



Report to: Development Services Committee

Report Date: June 26, 2012

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**SUBJECT:** Birchmount Road Rouge River Crossing and Road Extension

**PREPARED BY:** Simon Hung, Senior Capital Works Engineer Ext. 2136

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**RECOMMENDATION:**

- 1) **THAT** the staff report entitled, "Birchmount Road Rouge River Crossing and Road Extension" be received;
- 2) **AND THAT** subject to receipt of approvals as listed in this report, funding commitments or alternative arrangements, the CAO be authorized to approve the award of the construction contract for this project during the Council summer recess;
- 3) **AND THAT** a Purchase Order be issued to Schollen & Company Inc., as a preferred supplier, in accordance with Purchasing By-Law 2004-341, Part II, Section 7 (1) (h), to carry out a Consolidated Conservation Strategy Report to evaluate the comprehensive environmental impact and restoration plan in the Rouge River valley corridor as requested by the Toronto Region Conservation Authority as a condition of permit approval, in the amount of \$105,544.45 (from capital account 083-5350-11078-005 - Birchmount Crossing at Rouge River - Design), inclusive of contingency and HST impact;
- 4) **AND THAT** Mayor and Clerk be authorized to execute cost sharing or any other agreements/documents required to give effect to this report, to the satisfaction of the Treasurer and Commissioner of Development Services;
- 5) **AND THAT** staff be authorized and directed to do all things necessary to give effect to this resolution.

**PURPOSE:**

The purpose of this report is to update Council on the status of the Birchmount Road project and seek approval for the contract award subject to receipt of outstanding approvals and funding commitments.

The Ministry of Natural Resources (MNR) has advised they do not anticipate that they can process and provide a permit until June 2013. This will delay the delivery of the Birchmount project and the completion of the Markham District Energy (MDE) service until summer/fall 2014. As the occupancy date of the Times phase 1 development is September 1, 2013, which is dependent on MDE servicing, MDE may have to set up temporary facilities to provide heating during the 2013/14 winter at an estimated cost of approximately \$500,000 and an additional \$500,000 to provide cooling for summer 2014.

**BACKGROUND:**

Times Group commenced its phase 1 development in Markham Uptown in 2011 and occupancy is now scheduled for fall 2013. The heating and cooling system for the Times development will rely on the Markham District Energy (MDE) system. Four (4) circulation pipes, (two (2) heating and two (2) cooling), will be extended north from the existing MDE infrastructure on Birchmount Road south of the Rouge River and be supported by the proposed bridge into the Times development to provide service. This triggers the

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need to proceed with the construction of the Rouge River crossing to provide road connectivity and to facilitate Markham District Energy (MDE) system to cross the river by means of the bridge structure.

Times Group has advised that the occupancy for the development is scheduled for September 1, 2013. Any delay in the completion of the bridge and consequently the MDE system will negatively impact the occupancy or significantly increase the cost to MDE to set up temporary facilities to service the proposed development.

In addition to the Rouge River crossing, an un-constructed section of Birchmount Road to the south within the Remington property will be included in this project to allow for the extension of the road and the MDE system (Attachment 'A'). Once the river crossing and the un-finished section of the road is constructed, Birchmount Road will be fully connected from Highway 7 to 14<sup>th</sup> Avenue.

Before the project can be constructed, the following are required.

- Completion of the Class Environment Assessment Process
- Conveyance of lands from Remington
- Detailed design
- Tender and Award
- Permits from various agencies to construct a bridge over the Rouge River

#### **Environmental Assessment Completion:**

A Class Environmental Assessment (EA) for the extension of Birchmount Road from Highway 7 to 14<sup>th</sup> Avenue was completed in 1996 and an addendum to determine a preferred alternative for the Rouge River crossing, including the bridge location, span and structure type has been completed by MMM Group on behalf of the Times Group. The addendum was filed for public review on April 27, 2012 with a 30 days comment period. No objection was received after the comment period and the EA document is now approved.

#### **Detailed Design:**

The Town retained AECOM in May 2011 to commence the detailed design of the Birchmount Rouge River crossing in advance of the completion of the EA process to fast track the design in order to meet the schedule for the Times development. The detailed design of the crossing was completed in early May 2012. At the same time, detailed design of the remaining unconstructed section of Birchmount Road within the Remington property has been completed by the developer's engineer. MDE has also completed the design for extending the heating and cooling system from the existing infrastructure to the Times development.

