



Report to: General Committee

Report Date: October 23, 2017

SUBJECT:	In-Boulevard Cycle Track Annual Maintenance Policy
PREPARED BY:	Loy Cheah, Senior Manager, Transportation, Ext. 4838 Alice Lam, Manager, Roads Operations, Ext. 2748
REVIEWED BY:	Brian Lee, Director, Engineering, Ext. 7507 Morgan Jones, Director, Operations, Ext. 4857

RECOMMENDATION:

- 1) That the staff report entitled, In-Boulevard Cycle Track Annual Maintenance Policy, be received; and,
- 2) That the Operations and Maintenance level of service for In-Boulevard Cycle Tracks as identified in Attachment 'B' be endorsed for the 2017-2018 and 2018-2019 winter seasons; and,
- 3) That staff monitor the maintenance condition of the Highway 7 cycle tracks over the 2017-2018 and 2018-2019 winter seasons and report back in 2019 on the potential need to revise the maintenance level of service and policy and the associated budget implications; and,
- 4) That the Operations Department 2018 operating budget be increased by \$143,850 to cover the annual operations and maintenance requirements for the Highway 7 cycle tracks and wider sidewalks; and,
- 5) That the Mayor and Clerk be authorized to execute an agreement with the Regional Municipality of York ("York Region") to govern the operations and maintenance of infrastructure within the Highway 7 boulevard including cycle track, streetscaping components from Town Centre Boulevard to Sciberras Road, provided that the form and content of such agreement are satisfactory to the Chief Administrative Officer and the City Solicitor; and,
- 6) That staff be authorized and directed to do all things necessary to give effect to this resolution.

PURPOSE:

This report seeks to:

1. Obtain Council approval for an annual operations and maintenance policy for the Highway 7 cycle track along both the north and south boulevards of Highway 7 between Town Centre Boulevard and Sciberras Road (the "Cycle Tracks") and the associated budget implications; and
2. Obtain Council authority to enter into an agreement with York Region on the operations and maintenance of infrastructure within the Highway 7 boulevard including cycle track, streetscaping components from Town Centre Boulevard to Sciberras Road.

BACKGROUND:

York Region is finishing the widening of Highway 7 from Town Centre Boulevard to Sciberras Road which includes the construction of the 1.8m wide concrete Cycle Tracks and 2.0m wide sidewalk on both the north and south boulevards of Highway 7. Upon completion, York Region will turn over the operations and maintenance responsibilities of the Cycle Tracks, sidewalks and some streetscape design elements to the City. York Region will continue to maintain the buffered bike path along Highway 7 west of Town Centre Boulevard.

The City made special efforts in working with York Region to design and build the Cycle Tracks and enhanced streetscaping elements on this section of Highway 7. Properly designed cycle tracks represent the highest level of accommodation for cyclists within the right-of-way of a road corridor, and these facilities are expected to attract the highest volume and widest range of cyclists. Therefore, it is anticipated that the Cycle Tracks will attract cyclists throughout the year, even through the winter months.

DISCUSSION:**Operations and Maintenance Agreement**

Staff have been negotiating the terms of an agreement with York Region on the operation and maintenance of certain infrastructure within the Highway 7 boulevard between Town Centre Boulevard and Sciberras Road. Attachment 'A' denotes the approximate areas of responsibility within the boulevard in terms of both capital and operating obligations proposed by staff from York Region and the City. Staff recommends entering into an agreement with York Region on shared operations and maintenance, capital funding, operating & life cycle costs of infrastructure within the Highway 7 boulevard between Town Centre Boulevard and Sciberras Road. Under the terms of the proposed agreement, the City will be fully responsible for the operation and maintenance of the Cycle Tracks and other streetscaping infrastructure within the boulevard approximately shown in Attachment 'A' (in addition to the sidewalks which are maintained by the City).

Determining Operations and Maintenance Costs

The operations and maintenance responsibilities of the City for the Cycle Tracks are outlined in Attachment 'B'. The annual operations and maintenance cost of the Cycle Tracks is generally determined by the following key factors:

1. Level of service during winter conditions and the rest of the year; and
2. Snow storage room for winter maintenance of the cycle tracks.

