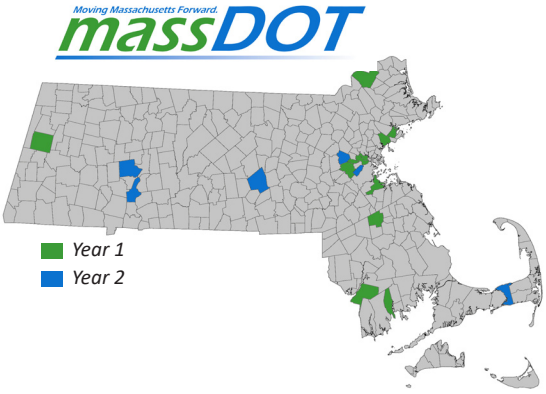


Bicycle and Pedestrian Infrastructure Assessments Holyoke, MA

Beech Street at Resnic Boulevard / W Franklin Street
and
Appleton Street Corridor between Sycamore Street and Chestnut Street

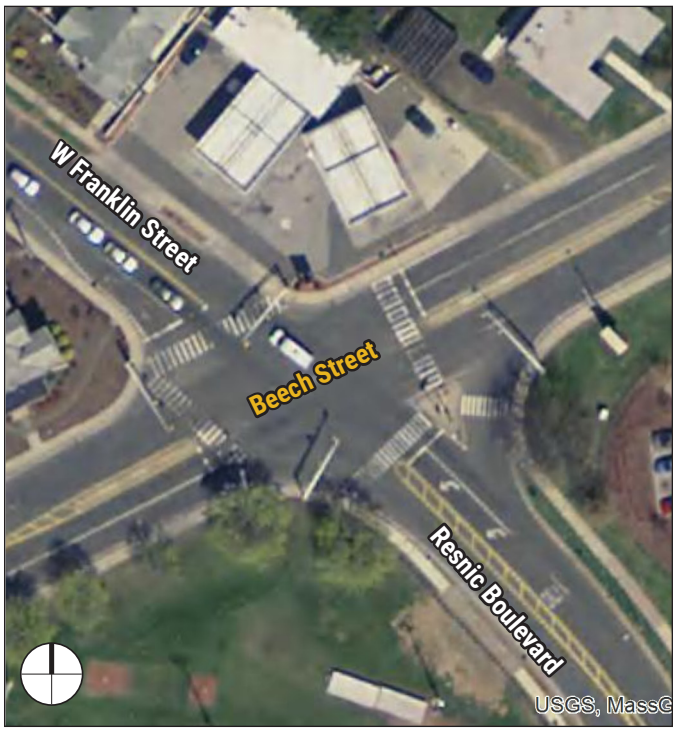
Holyoke is one of 18 communities participating in the MassDOT multi-disciplinary program to improve bicycle and pedestrian safety in Massachusetts. One of the components of the MassDOT program is to conduct walk and bike assessments that identify infrastructure challenges to biking and walking, and recommend short- and long-term improvements. These assessments are also a means of building local knowledge of the importance of well-designed bicycle and pedestrian facilities. WalkBoston and MassBike led a walk and bicycle assessment of two locations in Holyoke: the intersection of Beech Street at Resnic Boulevard / W Franklin Street and the Appleton Street Corridor between Sycamore Street and Chestnut Street.

General Recommendations

Beech Street at Resnic Boulevard / W Franklin Street

Short Term:

1. Study the feasibility of removing a travel lane on Beech Street in each direction. Consider alternatives for widening sidewalks and providing dedicated bicycle facilities;
2. Consider adjusting the fence line to increase visibility between pedestrians and turning vehicles on the southwest corner of the intersection;
3. Consider reducing corner radii to slow motor vehicle speeds via flexposts and paint;
4. Evaluate the feasibility of closing the northbound right-turn slip lane on Resnic Boulevard with consideration for the design vehicle, frequency of truck turning volumes, and the needs of vulnerable users. Consider narrowing travel lanes on all approaches, removing the hatched median on Resnic Boulevard, and potentially removing the concrete median island on Beech Street to provide adequate turning space for large trucks;
5. Reinstall the missing light pole located within the splitter island for the right-turn slip lane on the Resnic Boulevard approach;
6. Service the pedestrian signal pedestal within the splitter island for the right-turn slip lane on the Resnic Boulevard approach to be fully operational and to ensure the signal heads face the correct direction;
7. Install pedestrian warning signs for the slip lane approach on Resnic Boulevard;
8. Evaluate the signal timing and phasing. Consider the safety implications and wait times of all users for both concurrent and exclusive phasing, with particular focus on behaviors of teens as the intersection is heavily used by middle and high school students. Consider proposed geometric changes in conjunction with signal operations;



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General Recommendations (continued)

Beech Street at Resnic Boulevard / W Franklin Street (continued)

9. Consider restricting right turn on reds, particularly for the Beech Street northbound approach;
10. Coordinate with the gas station to consider removing the center curb cut on W Franklin Street closest to the intersection to reduce pedestrian exposure and conflicts within the intersection;
11. Upgrade the signal timing with the preferred phasing and provide the pedestrian phase on automatic recall 24 hours per day with an All Red Clearance Interval;
12. Install high-visibility ladder style crosswalks markings; and
13. Consider removing the center curb cut to the gas station on W Franklin Street closest to the intersection to reduce pedestrian exposure and conflicts within the intersection.

Long Term:

A. Consider curb reconstruction to minimize corner radii to reduce motor vehicle turning speeds and improve sight lines between all roadway users;
B. Consider removing the slip lane and splitter island via reconstruction to shorten crossing distances for pedestrians and slow turning vehicle speeds;
C. Upgrade pedestrian signal equipment to meet current accessibility requirements;
D. Upgrade curb ramps to meet accessibility requirements;
E. Install wider sidewalks with buffers; and
F. Install dedicated bicycle facilities.

General Recommendations

Appleton Street

Short Term:

1. Evaluate alternatives for bicycle facilities, including standard bicycle lanes, separated bicycle lanes on each side of the street, and a two-way separated bicycle lane on one side of the street;
2. Evaluate parking utilization on Appleton Street, side streets, and off-street. Consider consolidating parking to one side of the street, and/or relocating parking to side street to provide separated bicycle lanes;
3. Consider intersecting bicycle routes per the Holyoke Bicycle Master Plan and whether additional intersection treatments are necessary to facilitate safe bicycle turning movements and reduce conflicts;
4. Install a dedicated bicycle facility via pavement markings and signage;
5. Reduce travel lanes widths by marking parking lanes or bicycle facilities;
6. Reinstall or install high-visibility ladder-style crosswalks on all legs of all intersections;
7. Install appropriate pedestrian warning signage (W11-2, R1-6, etc.) at crossings;

(continued on next page)

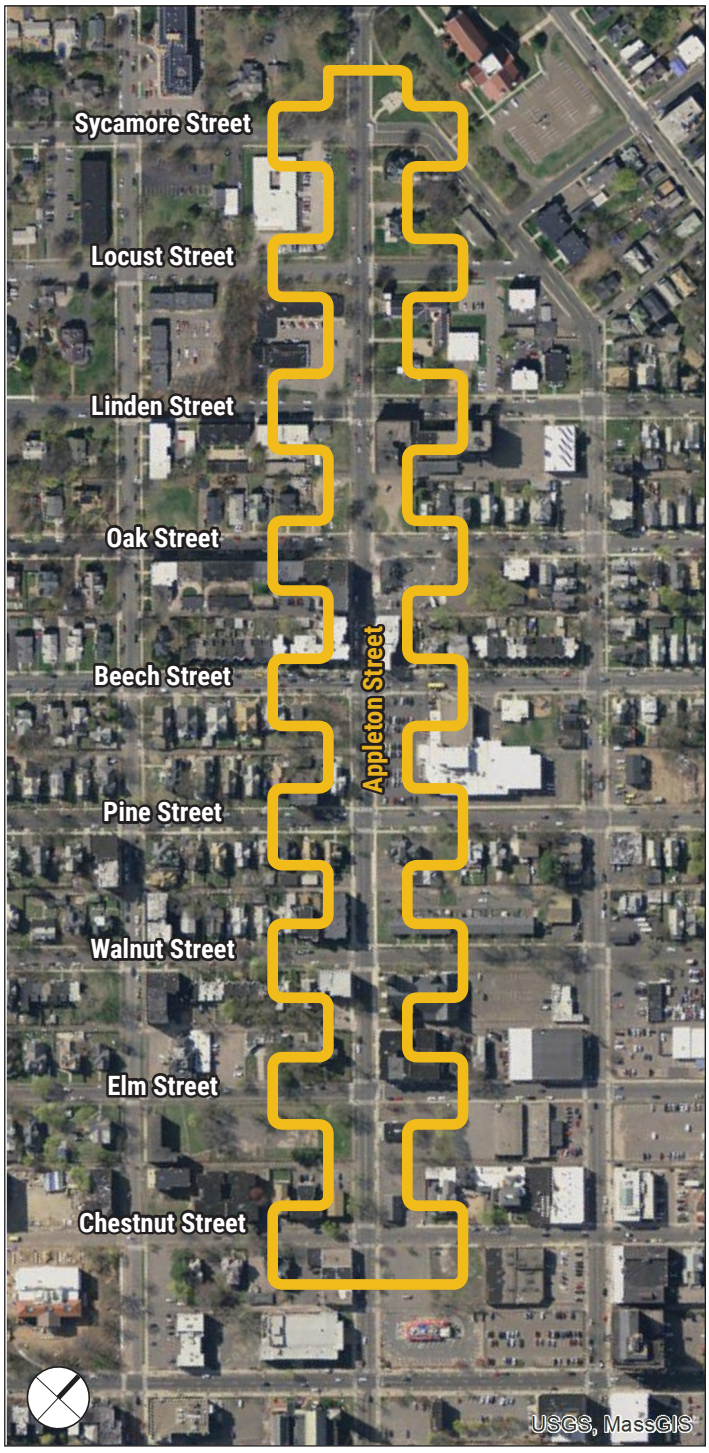
8. Upgrade pedestrian signal equipment to include accessible signals at signalized intersections that meet current standards;
9. Increase sight distance by restricting parking within 20 feet of crosswalks via pavement markings and regulatory signage;
10. Consider curb extensions and reducing curb radii via low-cost solutions such as pavement markings and flexposts;
11. Consider installing bicycle racks on sidewalks and bicycle parking corrals in existing parking lanes; and
12. Install tree grates for existing street trees without grates.

Long Term:

A. Provide accessible curb ramps for each crosswalk;
B. Consider constructing curb extensions in coordination with bicycle facilities to improve pedestrian access while minimizing impacts to bicycle access;
C. Consider additional street trees and plantings within the sidewalk buffer to provide a traffic calming effect;
D. Consider additional lighting to improve visibility at night for all users; and
E. Consider reconstructing sidewalks at unsignalized driveways to provide a pedestrian zone that is continuous, level, and clearly delineated from the driveway.

Location-specific recommendations for the Appleton Street Corridor are provided on the following pages.

Assessment Area: Appleton Street Corridor



Appleton Street at Locust Street

Short Term:

1. Install crosswalks and accessible curb ramps across all legs of the intersection; and
2. Repair cracked sidewalks on Appleton Street between Locust Street and Linden Street to meet accessibility requirements.

Long Term:

A. Consider reconstructing the sidewalks on Appleton Street between Locust Street and Linden Street as concrete to meet accessibility requirements.

Appleton Street at Linden Street

Short Term:

1. Install accessible pedestrian signals;
2. Confirm if Appleton Street is an active bus route and where active bus stops are located along the corridor; and
3. Conduct an accessibility assessment for existing bus stops and upgrade bus stops to meet accessibility requirements.

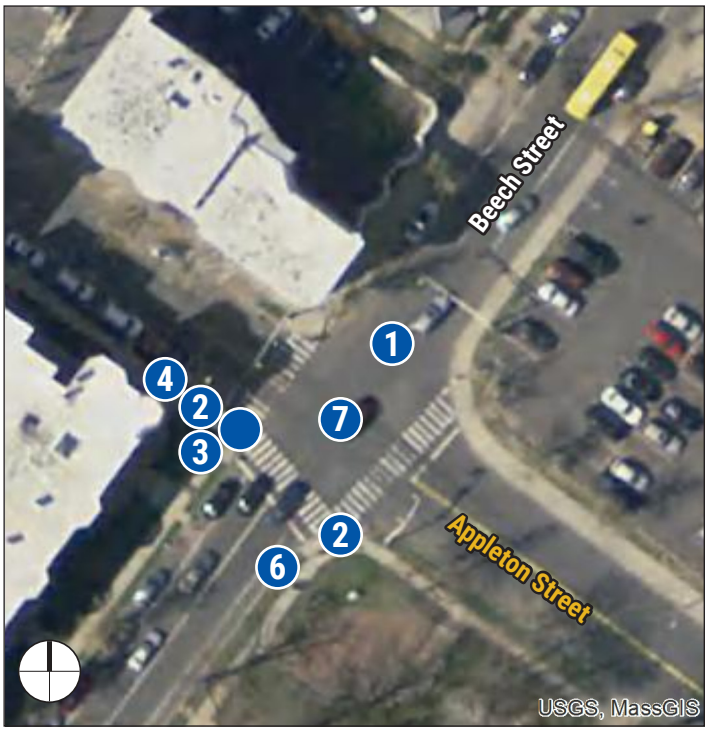
Long Term:

A. Consider reconstructing the sidewalk on the south side of Appleton Street west of Linden Street as concrete and to meet accessibility requirements.

Appleton Street at Oak Street

Short Term:

1. Consider installing high-visibility ladder-style crosswalks on the east and west sides across Appleton Street at Oak Street;
2. Provide accessible curb ramps for each crosswalk;
3. Upgrade the sidewalk on the south side of the intersection to meet accessibility requirements; and
4. Evaluate the height of the existing "Rte. 202 and Rte.141" wayfinding sign for eastbound traffic on Appleton Street and adjust the height as necessary to meet MUTCD and accessibility requirements.



Appleton Street at Beech Street

Short Term:

1. Install a crosswalk, accessible curb ramps, and pedestrian signal indications on the northeast leg of the intersection across Beech Street;
2. Provide an accessible path on the southwest corner of the intersection. Consider curb extensions or relocating obstructions;
3. Evaluate sight distance on the southwest corner of the intersection and consider treatments to improve sightlines as necessary;
4. Install lane directional markings and advance intersection lane control signs on the Beech Street northbound approach;
5. Consider feasibility of an exclusive pedestrian phase;
6. Service the pedestrian signal indications and push buttons on the southeast and southwest corners of the intersection so they are operational; and
7. Adjust the height of the pedestrian signal head on southwest corner to meet MUTCD and accessibility requirements.

Appleton Street at Pine Street

Short Term:

1. Evaluate sight lines on the southbound Pine Street approach and consider treatments such as restricting parking within 20 feet of the intersection, curb extensions via pavement markings and signage.

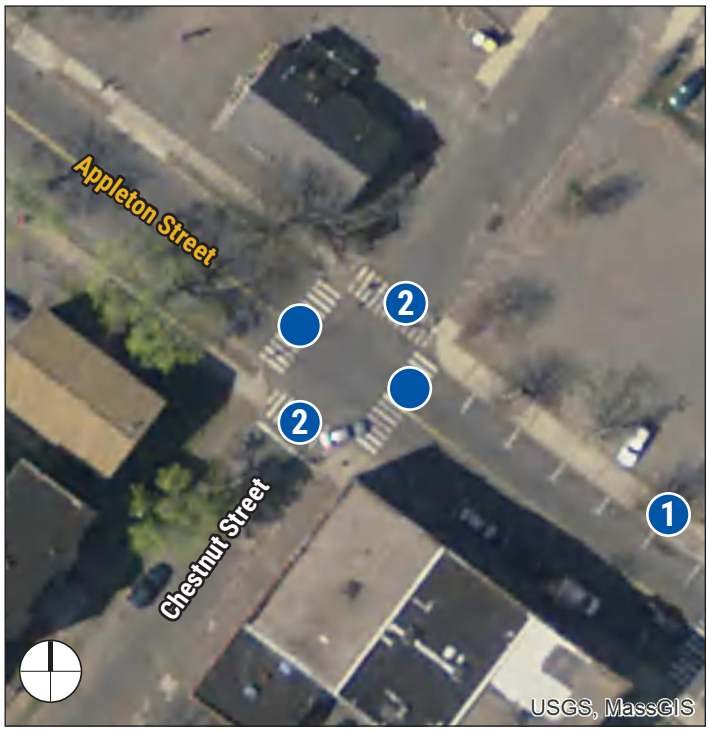
Long Term:

A. Evaluate sight lines on the southbound Pine Street approach and consider constructing curb extensions and relocating the fence and transformer box to increase sight distance.

Appleton Street at Chestnut Street

Short Term:

1. Relocate the existing crosswalk or McDonald's driveway curb cut just south of the intersection to provide an accessible crossing with compliant curb ramps; and
2. Restripe the crosswalk with high-visibility ladder-style pavement markings.



Walk/Bicycle Assessment
Appleton Street and
Beech Street at Resnic Boulevard

Holyoke, MA

May 2, 2017

Prepared for the Massachusetts Department of Transportation Bicycle and Pedestrian Safety Awareness and Enforcement Program

Introduction

WalkBoston and MassBike conducted an assessment of pedestrian and bicycle infrastructure along Appleton Street from Sycamore Street to Chestnut Street, as well as the intersection of Beech Street at Resnic Boulevard / W Franklin Street in the City of Holyoke on Thursday, March 9, 2017. This report describes the key findings of the assessment, the assessment team, the existing conditions and observations, as well as short-term and long-term recommendations to improve safety.

Key Findings

Beech Street at Resnic Boulevard / W Franklin Street

Key themes discussed at the intersection of Beech Street at Resnic Boulevard / W Franklin Street included motor vehicle speeds, intersection geometry, pedestrian signals, sidewalk widths, visibility of pedestrians to turning vehicles, and a lack of bicycle facilities. Team members noted concerns about the volume and speed of motor vehicle traffic on Beech Street and Resnic Boulevard. The assessment team also discussed concerns about the width of Beech Street and the discrepancy in roadway capacity needed for the peak and off-peak hours. Beech Street has four travel lanes that carry vehicle capacity during the peak hours. However, during off-peak hours, the width of the road may contribute to speeding. In addition, the wide corner radii on all approaches permit motor vehicles to turn at high speeds. The crash data for the intersection shows a high number of rear end crashes, where approach speed may be a contributing factor. The assessment team also noted that there are no bicycle accommodations on any street approaching the intersection.

The existing signals provide concurrent pedestrian phasing and there are concerns about visibility between turning vehicles and pedestrians. The southwest corner of the intersection has limited sight distance due to the location of the existing mast arm, fence, and tree line. The assessment team discussed that poor sight lines may have contributed to the reported crash where a bicyclist was struck while crossing in the crosswalk across Resnic Boulevard by a right turning motorist from Beech Street northbound. The team recommended removing the existing right-turn slip lane on the Resnic Boulevard westbound approach to improve visibility of pedestrians, reduce conflicts with pedestrians and turning vehicles, and reduce pedestrian crossing distances and exposure to motor vehicle traffic. In addition, the existing light pole on the splitter island of the westbound approach was recently struck. The assessment team observed that the existing pedestrian signal heads are not working and do not face the pedestrian direction of travel. The assessment team discussed the need to service the light pole and pedestrian signal. The assessment team also recommended evaluating the feasibility of closing the slip lane in the short-term via paint, flexposts, planters, and adjustment of the pavement markings while providing adequate turning radii for large trucks. In the long-term, the assessment team discussed reconstructing the corner to remove the slip lane and tighten the turning radii to better balance the safety of both pedestrians and turning vehicles.

Key recommendations for the Beech Street at Resnic Boulevard / W Franklin Street intersection include:

- Study the feasibility of a road diet on Beech Street to remove one travel lane in each direction;
- Consider installing dedicated bicycle facilities on Beech Street;
- Consider widening sidewalks;
- Consider adjusting the fence line to increase visibility between pedestrians and turning vehicles on the southeast corner of the intersection;
- Consider reducing corner radii to slow motor vehicle speeds via flexposts and paint or reconstruction;
- In the short term, reinstall the missing light pole located within the splitter island for the right-turn slip lane on the Resnic Boulevard. Service the pedestrian signal pedestal within the splitter island for the right-turn slip lane on the Resnic Boulevard so is operating and the pedestrian signal heads are facing the correct direction. Install pedestrian warning signs for the slip lane approach on Resnic Boulevard;
- In the short term, evaluate the feasibility of closing the westbound right-turn slip lane on Resnic Boulevard via low cost treatments such as pavement markings, signage, and flexposts. In the long term, reconstruct the corner to remove the slip lane and tighten the turning radii to balance the needs of both pedestrians and turning vehicles;
- Evaluate the signal timing and phasing for the intersection in conjunction with geometric changes. Evaluate the safety implications and wait times of all users for both concurrent and exclusive phasing, with particular focus on behaviors of teens as the intersection is heavily used by middle and high school students; Install high visibility ladder style crosswalks markings;
- Upgrade curb ramps to meet accessibility requirements; and
- Upgrade pedestrian signal equipment to meet current accessibility requirements.

Appleton Street

Several key themes were discussed for the Appleton Street corridor. Sidewalks are generally in good condition, however the assessment team noted accessibility concerns at some street crossings and driveways. The assessment team observed multiple occurrences where the sidewalk along the corridor sloped down to street level at alleys. Some pedestrian ramps at intersections were observed to be recently reconstructed, while other ramps in the same intersection were not. Existing curb ramps are typically apex style directing pedestrians into the center of the intersection, which are not preferred for pedestrian safety and accessibility. Most curb ramps do not have detectable warning surfaces and appear to be non-compliant with accessibility requirements, however a full accessibility assessment was not conducted. Crosswalks are not provided across all legs of intersections throughout the corridor. In addition, existing crosswalk markings provide perpendicular bars only, and do not include the outside transverse white lines, which are important to guide pedestrians with visual impairments. Crosswalk signage is inconsistent or missing. The assessment team also noted that pedestrians have been observed crossing outside of designated crosswalks throughout the Appleton Street corridor. Street tree plantings along the corridor are inconsistent and there appear to be opportunities to install additional street trees and plantings within the sidewalk buffer. It was also noted that at signalized intersections along the corridor, an All Red

clearance interval appears to be missing from the signal phasing, which is when all movements are held to allow the intersection to clear and reduce conflicts.

On the southwest corner of Appleton Street and Beech Street the existing signal controller box, retaining wall, landscaping, and light pole obstruct the sidewalk and reduce sightlines between northbound motorists on Beech Street and eastbound motorists on Appleton Street and there the sidewalk becomes narrow. Participants noted that there is poor visibility on the Beech Street approach because of the steep downhill grade.

The assessment team spent considerable time discussing the potential for bicycle facilities along Appleton Street. As a major east-west bicycle route through the City, separated bicycle facilities are desirable. Members of the assessment team noted that parking utilization along Appleton Street appears to be low to medium during different times of day. Generally, members noted that parking consolidation to one side of the street may be feasible along most of the corridor; however, several blocks, such as between Linden Street and Walnut Street, may be more challenging to consolidate parking due to the presence of large residential buildings and parking demand. The assessment team also noted that parking removal on Appleton maybe offset and accommodated by nearby on-street parking on side streets, and the large amount of off-street parking within and just outside of the study area at residential and commercial buildings. The assessment team recommended conducting a parking utilization study near the Appleton Street corridor including on- and off-street parking. This study can be used to determine the feasibility of consolidating or removing on-street parking on Appleton Street to provide a dedicated bicycle facility. The assessment team also noted that there is insufficient bicycle parking throughout the study area.

