

April 2010

The Corporation of the City of York Employee Pension Plan

Report on the Actuarial Valuation for Funding Purposes as at December 31, 2009

MERCER



MARSH MERCER KROLL
GUY CARPENTER OLIVER WYMAN

Consulting. Outsourcing. Investments.

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Summary of Results

Asset Values	31.12.2009	31.12.2008
Market value of assets	\$ 50,543,000	\$ 48,040,000
Rate of return during the year, based on market values (gross)	11.70%	-9.66%
Actuarial value of assets	\$ 53,327,000	\$ 54,984,000
Rate of return during the year, based on actuarial values (net of investment expenses)	2.16%	2.85%
Going-Concern Financial Position	31.12.2009	31.12.2008
Actuarial value of assets	\$ 53,327,000	\$ 54,984,000
Actuarial liability	(54,135,000)	(57,621,000)
Funding excess (deficiency)	\$ (808,000)	\$ (2,637,000)
Wind-Up Financial Position	31.12.2009	31.12.2008
Market value of assets (net of estimated Plan termination expenses)	\$ 50,481,000	\$ 47,973,000
Wind-Up liability	(58,467,000)	(60,189,000)
Wind-Up excess/(deficiency)	\$ (7,986,000)	\$ (12,216,000)
Transfer Ratio	86%	80%

Solvency Financial Position	31.12.2009	31.12.2008	
Solvency assets	\$ 50,481,000	\$ 47,973,000	
Solvency asset adjustment			
▪ Asset smoothing adjustment	2,198,000	6,472,000	
	52,679,000	54,445,000	
▪ Present value of funding and pre-existing solvency special payments due within 5 years	3,468,000	5,244,000	
Adjusted solvency assets	\$ 56,147,000	\$ 59,689,000	
Solvency liability	\$ 58,467,000	\$ 60,189,000	
Solvency liability adjustment	(556,000)	970,000	
Adjusted solvency liability	\$ 57,911,000	\$ 61,159,000	
Prior year credit balance	0	0	
Solvency excess (deficiency)	\$ (1,764,000)	\$ (1,470,000)	
Solvency position without asset adjustment for funding and solvency special payments	\$ (5,232,000)	\$ (6,714,000)	
Plan Membership	31.12.2009	31.12.2008	
▪ Active	0	0	
▪ Suspended or disabled	0	0	
▪ Retired members in receipt of pensions	151	163	
▪ Surviving spouses in receipt of pensions	98	105	
Total membership	249	268	
<hr/>			
Funding Requirements (annualized)	2010	2009	
Estimated minimum Employer contribution	\$ 1,471,104	\$ 3,495,862	
Estimated maximum Employer contribution	\$ 7,986,000	\$ 12,216,000	
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Schedule of Employer Contributions	2010-2012	2013	2014
Current Service Cost	\$ 0	\$ 0	\$ 0
Unfunded Liability	231,072	184,430	9,756
Solvency Deficiency	1,240,032	724,032	395,016
Total	\$ 1,471,104	\$ 908,462	\$ 404,772

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Introduction and Executive Summary

Introduction

**To: *Pension and Benefit Committee,
Corporation of the City of York Employee Pension Plan***

At your request, we have conducted an actuarial valuation of the Corporation of the City of York Employee Pension Plan (the "Plan") as at December 31, 2009. The previous actuarial valuation was prepared as at December 31, 2008.

The purpose of this valuation is to determine:

- the funded status of the Plan as at December 31, 2009 on going-concern and solvency bases, and
- the minimum funding requirements by the City of Toronto (the "Employer") and the Plan members during the period from January 1, 2010 through December 31, 2010.

The next actuarial valuation of the Plan will be required as at a date not later than December 31, 2010 or as at the date of an earlier amendment to the Plan, in accordance with the minimum requirements of the *Pension Benefits Act (Ontario)*.

The Report sets out full details of the Plan's financial position on the valuation date, makes recommendations as to the utilization of the experience gains and illustrates the effect of these recommendations on the Plan's funded position.

Executive Summary

Summary of Results

a) Plan Assets

For purposes of the going-concern valuation, the assets are valued on a smoothed market value basis.

A description of the asset valuation method is provided in Section 3. There were no changes made to the method used to value the Plan's assets.

The assets of the Plan, as reported on financial statements obtained from the custodian, have changed as follows during 2009.

	December 31, 2008	December 31, 2009	Rate of Return in 2009 *
Market Value	\$ 48,040,000	\$ 50,543,000	11.40%
Actuarial Value	\$ 54,984,000	\$ 53,327,000	2.16%

* The rate of return is net of investment expenses.

b) Going-Concern Financial Position as at December 31, 2009

On a going-concern basis, the actuarial value of assets of \$ 53,327,000 is less than the actuarial liabilities of \$ 54,135,000, producing a funding deficiency of \$ 808,000. The previous valuation at December 31, 2008 indicated a funding deficiency of \$ 2,637,000. The improvement in the funded position since the previous valuation is primarily due to special payments made to fund the deficiency partially offset by net experience losses primarily due to the worse than expected performance of the assets on the actuarial value basis. Further details can be found in Section 4.

c) Solvency Position as at December 31, 2009

On a solvency basis, the value of the assets of \$ 52,679,000 (market value adjusted to reflect estimated termination expenses and the asset smoothing adjustment) is less than the actuarial liabilities of \$ 57,911,000, producing a total solvency shortfall of \$ 5,232,000. The previous valuation at December 31, 2008 indicated a total solvency shortfall of \$ 6,714,000.

