

Rt 99 Vehicle Accidents

Reportedly there have been 28 left-turn, hit-from-behind vehicle accidents per year on Rt 99. Remarks here relate to this.

Dave at O'Reilly Auto Parts had valuable Rt 99 accident information. It is worth your talking with him to get the details. He indicated that there used to be a median strip in front of the store which caused a disproportionately large number of accidents. When the Town removed the median strip to stop accidents there, accidents ended.

Both Brian at OK barbershop and Rusty at Rusty's Lumber commented on the great difficulty large truck rigs now have making turns even with 4 lanes.

Although a deeper understanding of transportation data is necessary, this is the way it looks to me now:

As to the 28 accidents annually, a definitive measure is "Crash Rate by Vehicle Miles Traveled." The following table assumes that the section under consideration is one mile of Rt 99. A first approximation suggests one accident per 130,357 miles travelled, roughly the number of miles that a driver travels in 9.77 years between accidents of the same severity. I don't know how this stacks up against common urban accident rates (data for fatalities is readily available, but I have not yet seen good urban fender bender, property damage only stats).

Daily count	Days	Annual count	Accidents	Miles per accident
10,000	365	3,650,000	28	130,357

<https://www.trafficsafetystore.com/blog/who-causes-accidents/>
Men drive 16,550 miles and women drive 10,142 miles per year.

	Miles per yr	Yrs between Accidents
Man	16,550	7.88
Woman	10,142	12.85
Average	13,346	9.77

More specifically, the 28 accidents at issue were rear-enders. This is what Allstate Insurance says about that kind of accident: "Rear-ending results when one car collides into the back of car in front of it...This type of crash accounts for [29 percent of all accidents](#). ... **64 percent of those involved in rear-end crashes were not looking at the road at the time of the crash.**" [emphasis added]

Given this and the following circumstances that are [causes or contributory causes](#) of vehicle accidents, it would seem that a vast reduction of accidents by applying a new design theme to a road is unlikely except where egregious errors in road design exist to begin with. The second percentage column in the table shows the cumulative percent including prior categories. Before even getting to conscious decision errors, 75% of accidents can be attributed in part or whole to Driver Inattention, Vehicle Speed, Alcohol Impairment, or Perceptual Errors.

Driver Inattention	23%	23%
Vehicle Speed	19%	41%
Alcohol Impairment	18%	60%
Perceptual Errors	15%	75%
Decision Errors	10%	85%
Incapacitation	6%	91%
Other	9%	100%

There is no sketch of the proposed project (that I am aware of) to draw conclusions from. It would be only a guess whether the outcome of the grant would reduce, increase, or leave accidents roughly the same. But let's say for the sake of a highly optimistic conjecture that the grant project indeed did reduce the number of accidents by 25%, explicitly from 28 accidents per year to 21 accidents per year. And let's say that the bodily and property damage for each accident averaged \$4,000 per accident. Then, the value for reduced accidents would be \$28,000 per year [$\$28,000 = (28 - 21) * \$4,000$] from this purportedly \$2 million dollar project. All of this is blind guesswork, but from it you can see the kind of calculations that can be instructive even when assuming the grant is beneficial.

Presumably the 28 accidents a year is a recent annual figure [Or, is it the number of accidents during the past 3 years, as used in some studies?]. Without viewing this in context of past years of "Crash-Rate-by-Vehicle-Miles-Traveled" data on this same section of road, we would not know if the 28 accidents were a statistical anomaly or whether they were a part of a trendline change in the number of accidents. The change in driver attentiveness, thanks to cell-phones, is now causing accident rates to increase. There is even a semi-official name for it: "distracted driving."

Reportedly, [1 out of every 4 car accidents](#) in the United States is caused by texting and driving. This doubles the importance of thoroughly analyzing data over sufficiently long periods of time, and where necessary making surgically correct adjustments in the road itself, rather than assuming a blunt instrument like a grant can be relied on to improve accident rates.

Specificity is required. To make a competent analysis would seem to require detailed information on each of the 28 accidents such as:

- location
- severity, bodily injury
- severity, property damage (e.g., fender benders)
- direction of travel (East or West)
- driver age and whether under the influence of drugs or alcohol
- time of day, to account for blinding sun (eastward in morning, westward in evening) or night
- month of year
- weather and road conditions (especially ice or snow)
- data over many years to establish historical trend for: number of accidents per year
- data over many years to establish historical trend for: traffic count on that section of road
- data over many years to establish historical trend for: Crash-Rate-by-Vehicle-Miles-Traveled

If the grant was for the purpose of accident reduction, how much of this kind of information was provided to VDOT for analysis? Indeed a quick examination of the details of these 28 accidents might indicate appropriate correction long before ever reaching the grant stage. A case in point is the O'Reilly median strip accident example that resulted in pulling out the median strip where accident rates were high.

I walked to all business on Rt 99 between Duncan and Bob White, discussing the grant proposal with all available owners and store managers. To put it politely, there was no support for the measure and the opposition was universal, without prompting from me. Those who had not heard about the 4 lane to 2 lane grant proposal were simply stunned.

As I have repeatedly said, I feel Shawn is an exceptionally good Town Manager and that the work that Town Council faces is difficult and demanding. Having said this it strikes me that the message is, "Pull the tooth and get on with it." It is a time for applying reason, not a grant.