

ROAD SAFETY AUDIT

Main Street (Route 9)
Elm Street to Maple Street (Route 31)

Town of Spencer

February 13, 2013

Prepared For:
MassDOT Highway Division



Prepared By:
BETA Group, Inc.



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Project Data

A Road Safety Audit for Main Street (Route 9) between Elm Street and Maple Street (Route 31) was held on January 7, 2013 at the Spencer Town Hall in Spencer, MA. As indicated in Table 1, the audit team consisted of representatives from State, Regional and Local agencies and included a cross-section of engineering, planning and emergency response expertise.

Table 1. Participating Audit Team Members

Audit Team Member	Agency/Affiliation
Silpa Munukutla	MassDOT Highway Division – Safety Section
Corey O'Connor	MassDOT Highway Division – Safety Section
Peter Calves	MassDOT Highway Division – Safety Section
Qing Qing You	MassDOT Highway Division – Safety Section
Lola Campbell	MassDOT Highway Division – District 3
Michael Bruce	MassDOT Highway Division – District 3 Traffic
Tom Currier	MassDOT Highway Division – Project Management
Sujatha Mohanakrishnan	CMRPC
Dan Daniska	CMRPC
Kevin Krasnecky	CMRPC
Michelle Buck	Town of Spencer – Town Planner
Matt Chase	VHB
Dave Darrin	Town of Spencer – Police Chief
Bob Parsons	Town of Spencer – Fire
Eben Butler	Town of Spencer – Highway
Steven Tyler	Town of Spencer – Highway/U&F
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 Main Street (Route 9) in Spencer from Elm Street to Maple Street, a length of approximately 1,000 feet, because this segment is identified as a regional top 5% high pedestrian crash location, and the intersection of Main Street at Mechanic Street is a regional top 5% high crash location. A rehabilitation project extending from Elm Street to Grove Street, currently in the pre-25% design phase, has been advanced by the Town and is scheduled for reconstruction in 2016 under the statewide Transportation Improvement Plan (TIP). The RSA is intended to identify potential short and long term safety improvements that can be made along the Route 9 corridor, which can then be implemented through general maintenance for short term low cost improvements or incorporated into the planned rehabilitation project to the greatest extent practicable.

Project Description

Main Street (Route 9), shown in Figure 1, is a Principal Arterial providing east-west access through the Town of Spencer to Leicester and Worcester to the east and East Brookfield to the west. Route 31 is classified as a Rural Major Collector that runs north-south along Maple Street where it meets with Main Street (Route 9). From there it is carried along Main Street approximately 600 feet westward to Pleasant Street, then continues along Pleasant Street to the north. Main Street is under Town of Spencer jurisdiction as are all intersecting side streets within the study area. Route 9 is typically under MassDOT jurisdiction with the exception of a 1.4 mile stretch in the town center which includes the audit area, and is a National Highway System (NHS) roadway in Spencer and along its entire length statewide.

The horizontal and vertical alignment of Main Street through the study area creates steep grades at intersection approaches and both horizontal and vertical curves that restrict visibility for drivers, specifically those entering the roadway from side streets or driveways.

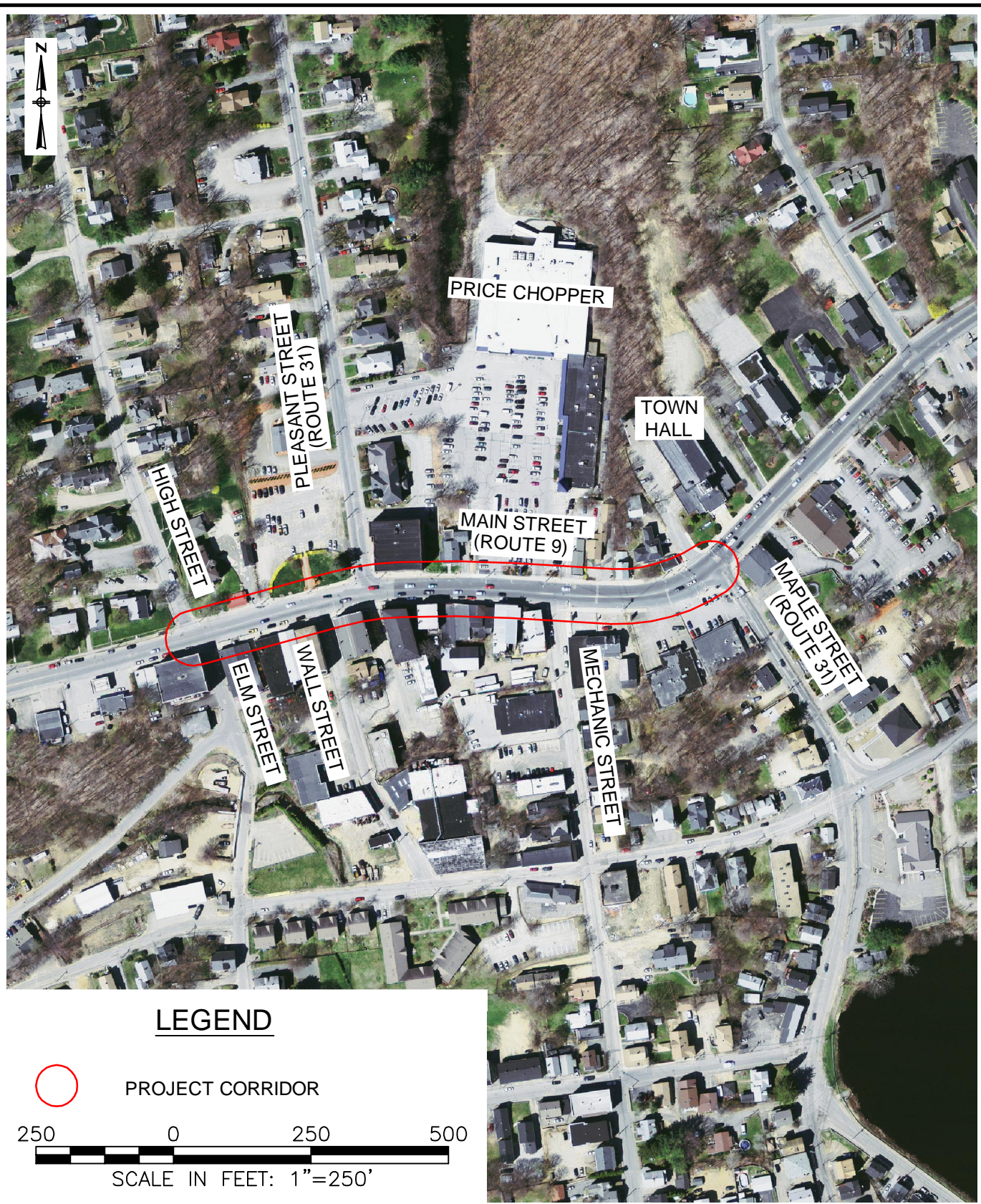
The four intersections included in the audit corridor are discussed in detail below.

Main Street (Route 9)/Maple Street (Route 31)

Main Street, Maple Street and the Spencer Town Hall driveway form a 4-legged intersection under traffic signal control. Main Street comprises the eastern and western legs of the intersection, while Maple Street comprises the southern leg. The northern leg of the intersection serves the municipal driveway for the Spencer Town Hall. Land use in the area is primarily commercial with some municipal and residential uses,



**Main Street at Maple Street
(looking south)**



Road Safety Audit
Route 9 (Main St) from
Elm St to Maple St
Spencer, MA

Figure 1
Location Map

with Spencer Town Hall on the northeast corner, a Cumberland Farms on the southwest corner, and buildings housing both businesses and residences on the northwest and southeast corners. Operations at the intersection are also impacted by John's Pizza, which is adjacent to the Cumberland Farms west of Maple Street.

The Main Street westbound approach provides an exclusive left-turn lane and a shared lane for throughs and right turns, while the Main Street eastbound approach provides a shared lane for left turns and throughs, and an exclusive right-turn lane. Maple Street northbound and the municipal driveway approaches each provide a single general purpose lane at the intersection. Pavement markings at the intersection consist of double yellow centerlines, stop bars, and white edge lines for Main Street and Maple Street, while the municipal driveway provides only a stop bar.

Marked crosswalks are provided across all approaches at the intersection. Continuous sidewalks are provided on both sides of Maple Street as well as on Main Street throughout the study corridor. Apex style handicap ramps are provided at the intersection and do not consistently align with the marked crosswalks, which does not meet ADA and MassDOT guidelines. "STATE LAW Yield to Pedestrian in Crosswalk" signs are provided for the crosswalks across Main Street and Maple Street, but should be removed because the referenced state law applies only to unsignalized crossings.

Main Street/Mechanic Street

Main Street and Mechanic Street form an unsignalized T-intersection. Main Street comprises the eastern and western legs of the intersection, while Mechanic Street forms the southern leg and is a one-way roadway departing Main Street. Land use in the area is varied, consisting of residential and commercial use with the Price Chopper Plaza to the north of the intersection.

