

ACTIVE TRANSPORTATION PLAN

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1.0 AN ACTIVE TRANSPORTATION PLAN FOR TRURO

The Town of Truro is home to a powerful cultural heritage and landscape and a very active community of outdoor enthusiasts. Founded in a rich industrial and rail heritage that heavily influences the cultural footprint of the town, Truro is exploring alternative and active approaches to moving around the town for recreation and outdoor adventure, shopping, work, social gathering and any other reason residents have to commute. Expanding street or trail networks to support multi-modal and multi-generational connectivity will have significant impacts on resident health through the creation of town-wide lifestyle infrastructure. This document, the Town of Truro Active Transportation Master Plan, explores the benefits of a network and the network required to achieve these benefits.





1.1 TRURO'S ACTIVE TRANSPORTATION PLATFORM

Truro's 13,000 residents (approximately) are the heart of Central Nova Scotia's 46,000 regional resident base. The town's downtown serves these residents with great assets, such as many locally owned businesses and high-quality academic and recreational assets. This hub expands to many adjacent regional supporting assets, such as an active and expanding industrial park, regional recreation facilities, and strong residential and cultural communities such as Millbrook First Nation. When considered together, the following five statements describe what makes Truro such a great place to live and love.

Evolving Community. Truro's residents are highly active and engaged citizens, builders and participants in the town's daily cultural and recreational lifestyle. This aspect of community life is expanding and evident in the life of the downtown, the use of town public spaces and parks, and the intensification and growth of Truro's business parks and residential neighbourhoods. Truro's traditional development and gathering patterns are evolving from low-density living accompanied by destination-based and programmed social interactions to a community where personal activity and social interaction are informal and spontaneous.

Evolving Downtown. Over the last ten years, Truro's downtown has responded to an evolving community with improved public spaces, new restaurants and pubs, and activity-based retail outlets such as outdoor adventure and bike shops. This evolution in downtown business character results in a stronger personal relationship between the visitor and business owner and supports 'on-demand' social interactions between visitors. Although the buildings and activities are great people places, the street environment remains mainly dedicated to the vehicle. Continued downtown evolution will align the street environment with the building environment.

Evolving Business and Economy. Truro is economically strong. The downtown, industrial facilities, business parks and shopping centres are busy and evolving to capitalize on new opportunities when available. Traditional economic engines such as Stanfields and Inglis Place present a strong message of history and economy, and they are important cultural assets to sustain as they evolve within local and global contexts (see figure 1 for location).

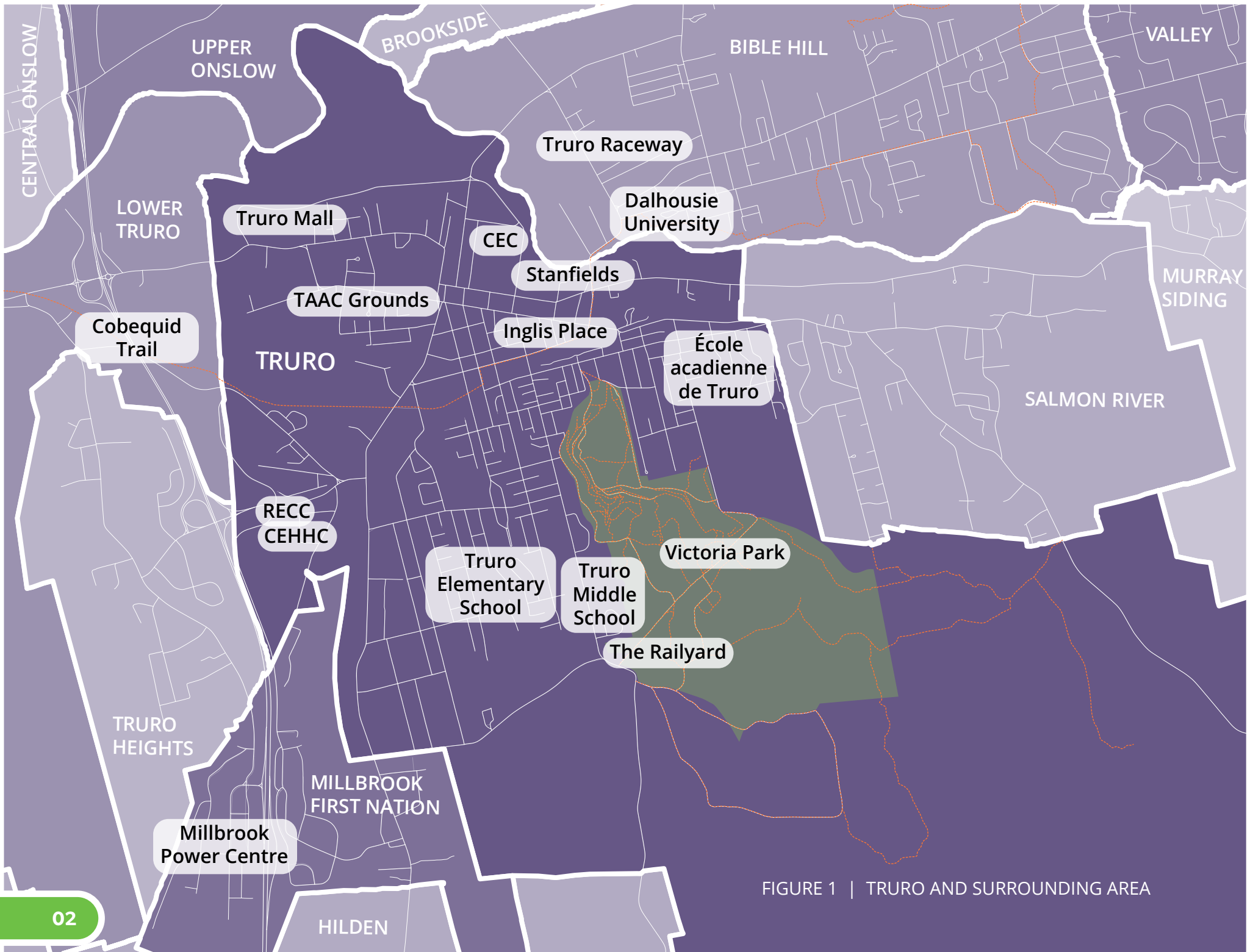


FIGURE 1 | TRURO AND SURROUNDING AREA

Emerging economic and cultural centres such as the Millbrook Power Centre serve to strengthen the first nation community while diversifying the regional economy. Together with strong residential and business growth in communities such as Onslow, North River and Bible Hill, Truro is positioned as a sustainable, resilient and responsive regional hub.

Great Academic Centres. Truro's five academic centres, Truro Elementary, Truro Middle School, École acadienne de Truro, the Cobequid Educational Centre, and the Nova Scotia Community College, combine to provide a complete educational program for both youth and residents. Learning for life, at all levels, is possible when considered with Bible Hill's Dalhousie campus and the Halifax universities. Truro's active transportation plan must propose a multi-modal and multi-generational transportation network that seamlessly integrates the regional assets into daily community life for students and residents.

World-Class Recreation Platform. Truro has repositioned itself within the provincial and Atlantic communities as an active and passive recreation hub. The addition of facilities such as the regional Cobequid Trail, Victoria Park's Railyard trails and the Rath Eastlink Community Centre provides world-class facilities within these contexts for activity-based tourism and a daily venue for fitness and social activity for Greater Truro residents.

Truro is well positioned to evolve its streets and trails toward the resident-desired multi-modal and multi-generational active transportation network that serves individuals, friends and families alike within the context of the following vision statement.

Truro's residents envision an active transportation system that is welcoming, legible, and safe for all residents; inclusive of all ages and human-powered modes; accessible for people of all abilities; and integrated with the town's high-quality economic, cultural and recreational environments. The active transportation network will connect neighbours, neighbourhoods, the town and the region overall, while supporting wellness through activity, facilitating connection to our world-class natural, recreational and cultural assets, respecting our heritage, and providing the foundation for intelligent town evolution and growth decisions.

1.2 WHY ACTIVE TRANSPORTATION?

Active transportation (AT) uses human-powered forms of travel, such as walking, running, biking and following to get from one place to another. Walking to school or biking to work are examples of active transportation. A strong active transportation network is one way the Town of Truro can support an active, healthy lifestyle for its residents.

The following chapters combine consultation concepts with a preliminary network model that expresses what residents want to see for active transportation in Truro, including important background information that informs the philosophical and thematic network components.

BENEFITS OF ACTIVE TRANSPORTATION

The Government of Canada defines active transportation (AT) as the movement of people or goods powered by human activity.¹ This includes walking, cycling, and the user human-powered mobility aids such as wheelchairs, e-bikes, snowshoes, and more.

While evidence shows that active transportation is more easily sustained than other forms of physical activity and exercise programs, the proportion of trips that are made in Canada using active transportation remains low compared to many European countries.² Much of this can be attributed to the barriers in the built environment, such as limited access and real and perceived safety concerns, especially during the winter, that can stem from exposure to traffic, poor lighting,

or deficient crossing provisions like inadequate time to cross an intersection or the lack of audio or braille signals.³

A 2009 report from the Canadian Senate estimates roughly 10% of population health outcomes can be attributed to the physical or built environment.⁴ This power of the built environment can be harnessed by establishing safe and efficient active transportation infrastructure and planning. It has been demonstrated that community design that supports active transportation provides multiple transportation, environmental, and public health benefits, such as promoting physical activity, improving air quality, reducing contributions to climate change, and improving community livability.⁵ While this broad reach of benefits is present through considerations of active transportation in the built environment, such as walkability and accessibility, the social environment is also an important facet to address in active transportation considerations, which includes perceptions of community and pedestrian safety, and attitudes towards active transportation users.

HEALTH BENEFITS

Active transportation is the most common form of physical exercise.⁶ While the physical health benefits of active transportation are frequently highlighted, active transportation also benefits mental health and developmental health, and aids in disease prevention. Given transportation is a daily necessity, investing in active

transportation is an effective way to incorporate and improve overall individual and community well-being.

Any level of physical activity, including low levels of walking less than 150 minutes/week, can prevent future depression.⁷ This makes incorporating active transportation, even for minor trips, an incredible tool for treating and preventing mental health disorders. One of the most notable opportunities for people to participate in active transportation is through their commute to work. Psychologists have long recognized the potentially detrimental effect of the commute on our mental health.⁸ Car commuters find their journey more stressful than other mode users, while across the developed world, active travellers are more satisfied with their commute and actually enjoy their journey. Evidence suggests that 30 minutes or more round trip commuting either on foot or by bicycle has significant positive effects on mental health—most notably for men.⁹ Additionally, each 1% increase in the proportion of neighbours who drive to work is associated with a 73% decrease in the chance that an individual will report having a social tie to a neighbour.¹⁰

Recent Canadian research, supported by a considerable body of international data, associates the built environment, including active transportation and physical activity infrastructure, with more physically active lifestyles.¹¹ For example, the odds of being physically active are reduced by 1.6% for each hour of driving per week,¹ but people living in highly walkable, mixed-use communities are more than

twice as likely to get 30 or more minutes of daily exercise as people who live in more auto-dependent neighbourhoods.¹² This is particularly significant given only half of Canadian adults aged 18-79 are meeting the recommended levels of physical activity.¹³ Evidence shows that active transportation is more easily sustained than other forms of physical activity and exercise programs¹⁴ and is one of the most cost-effective ways for an individual to become more physically active and remain healthy in the long term.¹⁵

An American study found nearly one-third of people who use public transit to commute meet their daily requirements for physical activity.¹⁶ Given incidental physical activity requires less motivation,¹⁷ efficient and user-friendly public transit services indirectly encourage physical activity as most people engage in active transportation to travel to and from transit stops. In fact, walking to and from public transit can help adults achieve 8 to 33 minutes more physical activity each day.¹⁸

In regards to developmental health, research has found kids who spend time outside have better test scores, better cognitive function, fewer behavioural problems, fewer signs of ADHD, and improved self-discipline.¹⁹ By walking one mile each way to and from school, children and adolescents can accomplish roughly 40 out of the 60 minutes of recommended daily physical activity.²⁰ In addition to being physically beneficial, this time can also be mentally beneficial as trees and greener environments are strongly linked to reduced negative thoughts, reduced symptoms

of depression, better-reported moods, and increased life satisfaction, as well as the social opportunity to engage with other kids travelling home.²¹

Additionally, for young people, research has found that teens who live in areas with seven exercise facilities were 32% less likely to be overweight, and 26% more likely to be highly active than those who lived in areas with no facilities.²² Thus recreation and active transportation have the power to support one another in their offerings. By establishing destinations youth want to visit, and safe routes to travel there, active transportation and recreation can bolster young people's physical activity levels as well as their social engagement in the community.

In addition to overall mental and physical health benefits, active transportation also aids in disease prevention. People who walk or cycle to work reduce their risk of developing chronic disease by 11%.²³ International data shows that countries with the highest levels of active transportation generally have the lowest obesity rates.²⁴ In 2021, physical inactivity accounted for nearly 11,000 new cancer cases in Canada.²⁵ Fortunately, physical activity is among the most significant modifiable behaviours that influence a person's likelihood of developing chronic diseases such as diabetes, heart disease, stroke, or cancer²⁶ and active transportation serves as a key tool to support this modification.

ECONOMIC BENEFITS

The economic benefits of active transportation range from cutting fuel costs to boosting tourism. By investing in active transportation, communities invest in their local economy as well as their communal identity.

Active transportation benefits the local economy by creating jobs and increasing foot traffic. Active transportation infrastructure creates more jobs than road infrastructure. Per million, bike infrastructure-only projects generate 11.41 jobs, pedestrian infrastructure-only projects generate 9.91 jobs, off-street multi-use trail projects generate 9.57 jobs, while roads-only infrastructure projects generate only 7.75 jobs.²⁷ Additionally, cyclists and pedestrians stop more often than drivers and are more likely to spend their money at local destinations,²⁸ thus supporting and growing local businesses.

Active transportation infrastructure like bike lanes increase customer visits and spending intention by 48%.²⁹ Bicyclists and pedestrians are an important market segment for small, local businesses since they tend to travel shorter distances, buy less at once, and buy more frequently. Active transportation users help to give smaller businesses an edge over suburban mega-stores that cater to the motorized customer. Additionally, the availability of local businesses can significantly reduce the amount people drive.³⁰

In Nova Scotia, driving a car costs \$6,000 to \$16,000 per year.³¹ In contrast, it only costs an average of \$150 per year to own and operate a bicycle³² and walking is virtually

cost-free. This affordability of active transportation helps to dismantle barriers for people who cannot drive due to physical, financial, or personal reasons—approximately 20-40% of the population.³³ By offering effective cost friendly travel opportunities, more demographics can access and participate in the local economy.

Types of non-drivers include youth (10-25% of the population); seniors who do not or cannot drive (5-15%); adults unable to drive due to disability (3-5%); low-income households burdened by vehicle costs (15-30%); people impaired or distracted by drugs, alcohol, or devices; visitors who lack a vehicle or driver's license; and those who simply prefer not to drive for personal reasons.³⁴ This extensive list of groups reflects how excluding investment in active transportation infrastructure excludes many people from fully participating in their communities and local economy.

A lack of alternative transportation options for people who cannot drive results in more driving and, thus, more expense. Chauffeuring non-drivers is estimated to account for 5-15% of vehicle travel, and the driver's empty return trip can double the vehicle miles involved in chauffeuring non-drivers.³⁵ Both active transportation and public transit infrastructure can help to alleviate this problem which affects both non-drivers and caregivers.

Research has also found that communities well-served by public transportation are more affordable than communities where people need to drive more frequently.³⁶ Given most people use active transportation

to travel to and from transit stops, active transportation and public transit have a symbiotic relationship. Research reveals that transit operates most effectively when planned and built in close connection to walking and cycling facilities,³⁷ and a 2015 survey conducted by the TTC found that 11% of TTC users ride their bikes to transit at some point, and a further 61% of transit users would consider doing so with improved infrastructure.³⁸

Furthermore, research conducted in 2009 by Tourism BC found that 25-30% of all travellers from North America who participate in either hiking or biking chose their destination specifically for these types of recreation.³⁹ By increasing active transportation infrastructure and investing in AT networks, communities have the potential to boost their local tourism.

An additional economic benefit of active transportation is its influence on property value. When considering where to move, homebuyers rank walking and biking paths as one of the most important features of a new community.⁴⁰ In fact, property values have been shown to increase in proximity to trails as communities recognize them as safe places to be active, healthy and community oriented.⁴¹

ENVIRONMENTAL BENEFITS

While one of the largest environmental benefits of active transportation is reducing fuel emissions and pollution, active transportation also benefits the environment by promoting respect for nature, offering outdoor recreation opportunities, and increasing and protecting green space.

In Canada, the number of cars per 1,000 persons has doubled since 1960.⁴² In Nova Scotia, each car generates 1,500 kg to 8,000 kg of greenhouse gas emissions annually.⁴³ And surprisingly, shorter car trips are more polluting on a per-mile basis than longer trips, as approximately 60% of pollution generated by automobiles occurs within the first few minutes of operation.⁴⁴ Active transportation is a key tool to decrease the pollution generated by these short trips. In fact, active transportation is the easiest way to complete short trips, so much so that a modest 5 percent increase in neighbourhood walkability reduces vehicle nitrogen emissions by 5.6 percent and volatile organic compounds by 5.5 percent.⁴⁵ Furthermore, a 2012 American study conducted by the Federal Highway Administration showed that new and improved active transportation infrastructure reduced more than 7,700 tons of carbon dioxide—the equivalent of saving 1.7 million gallons of gas overall.⁴⁶

Active transportation promotes natural resource management strategies. Many environmental studies have shown that greenways and natural areas which contain trail systems offer valuable water quality benefits as well as recreational opportunities.⁴⁷ In fact, greenways can serve

as natural floodplains. By protecting land along rivers and streams, greenways prevent soil erosion and filter pollution caused by agricultural and road runoff.⁴⁸ Thus active transportation pathways may serve a dual purpose to protect areas and get people where they need to go.

Of course, trail and pathway systems save energy and protect air quality by encouraging non-motorized transportation,⁴⁹ but they also provide a “buffer” between the built and natural environment.⁵⁰ In doing so, trails provide corridors not only for people, but for wildlife. Additionally, these pathways allow for passive recreational use and educational access to protected areas which instill a sense of appreciation for nature and green space.⁵¹ Active transportation can thus serve as a gateway to accessing and encouraging outdoor recreation, which fosters a sense of respect for the natural environment hosting the activity.

COMMUNITY BENEFITS

One of the strongest ways active transportation benefits a community is through its contribution to connectivity. By stimulating participation in community life and fostering community pride, active transportation serves as a key catalyst for building equitable, self-sufficient, and attractive communities.

One of the many ways this is achieved is by reducing local crime. Given people are more physically active in areas where they feel safe, higher levels of crime and violence have been associated with lower physical activity levels.⁵² Fortunately,

active transportation has the benefit of not only increasing physical activity levels but increasing the presence of people on streets which has been shown to reduce local crime.⁵³ Streets where people walk and bike have more people on them, thus more witnesses.

Additionally, one of the most effective ways Crime Prevention Through Environmental Design measures can be implemented in communities is through active transportation infrastructure. CPTED is a specific approach to designing safety and security in the environment.⁵⁴ It focuses on natural surveillance, access control, territorial reinforcement, activity support, and maintenance. By establishing thoughtful pathways, networks, and infrastructure, active transportation can embed CPTED into its systems to alleviate both real and perceived safety concerns about using active transportation.

The most vulnerable people in society have the most to gain from public investment in walkability. For example, people who are not drivers, such as children, people with lower incomes, people with disabilities, and the elderly, can face challenges with accessing jobs, schools, health care, and community facilities.⁵⁵ Near-universal reliance on the automobile for transportation leaves many people out of the equation. Children, the elderly, the visually impaired or otherwise physically challenged, those with lower incomes, those who do not have full-time access to a car, or those who do not drive for other personal reasons, are among the groups that benefit most when opportunities to safely walk or bicycle are improved.⁵⁶

Types of non-drivers include youth (10-25% of the population); seniors who do not or cannot drive (5-15%); adults unable to drive due to disability (3-5%); low-income households burdened by vehicle costs (15-30%); people impaired or distracted by drugs, alcohol, or devices; visitors who lack a vehicle or driver's license; and, those who simply prefer not to drive for personal reasons.⁵⁷ This extensive list of groups reflects how excluding investment in active transportation infrastructure excludes many people from fully participating in their communities.

In particular, children and youth greatly feel the effects of auto-centric design. Not only do they miss out on the independence achieved with active transportation, but trends show their health is impacted,⁵⁸ as well as their academic performance. Given youth who participate in recreation also do better academically, with research finding nearly 8 out of 10 teens who engage in after-school activities are A or B students, while only half of the teens who do not participate in after-school activities earn these high marks,⁵⁹ effective and accessible active transportation infrastructure helps encourage children and youth's participation in extracurriculars. Active transportation serves as an essential tool for developing youth to establish lifelong healthy habits.

Similarly, for aging adults, active transportation is a key ingredient to prolonging independent living.⁶⁰ While this benefits seniors' quality of life, the community also benefits by having experienced members who donate their time and expertise as community leaders and volunteers, as

well as limiting the demand for care services. For example, a lack of alternative transportation options for people who cannot drive results in more driving. Chauffeuring non-drivers is estimated to account for 5-15% of vehicle travel, and the driver's empty return trip can double the vehicle miles involved in chauffeuring non-drivers.⁶¹ Both active transportation and public transit infrastructure can help to alleviate this problem which affects seniors, children, other non-drivers and caregivers.

By promoting independence for non-drivers, active transportation increases community equity and accessibility. In fact, active transportation infrastructure can serve as an indicator of community equity. In communities with a 1% poverty rate, there was a 57% chance of a bike path being present, whereas, in communities with a 10% poverty rate, there was only a 9% chance that a bike path would be present.⁶² This correlation highlights how the benefits of active transportation are felt differently by different socio-demographic groups.

Furthermore, reducing the presence of automobiles is one of the strongest community benefits active transportation offers. 98.5% of collisions on regional roads are between gas-powered vehicles,⁶³ and 29% of injuries to bicyclists occur from being hit by a car.⁶⁴ Additionally, injury and fatality rates decrease as active transportation mode shares increase.⁶⁵ Rates of collisions, injuries and fatalities per capita decline when the number of people walking or biking increases.⁶⁶ For example, places where large proportions of the population

walk and cycle, such as in the Netherlands and Germany, have lower injury and fatality risks than in North America.⁶⁷

This "safety in numbers" effect can also be seen in a study done of Montreal's cycle tracks—the most extensive system of cycle tracks in North America. The study found that cycle tracks had an injury rate 28% lower than that on parallel roads without bicycle facilities and attracted 2.5 times more bicycle trips than did roads without cycle tracks.⁶⁸ The "safety in numbers" effect is also important for building respect and tolerance between AT users and motorists and helps mend the dangerous perception that active transportation users are offending the social and moral order of the road⁶⁹ that has developed through auto-centric culture. By increasing active transportation infrastructure and user-ship, the perceived exclusive power of the car is dissolved, and communities become safer as a result.

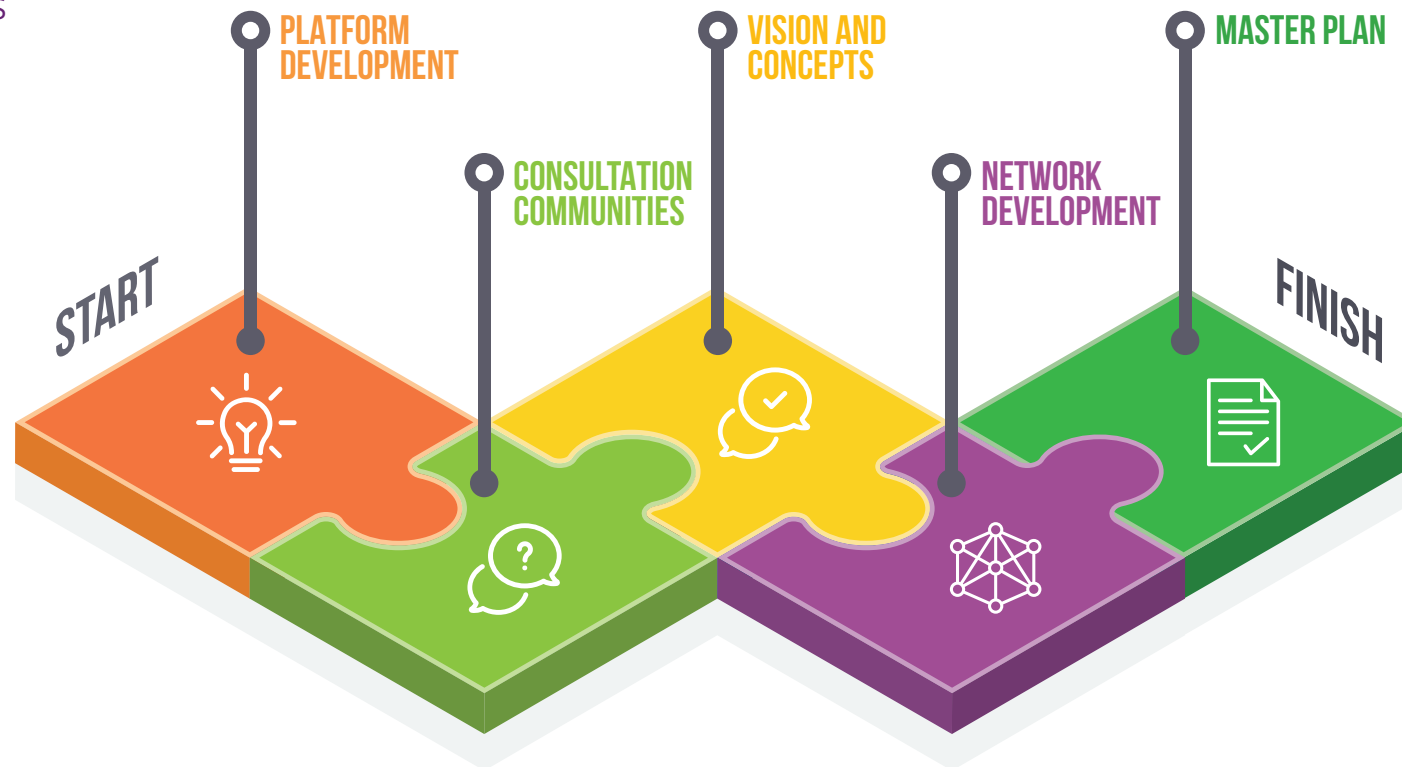
Perhaps the most significant community benefit active transportation offers is by increasing contact with neighbours and community.⁷⁰ People living in walkable neighbourhoods are more likely to know their neighbours, participate politically, trust others, and be socially engaged.⁷¹ Both the built environment and the social environment have roles to play in the community benefits of active transportation. While the built environment influences opportunities to access trails, parks, recreation centres, and walkable streets, the social environment impacts perceptions of community and pedestrian safety, social support, and access to recreation and activity programs.⁷² By increasing

active transportation infrastructure and promoting active transportation as a lifestyle choice, communities contribute to their community identity as one that reflects and supports all the people for whom it is a part.

1.3 ACTIVE TRANSPORTATION PLANNING IN TRURO

Creating this master plan required significant contributions from residents committed to achieving the plan's vision. This was evident in resident survey responses as well as the various individual, stakeholder and community work sessions that culminated in the concepts articulated in this master plan. Figure 2 describes the plan development process.

FIGURE 2
PLAN DEVELOPMENT
PROCESS



2.0 CONSULTATION AND CONCEPT PLAN

Any great municipal master plan is built upon the needs and desires gathered from residents throughout the plan development process. This master plan is fully built upon the destination, route and corridor concepts explored by Truro and area residents. The structural foundation of this active transportation master plan results from the iterative and collective resident contribution during information gathering and review sessions. This chapter reviews the results of these processes and proposes an active transportation concept plan.





2.1 CONSULTATION PROCESS

The consultation process included a ground-up approach to plan building. Early work included 'micro-sessions' with urban cyclists and pedestrians to develop baseline network mapping that described the 'well-known' route corridors and the 'local knowledge' linkages that have special meaning to Truro's various neighbourhoods. This mapping and associated cultural data were given more significant meaning, and physical scope, as the consultation process evolved and expanded. The following describes the various sessions.



FIGURE 3 | CONSULTATION PROCESS

2.2 123 BIG IDEAS FOR TRURO

Creating this master plan required significant input from members of the public, students, and stakeholders as part of the community engagement process. The enthusiasm of those who participated in the consultation process is directly reflected in the list of 123 Big Ideas, which forms the foundation of this master plan.

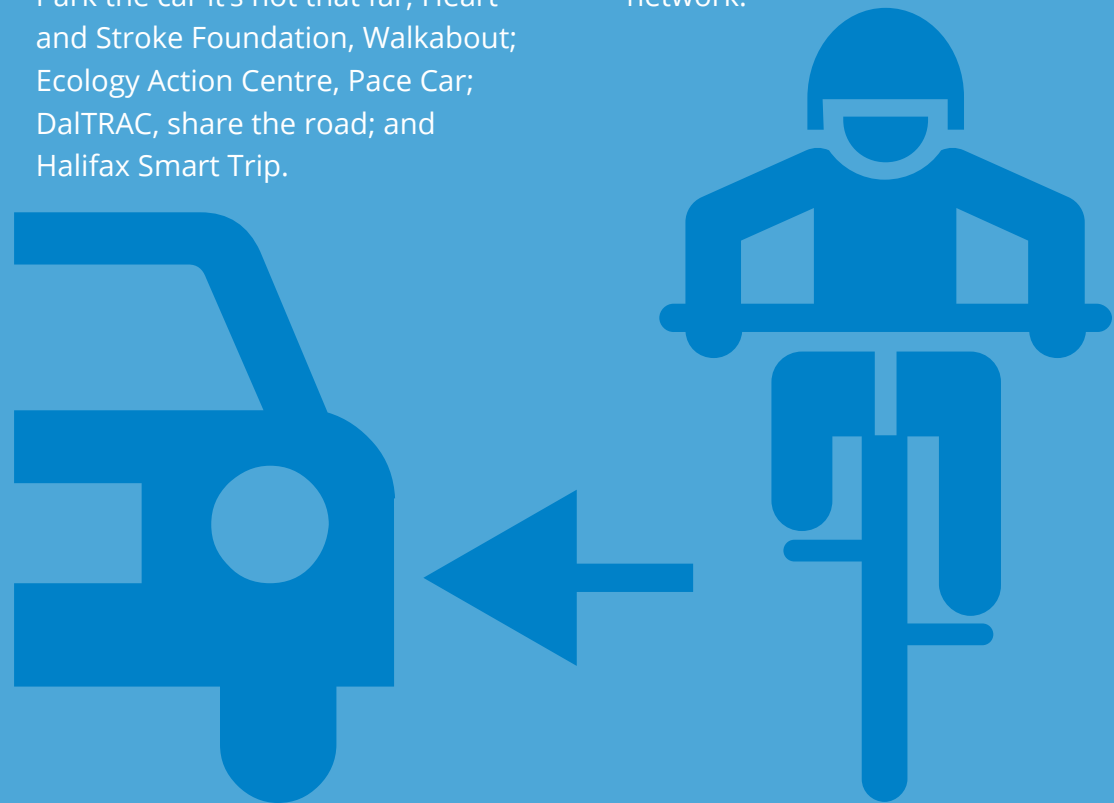
ENGAGEMENT AND ATTITUDES

1. Foster interest in active transportation as an environmentally conscious choice.
2. Build an active transportation network that entices and excites people to participate.
3. Educate cyclists and drivers about sharing the road.
4. Reposition messaging about physical activity and encourage people to include small active movement sessions in daily routines.
5. Work with our adjacent municipal partners to advocate for expanding existing trails and green spaces to support movement and physical activity.
6. Build partnerships with organizations and community groups that work with youth to facilitate opportunities to participate in active transportation.
7. Position opportunities for movement, physical activity, and recreation as economic drivers in the community and as opportunities for social connection.
8. Explore ways to implement and promote active transportation in schools (walking school bus, etc.).
9. Consider downtown heritage when planning active transportation intervention.
10. Establish the downtown as a pedestrian-dominant environment.

