EXTRACT FROM COUNCIL MEETING MINUTES OF APRIL 19. 2017

Item 21, Report No. 13, of the Committee of the Whole, which was adopted without amendment by the Council of the City of Vaughan on April 19, 2017.

21 HIGHWAY 400 WIDENING UPDATE – MAJOR MACKENZIE DRIVE TO KING ROAD WARDS 1 AND 3

The Committee of the Whole recommends:

- 1) That the recommendation contained in the following report of the Deputy City Manager of Public Works and the Director of Transportation Services, Parks and Forestry Operations and the Director of Development Engineering and Infrastructure Planning, dated April 4, 2017, be approved; and
- 2) That the presentation by Mr. Donald Cleghorn, Project Manager, SNC-Lavalin Inc., The West Mall, Toronto, and C38, presentation material titled "MTO Contract 2017-2001, Highway 400 Widening, Major Mackenzie Drive to Kind Road", be received.

Recommendation

The Deputy City Manager of Public Works and the Director of Transportation Services, Parks and Forestry Operations and the Director of Development Engineering and Infrastructure Planning recommend:

- 1. That the presentation by the Ministry of Transportation on the status of the Highway 400 widening project between Major Mackenzie Drive and King Road be received;
- 2. That the Ministry of Transportation, Region of York, York Region Rapid Transit Corporation and Metrolinx be requested to work with the City of Vaughan to develop a comprehensive and coordinated traffic management and road user consultation program to address the accumulative impact on traffic flow and mobility across the City resulting from the planned capital infrastructure projects that will be occurring between 2017 and 2019; and
- 3. That the City Clerk be requested to forward a copy of this report to the Ministry of Transportation, Region of York, York Region Rapid Transit Corporation and Metrolinx.

Contribution to Sustainability

This report contributes to the goals and objectives within Green Directions Vaughan, the City's Community Sustainability and Environmental Master Plan, specifically:

Goal 3: To ensure that Vaughan is a city that is easy to get around with a low environmental impact.

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, carpooling and public transit.

Economic Impact

Adoption of this report has no adverse economic impact.

EXTRACT FROM COUNCIL MEETING MINUTES OF APRIL 19, 2017

Item 21, CW Report No. 13 - Page 2

Communications Plan

The Highway 400 widening project is being carried out by the Ministry of Transportation (MTO). The project is anticipated to be completed in three years, starting in spring, 2017 and ending in late 2019.

The MTO is developing a Communications Plan for the Highway 400 widening project. Stakeholders and motorists will be informed of the temporary closure of King-Vaughan Road and Kirby Road. Communication tools include a project website, mobile message signs, and advance notice to local residents and businesses in the area. In addition, notification will be provided to emergency and public service agencies, transit and school bus operators. MTO will be responsible for the installation and maintenance of all traffic control measures and construction signage to provide for pedestrian safety and local access around the construction area.

In addition, the City should work with the Ministry of Transportation, Region of York, York Region Rapid Transit Corporation and Metrolinx to consider other tools to manage traffic in the area by taking advantage of the MTO system for travel choice and tools identified in the York Region travel smart program.

Purpose

The purpose of this report is to provide Council with a status update on the Highway 400 widening project.

Background - Analysis and Options

The widening of Highway 400 from Major Mackenzie Drive to King Road is scheduled to commence in spring 2017

The MTO is undertaking a widening of Highway 400 from Major Mackenzie Drive to King Road. The project consists of the rehabilitation and widening of Highway 400 from six (6) to eight (8) lanes to accommodate new High Occupancy Vehicle (HOV) lanes. It is the second part of the original 2006 design assignment. The reconstruction of the King Road interchange was completed in 2010. MTO had originally intended to start construction of the highway widening component of the project in the Fall 2011 but it was subsequently placed on hold pending funding.

The scope to be performed on the structures within the project limits is as follows:

- The Kirby Road Overpass structure will be widened to accommodate the ultimate ten lane cross-section of Highway 400, and the existing bridge will be rehabilitated
- The existing King-Vaughan Road Underpass structure will be demolished and replaced to accommodate the ultimate ten lane cross-section of Highway 400
- The East Humber River Arch culvert, located between King-Vaughan Road and King Road will be extended and rehabilitated to support the ultimate ten lanes cross section
- Eleven existing box culverts will be extended and rehabilitated to accommodate the widening of Highway 400

In addition, the project includes footings and provisions for future HOT Message and Toll and Enforcement Signs. The existing MTO CCTV camera system for monitoring traffic will be extended from Langstaff Road to King Road.

York Region to assume the jurisdiction of a segment of King-Vaughan Road in 2017

EXTRACT FROM COUNCIL MEETING MINUTES OF APRIL 19, 2017

Item 21, CW Report No. 13 - Page 3

In 2009, the City requested MTO to design the substructure of the new King-Vaughan Road replacement bridge over Highway 400 to accommodate the widening of the deck to a four (4) lane cross-section in the future. Subsequently, the City requested the Region of York to assume the jurisdiction of King-Vaughan Road between Pine Valley and Bathurst Street. The City is actively working with the Region to satisfy the conditions of the transfer of the roadway to the Region, which should be completed in May 2017.

In light of the pending jurisdictional change, the Region recently gave direction to MTO to not overbuild the substructure of the new King-Vaughan Road bridge due to the uncertainty of the final alignment of the proposed GTA West corridor and the location of the new interchange on Highway 400 that is required to service the employment lands in OPA637. Accordingly, MTO will be replacing the existing King-Vaughan bridge structure with a two (2) lane cross-section as part of the current highway widening project.

The highway construction is anticipated to be completed in three years, from May 2017 to November 2019

During the planned construction, Kirby Road and King-Vaughan Road will be closed sequentially at Highway 400 (within the MTO's controlled access limit) to facilitate the bridge widening and replacement work. Generally, the temporary closure of Kirby Road is scheduled for 2017 and King-Vaughan Road for 2018. Durations of temporary closures will be minimized and staff will work with MTO to mitigate impacts.