Main Street provides a single general purpose lane in each direction at the intersection, while Mechanic Street provides a single lane one-way southbound. Pavement markings at the intersection consist of a double yellow centerline and white edge lines for Main Street. On-street parking is provided along both sides of Mechanic Street.

Marked crosswalks are provided across Mechanic Street and across the east leg of Main Street, with apex style handicap ramps on the southwest and southeast corners that do not appear to meet current ADA and MassDOT guidelines. Continuous sidewalks are provided on both sides of Main Street and Mechanic Street. Pedestrian signage is provided for the Main Street crosswalk on both sides of the street, but visibility restrictions exist for these signs due to the buildings and layout of the roadway.

Main Street/Pleasant Street (Route 31)/Wall Street

Main Street, Pleasant Street, and Wall Street form an offset intersection under traffic signal control. Main Street comprises the eastern and western legs of the intersection, while Pleasant Street forms the northern leg. The southern leg of the intersection is comprised of Wall Street which is offset approximately 90 feet to the west. A driveway located between two buildings directly opposite Pleasant Street is also under signal control. Land use in the area is primarily commercial, with residential apartments above. Operations at the intersection are also impacted by the Price Chopper driveway on Pleasant Street approximately 300 feet north of Main Street.

Main Street eastbound provides a single travel lane with an adjacent parking lane approaching Wall Street, then provides an exclusive left-turn lane and a through lane between Wall Street and Pleasant Street with no on-street parking, and provides a single travel lane with adjacent on-street parking after Pleasant Street. The offset nature of the intersection creates the need for a stop line for eastbound vehicles west of Wall Street, before they can enter the left turn pocket. The lane alignment requires through vehicles to shift right in



**Main Street at Pleasant Street
(looking east)**

order to continue along Main Street, and creates an unusual transition from parking lane to through lane to parking lane. A lead phase is provided for the eastbound approach to accommodate left turning vehicles. Main Street westbound provides a through lane and an exclusive right-turn lane, while Pleasant Street and Wall Street each provide a single all-purpose lane in each direction at the intersection. Right turns from Wall Street to Main Street eastbound are restricted by signage, as are left turns from the signalized driveway. The signalized driveway connects to a parking area which also connects to Wall Street, and serves as a cut-through from Wall Street for vehicles intending to travel east on Main Street. The signal indications for the Wall Street and signalized driveway approaches are intended to reinforce the turn restrictions, with a green left arrow for Wall Street and a green right arrow for the driveway, but these signal indications may confuse drivers because they are typically used to indicate an exclusive, unopposed turn, as outlined in the Manual on Uniform Traffic Control Devices (MUTCD). The existing turns are permissive, meaning that other conflicting turns are allowed at the same time. Pavement markings at the intersection consist of double yellow centerlines, stop bars, and white edge lines for Main Street and Pleasant Street, while Wall Street and the signalized driveway provide only a stop bar.

Marked crosswalks are provided across the east leg of Main Street and across Pleasant Street. Continuous sidewalks are provided on both sides of Pleasant Street and Wall Street as well as on Main Street throughout the study corridor. Apex style handicap ramps are provided at the intersection for all marked crosswalks, but are generally in poor condition and do not meet ADA and MassDOT guidelines. “STATE LAW Yield to Pedestrian in Crosswalk” signs are provided for the crosswalk across Main Street and Pleasant Street, but should be removed because the referenced state law applies only to unsignalized crossings.

Main Street/Elm Street/High Street

Main Street, Elm Street, and High Street form a 4-legged intersection, with Elm Street approaching from the south and High Street approaching from the north, both under STOP control. Land use in the area is varied, consisting of residential and commercial use with the Kenwood Diner on the northeast corner of the intersection.

All approaches provide a single general purpose lane in each direction at the intersection with on-street parking provided on both sides of Main Street. Pavement markings at the intersection consist of a double yellow centerline for Main Street, while Elm Street and High Street provide only a stop bar.

Marked crosswalks are provided across Elm Street and High Street, with apex style handicap ramps on all corners that do not appear to meet current ADA and MassDOT guidelines. Continuous sidewalks are provided on both sides of all intersecting streets, with the sidewalk on the north side of Main Street west of the intersection separated from the edge of roadway by a grass strip.

Crash Data

Crash data provided by the Spencer Police Department and summarized by MassDOT show 43 crashes occurred within the study area between July 2009 and July 2012. A fatal crash was also noted to have occurred in the study area in 2007. The prevalent crash type was rear-end crashes, comprising 47% of total crashes. A collision diagram showing all crashes is included in Appendix C. The diagram shows six rear-end crashes involving eastbound vehicles arriving at the Main/Maple Street intersection. Five crashes occurred between vehicles and pedestrians. Four of these crashes occurred at the unsignalized crosswalk near Mechanic Street, including the fatal crash in 2007. Two of the four crashes involved vehicles turning to Mechanic Street, one involved a westbound vehicle and the fatal crash involved a vehicle traveling eastbound. A pedestrian-involved crash also occurred with a westbound vehicle at the signalized intersection at Maple Street and the municipal driveway; solar glare was cited as a cause. A number of the descriptions in the summary included in Appendix C describe “failed to yield to the right of way,” solar glare and “courtesy crashes.” A courtesy crash refers to when a vehicle in the inside lane may stop for a turning vehicle, but the turning vehicle is then struck by a vehicle traveling in the other lane, named for the courtesy shown by the stopped driver. Visibility for drivers departing the Main/Maple Street intersection is impacted by the downhill grade and roadway alignment. The uphill grade of the westbound approach may also impact a driver’s behavior. A summary of crash data and a collision diagram are included in the Appendix.

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 Main Street from Elm Street to Maple Street. Audit participants then visited the location as a group, at which time they offered observations on safety issues. A summary of those major safety considerations is as follows:

- **Intersection Alignment, Signal Phasing, Signal Equipment** – These safety issues were discussed in conjunction regarding the Main Street/Pleasant Street/Wall Street intersection. Safety concerns created by the existing offset alignment of Pleasant Street and Wall Street spurred the implementation of turn restrictions from Wall Street and from the signalized driveway opposite Pleasant Street. Right turns are restricted from Wall Street to avoid conflicts between right-turning vehicles and vehicles turning left from Pleasant Street. A similar restriction exists for left turns from the signalized driveway. Town personnel confirmed that the green arrows facing these approaches are intended to reinforce the turn restrictions. The MUTCD states that a steady green arrow signal indication “shall be displayed only to allow vehicular movements, in the direction indicated, that are not in conflict with other vehicles moving on a green or yellow signal indication...”; in simpler terms, this states that a green arrow shall be used only when a turn is protected, meaning no other conflicting movements are allowed at the same time. This is not the case at this intersection, where vehicles departing Pleasant Street have a green indication at the same time as vehicles departing Wall Street and the signalized driveway. This creates a conflict between vehicles turning right from Pleasant Street and vehicles turning left from Wall Street, and may be a factor in the two crashes involving vehicles departing Wall Street. It should also be noted that a crash involved a vehicle turning right from Wall Street, despite the existing turn restriction.
- **Intersection Alignment** – In addition to the signal phasing and signal head issues noted above, the offset alignment of the Main Street/Pleasant Street/Wall Street intersection creates potential confusion for eastbound drivers. An eastbound vehicle must stop at a stop line located before Wall Street, before the formation of the left turn lane for Pleasant Street. Once the light turns green a vehicle must make their choice of lane assignments and continue through the



**Turn Restriction
(enforced by signage and green left arrows)**



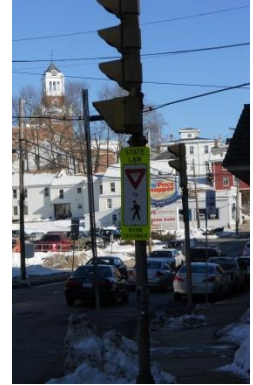
Main Street eastbound at Pleasant Street

intersection on their intended path, but can no longer see the signal indications controlling their approach. An unfamiliar driver may treat the crosswalk across Main Street as a de facto stop line at the end of the turn lane before turning left onto Pleasant Street or continuing on Main Street eastbound. Two rear-end crashes on this approach may be related to confusion over intended traffic control.