All the above designs will be included in a single construction contract to avoid multiple contractors working in the same area and to streamline coordination and administrative work.

#### **Schedule for Tender, Award and Construction:**

A pre-qualification for contractor was completed earlier this year for this project. Nine (9) contractors have been pre-qualified. The following is a schedule for the tender and award process.

- Tender was issued to the pre-qualified contractors for bidding on May 18, 2012.
- Tender closing is deferred to July 26, 2012.
- After evaluation of the bids, recommendation for award of the contract is scheduled for August 2012.
- Approval of the award (by CAO while Council is in summer recess) late August 2012.
- Construction commences September 2012.
- Bridge construction completion and commissioning of the MDE system by September 1, 2013.

- Completion of the road works by December 1, 2013
- Completion of the streetscape and river valley restoration Spring 2014

Times Group confirmed that the MDE system has to be fully functional by September 1, 2013. Based on the above schedule, a full calendar year will be available for the contractor to complete the bridge structure and the MDE pipes to be extended into the Times development and ready for service.

#### **Permits from Agencies:**

Permits are required from the following agencies for this project for works within the Rouge River valley and their status is as follow;

1. Toronto Region Conservation Authority (TRCA) – an application for a Development, Interference with Wetland and Alteration to Shorelines and Watercourses Permit has been submitted and constant communication with the agency is underway to obtain their permit before the tender is awarded. As a condition of the permit approval, TRCA requested the Town to commit to a Consolidated Conservation Strategy Report to evaluate the cumulative impacts from all the development related activities in Markham Downtown and Uptown (such as the vehicular and pedestrian river crossings, stormwater management facilities outfalls, trails in the river valley, impact to vegetation and wildlife etc.) to the ecological system and propose mitigation and restoration. Schollen and Company Inc. (Schollen) has been working on the Greenlands Master Plan in Markham Uptown for the Town's Parks Department with good understanding of the background and issues in this area. It is therefore more efficient for Schollen to undertake this assignment. Staff recommends that the tendering process be waived in accordance with Purchasing By-Law 2004-341, Part II, Section 7 (1) (h) "where it is necessary or in the best interests of the Town to acquire non-standard items or Consulting and Professional Services from a preferred supplier or from a supplier who has a proven track record with the Town in terms of pricing, quality and service." The proposed fee for the study is \$105,544.45 (from capital account 083-5350-11078-005 - Birchmount Crossing at Rouge River - Design), inclusive of contingency and HST impact.

We anticipate TRCA comments in June 2012 and conditional permit approval in July 2012.

2. Ministry of Natural Resources (MNR) – an application for Endangered Species Act Permit was submitted in March 2012, but to date the MNR has not processed the application. AECOM and Times Group have also tried to contact MNR's senior staff to expedite the permit approval process. Subsequent weekly contacts have been made by staff to try to fast track the process. AECOM contacted MNR (May 31, 2012) and was advised that the permit request submitted in March 2012 may take a minimum of two (2) to three (3) months to be reviewed, up to 6 months for comments will be issued and another three (3) to six (6) months before MNR will issue the permit. Based on the foregoing, the MNR permit may not be issued until May / June 2013, which will effectively delay the project for a year.
3. Ministry of Environment – according to the geotechnical report, pumping of ground water may exceed the maximum allowed daily rate during rainy season (Fall) for the construction of the bridge foundations so a Permit To Take Water is required. The application requires the Environment Assessment (EA) process be completed before a permit will be issued. No comment or objection was received for the EA and the application was submitted on May 29, 2012. It may take 4 to 6 weeks to obtain the permit and we anticipate that the permit will be available in July 2012.
4. Transport Canada – the Rouge River is deemed a navigable channel by Transport Canada which requires clearance from them. A Federal screening is required by the agency as part of the

application due to a new requirement. The Town consultant (AECOM) has prepared the necessary document which has been submitted to the agency in late May 2012. Staff and AECOM will follow up with the agency to obtain the clearance prior to construction. AECOM expects the review and approval process will be short and the permit may be available by July 2012.

Delay in obtaining any of the above permits will delay the award of the bridge construction which in turn will impact the delivery of the MDE system.

