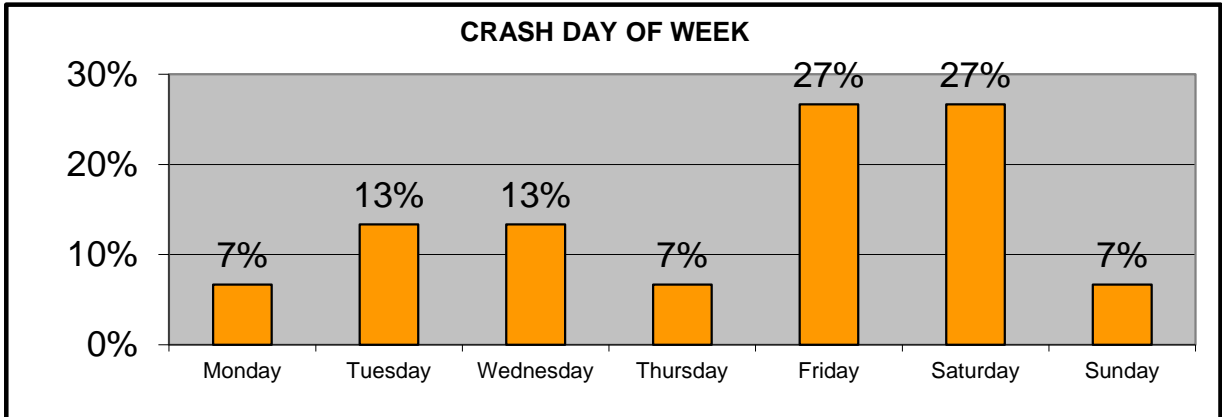
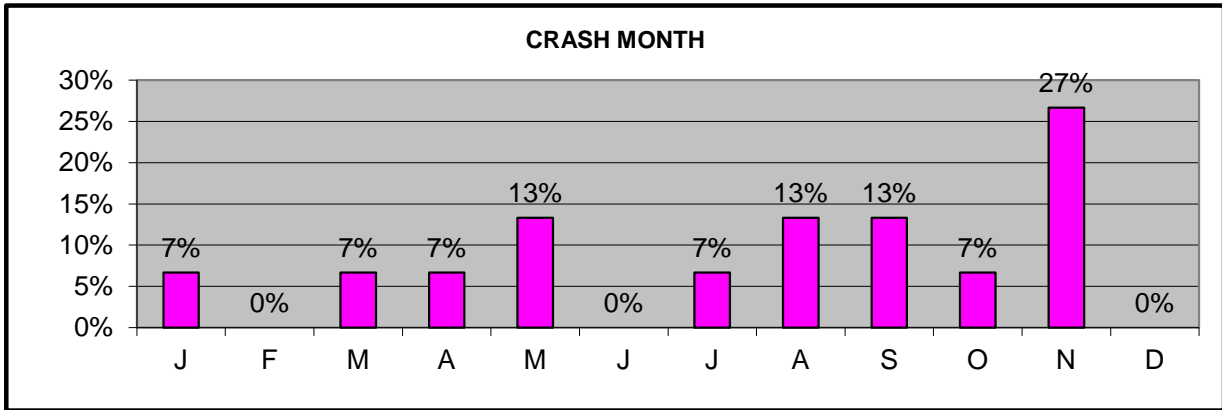
Bedford Street (Route 18) Corridor from Central Street to Whitman Street (Route 106), East Bridgewater, MA
2011 - 2013

