

# ROAD SAFETY AUDIT

Main Street at Legion Parkway and Centre Street (Route 123)

Brockton, MA

Amended Final / October 2018

Prepared For:  
**The City of Brockton, MA**

Prepared By:  
Old Colony Planning Council  
70 School Street, Brockton, MA 02301  
Under MassDOT Contract 88826

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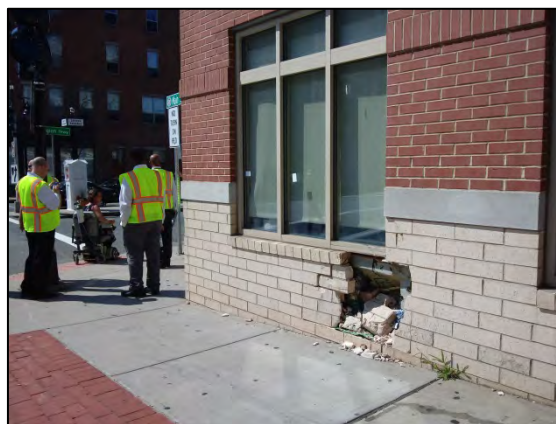
## Background

The Road Safety Audit (RSA) for the Main Street/Legion Parkway/Centre Street (Route 123) intersection was conducted by the Old Colony Planning Council upon request by Mayor Bill Carpenter of the City of Brockton. The City of Brockton is continuing its multiple efforts to address and improve safety for all pedestrians, bicyclists, and motorists. This intersection is number 28 on the Massachusetts Department of Transportation's Top 200 High Crash Intersection Location list (for the years 2013, 2014, 2015) for vehicle crashes. It is also in the top five percent crash clusters for the same time period for pedestrian crashes for pedestrian crash locations within the Old Colony Region.

The Old Colony Planning Council completed the *Abington and Brockton Route 123 Corridor Study*, in January of 2018. This intersection was included in the corridor study as Centre Street and Legion Parkway are both designated as Route 123 westbound through Brockton Downtown. The *Abington and Brockton Route 123 Corridor Study* cited a number of issues at the intersection including a high number of angle type crashes and an elevated crash rate, as well as a lack of pedestrian amenities, including pedestrian refuge, wheelchair access on the Legion Parkway island, and a lack of audible sounds for the walking phase that conform to the American Council of the Blind (ACB) standards.

This intersection has also experienced fatal crashes, with the latest occurring in April of 2018 when a collision between two vehicles resulted in one of the vehicles spinning out of control onto the sidewalk where it hit a pedestrian standing in front of the Neighborhood Health Center. The Neighborhood Health Center has been hit a number of times due to vehicles jumping the curb and hitting the building.

In September of 2014, the *Bikeability Assessment, for Downtown Brockton*, was conducted for the City by MassBike under the Massachusetts Department of Transportation Bicycle and Pedestrian Safety Program in partnership with Massachusetts Department of Public Health. The assessment included the Main Street/Legion Parkway/Centre Street (Route 123) intersection as well as Legion Parkway and Main Street. The assessment recommended an intersection redesign at the Main Street/Legion Parkway/Centre Street (Route 123) intersection. This included possibly extending and widening the pedestrian median at the intersection and implementing raised crosswalks. The assessment also recommended conducting an engineering study to evaluate the potential for implementing bulb-outs at the corners of the intersection. In addition, the assessment recommended the consideration of a streetscape redesign extending and widening the pedestrian median on Legion Parkway.



Damage to the Neighborhood Health Center building due to vehicles jumping the curb and hitting the building at the Main Street/Legion Parkway/Centre Street (Route 123) intersection.

## Project Data

The Road Safety Audit took place on Thursday, August 30, 2018 at the Old Colony Planning Council office located at 70 School Street, Brockton. OCPC staff facilitated the meeting. OCPC provided a collision diagram and the latest three-year crash experience based on crash reports provided by the Brockton Police Department. The meeting consisted of three components.

The first portion of the meeting focused on a discussion of the issues and concerns. The participants then departed the OCPC office and walked to the intersection to visit the site for the second portion of the meeting. The discussion of issues was continued during the site visit as OCPC staff took notes. The third portion of the meeting focused on potential short term and long term potential improvements for the intersection. The agenda and the background materials are included in the appendix to this report. Table 1 lists the names and affiliations of the audit participants.

**Table 1. Participating Audit Team Members**

<b>Audit Team Member</b>	<b>Agency/Affiliation</b>
Michael Jacques	Neighborhood Health Center
Rob May	Brockton Planning Department
Chike Odunakwe	Brockton DPW
Tobias T. Cowan	Brockton Mayor's Office
Pete Czymbor	Brockton Mayor's Office
Charles Kilmer	Old Colony Planning Council
William McNulty	Old Colony Planning Council
Kyle Mowatt	Old Colony Planning Council
Raymond Guarino	Old Colony Planning Council

## Project Location and Description

The Main Street/Legion Parkway/Centre Street (Route 123) intersection is a four-way intersection (signal controlled), located in downtown Brockton. The signals are post mounted on all four corners of the intersection. Pedestrian actuated buttons and pedestrian signals are located on all four corners of the intersection with crosswalks on all four legs of the intersection.

Main Street provides two lanes of northbound traffic and provides a bicycle lane on the east side of the street. Main Street provides three lanes on the northbound approach including a shared through left lane, a through lane, and an exclusive right turn lane. Although Main Street allows parallel parking on both sides, a sheltered Brockton Area Transit (BAT) stop is located on the east side of Main Street, which along with the exclusive right turn lane at the intersection, extending approximately 80 feet back from the intersection to a side street (Church Street), precludes parking on the east side of the approach. Parking is allowed on Main Street on the west side of the northbound approach to the intersection.

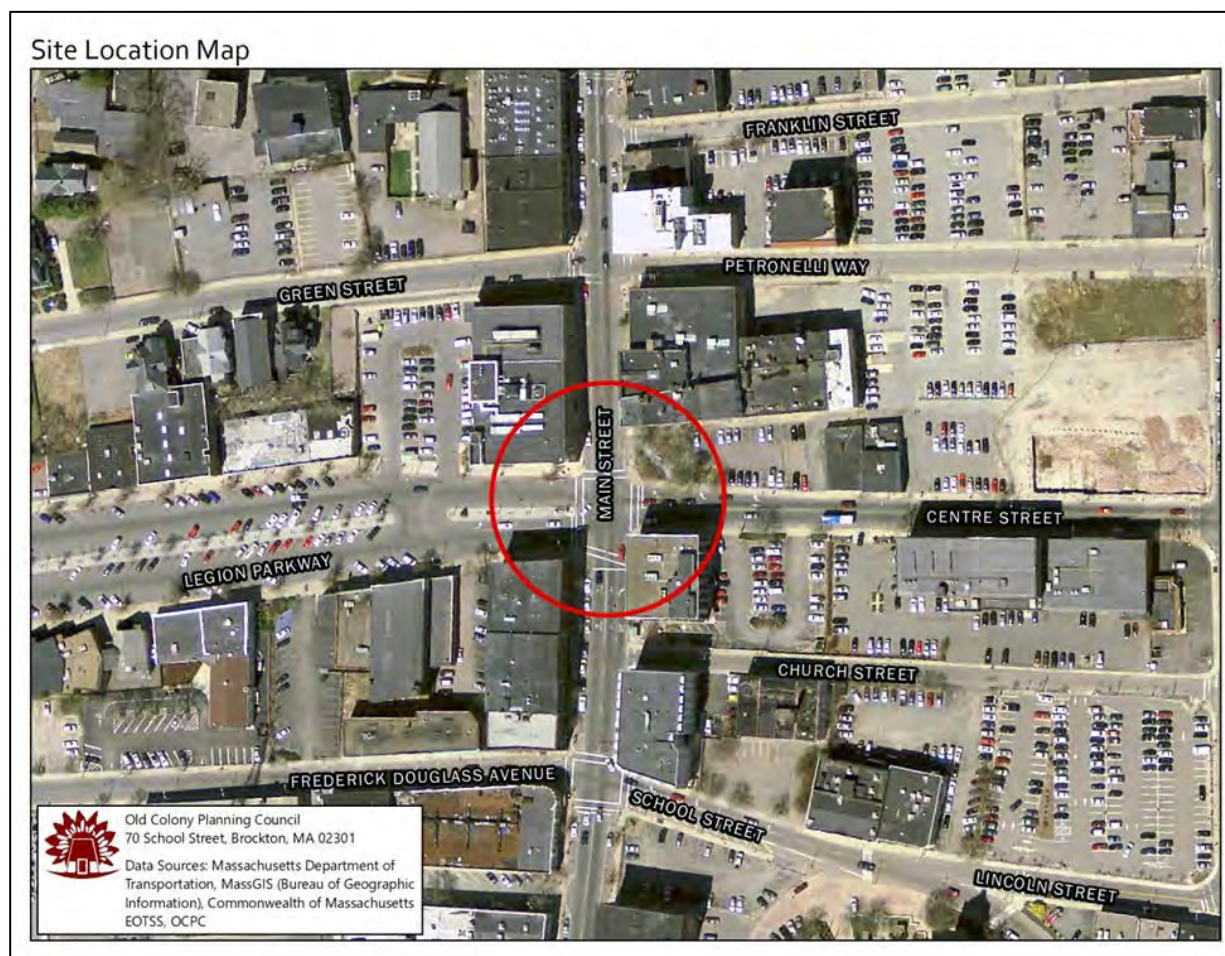
Legion Parkway is approximately 76 feet wide with a raised curb median, which is approximately 12 feet wide. The Legion Parkway eastbound approach is approximately 32 feet wide and has an exclusive left

turn lane and a through lane to Centre Street. The Legion Parkway receiving lane is also approximately 32 feet wide in front of the Neighborhood Health Center. The intersection is not directly aligned and the eastbound through lane from Legion Parkway to Centre Street faces Main Street so through traffic from Legion Parkway eastbound to the Centre Street receiving lane travels through the intersection on a diagonal path. This reduces visibility for eastbound through traffic looking south toward the Main Street northbound approach. Diagonal parking is allowed on Legion Parkway; however, parking is not allowed in front of the Neighborhood Health Center on the north side of the street (receiving lane from Centre Street Route 123 westbound) and parking on the Legion Parkway eastbound approach to the intersection is for taxi cabs only (parallel parking).

