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REVIEW OF TENDERING OPTIONS WESTON ROAD IMPROVEMENTS CITY OF VAUGHAN

The Transportation and Works Committee recommends the adoption of the recommendations contained in the following report, November 23, 2005, from the Commissioner of Transportation and Works:

1. RECOMMENDATIONS

It is recommended that:

1. A separate contract for the improvements to Weston Road (Y.R. 56) from Retreat Boulevard to Teston Road (Y.R. 49) be tendered for construction if an agreement between the Ministry of Transportation (MTO) and The Regional Municipality of York is not fully executed by February 15, 2006.
2. If the Weston Road (Y.R. 56) works are tendered and constructed under a separate contract, the improvements to Teston Road (Y.R. 49) from Weston Road (Y.R. 56) to west of Jane Street (Y.R. 55), including the new interchange at Highway 400, be tendered for construction following execution of the legal agreement with MTO.
3. The Regional Clerk forward this report to the Clerk of the City of Vaughan.

2. PURPOSE

This report responds to a request from the City of Vaughan and presents tendering options for the proposed road improvements to Weston Road (from Retreat Boulevard to Teston Road) and Teston Road (from Weston Road to west of Jane Street) – including a new interchange at Highway 400. A location plan is appended to this report (*See Attachment 1*).

3. BACKGROUND

On October 12, 2005, Mayor DiBiase met with staff to discuss the schedule for the reconstruction of Weston Road from Retreat Boulevard to Teston Road. During this meeting it was discussed that the Weston Road project had been combined with the Teston Road improvements from Weston Road to Jane Street, including the new interchange at Highway 400 and that the combined project would be tendered after the legal agreement between The Regional Municipality of York and MTO is fully executed. Due to the uncertainty in the timing for the execution of the legal agreement, Mayor DiBiase requested the Weston Road work be separated from the Teston Road work and

tendered without further delay. Staff agreed to review the request and report on the advantages and disadvantages of proceeding with the Weston Road work under a separate contract.

3.1 Weston Road – Retreat Boulevard to Teston Road

York Region completed a Class Environmental Assessment (EA) for Weston Road from Rutherford Road to Teston Road in June 2001. Under the approved 2005 – 10 Year Roads Construction Program, implementation of the preferred alternative is programmed as follows:

- Rutherford Road to Major Mackenzie Drive - Under construction
- Major Mackenzie Drive to Teston Road - 2012

Implementation of the preferred alternative has begun with the section from Rutherford Road to Retreat Boulevard currently under construction by Dufferin Construction Company as part of the York-Peel Feedermain Design/Build Contract. This work began in fall 2003 and is scheduled for completion in fall 2005. Funding for advancing the construction of the section from Major Mackenzie Drive to Retreat Boulevard has been provided by the Block 33W Developers Group. This funding has been provided in accordance with the terms of the fully executed Development Charge Credit Agreement (Langstaff). The intent was to construct this as soon as possible/practical.

3.2 Teston Road – Weston Road to west of Jane Street

York Region completed a Class Environmental Assessment (EA) for Teston Road from Pine Valley Drive to Bathurst Street in April 2003. This Class EA included the new interchange at Highway 400.

Under the approved 2005 – 10 Year Roads Construction Program, implementation of the preferred alternative for the section from Weston Road to Jane Street, including the new interchange at Highway 400, was programmed for 2005.

3.3 Legal Agreement with the Ministry of Transportation

In order to set out the obligations of the Ministry of Transportation (MTO) and York Region with respect to the design construction, operation, cost sharing and ownership of the new interchange at Teston Road and Highway 400 a legal agreement is required.

Negotiation of the legal agreement by the staff at York Region and MTO has been ongoing and should be complete by November 30, 2005. At which time the legal agreement will be ready for execution by the Regional Chair and Regional Clerk and the Minister of Transportation. Council Authority for the Regional Chair and Regional Clerk to execute the legal agreement was provided at the May 19, 2005, Regional Council Meeting.

