

Office of Highway Safety
Road Safety Audit Review

Town:	Stowe	Date Reviewed:	October 27, 2016
Route:	VT 100 and Stagecoach Intersection	Mile points:	VT 100: 5.066 (5.02-5.12) Stagecoach: 0.00 -0.05

Location Map



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Road Safety Audit Review

RSAR Process

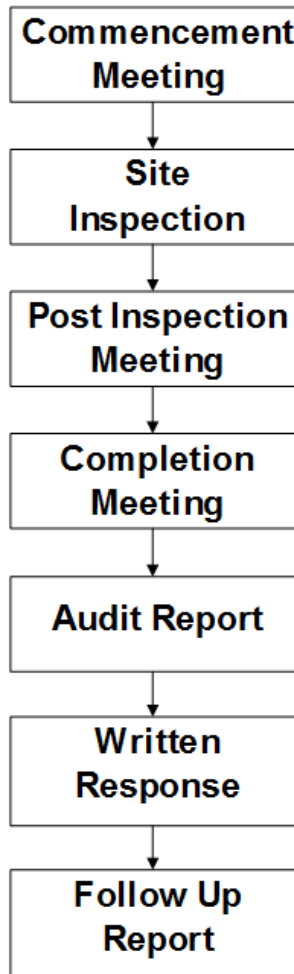
A **Road Safety Audit Review** (RSAR) is a formal examination of an existing road in which an independent, multi-discipline team (the Audit Team) reports on potential safety issues.

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

Figure 1 - Road Safety Audit Process



Office of Highway Safety

Road Safety Audit Review

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 VAOT design section, the local town, the local police or the local RPC.

Location

The location of this RSAR is the intersection of VT 100 and Stagecoach Road (MC0237) in Stowe.

Purpose of the RSAR

This RSAR was conducted as part of VAOT 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, VAOT, was the RSAR coordinator.

The other participants were:

Jim Cota,	District 8, VAOT
Tyler Guazzoni,	TSMO, VAOT
Michael LaCroix,	Traffic Design, VAOT
Pat McManamon,	DMV, VAOT
Ian Shea,	Traffic Design, VAOT
Chris Jolly,	Stowe Public Works
Tom Jackman,	Stowe Planning Director
Harry Shepard,	Stowe Public Works
Donald Hull,	Stowe Police

Office of Highway Safety

Road Safety Audit Review

Rob Moore,

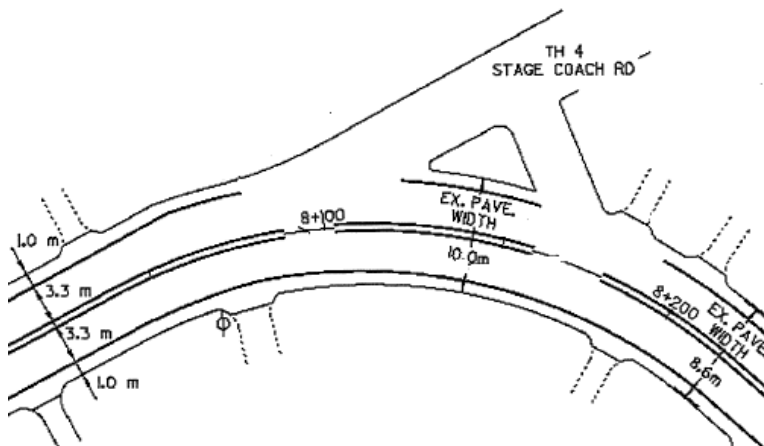
Lamoille County Planning Commission

Information Reviewed

Geometry

This intersection is located within a 12-degree curve. Because of this, the intersection was originally constructed as a triangle with Stagecoach Road having two connecting points to VT 100.

The northern branch of Stagecoach Road meets VT 100 at pretty much a 90-degree angle. It is mostly used by motorists who are turning left to travel north on VT 100 and by motorists who are making a right turn to travel north on Stagecoach Road.



The southern branch of Stagecoach Road intersects VT 100 at a 30-degree angle. It is used by those motorists who are traveling south on Stagecoach Road to continue south on VT 100 and by motorists who are traveling north on VT 100 and who are continuing north on Stagecoach Road.

In this area, VT 100 is a two-lane road with eleven-foot lanes and three-foot shoulders. There is extra pavement width within the curve and the overall width at that point is about thirty-two feet.

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Office of Highway Safety

Road Safety Audit Review

The pavement surface on VT 100 is rated as poor and very poor in the area of the intersection (VTransparency, November 2016).

There is a historic marker within the grass island to indicate that the first house in Stowe was built near this spot (According to the Town, the marker is not at the exact location where the first house was built and this marker could be relocated within the area).



Speed Limit

The posted speed limit on VT 100 approaching the intersection is 40 mph. The speed limit on Stagecoach Road is 35 mph.

A traffic count was taken by VAOT in July 2017 on VT 100 just south of Westview Heights (Location L 113). From this count, it can be determined that the 85th percentile speed would be

Office of Highway Safety

Road Safety Audit Review

between 45 and 47 mph (meaning that 85% of the traffic travels at a speed of 45/47 mph or less).