Although some team members noted that speeding does not appear to be an issue, it is desirable to slow speeds to reduce severe injuries and fatalities. As shown in **Figure 1** the crash data originally provided by WalkBoston sourced from MassDOT Top Crash Locations interactive map HSIP 2005 to 2014, there were 13 bicycle crashes (nine injury crashes), and 19 pedestrian crashes (15 injury crashes) along Appleton Street. The data shown in the **Appendix D** includes collision diagrams and crash summary tables provided by MassDOT covering 2011-2015. This data show shows six pedestrian crashes (four injuries) and four bicycle crashes (three injuries).

Key recommendations along the length of the Appleton Street corridor include:

- Reduce travel lanes widths by marking parking lanes and edge lines or bicycle facilities;
- Reinstall or install high-visibility ladder-style crosswalks on all legs of all intersections;
- Provide accessible curb ramps for each crosswalk;
- Install appropriate pedestrian warning signage at crossings;
- Increase sight distance by restricting parking within 20’ from crosswalks via paint, street signs, and/or constructed curb extensions;

- Consider curb extensions and reducing curb radii via low-cost solutions such as pavement markings and flexposts, and consider permanent reconstruction as funds become available. Curb extension locations should consider and minimize impacts to bicycle facility access;
- Consider additional street trees and plantings within the sidewalk buffer;
- Consider reconstructing sidewalks at unsignalized driveways to provide a continuous, level, and clearly delineated pedestrian zone;
- Install a dedicated bicycle facility. Evaluate alternatives for bicycle facilities, including standard bicycle lanes, separated bicycle lanes on each side of the street, or a two-way separated bicycle lane on one side of the street. Evaluate parking utilization and consider consolidating parking to one side of the street and/or relocating parking to side streets to provide separated bicycle lanes;
- Provide concurrent signal phasing and upgrade pedestrian signal equipment to meet accessibility standards;
- Evaluate sight distance on the southwest corner of the Appleton Street and Beech Street intersection and consider treatments to improve sightlines as necessary; and
- Consider installing bicycle racks on sidewalks and bicycle parking corrals in existing parking lanes.

Summary of MassDOT Bicycle and Pedestrian Safety and Awareness Program

The City of Holyoke is one of 18 communities participating in the Massachusetts Department of Transportation's (MassDOT) multi-disciplined program to improve bicycle and pedestrian safety in Massachusetts. One of the components of the MassDOT program is to conduct walk and bicycle assessments. The assessments have three goals:

1. Foster an awareness of the infrastructure elements which contribute to the biking and walking environment;
2. Evaluate the safety and quality of the biking and walking environment along the route; and
3. Recommend short and long-term infrastructure improvements.

One of the goals of this program is to identify if the built environment or infrastructure is contributing to the high incidence of crashes and/or poor behaviors resulting in crashes in the described locations. The results of this assessment can be used to identify safety issues and promote infrastructure improvements along this major east/west corridor in the city. The assessments are not meant to be a complete inventory of infrastructure deficiencies, nor are they meant to provide specific designs for every improvement. WalkBoston and MassBike lead the assessments to build local capacity for improving the built environment for walking and biking. This report may be used as a resource for municipal staff, traffic engineers, and design professionals who municipalities may engage to design and implement policies, programs, and infrastructure improvements.

The Holyoke Police Department received a grant to conduct enforcement and awareness activities at specific intersections and along identified corridors known to have high incidences of bicycle and

pedestrian crashes or violations. Police Officers are stopping all road users (drivers, bicyclists, and pedestrians) who are engaging in dangerous behaviors for three reasons:

1. To inform the road user of the rules of the road;
2. To determine if there is a built environment (or infrastructure) reason that someone is not following the rules; and
3. To gather qualitative data about the reasons why people are behaving the way they are.

The data collected from the police, coupled with the results of the infrastructure assessments, will identify deficiencies and propose recommendations to improve the safety and quality of the walking and biking environment along the Appleton Street corridor and Beech Street and Resnic Boulevard / W Franklin Street intersection in Holyoke.

Toole Design Group (TDG) is working with WalkBoston and MassBike to complete the assessment reports. TDG prepared this report which summarizes the observations made by members of the assessment team and provides recommendations for improvements to the built environment to increase walkability and bikeability. The observations vary from specific infrastructure deficits, such as faded crosswalks or uneven sidewalks, to general comments on traffic speeds or land use patterns (e.g., vacant storefronts). Likewise, the recommendations range from specific fixes (e.g., paint crosswalk) to suggestions for further study (e.g., evaluate the feasibility of a road diet) to non-infrastructure items such as education and enforcement.

City of Holyoke Pedestrian and Bicycle Background Context

The City of Holyoke has had pedestrian and bicycle planning on the agenda for several years. WalkBoston completed a Downtown Pedestrian Plan and MassBike produced a bicycle needs assessment in 2012. The Pioneer Valley Planning Commission has recently completed a draft of an updated comprehensive citywide bicycle network plan that is currently being reviewed by city staff and the Holyoke bicycle and pedestrian committee. The draft bicycle network plan proposes a citywide network of bicycle facilities, and presents design options for several key corridors, including Appleton Street.

Among many revitalization projects, Holyoke has seen infrastructure improvements on Dwight Street near the new regional train station. The second phase of the Holyoke Canalwalk was completed in October 2015. The Canalwalk is a pedestrian walkway and promenade along the City of Holyoke's historic canals. It includes a wide promenade along the 1st and 2nd Canals, and includes decorative paving, lighting, landscaping, railings, and benches to enhance and encourage pedestrian and bicycle activity along the canals to bring life back to the abutting sites and buildings. The Canalwalk will also provide a regional link to the Connecticut River Greenway project that will link the Pioneer Valley along a recreation and commuter system for alternative transportation such as walking and biking. A third construction phase is in the works.

Holyoke was the first city in western Massachusetts to pass a Complete Streets ordinance. The ordinance, passed in 2014, has entitled Holyoke to participate in the MassDOT Complete Streets Funding Program to encourage municipalities to regularly and routinely include Complete Streets design elements and infrastructure on locally-funded roads. The City is currently considered Tier 2, which means the City is in the process of completing a prioritization plan listing projects proposed for Complete Streets funding over the next 5 years. Once the prioritization plan is completed, Holyoke will be eligible to apply for up to $400,000 of construction funds to put towards projects on the prioritization plan.

Assessment Team

Representatives from the City of Holyoke, Holyoke Bicycle Pedestrian Committee, MassDOT, WalkBoston, MassBike, and TDG participated in the assessment. The members and their affiliations are provided in **Table 1**.

Table 1 - Assessment Team

Team Member	Agency/Affiliation	Email Address
Elsa Chan	MassDOT Traffic Safety	Elsa.chan@state.ma.us
Michelle Deng	MassDOT Traffic Safety	Michelle.deng@state.ma.us
Elbert Bowler	Holyoke Bicycle Pedestrian Committee	Treble13@comcast.net
Nancy Howard	Holyoke Bicycle Pedestrian Committee	nhowardsmith@comcast.net
Debbie Opperman	Holyoke Planning Department and Mass in Motion Coordinator	oppermannd@holyoke.org
Jeffrey Joniec	Holyoke Police Department	sgt.joniec@holyokepd.org
Eduardo Baez	Holyoke Bicycle Pedestrian Committee	eduardobaezx@aol.com
Price Armstrong	Holyoke Bicycle Pedestrian Committee	Pricearmstrong@gmail.com
Michael McManus	Holyoke Department of Public Works	mcmanusm@holyoke.org
Wendy Landman	WalkBoston	wlandman@walkboston.org
Stacey Beuttell	WalkBoston	sbeuttell@walkboston.org
David Watson	WatsonActive / MassBike	david@watsonactive.com
Jessica Mortell	Toole Design Group	jmortell@tooledesign.com

Assessment Location

In the fall and winter of 2016, WalkBoston, MassBike and MassDOT met with the City and local stakeholders to identify appropriate locations for the walk and bicycle assessments funded through this MassDOT safety program. The study area was identified based on the Highway Safety Improvement Plan (HSIP) identified crash clusters involving bicycle and pedestrian-related fatalities and injuries. The study area was ultimately selected by the Holyoke Bicycle and Pedestrian Committee, in consultation with the City of Holyoke staff. Appleton Street was selected as a critical east-west transportation corridor with significant potential for bicycle and pedestrian improvements. The Beech Street / Resnic Boulevard / W

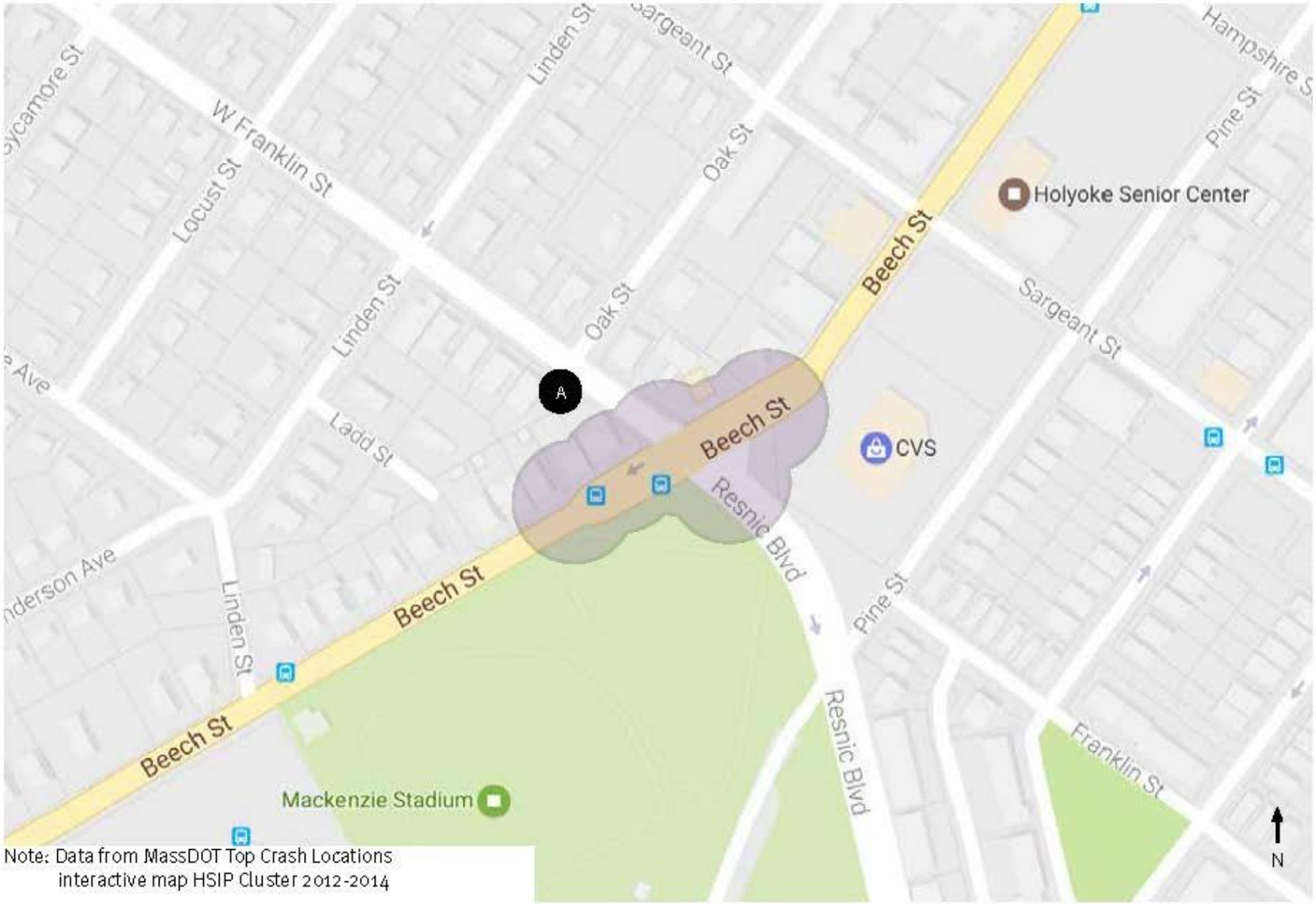
Franklin Street intersection was selected due to high number of crashes, geometric complexity, large pedestrian presence due to the nearby middle and high schools, and its potential utility as part of the bicycle network.

The study area selected for the bicycle and walk assessment includes the Beech Street at Resnic Boulevard / W Franklin Street intersection and the Appleton Street corridor between Sycamore Street and Chestnut Street, which includes the following intersections:

- Appleton Street at Sycamore Street;
- Appleton Street at Locust Street;
- Appleton Street at Linden Street;
- Appleton Street at Oak Street;
- Appleton Street at Beech Street;
- Appleton Street at Pine Street;
- Appleton Street at Walnut Street;
- Appleton Street at Elm Street; and
- Appleton Street at Chestnut Street.

The study area including three HSIP crash clusters identified and are illustrated in **Figures 1 and 2**. In addition, MassDOT provided crash data and collision diagrams which are provided in **Appendix D**.

Figure 1: Beech Street at Resnick Street Assessment Map



Note: Data from MassDOT Top Crash Locations interactive map HSIP Cluster 2012-2014

HSIP Cluster A	
Crash count	57
Fatal crashes	0
Injury crashes	8
Property damage crashes	49

Figure 2: Appleton Street Assessment Map

HSIP Bicycle Cluster A	
Crash count	13
Fatal crashes	0
Injury crashes	9
Property damage crashes	4

HSIP Pedestrian Cluster B	
Crash count	19
Fatal crashes	0
Injury crashes	15
Property damage crashes	4

massDOT
MassBike
walkBoston
Toole Design Group

Holyoke Assessment

The assessment was conducted on Thursday, March 9, 2017 and took approximately four hours. Before the assessment, WalkBoston and MassBike presented an introduction about the assessment process and a summary of pedestrian and bicycle infrastructure. The group spent about an hour and a half in the field and regrouped for a discussion of observations and potential recommendations.

During the assessment, the topics covered included the potential for narrowing lane widths and/or reducing the number of travel and/or parking lanes; reducing vehicular speeds; providing improved accessibility at intersections; providing clarity in pavement marking and signage; improving signal timing operations and signal detection for pedestrians and bicyclists; providing improved crossing opportunities throughout the corridor; increased sight distances; and providing dedicated bicycle facilities.

The following sections discuss area-wide recommendations as well as location-specific recommendations for the short-term (0 to 3 years) and/or long-term (>3 years).

Beech Street (Rte. 202 NB / SB) at Resnic Boulevard / W Franklin Street

The following section describes observations and recommendations identified during the assessment that apply to the entirety of the intersection of Beech Street at Resnic Boulevard / W Franklin Street.

Existing Conditions and Observations

General

Beech Street (Rte. 202 NB/SB) at Resnic Boulevard / W Franklin Street is a four-way signalized intersection with Beech Street running generally in a north-south direction and W Franklin Street / Resnic Boulevard generally running in an east-west direction. Beech Street, Resnic Boulevard, and W Franklin Street are City-owned roadways. As classified by the MassDOT Office of Transportation Planning, Beech Street and Resnic Boulevard are urban principal arterials, and W Franklin Street is an urban collector. Beech Street connects interstate (I)-91 to points east of Holyoke via Purple Heart Drive and the town of South Hadley.

At the intersection, Beech Street provides two travel lanes per direction separated by a narrow concrete median. The total curb to curb width as measured in Google Earth including the median is approximately 50'. To the east of the subject intersection, Beech Street transitions to one lane per direction east of Sargeant Street, with on-street parking for one block. At Hampshire Street, Beech Street transitions to a one lane, one-way street with on-street parking on both sides for one block, widening to two lanes east of Cabot Street. W Franklin Street to the east of the intersection provides two travel lanes and on-street parking, transitioning at the subject intersection to two approach lanes and one receiving lane with no on-street parking. Resnic Boulevard to the west of the intersection provides one receiving lane, a hatched yellow median, and three approach lanes including a left turn lane, thru lane, and a right-turn slip lane separated by a splitter / pedestrian refuge island. The existing right-turn slip lane is yield-controlled. Resnic Boulevard connects to I-391 and has a posted speed limit of 25 mph. There is no on-street parking within the intersection. Average daily traffic volumes were not provided at the assessment. Destinations

near the Beech Street and Resnic Boulevard / W Franklin Street intersection include Holyoke High School, and the Holyoke Medical Center to the west; and Mackenzie Stadium, Pouliot Pool, Sheard Park, and Fitzpatrick Ice Skating Rink to the south; and mostly residential land uses to the north and east. There is a CVS pharmacy to the south and gas station to the north located on the east side of the intersection. William R Peck Middle School is located to the west of the intersection; however, there is no direct access to the middle school via Beech Street.

There was a total of one pedestrian-involved crash and one bicycle-involved crash at this intersection discussed in further detail below.

Motor Vehicle Speeds

Resnic Boulevard and Beech Street connect directly to I-391 and I-91 and feel like extensions of the highway. Assessment team members noted that both roadways carry a relatively high volume of truck traffic; however, traffic counts were not provided. The assessment team described excessive speeds along these roadways. Crash data reviewed indicated high volumes of reported rear-end crashes (38%) on all approaches except for the southbound Beech Street approach; speeds may have been a contributing factor in these crashes. Beech Street has four travel lanes that are sufficient to handle motor vehicle traffic during the peak commuting hours, particularly during school arrival and dismissal, but the number of travel lanes and roadway width may contribute to speeding during off-peak times. The assessment team discussed concerns that the street is over built for 24-hour operations, and that the width of the street decreases comfort for pedestrians and bicyclists. The team discussed the potential to slow speeds and provide additional space for other modes by removing a travel lane on Beech Street in each direction, which is recommended for further study.

Image 1: Beech Street eastbound approach.

Sidewalks and Crossings

Sidewalks throughout the intersection are approximately six feet wide and do not provide a sidewalk buffer. Pedestrian volumes and activity along the sidewalks is moderate to high, especially during school arrival and dismissal. Members of the team noted that most of the pedestrian ramps within the study area do not appear to meet accessibility requirements and need to be upgraded. During school dismissal, the sidewalks are over-crowded. Assessment team members noted that it is difficult for school children to

cross the street at this intersection and that two crossing guards are stationed at this location during school hours to assist children crossing the street. One member of the assessment team reported that a crossing guard was struck while in the crosswalk across Resnic Boulevard on the west leg of the intersection. The motorist involved in the crash said they did not see the crossing guard due to poor visibility.

Corner Radii

The corner radii of the intersection create long crossing distances for pedestrians and increase exposure to motor vehicle traffic. The large curb radii allow vehicles to turn at high speeds. The assessment team discussed reducing corner radii to improve sight distances between pedestrians and other roadway users, and slow motor vehicle turning speeds. Consideration should be given to a short-term solution such as paint and flexposts, as well as long-term reconstruction.

Sight Lines

The existing fence and tree line on the southeast side of the intersection restrict sight lines between pedestrians and northbound motorists on Beech Street turning eastbound onto Resnic Boulevard. The poor sight lines and high motor vehicle turning speeds may have contributed to a reported crash were a bicyclist was struck while crossing in the crosswalk across Resnic Boulevard by a right-turning motorist from northbound Beech Street.

Image 2: Fence, light pole, and trees obstruct sight lines on the southeast corner of the Beech Street at Resnic Boulevard.

Right-Turn Slip Lane on Resnic Boulevard

The assessment team noted that the right-turn slip lane on the westbound approach is yield-controlled, which does not meet current standards and will need to be upgraded with signals during any reconstruction work. There are no advanced pedestrian warning signs for the right-turn slip lane. The assessment team observed a large truck mounting the sidewalk as it made a right turn onto Beech Street northbound. The sidewalk has notable cracking and gaps along the slip lane. In the long-term, the assessment team discussed removing the slip lane and tightening of the curb radii to slow vehicular speeds. In the short-term, the assessment team recommended installing warning signs and evaluating the feasibility of closing the slip lane. The team discussed that this may be possible by narrowing travel lanes on all approaches, removing the hatched median on Resnic Boulevard, and potentially removing the concrete median island on Beech Street to provide adequate turning space for large trucks. In the long-term, the assessment team recommends considering removal of the slip lane

Image 3: Sidewalk deterioration along right-turn slip lane on Resnic Boulevard northbound approach.

and splitter island via reconstruction to shorten crossing distances for pedestrians and slow motor vehicle speeds.

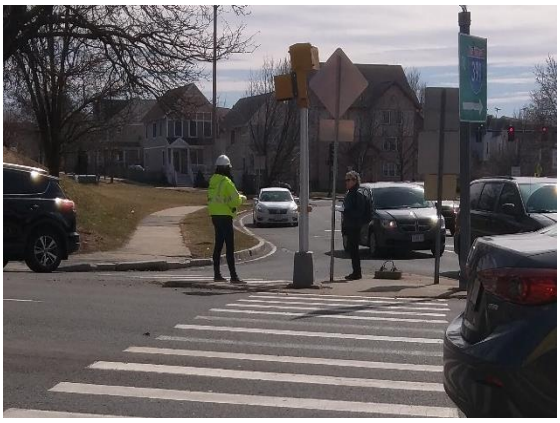


Image 4: Splitter island on Resnic Boulevard northbound approach with pedestrian signal heads rotated and missing light pole.

A light pole located within the splitter island for the right-turn slip lane on the Resnic Boulevard westbound approach was recently struck and was missing. In addition, the pedestrian signal pedestal to cross Beech Street is not operational and the signal heads were rotated and facing away from the pedestrian direction of travel. The assessment team also noted that because the slip lane is yield controlled, there are no pedestrian signal heads to indicate to pedestrians when to cross the slip lane.

Signal Timing and Phasing

Concurrent pedestrian phases were observed at the intersection. The assessment team expressed concerns about the lack of visibility and the high-speed turning motor vehicle traffic. Right turn on red is currently permitted in the intersection. As indicated in the reported crash data, a bicyclist was struck while in the crosswalk across Resnic Boulevard on the west leg of the intersection by a motorist turning right on red.

The team recommended evaluating the signal timing and phasing in conjunction with geometric changes to improve sight lines, visibility, and reduce conflicts between pedestrians and turning vehicles. The assessment team discussed considering a hybrid of exclusive and concurrent pedestrian phasing, with the exclusive phasing being programed to coincide with school arrival and dismissal and concurrent phasing at other times of day. However, it was also discussed that it may be desirable for the phasing to be consistent throughout the day to communicate consistent messaging and operations to all roadway users. Further study is recommended to determine the appropriate pedestrian phasing. It was also noted that at an All Red clearance interval appears to be missing from the signal phasing, which is when all movements are held to allow the intersection to clear and reduce conflicts. The assessment team discussed providing the pedestrian phase on automatic recall 24 hours per day with an All Red Clearance Interval.

Accessible Pedestrian Signals

Pedestrian signals do not provide countdowns or Accessible Pedestrian Signals (APS). The assessment team discussed upgrading signal equipment to include APS.

Crosswalk Markings

Existing crosswalk markings provide continental bars only, and do not include the outside transverse white lines, which are important to guide pedestrians with visual impairments. The team recommended high-visibility ladder style crosswalks be implemented for all crosswalks.

