

# COMPLETE STREETS FOR NIAGARA





# Complete Streets



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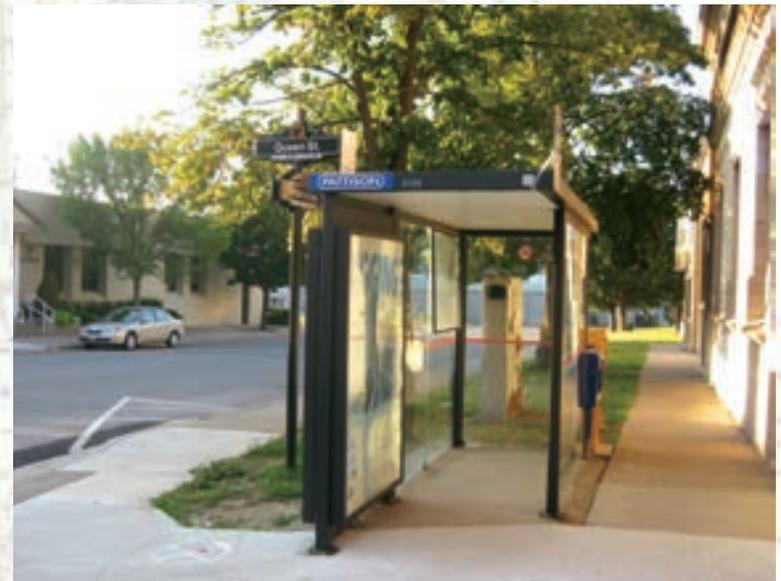
# Why Complete Streets?

In November of 2011, an Active Transportation (AT) Summit was hosted by Healthy Living Niagara to explore ways to make walking and cycling more accessible and occur more often within the region. The participants who attended the summit included municipal planners and engineers, elected officials, community stakeholders and local residents. A list of 15 actions was derived by the participants; the top action requested was the implementation of 'Complete Streets' to help encourage more active transportation on existing roads. In response, Niagara Region initiated the *Complete Streets for Niagara* project and will strive to facilitate the completion of streets within Niagara.

The participants committed to do more than 'talk' about the issue and agreed to participate actively in the implementation of any of the recommended projects that would help facilitate more active transportation in the region. This project attempts to acknowledge the desire of those 100 participants and work to improve active transportation levels across Niagara.

This discussion paper aims to:

- Define Complete Streets and how they might function in the Niagara Region
- Illustrate best practices on how to implement Complete Streets enhancements and policy
- Raise questions about implementation and illustrate the benefits of improving active transportation in the Niagara Region
- Outline the project process



# What is a Complete Street?

There are many definitions of 'Complete Streets' which share common themes. The most widely cited definition is provided by the National Complete Streets Coalition (NCSC), which states:

*“A complete street is a road that is designed to be safe for drivers; bicyclists; transit vehicles and users; and pedestrians of all ages and abilities.”*

Complete Streets can be implemented on many scales and may include a main arterial or Regional road with bicycle lanes, a suburban road with sidewalks, or a rural road with widened shoulders for bicycle or pedestrian traffic. It is important to note that all users do not need to be accommodated in order for a street to be complete (Toth, 2011); however, there should be an accommodation of more than just one transportation mode.

Complete Streets typically exhibit good urban design which can stimulate interaction between the modes, the people, and the built environment. Complete Streets help to balance the use of cars, bicycles, pedestrians and public transit vehicles on a right-of-way and are designed to function at a slower speed than automobile oriented streets. High vehicular speeds and pedestrian traffic are not a good mix. Complete Streets are designed to move vehicles slower and allow all modes of transportation to share the road at a reduced and safer speed. These improvements are not simply built; they are typically implemented through policies within an Official Plan, Secondary Plan or Community Improvement Plan, after giving careful consideration to appropriate urban design principles within the context of the street being studied.

There is no right or wrong way to complete a street because all streets are different and serve different modes and purposes within their communities. Although the terminology suggests that the right-of-way itself is the area of interest, many professionals and associated academics alike believe that Complete Streets policies should be a focused exercise in place-making. Transportation and land use are intrinsically linked and the development or deterioration of either will impact the other. Complete Street policies improve the movement of modes, universal accessibility, levels of social interaction and the overall design and feel of a street.



# Why does the Niagara Region need a Complete Streets Policy?

“Complete Streets policies are often engineering policies that promote the development of infrastructure for active transportation, pedestrianism and mass transit into new road construction in addition to better urban design” (Toth, 2011). As many as 50 local governments in the United States have implemented Complete Streets policies at a local or state level to achieve more balanced modal splits, less congestion and improved overall health for local residents. Communities that have implemented these policies include Louisville, Charlotte and New York City, which are duly noted as the most effective Complete Street policy makers. In Canada, the City of Waterloo is the only municipality to develop and execute an ‘official’ Complete Street policy so far; however there is inspiring work emerging from the western provinces, specifically in the City of Calgary.



