



P.O. Box 1749
Halifax, Nova Scotia
B3J 3A5 Canada

Item No. 11.3.1
Halifax Regional Council
May 4, 2021

TO: Mayor Savage and Members of Halifax Regional Council

SUBMITTED BY: Original Signed

Councillor Mason, Chair of the Transportation Standing Committee

DATE: April 16, 2021

SUBJECT: Pedestrian Infrastructure Highway 101 Exit 2

ORIGIN

April 15, 2021 meeting of the Transportation Standing Committee, Item 8.2.

LEGISLATIVE AUTHORITY

Administrative Order One, Schedule 7 – Transportation Standing Committee Terms of Reference
Section 4 - Duties and Responsibilities

4. The Transportation Standing Committee shall oversee and review of the Municipality's Regional Transportation Plans and initiatives, as follows:
- (a) overseeing HRM's Regional Transportation Objectives and Transportation outcome areas;
 - (b) overseeing and reviewing the Regional Transportation policies, bylaws and functional plans;
 - (c) providing input into the Municipality's transportation funding strategies such as infrastructure funding, Gateway initiatives and approaches to Capital Cost Contribution;
 - (d) providing input and review of the Transportation Road network strategies and related Regional initiatives;
 - (e) overseeing the Municipality's Regional Parking Strategy and other parking related initiatives flowing from the strategy;
 - (f) coordinating with the Community Planning and Economic Development Standing Committees of the Council in regard to reviews and initiatives under the Regional Plan in matters related to Regional Transportation; and
 - (g) providing input and review of road and pedestrian safety.

Halifax Regional Municipality Charter, subsection 34 (3):

The Council shall provide direction on the administration, plans, policies and programs of the Municipality to the Chief Administrative Officer.

RECOMMENDATION ON PAGE 2

RECOMMENDATION

That the Transportation Standing Committee recommend that Halifax Regional Council:

1. Direct the Chief Administrative Officer to conduct functional planning in 2022/23 (pursuant to funding approval in the 2022/23 capital budget) to establish the feasibility of a formal pedestrian crossing from Sackville Manor across Highway 101 based on the considerations outlined in the Discussion section of the staff report dated March 22, 2021; and,
2. Direct the Chief Administrative Officer to initiate conversation with NSTIR to request that they consider installing measures (e.g. jersey barriers, fencing) to serve as a deterrent to pedestrian crossing between Sackville Manor and Old Sackville Road as an interim measure.

BACKGROUND

At their April 15, 2021 meeting, the Transportation Standing Committee considered the staff report dated March 22, 2021 regarding Pedestrian Infrastructure Highway 101 Exit 2.

For further information, refer to the staff report dated March 22, 2021.

DISCUSSION

The Transportation Standing Committee considered the staff report dated March 22, 2021 and approved a recommendation to forward to Halifax Regional Council, as outlined in the 'Recommendation' section of this report.

For further discussion on this item, refer to the staff report dated March 22, 2021.

FINANCIAL IMPLICATIONS

As outlined in the staff report dated March 22, 2021.

RISK CONSIDERATION

As outlined in the staff report dated March 22, 2021.

COMMUNITY ENGAGEMENT

The agenda and reports of the Transportation Standing Committee are posted on Halifax.ca, and draft minutes of the meeting will be made available on Halifax.ca.

ENVIRONMENTAL IMPLICATIONS

As outlined in the staff report dated March 22, 2021.

ALTERNATIVES

The Transportation Standing Committee did not provide alternatives.

For further information on alternatives as it relates to this item, refer to the supplementary staff report dated March 22, 2021.

ATTACHMENTS

Attachment 1 - Staff report dated March 22, 2021.

A copy of this report can be obtained online at halifax.ca or by contacting the Office of the Municipal Clerk at 902.490.4210.

Report Prepared by: Andrea Lovasi-Wood, Legislative Assistant, Municipal Clerk's Office 902.490.6732



P.O. Box 1749
Halifax, Nova Scotia
B3J 3A5 Canada

Item No. 8.2
Transportation Standing Committee
March 25, 2021
April 15, 2021

TO: Chair and Members of Transportation Standing Committee

SUBMITTED BY: - Original Signed -
Brad Anguish, P.Eng., Executive Director, Transportation and Public Works

- Original Signed -
Jacques Dubé, Chief Administrative Officer

DATE: March 22, 2021

SUBJECT: Pedestrian Infrastructure Highway 101 Exit 2

ORIGIN

December 11, 2018 Regional Council motion (Item 14.5.1):

MOVED by Councillor Craig, seconded by Councillor Outhit

THAT Halifax Regional Council request that the Chief Administrative Officer work with staff of the Nova Scotia Department of Transportation and Infrastructure to discuss and outline what the infrastructure requirements and recommendations would be required to improve pedestrians' safe passage when they walk to/from the Sackville Manor Mobile Home Park from/to Walker Avenue and Old Sackville Road through the Highway 101 and Beaver Bank Connector network and that a report be submitted to Regional Council.

MOTION PUT AND PASSED.

LEGISLATIVE AUTHORITY

Halifax Regional Municipality Charter, Section 322(1): The Council may design, lay out, open, expand, construct, maintain, improve, alter, repair, light, water, clean, and clear streets in the Municipality.

Halifax Regional Municipality Charter, Section 79(1): Council may expend money required by the Municipality for: (aa) streets, culverts, retaining walls, sidewalks, curbs and gutters.

Halifax Regional Municipality Charter, Section 321(8): The traffic authority for the Municipality has, with respect to highways in the Municipality, excluding those for which the Provincial Traffic Authority has authority, the powers conferred upon a traffic authority by or pursuant to the Motor Vehicle Act, 2008, c. 39, s. 321.

