

Report Engineering Services

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Report To: General Government Committee

Date of Meeting: September 26, 2016

Report Number: EGD-036-16

Resolution: GG-475-16 C-247-16

File Number:

By-law Number:

Report Subject: Mill Street South Pedestrian Facility

Recommendations:

1. That Report EGD-036-16 be received;
 2. That a 1.5-metre-wide pedestrian facility be constructed on the west side of Mill Street South, as detailed in this report;
 3. That traffic calming measures and road safety improvements be implemented as noted in Section 1.3 of this report;
 4. That additional funding in the amount of \$320,000 for these improvements be included in the 2017 Capital Budget;
 5. That staff budget approximately \$5,250 annually for snow clearing on Mill Street South; and
 6. That all interested parties listed in Report EGD-036-16 and any delegations be advised of Council's decision.
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Report Overview

Public Information Centres (PIC's) held on November 19, 2014, and November 12, 2015, obtained input from residents for proposed improvements to the local transportation network in Bond Head for drivers, cyclists and pedestrians using Mill Street South, as well as the proposed future expansion of Bond Head Waterfront Park. Subsequent to the November 12, 2015, PIC, Option 2 was recommended to Council in Report EGD-010-15: A multi-use trail on the west side of Mill Street South from Metcalf Street to Boulton Street.

Additional information on construction around mature trees, permeable surfaces and next steps for the project was presented to the public at a third PIC on March 7, 2016. Staff also recommended a modified version of Option 2, to be constructed in two phases with Phase 1 to include the construction of a 1.5-metre-wide pedestrian facility on the west side of Mill Street South and Phase 2 to include widening of Mill Street South by 2.0 metres on each side to accommodate bike lanes. Engineering staff proposed Phase 1 of the transportation improvements be considered as part of the 2016 Capital Budget, and deferred Phase 2 to future budget allocations.

Based on public comments received at and subsequent to the third PIC, and Council direction under Resolution #C175-16, Engineering was authorized to proceed with detailed design of Phase 1: integrate a permeable surface into the 1.5-metre-wide pedestrian facility on the west side of Mill Street and provide special consideration for comprehensive tree preservation on the previously proposed pedestrian facility.

A fourth PIC was held on August 25, 2016, to present the detailed design and safety review conducted by Municipal Staff and CIMA+, Clarington's consultant, to help residents understand the reasoning behind the design. This report provides analysis of public response and recommendations for proceeding with the detailed design of the Mill Street South pedestrian facility, as presented, with additional, specific requests from resident incorporated into the design where appropriate.

Background

1.1. Project Chronology

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| 2006 | Municipality began monitoring speeds on Mill Street South, initiated by speed complaints received from Clarington residents |
| 2011 | July 29 – Motor vehicle accident involving a pedestrian occurs on Mill Street South |

- 2014 June 22 – Miovision™ installed at south end of Mill Street South – the results helped the Engineering Department to recognize that access to the park would need to be improved
- 2014 November 19 – PIC #1: 3 concept options for a multi-use trail were presented for public input
- 2015 May 25 – Report EGD-010-15 goes to Council
- 2015 November 12 – PIC #2 – based on public input and further analysis, preferred option was developed and presented to public
- 2016 February 16 – EGD-008-16 goes to Council
- 2016 March 29 – Presentation to General Government Committee
- 2016 March 7 – PIC #3: Additional information on construction around mature trees, permeable surfaces, next steps for the project was presented to the public
- 2016 April – Resolution GG-181-16: Transportation Improvements deferred until CTMP is released.
- 2016 July 7 – Resolution #C175-16 – proceed with detailed design of 1.5-metre permeable path on the west side of Mill Street South
- 2016 August – Tree Inventory and Assessment and safety review conducted for Mill Street South from Port of Newcastle Road to Boulton Street
- 2016 August 25 – PIC #4

1.2. PIC #4 Structure and Overview

The purpose and structure of the meeting was shared with those in attendance along with Council's specific direction with regard to Council resolution #C175-16, a general discussion of the project background and a review of public input received to date.

A recommended design was presented and attendees were made aware that the design is an evolution of previous designs as well from ongoing public input. Assurances were made that Council and staff have been listening and responding appropriately, that the proposed design reflects a balance of needs and desires brought forth by the public and that it is supported through the following additional studies provided by CIMA+ for the project:

- A detailed tree inventory and assessment as well as an investigation of topsoil depth and tree root location, providing recommendations to preserve the health of the existing, mature tree canopy through species diversity, age distribution, overall tree health considerations and a low impact construction approach.
- A traffic safety review for Mill Street South from Port of Newcastle Road to Boulton Street that provided design recommendations supporting local, provincial and industry standards and addressing recorded safety concerns experienced by roadway users.

