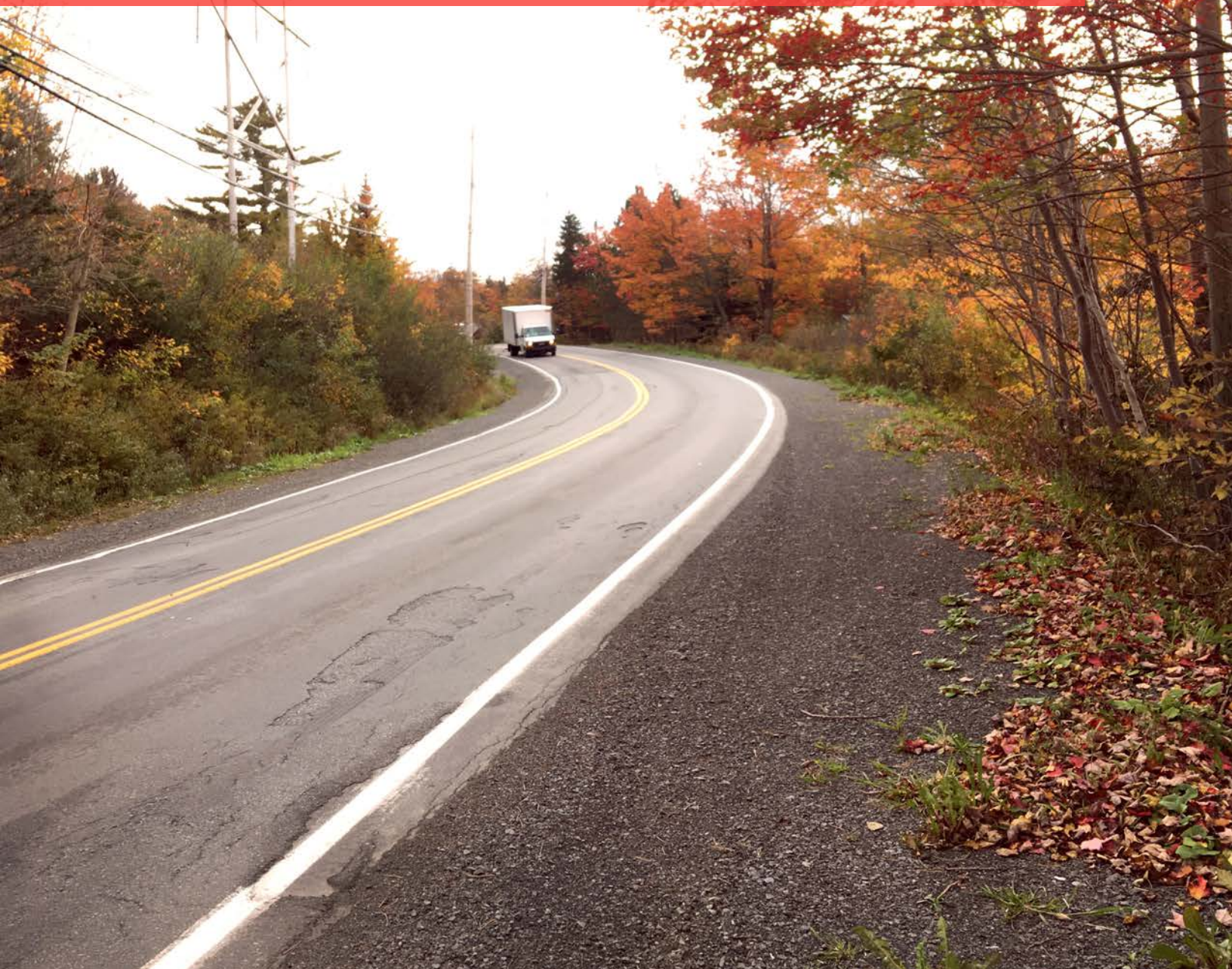




PROPOSED LUCASVILLE GREENWAY ACTIVE TRANSPORTATION PLANNING



Date
April 20, 2022

Prepared By
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Prepared For
Halifax Regional Municipality



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1

INTRODUCTION

WHAT IS ACTIVE TRANSPORTATION?

Active transportation is a term that describes human-powered forms of mobility including, but not limited to, walking, running, cycling, roller blading, scootering, skateboarding and through the use of assistive mobility devices such as wheelchairs, walkers and canes.