RECOMMENDATION ON PAGE 2

RECOMMENDATION

It is recommended that the Transportation Standing Committee recommend that Halifax Regional Council:

1. Direct staff to conduct functional planning in 2022/23 (pursuant to funding approval in the 2022/23 capital budget) to establish the feasibility of a formal pedestrian crossing from Sackville Manor across Highway 101 based on the considerations outlined in the Discussion section of this report; and,
2. Direct staff to initiate conversation with NSTIR to request that they install measures (e.g. jersey barriers, fencing) to serve as a deterrent to pedestrian crossing between Sackville Manor and Old Sackville Road as an interim measure.

BACKGROUND

The community of Sackville Manor and the homes along Walker Service Road are isolated from the rest of Lower Sackville by the 101 Highway, a major barrier to pedestrian access. These residents do not currently have a safe way to access Sackville and associated services (e.g. transit, grocery stores, other services) by foot. There are approximately 775 people living in this community (Statistics Canada, 2016). Walker Service Road does not have sidewalk and residents must walk along the gravel shoulder for long distances (see Table 1) to access the rest of Lower Sackville and associated amenities.

As a shortcut, residents of this area have been walking along the access ramps to Highway 101, then waiting for gaps in traffic to cross two major legs of traffic: The Beaver Bank Connector and the Exit 2 off-ramp of Highway 101 (See Figure 1 and Attachment A). The Beaver Bank Connector (Hwy 354) is two lanes wide and a posted 70 km/h speed limit. The 101 off-ramp (Exit 2) is one lane wide and a posted 50 km/h speed limit. Counts are not available to estimate the exact number of pedestrians who are using this shortcut route, however, pedestrian wear-paths would suggest that this route is being used by some residents.



Figure 1: Crossing Location of Beaver Bank Connector and Highway 101 Off-ramp (Exit 2)

The shortcut across the highway is appealing as it reduces trip distance and time by over 50% for people walking to major destinations like the Old Sackville Road, the Sackville Transit Terminal and the Downsview Plaza Shopping Complex (see Table 1). A 45-minute trip turns into a 15-20 minute trip.

Table 1: Walking Distance from Sackville Manor Community

Destination	Distance (km, mins) Via Walker Service Road	Distance (km, mins) Via Shortcut Across Hwy 101
Old Sackville Rd at Intersection of Walker Service Rd	1.5 km (17 min walk)	---
Old Sackville Rd at Intersection of Beaver Bank Connector	---	1.4 km (18 min walk)
Sackville Transit Terminal	3.6 km (45 min walk)	1.2 km (14 min walk)
Downsview Shopping Complex	3.9 km (47 min walk)	1.9 km (23 min walk)

This shortcut is dangerous and contrary to provincial regulations for 100-series highways and their access ramps. Signage is posted on-site indicating that no pedestrians are allowed in this area. It is particularly dangerous for someone walking to see or be seen by vehicles using the Exit 2 off-ramp due to the high speeds (deceleration from 100 km/h) and the curve of the ramp. This is made more dangerous at night when lighting levels are not to standard for pedestrian use. Unfortunately, there have been multiple vehicle-pedestrian collisions in the past 10 years, two of which resulted in pedestrian fatalities.

The introduction of a formal, designed pedestrian crossing would help to address the safety issues and the identified demand from the community. Additionally, using a socioeconomic lens, Sackville Manor is a community where the annual household income was 22% below average for HRM (Statistics Canada, 2016), which generally means that more residents may rely on walking and transit as a means of transportation.

This project has not been identified on any Council- approved plans to date (e.g. IMP or AT Plan) but was brought to the attention of HRM staff through the Regional Council resolution on December 11, 2018. The general practice has been to prioritize new infrastructure projects that have the maximum impact and benefit for Halifax residents, as well as the projects that address specific safety issues. The project cost and priority must be weighed against other major infrastructure projects that have been identified through the Council-ratified Active Transportation Priorities Plan and the Integrated Mobility Plan.

Existing Conditions

Several site visits have been conducted between January 2019 and December 2020. Staff observed narrow gravel shoulders between the guide rail and travelway along access ramps to the 100-series highway (see Attachment B). Snow and ice had accumulated, making passage increasingly difficult during winter conditions. Pedestrians must pass alongside cars under the Highway 101 Exit 2 concrete overpass with no physical barrier for protection. Within close proximity, cars are moving at a 70km/h posted speed.

Private roads within the mobile home park are typically narrow and not consistent with HRM standards. It is assumed that the majority of shortcutting pedestrians are originating from the mobile home park and joining with the highway from the end of Parklane Drive. There is a narrow strip of Provincial land separating Sackville Manor from Highway 101 ranging from approximately 40m – 70m wide. This land is currently vegetated with some informal pedestrian footpaths trodden through the trees. There is a small gravel parking lot at the end of Walker Service Road which indicates where Municipal property terminates.

DISCUSSION

Provincial Highway Land Jurisdiction

As the pedestrian shortcutting is taking place across 100-series highway access ramps, land ownership and jurisdiction rests with the Province. However, the Province does not typically provide pedestrian infrastructure. The Provincial-Municipal Services Exchange Agreement states that construction and maintenance of pedestrian facilities (including sidewalks and multi-use pathways) is a municipal

responsibility. Therefore, HRM must build and maintain sidewalks, multi-use pathways and other pedestrian facilities on provincial land.

Property Ownership

The origin of shortcutting pedestrians is from Parklane Drive, a private road that is part of the Sackville Manor mobile home park. As such, the Municipality does not own or have jurisdiction over this road. The nearest municipally-owned right-of-way is Walker Service Road, where ownership extends just past civic 118 (see Attachment A). There is currently no sidewalk along Walker Service Road and approximately 1.2 km of new curb, sidewalk and storm drainage infrastructure would be needed to connect the sidewalk from Old Sackville Road to Sackville Manor. However, this would involve significant expense and may not see much use due to the existing desired path across the highway and the extra travel time required for residents to reach the commercial area (see Table 1).

