

Man Sustains Fatal Injuries From Impact of Concrete Bridge Abutment South of Tavistock, Ontario

Posting Date: 16 September 2012

In many instances the cause of single-vehicle collisions cannot be identified by examining the physical evidence at the accident site. Such is the case of a fatal collision that occurred on Saturday afternoon, September 15th, 2012 when a southbound vehicle approached a bridge on Line 13 of East Zorra Tavistock Township, South of Tavistock, Ontario.

Below is a view looking south along Line 13 from several hundred metres north of the point of impact.



It can be seen that the roadway contains a slight downgrade for the few hundred metres leading up to a small bridge. Generally the road is straight and the surface is in good condition. The weather conditions on the afternoon of September 15th were good.

Below is a view from the same location but we have used the zoom on our camera lens to bring you to a closer view of the bridge. This shrinking of the length of the road often allows one to evaluate any unusual conditions of the road.



As can be seen in the above photo there does not appear to be anything unusual in the character of the road as one approaches the bridge. Even from this location one can appreciate that the bridge is relatively wide considering that this is a low volume road and a high level of service would not be expected.

One drawback is that the bridge abutments do not contain any guardrails. Such a rail, if it was firmly attached to the concrete abutment, would have provided the deflection of the vehicle and would likely have resulted in relatively minor consequences. However the reality is that many bridges on low volume roads in southern Ontario are unprotected like this.

As we get nearer to the bridge we can find how the vehicle travelled off the road surface and onto the grass at a relatively shallow angle, as shown in the southbound view of the photo below. It may not be easy to detect the tire marks on the grass because the vehicle has only pushed the grass down rather than pulling it out or tearing it. Signs of damage such as pulling/tearing is often indicative of a tire that is either being accelerated or braked. So the absence of any obvious evidence of this damage would suggest that the vehicle simply travelled, at highway speed, off the road surface. There could be several reasons why this would occur but drawing a conclusion from only this evidence could lead to an erred interpretation of what actually occurred.



The photo at the bottom of the previous page shows a closer view of the concrete bridge abutment where the impact occurred. It is not unusual to observe very little damage to such an abutment even though a collision might be quite severe. There was a hazard warning sign attached at the abutment and it appeared to be of newer vintage with reasonable reflectivity. The physical evidence indicates that the vehicle struck the abutment fairly centrally with its front end as it did not travel any appreciable distance after impact.

Looking back northward from the location of the abutment, as shown in the photo below, you can see the tire marks in the grass and the conditions of the roadway leading up to the impact.



The evidence of scraping on the roadway was caused after the impact as the vehicle was dragged from its rest position, likely to be transported by a tow truck.

The photo on the following page is taken from south of the bridge, looking northward along its west side. It can be appreciated that the bridge wall indicates that the bridge is substantially wide.



Measurements indicate that the width from this west bridge wall to the roadway centre-line was about 4.3 metres and the overall bridge deck was just over 8.6 metres. The width of the southbound travel lane just north of the bridge was about 3.25 metres. Thus the wall of the bridge was a good metre outside of the edge of the lane. These numbers do not indicate anything unusual or substandard.

Other than the lack of a guardrail this site did not possess any safety issues that would lead one to conclude that a vehicle would be drawn toward impact with the concrete abutment. The physical evidence further suggests that there was no obvious disturbance in the tire marks leading up to impact to suggest the vehicle was out of control and the driver was making efforts to re-direct or change the speed of the vehicle.

We have observed an abundance of police reports recently where it was concluded that the driver in a fatal collision experienced a medical condition which caused the vehicle to drift off the road. Such a conclusion was quite uncommon in the earlier years of our career. When it is officially recorded that a driver dies from a medical condition the consequence is that the event is not counted in the official statistics as a fatal motor vehicle collision. But how many of these instances exist in Ontario and whether there is an increase in these reported events is not readily available.

We can only indicate that why the present collision occurred is a matter that cannot be resolved from simply examining the physical evidence at this site.

Gorski Consulting
London, Ontario, Canada

*Copyright © Gorski Consulting,
All rights reserved*