Stakeholders and motorists will be informed of the construction activities and traffic will be managed according to MTO's traffic management plan

MTO's consultant (SNC-Lavalin) has completed a traffic impact study in 2010 to support the temporary closing of Kirby Road and King-Vaughan Road. The project was then put on-hold by the Ministry until late 2016. In November 2016, the MTO advised the City that they will be proceeding with tender and construction of the highway improvement works in early 2017. With consideration for the planned construction projects and new developments in the area, an updated traffic analysis was conducted to assess the impacts of the temporary closing of Kirby Road and King-Vaughan Road.

According to the updated traffic analysis, all local access would be maintained on Kirby Road and King-Vaughan Road during the temporary road closures. The proposed sequential temporary road closures to facilitate construction work on Highway 400 will result in the diversion of through traffic but not local traffic. As a worst case scenario, the analysis assumed that all existing traffic on Kirby Road will use King-Vaughan Road as an alternative route when Kirby road is temporary closed to general traffic. Similarly, all existing traffic on King-Vaughan Road will use Kirby Road as an alternative route when King-Vaughan Road is temporary closed to general traffic. The results of the analysis indicate that there is a need for traffic signals at the regional intersections of Weston Road and Kirby Road (from safety perspective) and Jane Street and Kirby Road (from traffic volume perspective).

MTO has indicated that it will install temporary traffic signals at the intersections of Weston Road and Kirby Road and Jane Street and Kirby Road as part of the highway construction project. The intersection of Weston Road and King-Vaughan Road will be monitored to determine if volumes increase and warrant a potential traffic signal.

A Traffic Management Plan will be in place to inform stakeholders and motorists of the temporary road closures of King-Vaughan Road and Kirby Road. A project website will be set up to provide information on the construction activities. Any public inquiries regarding the project can be

EXTRACT FROM COUNCIL MEETING MINUTES OF APRIL 19, 2017

Item 21, CW Report No. 13 - Page 4

directed to the MTO project team. Mobile message signs will be set up at key intersections and advance notice will be distributed to local residents and businesses in the area. In addition, notification will be provided to emergency services and public agencies, transit and school bus operators. The MTO will be responsible for the installation and maintenance of all traffic control measures and construction signage to provide for the pedestrian safety and local access around the construction area.

Major construction will be occurring on other arterial corridors during the period between 2017 and 2019

MTO, York Region, York Region Rapid Transit Corporation and Metrolinx will be undertaking capital infrastructure works on other arterial road corridors within the City of Vaughan during the period between 2017 and 2019 as illustrated on Attachment 2.

In addition, the City plans to conduct road rehabilitation projects from 2018 to 2019, as follows:

- In 2018, King-Vaughan Road from Pine Valley Drive to Kipling Avenue;
- In 2018, Pine Valley Drive from Kirby Road to the northern limits of Vaughan;
- In 2019, Kirby Road from Albion Vaughan Road to Huntington Road; and
- In 2019, Kirby Road from Kipling Avenue to Keele Street.

A comprehensive and coordinated traffic management plan would assist in managing traffic across the City

All these planned capital projects are necessary but will result in short term disruption to traffic during construction. In an attempt to better manage traffic during the construction of all these projects, staff is recommending that the Ministry of Transportation, Region of York, York Region Rapid Transit and Metrolinx be requested to work with the City of Vaughan to develop a comprehensive and coordinated traffic management and road user consultation program to better manage the accumulative effect of all the planned construction activity in the City during the two year period between 2017-2019.

The presentation from MTO staff will update Council on the status of the Highway 400 widening project and expand on the following areas:

- Scope of work and project status
- Construction staging and schedule
- Traffic Management and Communication Plan
- Next Steps

Through close collaboration, every effort will be made by the agencies to keep the impacts of construction to a minimum on the surrounding community while ensuring public and workforce safety during the construction.

Relationship to Term of Council Service Excellence Strategy Map (2014-2018)

In consideration of the strategic priorities related to the Term of Council Service Excellence Strategy Map (2014 – 2018), this report is consistent with the following Term of Council Priorities:

- Improve municipal network; and
- Continue to ensure the safety and well-being of citizens.

EXTRACT FROM COUNCIL MEETING MINUTES OF APRIL 19, 2017

Item 21, CW Report No. 13 - Page 5

Regional Implications

York Region staff participates in the Highway 400 widening project stakeholder coordination meetings. These meetings assists in coordinating the project needs, design, traffic management, and other matters of Regional interest associated with the Highway 400 widening project.

Conclusion

The presentation from MTO staff will provide an update to Council on the status of the Highway 400 widening project from Major Mackenzie Drive to King Road. The widening of Highway 400 will improve the efficiency of the road network and provide for inter-and intra-municipal travel within the City.

Staff is recommending that the Ministry of Transportation, Region of York, York Region Rapid Transit Corporation and Metrolinx be requested to work with the City of Vaughan to develop a comprehensive and coordinated traffic management and road user consultation program to manage the accumulative effect of all the construction activity that will be occurring in the City during the two year period between 2017 and 2019.

Attachment

1. Planned Major Infrastructure Improvements Under Construction 2017-2019

Report prepared by:

Mani Shahrokni, Transportation Project Manager, Ext. 8163 Margie Chung, Manager Traffic Engineering, Ext. 6173

(A copy of the attachments referred to in the foregoing have been forwarded to each Member of Council and a copy thereof is also on file in the office of the City Clerk.)