Most Complete Streets policies are used to enhance mobility and accessibility through improvements to the physical right-of-way. Mobility is the act of movement itself, accessibility is the ability of people of all ages and abilities to access and use the infrastructure or facilities; for example being able to take transit or walk to a destination. Providing opportunities for improved accessibility will in turn increase mobility. The underlying desire to improve the circulation and flow of people within a Complete Streets is evident in the various definitions of such policies below:

“Complete Streets policies aim to create a streetscape where people of all ages are able to safely move along and across a street regardless of their mode of transportation.”  
(Hill and Disher, 2009)

“Complete Streets is an urban planning and transportation engineering term used by policy makers to describe roadways purposefully designed and operated to achieve safe, attractive, and comfortable access and travel for all users.”  
(Dr. Henry Moller, U of T, 2010)

Not all Complete Streets policies are branded as comprehensive policies or guidelines, in fact, many are simple site-specific public realm improvement policies embedded in transportation or community development plans. A variety of plans, policies and initiatives can be used to achieve streets which help promote healthy lifestyles, improved social interaction and better mobility. In addition to specific Regional and Municipal Official Plan policies related to Complete Streets some additional measures may include Transportation Demand Management Plans (TDM), Secondary Plans, and Community Improvements Plans (CIP's).

Complete Streets policies are effective tools that can be used to positively shape the communities we live in and achieve a variety of different goals. As stated by Gary Toth at the Complete Streets Forum in Toronto in 2012, “Complete Streets policies are not a mandate for immediate retrofit”. They are however a way to ensure that all construction and rehabilitation projects are chances to improve the existing infrastructure. Complete Streets policies are not a ‘silver bullet’ that fixes all problems, nor are they a prescription on how to make change. Every community is different and requires a unique approach. The policies should be shaped around the current and perceived future needs in a way that is achievable and applicable at various scales. Complete Streets policies are a guide for creating better streets in a community. As stated by John LaPlante at the Complete Streets forum, “every (construction) project should lead to a better street.”



# Complete Streets for Niagara

Most roads within the Niagara region are primarily used by the automobile. While automobiles will always play an important role within Niagara's communities, Complete Streets can help balance the modal share with walking, cycling, and transit. With the introduction of a new pilot inter-municipal Transit System (Niagara Region Transit), improvements to municipal transit services, and the development of a world class bike trail system (Greater Niagara Cycle Route, Trans Canada Trail, Waterfront Trail), municipalities have multiple opportunities for regional connectivity, and encourage more pedestrian and cycle traffic.



Before Complete Streets became a formal term, Niagara had already done some road enhancements that reflected the current best practices across North America. For example, Regional Road 24 (Victoria Avenue) in Vineland underwent a lane reduction to address the issue of vehicle speed, trucks and pedestrians. As part of the retrofit, four lanes were reduced to three and on-street bicycle facilities were provided. Medians and streetscaping were also introduced to calm traffic. Developing and adopting Complete Streets model policies will present the opportunity for more of these proactive measures to be conducted in a formal manner which will ultimately help mitigate the conflicts between motorized and non-motorized modes of transportation on regional and local roads.

To be successful, the *Complete Streets for Niagara* model policies need to have regard for both land-use and transportation; as improving one will almost always improve the other. For example, providing more accessible transit service between municipalities encourages residents to live closer to major stations, thus intensifying an area. Intensified areas attract businesses and reduce the need for lengthy trips by residents for things like groceries and entertainment. Niagara has the existing infrastructure (e.g., roads, street patterns, building stock) and the population to support the implementation of Complete Streets.

# What will Complete Streets look like?

Complete Streets will look different in different places, appropriate to context and to modes expected in that corridor (Laplante and McCann, 2008); as will the policies. For example, a set of model policies for municipalities within the Niagara region will not look the same as those for Toronto's neighbourhoods, nor should they. Although the modes or amount of investment may vary, the policies will share common elements and goals; that of supporting safe, alternative forms of transportation within communities and making streets places to go to and not simply places to go through. While it may not be appropriate to compare the successes of one to the other; Niagara can take inspiration from policies and actions by larger communities. As Niagara works to improve its streets, stakeholders will need to remember that transportation must have character, as well as capacity (Swift, Hall, Chellman, 2003).

Scale will be the biggest obstacle when developing model policies for the Region. Complete Streets within the Niagara Region will have various scales of application due to the geographic and demographic differences amongst the 12 municipalities. In St. Catharines or Niagara Falls, additional bike lanes and transit stops could be supported by the larger populations living in the downtowns, whereas towns with more rural land like Pelham and Fort Erie may be more strategic with their project locations due to low population density and geographic separation.



# Complete Streets and the Public Realm

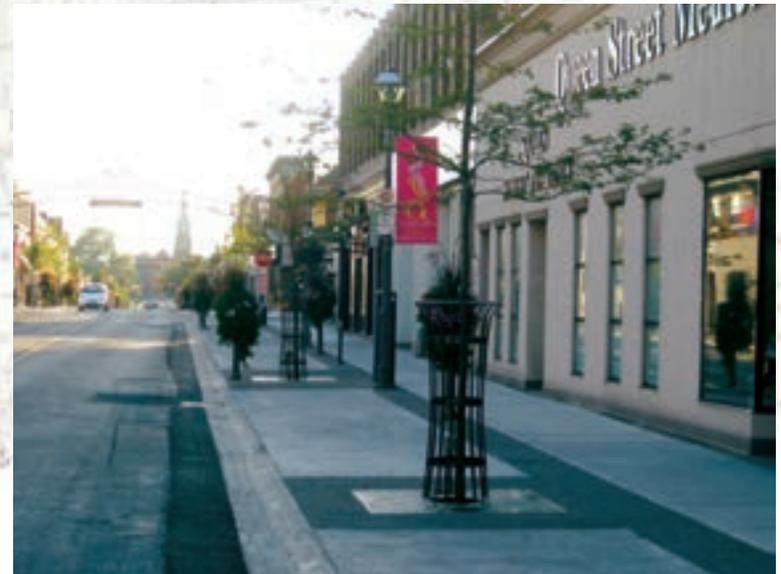
Complete Streets create more opportunities for access and improved mobility while at the same time improving the appearance and functionality of the public realm. The public realm is an important aspect of Complete Streets which is not fully captured within the NCSC definition. “The design of a street is only one aspect of its effectiveness. How the street fits within the surrounding transportation network and supports adjacent land uses will also be important to its effectiveness” (Charlotte Urban Street Design Guidelines). In the larger urban examples like New York City or Charlotte, the city centres already have a compact design and higher population density. In Niagara, the development is more spread out and thus pedestrianism and cycling is more difficult. Streets that are enhanced in areas of interest such as around downtowns, shopping areas or education institutions will have a better chance of being used to their full potential.