BENEFITS OF ACTIVE TRANSPORTATION

There are a variety of benefits relating to active transportation including (IMP, pg.86) :

- 1 **Mobility:** Every four trips shifted to active transportation removed three vehicles from the road. This benefits all road users, including those who drive. Having multiple options for mobility allows people to choose the most efficient travel mode to meet their needs.
- 2 **Health:** Active transportation allows people to build physical activity into their daily lives. People who incorporate walking and bicycling into their regular transportation have reduced incidences of chronic diseases such as diabetes, heart disease and obesity.
- 3 **Accessibility:** Active transportation infrastructure, when designed in a barrier-free manner, helps improve freedom of movement for people with different abilities.
- 4 **Economic:** Numerous studies document the economic benefits related to active transportation such as increased residential property values near active transportation facilities, improved productivity of employees who commute actively, reduced personal commuting costs and reduced strain on the health care system.
- 5 **Environment:** Travelling actively does not emit greenhouse gases or other emissions that contribute to poor air quality.
- 6 **Recreation:** Active transportation infrastructure such as bicycle lanes and multi-use paths can double as recreational amenities.
- 7 **Quality of Life:** Using active transportation for commuting and everyday trips enhances personal well-being, opportunities for social interaction and the overall quality of life in communities.

Sources: *Integrated Mobility Plan.* Halifax Regional Municipality, 2017.
 “Expanding the Network.” *Halifax*, <https://www.halifax.ca/transportation/cycling-walking/expanding-network>. Accessed 23 March 2022.

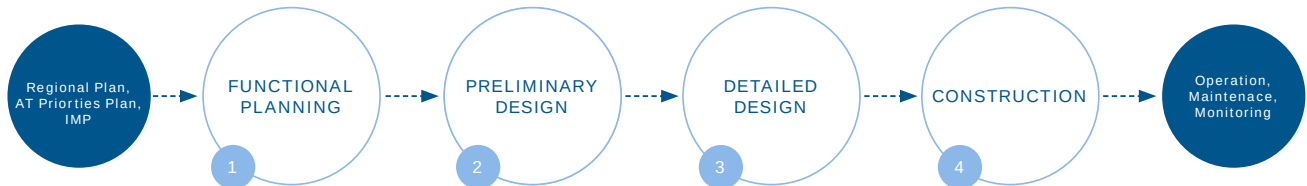
INVESTMENT IN ACTIVE TRANSPORTATION

“The Halifax Regional Municipality (HRM) is working to building a comfortable, convenient network of walking and cycling routes to provide people with options for moving around their communities. The focus is on connecting people to destinations and making this infrastructure accessible to people of all ages and abilities – from ages 8 to 80, including new and the seasoned users. By investing in designated infrastructure for walking and cycling, the municipality is contributing to building healthy, vibrant, sustainable, equitable communities across the Halifax region.” (Expanding the Network)

ACTIVE TRANSPORTATION PLANNING AND DESIGN PROCESS

The planning and design process for active transportation projects within HRM begins with the identification of an envisioned active transportation route through policy guidance from municipal plans, such as the Active Transportation Priorities Plan or the Integrated Mobility Plan, or from a community-led process.

Once an active transportation route is identified, four key stages are completed to transform the envisioned route to a built facility.



(1) Functional Planning is the stage where various concept options are developed and assessed for active transportation facility types, treatments and, occasionally, alternative routing to determine a preferred concept to carry forward with to develop functional (30%) design drawings and a high-level cost estimate. A major component of this stage is engagement with key stakeholders and the public to retrieve feedback to help evaluate and refine the concepts. Recommendations may be presented to Regional Council to obtain direction on proceeding to the next phase(s) of the planning and design process.

(2) Preliminary Design is the stage where the functional design is refined in preparation for detailed design. During this stage, coordination with internal and external stakeholders, such as municipal departments and utility providers, is conducted to determine how to make the new facilities possible, which may include property negotiations, establishing drainage plans, and coordinating the relocation of utility poles.

(3) Detailed Design is the stage where detailed (100%) designs and a final cost estimate are developed in preparation of tendering the project for construction. Multiple phases of review from several municipal departments and key external stakeholders are completed to ensure all design specifications are met.

(4) Construction is the stage where a tender is issued for construction to select a company to build the new facility based on the details provided in the detailed designs. Once a company has been selected, they will proceed with construction.

Once all four key phases of the planning and design process is complete, the active transportation facility will be in operation and receive ongoing maintenance and monitoring.

INTRODUCTION



The local community group, Lucasville Greenway Society (LGS), has identified the need for active transportation facilities within the Lucasville community to provide connections and access to other communities, assets within the community, and destinations on Sackville Road and Hammonds Plains Road. LGS produced the “Lucasville Greenway Vision” report and have conducted several community consultation sessions that supported an envisioned multi-use pathway along Lucasville Road. There is a strong desire within the community to have affordable transportation such as bus service, and walking and cycling infrastructure that is accessible for all.

MUNICIPAL POLICY DIRECTION

The Integrated Mobility Plan has an objective of continuing to build and maintain multi-use pathways as presented within the Regional Active Transportation (AT) Greenway Envisioned Network map of the Active Transportation Priorities Plan.

In June 2017, the Council of the HRM approved the addition of Lucasville Road as a candidate bicycle route as part of the Regional AT Greenway Envisioned Network.

PROJECT PURPOSE

The primary purpose of the project was to review and recommend AT facility route and facility type in consultation with LGS and their vision. The feasibility, functionality and any integration opportunities in particular with Halifax Water transmission line.



