



REPORT TO COUNCIL

To: **Mayor and Councillors**

Subject: **Grade Crescent Concept Design Update**

File #: 5210.00

Doc #:

From: Rick Bomhof, P.Eng.
Director of Engineering, Parks & Environment

Date: July 16, 2019

RECOMMENDATION:

THAT the report from the Director of Engineering, Parks & Environment regarding Grade Crescent Concept Design be received for information.

PURPOSE:

The purpose of the report is to report back to Council regarding the results of the Grade Crescent Concept Design Open House and to highlight next steps.

POLICY:

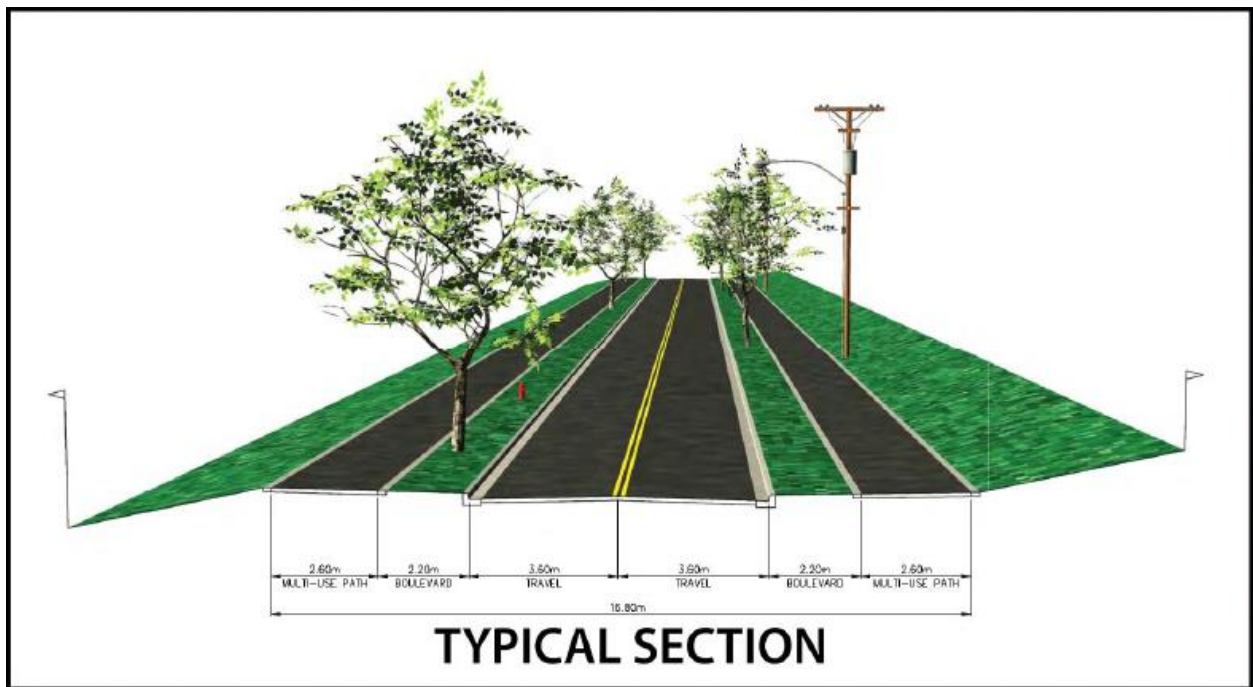
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COMMENTS/ANALYSIS:

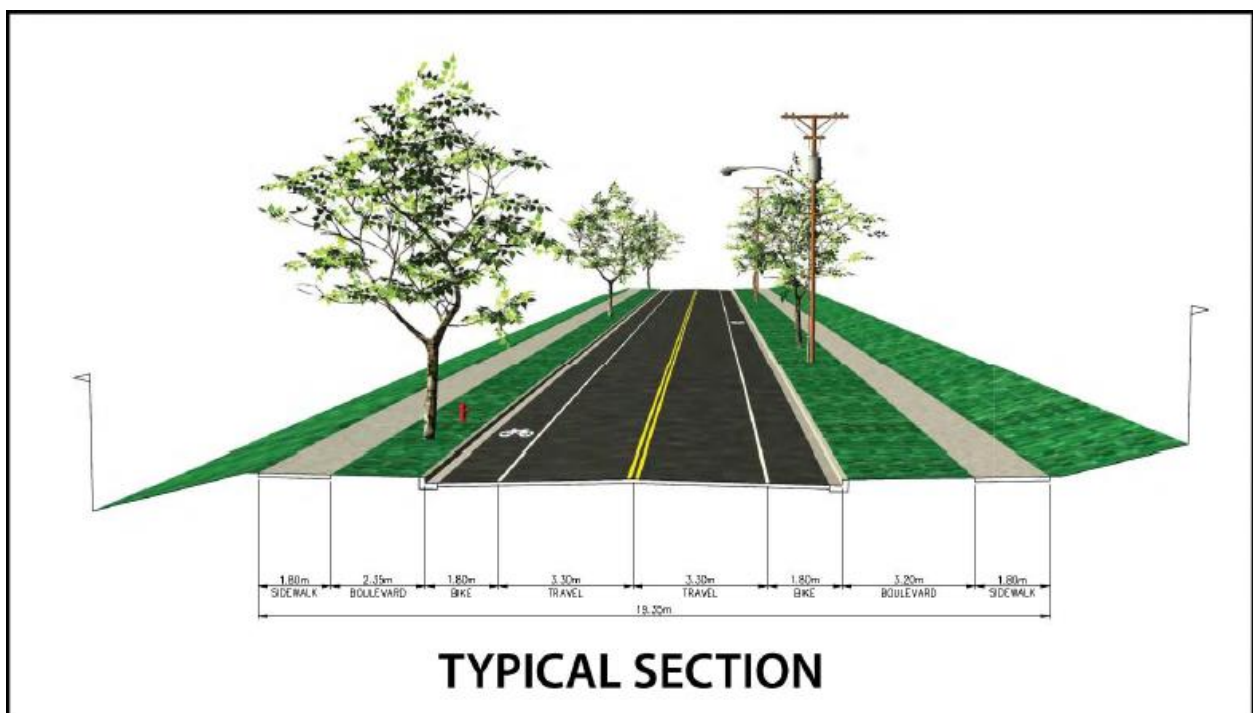
The Grade Crescent Concept Design Project is being completed to assist with the selection of the preferred road design option along with a construction cost estimate for future budgeting purposes. The conceptual design will also be used as a guide to set requirements for any development applications along the route.

The City retained R.F. Binnie & Associates to complete the conceptual design to upgrade Grade Crescent from 200th Street to 208th Street. Based on traffic counts and growth projections a single lane in each direction is sufficient. The two lane configuration is also consistent with the current collector road classification. Two conceptual designs were developed; Option 1: Off-Street Multi-Use Pathway (MUP) and Option 2: On-Street Bike lanes. (see concept plans below).

Option 1 – Off Street Multi-Use Pathway



Option 2 – On street Bike Lane



Both options can include on-street parking pockets. This will be refined during detailed design.

The options were presented at an Open House at H.D. Stafford Middle School on May 9, 2019. In general the public was in favour of upgrading Grade Crescent with almost equal support for either option. A summary of the open house results are shown below:

Preference of residents who live directly along Grade Crescent:

Option 1 (MUP) – 11

Option 2 (Bike lanes) – 9

Preference of residents who live on Grade Crescent & Feeder Routes:

Option 1 (MUP) – 14

Option 2 (Bike lanes) – 15

Preference of all residents (including those who live several blocks away or did not list an address):

Option 1 (MUP) – 19

Option 2 (Bike lanes) – 18

Option 1 is recommended as it provides added safety of an off-street multi-use pathway providing a physical barrier between vehicles and pedestrians/cyclists.