11. Ensure Women of Wheels have a voice in planning the active transportation network.
12. Increase outreach to communities who face barriers to transportation.
13. Enhance meaningful opportunities for volunteers matched to skills and interests.
14. Increase positive attitudes and respect towards active transportation and its users.
15. Strive to make participating in active transportation the norm rather than the exception.
16. Foster and build an environment where active transportation is safe, fun, convenient, and efficient.
17. Explore tourism opportunities for active transportation.

18. Entice people participating in active transportation for recreation to extend their active transportation habits to trips for utilitarian purposes.
19. Harness existing social marketing campaigns such as ParticipAction, Park the car it's not that far; Heart and Stroke Foundation, Walkabout; Ecology Action Centre, Pace Car; DalTRAC, share the road; and Halifax Smart Trip.

20. Encourage the attitude that active transportation is a valuable and enjoyable use of travel time.
21. Recognize promoting active transportation is an essential part of establishing a functional and effective active transportation network.



INCLUSIVITY AND ACCESS

- 22. Develop and implement policy to reduce financial barriers to accessing active and public transportation.
- 23. Use an accessibility lens when planning and promoting active transportation.
- 24. Identify partners and champions from various cultures and collaborate to support opportunities for active transportation.
- 25. Continue and expand programs that reduce barriers to participating in active transportation.
- 26. Promote no-cost and no-equipment activities.
- 27. Ensure universal design is considered with active transportation infrastructure.
- 28. Provide communication and promote resources within the school community, such as the equipment loan program.
- 29. Develop opportunities for children and youth to learn skills and gain knowledge that enables participation in active transportation.
- 30. Improve wayfinding signage and offer handheld maps.
- 31. Accommodate and support all modes of active transportation.
- 32. Explore solutions to all-season biking opportunities.
- 33. Prioritize intermodal connections within network development.
- 34. Establish an active transportation network that is child-friendly and can help connect children with spaces where they can explore, play safely, and experience challenges and risks in outdoor play.



BARRIERS, SAFETY, AND CONCERNS

- 35. Install thoughtful and strategic traffic-calming measures.
- 36. Promote cyclists wearing reflective clothing and installing lights and/or reflectors on their bikes.
- 37. Add paved shoulders for cyclists in high-traffic areas such as McClure Mills.
- 38. Transform Prince Street into one lane to increase space.
- 39. Address the risk of cyclists being doored by cars due to narrow streets with parking on both sides.
- 40. Consider initiating an “Idaho stop” system.
- 41. Mend the lights at RECC.
- 42. Widen Bible Hill Subway and/or develop a real solution to the safety and user concerns.
- 43. Address safety concerns of train tracks for active transportation users.
- 44. Improve safety at the intersections of Queen and Main, Walker Street and Mill Street, College Road and Main, and Willow Street and McClures Mills.
- 45. Address glass, debris, and gravel within active transportation lanes, particularly on Brunswick Street and the bottom of Pictou Road.
- 46. Consider having a street sweeper clear the bike lanes at least once a month.
- 47. Eliminate the double parking on both sides of Prince Street or consider a double bike lane travelling east and west.
- 48. Consider removing cyclists from Robie Street completely.
- 49. Reconsider the decision to narrow Young Street, an excellent street for bike lanes.
- 50. Provide a solution for the catch basins, low utility holes, potholes, missing pavement, and storm drains that are hazardous to cyclists.
- 51. Modify street designs to slow traffic.
- 52. Address the use of motorized equipment on trails.



- 53. Rebuild the sidewalk on Inglis to make it a safe and slow multi-use surface.
- 54. Ensure a place for dogs in the network.
- 55. Establish a user-friendly wayfinding system.
- 56. Address the mindset of depending on a car for utilitarian tasks such as transporting family and carrying groceries.
- 57. Address specific needs for those for whom safety concerns are even more pronounced, such as women, children, the physically challenged, and senior citizens.
- 58. Design a network where users are easily visible to people on adjacent roadways and routes are located in areas with significant street frontage.
- 59. Implement Crime Prevention through Environmental Design to support people whose fear of crime deters them from participating in active transportation.
- 60. Install safety lighting along key routes.

INFRASTRUCTURE, AMENITIES AND MAINTENANCE

- 61. Increase the presence and maintenance of sidewalks.
- 62. Consider equipment rental facilities for scooters, fat bikes, etc.
- 63. Allocate funds to repair and maintain roads, develop bike lanes and trails, and improve public transit.
- 64. Install bike racks at Farmer's Market and Civic Square.
- 65. Install barriers to respect and protect bike lanes, particularly in high-traffic areas.
- 66. Install a crosswalk for the Cobequid Trail at Willow Street.
- 67. Connect Millbrook to the community through a safe pedestrian/bike corridor.
- 68. Consider a paved or gravel trail behind the cemetery to the lookoff at Fundy Discovery Site going under the highway.
- 69. Install a cycling/walking bridge to Onslow from the Fundy Discovery Site.
- 70. Install a new roundabout at McClures Mills and Willow.

- 71. Prioritize winter clearing, maintenance, and use of sidewalks in the downtown.
- 72. Calculate maintenance costs in the development of new active transportation infrastructure.
- 73. Prioritize proper maintenance, use, and respect of active transportation infrastructure—i.e. bike lanes are not for storing winter sand.
- 74. Consider a new traffic circle at the corner of Pictou Road and Main Street.
- 75. Install a new crossing at Jimolly's (across Esplanade).
- 76. Position walking bridges across the hump yard tracks at the East End Cross Road and the Gasper Cross Road.
- 77. Install washrooms and a visitor centre at a primary Railyard Mountain Bike Park gateway.
- 78. Develop multi-modal mobility corridors.

- 79. Prioritize signage to mark routes, networks, and safety measures clearly.
- 80. Install paved shoulders on arterial and higher volume collector roads or rural roads.
- 81. Identify underused walking infrastructure such as sidewalks and consider transforming it into multi-use infrastructure.
- 82. Consider gateways at locations such as Shore Road trailhead, Lower Truro trailhead, Willow Street trailhead, NSCC campus, Tidal Bore Road, Robie Street where on-road and off-road sections meet, Esplanade/Victoria Park, Inglis/Farmer's Market area, Main/Walker bridge area, Salmon River Road—Pictou Road intersection, Tatamagouche—Patterson Wharf area, etc.

- 83. Increase the number of bike racks and ensure they are placed in thoughtful and practical locations.
- 84. Install one-way bike lanes on Revere Street and Church Street.



ROUTES AND DESTINATIONS

85. Factor the community's high use and enjoyment of the parks and trails into the active transportation network.
86. Consider a marked trail/bike path for Kennedy Branch Road in the Old Truro Road and, from there, marked trails toward the Reservoir and Victoria Park.
87. Develop a Harmony/Greenfield loop.
88. Recognize Hub Cycle as the starting location for many group rides.
89. Develop a multi-use trail between the end of Curtis Drive and parallel to William Barnhill Drive along the stream corridor.
90. Develop a trail from the turn on Marshland Drive to connect with the trail at the end of Robie Street.
91. Consider an alternative way other than highway 102 to cross the bay.
92. Focus on key routes such as out Queen through Greenfield, Valley, North River back on Main Street; out Harmony Road and around through Greenfield, Valley North River, Debert, Onslow and back on Main Street; up Young street to flashing light in Hilden back through Millbrook; Hospital/RECC to Downtown; RECC to downtown/ Victoria park; Dal AC to downtown; Maganese Mines to Salmon River/ Valley Road.
93. Consider extending the Cobequid Trail through Truro from King Street next to the railroad tracks.
94. Consider a trail beginning at the stadium, following the dykes to the lookoff, and connecting to the Cobequid Trail.
95. Establish a connection from Bible Hill to Downtown Truro.
96. Identify and develop safe routes to green spaces.
97. Create safe and connecting walking and wheeling routes within the community.
98. Promote safe active transportation routes throughout school communities and workplaces.
99. Establish a link into Victoria Park from Harmony Road.
100. Consider a link between schools and Victoria Park along Upham Drive.
101. Develop a link along Park Street to Farnham Road, towards Bible Hill.
102. Consider a link on the old rail bed leading from Willow-McClures Mills to Millbrook (on the corridor located on the west side of Willow).

103. Explore the link to RECC from Cobequid Trail along Wade Road.
104. Develop an alternative route to Young Street that runs through the park.
105. Establish connections along the rail corridor from Dominion Street to Salmon River and Bible Hill.
106. Explore a radial downtown loop with Esplanade, Prince, and Willow Streets.
107. Consider a trail from the McClures-Willow intersection that extends behind the old hospital and links to a Cobequid extension into the downtown.
108. Explore a riverfront trail that extends from the Park Street-Marshland Drive intersection to the Bible Hill bridge.
109. Upgrade Esplanade Promenade to create a unique downtown address, with passage through to the tracks and areas such as Victoria Park.
110. Develop gateways and good trails within Victoria Park from Burnyeat, Lyman and Wood Streets linking to the Railyard.
111. Explore an accessible surface up Young Street to the Middle School.
112. Upgrade Brunswick street to be an active transportation corridor with linkages to the downtown, the Cobequid Trail, and Victoria Park.
113. Consider the Old John Ross site for a central park that links various active transportation corridors.
114. Use Marshland Drive to link to the Fundy Discovery Site, extend through the marsh, and avoid Robie Street.
115. Explore ways to link the expanding Railyard and its new commercial and cultural offerings to the Town.
116. Develop links to Millbrook along the former rail corridor, Willow Street, William Barnhill Drive, and through Millbrook's Trail network.
117. Review Industrial Avenue as an essential active transportation link that connects many places.
118. Prioritize natural corridors along streets when planning an active transportation network that will lend itself to long-term recreational activity.
119. Implement long-distance active transportation recreation opportunities.
120. Select new routes that are attractive, diverse, visible, connected, accessible, safe, accommodating, supported, and distributed.

121. Create an important link within and out of the urban core by completing multi-use trail linkages of the Cobequid Trail.

122. Prioritize an extension of the Cobequid Trail along the rail line from King Street, past the Esplanade to Bible Hill.

123. Explore a trail from downtown to Victoria Park.



2.3 BIG ACTIVE TRANSPORTATION IDEAS

The following big ideas inform the creation of this chapter's active transportation concept plan (see figure 4).

BIG IDEA ONE - COMMUNITY CULTURE

The development of the Railyards (adventure-based cycling and hiking park) has fostered Truro's recreation evolution from an organized-centric team sport culture toward a highly active personal adventure-based sport culture. The street and trail network become the facility for this.

BIG IDEA TWO - COMMUNITY FORM

Truro's urban core built environment has evolved to host a healthy and active downtown business environment. Buildings are renovated to host existing and new businesses and social and retail shops (including bike shops, microbrew retail outlets, and outdoor activity stores). Community culture is reflected in the downtown business environment.

BIG IDEA THREE - INSTITUTIONALIZED DESTINATIONS

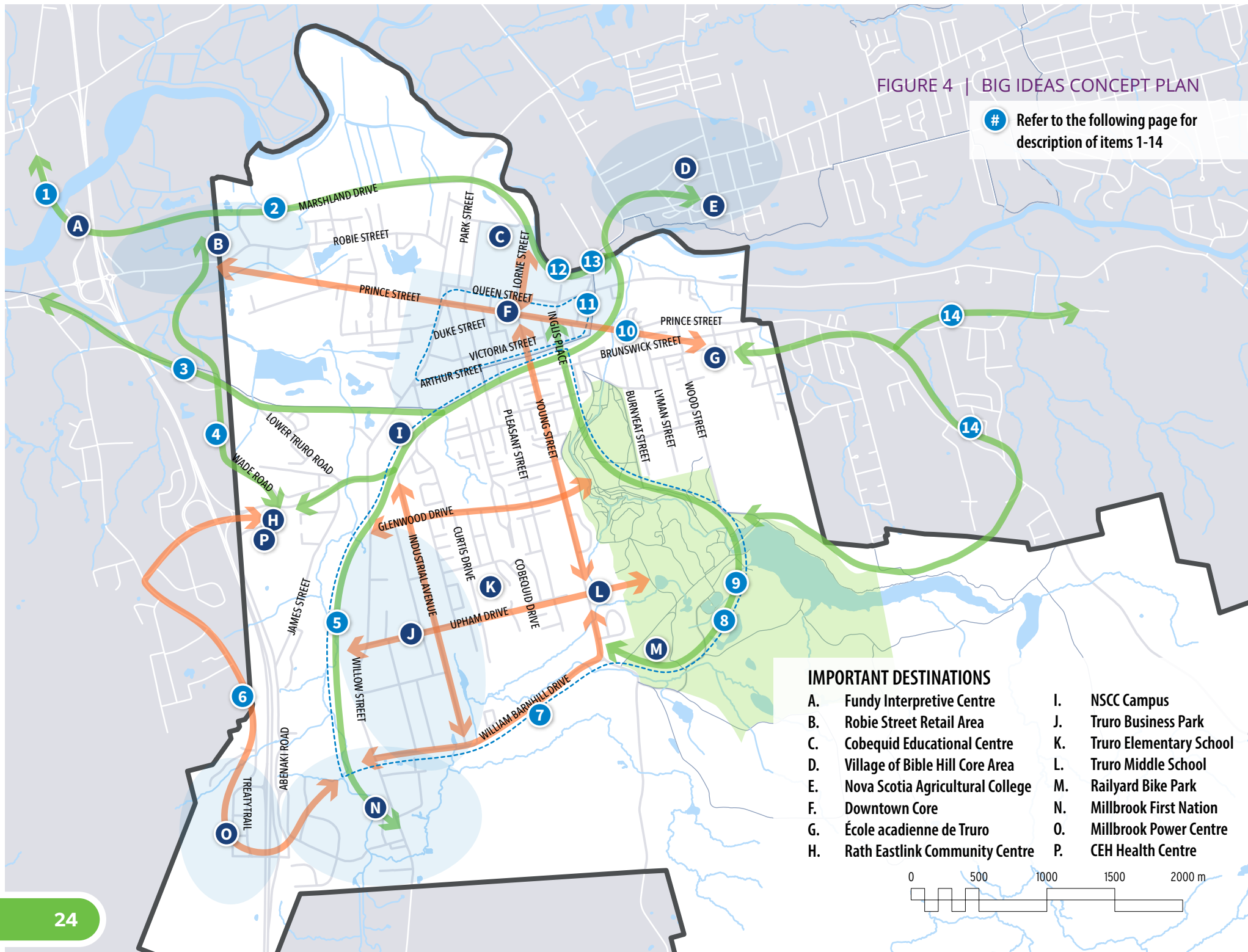
Several primary recreation, social, tourism and economic environments have evolved to become powerful destinations within the Truro area. These include the Downtown, Stanfields, schools, Victoria Park, Millbrook First Nation, the RECC and Hospital and the Fundy Experience Site.

BIG IDEA FOUR - CATCHING UP

Our preliminary discussions indicate that the previous three big ideas suggest that an advanced cultural, built form, and destination Truro network of addresses now requires a street and trail network equivalent to these environments. This advanced lifestyle must be reflected in the Town's mobility corridors to ensure Truro fully capitalizes and expands upon a great business and lifestyle environment. Thus, the active transportation master plan is all about developing multi-modal and multi-generational corridors that accomplish this for the corridor's host setting.

FIGURE 4 | BIG IDEAS CONCEPT PLAN

Refer to the following page for description of items 1-14



BIG IDEA FIVE - ACTIVE TRANSPORTATION NETWORK CONCEPT PLAN

This concept plan recognizes Truro's downtown as the heart of the regional network that extends to important in-town and adjacent community destinations. Figure 4 illustrates the location of the existing or proposed active transportation corridors that link these destinations, while the following describes the important aspects of the concept plan.

1. Work with regional partners to connect Marshland to a future bridge/trail crossing to Central Onslow at the former Boardlanding Bridge location.
2. Establish a Marshland link from downtown to Fundy Interpretive Centre.
3. Establish a Cobequid Trail connection into Downtown Truro to ensure the regional economic and cultural heart is also a physical heart and gateway to a regional trail network.
4. Establish new street or trail connections between important destinations in a manner that creates mobility loops.
5. Capitalize on former or under-utilized rail corridors by creating a multi-modal, multi-generational and multi-family trail that connects the heart of the Millbrook First Nation community to the heart of Downtown Truro.
6. Work with regional partners to create multi-modal routes to Truro's key destinations and downtown.
7. Revitalize a series of streets to create a humanized multi-modal network of connections between significant destinations.
8. Establish a multi-modal loop that links the heart of Truro to the hearts of Victoria Park and Millbrook. This works with concept point 5 to create a continuous multi-modal and multi-generational trail loop directly linked to the Cobequid Trail.
9. Establish a multi-modal route linking The Railyard with Downtown Truro/Inglis Place through Victoria Park.
10. Revitalize central Prince Street as a multi-modal destination where people, culture and business come together to express gathering and economy within this regional heart.
11. Establish a multi-modal loop around the Downtown Truro Core.
12. Establish the river's edge link from Cobequid Educational Centre to the downtown and Bible Hill.
13. Establish a new river crossing to Bible Hill.
14. Work with regional partners to establish connections to adjacent neighbourhoods and communities to Downtown Truro and Victoria Park through Salmon River.

3.0 ACTIVE TRANSPORTATION TOOLBOX





Tools that improve walk and roll-ability will be applied to a classification-based network of street and trail corridors that create desired connectivity throughout and beyond the Town of Truro. The tools combine in varied formats at various locations to create shared-use awareness and education, improve connectivity, and begin to evolve the nature of Truro's streets from vehicle habitat to human habitat.

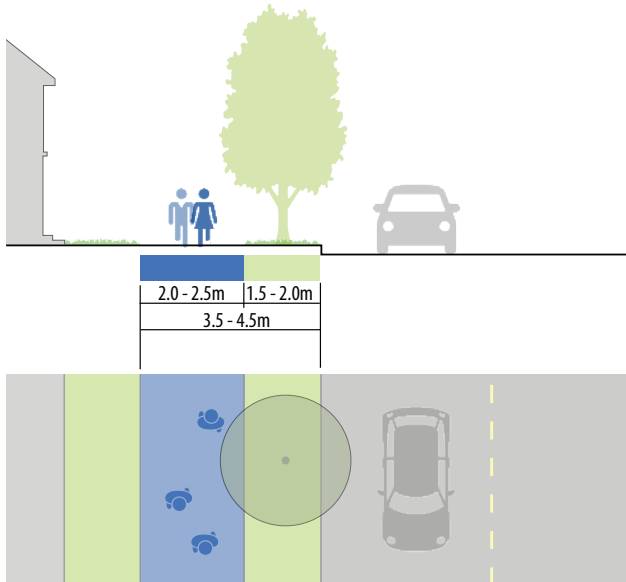
The toolbox components are organized relative to general user speed, irrespective of transport mode. The tool is applied to routes based on the active transport requirements of that route. For example, a travel-to-school route must serve walkers as well as youth or family cycling; therefore, the route must support passive use from 0 to 20 km/hr. Users such as joggers, in-line skaters, dog walkers, as well as those requiring accessibility devices can use this route as well. Thus, what functions as a school route has the ancillary benefit of functioning as a great social and active neighbourhood route.

0
km/h



5
km/h

SUBURBAN/URBAN BUFFERED SIDEWALK



- SAFETY
- COMFORT
- SPACE
- COST
- BENEFIT

FACILITY DESCRIPTION

- » Pedestrian-dominant pathways immediately attached to the street's edge/curb or offset from traffic follow the street corridor, or are separated from vehicle traffic by a boulevard.
- » Allows one-way travel for all passive modes.
- » Minimum 2.0-meter width.
- » Concrete surface.

APPROPRIATE USE

- » Sidewalks are highly influenced by adjacent traffic speed or volumes, and are best located on routes with lower speed limits.
- » Wherever possible, separate from street edges for routes that youth may use without parents.

OTHER CONSIDERATIONS

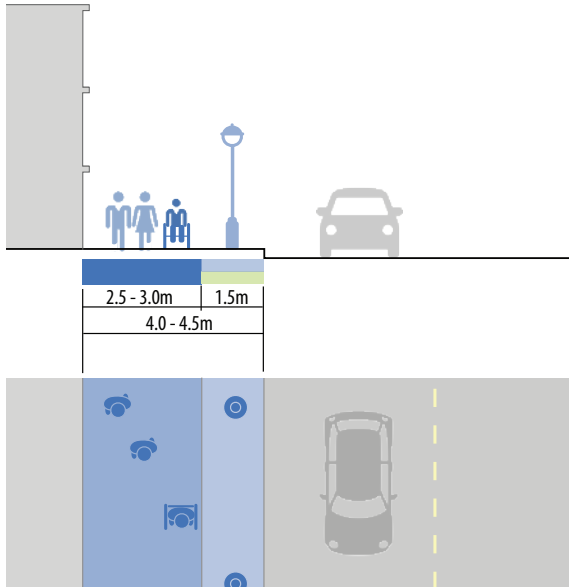
- » High level of comfort for people of all ages and abilities.
- » Can be used for both passive recreation and purposeful travel.
- » Neighbourhood surroundings motivate people to take advantage of the facility for both social and activity reasons.
- » On-street corridors provide a direct connection to desired destinations with continuous access points.

0
km/h



5
km/h

URBAN SIDEWALK



- SAFETY
- COMFORT
- SPACE
- COST
- BENEFIT

FACILITY DESCRIPTION

- » Pedestrian-dominant pathways offset from traffic with an amenity strip (that hosts trees and lighting).
- » Allows two-way travel for all passive modes.
- » Minimum 2.5-meter width plus 1.5-meter amenity strip where possible.
- » A mix of concrete and paving units or turf surfaces.

APPROPRIATE USE

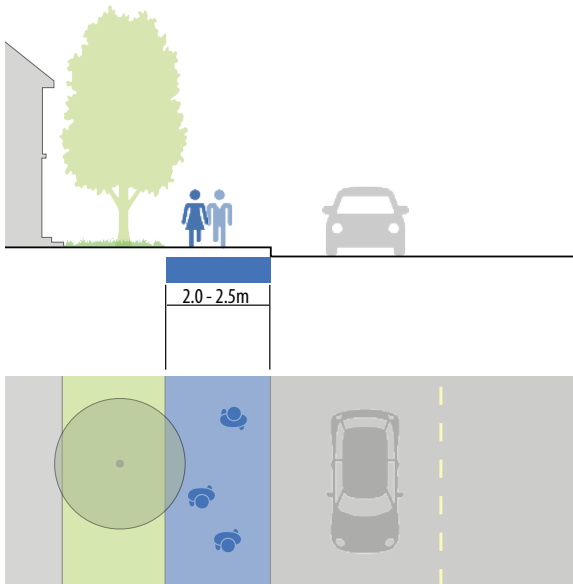
- » Urban sidewalks are influenced by adjacent traffic speed or volumes, and are best located in urban residential or business areas with moderate to lower vehicle speed limits.
- » Separate from street edges for routes with amenity strips that support user comfort.

OTHER CONSIDERATIONS

- » High level of comfort for people of all ages and abilities.
- » Can be used for both passive recreation and purposeful travel.
- » Residential or business surroundings motivate people to take advantage of the facility for active, social and business reasons.
- » On-street corridors provide a direct connection to desired destinations with continuous access points.



SUBURBAN/URBAN SIDEWALK



- SAFETY
- COMFORT
- SPACE
- COST
- BENEFIT

FACILITY DESCRIPTION

- » Pedestrian-dominant pathways offset from traffic with an amenity strip (that hosts trees and lighting).
- » Allows for two-way travel for all passive modes.
- » Minimum 2.0-meter width plus 1.5-meter amenity strip where possible.
- » A mix of concrete and grass surfaces.

APPROPRIATE USE

- » Suburban/urban sidewalks are influenced by adjacent traffic speed or volumes, and are best located in urban residential areas with moderate speed limits.
- » Separate from street edges for routes with amenity strips that support user comfort.

OTHER CONSIDERATIONS

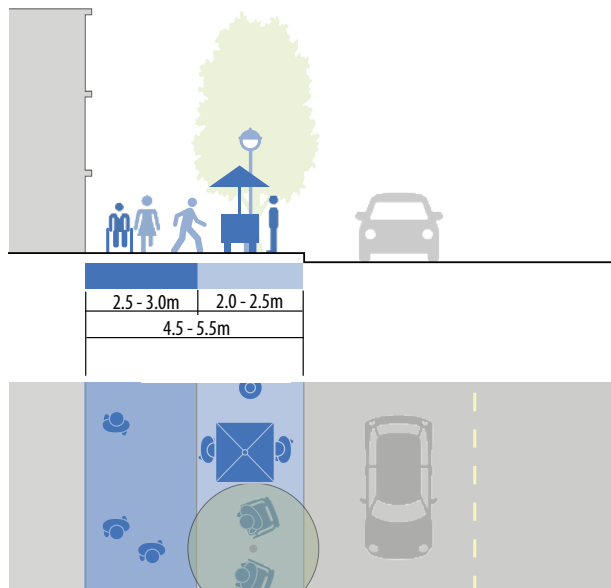
- » High level of comfort for people of all ages and abilities.
- » Can be used for both passive recreation and purposeful travel.
- » Residential surroundings motivate people to take advantage of the facility for passive activity or social reasons.
- » On-street corridors provide a direct connection to desired destinations with continuous access points.

0
km/h



5
km/h

URBAN HEART SIDEWALK



FACILITY DESCRIPTION

- » Designed as a regional destination corridor where people and businesses come together to create a strong social and cultural human-scale environment.
- » Pedestrian and retail dominant pathways offset from traffic with an amenity strip (that hosts trees, signage, patios, bike racks, lighting, etc.).
- » Allows two-way travel for all passive modes.
- » Minimum 2.5-meter width plus 2.0-meter amenity strip where possible.
- » May include a mix of concrete and paving unit surfaces.

APPROPRIATE USE

- » Urban heart sidewalks are influenced by adjacent traffic speed or volumes, and are best located in urban retail areas with low vehicle speed limits.
- » Separate from street edges for routes with amenity strips that support user comfort and retail activity within the heart of the downtown.

OTHER CONSIDERATIONS

- » High level of comfort for people of all ages and abilities.
- » Can be used for retail environments with patios and sidewalk shopping where highly permeable shops and restaurants border the sidewalk, or as passive recreation and purposeful travel.
- » Retail and residential surroundings motivate people to take advantage of the facility for shopping and social reasons.
- » On-street corridors provide a direct connection to desired destinations with designated continuous access points from adjacent streets or parking areas.



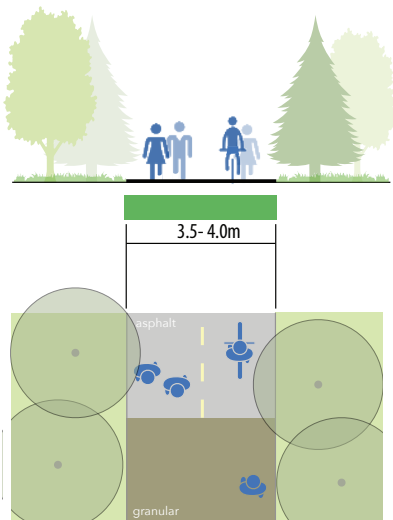
- SAFETY
- COMFORT
- SPACE
- COST
- BENEFIT

5
km/h



20
km/h

MULTI-USE PATHWAY



●●●●● SAFETY
 ●●●●● COMFORT
 ●●●○○ SPACE
 ●●○○○ COST
 ●●●●○ BENEFIT

FACILITY DESCRIPTION

- » Shared-use paths offset from traffic follow the street corridor but are separated from vehicle traffic by a boulevard.
- » They allow two-way travel for all active modes.
- » “Municipal Paths” in the Open Space Master Plan may be designed as a shared-use path.
- » Minimum 3.0-meter width.
- » Smooth paved surface.

APPROPRIATE USE

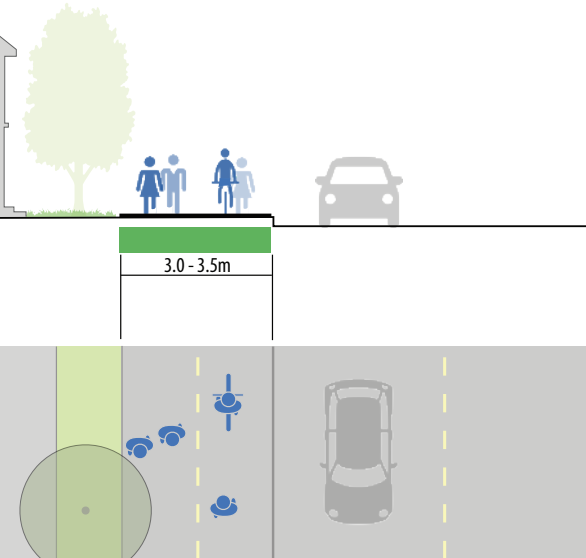
- » Shared-use paths offset from streets are less influenced by adjacent traffic speed or volumes and are best located on routes with fewer driveways and/or lower-volume intersections.
- » Consider separate pedestrian and bike trails when greater than 100 persons per hour (for a typical 3m shared-use path).
- » Shared-use paths with a hard-packed granular surface provide a lower quality facility but may be acceptable in some circumstances.



OTHER CONSIDERATIONS

- » Upgrading trails to widths suitable for shared use with paved surfacing makes them more accessible for all active transportation users and people with mobility challenges.
- » High level of comfort for people of all ages and abilities.
- » Can be used for both recreation and purposeful travel.
- » Natural surroundings and beautiful scenery motivate people to take advantage of the facility.
- » Preventing collisions between trail users requires courtesy. Providing information about users' responsibility for maintaining each others' safety is important (see Section 4.2 for more on education).
- » Off-street corridors can be less direct to desired destinations and/or have fewer access points.
- » Route choice may impact the natural environment.

MULTI-USE URBAN PATHWAY (TIGHT STREET)



- SAFETY
- COMFORT
- SPACE
- COST
- BENEFIT

FACILITY DESCRIPTION

- » Shared-use path placed at the street’s edge (at the back-of-curb). Placed where narrow street corridors do not allow for boulevard space
- » Allows two-way travel for all passive and active modes.
- » Minimum 3.0-meter width.
- » Smooth paved surface.