Committee of the Whole Presentation

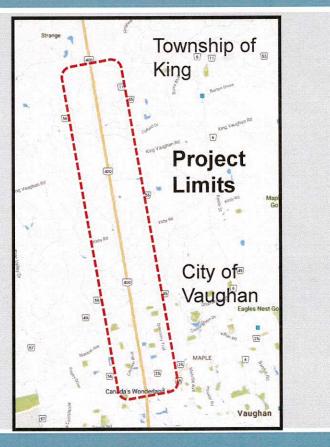
Tuesday April 4, 2017 City of Vaughan, 2141 Major Mackenzie Drive

MTO Contract 2017-2001
Highway 400 Widening
Major Mackenzie Drive to King Road

Project Overview

 Widening of Highway 400 from 6 to 8 lanes with provisions for ultimate 10lane cross section

 2nd part of original 2006 design assignment, King Road Interchange reconstruction completed in 2010







Agenda

3

Scope of Work

- Structures
- Construction Staging & Detours
- Roadside Safety & Signing
- Environmental Mitigation
- Illumination





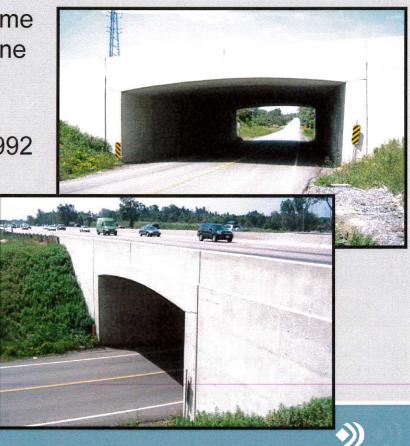
Structures – Kirby Road Overpass

 Reinforced concrete rigid frame with span of 11.3m over 2-lane Kirby Road

Constructed circa 1950;
 rehabilitated & widened in 1992

 Will be widened to support ultimate 10-lane section

 Existing bridge will be rehabilitated





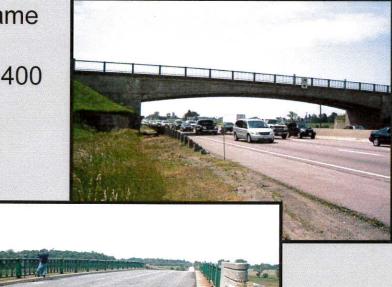
Structures – King-Vaughan Road Underpass

Reinforced concrete rigid frame
 2-lane bridge with span of
 37.4m over 6-lane Highway 400

 Constructed in 1960; rehabilitated in 1993

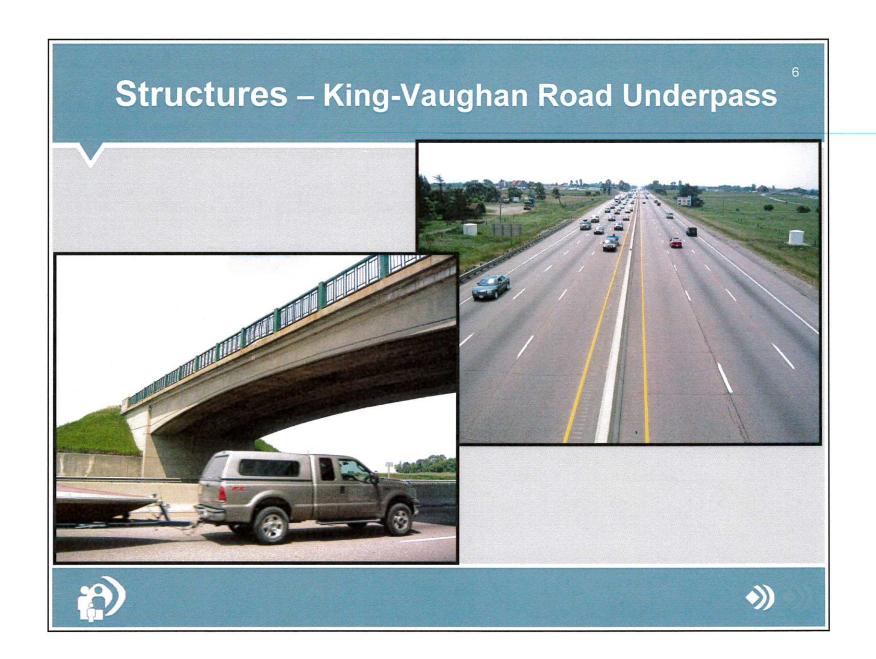
 Will be replaced to support ultimate 10-lane section

 Existing bridge will be demolished









Structures – East Humber River Arch Culvert

 Reinforced concrete barrel arch with diameter 12m; total length of 73m under Highway 400

 Constructed in 1946 and widened in 1950s; rehabilitated 1998

 Will be extended to support ultimate 10-lane section

 Located south of King Road in the Township of King







8

Construction Staging

Kirby Road Temporary Closure

- Kirby Road needs to be temporarily closed for approximately
 5 months (June 2017 to October 2017)
- Access will be maintained for local traffic at all times

King-Vaughan Road Temporary Closure

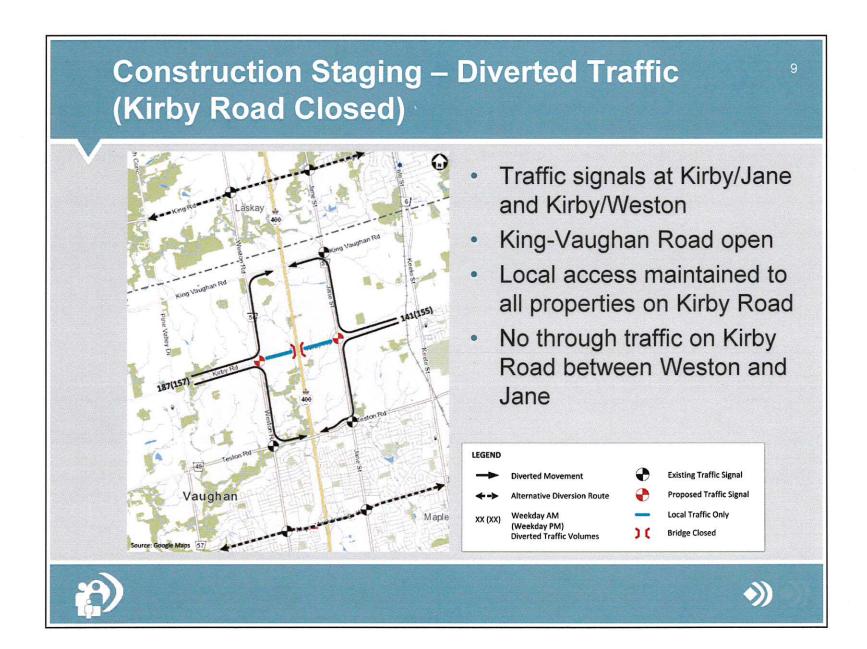
- King-Vaughan Road needs to be temporarily closed for approximately 8 months (April 2018 to November 2018)
- Access will be maintained for local traffic at all times