Crash Diagram Ref #	Crash Date <i>m/d/y</i>	Crash Day	Time of Day	Manner of Collision <i>Type</i>	Light Condition <i>Type</i>	Weather Condition <i>Type</i>	Road Surface <i>Type</i>	Driver Contributing Code <i>Type</i>	Ages			Comments
									D1	D2	D3	
1	3/18/11	Friday	5:54 PM	Angle	Daylight	Cloudy	Dry	Failed to yield right of way	34	69		V2 backed out of driveway of 391 Bedford St into V1.
2	4/19/11	Tuesday	10:29 PM	Single Vehicle Crash	Dark - lighted roadway	Rain	Wet	Operating Vehicle in erratic, reckless, careless, negligent, or aggressive manner	24			OUI. V1 hit utility pole and guardrail on opposite side of street.
3	7/31/11	Sunday	11:59 AM	Angle	Daylight	Clear	Dry	Failed to yield right of way	81	36		V1 exiting 225 Bedford Street failed to yield.
4	9/24/11	Saturday	12:39 PM	Rear-end	Daylight	Clear	Dry	Unknown	50	75		V1 waiting to turn into Subsea Divers, V2 rear-ended it.
5	11/12/11	Saturday	12:30 PM	Angle	Daylight	Clear	Dry	Failure to keep in proper lane or running off road	50	22		V1 turned right as V2 passed it on the right. V2 claims V1 was originally turning left. One lane road at location of crash.
6	11/25/11	Friday	11:41 AM	Angle	Daylight	Clear	Dry	Failed to yield right of way	44	23		V1 exiting 225 Bedford Street failed to yield.
7	5/2/12	Wednesday	2:25 PM	Rear-end	Daylight	Cloudy	Dry	Operating Vehicle in erratic, reckless, careless, negligent, or aggressive manner	21	58	49	V1 and 2 stopped for a vehicle in front turning left. V3, carrying a trailer with a pick-up-truck on it, hit V2 into V1.
8	5/4/12	Friday	11:22 PM	Single Vehicle Crash	Dark - lighted roadway	Rain	Wet	Failure to keep in proper lane or running off road	27			OUI. V1 left the roadway and hit tree at 464 Bedford Street.
9	8/7/12	Tuesday	11:55 AM	Rear-end	Daylight	Clear	Dry	Other improper action	30	72	42	Construction Zone. V1 and V3 stopped for police detail around 305 Bedford St. V2 claims that he had looked down to pick up eyeglasses.
10	10/8/12	Monday	2:44 AM	Head on	Dark - lighted roadway	Rain	Wet	Operating Vehicle in erratic, reckless, careless, negligent, or aggressive manner	24			OUI. V1 ran off road and hit parked vehicle (V2) parked in grass of 484 Bedford Street.
11	11/21/12	Wednesday	6:54 PM	Single Vehicle Crash	Dark - lighted roadway	Clear	Dry	Unknown	19			Operator passed out at the wheel and struck utility pole #110.
12	1/17/13	Thursday	6:28 PM	Rear-end	Dark - lighted roadway	Clear	Dry	Followed too closely	76	18		V1 slowed to allow an uninvolved vehicle out of 225 Bedford St, V2 rear-ended it.
13	8/2/13	Friday	9:58 AM	Rear-end	Daylight	Rain	Wet	Distracted	36	19		V1 stopped for traffic detail officer, V2 was checking phone and rear-ended V1.
14	9/28/13	Saturday	5:19 PM	Angle	Daylight	Clear	Dry	Failed to yield right of way	21	44		Uninvolved SB vehicle turned right into parking lot as V1 exited, colliding with V2 who was traveling behind uninvolved right turning vehicle.
15	11/30/13	Saturday	3:02 PM	Rear-end	Daylight	Clear	Dry	Inattention	29	17		V1 slowing for traffic, V2 was not paying attention and rear-ended V1.

Summary based on Crash Reports obtained from the East Bridgewater Police Department