Level of Service – Spring, Summer and Fall Period

The maintenance of the Cycle Tracks during the non-winter months will be at the same level as the maintenance performed on sidewalks. The annual cost is estimated at \$3,350 for the length of the Cycle Tracks.

Winter Maintenance Level of Service – Guidelines and Practices of Ontario Municipalities

The Cycle Track being completed on Highway 7 is a unique design that has not been done anywhere else in Ontario. The few other cycle tracks built in Ontario are raised cycle tracks, which are bike paths separated from the nearest traffic lane by a mountable curb and at a slightly higher elevation than the traffic lanes but not to the same elevation as the boulevard and sidewalk (e.g. Birchmount Road between Rouge River and Highway 7). The Cycle Track being completed on Highway 7 is an in-boulevard bike path next to the sidewalk, at the same elevation as the sidewalk, is built with a concrete pavement just like the sidewalk and separated from the nearest traffic lane by the standard road curb, kill strip, planters or other urban design features.

The maintenance required for raised cycle tracks and in-boulevard cycle tracks are different due to differences in their design. For example, off-site snow storage is more likely to be required for in-boulevard cycle tracks since there will be less room in the boulevard for snow storage.

Generally, the few municipalities in Ontario with raised cycle tracks maintain the cycle tracks at the same level of service as the roadway (as they are plowed at the same time), which is dependent on the highway classification of the road. The same is true for physically separated bike lanes that are part of the roadway pavement but separated from the nearest traffic lane by a physical median, parking lane, planters, bollards or a combination of them. Municipalities in Ontario generally maintain them to the same level of service as the adjacent roadway.

There is currently no Provincial legislation or regulation specifically addressing winter maintenance level for cycling facilities. However, general maintenance guidelines for raised cycle tracks exist in various guideline reports (such as Ontario Traffic Manual Book 18) (“OTM Guidelines”) published by the Ministry of Transportation aimed at giving providers of public highway infrastructure best practice guidelines. Although not binding, the OTM Guidelines constitutes persuasive evidence for establishing what the standard of care is for highway maintenance. The OTM Guidelines, indicate that “For bike lanes and cycle tracks, it is not acceptable to install “No Winter Maintenance” signs so practitioners should consider liability issues. As such, snow clearing operations should include all designated bike lanes on or adjacent to the roadway.” There are also new guidelines being prepared by different agencies such as the draft cycling facility maintenance guidelines being prepared by York Region. These draft guidelines could be adopted by the local municipalities to ensure consistent levels of service for the same type of cycling facility across York Region. Overall, published or draft guidelines generally recommend that raised cycle tracks be maintained to the same level of service as the roadway beside it.

Recommended Winter Maintenance Level of Service for City Cycle Tracks

West of Town Centre Boulevard, Highway 7 includes on-road, buffered bike lanes (one in

each direction next to the curb). The buffered bike lanes are maintained by York Region to the same level of service as the traffic lanes on Highway 7. If a cyclist is travelling eastbound from west of Town Centre Boulevard on the buffered bike lane and continuing east of Town Centre Boulevard, the cyclist would expect to experience the same level of maintenance of the in-boulevard cycle track as is the buffered bike lane.

In light of the recommendations in the OTM Guidelines to provide winter maintenance to bike lanes and cycle tracks and to maintain consistency with the maintenance level of service for Highway 7 buffered bike lanes and with raised cycle tracks in other Ontario municipalities, staff recommend **that the Cycle Tracks be maintained to the same level of service as the roadway, year-round including during winter months.**

Highway 7 with a posted speed of 60 km/hour is classified as a Class 2 highway. According to the Minimum Maintenance Standard, resources are to be deployed as soon as practicable or within 6 hours when snow accumulation is greater than 5 cm, and if icy conditions are present, the municipality have 4 hours to treat the pavement condition.

The annual regular winter maintenance costs is \$39,000.

Snow storage room

Staff is expecting that snow loading and hauling from the cycle tracks will be necessary due to the limited right-of-way width and design of this section of Highway 7 and the ongoing development frontage.