The improvement in the solvency position (from \$6.7 million to \$5.2 million) since the previous valuation is primarily the result of Employer contributions to fund the deficiency, partially offset by losses from the worse than expected performance of the assets on the actuarial value basis. Further details can be found in Section 6.

On a wind-up basis, the value of the liabilities of \$ 58,467,000 exceeds the value of assets of \$ 50,481,000 (market value less estimated termination expenses), producing a wind-up deficiency of \$ 7,986,000. The previous valuation at December 31, 2008 indicated a wind-up deficiency of \$ 12,216,000.

d) Funding Requirements

In 2010, it is recommended that the Employer make contributions at least equal to the minimum contributions of \$ 1,471,104 (\$ 122,592 per month) in respect of the going-concern and solvency deficiencies.

Since all active members have retired at December 31, 2009, current service contributions for 2010, and thereafter, are nil.

The minimum required and maximum allowable Employer contributions for 2010 are as follows:

Employer Contributions	Minimum Required	Maximum Allowable
▪ in respect of current service	\$ 0	\$ 0
▪ in respect of the funding deficiency	231,072	808,000
▪ in respect of the solvency/wind-up deficiency	1,240,032	7,178,000
Total Employer contributions	\$ 1,471,104	\$ 7,986,000

Upon filing this report, the Employer must contribute the excess, if any, of the minimum contribution with an allowance for interest recommended in this report over contributions actually made in respect of the period following January 1, 2010. This contribution, along with an allowance for interest, is due no later than 60 days following the date this report is filed.

e) 50% Rule Refund of Excess Contributions

It was recently discovered that, in respect of members who retired since January 1, 1987, the 50% rule refund of excess contributions amount, if any, may not have been processed. The issue is under investigation and a resolution has not yet been reached. At this time, the impact of the above, if any, is not known and cannot as yet be quantified. If it is determined that the Plan has an additional liability for unpaid excess refunds, the funded position of the Plan will be adversely affected and special payments may have to be increased.

f) Plan Membership

The membership data received from the Employer for purposes of this valuation includes:

- 0 active members, since the last remaining active member retired in 2006.
- 151 retired members having an average age of 78.0 years, in receipt of annual pensions totalling \$ 4,836,192 (this includes annual bridge pensions totalling \$ 34,876 in respect of 4 pensioners).
- 98 surviving spouses having an average age of 82.0 years, in receipt of annual pensions totalling \$ 1,312,221.
- The number of retired members and surviving beneficiaries receiving pensions from the Plan decreased from 268 to 249 during 2009.

Reconciliation of these membership changes and further details are included in Appendix B.

Changes in Actuarial Assumptions and Methods

There have been no changes made to the going-concern actuarial assumptions and methods from those used in the last actuarial valuation at December 31, 2008. A complete description of the going-concern actuarial methods and assumptions is provided in Appendix C.

Changes in By-law Provisions

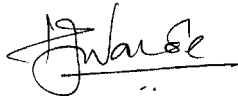
There have been no material changes to the By-law provisions since the previous valuation as at December 31, 2008. A summary of the main By-law provisions in effect on the valuation date is provided in Appendix A.

Recommendations

Based on the results of this valuation and in accordance with our calculations in Appendix E, which are based on the inactive lives excess yield method for determining such adjustments as outlined in the Plan document, it is recommended that no post retirement cost-of-living adjustment be made to pensions in payment as at July 1, 2010.

This report will be filed with the Financial Services Commission of Ontario ("FSCO") and with the Canada Revenue Agency ("CRA").

Respectfully submitted,



Anil Narale

Fellow of the Canadian Institute of Actuaries

Fellow of the Society of Actuaries

April 12, 2010

Date



Frank Dekeyser

Associate of the Society of Actuaries

April 12, 2010

Date

The Corporation of the City of York Employee Pension Plan

Registration number with the FSCO and with the CRA: 0320622

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Plan Assets

The pension fund is held in trust by CIBC Mellon and is invested in accordance with the investment policy by McLean Budden.

The going-concern assets are recorded at an "Actuarial Value" which is determined as follows:

- (1) The market value of total assets at the previous year-end is accumulated, together with the current year's cash flow, with interest at the valuation rate of 5.50%; and
- (2) The difference between the accumulation in (1) and the market value of total assets at the valuation date is spread over the current year and the three succeeding years in four equal amounts.

The value determined in accordance with the above method is **\$ 53,327,000** as at December 31, 2009.

The effect of the foregoing is shown below (in \$ 000).

Assets of the Pension Fund	Market Value	Actuarial Value
I. Cash and Equivalents		
▪ Cash and short-term investments	1,582	1,582
II. External Management		
Short-term investments	1	1
Bonds	24,616	24,616
Canadian equities	11,447	11,447
Foreign equities	12,897	12,897
Subtotal	48,961	48,961
III. Smoothing Adjustment		2,784
Total	50,543	53,327
Net amount in-transit	0	0
Total Fund	50,543	53,327

Under this adopted asset valuation method, the Plan's investment rate of return in 2009 was equal to 2.16% (net of investment expenses).

The currently unrecognized elements of the market value of assets will be taken into account in future years in the following amounts (\$ 000).

