

Office of Highway Safety

Road Safety Audit Review

Town:	Burlington	Date Reviewed:	October 19, 2016
Route:	Main St and Battery St intersection	Mile points:	Main, S5022 (0.00-0.01) Battery, S5008 (0.22-0.24)

Location Map



RSAR Process

A **Road Safety Audit Review** (RSAR) is a formal examination of an existing road in which an independent, multi-discipline team (the Audit Team) reports on potential safety issues.

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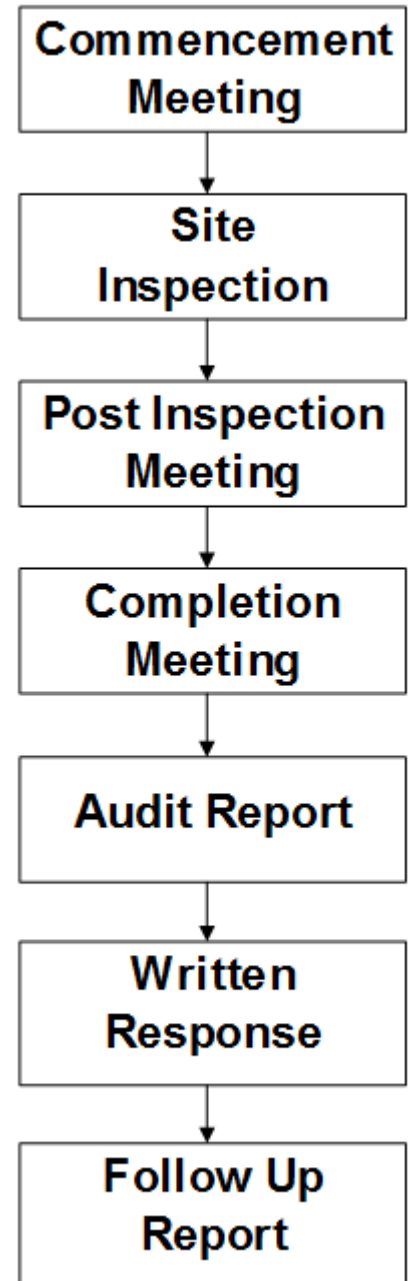
Road Safety Audit Review

According to the Federal Highway Administration (FHWA), the purpose of a RSAR is to determine which elements of the road may present a safety concern, to what extent and under what circumstances as well as to identify opportunities to mitigate the identified safety concerns.

The RSAR process is composed of several steps as shown in Figure 1. The process starts with a **Commencement Meeting** during which the Audit Team reviews data and gathers community concerns. A **Site Inspection** is then performed by the Audit Team. The site visit involves the identification of safety deficiencies as seen in the field. The Audit Team will usually drive through the location of interest to “get a feel” for the area, traveling through each approach in the case of intersections. The team is to then drive at a slower speed to make observations. If needed, the team will also walk the location. Following the site inspection, the Audit Team holds a **Post Inspection Meeting**. It is during this meeting that the team members discuss their observations and identify safety issues. The team is to reach a consensus on the importance of each safety issue mentioned. Only those issues for which a consensus is reached are included in the RSAR findings. A RSAR report (Written Report) is prepared.

The **Written Report** identifies safety concerns and proposes guidance. These issues and solutions are presented in a tabular format associated to each Responsible Entity for ease of reporting. The **Responsible Entities** are any groups who own a roadway feature or who are responsible for making an improvement or for initiating further studies. These could include for example, the VTrans design section, the local town, the local police or the local RPC.

Figure 1 - Road Safety Audit Process



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Location

The location of this RSAR is the intersection of Main Street and Battery Street in downtown Burlington.

Purpose of the RSAR

This RSAR was conducted as part of VTrans Highway Safety Improvement Program (HSIP). The locations selected for this HSIP effort were originally identified as high crash locations and subsequently ranked in terms of fatal and injury crash rate.

The RSAR herein has sought to identify potential safety hazards and physical features which may affect road user safety. However, it is possible that not every deficiency has been identified. It should further be recognized that the implementation of the guidance in this report may contribute to improve the level of safety of the facility reviewed but not necessarily remove all the risks.

RSAR Participants

Mario Dupigny-Giroux from the Office of Highway Safety, VTrans, was the RSAR coordinator.

