

Committee of the Whole Report

DATE: Tuesday, May 07, 2019

WARD(S): 2

TITLE: TEMPORARY ROAD CLOSURE OF MCGILLIVRAY ROAD FROM HUNTINGTON ROAD TO 600 METRES EASTERLY

FROM:

Zoran Postic, Interim Deputy City Manager, Public Works

ACTION: DECISION

Purpose

To seek Council's approval for a temporary road closure of McGillivray Road from Huntington Road to approximately 600 metres easterly. The closure is to facilitate the timely and efficient construction of two bridge piers over McGillivray Road and the CP Rail tracks, as part of the Highway 427 extension construction works. These construction activities have been planned and scheduled to meet the timelines stipulated for overall highway extension project.

Report Highlights

- McGillivray Road is not a high traffic roadway, and a temporary closure of the road will have minimal impact to residents and businesses in the vicinity of the road
- All other reasonable alternatives to a temporary closure, such as creating detours or work zones, were explored and ruled out due to insufficient property available
- Link 427, the design-build-maintain-finance consortium for the Highway 427 extension project, has prepared a detour signage plan to minimize the impacts of the temporary road closure
- Link 427 has also prepared a communications strategy to be sent out to the residents and businesses in the study area.

Recommendation

1. That the necessary by-law be enacted authorizing the temporary road closure of McGillivray Road between June 10, 2019 and September 13, 2019, between Huntington Road and 600 metres easterly.

Background

The Ministry of Transportation (MTO) received approval of the Highway 427 Environmental Assessment in October 2010

In October 2010, the Ministry of Transportation of Ontario (MTO) received approval of the Environmental Assessment (EA) for the extension of Highway 427 from its current terminus at Highway 7 northerly to Major Mackenzie Drive. The approved EA recommended a 6.6-kilometre extension and the construction of three new interchanges at Langstaff Road, Rutherford Road and Major Mackenzie Drive West as well as protection for a dedicated transitway along the west side of the extension and three transitway stations. At the current Highway 427 terminus at Highway 7, a four-lane arterial extension was opened in the Fall 2008 by York Region and was designated as York Regional Road 99 and continues for 700 metres north to Zenway Boulevard. This roadway is slated to be removed during construction to make place for the future Highway 427 extension.

The preferred alignment for the Highway 427 extension project is shown in Attachment 1, and will be as follows:

- A new 6.6-kilometre extension from Highway 7 northerly to Major Mackenzie Drive with:
 - eight lanes from Highway 7 to Rutherford Road and six lanes from Rutherford Road to Major Mackenzie Drive, including the removal of York Regional Road 99 between Highway 7 and Zenway Boulevard
 - three new interchanges (Langstaff Road, Rutherford Road and Major Mackenzie Drive)
 - new median High Occupancy Toll (HOT) lanes
 - grade-separated crossings of the 427 Corridor are proposed at Zenway Boulevard (Highway underpass) and McGillivray Road (Highway overpass).
- A 4-kilometre road widening from Finch Avenue to Highway 7:
 - from six to eight lanes between Finch Avenue to south of Steeles Avenue
 - from four to eight lanes from south of Steeles Avenue to Highway 7
 - new median HOT lanes

The Design-Build-Finance-Maintain assignment for the Highway 427 extension was awarded to Link 427 Consortium in March 2017 to commence the design and construction of the Highway 427 extension

In March 2017, the preliminary engineering phase of the Highway 427 extension was completed with the award of the Design-Build-Finance-Maintain (DBFM) assignment to Link 427 Consortium (“Link”). The Design-Build phase commenced in 2017 and is expected to be completed by Fall 2020.

One of the components of the highway extension is to construct two bridges over McGillivray Road. These bridges will cross McGillivray Road and the CP Rail tracks just to the north of McGillivray Road. A set of piers will be located between the existing road and the CP Rail tracks. To facilitate the safe construction the piers, Link must create a work zone to the south, providing appropriate space and clearance for the construction. Given the nature of the construction, there will be a need to extend this work zone over the existing McGillivray Road area. Link has explored several options, as detailed in Table 1, to provide the required work zone and maintain traffic. It has been deemed that the only viable option is to temporarily close McGillivray Road for a three-month period, from June 10th, 2019 to September 13th, 2019, to construct the piers.

It is also important to note that during the construction of the superstructure, there will be a need for a full closure to install the overhead girders for short durations, i.e., 1-2 days in late 2019.

