



# INFORMATION REPORT

<b>TO:</b>	Chair and Members Public Works Committee
<b>COMMITTEE DATE:</b>	December 5, 2016
<b>SUBJECT/REPORT NO:</b>	Feasibility of a Rail Trail Pedestrian Bridge over Wentworth Street South (PW15021b) (Wards 2 and 3) (Outstanding Business List Item)
<b>WARD(S) AFFECTED:</b>	Wards 2 and 3
<b>PREPARED BY:</b>	Aneta Zaskowska Traffic Safety Technologist (905) 546-2424 extension 5663 Martin White, C.E.T., Manager of Traffic Operations and Engineering (905) 546-2424 extension 4345
<b>SUBMITTED BY:</b>	Geoff Lupton Director, Energy, Fleet and Facilities Public Works
<b>SIGNATURE:</b>	

## Council Direction:

At the June 22, 2016, City Council Meeting, the following Motion was approved:

That should a Pedestrian Signal be installed on Wentworth Street South at the Wentworth Street Rail Trail Crossing (as part of the 2017 capital budget process); that it be funded 100% from the Red Light Camera Reserve 112203; and

That staff be directed to report back to the Public Works Committee, by the end of 2016 and in advance of the 2017 budget deliberations, on the feasibility and options surrounding the installation of a pedestrian bridge on Wentworth Street South at the Wentworth Street Rail Trail Crossing.

## Information:

In order to address this council motion, Stantec Consulting Ltd. (Stantec) was retained through Engineering Services to undertake a feasibility and planning study for the construction of a pedestrian bridge at the existing Rail Trail crossing on Wentworth Street South. Stantec concluded that the construction of such a bridge is feasible and proposed a prefabricated truss structure; see (Appendix A), as the most suitable bridge type. In addition, three alignment alternatives were presented and evaluated;

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*OUR Vision: To be the best place to raise a child and age successfully.*

*OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.*

*OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.*

Option 1: Straight Trail Alignment (Appendix B)

- Straight trail alignment and long straight embankments on either side of the bridge
- 170 metres on west side
- 93 metres on east side
- Access from the Rail Trail to Wentworth Street South via a short connection trail southeast of the bridge
- Retaining wall is required
- Geotechnical investigation and design is required
- Moderate temporary property impacts
- Estimated cost = \$1,350,000

Option 2: Switch-Back Trail Alignment (Appendix C)

- Embankments on either side of the bridge with a switch-back alignment reducing extent of the impacts along the length of the trail
- Cyclists not required to dismount to travel through the switch-back alignment
- A short connection trail southeast of the bridge can provide access to Wentworth Street South
- Design is required
- Combination of retaining walls and steep vegetated slopes required to accommodate wide embankments
- Temporary property impacts more extensive than Option 1
- Estimated cost = \$1,250,000

Option 3: Elevated Ramp Structure (Appendix D)

- Ramp structure on either side of bridge
- 9 metres maximum ramp length
- Access from Rail Trail to Wentworth Street South via short connection trail South East of the bridge
- Geotechnical investigation and design is required
- Temporary property impact less than Option 1
- Estimated cost = \$1,670,000

The recommended design option from Stantec calls for a single-span prefabricated truss bridge (Appendix A) using Option 1: Straight Trail Alignment alternative (Appendix B) in order to maintain the existing trail alignment.

The cost for the new structure is estimated at \$1,350,000. This project is currently unfunded. Should Council direct the construction of the bridge, additional investigation and detailed design will be required to confirm the findings of this feasibility study including associated utility and property impact costs; and design; and construction costs. The detailed design and the entire bridge construction and project timing will need to be conducted by the Engineering Services division of Public Works. It was noted that there are numerous utilities in the vicinity of the trail crossing such as underground sanitary sewers, water mains and telecommunications wiring. In addition, should the pedestrian bridge be constructed, Traffic Engineering staff strongly recommends a barrier to prohibit pedestrians crossing Wentworth Street South at grade.

Construction of the pedestrian bridge will also require further consultation and investigation regarding the following issues and with these named stakeholders;

- Winter maintenance
- Roads Operations
- Engineering Services
- Public safety (objects thrown onto vehicles or pedestrians below)
- Emergency Medical Services (EMS)
- Police /Fire
- Niagara Escarpment Commission (NEC)
- Development Planning – effect of pending condominium development on Charlton Street west on the timing, design and construction of a bridge

Beautification of the area including trail gateway features, improved lighting and landscaping should also be considered to create a more pleasing environment. Public health and pedestrian mobility can be enhanced by creating an inviting and safe destination point for all users.

Staff continue to recommend that a pedestrian signal is the most appropriate and viable option with a significantly lower cost of \$300,000 and a 2017 installation timeframe. There is currently no available source of funding for the required \$1,350,000, to construct the pedestrian bridge over Wentworth Street South at The Rail Trail crossing.