- Intersection Alignment, Signal Phasing – An additional concern related to the alignment and existing signal control is the flow of cut-through traffic from Wall Street through the signalized driveway opposite Pleasant Street. Vehicles currently use this cut-through to travel east on Main Street, due to the existing right turn restriction from Wall Street. This increases traffic exiting the driveway, which exacerbates concerns related to intersection alignment and visibility.
- Lane Widths – Narrow existing lane widths along Main Street were cited as a safety concern.
- Lane Alignment/Lane Trap – Parking is provided along the south side of Main Street, but the parking lane is removed at Pleasant Street and Maple Street to accommodate the addition of an exclusive turn lane. The result for eastbound through vehicles is a lane shift where vehicles must shift right at Pleasant Street to remain in the designated through lane, then shift left to avoid conflicts with parked vehicles. The lack of pavement markings delineating these transitions and lack of lane designation signage may trap eastbound vehicles in the left turn lane at Pleasant Street. Lane widths and lane alignment may be a factor in sideswipe crashes within the study area.
- Pavement Condition – The pavement is rutted along Main Street throughout the study area.
- Pedestrian Travel – Pedestrians crossing Main Street in the vicinity of the Price Chopper plaza do not typically use the existing unsignalized crosswalk located east of Mechanic Street. It was noted that this crosswalk is on the east side of Mechanic Street from the Price Chopper parking area, and that pedestrians often cross directly from the parking area to the businesses along the south side of Main Street in this area.
- Pavement Markings – Markings are faded at the intersections and along Main Street, which adds to confusion over intended lane configurations. Town personnel noted that painted markings were reapplied in 2012. The lack of double yellow centerlines on side streets was also noted as a safety concern.
- Pedestrian Signals – The lack of countdown pedestrian signals was noted as a potential safety concern. It should be noted that countdown pedestrian signal heads are required by the latest MUTCD and by MassDOT regulations.

- Pedestrian Signage – Two issues related to crosswalk-related signage were discussed by the audit team.

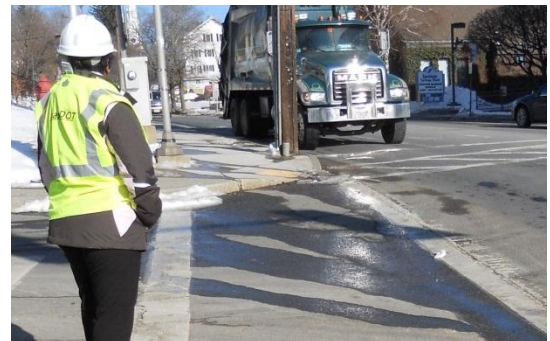
- R1-6 “STATE LAW Yield to Pedestrian in Crosswalk” signs are provided at all crosswalks within the study area. These signs are only appropriate at unsignalized intersections, where state law does require vehicles to yield to pedestrians in the crosswalk. Vehicle and pedestrian operation at signalized pedestrian crossings such as those at the Main Street/Pleasant Street/Wall Street and Main Street/Maple Street intersections are controlled by the signal indications.
- Typical W11-2 Pedestrian warning signs with a supplemental arrow are provided at the unsignalized crosswalk at Mechanic Street. It was noted that no advance signage is provided for the crosswalk, and that the alignment of the roadway, location of buildings and location of the existing signs reduce the visibility of existing signs for approaching vehicles.



- Visibility – Visibility was noted as an issue for vehicles departing side streets and driveways due to the proximity of parked vehicles along Main Street. Town personnel noted that parking is prohibited within 15 feet of side streets by Town regulation, which is supported by existing signage. Visibility issues may be created by parked vehicles parking partially outside of legally allowed areas. It was noted that emergency vehicles have experienced crashes when departing Wall Street as a result of visibility concerns.
- Fire Truck Turns – It was noted that parked vehicles along Mechanic Street create a safety concern for fire trucks turning onto Mechanic Street from Main Street. Parked vehicles create a reduction in available width, and require the operator to carefully maneuver the truck to avoid contact.
- Signal Operation – It was noted that the existing traffic signals at Main Street and Maple Street often turn to flash mode when damp and must be manually reset. This typically indicates a short created by water coming into contact with wiring.
- Backplates – The lack of backplates on existing signal heads may exacerbate concerns related to sun glare due to the east-west alignment of Main Street. Existing backplates are provided on overhead signals at the Main Street/Maple Street intersection, but are missing at the Main Street/Pleasant Street/Wall Street intersection. Glare was noted as a problem along Main Street within the study area.
- Signage –
 - The lack of lane designation signage on all multi-lane approaches creates confusion over lane assignments and may be a factor in sideswipe and rear-end crashes.
 - One-way signage provided for Mechanic Street is inconsistent, with an R6-1 One Way sign on the west side and an R6-2 One Way sign on the east side. Drivers may be confused by this inconsistency. It should be noted that the Massachusetts Amendments to

the MUTCD states that R6-2 signs should be used at locations where the one-way street goes away from an intersection, which is the case with Mechanic Street at Main Street.

- Sign clutter from private signs was noted as a safety issue. It was noted that temporary notices such as yard sale signs are often attached to utility poles along the corridor.
- Clearance Times – Clearance times at the Main Street/Pleasant Street/Wall Street intersection were observed on the day of the audit and determined to be inadequate to allow a vehicle on Main Street to clear the intersection before a green indication on Pleasant and Wall Streets. This may be a factor in both angle and rear-end crashes at the intersection. Clearance times were not observed at the Main Street/Maple Street intersection, but the history of rear-end crashes may indicate inadequate clearance times.
- Price Chopper Driveway – Vehicles departing Price Chopper onto Main Street are currently restricted to right turn movements only. It was noted that vehicle queues from the traffic signal at Pleasant Street often cause vehicles departing Price Chopper to block the westbound right turn lane at Pleasant Street, which may contribute to both rear-end and angle crashes in this area. The Price Chopper plaza has a second driveway on Pleasant Street that allows both entry and exit, and it was noted that drivers familiar with the area will use the Pleasant Street driveway for easier access to Main Street in either direction.
- Snow Removal – It was noted that snow was still partially blocking sidewalks and wheelchair ramps on the day of the audit from a prior snow event, reducing accessibility for all pedestrians.
- Wheelchair Ramps – Apex style ramps are provided at most locations within the study area, which do not allow for directional alignment of the ramp and the crosswalk and are not preferred under current MassDOT guidelines. Ramps do not clearly align with crosswalks at many locations, as shown at right.
- Wide Curb Cuts – The wide curb cuts for John's Pizza and the Cumberland Farms on the south side of Main Street between Mechanic Street and Maple Street were cited as a safety concern. Wide curb cuts provide limited channelization of entering and exiting vehicles. Two crashes occurred between westbound vehicles entering John's Pizza and eastbound through vehicles.



Potential Safety Enhancements

After the site visit, audit participants returned to the meeting location to discuss the safety issues and 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

- Replace green arrows with green balls on the Wall Street and signalized driveway approaches. The green arrow indications provided for the Wall Street and signalized driveway approaches are intended to reinforce turn restrictions, but are inappropriately used and should be removed and replaced with solid green ball indications. The existing turn restriction signage should remain. This is an immediate short-term, low cost improvement which addresses the non-compliant signal equipment at the intersection but does not address potential conflicts between Pleasant Street vehicles and vehicles departing Wall Street or the signalized driveway.
- Consider split phasing for the Pleasant Street, Wall Street and signalized driveway approaches. Split phasing would eliminate conflicts between the three approaches by providing two separate phases for side street traffic - one for the Wall Street approach and a shared phase for Pleasant Street and the signalized driveway approaches. Split phasing would allow for reintroduction of the restricted turns from the Wall Street and signalized driveway approach. This may negatively impact operation along Main Street. It was also noted that the existing traffic signal system at this location does not have the ability to add a phase, so the implementation of split phasing would require replacement of the traffic signal controller. This is a short-term, low cost improvement.
- Re-align the Main Street/Pleasant Street/Wall Street intersection. Shift Pleasant Street westward to align it opposite Wall Street to create a more typical 4-way intersection alignment and eliminate the need for turn restrictions. The proposed design ultimately advanced as part of the rehabilitation project must be in accordance with the MUTCD. This potential enhancement should remove the confusion that currently exists due to the existing conflicts. This is a mid-term, high cost improvement that may be part of the planned rehabilitation project.
- Increase enforcement of restricted turning movements and existing parking restrictions. Increased enforcement would deter illegal turns at the Main Street/Pleasant Street/Wall Street intersection, and would address existing concerns regarding cars parking outside the defined limits of parking along the south side of Main Street. This is a short-term improvement with a cost of allocation of limited police resources.

