

COMMITTEE OF THE WHOLE – JUNE 19, 2012

KEELE STREET CLASS ENVIRONMENTAL ASSESSMENT STEELES AVENUE TO RUTHERFORD ROAD – SEGREGATED BIKE LANES REGION OF YORK WARD 4

Recommendation

The Commissioner of Engineering and Public Works recommends that this report be received for information purposes.

Contribution to Sustainability

The provision of bike facilities along the Keele Street corridor will contribute to sustainability by creating a safer environment for cyclists, which will attract new cyclists. The proposed multi-modal transportation network for Keele Street will also provide for transit/high occupancy vehicles. Increasing cycling and transit use will reduce automobile dependency, traffic congestion, transportation related greenhouse gas emissions, and support many of the goals and objectives of Green Directions, particularly:

Objective 3.1 *To develop and sustain a network of sidewalks, paths and trails that supports all modes of non-vehicular transportation*

Objective 3.2 *To develop and sustain a network of roads that supports efficient and accessible public and private transit*

Objective 3.3 *Reduce single occupant vehicle (SOV) trips by supporting active transportation, car pooling and public transit*

Economic Impact

There are no immediate economic impacts associated with this report.

Communications Plan

York Region will be apprised of any resolution passed by Council relating to this item.

Purpose

The purpose of this report is to address Council's direction to work with the Region to investigate the possibility of providing segregated bike lanes in the study area covered by the Keele Street Class Environmental Assessment (EA).

Background - Analysis and Options

Council, at its meeting on March 20, 2012, received a staff report on the Region of York's Keele Street Class EA Study for road improvements to Keele Street from Steeles Avenue West to Rutherford Road. The Committee of the Whole Report was adopted and amended, as follows:

“That staff work with the Region of York to investigate the possibility of providing segregated bike lanes along this corridor and report back.”

This report has been prepared in response to the Council direction above.

Compared to traditional bike lanes, segregated bike lanes provide additional separation between cyclists and traffic

A bike lane is a dedicated lane for cycle use only, which is traditionally 1.5m wide and separated from traffic with a single white edge line. A 'segregated bike lane' provides additional separation between cycle traffic and general purpose traffic through:

- pavement marked buffers (plus option for bollards) or
- physical separation between bike lane and traffic (e.g. parking lane, planting/planters or barrier curb) or
- raised or vertically separated bike lanes (separated by mountable curb or boulevard)

York Region has investigated the possibility of providing segregated bike lanes, however they are not possible due to spatial constraints and safety concerns

The Region's original recommendation in the Keele Street Class EA includes a 6 lane cross section to provide for Transit/HOV lanes as well as two 1.5m on-street bike lanes in each direction with a 0.3m gutter. This represents a total dimension of 1.8m from the edge of the Transit/HOV lane to the face of the curb (see original cross section in Attachment No. 1a).

Following Council direction, staff met with Regional staff on April 11, 2012 to discuss the possibility of providing segregated bike lanes along Keele Street. At this meeting, the Region informed staff they would further investigate the possibility of providing segregated bike lanes and report back to the City.

Following this meeting, York Region staff advised the City through correspondence dated May 17, 2012 (see Attachment No. 1) that the existing 36m Keele Street right of way imposes many spatial constraints in order to provide for general purpose traffic lanes, Transit/HOV lanes, bike lanes, boulevards, sidewalks, lighting, streetscaping features, traffic signals, utilities and underground services.

The Region considered the possibility of providing an elevated physical separation; however this was not carried forward due to the following reasons:

- The large number of driveways in the section from Highway 7 to Rutherford Road will require large number of barrier/curb cuts. Also, openings in the barrier will be required at catchbasins locations in order to allow roadway drainage to flow to the catchbasins
- An elevated physical barrier creates safety issues as any low barrier will be difficult for motorists to see during snowfall events and periods of low visibility

The Region of York is now proceeding with detailed design, which includes bike lanes and pavement marked buffers

York Region is now proceeding with detailed design and has revised the typical cross section presented in the Class EA to incorporate a separation between the bike lane and the Transit/HOV lane as follows:

- 0.5m wide pavement marked buffer
- 1.2m wide bike lane
- Modified 0.1m wide gutter

Therefore, the total width of the bike lane from the face of the curb to the edge of the Transit/HOV lane continues to be 1.8m (see proposed cross section in Attachment No. 1b).

As per 2012 – 10 Year Roads Construction Program, approved by Regional Council on January 26, 2012 the Region is proposing to reconstruct Keele Street from Steeles Avenue to the south side of Highway 7 as Phase 1 of the work by 2014.

Phase 2 includes the intersection improvements of Highway 7 as part of VIVA's project to implement bus rapid transit along Highway 7. The proposed timing is between 2015 to 2020.