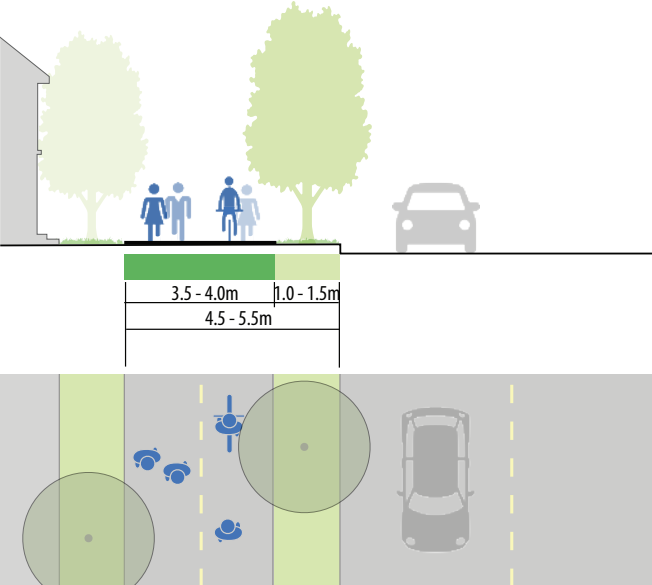
APPROPRIATE USE

- » Shared-use paths in residential or business environments where associated with street corridors.
- » Shared-use paths may use a smooth asphalt surface to support fully accessible trail use.
- » Provides a good alternative to the urban sidewalk where corridor space is available.

OTHER CONSIDERATIONS

- » Upgrading trails to widths suitable for shared use with paved surfacing makes them more accessible for all active transportation users and people with mobility challenges.
- » High level of comfort for people of all ages and abilities.
- » Can be used for both active and passive recreation, and purposeful travel.
- » Preventing collisions between trail users and speed enforcement requires courtesy between users.

MULTI-USE URBAN PATHWAY



- SAFETY
- COMFORT
- SPACE
- COST
- BENEFIT

FACILITY DESCRIPTION

- » Shared-use paths offset from traffic follow the street corridor but are separated from vehicle traffic by a boulevard.
- » They allow two-way travel for all passive and active modes.
- » Minimum 3.5-meter trail width with 1.0 grass boulevard.
- » Smooth paved surface.

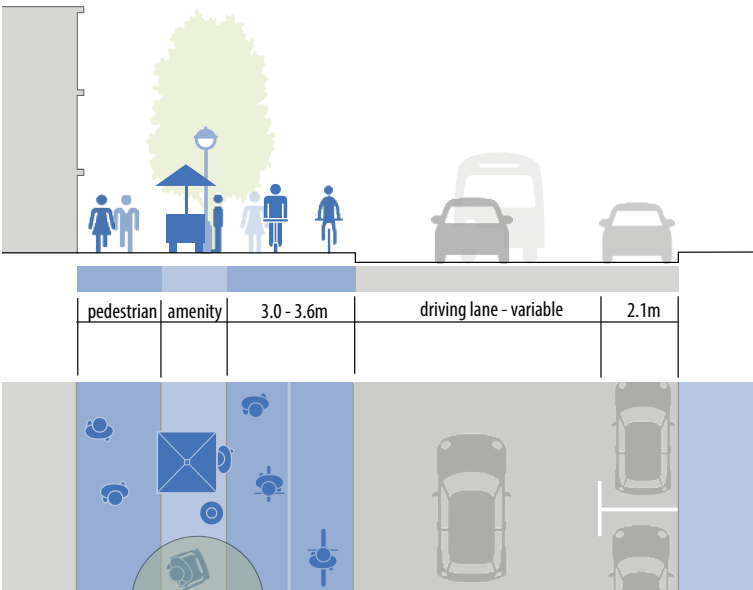
APPROPRIATE USE

- » Shared-use paths offset from streets are less influenced by adjacent traffic speed or volumes and are best located on routes with fewer driveways and/or lower-to-moderate-volume intersections.
- » Shared-use paths may use a smooth asphalt surface to support fully accessible trail use.
- » Shared-use paths with a hard-packed granular surface provide a lower quality facility but may be acceptable in areas with rural character.

OTHER CONSIDERATIONS

- » Upgrading trails to widths suitable for shared use with paved surfacing makes them more accessible for all active transportation users and people with mobility challenges.
- » Moderate level of comfort for people of all ages and abilities.
- » Can be used for both passive and active recreation, and purposeful travel.
- » Preventing collisions between trail users and speed enforcement requires courtesy between users.

TOWN CENTRE PUBLIC REALM



- SAFETY
- COMFORT
- SPACE
- COST
- BENEFIT

FACILITY DESCRIPTION

- » Designed for the urban Prince Street zone corridor where people and businesses come together to create a strong social and cultural human-scale environment (on a street with a dedicated multi-use corridor).
- » Multi-modal facility with pathways minimally offset from traffic with a sloped curb.
- » Corridor includes an amenity strip located between the multi-modal pathway and sidewalk for trees, signage, patios, bike racks, lighting, etc.
- » Allows two-way travel for all passive modes.
- » Minimum 3.0-meter multi-modal corridor plus sidewalk and amenity strip.
- » Includes a mix of concrete and paving unit surfaces.

APPROPRIATE USE

- » Urban heart sidewalks are influenced by adjacent traffic speed or volumes, and are best located in urban retail and residential areas with low vehicle speed limits and a highly interactive relationship between vehicle corridors and building ground floors.
- » Separate multi-modal corridor from pedestrian zones with amenity strips that support user comfort and retail activity, trees, signage, lighting, etc., within the heart of the downtown.

5
km/h



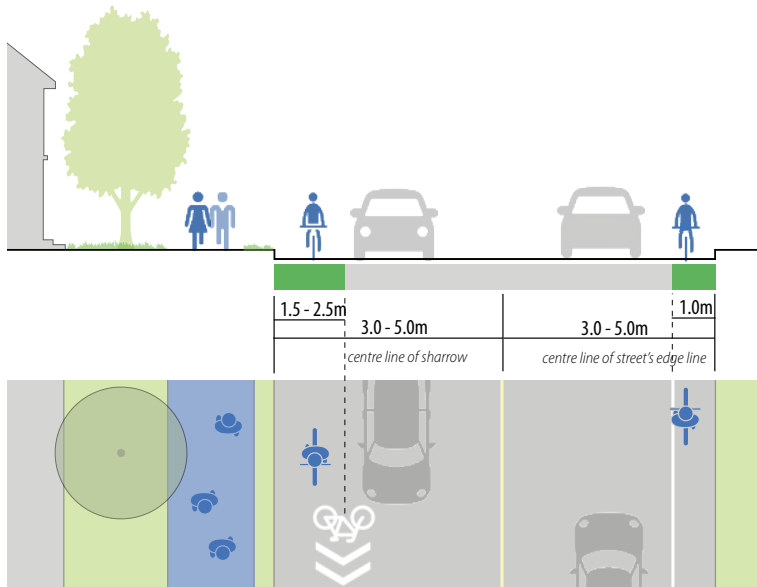
20
km/h

OTHER CONSIDERATIONS

- » High level of comfort for urban visitors of all ages and abilities where vehicle speeds are low.
- » Can be placed next to retail environments with patios and sidewalk shopping where highly permeable shops and restaurants border the sidewalk.
- » Retail and residential surroundings motivate people to take advantage of the facility for shopping and social reasons. The multi-modal corridor provides continuous vehicle-style movement for human-powered travel (including power-assist bikes and scooters).
- » On-street corridors provide a direct connection to desired destinations with designated continuous access points from adjacent streets or parking areas.



SHARED ROUTES



FACILITY DESCRIPTION

- » Painted bicycle symbols (sharrow) placed to promote cycling on the street and in the town.

APPROPRIATE USE

- » Lower traffic speeds.
- » Lower traffic volumes.

OTHER CONSIDERATIONS

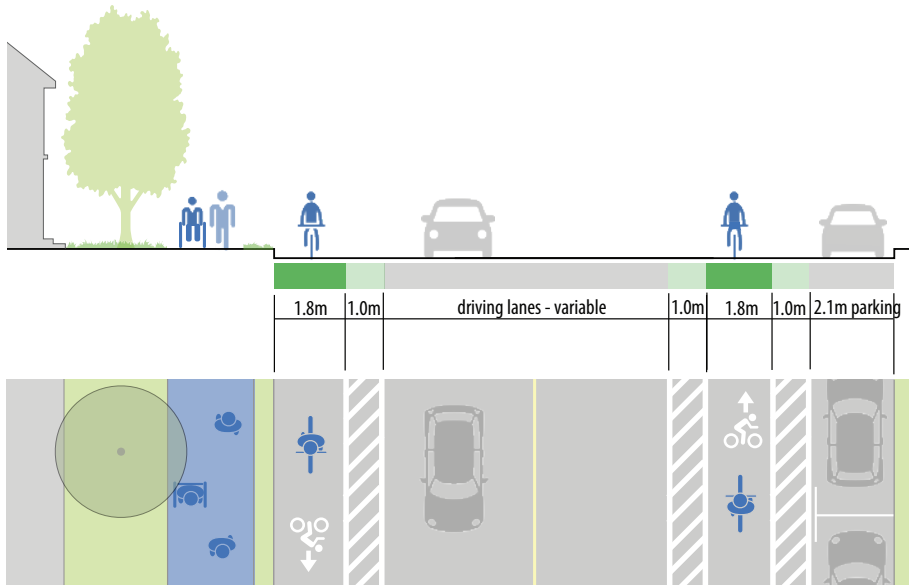
- » Moderate comfort for confident bike riders.
- » Equally useful as a shared-use promotion and safety facility.
- » Moderate to low comfort for less confident riders.
- » Vehicles and people riding bikes share the same corridor without designated separation.



- SAFETY
- COMFORT
- SPACE
- COST
- BENEFIT



BUFFERED BIKE LANES



- SAFETY
- COMFORT
- SPACE
- COST
- BENEFIT

FACILITY DESCRIPTION

- » Buffered bike lanes are located within the street corridor and are designated for the use of cyclists; however, scooters and in-line skaters often use the facility. They are typically indicated by painted solid lines and bicycle symbols and further buffered by a painted buffer strip between the bike lane, vehicle lane, and/or on-street parking lane.

APPROPRIATE USE

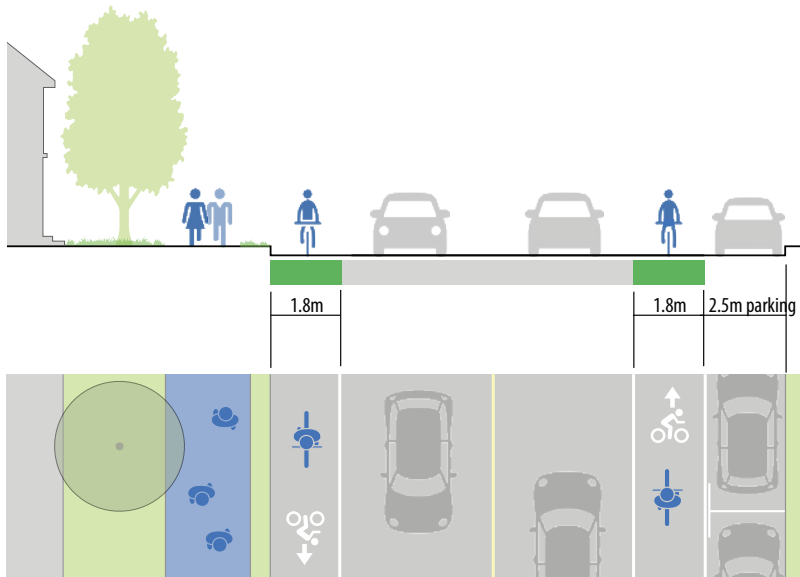
- » Lower traffic speeds.
- » Low to medium traffic volumes.

OTHER CONSIDERATIONS

- » High comfort for confident bike riders.
- » Visible painted separation between vehicles and bike riders.
- » Moderate to low comfort for less confident riders.
- » Vehicles and people riding bikes share the same corridor.



BIKE LANES



FACILITY DESCRIPTION

- » Painted bike lanes are located within the street corridor and are designated for the exclusive use of cyclists. They are typically indicated by a painted solid line and bicycle symbol.

APPROPRIATE USE

- » Lower traffic speeds.
- » Lower traffic volumes.

OTHER CONSIDERATIONS

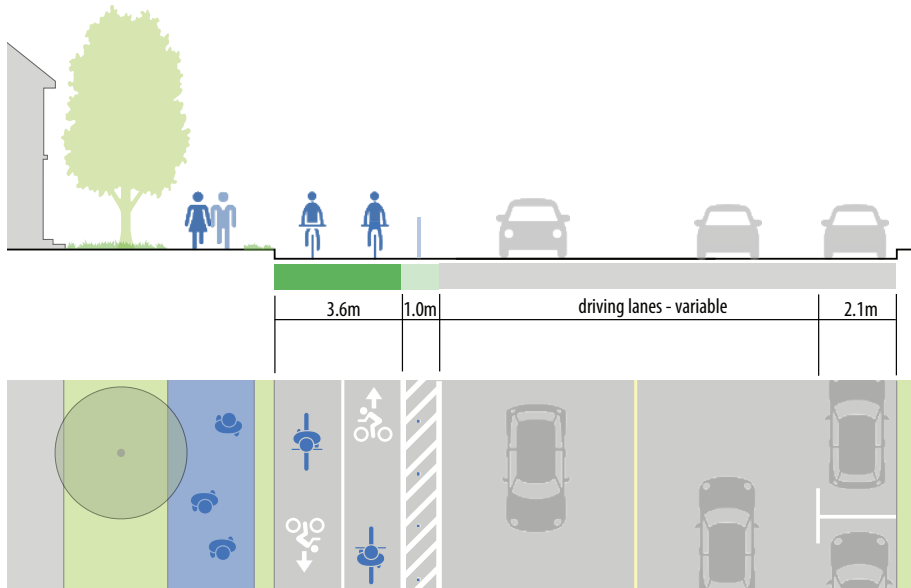
- » Moderate comfort for confident bike riders.
- » Visible separation between vehicles and bike riders.
- » Low comfort for less confident riders.
- » Vehicles and people riding bikes share the same corridor.



- SAFETY
- COMFORT
- SPACE
- COST
- BENEFIT



PROTECTED 2-WAY BIKE LANES



- SAFETY
- COMFORT
- SPACE
- COST
- BENEFIT

FACILITY DESCRIPTION

- » Protected two-way bike lanes are located within the street corridor and are physically separated from vehicle traffic (e.g., elevated with a rolled curb or separated by planter boxes, curbs, or flexible bollards).
- » Designed for the exclusive use of cyclists; however, scooters and in-line skaters often use the facility.
- » Specifically created as a test facility for Wade Road, utilizing flexible bollards.

APPROPRIATE USE

- » Low to Medium Traffic Speeds
- » Medium to High Traffic Volumes

OTHER CONSIDERATIONS

- » High comfort for confident bike riders
- » People riding bikes are physically separated from vehicles.
- » Location along street corridors has higher potential directness/proximity to destinations.
- » Greater appeal for purposeful travel.
- » Less comfortable for less confident riders.
- » People riding bikes are relatively close to motor vehicles.
- » Potential impacts on property access and on-street parking.

SIGNAGE

FACILITY DESCRIPTION

- » Wayfinding and destination panels placed within 1.0 meters of the facility edge for directional and multi-modal promotional purposes.
- » To be designed as an extension of Truro's existing urban wayfinding signage program; however, green should replace blue as the dominant panel colour (to promote the integration of environmental health and active transportation).
- » Signs to be designed at a human scale.

APPROPRIATE USE

- » Signs to be placed at the edge of active transportation facilities or in association with important destinations such as bike corrals, bike racks, schools, etc.

OTHER CONSIDERATIONS

- » Active transportation signage to become a wayfinding and destination system for people-dominant outdoor spaces such as trails and parks. Although the graphic themes should align with the town-wide wayfinding system, re-assigning the existing colours should delineate a variation between the vehicle and active transportation environments.



REGULATORY SIGNAGE

FACILITY DESCRIPTION

- » Regulatory signage to be located where facilities are associated with streets.
- » Signage includes shared or designated use facilities.
- » Signs are to be placed to Transportation Association of Canada (TAC) guidelines and standards and are designed at a vehicle scale.

APPROPRIATE USE

- » For placement at the edge of streets, or at intersections to indicate movement onto streets with active transportation facilities.

OTHER CONSIDERATIONS

- » TAC-based signage is not designed to articulate facilities as part of a town-wide system; therefore, non-regulatory signage should be sparingly used where necessary to ensure wayfinding is a component of the street network.



BIKE RACK

FACILITY DESCRIPTION

- » Bike racks are ideally situated within 20 meters or less from the entrance of the destination or urban area they serve. Good bike racks are sturdy, they are anchored to the ground, their design is self-explanatory, and they support the bike frame in at least two places. The ideal placement is visible to the public and nearby the destination they serve.
- » Bike racks should be designed in a manner that articulates the notion of a singular and unified active transportation system, irrespective of placement within the town.

APPROPRIATE USE

- » Bike racks should be located at varied residential or shopping locations, and other important gathering destinations where less than ten bikes/scooters require parking.

OTHER CONSIDERATIONS

- » Bike racks are excellent practical and promotional facilities and should be placed in highly visible and accessible locations.



BIKE CORRAL

FACILITY DESCRIPTION

- » Bike corrals offer higher capacity (typically ten plus bicycles), and short-term bicycle parking. Typically located at street level, they are suitable for locations with limited sidewalk space for bike racks, but with strong bicycle parking demand. They may be located on-street, adjacent to the curb, in a location not suitable for vehicle parking. Some jurisdictions convert single on-street parking spaces into bike corrals, either permanently or just for the summer season.

APPROPRIATE USE

- » Bike corrals should be located at schools, recreation facilities, shopping areas, parks, urban plazas, town-owned facilities, and other important gathering destinations.

OTHER CONSIDERATIONS

- » Bike corrals should be placed with active transportation destination signage to create a highly visible and accessible support destination at important destinations.



BIKE LOCKERS

FACILITY DESCRIPTION

- » Bike lockers are large plastic or metal boxes designed to secure bicycles and related accessories. They are typically situated in groups of two or four. Bike lockers protect bicycles from the weather; however, they may be placed outdoors, and their access can be exposed to the elements. Ideally, they are visible and located in well-lit areas. The large plastic or metal surfaces of bike lockers present a surface for branding or advertising.

APPROPRIATE USE

- » Bike lockers should be placed in highly visited urban areas that require safe and accessible storage for expensive bikes and scooters. Locations include Town Hall and an important destination such as the Esplanade.

OTHER CONSIDERATIONS

- » Bike lockers should be placed with bike racks and destination signage at highly visible and accessible locations.
- » When placed with other facilities, bike lockers become an active transportation hub within the urban environment.



PROGRAMMING

There are numerous examples of Canadian and American active transportation programs that successfully promote physical activity through the delivery of cycling skills and outreach, walking programs, school travel planning, commuter challenges, and road-sharing outreach. A collection of the most relevant programs for Truro are reviewed and discussed below.

This chapter also describes two programs specially designed to work within the context of the development themes and implementation strategy. These programs will also be modified and delivered with various program partners.

The Town of Truro will wish to work with provincial and community corporate/organization partners to personalize and deliver similar programs. It is important to note that Truro is home to a highly advanced outdoor activity culture that can support the immediate development and delivery of customized programs. Additionally, groups like Bicycle Nova Scotia support the creation and delivery of great use and safety programming. This is considered when proposing the following precedent municipal programs that can be reviewed as additional input into program development.

CYCLING CANADA'S CAN-BIKE

<http://canbikecanada.ca>

Cycling Canada's CAN-BIKE program offers a series of courses taught on all aspects of cycling, in order to ride safely, effectively, and enjoyably on the road. Cycling Canada coordinates program development, with help from National Examiners/Instructors, and course delivery and administration take place through CAN-BIKE Delivery Agents, such as community associations, municipal departments, service groups, and independent instructors. Courses cover topics such as the Fundamentals of Cycling, Cycling Basics & Bike Rodeo, Core Cycling Skills, Advanced Cycling Skills, and Instructor Training.

BIKE WINNIPEG

<http://bikewinnipeg.ca>

Bike Winnipeg is a cycling advocacy organization that provides best-practice research and informed recommendations to government agencies and related organizations. Their position statements cover topics such as mandatory helmet legislation, taxi cabs in diamond lanes, traffic control measures, neighbourhood greenways and Vision Zero. They also offer cycling skills courses, professional development, and a collaborative community events calendar. Their courses combine classroom presentations with practical on-road advice and mentoring to build critical cycling skills and confidence.

THE BIKE DUMP

<http://bike-dump.ca>

The Bike Dump is a volunteer-run community bicycle education space that strives to make knowledge of bicycle repair accessible to everyone. They offer tools and space to fix bicycles, a stock of recycled bike frames and parts from which people can build a bike, bike repair workshops, and volunteers to help guide repairs and bike building projects, and sell refurbished and recycled bicycles on a sliding scale.

SHARE THE ROAD CYCLING COALITION - BICYCLE FRIENDLY COMMUNITIES AWARD

<https://www.sharetheroad.ca/bicycle-friendly-communities-p138264>

The Bicycle Friendly Community Award (BFC) Program provides incentives, hands-on assistance, and award recognition for communities that actively support bicycling. Share the Road also has a bicycle-friendly business award for businesses encouraging their employees to ride to work. These initiatives have the potential to raise awareness as the city and its residents improve their capacity to facilitate commuter cycling.

Although this is an Ontario-based initiative, the programs are high-quality and provide a great precedent for shared-use thinking.

OTTAWA'S CYCLING SAFETY AWARENESS PROGRAM

<https://ottawa.ca/en/parking-roads-and-travel/road-safety/cycling-safety/cycling-safety-awareness-program>

The City of Ottawa is one of Canada's most advanced cycling municipalities, and offers several great programs that provide precedent. The Cycling Safety Awareness Program (CSAP) is an educational outreach program focused on cycling safety. Ottawa City Council has a Cycling Safety Improvement Program, which recommended the CSAP. The CSAP complements cycling infrastructure improvements by delivering key messages on dooring, sharrows, sidewalk cycling and the bike box. It also provides promotional material such as posters and information cards.

THE WRENCH

<http://thewrench.ca>

The Wrench is a non-profit organization in Winnipeg working to make the use of bicycles for transportation more accessible, with a particular focus on youth cycling education. They offer youth programming through formal educational programs with schools and other community organizations. Earn-a-Bike is one program that teaches youth participants how to build their own bikes from the ground up, as well as bicycle safety skills. They also offer support and advice to those who wish to start a community bike shop.

SPROCKIDS

<https://www.sprockids.com>

Sprockids is a mountain biking program oriented toward youth ages 6 to 18 that teaches off-road skills, safety, etiquette, bike maintenance, progress tracking, and leadership skills.

CHICAGO COMPLETE STREETS' BICYCLING AMBASSADORS

<http://chicagocompletestreets.org/safety/education/>

Bicycling Ambassadors travel all over the City of Chicago, educating people about pedestrian and bicycling safety. They offer presentations, safety literature, and bike activities at parks, schools, block parties, street festivals, and many more locations and events. Safe Routes Ambassadors also work in Chicago's public and private schools, offering educational presentations about walking and bicycling safety.

WHEEL KIDS BICYCLE CLUB

<http://wheelkids.com>

This organization focuses on hands-on learning that gets children ages 5-15 excited about cycling and establishes a lasting appreciation for health and fitness. The organization has a variety of programs, camps, classes and events such as Adventure Riding Camp, Coach in Training, one-day camps, private lessons, preschool lessons, and a bicycle academy.

CYCLE KIDS

<http://www.cyclekids.org>

Cycle Kids is committed to strengthening the emotional and physical health of children by giving them the skills to lead active and healthy lifestyles through riding a bike. The two-year program's curriculum for 4th and 5th-grade students can be implemented in physical education and academic classes. Schools are provided with bikes and a curriculum, training for teachers and local police officers, and program assessments. Each student is also provided with a textbook.

They cite the following positive impacts as a result of their program: 52% improvement in physical activity, 71% improvement in nutritional intelligence, 48% personal growth, and 48% social growth.

KIDS ON BIKES

<https://kidsonbikes.net>

Kids on Bikes offers an Earn a Bike program in Colorado Springs, USA; children earn points for accomplishing milestones so they may eventually earn a working bike of their own. Kids on Bikes also run bike libraries out of repurposed shipping crates; they are mini-hubs for refurbished bikes, tools, parts and an outdoor repair station. They also host rides from May to September, a bike maintenance mobile repair station, and a bicycle carnival.

GREEN COMMUNITIES CANADA'S ACTIVE SCHOOL TRAVEL

<http://ontarioactiveschooltravel.ca/about-us/>

For over 20 years, Green Communities Canada has promoted active travel to school through research, advocacy, training, educational resources, events, partnerships and on-the-ground programming. Their goal is to make walking, cycling and other forms of active, safe, and sustainable transportation the norm for trips to and from school. Their comprehensive approach, using the community-based School Travel Planning model, generates significant and sustained increases in active school travel.

ACTION FOR HEALTHY KIDS

<http://www.actionforhealthykids.org>

This program's mission is to mobilize school professionals, families and communities to take actions that lead to healthy eating, physical activity and healthier schools where kids thrive. It provides tips on how to motivate students to walk more and start a walking program. It recommends people talk to their school's administrators, identify teachers who will support the program, encourage parents to participate, recruit participation from older students (e.g., a high school football team can walk kids home once a week), promote the club to students and parents, and ask students for feedback.

WALK IN SHAPE!

<http://www.walkbc.ca/walk-programs>

Walk BC delivers a three-month-long competition that aims to help friends, family, colleagues, and community members encourage each other by challenging one another in a fun and friendly way. The free downloadable kit enables participants to compete to walk the farthest distance, walk the most steps, walk at a moderate pace for the longest amount of time, and lose the most weight. After participants download the log, they are asked to determine their monthly goals, for distance, steps, time and or weight loss on the log.

GREEN ACTION CENTRE'S COMMUTER CHALLENGE

<https://commuterchallenge.ca>

Every year in June, the Green Action Centre presents a free week-long event that encourages workplaces and individuals to explore green transportation options. All participants need to do is register and log their green commutes during the week. The Green Action Centre works with businesses and employers to make active and green types of commuting both appealing and accessible. Over 20,000 Canadians participate each year.

SUSTRANS

<https://www.sustrans.org.uk>

Sustrans is a UK charity with programming dedicated to helping young people travel actively and safely to school or college. They created a new Active Schools guide in partnership with Nike outlining simple steps to make schools more active. The program runs multiple national competitions each year in schools. They also provide a free online challenge in which entire schools, individual classes, or grades can participate.

DASH BC'S WALK AND WHEEL TO SCHOOL

<https://dashbc.ca>

Dash BC's Walk and Wheel to School program hosts an annual event as part of the International Walk to School Month (iWalk) that encourages students, parents, staff and community members to celebrate the many benefits of walking to school. This program celebrates active transportation, encourages daily physical activity, promotes opportunities to practice safe walking and biking skills, identifies safe routes to school, enhances the connection between students, parents, schools and communities in a fun and interactive way, and reduces school traffic congestion and vehicle emissions.

LIVING STREETS' WOW YEAR-ROUND WALK TO SCHOOL CHALLENGE

<https://www.livingstreets.org.uk/what-we-do/projects/wow>

Living Streets is a UK charity advocating for everyday walking since 1929; in the early days, their campaign led to the introduction of the UK's first zebra crossing and speed limits. The mission of their WOW challenge is to enable every child that can, to walk to school year-round. There is also a five-day secondary school challenge. The website provides free resources for download.

4.0 ACTIVE TRANSPORTATION MASTER PLAN





4.1 THE CLASSIFIED ACTIVE TRANSPORTATION NETWORK

Truro's Active Transportation Plan delivers physical products at three levels: regional, urban and neighbourhood. The regional products provide an arterial-style AT network that delivers commuter-based, multi-modal street and trail corridors that link significant lifestyle destinations throughout the town, and into adjacent communities. Urban destination and urban neighbourhood streets provide multi-modal town-centre streets where all users of the street are important; however, no user is more important than any other user.

The neighbourhood products are formed by designated AT multi-modal streets and trails that function as collector linkages between resident front doors and local destinations such as schools, parks, and corner stores, as well as regional and urban products. The chapter three toolbox components are applied to the designated street and trails based on how residents plan to use the corridor relative to speed, comfort and mode of transport.

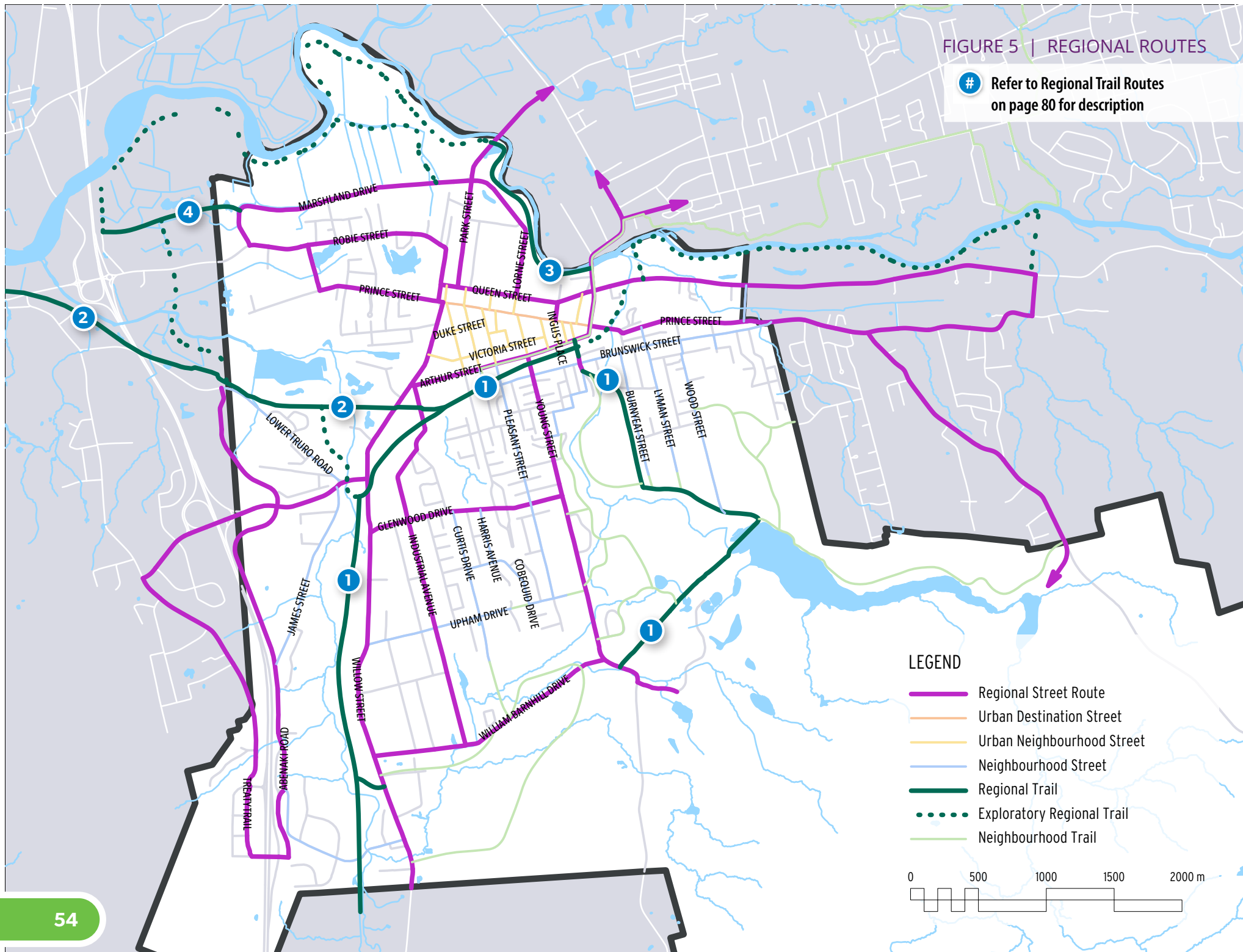
It is important to note that all street and trail sections are proposed based on the type of corridor that is required to accommodate wheel or foot users based on speed and destination. Final street and trail sections will require detailed engineering and landscape design to ensure the applied facilities fit within the selected corridors.