Through a site visit, staff is of the opinion that snow loading and hauling would only be necessary for certain segments of the cycle track. This will increase the annual winter maintenance cost by an additional \$89,250 on top of the regular annual winter maintenance cost \$39,000.

Operations and Maintenance Costs

Based on the above, the total annual maintenance cost of the Highway 7 cycle tracks is shown in Table 1 below.

Table 1: Annual Operating Costs of the Cycle Tracks

Type of Maintenance	Annual cost (\$'s)
Spring, Summer and Fall Maintenance	3,350
Regular Winter Maintenance	39,000
Snow Loading and Hauling	89,250
TOTAL	131,600

Annual maintenance cost of the wider Highway 7 sidewalks (i.e. 2.0 m in comparison to the traditional 1.5 m) is shown in Table 2 below.

Table 2: Annual Operating Costs of the Wider Sidewalk

Type of Maintenance	Annual cost (\$'s)
Spring, Summer and Fall Maintenance	650
Regular Winter Maintenance	11,600
TOTAL	12,250

In summary, the total annual operations and maintenance costs for the cycle tracks and sidewalk is \$143,850 (\$131,600 + \$12,250) which will be included as part of the 2018 Operating Budget. Maintenance of the Highway 7 sidewalks and cycle tracks will begin with the upcoming winter season starting in November 2017. Cost for winter maintenance of the sidewalks (1.5m) and cycle tracks for November and December 2017 is within the approved 2017 budget. Staff will monitor the maintenance condition of the Highway 7 cycle tracks over the next two winter seasons (2017-2018 and 2018-2019) and report back to Council in 2019 on the potential need to revise the maintenance level of service and policy and the associated budget implications.

Life Cycle Costs

Table 3 outlines the life cycle (asset replacement) costs of the Highway 7 cycle tracks and wider sidewalks.

Table 3: Asset Replacement Cost of the Cycle Tracks and Sidewalks

Cost Element	Cost (\$'s)
Concrete cycle tracks	343,000
Concrete sidewalks	573,000
Asset Replacement Cost	916,000

In addition to the operations and maintenance cost identified above, the Life Cycle reserve study will be updated to include an additional \$343,000 and \$573,000 for the future replacement of the Cycle Tracks and wider sidewalks respectively, each with a useful life of 40 years.

FINANCIAL CONSIDERATIONS AND TEMPLATE: (external link)

Operating Impact

The operating budget for the Operations Department will be increased by an estimated \$143,850 as part of the 2018 Operating Budget to cover the annual operations and maintenance requirements of the Highway 7 sidewalk and Cycle Tracks.

Life Cycle Impact

There is no impact to the Life Cycle Reserve Study over the next 25 years as the useful life of the Cycle Tracks and sidewalk is 40 years each.

HUMAN RESOURCES CONSIDERATIONS:

Not Applicable.

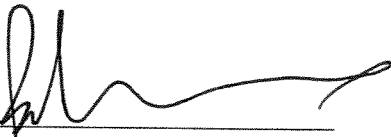
ALIGNMENT WITH STRATEGIC PRIORITIES:

The recommendations of this report align with the strategic focus for a Safe & Sustainable Community through the ongoing management of the City's transportation network and ensuring the reliability of City services.

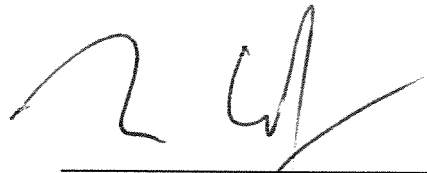
BUSINESS UNITS CONSULTED AND AFFECTED:

Finance and Legal have reviewed this report and their comments have been incorporated.