2009	25% of 2007 loss	(503)	
	25% of 2008 loss	(2,151)	
	25% of 2009 gain	674	(1,980)
2010	25% of 2008 loss	(2,151)	
	25% of 2009 gain	674	(1,477)
2011	25% of 2009 gain	673	673
Total			(2,784)

A reconciliation of the pension fund assets during 2009 on both market and actuarial value bases is provided in the table below.

Reconciliation of Fund Assets (\$ 000)

		Market Value	Actuarial Value
Value at 31.12.2008		48,040	54,984
Contributions in-transit		(0)	(0)
Adjusted value at 31.12.2008		48,040	54,984
I. Contributions			
Employee Current Service	0		
Employer Current Service	0		
Employer Special Payments	3,506	3,506	3,506
II. Adjusted Investment Income		5,447	1,287
III. Pensions & Other Benefits			
Pensions for Members	4,936		
Pensions for Widows & Others	1,328		
Lump sum payments	0	(6,264)	(6,264)
IV. Actuarial, Legal and Other Fees			
Actuarial Fees	46		
Custodial Fees	6		
Investment Management Fees	131		
Other Fees (audit, legal, etc.)	3	(186)	(186)
Value at 31.12.2009 (before in-transits)		50,543	53,327
Net amount in-transit		0	0
Value at 31.12.2009 (after in-transits)		50,543	53,327

Historical Fund Performance

Annual rates of return, net of investment expenses, for the last 12 years are provided below on both a market value and actuarial value bases.

	Year-end Market Value	Market Value Rate of Return	Year-end Actuarial Value	Actuarial Value Rate of Return
2009	\$ 50,543,000	11.40%	\$ 53,327,000	2.16%
2008	48,040,000	-9.90%	54,984,000	2.85%
2007	57,156,000	2.12%	57,046,000	7.57%
2006	58,764,000	9.33%	55,755,000	9.46%
2005	56,236,000	10.61%	53,424,000	4.78%
2004	53,087,000	8.93%	53,292,000	0.42%
2003	51,524,000	11.27%	55,969,000	0.61%
2002	46,557,000	-8.38%	55,899,000	0.10%
2001	57,408,000	-5.64%	62,147,000	4.60%
2000	67,243,000	8.12%	65,496,000	7.65%
1999	68,313,000	9.22%	66,974,000	7.18%
1998	68,709,000	6.75%	68,709,000	14.00%

Historical Updates to Pensions In-Payment

Annual cost-of-living adjustments (COLA) for the last 14 years, applicable to pensions that have been in payment for at least one year on the effective date, are provided below.

Effective Date	COLA Update *	Effective Date	COLA Update
July 1, 1996	1.16%	July 1, 2006	0.00%
July 1, 1997	2.91%	July 1, 2007	0.00%
July 1, 1998	3.59%	July 1, 2008	0.00%
July 1, 1999	4.41%	July 1, 2009	0.00%
July 1, 2000	4.79%		
July 1, 2001	4.01%		
July 1, 2002	0.00%		
July 1, 2003	0.00%		
July 1, 2004	0.00%		
July 1, 2005	0.00%		

* The COLA updates indicated are the maximum pension increases determined under the excess yield method. It should be noted that the annual increase for some pensioners is limited to the cumulative change in CPI since the last adjustment.

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Valuation Results – Going-Concern Basis

On the basis of the foregoing, the financial position of the Plan on the going concern basis as at December 31, 2009, with comparable results from the previous valuation, is summarized below:

Financial Position – Going-Concern Basis

	December 31, 2009 (\$ 000)	December 31, 2008 (\$ 000)
Assets		
▪ Value of Pension Fund	53,327	54,984
▪ Net amount in-transit	0	0
Total value of assets	53,327	54,984
Liabilities		
▪ Active and disabled members	0	0
▪ Retired members' pensions	44,203	47,137
▪ Spouses and other survivor pensions	9,932	10,484
Total actuarial liabilities	54,135	57,621
Funding Excess (Deficiency) *	(808)	(2,637)

* The going-concern position is subject to change pending resolution of the 50% rule excess refund issue.

Current Service Cost

As at December 31, 2009 all active members had retired. Therefore, no further contributions for current service are required by the Employer and the Plan members.

Special Payments for Unfunded Liabilities

The unfunded liabilities created at January 1, 2003, January 1, 2004, January 1, 2005 and December 31, 2005, funded by monthly special payments of \$80,375, \$29,109, \$29,110 and \$5,377 respectively, have been fully amortized as at the valuation date. The present value of the remaining special payments of \$18,433 per month for unfunded liabilities created prior to the valuation date was \$ 765,000 as at December 31, 2009. Net actuarial losses resulting from Plan experience in 2009 has created an unfunded liability of \$43,000 at December 31, 2009, which is to be amortized over 5 years with special payments of \$813 per month.

After including the above changes, the following minimum special payments must be made to the Plan in order to eliminate the funding deficiency of \$ 808,000 as at December 31, 2009 within the periods specified.

Minimum Funding Schedule

Unfunded Liability	Effective Date	Monthly Payment	Last Payment	Present Value of Remaining Payments at 31.12.2009
Plan experience	31.12.2008	\$ 18,443	10.2013	\$ 765,000
Plan experience	31.12.2009	813	12.2014	43,000
		\$ 19,256		\$ 808,000

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Reconciliation of Funded Position

As the foregoing actuarial balance sheet indicates, the Plan has a funding deficiency on the going-concern basis of \$ 808,000 on the valuation date. The analysis of change in the funded position during 2009 is as follows.