The Centre Street westbound approach (Route 123 Westbound) to the intersection contains an exclusive right turn lane and a through lane. Centre Street was recently reconstructed and re-striped (including the Centre Street westbound approach to the intersection). Centre Street has a two lane cross section (eastbound and westbound), and includes a bicycle lane on both sides of the street.

The Main Street north leg of the intersection includes two receiving lanes as Main Street is one-way northbound. It also includes parking on both sides of the street and a bicycle lane on both sides of the street. A “no turn on red” sign is posted on the northbound and westbound approaches at the Main Street/Legion Parkway/Centre Street (Route 123) intersection, therefore, no right turns on red are allowed at the intersection. Figure 1 shows the location of the intersection in downtown Brockton.

Figure 1. Locus Map



## Crash Details and Overview

Crash reports were compiled from the Brockton Police Department for the years 2015, 2016, and 2017, (and were supplemented with crash data from the MassDOT). There were a total of 50 crashes at the intersection within the three-year study period. Fifty percent of the crashes (25 crashes) were angle type crashes, 18 percent (9 crashes) were rear-end crashes, 10 percent (5 crashes) were side-swipe (same direction) crashes, 4 percent (2 crashes) were side-swipe opposite direction crashes, 4 percent (2 crashes) were single vehicle (ran off the road) crashes, and 2 percent (1 crash) involved a car hitting a bicycle. Thirty-four percent (17 crashes) resulted in personal injury, with the remainder resulting in property damage only.

The majority of the crashes took place between 12:00 P.M. and 10:00 P.M. There was a peak in crashes also during the 8:00 A.M. to 10:00 A.M. period. Most of the crashes occurred during daylight and dry conditions. The collision diagrams and the crash data are included in the Appendix to this report. In addition, the Main Street at Legion Parkway and Centre Street intersection is included in the Top 200 High Crash Intersection Locations list published by MassDOT, (for the three year period 2015, 2014, and 2013). It was ranked 28 out of the top 200 locations on the list.

## Audit Observations and Potential Safety Enhancements

During the RSA meeting prior to the field visit, an introduction of the RSA process and a summary of the crash information was presented to the audit participants. Following this presentation, the members of the audit team were asked to discuss the existing issues that may affect safety at the intersection. The audit team then visited the site as a group, at which time observations, safety concerns, and deficiencies were identified and documented by OCPC staff.

Provided below is a list of the safety concerns and the potential enhancements that were identified during the RSA.

**Safety Issue: Red light running. Main Street Traffic northbound runs through the red light potentially due to lack of visibility of post mounted traffic signals as well as driver distraction and/or inattentiveness.**

The narratives of several of the cross-movement (angle type crashes) stated that the motorist did not see the red light at the intersection. Northbound motorists sometimes look up the street past the post mounted signals at Main Street/Legion Parkway/Centre Street to the overhead signals at Court Street, which face northbound traffic over the approach lanes. There is also a lack of signal coordination of signals on Main Street.

**Enhancements:** Replace post mounted signals and install mast arm signals at the Main Street/Legion Parkway/Centre Street intersection with signal heads facing directly over approach lanes to improve overall visibility. Upgrade signal equipment, timing, and phasing to include signal coordination. Enhance red light running enforcement. Add back plates to signal heads to improve visibility. Enhance red light running enforcement. Stripe the bicycle lane green through the intersection.

**Safety Issue: The Legion Parkway eastbound through approach is not directly aligned with the Centre Street receiving lane.**

Vehicles in the Legion Parkway eastbound through approach are facing the sidewalk on the east side of Main Street rather than the Centre Street receiving lane. This forces these vehicles through movements to transverse the intersection at a diagonal. It also puts these eastbound motorists at a disadvantage when looking southbound at Main Street northbound traffic. Any vehicles on Main Street running a red light northbound would run into the blind spot of through vehicles eastbound on Legion Parkway to Centre Street, giving those vehicles little time to respond by applying the brakes.

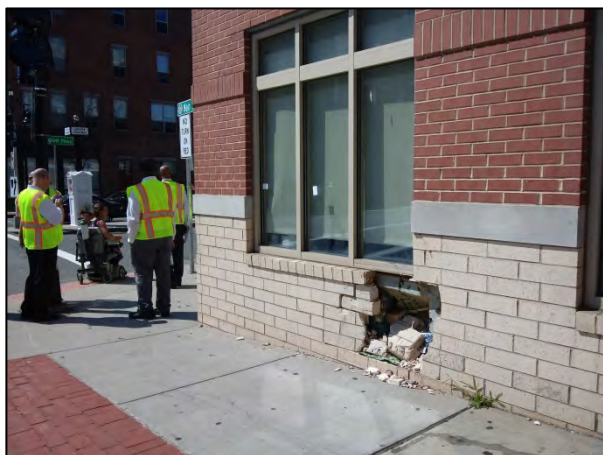


The northbound approach to the Main Street/ Legion Parkway/Centre Street intersection showing post-mounted signals and newly striped bicycle lane (bicycle lanes within the intersection should be painted green).



**Enhancements:** Move the median on Legion Parkway on the eastbound approach north, thereby moving the two Legion Parkway eastbound approach lanes, the exclusive left turn and the through lane, further north and aligning the eastbound through lane directly across from the Centre Street receiving lane. This would be done if there were sufficient turning radius for heavy vehicles turning left from Main Street northbound to Legion Parkway westbound.

**Safety Issue: The Neighborhood Health Center Building has been hit a number of times due to vehicles departing the travel lane, jumping the curb, and crossing the sidewalk.**



Vehicles traversing the intersection, including northbound left turns, westbound through movements, and vehicles spinning out of control due to cross-movement crashes, have departed the travel lane, jumped the curb, crossed the sidewalk and have impacted the Neighborhood Health Center Building. These lane departures create a danger for pedestrians and there was a recent fatality.

**Enhancement:** Add a curb bump out with barriers to the northwest corner of the intersection in front of the Neighborhood Health Center to widen the sidewalk and extend the curb into the intersection.

Damage to the Neighborhood Health Center building on the northwest corner of the intersection due to vehicles jumping the curb.

**Safety Issue: The turning radius for buses and trucks is insufficient on the southeast corner of the intersection.**

There is a bus stop located on the east side of Main Street (located at the corner of Church Street and Main Street). One of the RSA participants observed that buses might block visibility. Visibility of the lights on the east side of Main St northbound approach is low and is further impacted by a bus stop and trucks traveling on Main Street. The turning radius for buses and trucks is insufficient on the southeast corner of the intersection as heavy vehicles turning right from Main Street northbound to Centre Street eastbound encroach on the sidewalk and the Centre Street westbound through lane. The signal post on the southeast corner has been knocked down several times due to heavy vehicles jumping the curbs and knocking over the signal posts.

**Enhancement:** Brockton Area Transit has effectively located bus stops and shelters at optimal locations. While the buses may temporarily obscure the already low-visibility intersection, review of crash data does not support the observation that the bus stop is the cause of any accidents. Visibility at the intersection could be improved with the reconstruction of the intersection with overhead signals. The City should investigate the potential impacts of restriping the Main Street northbound approach to include a shared left through lane and a shared right through lane thereby eliminating the exclusive right turn lane on the Main Street northbound approach. This could allow heavy vehicles turning right from Main Street to Centre Street eastbound a wider turning radius.

**Safety Issue: There is a lack of pedestrian refuge across Legion Parkway (despite the existence of the median), and the crosswalk across Main Street northbound approach is on a diagonal.**

The crosswalk across Legion Parkway is outside the median and lacks pedestrian refuge. The crosswalk across Main Street is on a diagonal. Both of these situations create longer walk distances for pedestrians and increase pedestrian exposure.



Existing Legion Parkway median on the left lacks pedestrian refuge (the crosswalk is outside the median) and is not wheelchair accessible. The median on the right is an example of wheelchair accessibility at a median from the Main Street/Plain Street/Keith Avenue intersection, Brockton.