In many of the communities, Complete Streets are retrofitted into existing rights-of-way that are undergoing scheduled rehabilitation. There are two ways to accommodate different modes within a street, widen the surface or reduce the number of motorized vehicle lanes. The former is not always feasible. Many of Niagara’s Regional roads cannot be widened due to existing storm water management systems, utilities, roadside infrastructure and available land. Adding more road surface would require a significant investment in the right-of-way and the associated infrastructure (water, sewer, hydro, etc.). Road diets are becoming a more common form of accommodation on the roadways and similarly cannot be applied in all situations due to the required carrying capacity for vehicles.

Policies for implementing Complete Streets must have regard for the monetary constraints of the Niagara Region and the municipalities. This raises the question about “who pays” when it comes to completing Niagara’s streets? The public realm within a Regional right-of way has a complex mix of responsibility which is split between the Region, the local

municipality and property owners. Improvement plans are fairly straight forward; however the cost structure can be an issue of contention because of various levels of responsibility.

In the context of a Regional road, the Region is responsible for everything ‘between the curbs’ such as the road surface, travel lanes, storm water management, lighting, traffic calming medians, and signalization. The local municipality is responsible for sidewalks, on-street parking, landscaping and transit facilities and furniture. The private landowner is responsible for those enhancements on his or her property which can include, awnings, lighting, the building façade and signage. All of these components give a street character and a sense of place; however, the costs associated with their implementation vary significantly and may be a burden to the primary investor in the area.



# The Economic Value of Complete Streets

Completing local streets has the potential to add more people into an area to improve economic conditions. Feeling comfortable in an environment and being able to move easily can encourage more people to frequent local businesses and social services. Complete Streets may offer cost savings at all areas of local government; however, the research on this topic is limited. There are some general gains that can be made through investment in complete streets:

- Lower rates of disease and obesity, thus lowering health care costs
- More people on the street, thus lowering levels of crime (eyes on the street)
- Bring in development and wider tax base
- Increase bicycle tourism and economic impact is significant for Niagara



Complete Streets typically attract smaller-scale local businesses. As stated by Dan Burden (2012), “these types of businesses contribute roughly 60 cents on every dollar made back into the community. These businesses rely on pedestrian traffic heavily because of their small nature and inability to compete with large power centres. Franchise or ‘chain’ stores contribute roughly 20 cents on every dollar spent whereas ‘big box’ stores only contribute 6 cents back into the community.” By creating streets which support small business the local economy can thrive. Furthermore, housing and businesses near or adjacent to complete streets have realized higher property values purely based on their accessibility to so many resources.

The Niagara region is a popular destination for cycle tourism; an economic segment which has many benefits for both the Region and the local municipalities. Research has indicated that cycle tourists spend more money in a day visit than tourists which arrive by car. In Canada, Quebec has a strong cycle tourism industry which generates millions of dollars annually, which can be attributed to the fact that cyclists spend more than drivers. In 2005, cycle tourists spent an average of \$83 a day, whereas tourists in automobiles spent \$66 a day (April Economides, 2012).

Developing infrastructure which supports alternative modes of transportation has been shown to cost significantly less than single purpose roads. For example, to construct a kilometer of on-street bike lane in Canada costs an average of \$20,000 to install, whereas a kilometer of road costs an average of \$1.3 million (The Business Case for Active Transportation). Parking is another significant cost associated with streets. Spaces need to be maintained, cleared of snow and road space away from other vehicles which include bicycles, busses and other automobiles.



Parking spaces accommodate people who come from further distances so their abundant provision in local business areas should be reviewed. Based on research from communities across Australia, “Car parking is of less significance to local retail activity than is often thought. Space for people on foot is a

more significant attribute.” (National Heart Foundation of Australia, 2011). The provision of more active transportation supportive infrastructure will not only increase the amount of foot traffic to local business, but these people will also spend more money than those arriving by automobile.

Once the infrastructure is in place the indirect economic benefits in regards to healthcare, increased customer activity and tourism equates to roughly \$3.6 billion annually (Based on 5 per cent active transportation). Therefore the investment should be directed into an area where there is higher probability that people will be using the street.