The other participants were:

Ashley Bishop,	District 5, VTrans
Patti Coburn,	Traffic Design, VTrans
Andrea Elhajj,	Traffic Design, VTrans
Tyler Guazzoni,	TSMO, VTrans
Dick Hosking,	District 5, VTrans
Pat McManamon,	DMV, VTrans
Nick Meltzer,	Bike & Ped, VTrans
Derek Lyman,	TSMO, VTrans
Mark Magnant,	VT State Police
Dave Garen,	Burlington Public Works
Nicole Loch,	Burlington Public Works
Laura Wheelock,	Burlington Public Works
Sai Sarepalli,	CCRPC

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Information Reviewed

Geometry

This intersection is a four-way, signalized intersection. At this intersection, Battery Street runs south to north and Main Street runs east to west.

Battery Street has one through lane southbound and two through lanes northbound. Battery Street also has a dedicated left turn lane for southbound traffic turning onto Main Street.

Main Street on both west and east approaches has a dedicated right turn lane and a shared left and through lane.

The signal heads are mounted on pedestal poles, on each corner of the intersection. There is also a crosswalk on each approach of the intersection.

Parallel parking is present on the east approach, on the north side of Main Street. On that same approach, on the south side of Main Street, there is also angle parking just before the beginning of the right turn lane.

There is parking on both sides of Main Street on the west approach of the intersection.

On Battery Street, on the south approach, there is parallel parking on the west side of the street.

Speed Limit

The speed limit on these two streets is 25 mph.

Traffic Volumes

A turning movement count was performed at the intersection in June 2016. The raw count for the twelve-hour period between 6:00 am and 6:00 pm is shown below.

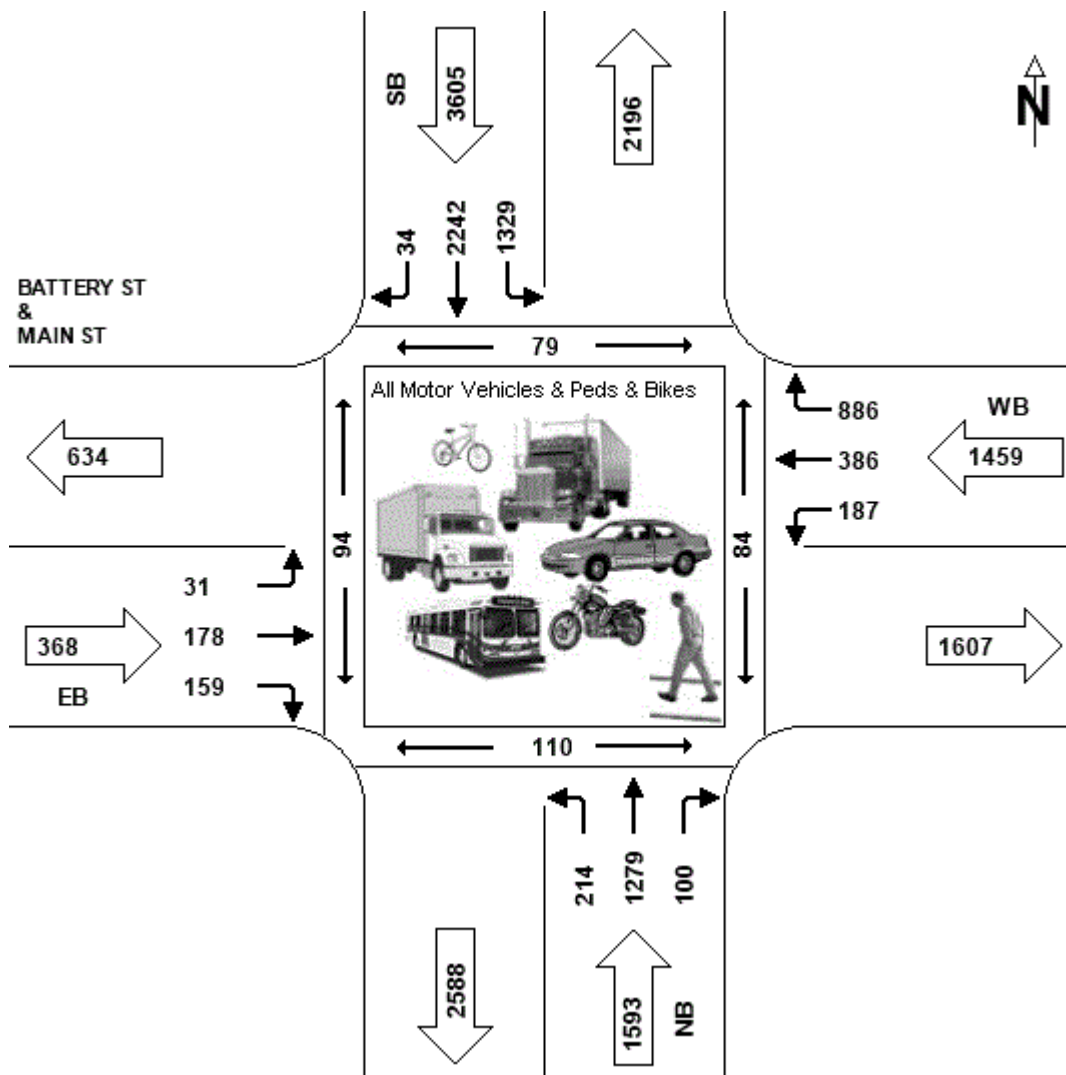
The count shows that for the twelve-hour period, fifty-one percent of the traffic enters the intersection from the north (3605 vehicles), twenty-one percent enters the intersection from the