Bicycle Accommodations

There are no existing bicycle facilities on any approach or through the intersection. The assessment team noted that few bicyclists are observed at this location currently. One member of the assessment team noted that some students biking typically access the school from Resnic Boulevard.

Access Management

There are three wide curb cuts providing access to the gas station on the northeast corner of the intersection, one on Beech Street and two on W Franklin Street. The team recommended removing the center curb cut on W Franklin Street closest to the intersection to reduce pedestrian exposure and conflicts within the intersection.

Image 5: Curb cuts on W Franklin Street at gas station.

Short-Term Recommendations

1. Study the feasibility of removing a travel lane on Beech Street in each direction. Consider alternatives for widening sidewalks and providing dedicated bicycle facilities;
2. Consider adjusting the fence line to increase visibility between pedestrians and turning vehicles on the southwest corner of the intersection;
3. Consider reducing corner radii to slow motor vehicle speeds via flexposts and paint;
4. Evaluate the feasibility of closing the northbound right-turn slip lane on Resnic Boulevard with consideration for the design vehicle, frequency of truck turning volumes, and the needs of vulnerable users. Consider narrowing travel lanes on all approaches, removing the hatched median on Resnic Boulevard, and potentially removing the concrete median island on Beech Street to provide adequate turning space for large trucks;
5. Reinstall the missing light pole located within the splitter island for the right-turn slip lane on the Resnic Boulevard approach;

6. Service the pedestrian signal pedestal within the splitter island for the right-turn slip lane on the Resnic Boulevard approach to be fully operational and to ensure the signal heads face the correct direction;
7. Install pedestrian warning signs for the slip lane approach on Resnic Boulevard;
8. Evaluate the signal timing and phasing. Consider the safety implications and wait times of all users for both concurrent and exclusive phasing, with particular focus on behaviors of teens as the intersection is heavily used by middle and high school students. Consider proposed geometric changes in conjunction with signal operations;
9. Consider restricting right turn on reds, particularly for the Beech Street northbound approach.
10. Coordinate with the gas station to consider removing the center curb cut on W Franklin Street closest to the intersection to reduce pedestrian exposure and conflicts within the intersection;
11. Upgrade the signal timing with the preferred phasing and provide the pedestrian phase on automatic recall 24 hours per day with an All Red Clearance Interval;
12. Install high-visibility ladder style crosswalks markings; and
13. Consider removing the center curb cut to the gas station on W Franklin Street closest to the intersection to reduce pedestrian exposure and conflicts within the intersection.

Long-Term Recommendations:

A. Consider curb reconstruction to minimize corner radii to reduce motor vehicle turning speeds and improve sight lines between all roadway users;
B. Consider removing the slip lane and splitter island via reconstruction to shorten crossing distances for pedestrians and slow turning vehicle speeds;
C. Upgrade pedestrian signal equipment to meet current accessibility requirements;
D. Upgrade curb ramps to meet accessibility requirements;
E. Install wider sidewalks with buffers; and
F. Install dedicated bicycle facilities.

Appleton Street (Rte. 141)
Corridor-wide Observations and Recommendations

The following section describes observations and recommendations identified during the assessment that apply to entirety of the Appleton Street corridor. To reduce repetition, corridor-wide observations and recommendations are listed below and are not repeated for each intersection. Observations and recommendations specific to each location that are not included in the corridor-wide section are provided by location following the corridor-wide recommendations.

Existing Conditions and Observations

General

Appleton Street (Rte. 141) is a City-owned roadway classified by the MassDOT Office of Transportation Planning as a principal arterial generally running in an east-west direction. Appleton Street is approximately 34 feet curb to curb as measured in Google Earth and provides one travel lane per direction and on-street parking on both sides of the street. Typically, side streets intersecting Appleton Street are

one-way and stop controlled. There are three signalized intersections within the study area. Average daily traffic volumes for Appleton Street were not provided at the assessment.

Image 6: Appleton Street Corridor facing eastbound.

Bicycle Accommodations

Currently there are no existing bicycle facilities along Appleton Street although team members noted that Appleton Street is a major connecting east-west bicycle route through the City. Bicyclists were observed riding on sidewalks and against traffic during the assessment.

Image 7: Bicyclist riding against traffic on Appleton Street.

Members of the assessment team suggested installing bicycle facilities by consolidating parking to one side of the street. The assessment team discussed different alternatives for bicycle facilities, including standard bicycle lanes on each side of the street, one-way separated bicycle lanes on each side of the street, and a two-way separated bicycle lane on one side of the street. Team members discussed that a separated bicycle lane may be provided at low cost by consolidating parking to one-side of the street and placing the bike lane between the curb and parked cars. Parking utilization appears low to medium during different times of day. The assessment team discussed the need for a better understanding of parking utilization on Appleton Street and adjacent side streets as a data point to inform bicycle facilities planning. Generally, assessment team members noted that parking consolidation to one side of the street may be feasible along most of the corridor; however, several blocks, such as between Linden Street and Walnut Street, may be more challenging to consolidate parking due to the presence of large residential buildings and parking demand.

The assessment team also noted that parking removal on Appleton maybe offset and accommodated by nearby on-street parking on side streets, and the large amount of off-street parking within and just outside of the study area at residential and commercial buildings. The assessment team recommended conducting a parking utilization study near the Appleton Street corridor including on- and off-street parking. This study can be used to determine the feasibility of consolidating or removing on-street parking on Appleton Street to provide a dedicated bicycle facility. One member of the assessment team recommended utilizing specific outreach efforts to provide businesses and residents with educational materials about the economic benefits of walking and biking infrastructure.

Additionally, the assessment team discussed the bicycle network within the area and that there is potential for intersecting bicycle routes to meet Appleton Street along the corridor. The Holyoke Bicycle Network Plan will be released in the coming months. The team discussed that at intersecting bicycle routes as identified in the plan, wayfinding signs and additional intersection treatments to facilitate bicycle turning movements and alert roadway users of conflicts may be necessary. Potential intersection bike routes discussed during the assessment may include Elm Street and Walnut Street. The assessment team noted that bicycle parking is insufficient throughout the corridor.

Sidewalks

Sidewalks are generally in good condition, however accessibility at street crossings and driveways varies. Sidewalks often slope down to street level at alleys and driveways which do not communicate that pedestrians have priority. There are some street trees along the corridor and in most locations, a buffer exists between on-street parking and the sidewalk. Some street trees were missing tree grates. Members of the assessment team recommended installing additional street trees along the corridor where feasible. Team members also noted that pedestrians cross outside of designated crosswalks throughout the Appleton Street corridor.

Curb Ramps

Members of the assessment team noted that most of the pedestrian ramps within the study area do not meet accessibility standards, however select ramps along the corridor were recently reconstructed and do appear to be compliant with accessibility requirements. Note a full accessibility assessment was not conducted. New and old ramps throughout the corridor are apex style. Apex ramps guide pedestrians into the middle of the intersection and can be confusing for pedestrians with visual impairments. The team discussed that separate curb ramps for each crosswalk should be provided. In addition, consideration should be given to installing curb extensions to reduce crossing distances, however in the location and design of curb extensions should consider and minimize impacts to bicycle facility access.

Image 8: Curb ramps on Appleton Street.

Crosswalk Pavement Markings and Signs

Crosswalks are not installed across all legs of intersections throughout the corridor. Existing crosswalks provide perpendicular bars only and do not include the outside transverse white lines which are important to guide pedestrians with visual impairments. Crosswalk warning signs at uncontrolled crossings are inconsistent or missing. Members of the assessment team discussed marking high-visibility ladder-style crosswalks on all legs of all intersections.

Signalized Intersections

At signalized intersections, concurrent pedestrian phases activated via pushbutton are generally provided along the Appleton Street corridor. Signalized intersections along Appleton Street are equipped with pedestrian indications but do not include countdowns or Accessible Pedestrian Signals (APS). The assessment team discussed upgrading signal equipment to meet current accessibility requirements. The assessment team also observed that an All Red clearance interval appears to be absent from the signal phasing, which is when all movements are held to allow the intersection to clear and reduce conflicts.

Lighting

The assessment team noted that lighting conditions along the corridor are poor. There were three pedestrian crashes that occurred under dark-lighted condition. Overall 18% crashes occurred at night. Additional lighting is needed to improve visibility at night for all users and create a more welcoming pedestrian environment.

Edge Line Pavement Markings

The team discussed there are no edge / fog lines along Appleton Street to visually narrow travel lanes and provide a traffic calming effect.

Sight Lines at Intersections

Team members noted that motorists park too close to intersections on both Appleton Street and side streets, thereby reducing sight lines. Poor sight lines may have contributed to the high number of angle crashes reported throughout the corridor at intersections. Members of the assessment team discussed restricting parking 20 feet from crosswalks and intersections via pavement markings and regulatory signage to increase visibility.

Motor Vehicle Speeds

The assessment team discussed that although speeding does not appear to be an issue, slower speeds are desirable to reduce severe injuries and fatalities. As shown in the crash data covering 2005 to 2014, there were 13 bicycle crashes (9 resulting in injury) and 19 pedestrian crashes (15 resulting in injury) along the Appleton Street Corridor. The assessment team discussed narrowing travel lane widths by marking parking lanes or bicycle facilities to reduce speeds.

Short-Term Recommendations:

1. Evaluate alternatives for bicycle facilities, including standard bicycle lanes, separated bicycle lanes on each side of the street, and a two-way separated bicycle lane on one side of the street;
2. Evaluate parking utilization on Appleton Street, side streets, and off-street. Consider consolidating parking to one side of the street, and/or relocating parking to side street to provide separated bicycle lanes;
3. Consider intersecting bicycle routes per the Holyoke Bicycle Master Plan and whether additional intersection treatments are necessary to facilitate safe bicycle turning movements and reduce conflicts;
4. Install a dedicated bicycle facility via pavement markings and signage;
5. Reduce travel lanes widths by marking parking lanes or bicycle facilities;
6. Reinstall or install high-visibility ladder-style crosswalks on all legs of all intersections;
7. Install appropriate pedestrian warning signage (W11-2, R1-6, etc.) at crossings;
8. Upgrade pedestrian signal equipment to include accessible signals at signalized intersections that meet current standards;
9. Increase sight distance by restricting parking within 20 feet of crosswalks via pavement markings and regulatory signage;
10. Consider curb extensions and reducing curb radii via low-cost solutions such as pavement markings and flexposts;
11. Consider installing bicycle racks on sidewalks and bicycle parking corrals in existing parking lanes; and
12. Install tree grates for existing street trees without grates.

Long-Term Recommendations:

A. Consider additional street trees and plantings within the sidewalk buffer to provide a traffic calming effect;
B. Consider constructing curb extensions in coordination with bicycle facilities to improve pedestrian access while minimizing impacts to bicycle access;
C. Consider additional lighting to improve visibility at night for all users;
D. Provide accessible curb ramps for each crosswalk; and
E. Consider reconstructing sidewalks at unsignalized driveways to provide a pedestrian zone that is continuous, level, and clearly delineated from the driveway.

Appleton Street at Sycamore Street

General

Appleton Street at Sycamore Street is an unsignalized four-way intersection. Sycamore Street is stop-controlled while Appleton Street is uncontrolled. Sycamore Street is two-way and provides one lane per direction. There is a large senior apartment complex 400' south of the intersection. Per the crash reports provided there were seven angle crashes and two pedestrian-involved crashes.

Short-Term and Long-Term Recommendations:

1. See corridor-wide recommendations above.

Appleton Street at Locust Street

General

Appleton Street at Locust Street is an unsignalized four-way intersection. Locust Street is stop-controlled while Appleton Street is uncontrolled. Locust Street is two-way and provides one lane per direction.

Crosswalks

There is an existing crosswalk across Locust Street on the north side of the intersection, however there are no crosswalks across Appleton Street on the east and west sides and no crosswalk across Locust Street on the south side of the intersection. Existing curb ramps are non-compliant.

Sidewalks

Sidewalks on the south side of Appleton Street are asphalt, narrow, and in disrepair between Locust and Linden Street.

Short-Term Recommendations

1. Install crosswalks and accessible curb ramps across all legs of the intersection; and
2. Repair cracked sidewalks on Appleton Street between Locust Street and Linden Street to meet accessibility requirements.

Long-term Recommendations

A. Consider reconstructing the sidewalks on Appleton Street between Locust Street and Linden Street as concrete to meet accessibility requirements.

Appleton Street at Linden Street

General

Appleton Street at Linden Street is a signalized four-way intersection with three approaches as Linden Street is one-way southbound. Linden Street provides two lanes and on-street parking. Crash reports indicated there was one bicycle and one pedestrian-involved crash at this intersection. The pedestrian was struck after exiting her vehicle and accessing the sidewalk. The bicyclist launched from the parking lot at 474 Appleton Street on the southwest corner of the intersection, went airborne onto Linden Street, and struck a motorist travelling southbound on Linden Street.

Image 9: Asphalt sidewalks on the south side of Appleton Street north of Linden Street.

Transit Accommodations

There is a PVTA Bus Stop sign on the southwest corner of the intersection for the Appleton Street eastbound direction. Local audit team members discussed whether the bus route was still active. Per Google Maps, PVTA route B23 and R24 provide service on Appleton Street. The existing grass sidewalk buffer does not provide an accessible level landing pad for boarding and alighting.

Sidewalks

Sidewalks switch from concrete to asphalt on the south side of Appleton Street after Linden Street and there are locations that appear to not meet accessibility standards.

Pedestrian Signals

There are no pedestrian signals provided at this intersection.

Short-term Recommendations

1. Install accessible pedestrian signals.
2. Confirm if Appleton Street is an active bus route and where active bus stops are located along the corridor.
3. Conduct an accessibility assessment for existing bus stops and upgrade bus stops to meet accessibility requirements.

Long-term Recommendations

A. Consider reconstructing the sidewalk on the south side of Appleton Street west of Linden Street as concrete and to meet accessibility requirements.

Appleton Street at Oak Street

General

Appleton Street at Oak Street is an unsignalized four-way intersection. Oak Street is stop-controlled while Appleton Street is uncontrolled. Oak Street is two-way and provides one lane per direction with on-street parking on both sides.

Sidewalks

It was observed the south side sidewalk of this intersection was in a poor condition.

Crosswalks

There are existing crosswalks across Oak Street on both the north and south side of the intersection, however there are no crosswalks across Appleton Street on the east and west side of the intersection. For the existing crosswalk on the south side of the intersection, there is a catch basin located at the base of the east ramp and there is no ramp on the west side of the crossing. On the west side, there is drainage inlet at the corner where the pedestrian ramps would be located.

Signage

Near the Appleton Street and Oak Street intersection heading eastbound on Appleton Street there is an existing "Rte. 202 and Rte.141" wayfinding sign located across from Appleton Market. The height of the sign is low and pedestrians on the sidewalk may hit the sign.

Short-Term Recommendations

1. Consider installing high-visibility ladder-style crosswalks on the east and west sides across Appleton Street at Oak Street. Upgrade existing crosswalks as high visibility ladder-style pavement markings;
2. Provide accessible curb ramps for each crosswalk;
3. Upgrade the sidewalk on the south side of the intersection to meet accessibility requirements;
4. Evaluate the height of the existing “Rte. 202 and Rte.141" wayfinding sign for eastbound traffic on Appleton Street and adjust the height as necessary to meet MUTCD and accessibility requirements.

Appleton Street at Beech Street

General

Appleton Street at Beech Street is a signalized four-leg intersection with three approaches as Beech Street is one-way northbound. Beech Street provides two lanes and on-street parking. There were two bicycle-involved crashes reported in this intersection. A bicyclist was struck by a left turning motorists on Beech Street northbound onto Appleton Street eastbound. The second crash involved a bicyclist being struck after running a red indication by a northbound motorist on Beech Street with the green indication.

Crosswalk, Ramps, and Pedestrian Signals on North East leg of Intersection

There are three crosswalks at the intersection with a missing crosswalk on the north side of the intersection across Beech Street. Assessment participants noted that pedestrians walking westbound on the north side of Appleton Street will not cross three legs of the intersection to continue straight along the corridor, but rather they will cross the approach that is missing a marked crosswalk, where the desire line is located.

Image 10: Missing crosswalk on north east leg of intersection of Appleton Street at Beech Street.

Sidewalk and Sightline Obstructions

On the southwest corner of the intersection the existing signal controller box, retaining wall, landscaping, and light pole obstruct the sidewalk and reduce sightlines between northbound motorists on Beech Street and eastbound motorists on Appleton Street.

Image 11: Sightline and sidewalk obstructions on southwest corner of Beech Street and Appleton Street.

Pedestrian Signals

The pedestrian signal indications and push buttons on the southeast and southwest corners of the intersection were not operational.

It was also noted that the pedestrian signal head on southwest corner was mounted very high.

Image 12: Pedestrian signal is not operational on the southeast corner of the intersection.

Team members also noted that when Beech Street northbound received the green signal, the pedestrians received a concurrent WALK signal for the east and west side crosswalks across Appleton Street. As shown in the reported crash data, there were six crashes with thru vehicles in the left lane and vehicles turning left from the right most lane, and one bicycle crash with a vehicle turning left from the right lane. A team members recommended considering lane directional markings and advance intersection lane control signs, as well as considering the feasibility of an exclusive pedestrian phase to separate the conflicts with left turning vehicles.

Short-Term Recommendations

1. Install a crosswalk, accessible curb ramps, and pedestrian signal indications on the northeast leg of the intersection across Beech Street;
2. Provide an accessible path on the southwest corner of the intersection. Consider curb extensions or relocating obstructions;
3. Evaluate sight distance on the southwest corner of the intersection and consider treatments to improve sightlines as necessary;
4. Install lane directional markings and advance intersection lane control signs on the Beech Street northbound approach;
5. Consider feasibility of an exclusive pedestrian phase;
6. Service the pedestrian signal indications and push buttons on the southeast and southwest corners of the intersection so they are operational; and
7. Adjust the height of the pedestrian signal head on southwest corner to meet MUTCD and accessibility requirements.

Appleton Street at Pine Street

Existing Conditions and Observations

General

Appleton Street at Pine Street is an unsignalized intersection. Appleton Street is uncontrolled and Pine Street is one-way southbound and stop-controlled.

Sight lines

Members of the assessment team noted sightline issues on the southbound Pine Street approach due to a recently installed fence and transformer box inside of the fence.

Image 13: Sight lines on Pine Street approaching Appleton Street.

Short-Term Recommendations

1. Evaluate sight lines on the southbound Pine Street approach and consider treatments such as restricting parking within 20 feet of the intersection, curb extensions via pavement markings and signage.

Long-Term Recommendations

A. Evaluate sight lines on the southbound Pine Street approach and consider constructing curb extensions and relocating the fence and transformer box to increase sight distance.

Appleton Street East of Chestnut Street

Existing Conditions and Observations

General

Appleton Street at Chestnut Street is an unsignalized intersection. Chestnut Street is one-way northbound and stop-controlled. There are no bicycle facilities on Chestnut Street. Marked crosswalks are provided across all legs of the intersection.

Image 14: Faded crosswalk located within McDonald's driveway on Appleton Street east of Chestnut Street.

Crosswalks

Approximately 140' east of the intersection of Appleton Street at Chestnut Street, assessment team members noted there is a faded crosswalk located within the McDonalds driveway which does not meet accessibility requirements. This crosswalk connects to an existing pedestrian alley. The team noted that either the crosswalk, or driveway should be relocated, however this location is a half-block outside of the study area.

Short-Term Recommendations

1. Relocate the existing crosswalk or McDonalds driveway curb cut just south of the intersection to provide an accessible crossing with compliant curb ramps; and
2. Restripe the crosswalk with high-visibility ladder-style pavement markings.

Appendices

Appendix A lists all the observations and recommendations that were discussed during the assessment and described in the previous sections. The observations and recommendations are divided by location. For each observation and recommendation, the appendix includes the estimated time frame for completion, estimated construction costs, and the responsible agency. The time frame is categorized as short-term (0 to 3 years) or long-term (>3 years). The costs are categorized as low (<$10,000), medium ($10,001 to $50,000), or high (>$50,000).

Appendix B provides a toolbox of pedestrian facilities that summarizes typical treatments and provides a description. The treatments may or may not be recommendations outlined in this report. This toolkit may be used by the City of Holyoke to assist in developing a more pedestrian-friendly town.

Appendix C provides a toolbox of bicycle facilities that summarizes typical treatments and provides a description. The treatments may or may not be recommendations outlined in this report. This toolkit may be used by the City of Holyoke to assist in developing a more bicycle-friendly town.