In Toronto, a study was conducted regarding the rationale of reallocating road space along Bloor Street, a major arterial shopping street in the City. Their research has shown that nearly 90 per cent of people visiting those businesses and shops do so by a mode other than the car. (The Clean Air Partnership, 2009)

A common argument is that reducing on-street parking, in this case for a proposed bike lane, will have a negative impact on businesses. From this research, the group established that those people arriving by alternate modes visited more often and lingered around longer in the stores and ultimately spent more money per month. Many Complete Streets enhancements do require a change in the use of space on the road, however, this helps to illustrate that people will not stray away from areas just because there is less space dedicated to the automobile. Off-street parking locations can accommodate more vehicles and free up space on the road for cyclists and transit vehicles and make a safer pedestrian environment.

The selection of a street to ‘complete’ should not be random or arbitrary. Using a place-making approach which focuses on the importance or role of an area can help ensure that the transportation network improvements yield wide ranging results. The transportation system can benefit if its routing, facilities and design reflect the area. Typical linear enhancements should not be the end of the improvement, as permeability into adjacent areas is important and will allow for increased opportunities related to active transportation and mass transit.

Street and road improvements can be the most expensive projects to undertake from an infrastructure standpoint. Although there will be certain economic benefits to their implementation there will be costs which will be incurred by the Region and the municipalities. Depending on the type of infrastructure improvements, money which is budgeted for road works may be diverted to fund strategic improvements on major thoroughfares. All economic benefits should be weighed against the overall cost of the improvements.

# Improving Public Health

Complete Streets provide opportunities for incorporating walking and cycling into the daily lives of Niagara residents. Additionally, providing better access to public transportation creates more opportunities for physical activity as all transit trips begin with pedestrian movement or cycling.

The Niagara Region has conducted significant amounts of research on the health of its residents. In light of the findings, solutions are going to be required to curb many significant health issues such as heart disease, diabetes and obesity that will be on the rise in the near future. Niagara has an above average percentage of obese youth and adults. Data compiled by Niagara Region Public Health has indicated that 31.7 per cent of Niagara's youth (12-17 years of age) are considered obese. Of residents 18 and over, 49.3 per cent are classified as overweight or obese. While many factors can contribute to these numbers such as diet and genetics, a lack of daily physical activity plays a significant role. According to the Active Kids Canada Report Card, only 9 per cent of our children and half of adults are getting recommended levels of physical activity. By providing more opportunities for physical activity in daily tasks through policy and infrastructure development, the obesity rate could be lowered significantly. The key to success may be to not make exercise a task in itself, such as going to the gym, but more of a passive activity that is done throughout the day. For example, in Canada only 12 per cent of trips to the store, work or school are made by an active

mode of transportation. These low numbers reflect the form of built environment that limits the opportunities for activities such as walking, cycling, rollerblading, etc. Communities that have implemented Complete Streets programs have often had the right "bones" to incorporate more active transportation, which many Niagara municipalities already have.





Communities that are more walkable see the direct and indirect benefits of their design. The City of London, England is a world leader in terms of its walkability and dedication to accommodating all modes of transportation. Transport for London, which plans and provides all transportation services states that there are five C's required when creating a street that is walkable:

- **'Connected'**
  - Streets need to link places together of both local and regional significance
- **'Convivial'**
  - Streets need to be safe and lively and conducive to social interaction
- **'Conspicuous'**
  - Appropriate types of way-finding should be provided
- **'Comfortable'**
  - Should be safe, aesthetically pleasing, have good landscaping
- **'Convenient'**
  - Should be functional and serve as a quick route between places and attraction

Municipalities in Niagara have limited areas with good walkability, with the majority located in the downtowns. Providing more opportunities for active transportation and mass transit does not necessarily mean that people will use Complete Streets; they must also be walkable. The 'walkability' of a street can be measured through the level of pedestrian activity. A street which has been designed without sidewalks, lighting, signage, benches, or crossing signals is not conducive to higher levels of foot traffic.

# Active Transportation

If a pedestrian network is not set up to be walkable, interesting or feel safe, people will be hesitant to use it. Even the smallest investments such as signage, fixing sidewalks and paths, and landscaping can help create a better sense of place and encourage more pedestrians to visit an area. Active Transportation groups in Niagara have been very vocal about improving the infrastructure for walking and cycling in the Region. This project shall attempt to address their needs and create an opportunity for further dialogue with the people who are, or will, use these streets daily. To quote the Living Streets UK group, this is an exercise in “changing the relationship between those who manage the streets and public space and those who use it” (Living Streets UK).

The Region has made significant improvements in regards to enhancements in downtowns and its off-road trails system. The community improvement work which has been completed in Ridgeway and Port Colborne includes the provision of a safe and easily navigable public realm which accommodates multiple modes of transportation such as pedestrians, cyclists, automobiles and freight traffic. The Region and its local and regional active transportation partners have worked together to make the off-road transportation network, including the Greater Niagara Circle Route, one of the best in Canada. Complete Streets can build upon and link to the already existing on and off road bicycle network to facilitate increased levels of active transportation.

Through the Complete Streets model policies, municipalities may be able to capitalize on existing infrastructure and redesign their roads, rather than rebuilding them. Intensification and redevelopment opportunities are exponentially higher if an efficient transportation system is in place. A Complete Streets policy can help remedy some of the legacy problems within the municipalities such as the limited provision of sidewalks, wide multi-lane arterials with no pedestrian refuge areas, limited crossings, and limited accessibility to local and regional transit.



