From horse-drawn trams, to electric streetcars, to personal automobiles, the design and usage of a city’s streets are good indicators of evolving societal trends and priorities. Within the city of Ottawa, the next step in that evolution is currently underway with the adoption of the City’s Complete Streets policies. What is a Complete Street? “Complete Streets incorporate the physical elements that allow a street to offer safety, comfort and mobility for all users of the street regardless of their age, ability, or mode of transportation” [2].

“Complete streets are designed to take all users, ages, abilities and modes of travel into consideration. In other words, streets are more than through-ways for cars getting from point A to point B. Complete streets are about moving people – not just cars – and creating a more efficient transportation system in the process.”

- says Robb Barnes, Executive Director, Ecology Ottawa.

De-emphasizing automobile users in street design

Throughout Ottawa

Complete Streets are designed for all users, encouraging more transit use, walking and biking

Creation of safer neighbourhoods, reduction on car dependence and lowering of vehicle emissions
In the past several decades, street use in Canada has been dominated by a focus on automobiles. Facilitating the efficient and timely passage of large numbers of personal vehicles has typically been the priority, while consideration of other groups of road users such as pedestrians and cyclists is often squeezed in, working around the needs of car-users.

Launched in 2004 in the United States by the National Complete Streets Coalition, the so-called Complete Streets approach to street design and use changes this, with equal emphasis placed on all road users, rather than simply adding additional modes of transport as an afterthought\(^3\).

Formally adopted by the City of Ottawa in November 2013 as part of the Transportation Master Plan Update\(^4\), Complete Streets policies have previously also been adopted in Toronto (2009), Calgary (2009), Waterloo (2010), Edmonton (2013) and Ajax (2013)\(^5\). This initial adoption of Complete Streets policies in Ottawa was subsequently operationalized through the release of a Complete Streets Implementation Framework in October 2015 which outlined in more detail how these new policies were to be implemented\(^6\).

Importantly, this framework aligned with new Multi-Modal Level of Service guidelines developed by the City\(^6\): the concept of Level of Service is a common metric used to evaluate the performance of a transportation system, typically from the perspective of a driver. As the historic emphasis of transportation planning has been on cars, such Levels of Service were previously defined only for motor vehicles.

These new Multi-Modal Levels of Service guidelines document the development of equivalent performance metrics for other modes of transport that have been overlooked in the past, such as guidelines and metrics available to help planners include pedestrians, cyclists, transit and trucks in their planning.

Complete Streets are lauded as offering a wide ranging of benefits as compared to traditional street designs\(^7\):

- they help reduce traffic and thus traffic accidents by encouraging more people to take public transit, bike and walk;
- they contribute to building safer, more livable and welcoming communities;
- they encourage more active forms of transport, which in turn have substantial public health benefits;
- less traffic on the roads results in reduced fuel usage and consequently lower greenhouse gas emissions and other pollution (the transportation sector in Ottawa is currently responsible for 40% of all local greenhouse gas emissions\(^8\));

They improve the lives of people with mobility impairments or disabilities because their needs are explicitly considered in the street design process.

So far, a number of road projects have been completed in Ottawa that incorporate Complete Streets design principles: O’Connor Street, Churchill Avenue and Main Street; Campeau Drive Extension in Kanata and Robert Grant Drive in Stittsville; as well as sections of St. Laurent Boulevard and Queen Street.
In spite of this vast suite of benefits, Ottawa has experienced first hand some of the practical growing pains of the journey towards a Complete Streets approach to transportation. Following the 2016 transformation of Churchill Avenue and Main Street, some users have had difficulty acclimatizing to the reduced number of vehicle lanes, slower speed limits and the narrowed intersections. They have expressed concerns about the added attention drivers must pay to the new bike lanes and the high speeds of some cyclists, as well as excess new road signage[9].

Time will tell if these early impressions are simply a normal part of acclimatizing to this new normal or if they are a sign of true reasons for concern. According to Kornel Mucsi, Program Manager of Transportation Planning at the City of Ottawa, most users are experiencing the new streets as a win-win: in cases where elevated cycle tracks are implemented, bicyclists are typically happy to be safely off the road and away from cars, while drivers are likewise happy that bikers are off the road and out of the way. Looking to the future, the City of Ottawa has further Complete Streets projects planned for sections of Elgin Street, Bank Street and St. Laurent Boulevard[9], as well as many new suburban streets.

**REFERENCES**

[5] https://completestreetsforcanada.ca/what-are-complete-streets

*Figure 1: Bikes in among vehicle traffic on Elgin Street, circa 2017[19]*