**Enhancement:** Move the crosswalk across Legion Parkway west to utilize the Legion Parkway median for pedestrian refuge. The median should be redesigned for wheelchair access. Re-stripe the crosswalk across the Main Street northbound approach perpendicular with the sidewalks.

**Safety Issue: The receiving lane on Legion Parkway (Route 123 westbound) in front of the Neighborhood Health Center is wide enough for two lanes, which leads to vehicles stopping and weaving creating hazardous conditions.**

The area in front of the Neighborhood Health Center on Legion Parkway is about 30 feet wide. It is the receiving lane for Centre Street (Route 123) westbound. This area is used by ambulances as well as by the public for drop-offs and pick-ups. There is a lot of weaving and maneuvers as well as pedestrians crossing in this area, which creates a hazardous condition.

**Enhancement:** Add a curb bump out with barriers to the northwest corner of the intersection in front of the Neighborhood Health Center to widen the sidewalk and extend the curb into the intersection. Stripe the front of the Neighborhood Health Center for “Emergency Vehicle Parking Only.” Stripe Legion Parkway in front of the Neighborhood Health Center as one lane (receiving lane) for Centre Street (Route 123) westbound.

**Safety Issue: The median on Legion Parkway was not designed for safely channeling vehicles in and out of the Neighborhood Health Center Parking lot.**

There is driver confusion and unconventional turning movements, as well as vehicles backing out of the Neighborhood Health Center, in and around the Legion Parkway median, which creates hazardous conditions for vehicles as well as pedestrians.

**Enhancement:** Re-design and reconstruct the median on Legion Parkway to safely channel vehicles in and out of the Neighborhood Health Center parking lot.

**Safety Issue: Vehicles are trapped in the intersection taking a left turn from Legion Parkway to Main Street northbound. The signal timing and phasing lacks pedestrian countdown signals and Accessible Pedestrian Signals (audible walk indications) and Pushbutton Locator Tones accepted by the American Council of the Blind (ACB). The ACB recommends rapid tick audible walk indicators as the most effective for sight-impaired individuals.**

**Enhancement:** Evaluate and improve signal timing and phasing (and equipment if necessary) to improve signal coordination on Main Street, add more all red clearance time for vehicles, and install ACB acceptable Audible Walk Indicators and Pushbutton locators for the sight impaired.

**Safety Issue: The sidewalk on the eastside of Main Street has transformer grates, which is an impediment to wheelchairs.**

**Enhancement:** The transformer grates on the sidewalk on the east side of Main Street should be made ADA accessible.

## Summary of Road Safety Audit

Based on the review of data, on-site field observations and group discussion, the RSA team identified possible enhancements that could improve safety at the intersection. Further study and design work will need to be conducted to determine the feasibility of making some of the improvements. Table 2 summarizes the estimated time frame and costs breakdown and Table 3 summarizes the safety issues, possible enhancements, estimated safety payoff, time frame, cost, and responsibility. Safety payoff estimates are based on engineering judgment and are categorized as low, medium, and high. The time frame is categorized as short-term (<1 year), midterm (1 to 3 years), or long-term (typically >3 years). Long-term improvements are typically considered substantial improvements with an expected time frame for implementation greater than 3 years. The costs are categorized as low (<\$10,000), medium (\$10,001 to \$50,000), or high (>\$50,000).

Table 2: Estimated Time Frame and Costs Breakdown

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

**Table 3: Potential Safety Enhancement Summary**


Safety Issue	Potential Safety Enhancement	Safety Payoff	Time Frame	Cost	Responsible Agency
Red Light Running. Main Street Traffic northbound runs through the red light due to lack of visibility of post mounted traffic signals.	Replace post-mounted signals, install mast arm signals, and signal heads that face directly over approach lanes. Add back plates to the signal heads. Upgrade signal timing and phasing to include signal coordination.	High	>3 Years	High	City of Brockton
The bicycle lane through the intersection consists of dashed lines.	Paint the bicycle lane green through the intersection.	Low	< 1 Year	Low	City of Brockton
The Legion Parkway eastbound through approach is not directly aligned with the Centre Street receiving lane.	Move the median on Legion Parkway northward, thereby moving the two Legion Parkway eastbound approach lanes further north, including the through lane, which can then be aligned directly across the Centre Street receiving lane.	High	>3 Years	High	City of Brockton
The Neighborhood Health Center Building has been hit a number of times due to vehicles jumping the curb, driving over the sidewalk, and hitting the building.	Add a bump out with barriers to the northwest corner of the intersection in front of the Neighborhood Health Center to widen the sidewalk and extend the curb into the intersection.	Medium	1-3 Years	High	City of Brockton
The turning radius for buses and trucks is insufficient on the southeast corner of the intersection.	Consider the feasibility of restriping Main Street northbound to include a shared left through lane and a shared right through lane, eliminate the exclusive right turn lane on the Main Street northbound and allow heavy vehicles turning right from Main Street to Centre Street eastbound a wider turning radius.	Low	1-3 Years	Medium	City of Brockton, Brockton Area Transit
There is a lack of pedestrian refuge across Legion Parkway (despite the existence of the median), and the crosswalk across Main Street northbound approach is on a diagonal.	Move the crosswalk across Legion Parkway west to utilize the Legion Parkway median for pedestrian refuge. Redesign the median for wheelchair access, and re-stripe the crosswalk across the Main Street northbound approach so that it is perpendicular with the sidewalks.	Medium	1-3 Years	High	City of Brockton

**Table 3: Potential Safety Enhancement Summary (continued)**

Safety Issue	Potential Safety Enhancement	Safety Payoff	Time Frame	Cost	Responsible Agency
<p>The receiving lane on Legion Parkway (Route 123 westbound) in front of the Neighborhood Health Center is wide enough for two lanes, which leads to vehicles stopping and weaving creating hazardous conditions.</p>	<p>Add a bump out with barriers to the northwest corner of the intersection in front of the Neighborhood Health Center, widen the sidewalk, and extend the curb into the intersection. Stripe the front of the Neighborhood Health Center for "Emergency Vehicle Parking Only" and stripe Legion Parkway in front of the Neighborhood Health Center for one receiving lane for Centre Street (Route 123) westbound.</p>	<p>Medium</p>	<p>1-3 Years</p>	<p>Medium</p>	<p>City of Brockton</p>
<p>The median on Legion Parkway was not designed for safely channeling vehicles in and out of the Neighborhood Health Center Parking lot.</p>	<p>Re-design and reconstruct the median on Legion Parkway to channelize vehicles in and out of the Neighborhood Health Center parking lot.</p>	<p>High</p>	<p>&gt;3 Years</p>	<p>High</p>	<p>City of Brockton</p>
<p>Left turn vehicles from Legion Parkway to Main Street are trapped in the intersection. The signal timing and phasing lacks pedestrian countdown signals and Accessible Pedestrian Signals (audible walk indications) and Pushbutton Locator Tones accepted by the American Council of the Blind (ACB).</p>	<p>Improve signal timing and phasing (and equipment if necessary) and coordinate signals on Main Street. Add more all red clearance time for vehicles. Install ACB acceptable Audible Walk Indicators and Pushbutton locators for the sight impaired. The ACB recommends rapid tick audible walk indicators as the most effective for sight-impaired individuals.</p>	<p>Medium</p>	<p>1-3 Years</p>	<p>High</p>	<p>City of Brockton</p>
<p>The sidewalk on the eastside of Main Street has transformer grates, which is an impediment to wheelchairs.</p>	<p>The transformer grates on the sidewalk on the east side of Main Street should be made ADA accessible.</p>	<p>Low</p>	<p>1-3 Years</p>	<p>Medium</p>	<p>City of Brockton</p>

## Appendix A. RSA Meeting Agenda

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<b>Agenda</b>	<b>Road Safety Audit</b> Brockton, MA <b>Main Street at Legion Parkway and Centre Street (Route 123) Intersection</b>  <b>Meeting Location:</b> Old Colony Planning Council Office 70 School Street Brockton, MA 02301 <b>Thursday, August 30, 2018</b> <b>10:00 AM – 12:00 PM</b>
	<b>Type of meeting:</b> Road Safety Audit <b>Attendees:</b> Invited Participants to Comprise a Multidisciplinary Team <b>Please bring:</b> Thoughts and Enthusiasm
<b>10:00 AM</b>	<b>Welcome and Introductions</b>
<b>10:05 AM</b>	<b>Review of Site Specific Material - Review and Discuss Project</b> <ul style="list-style-type: none"><li>• Review of Traffic Data</li><li>• Existing Conditions and Known Challenges</li></ul>
<b>10:45 AM</b>	<b>Visit the Intersection and Discussion</b> <ul style="list-style-type: none"><li>• Identify deficiencies at the study area location</li><li>• OCPC staff will document all observations and comments</li></ul>
<b>11:30 AM</b>	<b>Wrap up Site Visit and Post Visit Discussion Meeting</b> <ul style="list-style-type: none"><li>• Discuss issues and document and finalize potential improvements</li></ul>
<b>12:00 PM</b>	<b>Adjourn for the Day</b>
<b>Instructions for Participants:</b> <ul style="list-style-type: none"><li>• Before attending the RSA participants are encouraged to drive through the intersection and complete/consider elements on the RSA Prompt List with a focus on safety.</li><li>• All participants will be actively involved in the process throughout.</li><li>• After the RSA meeting, participants will be asked to comment and respond to the document materials to assure it is reflective of the RSA completed by the multidisciplinary team.</li><li>• <b>CONTACT:</b> Please direct questions regarding this RSA to Raymond Guarino, OCPC, (508) 583-1833, Ext 212, <a href="mailto:rguarino@ocpcrpa.org">rguarino@ocpcrpa.org</a>.</li></ul>	
	Old Colony Planning Council 70 School Street Brockton, MA 02301