- Reconfigure the available pavement width to provide wider lanes, clear lane transitions and defined parking limits. The proposed design should aim to provide lane widths meeting minimum MassDOT requirements while also providing 4-foot shoulders to accommodate bicycles and a narrow parking lane. Lane transitions along the corridor will be more clearly defined to eliminate existing lane traps and provide a clear delineation between travel lanes and parking lanes. This is a mid-term, high cost improvement assumed to be included in the planned rehabilitation project. It should be noted that proposed lane and shoulder widths do not meet minimum requirements for an NHS roadway, which requires a design exception from FHWA.
- Rehabilitate pavement. Pavement will be rehabilitated along the corridor as part of planned improvements. The appropriate method of pavement rehabilitation should be determined based on the results of subsurface exploration. This is a mid-term, high cost improvement.
- Consider relocating the unsignalized crosswalk across Main Street based on pedestrian desire lines. It was noted that pedestrians do not currently utilize the crosswalk when crossing from the Price Chopper parking area to the businesses along the south side of Main Street. Pedestrian travel paths should be studied and a relocation of the crosswalk considered, assuming that it can be relocated to an area that provides adequate visibility. This is a low cost, mid-term improvement that could be included in the planned rehabilitation project. The proposed location should be accompanied by signage placed on both sides of the roadway for added visibility.
- Reapply pavement markings. It is assumed that markings will continue to be repainted as a short-term improvement by the Town of Spencer. Recessed pavement markings are recommended for the rehabilitation project, and should be six inches wide and reflective thermoplastic. This is a mid-term, low cost improvement assumed to be included in the proposed project.
- Reconstruct the existing traffic signals with all new equipment including mast arms, overhead signals with backplates, and countdown pedestrian signal heads. Backplates should have retroreflective borders conforming to current MassDOT and FHWA recommendations. This is a mid-term, high cost improvement assumed to be included in the planned project.
- Remove R1-6 “STATE LAW Yield to Pedestrian in Crosswalk” signs from signalized intersections, and replace with R10-15 signs as shown at right. Existing R1-6 signs are only appropriate at unsignalized locations. Proposed R10-15 signs will alert drivers regarding the need to yield to pedestrians when turning. This is a short-term, low cost improvement.
- Provide additional advance warning signage for crosswalks. An additional W11-2 Pedestrian warning sign with a supplemental “AHEAD” plaque should be placed on Main Street in advance of the unsignalized crosswalk at Mechanic Street in both directions. A W11-2 sign should also be placed on Main Street westbound before its intersection with Maple Street. This is a short-term, low cost improvement. These signs should be relocated or replaced as necessary as part of the planned project.
- Update No Parking signage to restrict parking within 20 feet of all intersections. It was noted that existing Town regulations prohibit parking within 15 feet of intersections. This restriction should be



increased to 20 feet from the crosswalk line or to the extension of the back of sidewalk line from the side street, in accordance with the MUTCD. This is a short-term, low cost improvement.

- Construct bulb-outs on intersection corners to define limits of on-street parking and provide additional area for pedestrian refuge. This is a mid-term improvement that can be included in the planned rehabilitation project to provide additional definition of legally allowed parking areas, while having the added benefit of reducing crosswalk lengths and providing increased refuge for pedestrians on intersection corners.
- Provide emergency preemption as part of traffic signal reconstruction. It was noted that existing signals do not have optical detectors, but Spencer fire vehicles have optical emitters. Preemption will help ease concerns regarding emergency vehicles departing side streets by providing a protected phase. It should be noted that Spencer police vehicles do not currently have optical emitters. This is a mid-term, medium cost improvement that should be included in the proposed project.
- Increase parking restrictions on the west side of Mechanic Street to facilitate fire truck turning movements. Parking is currently allowed beginning approximately 20 feet south of the crosswalk crossing Mechanic Street. Extending this restricted area would allow more room for turning trucks. The exact limits of the parking restriction should be determined through coordination with the fire department. This is a short-term, low cost improvement.
- Install lane usage signage on all multi-lane approaches. This will alert drivers to the intended lane use in tandem with pavement marking improvements. It is recommended that R3-8 graphical signs be provided on all affected approaches. This should be implemented as a short-term, low cost improvement on the Main Street approaches to Pleasant Street and Maple Street, and should be retained and/or updated as part of the proposed project.
- Remove private signs and temporary postings from utility poles and other structures within the Town right-of-way. This short-term, low cost improvement will reduce sign clutter along the corridor.
- Study clearance times, and implement changes as needed. The existing yellow and all red clearance times should be determined from the existing traffic signal controllers at both signalized intersections and compared to minimum requirements calculated based on current MassDOT guidance. If existing clearance times are insufficient, clearance times should be increased accordingly. This change in clearance times could reduce the occurrence of rear-end crashes within the study area. This is a short-term, low cost improvement that should be done in advance of planned improvements. Clearance times for the proposed geometry should also be calculated following the same methodology as part of planned improvements.
- Consider closing the Price Chopper exit driveway onto Main Street. The existing driveway impacts operations along Main Street due to queues extending from the traffic signal at Pleasant Street. Restricting exit at this location will require all vehicles to exit Price Chopper via its driveway on Pleasant Street. Entry will still be allowed via the existing driveway on Main Street. This short-term, low cost improvement eliminates conflicts between turning vehicles and would directly address rear-end and angle crashes along Main Street. This could be implemented as a temporary measure with

signage and barrier, but could be made permanent along with driveway and sidewalk modifications proposed with the rehabilitation project.

- Increase snow removal efforts to provide adequate clear paths along sidewalks. Snow was partially blocking sidewalks on the day of the audit. This is a short-term, ongoing improvement.
- Replace sidewalks and wheelchair ramps. It was noted that sidewalks and wheelchair ramps will be reconstructed as part of proposed improvements. Existing wheelchair ramps are apex style ramps that do not meet current ADA and MassDOT guidelines. This is a mid-term, high cost improvement.
- Reduce width of the curb cuts for Cumberland Farms and John's Pizza by installing additional curbing between the two driveways. This will provide better definition of entry and exit points for vehicles, and provide additional definition of the continuous sidewalk along the south side of Main Street. This is a mid-term, medium cost improvement that can be accommodated within driveway and sidewalk modifications proposed with the rehabilitation project.

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 Spencer 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. Project improvements have a cost category assigned to them; short-term and ongoing maintenance improvements have an order of magnitude cost assigned.

Table 3. Potential Safety Enhancement Summary

Safety Issue	Safety Enhancement	Responsibility	Safety Payoff	Time Frame	Cost
Signal Equipment	Replace green arrows with green balls on the Wall Street and signalized driveway approaches.	Town	Medium	Short-term	\$1,000
Signal Phasing, Signal Equipment	Consider split phasing for the Pleasant Street, Wall Street and signalized driveway approaches, providing two separate phases for side street traffic - one for the Wall Street approach and a shared phase for Pleasant Street and the signalized driveway approaches	Town	High	Short-term	\$5,000
Intersection Alignment, Signal Phasing, Signal Equipment, Lane Alignment/Lane Trap	Re-align the Main Street/Pleasant Street/Wall Street intersection so that Pleasant Street is aligned opposite Wall Street. A more typical 4-way intersection would eliminate the need for turn restrictions.	Project	High	Mid-term	High*
Intersection Alignment, Lane Alignment/Lane Trap	Increase enforcement of restricted turning movements and existing parking restrictions.	Town	Medium	Short-term	Use of police resources
Lane Widths, Lane Alignment/Lane Trap	Reconfigure the available pavement to provide wider lanes, clear lane transitions and defined parking limits.	Project	High	Mid-term	High*
Pavement Condition	Rehabilitate pavement.	Project	Medium	Mid-term	High*
Pedestrian Travel	Consider relocating the unsignalized crosswalk across Main Street based on pedestrian desire lines. The proposed location should be accompanied by signage placed on both sides of the roadway for added visibility.	Project	High	Mid-term	Low*
Pavement Markings	Reapply pavement markings.	Town (Short) Project (Mid)	Medium	Short-term/ Mid-term	Low*
Signal Equipment, Pedestrian Signals, Signal Operation, Sun Glare	Reconstruct the existing traffic signals with all new equipment including mast arms, overhead signals with backplates, and countdown pedestrian signals. Backplates shall have retroreflective borders conforming to current MassDOT and FHWA recommendations.	Project	High	Mid-term	High*
Pedestrian Signage	Remove R1-6 "STATE LAW Yield to Pedestrian in Crosswalk" signs from signalized intersections, and replace with R10-15 "Turning Vehicles Yield to Pedestrian" signs.	Town	Medium	Short-term	\$500

Table 3. Potential Safety Enhancement Summary

Safety Issue	Safety Enhancement	Responsibility	Safety Payoff	Time Frame	Cost
Pedestrian Signage	Provide advance warning signage for the unsignalized crosswalk at Mechanic Street.	Town	Medium	Short-term	\$500
Visibility	Update No Parking signage to restrict parking within 20 feet of all intersections.	Town	Medium	Short-term	\$2,000
Visibility	Construct bulb-outs on intersection corners to define limits of on-street parking and provide additional area for pedestrian refuge.	Project	Medium	Mid-term	High*
Signal Equipment, Visibility	Provide emergency preemption as part of traffic signal reconstruction.	Project	Medium	Mid-term	Medium*
Fire Truck Turns	Increase parking restrictions on the west side of Mechanic Street to facilitate fire truck turning movements.	Town	Medium	Short-term	\$500
Signage	Install lane usage signage on all multi-lane approaches.	Town	Medium	Short-term	\$1,000
Signage	Remove private signs and temporary postings from utility poles and other structures within the Town right-of-way.	Town	Medium	Short-term	\$500
Clearance Times	Study existing clearance times and implement changes as needed.	Town	High	Short-term	\$2,000
Price Chopper Driveway	Consider closing the Price Chopper exit driveway onto Main Street.	Town	High	Short-term	\$1,000
		Project	High	Mid-term	Low*
Snow Removal	Increase snow removal efforts to provide adequate clear paths along sidewalks.	Town	Medium	Short-term (Ongoing)	-
Wheelchair Ramps	Replace sidewalks and handicap ramps at all locations.	Project	Medium	Mid-term	High*
Wide Curb Cuts	Reduce width of the curb cuts for Cumberland Farms and John's Pizza by installing additional curbing between the two driveways	Project	Medium	Mid-term	Medium*

* These improvements should be included in the next submission of the proposed project. Improvements to be incorporated are assumed to be included as part of the overall project cost.