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east (1459 vehicles), twenty-three percent enters the intersection from the south (1593 vehicles) and that five percent of the traffic enters from the west (368 vehicles).

The count further indicates that thirty-seven percent of the vehicles entering south from Battery Street are making a left turn onto Main Street towards UVM. In contrast, the majority of the traffic that is entering the intersection from the south on Battery Street is continuing north (80%, 1593 vehicles).



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From Main Street towards the waterfront, sixty percent of the traffic makes a right turn onto Battery Street, twenty-six percent continues across Battery Street and thirteen percent turns left.

From the waterfront, traffic mostly continues through or makes a right turn in about the same proportion (48% through vs 43% right). Only a handful of motorists make a left turn from this approach.

Traffic Control Devices

The signal heads at this intersection are mounted on pedestals. There is one section head on each corner for each approach (two per approach). On all approaches except for traffic traveling north, one of the section head is a five-section head.

The traffic timings¹ indicate that the southbound left turn phase has six seconds of minimum green time and that it can be extended up to twenty seconds of maximum green time.

The minimum green time for phases two and six on Battery Street is twenty seconds and this can go up to a forty-five-second maximum green. On Main Street, the minimum green is eight seconds and the maximum is twenty-eight seconds.

Past Projects

Unknown.

Future Projects

The Great Streets project is a design and construction project for downtown Burlington. This initiative will redesign six segments of Main Street from Union to Battery Street. The Main Street concept plans focus on improvements including sidewalks, street trees, stormwater, lighting, and bike facilities. Under this initiative, angle parking will be converted to parallel parking.

¹ Source: Signal Timings Battery and Main, Last Updated September 29, 2016

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Crash History

The crash history was reviewed at this intersection for the five-year period covering the years 2011 to 2015. There were forty-six crashes at this intersection during this period. Crash narratives are provided at the end of this report along with a collision diagram. Note that ten crashes could not be plotted on the collision diagram due to lack of information in the crash reports.

There are a number of small crash patterns at this intersection.

One of the crash patterns involves southbound traffic that is making a left turn onto Main Street and a through vehicle continuing north on Battle Street. This represents about eleven percent of the crashes at this intersection. These crashes are happening when the left turners are facing a solid green indication or when they have a yellow indication.

Same direction sideswipe crashes on the Main Street approach in the westbound direction represent another crash pattern with about eleven percent of all crashes. In some of these instances, large trucks were involved as they were proceeding to make a right turn onto Battery Street. Motorists trying to go around another vehicle was also another reason for these crashes.

On Battery Street, on the northbound approach, there is a same direction sideswipe pattern due to people changing lanes. This represents about eleven percent of all the crashes at this intersection. In one of the crash reports, it was clearly identified that the motorist was in the wrong lane and wanted to turn right onto Main Street.

Identified Safety Concerns

This section lists the areas of safety concern identified by the audit team during the site inspection and from the analysis of available data. This section also reports the potential safety enhancements suggested by the audit team. The concerns are not listed in order of importance.

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Concern: Left Turning Crashes, Battery Street to Eastbound Main Street

Vehicles on Battery Street turning left and colliding with a northbound vehicle while a solid green ball is displayed or when the light is yellow is a common crash pattern at this intersection.

Safety Enhancements:

Short to Mid

Consider an exclusive left turn phase or use a flashing yellow arrow indication or a combination of both depending on the time of day.

Concern: Confusing Lane Assignment, Battery Street Southbound

Battery Street has two travel lanes in the southbound direction. Past College Street, the left most lane turns into an exclusive left turn lane at the intersection with Main Street. This transition is not obvious to the unfamiliar driver.

Safety Enhancements:

Short to Mid

Replace the existing Left Lane Must Turn Left sign (on the west side of Battery Street) with a lane assignment sign that will have a left arrow on the left and a shared through and right arrow on the right.

Concern: Same Direction Sideswipe Main St, Westbound

There is evidence of some same direction sideswipe crashes on the east approach on Main Street. The parallel parking on the right on Main Street interferes with the right turning lane. The turning radius at the intersection is tight and a large truck must use part of the left turn lane to make a right turn.