It is not typical or recommended to build municipal pedestrian infrastructure to dead-end at a private road or community since HRM would not be able to ensure the continued effectiveness of the facility if the route were impeded or the land redeveloped in the future. In addition, the route would not be available for use by the general public without a continuous connection. To create a continuous path for users wishing to use the trail as a thoroughfare, HRM would need to establish an easement through Sackville Manor mobile park or continue the pathway along Provincial right of way to connect the facility to Walker Service Road.

Easement Considerations

When approached with some preliminary details of a potential easement to allow public thoroughfare through the mobile home park to reach Provincial lands, the owners of Sackville Manor indicated that they are **not interested in the possibility of negotiating an easement at this time**. This is due to concerns regarding liability, maintenance, and the impact to development potential of the park in the future.

For this reason, all routing options must utilize Provincial right-of-way alongside Highway 101 that circumvents Sackville Manor to connect to municipally-owned Walker Service Road. The requirement to circumvent the property adds a significant cost to the project (see Financial Implications).

Municipal AT Planning Process and Capital Prioritization

Municipal staff have developed an assessment tool for evaluating the pedestrian potential and demand for new pedestrian facilities. The criteria include proximity to schools, daycares, seniors' homes, commercial areas, parks, recreation facilities, high density residential areas, and transit stops. Points are also awarded based on the classification of road, if there are any safety concerns (e.g. speed or sightlines), or if the sidewalk fills a gap in the network. Each category is weighted and summed to a cumulative sidewalk score, which is then used to help prioritize which sidewalk projects to build each year. There are currently over 600 sidewalk requests (some of which have significant constructability issues) of which 5-10 projects are built each year.

Staff rated the section between Parklane Drive and the Sackville Transit Terminal parking lot for new sidewalk as rationale for this pedestrian connection. **The segment rates 'Average'** for pedestrian generators and demand. Standalone projects are typically considered for those with 'High' ratings only due to the relatively high number of projects with these ratings and the limited budget available for new sidewalk installation. The new sidewalk assessment tool does not currently account for socioeconomic factors that may feed into the demand for sidewalk facilities. Action 71 of the Integrated Mobility Plan requests that the sidewalk criteria be updated to better reflect equity considerations; this is currently underway. In the absence of such updated criteria, professional judgement can be used to determine whether this community warrants a proper sidewalk connection. Median household income in Sackville Manor and the surrounding area is 22% below average for HRM (\$54,400 vs. \$69,500, Statistics Canada 2016). "Low Income" status can be claimed by 22% of youth 0-17, 16% of adults 18 – 64 and 16% of seniors 65+. Approximately 130 residents (17%) rely on walking, transit, and other non-automobile means as their primary mode of transportation. For these reasons, along with the history of collisions and fatalities, facilitating safe pedestrian access could be considered.

Typically, functional planning of the pedestrian connection would take place to determine the preferred design of the facility and a cost estimate for Capital budget consideration. HRM staff must then prioritize the demand and construction costs associated with this project based on how it holds up against the long list of other project priorities identified in both the Active Transportation Priorities Plan (AT Plan) and the Integrated Mobility Plan (IMP). This infrastructure project would require a significant portion of the Capital Budget in the year(s) it's built (see Financial Implications) where trade-offs must be made to decide which projects don't get built as a result.

With community support, there may be other external funding opportunities to help offset the cost of building this connection. There is also the possibility of establishing a local improvement charge or area rate towards construction of this facility. However, it is expected that this external or community funding would be dependent on the local desire for the service and HRM would still be responsible to cover the majority of the design and construction costs. Given the high cost associated with this facility (see 'Financial Implications' below) and relatively few residents impacted by the work, the LIC would likely be significant and therefore may not be supported by those affected.

Transportation vs. Recreational Uses

The primary purpose of establishing this pedestrian facility is to connect the people living on Walker Service Road and within the Sackville Manor Mobile Home Park with the transit terminal and commercial services of Sackville. These utilitarian trips are for transportation purposes, which matches the mandate of HRM's Active Transportation facilities. However, it is important to acknowledge the possibility that this connection could attract a larger number of users beyond this community if and when the Sackville Greenway system is extended to Walker Avenue in future years.

Facility Type

Options for pedestrian facilities generally include sidewalks or multi-use pathways. It is recommended that a multi-use pathway be considered for the Sackville Manor connection since it will accommodate more users and types of uses (e.g. walking, cycling, wheeling, scooting, skating). Preliminary cost analysis reveals that the construction costs for multi-use pathways are only expected to be slightly higher than those of sidewalks making this the preferred facility type.

Provincial Design Considerations

During initial correspondence with Nova Scotia Transportation and Infrastructure Renewal (NSTIR), the following feedback was provided with respect to the possibility of enhanced pedestrian facilities:

1. NSTIR will not permit an at-grade pedestrian crossing along the Highway 101 ramps or mid block along the Beaver Bank Connector based on how the interchange ramps/connector is currently configured.
2. NSTIR may permit a grade-separated pedestrian crossing, provided it has no significant impact to traffic during construction, does not interfere with any sightlines, and appropriate clearance is provided.
3. NSTIR have no plans to upgrade or replace the Highway 101 Exit 2 Overpass in the foreseeable future.

Subsequently, HRM met with NSTIR on August 13, 2019 to discuss preliminary routing options and cross sections to determine the feasibility for developing a facility adjacent to the highway and below the Exit 2 overpass. They are generally supportive should HRM wish to proceed with pedestrian improvements in this area and their specific comments, related to the design options, have been incorporated into the Options Review section (page 9). Continued coordination and design approval from NSTIR would be required if the project proceeds to functional planning and detailed design.

Municipal Design Options

The following conceptual crossing options have been explored to help determine feasibility and expected costs for the connection between Sackville Manor and the Transit Terminal (Attachment C).