The study area for this project extends from Old Sackville Road to Hammonds Plains Road along Lucasville Road, as can be seen in the image below.

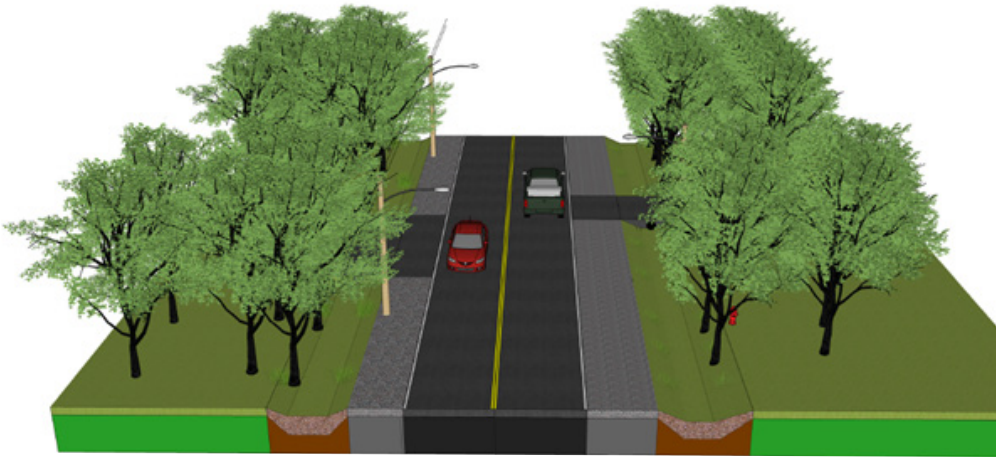




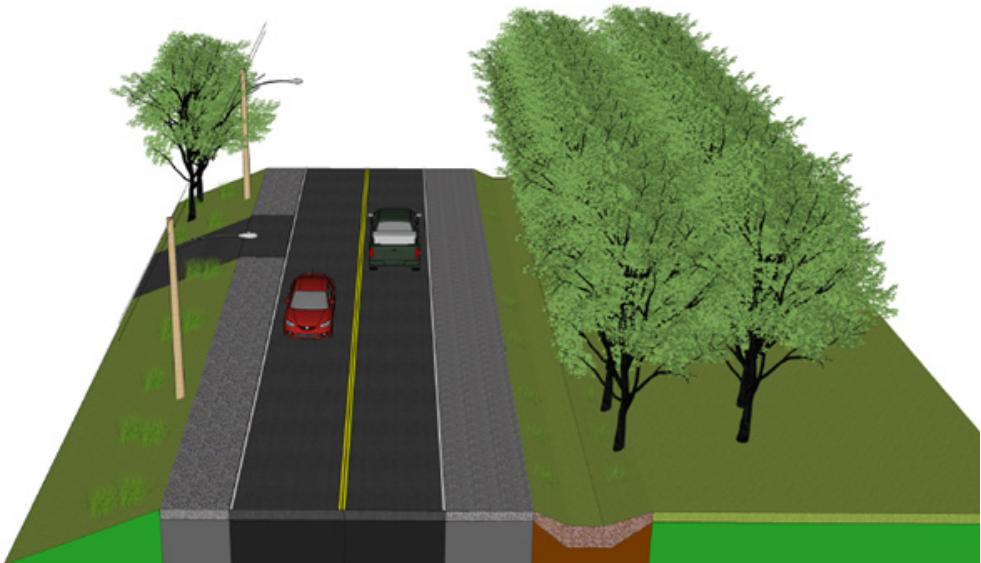
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EXISTING CONDITIONS

Lucasville Road is a 2-lane major collector roadway with gravel shoulders and open ditching. The posted speed limit ranges from 50 to 70 km/h, from Sackville Road to Hammonds Plains Road with approximately 7,900 vehicles per day. There is no bus service in the area. Lucasville Road is an important north-south connection from Sackville Drive to Hammonds Plains Road that provides access to other communities and community destinations.



EXISTING CONDITIONS CROSS SECTION:
DOUBLE DITCH



EXISTING CONDITIONS CROSS SECTION:
SINGLE DITCH

3 CONCEPT OPTIONS

FACILITY TYPE

The Lucasville Greenway Vision identified the desired active transportation facility type to be a multi-use pathway (also known as a greenway). Multi-use pathways are dedicated facilities that permit 2-way travel for active transportation uses and are typically 3-4m wide with a crusher dust or an asphalt surface. When next to a road, features such as a grassed buffer zone (1-2m) and/or physical vertical barrier (e.g. guide rail) can be considered to increase user comfort and safety.

An alternative option of having paved shoulders and a sidewalk was discussed during the early stages of the project, but was not pursued any further as the facilities would not accommodate all ages and abilities cyclists and would require more road right-of-way width than the multi-use pathway.