Perceptions of public safety fit within the lens of health. Pedestrian and cyclist collisions with automobiles and other motorized vehicles can be severe or fatal, especially when vehicles are travelling at high speeds. When vehicles travel at speeds of 50 km/h or greater there is an 80 per cent fatality rate for cyclists and pedestrians if a collision occurs. “The safety issue of reduction in traffic mortality and injuries should also be viewed as a tangible health benefit from a health-care costs savings perspective, as there are fewer emergency room and rehabilitation resources consumed.” (Moller, 2010) Many studies have shown that as the modal share of pedestrians and cyclists increases on the roads, the amount of collisions, injuries and fatalities they experience decreases. Often these collisions occur when pedestrians and cyclists attempt to cross the road where there is no signalized or indicated crossing provided. Strategic improvements that can be identified through future consultation with area cyclists and pedestrians can help ensure that complete streets feel as safe as possible.

# Social Implications

In regards to transportation, “social benefits are often more difficult to quantify than economic or environmental benefits” (Urban Transportation Showcase Program, 2006). As with many large scale investments, such as infrastructure, stakeholders are most interested in numbers which illustrate what can be saved, what profit can be made, what the cost is, increases in capacity and so forth. Showing good metrics can push a program forward quickly if the benefits are clear and can be measured.



Complete Streets facilitate more social gains than economic or environmental ones, and in order for people to believe in them the benefits need to be highlighted, as many are intangible. The benefits created as a result of complete streets investments are a form of capital, defined as ‘Social Capital’ which is the networks and interactions that inspire trust and reciprocity among citizens” (Urban Transportation Showcase Program, 2006). Kevin Leyden (2003) suggests that the neighbourhood designs that are most likely to produce social capital are those found in complete neighbourhoods, which usually exhibit characteristics of the neighbourhoods we are now trying to create. Leyden notes that these types of neighbourhoods encourage active transportation such as walking and cycling as the primary form of movement, which suggests that a complete neighbourhood has complete streets.



# Complete Streets build a sense of Community

Aside from improvements to the health of Niagara residents as previously mentioned, Complete Street initiatives can help build community values, stimulate neighbourhood interaction and even decrease crime. The occurrence of “bump-in’s” with other pedestrians is common for those who walk and cycle. These interactions help build community values and help create a sense of place, as well as security, which make the streets a more inviting place to be.

Increased social interaction is another benefit that accompanies the development of Complete Streets, promoting financial investment and environmental stewardship. For many people in Niagara, the ability to use a private vehicle may not exist due to financial or personal issues.

Complete Streets are inherently equitable, which means that all people have the same access to the amenities on that street such as work, education, and services. To be truly equitable and accessible, infrastructure and policy needs to be developed in a way which is functional to those who have the most limited abilities.



# Accessibility

The *Accessibility for Ontarians with Disabilities Act (AODA)*, is a Provincial initiative which is committed to making all public infrastructure accessible to everyone, regardless of ability. AODA measures are applied progressively and proactively, as retrofitting all existing infrastructure is challenging and expensive. The Niagara Region took a significant step in 2010 and voluntarily adopted the Facility Accessibility Design Standards, which ensures that all Regional infrastructure meets AODA standards. Almost all local municipalities in Niagara have adopted the policy. Streets are one of the largest pieces of regional infrastructure, and accordingly, they should be accessible to everyone. Complete Streets makeovers offer an opportunity to make the streets equitable and accessible to everyone in many ways which can include signage enhancements, curb grading, lighting and personal safety measures. Complete Streets are founded on accessibility and justly, Niagara's Facility Accessibility Design Standards are a set of standards which can help make streets accessible to all.



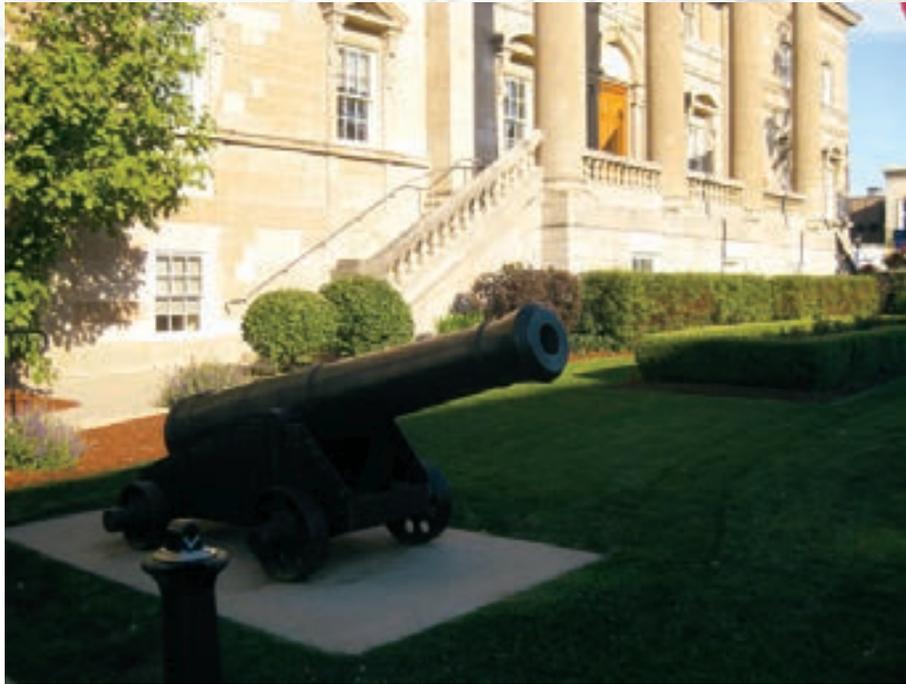
Streets facilitate transportation for the community, not just those who can legally operate motorized transportation. Niagara is dedicated to building Age Friendly Communities which meet the needs of residents across their entire life span. Age Friendly Communities are an excellent example of socially inclusive environments. Streets that are designed for the safe traverse of persons of all ages and abilities are the most desired. They provide an opportunity for all segments of the population to use community infrastructure equally and create numerous opportunities for social interaction and physical activity as well as create a sense of ownership over the streets they use daily.