Appendix A. RSA Meeting Agenda

Agenda

Road Safety Audit

Spencer

**Main Street (Route 9) between Elm Street and
Maple Street (Route 31)**

**Meeting Location: Spencer Town Hall, Meeting Room – A
157 Main Street, Spencer, MA 01562
Monday, January 7th, 2013
12:30 PM – 3:30 PM**

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

12:30 PM Welcome and Introductions

12:45 PM Discussion of Safety Issues

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

1:30 PM Site Visit

- Walk to the Corridor of Main Street (Route 9) between Elm Street and Maple Street (Route 31)
- As a group, identify areas for improvement

2:30 PM Discussion of Potential Improvements

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

3:30 PM Adjourn for the Day – but the RSA has not ended

Instructions for Participants:

- Before attending the RSA on January 7th, participants are encouraged to drive/walk through the corridor 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

Spencer RSA Sign In Sheet

1/7/13

NAME	AGENCY	EMAIL	PHONE
Greg Lucas	BETA Group	GLucas@BETA-Inc.com	781-255-1180
Lola Campbell	D3 MassDOT	alolade.Campbell@state.ma.us	508-885-7
Michael Bruce	MassDOT D3 Traffic	michael.bruce@state.ma.us	508-924-3914
Sujatha Mohanakrishnan	CMRPC	Sujatha@cmrpc.org	508-459-3335
DAVID DANISKA	CMRPC	DDANISKA@CMRPC.ORG	508-459-3331
Kevin Krasnecky	CMRPC	KKrasnecky@cmrpc.org	508-459-3314
MATT CHASE	VHB	MCHASE@VHB.COM	508-752-1001
Michelle Buck	Spencer-Town Planner	mbuck@spencerma.gov	508-885-7500 ^{x182}
DAVE DARRIN	Chief of Police	ddartin@spencerma.gov	508-885-6333
Justin Curawitz	BETA Group	JCurawitz@beta-inc.com	781-255-1482
Tom Currier	Mass DOT	Thomas.Currier@DOT.state.ma.us	
Silpa M	Mass DOT	Silpa.munukutla@dot.state.ma.us	978-368-9637
Qingqing You	Mass DOT	you.q@husky.nev.edu	857-294-5465
CORBY O'Connor	Mass DOT Safety	CORBY.O'Connor@STATE.MA.US	867-368-9638
Peter Calves	Mass Dot Safety	calves.p@husky.nev.edu	
Bob Parsons	Spencer-Town	rparsons@spencerma.gov	
Eben Butler	SPENCER Highway	ebutler@spencerma.gov	
Steven Tyler	Spencer Hwy/U&F	styler@spencerma.gov	508-885-7525

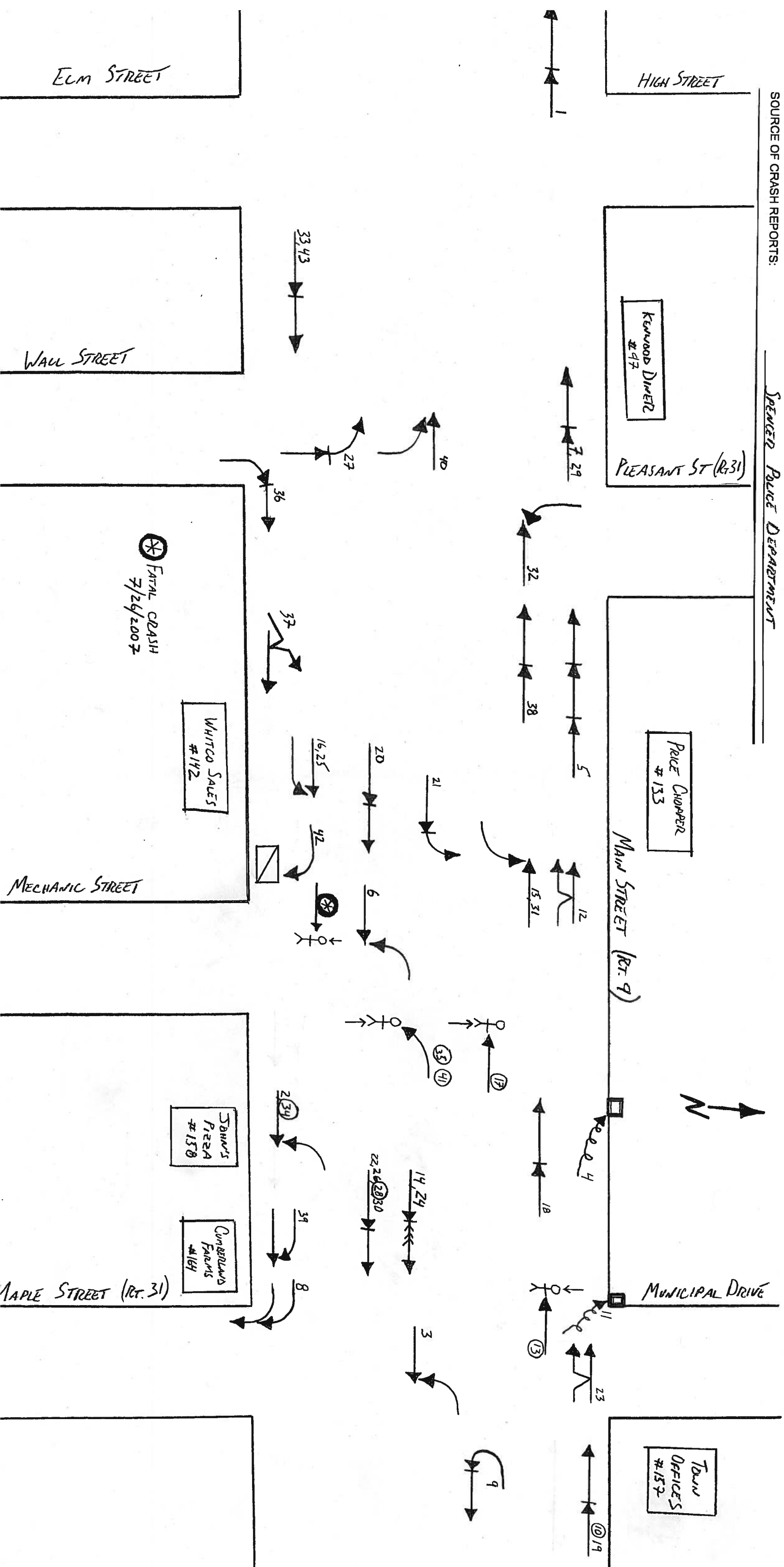
Appendix C. Detailed Crash Data



COLLISION DIAGRAM

CITY/TOWN: SPENCER DATE PREPARED: 8/27/12
REGION: CMRPC PREPARED BY: CO
ROADWAY NAMES: Main St (Rt 9) BETWEEN Elm St & Maple St
TIME PERIOD ANALYZED: 7/15/2009 - 7/15/2012
SOURCE OF CRASH REPORTS: SPENCER Police Department