Appendix A: Table of Recommendations

Location	Issue	Recommendation	Time Frame	Cost	Agency
Beech Street (Route 202) at Resnic Boulevard / W Franklin Street	Speeding	Study the feasibility of removing a travel lane on Beech Street in each direction. Consider alternatives for widening sidewalks and providing dedicated bicycle facilities.	Short-term	Low	City of Holyoke
	Sight Line obstructions	Consider adjusting the fence line to increase visibility between pedestrians and turning vehicles on the southwest corner of the intersection.	Short-term	Medium	City of Holyoke
	Large corner radii create long crossing distances for pedestrians, increase exposure to motor vehicle traffic, and allow vehicles to turn at high speeds	Consider reducing corner radii to slow motor vehicle speeds via flexposts and paint.	Short-term	Low	City of Holyoke
		Consider reducing corner radii to slow motor vehicle speeds reconstruction.	Long-term	Medium	City of Holyoke
	Right-turn slip lane is difficult for pedestrians to cross, encourages high speed turns, and is yield-controlled at a signalized intersection	Evaluate the feasibility of closing the northbound right-turn slip lane on Resnic Boulevard with consideration for the design vehicle, frequency of truck turning volumes, and the needs of vulnerable users. Consider narrowing travel lanes on all approaches, removing the hatched median on Resnic Boulevard, and potentially removing the concrete median island on Beech Street to provide adequate turning space for large trucks.	Short-term	Medium	City of Holyoke
		Consider removing the slip lane and splitter island via reconstruction to shorten crossing distances for pedestrians and slow turning vehicle speeds.	Long-term	Medium	City of Holyoke

Location	Issue	Recommendation	Time Frame	Cost	Agency
Beech Street (Route 202) at Resnic Boulevard / W Franklin Street (continued)	Missing light pole in splitter island	Reinstall the missing light pole located within the splitter island for the right-turn slip lane on the Resnic Boulevard approach.	Short-term	Medium	City of Holyoke
	Non-operable pedestrian signal and indications are not facing pedestrian direction of travel in splitter island	Service the pedestrian signal pedestal within the splitter island for the right-turn slip lane on the Resnic Boulevard approach to be fully operational and to ensure the signal heads face the correct direction.	Short-term	Low	City of Holyoke
	No warning signs for yield-controlled right turn lane slip lane	Install pedestrian warning signs for the slip lane approach on Resnic Boulevard.	Short-term	Low	City of Holyoke
	Concurrent signal phasing creates conflicts with pedestrians and motor vehicles due to poor visibility and high speed turning vehicle traffic	Evaluate the signal timing and phasing. Consider the safety implications and wait times of all users for both concurrent and exclusive phasing, with particular focus on behaviors of teens as the intersection is heavily used by middle and high school students. Consider proposed geometric changes in conjunction with signal operations.	Short-term	Low	City of Holyoke
	Right turn on red conflicts with concurrent pedestrian movements	Consider restricting right turn on reds, particularly for the Beech Street NB approach	Short-term	Low	City of Holyoke
	Pedestrian signals are not on recall	Upgrade the signal timing with the preferred phasing and provide the pedestrian phase on automatic recall 24 hours per day.	Short-term	Low	City of Holyoke
	Crosswalks markings are not high visibility ladder style	Install high visibility ladder style crosswalks markings.	Short-term	Low	City of Holyoke
	Accessible pedestrian signals with countdowns are not provided	Upgrade pedestrian signal equipment to meet current accessibility requirements.	Long-term	Medium	City of Holyoke

Location	Issue	Recommendation	Time Frame	Cost	Agency
Beech Street (Route 202) at Resnic Boulevard / W Franklin Street (continued)	Curb ramps do not appear to meet accessibility	Upgrade curb ramps to meet accessibility requirements.	Long-term	Medium	City of Holyoke
	Three wide curb cuts at the gas station reduce comfort along the sidewalk and increase pedestrian exposure	Coordinate with the gas station to consider removing the center curb cut on W Franklin Street closest to the intersection to reduce pedestrian exposure and conflicts within the intersection.	Short-term	Low	City of Holyoke
	Sidewalks are congested and narrow	Install wider sidewalks with buffers.	Long-term	High	City of Holyoke
	Bicycle facilities are not provided	Install dedicated bicycle facilities.	Long-term	Low	City of Holyoke
Appleton Street Corridor-wide	No existing bicycle facilities along Appleton Street	Evaluate alternatives for bicycle facilities, including standard bicycle lanes, separated bicycle lanes on each side of the street, and a two-way separated bicycle lane on one side of the street.	Short-term	Low	City of Holyoke
		Evaluate parking utilization on Appleton Street, side streets, and off-street. Consider consolidating parking to one side of the street, and/or relocate parking to side street to provide separated bicycle lanes.	Short-term	Medium	City of Holyoke
		Consider intersecting bicycle routes per the Holyoke Bicycle Master Plan and if additional intersection treatment may be necessary to facilitate bicycle turning movements and reduce conflicts.	Short-term	Low	City of Holyoke
		Install a dedicated bicycle facility via pavement markings and signage.	Short-term	Medium	City of Holyoke

Location	Issue	Recommendation	Time Frame	Cost	Agency
Appleton Street Corridor-wide (continued)	Speeding	Reduce travel lanes widths by marking parking lanes or bicycle facilities.	Short-term	Low	City of Holyoke
		Consider additional street trees and plantings within the sidewalk buffer to provide a traffic calming effect.	Long-term	Medium	City of Holyoke
	Crosswalks markings are not high visibility ladder style	Reinstall or install where crosswalks are missing high visibility ladder style crosswalks on all legs of all intersections.	Short-term	Low	City of Holyoke
	Crosswalk warning signs are inconsistent or missing.	Install appropriate pedestrian warning signage (W11-2, R1-6, etc.) at uncontrolled crossings.	Short-term	Low	City of Holyoke
	Pedestrian indications do not include countdowns or Accessible Pedestrian Signals (APS)	Upgrade pedestrian signal equipment to include accessible signals at signalized intersections that meet current standards.	Short-term	Medium	City of Holyoke
	Parking too close to intersections and crosswalks obstructs sight lines	Increase sight distance by restricting parking within 20' from crosswalks per the City ordinance via paint, street signs.	Short-term	Low	City of Holyoke
		Consider curb extensions and reducing the curb radii via low cost solutions such as pavement markings and flexposts.	Short-term	Low	City of Holyoke
		Consider constructing curb extensions in coordination with bicycle facilities to improve pedestrian access while minimizing impacts to bicycle access	Long-term	Medium	City of Holyoke
	Insufficient bicycle parking	Consider installing bicycle racks on sidewalks and bicycle parking corrals in existing parking lanes.	Short-term	Medium	City of Holyoke

Location	Issue	Recommendation	Time Frame	Cost	Agency
Appleton Street Corridor-wide (continued)	Missing tree grates	Install tree grates for existing street trees without grates.	Short-term	Low	City of Holyoke
	Insufficient lighting at night	Consider additional lighting to improve visibility at night for all users.	Long-term	High	City of Holyoke
	Most of the pedestrian ramps are apex style ramps and do not appear to meet accessibility standards	Provide accessible curb ramps for each crosswalk.	Long-term	Medium	City of Holyoke
	Sidewalks often break or slope down to street level at alleys and driveways and do not give pedestrians priority	Consider reconstructing sidewalks at unsignalized driveways to provide a pedestrian zone that is continuous, level, and clearly delineated from the driveway.	Long-term	Medium	City of Holyoke
Appleton Street at Locust Street	Missing crosswalks on east and west sides of Appleton Street and south side Locust Street	Install crosswalks and accessible curb ramps across all legs of the intersection.	Short-term	Medium	City of Holyoke
	Sidewalks on the south side of Appleton Street are asphalt, narrow, and in disrepair between Locust and Linden Street.	Repair cracked sidewalks to meet accessibility requirements.	Short-term	Low	City of Holyoke
		Consider reconstructing the sidewalks on Appleton Street between Locust Street and Linden Street as concrete to meet accessibility requirements.	Long-term	Medium	City of Holyoke

Location	Issue	Recommendation	Time Frame	Cost	Agency
Appleton Street at Linden Street	Pedestrian signals are not provided	Install accessible pedestrian signals	Short-term	Medium	City of Holyoke
	Potential active bus stops do not appear to meet accessibility requirements	Confirm if Appleton Street is an active bus route and where active bus stops are located along the corridor.	Short-term	Low	City of Holyoke
		Conduct an accessibility assessment for existing bus stops and upgrade bus stops to meet accessibility requirements.	Short-term	Medium	City of Holyoke
	Sidewalks switch from concrete to asphalt on the south side of Appleton after Linden Street and some locations do appear to meet accessibility standards.	Consider reconstructing the sidewalk on Appleton Street north of Linden Street as concrete and to meet accessibility requirements.	Long-term	Medium	City of Holyoke
Appleton Street at Oak Street	Missing crosswalks on east and west sides of Appleton Street.	Consider installing high visibility ladder style crosswalks on the east and west sides across Appleton Street at Oak Street. Upgrade existing crosswalks as high visibility ladder-style pavement markings;	Short-term	Low	City of Holyoke
	Curb ramps do not meet accessibility requirements	Provide accessible curb ramps for each crosswalk.	Short-term	Low	City of Holyoke
	South side sidewalk in a poor condition	Upgrade the sidewalk on the south side of the intersection to meet accessibility requirements.	Short-term	Low	City of Holyoke
	Existing height of wayfinding sign "Rt.202 and Rt.141" is low	Evaluate the height of the existing “Rte. 202 and Rte.141" wayfinding sign and adjust the height as necessary to meet MUTCD and accessibility requirements.	Short-term	Low	City of Holyoke

Location	Issue	Recommendation	Time Frame	Cost	Agency
Appleton Street at Beech Street	Missing crosswalk, curb ramps, and pedestrian signals on north-east leg	Install a crosswalk, accessible curb ramps, and pedestrian signal indications on the north-east leg of the intersection across Beech Street.	Short-term	Medium	City of Holyoke
	Sidewalk and sightline obstructions	Provide an accessible path on the southwest corner of the intersection. Consider curb extensions, or relocating obstructions.	Short-term	Medium	City of Holyoke
		Evaluate sight distance on the southwest corner of the intersection and consider treatments to improve sightlines as necessary.	Short-term	Low	City of Holyoke
	High amounts of crashes between through vehicles in left lane and left turning vehicles in the right lane on Beech Street NB	Install lane directional markings and advance intersection lane control signs on the Beech Street northbound approach.	Short-term	Low	City of Holyoke
		Consider feasibility of an exclusive pedestrian phase.	Short-term	Low	City of Holyoke
	Pedestrian signal indications and push buttons on the southeast and southwest corners were not operational	Service the pedestrian signal indications and push buttons on the southeast and southwest corners of the intersection so they are operational.	Short-term	Low	City of Holyoke
	Pedestrian signal head on southwest corner was mounted too high	Adjust the height of the pedestrian signal head on southwest corner to meet MUTCD and accessibility requirements.	Short-term	Low	City of Holyoke
Appleton Street at Pine Street	Sightline issues due to a recently installed fence and transformer box	Evaluate sight lines for southbound Pine Street approach and consider treatments such as restricting parking within 20 feet of the intersection, curb extensions via pavement markings and signage	Short-term	Low	City of Holyoke

Location	Issue	Recommendation	Time Frame	Cost	Agency
		Consider constructing curb extensions and relocating the fence and transformer box to increase sight distance.	Long-term	Medium	City of Holyoke
Appleton Street East of Chestnut Street	Faded crosswalk located within the McDonalds driveway and does not meet accessibility requirements	Relocate the crosswalk, or McDonalds driveway curb cut just south of the intersection to provide an accessible crossing with compliant curb ramps.	Short-term	Low	City of Holyoke
		Restripe the crosswalk with high visibility ladder style pavement markings.	Short-term	Low	City of Holyoke

Appendix B: Pedestrian Facility Toolbox

Facility Type	Description	Sample Photo
Accessible Pedestrian Signals	Accessible pedestrian signals systems are the components used at a signalized intersection to alert pedestrians when they may cross a roadway. Accessible pedestrian signals may include audible and vibrating features to assist visually-impaired pedestrians.	
Crosswalk	Crosswalks indicate to pedestrians the appropriate place to cross the street and inform drivers of potential pedestrian movements in the street.	
Curb Ramp and Detectable Warning Panels	ADA-compliant curb ramps provide ramped access and detectable warning for persons with disabilities. Curb ramps are typically at least 5 feet wide with a level landing pad. Detectable warning panels should be a contrasting color to the adjacent surface.	
Curb Extensions	A curb extension is an extension of the sidewalk at intersections or mid-block to reduce the pedestrian crossing distance and provide greater visibility for pedestrians waiting to cross a street.	
Curb Radii	Modifications to curb lines or edges of the pavement at an intersection. These modifications typically are used to decrease crossing distances for pedestrians or to reduce vehicular speed by tightening the turning radii at the intersection corners.	

Facility Type	Description	Sample Photo
Edge Lines	Edge lines are solid white lines painted along the roadside curb that defines the driving lane and visually narrows the travel lane. In some cases, edge lanes may be used to create bicycle lanes.	
In-Street Pedestrian Crossing Sign	A removable high-visibility sign placed on the centerline of a street prior to a crosswalk to alert motorists to yield when pedestrians are present in the crosswalk.	
Leading Pedestrian Interval	A pedestrian crossing indication that permits pedestrians to move into the intersection 3-7 seconds before a green light is given to turning motorists that may cross the crosswalk.	
Parklet	Permanent or temporary gathering area installed in the street adjacent to the curb as an extension of sidewalk space.	
Pedestrian Hybrid Beacon	An overhead flashing beacon activated by pedestrians. The flashing lights alert motorists to yield and increase visibility of pedestrians in the crosswalk.	

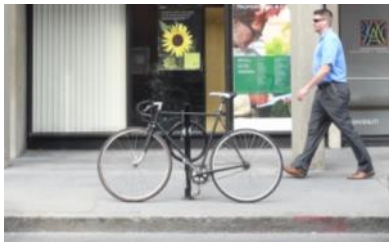
Facility Type	Description	Sample Photo
Pedestrian Crossing Island	Raised median or island that provides in-street refuge at a pedestrian crossing. The crosswalk may be angled at refuge to encourage pedestrians to make eye contact with oncoming traffic.	
Pedestrian-Scale Lighting	Light fixtures used to illuminate a sidewalk or pathway typically closer to the ground and placed closer together than roadway lighting.	
Raised Intersection	A crosswalk or entire intersection raised from street-level to sidewalk-level. This elevated crossing increases pedestrian priority and visibility and slows approaching vehicles.	
Rectangular Rapid Flash Beacon	An on-demand activated flashing beacon with a “wig-wag” pattern that alerts motorists to pedestrians in the crosswalk. Typically used on lower volume and lower speed streets.	
Shared Street	The road surface is typically at the same level as the sidewalk surface to create a continuous pedestrian space. A shared street is for motorists, pedestrians, and bicyclists.	

Facility Type	Description	Sample Photo
Shared-use Path	A two-way path that is open for bicyclists, pedestrians, and other non-motorized users. The path is typically ADA-compliant and ranges between 10 to 14 feet wide.	
Sidewalk	A concrete pathway adjacent to the roadway. Sidewalks must meet minimum dimensions and smoothness for ADA-compliance. They may have decorative paving or plantings and should be wider where high pedestrian volumes are present or desired.	

Appendix C: Bicycle Design Toolbox

Facility Type	Description	Sample Photo
Shared Lane Markings	Designate positioning for cyclists within shared travel lanes and alert drivers to the presence of cyclists. Shared lane markings should be considered temporary measures until future improvements can provide full bicycle facilities.	
Bicycle Lane	Exclusive travel lane for bicycles, typically located along the right side of the travel lanes on a two-way street, however may be located on either side of a one-way street.	
Buffered Bicycle Lane	Bicycle lane with a painted buffer separating cyclists from adjacent vehicle traffic and/or adjacent parking lanes.	
Separated Bicycle Lane	Bicycle lane protected from vehicle traffic by adjacent vertical elements, including flex posts, planters, parked cars, curbs, or raised medians.	
Bicycle Box	Advance stop bar allows bicyclists to stop at a traffic signal ahead of vehicle traffic to increase visibility and allow for left turns.	

Facility Type	Description	Sample Photo
Two-Stage Turn Queue Box	Turn box typically provided between the bicycle lane and the cross-street crosswalk allows cyclists to turn out of the bicycle lane and complete a left turn after the traffic signal cycles to the side street green phase.	
Bicycle Traffic Signal	Exclusive traffic signal for bicycle facilities allows for time separation between cyclists and vehicles, especially at locations with high turning volumes.	
High Capacity Bicycle Parking	Large bicycle racks at key locations. Bicycle racks should always be placed in areas of high visibility to maximize use and provide increased security.	
Bicycle Corral	Bicycle racks placed within the parking lane of a roadway. A single corral can replace one vehicle parking space with 10 to 12 bicycle parking spaces.	

Facility Type	Description	Sample Photo
Post and Ring Bicycle Parking	Individual bicycle racks typically placed along sidewalks to provide incremental bicycle parking throughout a larger area.	
Bicycle Wayfinding	Signage provides guidance for cyclists on recommended routes to key destinations.	
Curb Extensions	Curb and associated accessible sidewalk ramp is extended to the edge of the bicycle lane or travel lane to reduce through vehicle speeds and increase visibility for pedestrians.	

Appendix D: Crash Data and Collision Diagrams

MassDOT
Massachusetts Department of Transportation
Highway Division

COLLISION DIAGRAM

SYMBOLS

Involved / Non-Involved

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

TYPE OF CRASH

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

SEVERITY

- (#) Injury
- (#) Fatal
- # Property Damage Only

Holyoke, MA

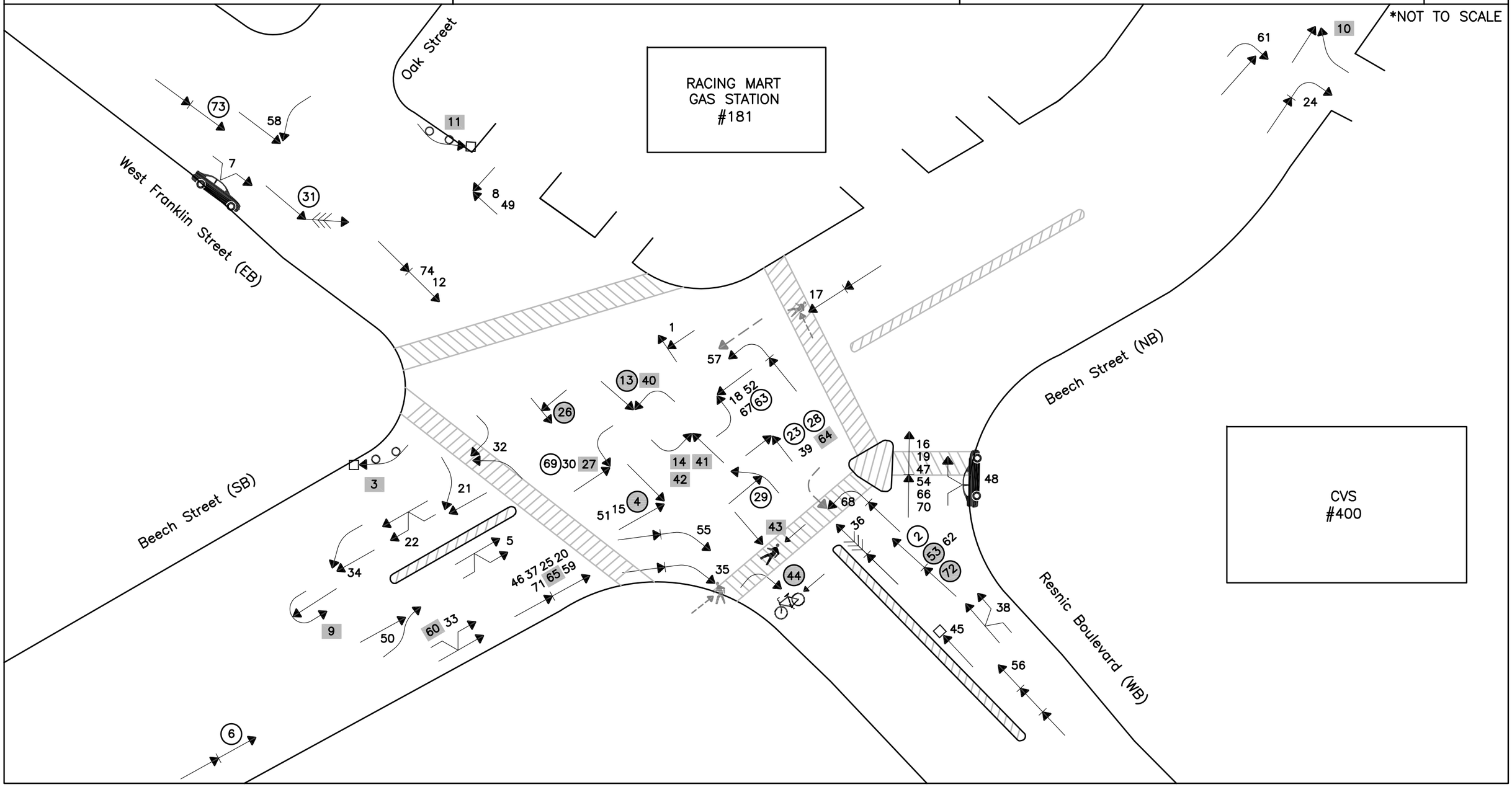
BEECH STREET AT WEST FRANKLIN STREET/RESNIC BOULEVARD

REGION: PVPC

TIME PERIOD ANALYZED: 2011–2015
SOURCE OF CRASH REPORTS: HOLYOKE POLICE DEPARTMENTS
DATE PREPARED: 11/16/16
PREPARED BY: KEVIN T FITZGERALD JR

N

*NOT TO SCALE



Crash Data Summary Table

Beech Street at West Franklin Street/Resnic Boulevard, Holyoke, MA

2011-2015

Crash Diagram Ref #	Crash Date	Crash Day	Time of Day	Manner of Collision	Light Condition	Weather Condition	Road Surface	Driver Contributing Code	Driver Ages			Comments
	m/d/y			*Type*	*Type*	*Type*	*Type*	*Type*	*D1*	*D2*	*D3*	
1	1/1/11	Saturday	1:42 PM	Angle	Daylight	Cloudy	Dry	Disregarded traffic signs, signals, road markings	43	25		MV2 ran red light on West Franklin Street striking MV1 travelling south on Beech St.
2	1/24/11	Monday	11:41 AM	Rear-end	Daylight	Clear	Dry	Followed too closely	17	49		MV2 was rear ended by MV1 who was following too close
3	2/21/11	Monday	4:57 AM	Single Vehicle Crash	Dark - lighted roadway	Snow	Snow	No Improper Driving	29			MV1 slid on freshly fallen snow, during slide MV1 struck the curb
4	3/3/11	Thursday	7:13 PM	Angle	Dark - lighted roadway	Other	Dry	Failed to yield right of way	61	64		MV2 traveling EB on West Franklin Street ran the red light and struck MV1 travelling on Beech Street
5	3/9/11	Wednesday	10:43 AM	Sideswipe, same direction	Daylight	Clear	Dry	No Improper Driving	39	57		Both MVs were travelling past a construction site at the intersection when contact was made. MV2 in the right hand lane, stated they did not see MV1
6	3/23/11	Wednesday	3:17 PM	Rear-end	Daylight	Snow	Wet	Followed too closely	56	22		MV1 was stopped for red traffic light MV2 rear ended MV1 when the light changed to green
7	3/30/11	Wednesday	12:04 PM	Sideswipe, same direction	Daylight	Clear	Dry	Unknown	UNK	UNK		MV1 was parked and struck by a vehicle that fled the scene
8	4/13/11	Wednesday	8:14 AM	Angle	Daylight	Rain	Wet	Failed to yield right of way	27	43		MV2 was exiting the Racing Mart when the front of the vehicle struck MV1 on the side
9	5/18/11	Wednesday	11:36 PM	Angle	Dusk	Snow	Wet	Operating Vehicle in erratic, reckless, careless, negligent, or aggressive manner	29	UNK		MV1 pulled out of Racing Mart, went through the red light onto Beech Street SB and made a U-turn from the right lane. MV2 struck MV1 during the U-turn
10	10/22/11	Saturday	7:52 PM	Angle	Dark - lighted roadway	Clear	Dry	Failure to keep in proper lane or running off road	49	51		MV2 was travelling north on Beech Street. MV1 exited the CVS and entered the second lane striking MV2
11	10/29/11	Saturday	10:53 PM	Single Vehicle Crash	Dark - roadway not lighted	Snow	Snow	No Improper Driving	32			MV1 was attempting to turn into the gas station and slid on the snow striking a fire hydrant
12	12/6/11	Tuesday	8:05 AM	Rear-end	Daylight	Rain	Wet	Inattention	49	16		MV2 rear ended MV1 at traffic lights
13	12/15/11	Thursday	6:08 PM	Head on	Dark - lighted roadway	Rain	Wet	No Improper Driving	69	20		MV2 was attempting to turn left onto Beech Street when struck by MV1 travelling EB on Franklin Street
14	12/21/11	Wednesday	5:00 PM	Head on	Dark - lighted roadway	Rain	Wet	Failed to yield right of way	26	32		MV1 traveling EB on W.Franklin Street attempted to make a left when it struck MV2 travelling WB on W.Franklin Street.
15	1/3/12	Tuesday	9:33 AM	Angle	Daylight	Clear	Dry	Inattention	21	47		MV2, an ambulance with patient on board, had lights and sirens on and stopped for red light on Beech St. As it proceeded through intersection it was struck in rear by MV1
16	1/16/12	Monday	10:11 PM	Rear-end	Dark - lighted roadway	Snow	Snow	Driving too fast for conditions	21	23		MV2 slowed to yield onto Beech Street and was struck from behind
17	3/9/12	Friday	8:07 AM	Rear-end	Daylight	Other	Dry	Inattention	35	32		MV2 was rear ended by MV1 while turning left after stopping at a green light for pedestrians in the crosswalk
18	4/3/12	Tuesday	7:45 AM	Angle	Daylight	Clear	Dry	Made an improper turn	19	45		MV1 was attempting to turn left onto W. Franklin St and collided with SB MV2
19	4/24/12	Tuesday	1:34 PM	Rear-end	Daylight	Other	Dry	Inattention	34	34		MV2 thought that MV1 had proceeded onto Beech St and rear ended MV1
20	5/22/12	Tuesday	7:56 AM	Rear-end	Daylight	Rain	Wet	Followed too closely	72	17		MV1 followed to close and rear ended MV2
21	6/8/12	Friday	10:20 AM	Angle	Daylight	Clear	Dry	Failure to keep in proper lane or running off road	21	65		MV2 over-steererd and failed to stay in lane during turn and struck SB MV1 in the left lane
22	6/14/12	Thursday	10:06 PM	Sideswipe, same direction	Dark - lighted roadway	Clear	Dry	Failure to keep in proper lane or running off road	73	24		MV1 failed to stay in its lane and struck MV2
23	7/11/12	Wednesday	7:23 AM	Angle	Daylight	Clear	Dry	Failed to yield right of way	25	38		MV2 WBwent through flashing red light on W. Franklin Street and struck MV1 NB on Beech Street on flashing yellow light
24	7/19/12	Thursday	6:39 PM	Rear-end	Daylight	Clear	Dry	Swerving or avoiding due to wind, slippery surface, vehicle, object, non-motorist in roadway, etc.	20	36		MV2 was attempting to turn right into CVS and was struck when MV1 attempted to go left around MV2
25	9/10/12	Monday	3:30 PM	Rear-end	Daylight	Clear	Dry	Followed too closely	40	42		MV2's operator's foot slipped off brake at red light and struck MV1
26	9/15/12	Saturday	12:06 AM	Angle	Dark - lighted roadway	Clear	Dry	Unknown	30	38		MV2 stopped for flashing red light and then proceeded through intersection when was struck by MV1
27	9/18/12	Tuesday	5:30 PM	Head on	Dusk	Rain	Wet	Failed to yield right of way	25	45		MV2 was turning left from Beech Street and was struck by MV1 going straight