Traffic Volumes

A full turning movement count was conducted by VTrans Traffic Research in July 2016. However, District 8 indicated that the Cadys Falls Bridge in Morristown had been closed at the time that the count was taken and that traffic patterns were modified on Stagecoach Road and VT 100 due to the bridge closure and that the count may not be representative of normal traffic conditions.

Because of this limitation, a partial afternoon count between the hours and three and six was conducted in March 2017 by VTrans Traffic Research in order to determine if a northbound left turn lane was warranted

The previous full count at this intersection was done in 2011 (*but VTrans Traffic Research believes that, because this count was done prior to the Alternate Truck Route opening, which changed traffic patterns in the area, the count may not be representative of current conditions either*). On the other hand, comparing the 2011 count to the one taken in 2016 does show lower traffic volumes on Stagecoach Road in 2016 (potentially due to the bridge closure).

Taking traffic traveling northbound, 19% of the traffic between 6:00 am and 12:00 pm turned left onto Stagecoach Road in the 2011 count compared to 12% in 2016. Similarly, for the same time period, 19% and 12% of the southbound traffic that continued on VT 100 entered the intersection from Stagecoach in 2011 and 2016 respectively.

In the afternoon, between the hours of 12:00 pm and 6:00 pm, 18% of the northbound traffic on VT 100 was making a left turn onto Stagecoach Road in 2011 compared to 12% in the 2016 count. Similarly, traveling southbound, 19% of the southbound traffic that continued onto VT 100 entered the intersection from Stagecoach Road in 2011 compared to 12% in 2016.

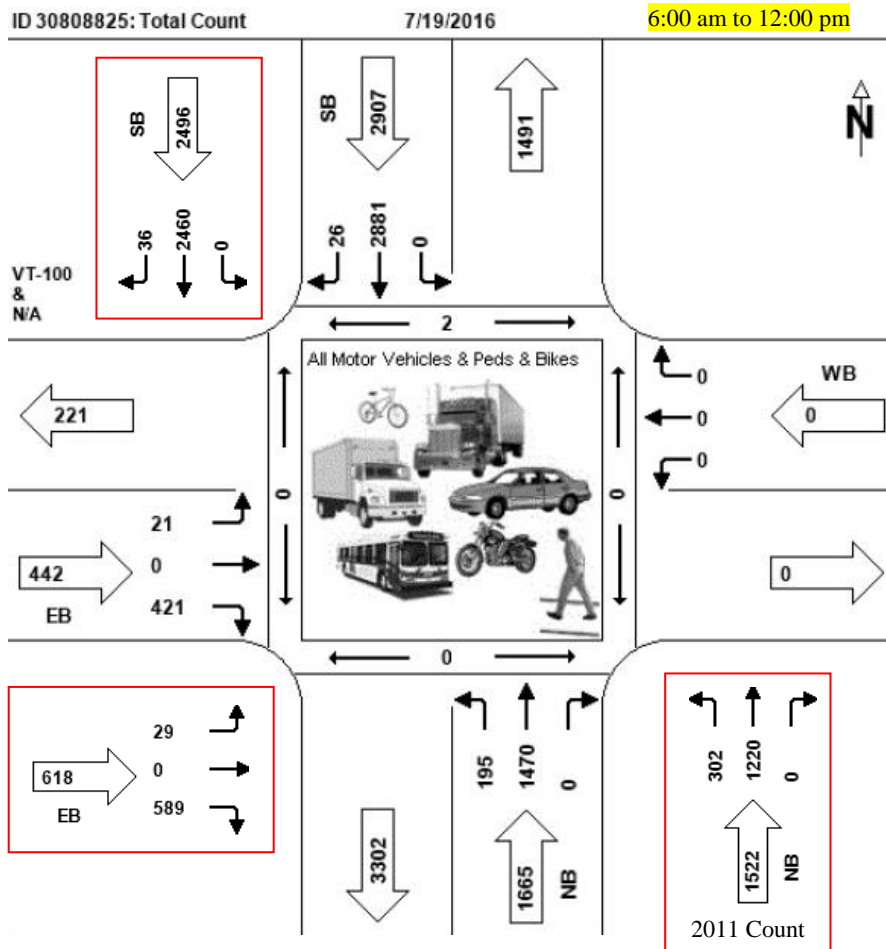
The partial 2017 pm count shows that 18% of the northbound vehicles made a left turn onto Stagecoach Road (this proportion is similar to the one of the 2011 count). Similarly, the 2017 partial count shows that the proportion of vehicles that entered the intersection from Stagecoach

Office of Highway Safety

Road Safety Audit Review

to continue southbound on VT 100 was very similar to the one obtained during the 2011 count with 22% (compared to 19%).

For either turning movement count, the main traffic movements were found to be the through movements on VT 100. For a twelve-hour time period (6:00 am to 6:00 pm), 5002 southbound through vehicles were counted in 2016 compared to 4149 in 2011. Northbound, the 2016 count



Office of Highway Safety

Road Safety Audit Review

showed 4402 through vehicles on VT 100 compared to 3623 vehicles in 2011.