SYMBOLS	TYPES OF CRASH	SEVERITY



Crash Data Summary Table

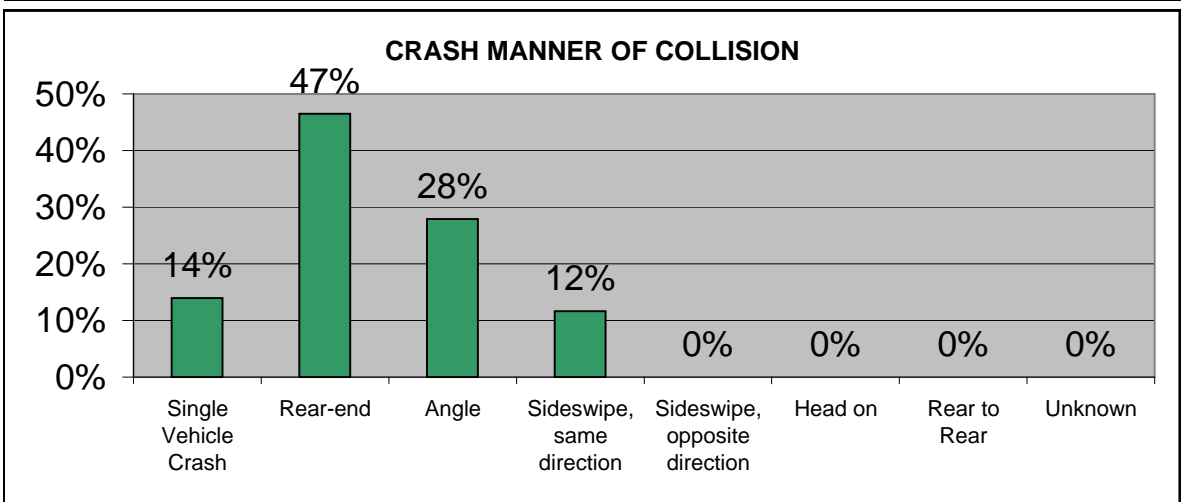
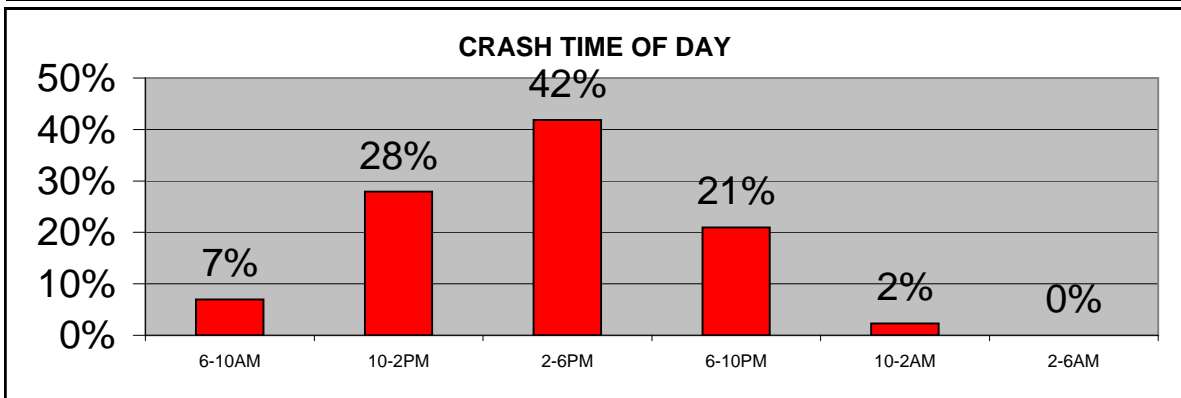
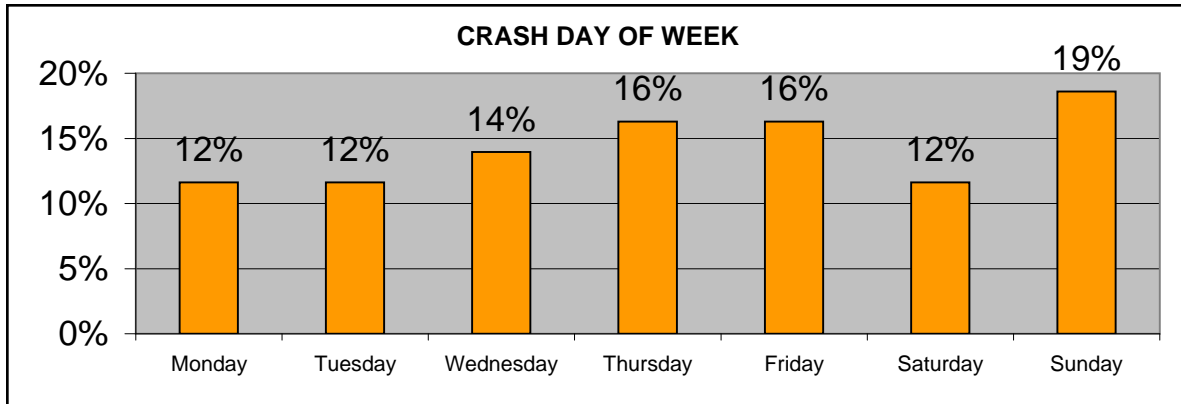
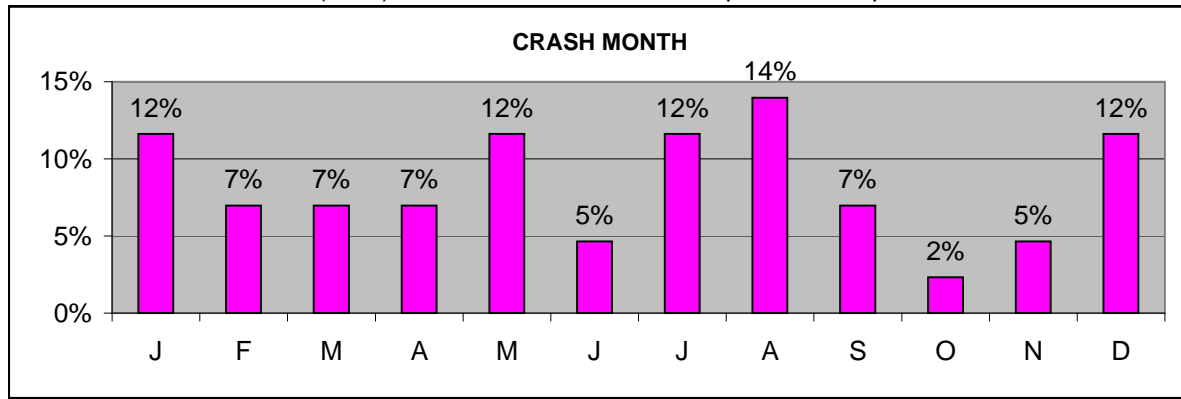
Main Street (Rt. 9) between Elm Street and Maple Street; Spencer, MA
7/15/2009 - 7/15/2012