	(\$ 000)	(\$ 000)
Funding Deficiency at December 31, 2008		2,637
▪ Interest on deficiency at 5.50% per annum	145	
▪ Employer special payments made in 2007, with interest	<u>(3,602)</u>	(3,457)
Experience losses (gains)		
▪ Investment experience	1,847	
▪ Mortality experience	(222)	
▪ Data corrections	0	
▪ Miscellaneous	<u>3</u>	1,628
Funding Deficiency at December 31, 2009		808

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Valuation Results – Solvency Basis

When conducting a solvency valuation, we determine the relationship between the respective values of the Plan's assets and its liabilities on a solvency basis, determined in accordance with the *Pension Benefits Act (Ontario)*. The value of the Plan's assets and liabilities on a solvency basis are related to the corresponding values calculated as though the Plan were wound up and settled on the valuation date.

Pre-Existing Special Payments

The present value at December 31, 2009 of the pre-existing special payments established in the prior valuation to eliminate the solvency deficiencies over the prescribed periods is determined as follows:

Present Value of Pre-Existing Solvency Special Payments

Effective Date	Monthly Special Payment	Last Payment	Present Value of Remaining Payments as at 31.12.2009
01.01.2005	\$ 59,177	12.2009	\$ 0
31.12.2005	209	12.2009	0
31.12.2007	43,000	12.2012	1,445,000
31.12.2008	27,418	12.2013	1,202,000
Total	\$ 129,804		\$ 2,647,000

As indicated above, the present value of the pre-existing solvency special payments of \$ 129,804 per month from the previous valuation is \$ 2,647,000 at the current valuation date.

Financial Position on a Solvency Basis

The Plan's solvency position as at December 31, 2009, in comparison with that of the previous valuation as at December 31, 2008, is determined as follows:

Financial Position – Solvency Basis

	Dec. 31, 2009 (\$ 000)	Dec. 31, 2008 (\$ 000)
Assets		
Market value of assets (before in-transit amounts)	50,543	48,040
▪ Net amount in-transit	0	0
Market value of assets (after in-transit amounts)	50,543	48,040
▪ Termination expenses	(62)	(67)
Solvency assets	50,481	47,973
Solvency asset adjustment:		
▪ Asset smoothing adjustment	2,198 *	6,472
▪ Present value of funding and pre-existing solvency special payments due within 5 years	3,468	5,244
Adjusted solvency assets	56,147	59,689
Actuarial liability		
Present value of accrued benefits for:		
▪ Active and disabled members	0	0
▪ Retired members pensions	47,823	49,278
▪ Spouses and other survivor pensions	10,644	10,911
Solvency liabilities	58,467	60,189
Solvency liability adjustment	(556)	970
Adjusted solvency liability	57,911	61,159
Solvency excess (deficiency) created at the valuation date **	(1,764)	(1,470)
Total solvency surplus (shortfall), excluding asset adjustment for funding and solvency deficiency payments and prior year credit balance adjustment **	(5,232)	(6,714)
Market value less prior year credit balance	50,543	48,040
Solvency liability, excluding adjustments	58,467	60,189
Transfer ratio	86%	80%

* Averaging method adjustment = 75% of investment gains from 2009, \$(2,327,000), plus 50% of investment losses from 2008, \$4,095,000, plus 25% of investment losses from 2007, \$430,000.

** The solvency position is subject to change pending resolution of the 50% rule excess refund issue.

Impact of Plan Wind-Up

In our opinion, the value of the Plan's assets would be less than its actuarial liabilities if the Plan were to be wound up on the valuation date. Specifically, actuarial liabilities of \$ 58,467,000 would exceed the market value of Plan assets of \$ 50,481,000 by an amount of \$ 7,986,000. For purposes of this calculation, the market value of assets includes a provision for Plan termination expenses that might be payable from the pension fund. It should be noted that the financial position on the windup basis is subject to change pending resolution of the 50% rule excess refund issue.

Total Special Payments for Solvency Deficiency

In accordance with the *Pension Benefits Act (Ontario)*, each solvency deficiency must be eliminated by special payments within five years of the respective effective date.

The pre-existing solvency deficiencies established at January 1, 2005 and December 31, 2005 have been fully amortized and are therefore eliminated as at December 31, 2009. The pre-existing solvency deficiency established at December 31, 2007 will continue to be amortized with monthly special payments of \$43,000 until December 31, 2012 and the pre-existing solvency deficiency established at December 31, 2008 will continue to be amortized with monthly special payments of \$27,418 until December 31, 2013. In addition, there is a new solvency deficiency of \$1,764,000 created at December 31, 2009 which shall be funded within 5 years by minimum special payments of \$ 32,918 per month.

After including the above changes, the following minimum special payments must be made to the Plan in order to eliminate the total solvency shortfall of \$ 4,411,000 as at December 31, 2009 within the periods specified.

Present Value of Monthly Special Payments

Effective Date	Monthly Special Payment	Last Payment	Present Value of Remaining Payments as at 31.12.2009
31.12.2007	\$ 43,000	12.2012	\$ 1,445,000
31.12.2008	27,418	12.2013	1,202,000
31.12.2008	32,918	12.2014	1,764,000
Total	\$ 103,336		\$ 4,411,000

Pension Benefits Guarantee Fund (PBGF) Assessment

In accordance with subsection 47(1)(p.18) of the Regulations under the *Pension Benefits Act (Ontario)*, the pension benefits provided by this Plan are not guaranteed by the Pension Benefits Guarantee Fund (PBGF) and are therefore exempt from the filing of PBGF assessment certificate (subsection 18(7) of the Regulations) and payment of an annual PBGF assessment (section 37 of the Regulations).