## Appendix B: RSA Audit Team Contact List

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### Participating Audit Team Members

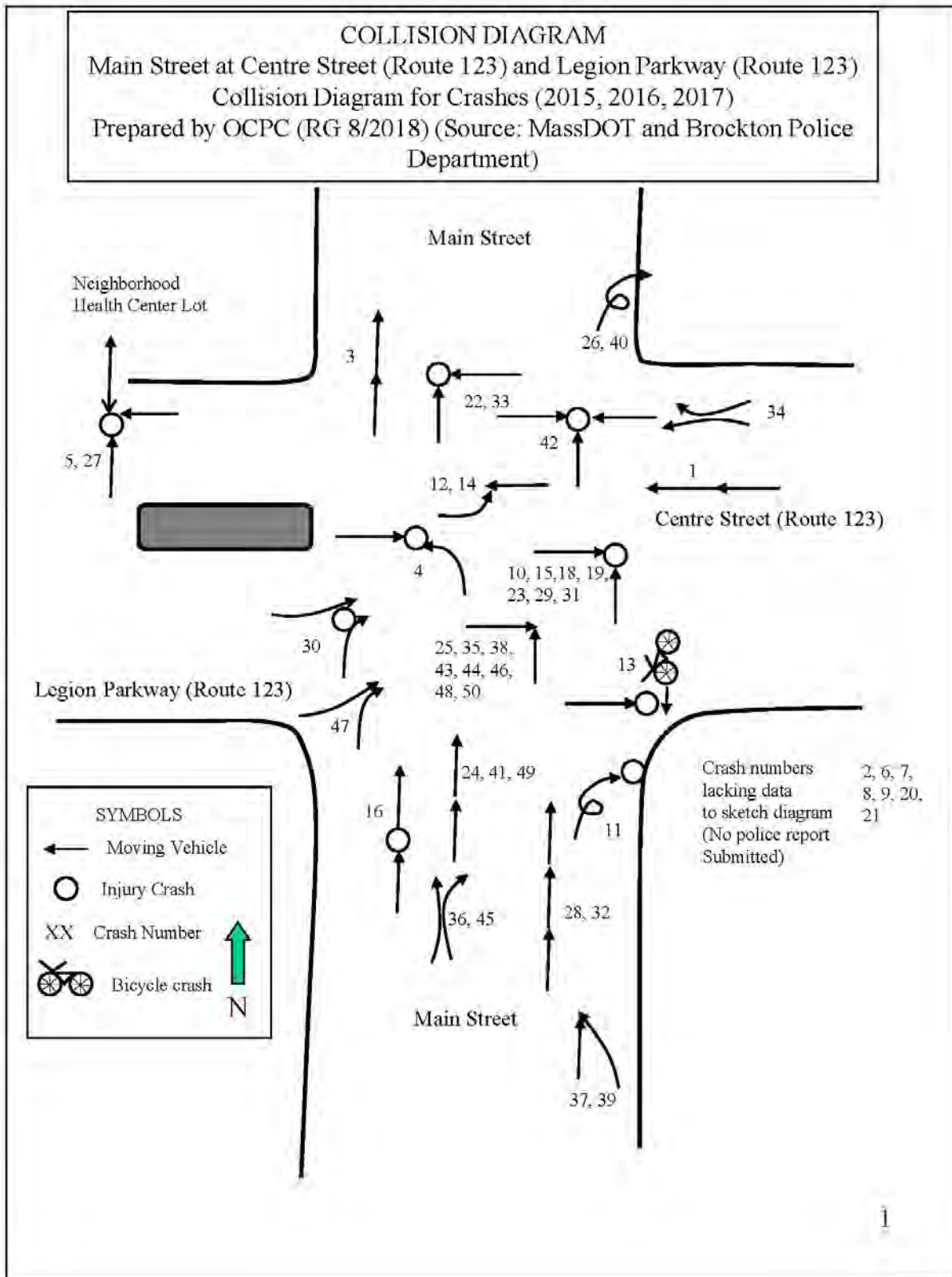
Date: August 30, 2018 Location: OCPC 70 School St Brockton, MA

<b>Audit Team Members</b>	<b>Agency/Affiliation</b>	<b>Email Address</b>	<b>Phone Number</b>
Name	Agency	Email	xxx-xxx-xxxx
Michael Jacques	Brockton Neighborhood Health Center	<a href="mailto:jacquesm@bnhc.org">jacquesm@bnhc.org</a>	508-801-9309
Rob May	Brockton Planning Department	<a href="mailto:rmay@cobma.us">rmay@cobma.us</a>	
Chike Odunakwe	Brockton DPW	<a href="mailto:codunakwe@cobma.us">codunakwe@cobma.us</a>	508-897-6437
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William McNulty	Old Colony Planning Council	<a href="mailto:wmcnulty@ocpcrpa.org">wmcnulty@ocpcrpa.org</a>	508-583-1833
Kyle Mowatt	Old Colony Planning Council	<a href="mailto:kmowatt@ocpcrpa.org">kmowatt@ocpcrpa.org</a>	508-583-1833
Raymond Guarino	Old Colony Planning Council	<a href="mailto:rguarino@ocpcrpa.org">rguarino@ocpcrpa.org</a>	508-583-1833



## Appendix C. Detailed Crash Data

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**Crash Data Summary Table 2015, 2016, 2017**  
**Main Street at Legion Parkway (Route 123) and Centre Street (Route 123) - Brockton**

Crash Num	P.D. Code	Crash Date	Crash Day	Time of Day	Manner of Coll	Light Cond	Weather	Road Surf	Driver Contribute Code	Age 1	Age 2	Comments	Inj
1	15-620-AC	3/28/2015	Sat	11:36 AM	Rear-end	Daylight	Snow	Wet	Distracted Driver	26	42	Driver issued citation for following too closely	PDO
2	N/A	5/22/2015	Fri	8:26 PM	N/A	Dark-lighted road	N/A	N/A	N/A	N/A	N/A		N/A
3	15-1195-AC	7/1/2015	Wed	1:07 PM	Rear-end	Daylight	Cloudy	Dry	Inattention	38	40	NB Veh 1 driving through the intersection stopped for pedestrian while Veh. 2 also NB then rear-ended Veh. 1	PDO
4	15-1522-AC	8/19/2015	Wed	12:05 PM	Angle	Daylight	Clear	Dry	Failed to yield ROW	22	40	Veh 2 cited for operating without license - EB motorist "jackrabbit" start entering intersection before it was clear.	Injury
5	15-1704-AC	9/15/2015	Tues	2:06 PM	Angle	Daylight	Clear	Dry	Operator cited for failure to use care.	47	36	This crash happened at the Neighborhood Health Center lot exit. Vehicle backed out into traffic (hit WB Centre St WB to Legion Prkwy and other car on Legion)	Injury
6	N/A	9/17/2015	Thur	4:03 PM	N/A	Daylight	N/A	N/A	N/A	N/A	N/A		PDO
7	N/A	2/15/2016	Mon	6:54 PM	Angle	Dusk	N/A	N/A	Minor collision	N/A	N/A	Minor Crash occurred as vehicles were exiting parking lot of Health Center	PDO
8	N/A	3/14/2016	Mon	3:47 PM	N/A	Daylight	N/A	N/A	N/A	N/A	N/A		N/A
9	N/A	4/6/2016	Sat	9:23 AM	N/A	Daylight	N/A	N/A	N/A	N/A	N/A		N/A
10	16-1139-AC	6/24/2016	Fri	12:30 PM	Angle	Daylight	Clear	Dry	Driver disregarded traffic control	33	19	Main St NB stated she entered intersection just before the light turned red, Legion EB stated he entered when light turned green and hit Veh 2	Injury
11	16-1349-AC	7/29/2016	Fri	2:10 AM	Sideswipe same direction	Dark-lighted road	Clear	Dry	Driver fell asleep at wheel	27		Driver fell asleep at wheel and hit parked cars.	Injury
12	16-1466-AC	8/14/2016	Sun	2:52 PM	Angle	Daylight	Clear	Dry	Driver failed to yield right of way	48	38	Veh. 1 attempted left turn from Legion to Main St NB, Veh 2 WB on Legion/Centre going straight hit Veh 1.	PDO
13	16-1607-AC	9/4/2016	Sun	7:16 PM	Bicyclist	Daylight	Clear	Dry	Hit Bicycle rider	54	21	Motorist EB hit bicyclist who was traveling SB on the wrong side of the road on Main Street.	Injury
14	16-1801-AC	10/1/2016	Sat	5:41 PM	Angle	Daylight	Rain	Wet		55	55	Veh. 2 attempted left turn from Legion to Main St NB, Veh 1 WB on Legion/Centre going straight hit Veh 2.	PDO
15	16-2352-AC	12/18/2016	Sun	7:20 PM	Angle	Dark-lighted road	Clear	Dry		64	48	Veh 1 NB, Veh 2 EB, both drivers claim they had the green light.	Injury
16	17-135-AC	1/21/2017	Sat	9:23 PM	Rear-end	Dark-lighted road	Clear	Dry		27	45	Driver issued citation for leaving the scene	Injury
17	17-687-AC	4/13/2017	Thur	8:13 PM	Sideswipe same direction	Dark-lighted road	Clear	Dry		65	17	Veh 2 turning left from far lane.	PDO
18	17-945-AC	5/22/2017	Mon	8:18 AM	Angle	Daylight	Cloudy-Rain	Wet		32	71	Possible red light running NB	Injury
19	17-1006-AC	5/29/2017	Mon	8:18 PM	Angle	Dusk	Cloudy	Dry	Failed to stop for red light	34	26	Operator cited for failing to stop on red light.	Injury
20	N/A	7/5/2017	Wed	6:30 AM		Daylight	N/A	N/A	N/A	N/A	N/A		PDO
21	N/A	12/5/2017	Tues	3:42 PM		Daylight	N/A	N/A	N/A	N/A	N/A		PDO