Actively engaged citizens care about their community and will wish to see it remain safe and clean. Crime Prevention through Environmental Design (CPTED) principles can be applied to enhance the public realm and make streets more inviting for pedestrians and cyclists. More 'eyes on the street', as first defined by Jane Jacobs, helps to reduce the need for extensive policing and surveillance, providing a natural privacy that is less intrusive than that provided by a government authority.

# Promoting Culture

As Niagara is the Culture Capital of Canada for 2012, it is fitting that the importance of heritage and culture be reflected in our streets. The public realm contains many pieces of purposeful and essential street furniture that can help people move more easily; however, that does not mean it needs to look plain. Streets should be a reflection of their surrounding community and population, and should have their own unique identity, which helps prevent all complete streets from becoming part of the geography of nowhere (where all places look the same and you cannot tell them apart). Local artists, historians and other individuals that work within Niagara's unique culture industries can help design the streets to be more interesting for pedestrians, cyclists and tourists.



Opportunities for customization of street furniture such as lights, benches and gardens can be provided to local artists or craftsmen to add more authenticity and local feel to the street. Larger scale features such as planted medians can exhibit local plant species. Signage and way-finding are additional ways which highlight the significance of an area and tell a story. Historical plaques and banners give the street more meaning and provide an opportunity for learning as well as travel. Culture is inherently an identity, one which can be used to establish generic and lifeless thoroughfares into vibrant and interesting places which all users can appreciate and admire.

# A Healthy Environment

From an environmental perspective, the benefits are quite clear; the more citizens that use streets via public transit and active modes of transportation, the fewer cars there are to produce greenhouse gases. Close to 90 per cent of Niagara residents use the automobile as their primary form of transportation. Any reduction in motorized traffic will be beneficial to the respiratory health of Niagara residents. Complete Streets can also draw people to an area for work and residency, and limit the requirement for developing and servicing greenfield land. As per the 2006 Community Greenhouse Gas Emissions Inventory prepared by the Region, transportation contributed 40 per cent of annual emissions region-wide. This percentage equates to over 1.6 million tons of CO<sub>2</sub> into our environment. Facilitating more opportunities for active transportation can have a significant impact on the amount of annual pollution from vehicles in the Niagara Region and will undoubtedly have profound effects on the respiratory health of our residents.

Noise pollution is an often forgotten part of environmental sustainability but one that has an incredible impact on human health. Within large urban centres the noise levels can rise above safe limits due to the heavy amount of vehicles (cars, trains, transport trucks) and road noise. Increased vibration levels cause stress and sound waves can even keep us up at night, limiting sleep and hurting our cardiovascular system. An increased share of active transportation can contribute to more tranquil spaces.

Landscaping is also an important portion of many Complete Streets initiatives, mainly because it can bring nature back into cities and towns. Trees and plants provide natural cooling and limit the heat island effect. Also, the provision of shade in pedestrian areas makes for a more comfortable environment, as well as limits exposure to harmful UV radiation. In addition to incorporating local plant life into streets there is an opportunity to include many environmentally sustainable technologies during the rebuild. Permeable pavements, sustainable building materials and better water management are all examples of engineering solutions and design methods which can improve the local environment.



# Issues and Obstacles

There are many issues and obstacles that will present themselves should Niagara's municipalities incorporate Complete Streets into their communities. The issues are those which can be addressed and remedied using Complete Streets, whereas obstacles are those social, economic, cultural or environmental barriers that may make their implementation difficult.

Issues	Obstacles
Deteriorating Infrastructure	Funding
Limited Active Transportation Infrastructure	Limited Transit Services
Perceptions of Safety	Aging Population
Dispersed Employment and Population	Low Employment densities
Parking Requirements	'Red Tape' (Politics and Process)
Auto-centric Focus	'Who is Responsible?' (Region, Local, MTO or Public?)
No sense of place for our roads	No numbers on current Active Transportation levels

While there are obstacles to the implementation of Complete Streets, they are things that must be addressed for the good of the Region in general. Complete Streets may serve as the catalyst that gets these questions answered and problems addressed so other projects can go forward with ease.

## Opportunities

Although there are many issues and obstacles that slow the implementation of more active transportation in Niagara, there are also several opportunities to be capitalized on. These opportunities include events, infrastructure, tourist draws and planning tools. More specifically, they include:

- Enhanced Public Transit Service
- Tourism
- Regional Bicycle Network
- Large student population and the universal transit pass
- Informed and Active Public (Local Active Transportation Groups, Students)
- Sustainable Niagara
- Smarter Niagara Incentives
- Ontario Municipal Transportation Demand Management Grant Program
- Pan Am Games

# Issues and Obstacles

## The Process

The Complete Streets project shall entail three phases. The first phase will include investigating what Complete Streets are and how they function. The findings will be presented in the form of a discussion paper that will ask a series of questions which will be addressed during internal and external consultation. Answers to these questions will be incorporated into the development of model policies.