CONCEPT OPTIONS

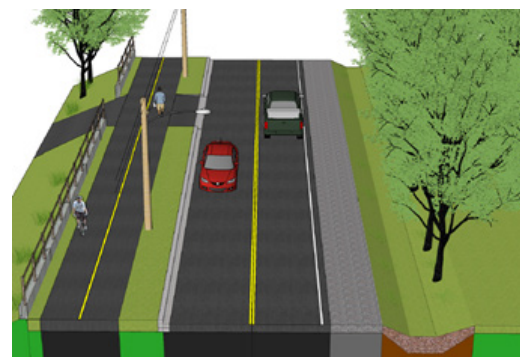
Two functional planning studies were conducted to explore concept options for the Lucasville Road corridor. The first study assessed concept options for the corridor from Old Sackville Road to Cranley Road (Segments 1-3) with supplemental information for the remainder of the corridor from Cranley Road to Hammonds Plains Road (Segment 4), while the second study provided a more detailed assessment of concept options for the corridor from Old Sackville Road to the Wallace Lucas Community Centre (Segment 1).

The first planning study assessed three different concept options :

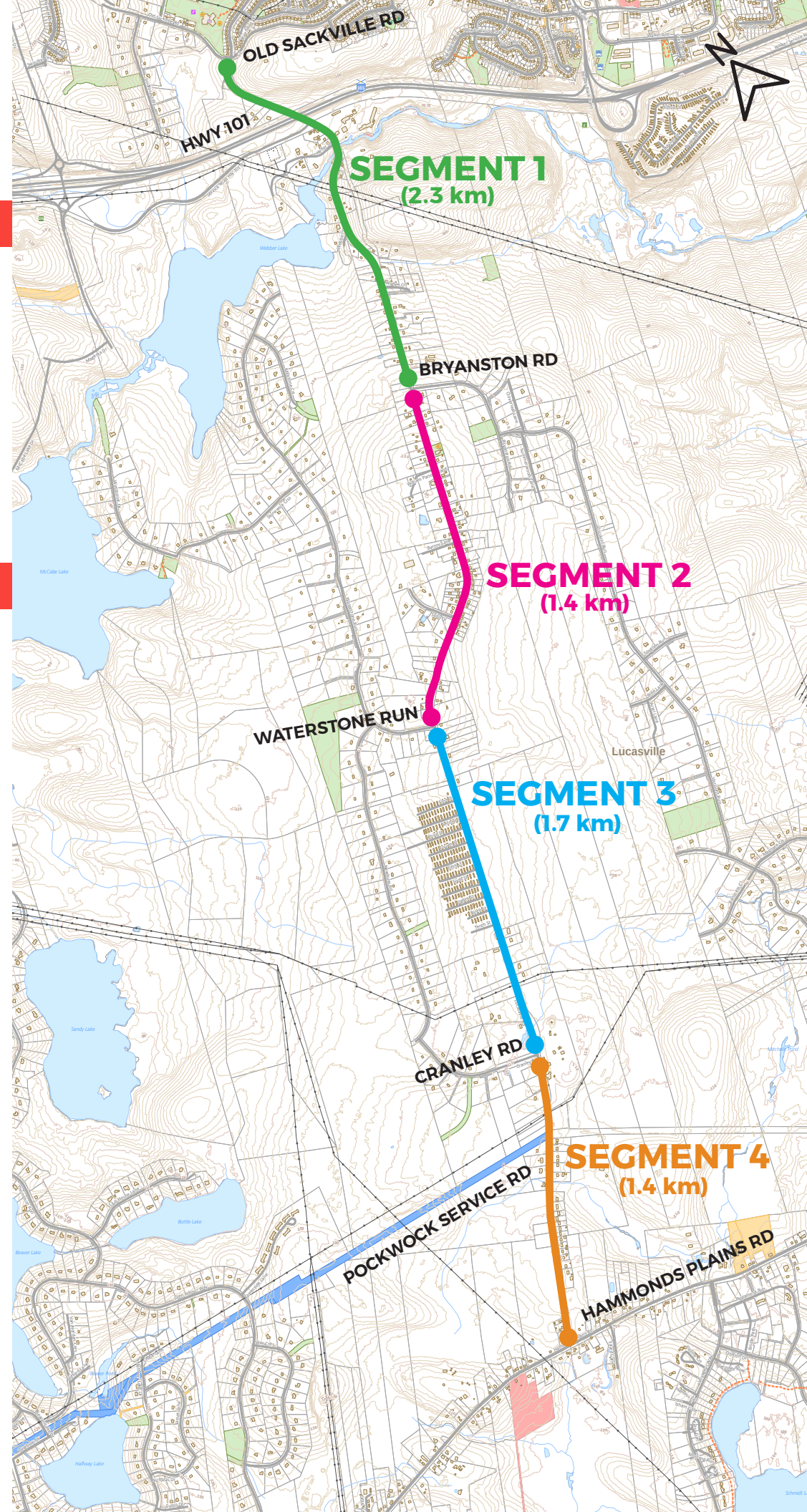
- 1 A multi-use pathway on the east side of the road
- 2 A multi-use pathway on the west side of the road
- 3 A multi-use pathway that switched sides of the road