Previous Reports/Authority

[Highway 427 Expansion Project Update, Committee of the Whole \(Working Session\), June 6th, 2017, Item 2, Report No. 24](#)

[Highway 427 Expansion Project Update, Committee of the Whole, June 21st, 2016, Item 16, Report No. 27](#)

Analysis and Options

McGillivray Road is a rural two-lane gravel road located entirely in Block 60 West and is under the jurisdiction of the City of Vaughan. The road runs in the east-west direction from Huntington Road in the northwest corner of Block 60 West for approximately 800 metres, then bends ninety degrees for approximately 300 metres, running in the north-south direction for approximately 1.6 kilometres to intersect with Rutherford Road in the southeast. Both intersections at Huntington Road and Rutherford Road are stop-controlled. Land use along the road is mainly agricultural, with two construction equipment

and trucking businesses located on the east side, just west of the CP Rail tracks. The statutory speed limit on McGillivray is 80km/h.

The Highway 427 extension preferred alignment will cross Block 60 West from Rutherford Road in the south to Huntington Road in the northwest, ending just west of Huntington Road with the proposed Major Mackenzie Drive interchange. Bridge crossings have been identified over McGillivray Road, east of the intersection with Huntington Road, and over the CP Rail tracks, immediately north of McGillivray Road. These crossings will require the construction of two piers between the existing McGillivray Road and the CP Rail tracks just to the North. The General Arrangement drawing illustrating the future bridge structure over McGillivray Road is shown in Attachment 2.

Link explored three alternative options to compare their impacts with a temporary full road closure, as shown in Table 1:

Option	Description	Outcome
1	Create a diversion to the south to maintain traffic on McGillivray Road	Ruled out as there was insufficient property on the south side of the roadway to construct a detour for the currently posted speed limit of 80 km/hr
2	Create a work zone on the north side where the CP Rail tracks are	Ruled out as the CP Rail was unwilling to provide a work zone within their lands
3	Use a temporary conditions layout from the Ontario Traffic Manual (OTM) - Book 7 to develop the work zone	Ruled out as there was insufficient room to construct the deep foundations of the future bridge

Table 1. Alternative options to a temporary road closure

Given the issues noted above, a temporary road closure over a 600-metre long stretch has been determined to be the optimal option to undertake these works. The temporary closure of McGillivray Road from Huntington Road to 600 meters easterly will:

- create a secure work environment for the required construction activities
- increase construction efficiency
- reduce the overall project risk

The remaining section of McGillivray Road, between the east end of the work zone and intersection of McGillivray Road and Rutherford Road will remain open to traffic. The north

end of this section will terminate in a temporary turnaround area, some 600 metres east of Huntington Road. Signage indicating road closure and detours will be posted along Huntington Road, south of Major Mackenzie Drive in the southbound direction, and north of Rutherford Road in the northbound direction. The proposed closure and traffic management plan is shown in Attachment 3.

There are no residential properties directly fronting onto the section of roadway where the work zone is planned. The lands located on the north side of McGillivray Road belong to CP Rail with two gravel driveways that currently allow access to the tracks, the western one being located 700 metres east of Huntington Road, and the eastern one some 1.7km north of Rutherford Road. Link confirmed that both driveways will continue to be accessible, as they will be outside the planned work zone. The lands located to the south of the work zone are currently owned by the MTO and will not require to be accessed.

In addition, Link has performed an analysis of the impacts that the temporary closure would have on the operations of the adjacent signalized intersections of Huntington Road and Rutherford Road, as well as Huntington Road and Major Mackenzie Drive. It was concluded that the impacts to these intersections will be minimal. As a result, no improvements will be pursued as existing performance conditions will be maintained. Pre and post-closure traffic volumes are shown in Attachment 4.

As a result, Link is requesting a temporary road closure of the section of McGillivray Road from Huntington Road to 600 metres easterly, between June 10th, 2019 and September 13th, 2019, 2019.

A Communications roll-out plan will be provided by Link, including letters to be sent to the residents and a proposed detour signage plan.

Financial Impact

Adoption of this report has no adverse financial impact to the City.

Broader Regional Impacts/Considerations

The proposed temporary full road closure and traffic management plan will be coordinated with York Region as the signalized intersection of Huntington Road and Rutherford Road is under the Region's jurisdiction.

Conclusion

A temporary road closure of McGillivray Road has been determined to be the optimum

alternative to facilitate the construction of two bridge piers over McGillivray Road and the CP Rail tracks, as part of the Highway 427 extension construction works. This will allow the work to be undertaken in an efficient and timely manner and meet the construction timelines stipulated by Link 427.

For more information, please contact Vince Musacchio, Director, Infrastructure Planning and Corporate Asset Management, at Ext. 8311

Attachments

1. Highway 427 Preferred Alignment
2. General Arrangement drawing for Bridge
3. Schematic of Closure Area with Turn Around
4. McGillivray Road Pre and Post-Closure Traffic Volumes

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