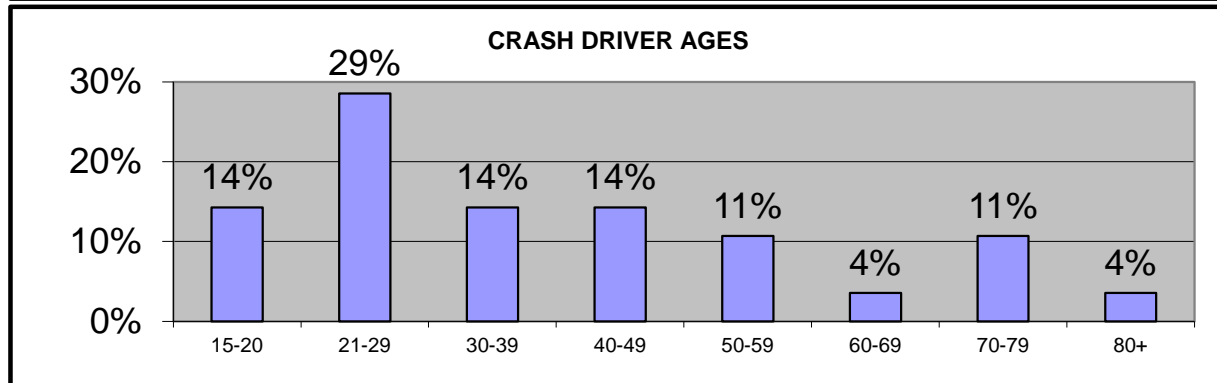
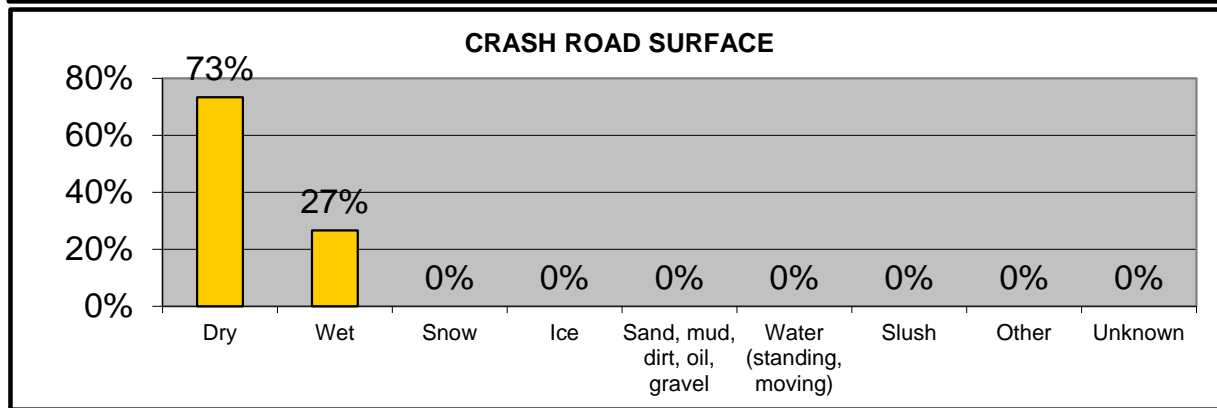
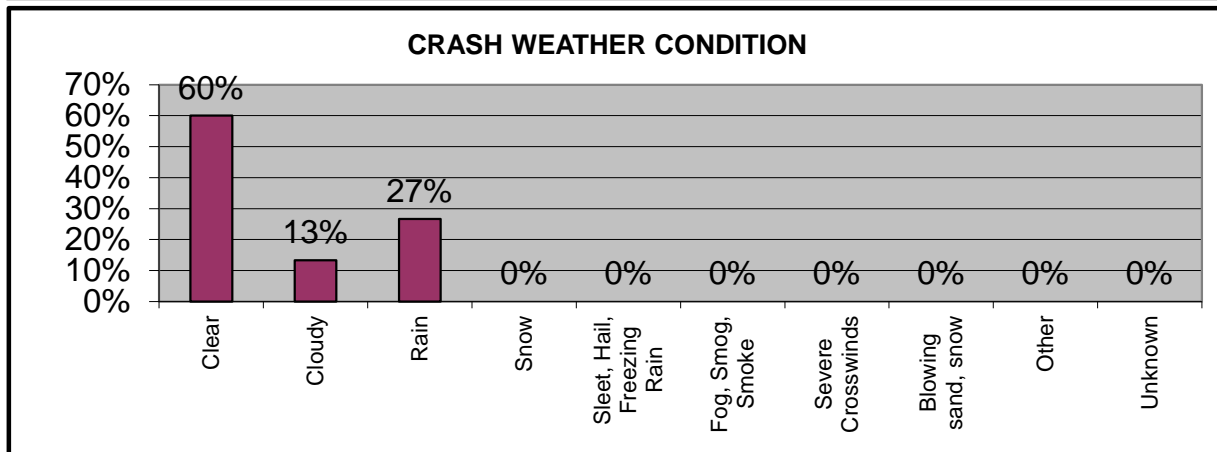
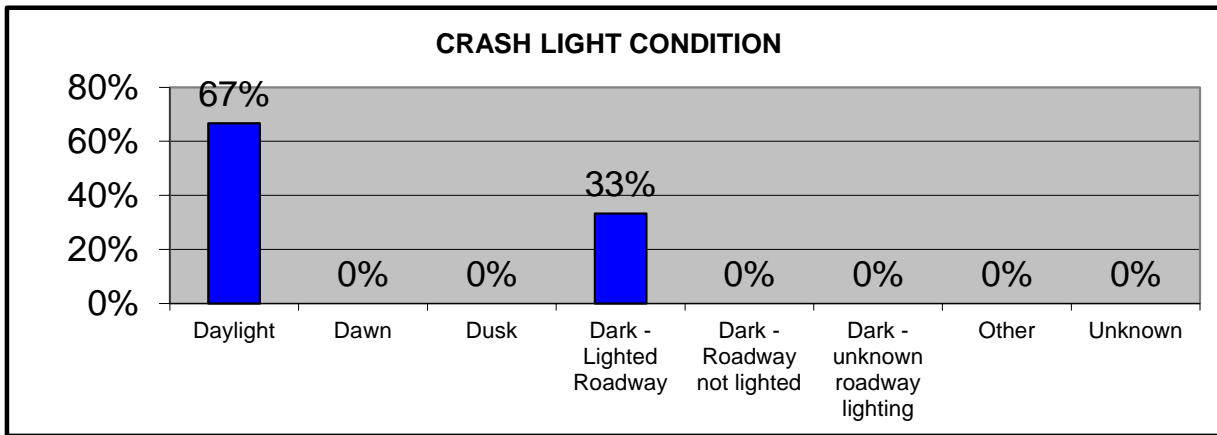
Crash Data Summary Tables and Charts