Option 1: A 280m long multi-use pathway may be considered from Parklane Drive along the outside shoulder of the access ramp and beneath the Highway 101 Exit 2 overpass. To facilitate safe crossing, a new 80m pedestrian bridge (including a 30m span and a 50m long ramp structure) may be considered over the Highway 101 outbound access ramp. A connection to Old Sackville

Road may be established using a new 350m multi-use pathway following the outbound shoulder of the Beaver Bank Connector (See Figure 2). This would connect with the existing sidewalk network at this intersection. The proposed facility should be significantly buffered or delineated from the high-speed traffic lane using appropriate protective measures such as jersey barriers. Options for protective measures would be evaluated during detailed design.

To facilitate proper drainage and to avoid property impacts, Option 1 would likely require installation of a new storm sewer system and retaining wall for multi-use pathway construction adjacent to the residential properties along the Beaver Bank Connector, approximately 220 meters in length.

To create a continuous route and avoid dead-ending a municipal facility (see *Property Ownership* discussion above), an additional 790m long multi-use pathway would need to be constructed within the provincial right-of-way connecting Walker Service Road to the end of Parklane Drive.



Figure 2: Option 1 proposed multi-use pathway at Beaver Bank Connector and Highway 101 Off-ramp (Exit 2)

Option 1 is initially desirable as it only crosses one 'leg' of this interchange. However, it is less preferable as it does not provide a direct connection to the transit terminal. With the proposed infrastructure in Option 1, pedestrians can reach the Sackville Transit Terminal via sidewalks on Old Sackville Road and Walker Road. However, this route overshoots the transit terminal by 500m, therefore it is likely that some people would continue to cross traffic lanes to reach the transit terminal to save time.

Although necessary to create continuous public access, the segment of multi-use pathway between Parklane Drive and Walker Service Road may see a lower level of use.

Option 2: This option considers approximately 280m of new multi-use pathway from Parklane Drive along the outside shoulder of the access ramp and beneath the Highway 101 Exit 2 overpass. A new 110m pedestrian bridge (including a 70m span and a 40m long ramp structure) may be considered across the Beaver Bank Connector and the Highway 101 Exit 2 off-ramp, connecting directly to the Sackville Transit Terminal. An additional 30m of new multi-use pathway would be required to reach the existing sidewalk from the end of the bridge to the transit platform (Figure 3) which would create a continuous pedestrian and cycling connection to Walker Road and the rest of the network in Sackville.

To create a continuous route and avoid dead-ending a municipal facility (see *Property Ownership* discussion above), an additional 790m long trail would need to be constructed within the provincial right-of-way connecting Walker Service Road to the end of Parklane Drive.



Figure 3: Option 2 proposed multi-use pathway at Beaver Bank Connector and Highway 101 Off-ramp (Exit 2)

Option 2 would provide the community of Sackville Manor direct pedestrian access to the Sackville Transit Terminal. Building a safe crossing at this location would be the most beneficial as this is the current desired line of shortcutting for pedestrians; one can assume the greatest demand is for crossing at this location. However, crossing the two 'legs' of highway interchange requires a longer bridge than in Option 1 which has its associated costs.

Access to the Downsview Plaza would be established by Option 2 via the transit terminal to Walker Road. Ease of movement to and from the Downsview Plaza and surrounding area does not significantly favour Option 1 or Option 2.

Although necessary to create continuous public access, the segment of multi-use pathway between Parklane Drive and Walker Service Road may see a lower level of use.

Option 3: This option considers crossing four lanes of Highway 101 using a 115m long pedestrian bridge (including a 45m span over the highway and a 70m long ramp structure) to connect to existing HRM parkland off Walker Avenue (see Figure 4). Switchbacks would be required to traverse the 6m elevation difference from the highway to the park where there are existing crusher dust pathways that would be paved as part of this project (for improved access and winter maintenance). This 260m long multi-use pathway would connect to the existing sidewalk network on Walker Ave. where people can continue northward to reach Sackville Transit Terminal and the Downsview Plaza without backtracking. To connect Sackville Manor to the proposed bridge, a multi-use pathway length of approximately 190m would be required including switchbacks to help flatten out some of the steep slopes between Hilltop Drive and Highway 101.

To create a continuous route and avoid dead-ending a municipal facility (see *Property Ownership* discussion above), an additional 350m long trail would need to be constructed within the provincial right-of-way to connect to Walker Service Road.

Although Option #3 is crossing Highway 101 in an alternative location farther south than the other options, this connection would also provide convenient pedestrian access to the Downsview Plaza services and Sackville Transit Terminal via existing sidewalks on Walker Avenue.