Road Safety Audit - Main Street/ Legion Parkway/ Centre Street (Route 123), Brockton  
 Prepared by Old Colony Planning Council - *Amended Final*

Num	CrashID	Date	Day	Time	TYPE	LIGHT	WEATHER SURF	EVENTS	SEVERITY
15-164-AC	233999281	24-Jan-2015	Sat	10:19 PM	Angle	Dark - lighted roadway	Clear/Snow Wet	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	Inj
15-583-AC	234023528	22-Mar-2015	Sun	4:21 PM	Angle	Daylight	Clear Dry	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	Inj
24	404741930	30-May-2015	Sat	9:49 PM	Rear-end	Dark - lighted roadway	Clear Dry	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	PDO
15-1214-AC	254058063	04-Jul-2015	Sat	2:58 AM	Angle	Dark - lighted roadway	Clear Dry	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	PDO
15-1243-AC406156	263	10-Jul-2015	Fri	9:01 AM	Single vehicle crash	Daylight	Clear Wet	V1: Collision with tree	PDO
15-1704-AC	274087657	15-Sep-2015	Tues	2:06 PM	Rear-to-rear	Daylight	Clear Dry	V1: Collision with parked motor vehicle / V2: Collision with motor vehicle in traffic / V3: Collision with motor vehicle in traffic	Inj
15-1919-AC	284096231	13-Oct-2015	Tues	7:54 AM	Rear-end	Daylight	Rain/Cloudy Wet	V1: Collision with motor vehicle in traffic / V3: Collision with motor vehicle in traffic	PDO
15-2134-AC	294112579	17-Nov-2015	Tues	12:38 PM	Angle	Daylight	Clear Dry	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	Inj
15-2181-AC	304115370	24-Nov-2015	Tues	8:30 AM	Sideswipe, opposite direction	Daylight	Clear Dry	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	Inj
15-2264-AC	314120185	08-Dec-2015	Tues	9:12 PM	Angle	Dark - lighted roadway	Clear Dry	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	Inj
3216-75-AC	13-Jan-2016	Wed	1:59 PM	Rear-end	Daylight	Clear Dry	V1: Collision with motor vehicle in traffic / V3: Collision with motor vehicle in traffic	PDO	
3316-158-AC	24-Jan-2016	Sun	1:47 PM	Angle	Daylight	Clear Snow	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	Inj	
34NA	17-Feb-2016	Wed	8:57 AM	Sideswipe, same direction	Daylight	Clear Dry	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	PDO	
3516-554-AC	25-Mar-2016	Fri	4:21 PM	Angle	Daylight	Clear Dry	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	PDO	
3616-604-AC	03-Apr-2016	Sun	1:42 AM	Sideswipe, same direction	Dark - lighted roadway	Clear Dry	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	PDO	

Main Street at Legion Parkway at  
 Centre (Route 123)

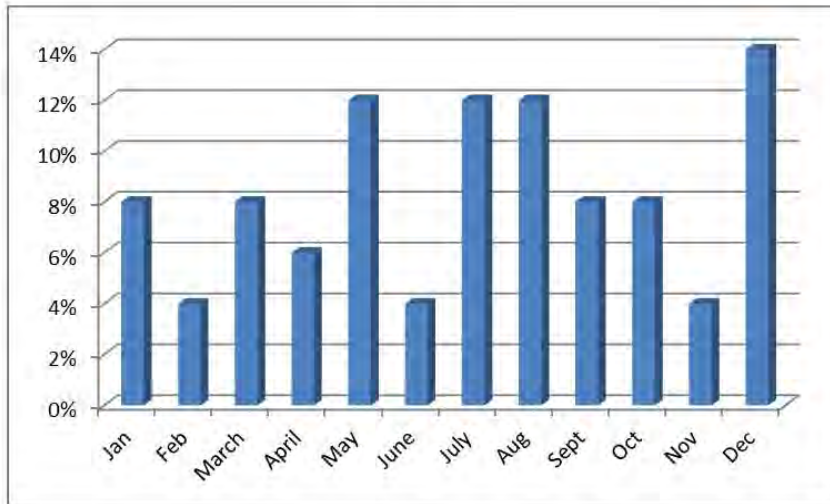
Road Safety Audit - Main Street/ Legion Parkway/ Centre Street (Route 123), Brockton  
 Prepared by Old Colony Planning Council - Amended Final

3716-850-AC	11-May-2016	Wed	9:26 AM	Angle	Daylight	Clear	Dry	51	61 in traffic	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	PDO
3816-886-AC	15-May-2016	Sun	1:30 PM	Angle	Daylight	Clear/Unknown	Dry	31	23 in traffic	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	PDO
39NA	14-Jun-2016	Tues	7:29 PM	Angle	Dusk	Clear	Dry			V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	PDO
16-1210-40 AC	06-Jul-2016	Wed	9:43 AM	Single vehicle crash	Daylight	Clear	Dry	58		V1: Collision with unknown movable object	PDO
16-1375-41 AC	02-Aug-2016	Tues	5:49 PM	Rear-end	Daylight	Clear	Dry	54	30 in traffic	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	PDO
16-1474-42 AC	15-Aug-2016	Mon	5:48 PM	Angle	Daylight	Clear	Dry	59, 21	23	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic / V3: Collision with motor vehicle in traffic	Inj
16-1484-43 AC	16-Aug-2016	Tues	9:30 PM	Angle	Dark - lighted roadway	Clear	Dry	30	22 in traffic	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	PDO
16-1528-44 AC	22-Aug-2016	Mon	6:00 PM	Angle	Daylight	Clear	Dry	62	42 in traffic	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	PDO
16-1802-45 AC	01-Oct-2016	Sat	6:18 PM	Sideswipe, same direction	Daylight	Cloudy/Rain	Wet	57	42 in traffic	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	PDO
16-1973-46 AC	27-Oct-2016	Thur	7:48 PM	Angle	Dark - lighted roadway	Rain	Wet	44	67 in traffic	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	PDO
16-2263-47 AC	04-Dec-2016	Sun	9:12 PM	Sideswipe, opposite direction	Dark - lighted roadway	Clear	Dry	19	53 in traffic	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	PDO
16-2282-48 AC	06-Dec-2016	Tues	5:50 PM	Angle	Dusk	Clear/Cloudy	Dry	50	26 in traffic	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	PDO
16-2392-49 AC	24-Dec-2016	Sat	2:41 AM	Rear-end	Dark - lighted roadway	Clear/Unknown	Dry	44	55 in traffic	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	PDO
16-2407-50 AC	24-Dec-2016	Sat	9:55 PM	Angle	Dark - lighted roadway	Clear	Ice	32	75 in traffic	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	PDO

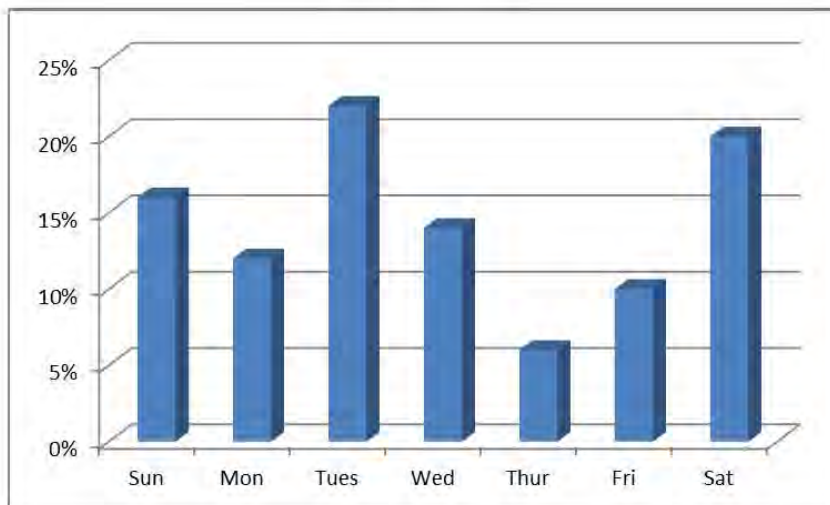
Main Street at Legion Parkway at  
 Centre (Route 123)