Bedford Street (Route 18) Corridor from Central Street to Whitman Street (Route 106), East Bridgewater, MA



Crash Data Summary Tables and Charts

Bedford Street (Route 18) Corridor from Central Street to Whitman Street (Route 106), East Bridgewater, MA



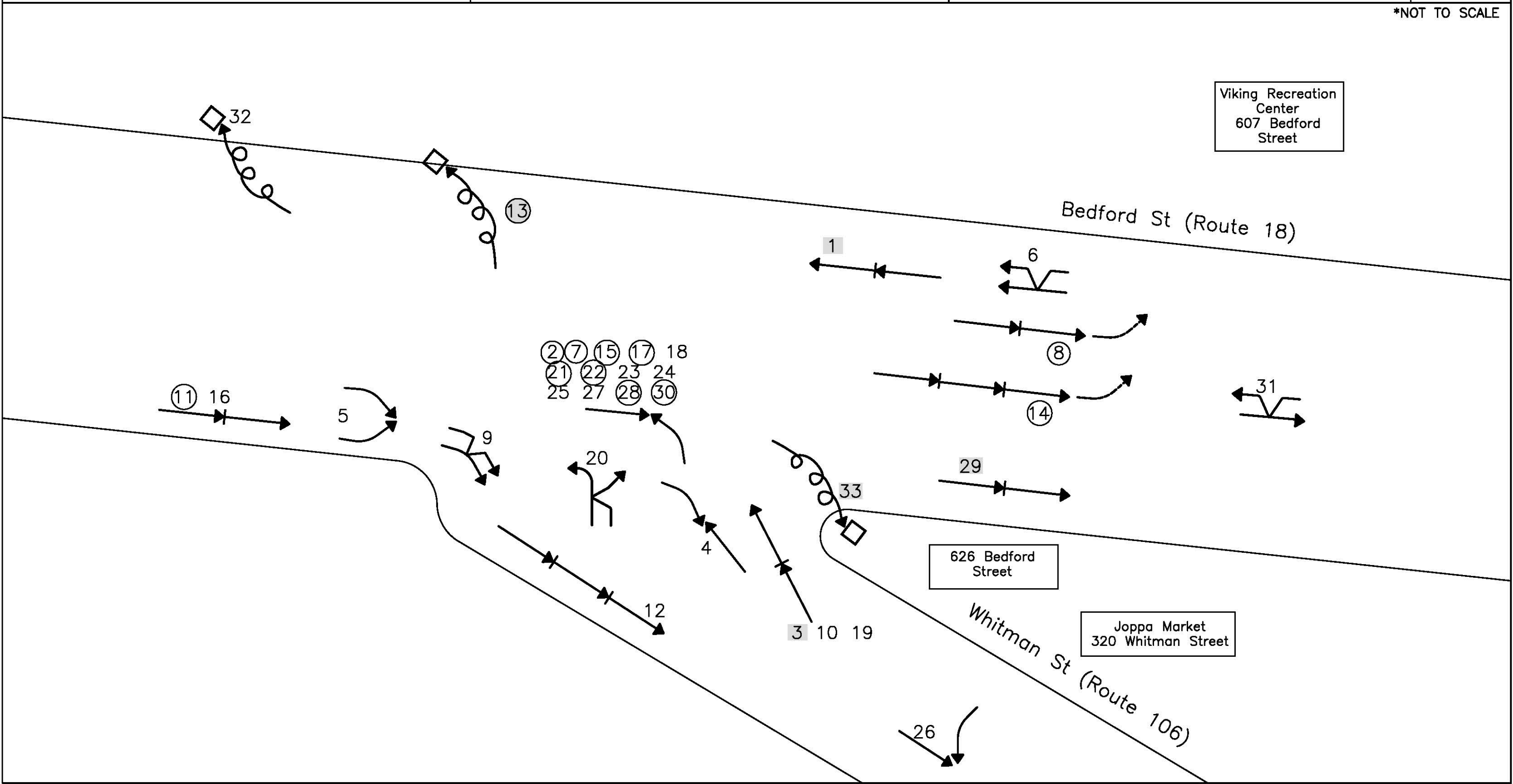
SYMBOLS	TYPES OF CRASH	SEVERITY
Moving Vehicle	Head on	Injury
Backing Vehicle	Rear End	Fatal
Non-Involved Vehicle	Angle	
Pedestrian	Turning Movement	
Bicycle	Sideswipe	
Animal	Out of Control	
Parked Vehicle	Night Time Crash	
Fixed Object		