#	Crash Date	Crash Day	Time of Day	Manner of Collision	Light Condition	Weather Condition	Road Surface	Driver Contributing Code	Ages			Comments
	m/d/y			Type	Type	Type	Type	Type	D1	D2	D3	
1	8/22/09	Saturday	11:40 AM	Rear-end	Daylight	Clear	Dry	No Improper Driving	18	55		
2	8/30/09	Sunday	12:15 PM	Angle	Daylight	Cloudy	Dry	No Improper Driving	48	44		Non-involved operator in thru lane waved vehicle 2 into John's Pizza, Vehicle 1 traveling in RTL hit Vehicle 2
3	10/21/09	Wednesday	7:30 AM	Angle	Daylight	Cloudy	Dry	Failed to yield to right of way	40	18		
4	12/28/09	Monday	11:47 AM	Single Vehicle Crash	Daylight	Snow	Snow	No Improper Driving	22			Snowy and icy conditions, hit utility pole
5	1/10/10	Sunday	4:49 PM	Rear-end	Dusk	Clear	Dry	Inattention	62	40	20	
6	2/1/10	Monday	12:45 PM	Angle	Daylight	Clear	Dry	Failed to yield to right of way	65	58		
7	2/8/10	Monday	4:10 PM	Rear-end	Dusk	Clear	Dry	Glare	54	39		Vehicle 1 stopped to allow pedestrian to cross, Vehicle 2 did not see Vehicle 1 stop due to sun glare
8	2/11/10	Thursday	6:43 PM	Sideswipe, same direction	Dusk	Clear	Dry	Disregarded traffic signs, signals, road markings	48	Unk		Hit and run. Vehicle 1 turned right from RTL, Vehicle 2 turned right from thru lane and hit Vehicle 1
9	3/7/10	Sunday	6:55 PM	Rear-end	Dark - lighted roadway	Clear	Dry	Operating Vehicle in erratic, reckless, careless, negligent, or aggressive manner	18	23		Road rage
10	4/30/10	Friday	2:30 PM	Rear-end	Daylight	Clear	Dry	Inattention	59	49		Vehicle 2 inched forward in traffic, Vehicle 1 moved forward and rear-ended Vehicle 2
11	5/2/10	Sunday	10:37 AM	Single Vehicle Crash	Daylight	Clear	Dry	No Improper Driving	57			Vehicle lost control & hit traffic signal
12	5/13/10	Thursday	6:10 PM	Sideswipe, same direction	Daylight	Clear	Dry	No Improper Driving	29	22		
13	5/25/10	Tuesday	6:05 PM	Single Vehicle Crash	Daylight	Clear	Dry	Glare	38			Sun glare, crosswalk paint was faded
14	7/3/10	Saturday	10:20 PM	Rear-end	Dark - lighted	Clear	Dry	No Improper Driving	37	Unk		Hit and run. Vehicle 2 rolled back into Vehicle 1
15	7/13/10	Tuesday	5:40 PM	Angle	Daylight	Cloudy	Dry	No Improper Driving	49	17		Traffic stopped in thru lane, Vehicle 1 failed to see Vehicle 2
16	7/13/10	Tuesday	7:45 PM	Angle	Daylight	Cloudy	Dry	No Improper Driving	18	61		Entering traffic from parking space
17	8/5/10	Thursday	3:19 PM	Single Vehicle Crash	Daylight	Rain	Wet	Failed to yield to right of way	35			Non-involved vehicle stopped for pedestrian, Vehicle 1 passed non-involved vehicle on right and struck pedestrian
18	9/28/10	Tuesday	3:40 PM	Rear-end	Daylight	Rain	Wet	No Improper Driving	35	45		Traffic stopped for pedestrian crossing street
19	12/1/10	Wednesday	4:50 PM	Rear-end	Dark - lighted	Rain	Wet	No Improper Driving	51	18		
20	12/3/10	Friday	4:07 PM	Rear-end	Daylight	Cloudy	Dry	No Improper Driving	56	81		
21	12/10/10	Friday	12:00 PM	Rear-end	Daylight	Clear	Dry	No Improper Driving	75	Unk		Hit and run
22	3/9/11	Wednesday	1:00 PM	Rear-end	Daylight	Cloudy	Dry	Followed too closely	50	47		
23	3/25/11	Friday	3:00 PM	Sideswipe, same direction	Daylight	Clear	Dry	Inattention	60	61		Vehicle 1 traveling in LTL does not make left turn and side-swipes Vehicle 2 in thru lane
24	4/14/11	Thursday	4:00 PM	Rear-end	Daylight	Clear	Dry	No Improper Driving	24	39		Vehicle 1 rolled back into Vehicle 2
25	4/17/11	Sunday	12:23 PM	Angle	Daylight	Rain	Wet	Failed to yield to right of way	68	47		Entering traffic from parking space
26	5/23/11	Monday	5:52 PM	Rear-end	Daylight	Rain	Wet	Followed too closely	47	19		
27	5/25/11	Wednesday	6:52 PM	Rear-end	Daylight	Clear	Dry	Inattention	47	54		
28	6/2/11	Thursday	3:35 PM	Rear-end	Daylight	Cloudy	Dry	No Improper Driving	62	Unk		Operator 2 claims that foot slipped from brake pedal to gas pedal
29	7/9/11	Saturday	11:07 AM	Rear-end	Daylight	Clear	Dry	Inattention	18	24		
30	8/7/11	Sunday	9:36 AM	Rear-end	Daylight	Rain	Wet	Inattention	31	23		
31	8/18/11	Thursday	4:54 PM	Angle	Daylight	Clear	Dry	No Improper Driving	21	17		Traffic stopped in thru lane, Vehicle 1 failed to see Vehicle 2 passing traffic on right. *RTL does not begin until 25 ft. west of crash
32	8/26/11	Friday	11:30 AM	Angle	Daylight	Clear	Dry	Failed to yield to right of way	63	20		Operator 2 failed to stop at blinking red light, traffic in RTL on Main Street blocked view
33	9/3/11	Saturday	2:35 PM	Rear-end	Daylight	Clear	Dry	Inattention	21	50		
34	9/30/11	Friday	6:40 PM	Angle	Dark - lighted	Clear	Dry	Failed to yield to right of way	63	24		Traffic stopped in thru lane, Vehicle 2 failed to see Vehicle 1
35	11/10/11	Thursday	6:01 PM	Single Vehicle Crash	Dark - lighted	Rain	Wet		65			
36	11/28/11	Monday	2:46 PM	Angle	Daylight	Clear	Dry	Disregarded traffic signs, signals, road markings	28	31		
37	12/18/11	Sunday	2:36 PM	Sideswipe, same direction	Daylight	Clear	Dry	No Improper Driving	55	46		Vehicle 1 pulled to the side to wait for open parking spot, Vehicle 2 side-swiped Vehicle 1
38	1/1/12	Sunday	1:00 PM	Rear-end	Daylight	Clear	Dry	Followed too closely	65	71		
39	1/18/12	Wednesday	2:02 PM	Angle	Daylight	Clear	Dry	Made an improper turn	35	74		Vehicle 2 attempted to turn into Cumberland Farms from thru lane, hit Vehicle 1 in RTL
40	1/24/12	Tuesday	10:55 AM	Angle	Daylight	Clear	Dry	Failed to yield to right of way	88	44		
41	1/27/12	Friday	5:07 PM	Single Vehicle Crash	Dark - lighted	Rain	Wet	Failed to yield to right of way	69			
42	6/16/12	Saturday	7:00 PM	Sideswipe, same direction	Daylight	Clear	Dry	No Improper Driving	65	53		
43	7/11/12	Wednesday	7:30 AM	Rear-end	Daylight	Clear	Dry	Followed too closely	62	39		
*	7/26/07	Thursday	7:18 AM	Single Vehicle Crash	Daylight	Clear	Dry	Glare	44			Fatal crash with pedestrian

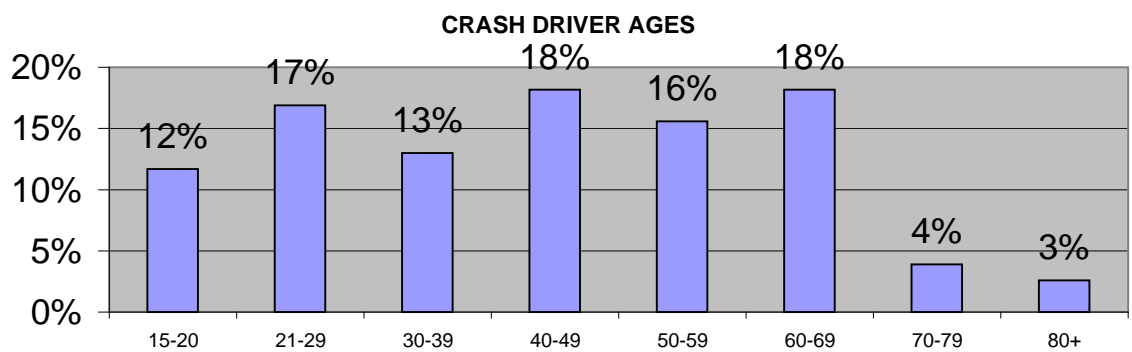
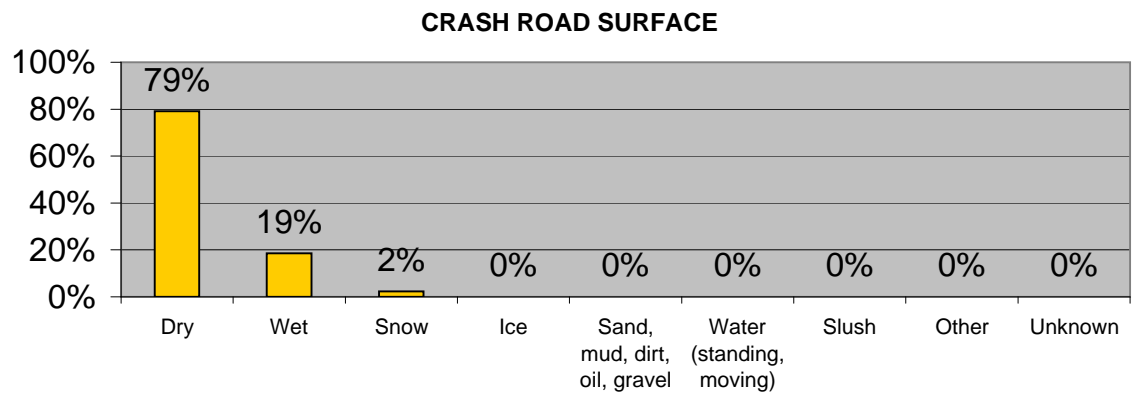
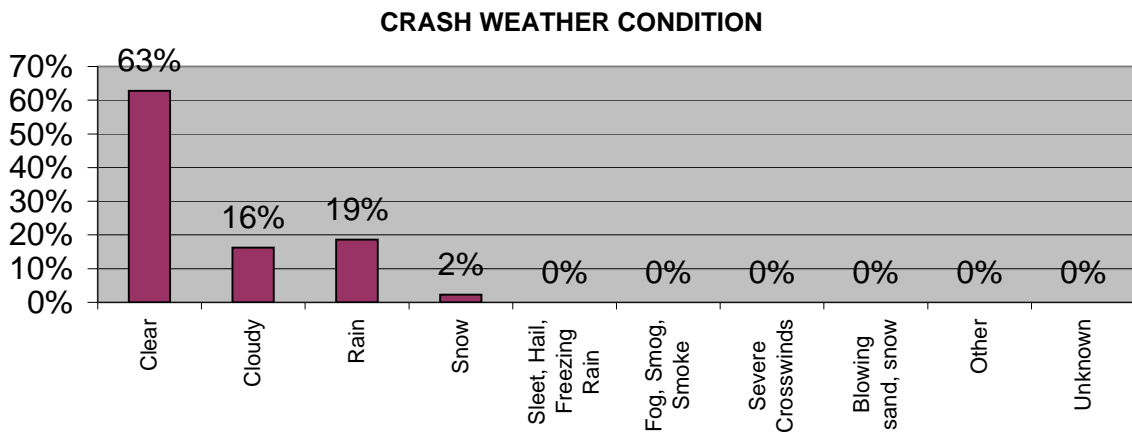
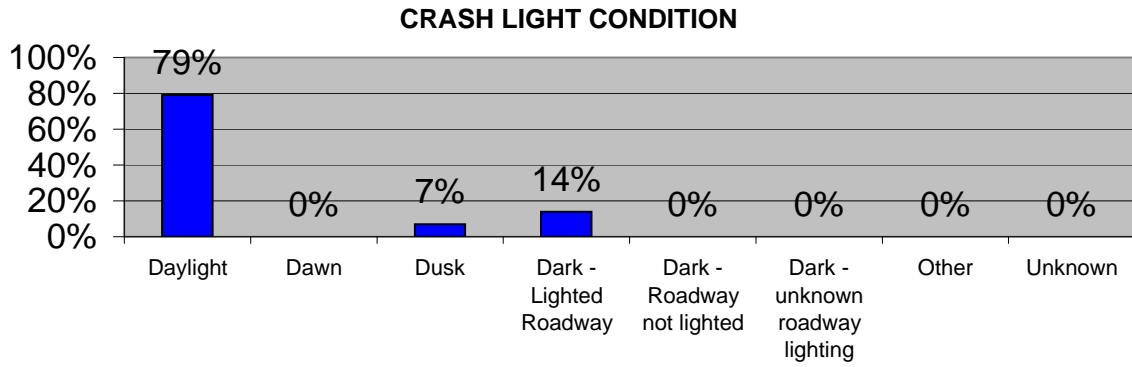
* Crash was not included in analysis charts.

