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TRANSPORTATION MASTER PLAN UPDATE PRELIMINARY COST ESTIMATES

The Planning and Economic Development Committee recommends that Council:

1. **Receive the presentation by Paul May, Director of Infrastructure Planning; and**

2. **Receive for information the following report dated November 21, 2008, from the Commissioner of Planning and Development Services and the Commissioner of Transportation Services:**

1. RECOMMENDATIONS

It is recommended that:

1. Regional Council receive the preliminary cost estimates of the Transportation Master Plan Update draft recommendations for information.

2. The Regional Clerk forward a copy of this report to the Clerks of the local municipalities in York Region, City of Toronto, Durham Region, Peel Region, Simcoe County, Metrolinx, GO Transit and Provincial Ministries of Energy and Infrastructure, Transportation and Municipal Affairs and Housing.

2. PURPOSE

This report informs Regional Council of the preliminary cost estimates of the Transportation Master Plan (TMP) Update draft recommendations.

3. BACKGROUND

The three core components of the Transportation Master Plan are the transit network, road network and policies and programs

As in the 2002 Transportation Master Plan, the core components of this Update consist of draft recommendations for the transit and road networks and policies and programs. The draft recommendations for 2031 can be summarised as follows:

- An expanded transit network that brings more residents closer to rapid transit services.
- A draft road network that promotes efficient transit services and goods movement.

- Key policies and programs that support and promote the use of sustainable transportation modes.

Draft 2031 recommendations were reported to Regional Council and presented to the public in November 2008 for review and comment

The draft recommendations were reported to Regional Council in November 2008. That report authorised staff to present the draft recommendations to the public at a series of public consultation centres from November 12 to November 27, 2008.

4. ANALYSIS AND OPTIONS

To address the growth projected over the next 20 to 25 years and to meet the sustainability goals of York Region, the Transportation Master Plan Update study has recommended changes to the 2002 Master Plan.

The draft transit network represents a doubling of the rapid transit system

In addition to rapid transit service on Yonge Street and Highway 7, the Update study is recommending two new east-west and three new north-south rapid transit lines (*Council Attachment 1*). These new lines represent more than a doubling of the length of existing rapid transit lines in York Region.

Rapid transit lines previously identified in the Master Plan are:
- Extensions of the Spadina and Yonge subway lines to Highway 7 at the Vaughan Corporate Centre and Richmond Hill-Langstaff Centre respectively (2.5 and 4.2 km).
- Yonge Street rapid transit line from the Richmond Hill-Langstaff Centre to the Newmarket Centre and across Davis Drive (25 and 3 km).
- A Highway 7 rapid transit line from the City of Brampton to the City of Pickering (39 km).
- A Markham north-south rapid transit line in the Warden Avenue corridor (4 km).

New rapid transit lines identified in the draft transit network are:
- An east-west line in the Major Mackenzie Drive corridor extending from Weston Road in the City of Vaughan to Ninth Line in the Town of Markham and connecting to the Highway 7 rapidway along Ninth Line (27 km).
- An east-west line in the Steeles Avenue corridor extending from Highway 27 in the west to east Markham and connecting to an extension of the proposed Malvern rapid transit corridor (33 km).
- A north-south extension of the proposed Jane Street LRT line from the City of Toronto to the Major Mackenzie Drive corridor (8 km).
- A north-south line in the Bathurst-Dufferin Street corridor (10 km).

- A north-south extension of the proposed Don Mills LRT line from the City of Toronto to the Beaver Creek-Commerce Valley employment node at Highway 7 along Leslie Street (4.5 km).

Overall, the 2002 Master Plan recommended a 75 km rapid transit network while the draft recommendation of the Update is a doubling of the rapid transit network to 160 km.

With the new rapid transit lines, a revised network of transit priority corridors (145 km) has been recommended where bus services operating in mixed traffic can efficiently feed the rapid transit lines assisted by transit priority measures such as traffic signal priority, queue jump lanes and HOV/transit lanes.

A reduced road program has been recommended

The draft road network presented in November 2008 is primarily made up of improvements associated with the transit priority corridors identified in the transit network and widenings of two-lane roads to four lanes in the emerging travel corridors of York Region (*Council Attachment 2*). It reflects the new focus on sustainable modes of transportation such as transit, cycling and walking.