East Bridgewater, MA
 Bedford St (Rt 18) at Whitman St (Rt 106)
 REGION: OCPC

TIME PERIOD ANALYZED: 2011 - 2013
 SOURCE OF CRASH REPORTS: East Bridgewater Police Department
 DATE PREPARED: March 21, 2013
 PREPARED BY: CO

COLLISION DIAGRAM

*NOT TO SCALE



Crash Data Summary Table

Bedford Street (Route 18) at Whitman Street (Route 106), East Bridgewater, MA

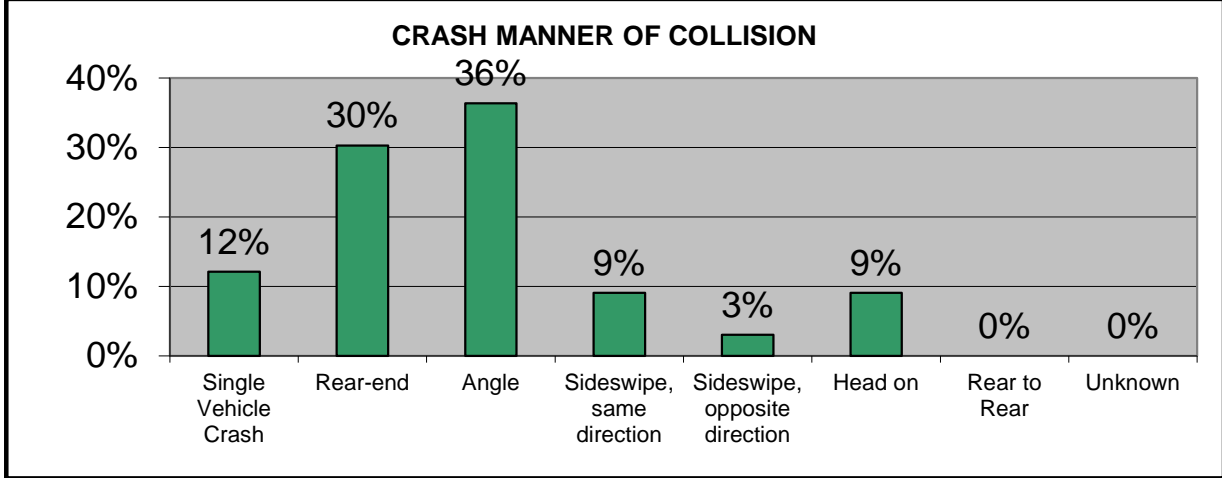
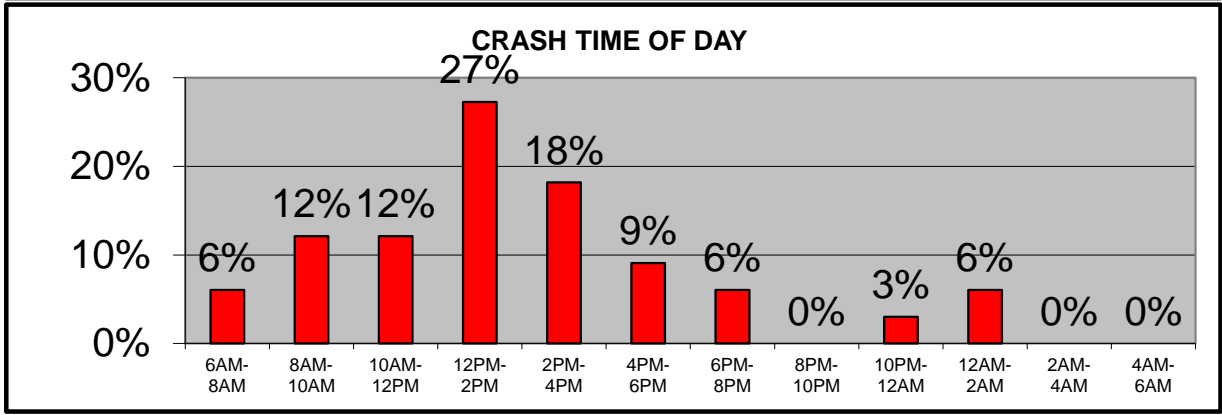
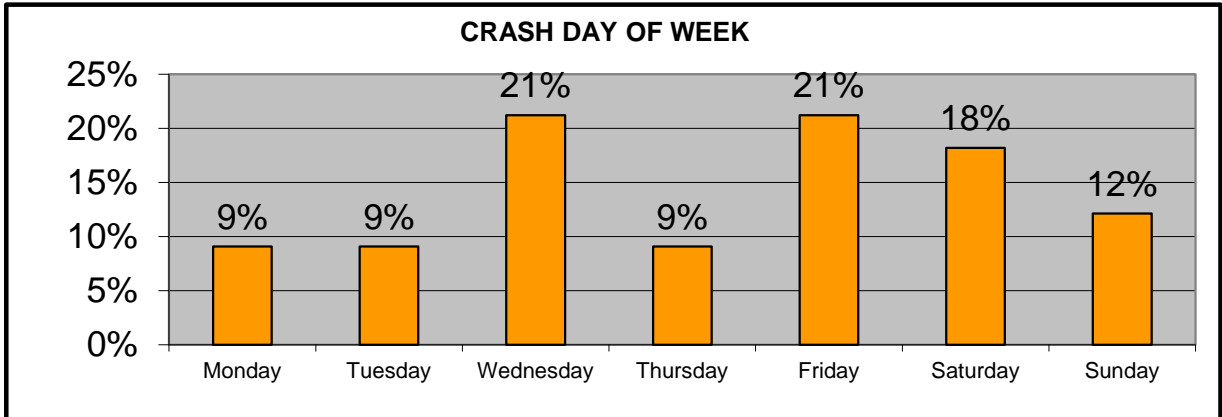
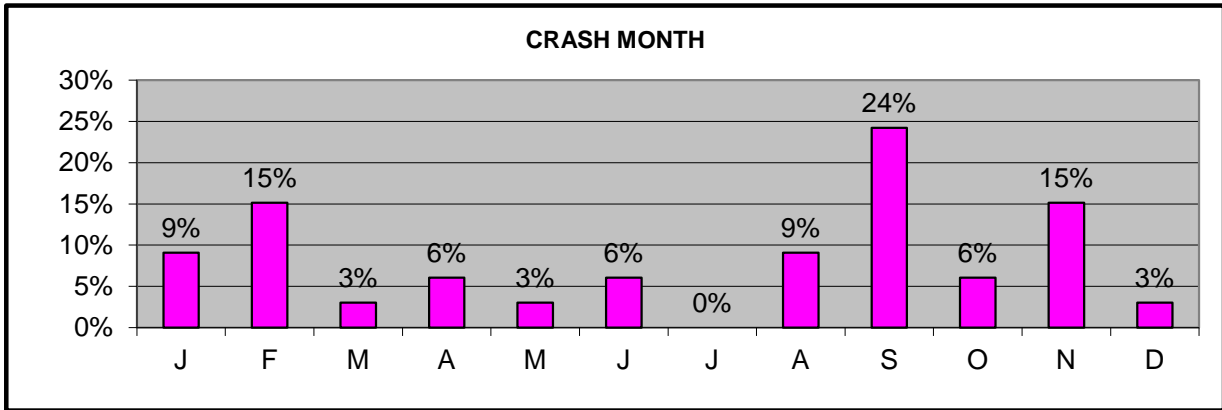
2011 - 2013