4.2 REGIONAL ACTIVE TRANSPORTATION ROUTES

These regional street corridors and trail routes provide broad connectivity throughout the town, and to adjacent communities for social, recreation and transportation purposes. These combine to form the spine of the regional network, and include the following routes.

FIGURE 5 | REGIONAL ROUTES

Refer to Regional Trail Routes on page 80 for description



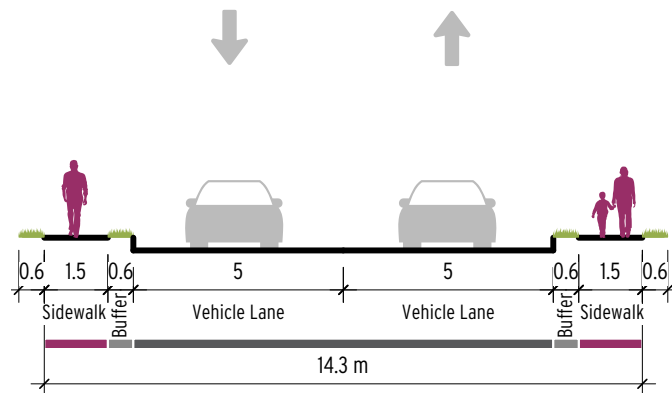
REGIONAL STREET ROUTES

ARTHUR STREET

DESCRIPTION

- » This is an important town-centre street that provides multi-modal access to several business and residential addresses, and is a component of the 'urban loop'.
- » 1.5-meter-wide bike lane added to each side of the street.
- » The pedestrian environment is improved with a 1.5-meter wide concrete sidewalk complete with a 0.5-meter grass buffer strip.

EXISTING STREET SECTION

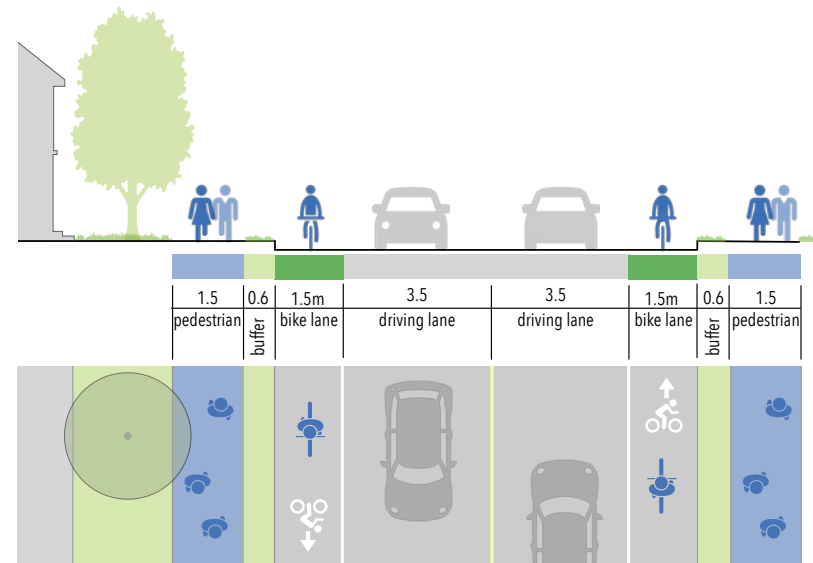


- » Existing vehicle speed and capacity are retained with slightly decreased lanes. Bike lane provides additional protection to cyclists.

CONSIDERATIONS

- » This is a busy and important multi-modal street that requires both promoted and physical improvements that ensure the street meets its intended master plan role.

PROPOSED STREET SECTION

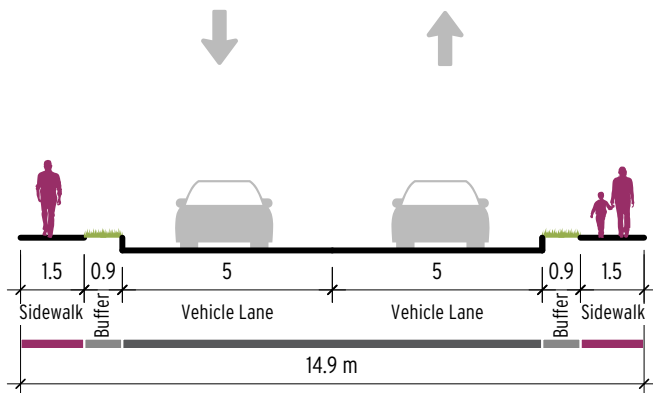


ELM STREET

DESCRIPTION

- » This is a very important pedestrian link between the downtown and Robie Street (extending to Truro Mall).
- » The existing sidewalk and grass buffer strip remain; however, the grass buffer is expanded to 1.5 meters wide on both sides of the street to improve pedestrian comfort.
- » Shared use sharrows are added to the driving lanes to communicate the notion of cycle traffic between the town centre loop and Ford Street.

EXISTING STREET SECTION

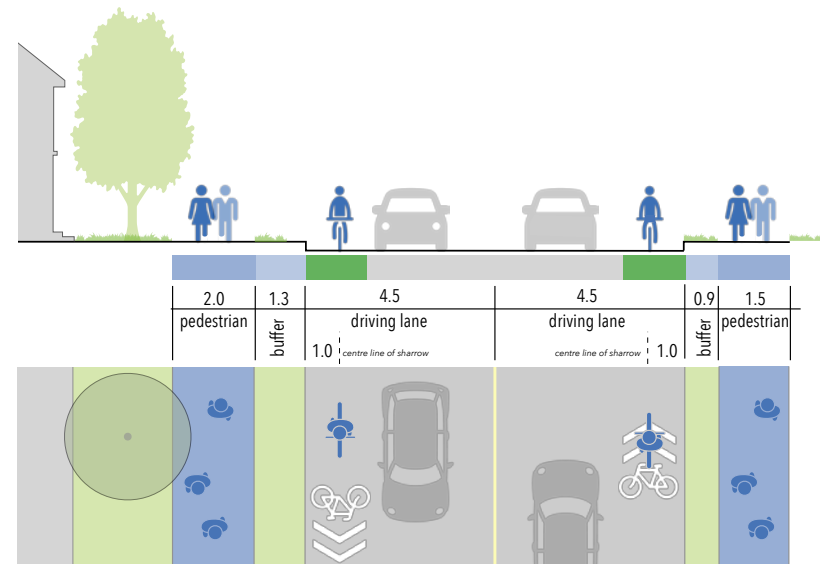


- » Existing vehicle speed and capacity are retained on slightly modified lane widths.

CONSIDERATIONS

- » This is an evolutionary street that is design-modified when street reconstruction is required.

PROPOSED STREET SECTION

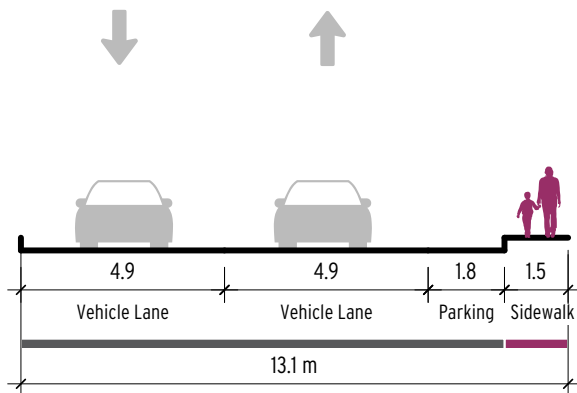


ESPLANADE STREET

DESCRIPTION

- » This is a very important link between Arthur and Walker Streets, and provides connectivity to Inglis Place and connections to Victoria Park (through the Truro Centre Mall).
- » The existing north-side sidewalk and parking are retained. A new sidewalk is proposed for the south side of the street, adjacent to the mall.
- » Existing vehicle speed and capacity are retained on slightly modified lane widths.

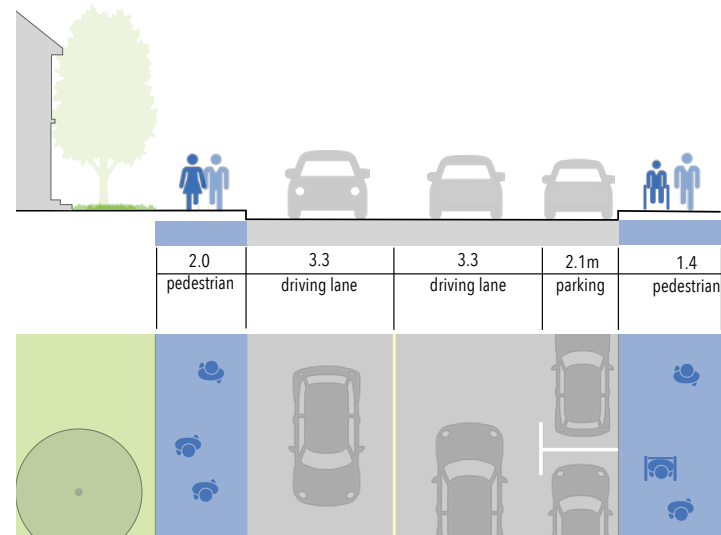
EXISTING STREET SECTION



CONSIDERATIONS

- » This is an evolutionary street that requires design thinking that adds shared-use pedestrian infrastructure between the street and the mall.

PROPOSED STREET SECTION

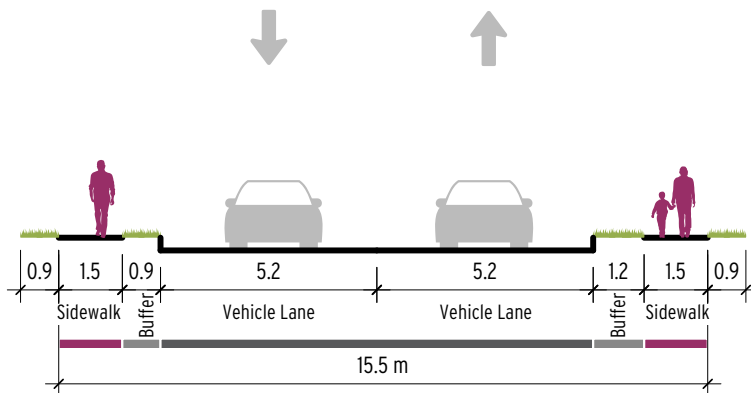


GLENWOOD DRIVE

DESCRIPTION

- » This is an important east-west street that provides a multi-modal connection between Willow Street and Victoria Park.
- » The south-side concrete sidewalk and 1.2-meter grass buffer are retained, while the north-side sidewalk and buffer are replaced with a 3.0-meter-wide asphalt multi-use trail and a 1.5-meter-wide grass strip.
- » Existing vehicle speed and capacity are retained on the existing street.

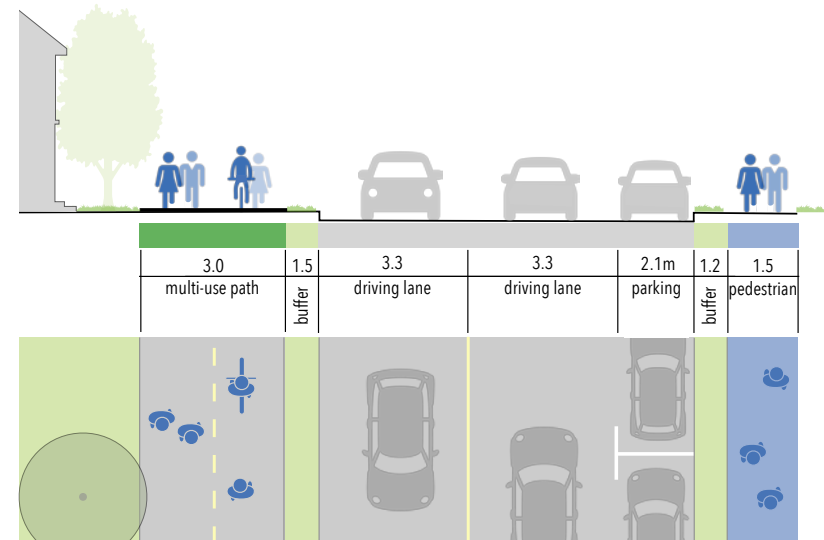
EXISTING STREET SECTION



CONSIDERATIONS

- » This is an important multi-modal link that bisects through the heart of residential and industrial areas and links a proposed trail connection to Victoria Park.
- » Portions of Glenwood Drive presently host parked cars, while others do not. The illustrated section includes parallel parking; however, the town may not delineate this parking.

PROPOSED STREET SECTION



INDUSTRIAL DRIVE

DESCRIPTION

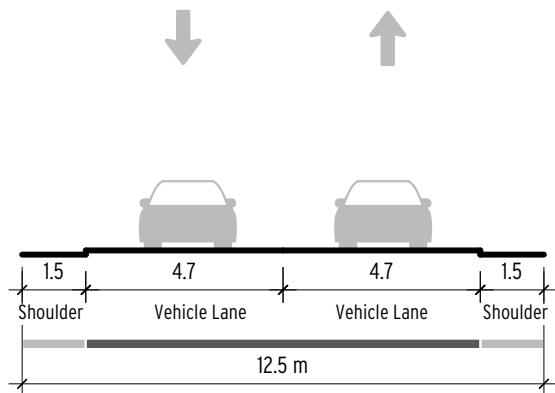
- » As the name suggests, this is an industrial zone street; however, the street also functions as an important multi-modal link between Arthur Street and William Barnhill Drive.
- » Use of the street to expand to include the promoted use of cycling, on a lane that can function for cyclists and walkers.
- » 1.5-meter bike lanes added to each side of the street.

- » Existing vehicle speed and capacity are retained with slightly decreased lanes.

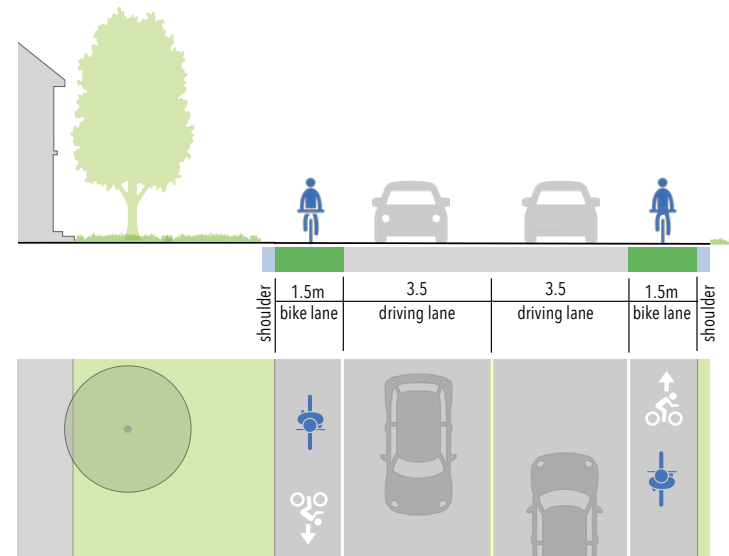
CONSIDERATIONS

- » Adding bike lanes to Industrial Drive supports the existing cycling and running use of the street, while promoting bike-to-work initiatives within the business park.

EXISTING STREET SECTION



PROPOSED STREET SECTION



KAULBACK STREET

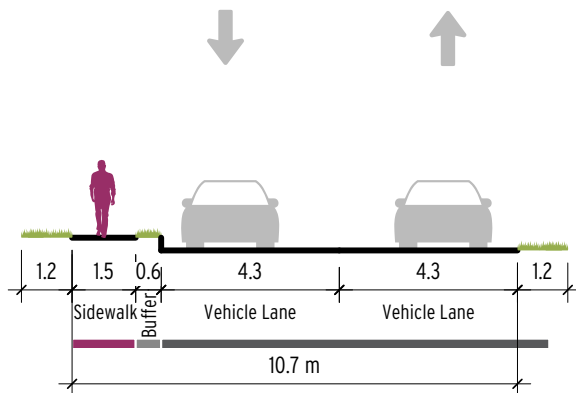
DESCRIPTION

- » This street provides north-south connectivity that links Industrial Avenue to Arthur Street.
- » The street corridor is modified from a single-sided sidewalk to a continuous multi-use trail on the east side of the street, complete with a 0.5-meter grass buffer strip.

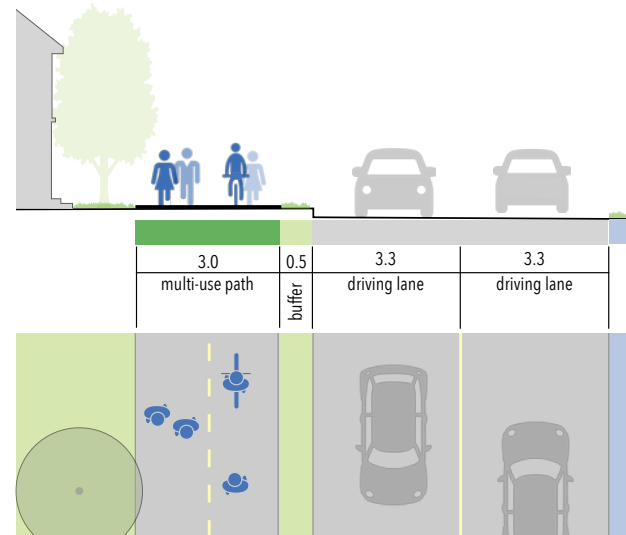
CONSIDERATIONS

- » This is an important street that provides connectivity between industrial and town-centre areas, with a direct connection to the 'urban loop'.

EXISTING STREET SECTION



PROPOSED STREET SECTION



LORNE STREET A & B

DESCRIPTION

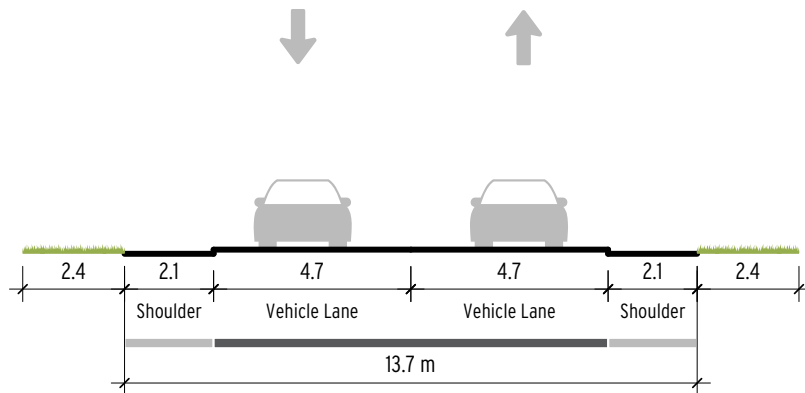
- » This important street provides north-south connectivity between the downtown and the Cobequid Educational Centre, and beyond to Park Street and Marshland Drive.
- » Street section A provides a detail for Lorne Street between **North and Park Streets**, while section B provides a detail between **Queen and North Streets**. High school parking is retained on Lorne Street for section B.

- » The street corridor is modified from a single-sided sidewalk for section B, to a continuous 3.0 meter-wide multi-use asphalt trail on the east side. Section B includes a 1.0 meter-wide grass buffer to provide additional protection where vehicle speeds increase.

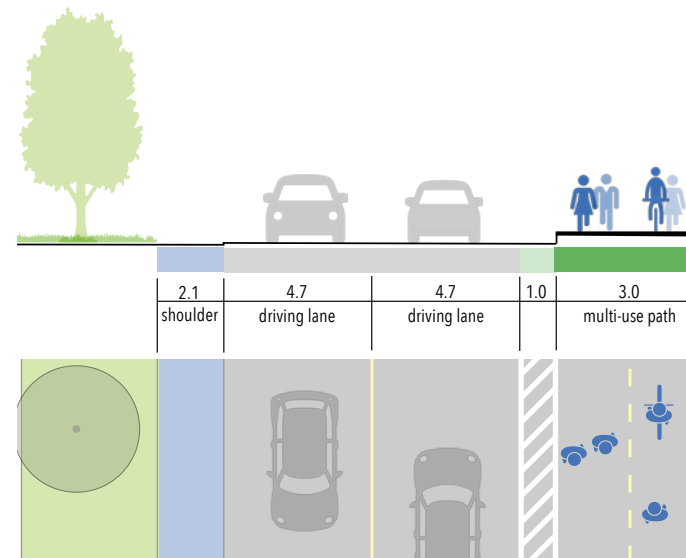
CONSIDERATIONS

- » This street is modified to provide regional connectivity between the downtown and high school as well as to adjacent communities.

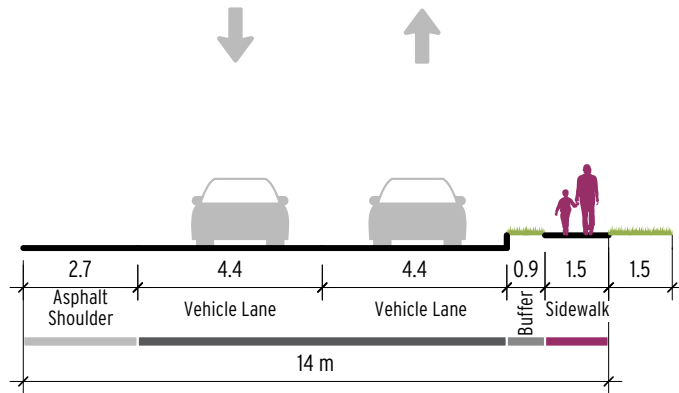
EXISTING STREET SECTION A



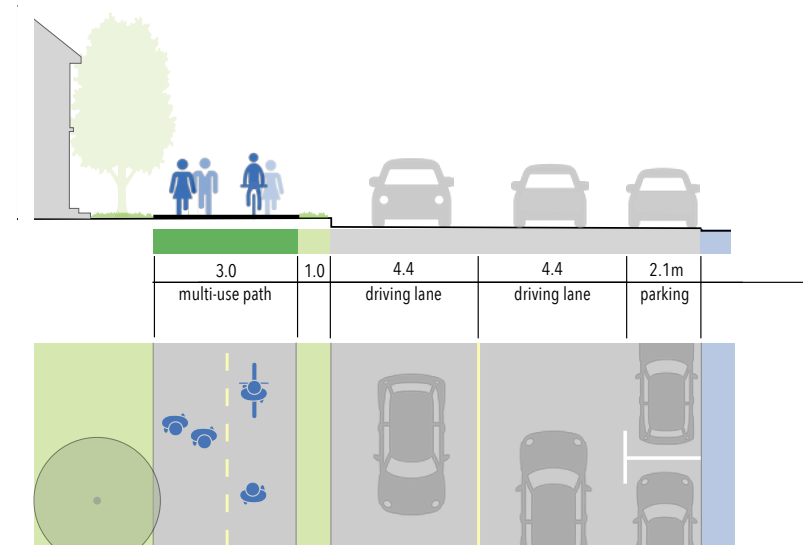
PROPOSED STREET SECTION A



EXISTING STREET SECTION B



PROPOSED STREET SECTION B



MARSHLAND DRIVE

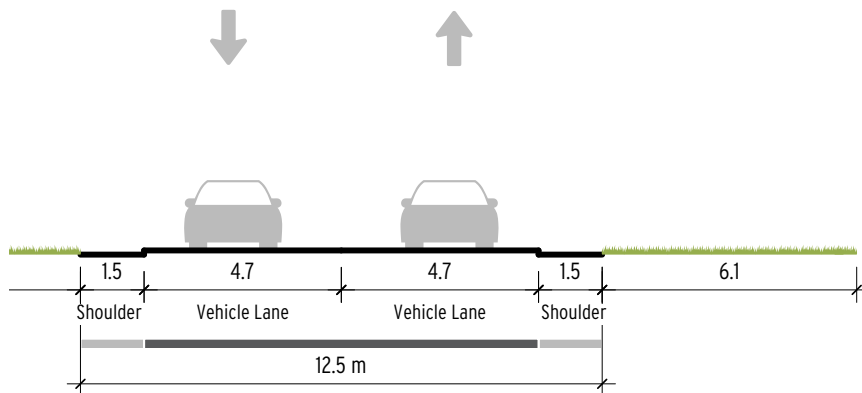
DESCRIPTION

- » This street provides east-west connectivity between the downtown and the Cobequid Trail, at a location that accesses the Truro Mall.
- » The street corridor is modified to host a 3.0-meter-wide multi-use asphalt trail with a 1.0-meter-wide grass buffer.

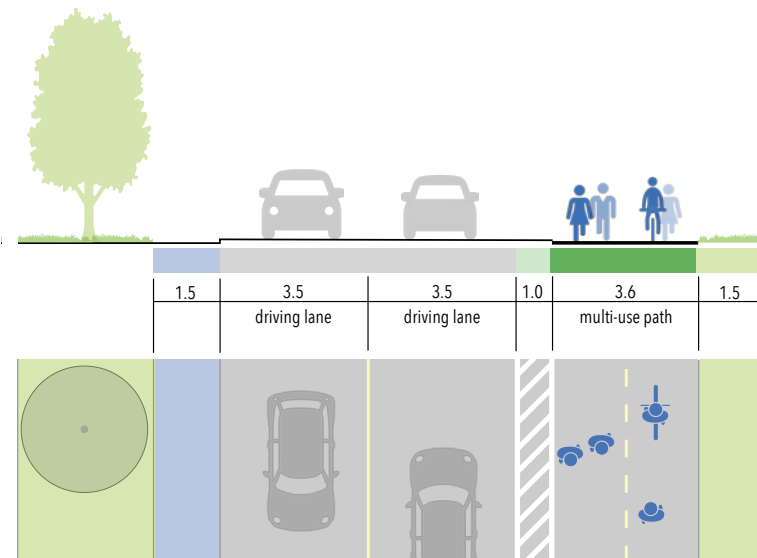
CONSIDERATIONS

- » This street can be modified without any significant street work.

EXISTING STREET SECTION



PROPOSED STREET SECTION



MCCLURES MILLS ROAD

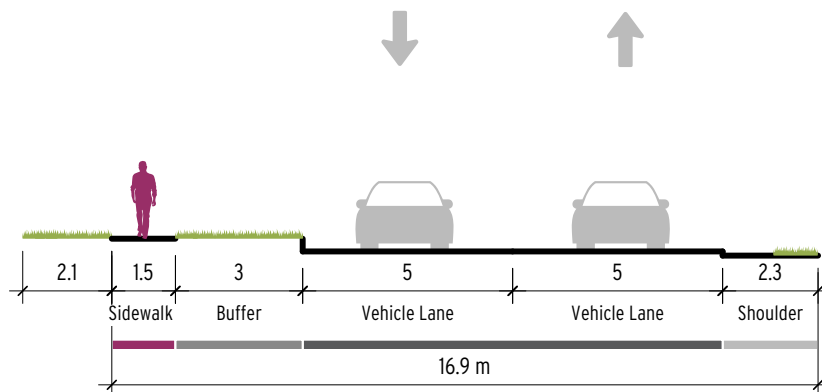
DESCRIPTION

- » This very important street provides east-west connectivity between the downtown and the RECC.
- » The street corridor is modified from a single-sided sidewalk to a continuous multi-use trail on the south side of the street, complete with a 1.5-meter grass buffer strip.

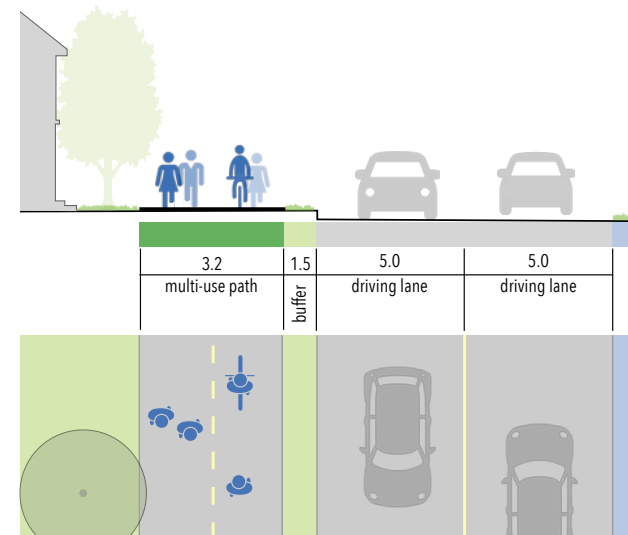
CONSIDERATIONS

- » This is a very important route that provides connectivity between the town centre and an important civic facility. Additionally, the road provides a connection to trails and the 'urban loop'.

EXISTING STREET SECTION



PROPOSED STREET SECTION



PARK STREET

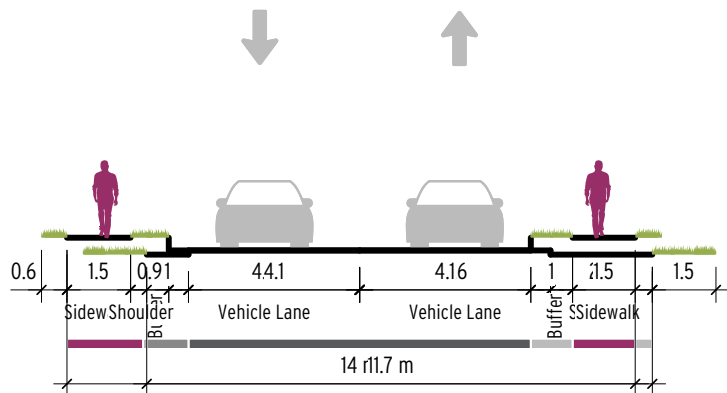
DESCRIPTION

- » This important street provides north-south connectivity between the downtown and Bible Hill.
- » The street corridor is modified from a single-sided sidewalk with a 0.9-meter wide grass buffer to a street with a continuous concrete sidewalk and buffer, and an asphalt multi-use trail on the east side of the street.

