

CITY OF HAMILTON

PUBLIC WORKS DEPARTMENT **Environment & Sustainable Infrastructure Division**

TO: Chair and Members Public Works Committee	WARD(S) AFFECTED: Ward 4
COMMITTEE DATE: October 3, 2011	
SUBJECT/REPORT NO: Bridge 326 - Burlington Street Overpass at Kenilworth Avenue (PW11075) - (Ward 4)	
SUBMITTED BY: Gerry Davis, CMA General Manager Public Works Department	PREPARED BY: John Murray (905) 546-2424, Extension 4479
SIGNATURE:	

RECOMMENDATION

- (a) That the appropriation for Capital Budget Project ID 4031118125 (Bridge 326 Burlington Street Overpass at Kenilworth Avenue) be increased by \$870,000 from \$1,300,000 to \$2,170,000;
- (b) That this increased funding be financed by the transfer of \$550,000 of available funding from Capital Budget Project ID 4031018001 (2010 Bridge and Culvert program) and \$320,000 of available funding from Capital Budget Project ID 4031118001 (2011 Bridge and Culvert program), as outlined in Appendix "A" attached.

EXECUTIVE SUMMARY

Upon review of the bids received to perform repairs to Bridge 326, the Burlington Street Overpass, centred approximately over Kenilworth Avenue, it was determined that the funding appropriation approved in 2011, will not be sufficient. It is being recommended that the appropriation for Capital Budget Project ID 4031118125 (Bridge 326 – Burlington Street Overpass at Kenilworth Avenue) be increased by \$870,000 from \$1,300,000 to \$2,170,000 and that this increased funding be financed by the transfer of \$550,000 of available funding from Capital Budget Project ID 4031018001 (2010 Bridge and Culvert program) and \$320,000 of available funding from Capital Budget Project ID 4031118001 (2011 Bridge and Culvert program), as outlined in Appendix "A" attached.

**SUBJECT: Bridge 326 – Burlington Street Overpass at Kenilworth Avenue
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The Burlington Street Overpass requires rehabilitation to its steel-box girders. Rehabilitation was scheduled to commence this Fall 2011. Rehabilitation of the girders will reduce risk and liability to the City and extend the service life of the overall structure.

Alternatives for Consideration - See Page 3

FINANCIAL / STAFFING / LEGAL IMPLICATIONS

Financial: The additional funding requirement of \$870,000 for Capital Budget Project ID 4031118125 (Bridge 326 - Burlington Street Overpass at Kenilworth Avenue) will increase the total funding allocation to \$2,170,000. There are sufficient funds in the 2010 and 2011 Bridge and Culvert programs to fund the additional \$870,000, as outlined in Appendix "A" attached.

Staffing: N/A

Legal: N/A

HISTORICAL BACKGROUND

The City of Hamilton retained the services of a structural engineer to conduct a biennial detailed visual inspection of Bridge 326, Burlington Street Overpass at Kenilworth Avenue, in May of 2010. The inspection was carried out according to the methodology set out in the MTO's Ontario Structure Inspection Manual (OSIM).

Based on the results of the detailed visual inspection, the bridge structure is in good condition overall. However, it was identified that fatigue and weld cracks exist inside the steel box-girders. The structural engineering consultant identified the fatigue and weld cracks as being a serious concern regarding the safety of the bridge, and recommended that repairs be performed prior to the end of 2011.

In addition to the repair of fatigue and weld cracks, the consultant also identified additional minor repairs that should be performed (e.g. minor concrete patching) in coordination with the girder repairs, to take advantage of cost-savings that can be achieved, since traffic control and mobilization will already be included as part of the girder repairs.

Subsequently, staff proposed the project entitled "Bridge 326 – Burlington Street Overpass at Kenilworth Avenue", with an appropriation of \$1,300,000, as part of the 2011 Capital Budget program, and this project was approved by Council during the Capital Budget approval process.

Upon review of the bids received to perform repairs to Bridge 326, the Burlington Street Overpass at Kenilworth Avenue, it was determined that the initial funding approved in 2011, will not be sufficient. It is being recommended that the appropriation for Capital Budget Project ID 4031118125 (Bridge 326 – Burlington Street Overpass at Kenilworth Avenue) be increased by \$870,000 from \$1,300,000 to \$2,170,000. The increase in cost is attributed to an increase in bridge repair work being done across the province and a shortage of available contractors.