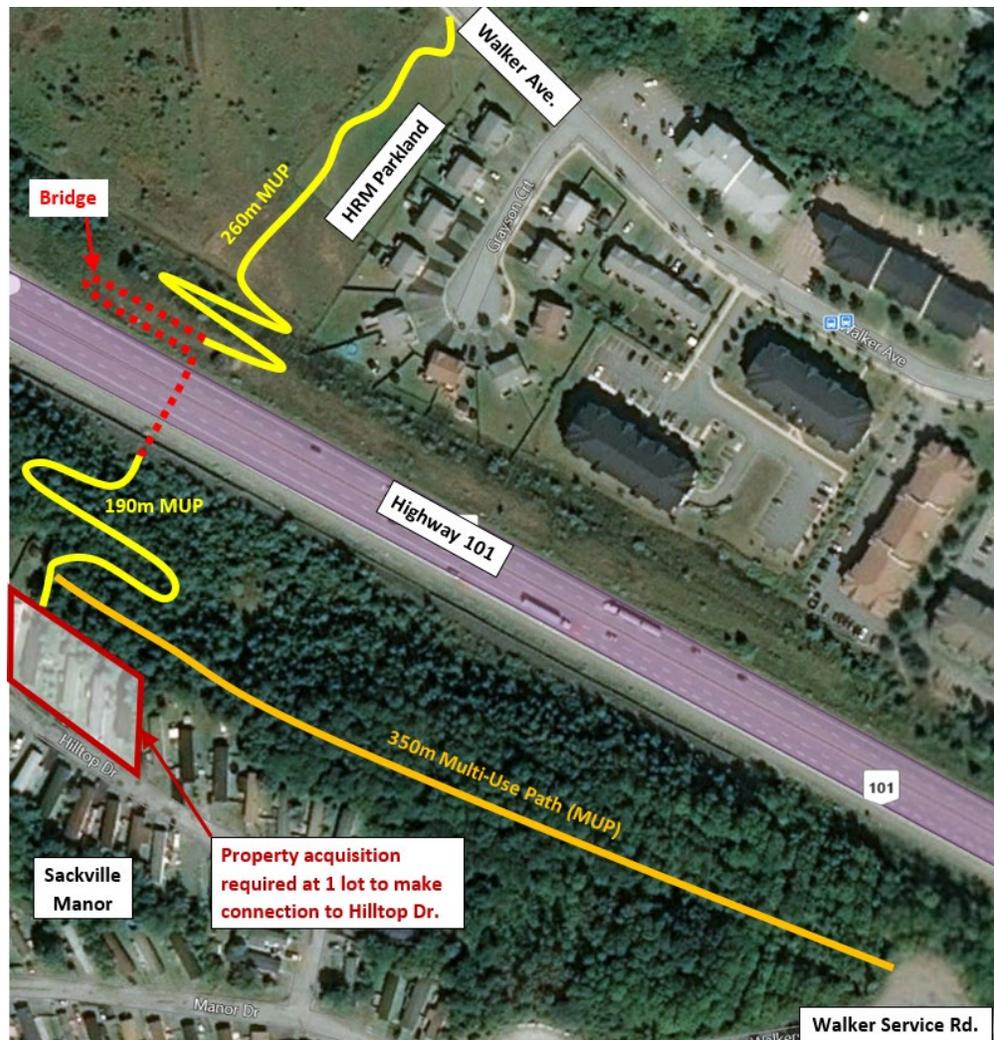


Figure 4: Option 3 proposed pedestrian bridge (overpass) across Highway 101 w park connection to Walker Ave

To create easy access to this multi-use pathway for the residents of Sackville Manor, it would be beneficial to create a connection directly into the mobile home park at Hilltop Drive. This would require property acquisition and the removal of 1 mobile home unit. The owner of Sackville Manor did not seem optimistic about the potential loss of property to create this multi-use pathway connection (see *Property Ownership* section). Therefore, AT users would need to leave the mobile home park and join the pathway from Walker Service Road to cross the highway, adding an additional 350m+ onto each trip.

In addition, this connection across the highway through HRM parkland does not reflect the current desired line of shortcutting pedestrians. There is a risk associated with building the facility (Option #3) that people will continue to use a more direct route originating from the end of Parklane Drive and crossing below the overpass.

Options Review

An initial evaluation of the routing options is presented below. Preliminary review suggests that Option 1 is not recommended given that the path does not reflect the desired line for travel and therefore people may continue to cross the access ramps to the Transit terminal without using the new facility. Discussions with NSTIR staff have revealed their strong preference for Option 3 to avoid safety and maintenance concerns with locating a multi-use pathway immediately adjacent to the highway access ramps. However, Option 3 does not provide a direct connection for residents who live on the western side of the mobile home park

who may find the existing shortcutting route, beneath the overpass, a more convenient route. There is a risk that this facility will be under utilized given the significant investment required to build this facility. Option 2 reflects the most direct connection between residents at Sackville Manor and nearby services and is consistent with where people are currently crossing. A comparison of each option is summarized below:

Figure 5: Comparison Table Evaluation of Routing Options Explored

	Pros	Cons
Option 1	<ul style="list-style-type: none"> Allows convenient connection to end of Parklane Drive which increases likelihood of usage. 	<ul style="list-style-type: none"> Most expensive option. Does not provide direct connection to the Transit Terminal. Requires 790m pathway connection to Walker Service Road (nearest municipal land) that could have low usage.
Option 2	<ul style="list-style-type: none"> Most direct connection to Sackville Transit Terminal and Downsview Plaza. Reflects current desire line for crossing highway. 	<ul style="list-style-type: none"> Requires 790m pathway connection to Walker Service Road (nearest municipal land) that could have low usage.
Option 3	<ul style="list-style-type: none"> Least expensive option as it requires the shortest distance of pathway to connect to Walker Service Road. Preference of NSTIR. 	<ul style="list-style-type: none"> Less convenient for nearby residents, does not reflect desire line. Risk of continued shortcutting across highway access ramps. No direct connection to residents of Sackville Manor without property acquisition and loss of one mobile home.

Since the initiation of this report, HRM staff have met twice with the owners of Sackville Manor mobile home park to discuss the proposed routing options, gather background information and gauge feedback. The owners raised concerns that Options 1 and 2 could impact their private underground water and sewer pipes that pass directly beneath the proposed pathway location. They proposed an alternative alignment that uses the paved shoulder on the opposite side of the access ramps to avoid these pipes. However, this would require two smaller structures to cross the highway with higher anticipated costs compared to one larger structure shown in Figure 3. Should this project move forward, an Option 2 variation could be investigated further in the functional planning stages. Based on the available information in these conceptual crossing options, the owners were initially not in favour of selling any private property to achieve the Option 3 connection. The owners are also not interested in negotiating an access easement through Sackville Manor, which necessitates that each routing option must circumvent the park and connect directly to Walker Service Road (see *Easement Considerations* section on p4).