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Recommendations and Funding

Post-Retirement Adjustment at July 1, 2010

In accordance with the Plan provisions, a post-retirement adjustment would have been scheduled to be granted on pensions, effective July 1, 2010, to all pensioners whose benefit payments commenced prior to 2010. However, in accordance with our calculations in Appendix E, we have determined this adjustment to be 0.00%, based on 2009 returns and the inactive lives excess yield method described in the Plan provisions.

It is recommended that:

- no post-retirement adjustment be made as at July 1, 2010.

The minimum funding schedule after the above recommendation(s) is provided below.

Minimum Funding Schedule after Recommendations

Type of Deficiency	Effective Date	Monthly Payment	Last Payment
Unfunded Liability	31.12.2008	\$ 18,443	10.2013
Unfunded Liability	31.12.2009	813	12.2014
Subtotal – Going-Concern		\$ 19,256	
Solvency Deficiency	31.12.2007	\$ 43,000	12.2012
Solvency Deficiency	31.12.2008	27,418	12.2013
Solvency Deficiency	31.12.2009	32,918	12.2014
Subtotal – Solvency		\$ 103,336	
Total		\$ 122,592	

Since all active members have retired, no Employer contributions are required for current service. Therefore, we recommend that the Employer contribute at the rate of \$ 122,592 per month in respect of the unfunded liabilities and solvency deficiencies, until revised by a subsequent valuation report.

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Actuarial Opinion

**with respect to the Actuarial Valuation as at December 31, 2009
of the Corporation of the City of York Employee Pension Plan**
FSCO and CRA Registration No. 0320622

It is hereby certified that, in our opinion, with respect to the Corporation of the City of York Employee Pension Plan:

- 1) since all active members were retired as at December 31, 2009, current service contributions for 2010, and thereafter, are nil;
- 2) on a going-concern basis, the Plan is not fully funded as at December 31, 2009, with liabilities exceeding assets by \$ 808,000. In order to comply with the provisions of the *Pension Benefits Act (Ontario)*, the unfunded liability must be liquidated by monthly special payments over a period not exceeding 15 years. Due to the mature nature of the Plan, we recommend a shorter amortization period of 5 years. Accordingly, the recommended special payments are set forth below:

Type of Deficiency	Effective Date	Monthly Special Payment	Date of Last Payment
Unfunded Liability	31.12.2008	\$ 18,443	10.2013
Unfunded Liability	31.12.2009	813	12.2014
		\$ 19,256	

- 3) on a solvency basis, the Plan is not fully funded as at December 31, 2008, with liabilities exceeding assets by \$ 5,232,000. In order to comply with the *Pension Benefits Act (Ontario)*, the solvency deficiency must be eliminated by monthly special payments at least equal to the amounts indicated and for the period set forth below:

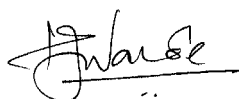
Type of Deficiency	Effective Date	Monthly Special Payments	Date of Last Payment
Solvency Deficiency	31.12.2007	\$ 43,000	12.2012
Solvency Deficiency	31.12.2008	27,418	12.2013
Solvency Deficiency	31.12.2009	32,918	12.2014
Total		\$ 103,336	

- 5) the financial positions of the Plan on the going-concern and solvency bases are subject to change pending resolution of the 50% rule excess refund issue; and
- 6) as at December 31, 2009, the transfer ratio of the Plan is 0.86 and the Prior Year Credit Balance is \$ 0; and
- 7) the Plan benefits are not guaranteed by the Pension Benefits Guarantee Fund and are therefore exempt from the annual filing of the PBGF assessment certificate and payment of any associated fees, in accordance with subsection 47(1)(p.18) of the Regulations under the *Pension Benefits Act (Ontario)*.

In our opinion,

- the data on which the valuation is based are sufficient and reliable for the purpose of the valuation.
- the assumptions are, in aggregate, appropriate for the purpose of the valuation.
- the methods employed in the valuation are appropriate for the purpose of the valuation.
- the liabilities would exceed the assets if the Plan were to be wound up on the valuation date.

This report has been prepared, and our opinions have been given, in accordance with accepted actuarial practice in Canada.



Anil Narale

Fellow of the Society of Actuaries
Fellow of the Canadian Institute of Actuaries

April 12, 2010

Date



Frank Dekeyser

Associate of the Society of Actuaries

April 12, 2010

Date

Appendix A

By-law Provisions

The following is a summary of the main provisions of the Plan, contained in By-law no. 3001999, which are relevant to the actuarial valuation. For complete details reference should be made to the formal Plan document.

Effective Date:	January 1, 1955.
Membership:	Employees who were hired before July 1, 1968.
Normal Retirement:	Age 60 for firefighters; age 65 for others.
Early Retirement:	Unreduced pensions upon completion of 30 years of service and attainment of age 55 (age 50 for firefighters). Otherwise the pension will be actuarially reduced.
Disability Retirement:	Permitted, with unreduced accrued pension, <ul style="list-style-type: none">(a) after 10 years, if disability is total and permanent, or(b) after 20 years, if the employee is incapable of continuing in the employer's service.