**MULTI-USE PATHWAY:
EAST SIDE**



**MULTI-USE PATHWAY:
WEST SIDE**

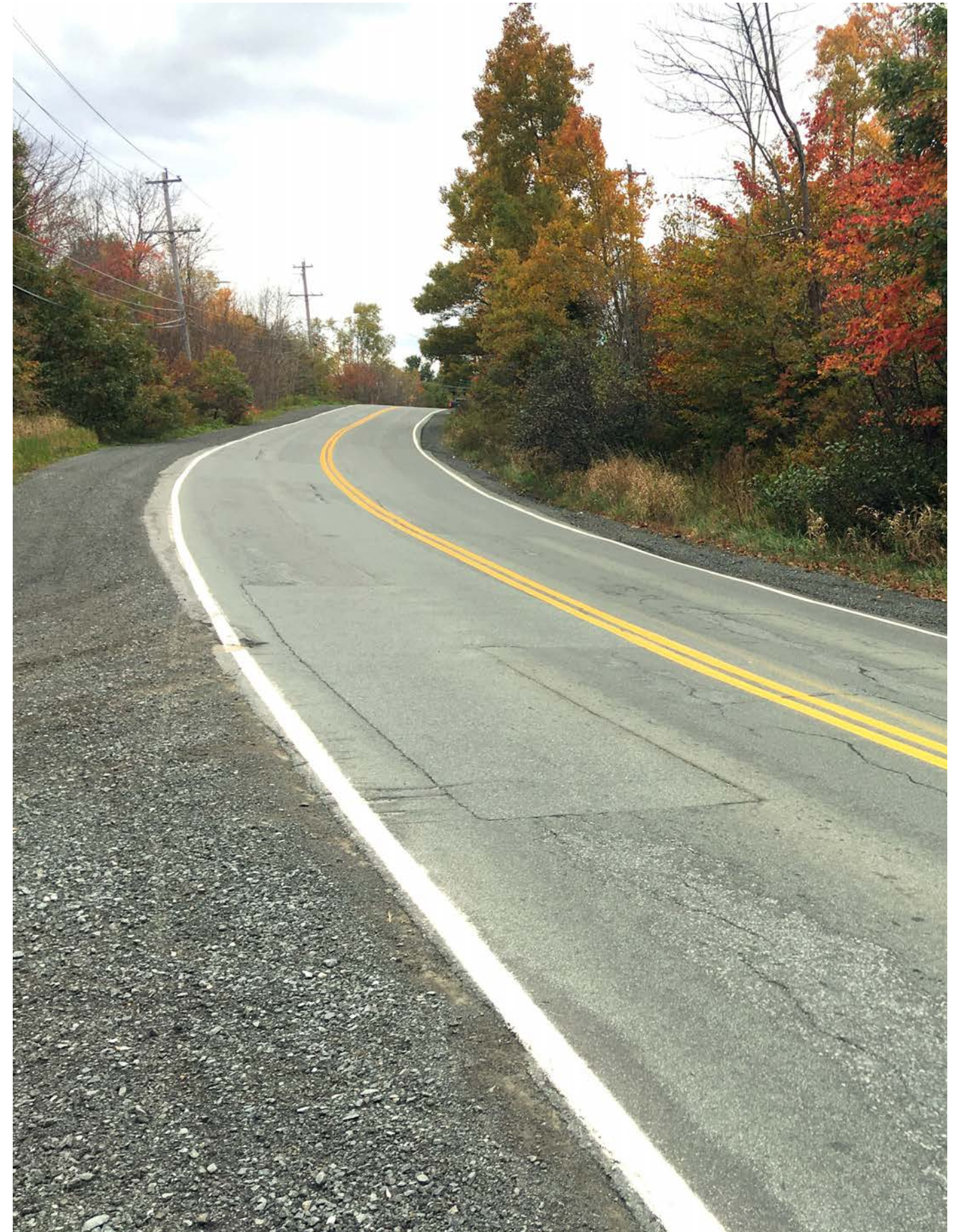
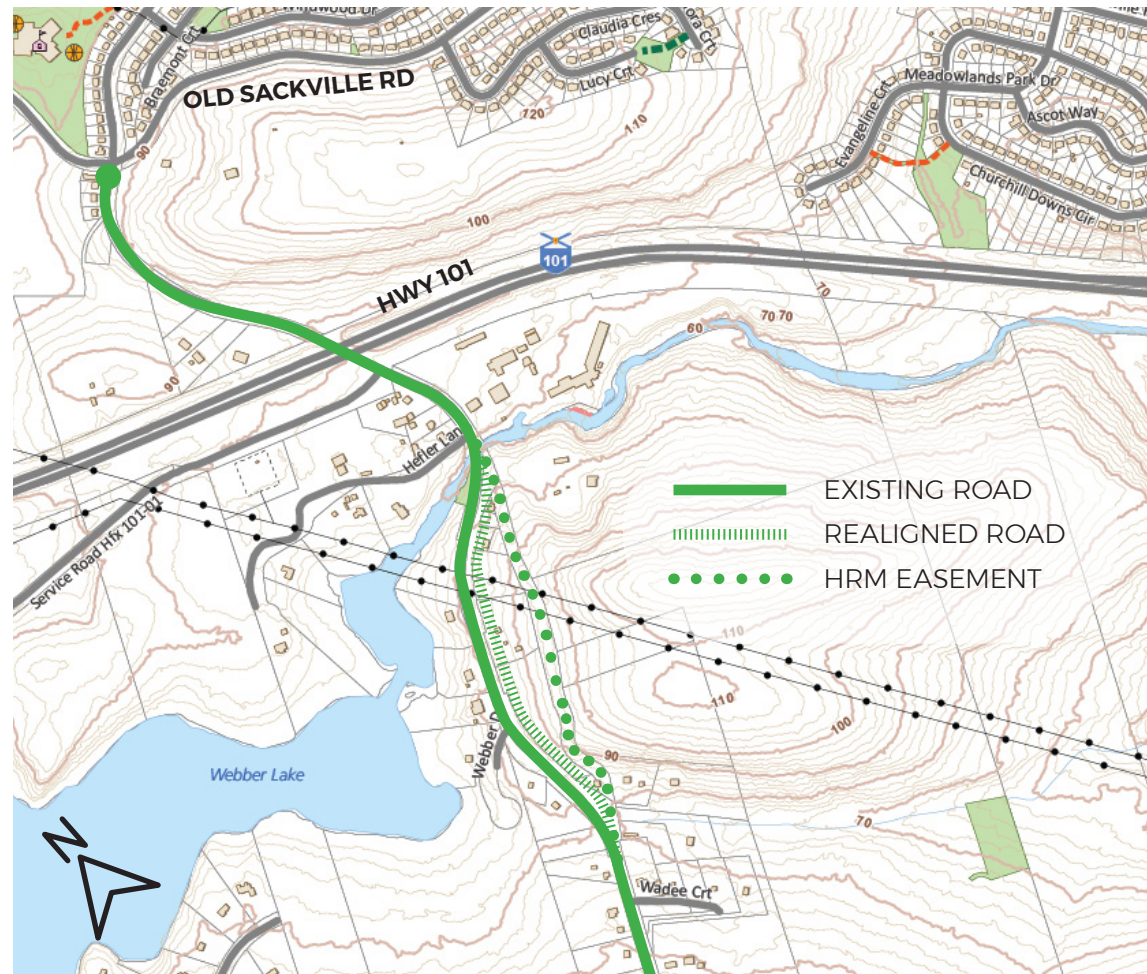