### FINANCIAL CONSIDERATIONS:

As a condition of the permit approval, TRCA requested the Town to commit to a Consolidated Conservation Strategy Report to evaluate the cumulative impacts from all the development related activities in Markham Downtown and Uptown. Schollen and Company Inc. has been working on the Greenlands Master Plan in Markham Uptown for the Town's Parks Department with good understanding of the background and issues in this area. It is therefore more efficient for Schollen to undertake this assignment. Staff recommends that the tendering process be waived. The proposed fee for the study is \$105,544.45 (from capital account 083-5350-11078-005 - Birchmount Crossing at Rouge River - Design), inclusive of contingency and HST impact.

The latest cost estimates have been prepared for this project and are summarized in the following table:

DESCRIPTION	TOTAL	TOWN	REMINGTON	MDE	
Rouge River bridge	\$ 8,500,000	\$ 8,500,000	--	--	
Road work in Remington property (1)	\$ 1,281,000	\$ 631,000 (4)	\$ 650,000	--	
Modification to an existing section of Birchmount to provide dedicated bike lanes (1)	\$ 111,000	--	\$ 111,000	--	
Markham District Energy system (2)	\$ 1,750,000	--	--	\$ 1,750,000	
AECOM construction administration	\$ 211,688	\$ 156,688	\$ 20,000	\$ 35,000	
Sub-Total	\$ 11,853,688	\$ 9,287,688	\$ 781,000	\$ 1,785,000	A
Contingencies (20%)	\$ 2,370,738	\$ 1,857,538	\$ 156,200	\$ 357,000	B
Schollen & Company for Comprehensive Study	\$ 105,000	\$ 105,000	--	--	C
A+B+C	\$ 14,329,426	\$ 11,250,226	\$ 937,200	\$ 2,142,000	D
Engineering fee (4.5% of D)	\$ 601,984	\$ 506,260	\$ 42,174	\$ 53,550	E
Total D+E (excl. HST)	\$ 14,931,410	\$ 11,756,486	\$ 979,374	\$ 2,195,550	
Total D+E (Incl. of HST)	\$ 15,194,203	\$ 11,963,400	\$ 996,611	\$ 2,234,192	

(1) A construction agreement is being prepared with Remington to recover the local cost of the road construction and bike lane retrofit.

(2) Full cost will be reimbursed by Markham District Energy. MDE has provided commitments to the estimates as noted above.

(3) Engineering Fee for MDE works is agreed to at 2.5% (4.5% for other works)

(4) DC eligible component of road construction (i.e. 4<sup>th</sup> lane)

Due to the uncertainties of the timing of the permit approvals from the agencies, a 20% contingency is allowed for potential extra costs for winter works and accelerated activities to meet the deadlines.

The current available funding is \$15,040,090 and is to be funded from capital accounts 083-5350-11078-005 (Birchmount Crossing at Rouge River - Design) and 083-5350-12055-005 (Birchmount Road Crossing at Rouge River – Construction). Breakdown of the funding sources are as follows:

• Town Wide DC's	-	\$12,840,090
• Remington	-	\$ 900,000
• MDE	-	\$ 1,300,000
Total		\$15,040,090

The capital accounts will be updated to reflect the final contribution from the developer (\$996K) and MDE (\$2.2million) during the staff award process.

The tender was issued to 9 pre-qualified contractors on May 16, 2102 which will be closed on July 26, 2012. The bidder with the lowest price will be awarded the contract subject to the satisfaction of the CAO of the following;

Approvals

- Toronto Region Conservation Authority
- Transport Canada
- Ministry of Natural Resources
- Ministry of Environment

Funding

- Town Wide Development Charges
- Remington
- Markham District Energy

**ALIGNMENT WITH STRATEGIC PRIORITIES:**


The extension of Birchmount Road and the construction of the Rouge River crossing will complete the linkage of Birchmount Road from Highway 7 to 14<sup>th</sup> Avenue. The project provides an important north-south connection to relief traffic congestions on Warden Avenue and Kennedy Road and provides access for the developments in Remington and Times properties.

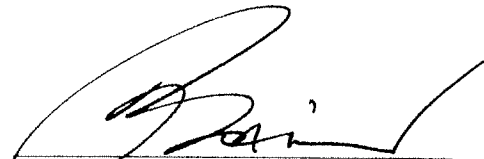
This project is in line with the Town of Markham's strategic focus relating to Growth Management, Transportation/Transit and Municipal Services.