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Short Term

Install a lane assignment sign in advance of the beginning of the right turn lane.

Mid to Long Term

Consider removing the parking or turn it into parallel parking.

Evaluate the need for the right turn lane or review the geometry at the corner to facilitate turning by large vehicles.

Concern: Change Lanes Crashes, Battery Street Northbound

Battery Street in the northbound direction has one travel lane and parallel parking on the right side of the road. The parallel parking stops and the travel lane widens to make place to a second lane. A solid white line is used to mark this lane. The beginning of this second lane is approximately 75 feet from the last parking space. This second lane is about forty feet long.

Short Term

Install a lane assignment sign in advance of the beginning of the second lane.

Mid Term

Evaluate if there is a need for the second lane. If the lane is not required, a bulbout at the corner could be constructed to close the lane.

Summary of Safety Enhancements

The safety concerns and potential actions that were identified in the previous sections are further summarized in the next table. These potential enhancements will be presented to the respective parties for further consideration.

Potential Safety Enhancements Summary Table

Safety Concern	Safety Enhancement	Responsibility	Safety Payoff	Time Frame	Cost
Left Turning Crashes, Battery Street to Eastbound Main Street	Consider an exclusive left turn phase or use a flashing yellow arrow indication or a combination of both depending on the time of day	Determination: City, Implementation: VTrans (through HSIP project)	25% reduction left turn crashes ²	Short-Mid	Low-Mid
Confusing Lane Assignment, Battery Street Southbound	Replace the existing Left Lane Must Turn Left sign (on the west side of Battery Street) with a lane assignment sign that will have a left arrow on the left and a shared through and right arrow on the right	City or VTrans (through HSIP project)		Short-Mid	Low
Same Direction Sideswipe Main St, Westbound	Install a lane assignment sign in advance of the beginning of the right turn lane	City or VTrans (through HSIP project)		Short-Mid	Low
	Consider removing the parking or turn it into parallel parking	City		Mid-Long	
	Evaluate the need for the right turn lane or review the geometry at the corner to facilitate turning by large vehicles	City		Mid-Long	
Change Lanes Crashes, Battery Street Northbound	Install a lane assignment sign in advance of the beginning of the second lane	City or VTrans (through HSIP project)		Short-Mid	Low
	Evaluate if there is a need for the second lane. If the lane is not required, a bulbout at the corner could be constructed to close the lane	City		Mid-Long	

² CMF # 7697, doghouse to FYA protected-permissive

COLLISION DIAGRAM

Key Number = _____

MUNICIPALITY: Burlington COUNTY: _____

FILE: MainBatteryInter

INTERSECTION: BATTERY ST.- BURLINGTON

CASE # : _____

PERIOD: 5 YEARS 0 MONTHS FROM 1/1/2011 TO 12/31/2015

BY: _____ DATE: 2/21/2017



34	41	44
20	21	32
10	18	19
2	8	9

SYMBOLS		MANNER OF COLLISION	
	MOVING VEHICLE		PEDESTRIAN
	TURNING VEHICLE		BICYCLIST
	BACKING VEHICLE		ANIMAL
	PARKED VEHICLE		FIXED OBJECT
	RECORD NUMBER		Fatal
	REAR END		HEAD ON
	LEFT TURN		RIGHT TURN
	LEFT TURN		RIGHT TURN
	OVERTAKE		RIGHT ANGLE
	OUT OF CONTROL		SIDE SWIPE

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Crash Number	Road	Marker	Date	Time	Weather	Injuries	Fatalities	Type	Description
1	BATTERY	0.22	12/30/2011	17:48	[No Weather]	0	0	Rear End	Veh #1 rear-ended Veh #2. No injuries. Op #1 advised he was travelling south on Battery and collided w/ Veh #2. Op #2 advised he was stopped in the southbound lane for a veh that was paralle parking when Veh #1 rear-ended him.
2	BATTERY	0.23	2/22/2011	15:09	Clear	1	0	Left Turn and Thru- Angle Broadside -->v--	No narrative, diagram nor coordinates.
3	BATTERY	0.23	3/26/2011	11:07	Clear	0	0	Same Direction Sideswipe	Crash with no reported injury. Op #2 stated that he was traveling north on Battery Street in the east lane when Vehicle #1 "Ran into him" and struck the bus on the driver's side forward portion. Op #1 stated that he was traveling north on Battery Street in the west lane when he realized that he had missed his turn onto Main Street and attempted to make a lane change. As he did so, he did not see the bus as it was in his blind spot and stated that he was traveling 5 mph when he attempted to make the change. No injuries.
4	BATTERY	0.23	8/18/2011	19:42	Clear	1	0	Left Turn and Thru- Angle Broadside -->v--	Two vehicles. Veh #1 southbound on Battery. Veh #2 northbound on Battery. Veh #1 made a left turn from Battery onto Main. Veh #2 was traveling straight through the inters, heading northbound. Both claim green signal.
5	BATTERY	0.23	12/21/2011	22:10	Rain	0	0	Left Turn and Thru- Angle Broadside -->v--	Two vehicles w/no injuries. Veh #1 southbound on Battery and attempted left onto Main. Claimed light was green and turned yellow on turn attempt. Veh #2 collided w/Veh #1 Op #2 also claimed green light.
6	BATTERY	0.23	5/12/2012	9:47	Clear	0	0	Rear End	Both vehicles southbound on Battery. Veh #2 stopped at light. Veh #1 following Veh #2. Op #1 stated they distracted and did not see Veh #2 stop. Veh #1 rear-ended Veh #2.