Member Contributions: Firefighters: 4.4% of Salary up to YMPE and
6.5% of Salary over YMPE.

All Others: 3.9% of Salary up to YMPE and
6.0% of Salary over YMPE.

Since all active members had completed 35 years of pensionable service as at December 31, 2003, there are no further contribution requirements after this date.

Employer Contributions: Such amounts as certified by the Actuary in the actuarial valuation reports.

Normal Retirement Pension: 2% of employee's best consecutive 5-year average earnings, multiplied by his number of years of service up to a maximum of 35 years, less (after age 65 or total disability) 0.7% of final 3 year average Y.M.P.E., multiplied by number of years of service after 1.1.66, up to a maximum of 35 years. For years of service after 1990, Revenue Canada restricted pensions to a flat dollar amount per year of service. For 2006 (the year that the last member retired), this amount was \$ 2,111.11.

Pre-Retirement Death Benefits: The pre-retirement death benefit is equal to five times the annual pension accrued to date of death, less any benefit payments made prior to date of death. In addition, commencing 5 years after the date of death an eligible widow or widower will receive 50% of the annual pension accrued to date of death, and if there are any surviving children this benefit will be increased by 10% of the accrued pension for each eligible child up to a maximum benefit of 75% of the accrued pension. If there is no surviving widow or widower the 50% benefit will be divided equally among the eligible surviving children. Dependent children's benefits cease on attainment of age 21.

Form of Retirement Pension: The normal form of pension benefit for a member who is not married at retirement is a lifetime pension, guaranteed for 5 years and for a married member is a joint and survivor 60% pension, guaranteed for 5 years. Effective as at January 1, 2002, survivor benefits are provided on post-retirement marriage, after the spouse has completed a 3-year period of marriage or co-habitation in a conjugal relationship.

Withdrawal Benefits:	Vested pension, or return of terminated member's pre-1987 contributions plus interest plus the commuted value of the member's post-1986 accrued pension.
Employer Cost-Sharing:	Upon termination, death or retirement, the member or his beneficiary is entitled to receive the excess, if any, of the member's post-1986 contributions plus interest over 50% of the commuted value of the pension earned over the same period.
Post-Retirement Adjustments:	Each July 1, the monthly income of members in receipt of pensions, survivors in receipt of pensions and terminated vested members entitled to a deferred pension shall be increased, as determined annually by the actuary and subject to Revenue Canada limitations, by a factor calculated as the sum of the inactive lives excess yields calculated for each of the 4 previous calendar years divided by 4. The inactive lives excess yield means the earnings of the pension fund that are in excess of that needed to match the inactive liabilities.

Notes:

1. All pensions are subject to the maximum limitation imposed by the *Municipal Act and the Income Tax Act*.
2. The Plan is subject to the provisions of the *Pension Benefits Act, Revised Statutes of Ontario, 1990*.

Appendix B

Membership Data

Data as to the membership of the Plan were obtained from the Employer for purposes of this actuarial valuation. These data reflect membership changes up to the end of January (approximately) of the year following the valuation date. Tests were carried out as to the validity of the data by comparison with the data obtained in the previous valuation, by reconciliation of the membership movement during the inter-valuation period and by performing various data checks to ensure that pension amounts, dates of birth, and so on are reasonable. The results of these tests were satisfactory.

Membership Reconciliation

A reconciliation of the membership data since the previous valuation is provided below.

	Active & Disabled Members	Pensioners	Surviving Spouses	Total
As at 12.31.2008	0	163	105	268
Pension Splits				
Data Corrections				
Exits By:				
Retirement				
Death - no spouse		(9)	(10)	(19)
Death - with spouse		(3)	3	
As at 31.12.2009	0	151	98	249

Active and Disabled Members

The sole remaining active Plan member retired in 2006.

Pensioners and Spouses

As at December 31, 2009, there are 151 pensioners having an average age of 78.0 years, receiving annual pensions totalling \$ 4,836,192 (this includes annual bridge pensions of \$ 34,876 in respect of 4 pensioners) and there are 98 surviving spouses having an average age of 82.0 years, receiving annual pensions totalling \$ 1,312,221.

The following table provides a further breakdown:

Age Group	PENSIONERS		SURVIVING SPOUSES	
	No.	Average Annual Pension	No.	Average Annual Pension
60 – 64	4	\$ 27,868	1	\$ 17,139
65 – 69	14	42,982	4	22,276
70 – 74	35	37,009	13	19,200
75 – 79	38	37,142	19	16,192
80 – 84	37	23,978	23	12,676
85 – 89	17	26,668	25	10,933
90 – 94	4	15,102	12	6,861
95 & over	2	7,683	1	1,530
Total	151	\$ 32,028	98	\$ 13,390
Males	134	\$ 34,313	9	\$ 9,610
Females	17	\$ 14,016	89	\$ 13,772



Appendix C

Actuarial Methods and Assumptions – Going-Concern Basis

The actuarial value of benefits is based on economic and demographic assumptions. At each valuation, we determine whether, in our opinion, the actuarial assumptions are still appropriate for the purposes of the valuation, and we revise the assumptions if necessary.

In this valuation, we have used the same assumptions as in the previous valuation, except as noted. Emerging experience will result in gains or losses that will be revealed and considered in future actuarial valuations. For this valuation, we have used the following assumptions:

Economic Assumptions

Investment Return

We have assumed that the investment return on the actuarial value of the fund, net of eligible Plan expenses charged to the Plan assets, will average 5.50% per year over the long term. We have based this assumption on an expected long-term return on the pension fund less an allowance for investment and administrative expenses and less a margin for adverse deviations, as described below.