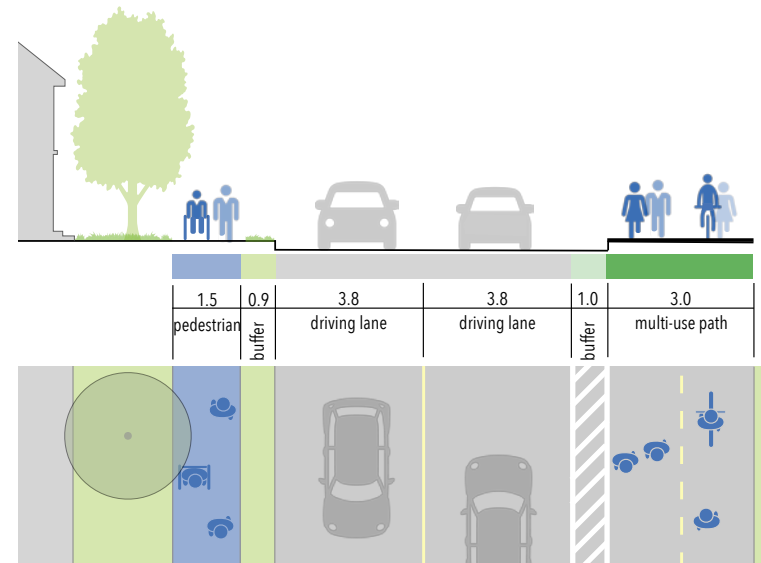
CONSIDERATIONS

- » This street is modified to provide regional connectivity between the downtown and adjacent communities.

EXISTING STREET SECTION



PROPOSED STREET SECTION

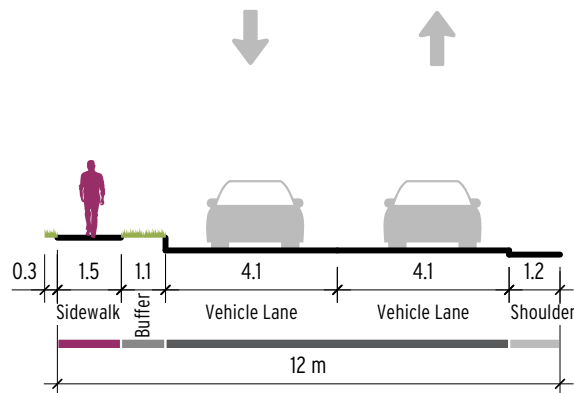


PRINCE STREET EAST A

DESCRIPTION

- » Street to expand its 'promoted' mode uses to include cycling and pedestrian for the corridor between **Walker and Monroe Streets**.
- » Municipal specification concrete sidewalk.
- » 1.5-meter bike lanes added to each side of the street.
- » Existing vehicle speed and capacity are retained with slightly decreased lanes.

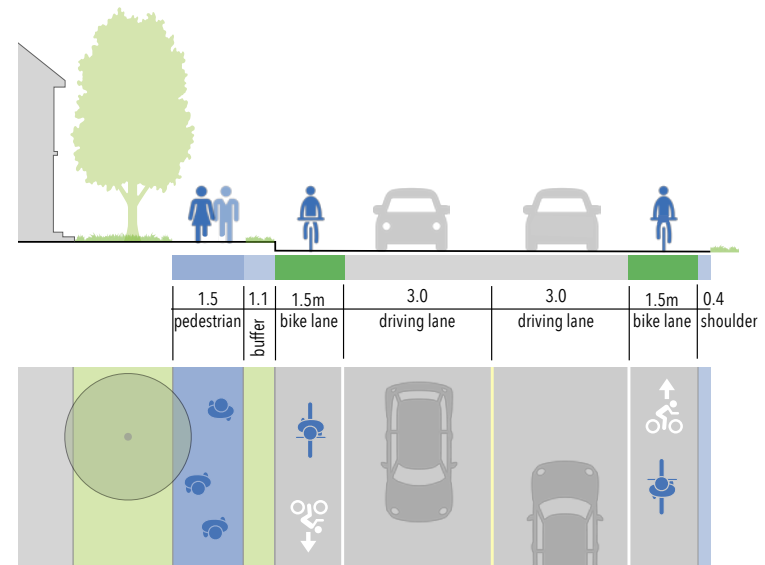
EXISTING STREET SECTION



CONSIDERATIONS

- » This is an important street that requires reduced vehicle dominance and increased multi-modal promotion.
- » The illustrated buffer may move to a location between the bike and driving lanes of streets which are completely reconstructed. If this occurs, the sidewalk and bike lane convert to a 3.0m two-way asphalt trail, with a 1.5m wide concrete sidewalk on the opposite side of the street. This requires the modification of street-edge power pole locations.

PROPOSED STREET SECTION

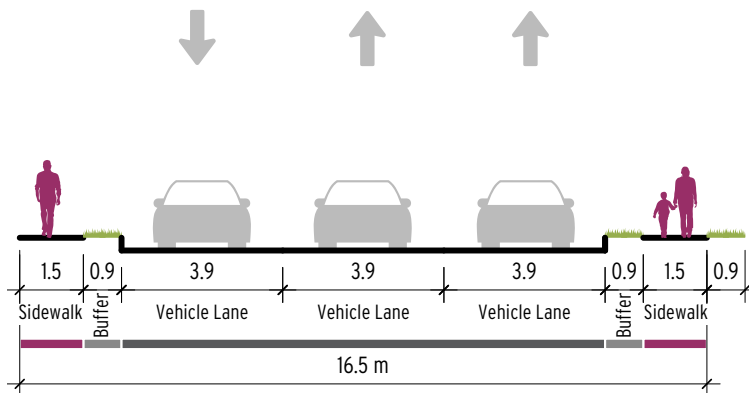


PRINCE STREET EAST B

DESCRIPTION

- » Street section modified to host a continuous asphalt trail with a street's edge painted buffer for all Prince Street areas ***east of Monroe Street***.
- » Existing municipal specification concrete sidewalk with 0.9-meter wide grass buffer to remain.
- » Existing vehicle speed and capacity are retained with slightly decreased lanes.

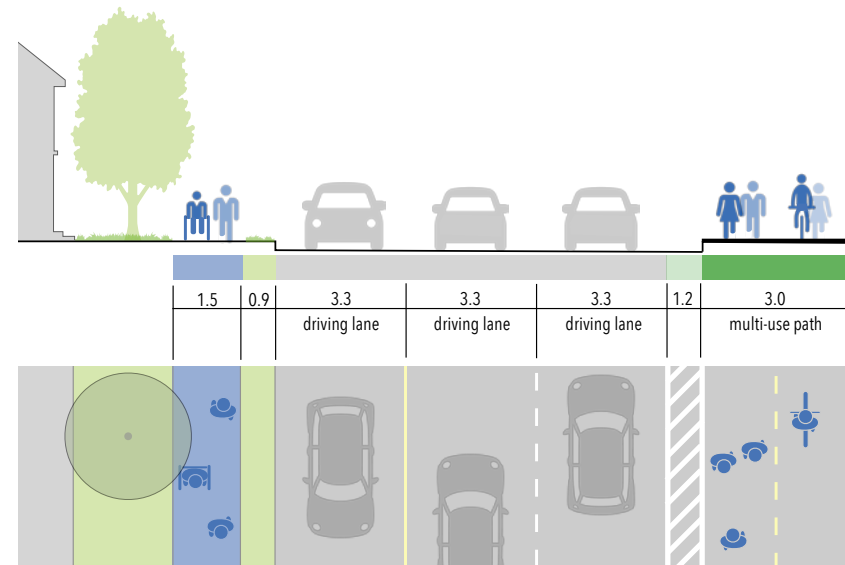
EXISTING STREET SECTION



CONSIDERATIONS

- » This is an evolutionary street that is modified when street reconstruction, inclusive of curb replacement, occurs.

PROPOSED STREET SECTION

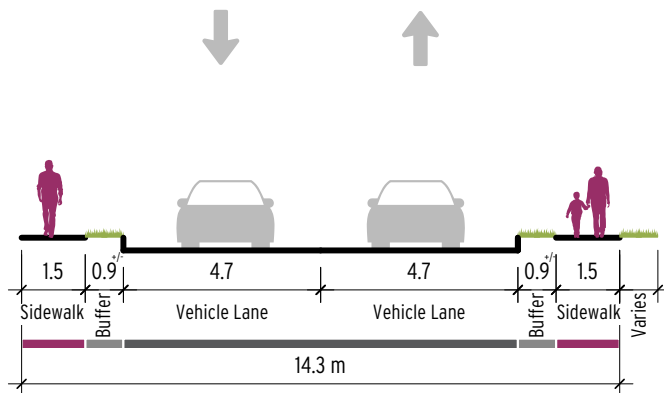


PRINCE STREET WEST

DESCRIPTION

- » Street to expand its 'promoted' mode uses to include on-street cycling.
- » Municipal specification concrete sidewalk on both sides of the street.
- » 1.5-meter bike lanes added to each side of the street.
- » Existing vehicle speed and capacity are retained with slightly decreased lanes.
- » This detail applies to the portion of Prince Street located to the **west of Court Street**.

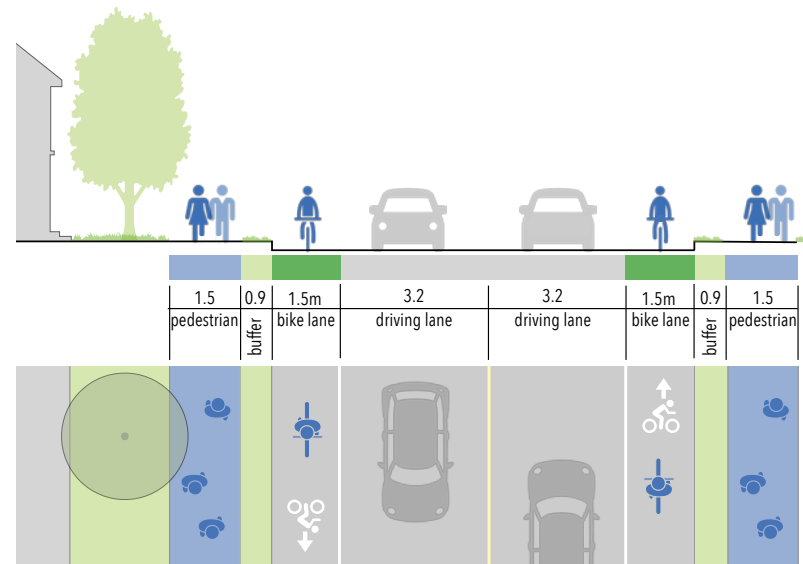
EXISTING STREET SECTION



CONSIDERATIONS

- » This is an important street that requires retained vehicle use while increasing multi-modal promotion.
- » Illustrated buffer may move to a location between the bike and driving lanes of streets which are completely reconstructed. If this occurs, the sidewalk and bike lane convert to a 3.0m two-way asphalt trail, with a 1.5m wide concrete sidewalk on the opposite side of the street. This requires the modification of street-edge power pole locations.

PROPOSED STREET SECTION



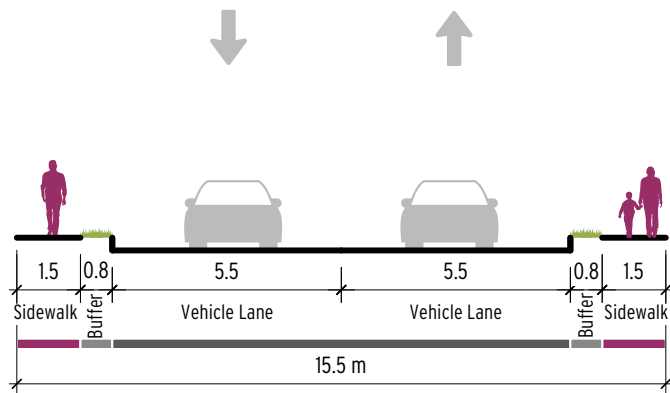
QUEEN STREET A&B

DESCRIPTION

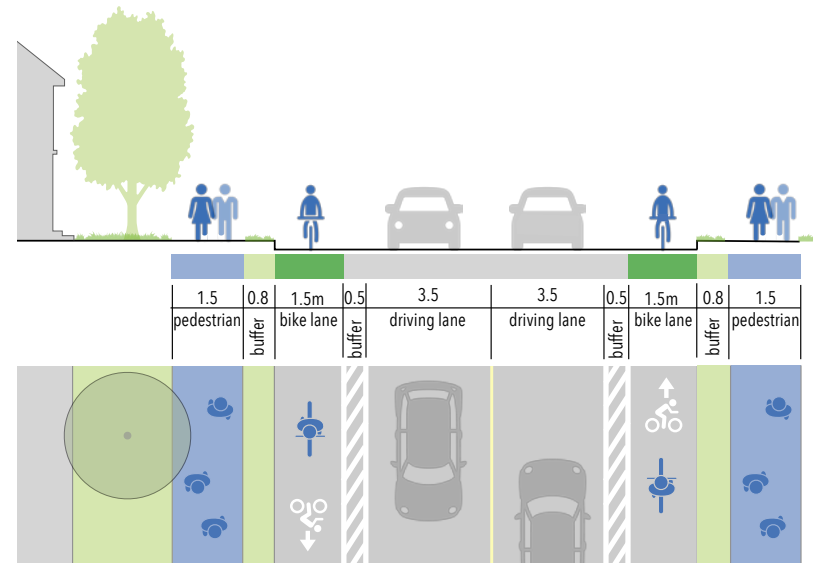
- » This is an important town-centre street that provides multi-modal access to several business and residential addresses, and is a component of the 'urban loop'.
- » 1.5-meter-wide bike lane added to each side of the street.
- » Pedestrian environment is improved with a 1.5-meter wide concrete sidewalk complete with a 0.5-meter grass buffer strip.

- » Existing vehicle speed and capacity are retained with slightly decreased lanes. Bike lane provides additional protection to cyclists.
- » Queen Street's functional width varies between 13.7 and 15.5 meters wide. The illustrated proposed sections provide active transportation facility applications for both.

EXISTING STREET SECTION A



PROPOSED STREET SECTION A

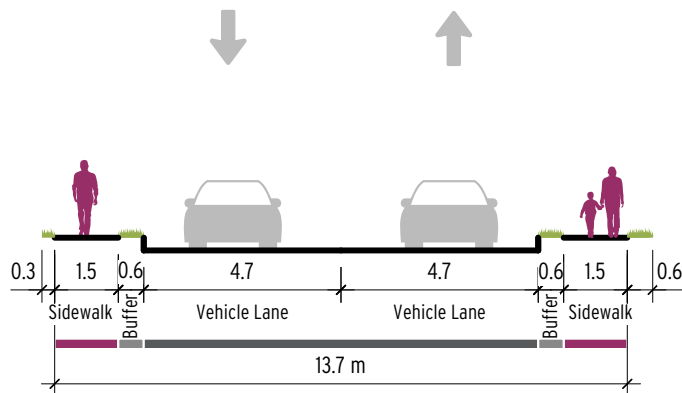


CONSIDERATIONS

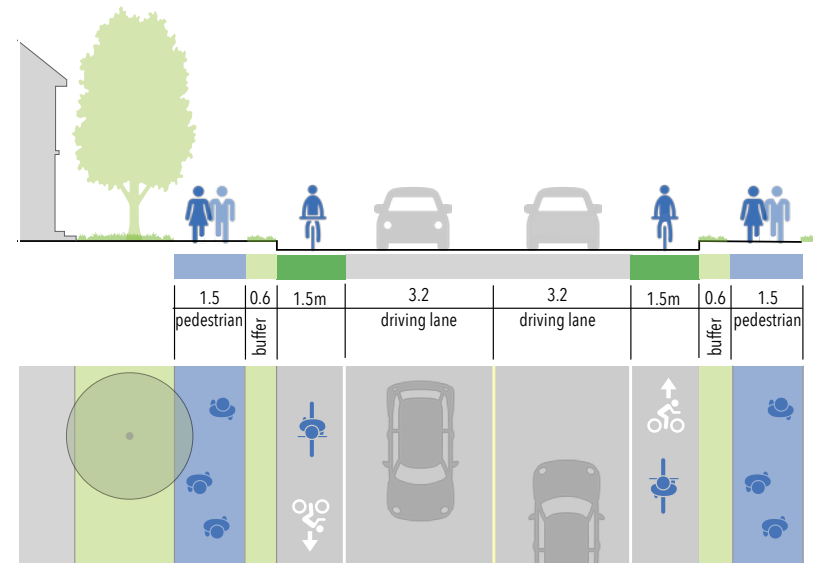
- » This is a busy and important multi-modal street that requires both promoted and physical improvements that ensure the street meets its intended master plan role.

- » Illustrated buffer may move to a location between the bike and driving lanes of streets which are completely reconstructed. If this occurs, the sidewalk and bike lane convert to a 3.0m two-way asphalt trail, with a 1.5m wide concrete sidewalk on the opposite side of the street. This requires the modification of street-edge power pole locations.

EXISTING STREET SECTION B



PROPOSED STREET SECTION B

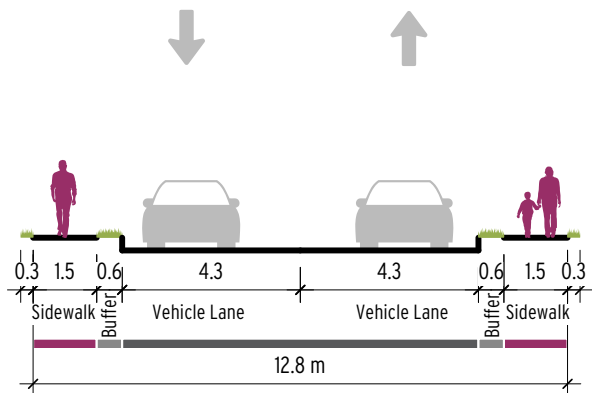


ROBIE STREET

DESCRIPTION

- » This is a very important pedestrian link between the downtown and the Truro Mall.
- » The existing sidewalk and grass buffer strip remain; however, the grass buffer is expanded to 1.5 meters wide on both sides of the street to improve pedestrian comfort.
- » Existing vehicle speed and capacity are retained on slightly modified lane widths.

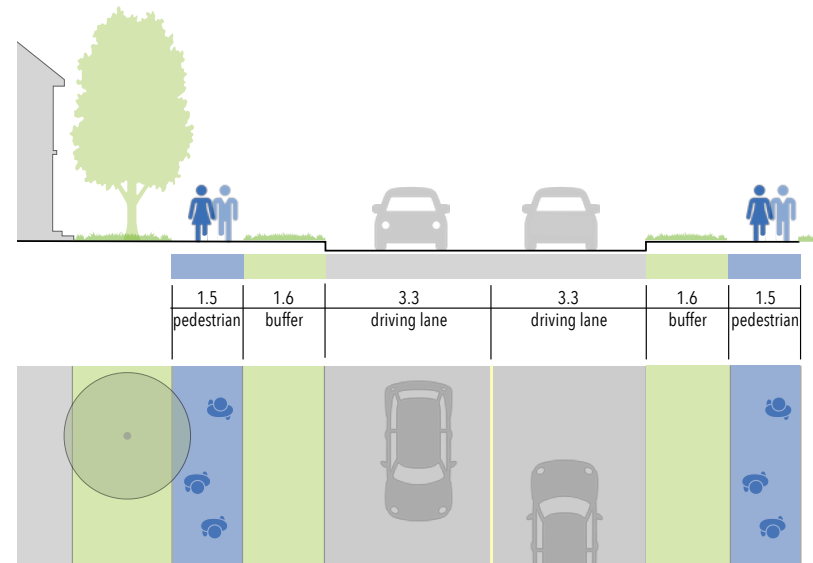
EXISTING STREET SECTION



CONSIDERATIONS

- » This is an evolutionary street that is design-modified when street reconstruction is required.
- » This street is a pedestrian-dominant corridor within a narrow corridor. Cycling within this area of town is focused on Marshland Drive and the Cobequid Trail, with proposed future trail linkage between these routes (see figure 5). This approach allows Robie Street to expand under additional vehicle traffic if required without removing cycling facilities.

PROPOSED STREET SECTION



TREATY TRAIL AND TRURO HEIGHTS ROAD

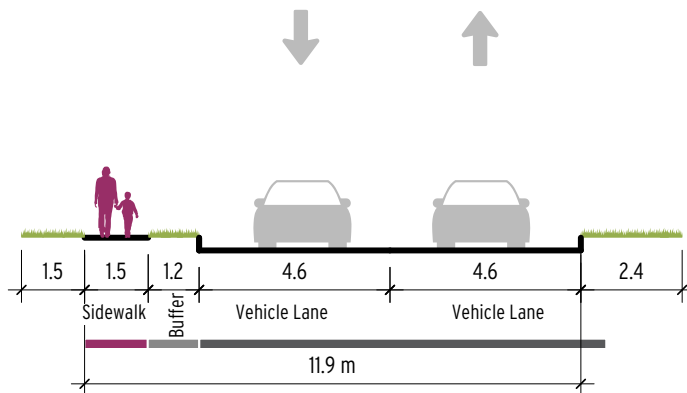
DESCRIPTION

- » This street provides north-south connectivity on the west side of the town and can support increased visitation to the areas surrounding the road.
- » The street corridor is modified to host a 3.0-meter-wide multi-use asphalt trail with a 1.0-meter-wide grass buffer.

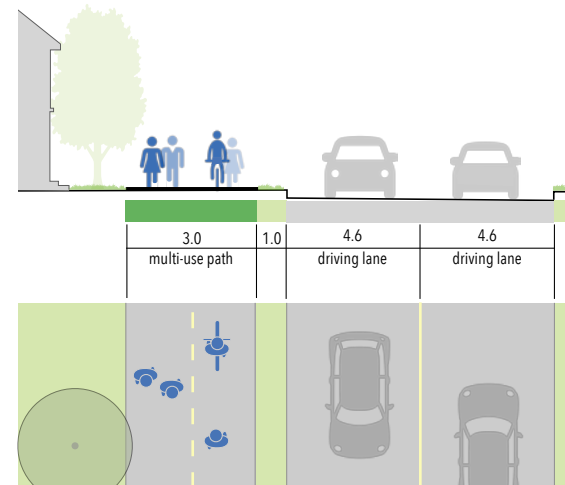
CONSIDERATIONS

- » This street lacks multi-modal facilities; however, this is an important street that links with adjacent streets to form a continuous regional corridor with connectivity to Millbrook, the downtown, the RECC, the hospital, and the Cobequid Trail.

EXISTING STREET SECTION



PROPOSED STREET SECTION

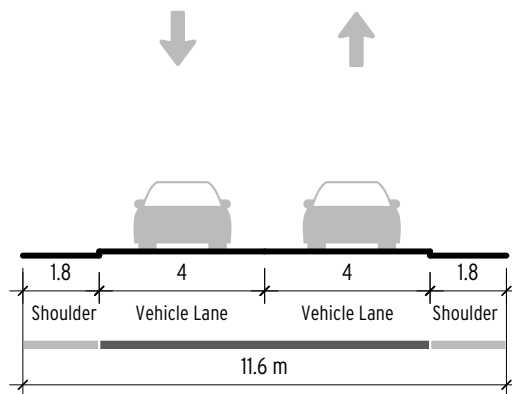


WADE ROAD

DESCRIPTION

- » This north-south street provides a multi-modal connection between the Cobequid Trail and the McClures Mills Road (and the RECC and hospital).
- » The existing street is modified with a 3.2 meter-wide asphalt trail and 1.0 meter-wide asphalt buffer that links the street's vehicle lanes and multi-use trail.
- » Existing vehicle speed and capacity are retained on the existing street.

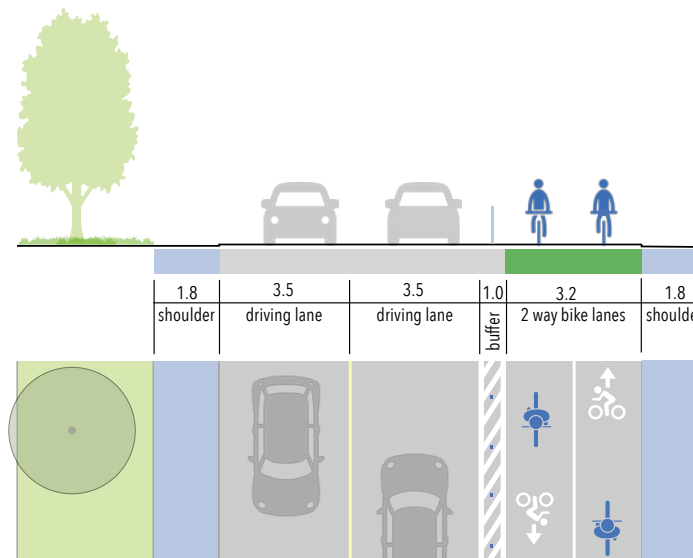
EXISTING STREET SECTION



CONSIDERATIONS

- » This is an important multi-modal link that is amended to provide multi-modal connectivity between the Cobequid Trail, the hospital, and the RECC.

PROPOSED STREET SECTION



WALKER STREET

DESCRIPTION

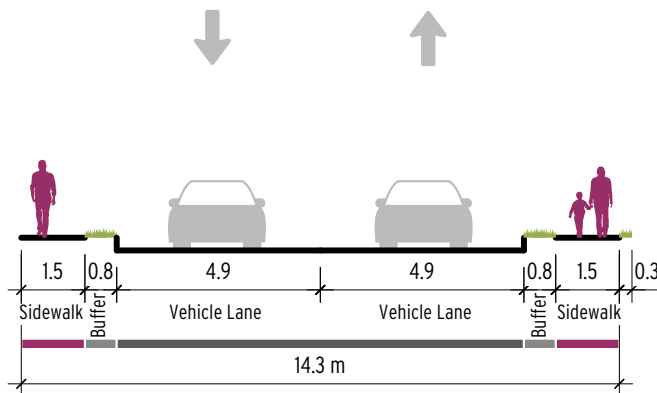
- » This is an important town-centre street that provides multi-modal access to several shopping, business and residential addresses.
- » 1.5-meter-wide buffered bike lane added to each side of the street.
- » Pedestrian environment is improved with a 1.5-meter-wide concrete sidewalk complete with a 0.5-meter grass-buffered strip on each side of the street.

- » Existing vehicle speed and capacity are retained with slightly decreased lanes. Buffered bike lane provides additional spatial protection to cyclists.

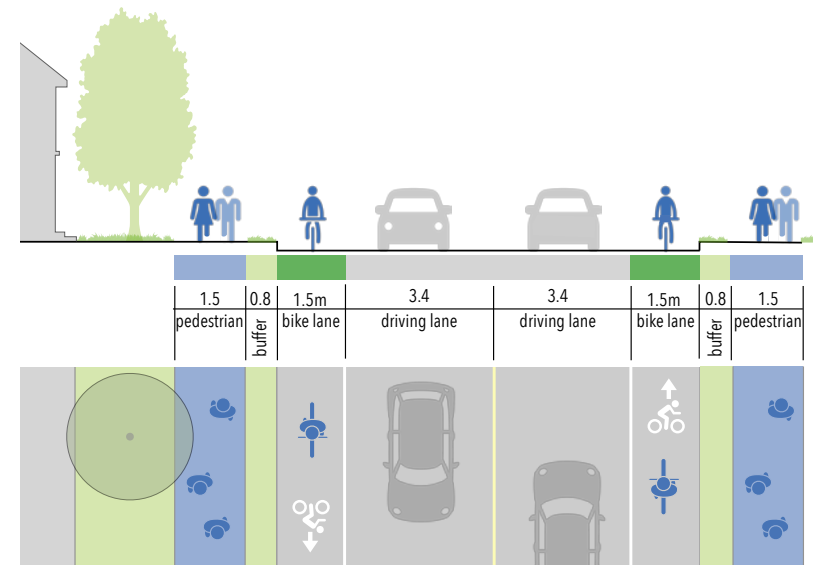
CONSIDERATIONS

- » This is a busy and important multi-modal street that requires both promoted and physical improvements that ensure the street meets its intended master plan role.

EXISTING STREET SECTION



PROPOSED STREET SECTION

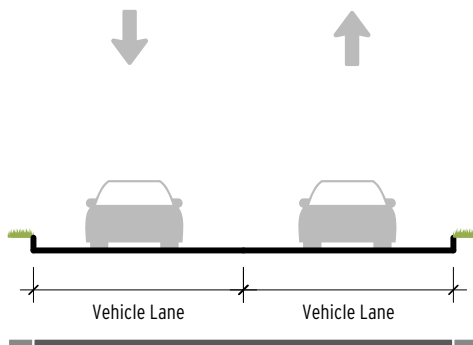


WILLIAM BARNHILL DRIVE

DESCRIPTION

- » This street provides a multi-modal linkage between Millbrook and Victoria Park.
- » Multi-modal corridor is improved with a 3.6-meter wide multi-use asphalt trail side of the street's south side, complete with a 1.5-meter grass-buffer strip.
- » No changes to vehicle lanes are required.

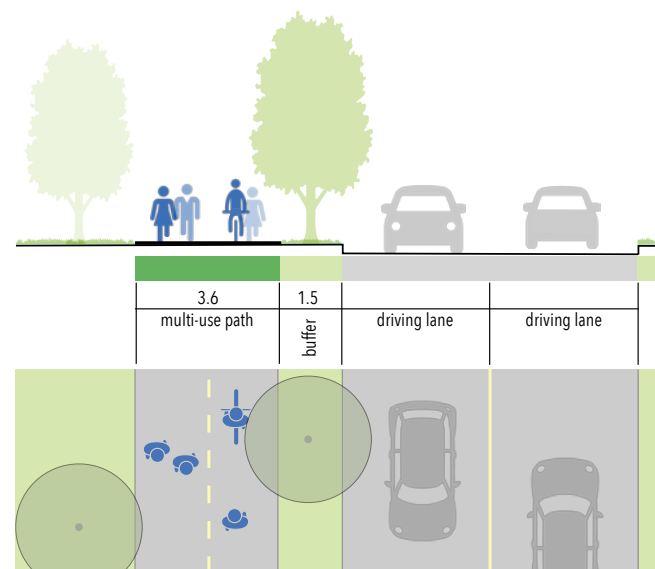
EXISTING STREET SECTION



CONSIDERATIONS

- » This is an important component of a regional trail that provides connectivity from Millbrook to Downtown Truro, in both directions.

PROPOSED STREET SECTION

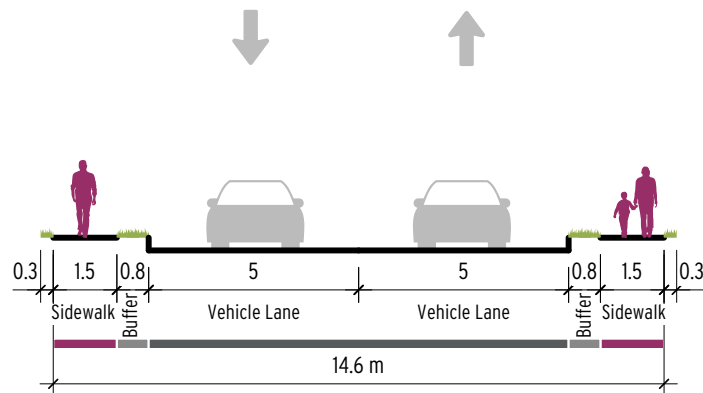


WILLOW A

DESCRIPTION

- » This is an important town-centre street that provides multi-modal access to several shopping, business and residential addresses, and includes the Willow Street Section extending from **Prince Street to Arthur Street**.
- » 3.0-meter wide two-way asphalt multi-use trail replaces the sidewalk on the west side of the street.
- » Pedestrian environment is improved with a 1.5-meter-wide concrete sidewalk complete with a 0.5-meter grass-buffered strip on the east side of the street.

