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Attachment 1

Attachment 1

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METROPOLITAN TORONTO POLICE BENEFIT FUND

REPORT ON THE ACTUARIAL VALUATION FOR FUNDING PURPOSES AS AT DECEMBER 31, 2016

APRIL 2017

Financial Services Commission of Ontario Registration Number: 0351585
Canada Revenue Agency Registration Number: 0351585

MARSH & McLENNAN COMPANIES

Note to reader regarding actuarial valuations:

This valuation report may not be relied upon for any purpose other than those explicitly noted in the Introduction, nor may it be relied upon by any party other than the parties noted in the Introduction. Mercer is not responsible for the consequences of any other use. A valuation report is a snapshot of a plan's estimated financial condition at a particular point in time; it does not predict a pension plan's future financial condition or its ability to pay benefits in the future. If maintained indefinitely, a plan's total cost will depend on a number of factors, including the amount of benefits the plan pays, the number of people paid benefits, the amount of plan expenses, and the amount earned on any assets invested to pay the benefits. These amounts and other variables are uncertain and unknowable at the valuation date. The content of the report may not be modified, incorporated into or used in other material, sold or otherwise provided, in whole or in part, to any other person or entity, without Mercer's permission. All parts of this report, including any documents incorporated by reference, are integral to understanding and explaining its contents; no part may be taken out of context, used, or relied upon without reference to the report as a whole.

To prepare the results in this report, actuarial assumptions are used to model a single scenario from a range of possibilities for each valuation basis. The results based on that single scenario are included in this report. However, the future is uncertain and the plan's actual experience will differ from those assumptions; these differences may be significant or material. Different assumptions or scenarios within the range of possibilities may also be reasonable, and results based on those assumptions would be different. Furthermore, actuarial assumptions may be changed from one valuation to the next because of changes in regulatory and professional requirements, developments in case law, plan experience, changes in expectations about the future, and other factors.

The valuation results shown in this report also illustrate the sensitivity to one of the key actuarial assumptions, the discount rate. We note that the results presented herein rely on many assumptions, all of which are subject to uncertainty, with a broad range of possible outcomes, and the results are sensitive to all the assumptions used in the valuation.

Should the plan be wound up, the going concern funded status and solvency financial position, if different from the wind-up financial position, become irrelevant. The hypothetical wind-up financial position estimates the financial position of the plan assuming it is wound up on the valuation date. Emerging experience will affect the wind-up financial position of the plan assuming it is wound up in the future. In fact, even if the plan were wound up on the valuation date, the financial position would continue to fluctuate until the benefits are fully settled.

Decisions about benefit changes, granting new benefits, investment policy, funding policy, benefit security, and/or benefit-related issues should not be made solely on the basis of this valuation, but only after careful consideration of alternative economic, financial, demographic, and societal factors, including financial scenarios that assume future sustained investment losses.

Funding calculations reflect our understanding of the requirements of the Pension Benefits Act (Ontario), the Income Tax Act, and related regulations that are effective as of the valuation date. Mercer is not a law firm, and the analysis presented in this report is not intended to be a legal opinion. You should consider securing the advice of legal counsel with respect to any legal matters related to this report.

CONTENTS

1

Summary of Results

	31.12.2016 ($000's)	31.12.2015 ($000's)
Asset Values		
Market value of assets	$543,400	$550,281
Rate of return during the year (net)	7.29%	5.78%
Going-Concern Financial Position		
Actuarial value of assets	$525,885	$526,126
Going-concern funding target	446,180	447,042
Funding excess (shortfall)	$79,705	$79,084
Hypothetical Wind-up Financial Position[1]		
Wind-up assets	$543,134	$550,007
Wind-up liability	513,387	558,503
Wind-up excess (shortfall)	$29,747	($8,496)
Transfer Ratio	106%	98%
Solvency Financial Position[2]		
Solvency assets	$564,067	$564,710
Asset smoothing adjustment	(33,340)	(40,783)
Smoothed assets	$530,727	$523,927
Solvency liability	$513,387	$558,503
Liability smoothing adjustment	(9,141)	(29,040)
Adjusted solvency liability	$504,246	$529,463
Solvency excess (shortfall)	$26,481	($5,536)
Indexation Reserve Account	$0	$0
Plan Membership		
Active	1	1
Suspended or disabled	0	0
Retired members in receipt of pensions	1,070	1,125
Surviving spouses in receipt of pensions	700	703
Total membership	1,771	1,829

[1] Not reflecting letter of credit ("LC").