We have assumed a gross rate of return of 7.12% consistent with market conditions applicable on the valuation date, based on estimated returns for each major asset class and the target asset mix specified in the Plan's investment policy. We have allowed for investment and administrative expenses of 0.40% per year, the expected average rate of such expenses in the future. We have included a margin for adverse deviations, from all sources, of 1.22% per year.

Discount Rate

We have assumed that the discount rate for determination of the actuarial liabilities will be equal to the investment return assumption of 5.50% per year.

Expenses

We have not included a specific allowance for eligible Plan expenses. Instead, we have assumed that the investment return assumption is net of all eligible Plan expenses.

Cost-of-Living Increases

We have not included an assumption for potential future post retirement cost-of-living increases to pensions.

Demographic Assumptions

Mortality

The actuarial value of the pension depends on the lifetime of the member. We have assumed mortality rates after retirement in accordance with the Uninsured Pensioner Mortality Table for 1994 (UP94), with allowance for future mortality improvements. No mortality assumption was included in the pre-retirement period. According to this table, the life expectancy at age 65 years is 18.7 years for a male and 21.3 years for a female.

Spousal Benefit Assumptions

The survivor benefit assumption is based on actual data provided and an allowance for remarriage of 0.25% of the pensioner liability.

Subject to the entitlement of the prior spouse, if any, the 3-year waiting period specified in the Plan and the requirements under the *Pension Benefits Act (Ontario)*, a spouse acquired after retirement date may be entitled to receive the spousal pension. Based on remarriage rates for older adults in Canada, it was estimated that the additional liability as a result of this provision is approximately 0.25% of the pensioner liability.

Assumed Percentage of Members Married

No marriage assumption was made for inactive members. Instead, actual spousal information was used.

Deviation from Assumptions

Emerging experience differing from the assumptions will result in gains or losses in future actuarial valuations.

Funding Method

The total *actuarial liability* has been determined as the actuarial present value of accrued benefits for current pensioners and spousal pensioners.

The total *value of assets* has been determined as the actuarial value of invested assets.

The difference between the total value of assets and the total actuarial liability is called the *funding excess* or *unfunded liability*, as the case may be. An unfunded liability will be amortized over no more than 15 years through special payments as required under the *Pension Benefits Act (Ontario)*.

Differences between actual experience and that expected based upon a set of actuarial assumptions during the period between two actuarial valuation dates will result in experience gains/(losses) which will increase/(decrease) the funding excess/(unfunded liability).



Appendix D

Actuarial Methods and Assumptions – Solvency Basis

The value of assets used for determining the financial position of the Plan on the solvency basis includes the solvency assets plus a solvency asset adjustment.

The *solvency assets* are determined as the market value of investments held by the Plan plus any cash balances of the Plan and accrued or receivable income items.

The *solvency asset adjustment* is determined as (1) the present value at the interest rate used to calculate the solvency liability adjustment of the special payments required to eliminate any going-concern unfunded liability and pre-existing solvency deficiency that are scheduled for payment within 5 years of the valuation date, plus (2) the amount, positive or negative, by which the value of the solvency assets are adjusted as a result of applying an averaging method that stabilizes short-term fluctuations of the Plan assets.

The value of the liabilities used for determining the financial position of the Plan on the solvency basis includes the solvency liabilities plus a solvency liability adjustment.

To determine the *solvency liability*, we have valued those benefits that would have been paid had the Plan been wound up on the valuation date with all members vested in their accrued benefits.

The *solvency liability adjustment* is determined as the amount, positive or negative, by which the value of the solvency liabilities are adjusted as a result of using a solvency valuation interest rate that is the average of the market interest rates calculated over a period of 4 years (the same period used for the averaging method used to determine the solvency asset adjustment).

The difference between (1) the sum of the solvency assets and solvency asset adjustment and (2) the sum of the solvency liability and solvency liability adjustment is called the *solvency excess* or *solvency deficiency*, as the case may be.

Since all members have qualified for a retirement pension, we have assumed that all benefits will be settled through the purchase of annuities and have used a valuation interest rate for solvency purposes which, when used with the 1994 Uninsured Pensioners mortality table with mortality projected to 2015 (U94P2015), provides an estimate of group annuity purchase rates for non-indexed pensions.

The Plan provides that the new spouse of a pensioner, whose former spouse at retirement has died or who was without spouse at retirement, is eligible for a survivor pension provided that the new spousal relationship, as defined in the Plan, has been in effect for a minimum of 3 years. In order to make allowance for the possible increase in future liabilities on remarriage of a pensioner, we have loaded the pensioner liabilities by 0.25% as an allowance for remarriage.

Assumptions for determination of the solvency liability are as follows:

Actuarial Assumptions

Mortality rates:	UP1994 table, with mortality projection to 2020
Interest rate for benefits to be settled through annuity purchase:	4.49%
Post retirement cost-of-living increases	0.00%
Termination expenses:	\$ 62,000 (based on \$ 250 per pensioner/survivor)

Assumptions for determination of the solvency liability adjustment are as follows:

Actuarial Assumptions

Mortality rates:	UP1994 table, with mortality projection to 2020
Interest rate for benefits to be settled through annuity purchase:	4.625%
Post retirement cost-of-living increases	0.00%

We have used an average of the annuity proxy rates as at December 31, 2006 (4.60% per year), December 31, 2007 (4.50% per year), December 31, 2008 (4.85% per year) and December 31, 2009 (4.49% per year) which produces a rate of 4.625% per year (rounded to the nearest 1/8%).