### Phase 1 – Research and Review

- Research
- Case Studies and Best Practices
- Assessment of policy within Provincial and Regional Framework

**Deliverable: Discussion Paper**

Phase 2 will include consultation with interested parties. It is through this collaboration that a set of draft model policies will be created for application to a pilot site in the next phase of the project.

### Phase 2 – Consultation and Policy Development

- Development of policies in consultation with stake holders
- Consultation with Active Transportation Summit participants
- Public meeting / Open house
- Develop site selection criteria
- Select the pilot site
- Checkpoint with Integrated Community Planning Committee

**Deliverable: Model Policies and Recommendations for Implementation**

The third phase of the project will involve applying model policies to a selected site. Visual renderings and interactive data will be presented to show how effective a complete streets model policy set and investment could be within Niagara.

### Phase 3 – Implementation Strategy

- Pilot Project
- Visual renderings/ Charettes
- Model Guidelines

**Deliverable: Pilot Project; Model Complete Streets Guidelines**

## Next Steps – Out of Scope

- Possible Regional Policy Plan Amendment
- Inclusion in Transportation Master Plan
- Ongoing consultation and incentives assistance with municipalities who implement Complete Streets

# Roles, Responsibilities and Stakeholders

Complete Streets have the opportunity to benefit all Niagara residents; therefore, a cornerstone of this project will be consultation. While there are many benefits (social, economic, environmental, and cultural) associated with Complete Streets there are equally things at stake. The Technical Advisory Group is listening to find out what each community needs and why they need it, as opposed to prescribing a set of general strategies for them. Each set of individual and group recommendations are as valuable as the next; it is the intent of this project to develop model policies that have benefits for the Region, municipalities and the citizens of Niagara. Every group has a different role to play to bring these streets to life.

There will be four (4) groupings of 'stakeholders' for this project which include the Technical Advisory Group (TAG), Municipal Stakeholders, Private Stakeholders and Public Stakeholders.

The TAG will consist of the main Regional partners that are steering this project, including Healthy Living Niagara, Niagara Region Public Health, Integrated Community Planning and Niagara Region Public Works.

**Municipal Stakeholders** will include staff (planners, engineers, other) from the 12 municipalities, local transit agencies (Welland Transit, St. Catharines Transit, Niagara Falls Transit, Niagara Region Transit) school boards, Niagara Parks Commission and interested elected officials.

**Private Stakeholders** will include those business or property owners along Regional roads that will have an opportunity to contribute to the improvement of the road via aesthetic improvements, infrastructure (bike racks, awnings, lighting).

**Public Stakeholders** will include those members of the public who are interested in the idea of Complete Streets such as Regional cycling groups, local cycling groups, walking groups, the elderly and youth.

A breakdown of the group interests is below:

## **Healthy Living Niagara (HLN)**

HLN initiated this project indirectly when it hosted the Active Transportation Summit in November of 2011. Through a series of improvements and additions to the Active Transportation network in the Region, HLN hopes to see the overall health of Niagara residents improve, specifically in the youth population. Levels of obesity, stress, high blood pressure and depression can all be minimized through a more active lifestyle. HLN has secured \$25,000 from the Ministry of Health and Long Term Care to fund this project.

## **Niagara Region Public Health (NRPH)**

Active Transportation has countless benefits to the health of those who use it. Completing Streets and facilitating an increase in walking and cycling levels can lower overall health costs to the Region and the province by reducing the amount of premature death and ambulance calls.

## **Integrated Community Planning (ICP)**

ICP will be developing model policies for municipalities that want to improve the quality and accessibility of their streets. ICP staff will look at current Provincial, Regional and local policies to gauge how well Complete Streets fit within it. Complete Streets will be recommended as a way of encouraging more alternative forms of transportation and encouraging more compact, mixed use development in the long term.

# Roles, Responsibilities and Stakeholders

## **Niagara Region Public Works (NRPW)**

As the facilitator of infrastructure on Regional right-of-ways, Public Works is a member of the Technical Advisory Group as well as a stakeholder. Complete Street improvements along Regional roads will come with a cost and be factored in as an expense under the Public Works budget.

## **Municipalities**

Complete Streets will unfold within the 12 municipalities and change the way people get around. Small improvements will have many social, economic and environmental benefits that can be capitalized on. Area municipalities will have to be vocal and active participants in the process to highlight their specific needs and how they see complete streets working within their communities.

## **Transit Authorities**

Transit is an important part of Complete Streets initiatives. Transit authorities can provide information about ridership and routing which can be incorporated into on-street enhancements. An increase in active modes of transportation, primarily walking, increases transit ridership and efficiencies.

## **School Boards**

Active transportation begins with education. School Boards can provide the TAG with information regarding school travel patterns and if enhancements to area streets can encourage more healthy, active travel by the students.

## **Elected Officials**

Elected officials vote to bring change into effect in the communities. Having involved officials provides the Region with information from their will be extremely valuable. If elected officials are a part of this process from the beginning, it will help make the implementation process easier going forward.

## **Private Stakeholders**

The Region and municipalities have a role to play in the funding and development of Complete Streets. As many businesses and residences front onto possible pilot sites they stand to gain economic benefits as well as public realm improvements. Private realm improvements such as planting, active transportation infrastructure and lighting can help create a sense of place on local streets.