Crash Data Summary Table

Beech Street at West Franklin Street/Resnic Boulevard, Holyoke, MA

2011-2015

Crash Diagram Ref #	Crash Date	Crash Day	Time of Day	Manner of Collision	Light Condition	Weather Condition	Road Surface	Driver Contributing Code	Driver Ages			Comments
	m/d/y			*Type*	*Type*	*Type*	*Type*	*Type*	*D1*	*D2*	*D3*	
28	11/12/12	Monday	8:18 AM	Angle	Daylight	Clear	Wet	Failed to yield right of way	52	30		MV1 WB failed to yield right of way at flashing red lights striking MV2 NB on flashing yellow on Beech Street.
29	11/24/12	Saturday	9:54 AM	Angle	Daylight	Clear	Dry	Failed to yield right of way	20	26		MV1 WB W. Franklin St. turning left, failed to yield right of way at flashing red lights striking MV2 NB on Beech St.
30	1/23/13	Wednesday	8:13 AM	Angle	Daylight	Clear	Dry	Inattention	43	17		MV2 turned sharply left cutting in front of MV1
31	3/15/13	Friday	1:18 PM	Angle	Daylight	Clear	Dry	Failure to keep in proper lane or running off road	81	26		MV1 entered wrong lane during construction and attempted to back out and struck MV2
32	3/22/13	Friday	12:55 PM	Angle	Daylight	Clear	Dry	Inattention	49	36		MV2 turned from West Franklin Street onto Beech Street and was attempting to make a U-turn from the right lane on Beech Street and struck MV1 who turned left from Resnic Blvd.
33	6/18/13	Tuesday	11:58 AM	Sideswipe, same direction	Daylight	Cloudy	Dry	Inattention	25	55		MV2, a Tractor Trailer, did not see MV1 as it was changing lanes across a solid white line
34	7/3/13	Wednesday	11:25 AM	Angle	Daylight	Clear	Dry	Made an improper turn	53	50		MV2 attempted to make a U-turn from the right lane and struck MV1 a FedEx van in the left lane
35	7/19/13	Friday	8:23 AM	Rear-end	Daylight	Clear	Dry	Followed too closely	44	40		MV1 stopped while turning right to allow a pedestrian to cross and was struck from behind by MV2
36	8/1/13	Thursday	11:54 AM	Rear-end	Daylight	Cloudy	Dry	Operating Vehicle in erratic, reckless, careless, negligent, or aggressive manner	22	57		MV1 a large truck did not see MV2 behind it backed into MV2 at the red light
37	8/28/13	Wednesday	3:30 PM	Rear-end	Daylight	Clear	Dry	Inattention	59	36		MV1 stopped at red light and was hit from behind by MV2
38	9/30/13	Monday	3:42 PM	Sideswipe, same direction	Daylight	Clear	Dry	Unknown	35	35		MV1 and MV2 made contact while travelling WB on Resnic Blvd
39	10/3/13	Thursday	7:34 AM	Angle	Daylight	Clear	Dry	Inattention	44	31		MV2 thought he could beat the yellow light from Beech Street NB
40	11/26/13	Tuesday	5:35 PM	Angle	Dark - lighted roadway	Rain	Wet	No Improper Driving	62	16		MV2 was turning left WB on Resnic Blvd and was struck by MV1 EB on West Franklin St. both had green lights
41	11/30/13	Saturday	5:30 PM	Angle	Dusk	Clear	Dry	Unknown	18	38		MV2 was turning left onto Beech St NB and struck MV1 was travelling WB on Resnic Blvd
42	12/5/13	Thursday	7:57 PM	Angle	Dark - lighted roadway	Rain	Wet	Unknown	21	73		MV1 was turning left onto Beech St NB while MV2 was travelling through a yellow light WB on W. Franklin St
43	12/9/13	Monday	4:29 PM	Single Vehicle Crash	Dark - lighted roadway	Fog, Smog, Smoke	Wet	Visibility Obstructed	65	15		MV1 struck a pedestrian in the crossing Resnic Blvd in fog and rain
44	1/13/14	Monday	11:19 PM	Angle	Dark - lighted roadway	Clear	Dry	Inattention	39	20		MV1 hit a bicyclist crossing the street in the crosswalk while turning right on red
45	1/24/14	Friday	11:47 AM	Unknown	Daylight	Clear	Dry	No Improper Driving	76	50	61	MV3 was turning left and the front wheel broke off the axle, crossed the road and struck MV1 and MV2. From NB Beech Street to EB Resnic Blvd.
46	2/4/14	Tuesday	8:24 AM	Rear-end	Daylight	Clear	Wet	Followed too closely	61	32		MV2 rear ended MV1
47	2/8/14	Saturday	9:25 AM	Rear-end	Daylight	Clear	Dry	Unknown	26	21		MV2 rear ended MV1 at the yield sign. MV2 thought MV1 was moving
48	2/26/14	Wednesday	7:20 AM	Angle	Daylight	Cloudy	Dry	Made an improper turn	UNK	35		MV1, fire department was off the side of the roadway working on the traffic lights, and was struck by the rear of a tractor trailer
49	3/20/14	Thursday	3:14 PM	Angle	Daylight	Clear	Dry	Unknown	48	18		MV1 was waved out of the gas station by a vehicle in the opposite direction and then struck MV2 traveling WB on W Franklin St
50	4/1/14	Tuesday	7:34 AM	Angle	Daylight	Clear	Dry	Other improper action	60	84		MV1 changed lanes from right to left in front of MV2 striking MV2
51	4/21/14	Monday	7:46 AM	Angle	Daylight	Clear	Dry	Disregarded traffic signs, signals, road markings	18	37		MV2, EB W Franklin Street, ran the flashing red light collided with MV1 which had a flashing yellow NB on Beech Street
52	4/22/14	Tuesday	5:01 PM	Angle	Daylight	Cloudy	Dry	Failed to yield right of way	46	18		MV2 left turn from NB Beech Street failed to yield right of way while turning and struck MV1 SB
53	5/11/14	Sunday	9:07 PM	Rear-end	Dark - lighted roadway	Clear	Dry	Unknown	31	30		MV1 stopped abruptly at the intersection with green light for a fire truck with lights on, MV2 rear ended MV1
54	6/7/14	Saturday	4:24 PM	Rear-end	Daylight	Clear	Dry	Unknown	37	71		MV1 was rear ended at the yield sign MV2 thought MV1 was moving
55	6/24/14	Tuesday	4:13 PM	Rear-end	Daylight	Clear	Dry	Inattention	61	23		MV1 stopped while turning right onto Resnic Blvd to allow a pedestrian to cross and was struck from behind.
56	9/29/14	Monday	4:09 PM	Rear-end	Daylight	Cloudy	Dry	Unknown	27	30	32	MV3 rear ended MV2 pushing it into MV1
57	11/12/14	Wednesday	8:28 AM	Rear-end	Daylight	Fog, Smog, Smoke	Wet	Followed too closely	22	38		MV2 stopped while turning left to let a police cruiser with lights and sirens pass and was rear ended by MV1
58	11/18/14	Tuesday	9:46 AM	Angle	Daylight	Cloudy	Dry	No Improper Driving	70	34		MV2 struck MV1 EB which was making a left turn from Oak Street onto EB West Franklin Street
59	1/26/15	Monday	3:18 PM	Rear-end	Daylight	Cloudy	Wet	Unknown	23	20		MV1 was rear ended while slowing for traffic lights
60	2/7/15	Saturday	5:57 PM	Sideswipe, same direction	Dark - lighted roadway	Cloudy	Wet	No Improper Driving	47	UNK		MV1 was hit from behind. Hit and run
61	2/10/15	Tuesday	12:58 PM	Angle	Daylight	Clear	Dry	Made an improper turn	41	38		MV1 took a right turn into CVS from the left lane and struck MV2 in the right lane

Crash Data Summary Table

Beech Street at West Franklin Street/Resnic Boulevard, Holyoke, MA

2011-2015

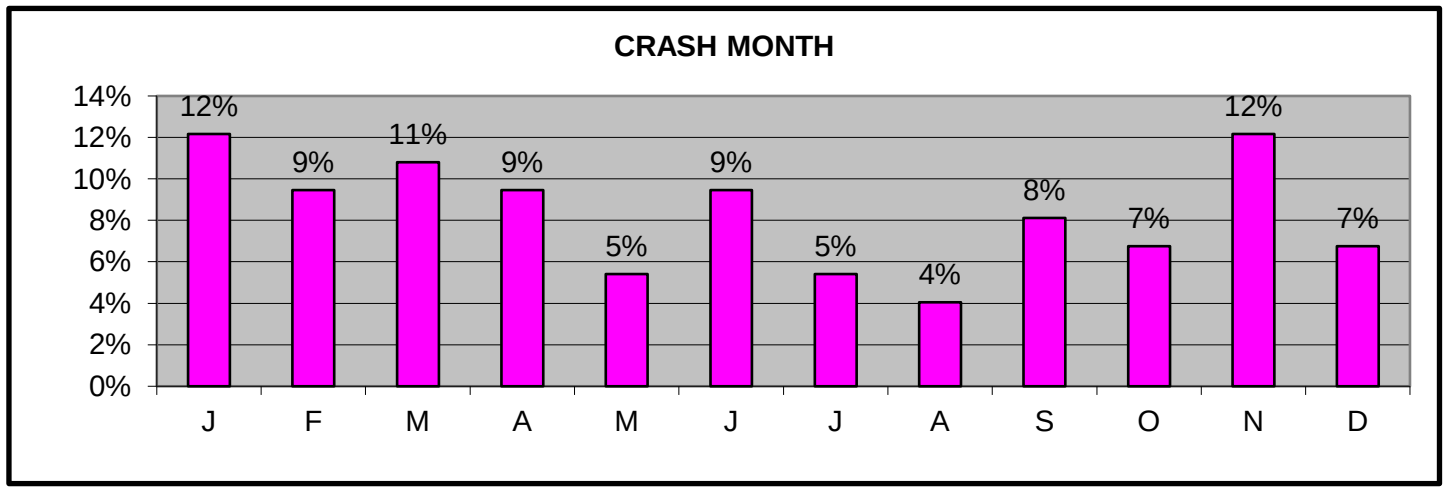
Crash Diagram Ref #	Crash Date	Crash Day	Time of Day	Manner of Collision	Light Condition	Weather Condition	Road Surface	Driver Contributing Code	Driver Ages			Comments
	m/d/y			*Type*	*Type*	*Type*	*Type*	*Type*	*D1*	*D2*	*D3*	
62	2/25/15	Wednesday	8:24 AM	Rear-end	Daylight	Clear	Dry	Operating Vehicle in erratic, reckless, careless, negligent, or aggressive manner	UNK	57		MV2 was hit from behind. Hit and run
63	4/8/15	Wednesday	9:15 AM	Angle	Daylight	Clear	Dry	Failed to yield right of way	20	26		MV1 turned left onto NB Beech Street in front of MV2 WB on Resnic Blvd, while both had green lights
64	5/24/15	Sunday	3:20 AM	Angle	Dark - lighted roadway	Clear	Dry	No Improper Driving	28	UNK		MV2 ran the red light going North on Beech St. and struck MV1 travelling WB on Resnic Blvd. MV2 then reversed then hit MV1 again and fled the scene. Crash was seen on nearby police camera
65	6/18/15	Thursday	8:05 AM	Rear-end	Daylight	Clear	Dry	Distracted	63	27		MV2 was looking at high school kids on the side of the road rear ended MV1
66	8/8/15	Saturday	6:55 PM	Rear-end	Daylight	Clear	Dry	Inattention	45	70		MV2 took eyes off road and rear ended MV1 at the yield sign. MV2 later struck a traffic sign on beech street while making a u-turn when leaving the crash
67	9/13/15	Sunday	1:55 PM	Angle	Daylight	Cloudy	Dry	Failed to yield right of way	42	21		MV2 turned left quickly as the light turned green and failed to yield right of way while turning
68	10/14/15	Wednesday	4:02 PM	Rear-end	Daylight	Clear	Dry	No Improper Driving	43	62		MV2 rear ended MV1 after MV1 was cut off by an unkown vehicle making a left turn. View was obstructed by a school bus turning right
69	10/28/16	Friday	6:15 PM	Angle	Daylight	Rain	Wet	Inattention	39	33		MV2 failed to yield right of way while turning left onto EB West Franklin Street and struck MV1. Both vehicles had yellow lights
70	11/6/15	Friday	1:01 PM	Rear-end	Daylight	Clear	Dry	Inattention	46	27		MV1 was rear ended at the yield sign
71	11/10/15	Tuesday	2:47 PM	Rear to Rear	Daylight	Rain	Wet	Followed too closely	49	57		MV1 rear ended MV2 after MV2 slowed down
72	11/25/15	Wednesday	6:47 PM	Rear-end	Dark - lighted roadway	Clear	Dry	Unknown	26	28		MV2 proceeded forward as the light turned green and did not realize MV1 in front did not move. MV2 rear ended MV1
73	6/4/13	Tuesday	11:03 PM	Rear-end	Daylight	Clear	Dry	Operating Vehicle in erratic, reckless, careless, negligent, or aggressive manner	56	36		MV2 was a moped that rear ended MV1 at the traffic light and then hit MV3 which was parked.
74	1/2/11	Sunday	7:05 PM	Rear-end	Dark - lighted roadway	Clear	Wet	Operating Vehicle in erratic, reckless, careless, negligent, or aggressive manner	63	52		MV2 traveling EB on West Franklin Street rear ended MV1 at the traffic lights.

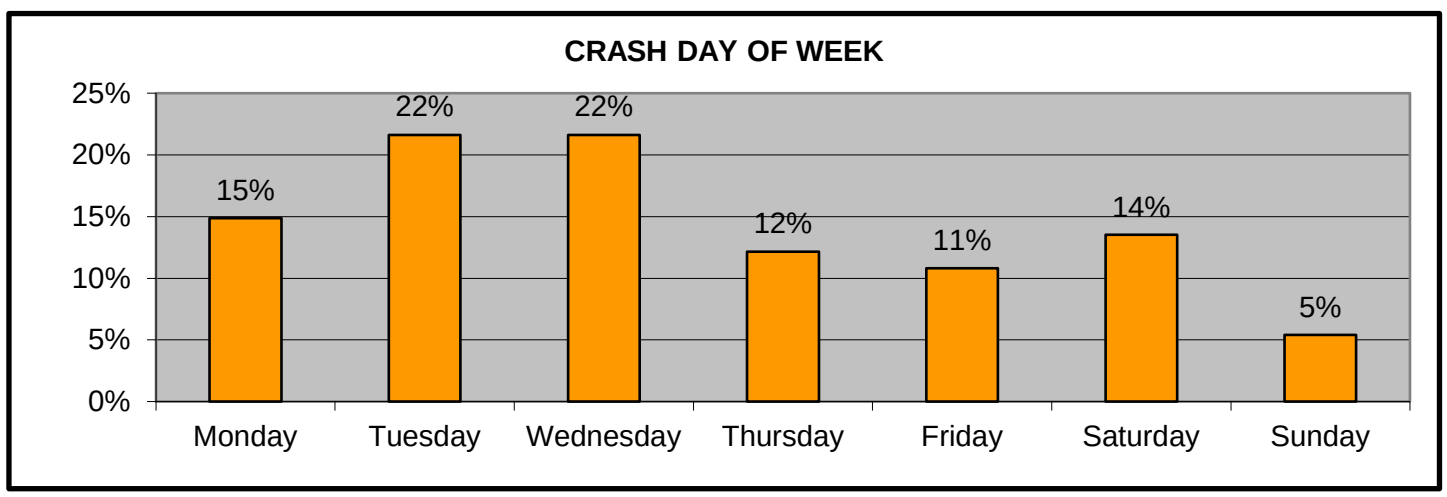
*Courtesy Crash - A term used to describe a crash that occurs subsequent to a non-involved mainline driver who gives the right of way, contrary to the rules of the road, to another driver.

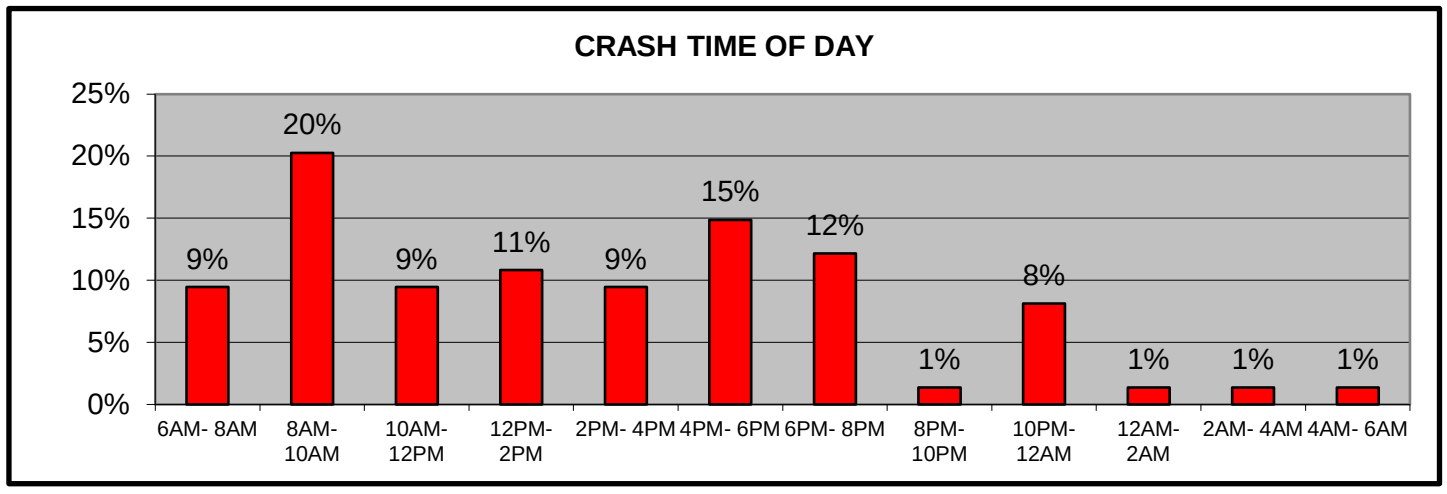
Summary based on Crash Reports obtained from the Hoyloke Police Department.