[2] LC included in Solvency Assets.

Funding Requirements[3]	2017	2016
Minimum Employer contribution	$0	$3,424,800
Maximum Employer contribution	$0	$8,496,000

Schedule of Employer Contributions	2017	2018	2019
Current Service Cost	$0	$0	$0
Unfunded Liability	0	0	0
Solvency Deficiency	0	0	0
Total	$0	$0	$0

[3] Funding requirements for 2016 are prior to the application of a letter of credit. Nil contributions are required after the application of the letter of credit.

2

Introduction

To Trustees, Metropolitan Toronto Police Benefit Fund

At the request of the Trustees of the Metropolitan Toronto Police Benefit Fund (the "Board"), we have conducted an actuarial valuation of the Metropolitan Toronto Police Benefit Fund (the "Plan"), sponsored by City of Toronto (the "Employer"), as at the valuation date, December 31, 2016. We are pleased to present the results of the valuation.

Purpose

The purpose of this valuation is to determine:

- The funded status of the Plan as at December 31, 2016 on going concern, hypothetical wind-up, and solvency bases;
- The minimum required funding contributions from January 1, 2017, in accordance with the *Pension Benefits Act (Ontario)*; and
- The maximum permissible funding contributions from January 1, 2017, in accordance with the *Income Tax Act ("ITA").*

The information contained in this report was prepared for the internal use of the Trustees, the Employer and for filing with the Financial Services Commission of Ontario ("FSCO") and with the Canada Revenue Agency ("CRA"), in connection with our actuarial valuation of the Plan. This report is not intended or suitable for any other purpose.

In accordance with pension benefits legislation, the next actuarial valuation of the Plan will be required as at a date not later than December 31, 2019, or as at the date of an earlier amendment to the Plan.

Indexation Reserve Account

Based on the results of this valuation, the Indexation Reserve Account has increased from $0 at December 31, 2015 to $5,548,000 at December 31, 2016.

If the Board recommends a cost-of-living adjustment (COLA) to pensions in pay of 1.10%, the estimated cost at January 1, 2017 would be $4,890,000 on the going-concern basis and $5,548,000 on the solvency basis. The Indexation Reserve Account of $5,548,000 is sufficient to provide a COLA of 1.10%. If a COLA of 1.10% is provided, the Indexation Reserve Account would reduce by $5,548,000 to $0.

For comparison, the annual rate of inflation for the period was 1.34% (based on a ratio of the Consumer Price Index determined on a 12-month average to September 2016 over the 12-month average to September 2015).

Terms of Engagement
In accordance with our terms of engagement with the Trustees, our actuarial valuation of the Plan is based on the following material terms:

- It has been prepared in accordance with applicable pension legislation and actuarial standards of practice in Canada.

- As instructed by the Trustees, the going concern discount rate reflects a margin for adverse deviations of 0.15% per year.

  We have reflected the Trustee's decisions for determining the solvency funding requirements, summarized as follows:
  - The same plan wind-up scenario was hypothesized for both hypothetical wind-up and solvency valuations.
  - The solvency financial position was determined on a four year smoothed basis..

  See the Valuation Results - Solvency section of the report for more information.

Events since the Last Valuation at December 31, 2015
Changes in By-law Provisions
There have been no material changes to the By-law provisions since the previous valuation as at December 31, 2015. The Employer has used a letter of credit to meet solvency special payment requirements (and interest thereon) up to December 31, 2016.

A summary of the main By-law provisions in effect on the valuation date is provided in Appendix F.

Assumptions
We have used the same going concern valuation assumptions and methods as were used for the previous valuation, except for the following:

	Current valuation	**Previous valuation**
Discount rate:	4.25%	5.00%

The impact of the change to the financial assumptions is a loss of $23,920,000.