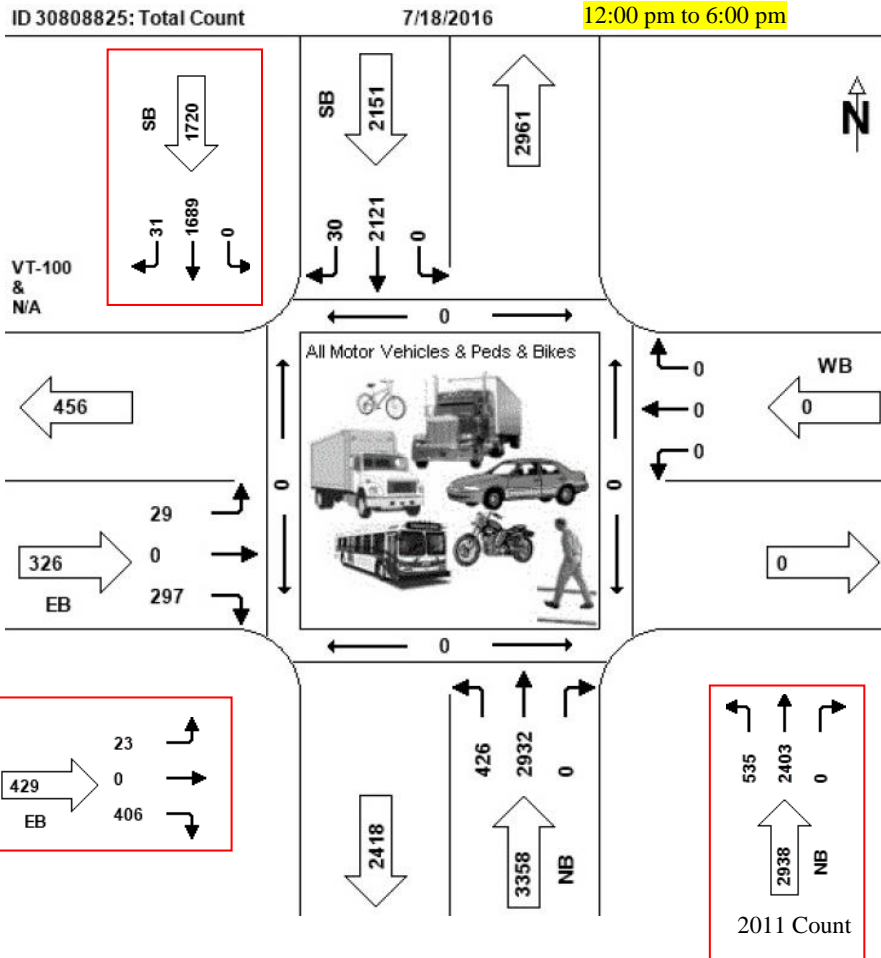
For the same twelve-hour time period, the next heaviest movement is the southbound Stagecoach Road onto southbound VT 100 movement with 718 vehicles in 2016 compared to 995 in 2011. The reverse movement (northbound VT 100 onto Stagecoach Road) is the other heaviest movement at this intersection during the twelve-hour period with 621 vehicles in 2016 compared to 837 in 2011.

Commented [DM1]:

The two full counts show that more vehicles turn left onto Stagecoach Road in the afternoon and more vehicles enter the intersection from Stagecoach in the morning.

Office of Highway Safety

Road Safety Audit Review



Office of Highway Safety

Road Safety Audit Review

Traffic Signs

The intersection is controlled by stop signs on Stagecoach Road at the two intersection points with VT 100. There is no stop sign to control traffic where Stagecoach Road meets the 90-degree approach to VT 100.

There are modified curve signs with an intersection displayed on them in both directions of travel. These signs are supplemented with a Stagecoach street name plaque below them. The northbound sign is located at mile point 4.960 (about 550 feet from the intersection) while the southbound sign is located at mile point 5.155 (460 feet from the intersection). These signs have a fluorescent yellow sheeting.

Near the intersection when traveling northbound, there is a Left Turn Yield to Thru Traffic sign located at mile point 5.005 to instruct the motorists, who are traveling northbound to turn left onto Stagecoach Rd, to yield to oncoming VT 100 southbound traffic.

Southbound, there is a 40 mph speed limit sign at mile point 5.280. There is also a 40 mph speed limit sign in the northbound direction at mile point 4.605.

Past Projects

Project Stowe-Morristown STP 9820(1)S was for the resurfacing of VT100. This project was completed in September 2000.

Project STPG SIGN(28) was completed in October 2010 and was for the replacement of traffic signs on VT 100. As part of this project, the northbound modified curve sign was relocated from mile point 4.920 to its current location at mile point 4.960.

Future Projects

As per November 2016 email communications with Mike Fowler (VAOT pavement management) and Mike Hedges (VAOT AMP), a new Stowe Morristown paving project could be scheduled for 2020.

Office of Highway Safety

Road Safety Audit Review

Crash History

The crash history was reviewed at the intersection for the five-year period covering the years 2011 to 2015. A total of twenty crashes took place at this intersection during this period. These are displayed on the collision diagram shown below. Summary of crash narratives are provided at the end of this report.

Overall, two prominent crash patterns are recognizable.

The first are southbound rear-end crashes on Stagecoach Road at the entry point with VT 100. This pattern represents 35% of all the crashes at this intersection. The typical way that these crashes happened was when the vehicle in front started to move but stopped again and the motorist behind did not realize that the vehicle in front had stopped and moved forward into the rear of the vehicle in front.