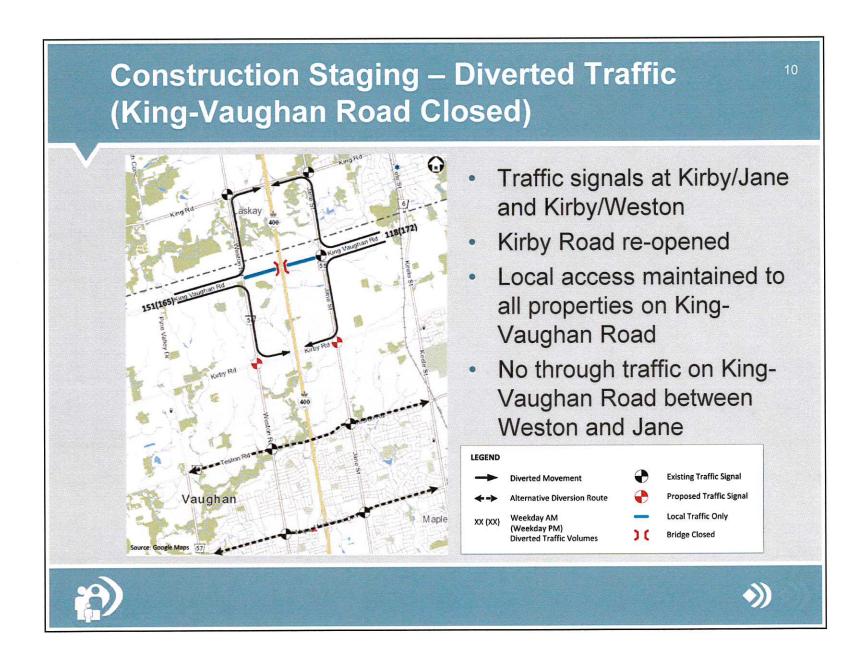
Highway 400 Temporary Closure

- Bridge demolition at King-Vaughan Road (Sunday 00:00 08:00)
- Nightly ramp closures as required for widening/tie-in work









Traffic Management and Communication Plan

11

Traffic Management Plan

- Traffic signals installed before Kirby Road closure:
 - Kirby Road at Weston Road and
 - Kirby Road at Jane Street
- York Region will assume ownership and operations of traffic signals following construction
- Local access on Kirby Road and King-Vaughan Road will be maintained during respective bridge closures
- Roadside signage placed in advance of area to inform drivers of the road closures





Traffic Management and Communication Plan

12

Public Information Plan

- Flyers with general project details and timing of planned closure of Kirby Road will be distributed to property owners/businesses on Jane Street and Weston Road from Major Mackenzie Drive to King Road 2 weeks prior to work
- Flyers with general project details and timing of planned closure of King-Vaughan Road will be distributed to property owners/ businesses on Jane Street and Weston Road from Major Mackenzie Drive to King Road 2 weeks prior to work





Traffic Management and Communication Plan

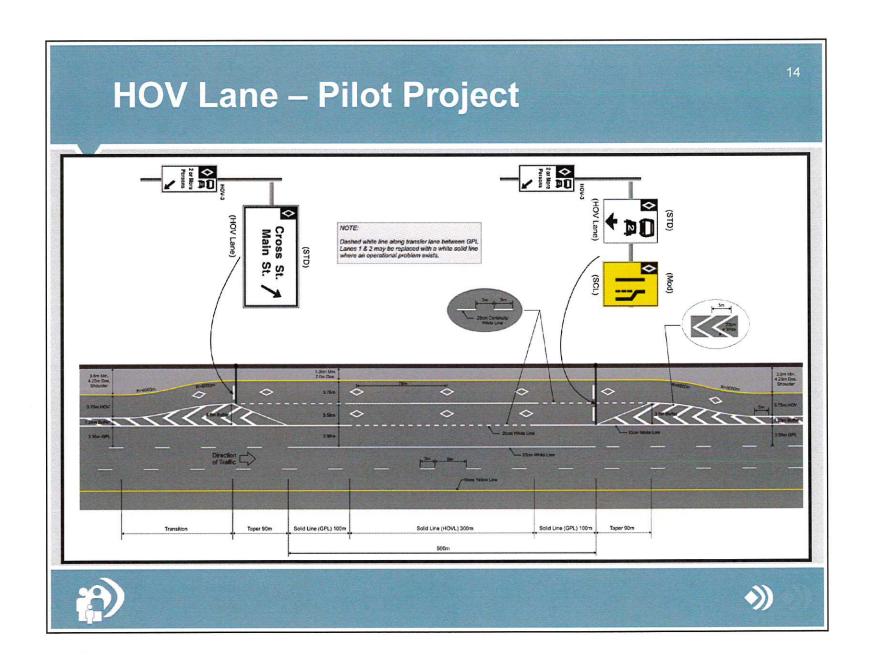
13

Public Information Plan

- Weekly updates will be provided to the City of Vaughan on traffic impacts, closure information and traffic detours within the project area
- Area emergency services, school boards and local municipalities will be provided with written advance notification of construction timing, and long term and temporary road closure periods
- The Contract Administrator (CA) will provide closure information to York Region, City of Vaughan and King Township to post on their websites