MTO staff have been unable to confirm the time period required for execution of the legal agreement by the Minister of Transportation.

3.4 Development of Block 33W

Block 33W is the area bounded by Teston Road (north) Highway 400 (east) Major Mackenzie Drive (south) and Weston Road (west). Block 33W is currently under active development with significant works under construction.

This area will be primarily low-density residential housing with some high performance employment land uses adjacent to the Highway 400 corridor.

3.5 Project and Contract Planning

During summer 2003, the project and contract planning for Weston Road and Teston Road, including the new interchange at Highway 400, was underway. At that time it was determined the two projects should be implemented as one detail design/engineering assignment and construction should proceed under one contract. This decision was made for the following reasons:

- Similar timing of the two projects.
- Overlapping work zones.
- Marginally lower cost due to economies of scale.
- Integrated traffic/construction staging and control.
- Single point of responsibility for all construction activities.

Based on the above, staff proceeded with the detail design, utility relocation, property acquisition, permitting and other project activities on the basis of these two projects being designed and constructed as one contract.

3.6 Project Status

As a combined contract package the project status is as follows:

Weston Road

- Detail design – complete.
- Permits and Approvals – complete.
- Property Acquisition – complete.
- Utility Relocation – ongoing (scheduled for completion November 30, 2005).

Teston Road, Including Highway 400 Interchange

- Detail design – complete.
- Permits and Approvals – complete (pending execution of Legal Agreement with MTO).
- Legal Agreement with MTO – ongoing.
- Property Acquisition – interchange lands have been expropriated and possession anticipated for December 2005.
- Utility Relocation – complete.

3.7 Anticipated Construction Schedule for Combined Contract

As part of the detail design and contract preparation process, staff has developed an anticipated construction schedule which considers all factors affecting the sequencing and timing of construction.

The constraints affecting the schedule and sequence of construction are as follows:

- Teston Road must be closed for the construction of the new bridge crossing Highway 400. This is required because the opening width of the existing Highway 400 bridge is not sufficient to maintain six-lanes of traffic on Highway 400 and provide room to build the new structure (notably the new bridge pier to be located in the Highway 400 median).
- All work affecting traffic on Highway 400 must be completed in the same calendar year it is started.
- Teston Road can be closed for a period not exceeding 18 months, as approved by Regional Council in June 2004 and by City of Vaughan Committee of the Whole in April 2004.
- Teston Road must be closed for construction of the culvert replacement at Cold Creek.
- Teston Road must be closed for the reconstruction due to the significant grade changes. Stage construction while maintaining through traffic is not practical and presents significant safety concerns.
- The Cold Creek culvert extension on Highway 400 north of Teston Road must be done during July 1 to September 15.
- The Cold Creek bridge replacement on Teston Road west of Highway 400 must be done during July 1 to September 15.
- The Cold Creek culvert extension of Weston Road south of Teston Road must be done during July 1 to September 15.
- Uninterrupted access must be maintained throughout construction to all properties currently having access to Teston Road.

The anticipated construction schedule of the combined contract is as follows:

Spring 2006

Weston Road -	Retreat Boulevard to Greenbrooke Crescent
Teston Road -	Weston Road to Highway 400
Highway 400 -	Preliminary ramp grading (not affecting existing traffic lanes)

Summer 2006

Weston Road -	Cold Creek culvert extension
Teston Road -	Cold Creek bridge replacement
Highway 400 -	Cold Creek culvert extension (not affecting existing traffic lanes)

Fall 2006

Weston road -	Greenbrooke Crescent to Teston Road and finishes
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Teston Road - Weston Road to Highway 400
Highway 400 - Widening for new ramp lanes

Note: At the end of 2006 the Weston Road improvements are complete and all lanes are open to traffic.