Anticipated timing for the remaining section of Keele Street from north of Highway 7 northerly to Rutherford Road is currently 2018, at the earliest.

Regional Implications

York Region is the proponent of the Class Environmental Assessment Study for road improvements to Keele Street from Steeles Avenue West to Rutherford Road.

Relationship to Vaughan Vision 2020/Strategic Plan

This report is consistent with the priorities previously set by Council Vaughan Vision 2020 strategic initiatives:

- To enhance and ensure community safety, health and wellness;
- To pursue excellence in service delivery;
- To lead and promote environmental sustainability; and
- To plan and manage growth and economic vitality.

This report is therefore consistent with the priorities previously set by Council.

Conclusion

Council directed staff to work with the Region of York to investigate the possibility of providing segregated bike lanes along the Keele Street corridor from Steeles Avenue West to Rutherford Road. Elevated physical separation is not possible due to spatial constraints and safety concerns. The Region has therefore proposed to include a pavement marked buffer area adjacent to the Transit/HOV lane, and the total width of the bike lane continues to be 1.8m.

Attachments

1. York Region response (dated May 17, 2012)
 - a. Original Keele Street Class EA Cross Section (August 2008)
 - b. Proposed Keele Street Class EA Cross Section (May 2012)

Report prepared by:

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Selma Hubjer, P.Eng., Transportation Engineer – Ext.8674

Respectfully submitted,

Paul Jankowski, P. Eng.
Commissioner of Engineering and Public Works

Andrew Pearce, C.E.T.
Director of Development/
Transportation Engineering

ATTACHMENT NO. 1 YORK REGION RESPONSE



Transportation and
Community Planning
Roads Branch

May 17, 2012

Selma Hubjer
Transportation Engineer
City of Vaughan
2141 Major Mackenzie Drive
Vaughan, Ontario, L6A 1T1

By Email: Selma.Hubjer@vaughan.ca

Dear Selma:

**Re: Keele Street Detailed Design
Steeles Avenue to Highway 7
Bike Lanes**

Further to our meeting of April 11th, 2012 to discuss the Keele Street detailed design project from Steeles Avenue to Highway 7, we have looked into the request to investigate the possibility of providing segregated bike lanes along this section of the Keele Street corridor.

The Keele Street Class Environmental Assessment (Class EA) from Steeles Avenue to Rutherford Road filed in January 2012 presents a typical cross section that has a 1.5 m wide bike lane adjacent to the Transit/HOV lane and a standard curb and gutter section which has the following dimensions: 0.3 m gutter and 0.2 m curb. This represents a total dimension of 1.8 m from the edge of the Transit/HOV lane to the face of curb. (Figure 6.1 (August 2008) attached)

The existing Keele Street right of way is generally 36 m which imposes many spatial constraints in order to provide for general purpose traffic lanes, Transit/HOV lanes, bike lanes, boulevards, sidewalks, lighting, streetscaping features, traffic signals, utilities and underground services.

During the Class EA we investigated the possibility of providing off-road bike lanes within the section of the Keele Street corridor extending from Steeles Avenue to Rutherford Road. This alternative was not moved forward due to the following reasons:

- Safety concerns related to the large number of driveways present in the section from Highway 7 to Rutherford Road
- Spatial constraints in the section of Keele Street crossing Highway 407 do not allow for an off-road bike facility unless the bridge is widened

We considered the possibility of providing an elevated physical separation by means of a barrier/curb between the Transit/HOV lane and the bike lane. This alternative was not carried forward due to the following reasons:

- The large number of driveways in the section from Highway 7 to Rutherford Road will require large number of barrier/curb cuts. Also, openings in the barrier will be required at catchbasins locations in order to allow roadway drainage to flow to the catchbasins
- An elevated physical barrier creates safety issues as any low barrier will be difficult for motorists to see during snowfall events and periods of low visibility

We are now proceeding with the detailed design and have revised the typical cross section presented in the Class EA to incorporate a separation between the bike lane and the Transit/HOV lane as follows:

- 0.5 m wide pavement marked buffer area adjacent to the Transit/HOV lane
- 1.2 m bike lane
- Modified curb and gutter: 0.1 m gutter and 0.2 m curb

The total dimension from the edge of the Transit/HOV lane to the face of the curb continues to be 1.8 m, as per the Class EA typical cross section, however, we have now provided a buffer between the bike lane and the Transit/HOV lane without affecting the property requirements as presented in the Class EA. (Figure 6.1 (May 2012) attached)

We trust this addresses your request to investigate the possibility of providing segregated bike lanes along this section of the Keele Street corridor. Please do not hesitate to contact me at (90) 830-4444 x 5942 or at gina.gammarano@york.ca if there are any further concerns.