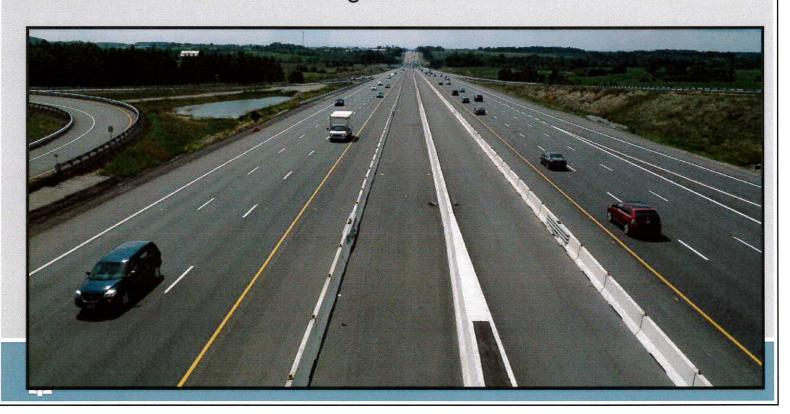




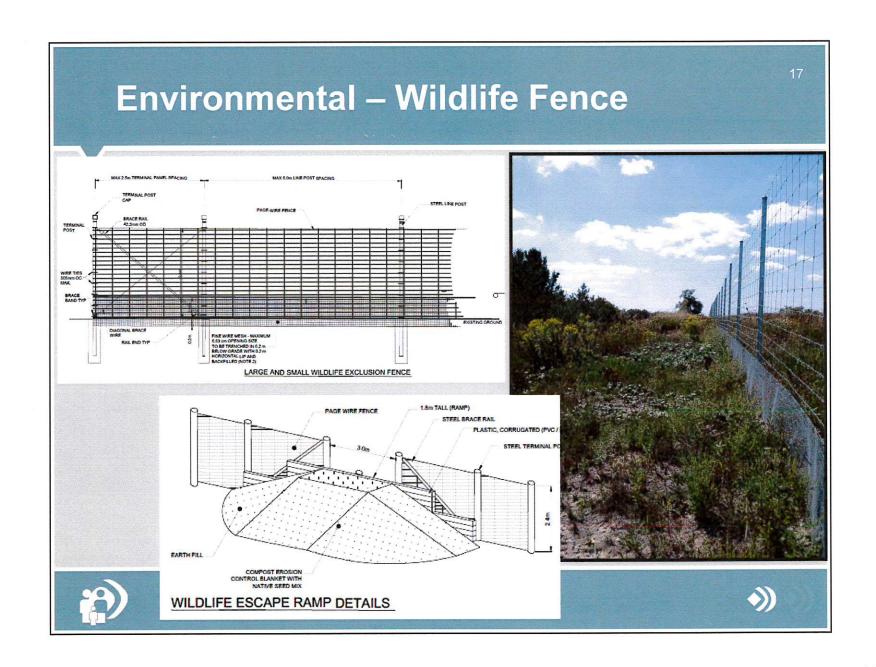
Roadside Safety

15

- Median concrete 'Tall Wall' barrier
- Steel Beam Guiderail along outside shoulders

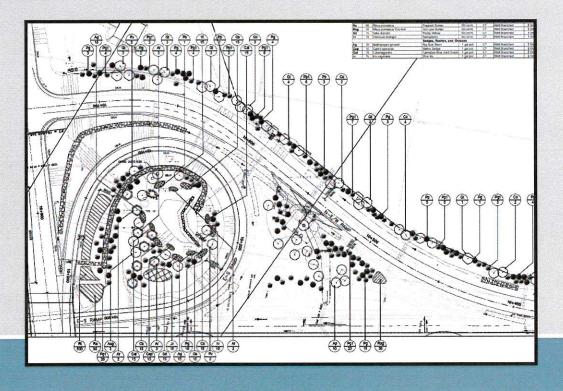


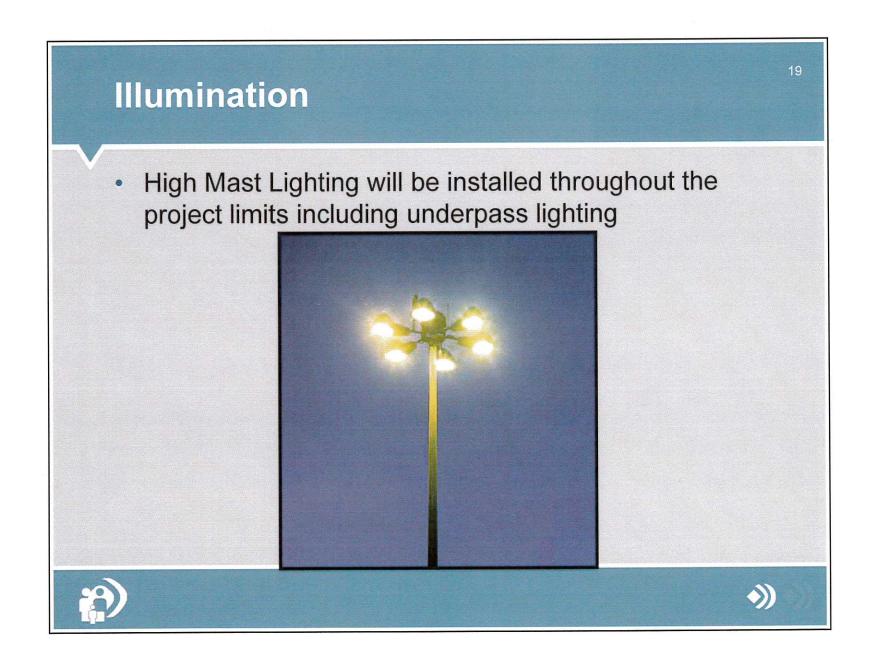
Environmental Advance Clearing contract for migratory birds & bat boxes Noise By-Law exemptions (King & Vaughan) At the request of MNRF, wildlife fencing will be installed in East Humber River valley to funnel mammals towards the safe crossing at the arch culvert