Overall, the 2002 Master Plan recommended about 750 new lane-kms of arterial roads while the draft recommendation of the Update is about 660 new lane-kms of arterial roads. Simply taken, this represents a 12% reduction in the road program.

Transportation corridor protection is paramount

It should be noted that the draft recommendations of the Transportation Master Plan Update are, on the most part, based on forecasts of transit ridership and traffic volumes. These forecasts are derived through a computerised modelling process that is based on assumptions of population and employment growth to 2031 as well as commuter behaviour towards transportation services. These assumptions put some degree of uncertainty to the forecasts and therefore, the draft recommendations.

However, it should also be noted that the uncertainty of the forecasts and therefore the draft recommendations are on the forecast year and not on the need for the facilities. Thus, it is important that we plan for and protect the rapid transit and highway corridors for the predicted timeframes. Projects can be deferred if funding is not available but corridors must be physically protected.

5. FINANCIAL IMPLICATIONS

PRELIMINARY COST ESTIMATES

Summary reasons for cost increases

Preliminary cost estimates are presented in *Council Attachment 3* which shows an overall estimated cost of $19.0B for the draft Master Plan Update. In comparison, the 2002 Master Plan cost of $6.4B in 2001 dollars is equivalent to $11.7B in 2008 dollars.

There are three main reasons for the higher Master Plan Update costs. They are:

- Additional rapid transit infrastructure is needed to address growth.
- The overall recommended plan is designed to meet our sustainability goals, which meant a higher emphasis on transit-related solutions.
- Cost of construction for various components of transportation projects have increased.

These factors in combination drive the estimated cost of the updated Transportation Master Plan up. Details on each cost component of the Master Plan follows.

Preliminary cost estimate of draft transit network is about $13.6B, double the network cost in the 2002 Transportation Master Plan

The transit network recommended in the 2002 Master Plan, which included conversion of some segments to LRT, was estimated to cost $4.1B in 2001 dollars. With inflation and increases in construction prices, that number has risen to over $7.7B in 2008 dollars.

The new draft transit network approximately doubles the length of the rapid transit lines in York Region. Based on updated unit costs, the preliminary cost estimate of the new draft transit network is in the range of $13.6B. Part of this cost estimate includes LRT conversions of some of the BRT corridors. It includes the full cost for the Steeles Avenue line but does not include York Region's share of GO Transit's expansion program.

Draft road network cost will decrease

The 2002 Master Plan recommended a road network that was estimated at $1.9B in 2001 dollars. That number is about $2.7B in 2008 dollars.

In addition to the costs associated with the transit priority corridors and widenings of two-lane roads to four lanes, the road network cost includes road reconstructions, grade separations, intersections improvements, jog eliminations, ITS strategic plan and streetscaping. The preliminary cost estimate of the draft road network is $2B. It does not include Provincial highway and interchange improvement costs.

Thus, road cost is expected to decrease from $2.7B to $2.0B.

Policies and programs costs are estimated at about $156M

Unlike the infrastructure costs associated with the transit and road networks where unit costs are available, the costs of programs and strategies associated with the draft policy recommendations are more difficult to estimate. The programs and strategies include transportation demand management (TDM) measures, outreach and incentive programming for sustainable travel modes, special transportation studies and additional staffing resources.

Without the benefit of having defined these components to a higher level of detail, staff estimated that the costs of programs and strategies should be capped at 1% of the total transit and road infrastructure capital costs, which is $156M.

Costs of asset rehabilitation and replacement will be higher

With the aging of our infrastructure, the cost of maintaining them will increase over time. It is estimated that over the next 20 to 25 years, the cost of maintaining our transit and road system will total $2.3B and $1B respectively.

Operating costs will be substantially higher

With an expanding transit and road system, gross operating costs will increase substantially with the transit system cost increasing most rapidly to over $729M per year by 2031. Road operating costs are estimated at $76M per year by 2031.

