

Healthy Streets

AVOIDING STROADS

By George Liu

Outside the core of Toronto and Hamilton, decades of auto-centric development in the GTA has created an environment that is hostile to people using various forms of active transportation. Addressing this challenge requires careful consideration of a rights-of-way functionality, widths and conflict points.

Speaking at the Toronto Centre for Active Transportation Complete Streets Forum October 1, **Strong Towns** president **Charles Marohn** told participants that when designing the urban environment it is critical to consider first and foremost the function of a right-of-way, and whether it best serves its function as a road or a street.

“What we find is that... we can build great roads that connect places really cost effectively, and we can build [streets in] great places that produce a lot of wealth, at reasonable cost. In the middle, we try to do both [with arterials]. It’s that middle area, where we have speeds that are too high [and conditions that are too complex]... This middle area is what we call a ‘stroad’. It is the futon of transportation. The stroad tries to do two things at once and does neither very well.”

Unfortunately, the stroad, according to Marohn, is the dominant right-of-way design in most North American cities. He argues the solution to building better cities is either to reduce speeds and increase complexity to create a vibrant and safe street, or to limit access and increase speeds to make a high-performance road.

When designing streets, evidence shows that wider lanes are not necessarily safer. City of Toronto senior transportation planner **Dewan Masud Karim** uses empirical evidence from studies in Tokyo and Toronto to conclude that the safest lane width is between 3.1 and 3.2 metres. Wider lanes are associated with greater crash rates and higher impact speeds. Given this evidence, there is good financial and safety reasons for all municipalities to reconsider their current rights-of-way allocation. By reducing lane width, cities can create space for wider sidewalks, streetscaping and bike lanes.

Mobycon CEO **Johan Diepens** uses Dutch street design as an example of how narrow urban streets are safer for all vulnerable users. Narrow lanes within narrow streets force interaction between cars and cyclists, and reduce the speed of all traffic.

Diepens explains, “at 30 km/h, we say, that we can mix the cyclists and with cars, but we can only mix those two groups when the street is narrow, because you want interaction between those two... If you make it too wide, then you have a problem, because then I can go in the middle and not [interact] with the cyclist. If you are [a person on a bicycle], then you get in big trouble. ... If a car is going 50 km/h beside you, then it is unpleasant and unsafe. ... The important thing we found out is that if [a person] is hit by a car at 30 km/h, then you have a 90 per cent chance of going home. If you get hit at 50 km/h, then you only have 20 per cent chance [of survival].”

The implementation of complete streets, especially in the suburbs, faces many challenges. One of these challenges, says Ajax senior transportation planner **Hubert Ng**, is the requirement to conform to traffic engineering standards.

“Our engineering department claims that multi-use trails are not conventional and not part of engineering standards, and is therefore a bit reluctant to implement those... so, we’ve got some internal battles.”

Meanwhile, the Peel Region has conducted an innovative road characterization study as part of its Long Range Transportation Plan, which seeks to integrate the land use planning and transportation planning processes.

Peel principal planner **Lindsay Edwards** says, “It is not about who is using the road, but about how it is used... [and] what we found was that conflict points

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CATCHING UP WITH TECHNOLOGY

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Hinton sees ePlan as a way for the city to play catch up with the industry when it comes to technology.

”That’s the way the world works now; we’re just catching up to this. The design industry and architecture and engineering have been in this media since the advent of CAD, and we actually have them dumb it down for us by printing it. And

the challenge with printing it is it’s outdated as soon as it’s printed... those drawings are a living document, they’re always changing,” he said.

The service is currently in a soft launch phase and is scheduled for council consideration October 21, with a full roll-out of the service anticipated early next year. [nru](#)

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really limit our ability to plan for complete streets.” Hence, she explains, effective spacing of access points on regional roads requires not just conformity to the traffic manual, but also requires due consideration for the intended use of the right-of-way.

Ultimately the end goal of road safety efforts, best articulated by Swedish organization **Vision Zero**, is to achieve a highway system with no fatalities or serious injuries in road traffic.

Vision Zero network director **Leah Shahum** emphasizes that, “Traffic crashes are preventable... humans are fragile... and speed matters most.” The solution lies in effective stakeholder engagement, she says. Traffic fatalities cannot be eliminated by engineering solutions alone.

By designing streets that prioritize active modes of travel, society also reaps the benefit of increased physical activity, such as walking and cycling, Toronto Public Health healthy public policy director Dr. **Monica Campbell** explains.

“Complete streets are healthy streets because they increase safety for all users, [especially vulnerable road users].” She adds, “You see there is an inverse relationship that countries with high mode share of walking, cycling and transit infrastructure, in fact, have the lowest obesity rates.”

York Region performance monitoring and research head **Angela Gibson** articulates the goal of the complete street as being part of a greater urban planning vision. Gibson envisions that, “The final destination is not just a complete street. The destination is a productive street and how we can change the auto-centric paradigm.”

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