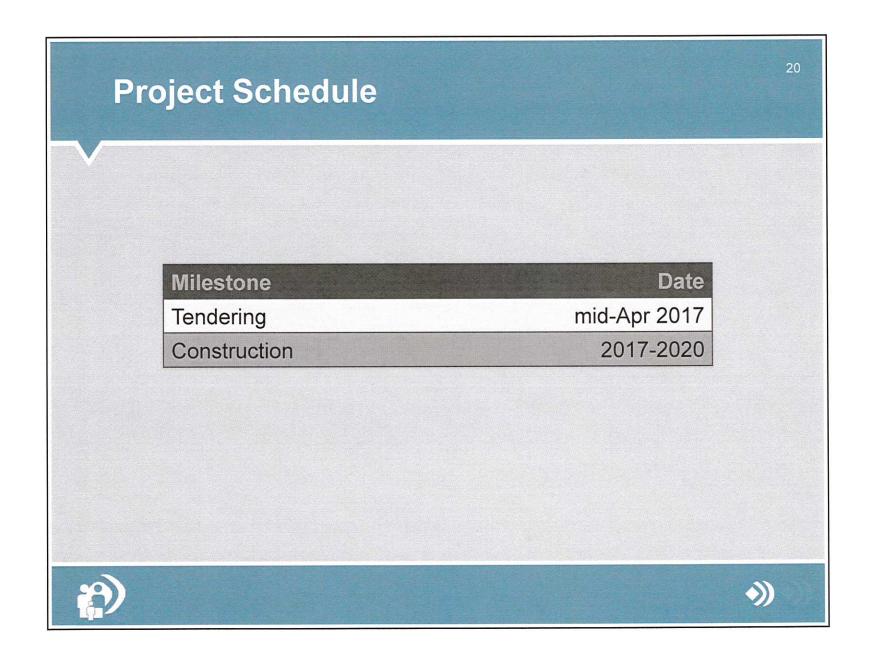


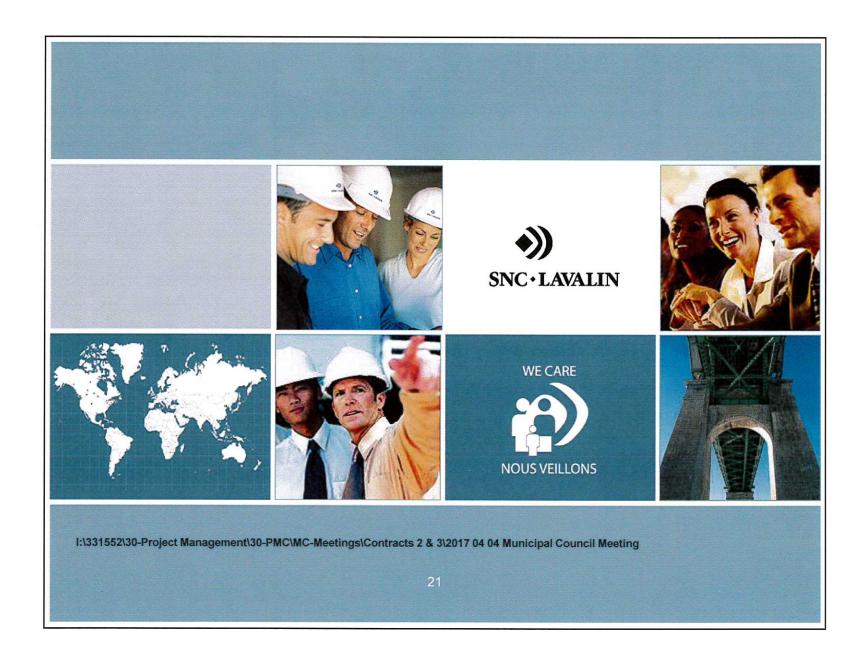


 At King Road Interchange and throughout entire corridor where existing is impacted









APRIL 4, 2017

HIGHWAY 400 WIDENING UPDATE – MAJOR MACKENZIE DRIVE TO KING ROAD WARDS 1 AND 3

Recommendation

The Deputy City Manager of Public Works and the Director of Transportation Services, Parks and Forestry Operations and the Director of Development Engineering and Infrastructure Planning recommend:

- 1. That the presentation by the Ministry of Transportation on the status of the Highway 400 widening project between Major Mackenzie Drive and King Road be received;
- 2. That the Ministry of Transportation, Region of York, York Region Rapid Transit Corporation and Metrolinx be requested to work with the City of Vaughan to develop a comprehensive and coordinated traffic management and road user consultation program to address the accumulative impact on traffic flow and mobility across the City resulting from the planned capital infrastructure projects that will be occurring between 2017 and 2019; and
- 3. That the City Clerk be requested to forward a copy of this report to the Ministry of Transportation, Region of York, York Region Rapid Transit Corporation and Metrolinx.

Contribution to Sustainability

This report contributes to the goals and objectives within Green Directions Vaughan, the City's Community Sustainability and Environmental Master Plan, specifically:

Goal 3: To ensure that Vaughan is a city that is easy to get around with a low environmental impact.

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, carpooling and public transit.

Economic Impact

Adoption of this report has no adverse economic impact.

Communications Plan

The Highway 400 widening project is being carried out by the Ministry of Transportation (MTO). The project is anticipated to be completed in three years, starting in spring, 2017 and ending in late 2019.

The MTO is developing a Communications Plan for the Highway 400 widening project. Stakeholders and motorists will be informed of the temporary closure of King-Vaughan Road and Kirby Road. Communication tools include a project website, mobile message signs, and advance notice to local residents and businesses in the area. In addition, notification will be provided to emergency and public service agencies, transit and school bus operators. MTO will be responsible for the installation and maintenance of all traffic control measures and construction signage to provide for pedestrian safety and local access around the construction area.

In addition, the City should work with the Ministry of Transportation, Region of York, York Region Rapid Transit Corporation and Metrolinx to consider other tools to manage traffic in the area by taking advantage of the MTO system for travel choice and tools identified in the York Region travel smart program.

Purpose

The purpose of this report is to provide Council with a status update on the Highway 400 widening project.