The second most important crash pattern consists of northbound rear-end crashes involving a vehicle waiting to turn left onto Stagecoach Road. This represent thirty percent of all the crashes at this

intersection. The major reason for these crashes was the motorists at fault having looked away and not being able to stop in time once they realized that the vehicle in front had stopped.



Office of Highway Safety

Road Safety Audit Review

Current Local Concerns

The Town expressed concerns with motorists not stopping at the stop sign on Stagecoach Road. Motorists are treating this approach more like a slip lane. This was observed by the audit team during the field visit.

The Town also explained that northbound motorists were passing on the right vehicles that were waiting to turn left onto Stagecoach. To do this, motorists have to leave the paved portion of the roadway to be able to pass a vehicle. This behavior was also observed by the audit team during the site visit.

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.

Concern: Stagecoach Road meets VT 100 at an acute angle

Stagecoach Road and VT 100 intersect at a 30-degree angle. The acute angle of this approach is problematic and results in poor visibility and limited sight distance. Motorists are forced to turn their heads awkwardly in order to be able to see oncoming traffic. A consequence is that several motorists are not obeying the stop sign and enter VT 100 without stopping. Another consequence is that rear-end crashes are common on this approach.

Safety Enhancements:

Realign the intersection to create a 90-degree intersection and in no case should the two roads meet at an angle of less than 75-degree. The percent crash reduction in overall crashes for realigning the intersection from 30 degrees to 90 degrees is around 21%.

It was determined that the maximum project costs that could be justified from a crash reduction perspective to obtain a benefits-to-costs ratio (B/C ratio) of at least 1 was \$335,000. A similar

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12 of 31

Office of Highway Safety

Road Safety Audit Review

project (HES 0235(22)) has been designed at the intersection of VT 108 and Luce Hill Road. The estimated cost for this project was slightly below \$75,000. Using \$75,000 as the planning cost for the Stagecoach Road intersection project, a B/C ratio of 4.46 is obtained.

An alternative to a realignment could have been the transformation to a roundabout. The expected crash reduction associated with this type of improvement is 71% and the maximum project costs that could be justified from a crash reduction perspective to obtain a B/C ratio of at least 1 would be \$1,342,000. Recent roundabout project bids resulted in an average estimated construction cost of \$1,474,900. Using this figure as a planning cost generates a B/C ratio of below 1 (0.91) and indicates that the construction of a roundabout could not be justified in terms of safety since the project would cost more than the benefits obtained from it.

An incremental B/C ratio analysis between a roundabout alternative and an intersection realignment alternative results in an incremental ratio of 0.95 and confirms that the realignment alternative should be the preferred option when comparing the two alternatives ($[Annual Value Benefits_{roundabout} - Annual Value Benefits_{realignment}] / [Annual Value Costs_{roundabout} - Annual Value Costs_{realignment}]$)

	<u>Roundabout</u>	<u>Realignment</u>	<u>Difference</u>	<u>Inc B/C</u>
Annual Benefits	\$ 71,595.00	\$ 7,944.00	\$ 63,651.00	
Annual Costs	\$ 71,595.00	\$ 4,743.00	\$ 66,852.00	0.95 Keep Realignment

Concern: Rear-end Crashes due to Left Turning Traffic

Rear-end crashes involving a northbound vehicle waiting to turn left onto Stagecoach roads are common at this intersection. Northbound VT 100 through vehicles are often passing a left turning vehicle on the right, off the paved roadway.

Safety Enhancements:

Consider the installation of a northbound left turn lane.

Office of Highway Safety

Road Safety Audit Review

Traffic Research performed a left turn lane warrant analysis based on a 2017 traffic count and determined that a northbound left turn lane was warranted.

The Crash Modification Factors Clearing House has at least two highly rated crash reduction factors that meet the site conditions of this intersection. CMF #253 suggests a crash reduction of 44% while CMF 7996 suggests a crash reduction of 25%. Using these two reduction factors, it was determined that the maximum project costs that could be justified from a crash reduction perspective to obtain a B/C ratio of at least 1 would be between \$375,500 (with 25% reduction) and \$555,000 (with 44% reduction). Taking an average of the two reduction rates results in a 34.5% reduction rate and a maximum project cost of \$435,000.

Assuming \$300,000 as the planning cost for the construction of a left turn lane and using 34.5% as the potential crash reduction, a B/C ratio of 1.45 is obtained.

Considering the realignment of the intersection and the installation of a northbound left turn lane, a combined crash reduction rate of 48% would be obtained. With a total construction cost of \$375,000, a B/C of 1.62 would be achieved (the construction costs include an assumed \$300,000 for the left turn lane plus \$75,000 for the realignment as determined from a similar project at VT 108 and Luce Hill Road - HES 0235(22)).

An incremental analysis comparing a roundabout, the realignment alone and the realignment plus a left turn lane shows that the addition of the left turn lane to the realignment alternative is the best option. The calculations are illustrated in the table below.

