How dangerous are left turns?

*There's nothing special about this accident; it was caused by the **operator's failure to yield during a left turn**. Although I discussed left turns in a previous document, I thought it necessary to elaborate once again **how unsafe these left turn maneuvers really are**.*

2 ejected from vehicle in Aroostook collision

By Tony Reaves, BDN Staff
Posted Aug. 25, 2014, at 7:41 a.m.
(excerpt of original article)

Monticello, Maine — Three were injured in a collision Sunday evening on Route 1, according to a release from the Maine State Police.

Police say Josiah Nash, 27, of Blaine, was traveling south on Route 1 in a 1965 Volkswagon Dunebuggy at about 6:30 p.m. when he was struck by Barbara Watson, 71, of Monticello, who was **making a left turn** from the northbound lane onto Silver Street.

http://bangordailynews.com/2014/08/25/news/aroostook/2-ejected-from-vehicle-in-aroostook-collision/

The case for almost never turning left while driving

By Matt McFarland April 9 (excerpt of original article)

*"Federal data have shown that **53.1 percent of crossing-path crashes involve left turns, but only 5.7 percent involve right turns**."*

***"And 36 percent of fatal accidents involving a motorcycle involve a left-hand turn in front of a motorcycle**, according to the National Highway Traffic Safety Association."*

Left turns are unsafe for everyone.

Federal data have shown that 53.1 percent of crossing-path crashes involve left turns, but only 5.7 percent involve right turns. That's almost 10 times as many crashes involving left turns as right. A study by New York City's transportation planners concluded that left-hand turns were three times as likely to cause a deadly crash involving a pedestrian as right-hand turns. And 36 percent of fatal accidents involving a motorcycle involve a left-hand turn in front of a motorcycle, according to the National Highway Traffic Safety Association.

"Left turns create some concerns when it comes to generating potential for congestion, back-up traffic flow, safety, accident situations," said Phil Caruso, the deputy executive director for technical programs at the Institute of Transportation Engineers. **"So if you can eliminate left turns, especially concurrent left turns, that's a positive."**

We could save lives by restricting left turns, but we're unwilling to sacrifice what we see as a needed convenience. Even if you discount the safety concerns, the efficiency of turning left is questionable.

The case for almost never turning left while driving (continued):

Engineers don't like left-hand turns.

> *"**Left turns create some concerns when it comes to generating potential for congestion, back-up traffic flow, safety, accident situations…So if you can eliminate left turns,** especially concurrent left turns, **that's a positive**."*

Tom Vanderbilt, author of the popular book Traffic, has called left turns "the bane of traffic engineers." Solutions such as diverging diamond interchanges have been proposed. Here's the problem with left turns, according to Vanderbilt:

It's either a car stopped in an active traffic lane, waiting to turn; or, even worse, it's cars in a dedicated left-turn lane that, when traffic is heavy enough, requires its own "dedicated signal phase," lengthening the delay for through traffic as well as cross traffic. And when traffic volumes really increase, as in the junction of two suburban arterials, multiple left-turn lanes are required, costing even more in space and money.

http://www.washingtonpost.com/blogs/innovations/wp/2014/04/09/the-case-for-almost-never-turning-left-while-driving/

What does the FHWA say about left turns?

> *"Research suggests **approximately 72 percent of crashes at a driveway involve a left-turning vehicle**."*
>
> *"Where restricting turning movements to and from a driveway is possible, **it is most beneficial from a safety perspective to prohibit left-turning movements**."*

*"Where restricting turning movements to and from a driveway is possible, it is most beneficial from a safety perspective to prohibit left-turning movements. Research suggests that approximately 72 percent of crashes at a driveway involve a **left-turning** vehicle…approximately 34 percent of these crashes are due to an outbound vehicle **turning left** across through traffic. Twenty-eight percent of crashes are due to an inbound, **left-turning** vehicle conflicting with opposite direction through traffic, and 10 percent are due to outbound, **left-turning** movements incorrectly merging into the same direction through movement."*

http://safety.fhwa.dot.gov/intersection/resources/fhwasa10002/

What does the MaineDOT say about left turns?