## **AT Summit Participants**

As this project was initiated in response to the actions developed by participants of the AT Summit, it shall provide the opportunity to be actively involved and do more than 'simply talk'.

## **Local and Regional Active Transportation Groups (e.g., cycling clubs, walking groups)**

Local residents who walk, cycle and take transit know which streets are unfit for walking, where there should be better neighbourhood connections and where transit stops need to be located. The Complete Streets team needs to hear these opinions and integrate them into the policies to ensure that their needs are met and that when the first complete street is built people capitalize on it.

## **Elderly**

Designing streets to be accessible for all is a key component of Complete Street policies. As Niagara's population ages, having regard and listening to concerns from the elderly can help with street design and encourage support for their implementation.

# Roles, Responsibilities and Stakeholders

## High School and Post-Secondary Students

Many of Niagara's students have the ability to drive to school, however many use public transit. The TAG is interested in knowing how Niagara can make the transit services more accessible and functional for those youth that choose other forms of transportation, so they continue these good practices after graduation.

## Families

Families require streets that are accessible and convenient for activities such as walking to school, work or to local services. The Complete Streets team would like to know where families feel more improvements are needed to make streets feel safer and offer better mobility and accessibility.

## Conclusions

Complete Streets offer a variety of benefits to those communities which implement them. In Niagara, Complete Streets could improve our overall health, stimulate local economy and change the way we move. Taking steps to integrate their principles into road rehabilitation projects and new developments will transform Niagara's transportation system and public realm drastically. Many agencies and individuals within the region have a role to play in their implementation, as do those at the local level. It is time for Niagara to take the lead in this progressive movement and step towards creating complete communities that are healthy, prosperous and allow people to move freely in the most sustainable and equitable way possible.

As John LaPlante stated at the 2012 Complete Streets Forum, "healthy cities don't happen – they are created by design." Niagara has the opportunity to reshape and design its municipalities in a way which improves resident health, creates better and more accessible public spaces and encourages investment.

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# Glossary

**Accessibility:** A measure of the ability of a person to easily access goods, services or destinations.

**Active Transportation:** Any form of self-propelled (non-motorized) transportation that relies on the use of human energy such as walking, cycling, inline skating or jogging.

**Complete Streets:** Roadways that are designed and operated in a context sensitive manner to enable safe access for all users. Pedestrians, cyclists, motorists and transit users of all ages and abilities must be able to safely move along and across a complete street. Central to the complete streets concept is the requirement that all road users be included in design decisions. (National Complete Streets Coalition)

**Heat Island:** The term “heat island” describes built-up areas that are hotter than nearby rural areas. Unlike vegetation, paved and hard surfaces absorb heat throughout the day and release it which keeps the temperature higher than it actually is.

**Infrastructure:** Physical structures (facilities and corridors) that form the foundation for development. Infrastructure includes: sewage and water systems, septage treatment systems, waste management systems, electric power generation and transmission, communications/telecommunications, transit and transportation corridors and facilities, oil and gas pipelines and associated facilities.

**Intensification:** The development of a property, site or area at a higher density than currently exists through: (Provincial Policy Statement, 2005)

- a) Redevelopment, including the reuse of brownfield sites;
- b) The development of vacant and/or underutilized lots within previously developed areas;
- c) Infill development; or
- d) The expansion or conversion of existing buildings.

**Mobility:** The ability to move in one’s environment with ease and without restriction.

**Modal Share:** The percentage of person-trips or of freight movements made by one travel mode, relative to the total number of such trips made by all modes.

**Multi-modal:** The availability or use of more than one form of transportation, such as automobiles, walking, cycling, buses, rapid transit, rail (such as commuter and freight), trucks air and marine.

**Place-making:** A multi-faceted approach to the planning, design and management of public spaces.

**Public Realm:** All spaces to which the public has unrestricted access, such as streets, parks and sidewalks. In relation to Complete Streets, the public realm is the area of public space between the facades of buildings on a street which includes yards, sidewalks, the roadway and all associated physical infrastructure in between. (Metrolinx Mobility Hub Guidelines)

**Right-of-Way:** Land that is reserved, usually through legal designation, for transportation and/or utility purposes, such as for a trail, hydro corridor, rail line, street or highway. A right-of-way is often reserved for the maintenance or expansion of existing services.

**Road Diet:** The reconfiguration of existing road space, generally where capacity is substantially above demand, to improve safety and mobility for road users and providing an improved walking and cycling environment.

**Sustainability:** Meeting the needs of today without compromising the ability of future generations to meet their own needs.

**Transportation Demand Management:** A set of strategies that result in more efficient use of the transportation system by influencing travel behaviour by mode, time of day, frequency, trip length, regulation, route or cost. Examples include: carpooling, vanpooling, and shuttle buses; parking management; site design and on-site facilities that support transit and walking; bicycle facilities and programs; pricing (road tolls or transit discounts); flexible working hours; telecommuting; high occupancy vehicle lanes; park-and-ride; incentives for ride-sharing, using transit, walking and cycling; initiative to discourage drive-alone trips by residents, employees, visitors and students.

**Walkability:** A measure of how easily one can access services and amenities by walking or some other form of non-vehicular transportation.

**Wayfinding:** The means in which people orient themselves in physical space and navigate from place to place. Can include the physical design of spaces and assistive features such as signage.

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