	<u>Roundabout</u>	<u>Realignment + Turn Lane</u>	<u>Difference</u>	<u>Inc B/C</u>	
Annual Benefits	\$ 71,595.00	\$ 43,456.00	\$ 28,139.00	0.56	Keep Realignment + Turn Lane
Annual Costs	\$ 71,595.00	\$ 21,186.00	\$ 50,409.00		
	<u>Realignment + Turn Lane</u>	<u>Realignment</u>	<u>Difference</u>	<u>Inc B/C</u>	
Annual Benefits	\$ 43,456.00	\$ 7,944.00	\$ 35,512.00	2.16	Keep Realignment + Turn Lane
Annual Costs	\$ 21,186.00	\$ 4,743.00	\$ 16,443.00		

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14 of 31

Office of Highway Safety
Road Safety Audit Review

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
Stagecoach Road meets VT 100 at an acute angle	Realign the intersection to create a 90-degree intersection	VTrans (Pavement Management 2020) ¹	21% crash reduction ²	Mid-Long	\$75,000, B/C ratio=4.46 (Max costs \$335,000 to get B/C =1)
Northbound Rear-End crashes	Consider a NB left turn lane on VT 100 (depending on cost and left turn warrant result)	VTrans (Pavement Management 2020)	34.4%% crash reduction ³	Mid-Long	(Max costs \$435,000 to get B/C =1)
	Combined realignment and a NB left turn lane ⁴	VTrans (Pavement Management 2020)	48% combined crash reduction	Mid-Long	\$375, 000, B/C ratio = 1.62

¹ As per November 2016 email communications with Mike Fowler (VAOT pavement management) and Mike Hedges (VAOT AMP), a new Stowe Morrystown paving project could be scheduled for 2020 and this improvement could be added to the project.

² CMF # 5118

³ Average of CMF # 253 & CMF # 7996

⁴ The incremental B/C ratio analysis shows the combination of the realignment with a nb left turn lane as being the best option.

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Crash Number	Road	Marker	Date	Time	Weather	Injuries	Fatalities	Type	Description
1	VT-100	5.06	12/22/2011	12:47	Clear	2	0	Rear End	Op 1 advised she was northbound behind Veh 2 when she saw a vehicle moving in the parking lot beside the roadway ahead of her. Op 1 advised she briefly took her eyes from the road to watch the vehicle as she was passing the parking lot and when she looked back, Veh 2 had stopped ahead of her. Op 1 advised she did not have time to stop before striking Veh 2. Op 2 advised she had just stopped for incoming traffic at the intersection of Stagecoach Rd when she was struck from behind by Veh 1). Op 2 advised she had not been stopped long when she was struck and that she was not injured. W1 is a state police detective and was stopped at Stagecoach Rd waiting to proceed south on Rt 100 when the crash occurred. Witness advised that he observed Veh 1 collide with the back of Veh 2 and it appeared there was no attempt at braking before the collision. Officer observed that Veh 1 was still at its uncontrolled point of rest in the roadway. Veh 1 sustained moderate contact and induced damage across the front of the vehicle. The damage extended back into the engine compartment and the vehicle was inoperable. Veh 2 sustained minor contact damage cross the back of the truck and was driven away from the scene. The weather at the time of the crash was warm and sunny. The road surface was dry and free of hazards. Visibility at the scene was good. This crash occurred as a result of Op 1 not paying attention to the roadway and colliding with Veh 1 stopped in the road ahead of her waiting for traffic to clear. Inj 4

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Crash Number	Road	Marker	Date	Time	Weather	Injuries	Fatalities	Type	Description
2	VT-100	5.06	12/20/2013	8:25	[No Weather]	0	0	Rear End	Two-car motor vehicle collision with no injuries at the intersection of Stagecoach Road and Pucker Street (aka VT100). It was clear and cool, traffic was heavy. Op #1 stated he was traveling north on VT-100 at approximately 45mph when he rear ended vehicle #2. Op #1 advised he was not paying attention and looked away for a moment and when he looked back, he could not stop in time. Approximately 15 feet of skid marks made by vehicle #1. It had damage to the front end and hood. The bumper was pushed back which was rubbing on the left front tire preventing the truck from being driven. Op 2 said that she was stopped in traffic waiting to make a left hand turn onto the Stagecoach Road when she was rear-ended. She was also complaining that her neck was starting to hurt. Based on the above information Operator #1 was driving north when he rear-ended vehicle #2 which was stopped in traffic.

Crash Number	Road	Marker	Date	Time	Weather	Injuries	Fatalities	Type	Description
3	VT-100	5.06	6/21/2014	9:53	Clear	1	0	Rear End	Two-vehicle crash. No injuries or hazards reported. Conditions at the scene were snow/slush/ice covered roads. Weather was overcast with a mixture of snow and sleet falling. Traffic was moderately heavy. Operator #1 stated that he was traveling north on Route 100. He noticed that V#2 had stopped to make a turn onto Stagecoach Road so he hit his brakes but hit a patch of ice, lost control of his car and hit the back end of V#2. Operator #2 stated that she was traveling north on Route 100 and had stopped to make a left turn onto Stagecoach Road. She looked in her mirror to see V#1 coming up behind her quickly and knew it was going to hit her. She tried to move forward to avoid the crash but was unsuccessful. Damage to V#1 was the front grille, bumper, headlight area. Damage to V#2 was minimal rear bumper cover damage. Officer believes the cause of this crash was inattention and speed too fast for conditions of the roadway combined with poor road conditions. Inj 4
4	VT-100	5.06	3/26/2015	13:06	[No Weather]	0	0	Rear End	Two-car collision. The weather was warm and dry and the sky was clear. There were no roadway hazards and visibility was good with no obstructions. The road surface was clear. Op 1 advised that he pulled up behind Veh 2 which was stopped at the stop sign waiting to go south on Rt.100. Op #1 advised Veh 2 pulled onto Rt 100, or so he thought, and he began to pull ahead and bumped the back of Veh 2. Op #1 advised the collision was his fault. Op 2 advised he was stopped at the stop sign and veh 1 struck him from behind as he waited to pull into traffic. Officer observed the damage to both vehicles which appeared consistent with the scenario explained by both operators.