For the reasons described above, it is recommended that any future functional planning focus on Option 2 (and slight variations) as an initial preference for further analysis.

FINANCIAL IMPLICATIONS

It is expected that a consultant would be hired to complete functional planning and stakeholder consultation for the proposed pedestrian connection and consultant fees would be in the range of \$50,000 to \$100,000.

The below estimates have been developed to indicate the possible impact to the Capital Budget in future years should the work proceed past functional planning to detailed design and construction.

Cost Analysis

Class ‘C’ construction cost estimates have been developed for each option and are summarized in the table below. These estimates are meant for high-level planning and budgeting purposes, and more accurate

estimates may be developed with further study. The estimate does not include budget allowances for fees related to establishing easements within the highway right-of-way.

Description	Unit	Unit Price	Option 1		Option 2		Option 3*	
			Qty	Cost	Qty	Cost	Qty	Cost
** Multi-Use Pathway Development (Adjacent to Hwy)	m	\$1,400	410	\$574,000	310	\$434,000		
Multi-Use Pathway Development (Through Treed/ Parkland areas)	m	\$880	790	\$695,000	790	\$695,000	800	\$704,000
Multi-Use Pathway w/ Storm System & Ret. Wall	m	\$3,700	220	\$814,000				
Pedestrian Bridge	m2	\$5,000	240	\$1,200,000	330	\$1,650,000	345	\$1,725,000
Subtotal:				\$3,283,000		\$2,779,000		\$2,429,000
Cont. *** 35%				\$1,149,050		\$972,650		\$850,150
Net HST: 4.286%				\$189,958		\$160,796		\$140,544
Budget Total:				\$4,620,000		\$3,910,000		\$3,420,000

* Doesn't include costs for property acquisition.

** It has been assumed pedestrian level lighting will be provided for the pathway adjacent to the highway only.

*** A 35% contingency has been used due to the uncertainty associated with this level of review.

There may be an opportunity for HRM staff to work with Municipal Affairs to pursue alternative funding sources to help supplement the significant cost associated with the design and construction of a safe pedestrian connection. This may help make the project more economically feasible and allow HRM to better balance the priorities of the Active Transportation Priorities Plan and the Integrated Mobility Plan.

Another alternative funding mechanism could be exploring the possibility of implementing an area rate or local improvement charge (LIC) to have the residents who directly benefit help pay for the project. However, this community funding would likely only be a fraction of the total and HRM would still be responsible for the majority of the design and construction costs. This may not be recommended as the residents living in this mobile home park may be less willing or able to incur large improvement charges.

RISK CONSIDERATION

There are no significant risks associated with the recommendations in this Report. The risks considered rate Low.

However, there is an ongoing risk to the public safety of those who are using this route to cross the highway if no action is taken. There have been collisions in the past and there is risk that if changes aren't made they may occur again. Signage prohibiting pedestrians has been posted, however, people continue to walk along the highway shoulders to make this shortcut. Some type of physical intervention may be necessary as a further deterrent to this movement such as fencing. However, people are resourceful, and nothing can be done to completely prevent pedestrian crossings at this location. Although HRM can recommend further deterrent measures be installed, the decision to act remains in the hands of NSTIR as this is their property.

There is risk in the functional planning stages that NSTIR may not approve of the designs presented to facilitate this crossing, particularly if Option 2 is pursued. They have the ultimate decision as the

infrastructure would be located on their property. Although NSTIR has indicated they will consider Option 2, further collaboration with NSTIR would be required through functional and detailed design to determine the approved route. Collaboration may also be required with the private property owner (Sackville Manor) if Option 3 is pursued and property acquisition is necessary.

COMMUNITY ENGAGEMENT

As the solutions are few and technical in nature, there was no community engagement considered as part of this report, however it would be important to consult the community within the functional planning stages, if pursued.

Staff engaged with the owners of Sackville Manor mobile home park at a high level to inform them of the project and the route options being considered. More details on their feedback can be found in the Options Review section (page 10). Continued contact with the owners will be important to informing the functional planning stages of this project, if pursued.

ENVIRONMENTAL IMPLICATIONS

There are no environmental implications.

ALTERNATIVES

The Transportation Standing Committee could recommend that Halifax Regional Council not pursue functional planning of a pedestrian connection across Highway 101 at this time and instead focus efforts on building out Council-approved routes in the Integrated Mobility Plan and Active Transportation Plan as higher priority projects. This is not recommended as there is significant risk of future pedestrian collisions in the absence of a formalized crossing, and the functional planning work will assist in better understanding the feasibility and costs of potentially constructing a future connection from Sackville Manor across Highway 101.