CONCEPT OPTIONS (CONTINUED)

The second planning study assessed five different concept options :

- 1 A multi-use pathway on the east side of the existing road
- 2 A multi-use pathway on the west side of the existing road
- 3 A multi-use pathway on the east side of a realigned road
- 4 A multi-use pathway on the west side of a realigned road
- 5 A multi-use pathway on the east side of the existing road with a section that travels off-road along an existing HRM easement

Option 1 and Option 2 were the only concept options that were evaluated in detail, as it was determined early in the review process that they were more feasible than the other concept options.

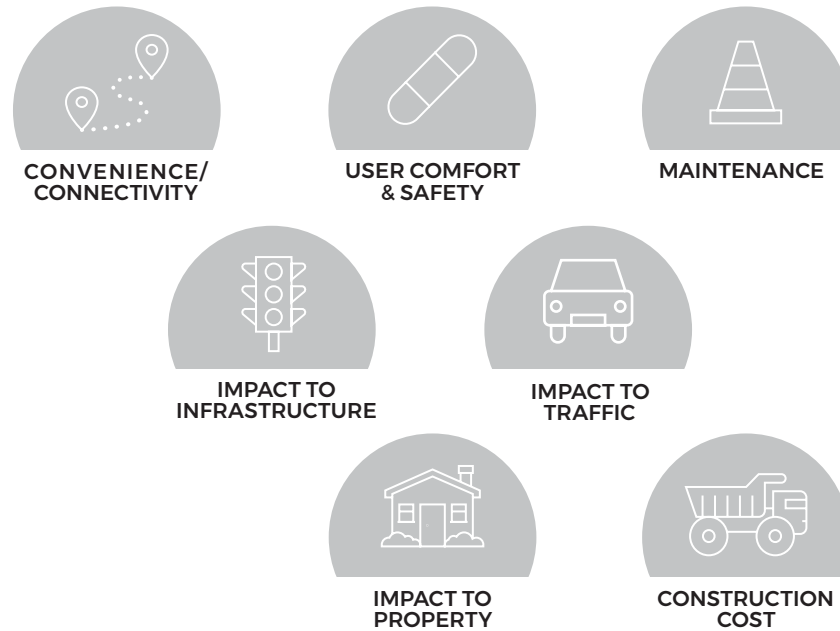


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EVALUATION & PREFERRED CONCEPT