Crash Number	Road	Marker	Date	Time	Weather	Injuries	Fatalities	Type	Description
5	VT-100	5.06	12/20/2015	18:55	Clear	0	0	Head On	No reported injuries. Op #1 advised he was traveling on VT 100 toward Morrisville. He approached the intersection of Stagecoach Road and saw a blue Ford focus that was turning. He said the traffic started to move and did not realize the vehicle in front of him was going to turn. Op #1 said he was traveling about 20 to 25 MPH and said he noticed the car in front of him was stopped but did not have enough time to react and his front end collided with the rear end of V#2. His vehicle had damage to the grill, bumper and front end area. I met with operator #2 who told me he was stopped on Pucker Street and was waiting to turn onto Stagecoach Road. He said that he could see V#1 in his rear mirror collide with the rear end of his vehicle. He said he could not take any action to avoid being hit. His vehicle had major rear end damage to the bumper and trunk area.

Crash Number	Road	Marker	Date	Time	Weather	Injuries	Fatalities	Type	Description
6	VT-100	5.06	1/22/2016	7:59	Clear	0	0	Rear End	Two-car accident. Reported as a head on accident. This section of roadway is posted at 40mph. It is flat and paved with a slight curve. At the time of the crash, the roadway was clear and dry. Op #1 advised that as she was traveling northbound when her windshield started to fog up, she slowed as she knew her turn was coming up. She tried to use her wipers to clear the window but sprayed wiper fluid instead which only made her visibility worse. She advised that she had slowed to about 30 mph and did not know she was now in the southbound lane at which point she struck V#2 which was traveling south. V#1 had extensive damage to the front end. Op #2 advised that she was traveling southbound on Route 100 at approximately 30 mph when she noticed lights in her lane, she advised at the time she saw the vehicle in her lane it was too late and she did not even get a chance to hit her brakes. V#2 had extensive damage to the front end. It is felt by the investigating officer that the cause of this accident was the result of Op #1 crossing the centerline. Op #1 advised that the reason she crossed the centerline was due to her windshield fogging up on her and not being able to see the roadway.

Crash Number	Road	Marker	Date	Time	Weather	Injuries	Fatalities	Type	Description
7	VT-100	5.07	2/22/2011	10:10	Clear	3	0	Rear End	Along the northbound lane of the shoulder, there is a snowbank about three feet high. At the time of the collision, the roadway was dry and clear. The weather was clear and cold and visibility was very good. This roadway also intersects with Stagecoach Road. Stagecoach Road intersects with Route 100 on the south side of the sharp curve. There was a report of injury. Op #1 stated she was nb on Route 100 at about 40 MPH. Op #1 advised she saw vehicle #2 stopped, then it let off the brakes and it looked like the operator was going to turn left, but then it stopped again. Op #1 stated when vehicle #2 stopped again, she had no time to brake but moved to the right, and her vehicle collided with vehicle #2. When Op #1 first saw vehicle #2 she was about two car lengths from it. Op #1 advised she was looking straight on and there were no distractions when she was driving. Op 1 advised her injuries appeared to be bruising and soreness. Operator #2 stated she was nb on Route 100 and was stopped to turn left onto Stagecoach Road. She was signaling to turn left. She stated she was stopped for a few seconds waiting for traffic to clear in the southbound lane. As Op #2 was sitting there, vehicle #1 hit fast from behind and pushed Veh #2 forward. Op #2 advised her injuries appeared to be soreness. The point of impact occurred in the northbound lane partially on the shoulder and travel portion of the roadway. Inj 3

Crash Number	Road	Marker	Date	Time	Weather	Injuries	Fatalities	Type	Description
8	VT-100	5.07	11/28/2011	8:05	Cloudy	0	0	Rear End	Op #1 stated he was northbound at about 35 MPH. He was following vehicle #2 and was about three car lengths from it. Op #1 stated that he did not see vehicle #2 stop, further stating he was distracted. Op #1 could not remember what it was that distracted him. Op #1 then saw the brake lights on and he tried to stop by braking and turning to the right to avoid vehicle #2. He stated he did not make it and collided with vehicle #2. Op #1 advised the left front side of his vehicle collided with the right rear side of vehicle #2. Op #1 advised there was a car in front of vehicle #2 waiting to turn. Adams said he was about half on and half off the road when the collision occurred. Op #2 stated she was northbound. She stopped because of a car in front of her was waiting to turn left. She was getting ready to go when she got hit from behind. Her car moved forward and she stopped. Vehicle #1 sustained contact damage to the left front side to include the headlight, fender, bumper and the corner of the hood. This area was smashed and the fender was ripped. The plastic wheel well cover was ripped out. There was induced damage along the left front fender behind the tire. The fender was dented and pushed into the doorpost. Vehicle #2 had contact damage to the right rear side. The bumper was pushed in toward the right rear tire. The tail pipe was against the tire. The lower right corner of the tailgate was dented. The right rear fender above the tire had induced damage too.