Background - Analysis and Options

The widening of Highway 400 from Major Mackenzie Drive to King Road is scheduled to commence in spring 2017

The MTO is undertaking a widening of Highway 400 from Major Mackenzie Drive to King Road. The project consists of the rehabilitation and widening of Highway 400 from six (6) to eight (8) lanes to accommodate new High Occupancy Vehicle (HOV) lanes. It is the second part of the original 2006 design assignment. The reconstruction of the King Road interchange was completed in 2010. MTO had originally intended to start construction of the highway widening component of the project in the Fall 2011 but it was subsequently placed on hold pending funding.

The scope to be performed on the structures within the project limits is as follows:

- The Kirby Road Overpass structure will be widened to accommodate the ultimate ten lane cross-section of Highway 400, and the existing bridge will be rehabilitated
- The existing King-Vaughan Road Underpass structure will be demolished and replaced to accommodate the ultimate ten lane cross-section of Highway 400
- The East Humber River Arch culvert, located between King-Vaughan Road and King Road will be extended and rehabilitated to support the ultimate ten lanes cross – section
- Eleven existing box culverts will be extended and rehabilitated to accommodate the widening of Highway 400

In addition, the project includes footings and provisions for future HOT Message and Toll and Enforcement Signs. The existing MTO CCTV camera system for monitoring traffic will be extended from Langstaff Road to King Road.

York Region to assume the jurisdiction of a segment of King-Vaughan Road in 2017

In 2009, the City requested MTO to design the substructure of the new King-Vaughan Road replacement bridge over Highway 400 to accommodate the widening of the deck to a four (4) lane cross-section in the future. Subsequently, the City requested the Region of York to assume the jurisdiction of King-Vaughan Road between Pine Valley and Bathurst Street. The City is actively working with the Region to satisfy the conditions of the transfer of the roadway to the Region, which should be completed in May 2017.

In light of the pending jurisdictional change, the Region recently gave direction to MTO to not overbuild the substructure of the new King-Vaughan Road bridge due to the uncertainty of the final alignment of the proposed GTA West corridor and the location of the new interchange on Highway 400 that is required to service the employment lands in OPA637. Accordingly, MTO will be replacing the existing King-Vaughan bridge structure with a two (2) lane cross-section as part of the current highway widening project.

The highway construction is anticipated to be completed in three years, from May 2017 to November 2019

During the planned construction, Kirby Road and King-Vaughan Road will be closed sequentially at Highway 400 (within the MTO's controlled access limit) to facilitate the bridge widening and replacement work. Generally, the temporary closure of Kirby Road is scheduled for 2017 and King-Vaughan Road for 2018. Durations of temporary closures will be minimized and staff will work with MTO to mitigate impacts.

Stakeholders and motorists will be informed of the construction activities and traffic will be managed according to MTO's traffic management plan

MTO's consultant (SNC-Lavalin) has completed a traffic impact study in 2010 to support the temporary closing of Kirby Road and King-Vaughan Road. The project was then put on-hold by the Ministry until late 2016. In November 2016, the MTO advised the City that they will be proceeding with tender and construction of the highway improvement works in early 2017. With consideration for the planned construction projects and new developments in the area, an updated traffic analysis was conducted to assess the impacts of the temporary closing of Kirby Road and King-Vaughan Road.

According to the updated traffic analysis, all local access would be maintained on Kirby Road and King-Vaughan Road during the temporary road closures. The proposed sequential temporary road closures to facilitate construction work on Highway 400 will result in the diversion of through traffic but not local traffic. As a worst case scenario, the analysis assumed that all existing traffic on Kirby Road will use King-Vaughan Road as an alternative route when Kirby road is temporary closed to general traffic. Similarly, all existing traffic on King-Vaughan Road will use Kirby Road as an alternative route when King-Vaughan Road is temporary closed to general traffic. The results of the analysis indicate that there is a need for traffic signals at the regional intersections of Weston Road and Kirby Road (from safety perspective) and Jane Street and Kirby Road (from traffic volume perspective).

MTO has indicated that it will install temporary traffic signals at the intersections of Weston Road and Kirby Road and Jane Street and Kirby Road as part of the highway construction project. The intersection of Weston Road and King-Vaughan Road will be monitored to determine if volumes increase and warrant a potential traffic signal.

A Traffic Management Plan will be in place to inform stakeholders and motorists of the temporary road closures of King-Vaughan Road and Kirby Road. A project website will be set up to provide information on the construction activities. Any public inquiries regarding the project can be directed to the MTO project team. Mobile message signs will be set up at key intersections and advance notice will be distributed to local residents and businesses in the area. In addition, notification will be provided to emergency services and public agencies, transit and school bus operators. The MTO will be responsible for the installation and maintenance of all traffic control measures and construction signage to provide for the pedestrian safety and local access around the construction area.

Major construction will be occurring on other arterial corridors during the period between 2017 and 2019

MTO, York Region, York Region Rapid Transit Corporation and Metrolinx will be undertaking capital infrastructure works on other arterial road corridors within the City of Vaughan during the period between 2017 and 2019 as illustrated on Attachment 2.

In addition, the City plans to conduct road rehabilitation projects from 2018 to 2019, as follows:

• In 2018, King-Vaughan Road from Pine Valley Drive to Kipling Avenue;

- In 2018, Pine Valley Drive from Kirby Road to the northern limits of Vaughan;
- In 2019, Kirby Road from Albion Vaughan Road to Huntington Road; and
- In 2019, Kirby Road from Kipling Avenue to Keele Street.

A comprehensive and coordinated traffic management plan would assist in managing traffic across the City

All these planned capital projects are necessary but will result in short term disruption to traffic during construction. In an attempt to better manage traffic during the construction of all these projects, staff is recommending that the Ministry of Transportation, Region of York, York Region Rapid Transit and Metrolinx be requested to work with the City of Vaughan to develop a comprehensive and coordinated traffic management and road user consultation program to better manage the accumulative effect of all the planned construction activity in the City during the two year period between 2017-2019.