Sincerely,

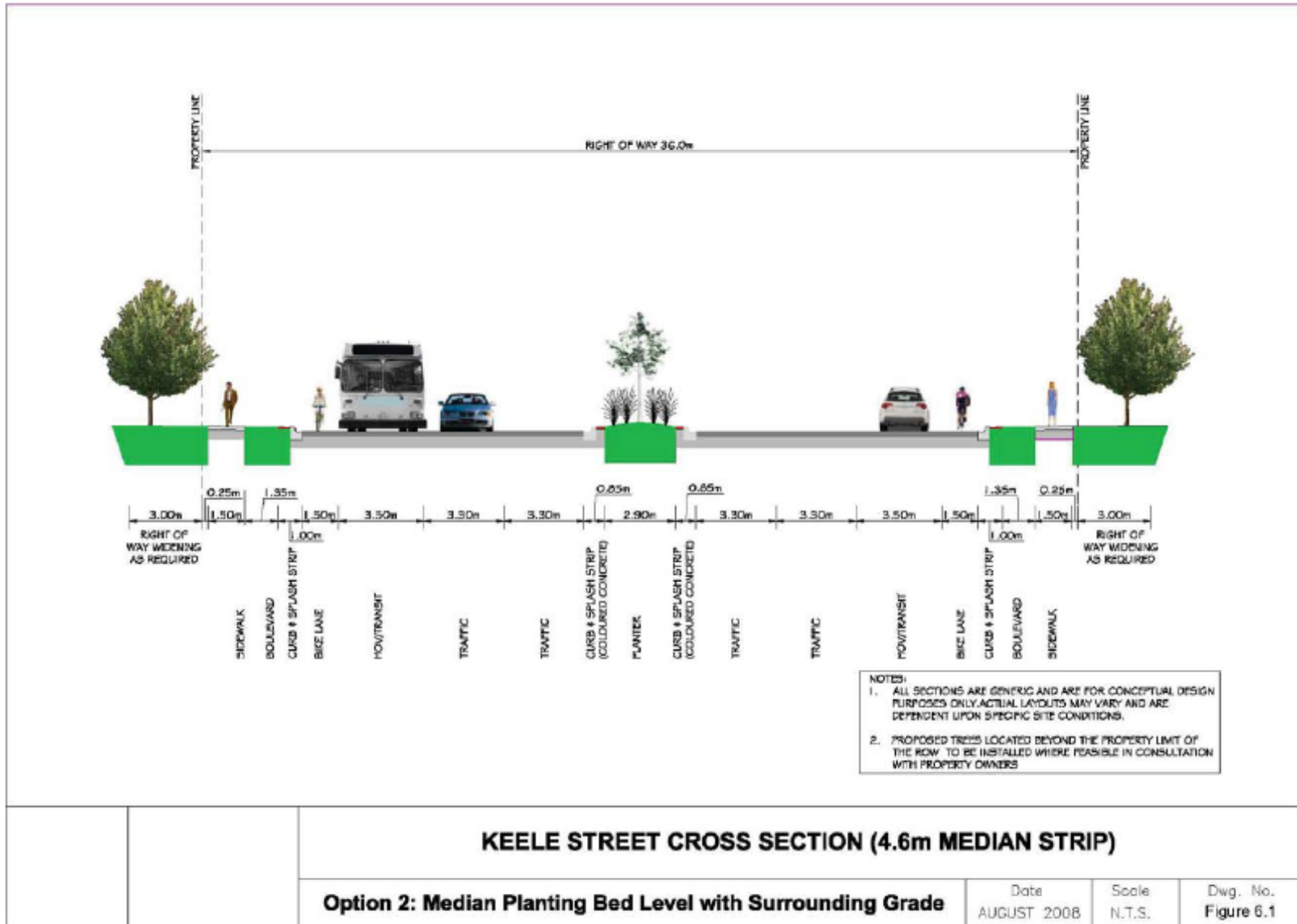
Gina Gammarano, M.Eng., P. Eng., PMP
Project Manager

GG/

Attachments: Figure 6.1 (August 2008)
Figure 6.1 (May 2011)

Copy to: Steve Collins – Manager of Engineering
Salim Alibhai – Manager of Engineering
Steve Kemp – Director of Traffic Management and ITS
Harold McColm – RVA Anderson

ATTACHMENT NO. 1A **ORIGINAL KEELE STREET CLASS EA CROSS SECTION (AUGUST 2008)**



ATTACHMENT NO. 1B **PROPOSED KEELE STREET CLASS EA CROSS SECTION (MAY 2012)**