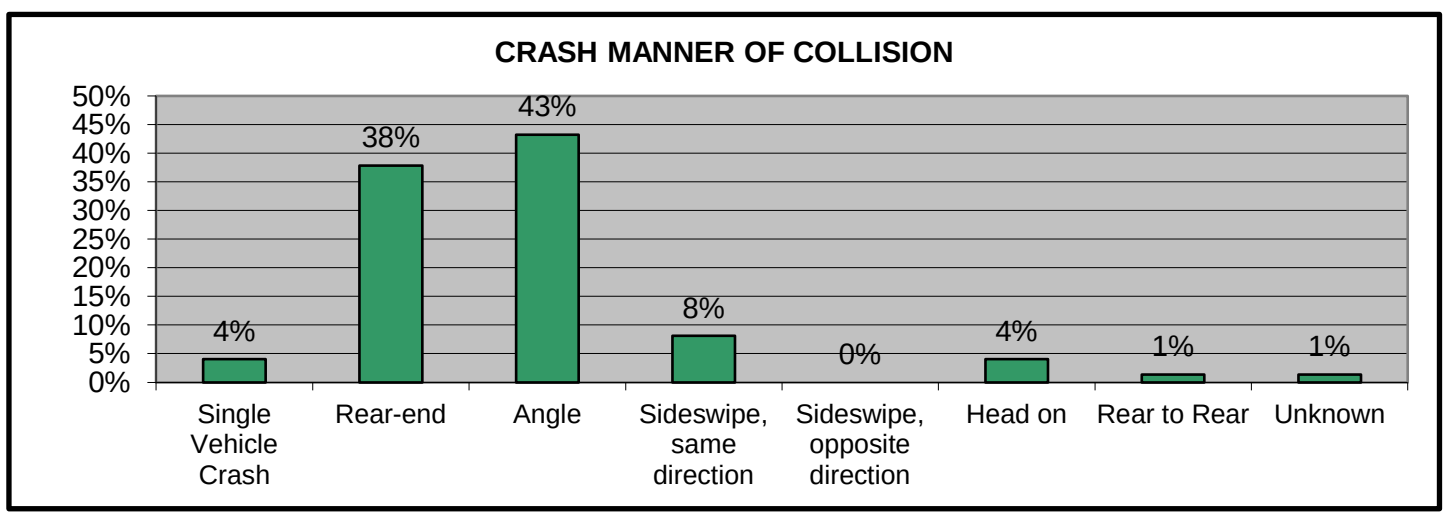
Crash Data Summary Tables and Charts

Beech Street at West Franklin Street/Resnic Boulevard, Holyoke, MA



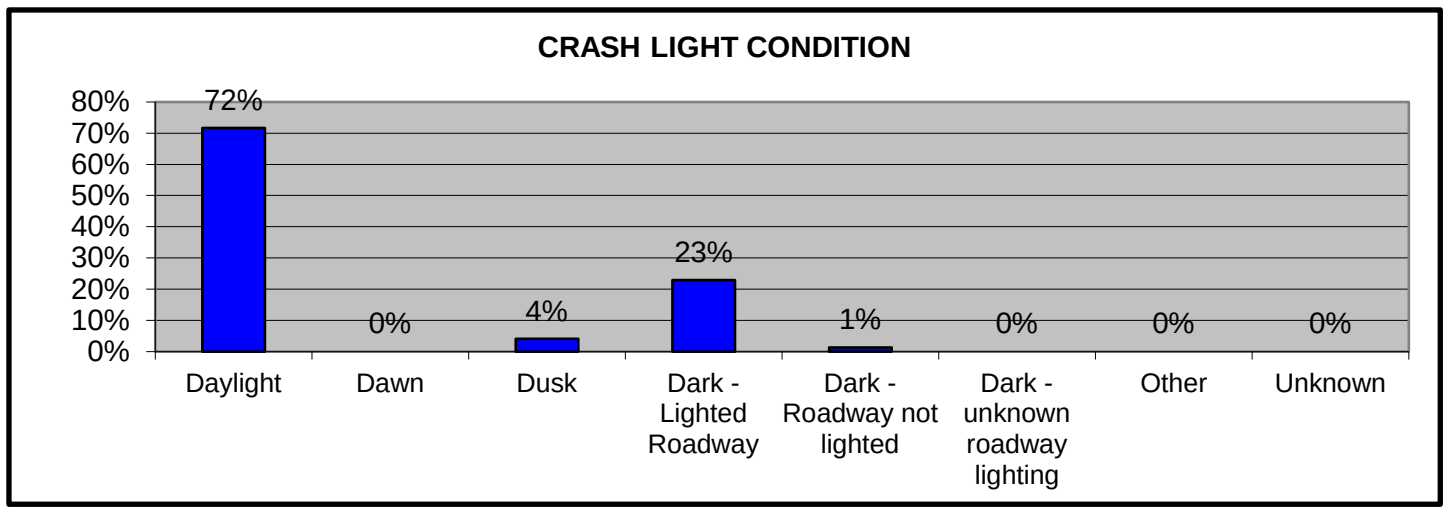


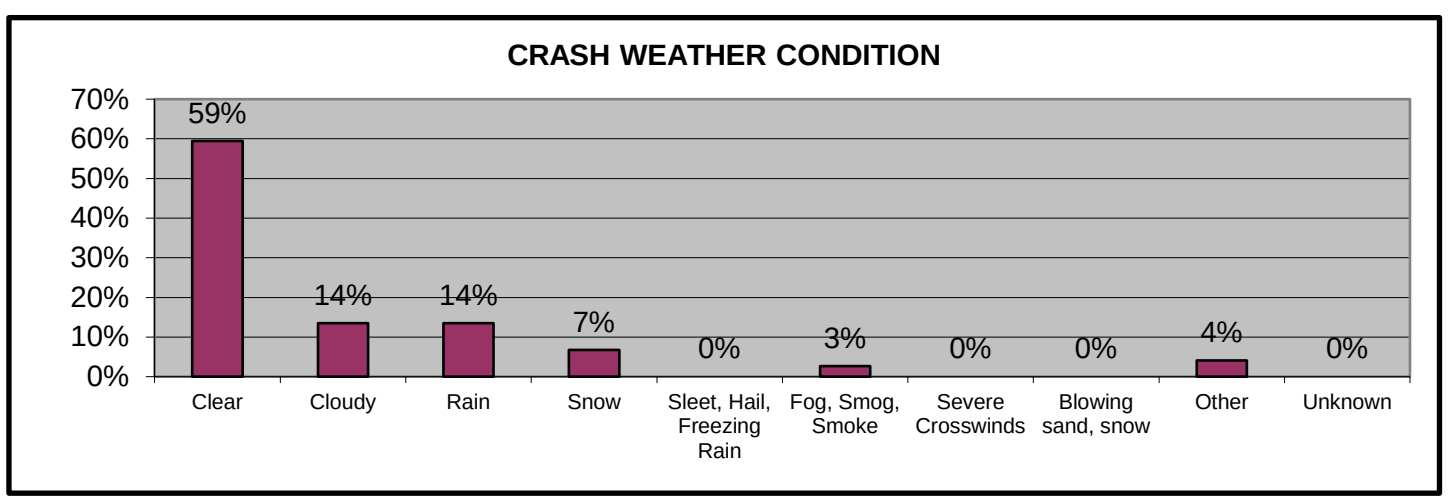


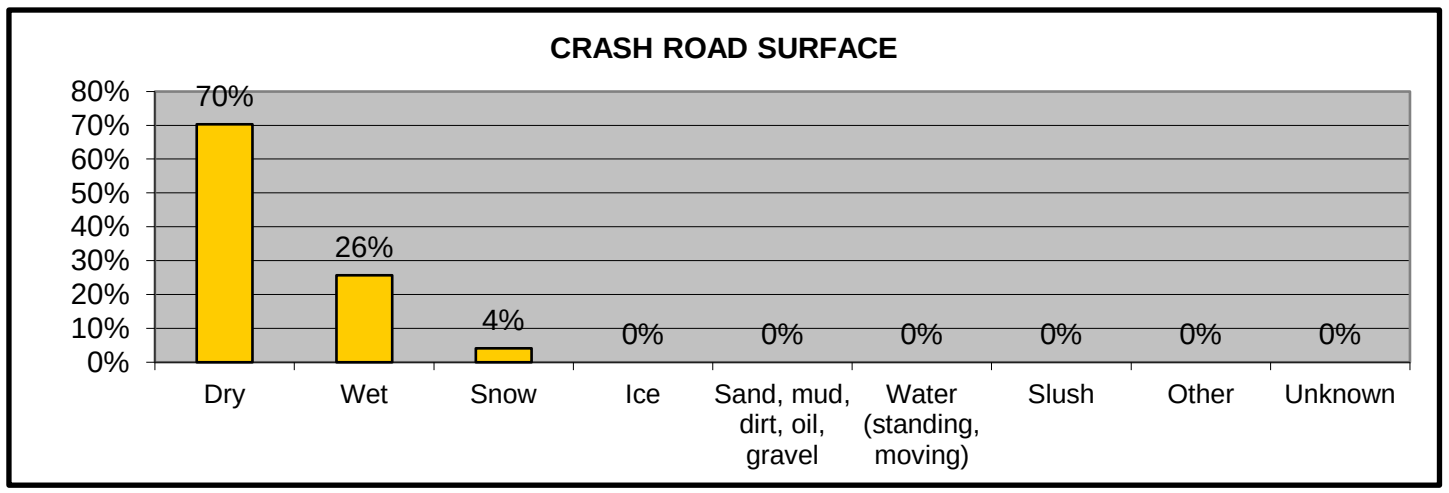


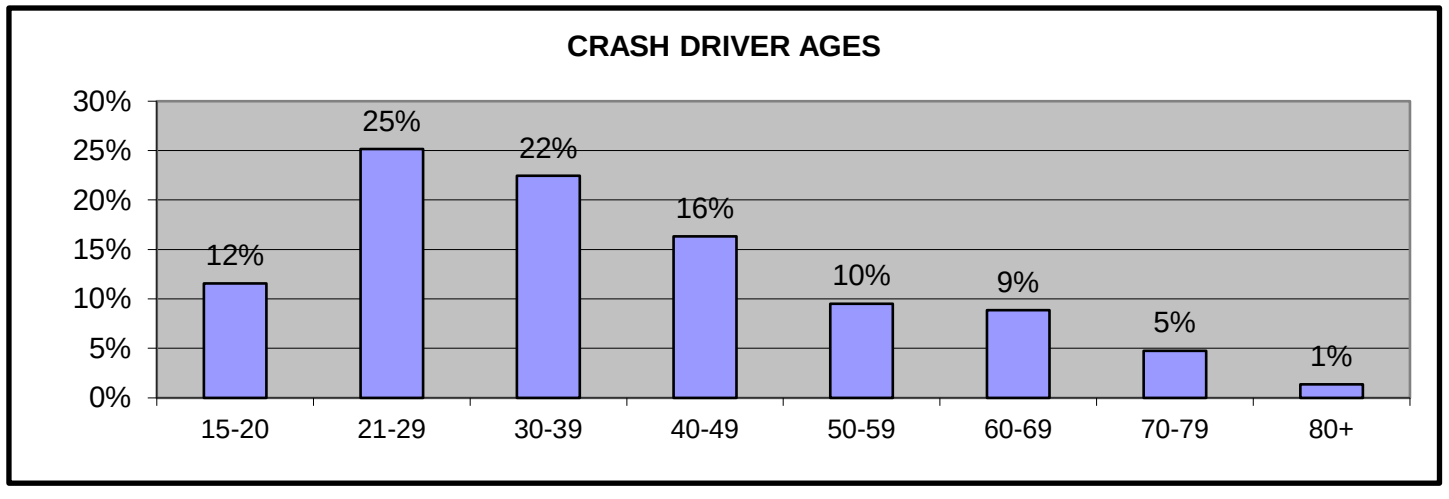
Crash Data Summary Tables and Charts

Beech Street at West Franklin Street/Resnic Boulevard, Holyoke, MA









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COLLISION DIAGRAM

SYMBOLS

Involved / Non-Involved

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

TYPE OF CRASH

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

SEVERITY

- (#) Injury
- (#) Fatal
- # Property Damage Only

HOLYOKE, MA

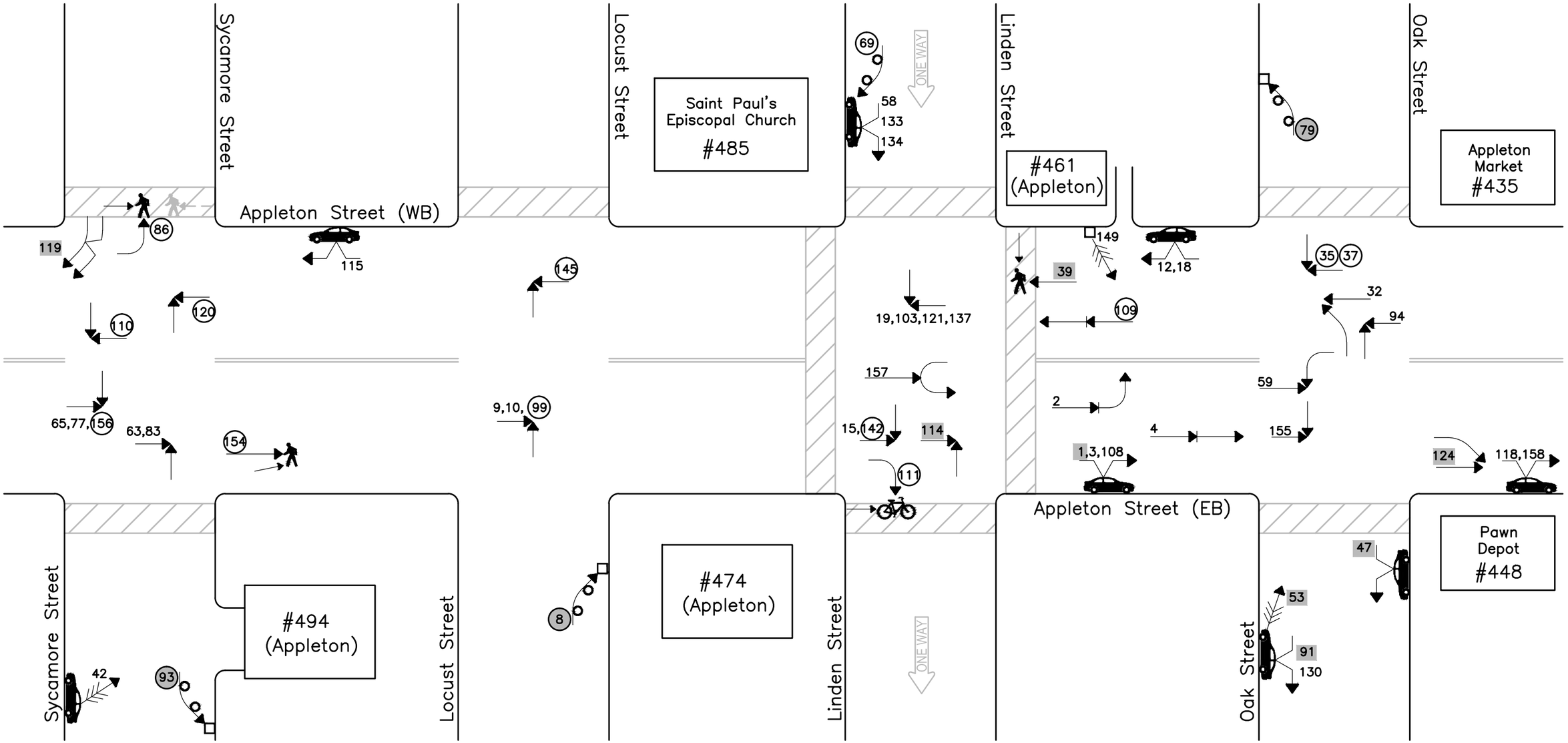
APPLETON CORRIDOR FROM SYCAMORE STREET TO OAK STREET

REGION: PVPC

TIME PERIOD ANALYZED: 2011–2015
SOURCE OF CRASH REPORTS: HOLYOKE POLICE DEPARTMENT
DATE PREPARED: 11/16/2016
PREPARED BY: CONNOR KEATING

N

*NOT TO SCALE



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Massachusetts Department of Transportation
Highway Division

HOLYOKE, MA

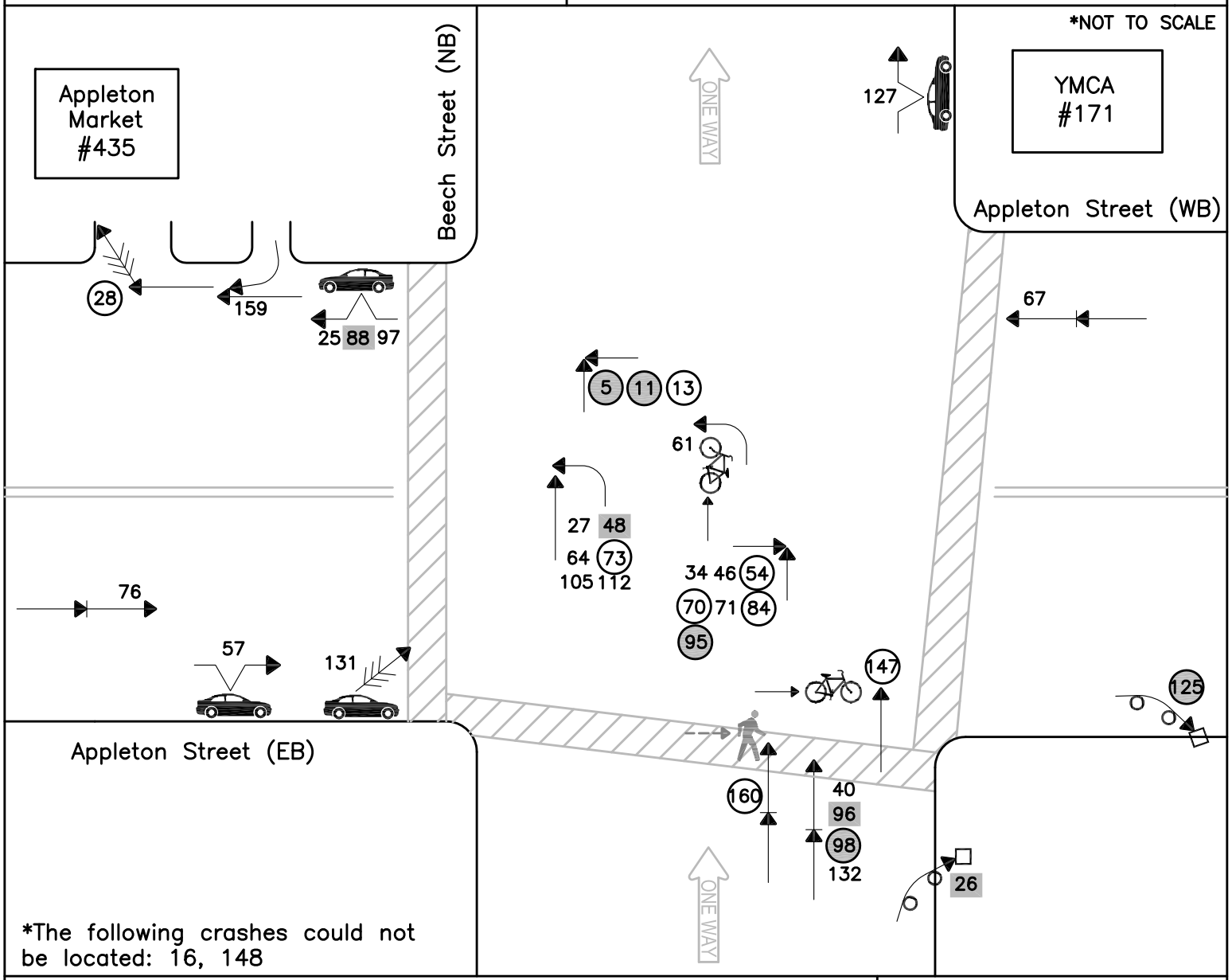
APPLETON STREET AT BEECH STREET

REGION: PVPC

COLLISION DIAGRAM

TIME PERIOD ANALYZED: 2011–2015
SOURCE OF CRASH REPORTS: HOLYOKE POLICE DEPARTMENT
DATE PREPARED: 11/16/2016
PREPARED BY: KUSH BHAGAT

*NOT TO SCALE



*The following crashes could not be located: 16, 148

SYMBOLS

- Moving Vehicle
- Backing Vehicle
- Non–Involved Vehicle

Involved	Non–Involved	
		Pedestrian
		Bicycle
		Animal
		Direction of Motion
		Parked Vehicle
		Fixed Object

TYPES OF CRASH

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

SEVERITY

- Injury
- Fatal

N

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Highway Division

COLLISION DIAGRAM

SYMBOLS

Involved / Non-Involved

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

TYPE OF CRASH

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

SEVERITY

- (#) Injury
- (#) Fatal
- # Property Damage Only

HOLYOKE, MA

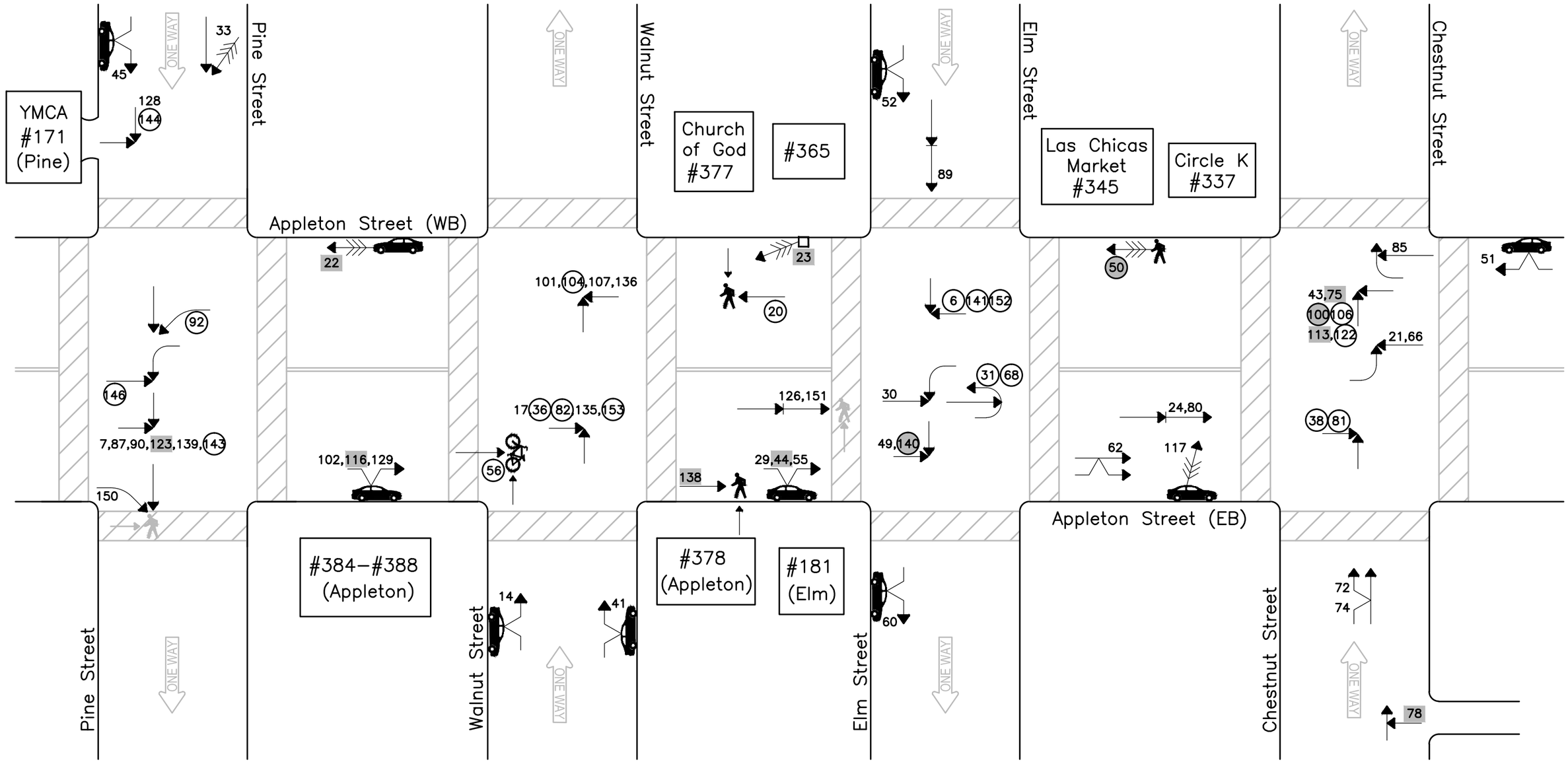
APPLETON CORRIDOR FROM PINE STREET TO CHESTNUT STREET

REGION: PVPC

TIME PERIOD ANALYZED: 2011–2015
SOURCE OF CRASH REPORTS: HOLYOKE POLICE DEPARTMENT
DATE PREPARED: 11/16/2016
PREPARED BY: CONNOR KEATING