4

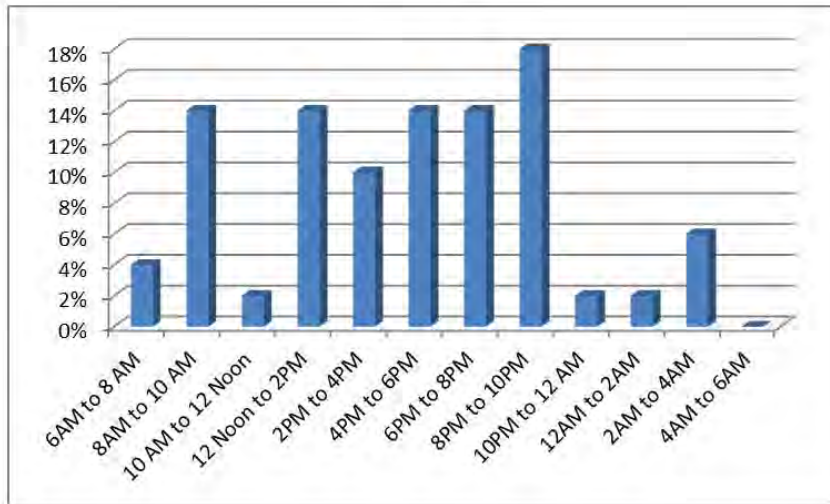
Crash Month



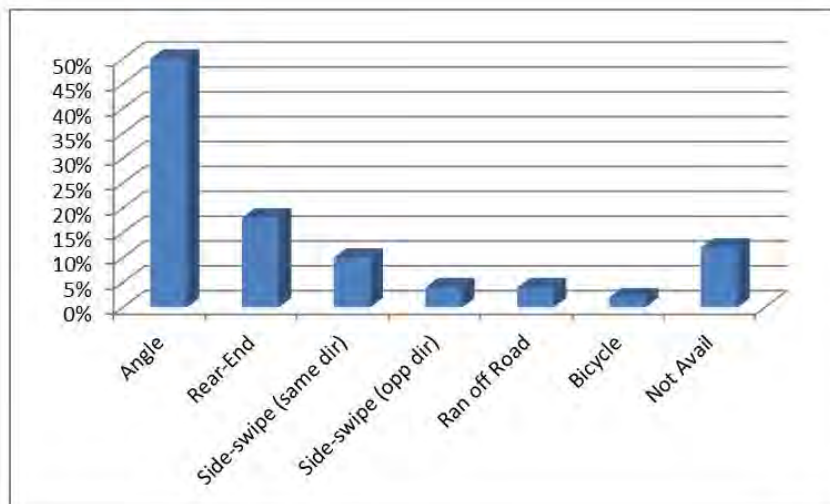
Day of the Week



Time of Day

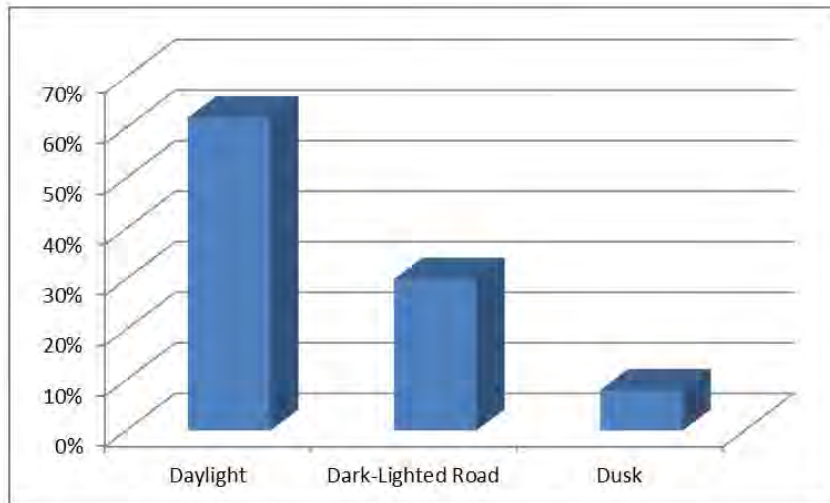


Manner of Collision

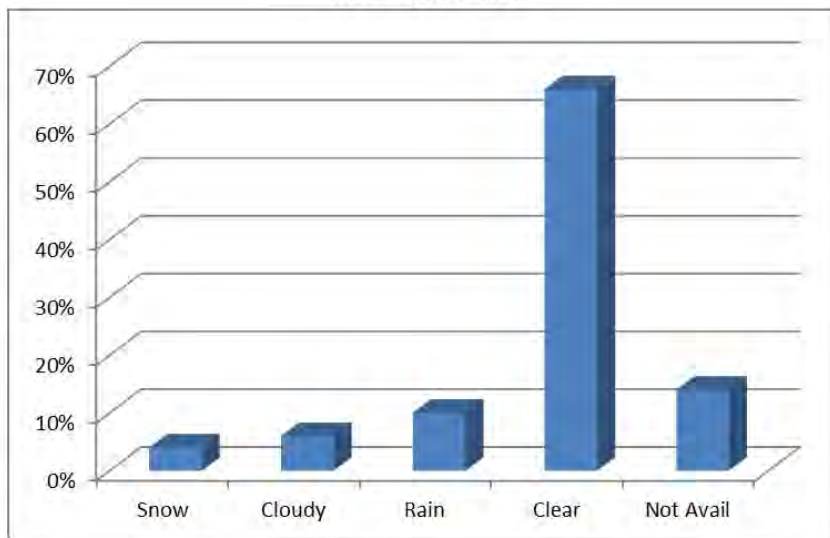


Main Street at Legion Parkway (Route 123)  
 and Centre Street (Route 123) - Brockton

Light Conditions



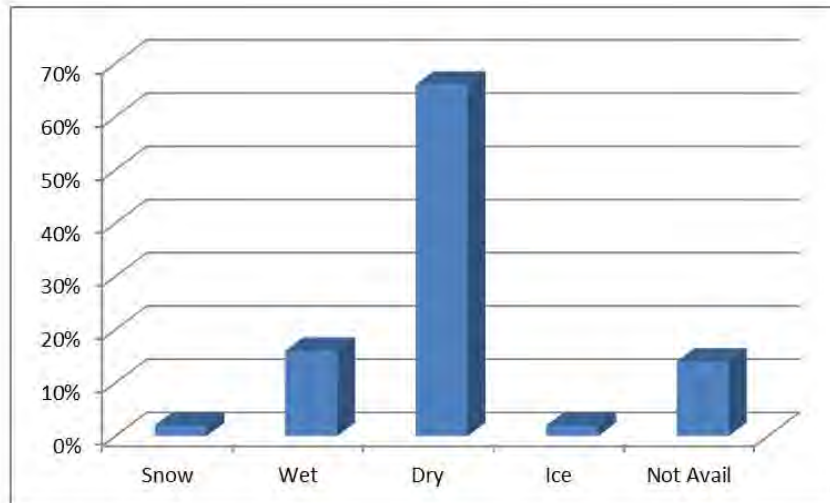
Weather Conditions



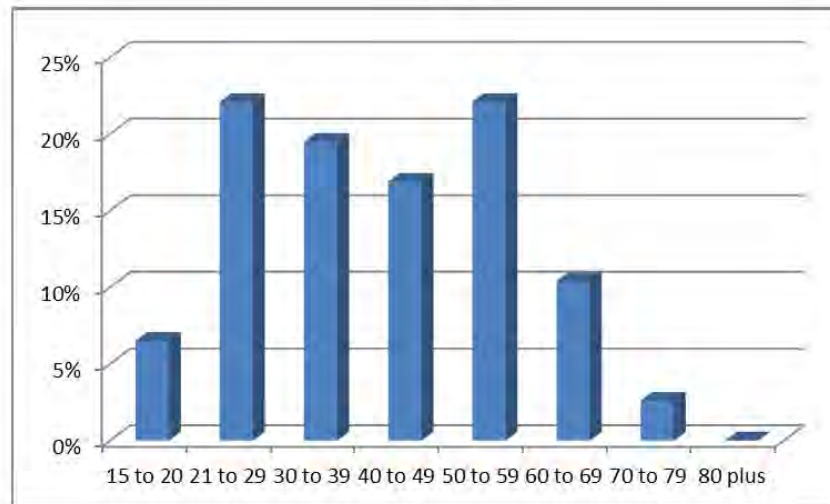
**Main Street at Legion Parkway (Route 123)  
and Centre Street (Route 123) - Brockton**