Spring 2007 – Stage 1

Highway 400 - Bridge demolition

Spring 2007 – Stage 2

Teston Road - Highway 400 to west of Jane Street
Highway 400 - New bridge abutments and pier, including median improvements

Summer 2007

Teston Road - Highway 400 to west of Jane Street and finishes
Highway 400 - New bridge and ramp grading and paving

Fall 2007

Highway 400 - Finishes

4. ANALYSIS AND OPTIONS

4.1 Tendering Options

There are two options for tendering the works:

Option 1 - to tender the works as a combined contract; and

Option 2 - to tender the Weston Road works as a separate contract.

The advantages of Option 2 are:

- Weston Road work proceeds without being delayed further by the Teston Road and Highway 400 interchange work.

The disadvantages of Option 2 are:

- Coordination between the Weston Road work and Teston Road work would be more difficult with potentially two different contractors.
- Marginal increase (less than 2% of the total combined contract construction value) in the construction costs due to lost economies of scale and the overhead costs (site office, administration, etc.) of two separate contracts are higher.
- Potential Constructor issues if the Weston Road work and Teston Road work are underway at the same time. To avoid this situation, the Teston Road work could be delayed until the Weston Road work is completed.

4.2 Schedule for Weston Road as a Separate Contract

The anticipated schedule for proceeding with Weston Road under a separate contract is as follows (dates represent the completion of activity):

Prepare separate contract for Weston Road	-	December 15, 2005
Tender Weston Road	-	February 16, 2006 to March 9, 2006
Award Contract for Weston Road	-	March 2006
Construction	-	April 2006 to September 2006

In order to proceed with Option 2 the current detail design and contract documentation for the combined works must be reviewed and a separate design/contract package be prepared. The work to prepare a separate contract package and be tender ready has been initiated and will be complete by December 15, 2005.

The Toronto and Region Conservation Authority has restricted all “in-water” work for the Cold Creek culvert extension (east side of Weston Road south of Teston Road) to occur only during the period from July 1 to September 15. As such, the culvert extension and therefore the road widening in this area cannot begin until July 1, 2006 at the earliest, regardless of when the work is tendered. The result is the Weston Road work cannot be completed until September 2006, at the earliest.

4.3 Impact of Option 2 on the Teston Road and Highway 400 interchange Contract

The traffic and construction staging for the Teston Road and Highway 400 interchange work is complex. Based on the constraints presented in Section 3.7, there is limited flexibility in the sequence of the construction activities. As such, regardless of which option is implemented, the contract containing the Teston Road and Highway 400 interchange work must be tendered no later than March 15, 2006 for the work to be completed by fall 2007. If the contract containing the Teston Road and Highway 400 interchange work is tendered after March 15, 2006, the work cannot be completed until summer 2008, at the earliest. If the work starts in 2006 adequate provisions and operational constraints will be included in the contract to control the contractors operations and minimize traffic impacts over the three year construction period.

4.4 Stakeholder Comments on Option 2

Staff met with representatives from the City of Vaughan and Block 33W to discuss Option 2 and seek their comments and/or concerns if York Region proceeds to tender a separate contract for Weston Road.

The City of Vaughan staff advised that Option 1 is preferable; however, they would support a decision to proceed with Option 2 if an agreement between York Region and MTO is not fully executed by February 15, 2006. The reason for this is that the completion of Weston Road is constrained by the “in-water” work period for the Cold Creek culvert extension. As such, regardless of which option is selected, the Weston Road works cannot be completed until September 2006.

Block 33W advised that either option is acceptable; however, they would be very concerned if either option delayed the completion of Teston Road and opening the new intersection at Cityview Boulevard beyond 2007.

Staff are proceeding with the preparation of a separate contract package for the Weston Road improvements. This work is being done so that, if necessary, the Weston Road improvements can be completed under a separate contract without being further delayed by the Teston Road and Highway 400 interchange works.