N

*NOT TO SCALE



Crash Data Summary Table

Appleton Street from Sycamore Street to Chestnut Street, Holyoke, MA

2011-2015

Crash Diagram Ref #	Crash Diagram Sheet #	Crash Date	Crash Day	Time of Day	Manner of Collision	Light Condition	Weather Condition	Road Surface	Driver Contributing Code	Driver Ages			Comments
		m/d/y			*Type*	*Type*	*Type*	*Type*	*Type*	*D1*	*D2*	*D3*	
1	1	1/1/11	Saturday	7:33 PM	Sideswipe, same direction	Dark - lighted roadway	Clear	Dry	Inattention	UNK	UNK		V1 was parked on the side of EB Appleton Street, V2 sideswiped V1.
2	1	1/15/11	Saturday	3:20 PM	Rear-end	Daylight	Clear	Dry	No Improper Driving	19	21		V1 was turning left off EB Appleton Street when V2 rear-ended V1.
3	1	1/20/11	Thursday	4:30 PM	Unknown	Daylight	Clear	Wet		UNK			V1 driver's side mirror was struck while parked on EB Appleton Street.
4	1	1/20/11	Thursday	1:35 PM	Rear-end	Daylight	Clear	Ice	Swerving or avoiding due to wind, slippery surface, vehicle, object, non-motorist in roadway, etc.	64	36		V1 was stopped for traffic on EB Appleton Street, V2 rear-ended V1 due to the ice on the roadway.
5	2	1/22/11	Saturday	1:19 AM	Angle	Dark - lighted roadway	Clear	Ice	Disregarded traffic signs, signals, road markings	21	19		V1 traveling on NB Beech Street failed to stop for a red light in time due to the ice on the roadway causing V1 to hit V2 (van).
6	3	2/4/11	Friday	12:50 PM	Angle	Daylight	Clear	Snow	Operating Vehicle in erratic, reckless, careless, negligent, or aggressive manner	49	UNK		V1 was travelling on WB Appleton Street, V2 failed to stop at the stop sign on SB Elm Street and struck V1.
7	3	2/4/11	Friday	9:01 AM	Angle	Daylight	Clear	Wet	Failed to yield right of way	35	20		V2 travelling on SB Pine St did not yield right of way to V1 travelling on EB Appleton Street, striking V1.
8	1	2/5/11	Saturday	6:53 PM	Single Vehicle Crash	Dark - lighted roadway	Sleet, Hail, Freezing Rain	Ice	No Improper Driving	20			V1 was travelling NB on Locust St approaching Appleton Street. Due to the ice and rain, V1 slid, hit a snowbank and curbing, then flipped over on the driver's side.
9	1	2/9/11	Wednesday	2:15 PM	Angle	Daylight	Clear	Dry	Visibility Obstructed	55	22		V2 slowly pulled away from the stop sign on NB Locust Street when she struck V1 due to her visibility being obstructed by the high snow banks.
10	1	2/26/11	Saturday	2:34 PM	Angle	Daylight	Clear	Dry	Failed to yield right of way	17	20		V2 failed to stop at stop sign on NB Locust Street.
11	2	3/1/11	Tuesday	5:51 PM	Single Vehicle Crash	Dusk	Clear	Dry	No Improper Driving	38	UNK		V2 ran red light on WB Appleton Street, hitting NB V1.
12	1	3/16/11	Wednesday	5:23 PM	Angle	Daylight	Clear	Dry	Inattention	UNK	36		V2 travelling on WB Appleton Street struck parked V1 while turning into the alleyway.
13	2	4/7/11	Thursday	11:25 AM	Angle	Daylight	Clear	Dry	Disregarded traffic signs, signals, road markings	37	51		V1 ran a red light on NB Beech Street as he was unable to stop in time, striking V2 travelling WB on Appleton Street.
14	3	4/10/11	Sunday	11:37 AM	Sideswipe, same direction	Daylight	Cloudy	Dry		UNK			V1 was parked on the side of NB Walnut Street and was sideswiped by an unknown vehicle.
15	1	4/19/11	Tuesday	4:30 PM	Angle	Daylight	Rain	Wet	Inattention	23	27		V1 ran red light on EB Appleton Street, striking V2 travelling SB on Linden Street.
16	NA	4/28/11	Thursday	8:23 PM	Sideswipe, same direction	Dark - lighted roadway	Clear	Dry	Unknown	40	22		V2 was parked with the door open on EB Appleton Street, V1 travelling in the same direction struck the door of V2.
17	3	5/4/11	Wednesday	5:29 PM	Angle	Daylight	Clear	Dry	Distracted	40	35		V2 did not see the stop sign on NB Walnut Street, and struck V1 travelling on EB Appleton Street.
18	1	5/9/11	Monday	7:25 PM	Sideswipe, same direction	Daylight	Clear	Dry	No Improper Driving	59	46		V2 was parked on the side of WB Appleton Street, V1 sideswiped V2.
19	1	5/24/11	Tuesday	1:34 PM	Angle	Daylight	Clear	Dry	Disregarded traffic signs, signals, road markings	70	43		V2 ran red light on WB Appleton Street, hitting V1.
20	3	5/25/11	Wednesday	7:38 PM	Unknown	Daylight	Clear	Dry	No Improper Driving	35	24		V1 travelling on WB Appleton Street struck a pedestrian that fell into the roadway while playing with a water gun.
21	3	5/26/11	Thursday	3:22 PM	Angle	Daylight	Clear	Dry	Unknown	29	60		V2 travelling on WB Appleton Street failed to yield to V1 travelling on EB Appleton Street while attempting to turn left.
22	3	6/15/11	Wednesday	1:51 AM	Rear-end	Dark - lighted roadway	Rain	Wet	Operating Vehicle in erratic, reckless, careless, negligent, or aggressive manner	UNK	UNK	UNK	V1 backed out of the alley into parked V2, then travelled on EB Appleton Street and sideswiped V3 traveling in the same direction.
23	3	7/6/11	Wednesday	11:34 PM	Single Vehicle Crash	Dark - lighted roadway	Clear	Dry	Inattention	57			V1 backed up over the curb on EB Appleton Street and into a building.
24	3	7/8/11	Friday	12:26 PM	Rear-end	Daylight	Cloudy	Dry	Unknown	UNK	41		V2 was stopped in traffic on EB Appleton Street, V1 failed to stop in time and rear-ended V2.
25	2	7/26/11	Tuesday	3:02 PM	Sideswipe, same direction	Daylight	Clear	Dry	Visibility Obstructed	50	45		V2 was parked on WB Appleton Street, V1 struck V2's driver's side mirror.
26	2	7/29/11	Friday	11:00 PM	Single Vehicle Crash	Dark - lighted roadway	Rain	Wet	Swerving or avoiding due to wind, slippery surface, vehicle, object, non-motorist in roadway, etc.	18			Operator of V1 applied her brakes to stop for the yellow light on NB Beech Street when the vehicle swerved out of control and crashed into a tree.
27	2	8/9/11	Tuesday	5:24 PM	Angle	Daylight	Clear	Dry	Distracted	23	56		V1 attempted to turn left from the right lane on NB Beech Street, V2 was on the left side of V1 travelling straight on NB Beech Street. Operator of V1 thought Beech Street was a one lane road.
28	2	8/12/11	Friday	11:55 AM	Rear-end	Daylight	Clear	Dry	Operating Vehicle in erratic, reckless, careless, negligent, or aggressive manner	40	54		V1 backed out of the Appleton Market into V2 parked on WB Appleton Street.
29	3	8/23/11	Tuesday	12:14 PM	Sideswipe, same direction	Daylight	Clear	Dry		UNK			V1 was parked on the side of EB Appleton Street, V2 sideswiped V1.
30	3	8/30/11	Tuesday	5:09 PM	Angle	Daylight	Clear	Dry		28	36		V2 travelling on EB Appleton Street was struck by V1 which made an improper left turn from WB Appleton Street to SB Elm Street.
31	3	10/15/11	Saturday	4:01 PM	Angle	Daylight	Clear	Dry	Made an improper turn	36	25		V2 travelling on EB Appleton Street moved to the right before attempting a U-turn at the intersection, V1 travelling on EB Appleton Street struck V2.

Crash Data Summary Table

Appleton Street from Sycamore Street to Chestnut Street, Holyoke, MA

2011-2015

Crash Diagram Ref #	Crash Diagram Sheet #	Crash Date	Crash Day	Time of Day	Manner of Collision	Light Condition	Weather Condition	Road Surface	Driver Contributing Code	Driver Ages			Comments
		m/d/y			*Type*	*Type*	*Type*	*Type*	*Type*	*D1*	*D2*	*D3*	
32	1	10/19/11	Wednesday	3:49 PM	Angle	Daylight	Rain	Wet	Unknown	31	41		SB V1 did not see EB V2 while turning left from SB Oak Street onto EB Appleton Street.
33	3	10/25/11	Tuesday	6:00 PM	Angle	Daylight	Clear	Dry	Failed to yield right of way	22	48		V2 was backing up to parallel park on SB Pine Street while V1 travelling on SB Pine Street struck V2 on the side.
34	2	11/7/11	Monday	2:00 PM	Angle	Daylight	Clear	Dry	Inattention	31	39		V2 had a hard time seeing the traffic light due to the glare on NB Beech Street, striking V1 on EB Appleton Street.
35	1	11/16/11	Wednesday	1:07 PM	Angle	Daylight	Clear	Wet	Failed to yield right of way	24	56		V2 travelling on SB Oak Street failed to yield to V1 travelling on WB Appleton Street while entering the intersection.
36	3	11/16/11	Wednesday	8:53 AM	Angle	Daylight	Cloudy	Dry	No Improper Driving	43	84		V2 travelling on NB Walnut Street did not see V1 travelling on EB Appleton Street as V1 was travelling at a high rate of speed.
37	1	11/21/11	Monday	12:56 PM	Angle	Daylight	Clear	Dry	Failed to yield right of way	36	23		V1 travelling on SB Oak Street failed to yield to V2 travelling on WB Appleton Street.
38	3	11/23/11	Wednesday	11:07 AM	Angle	Daylight	Rain	Wet	Visibility Obstructed	32	54		V1 travelling on NB Chestnut Street struck V2 travelling on EB Appleton Street as V1 could not see V2 due to a vehicle parked too close to the intersection. V2 could not see V1 for the same reason.
39	1	11/27/11	Sunday	10:17 PM	Unknown	Dark - lighted roadway	Clear	Dry		33			V1 travelling on Appleton Street struck a pedestrian that had just exited her vehicle and was walking to the sidewalk.
40	2	11/28/11	Monday	8:28 AM	Rear-end	Daylight	Cloudy	Wet	Swerving or avoiding due to wind, slippery surface, vehicle, object, non-motorist in roadway, etc.	23	45		V2 was stopped in traffic on SB Beech Street, operator of V1 slid on the wet roadway after applying the brakes and rear-ended V2.
41	3	11/29/11	Tuesday	10:00 AM	Sideswipe, same direction	Daylight	Cloudy	Dry		UNK			V1 was parked on the side of NB Walnut Street, an unknown vehicle hit V1 overnight.
42	1	12/7/11	Wednesday	12:04 PM	Angle	Daylight	Rain	Wet	Operating Vehicle in erratic, reckless, careless, negligent, or aggressive manner	UNK	22		V2 backed into V1 parked on SB Sycamore Street.
43	3	12/11/11	Sunday	3:40 PM	Angle	Daylight	Clear	Dry	Failed to yield right of way	18	25		V1 travelling on NB Chestnut Street failed to yield to V2 on WB Appleton Street at the stop sign.
44	3	1/16/12	Monday	3:39 AM	Sideswipe, same direction	Dark, unknown roadway lighting	Clear	Dry	Inattention	22	UNK		V1 travelling on EB Appleton Street swerved to avoid a vehicle in his path, and struck V2, parked on the side of the road.
45	3	1/23/12	Monday	11:58 AM	Rear-end	Daylight	Rain	Wet	Failure to keep in proper lane or running off road	20	UNK		V2 was parked on the side of SB Pine Street, V1 travelling on SB Pine Street struck V2.
46	2	2/6/12	Monday	2:03 PM	Angle	Daylight	Clear	Dry	Unknown	31	41		V1 claimed to have a green light on NB Beech Street, V2 claimed to have a yellow light on EB Appleton Street.
47	1	2/25/12	Saturday	7:05 AM	Angle	Dark, unknown roadway lighting	Rain	Wet	No Improper Driving	UNK			V1 was parked on the side of SB Oak Street, an unknown vehicle hit V1 overnight.
48	2	3/17/12	Saturday	10:19 PM	Angle	Dark - lighted roadway	Clear	Dry	Inattention	24	28		V2 travelling on NB Beech Street attempted to make a left turn from the right lane, striking V1 travelling straight in the left lane.
49	3	4/30/12	Monday	12:29 PM	Angle	Daylight	Clear	Dry	Failed to yield right of way	35	43		V1 failed to stop for a stop sign on SB Elm Street, striking V2 travelling on EB Appleton Street.
50	3	5/1/12	Tuesday	9:22 PM	Single Vehicle Crash	Dark - lighted roadway	Cloudy	Dry	Operating Vehicle in erratic, reckless, careless, negligent, or aggressive manner	57	44		Operator of V1 on WB Appleton Street pushed the passenger out of the vehicle, backed over the legs of the passenger, then went forward over the legs.
51	3	5/20/12	Sunday	3:35 PM	Rear-end	Daylight	Clear	Dry	Cellular telephone	37	UNK	UNK	V1 veered off the right of WB Appleton Street striking V2 (parked), causing V2 to hit V3 (parked).
52	3	5/29/12	Tuesday	9:47 AM	Angle	Daylight	Clear	Dry	Operating Vehicle in erratic, reckless, careless, negligent, or aggressive manner	UNK	UNK		V1 was parked on SB Elm Street when it was struck by V2 travelling SB on Elm Street.
53	1	6/17/12	Sunday	1:02 AM	Sideswipe, opposite direction	Dark - lighted roadway	Clear	Dry		UNK			V2 backed into V1 parked on SB Oak Street.
54	2	7/13/12	Friday	11:57 AM	Angle	Daylight	Cloudy	Dry	Inattention	19	49		V1 ran red light on NB Beech Street, hitting MC2. V1 did not know what color the light was.
55	3	7/13/12	Friday	11:28 AM	Sideswipe, same direction	Daylight	Clear	Dry	Failure to keep in proper lane or running off road	82	UNK		V1 travelling on EB Appleton Street failed to stay in lane and hit V2 which was parked on EB Appleton Street.
56	3	7/18/12	Wednesday	6:36 PM	Angle	Daylight	Clear	Dry	No Improper Driving	68	7		V1 was travelling on EB Appleton Street when a cyclist entered the intersection travelling NB on Walnut Street and struck V1.
57	2	7/20/12	Friday	2:30 PM	Angle	Daylight	Cloudy	Dry	Unknown	UNK	UNK		V2 was parked on EB Appleton Street, V1 travelling on EB Appleton Street made contact with the left rear of V2.
58	1	7/26/12	Thursday	8:38 AM	Angle	Daylight	Cloudy	Wet	Over-correcting/over-steering	37	UNK		V1, a Tractor Trailer, attempted to take a right turn from SB Linden Street and cut the turn too short, hitting V2 which was parked on SB Linden Street.
59	1	7/27/12	Friday	5:43 PM	Angle	Daylight	Clear	Dry	Inattention	29	49		V2 struck V1 while V1 was turning left from WB Appleton Street to SB Oak Street.
60	3	8/13/12	Monday	3:35 PM	Sideswipe, same direction	Daylight	Clear	Dry	No Improper Driving	42			V2 was parked on the side of SB Elm Street, V1 sideswiped V2.

Crash Data Summary Table

Appleton Street from Sycamore Street to Chestnut Street, Holyoke, MA

2011-2015

Crash Diagram Ref #	Crash Diagram Sheet #	Crash Date	Crash Day	Time of Day	Manner of Collision	Light Condition	Weather Condition	Road Surface	Driver Contributing Code	Driver Ages			Comments
		m/d/y			*Type*	*Type*	*Type*	*Type*	*Type*	*D1*	*D2*	*D3*	
61	2	9/11/12	Tuesday	5:22 PM	Sideswipe, same direction	Daylight	Clear	Dry	No Improper Driving	42	25		Bicyclist was on the left side of V1 on NB Beech Street, V1 struck the bicyclist while attempting to turn left.
62	3	9/15/12	Saturday	3:13 PM	Sideswipe, same direction	Daylight	Clear	Dry	Unknown	20	52		V1 was merging into traffic from a parked position on EB Appleton Street and sideswiped V2.
63	1	9/18/12	Tuesday	12:39 PM	Angle	Daylight	Rain	Wet	Operating Vehicle in erratic, reckless, careless, negligent, or aggressive manner	68	20		V1 stopped at stop sign on NB Locust Street, but did not remain stopped for V2 travelling on WB Appleton Street, hitting V2.
64	2	9/28/12	Friday	3:18 PM	Angle	Daylight	Rain	Wet	Failed to yield right of way	32	16		V2 travelling on NB Beech Street attempted to make a left turn from the right lane, striking V1 travelling straight in the left lane.
65	1	10/8/12	Monday	5:19 PM	Angle	Daylight	Cloudy	Dry	Failed to yield right of way	32	59		V2 stopped at stop sign on SB Sycamore Street, but did not remain stopped for V1 travelling on EB Appleton Street, hitting V2.
66	3	10/25/12	Thursday	11:50 AM	Head on	Daylight	Cloudy	Dry	Made an improper turn	38	36		V1 travelling on EB Appleton Street failed to yield to V2 travelling on WB Appleton Street, while V1 was turning left onto Chestnut Street.
67	2	11/27/12	Tuesday	9:50 AM	Rear-end	Daylight	Snow	Wet	Followed too closely	65	67		V2 was stopped at the traffic light on WB Appleton Street and was rear-ended by V1.
68	3	11/30/12	Friday	3:29 PM	Angle	Daylight	Clear	Dry	Made an improper turn	23	57		V2 travelling on EB Appleton Street attempted a U-turn at the intersection and struck V1 travelling EB on Appleton Street.
69	1	12/20/12	Thursday	8:25 AM	Sideswipe, same direction	Daylight	Snow	Snow	Driving too fast for conditions	33	UNK		V1 travelling on SB Linden Street lost control due to the icy conditions and sideswiped a parked car, V2.
70	2	12/7/12	Friday	3:10 PM	Angle	Daylight	Rain	Wet	Inattention	34	35		V1 ran red light on WB Appleton Street, hitting V2 travelling on NB Beech Street.
71	2	12/13/12	Thursday	8:38 AM	Angle	Daylight	Clear	Dry	Disregarded traffic signs, signals, road markings	68	59		V2 ran red light on EB Appleton Street, hitting V1 travelling on NB Beech Street.
72	3	12/21/12	Friday	8:07 AM	Angle	Daylight	Rain	Wet	Inattention	47	52		V2, a single unit truck, struck V1 while entering traffic from a parked position on NB Chestnut Street.
73	2	12/27/12	Thursday	2:10 PM	Angle	Daylight	Rain	Wet	Failure to keep in proper lane or running off road	22	44		V2 travelling on NB Beech Street attempted to make a left turn from the right lane, striking V1 travelling straight in the left lane.
74	3	12/29/12	Saturday	12:29 PM	Sideswipe, same direction	Daylight	Clear	Dry		UNK			V1 was parked on the side of WB Appleton Street, an unknown vehicle sideswiped V1 overnight.
75	3	1/1/13	Tuesday	10:20 PM	Angle	Dark - lighted roadway	Clear	Dry	Failed to yield right of way	22	43		V1 travelling on NB Chestnut Street failed to stop for the stop sign and struck V2 travelling on WB Appleton Street.
76	2	1/22/13	Tuesday	8:07 AM	Rear-end	Daylight	Clear	Wet	Inattention	39	39		V1 was stopped for traffic on EB Appleton Street, V2 rear-ended V1, operator of V2 said she could not see due to the sun.
77	1	1/25/13	Friday	6:36 AM	Angle	Daylight	Clear	Dry	Inattention	62	53		V1 was travelling at a high rate of speed on EB Appleton Street when it was struck by V2, which failed to use caution when proceeding after the stop sign on SB Suffolk Street.
78	3	1/31/13	Thursday	7:20 PM	Angle	Dark - lighted roadway	Clear	Dry		UNK			An unknown vehicle exiting a parking lot hit V1 parked on NB Chestnut Street and ran.
79	1	2/18/13	Monday	7:53 PM	Single Vehicle Crash	Dark - lighted roadway	Clear	Ice	No Improper Driving	59			V1 travelling on NB Oak Street lost control due to the icy conditions and struck a snowbank.
80	3	3/8/13	Friday	4:10 PM	Rear-end	Daylight	Clear	Dry	Inattention	23	25		V1 travelling on EB Appleton Street rear-ended V2.
81	3	4/12/13	Friday	12:41 PM	Angle	Daylight	Rain	Wet	Failed to yield right of way	24	44		V2 travelling NB on Chestnut Street failed to yield to V1 travelling EB on Appleton Street.
82	3	4/12/14	Saturday	2:54 PM	Angle	Daylight	Rain	Wet	Failed to yield right of way	29	40		V1 travelling NB on Walnut Street failed to yield to V2 travelling EB on Appleton Street.
83	1	5/4/13	Saturday	4:01 PM	Angle	Daylight	Clear	Dry	Failed to yield right of way	48	28		V1 was stopped at the stop sign on NB Sycamore Street, then proceeded to turn right on EB Appleton Street and struck V2 travelling on EB Appleton Street. Operator of V1 did not see V2.
84	2	5/19/13	Sunday	2:39 PM	Angle	Daylight	Rain	Wet	Disregarded traffic signs, signals, road markings	48	33		V2 ran red light on EB Appleton Street, hitting V1 travelling on NB Beech Street.
85	3	6/13/13	Thursday	11:21 AM	Angle	Daylight	Rain	Wet	Inattention	43	40		V2 failed to use care in entering traffic from a parked position on WB Appleton Street and hit V1.
86	1	6/21/13	Friday	12:23 PM	Single Vehicle Crash	Daylight	Clear	Dry	Inattention	52	39		V1 attempted to avoid a pedestrian entering the crosswalk and did not see another pedestrian that was already in the crosswalk and struck him.
87	3	8/1/13	Thursday	5:59 PM	Angle	Daylight	Rain	Wet	Disregarded traffic signs, signals, road markings	57	28		V2 failed to stop for the stop sign on SB Pine Street, and hit V1 travelling on EB Appleton Street.
88	2	8/9/13	Friday	11:32 PM	Angle	Dark - lighted roadway	Clear	Dry	No Improper Driving	UNK			V1 was parked on the side of WB Appleton Street, an unknown vehicle hit V1 overnight.
89	3	8/13/13	Tuesday	3:13 PM	Rear-end	Daylight	Cloudy	Dry	Unknown	39	44		V1 was stopped on SB Elm Street, V2 rear-ended V1.
90	3	8/19/13	Monday	3:09 PM	Angle	Daylight	Clear	Dry	No Improper Driving	40	24		V1 failed to stop for the stop sign on SB Pine Street and struck V2 travelling on WB Appleton Street.
91	1	8/19/13	Monday	8:49 PM	Sideswipe, same direction	Dark - lighted roadway	Clear	Dry		UNK			V1 was parked on the side of SB Oak Street, an unknown vehicle sideswiped V1.

