

## **Fatal Angle Collision Embro Road & Perth Road 26 South West of Stratford, Ontario, August 13, 2011**

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It was reported that yesterday afternoon a northbound Toyota passenger car on Embro Road stopped at the intersection with Perth County Road 26. This is a busy intersection with a flashing red/amber warning light overhead. The driver of the Toyota, Mr. Ralph Fildes of Ottawa, reportedly looked left and right and then pulled out just as a platoon of three eastbound vehicles approached the intersection.

The eastbound driver of a Chevrolet Cruze drove into the driver's side of the Toyota and both vehicles travelled toward the north east quadrant of the intersection. The Cruze stopped on the edge of the roadway pavement while the Toyota struck a traffic sign and then slid into some very tall grass on the roadside ditch. Mr. Fildes sustained fatal injuries.

Here are some photos from the accident site taken yesterday evening shortly after the roadway was re-opened from the police investigation.

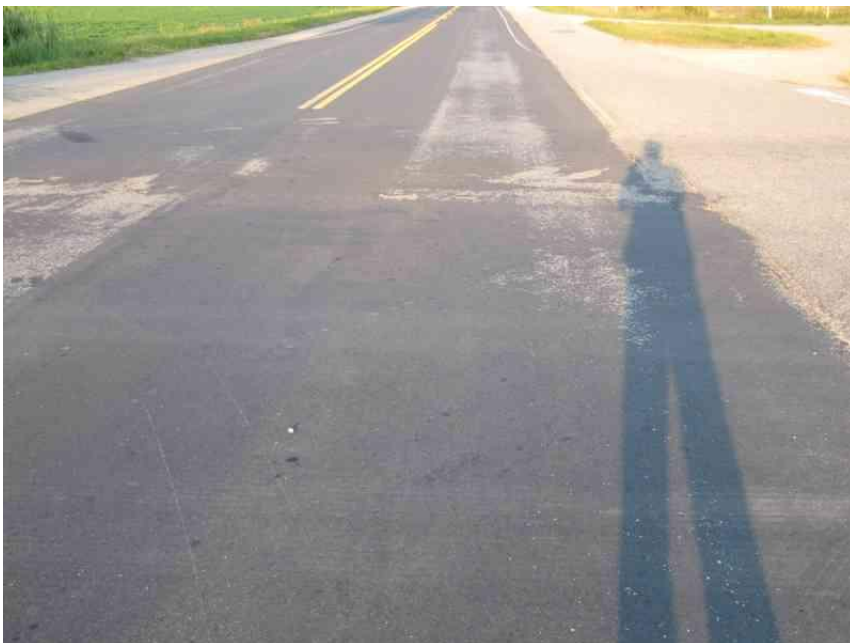
First we see a view looking eastward along Perth Road 26 and this is the view that the eastbound Cruze driver would have seen as he approached Embro Road.



As we get closer to the intersection we can begin to see the Embro Road. Mr. Fildes was crossing from the right to the left in this view.



As we approach the intersection of the two roads you can note that there are no visible skid marks from the Cruze but also note that this vehicle is, at most, likely more than a year old and its more modern technology might have influenced the evidence of any pre-crash braking. What you should also observe is that there is no physical evidence of an impact within the eastbound lane of Perth Road 26.



But as we approach closer we can see some tire marks on the other side of the roadway centre-line. This viewed better rotating around 180 degrees and looking back westbound as noted in the photo below. So in the photo below the Cruze is approaching the camera and you should see two tire marks to the north or right side of the roadway centre-line.



If you have followed any of my previous articles you should be expecting fresh gouges in the pavement in the vicinity of where the vehicles struck. But there are no gouges. This is a little un-common but not terribly so.

Remember that the physical evidence in a serious angle collision will not be the same as what you would see in a head-on collision when it comes to gouges. In head-on collisions you can almost guarantee that there will be gouges if there is a fatality and the gouges will be essentially at the point where the two vehicles struck. But in an angle collision the severity of collision ( $\Delta V$ ) is not as large because one of the vehicles is generally moving perpendicular to the travel path of the other, so the likelihood of gouges occurring is lessened. And the second rule of thumb is that if gouges are present they are often located just slightly "past" the point of initial contact of the vehicles. So if both vehicles moved northeast then we would generally expect the gouges to lie slightly north-east of where the impact occurred.

But the above photo shows that the two tire marks start to show up a fair distance to the north and this is beyond what we would expect if the Cruze was simply travelling within its own lane at impact. Instead the evidence would be better explained if the driver of the Cruze steering left just before impact in an attempt to avoid the collision.

Hindsight is 100% right and some would say, well, if the Cruze driver had just stayed within his own lane the fatality might not have occurred. You cannot make such a statement. As a driver faced with someone coming into your lane you have a very short time to select an evasive action. I would have been more concerned if the Cruze driver exhibited no indication of any change in speed or travel direction of his/her vehicle.

But there is an indication that the severity of this impact was reduced, either by the Cruze driver driving at a reasonable speed or because he or she applied the brakes before impact. I say this because of the final rest positions of the vehicles. Below is a view looking north east from the area of impact and looking toward those rest positions.



As is typical, you see the usual scrapes and scratches in the pavement and the spray of dark fluid as the front end of the "front-impacting" vehicle spills its engine fluids. You will note the large stain of dark fluid and that will be the final rest position of the front end of the Cruze. So the Cruze did not travel very far after impact and that should be an indication to you of its speed, regardless of any calculations. The other thing that

should catch your attention is the angle at which both vehicles departed the impact. The travel path of the Cruze was re-directed substantially as result of the impact and that is an indication of its moderate impact speed. Look at it this way, if the Cruze was just flying down the road at tremendous speed it would knock the Toyota out of the way and then it would continue to travel along a similar travel path to the path it took just before impact. Think about Momentum: Velocity X Mass.

Below is a view from the north east looking back toward the area of impact.



Yes, there is evidence that the Toyota travelled some distance into the tall grass after impact, but that is mostly the case in fatal angle collisions. But when we compare this travel distance to other fatal collisions we will see that this distance is not large. So the Toyota was also not travelling "very quickly" after impact and it matches the belief that it had come to a stop and then pulled out just before impact as opposed to simply driving through the stop sign without stopping.

I had some witnesses comment at the site that they could not understand how this man could stop and actually look in the direction of the oncoming vehicles and then proceed to travel into their path. And I hear that quite often, although I also hear much worse judgments. I can only say that the explanations for why these things happen are usually more complicated than the simple arm-chair quarter-backing that so often takes place.