POLICY IMPLICATIONS

The recommendations contained in this report support the Mission Statement of the Public Works Business Plan "Innovate Now" - "Provide safe, strategic and environmentally conscious services that bring our communities to life".

RELEVANT CONSULTATION

As part of the project, discussions were had with the Public Works Department, Operations and Waste Management Division. The Ward 4 Councillor has been notified of the recommendations contained in this report and approves.

ANALYSIS / RATIONALE FOR RECOMMENDATION

Bridge 326 - Burlington Street Overpass at Kenilworth Avenue, is approximately 40 years old, and the bridge is in good condition overall. The fatigue and weld cracks that are present on the inside of the steel box-girders are a concern regarding the safety of the bridge and, therefore, repairs are required. Performing repairs at this time will improve the long term safety of the bridge structure, reduce risk and liability to the City, extend the structure's useful life and eliminate further monitoring costs that will otherwise be incurred, if rehabilitation of the bridge is deferred.

ALTERNATIVES FOR CONSIDERATION

Should Council not approve the funding increase at this time, these additional funds would be proposed again as part of the 2012 Capital Budget Program. Since bridge repairs would not be carried out in Fall 2011, as proposed, based on the recommendation of the structural engineer, the fatigue cracks inside the steel box-girders would remain a concern to the structural integrity of the bridge. In this case, we would retain the services of a structural engineer to perform an interim inspection of the inside of the steel box-girders, at an estimated cost of approximately \$100,000, in order to report on the updated status of the fatigue cracking, and whether required repairs can be further deferred. However, results of the interim inspection could indicate the need for emergency repairs.

CORPORATE STRATEGIC PLAN

Focus Areas: 1. Skilled, Innovative and Respectful Organization, 2. Financial Sustainability, 3. Intergovernmental Relationships, 4. Growing Our Economy, 5. Social Development, 6. Environmental Stewardship, 7. Healthy Community

Financial Sustainability

- ◆ Performing the recommended repairs to this bridge at this time will ensure that the bridge will attain its full life expectancy, which will result in the avoidance of unnecessary costs due to premature replacement of the structure.

Growing our Economy

- ◆ This bridge structure is a main component of the high volume Burlington Street industrial road corridor. Repairs to this bridge will ensure that traffic flow through the industrial corridor is maintained so that industries' transportation operations can continue to operate efficiently. Easily accessible lands/buildings can also attract new industry.

Environmental Stewardship

- ◆ Performing the recommended repairs to this bridge at this time will ensure safety for the travelling public

APPENDICES / SCHEDULES

Appendix "A": 2011 Capital Budget Appropriation Adjustments

PUBLIC WORKS
2011 Capital Budget Appropriation Adjustments

Appendix A
PW11075

Project Number	Project Description	GROSS COST			REVENUE			NET FINANCING REQUIRED			REASON FOR ADJUSTMENT	
		Budget	Increase/ (Decrease)	Revised	Budget	%	Increase/ (Decrease)	Revised	Budget	Increase/ (Decrease)		Revised
4031118125	Bridge 326 - Burlington St. Overpass at Kenilworth Avenue	1,300,000	870,000	2,170,000	0		0	0	1,300,000	870,000	2,170,000	
4031018001	2010 Bridge & Culvert Program	1,156,500	-550,000	606,500	0		0	0	1,156,500	-550,000	606,500	
4031118001	2011 Bridge & Culvert Program	2,289,000	-320,000	1,969,000	0		0	0	2,289,000	-320,000	1,969,000	
TOTAL INCREASE/(DECREASE)		4,745,500	0	4,745,500	0		0	0	4,745,500	0	4,745,500	

PUBLIC WORKS
2011 Capital Budget Appropriation Adjustments

Appendix A
PW11075

<i>Project Number</i>	<i>Project Description</i>	<i>GROSS COST</i>			<i>REVENUE</i>				<i>NET FINANCING REQUIRED</i>			<i>REASON FOR ADJUSTMENT</i>
		<i>Budget</i>	<i>Increase/ (Decrease)</i>	<i>Revised</i>	<i>Budget</i>	<i>%</i>	<i>Increase/ (Decrease)</i>	<i>Revised</i>	<i>Budget</i>	<i>Increase/ (Decrease)</i>	<i>Revised</i>	