ATTACHMENTS

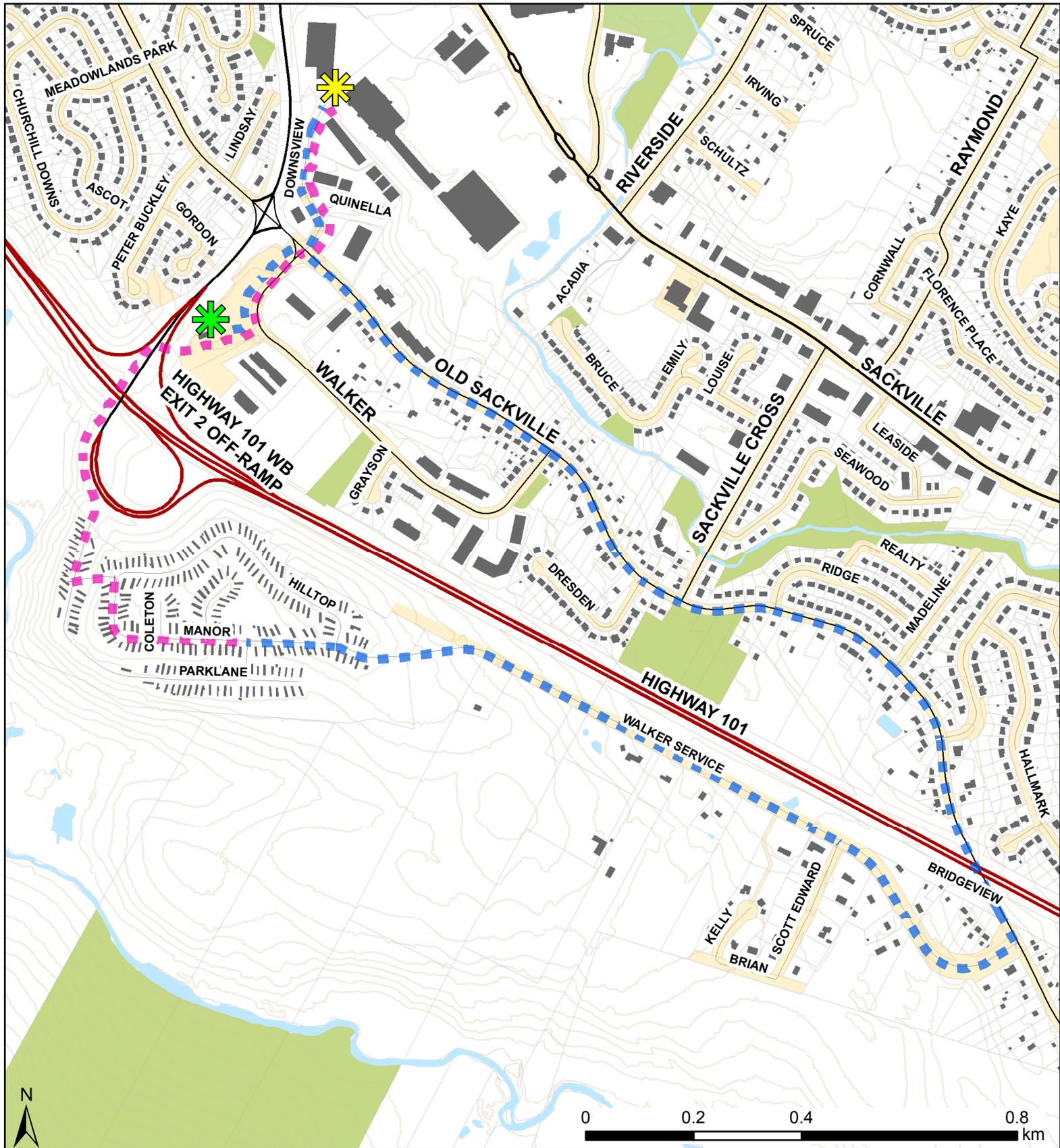
Attachment A: Context Map and Walking Distance

Attachment B: Photographs of Existing Condition from Site Visit January 21, 2019

Attachment C: Proposed Pedestrian Crossing Options

A copy of this report can be obtained online at halifax.ca or by contacting the Office of the Municipal Clerk at 902.490.4210.

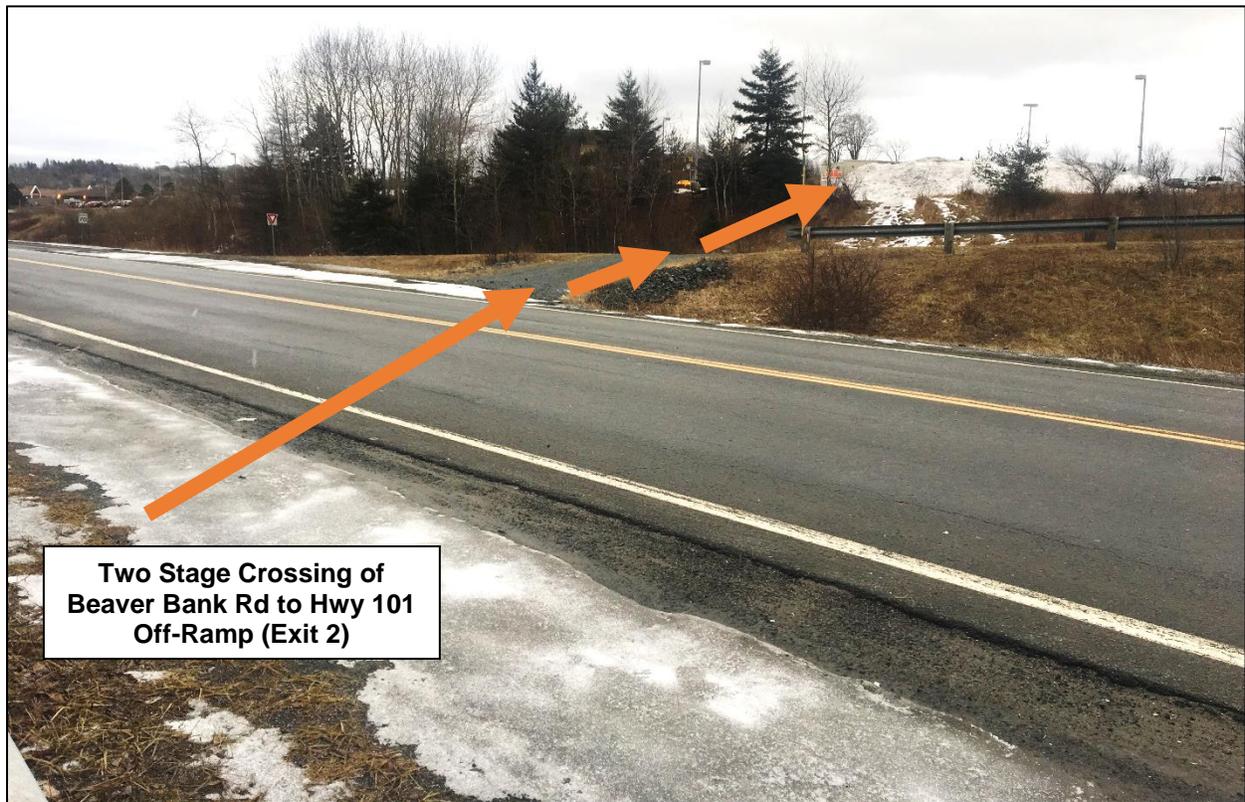
Report Prepared by: Siobhan Witherbee, Active Transportation Planner, TPW, 902.293.9748
Philip Nickerson, Design Engineer, TPW, 902.476.0836