A summary of some of the recurring comments that were raised by the public include:

- Improve street lighting
- Improve drainage
- Raised crosswalk at 201 Street
- Remove grass boulevards due to grade issues (steep driveways) and maintenance

The proposed design will address the lighting and drainage comments. A crosswalk at 201 Street is provided in the design but it will not be a raised crosswalk unless it meets the City's traffic calming criteria. An assessment of traffic speeds for the purpose of traffic calming warrants is not part the current scope of work.

It is unclear why 'removal of grass boulevards due to grade issues' was identified as a concern. It is suspected that this has more to do with the driveway grades. The driveway grades are quite steep, due to the downward slope from south to north, and little can be done to change that but the design balances the grades on both sides of the road to achieve the optimum grades possible. Maintaining the road as two lanes also helps to minimize driveway slopes.

Interim improvements

One of the other questions asked at the Open House was in regards to the safety improvements on 208th Street and Grade Crescent. High vehicle speeds are a concern and eastbound left turn movements. This intersection has been reviewed previously (in 2008) to see if a traffic signal or roundabout could be installed but was not recommended due to a number of issues. When the traffic signal warrant analysis was conducted none of the 9 different warrants were met. The proximity to the existing signal at 48th Avenue and the approach grades of up to 12% are the main factors in this decision. The safety improvement currently recommended was also recommended in 2008 by R.F Binnie. The design includes a raised median barrier to restrict eastbound left turn and thru movement. There was considerable support for the improvements; overall there were 21 responses in favor, and 9 responses against.

As noted in the budget implications section below the project cost is considerable and therefore will need to be prioritized against other projects the City would like to achieve.

In addition, a delegation came before Council on July 8, 2019 asking for safety improvements on Grade Crescent in the 201A St area with one item of concern being the crosswalk. Council approved the following motion:

THAT City staff investigate the cost of implementing interim traffic calming measures, interim repairs and measures and cross walk safety improvements between 203 Street and 200 Street along Grade Crescent in time for the 2020 budget cycle or sooner if possible.

Unless Council directs otherwise, the next steps will be as follows:

- Complete a traffic impact assessment of the proposed restrictive median at 208 Street and Grade Crescent including 48th Avenue, as the left-turn traffic would all be re-routed. ICBC would also be consulted for possible funding of this safety improvement. The City has sufficient budget to complete this study in 2019.
- Complete a traffic speed and volume count on Grade Crescent at 201A Street to assess if additional traffic calming is warranted. The City has sufficient budget to complete this assessment in 2019.
- Consider two capital interim traffic calming projects for the 2020 budget (addresses Council motion above):
 - a new pedestrian crosswalk on Grade Crescent in the 201A Street area complete with rapid flashing beacons and raised roadside islands narrowing the road width at the crossing.
 - Installation of a median barrier on 208 St to restrict eastbound Grade Crescent left turn movements.

Walkway improvements along Grade Crescent are scheduled this summer from 201 Street to 203 Street. This includes tree trimming and a new wider asphalt pathway along the north side of Grade Crescent.

The City will apply for provincial grants such as BikeBC and other infrastructure related grants when possible. With the concept design finalized there is a better chance at securing these grants as some of them require projects to be shelf ready.

Translinks funding criteria require projects to have separated or protected bike lanes which the City could be eligible for in the future going with Option 1.

Once the preferred option is selected the consultant will initiate electrical concept design and finalize drawings by incorporating any comments from the open house.

BUDGET IMPLICATIONS:

The class D estimated cost for this project is approximately \$13,000,000; however, this includes some assumptions regarding the electrical costs. Once the preferred option is selected they will complete the electrical concept design which will refine the class D cost estimate for the project. There is potential to phase this project and apply for grants once the designs are complete.

Cost estimates will be completed for the interim works noted above and submitted for consideration in the 2020 capital plan.

A capital budget request will be submitted for 2021 or 2022 for detailed design.

ALTERNATIVES:

Select option 2 with on-street bike lanes.

Respectfully Submitted,



Rick Bomhof, P.Eng.
Director of Engineering, Parks & Environment

CHIEF ADMINISTRATIVE OFFICER'S COMMENTS:

I support the recommendation.



Francis Cheung, P. Eng.
Chief Administrative Officer