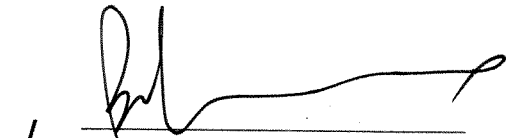
RECOMMENDED BY:



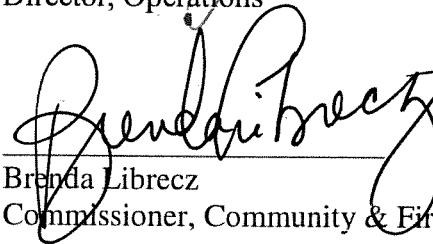
Brian Lee, P. Eng.
Director, Engineering



Morgan Jones
Director, Operations



for Jim Baird, M.C.I. P., R.P.P.
Commissioner, Development Services
Services



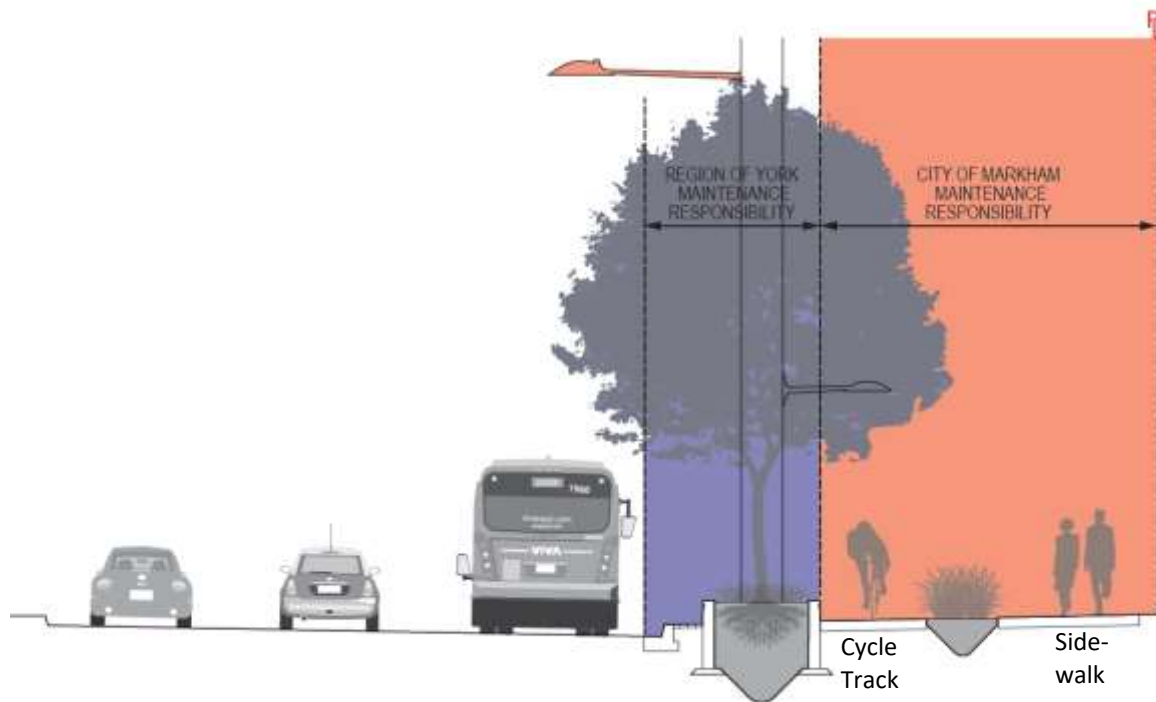
Brenda Librecz
Commissioner, Community & Fire

ATTACHMENTS:

Attachment 'A' Assessment of Responsibility

Attachment 'B' Operations and Maintenance Responsibilities of the City

Attachment 'A' Proposed Assessment of Responsibility



Attachment 'B'

Operations and Maintenance Responsibilities of the City

BOULEVARD:

Cycle Track:

- Annual inspection
- Repair of minor cracks and blemishes to match paving surface material
- Replacement of sections/ members when necessary
- Sweeping, cleaning and debris removal
- Maintain in a passable and safe condition during spring, summer and fall
- Leveling of sections as necessary
- Graffiti removal
- All sidewalks and cycle track are plowed within 6 hours of the end of a snowfall when accumulations reach 5cm or more. Priority service is provided according to the road classification. Special attention is given to sidewalks near schools and bus stops. Plowing and sanding takes approximately 14 hours to complete.