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Crash Number	Road	Marker	Date	Time	Weather	Injuries	Fatalities	Type	Description
7	BATTERY	0.23	2/22/2014	17:17	Clear	0	0	Same Direction Sideswipe	Two vehicles, no injuries. Op #1 on west leg approaching intersection, attempting right turn onto Battery. Veh #1 turned onto Main and then a truck from behind hit Veh #1. Op #2 stated he was headed southbound on Battery in right hand lane. Op #2 said Veh #1 made the right turn out of Main west leg onto Battery into the left hand southbound lane. Op #2 said he quickly attempted to move into the right hand lane but caught the front driver's side corner of his veh w/the rear passenger side of Veh #1. Contact caused him to leave the roadway and strike a snowbank. Op #1 said she did not turn into the left lane but may have made a wide turn onto Battery southbound.
8	BATTERY	0.23	6/15/2014	21:31	Cloudy	2	0	Single Vehicle Crash	Veh traveling southbound on Battery at high rate of speed. As veh approached intersection of College, it crossed into the northbound lanes and continued to travel south. Veh operator appeared to be slumped to side of steering wheel. Veh came to stop as it collided with a light post on eastern side of Battery just north of Main intersection. Operator advised using heroin.
9	BATTERY	0.23	7/13/2014	0:18	[No Weather]	0	0	Other - Explain in Narrative	NOT at this intersection.
10	BATTERY	0.24	2/9/2011	14:20	Clear	0	0	Same Direction Sideswipe	No narrative, diagram nor coordinates.
11	BATTERY	0.24	2/2/2012	23:45	Snow	0	0	Same Direction Sideswipe	Both vehicles traveling north on Battery. Op 1 stated he check in his mirror prior to changing lanes and did not see another vehicle, then Veh #1 changed lanes and Veh 2 "was there". Op #2 stated the bus had come over in his lane and struck his vehicle.

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Crash Number	Road	Marker	Date	Time	Weather	Injuries	Fatalities	Type	Description
12	BATTERY	0.24	12/17/2012	12:22	Cloudy	0	0	Same Direction Sideswipe	Op #2 stated she was parked on Battery about 20 feet south of Main, facing south. Op #2 stated that the vehicle being towed by Veh #1 was tacking to the side and dragged against Veh #2. Op #1 sated he was towing a vehicle and did not notice that it was drifting to the side.
13	BATTERY	0.24	6/12/2014	17:41	Rain	1	0	Rear End	Op #1 advised he was traveling southbound on Battery and stopped in west lane at the intersection of Main. Op #1 advised his foot had "slipped" off the clutch causing it to jump forward and he was unable to react and made contact w/ Veh #2. Op #2 advised she was traveling southbound on Battery and came to a stop in the west lane at Main intersection. Op #2 advised a vehicle had struck her from behind. Op #3 advised he was also traveling south on Battery and came to a stop in the west lane at the Main intersection and he was the first in line at the stop at the traffic light. Op #2 stated while waiting for the light to turn green, a veh struck him from behind.
14	BATTERY	0.24	5/19/2015	16:22	Clear	1	0	No Turns-Thru moves only-Broadside ^<	Op #2 advised she was driving southbound on Battery and executing a left turn on a yellow light when she was struck by Veh #1. Op #1 advised he was traveling northbound on Battery and proceeded through a yellow light when he struck Veh #2. Op #2 did not remember if light was a yellow arrow.
15	BATTERY	0.24	6/17/2015	10:59	Clear	0	0	No Turns-Thru moves only-Broadside ^<	Veh #1 was traveling northbound on Battery in the passing lane and approaching the intersection of Main when it collided into the driver side of Veh #2, who was also traveling northbound in other lane. Op #1 stated that Veh #2 was in his "blind stop" when he attempted to change lanes. Op #2 state that she was surprised when Veh 1 suddenly collided into her vehicle.