Crash Number	Road	Marker	Date	Time	Weather	Injuries	Fatalities	Type	Description
9	VT-100	5.11	1/28/2011	7:00	Snow	0	0	Single Vehicle Crash	Op #1 reported that she was headed south on Pucker Street when she lost control and slid off the road. At the time, the roads were wet and slippery in spots. Op #1 appeared to have fishtailed, hit a mailbox at 1695 Pucker St, went into a snowbank, and then into a tree. The vehicle's airbags deployed as a result of the accident. Op #1 reported that she did not have any injuries. No injuries.
10	VT-100	5.12	1/19/2013	7:56	Snow	0	0	Single Vehicle Crash	This one vehicle, no injury, roll over crash. Visibility was good under cloudy conditions. The paved road surfaces were partially snow covered and quite slippery at the time of this crash. Op #1 was headed northbound to go skiing with his brother when this crash occurred. Oper#1 explained he was traveling at approximately 35 MPH when he rounded the slight curve in the road and slid left of center, across the southbound lane and down over an embankment, rolling the vehicle in the process. Op #1 advised Veh#1 landed upright on its wheels. Officer discovered Veh#1 on all four wheels down over an embankment off the southbound shoulder of the road. Officer observed Veh#1 sustained substantial hood, roof, windshield and side damage consistent with having rolled completely over.

Crash Number	Road	Marker	Date	Time	Weather	Injuries	Fatalities	Type	Description
11	FAS 0237	0.00	1/12/2011	7:55	Snow	0	0	Rear End	Two-car collision. There were no injuries reported and damage was very minor to both vehicles. OP 1 advised she was in line at the stop sign behind Veh 2. Op #1 advised she was watching approaching traffic on Rte. 100 and as traffic passed she expected Veh 2 to pull out so she started to go, driving into the back of Veh 2. Op 2 advised she was stopped at the stop sign waiting for traffic and was struck from behind by Veh 1. Veh 1 had very minor damage to the front bumper around the license plate. Veh 2 had minor damage to the rear bumper cover. The weather at the time of the collision was cold and it was just starting to snow. The road surface is blacktop and was wet. There were no obstructions to visibility or any roadway hazards.

Crash Number	Road	Marker	Date	Time	Weather	Injuries	Fatalities	Type	Description
12	FAS 0237	0.00	1/21/2011	8:45	Unknown	0	0	Rear End	This two vehicle, no injury, non-reportable crash. Op #1 reported that he stopped at the stop sign on Stagecoach Road at Rte. 100 as Veh #2 accelerated forward past the stop sign towards the intersection. Op #1 eased off the brake rolling forward looking (to his left) over and around the snowbanks, making sure the way was clear. Op #1 was not sure if Veh #2 backed up into his vehicle or if he rolled into vehicle #2. Op #2 reported that he was stopped at the stop sign at Stagecoach Road/Rte. 100 intersection with his foot on the brake waiting for traffic to clear when he felt a jolt. The stop sign at this intersection faces the southbound lane of Stagecoach Road and is positioned approximately two car lengths from the southbound lane of Rte. 100 where there is a stop line. Motorists often stack up in this package until it is safe to enter Rte 100. During the winter months, motorists often ease forward of the stop sign into this package enabling them to see around the snowbanks to determine if it safe to enter Rte. 100. This is a busy intersection making it tricky at times for motorists to enter (or exit) Rte 100.

Crash Number	Road	Marker	Date	Time	Weather	Injuries	Fatalities	Type	Description
13	FAS 0237	0.00	12/16/2011	7:15	Rain	2	0	Rear End	In the area where the collision occurred, the road is paved with paved shoulders and in good general condition. The roadway is straight, level and was wet. There is a posted stop sign just before the intersection. At the intersection, there is a white line with the word "STOP" painted on the pavement. There was heavy cloud cover with a light rain and it was cool out. Visibility at the intersection was good. Op #1 stated he was southbound on the Stagecoach Road and saw Veh #2 was stopped. Op #1 stopped behind vehicle #2 and they both waited for traffic. Op #1 said he was looking to his left and saw a van taking a right turn onto Stagecoach Road. Op #1 hit the gas but did not look back in front him and collided with vehicle #2. He stated he could not have been going more than 5 miles per hour at the time of the collision. Op #2 stated he was southbound on the Stagecoach Road and was stopped at the white stop line at the intersection. Op #2 was looking left for about three to four seconds and got hit from behind. Just before he stopped, Op #2 looked in his rear view mirror and saw headlights. After the collision, he checked on the other operator. Op #2 advised Op #1 stated it was his fault. Based on the information above, the primary cause of this collision was Op #1 following Veh #2 too closely. Inj 4
14	FAS 0237	0.00	3/28/2012	10:25	Rain	0	0	Rear End	Two-car accident with no injuries. Op #1 reported she was headed south on Stagecoach Road approaching the intersection with Pucker Street. Op #1 was looking over her shoulder for oncoming traffic and did not see that Veh #2 was stopped. OP #1 stated she ran into the rear of Veh #2. Op #2 said she was at a complete stop when the accident happened.