EXISTING STREET SECTION

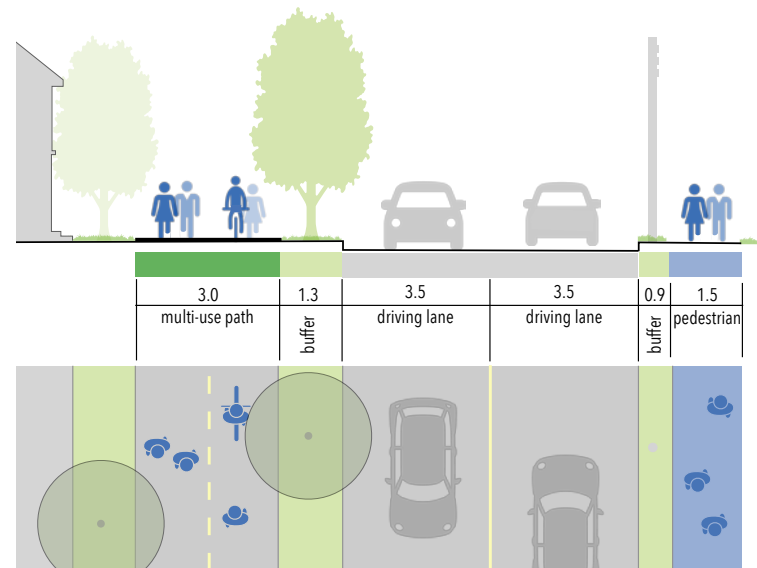


- » Existing vehicle speed and capacity are retained with slightly decreased lanes. A 1.5-meter wide grass strip provides additional protection to trail users.

CONSIDERATIONS

- » This is a very busy and important multi-modal street that requires physical improvements that ensure the street meets its intended master plan role.

PROPOSED STREET SECTION

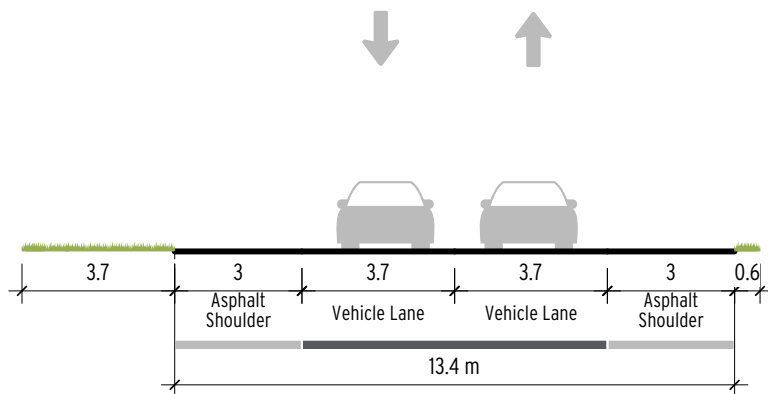


WILLOW B

DESCRIPTION

- » This is an important street that provides multi-modal access to several shopping, business and residential addresses, and extends from **Arthur Street to Millbrook**.
- » Pedestrian environment is improved with a 1.5-meter-wide concrete sidewalk on the east side of the street, complete with a 1.5-meter grass buffer strip.
- » Add a 3.0m wide multi-modal trail complete with a 1.5-meter wide buffer on the west side of the street.

EXISTING STREET SECTION

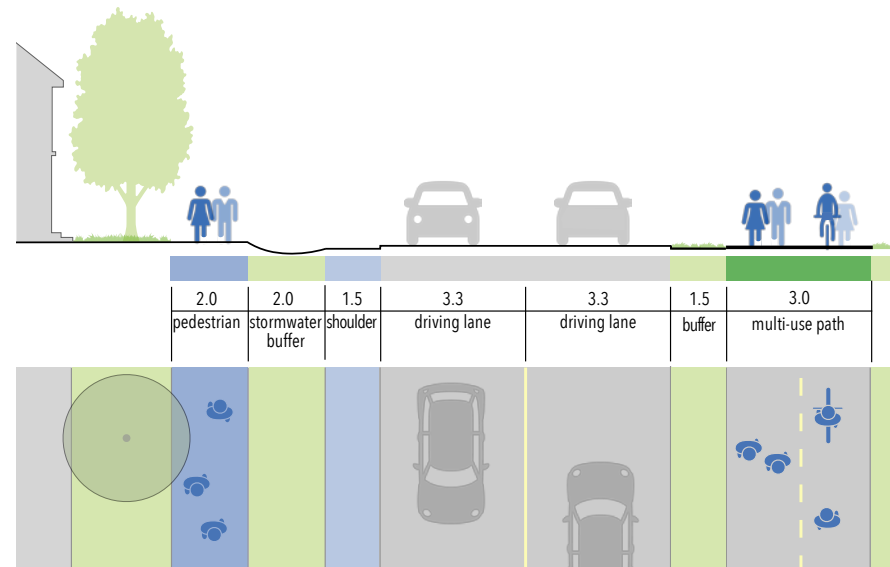


- » Existing vehicle speed and capacity are retained with slightly decreased lanes. A 1.5-meter wide grass strip provides additional protection to trail users.

CONSIDERATIONS

- » This is a very busy and important vehicle and pedestrian street that requires physical improvements that ensure the street meets its intended master plan role.

PROPOSED STREET SECTION

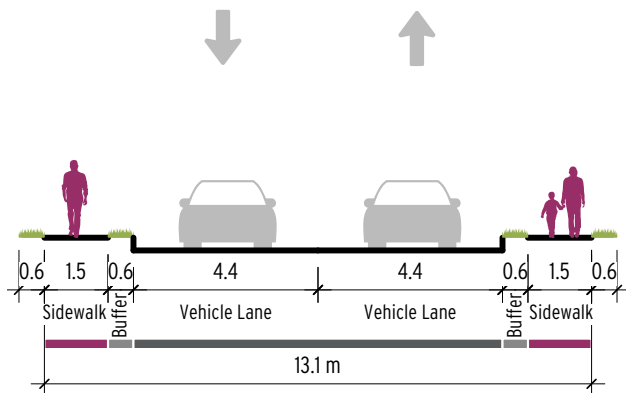


YOUNG STREET A

DESCRIPTION

- » This very important north-south street provides a multi-modal connection between **Prince Street and Glenwood Drive**.
- » The existing sidewalks and grass buffer strips remain. The existing street is amended with shared-use sharrow markings that promote cycling use between the downtown and the Railyard.
- » Existing vehicle speed and capacity are retained on the existing street.

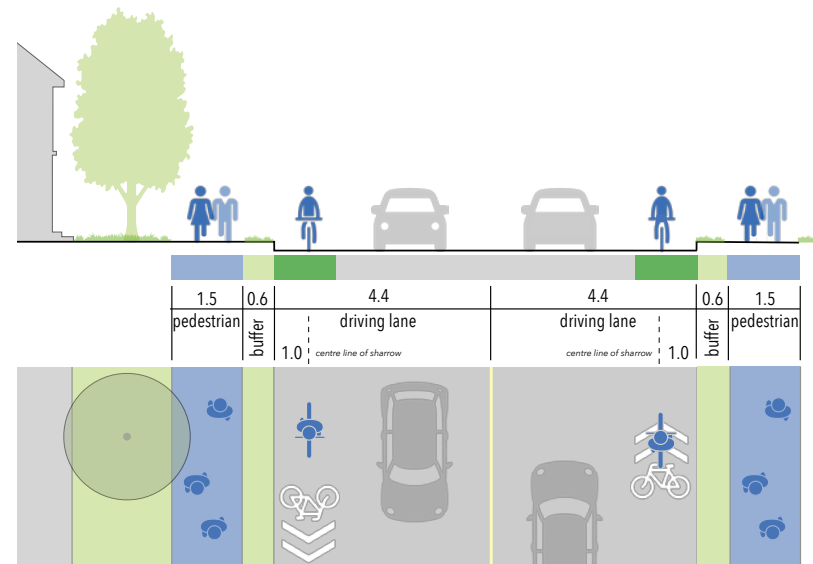
EXISTING STREET SECTION



CONSIDERATIONS

- » This is an important multi-modal link that is amended for cycling awareness promotional reasons.

PROPOSED STREET SECTION

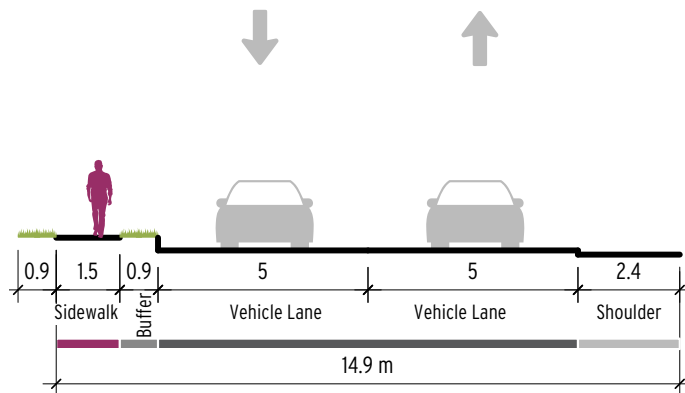


YOUNG STREET B

DESCRIPTION

- » This very important north-south street provides a multi-modal connection between ***Glenwood Drive and the Railyard entrances.***
- » The existing sidewalk and grass buffer strip remain. The existing street is amended with shared-use sharrow markings that promote cycling use between the downtown and the Railyard.
- » Existing vehicle speed and capacity are retained on the existing street.

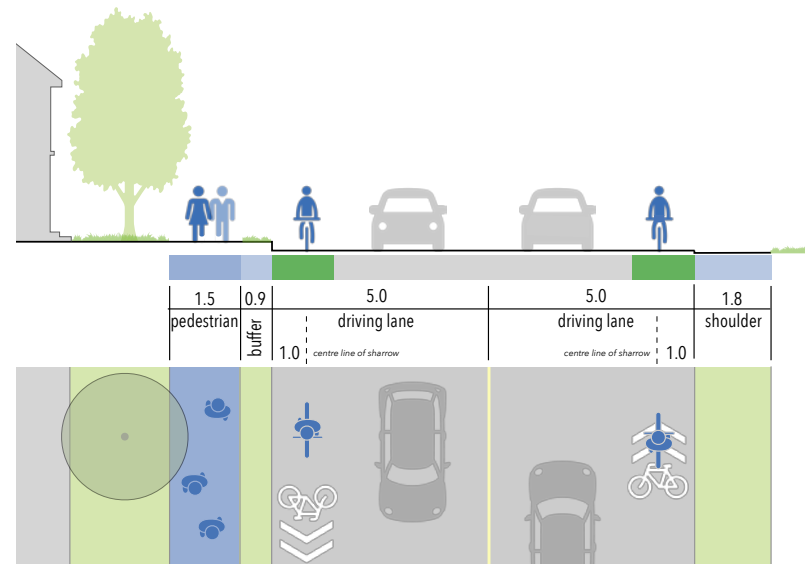
EXISTING STREET SECTION



CONSIDERATIONS

- » This is an important multi-modal link that is amended for cycling awareness promotional reasons.

PROPOSED STREET SECTION



REGIONAL TRAIL ROUTES

THE WABANAKI TRAIL

This trail (refer to #1 in Figure 5) is an exciting foundational master plan component that capitalizes on under-utilized rail corridors between downtown Truro and Millbrook before looping back to the downtown on the William Barnhill Drive Multi-Use Trail and an upgraded trail surface through the Railyard and Victoria Park. Important on-route connections include the Cobequid Trail, the McClures Mills link to the RECC, the hospital, the Victoria Park trails, as well as several facilities and trails within Millbrook.

When complete, the 3.0 - 3.5 meter-wide asphalt trail will provide residents with over 10 kilometres of a new active and passive recreational trail that instantly becomes a provincial destination for a family adventure. The trail also becomes a tool for economic development within Millbrook and Truro, thus, bringing the two municipal entities together to create a great user experience for residents and tourists.

THE COBEQUID TRAIL

This existing trail (refer to #2 in Figure 5) extends from the Wabanaki Trail to a gateway at Clifton, with connections to the Fundy Discovery Site and a proposed bridge to Central Onslow. The Town of Truro can improve the Cobequid Trail located between Willow and Kaulback Streets as a component of the Wabanaki Trail.

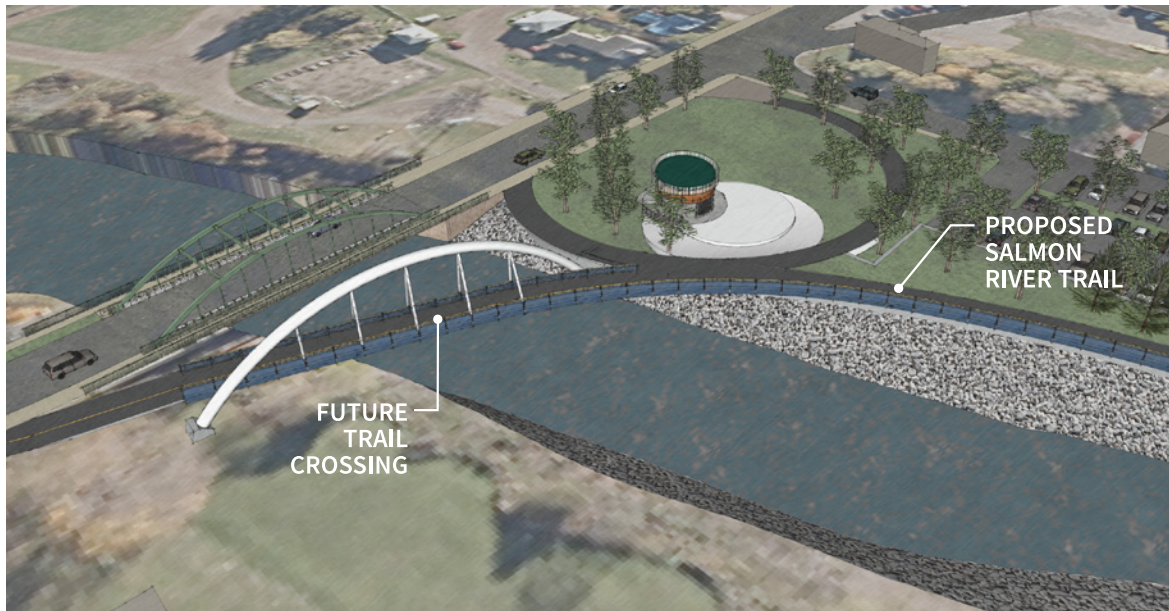
THE SALMON RIVER TRAIL

This trail (refer to #3 in Figure 5) links Park Street to Walker Street, along the Salmon River. The trail becomes a component of Truro's climate change adaption strategy, and is planned as a barrier between global sea level rise and important facilities such as Stanfields and the Cobequid Educational Centre.

Like the Wabanaki Trail, this route is planned as a recreation and economic investment and should be planned in association with residential, corporate and retail intensification along the shoreline. Additionally, the Town of Truro can work with the Municipality of the County of Colchester and the Village of Bible Hill to create an active transportation link over the Salmon River, and to Main Street, College Road, Pictou Road and Cobequid Trail corridors.



Salmon River Trail Concept



Salmon River Trail Crossing Concept

THE MARSHLAND TRAIL

This trail (refer to #4 in Figure 5) links Marshland Drive to the Fundy Tidal Centre, and to the Cobequid Trail. A planned trail crossing at the former Boardlanding Bridge will provide access to and from Central Onslow, and to county areas to the north and west of Truro.

EXPLORATORY REGIONAL TRAIL ROUTES

This master plan illustrates several shoreline routes designated as exploratory trails. These are routes that require further exploration following the completion of the Wabanaki, Cobequid and Salmon River Trails, as well as the street routes the exploratory coastal routes link to Fundy Discovery Centre.

SPECIAL REGIONAL PROJECTS

TOWN OF TRURO ACTIVE TRANSPORTATION HUB

The town takes a forward role in promoting multi-modal movement within downtown Truro by placing an active transportation hub at the Town Hall. This highly visible destination will include bike racks and lockers under a branded shade/weather protection structure, a bike repair station and wayfinding signage.

ACTIVE TRANSPORTATION WAYFINDING PLAN

The Town of Truro can adapt the town's existing wayfinding plan to include directional and destination signage for specific application to the active transportation network. This application should move green to the forefront, and blue to the background. This will create a thematically aligned active transportation wayfinding system that visibly defines the AT components as a unique lifestyle product for Truro.

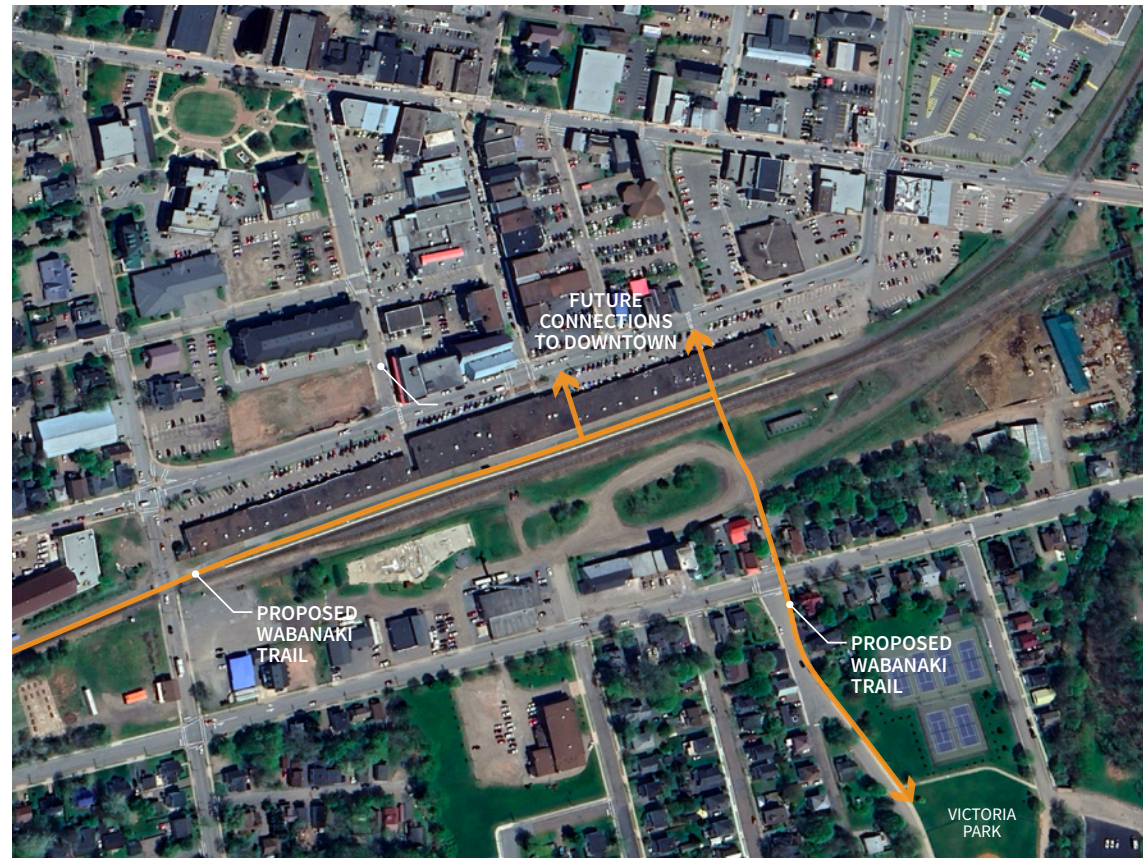


TRURO CENTRE HUB

The Truro Centre and railway corridor are a barrier between the heart of the downtown and the residential/recreational lands located to the south of the mall. Using active transportation, this master plan proposes to reverse the character of the mall from barrier to focal point by creating an additional access point through the building, at a location where retail uses can benefit from the new access point.

The Town of Truro works with the mall owners to create the new corridor, and to place bike racks and lockers within the new corridor. Corridor edge mall tenants should include the existing bike shop, a new food/refreshment retailer, and a new fitness operator that can provide membership-based shower facilities for those cycling to work, and parking at this location.

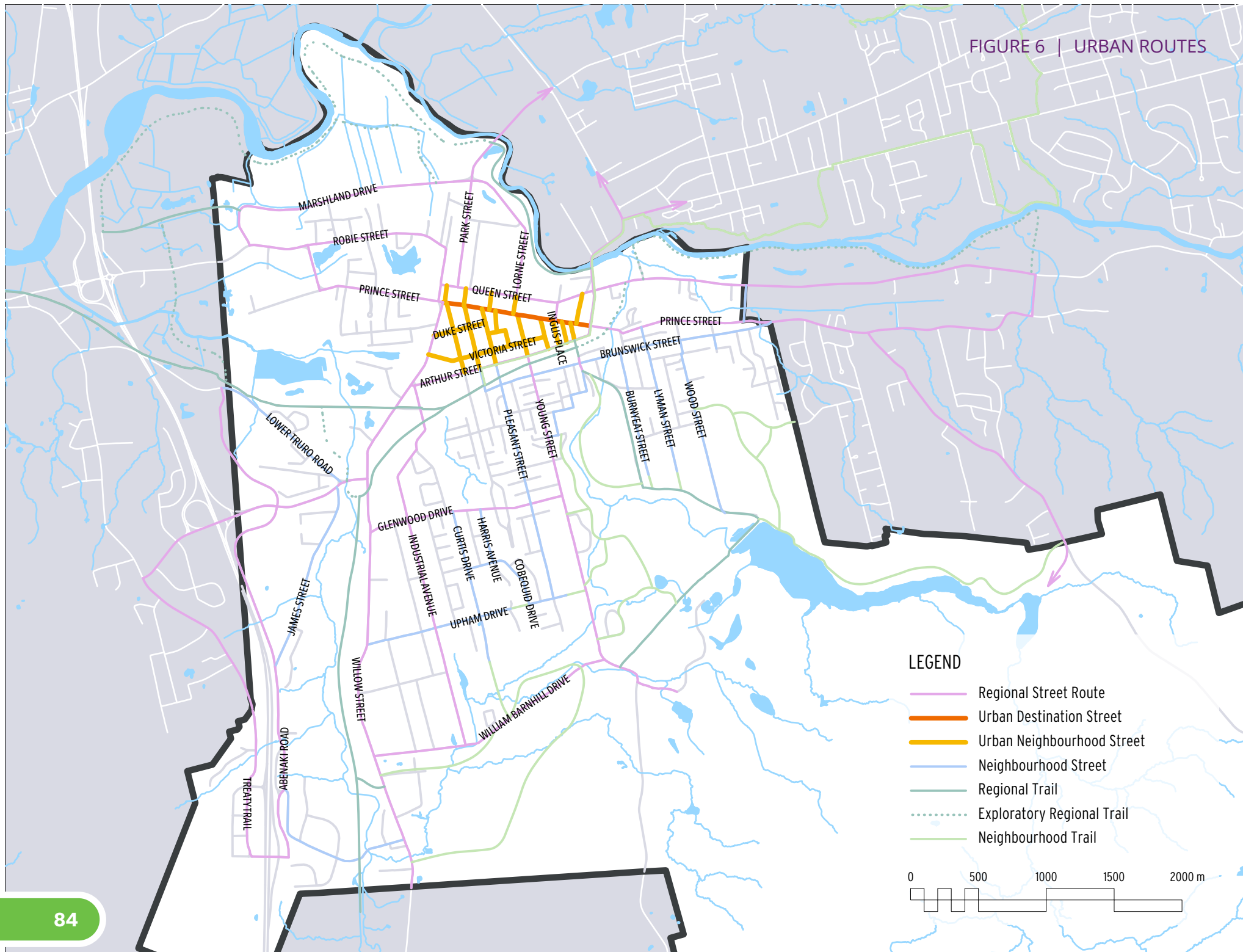
Truro Centre Hub and Wabanaki Trail



4.3 URBAN ACTIVE TRANSPORTATION ROUTES

These town centre streets are the corridors that support Truro's cultural and economic environments. Modifying these streets brings Truro's street-based public realm in line with the building and business environment.

FIGURE 6 | URBAN ROUTES



URBAN DESTINATION STREETS

INGLIS PLACE

DESCRIPTION

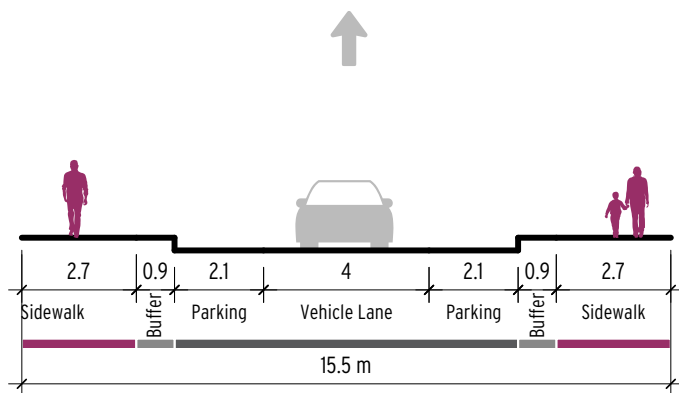
- » Multi-modal 'wall-to-wall' street where no mode is dominant within the corridor.
- » Continuous retail environment on the street, with highly permeable ground floors.
- » 2.7-meter wide multi-use paver unit surface increases the corridor's public realm to allow for expanded mobility, and static street uses.

- » Ground floor uses expand onto the sidewalk with retail and food patios within the shaded corridor.

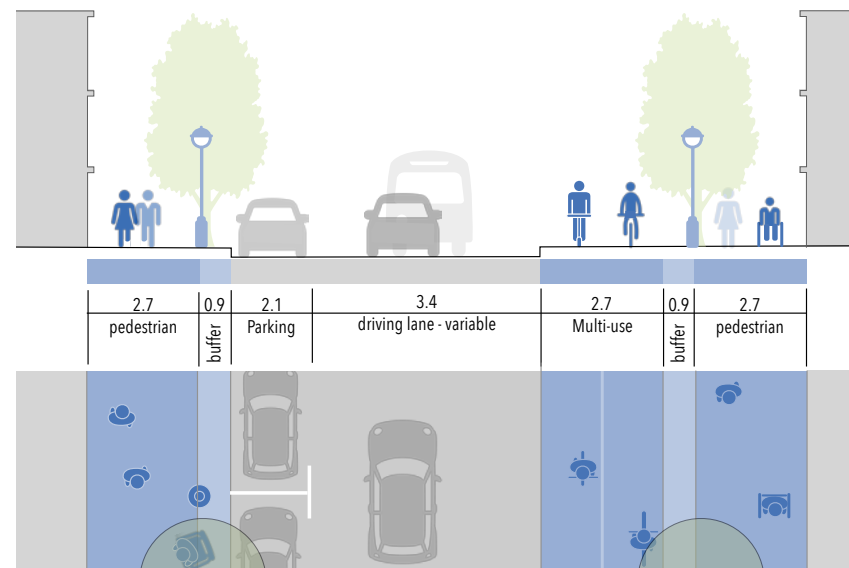
CONSIDERATIONS

- » This is an evolutionary street that can occur following detailed parking and circulation works that allow the street to move from vehicle dominant to human-dominant.

EXISTING STREET SECTION



PROPOSED STREET SECTION





Inglis Place Concept

PRINCE STREET

DESCRIPTION

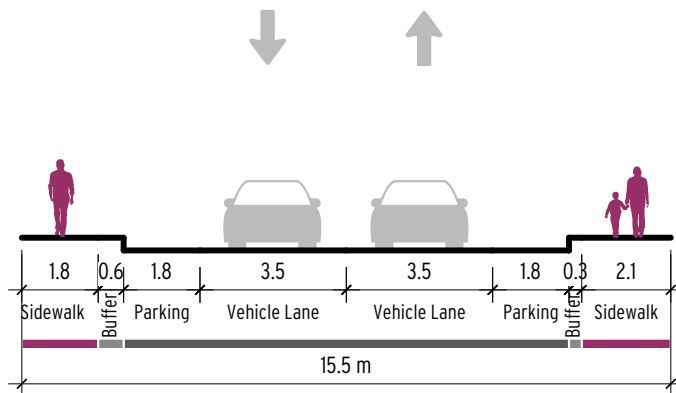
- » Multi-modal street where the 'visible weight' of the car is reduced by evaluating and reconfiguring downtown parking.
- » 4.2-meter wide multi-use paver unit surface increases the corridor's public realm to allow for expanded mobility, and static street uses. 2.1 meter-wide sidewalks and 1.6 meter-wide amenity strip are located on the building side of the multi-use surface.

- » Continuous retail environment on the street, with highly permeable ground floors

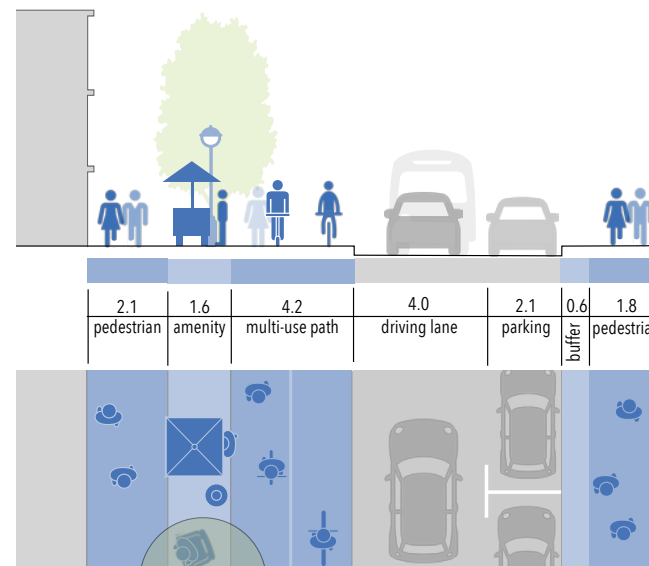
CONSIDERATIONS

- » This is an evolutionary street that can occur following detailed parking and circulation works that allow the street to move from vehicle dominant to all-user inclusive.

EXISTING STREET SECTION



PROPOSED STREET SECTION



Prince Street Concept



Prince Street Concept



URBAN NEIGHBOURHOOD STREETS

These are town-centre streets where a quality sidewalk network provides both passive recreation and social amenity for urban residents. The Appendix C sidewalk improvements specification are applied to these streets.