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Crash Number	Road	Marker	Date	Time	Weather	Injuries	Fatalities	Type	Description
16	BATTERY	0.24	10/3/2015	13:17	Clear	0	0	Same Direction Sideswipe	Both vehicles traveling northbound on Battery when Veh #1 attempted to change lanes and struck Veh #2, who was in the adjacent lane.
17	BATTERY	0.24	11/24/2015	6:16	Clear	1	0	Other - Explain in Narrative	Pedestrian and vehicle crash. Op #1 stated she was making a left hand turn onto Main from Battery. She was heading eastbound on Main and Ped was in the crosswalk at the intersection (heading northbound). Veh #1 hit Ped.
18	MAIN	0.00	2/15/2011	13:04	Clear	0	0	Same Direction Sideswipe	No narrative, no diagrams, no coordinates. AOT Use shows at MM 0.23 (at intersection) based on report Street address and Inters Street info on page 1.
19	MAIN	0.00	2/17/2011	8:48	Clear	1	0	Left Turn and Thru- Angle Broadside -->v--	No narrative, no diagrams, no coordinates. AOT Use shows at MM 0.23 (at intersection) based on report Street address and Inters Street info on page 1.
20	MAIN	0.00	3/6/2011	13:43	Snow	1	0	Rear End	No narrative, no diagrams, no coordinates. AOT Use shows at MM 0.23 (at intersection) based on report Street address and Inters Street info on page 1.
21	MAIN	0.00	4/8/2011	21:34	Clear	0	0	Rear End	NOT at this intersection.

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Crash Number	Road	Marker	Date	Time	Weather	Injuries	Fatalities	Type	Description
22	MAIN	0.00	5/11/2011	13:15	[No Weather]	0	0	[No Direction of Collision]	Vehicle 1 was turning from Westbound on Main Street at Battery Street to Northbound on Battery Street from the Right Hand Lane. Vehicle 2 was stopped in the Left Hand Lane Westbound on Main Street to proceed through the intersection. As Vehicle 1 proceeded through the turn, the rearward portion of the trailer, behind the tire/axle, made contact with the passenger's side of Vehicle 2. The trailer was dragged along the side of Vehicle 2 causing damage to the majority of the passenger's side of the vehicle in the form of significant scrapes, scratches dents and other damage. Vehicle 1 had a trail vehicle accompanying it, however that vehicle did not block the Left Hand Lane to allow for turning radius on the trailer behind the axle (tail whip). Trail vehicle for Vehicle 1 could have cleared the Left Hand Lane to allow for the manner of turn inherent in the construction of Vehicle 1. Primary cause of incident is turning manner of Vehicle 1. Neither vehicle operated in a reckless or inappropriate manner. Operator of Vehicle 1 may not have observed Vehicle 2 as he was reliant upon the Trail Vehicle for that purpose.
23	MAIN	0.00	7/7/2011	8:05	Clear	1	0	Left Turn and Thru- Angle Broadside -->v--	Veh #1 was traveling southbound on Battery and attempting to make a left turn onto Main. While in the process of making the turn, Veh #1 had to cut across the lane of traffic designated for traffic northbound on Battery. Veh #1 hit Veh #2 who was headed northbound.

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Crash Number	Road	Marker	Date	Time	Weather	Injuries	Fatalities	Type	Description
24	MAIN	0.00	7/23/2011	15:20	Clear	0	0	Same Direction Sideswipe	Op #2 state she was in the right turn lane and a vehicle was next to her in the middle lane that caused her to go off the road. Op #2 advised that the other vehicle drove straight, and the other vehicle's trailer went over the white lane marked for traffic, which forced her to drive onto the curb so that it would not hit her vehicle (#2). Witness confirmed Op #2's statement. No injuries.
25	MAIN	0.00	8/19/2011	17:19	Clear	0	0	Single Vehicle Crash	Vehicle traveling west on Main toward inters w/Battery. Operator applied his brakes, however his vehicle would not slow down. Vehicle's right front tire mounted curb and he hit a "No Parking" sign. No other vehicles involved.
26	MAIN	0.00	10/19/2011	12:14	Cloudy	0	0	Other - Explain in Narrative	Veh #1 (bus) and Veh #2 (car). Op #1 advised she was westbound on Main and came to green light at Battery intersections. Op #1 advised she activated right turn signal and moved bus partially into the left lane and proceeded to turn right onto Battery. Op #1 advised she had to swing to left to make right turns for such a large vehicle. Op #1 began her turn and did not see Veh #1 on her passenger side until Veh #1 collided with the driver side of Veh #2. OP #2 advised she was westbound on Main and came up to red light at Battery intersection. Op #2 advised she was in the right lane of Main and Veh #1 was completely in the left lane. Ope #2 advised Veh #1 was stopped and then as Op #2 started to run right onto Battery northbound, she observed Veh #1 begin to turn right from the left lane. Op #2 advised she honked her horn, but Veh 1 collided w/Veh #2.
27	MAIN	0.00	11/26/2012	7:47	Snow	0	0	Rear End	Officer stated there was significant snow accumulating on the roadway. NOTE: narrative did not contain detailed description. Collision diagram data from Box D and street address location data.