Appendix E

Post Retirement Cost-of-Living Adjustments

COLA at July 1, 2010

The COLA at July 1, 2010 is based on the average of the Inactive Lives Excess Yields calculated for each of the previous 4 calendar years (i.e. 2006, 2007, 2008, 2009).

If the increase calculated is zero or negative, no adjustment to pensions is to be granted. In accordance with the calculation on the following page, since the increase calculated is negative, no adjustment to pensions arises at July 1, 2010.

Calculation of COLA at July 1, 2010

The calculation of COLA as at July 1, 2010 on pensions in payment at December 31, 2009 is as follows:

	2009	2008	2007	2006
MV of assets at Dec. 31	\$50,543,000	\$48,040,000	\$57,156,000	\$58,764,000
Inactive liability at Dec. 31 based on Jan 1 benefits	\$54,135,000	\$57,621,000	\$60,466,000	\$64,191,000
Inactive Lives Reserve				
OILR at Jan. 1	\$57,621,000	\$60,466,000	\$64,191,000	\$68,139,000
CILR at Dec. 31	\$54,135,000	\$57,621,000	\$60,466,000	\$64,191,000
Inactive Lives Fund				
OILF at Jan. 1	\$48,040,000	\$57,156,000	\$58,764,000	\$56,236,000
Fund income & appreciation	5,447,000	(5,340,000)	1,370,000	5,279,000
Pensions paid in year	(6,264,000)	(6,678,000)	(6,728,000)	(7,051,000)
Expenses paid in year	(186,000)	(219,000)	(222,000)	(197,000)
CILF at Dec. 31	\$47,037,000	\$44,919,000	\$53,184,000	\$54,267,000
Inactive Lives Excess Yield (CILF-CILR)/CILR	-13.11%	-22.04%	-12.04%	-15.46%
4-Year Average Excess Yield	-15.66%			
COLA Adjustment for 2010	0.00%			

Definition of Terms and Actuary's Interpretations

Inactive Lives Excess Yield (s2.27), means “the earnings of the Fund that are in excess of that needed to match the liabilities established for pensioners, survivors and deferred members. This percentage is calculated annually by the formula:

$$100\% \times (\text{CILF} - \text{CILR}) / \text{CILR} “$$

Opening Inactive Lives Reserve (OILR) (s2.34), means “the liability of the Fund, as determined by the Actuary, with regard to pensioners, deferred members eligible for pensions and survivors in receipt of pension benefits as of each January 1.

We have interpreted the OILR to be equal to the inactive going-concern actuarial liabilities as of each January 1 (i.e. as of December 31 of the previous year).

Opening Inactive Lives Fund (OILF) (s2.33), means “the amount of the Fund set aside to match the OILR. This amount, as determined by the Actuary, will always equal the OILR for the same calendar year.”

If the market value of assets at January 1 is less than the OILR at that date, we have interpreted the OILF to be equal to the market value of assets at that date, otherwise, the OILF will equal the OILR.

Closing Inactive Lives Reserve (CILR) (s2.12), means “the liability of the Fund, as determined by the Actuary, with regard to pensioners, deferred members eligible for pensions and survivors in receipt of pension benefits as of each December 31. The reserve shall be calculated using the amounts of pension and recipients utilized in determining the OILR for the same calendar year.”

We have interpreted the CILR to be equal to the inactive going-concern actuarial liabilities as of each December 31, but excluding the liability for any amendments during the year which affected the pension benefits of the inactive members and excluding liability for new retirements.

Closing Inactive Lives Fund (CILF) (s2.11), means “the amount, as determined by the Actuary, of the OILF at the end of the calendar year. This figure is calculated by adjusting the OILF for the investment income, recognized capital gains and losses and expenses on a pro rata basis with the entire Fund, and assuming that all benefits paid to recipients valued in that year’s OILR are paid from the OILF.”

We have interpreted the above calculation of the CILF to include all interest and dividend income and both realized and unrealized capital gains and losses. As well, if the OILF is less than the OILR, we have interpreted the pro rata percentage to be 100%, otherwise the pro rata percentage is equal to the ratio of OILF to total Fund at January 1. The contributions made to the Fund in a calendar year are not included in the CILF for that year.

Appendix F

Employer Certification

With respect to the report on the actuarial valuation of the *Corporation of the City of York Employee Pension Plan*, as at December 31, 2009, I hereby certify that, to the best of my knowledge and belief:

- a copy of the official Plan documents, and of all amendments made up to the date of the valuation, were provided to the actuary;
- the membership and financial data provided to the actuary for the purposes of this valuation are accurate and complete;
- the membership data provided to the actuary include a complete and accurate description of every person who is entitled to benefits under the terms of the Plan for service up to the date of the valuation, and
- all events subsequent to December 31, 2009 that may have an impact on the results of the valuation have been communicated to the actuary.

Date

Signed

Name

Title

MERCER



MARSH MERCER KROLL
GUY CARPENTER OLIVER WYMAN

Mercer (Canada) Limited
161 Bay Street
P.O. Box 501
Toronto, Ontario M5J 2S5
416 868 2000

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