SPECIAL URBAN PROJECTS

DOWNTOWN CIRCULATION AND PARKING ANALYSIS

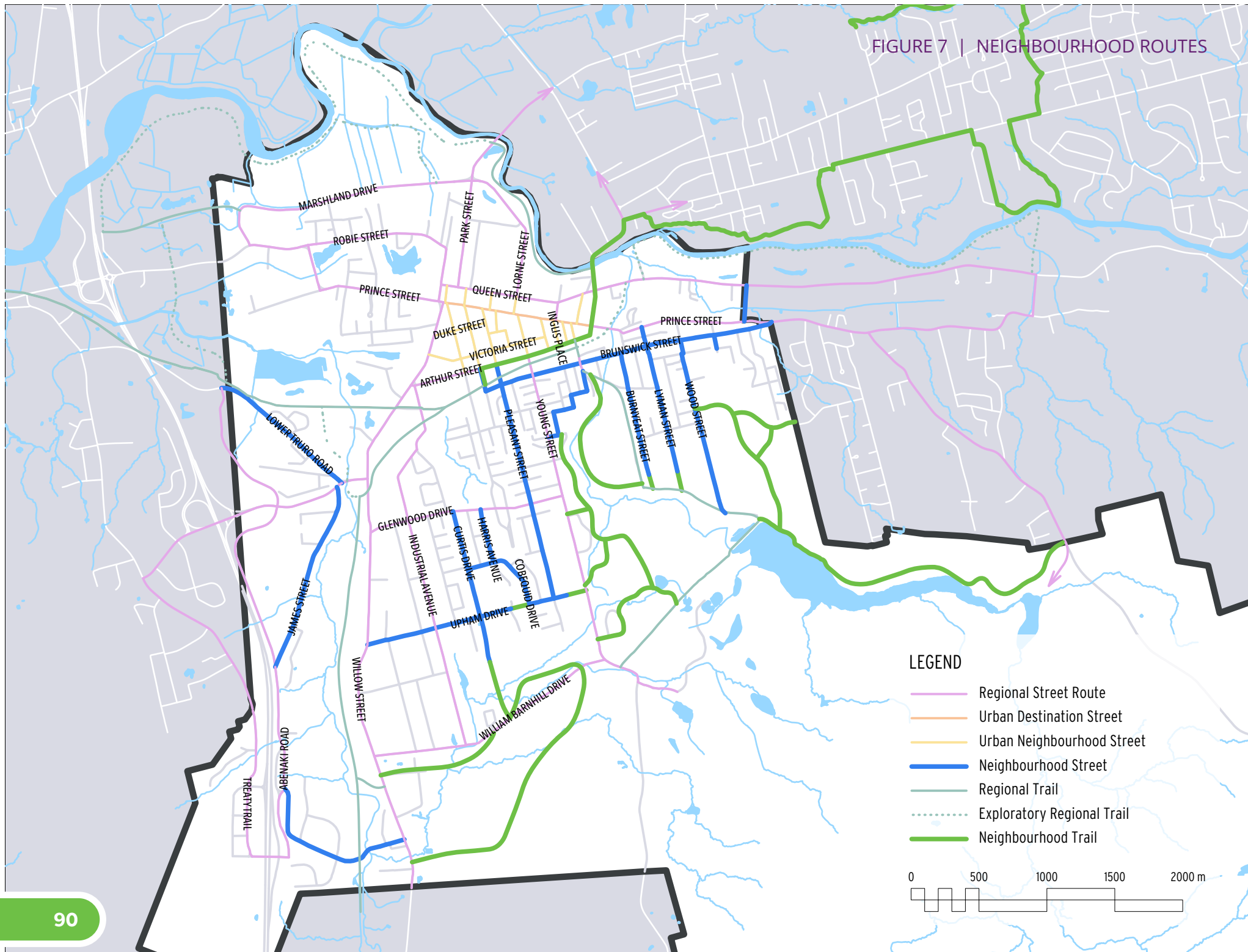
As noted earlier, this master plan provides a roadmap for elevating Truro's public realm quality to align with the quality of downtown Truro's building and business environment. Doing this requires an analysis of the functionality and relevance of Truro's downtown circulation and parking environment to clearly understand how the public realm can evolve to become an asset to the downtown business.

The Town of Truro should commission an analysis of present staff and public/visitor parking needs, as well as availability (for both street and lot parking). Additionally, the analysis should consider how the existing street network functions as downtown business streets, and how they deliver consumers to parking, and to business doors. This baseline data will inform proposed street modifications within the downtown.

4.4 NEIGHBOURHOOD ACTIVE TRANSPORTATION ROUTES

These local street corridors and trail routes broadly connect residents to important in-neighbourhood addresses, or to the regional network.

FIGURE 7 | NEIGHBOURHOOD ROUTES



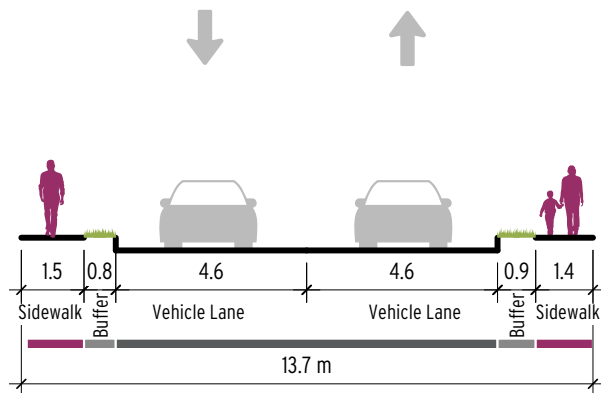
NEIGHBOURHOOD STREET ROUTES

ABERDEEN STREET

DESCRIPTION

- » This street provides a link between Prince and Brunswick Streets, and the École acadienne de Truro.
- » The existing sidewalks and grass buffers are retained, and shared route markings are added to the street to promote cycling on the street.

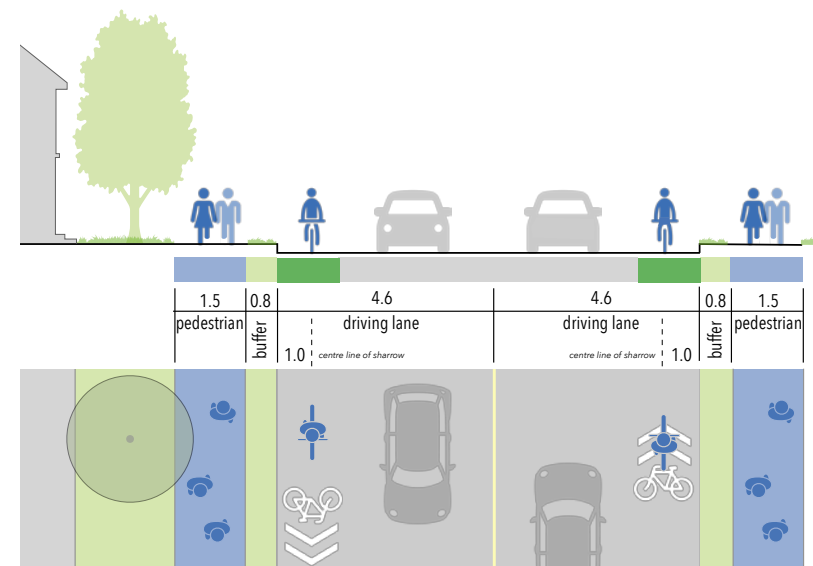
EXISTING STREET SECTION



CONSIDERATIONS

- » This is a small but important student and family-use corridor that provides multi-modal access to school property.
- » Illustrated bike lanes may move to a sidewalk position if the street is completely reconstructed. If this occurs, the sidewalk converts to a 3.0m two-way asphalt trail, with a 1.5m wide concrete sidewalk on the opposite side of the street. This requires the modification of street-edge power pole locations.

PROPOSED STREET SECTION



BROOKS LANE

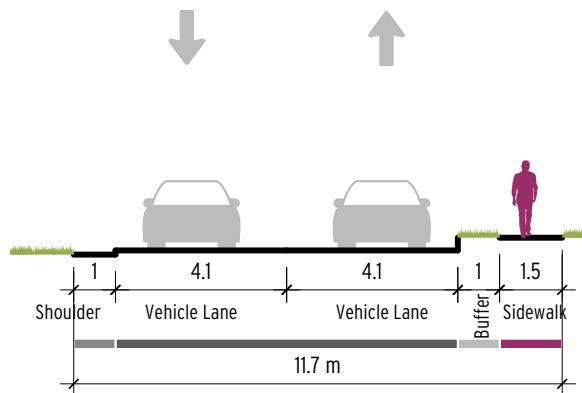
DESCRIPTION

- » Millbrook First Nation collector corridor that links residents to the Power Centre highway environment.
- » Important mixed-use corridor within limited right-of-way space.
- » Pedestrian sidewalks accompanied by on-street bike lanes increase the notion of multi-use, while still allowing for vehicles at existing speeds and volumes.

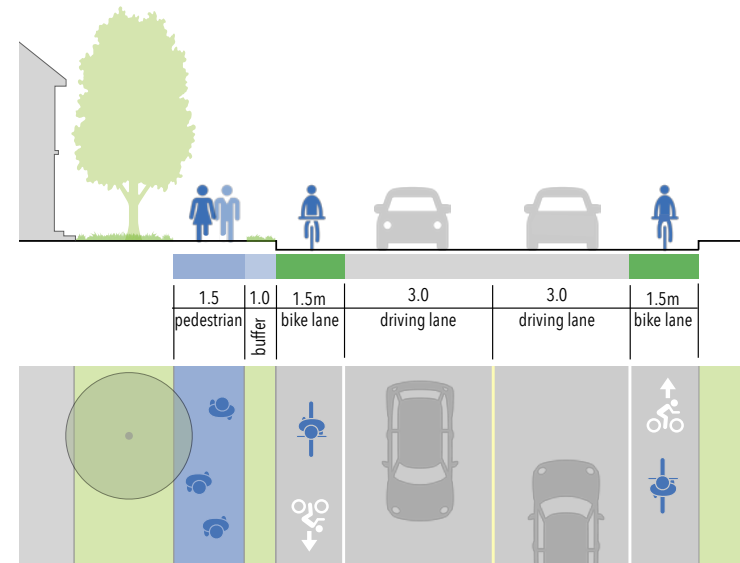
CONSIDERATIONS

- » This is an evolutionary street that can occur following detailed parking and circulation works that allow the street to move from vehicle dominant to human-dominant.

EXISTING STREET SECTION



PROPOSED STREET SECTION

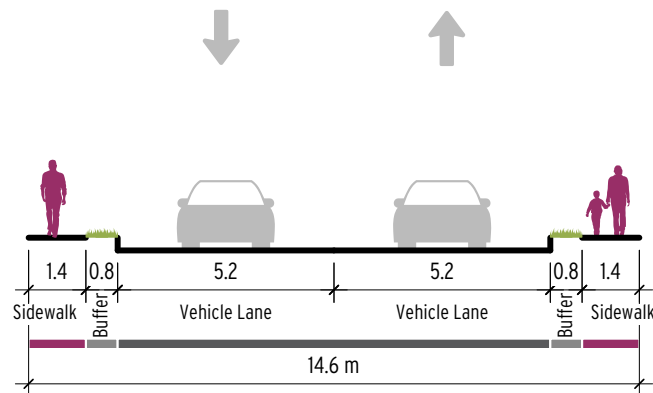


BRUNSWICK STREET

DESCRIPTION

- » This is an important east-west corridor that links downtown to residential neighbourhoods located to the east of the downtown.
- » The street is modified by removing a sidewalk on one side of the street to place a 3.0-meter-wide asphalt trail and a 1.5-meter-wide grass buffer.

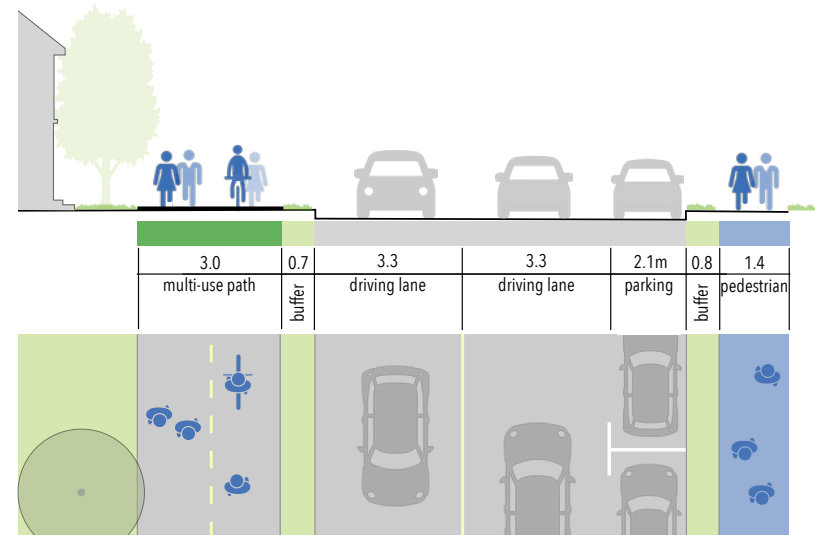
EXISTING STREET SECTION



CONSIDERATIONS

- » This is an evolutionary street that is modified when reconstruction is required.

PROPOSED STREET SECTION

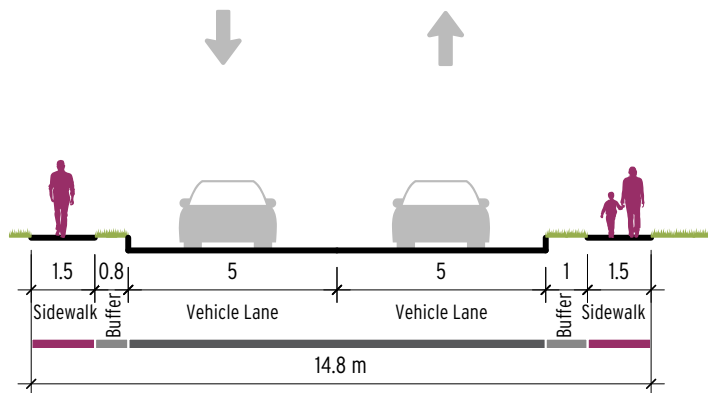


BURNYEAT STREET

DESCRIPTION

- » This street provides a link between Prince and Brunswick Streets, and Victoria Park.
- » The street is completely modified to a section that includes a 1.5-meter wide concrete sidewalk and buffers on each side of the street, and adds mixed-use sharrows to the asphalt street. The existing on-street parking is retained.

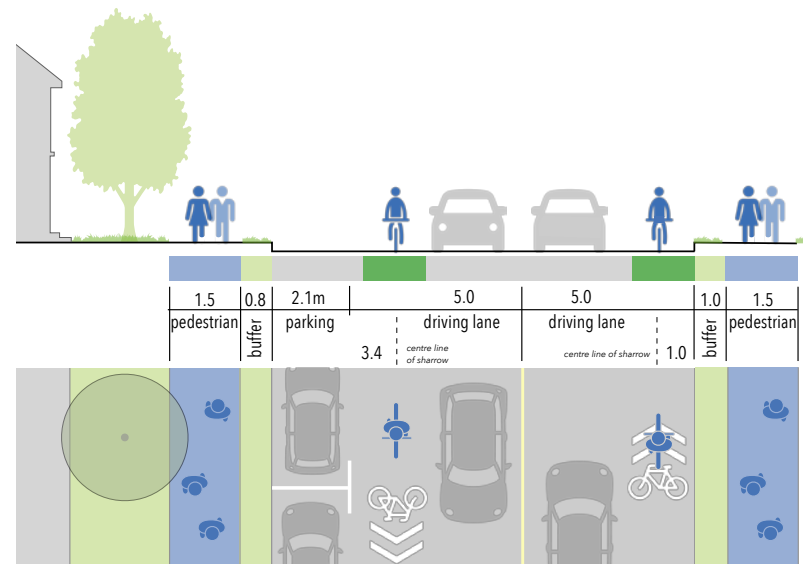
EXISTING STREET SECTION



CONSIDERATIONS

- » This is an evolutionary street that is modified when reconstruction is required.

PROPOSED STREET SECTION

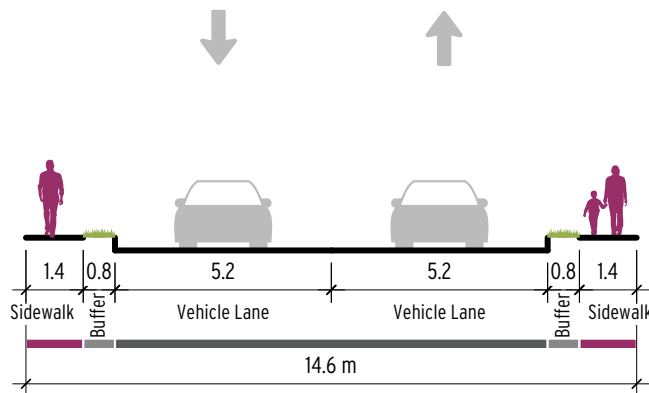


CHARLES STREET

DESCRIPTION

- » This is an important east-west corridor that links downtown to residential neighbourhoods and schools located to the west of the downtown.
- » The street is modified by removing a sidewalk on one side of the street to place a 3.0-meter-wide asphalt trail and 0.7-meter-wide grass buffer.

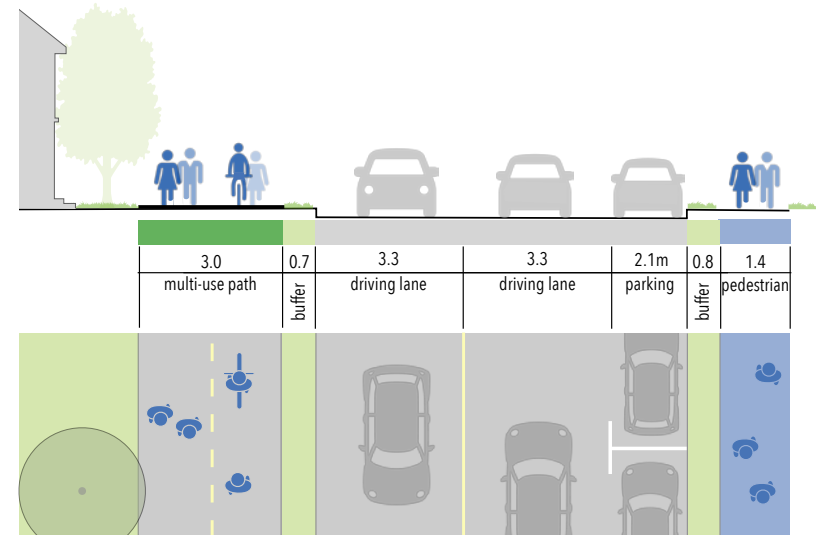
EXISTING STREET SECTION



CONSIDERATIONS

- » This is an evolutionary street that is modified when reconstruction is required.

PROPOSED STREET SECTION



CURTIS DRIVE

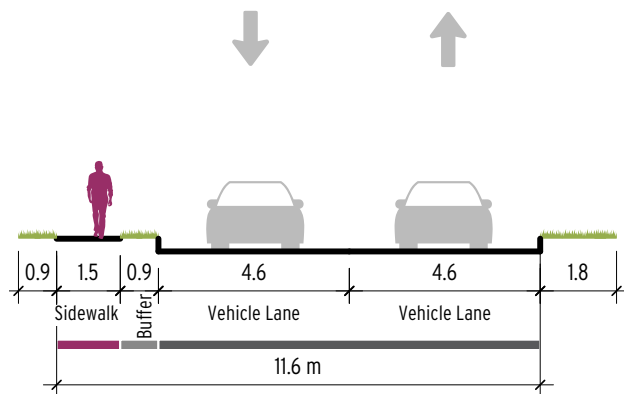
DESCRIPTION

- » This street provides north-south connectivity that links an elementary school to adjacent neighbourhoods.
- » The street corridor is modified from a single-sided sidewalk to a continuous multi-use trail on the east side of the street, complete with a 1.5-meter grass buffer strip.

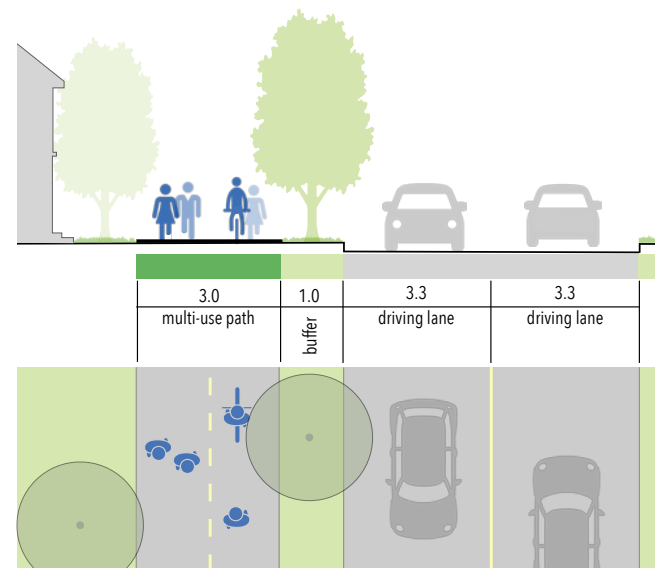
CONSIDERATIONS

- » This is an important street for youth who access the school property on a year-round basis. An asphalt trail provides an accessible and safe trail surface for this purpose.

EXISTING STREET SECTION



PROPOSED STREET SECTION



HARRIS DRIVE

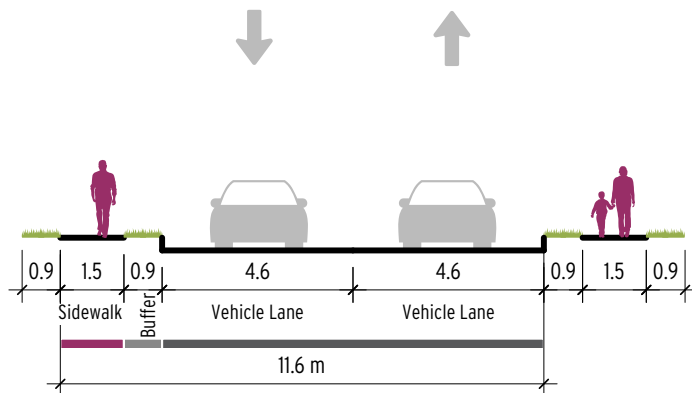
DESCRIPTION

- » This street provides a link between Glenwood Drive and Truro Elementary School, on a multi-use surface.
- » The east-side concrete sidewalk and grass buffer are retained, while the west-side sidewalk and buffer are replaced with a 3.0-meter-wide asphalt multi-use trail.

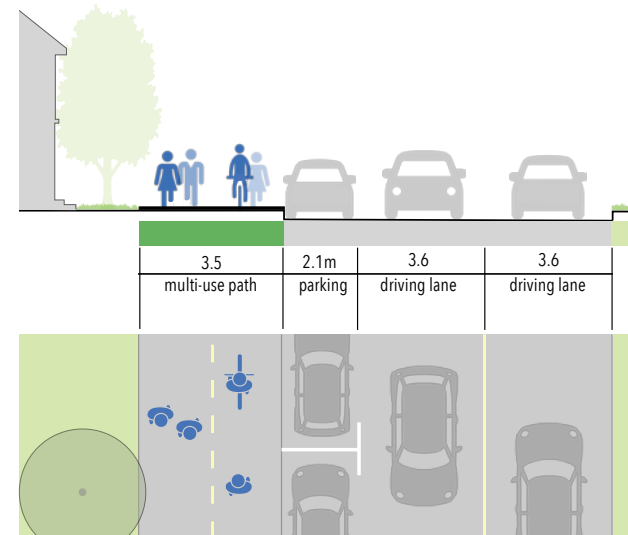
CONSIDERATIONS

- » This is an important student and family-use corridor that bridges a gap between the school and the residential areas adjacent to Glenwood Drive.

EXISTING STREET SECTION



PROPOSED STREET SECTION

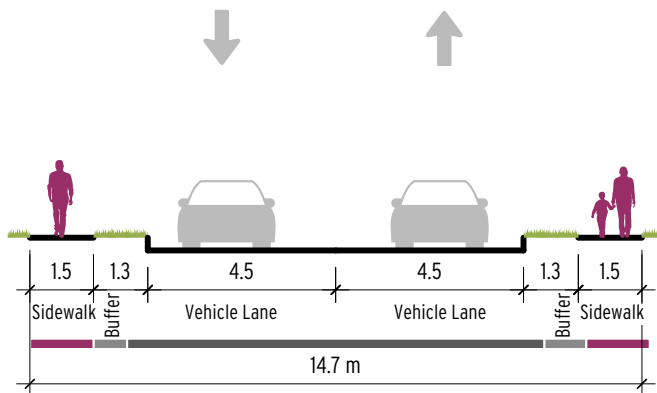


LYMAN STREET

DESCRIPTION

- » This street provides a link between Prince and Brunswick Streets, and Victoria Park.
- » The street is completely modified to a section that includes a 1.5-meter wide concrete sidewalk and buffers on each side of the street and adds mixed-use sharrows to the asphalt street.

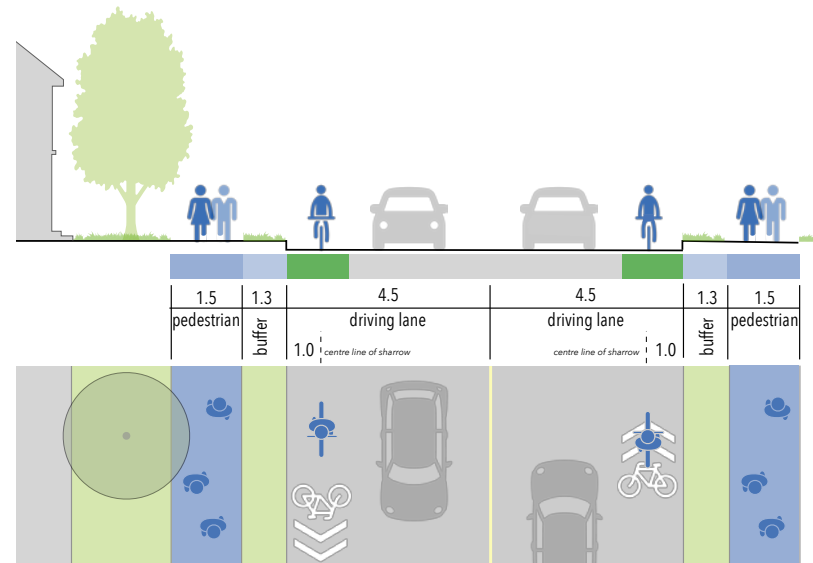
EXISTING STREET SECTION



CONSIDERATIONS

- » This is an evolutionary street that is modified when reconstruction is required.

PROPOSED STREET SECTION



PLEASANT STREET A & B

DESCRIPTION

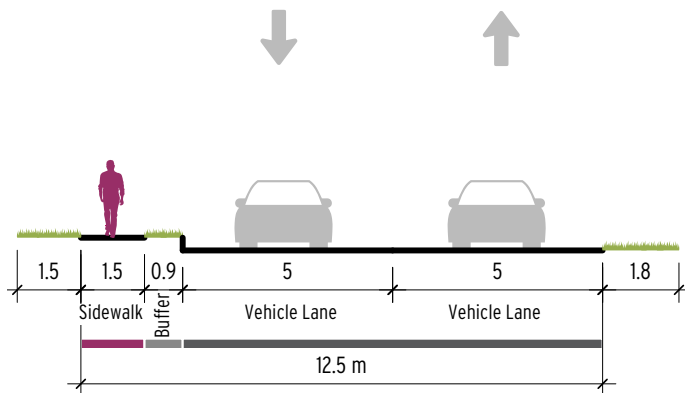
- » This street functions like a collector corridor that links residents to important residential, industrial, business and academic addresses.
- » Important mixed-use corridor within limited right-of-way space.
- » Pedestrian sidewalks (where possible) accompanied by on-street bike lanes increase the notion of multi-use, while still allowing for vehicles at existing speeds and volumes on slightly reduced lane widths.

- » Pleasant Street varies in functional width between 12.5 and 14.0 meters wide; the proposed sections provide an approach to facility application for each.

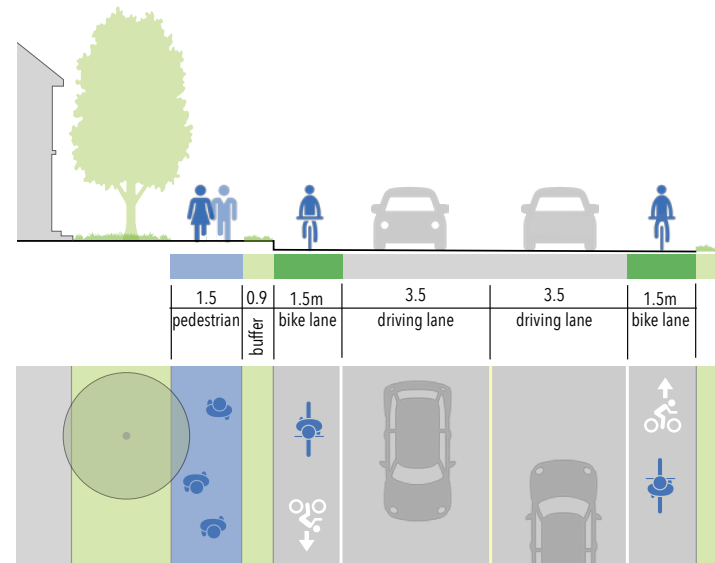
CONSIDERATIONS

- » This is a street with perceptually steep slopes, with continuous residential edge uses. Additionally, the important land uses at each end of the street require changes to the street that ensure multi-modal access to each end.

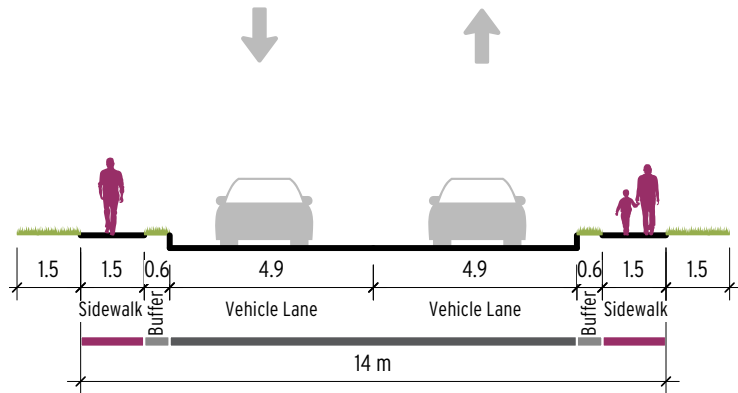
EXISTING STREET SECTION A



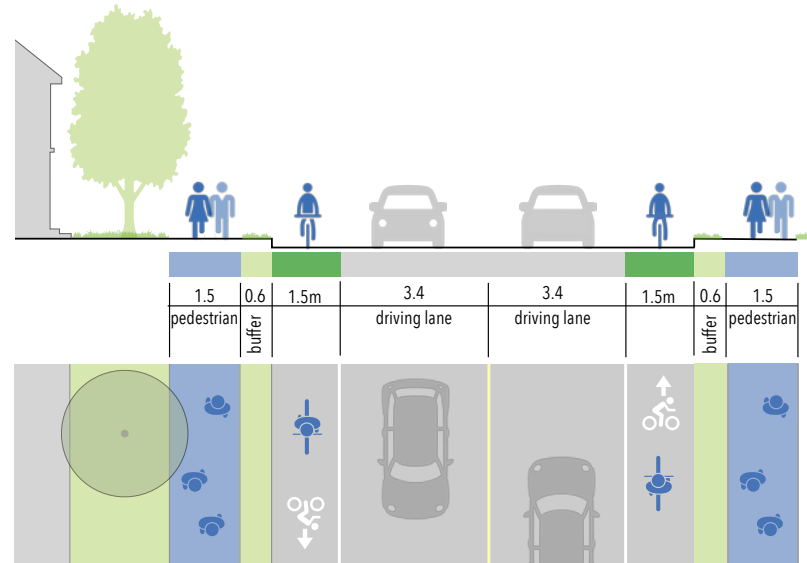
PROPOSED STREET SECTION A



EXISTING STREET SECTION B



PROPOSED STREET SECTION B

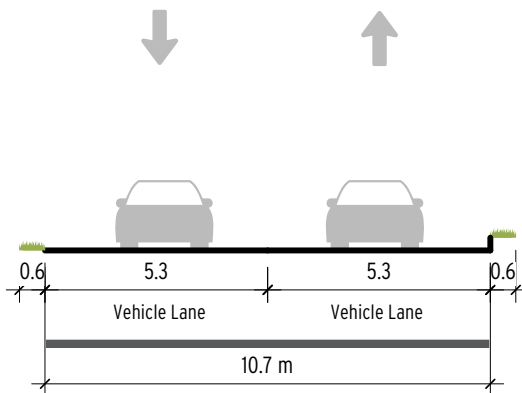


UPHAM DRIVE

DESCRIPTION

- » This street provides east-west connectivity that links two town schools. The narrow corridor does not allow for a sidewalk; however, future street reconstruction and right-of-way expansion should explore expansion to allow for a sidewalk if possible.
- » Street corridor with no existing pedestrian or cycling infrastructure is expanded with two bike lanes within the existing right-of-way to serve both wheel and feet users.