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Crash Number	Road	Marker	Date	Time	Weather	Injuries	Fatalities	Type	Description
28	MAIN	0.00	12/7/2012	11:52	Clear	0	0	Same Direction Sideswipe	Veh #2 on Main facing west at Battery intersection when Veh #1 attempted to move around Veh #2 into the right turn lane. Veh #1 made contact w/rear of Veh #2. Veh #1 was LSA.
29	MAIN	0.00	1/21/2013	11:35	Cloudy	0	0	Same Direction Sideswipe	Weather was approx. 16 degrees and road was dry and debris free. Op #1 advises she was headed westbound on Main to the right of Veh #2 when Veh #2 started moving over towards Veh #1. Op #1 said she had nowhere to go and Veh #2 ended up hitting Veh #1. Op #2 stated she had slowed down because she was looking for an address and as she slowed to a crawl, she found a parking spot and began turning into it when all of a sudden Veh #1 collided w/her. Veh #2 was trying to turn into a marked parking spot while Veh #1 had tried to pass Veh #2 on the right through empty parking spots in preparation for a right turn at Battery.
30	MAIN	0.00	2/25/2013	14:22	Snow	0	0	Rear End	Op #2 advised she was waiting for a red light for northbound Battery traffic. Op #2 said the light was green and a pedestrian suddenly ran out in traffic in front of Veh #2. Veh #2 began moving but Op #2 suddenly hit the brakes for the pedestrian. Op #1 said he had also began to move forward but did not stop in time and struck Veh #2.
31	MAIN	0.00	3/23/2013	17:43	Cloudy	0	0	No Turns- Thru moves only- Broadside ^<	Veh #1 was headed northbound on Battery. Op #1 stated she was sure she had the green light. Veh #2 was headed eastbound on Main. Op #2 had stop for a red light. Op #2 said once the light turned green, she proceeded thru the intersection and felt that Veh #1 ran a red light when they collided.
32	MAIN	0.00	6/26/2013	11:14	Rain	0	0	Head On	No narrative, diagram nor coordinates.

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Crash Number	Road	Marker	Date	Time	Weather	Injuries	Fatalities	Type	Description
33	MAIN	0.00	7/2/2013	19:31	Cloudy	0	0	Rear End	Op #2 stated they were stopped at a stop light heading eastbound on Main on east leg of intersection w/Battery. Veh #1 put their car in reverse (reverse lights were on) and backed into Veh #2. Op #1 stated he stopped at a yellow light at which time Veh #2 stopped behind him w/in very close proximity to Veh #1 bumper. When the light turned green, and Op #1 moved his foot from the break to the gas, his vehicle rolled back into Veh #2.
34	MAIN	0.00	8/12/2013	11:11	Clear	0	0	No Turns- Thru moves only- Broadside ^<	Op #2 stated that he had pulled out of his parking spot and was approaching the intersection of Main and Battery when Veh #1 was backing out of the parking spot and struck Veh #2 on the passenger side door panel. Veh #1 was facing south and backing north out of the parking spot. Op #2 described same.
35	MAIN	0.00	9/16/2013	16:16	[No Weather]	0	0	[No Direction of Collision]	CCTA bus was only vehicle involved. Bus struck a traffic light post while making a right turn off Main and onto Battery northbound. Operator said she was in the right hand turn lane at the stop light facing east. She said there were two vehicles next to her and when she went to make the right turn, she looked to make sure that the end of the bus was not going to swing out and hit the other vehicles, but cut the corner and struck the traffic light post.