*"Assuming 10 trip ends per drive and an equal number of **left** and right turns, Alternative 2B's ability to satisfy the system linkage and traffic congestions needs is questionable."*

*"…and **the number of left turns, contribute** to the poor LOS and **safety concerns**, and the inability of Alternative 2B to satisfy the system linkage purpose and need effectively."*

*"Limited opportunities exist to control access management on this section of Route 9 from local roads and driveways. **There are ten local roads and 148 existing drives or access points to undeveloped lots.** Assuming 10 trip ends per drive and an equal number of left and right turns, **Alternative 2B's ability to satisfy the system linkage and traffic congestions needs is questionable.** There are several hundred acres that can be developed along this section of Route 9. Additionally, 200 buildings (residential and commercial) would be located in proximity (within 500 feet) of the proposed roadway."*

*"The **lack of existing access controls** and the **inability to effectively manage access along this section of Route 9**, and **the number of left turns, contribute to** the poor LOS and **safety concerns**, and the inability of Alternative 2B to satisfy the system linkage purpose and need effectively."* http://www.i395-rt9-study.com/Pubs/Alts%20Tech%20Memo.pdf (pages 20-21)

How many left turns are in the 4.2 mile section of Route 9 that is 40.8% of the 2B-2 alternative?

"There are ten local roads and 148 existing drives or access points to undeveloped lots."

- Question: How many left turns exist on the section of Route 9 which makes up 40.8% of the 2B-2 alternative?
  - Answer: If you traverse that section of Route 9 from one end to the other and back again, you will come upon **158 left turns**!!
- So tell me again, **how does alternative 2B-2 meet the Safety Concerns Needs of this study?**

*"In fact, some courts have stated that **the left turn is the most dangerous maneuver a motorist may execute**, and thus great caution must always be undertaken."*

***"Left-hand turns are especially risky, because you're attempting to drive across oncoming traffic.** If your judgment is off or your visibility is compromised, making a left-hand turn that isn't controlled by a traffic arrow may be dangerous."*
http://seniordriving.aaa.com/improve-your-driving-skills/everyday-driving-challenges/left-hand-turns

*"When an automobile accident occurs with a vehicle attempting to make a **left turn**, the law sets forth certain rules and presumptions regarding the fault of the parties involved. **The law recognizes that a left turn is a dangerous maneuver because the left turning vehicle enters the lane of traffic for other vehicles.** In fact, **some courts have stated that the left turn is the most dangerous maneuver a motorist may execute, and thus great caution must always be undertaken**."*
http://www.cochranfirm.com/civil/auto-left-turn.html

Left turns are inherently dangerous as they can lead to nasty head-on collisions, just like any other accident caused by the failure of the operator to stay in the correct travel lane. **Crossing traffic is dangerous no matter where it happens and it is just as dangerous when discussing the 4.2 mile section of Route 9 that is 40.8% of the overall length of the 2B-2 alternative.**

"…each access point added increases the annual accident rate by seven percent."

"…ten local roads and 148 existing drives or access points…"

FHWA data suggests that you are 1,106% more likely to have an accident on 2B-2 than any of the 79+ studied alternatives that satisfied the original System Linkage Need.

FHWA documentation states: ***"In rural areas, each access point added increases the annual accident rate by seven percent."***

With access management added to the mix, question how 158 additional access points added to this new connector from the onset will affect **Safety Concerns and Traffic Congestion**. Why would professional engineers select and promote 2B-2 with an additional 158 access points when any of the 79+ studied alternatives satisfying the System Linkage Need had zero access points? **The 4.2 miles of Route 9 integral to 2B-2 - includes an average of 37.6 access points/mile.**

As the number of access points increases—the accident rate increases—decreasing SAFETY.

Why would the MaineDOT and the FHWA want to squander $61 million on a defective connector when there are so many unmet transportation needs and shortfalls in our state?