Crash Number	Road	Marker	Date	Time	Weather	Injuries	Fatalities	Type	Description
15	FAS 0237	0.00	10/2/2013	7:50	Cloudy	0	0	Rear End	Two-car collision. Op #1 advised he was stopped at the stop sign on Stagecoach Rd behind Veh #2. Op #1 saw Veh #2 begin to pull onto Rt. 100 and he checked one more time over his shoulder for oncoming traffic as he began to pull out. When Op #1 looked up, he advised he could not avoid the collision with Veh 2. Op #1 advised he thought Veh #2 had pulled out and out of his way and had not looked back before pulling onto the roadway. Op #1 advised it was his fault. Op #2 advised she was stopped at the stop sign and began to pull out onto Rt. 100. Shortly after she began to pull out, she felt the contact from behind as Veh #1 struck her. The road was blacktopped and dry. The weather was cloudy and warm. Veh #2 pulled away from the stop sign and Op #1 followed while checking for oncoming cars and not making sure that Veh #2 had cleared out of the way for him to proceed. Visibility at the scene was good and the road surface was free of hazards.
16	FAS 0237	0.00	2/3/2014	9:31	Cloudy	0	0	Rear End	Op #1 stated she was traveling south on Stagecoach Road and as she approached the intersection Veh #2 started to moved forward and she did not see that Veh #2 stopped again and Op #1 struck the rear of Veh #2. Op #2 stated that he was traveling south on Stagecoach Road. Op #2 stated there was a vehicle in front of him at the stop sign and he moved forward after that vehicle proceeded out onto Route 100. Op #2 stated he moved forward and stopped at the stop sign and Vehicle 1 struck the rear of his vehicle. Investigation determined that both vehicles were traveling south on Stagecoach Road when Vehicle 1 struck the rear of vehicle 2 as it stopped for a stop sign.

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Crash Number	Road	Marker	Date	Time	Weather	Injuries	Fatalities	Type	Description
17	FAS 0237	0.00	9/12/2014	2:41	Cloudy	0	0	Single Vehicle Crash	A vehicle had come to an uncontrolled rest on the driver's side of the vehicle. There was smoke coming from the vehicle. Operator complained of knee pain and had small cuts on his knees and the top of his head. Operator said he was uninjured besides the knee pain. Operator was traveling southbound on Stagecoach Road and went off the roadway, colliding with a set of mailboxes, a telephone pole, and came to an uncontrolled rest on the driver's side of the vehicle on the side of the road at the intersection of Pucker Street on Stagecoach Road. Operator had a strong odor of intoxicants emitting from his breath along with bloodshot watery eyes and had a difficult time understating where he was traveling from prior to the crash and appeared to be highly intoxicated. Operator said he was traveling about 50 miles per hour prior to the crash. Investigation shows the vehicle's southbound path indicated a slow drift off the road and traveled 139 ft. 1 in. before impacting a mailbox post constructed from an old telephone pole. This caused the vehicle to tip up onto the left side tires like a car stunt. The vehicle appears to have traveled on the left side tires until at 186 ft 3 inches it struck a utility pole with the front right tire shattering the rim and taking a chunk out of the pole. The vehicle then traveled on its left side tires until impacting a tree at 286 ft 5 in and then rolling onto the driver side at a position of uncontrolled rest. The vehicle was totaled. There were no skid marks. The vehicle had been traveling south on Stagecoach Road. The road is straight in this area with a posted 33 mph speed limit. The operator said he might have been going 50 mph. He smelled of intoxicants and was subsequently processed for DUI

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Crash Number	Road	Marker	Date	Time	Weather	Injuries	Fatalities	Type	Description
18	FAS 0237	0.00	9/17/2014	20:17	[No Weather]	0	0	Left Turn + Thru	Two-vehicle crash. Op #1 stated the crash was her fault. Op#1 was traveling south and turned left into vehicle 2. She stated she was not paying attention and did not notice the other vehicle. Op #2 stated she had just turned north onto Stagecoach Rd when the other vehicle turned left into her and hit her. There was minor damage to the driver's side bumper of vehicle 2. The primary cause of the accident was vehicle 1 turning in front of vehicle 2.
19	FAS 0237	0.00	2/7/2015	10:10	[No Weather]	0	0	Rear End	Two-car accident with no injuries. The road was wet but clear following a recent snow. The weather was also clear and sunny. Op #1 reported they were pulling off Stagecoach Road when he thought the vehicle ahead of him had started to go, so he started to go. Once he realized vehicle #2 had not pulled out, he was unable to stop in time to avoid hitting him. There was minor damage to the front lower bumper area of vehicle 1, and fairly extensive damage to the rear trunk and bumper of vehicle 2. Op #2 stated he was stopped at the time of the accident.
20	FAS 0237	0.01	2/10/2014	8:20	Snow	0	0	Rear End	Two-vehicle crash. At the time of the crash, the roads were snow covered. Op #2 advised he was traveling south on Stagecoach Road and stopped at the stop sign. Op #2 advised he began to enter VT RT 100 when his vehicle was hit from the rear. Op #1 advised he was behind Veh #2 when Veh #2 stopped at the stop sign at the Stagecoach Road and VT RT 100 intersection. Op #2 checked the southbound traffic and began moving forward making contact with Veh #2. This accident could have been avoided had Veh 1 stopped and looked in the direction he was traveling. There was no damage to the front of Veh #1. Veh #2 had extensive damage to the rear of the vehicle.

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