1.3. PIC #4 – Summary of the Presented Design

Based on the foregoing, the following design elements and considerations have been addressed in the presented design:

Rural character and waterfront heritage value

There is a clear consensus that the existing tree canopy and rural character of Mill Street South be preserved wherever possible.

In this respect, the proposed design improves on alternatives investigated at previous PICs by providing the least invasive solution that still addresses identified public safety concerns and requirements. One of the chief characteristics of the design is that it maintains public enjoyment of the valuable cultural and heritage resources available to pedestrian facility users on Mill Street South as it approaches the Bond Head Waterfront Park.

Pedestrian facility (proposed ultimate works)

Based on applicable standards, CIMA+'s traffic safety experts have confirmed the need for a pedestrian facility that is separate from the road.

The responsibility to reasonably apply these standards within existing physical constraints provided by the project site is a municipal concern. The proposed design has balanced this concern carefully with public input provided for the project and offers a pragmatic and effective solution that will stand the test of time. Highlights of the design include:

- Keeping the pedestrian facility as close to the existing ground elevation as possible to minimize impacts to trees and vary the horizontal geometry (deviate from the straight-line path) to move the pedestrian facility as far away as possible from homes built close to the roadway, avoid impacts to significant trees, and avoid costly utility relocations. This will support the perception that the pedestrian facility is mimicking a natural rural path, built around existing trees and obstacles, rather than a linear urban sidewalk.
- Integration of a course aggregate asphalt is recommended and can be permeable or not; however, given public opinion, it is suggested that available funds be spent on construction techniques to minimize impact to tree roots (vacuum excavation, high performance bedding) rather than the premium for permeable asphalt which will have minimal benefit given the surrounding environment and may require deeper excavation.
- Curb will be required where the sidewalk is adjacent to the roadway. Barrier curb will be used rather than curb and gutter as it has a reduced visual impact (narrower profile) and can be coloured to create better visual awareness for drivers, warning them of the proximity of pedestrian traffic to the roadway.

- A boardwalk has been recommended at the south limit with a potential viewing platform. The purpose of this construction choice is to accommodate constraints imposed by the width of the right-of-way, but will also serve to enhance the rural feel of the pedestrian facility and provide pedestrians with an opportunity to pause and enjoy the waterfront view from the vantage point of a scenic lookout.

It is noted that the proposed design does not fully comply with applicable safety standards where surface elevation of the pedestrian facility is significantly lower and in close proximity to the adjacent roadway. The issue is that stopping distance for a vehicle that loses control and leaves the roadway is increased when moving down a slope. As a guideline, exceeding the standard is allowable if reasonable precautions are made to counteract the resulting effect. In this case, reducing the roadway speed to 40 km/h will provide an alternate method of reducing stopping distance in such an event.

Traffic calming and roadway safety improvements

The safety review also took a careful look at appropriate traffic calming measures that could feasibly be implemented for the project and in the process examined existing Phase 2 recommendations to widen Mill Street South by 2.0 metres on each side to accommodate bike lanes. The report found that, the following measures would achieve the same safety objectives as Phase 2 works:

- Construct speed tables at Metcalf and Queen Victoria Streets and provide a stop condition at Boulton Street. Speed tables are raised asphalt platforms that provide a less jarring form of speed control that generates less environmental noise (i.e., suspension and shifting load noise produced by cargo vehicles) when compared to speed bumps or speed humps.
- Drop the speed limit to 40 km/h and install “Share the Roadway” signage and paint markings for motorists and cyclists. These measures are key in mitigating safety concerns for cyclists and motorists as well as pedestrians in the event of vehicle loss of control.
- Extend guiderail at the northerly end where the roadway is adjacent to the creek

Removal of Phase 2 works from the project

Given the preceding, Phase 2 works will no longer be necessary if traffic calming and roadway safety improvements recommended in CIMA+’s safety review are implemented with construction of the proposed, modified pedestrian facility (Ultimate Design).

There are several significant benefits to this:

- Proposed Phase 2 works have been an ongoing source of public opposition. It is expected that removal would assist in mitigating public concern over the project by addressing safety concerns while retaining Mill Street South's rural character and helping to preserve the existing mature tree canopy.
- Elimination of Phase 2 works represents an environmentally low impact solution.
- Design and construction costs will be significantly reduced if Phase 2 is not implemented, though modifications based on recommendations in the safety review and this report will incur some additional cost to the original proposed Phase 1 works, as follows:

Proposed Works	Estimate
Phase 1 (original)	\$ 430,000
Phase 2 (original)	\$ 730,000
Total original cost	\$1,160,000
Ultimate Design (modified Phase 1)	\$ 750,000
Total savings	\$ 410,000

Impacts to specific properties

Through the public consultation process, design considerations specific to identified properties have been implemented for following addresses:

- 628 Mill Street
- 620 Mill Street
- 608 Mill Street
- 612 Mill Street
- 592 Mill Street
- 590 Mill Street
- 568 Mill Street

Details of these requests are documented in the project files and have been approved by the Engineering Department.