Road Surface Conditions



Age



**Main Street at Legion Parkway (Route 123) and  
Centre Street (Route 123) - Brockton**

## Appendix D. Additional Information

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- Intersection Turning Movement Counts
- Automatic Traffic Recorder (ATR) Vehicle Counts

Road Safety Audit - Main Street/ Legion Parkway/ Centre Street (Route 123), Brockton  
 Prepared by Old Colony Planning Council - *Amended Final*



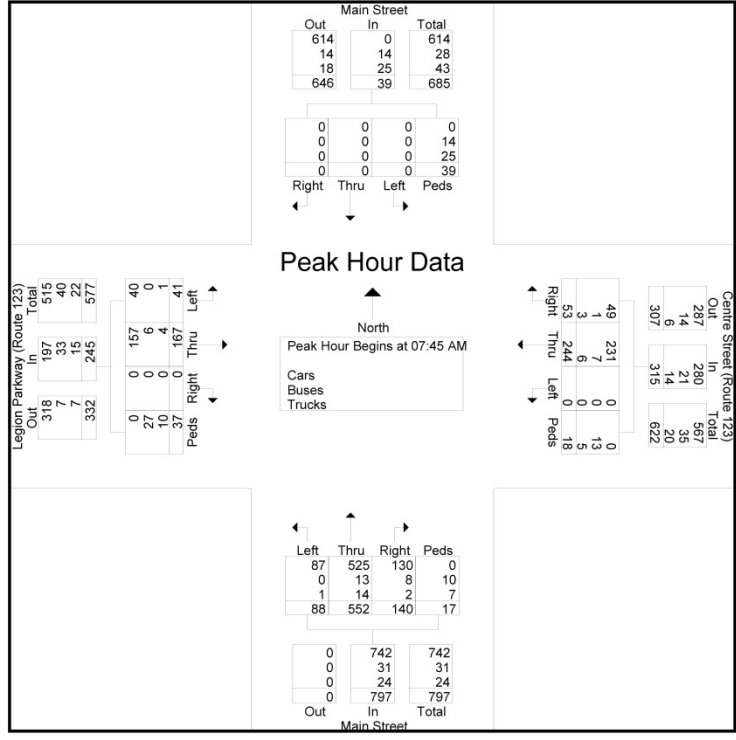
**Old Colony Planning Council**

70 School Street  
 Brockton, MA 02301  
 (508) 583-1833  
 www.ocpcrpa.org

Community: Brockton  
 Weather: Clear  
 Board # & Staff: DB-400 (6) / RG  
 Traffic Control: Traffic Light

File Name : Main Street & Legion Parkway (Route 123)\_AM  
 Site Code : 44  
 Start Date : 3/29/2017  
 Page No : 4

Start Time	Main Street Southbound					Centre Street (Route 123) Westbound					Main Street Northbound					Legion Parkway (Route 123) Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	0	0	0	6	6	11	51	0	0	62	39	142	28	6	215	0	54	6	9	69	352
08:00 AM	0	0	0	10	10	20	77	0	1	98	31	136	26	2	195	0	34	12	10	56	359
08:15 AM	0	0	0	7	7	12	53	0	4	69	34	132	18	4	188	0	46	11	5	62	326
08:30 AM	0	0	0	16	16	10	63	0	13	86	36	142	16	5	199	0	33	12	13	58	359
Total Volume	0	0	0	39	39	53	244	0	18	315	140	552	88	17	797	0	167	41	37	245	1396
% App. Total	0	0	0	100		16.8	77.5	0	5.7		17.6	69.3	11	2.1		0	68.2	16.7	15.1		
PHF	.000	.000	.000	.609	.609	.663	.792	.000	.346	.804	.897	.972	.786	.708	.927	.000	.773	.854	.712	.888	.972
Cars	0	0	0	0	0	49	231	0	0	280	130	525	87	0	742	0	157	40	0	197	1219
% Cars	0	0	0	0	0	92.5	94.7	0	0	88.9	92.9	95.1	98.9	0	93.1	0	94.0	97.6	0	80.4	87.3
Buses	0	0	0	14	14	1	7	0	13	21	8	13	0	10	31	0	6	0	27	33	99
% Buses	0	0	0	35.9	35.9	1.9	2.9	0	72.2	6.7	5.7	2.4	0	58.8	3.9	0	3.6	0	73.0	13.5	7.1
Trucks	0	0	0	25	25	3	6	0	5	14	2	14	1	7	24	0	4	1	10	15	78
% Trucks	0	0	0	64.1	64.1	5.7	2.5	0	27.8	4.4	1.4	2.5	1.1	41.2	3.0	0	2.4	2.4	27.0	6.1	5.6



Road Safety Audit - Main Street/ Legion Parkway/ Centre Street (Route 123), Brockton  
 Prepared by Old Colony Planning Council - *Amended Final*

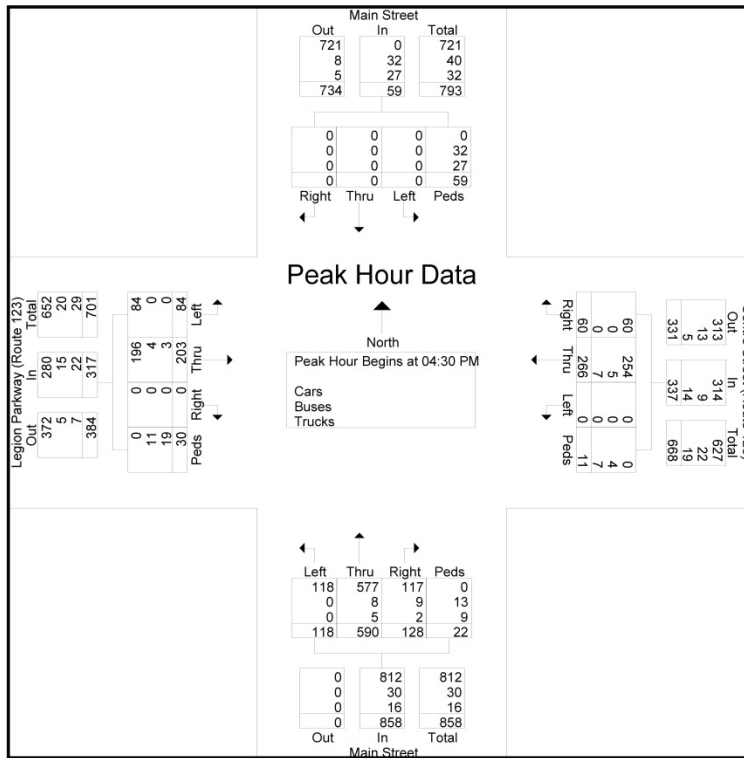


**Old Colony Planning Council**  
 70 School Street  
 Brockton, MA 02301  
 (508) 583-1833  
 www.ocpcrpa.org

Community: Brockton  
 Weather: Clear  
 Board # & Staff: DB-400 (6) / RG  
 Traffic Control: Traffic Light

File Name : Main Street & Legion Parkway (Route 123)\_PM  
 Site Code : 44  
 Start Date : 3/29/2017  
 Page No : 4

Start Time	Main Street Southbound				Centre Street (Route 123) Westbound				Main Street Northbound				Legion Parkway (Route 123) Eastbound				Int. Total				
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total						
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	0	0	14	14	19	67	0	2	88	40	151	25	0	216	0	50	25	7	82	400
04:45 PM	0	0	0	13	13	12	58	0	5	75	26	143	31	11	211	0	45	18	6	69	368
05:00 PM	0	0	0	15	15	13	69	0	1	83	27	144	29	4	204	0	57	20	7	84	386
05:15 PM	0	0	0	17	17	16	72	0	3	91	35	152	33	7	227	0	51	21	10	82	417
Total Volume	0	0	0	59	59	60	266	0	11	337	128	590	118	22	858	0	203	84	30	317	1571
% App. Total	0	0	0	100		17.8	78.9	0	3.3		14.9	68.8	13.8	2.6		0	64	26.5	9.5		
PHF	.000	.000	.000	.868	.868	.789	.924	.000	.550	.926	.800	.970	.894	.500	.945	.000	.890	.840	.750	.943	.942
Cars	0	0	0	0	0	60	254	0	0	314	117	577	118	0	812	0	196	84	0	280	1406
% Cars	0	0	0	0	0	100	95.5	0	0	93.2	91.4	97.8	100	0	94.6	0	96.6	100	0	88.3	89.5
Buses	0	0	0	32	32	0	5	0	4	9	9	8	0	13	30	0	4	0	11	15	86
% Buses	0	0	0	54.2	54.2	0	1.9	0	36.4	2.7	7.0	1.4	0	59.1	3.5	0	2.0	0	36.7	4.7	5.5
Trucks	0	0	0	27	27	0	7	0	7	14	2	5	0	9	16	0	3	0	19	22	79
% Trucks	0	0	0	45.8	45.8	0	2.6	0	63.6	4.2	1.6	0.8	0	40.9	1.9	0	1.5	0	63.3	6.9	5.0



Road Safety Audit - Main Street/ Legion Parkway/ Centre Street (Route 123), Brockton  
 Prepared by Old Colony Planning Council - *Amended Final*