EVALUATION CRITERIA

A multi-criteria analysis was used to evaluate the concept options within each of the planning studies to determine the preferred concept option. The criteria used for the evaluations were :

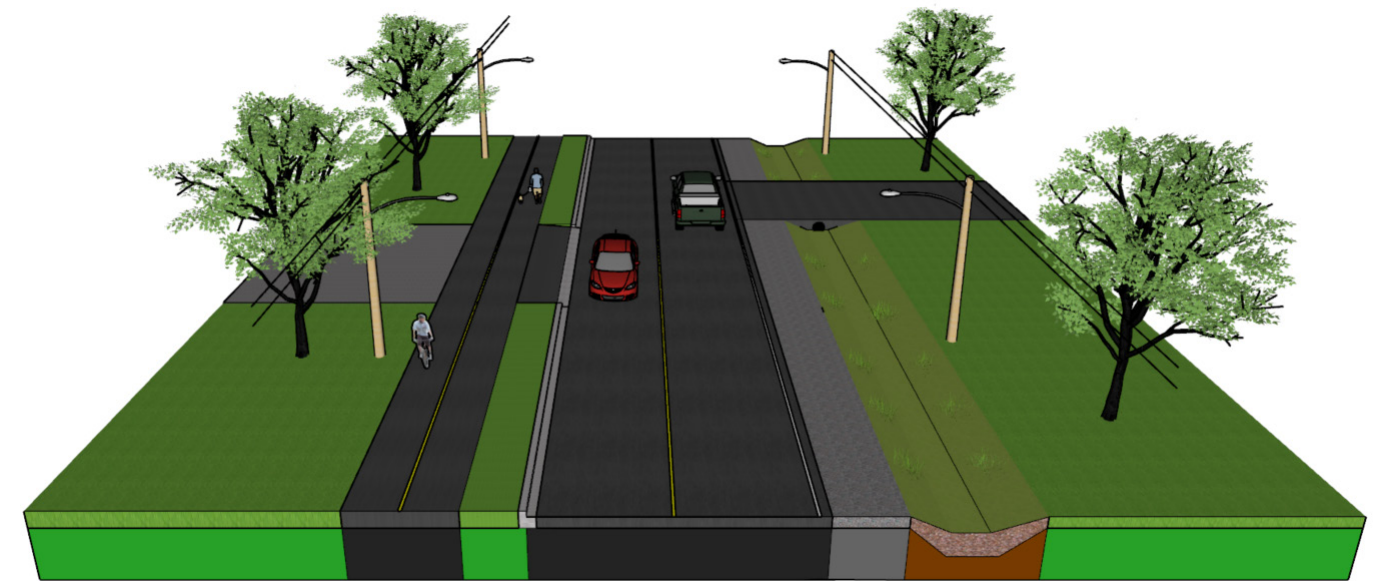


PREFERRED CONCEPT OPTION

For the first planning study, the evaluation found that Option 2 (multi-use pathway on the west side of the road) was the best option for meeting project objectives and the needs of users. The option provides excellent connectivity to local destinations and other active transportation facilities, and provides a high level of safety and comfort for users. For segment 4, the study recommended that the multi-use pathway continue along the east side of the road since the facility would service more people as more homes exist on the east side.

The evaluation of Option 1 and 2 for the second planning study resulted in Option 1 (multi-use pathway on the east side of the road) being chosen as the preferred option for Segment 1 of the corridor. Option 1 is less challenging to construct and provides better access to commercial destinations.

The proposed multi-use pathway in each of the preferred concepts will have two different cross sections along the corridor and will have a 3m wide asphalt surface with either a curb and grass buffer or the existing ditch separating it from the travel lanes along its length. A minimum of 4.5m separation from the edge of the travel lane will accommodate a 3.0m multi-use pathway and 1.5m grass buffer.