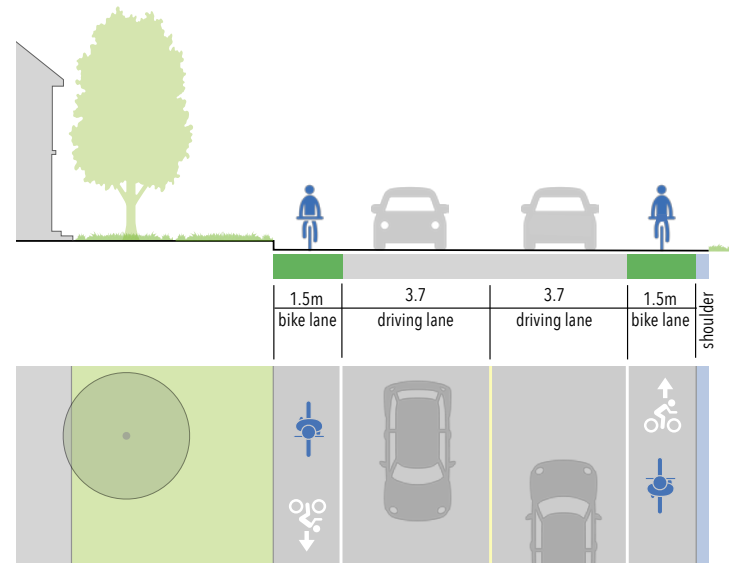
EXISTING STREET SECTION



CONSIDERATIONS

- » The two Upham Drive street sections are connected by an informal walking surface between Ritchie Barnhill Drive and Heritage Place. This section requires an accessible trail that ensures a continuous multi-modal corridor.

PROPOSED STREET SECTION



WOOD STREET

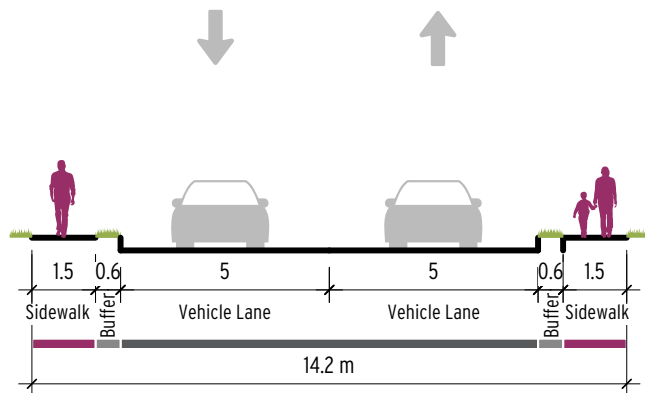
DESCRIPTION

- » This street provides a link between Prince and Brunswick Streets, and Victoria Park.
- » The street is completely modified to a section that includes a 1.5-meter wide concrete sidewalk and buffers on each side of the street and adds mixed-use sharrows to the asphalt street. The existing on-street parking is retained.

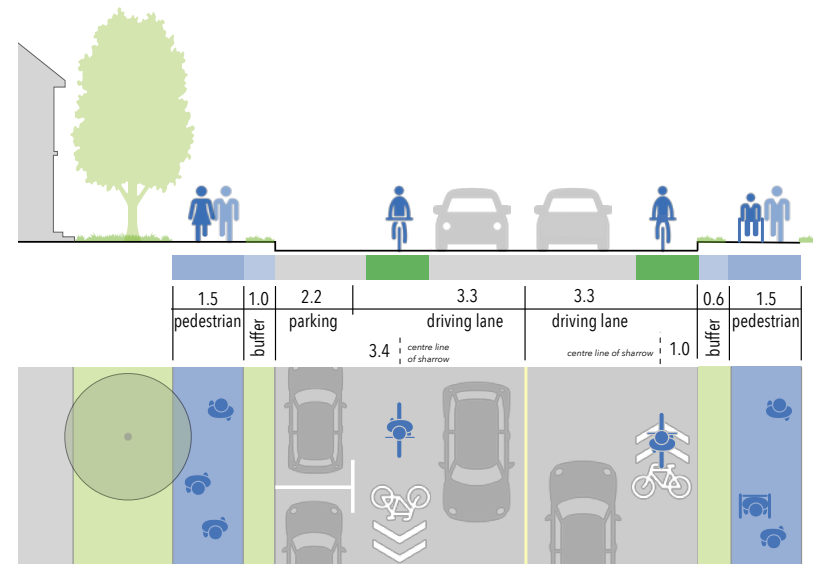
CONSIDERATIONS

- » This is an evolutionary street that is modified when reconstruction is required.

EXISTING STREET SECTION



PROPOSED STREET SECTION



NEIGHBOURHOOD TRAIL ROUTES

This master plan illustrates several neighbourhood routes designated as exploratory trails. These are routes that require further exploration following the completion of the regional/neighbourhood street and trail routes to ensure connectivity from the in-neighbourhood activity origins.

5.0 MASTER PLAN IMPLEMENTATION





The Town of Truro commissioned this active transportation master plan to identify a vision, network plan and projects that can be undertaken to improve human-powered mobility over the next ten years. It is important to note that the tasks described in this chapter are presented in linear format; however, linear implementation is unlikely. Implementation will be highly iterative relative to available staffing, funding, council priority, etc. Moving tasks forward, and reverse, is not a failure to meet resident desires if the plan's vision and development themes are adhered to. In fact, real success is the result of adapting to the 'reality of the day' within the context of the vision and themes.

The Implementation tasks described in this chapter follow a three-step strategy. First, the town should develop the administrative and physical platform to move forward from. This includes completing background studies, developing signage and amenities programs,

as well as creating the trails with supporting furnishings that provide recreational a social space for present-day active residents, and encourage first-time trail users to buy shoes, bikes, scooters, etc., and get on the trails.

Second, as the community of active transportation enthusiasts grows, the town should expand the trail network and begin placing on-street active transportation facilities that link residents to the trail network, and to important destinations. As street network components and the community of users grow, recreation trail users will become recreation and commuting street users.

Finally, the town can proceed with the more complex street reconstruction projects with the support of its community of users. Thus, the town has built demand for vehicle-centric street conversion to active transportation network components.

5.1 PHASE ONE - BUILDING THE PLATFORM

This phase of implementation sets the administrative and physical platform for implementing this master plan, and includes the following tasks.



TASK ONE - BUILDING PARTNERSHIPS

This is a very important and transformative plan that has an opportunity to bring Truro's built form in line with its cultural form. Plan implementation will require the participation of varied local, provincial and federal departments, groups and individuals to ensure this occurs. Therefore, this plan should be formally presented to, at a minimum, the following groups (alone and in group settings):

- » The Millbrook First Nation (to Council)
- » The Municipality of the County of Colchester (to County staff)
- » The Village of Bible Hill (to Village staff)
- » The Province of Nova Scotia (to MLAs)
- » The Government of Canada (to MPs)
- » The Accessibility Directorate
- » Bicycle Nova Scotia
- » The Downtown Truro Partnership
- » All local companies discussed in this master plan
- » Any other partnership groups that will contribute to the creation of an active transportation plan in Truro.



TASK TWO - COMMENCE GROUP PLANNING ON THE WABANAKI TRAIL

This project is the backbone of this master plan and will require broad participation from Truro and Millbrook representatives to collectively ensure the Wabanaki Trail proceeds as described in this master plan. Therefore, the Town of Truro and Millbrook First Nation council should develop and sign a Memorandum of Understanding (MOU) that clearly describes what this trail is, how it will benefit each community, and what role each community will play in developing the trail.

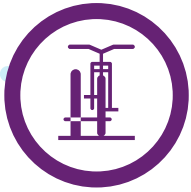
Additionally, the MOU should clearly define the members and responsibilities of a staff-level working group that is mandated to move the project forward (including detailed design tasks). Extending from this, the group should commission a professional team to conduct a feasibility model that explores linear and intersection construction requirements, detailed costs, and estimates the potential economic and cultural benefits of creating the Wabanaki Trail.



TASK THREE - EDUCATION AND ACTIVITY PROGRAMMING

The Town of Truro, in association with Bicycle Nova Scotia, as well as local cycling groups and bike shops, should apply for funding and develop a comprehensive education plan (as described in Chapter Three of this master plan). The plan must start with the notion of getting families to treat their neighbourhoods like parks, and have drivers understand and respect this initiative. Seeding this idea at the neighbourhood level will create a platform that can grow to town-wide and regional levels.

Cost Estimate: \$25,000 - \$30,000



TASK FOUR - THE TRURO BIKE RACK CONTEST

This task is a great way to engage residents in the initial steps of plan implementation by engaging their creative spirit and imagination. The Town of Truro, in association with the Millbrook First Nation and local bike groups and shops, should design and deliver a broad-participation design challenge program for the conceptual design of a Town of Truro AT Bike Rack System. This process should be delivered in the following stages:

- » Make a public invitation to all residents (specifically students) to provide design ideas for a bike rack system over a 60-day period.
- » Develop a short list of 20 (+/-) responses to provide a finer detailed concept for public viewing.
- » Create a public opening to review responses where visitors vote to select a winner (who receives a cash prize).
- » Provide the final selection to a landscape architect for detailed design and costing based on the concept.
- » Publicly issue the final design for public review and inclusion in the next task.

This program will bring attention to the importance of bike racks in the urban environment, and provides an opportunity to explore the creation of a policy that requires developers and builders to place bike racks at all new residential, retail and commercial projects as part of development agreements. The requirement should be set at one bicycle parking space per 20 vehicle parking spaces. Any new builds that do not require 20 spaces do not require bicycle parking.

Cost Estimate: \$15,000 - \$20,000



TASK FIVE - DETAILED MATERIALS PALETTE

The Town of Truro should commission a landscape architect, in association with structural engineering support, to create a detailed standard materials manual for all the AT components required in all phases of implementation. This will include gateway panels, Transportation Association of Canada (TAC) related regulatory signs and specifications for trail and street signage, themed wayfinding signage based on Truro's existing wayfinding signage, and the selected bike rack system. This will also include locations, quantities as well as fabrication and installation budgets for the various palette components.

Cost Estimate: \$15,000 - \$20,000



TASK SIX - DEVELOP A STANDING ORDER FOR WAYFINDING MATERIALS

The Town of Truro should issue a standing order for materials from the task five materials palette, including gateway panels, bike racks, directional signage as well as relevant TAC signage can be applied to the trails and streets when required. This requires that the Town of Truro package and release a tender for these materials, which can then be ordered on demand based on submitted pricing.

When awarded, the Town of Truro should work with downtown businesses, schools and other companies/groups to place the branded bike racks at schools, residential projects and retail/commercial areas.



TASK SEVEN - TOWN HALL AND DOUGLAS AVENUE RECREATION CENTRE AT HUBS

The Town of Truro should capitalize on competitive pricing to develop active transportation hubs at the Town Hall, and at the Douglas Avenue Recreation Centre. To do this, the town should commission a landscape architect to develop a design for the hubs based on the sites and user needs.

Cost Estimate: \$225,000 - \$250,000



TASK EIGHT - BEGIN DISCUSSION WITH THE TRURO CENTRE MALL REPRESENTATIVES

Commencing at the staff level, the Town of Truro should initiate discussions with Truro Centre Mall ownership to explore partnership options that convert the building from barrier to focal point within the context of active transportation and community lifestyle. As previously noted, this discussion should explore the creation of a new opening in the mall that provides access to the future Wabanaki Trail, and the lands/parks located on the south side of the CN tracks.



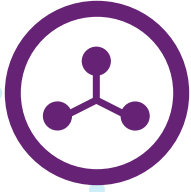
TASK NINE - REGIONAL CONNECTIVITY DISCUSSIONS

The Town of Truro functions as a regional cultural, economic and physical hub, and is one of several administrations that operate within this context. The town should commence discussions with the adjacent municipal entities to explore projects such as a trail crossing to Bible Hill, trail connectivity to the Fundy Tidal Site and Cobequid Trail (from the Fundy Tidal Site), as well as the many streets indicated in this master plan.



TASK TEN - DOWNTOWN CIRCULATION AND PARKING ANALYSIS

The Town of Truro should commission a downtown circulation and parking analysis that clearly defines parking requirements for today's downtown, illustrates and summarizes all street and lot parking spaces, identifies where downtown staff park, explores how parking lots and spaces are found by downtown visitors, and estimates parking requirements for an intensifying downtown. This information will inform how Prince Street and Inglis Place can evolve relative to this active transportation master plan.



5.2 PHASE TWO - KEY CONNECTIONS

Several streets and trails identified as important linkages require no modifications to street sections. These projects can enter Truro's short-term municipal capital upgrade planning and can be undertaken as partnerships develop, and budget permits. The following streets and trails are included in this phase.

Aberdeen Street. Adds multi-modal markings to street, connecting neighbourhoods to elementary school.

Brooks Lane. Adds sidewalk and bike lanes to the existing street corridor; important linkage between Millbrook and residential/shopping areas.

Curtis Street. Adds multi-modal trail to a modified street section that links residential areas to elementary school.

Glenwood Drive. On-street multi-use trail that links Victoria Park to Willow Street.

Harris Avenue. Adds multi-modal trail to a modified street section that links residential areas to elementary school.

Kaulback Street. Adds multi-use trail to street, connecting neighbourhoods to elementary school.

Lorne Street. Adds multi-use trail to street, connecting neighbourhoods to high school and Marshland Drive.

Marshland Drive. Adds multi-use trail to street, connecting Lorne Street to the Fundy Experience Centre.

McClures Mills Road. Adds multi-use trail to street, connecting Willow Street and the Wabanaki Trail to the RECC and Truro Heights.

Prince Street East and West. These important streets require reconstruction work within the corridor, and should proceed prior to commencing urban core street works.

Robie Street. This important pedestrian corridor requires reconstruction to improve the street environment for those walking to Robie Street shopping areas.

Upham Drive. Adds bike lanes to important east-west connector; links Willow Street to elementary and middle schools.

Wade Road. Adds multi-modal trail to street corridor, linking the RECC to the Cobequid Trail.



William Barnhill Drive. Component of the Wabanaki Trail; provides an important linkage between Millbrook and Victoria Park/Railyard.

Wood Street. Adds bike lanes to the existing street; important linkage to Victoria Park.

Young Street. Important connection between the downtown Truro Middle School/Railyard.

5.3 PHASE THREE - STREET EVOLUTION

Projects included in this phase occur as street reconstruction occurs, or as public demand for active transportation infrastructure increases to the point that council wishes to respond. It is important to note that the following projects proceed following the development and operation of the Wabanaki Trail, which will serve to create demand.

Arthur Street. Component of the urban loop; important functional and multi-modal promotional facility.

Brunswick Street. Adds multi-modal trail to important east-west street connection.

Burnyeat Street. Adds shared use markings to a modified street section that includes two sidewalks and parking.

Charles Street. Adds multi-modal trail to important east-west street connection.

Elm Street. Connects the urban loop to Robie and Ford Street; an important pedestrian route.

Esplanade Street. Component of the urban loop; important to 'humanize' the downtown core.

Industrial Drive. Adds multi-modal facilities to an important commercial and light industrial area.

Inglis Place. Downtown destination street developed as a retail and pedestrian-dominant corridor.

Lyman Street. Add shared-use street markings to an existing street corridor.

Park Street. Connects Marshland Drive and Lorne Street to Bible Hill.

Pleasant Street. Adds bike lanes to an existing corridor; links Wabanaki Trail to south-side residential areas.

Prince Street. Downtown destination street developed in association with urban core intensification and public realm improvements.



Queen Street. Component of the urban loop provides east-west connectivity on the north edge of the downtown.

Treaty Trail and Truro Heights Road. Adds multi-modal trail to an important connection between Millbrook and adjacent work/shopping areas.

Walker Street. Component of the urban loop.

Willow Street. Component of the urban loop provides north-south connectivity on the west edge of the downtown.

5.4 POLICY

Through its enactment of the policies listed below, the Town of Truro establishes the mandate for which the Active Transportation Master Plan's implementation will be achieved. The strategy for moving this master plan forward involves embarking on a three-phase implementation plan that commences with administrative tasks prior to moving into working projects. Although this document was developed under the direction of those consulted throughout plan development, further consultation and partnership-forming are required for implementation. These relationships are forged in the first phase. Thus, the administrative context required to implement this implementation plan is developed immediately for procedural ease.

POLICY AT-1 The Town of Truro shall incorporate this Active Transportation Master Plan's policies and projects into future municipal plan update development processes to ensure the seamless integration of Truro's human-powered mobility and development procedures.

POLICY AT-2 The Town of Truro shall promote the use of self-propelled or power-assist, active transportation modes (i.e., bicycles, scooters, pedestrian movement), by maintaining and expanding upon its active transportation network, through the implementation of the network as identified in the Town of Truro Transportation Master Plan.

POLICY AT-3 Council shall amend the Section 10.2 Municipal Plan Transportation Map and supporting text to include the active transportation classified network as identified in the Town of Truro Active Transportation Master Plan.



POLICY AT-4 Active Transportation facilities and components, as outlined in Chapter 3 and Chapter 4 of the Town of Truro Active Transportation Master Plan, will be incorporated to the maximum extent practical, in all planning, design, and construction of new roads, trails, maintenance of existing roads and trails, and/or reconstruction of existing roads.

POLICY AT-5 Council shall use Chapter 5.0 Master Plan Implementation as a guide to implementing the Town of Truro Active Transportation Master Plan.

POLICY AT-6 Council shall use the Town of Truro Active Transportation Master Plan as a guide for expanding active mobility within existing or developing city neighbourhoods, and when connecting to existing or proposed adjacent active transportation infrastructure.

5.5 COMPLIANCE

Although each street, trail, intersection and amenity package requires detailed design for liability and use comfort reasons, three Canadian documents provide helpful planning and design specification guidance when developing preliminary plans ahead of detailed design. These are:

Transportation Association of Canada. Bikeway Traffic Control Guidelines for Canada. Government of Canada. Latest Edition.

Transportation Association of Canada. Active Transportation in Canada, A Resource and Planning Guide. Government of Canada. 2011.

Ministry of Transportation of Ontario. MTO Book 18, Cycling Facilities. Province of Ontario. Latest Edition.

Additionally, during the design phase, consult with the Accessibility Directorate for input and compliance with the *Accessibility Act* and *Access by Design 2030*.



5.6 BUDGET DISCUSSION

It is difficult to develop cost estimates for detailed projects that are conceptualized in master plans; therefore, the following chart provides general unit costing for varied active transportation projects that can be preliminarily applied to capital projects.

Project	Estimated Unit Cost
3.0 meter-wide granular trail c/w restoration and signage	\$225/lin.m.
3.0 meter-wide asphalt trail c/w restoration and signage	\$375/lin.m.
Concrete Sidewalk c/w restoration	\$325/lin.m.
Concrete Curb c/w restoration	\$135/lin.m.
Shared route street marking c/w signage	\$20,000/km
Bike lanes	\$45,000/km
Buffered Bike Lanes	\$72,000/km
Buffered Bike Lane with Bollard	\$92,500/km
Basic amenities (bike racks, trees, trash receptacles, etc)	\$35/lin.m.

It is important to note that all projects require detailed design before detailed cost estimates are established. Additionally, a detailed intersection treatment design relative to active transportation is required before developing the final linear meter costing.

ENDNOTES

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APPENDIX A - PREVIOUS WORKS SUMMARY

The study team reviewed existing plans and policies related to active transportation to develop a baseline platform from which to develop a new plan. The reviewed plans include:

- » Colchester - Truro Bikeways Plan
- » Active Transportation Behaviour and Attitudes Survey
- » Social Marketing Strategy for Walking and Cycling
- » Outdoor Play Policy for Children and Youth
- » Physical Activity Strategic Plan
- » Northern Zone Community Health Plan
- » Downtown Truro Traffic Management Study Update

COLCHESTER – TRURO BIKEWAYS PLAN

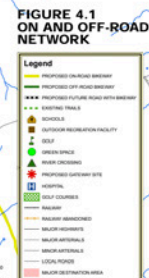
In 2009, the Colchester – Truro Bikeways Plan was completed with the purpose of developing a connected, safe and functional cycling network that would provide more Active Transportation (AT) options within the urban and rural areas of Colchester County. The goal of the plan was ultimately to reduce dependency on motorized vehicle travel within the county. According to the plan, AT is defined in four basic categories: active commuter travel, active workplace travel, active destination-oriented travel, and active recreation. The resulting network would meet the needs of each of these AT categories (see adjacent Bikeway Plan Map).

The plan integrates existing and planned facilities within the county to develop a comprehensive and connected bike network that includes clearly signed off-road trails and on-road facilities. Route selection criteria included the following:

- » attractiveness of the route itself
- » diversity in route options
- » visibility of the bicycle network
- » connectivity to the transportation network
- » accessibility to neighbourhoods and major destinations within the county
- » safety for network users

- The Bikeways Plan also includes design guidelines for the off-road and on-road facilities that are included in the proposed network. The proposed off-road facilities consist of signed multi-use trails, while the proposed on-road facilities include bike lanes, paved shoulders, and signed-only on-street bike routes.

FIGURE 8 BIKEWAYS PLAN MAP



ACTIVE TRANSPORTATION BEHAVIOUR AND ATTITUDES SURVEY

In April 2014, a survey was conducted by the County of Colchester to obtain information related to the travel behaviours of county residents and to understand their AT habits. A total of 567 responses were received and analyzed. The responses included information on respondents' primary commute mode, commute distance, number of weekly trips, frequency of walking and cycling, desired change in AT habits, barriers to increasing frequency of AT use, etc. The results indicate that most respondents travel in a motor vehicle (72% drivers and 6% passengers) to commute to work or school, while walking and cycling account for approximately 12% and 1% of commuter travel, respectively. However, it was determined that many residents live close enough to their work or school that active transportation modes could be used.

For local, non-work-related trips including shopping, social outings and personal errands, these are made either by walking or cycling three or more times per week by approximately 35% of residents. It was indicated, however, that approximately half of the respondents would be interested in walking more in the coming year, while one-third of respondents would be interested in cycling more.

SOCIAL MARKETING STRATEGY FOR WALKING AND CYCLING

A pilot program was developed for Colchester County to encourage the adoption of AT habits and behaviours. The goal of this social marketing strategy was to promote walking and cycling for travel by changing attitudes around AT modes, changing travel behaviours of residents and providing an environment where AT is safe, fun, convenient, and efficient. The data obtained through the Active Transportation Behaviour and Attitudes Survey were used to determine existing travel behaviours within the county and to identify target behaviours based on impact, probability and market penetration. The strategy discussed barriers and motivators for people to choose AT modes over motor vehicle travel. Motivators for walking and cycling include, most notably, exercise and a sense of connection to nature and the community. Barriers include factors related to convenience, such as weather and distance to destinations. For cycling specifically, barriers include traffic speeds and volumes due to the perception of unsafe conditions for cyclists. The implementation of infrastructure that provides designated space for AT modes such as bikes lanes and sidewalks greatly encourages this behaviour.

OUTDOOR PLAY POLICY FOR CHILDREN AND YOUTH

The Town of Truro developed an Outdoor Play Policy for Children and Youth in June 2021 to address outdoor play in the municipality and to identify the associated responsibility of the Town. The vision of the policy is to create a child-friendly environment where play opportunities are offered to every child regardless of age, ability, gender, ethnicity, geographic location, or economic circumstance.

The Outdoor Play Policy includes several action items to be taken by the Town of Truro. The six action items are as follows:

Leadership and advocacy of outdoor play. The Town will review existing policies and bylaws to ensure there are no barriers to outdoor play and they will host community groups and mini gatherings with the goal of developing initiatives and partnerships related to outdoor play.

Youth Engagement. The Town will regularly engage children and youth to ensure that outdoor play spaces satisfy their wants and needs.

Land use planning and outdoor play spaces. The Town will encourage the incorporation of formal and informal play spaces as part of planning initiatives. All development agreements shall also consider the inclusion of play spaces.

Develop active transportation routes to connect community and public spaces. Sidewalks and bike lanes will be incorporated into the transportation network near play spaces. Street design will be modified to encourage traffic calming in these areas.

Programs to support outdoor play. The Town will offer programs that support the opportunities for outdoor play including equipment loan programs and learning opportunity programs to enable participation in outdoor play.

Communication and Awareness. The Town will implement a communications strategy related to outdoor play with the goal of providing key messages to parents and local decision-makers.

PHYSICAL ACTIVITY STRATEGIC PLAN

In January 2021, a new Physical Activity Strategic Plan was developed for the Town of Truro that built on the previous Physical Activity Plan developed in 2012. This new plan would identify opportunities to help promote and increase physical activity, sport and recreation within the municipality. The Plan incorporates several strategic directions, each with its own goals and high-level action items. The strategic directions and their goals are summarized as follows:

Communication and promotion. Inform residents about opportunities and benefits of available physical activity within the Town of Truro.

Natural and built environment. Make use of and identify opportunities for sustainable natural and built environments within the Town that support physical activity.

Accessibility and inclusivity. Providing equitable physical activity for everyone.

Engagement and partnerships. Active engagement of internal and external partners to ensure the advancement of the goals of the physical activity strategy.

Workplace setting. Align with community workplaces to support physical activity and movement at work.

NORTHERN ZONE COMMUNITY HEALTH PLAN

The Northern Zone Community Health Plan was developed with the purpose of providing recommendations to the Nova Scotia Health Authority (NSHA) on actions that can be undertaken to support community health priorities for the counties of East Hants, Colchester, Cumberland and Pictou. The four priorities identified in the Plan include mental wellness and a sense of belonging; a healthy, active lifestyle and supportive environment; thriving communities, prosperity and affordability; and community engagement, connection and inclusion. Under the healthy, active lifestyle and supportive environment priority, it is recommended that the NSHA develop and support the implementation of policies that would advocate for environments where healthy choices are easy to make. This includes policies that would support active transportation initiatives.

DOWNTOWN TRURO TRAFFIC MANAGEMENT STUDY UPDATE

This study update does not directly address Active Transportation holistically. However, consideration of pedestrian needs is evident throughout the traffic engineering analysis of nineteen study intersections. Further, possible bicycle infrastructure on Prince Street is shown in some of the cross-section options presented. Upgrades discussed in the report offer the opportunity to incorporate AT facilities or upgrades.



APPENDIX B - CONSULTATION SUMMARY

The following briefly summarizes the content discussed during consultation conversations.

STEERING COMMITTEE START-UP SESSION

The project team and steering committee discussed the project goals, proposed work plan, data sources, preliminary contact list, and upcoming tasks.

HUB CYCLE CHAT

This session discussed where residents are riding and hiking, the products they are using, and how the street-based cycling community is moving to gravel and trail environments.

BIKE MONKEY SESSION

This session discussed the AT recreational and commuting environments, roadblocks and opportunities that should be explored during consultations.

STEERING COMMITTEE PLATFORM SESSION

This session discussed what has been learned to date, the emerging project questions, and what requires further exploration during broad community consultation.



COMMUNITY WORKSHOP

On June 21, 2022 from 7pm - 9pm, residents joined the consultation team at the Douglas Street Recreation Centre to review the information and big ideas collected to date, share their thoughts about AT in Truro and to add their own ideas to the Big Ideas Wall. Residents worked their way through self-guided stations where members of the project team were ready to chat with those wishing to share additional comments, concerns and ideas. The following stations were included:

- » Introduction to Truro Active Transportation to learn about Truro's area, population and demographics,

and what active transportation is;

- » Interactive Background Station where the collected big ideas about routes and facilities were reviewed, discussed, prioritized and amended;
- » Group Discussion Station where a large map provided opportunities to discuss specific routes, destinations and opportunities for future projects;
- » Big Idea Wall Station where participants could leave additional comments on maps or sticky notes for other participants and the consultation team to review.

The session was well attended and a lively impromptu sit down session unfolded where residents had the opportunity to voice their ideas and concerns around active transportation in Truro to the gathered crowd and hear from representatives from the Town and the project team.

SCHOOL SESSIONS

Students from Truro Middle School participated in 2 Lifestyle Criteria Sessions on May 11, 2022. This workshop-style session included working with students about what an integrated and connected multi-modal network looks and feels like, leading to the creation of facility criteria for varied family-based walking and cycling corridors.



ACTIVE TRANSPORTATION COMMUNITY SURVEY

Previous consultations provided valuable insight relative to general town-wide network requirements, as well as some of the roadblocks to creating that network in both natural and built settings. This consultation phase further explored the user, their requirements, and preferred settings for multi-modal activity.

The online survey invited participants to share information about how frequently they use active transportation, what modes of AT they use, and where they go. Participants were also asked to share what they believe to be barriers to AT, and what would encourage more people to participate.

269 people responded to the public survey.

Other modes of active transportation reported included running, canoeing, skiing and snowshoeing.

Other destinations that respondents visit using active transportation include trails, especially the Cobequid Trail, parks, nearby communities, school, church, carpooling meeting spots, restaurants, the mall, friends' homes, and recreational destinations such as the Salmon River, Christie Brook, Shortts Lake, and Fundy Discovery Site.

When asked about barriers to participating in active transportation, respondents mentioned safety related concerns most frequently—safe, protected, connected, accessible, well-maintained routes are desired. Additionally,

lack of active transportation infrastructure (especially separated bike lanes and multi-use pathways), access to public transit, wheelchair accessibility and secure bike (or other AT equipment) parking are barriers to participation. Network maintenance, connectivity and distance, the influence of car culture, and the lack of awareness and education of both automobile and bicycle users also dissuade people from participating.

Respondents provided the following suggestions to encourage more people to participate in active transportation: Improved and safe AT infrastructure to popular destinations, a well-connected network (separated or buffered from cars when possible), a year-round AT network, wider sidewalks and more multi-use paths, accessible and efficient public transit (integrated with the AT network), more engagement, education and promotion, secure parking for bikes, e-bikes, e-scooters etc., working with nearby communities to create safe and completed AT links, pet-friendly routes and destinations, traffic-calming measures, bike rentals, better signage, better enforcement (car speed limits, 1m rule, full stops, yielding to pedestrians etc.), unbroken routes that require no interaction with vehicles, more room for AT on shared roads, road diets, less car parking, lighting, more and safer crossings, and making the downtown core less car-friendly and more people-friendly.



APPENDIX C

SIDEWALK IMPROVEMENT SPECIFICATIONS