Crash Diagram Ref #	Crash Date m/d/y	Crash Day	Time of Day	Manner of Collision Type	Light Condition Type	Weather Condition Type	Road Surface Type	Driver Contributing Code Type	Ages				Comments
									D1	D2	D3	D4	
1	1/19/11	Wednesday	4:55 PM	Rear-end	Dark - lighted roadway	Rain	Wet	Illness	65	49			V1 slowed for red light, V2 did not. V2 transported to hospital due to illness/diabetic issues.
2	2/9/11	Wednesday	3:20 PM	Angle	Daylight	Clear	Dry	No Improper Driving	19	37			Both operators claim they had a green light.
3	3/2/11	Wednesday	10:45 PM	Rear-end	Dark - lighted roadway	Clear	Dry	Inattention	49	40			V2 did not stop at red light and rear-ended V1.
4	5/8/11	Sunday	1:05 PM	Head on	Daylight	Cloudy	Dry	Disregarded traffic signs, signals, road markings	26	66			V1 crossed center line while turning onto Whitman St. and hit V2
5	8/26/11	Friday	1:02 PM	Angle	Daylight	Clear	Dry	Unknown	61	40			Unclear of how crash occurred
6	9/7/11	Wednesday	8:49 AM	Sideswipe, same direction	Daylight	Rain	Wet	Inattention	47	26			V1 slowing, V2 could not stop and attempted to bail right.
7	9/13/11	Tuesday	12:22 PM	Head on	Daylight	Clear	Dry	Disregarded traffic signs, signals, road markings	76	75			V2 (NB) made no attempt to stop at red signal.
8	9/30/11	Friday	12:11 PM	Rear-end	Daylight	Clear	Dry	Inattention	53	36			Uninvolved vehicle abruptly turned left into Viking Recreation Center causing V2 to stop abruptly causing V2 (motorcycle) to rear-end it.
9	9/30/11	Friday	12:22 PM	Sideswipe, same direction	Daylight	Clear	Dry	Failure to keep in proper lane or running off road	60	37			V1 (TT) turning right onto Whitman St. V2, attempting to bypass the above crash, quickly turned right onto Whitman St into V1.
10	10/31/11	Monday	7:16 AM	Rear-end	Daylight	Clear	Wet	No Improper Driving	29	17			V1 stopped at signal. V2 applied brakes and slid into V1 on wet road.
11	10/31/11	Monday	8:12 AM	Rear-end	Daylight	Clear	Wet	Inattention	52	23			V1 at red light, V2 rear-ended it.
12	11/5/11	Saturday	12:09 PM	Rear-end	Daylight	Clear	Dry	Inattention	45	21	46		V1 and V2 stopped in traffic, V3 rear-ended V2 into V1.
13	2/29/12	Wednesday	7:18 PM	Single Vehicle Crash	Dark - lighted roadway	Sleet, Hail, Freezing Rain	Slush	Driving too fast for conditions	16				V1 fishtailed turning from Whitman St onto Bedford St. and hit curb.
14	4/9/12	Monday	12:35 PM	Rear-end	Daylight	Clear	Dry	Unknown	52	58	18		V1 stopped as a uninvolved vehicle abruptly turned left causing V2 to hit V1 and V3 to hit V2.
15	8/14/12	Tuesday	11:25 AM	Angle	Daylight	Clear	Dry	Unknown	88	40			Both operators state they had a green light. Witnesses claim V1 (NB) ran red light.
16	8/17/12	Friday	5:37 PM	Rear-end	Daylight	Clear	Dry	Inattention	18	48			V2 thought V1 was going to proceed through intersection when light turned from green but did not.
17	9/8/12	Saturday	10:13 AM	Angle	Daylight	Clear	Dry	Disregarded traffic signs, signals, road markings	57	51			V1 followed uninvolved vehicle through red light NB and hit V2.