**PREFERRED CONCEPT OF PLANNING STUDY 1:
WEST SIDE MULTI-USE PATHWAY**



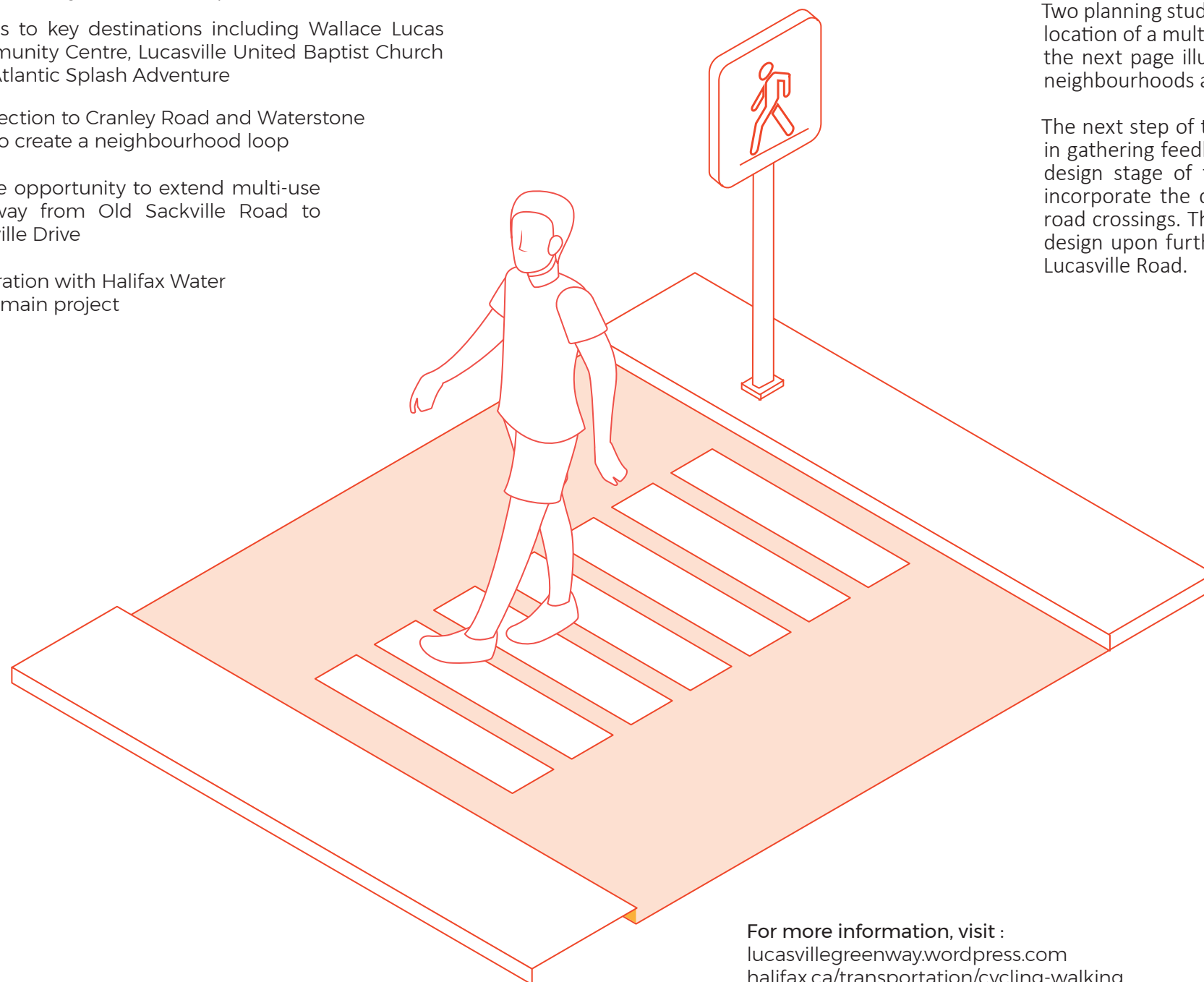
**PREFERRED CONCEPT OF PLANNING STUDY 2:
EAST SIDE MULTI-USE PATHWAY**

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BENEFITS

Benefits of the preferred concept options from the planning studies include :

- 1 Accommodates various forms of active transportation for multiple trip purposes including recreation, commuting, etc.
- 2 Physically separated from vehicular traffic
- 3 Opportunity to have the multi-use pathway go behind the existing ditch from Waterstone Run to Cranley Road to provide a large horizontal separation from vehicular traffic
- 4 Access to key destinations including Wallace Lucas Community Centre, Lucasville United Baptist Church and Atlantic Splash Adventure
- 5 Connection to Cranley Road and Waterstone Run to create a neighbourhood loop
- 6 Future opportunity to extend multi-use pathway from Old Sackville Road to Sackville Drive
- 7 Integration with Halifax Water watermain project



For more information, visit :
lucasvillegreenway.wordpress.com
halifax.ca/transportation/cycling-walking

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SUMMARY

HRM is continuing to improve active transportation infrastructure in the region that will encourage people to choose active travel to get to destinations. In June 2017, Council approved the addition of Lucasville Road in HRM's Active Transportation Priorities Plan.

The local community group, Lucasville Greenway Society, identified the need for active transportation facilities to provide connection and access to adjacent communities, assets within the community, and destinations on Sackville Drive and Hammonds Plains Road. There is a strong desire to have affordable transportation such as transit service, and walking and cycling infrastructure that is accessible for all.

Two planning studies were conducted to establish a preferred concept for the location of a multi-use pathway along Lucasville Road. The map presented on the next page illustrates these recommendations as well as connections to neighbourhoods and key destinations.

The next step of the project is community engagement. This will assist HRM in gathering feedback that will help refine the design during the preliminary design stage of the project. The future design stages are anticipated to incorporate the design of elements such as rest areas, traffic calming and road crossings. The addition of transit stops may be incorporated within the design upon further study being conducted on adding transit service along Lucasville Road.