Crash Data Summary Table

Appleton Street from Sycamore Street to Chestnut Street, Holyoke, MA

2011-2015

Crash Diagram Ref #	Crash Diagram Sheet #	Crash Date	Crash Day	Time of Day	Manner of Collision	Light Condition	Weather Condition	Road Surface	Driver Contributing Code	Driver Ages			Comments
		m/d/y			*Type*	*Type*	*Type*	*Type*	*Type*	*D1*	*D2*	*D3*	
92	3	11/11/13	Monday	11:35 AM	Angle	Daylight	Clear	Dry	Failed to yield right of way	86	74		V2 stopped at stop sign on SB Pine Street, then proceeded and hit V1 travelling on WB Appleton Street as operator of V2 could not see V1.
93	1	11/20/13	Wednesday	11:53 PM	Single Vehicle Crash	Dark - lighted roadway	Cloudy	Dry	Operating Vehicle in erratic, reckless, careless, negligent, or aggressive manner	51			OUI.
94	1	12/4/13	Wednesday	10:20 AM	Angle	Daylight	Cloudy	Dry	Failed to yield right of way	76	40		V1 stopped at stop sign on NB Oak Street, then proceeded and hit V2 travelling on WB Appleton Street as he could not see V2.
95	2	12/15/13	Sunday	8:58 PM	Angle	Dark - lighted roadway	Clear	Wet	Disregarded traffic signs, signals, road markings	57	44		V2 ran red light on NB Beech Street, hitting V1 travelling on EB Appleton Street.
96	2	12/17/13	Tuesday	4:56 PM	Rear-end	Dark - lighted roadway	Snow	Snow	No Improper Driving	24	23		V2 was stopped on SB Beech Street, V1 rear-ended V2 due to the wet road surface.
97	2	12/18/13	Wednesday	8:17 AM	Angle	Daylight	Cloudy	Snow	No Improper Driving	34	UNK		V1 slid on the snow and ice and hit V2 which was parked on EB Appleton Street.
98	2	12/24/13	Tuesday	8:33 PM	Rear-end	Dark - lighted roadway	Cloudy	Dry	Inattention	50	57		V1 was stopped on NB Beech Street, V2 rear-ended V1.
99	1	12/26/13	Thursday	1:03 PM	Angle	Daylight	Cloudy	Snow	Failed to yield right of way	17	22		V2 failed to stop at stop sign on NB Locust Street due to the icy road conditions and hit V1 travelling on WB Appleton Street.
100	3	1/4/14	Saturday	7:21 PM	Angle	Dark - lighted roadway	Clear	Ice	Inattention	40	38		V1 failed to stop at stop sign on NB Chestnut Street and hit V2 travelling on WB Appleton Street.
101	3	1/18/14	Saturday	2:27 PM	Angle	Daylight	Snow	Snow	No Improper Driving	54			V2 failed to stop at stop sign on NB Walnut Street and hit V1 travelling on WB Appleton Street.
102	3	1/27/14	Monday	12:19 PM	Angle	Unknown	Cloudy	Wet		UNK			V1 was parked on the side of EB Appleton Street, an unknown vehicle hit V1 overnight.
103	1	3/28/14	Friday	3:20 PM	Angle	Daylight	Rain	Wet	Failed to yield right of way	26	43		V1 ran red light on WB Appleton Street and hit V2 travelling on SB Linden Street.
104	3	4/10/14	Thursday	4:17 PM	Angle	Daylight	Clear	Dry	Visibility Obstructed	53	35		V2 travelling on NB Walnut Street failed to yield to V1 travelling on WB Appleton Street.
105	2	4/21/14	Monday	11:50 AM	Angle	Daylight	Clear	Dry	Made an improper turn	47	94		V2 travelling on NB Beech Street attempted to make a left turn from the right lane, striking V1 travelling straight in the left lane.
106	3	5/16/14	Friday	3:01 PM	Angle	Daylight	Cloudy	Wet	Disregarded traffic signs, signals, road markings	50	60		V2 travelling on NB Chestnut Street failed to yield to V1 travelling on WB Appleton Street.
107	3	6/19/14	Thursday	5:34 PM	Angle	Daylight	Clear	Dry	Inattention	30	32		V2 travelling on NB Walnut Street could not see V1 travelling on WB Appleton Street due to the parked cars on Appleton Street blocking the view. V2 failed to yield to V1.
108	1	6/20/14	Friday	1:09 PM	Sideswipe, same direction	Daylight	Clear	Dry	No Improper Driving	36	UNK		V2 was parked with the door open on EB Appleton Street, V1 travelling on EB Appleton Street struck the door of V2.
109	1	6/20/14	Friday	11:21 AM	Rear-end	Daylight	Clear	Dry	Operating defective equiptment	44	27		V1 was stopped at the traffic light on WB Appleton Street, V2 rear-ended V1, V2's brakes were not working.
110	1	7/23/14	Wednesday	12:08 PM	Angle	Daylight	Clear	Dry	Failed to yield right of way	33	60		V2 failed to stop at stop sign on SB Sycamore Street, V1 was speeding on WB Appleton Street, V2 hit V1.
111	1	8/20/14	Wednesday	1:08 PM	Single Vehicle Crash	Daylight	Clear	Dry	No Improper Driving	29	17		Bicyclist launched from the parking lot at 474 Appleton Street, went airborne onto Linden Street, and struck V1 travelling on NB Linden Street.
112	2	9/14/14	Sunday	12:18 PM	Angle	Daylight	Clear	Dry	Made an improper turn	27	21		V1 attempted to make a left turn from the right lane on NB Beech Street, striking V2 in the left lane.
113	3	10/10/14	Friday	8:53 PM	Angle	Dark - lighted roadway	Clear	Dry	No Improper Driving	32	34		V1 failed to stop at the stop sign on NB Chestnut Street and hit V2 travelling on WB Appleton Street.
114	1	10/13/14	Monday	7:49 PM	Angle	Dark - lighted roadway	Cloudy	Dry	Wrong side or wrong way	45	24		V2 was travelling the wrong way on Linden Street and hit V1 travelling EB on Appleton Street.
115	1	10/23/14	Thursday	2:42 PM	Sideswipe, same direction	Daylight	Cloudy	Wet	Inattention	26	43		V1 was parked on the side of WB Appleton Street, V2 sideswiped V1.
116	3	11/2/14	Sunday	5:42 PM	Sideswipe, same direction	Dusk	Clear	Dry		UNK			V1 was parked on the side of EB Appleton Street, V2 sideswiped V1.
117	3	11/3/14	Monday	10:03 AM	Angle	Daylight	Clear	Dry	No Improper Driving	59	UNK		V1 backed out of a parking lot and hit V2 which was parked on EB Appleton Street.
118	1	11/12/14	Wednesday	1:45 PM	Sideswipe, same direction	Daylight	Cloudy	Dry	Inattention	42	46		V1 was parked on EB Appleton Street with the door open, V2 struck the door of V1.
119	1	11/19/14	Wednesday	9:13 PM	Sideswipe, same direction	Dark - lighted roadway	Clear	Dry	Inattention	81	63		V1 travelling on SB Suffolk Street attempted to turn right, hitting V2 travelling in the same direction on the right of V1.
120	1	11/26/14	Wednesday	9:47 AM	Angle	Daylight	Snow	Wet	No Improper Driving	32	58		V2 stopped at stop sign on NB Sycamore Street, but did not remain stopped for V1 travelling on WB Appleton Street, hitting V1.
121	1	12/5/14	Friday	9:15 AM	Angle	Daylight	Clear	Dry	No Improper Driving	71	UNK		V2, a Tractor Trailer, ran the red light on WB Appleton Street, hitting V1 travelling on SB Linden Street.
122	3	12/11/14	Thursday	1:01 PM	Angle	Daylight	Snow	Wet	Disregarded traffic signs, signals, road markings	53	23		V2 travelling on NB Chestnut Street failed to yield to V1 travelling on WB Appleton Street.

Crash Data Summary Table

Appleton Street from Sycamore Street to Chestnut Street, Holyoke, MA

2011-2015

Crash Diagram Ref #	Crash Diagram Sheet #	Crash Date	Crash Day	Time of Day	Manner of Collision	Light Condition	Weather Condition	Road Surface	Driver Contributing Code	Driver Ages			Comments
		m/d/y			*Type*	*Type*	*Type*	*Type*	*Type*	*D1*	*D2*	*D3*	
123	3	12/12/14	Friday	6:26 PM	Angle	Dark - lighted roadway	Clear	Dry	No Improper Driving	45	25		V2 traveling on SB Pine Street failed to yield to V1 traveling on EB Appleton Street, V2 could not see V1 because her lights were not on.
124	1	1/2/15	Friday	6:48 PM	Angle	Dark - lighted roadway	Clear	Dry	Unknown	69	UNK		V2 travelling on EB Appleton Street activated emergency lights and attempted to turn right from left lane, and hit V1 travelling on the right.
125	2	1/12/15	Monday	5:25 AM	Single Vehicle Crash	Dark - lighted roadway	Snow	Snow	No Improper Driving	47			V1 slid on the snow while turning right from NB Beech Street to EB Appleton Street and struck a tree.
126	3	1/16/15	Friday	10:11 AM	Rear-end	Daylight	Clear	Dry	Inattention	39	44		V1 travelling on EB Appleton Street was stopped for a pedestrian crossing the street, V2 did not stop in time and rear-ended V1.
127	2	1/22/15	Thursday	3:34 PM	Sideswipe, same direction	Daylight	Clear	Dry	Unknown	36	UNK		V1 was pulled off on the side of the road on WB Appleton Street, V2 sideswiped V1 as V2 attempted to pass V1.
128	3	2/6/15	Friday	7:46 AM	Angle	Daylight	Cloudy	Ice	Failed to yield right of way	19	23		V2 did not see V1 travelling on SB Pine Street and hit V1 while exiting the YMCA parking lot.
129	3	2/9/15	Monday	4:41 PM	Rear-end	Daylight	Snow	Snow	Operating Vehicle in erratic, reckless, careless, negligent, or aggressive manner	32	UNK		V1 travelling on EB Appleton Street rear-ended V2 which was parked.
130	1	2/11/15	Wednesday	12:48 PM	Rear-end	Daylight	Clear	Dry	Failure to keep in proper lane or running off road	25	UNK		V1 travelling on SB Oak Street sideswiped V2 which was parked.
131	2	2/13/15	Friday	8:59 AM	Angle	Daylight	Clear	Dry	Failure to keep in proper lane or running off road	UNK	25		V2 backed into parked V1 on EB Appleton Street.
132	2	2/19/15	Thursday	2:02 PM	Rear-end	Daylight	Clear	Dry	Unknown	52	43		V1 was stopped on NB Beech Street, V2 rear-ended V1.
133	1	2/27/15	Friday	8:51 AM	Sideswipe, same direction	Daylight	Clear	Dry	Other improper action	UNK	72		V2 travelling on SB Linden Street struck parked V1.
134	1	3/1/15	Sunday	1:19 PM	Sideswipe, same direction	Daylight	Snow	Wet	Physical Impairment	UNK	UNK		OUI.
135	3	3/19/15	Thursday	8:47 AM	Angle	Daylight	Clear	Dry	Failed to yield right of way	26	83		V2 travelling on NB Walnut Street failed to yield to V1 travelling on EB Appleton Street.
136	3	3/26/15	Thursday	4:05 PM	Angle	Daylight	Rain	Wet	No Improper Driving	55	29		V1 travelling on NB Walnut Street failed to yield to V2 travelling on WB Appleton Street, V1 did not see V2.
137	1	3/31/15	Tuesday	10:34 AM	Angle	Daylight	Clear	Dry	Failed to yield right of way	25	40		V1 travelling on SB Linden Street failed to yield to V2 travelling on WB Appleton Street due to solar glare.
138	3	4/10/15	Friday	8:09 PM	Sideswipe, same direction	Dark - lighted roadway	Rain	Wet	No Improper Driving	22			A pedestrian came out from between two cars and V1 travelling on EB Appleton Street could not stop in time and struck the pedestrian.
139	3	4/16/15	Thursday	4:21 PM	Angle	Daylight	Clear	Dry	Failed to yield right of way	32	39		V2 travelling on SB Pine Street failed to yield to V1 travelling on EB Appleton Street.
140	3	4/17/15	Friday	7:03 PM	Angle	Dusk	Clear	Dry	Disregarded traffic signs, signals, road markings	26	26		V1 travelling on SB Elm Street failed to stop at stop sign and hit V2 travelling on EB Appleton Street.
141	3	5/14/15	Thursday	2:43 PM	Angle	Daylight	Cloudy	Dry	Disregarded traffic signs, signals, road markings	25	40		V1 travelling on SB Elm Street failed to stop at stop sign and hit V2 travelling on WB Appleton Street.
142	1	6/9/15	Tuesday	10:24 AM	Angle	Daylight	Rain	Wet	Disregarded traffic signs, signals, road markings	UNK	41	52	V1 ran red light on EB Appleton Street, striking V2 travelling SB on Linden Street.
143	3	6/9/15	Tuesday	8:03 AM	Angle	Daylight	Cloudy	Dry	Inattention	44	56		V2 travelling on SB Pine Street failed to yield to V1 travelling on EB Appleton Street.
144	3	6/12/15	Friday	10:07 AM	Angle	Daylight	Cloudy	Dry	Failed to yield right of way	53	24		V2 travelling on SB Pine Street was struck by MC1 exiting YMCA attempting to make a right turn onto SB Pine Street.
145	1	6/25/15	Thursday	2:43 PM	Angle	Daylight	Cloudy	Dry	Inattention	70	35		V1 travelling on NB Locust Street failed to yield to V2 travelling on WB Appleton Street as the operator of V1 did not see the stop sign.
146	3	7/1/15	Wednesday	4:59 PM	Angle	Daylight	Clear	Dry	No Improper Driving	43	38		V2 travelling on WB Appleton Street failed to yield to V1 travelling on EB Appleton Street while turning left.
147	2	7/1/15	Wednesday	2:15 PM	Single Vehicle Crash	Daylight	Clear	Dry	No Improper Driving	88	12		V1 had a green light on NB Beech Street, the bicyclist travelling on EB Appleton Street ran a red light, V1 slowed to avoid the bicyclist, but was unable to avoid a collision.
148	NA	7/14/15	Tuesday	8:32 AM	Sideswipe, same direction	Daylight	Cloudy	Dry	Failure to keep in proper lane or running off road	UNK	26		V1 was parked on NB Beech Street, V2 sideswiped V1.
149	1	8/12/15	Wednesday	1:11 PM	Rear-end	Daylight	Clear	Dry	Inattention	47			V1 backed up on EB Appleton Street and stuck a light pole.
150	3	8/24/15	Monday	4:52 PM	Angle	Daylight	Cloudy	Dry	Inattention	24	43		Operator of V1 travelling on SB Pine Street was distracted by a pedestrian crossing the street, and did not see V2 travelling on EB Appleton Street.
151	3	9/8/15	Tuesday	9:00 AM	Rear-end	Daylight	Clear	Dry	Followed too closely	36	52		V2 travelling on EB Appleton Street came to a stop at the intersection to let a pedestrian cross, V1 did not stop in time, V1 rear-ended V2.
152	3	10/11/15	Sunday	5:10 PM	Angle	Daylight	Clear	Dry	Disregarded traffic signs, signals, road markings	86	17		V2 travelling on SB Elm Street failed to stop at stop sign and hit V1 travelling on WB Appleton Street.
153	3	10/13/15	Tuesday	6:16 PM	Angle	Daylight	Clear	Dry	Disregarded traffic signs, signals, road markings	44	22		V2 travelling on NB Walnut Street failed to stop at stop sign and hit V1 travelling on EB Appleton Street.
154	1	11/6/15	Friday	2:51 PM	Single Vehicle Crash	Daylight	Clear	Dry	Swerving or avoiding due to wind, slippery surface, vehicle, object, non-motorist in roadway, etc.	37	22		V1 travelling on EB Appleton Street crossed the centerline to pass a skateboarder travelling in the same direction, the skateboarder had ear buds in both ears and drifted into V1.

Crash Data Summary Table

Appleton Street from Sycamore Street to Chestnut Street, Holyoke, MA

2011-2015

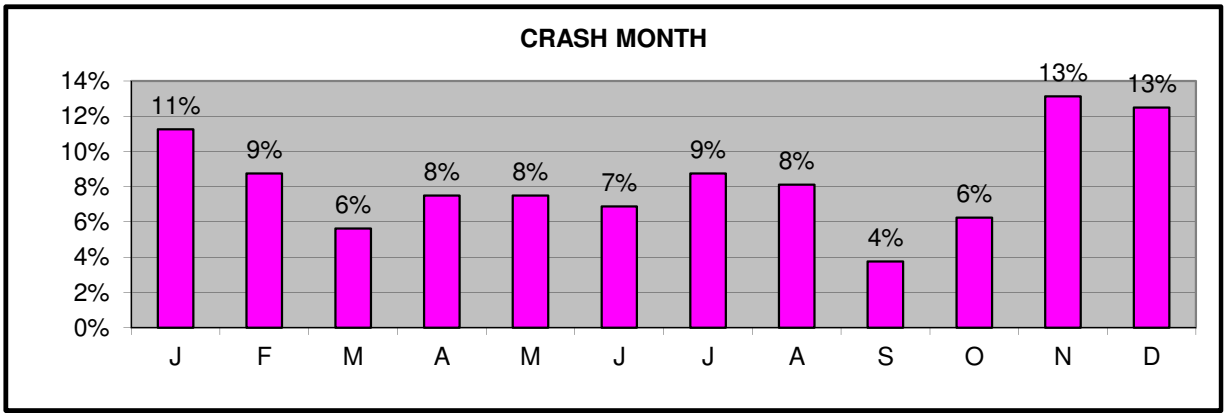
Crash Diagram Ref #	Crash Diagram Sheet #	Crash Date	Crash Day	Time of Day	Manner of Collision	Light Condition	Weather Condition	Road Surface	Driver Contributing Code	Driver Ages			Comments
		m/d/y			*Type*	*Type*	*Type*	*Type*	*Type*	*D1*	*D2*	*D3*	
155	1	11/10/15	Tuesday	9:07 AM	Angle	Daylight	Clear	Dry	Failed to yield right of way	83	27		V1 travelling on SB Oak Street failed to yield to V2 travelling on EB Appleton Street.
156	1	11/21/15	Saturday	10:50 AM	Angle	Daylight	Clear	Dry	Other improper action	23	23	36	V1 travelling on SB Sycamore Street failed to yield to V2 travelling on EB Appleton Street, V1 did not see V2. The impact caused V1 to hit V3 on the opposite side of the intersection on NB Sycamore Street.
157	1	11/28/15	Saturday	1:01 PM	Rear-end	Daylight	Rain	Wet	Failed to yield right of way	22	32		V1 travelling on WB Appleton Street attempted a U-turn at the intersection, failing to yield to V2 travelling on EB Appleton Street.
158	1	12/7/15	Monday	1:02 PM	Angle	Daylight	Cloudy	Dry	Unknown	UNK	36		V1, a Tractor Trailer, travelling on EB Appleton Street sideswiped V2 while V2 was parked.
159	2	12/23/15	Wednesday	8:46 AM	Angle	Daylight	Clear	Dry	Failed to yield right of way	23	39		V2 was exiting the alley when it was hit by V1 travelling on EB Appleton Street. V1 was speeding.
160	2	12/25/15	Friday	10:34 AM	Rear-end	Dawn	Clear	Wet	No Improper Driving	53	19	26	V1 travelling on NB Beech Street slammed on the brakes to avoid hitting a pedestrian crossing on the don't walk signal, V2 did not stop in time and rear-ended V1.

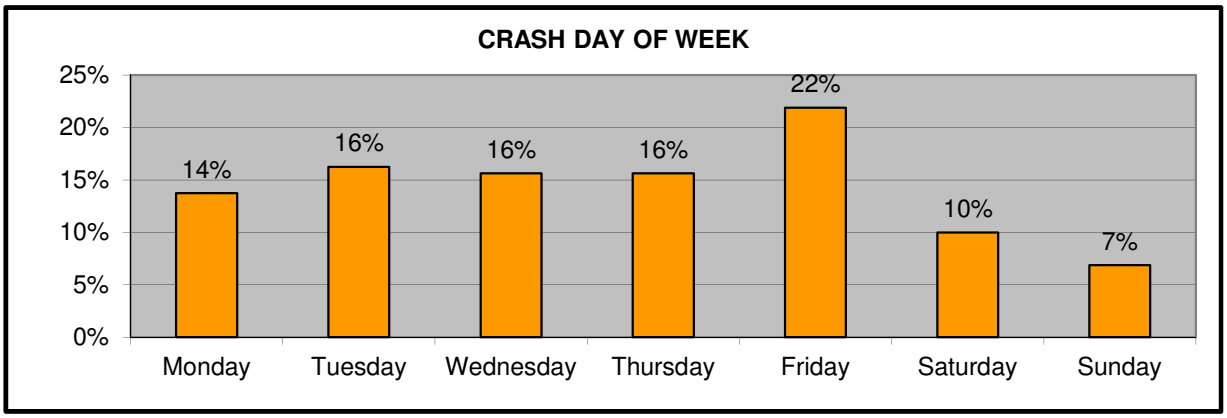
*Courtesy Crash - A term used to describe a crash that occurs subsequent to a non-involved mainline driver who gives the right of way, contrary to the rules of the road, to another driver.

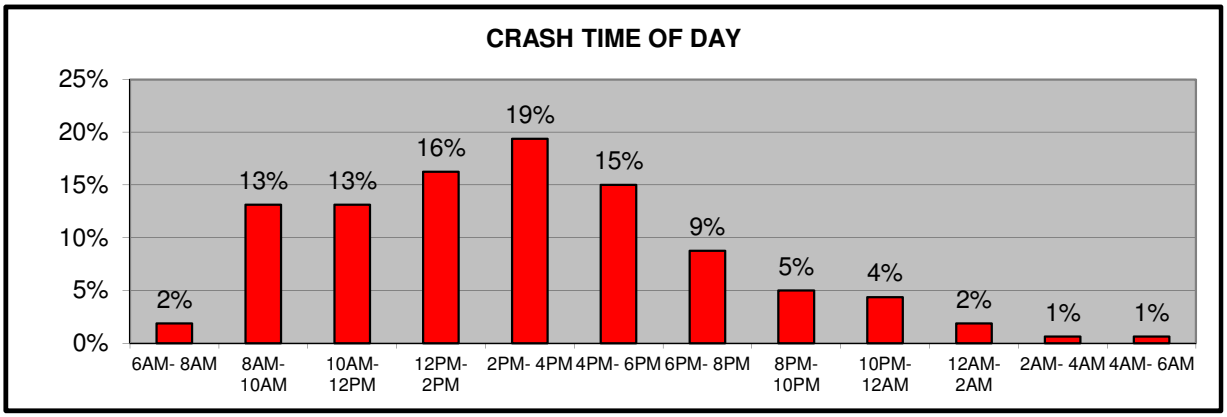
Summary based on Crash Reports obtained from the Holyoke police department.

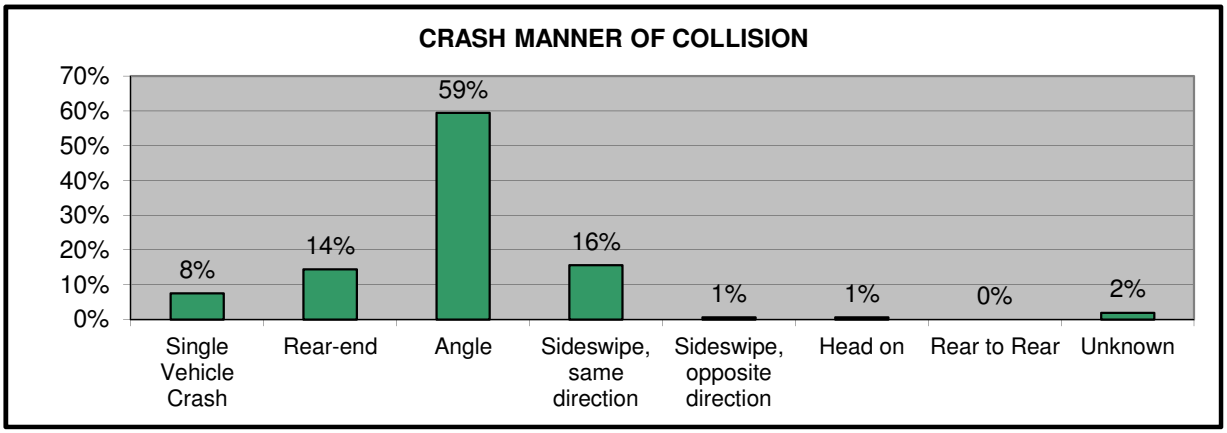
Crash Data Summary Tables and Charts

Appleton Street from Sycamore Street to Chestnut Street, Holyoke, MA









Crash Data Summary Tables and Charts

Appleton Street from Sycamore Street to Chestnut Street, Holyoke, MA