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Crash Number	Road	Marker	Date	Time	Weather	Injuries	Fatalities	Type	Description
36	MAIN	0.00	1/6/2014	17:39	[No Weather]	0	0	Rear End	Op #1 advised he was traveling west on Main and attempted to slow down for the veh stopped in fron of him (Veh #2). Op #2 stated that his vehicle did not stop and continued to slide. Op #1 attempted to steer around Veh #2 but struck the back of Veh #2 and Veh #1 continued onto the sidewalk. Officer states the weather was clear and dark and that moisture that had been on the roadway during the day was starting to freeze. Officer observed ice on the roadway at the location of the crash. Ice appeared to be a factor in this crash according to the officer.
37	MAIN	0.00	3/14/2014	8:31	Clear	0	0	Rear End	Op #2 stated he had been stopped at the red light for eastbound traffic at Main when he was struck from behind by Veh #1. Op #1 stated he had been traveling east on Main approaching the intersection with Battery and, due to glare from bright sunlight, did not see the traffic light was red. Op #1 also stated he had difficulty seeing Veh #2 until the last moment. Op #1 stated due to slippery road conditions he was unable to avoid colliding w/Veh #2.
38	MAIN	0.00	3/20/2014	7:46	Cloudy	0	0	Rear End	Veh #1 was stopped at the left turn lane red light on Battery, at the Main intersection, heading southbound. Op #1 advised she witnessed a green light and immediately pressed the gas causing her vehicle to leap forward and collide w/Veh #2.
39	MAIN	0.00	3/25/2014	8:46	Clear	0	0	No Turns- Thru moves only- Broadside ^<	Witness stated Veh #1 driving north on Battery and run the red light at Main, striking Veh #2 (which was driving east on Main, crossing Battery). Op #1 admits running red light.

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Crash Number	Road	Marker	Date	Time	Weather	Injuries	Fatalities	Type	Description
40	MAIN	0.00	3/26/2014	14:35	Cloudy	0	0	No Turns-Thru moves only-Broadside ^<	Op #2 stated that she had been on Main and was westbound through the intersection. Op #2 had come upon the intersection with a green light so she proceeded through. When she was in the intersection, she was struck by Veh #1. Op #1 stated he was northbound when he entered the intersection. Op #1 told officer that the light suddenly turned red and he was unable to stop and struck Veh #2. Officer concluded Op #1 failed to stop for a red light.
41	MAIN	0.00	5/6/2014	13:02	Clear	0	0	No Turns-Thru moves only-Broadside ^<	No narrative, diagram nor coordinates.
42	MAIN	0.00	7/19/2014	13:52	Clear	0	0	Rear End	Veh #1 back up system failed operator and Veh #1 backed into Veh #2.
43	MAIN	0.00	7/10/2015	11:08	Clear	0	0	No Turns-Thru moves only-Broadside ^<	Op #1 advised she was parked facing north on Main and attempting to back out of the parking space. Op #1 advised she had looked behind her and did not observe any vehicle in her way. Op #1 advised she began a conversation with an occupant of a vehicle parked next to her and after the conversation, Op #1 failed to look behind her again and began to back up. As Op #1 was backing up, she collided with Veh #2, who had stopped at the red light facing east on Main.
44	MAIN		7/19/2015	8:19	Unknown	0	0	Head On	No narrative, diagram nor coordinates. (NOTE: involved parked veh w/hit and run.)
45	MAIN	0.00	9/13/2015	13:39	Clear	0	0	Same Direction Sideswipe	Parked vehicle damaged by hit/run (LSA). Parked on other side of Main in area of 30 Main St.

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Crash Number	Road	Marker	Date	Time	Weather	Injuries	Fatalities	Type	Description
46	MAIN	0.00	9/30/2015	15:40	Rain	0	0	Rear End	Op #1 advised he observed the light turn green and expected Veh #2 to move, but it did not and Veh #1 moved forward and hit Veh #2. Op #1 stated he was stopped at the traffic light and was waiting for the vehicle ahead of him to make a left turn, so Veh #2 was unable to go forward, at which time Veh #1 rear-ended Veh #2.
47	MAIN	0.01	4/20/2011	15:00	[No Weather]	0	0	[No Direction of Collision]	Op #1 unknown (LSA). Op #2 reported that her vehicle had been damaged as it was parked in front of 3 Main St. Op #2 said she parked her vehicle on Main St. just west of Battery St at 1500 hours. When she returned to her vehicle at 1715 hours she observed damage to the passenger side rear bumper. She said the bumper had been separated from the vehicle. I later observed the same damage. Pictures were taken and are attached to the incident. Op #2 does not know who damaged her vehicle and no one has come forward with additional information. Op #2 was provided with the incident number for insurance purposes.
48	MAIN	0.01	9/19/2012	17:04	Clear	0	0	Other - Explain in Narrative	Op #1 said she was traveling west on Main before the crash, and before the intersection with Battery. Veh #2 backed out of a diagonal parking spot on the north side of the street. Op #1 was unable to avoid a collision and the rear bumper of Veh #2 struck the passenger side panel of Veh #1. Op #2 felt Op #1 was operating at a high rate of speed.