Proceeding with a separate tender for the Weston Road improvements prior to February 15, 2006, does not result in an earlier completion of the work. However, after this date any further delay will result in uncertainty for completing the Weston Road work in 2006. As such, if the legal agreement between York Region and MTO is not fully executed by February 15, 2006, the Weston Road improvements should be tendered and constructed separately.

5. FINANCIAL IMPLICATIONS

Option 2 will have a marginal (less than 2% of the total combined contract construction value) increase on the total project cost (see Table 1). Areas of potential cost increase are:

- Increased total cost from loss in economies of scale.
- Increases overhead costs by having two contracts.
- Additional construction costs for building a temporary transition between the widened Weston Road and the existing Teston Road.
- Additional engineering costs for preparing a separate contract.

The funding for this project is shown in Table 2, below.

Table 1
Estimated Costs

Item	Option 1	Option 2 (incremental cost)
Construction	\$27,500,000	+ 2% (\$500,000) est.
Engineering	0	+25,000 est.
TOTAL	\$27,500,000	+2% (\$525,000) est.

Table 2
Roads Transportation Services – 2005 10-Year Capital Plan

	2005	2006	2007	Total
Weston Road (Project 8182)	\$2,538,000	\$2,238,000	\$0	\$4,776,000
Teston Road and Highway 400 (Project 9861)	10,644,000	9,145,000	0	19,789,000
TOTAL	\$13,182,000	\$11,383,000	\$0	\$24,565,000

The difference between the Total Estimated Cost presented in Table 1, and the Total Budgeted Cost presented in Table 2, is a direct result of the following:

- Escalation of construction work and materials costs.
- Increase property acquisition costs.
- Increase construction costs to satisfy environmental commitments and address poor soil conditions.

Additional funding, if required, to compensate for the difference between 2005 10-Year Capital Plan approved budget and the actual contract value based on tender results will be requested in the 2007 Roads Capital Budget.

The 2006 10 year Capital plan budget for this project will not be affected. Funding for this project is provided through a combination of 76.5% development charges and 23.5% tax levy. Incremental costs will be included in the next updated Development Charge By-law.

6. LOCAL MUNICIPAL IMPACT

These road improvement projects will be constructed in the City of Vaughan and are required to address the transportation needs and accommodate growth that is occurring in the area.

Although not part of this report, the notable impact to the local municipality resulting from this project is the 18 month closure of Teston Road, which has been approved by both Regional Council in June 2004 and City of Vaughan Committee of the Whole in April 2004. Otherwise there is no reason to expect adverse impacts on local municipalities other than impacts normally associated with large construction projects of this nature.

7. CONCLUSION

It is recommended that staff begin preparation of a separate contract for the improvements to Weston Road from Retreat Boulevard (approximately 500 metres north of Major Mackenzie Drive) to Teston Road. This will provide the flexibility to proceed with Option 1 or Option 2 depending on the completion of the legal agreement with MTO. Preparation of a separate contract will have a marginal increase in the engineering costs; however, these costs can be absorbed within the available contingency under Purchase Order P-03-55, with McCormick Rankin Corporation.

It is recommended that a separate contract for the improvements to Weston Road be tendered for construction if an agreement between MTO and The Regional Municipality of York is not fully executed by February 15, 2006. This will allow the reconstruction and widening of Weston Road to proceed and not be further delayed by the Teston Road and Highway 400 interchange project.

If the Weston Road works are tendered and constructed under a separate contract, the improvements to Teston Road from Weston Road to west of Jane Street, including the new interchange at Highway 400, be tendered for construction immediately following the execution of the legal agreement with MTO. If a fully executed legal agreement between York Region and MTO is not in place by March 15, 2006, the Teston Road and Highway 400 interchange work cannot be completed until summer 2008, at the earliest.

The Senior Management Group has reviewed this report.

(The attachment referred to in this clause was included in the Agenda for the November 30, 2005 Committee meeting.)