FUNDING SOURCES

Most of the rapid transit lines in the draft transit network is in the draft Metrolinx Regional Transportation Plan

In terms of funding, the Metrolinx Plan references the MoveOntario 2020 plan which commits the Province to fund two-thirds of identified rapid transit projects with the remaining one-third anticipated to be provided by the Government of Canada. The $17.5B MoveOntario 2020 announcement will fund the first part of the $50B Metrolinx Plan. Within five years, Metrolinx will finalize an investment strategy to fund the remaining part of the plan.

Three of the rapid transit lines in the draft recommended transit network are not in the draft Metrolinx Plan 25-year network. They are the Major Mackenzie Drive, Jane Street and Bathurst-Dufferin lines. The first two are identified as needed beyond the 25-year timeframe in the Metrolinx Plan.

York Region's share of the rapid transit network cost could be as low as $1.9B

York Region's preliminary share of the rapid transit network cost is estimated at $1.9B, based on the following assumptions:

- That all rapid transit projects in the draft Metrolinx Regional Transportation Plan 25-year network are fully funded by senior levels of government.
- The Major Mackenzie Drive, Jane Street and Bathurst-Dufferin line costs are shared equally at one-third each by York Region, the Province and Federal Government.
- The conversion cost of BRT lines to LRT technology are shared equally at one-third each by York Region, the Province and Federal Government.
- Two-thirds of the cost to extend the Spadina Subway to Highway 7 has been committed by senior levels of government. The Region's share of the remaining one-third is approximately $300M.

The Capital and Operating Cost estimates will be further refined

The costs estimates identified in the report should be considered preliminary and may be further refined as Regional staff finalize the Master Plan. It will also incorporate input from the consultation program and a coordinated review by Transportation Services and York Region Rapid Transit Corporation. However, it is anticipated that there will not be major changes in the cost estimates.

The Development Charges Bylaw will be impacted

The 2007 DC Bylaw included transportation project costs of $5.7B. The current Master Plan update is forecasting major changes to the transportation improvements. As part of the approval of the most recent development charge by-law Regional Council addressed potential impacts on Development Charges by approving the following clause "Within six months of the adoption of the Master Plans by Council, a report be brought forward outlining the DC impacts and if the roads, transit, water and wastewater impacts are greater than 5%, those elements of the DC By-law be updated at that time."

KEY MESSAGES ON FINANCIAL IMPLICATIONS

1. The transportation investment needed to address legislated growth in York Region is significant.
2. York Region alone cannot bear the burden of the capital cost requirements.
3. The work of Metrolinx through its Regional Transportation Plan and associated Investment Strategy, and Provincial and Federal government funding to support the RTP will determine York Region's ability to accommodate the legislated growth.
4. York Region, its local municipalities, Metrolinx, the Province and Federal government must work together to ensure that continuous and necessary transportation investments are made in York Region over the next 25 years.

6. LOCAL MUNICIPAL IMPACT

The draft recommendations of the Transportation Master Plan Update study will address the growth projections developed for the local municipalities.

7. CONCLUSION

To address the growth projected over the next 25 years and to meet the sustainability goals of York Region, the Transportation Master Plan Update study has draft recommended transit and road networks and policies and programs. These recommendations represent a significant increase in capital investment compared to the 2002 Transportation Master Plan, particularly for the rapid transit system.

Overall, the gross investment needed to implement the draft recommendations of the study is in the range of $19 billion. The proportion of this total that is York Region's share cannot be determined at this time because it depends on which projects are considered part of the Metrolinx Regional Transportation Plan.

The current best estimate is that York Region's share of the capital cost of the draft recommended rapid transit network is about $1.9B. This estimate is based on a set of assumptions that must be discussed and negotiated with Metrolinx and the Province over the next months and years. It assumes a one-third contribution each from the governments of Ontario and Canada for projects outside the 25-year network of the Metrolinx Regional Transportation Plan.

Asset management and system operation costs are also estimated to be much higher than today for both the transit and road components.

For more information on this report, please contact Loy Cheah, Manager, Transportation Planning at (905) 830-4444, Ext. 5024 or Paul May, Director, Infrastructure Planning at Ext. 5029.

The Senior Management Group has reviewed this report.

(The three attachments referred to in this clause are attached to this report.)