Snow clearing

Clarington's Consolidated Snow Clearing By-law 93-144 requires that residents keep sidewalks fronting their property cleared of snow and ice. Implementation of a pedestrian facility on the west side of Mill Street South will create a significant burden on affected residents with regard to snow clearing.

This burden can be somewhat mitigated by Clarington's Senior Citizens and the Physically Disabled Snow Clearing Program which provides snow clearing in Clarington's urban areas and hamlets through the Operations Department, pending successful application and payment of a nominal application fee. However, this program cannot consistently address all affected residents whose frontages generally exceed 50 metres in length, and will not address the local orchard properties with affected frontage exceeding 325 metres.

The preferred alternative would be to transfer responsibility for clearing snow on the proposed pedestrian facility to the Municipality. There are several reasons to do this:

- The Municipality is responsible for clearing municipal rights-of-way. There are six municipal rights-of-way that cross the proposed pedestrian facility, as well as 146 m of Clarington property at the north end and 70 m at the south end of the project. This means that the Operations Department, as part of the Municipality's responsibility would clear snow on approximately 350 m (35%) of the facility's total length. The Operations Department has been consulted in preparing this report and has advised that winter maintenance of this section of sidewalk is estimated at approximately \$5,250 (2016 costs per year). The Operations Department also advised that they propose to carry this item as a Priority "A" item in the 2017 Budget provided the project is approved, because the new sidewalk will be a main pedestrian route to the waterfront.
- There is some precedent for the Municipality to take over responsibility for clearing snow from the pedestrian facility as Mill Street South is part of the Lake Ontario Waterfront Trail system and if built would provide the only dedicated pedestrian facility providing safe access to Lake Ontario at Bond Head while maintaining the unique character along this section of the trail.

Given the preceding, having the Municipality responsible for clearing snow along the full length of the pedestrian facility would benefit the area community, and would alleviate substantial additional burden to the affected residents.

1.4. PIC #4 – Analysis of Public Response

Thirty-six interested parties attended and signed the register at PIC #4. Twelve comment sheets were submitted with a total of approximately thirty individual comments.

Councillors in attendance, municipal staff and members of CIMA+'s consulting team were pleased with the outcome of this PIC. Despite earlier opposition, once the recommended design was presented to those in attendance, the mood at PIC #4 became very positive. Many complements were received from attendees and the overall impression was that the recommended design had been well received.

Three of the twelve comment sheets submitted support this assessment and are summarized below:

1. Very pleased with presented solution and support it fully, including the pedestrian facility. Appreciate tree survey. Traffic calming measures are sensible.
2. Very pleased with presented solution including pedestrian facility and traffic calming. Would prefer natural-looking materials for sidewalk and curb
3. Very pleased with presented solution, including conservation of trees, traffic calming measures and pedestrian safety/facilities

The remaining nine comment sheets are summarized in the following table. A brief description of corresponding mitigation measures supported by the recommended design is also provided.

Comment Summary	Mitigation
<ul style="list-style-type: none">– Too close to tree– Leave as is– Put in stops signs and crosswalks instead	<ul style="list-style-type: none">✓ Recommendations from the tree inventory and assessment will protect existing trees from construction activities.✓ A stop condition will be introduced at the corner of Boulton Street and Mill Street South.✓ In place of crosswalks, traffic calming measures will be introduced at key intersections and a reduction in speed to 40 km/h will be implemented on Mill Street South.
<ul style="list-style-type: none">– Consider options including stop signs and road control or George Manners alternative	<ul style="list-style-type: none">✓ A stop condition will be introduced at the corner of Boulton Street and Mill Street South.✓ In place of crosswalks, traffic calming measures will be introduced at key intersections and a reduction in speed to 40 km/h will be implemented on Mill Street South.✓ Alternative design options for a pedestrian facility were considered and determined to be less effective overall due to existing design constraints and value to the community.