Attachment A: Context Map with Walking Distances

- | | | | | | |
|---|-----------------------------|---|----------------------------------|---|-----------------|
|  | Sackville Transit Terminal |  | Shortcut Route via 101 Hwy Ramps |  | Highway 101 |
|  | Downsview Plaza (Groceries) |  | Long Route via Walker Service Rd |  | Arterial Roads |
|  | HRM-Owned Right of Way |  | Building Footprints |  | Collector Roads |
| | |  | HRM Parkland |  | Local Roads |

Attachment B: Photographs of Existing Condition from Site Walk
January 21, 2019

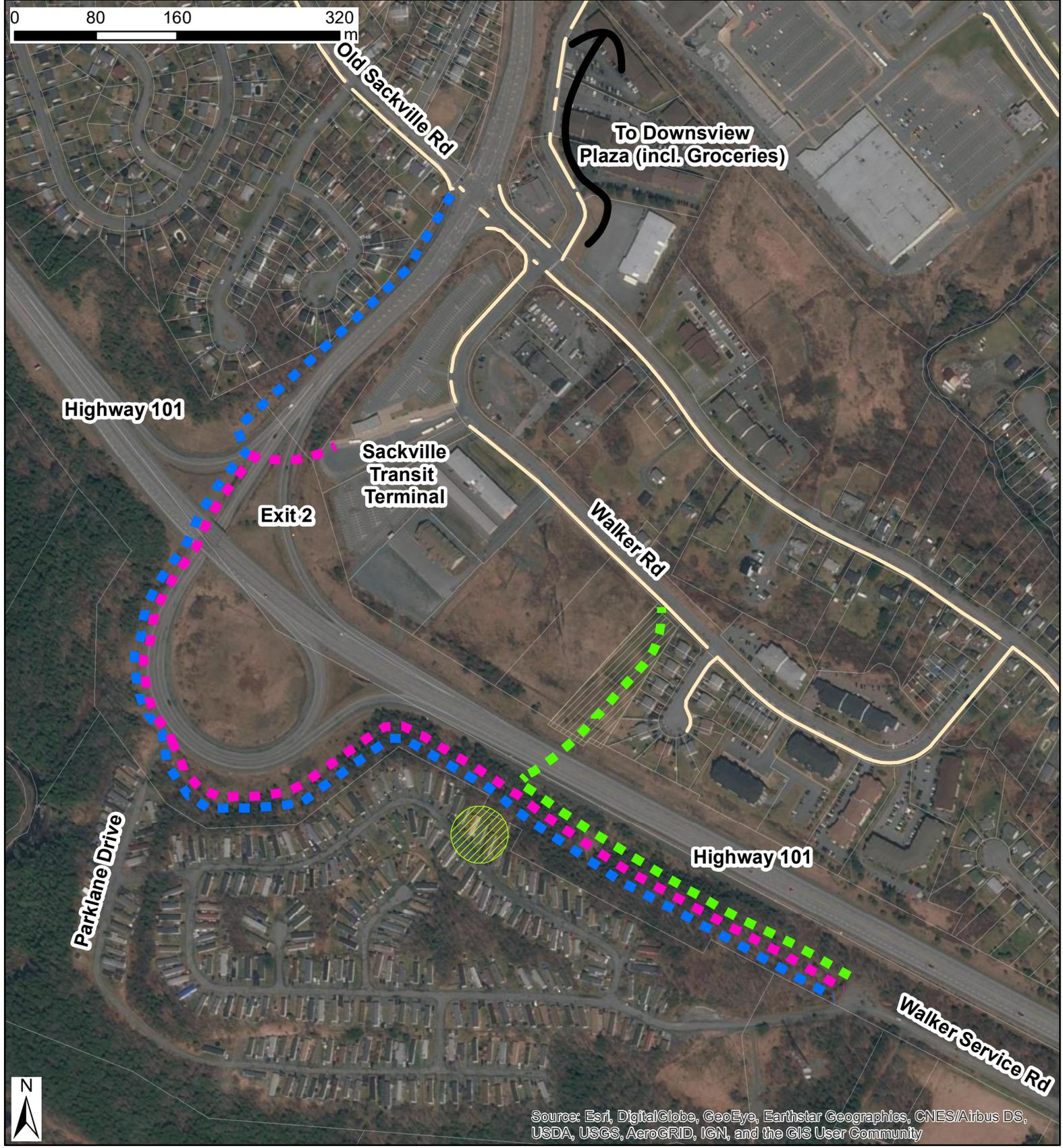




**Walking Under Bridge
Despite Posted 'No
Pedestrians' Signage**



**Possible Crossing Location
(Bridge in Option 2)**



Attachment C: Pedestrian Crossing Options

- Option 1: Pedestrian Bridge (Overpass) Across Hwy 101 On-Ramp with Multi-Use Pathway Connection to Old Sackville Rd
 - Option 2: Pedestrian Bridge (Overpass) Across Beaver Bank Connector and Hwy 101 Off-Ramp (Exit 2) to Transit Terminal
 - Option 3: Pedestrian Bridge (Overpass) to HRM Parkland with Multi-Use Pathway through Park to Walker Rd
- Existing Sidewalk
 - HRM Parkland
 - Possible Property Acquisition (Option 3)