**BUSINESS UNITS CONSULTED AND AFFECTED:**

The Finance Department has been consulted and their comments have been incorporated.

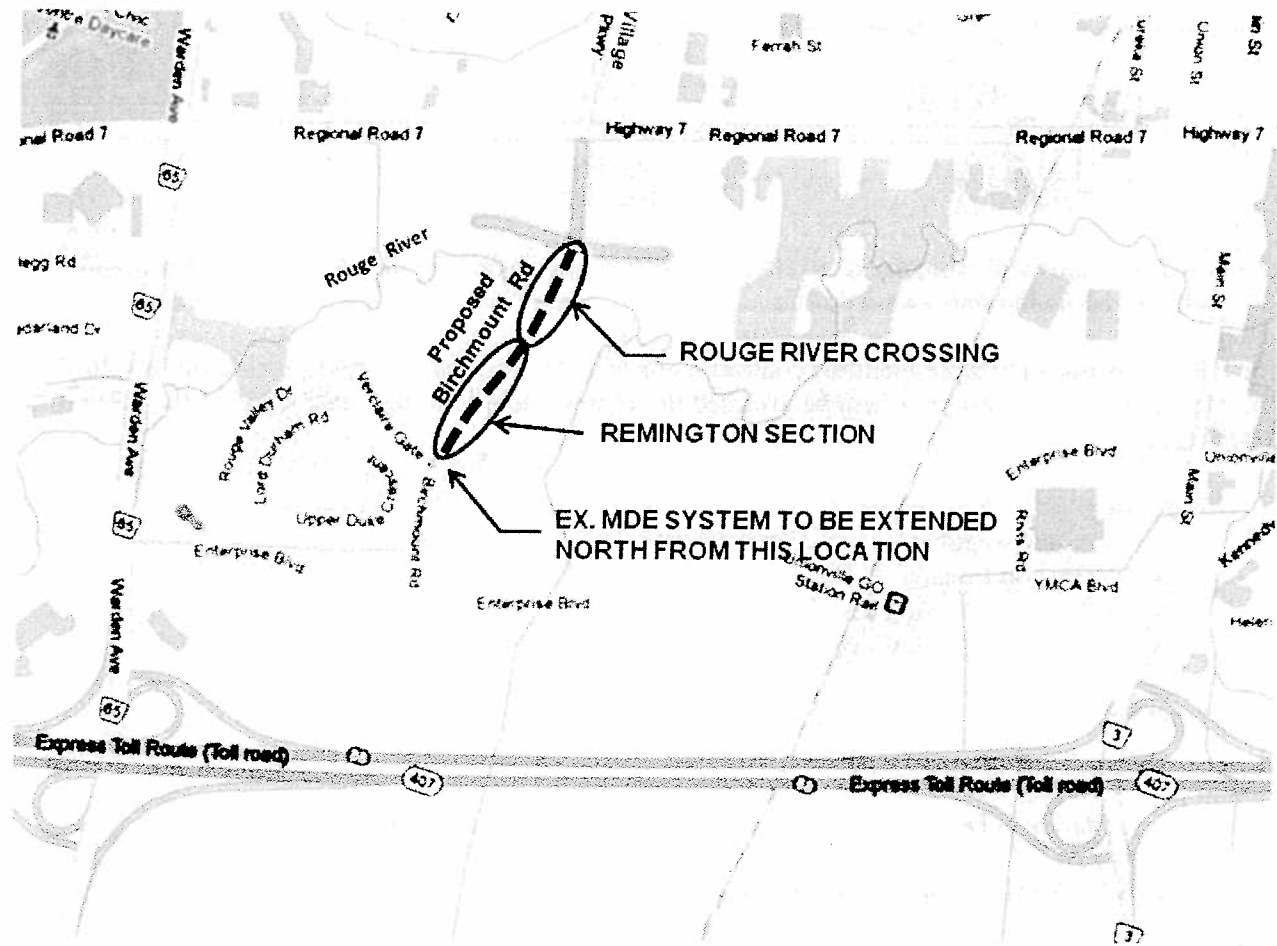
**RECOMMENDED BY:**

  
 Alan Brown, C.E.T.  
 Director of Engineering

  
 Jim Baird, M.C.I.P., R.P.P.  
 Commissioner, Development Services

**ATTACHMENTS:**

Attachment "A" – Key Map



Key Map

Attachment 'A'