The presentation from MTO staff will update Council on the status of the Highway 400 widening project and expand on the following areas:

- Scope of work and project status
- Construction staging and schedule
- Traffic Management and Communication Plan
- Next Steps

Through close collaboration, every effort will be made by the agencies to keep the impacts of construction to a minimum on the surrounding community while ensuring public and workforce safety during the construction.

Relationship to Term of Council Service Excellence Strategy Map (2014-2018)

In consideration of the strategic priorities related to the Term of Council Service Excellence Strategy Map (2014 – 2018), this report is consistent with the following Term of Council Priorities:

- Improve municipal network; and
- Continue to ensure the safety and well-being of citizens.

Regional Implications

York Region staff participates in the Highway 400 widening project stakeholder coordination meetings. These meetings assists in coordinating the project needs, design, traffic management, and other matters of Regional interest associated with the Highway 400 widening project.

Conclusion

The presentation from MTO staff will provide an update to Council on the status of the Highway 400 widening project from Major Mackenzie Drive to King Road. The widening of Highway 400 will improve the efficiency of the road network and provide for inter-and intra-municipal travel within the City.

Staff is recommending that the Ministry of Transportation, Region of York, York Region Rapid Transit Corporation and Metrolinx be requested to work with the City of Vaughan to develop a comprehensive and coordinated traffic management and road user consultation program to manage the accumulative effect of all the construction activity that will be occurring in the City during the two year period between 2017 and 2019.

Attachment

1. Planned Major Infrastructure Improvements Under Construction 2017-2019

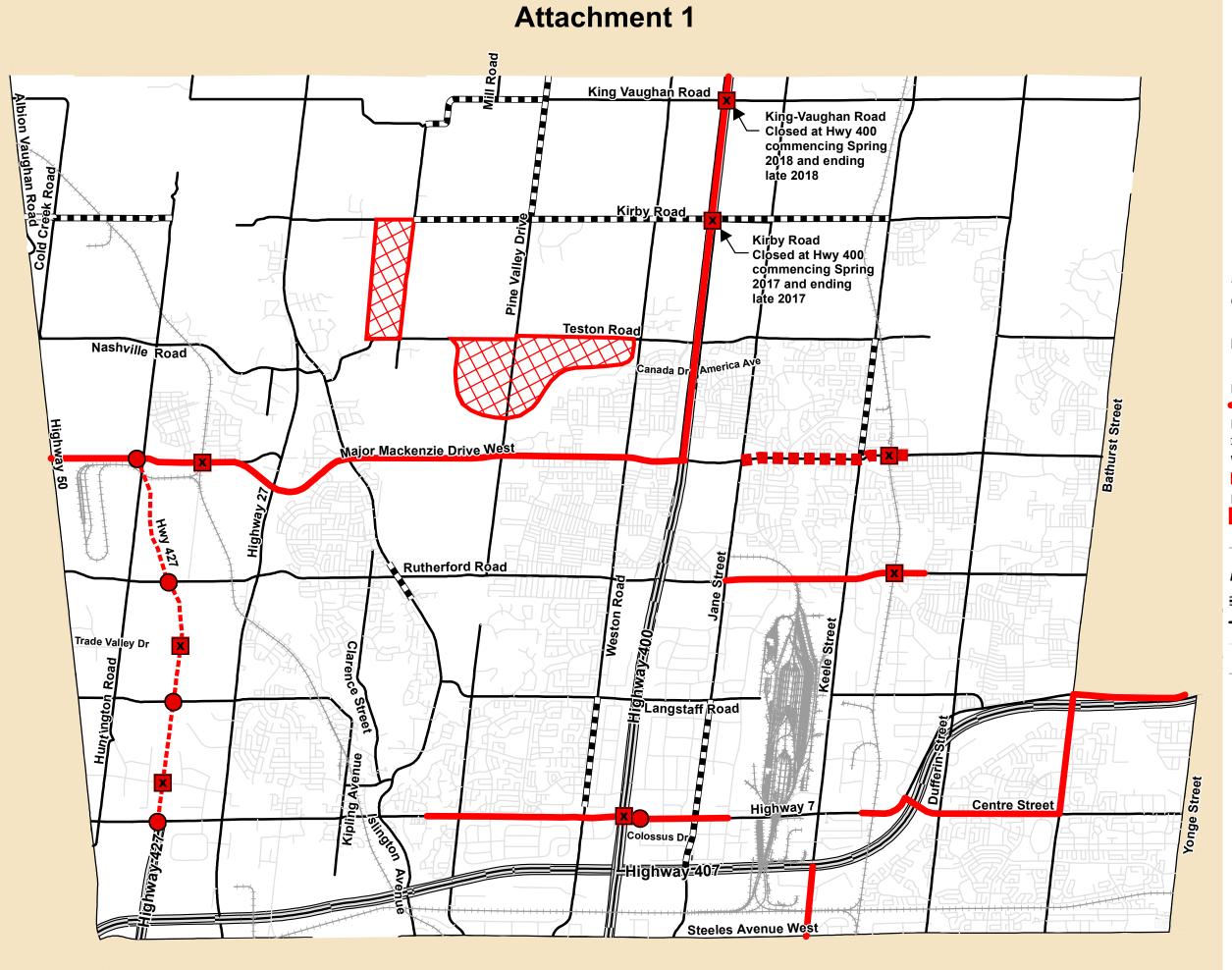
Report prepared by:

Mani Shahrokni, Transportation Project Manager, Ext. 8163 Margie Chung, Manager Traffic Engineering, Ext. 6173

Respectfully submitted,

Stephen Collins, P.Eng Deputy City Manager, Public Works Zoran Postic, Director, Transportation Services, Parks and Forestry Operations

Andrew Pearce Director, Development Engineering and Infrastructure Planning Margie Chung Manager, Traffic Engineering



Planned Major Infrastructure Improvements Under Construction 2017 - 2019

LEGEND

Grade Separations / Bridge Expansions



Interchange Improvements



Road Widening / Improvements

Road Resurfacing

Watermain Replacement

Major Subdivision Construction



BASE MAP INFORMATION

Freeway

─ Major Road

Local Road