Community: Brockton  
 Com#\_UR/FC: 44\_U3  
 Recorder # 25236  
 Layout 1.6 Basic (2)

Old Colony Planning Council  
 70 School Street  
 Brockton, MA 02301  
 508-583-1833  
[www.ocpcpa.org](http://www.ocpcpa.org)

Page 1  
 Station ID:  
 Site Code: 44  
 Date Start: 23-Sep-15  
 Date End: 24-Sep-15  
 Centre St (123), east of Main St

Start Time	21-Sep-15		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
12:00 AM	*	*	*	*	31	38	25	43	*	*	*	*	*	*	28	40
01:00	*	*	*	*	17	27	12	14	*	*	*	*	*	*	14	20
02:00	*	*	*	*	7	4	7	11	*	*	*	*	*	*	7	8
03:00	*	*	*	*	8	5	15	7	*	*	*	*	*	*	12	6
04:00	*	*	*	*	24	22	14	20	*	*	*	*	*	*	19	21
05:00	*	*	*	*	53	69	53	68	*	*	*	*	*	*	53	68
06:00	*	*	*	*	163	181	166	191	*	*	*	*	*	*	164	186
07:00	*	*	*	*	259	271	262	269	*	*	*	*	*	*	260	280
08:00	*	*	*	*	261	299	232	381	*	*	*	*	*	*	246	345
09:00	*	*	*	*	217	364	230	379	*	*	*	*	*	*	224	372
10:00	*	*	*	*	224	406	254	336	*	*	*	*	*	*	239	371
11:00	*	*	*	*	181	381	230	353	*	*	*	*	*	*	208	357
12:00 PM	*	*	*	*	226	363	270	312	*	*	*	*	*	*	248	338
01:00	*	*	*	*	235	375	267	314	*	*	*	*	*	*	251	344
02:00	*	*	*	*	271	359	285	298	*	*	*	*	*	*	278	328
03:00	*	*	*	*	275	287	281	304	*	*	*	*	*	*	278	286
04:00	*	*	*	*	305	276	274	282	*	*	*	*	*	*	290	284
05:00	*	*	*	*	279	313	330	257	*	*	*	*	*	*	304	285
06:00	*	*	*	*	267	250	226	289	*	*	*	*	*	*	246	270
07:00	*	*	*	*	215	215	191	207	*	*	*	*	*	*	203	211
08:00	*	*	*	*	144	149	148	124	*	*	*	*	*	*	146	142
09:00	*	*	*	*	99	101	131	97	*	*	*	*	*	*	115	99
10:00	*	*	*	*	65	78	89	95	*	*	*	*	*	*	77	86
11:00	*	*	*	*	51	75	52	89	*	*	*	*	*	*	52	82
Total	0	0	0	0	3677	4888	4044	4750	0	0	0	0	0	0	3980	4839
Day	0	0	0	0	6765	8888	8834	8834	0	0	0	0	0	0	6769	8839
AM Peak	-	-	-	-	08:00	10:00	07:00	08:00	-	-	-	-	-	-	07:00	09:00
Vol.	-	-	-	-	261	406	262	391	-	-	-	-	-	-	260	372
PM Peak	-	-	-	-	15:00	13:00	17:00	13:00	-	-	-	-	-	-	17:00	13:00
Vol.	-	-	-	-	305	375	330	314	-	-	-	-	-	-	304	344
Comb Total	0	0	0	0	8765	8834	8834	8834	0	0	0	0	0	0	8769	8839

Road Safety Audit - Main Street/ Legion Parkway/ Centre Street (Route 123), Brockton  
 Prepared by Old Colony Planning Council - *Amended Final*

Community: Brockton  
 Com#\_UR/FC: 44\_U3  
 Recorder# 19645  
 Layout: L4 Volume Only

Old Colony Planning Council  
 70 School Street  
 Brockton, MA 02301  
 (508) 583-1833  
 www.ocpcrpa.org

Page 1  
 Station ID:  
 Site Code: 44  
 Date Start: 26-Oct-16  
 Date End: 27-Oct-16  
 Legion Pkwy (123), west of Main (WB)

Start Time	Mon 24-Oct-16	Tue 25-Oct-16	Wed 26-Oct-16	Thu 27-Oct-16	Fri 28-Oct-16	Average Day	Sat 29-Oct-16	Sun 30-Oct-16	Week Average
12:00 AM	*	*	42	50	*	46	*	*	46
01:00	*	*	21	22	*	22	*	*	22
02:00	*	*	8	75	*	12	*	*	12
03:00	*	*	11	74	*	12	*	*	12
04:00	*	*	24	74	*	19	*	*	19
05:00	*	*	80	64	*	72	*	*	72
06:00	*	*	176	195	*	186	*	*	186
07:00	*	*	324	340	*	332	*	*	332
08:00	*	*	<b>397</b>	461	*	<b>429</b>	*	*	<b>429</b>
09:00	*	*	376	389	*	382	*	*	382
10:00	*	*	343	<b>467</b>	*	405	*	*	405
11:00	*	*	376	439	*	408	*	*	408
12:00 PM	*	*	427	405	*	416	*	*	416
01:00	*	*	410	329	*	394	*	*	394
02:00	*	*	459	438	*	448	*	*	448
03:00	*	*	<b>465</b>	<b>440</b>	*	<b>452</b>	*	*	<b>452</b>
04:00	*	*	423	381	*	402	*	*	402
05:00	*	*	463	430	*	446	*	*	446
06:00	*	*	367	363	*	365	*	*	365
07:00	*	*	254	231	*	242	*	*	242
08:00	*	*	194	185	*	190	*	*	190
09:00	*	*	113	117	*	115	*	*	115
10:00	*	*	76	103	*	90	*	*	90
11:00	*	*	107	91	*	99	*	*	99
Day Total	0	0	5936	6033	0	5984	0	0	5984
% Avg. WkDay	0.0%	0.0%	99.2%	100.8%	0.0%				
% Avg. Week	0.0%	0.0%	99.2%	100.8%	0.0%	100.0%	0.0%	0.0%	
AM Peak	-	-	08:00	10:00	-	08:00	-	-	08:00
Vol.	-	-	397	467	-	429	-	-	429
PM Peak	-	-	15:00	15:00	-	15:00	-	-	15:00
Vol.	-	-	465	440	-	452	-	-	452
Grand Total	0	0	5936	6033	0	5984	0	0	5984

Road Safety Audit - Main Street/ Legion Parkway/ Centre Street (Route 123), Brockton  
 Prepared by Old Colony Planning Council - *Amended Final*

Community: Brockton  
 Com# UR/FC: 44\_U3  
 Recorder #: 13205  
 Layout: L4 Volume Only

**Old Colony Planning Council**  
 70 School Street  
 Brockton, MA 02301  
 (508) 583-1833  
 www.ocpcrpa.org

Page 1  
 Station ID:  
 Site Code: 44  
 Date Start: 26-Oct-16  
 Date End: 27-Oct-16  
 Legion Pkwy (123), west of Main St (EB)

Start Time	Mon 24-Oct-16	Tue 25-Oct-16	Wed 26-Oct-16	Thu 27-Oct-16	Fri 28-Oct-16	Average Day	Sat 29-Oct-16	Sun 30-Oct-16	Week Average
12:00 AM	*	*	30	30	*	30			30
01:00	*	*	18	17	*	18			18
02:00	*	*	18	14	*	16			16
03:00	*	*	7	11	*	9			9
04:00	*	*	14	9	*	12			12
05:00	*	*	43	33	*	38			38
06:00	*	*	86	81	*	84			84
07:00	*	*	185	191	*	188			188
08:00	*	*	217	264	*	240			240
09:00	*	*	190	223	*	210			210
10:00	*	*	<b>228</b>	247	*	238			238
11:00	*	*	225	<b>290</b>	*	<b>258</b>			<b>258</b>
12:00 PM	*	*	249	303	*	276			276
01:00	*	*	240	267	*	254			254
02:00	*	*	<b>324</b>	<b>313</b>	*	<b>318</b>			<b>318</b>
03:00	*	*	293	271	*	282			282
04:00	*	*	272	299	*	286			286
05:00	*	*	306	286	*	296			296
06:00	*	*	255	220	*	238			238
07:00	*	*	165	155	*	160			160
08:00	*	*	153	139	*	146			146
09:00	*	*	92	78	*	85			85
10:00	*	*	59	57	*	58			58
11:00	*	*	45	42	*	48			48
Day Total	0	0	3722	3850	0	3788	0	0	3788
% Ava- WkDay	0.0%	0.0%	98.3%	101.6%	0.0%				
% Ava- Week	0.0%	0.0%	98.3%	101.6%	0.0%	100.0%	0.0%	0.0%	
AM Peak	-	-	10:00	11:00	-	11:00	-	-	11:00
V. vol.	-	-	228	290	-	258	-	-	258
PM Peak	-	-	14:00	14:00	-	14:00	-	-	14:00
V. vol.	-	-	324	313	-	318	-	-	318
Grand Total	0	0	3722	3850	0	3788	0	0	3788

## Appendix E. Road Safety Audit References

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## Road Safety Audit References

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