Comment Summary	Mitigation
<ul style="list-style-type: none"> – Plant mature trees. – Do not want to shovel sidewalk. – Believe there are more than 60 pedestrians per day. – Black pavement is ugly. 	<ul style="list-style-type: none"> ✓ A planting plan will be prepared and implemented to ensure continued health of the existing tree canopy ✓ It has been recommended that the Municipality of Clarington take over responsibility for snow clearing along the pedestrian facility ✓ The pedestrian facility provides the safest alternative to accommodate existing and future pedestrian traffic on Mill Street South ✓ Pavement alternatives will be investigated in final design
<ul style="list-style-type: none"> – Do the right thing. Keep your word. 	<ul style="list-style-type: none"> ✓ The Municipality of Clarington will proceed with the recommended design as the best fit solution for the needs of local residents and the municipality at large
<ul style="list-style-type: none"> – Like the traffic calming bumps. Do not reduce speed limit. Like small curb and not opposed to asphalt. Pleased with 2/3-way stop at corner 	<ul style="list-style-type: none"> ✓ To ensure effectiveness of traffic calming and other safety elements associated with the design, a reduction in the speed limit is necessary. ✓ Barrier curb (small curb) will be implemented in the design ✓ A stop condition will be introduced at the corner of Boulton Street and Mill Street South.
<ul style="list-style-type: none"> – Request sidewalk at edge of road at 626 Mill Street 	<ul style="list-style-type: none"> ✓ Design requests for individual properties will be accommodated wherever possible.
<ul style="list-style-type: none"> – No need for improvements. Good as is. 	<ul style="list-style-type: none"> ✓ The Municipality of Clarington will proceed with the recommended design as the best fit solution for the needs of local residents and the municipality at large
<ul style="list-style-type: none"> – Approve of speed bumps. No sidewalks. 	<ul style="list-style-type: none"> ✓ The pedestrian facility provides the safest alternative to accommodate existing and future pedestrian traffic on Mill Street South
<ul style="list-style-type: none"> – Want traffic calming but not pedestrian facility, curbs, traffic circles or treed median. 	<ul style="list-style-type: none"> ✓ Traffic calming will be implemented as per the recommended design. ✓ The pedestrian facility provides the safest alternative to accommodate existing and future pedestrian traffic on Mill Street South ✓ Traffic circles and treed medians are not included in the recommended design ✓ Use of curbs will be limited to locations where they are required for pedestrian safety

Input Received Post PIC #4	
<ul style="list-style-type: none"> – One resident suggested an alternative with a curb down the entire length of Mill St., on the west side with sidewalk directly behind. 	<ul style="list-style-type: none"> ✓ Residents have stated that keeping the rural character of Mill St. is a major concern. Keeping the path separate from the road edge wherever possible allows us to preserve the natural charm of Mill St. ✓ The addition of curb to the street narrows the driving lane width and may require us to widen the road ✓ Widening of the road platform would complicate existing drainage pattern for the road. The short sections of curb proposed at the PIC do not have a significant impact on lane width requirements ✓ Road widening may necessitate the introduction of a local storm sewer system and/or ditch ✓ A curb the full length of the street would reduce the effectiveness of the traffic calming measures we have proposed ✓ Existing underbrush along Mill St. is dominated by invasive, exotic species that are competing with native herbaceous species. We recommend removal of invasive species where appropriate
<ul style="list-style-type: none"> – Two residents suggested that roundabouts be added for traffic calming 	<ul style="list-style-type: none"> ✓ The existing right-of-way is not wide enough to accommodate a properly sized roundabout. ✓ Private property would need to be purchased by the Municipality ✓ Other traffic calming measures are proposed to assist with the safety improvements

Next Steps

Prior to implementation, the recommended design will require some refinement to accommodate PIC #4 outcomes. These will include:

- Refinement of the sidewalk alignment at specific locations to accommodate resident requests
- Associated streetscape design where sidewalk alignments have changed
- Minor refinement of boardwalk and viewing platform area
- Addition of recommended traffic calming measures and signage

Proposal

Based on the preceding analysis and input from previous PICs conducted for this project, the Engineering Department has concluded that the recommended design detailed in this report provides a good balance between the various needs and desires of respondents while fulfilling municipal responsibility to exercise its due diligence in implementing roadway and pedestrian safety improvements outlined in the Mill Street South safety review.

Implementation of the proposed design will require:

1. Construction of a pedestrian facility on Mill Street South as presented at PIC #4, with minor modifications to the final design as discussed in Section 1.4 and Section 2 of this report
2. Implementation of traffic calming measures and road safety improvements as noted in Section 1.3 of this report
3. Budgeting approximately \$5,250 annually for snow clearing.

Concurrence


Not applicable.


Conclusion

It is respectfully recommended that Council endorse the recommendations provided in this report and direct staff to proceed with implementation of the proposed design as detailed in this report.

Strategic Plan Application

The recommendations contained in this report conform to the Strategic Plan.

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Director of Engineering Services

Reviewed by: 
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Attachments:

N/A

List of interested parties to be notified of Council's decision is on file in the Engineering Services Department.

ASC/RA/kr/jb