Summary based on Crash Reports obtained from the Spencer Police Department.

Crash Data Summary Tables and Charts
Main Street (Rt. 9) between Elm Street and Maple Street; Spencer, MA



Crash Data Summary Tables and Charts
Main Street (Rt. 9) between Elm Street and Maple Street; Spencer, MA



Appendix D. Speed Regulations

JUL 01 1981

TOWN OF SPENCER
SPECIAL SPEED REGULATION NO. 7069

Highway Location: SPENCER
Authority In Control: TOWN OF SPENCER
Name of Highway: ROUTE 31

In accordance with the provisions of Chapter 90, Section 18, of the General Laws (Ter. Ed.) as amended, the following Special Speed Regulation is

hereby Adopted
by the Board of Selectmen
of the Town of Spencer

That the following speed limits are established at which motor vehicles may be operated in the areas described:

ROUTE 31-NORTHBOUND

Beginning at the Charlton Town Line
Thence northerly on Route 31
3.70 miles at 40 miles per hour
0.53 " " 25 " " " ending at Route 9.

And beginning again 100 feet north of Route 9.
Thence northerly on Route 31
1.37 miles at 30 miles per hour
1.49 " " 40 " " "
1.03 " " 45 " " "
1.17 " " 40 " " "
0.57 " " 30 " " " ending at the Paxton
Town Line; the total distance being 9.86 miles.

ROUTE 31-SOUTHBOUND

Beginning at the Paxton Town Line
Thence southerly on Route 31
0.57 miles at 30 miles per hour
1.17 " " 40 " " "
1.03 " " 45 " " "
1.49 " " 40 " " "
1.39 " " 30 " " " ending at Route 9.

And beginning again 100 feet south of Route 9
Thence southerly on Route 31
0.51 miles at 25 miles per hour
3.70 " " 40 " " " ending at the Charlton
Town Line; the total distance being 9.86 miles.

Operation of a motor vehicle at a rate of speed in excess of these limits shall be prima facie evidence that such speed is greater than is reasonable and proper.

The provisions of this regulation shall not, however, abrogate in any sense Chapter 90, Section 14, of the General Laws (Ter. Ed).

Date of Passage

March 23, 1981

Attest

Elizabeth W. Noga
Town Clerk

Richard L. Smith
John P. Shaw
William A. Sullivan
Board of Selectmen

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF PUBLIC WORKS

SPECIAL SPEED REGULATION NO. 7069

The Department of Public Works and the Registrar of Motor Vehicles, acting jointly, do hereby certify that this regulation is consistent with the public interests.

Standard signs must be erected at the beginning of each zone.

DATE: JUL 01 1981

FOR THE DEPARTMENT OF PUBLIC WORKS

BY:

Robert A. Pansa
Chief Deputy Registrar

J. Cantare
Traffic Engineer

THE COMMONWEALTH OF MASSACHUSETTS
HIGHWAY DEPARTMENT
TOWN OF SPENCER
SPECIAL SPEED REGULATION #7069-A

Highway Location: SPENCER
Authority In Control: TOWN OF SPENCER
Name of Highway (s): ROUTE 31

In accordance with the provisions of Chapter 90, Section 18, of the General Laws (Ter. Ed.) as amended, the following Special Speed Regulation is

Hereby Adopted
by the Board of Selectmen
of the Town of Spencer

Special Speed Regulation number 7069, dated July 1, 1981 is hereby amended as follows:

That the following speed limits are established at which motor vehicles may be operated in the areas described:

ROUTE 31 - NORTHBOUND

By striking out the clauses reading;
1.37 miles at 30 miles per hour
1.49 miles at 40 miles per hour
And inserting in place thereof
0.95 miles at 30 miles per hour
1.91 miles at 40 miles per hour

ROUTE 31 - SOUTHBOUND

By striking out the clauses reading;
1.49 miles at 40 miles per hour
1.39 miles at 30 miles per hour
And inserting in place thereof
1.91 miles at 40 miles per hour
0.97 miles at 30 miles per hour

Operation of a motor vehicle at a rate of speed in excess of these limits shall be prima facie evidence that such speed is greater than is reasonable and proper.

The provisions of this regulation shall not, however, abrogate in any sense Chapter 90, Section 14, of the General Laws (Ter. Ed.).

Date of Passage Nov. 18 1996

William B. Shennette, III

Paul J. Bria

John P. Pless

BOARD OF SELECTMEN

Attest

Jean M. Mulhall

TOWN CLERK

COMMONWEALTH OF MASSACHUSETTS
HIGHWAY DEPARTMENT

SPECIAL SPEED REGULATION NO. 7069-A

The Highway Department and the Registry of Motor Vehicles, acting jointly, do hereby certify that this regulation is consistent with the public interest.

Standard signs must be erected at the beginning of each zone.

DATE: 9-25-97

FOR THE HIGHWAY DEPARTMENT

BY:

Chris Stary
Traffic Engineer

FOR THE REGISTRY OF MOTOR VEHICLES

BY:

Robert P. McQuinnell
Chief Deputy Registrar

4/21/82

TOWN OF SPENCER
SPECIAL SPEED REGULATION
NO. 7118

Highway Location: TOWN OF SPENCER
Authority In Control: TOWN OF SPENCER
Name of Highway(s);: MECHANIC STREET
GREENVILLE ROAD

In accordance with the provisions of Chapter 90, Section 18, of the General Laws (Ter. Ed.) as amended, the following Special Speed Regulation is

hereby Adopted

by the Board of Selectmen
of the Town of Spencer

That the following speed limits are established at which motor vehicles may be operated in the areas described:

MECHANIC STREET---NORTHBOUND

Beginning at the Fish and Game Club
thence northerly on Mechanic Street

0.58 miles at 25 miles per hour ending at Cherry Street; the total distance being 0.58 miles.

MECHANIC STREET---SOUTHBOUND

Beginning at Main Street (Route 9)
thence southerly on Mechanic Street

0.66 miles at 25 miles per hour ending at the Fish and Game Club; the total distance being 0.66 miles.

GREENVILLE STREET---NORTHBOUND

Beginning at Chickering Road
thence northerly on Greenville Street

2.57 miles at 30 miles per hour
0.34 miles at 25 miles per hour ending at Main St. (Route 9); the total distance being 2.91 miles.

GREENVILLE STREET---SOUTHBOUND

Beginning at Main St. (Route 9)
thence southerly on Greenville St.

0.34 miles at 25 miles per hour
2.57 miles at 30 miles per hour ending at Chickering Road; the total distance being 2.91 miles.

4/21/82

NO. 7118

Operation of a motor vehicle at a rate of speed in excess of these limits shall be prima facie evidence that such speed is greater than is reasonable and proper.

The provisions of this regulation shall not, however, abrogate in any sense Chapter 90, Section 14, of the General Laws (Ter. Ed).

Date of Passage March 22, 1982

Richard G. Smith

John M. Hagan

William J. Sullivan

Board of Selectmen

Attest

Elizabeth W. Noyes
Town Clerk

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF PUBLIC WORKS

SPECIAL SPEED REGULATION NO. 7118

The Department of Public Works and the Registrar of Motor Vehicles, acting jointly, do hereby certify that this regulation is consistent with the public interests.

Standard signs must be erected at the beginning of each zone.

DATE: 4/21/82

FOR THE DEPARTMENT OF PUBLIC WORKS

BY:

J. J. Carbone
Traffic Engineer

Robert A. Panora
Chief Deputy Registrar