18	9/29/12	Saturday	7:26 AM	Angle	Daylight	Rain	Wet	Other improper action	25	47			V1 (NB) ran red light.
19	9/30/12	Sunday	12:06 PM	Rear-end	Daylight	Rain	Wet	Unknown	21	42			V2 stopped at signal, V1 hit it.
20	11/9/12	Friday	3:17 PM	Sideswipe, same direction	Daylight	Clear	Dry	Failure to keep in proper lane or running off road	54	54			V1 (bus) turning right while V2 attempted to turn left beside it.
21	11/22/12	Thursday	2:46 PM	Angle	Daylight	Clear	Dry	Failed to yield right of way	62	63			V2 (NB) ran red light.
22	12/5/12	Wednesday	12:36 PM	Angle	Daylight	Clear	Dry	Disregarded traffic signs, signals, road markings	68	74			V2 (NB) ran red light.
23	1/5/13	Saturday	2:44 PM	Angle	Daylight	Clear	Dry	Disregarded traffic signs, signals, road markings	26	44			V2 (NB) ran red light.
24	1/15/13	Tuesday	8:33 AM	Angle	Daylight	Clear	Wet	Failed to yield right of way	44	30			V1 (NB) ran red light.
25	2/1/13	Friday	9:32 AM	Angle	Daylight	Clear	Dry	Disregarded traffic signs, signals, road markings	64	32			V1 (NB) did not see traffic signals and ran red light.
26	2/13/13	Wednesday	3:19 PM	Angle	Daylight	Clear	Dry	Failed to yield right of way	33	42			Courtesy Crash.* V2 attempting to exit Joppa Market.
27	2/17/13	Sunday	11:29 AM	Angle	Daylight	Blowing Sand, Snow	Snow	Driving too fast for conditions	42	47			V2 (NB) slid on snow through red light into V1.
28	4/18/13	Thursday	4:13 PM	Single Vehicle Crash	Daylight	Clear	Dry	Inattention	46	27			V2 (NB) ran red light. Crash coded as single vehicle crash, appears to be angle crash.
29	6/1/13	Saturday	12:51 AM	Rear-end	Dark - lighted roadway	Clear	Dry	Followed too closely	45	43			V1 claims that an uninvolved vehicle cut in front of him causing him to brake abruptly causing V2 to rear-end V1.
30	6/21/13	Friday	10:13 AM	Head on	Daylight	Clear	Dry	Disregarded traffic signs, signals, road markings	62	75			V2 (turning left from Whitman St) ran red light.
31	9/28/13	Saturday	6:26 PM	Sideswipe, opposite direction	Daylight	Clear	Dry	Unknown	23	unk			V1 claims that V2 crossed double yellow line and struck its mirror.
32	11/10/13	Sunday	2:28 PM	Single Vehicle Crash	Daylight	Rain	Wet	Driving too fast for conditions	24				After turning from Whitman St, V1 accelerated quickly, lost control and struck utility pole #25. Open alcoholic containers were found inside V1.
33	11/28/13	Thursday	1:10 AM	Single Vehicle Crash	Dark - lighted roadway	Clear	Dry	Operating Vehicle in erratic, reckless, careless, negligent, or aggressive manner	32				OUI. V1 attempted to turn right but lost control and hit traffic light.

Summary based on Crash Reports obtained from the East Bridgewater Police Department

Crash Data Summary Tables and Charts

Bedford Street (Route 18) at Whitman Street (Route 106), East Bridgewater, MA



Crash Data Summary Tables and Charts

Bedford Street (Route 18) at Whitman Street (Route 106), East Bridgewater, MA