A summary of the going concern methods and assumptions is provided in Appendix C.

The hypothetical wind-up and solvency assumptions have been updated to reflect market conditions at the valuation date. A summary of the hypothetical wind-up and solvency methods and assumptions is provided in Appendix D.

Regulatory Environment and Actuarial Standards
There have been no changes to the Act or the relevant regulations which impact the funding of the Plan.

Subsequent Events

It has been 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, however it is not expected to be material.

After checking with representatives of the Employer, to the best of our knowledge there have been no events subsequent to the valuation date which, in our opinion, would have a material impact on the results of the valuation. Our valuation reflects the financial position of the Plan as of the valuation date and does not take into account any experience after the valuation date.

Impact of Case Law

This report has been prepared on the assumption that all claims on the Plan after the valuation date will be in respect of benefits payable to members of the Plan determined in accordance with the Plan terms and that all Plan assets are available to provide for these benefits. It is possible that court and regulatory decisions and changes in legislation could give rise to additional entitlements to benefits under the Plan and cause the results in this report to change. By way of example, we bring your attention to the following decisions:

- The Ontario Court of Appeal’s 2003 decision in *Aegon Canada Inc. and Transamerica Life Canada versus ING Canada Inc.* restricted the use of original plan surplus where two or more pension plans were merged.
- The Supreme Court of Canada’s 2004 decision in *Monsanto Canada Inc. versus Superintendent of Financial Services* upheld the requirement, with retroactive effect, to distribute surplus on partial plan wind-up under the *Pension Benefits Act (Ontario).*

We are not aware of any partial plan wind-up having been declared in respect of the Plan where the Monsanto decision may apply. In preparing this actuarial valuation, we have therefore assumed that all the Plan’s assets are available to cover the Plan’s liabilities presented in this report.

3

Valuation Results – Going Concern

Financial Status ($000's)

A going concern valuation compares the relationship between the value of Plan assets and the present value of expected future benefit cash flows in respect of accrued service, assuming the Plan will be maintained indefinitely.

The results of the current valuation, compared with those from the previous valuation, are summarized as follows:

	31.12.2016	31.12.2015
Assets		
Market value of assets	$543,400	$550,281
Asset smoothing adjustment	(17,515)	(24,155)
Smoothed value of assets	$525,885	$526,126
Going concern funding target		
• Active and disabled officers	$1,598	$1,514
• Retired members' pensions	343,970	348,199
• Spouses and other survivor pensions	100,428	97,318
• Beneficiary Reserve[4]	173	0
• Reserve for 50% Rule Refunds	11	11
Total	$446,180	$447,042
Funding excess (shortfall)	$79,705	$79,084

[4] This reserve is held for pensioners who have passed away and who may have a surviving spouse. The administrator is investigating to determine if the spouse is eligible to receive a benefit.

Reconciliation of Financial Status ($000s)

Funding excess (shortfall) as at previous valuation		$79,084
Interest on funding excess (shortfall) at 5.00% per year		3,954
Employer's special payments, with interest		0
Expected funding excess (shortfall)		$83,038
Net experience gains (losses)		
• Investment return	$19,581	
• Mortality	562	
Total experience gains (losses)	$20,143	20,143
Change in financial assumptions		(23,920)
Net impact of other elements of gains and losses		444
Funding excess (shortfall) as at current valuation		$79,705

Current Service Cost

As at December 31, 2016 all active members had completed 35.0 years of credited service. Therefore, no further contributions for current service are required by the Employer and the Plan members.

Discount Rate Sensitivity ($000s)

The following table summarizes the effect on the going concern funding target shown in this report of using a discount rate which is 1% lower than that used in the valuation.

Scenario	Valuation Basis	Reduce Discount Rate by 1%
Going concern funding target	$446,180	$482,147

4

Valuation Results – Hypothetical Wind-up

Financial Position ($000s)

When conducting a hypothetical wind-up valuation, we determine the relationship between the respective values of the Plan's assets and its liabilities assuming the Plan is wound up and settled on the valuation date, assuming benefits are settled in accordance with the Act and under circumstances producing the maximum wind-up liabilities on the valuation date. However, to the extent permitted by law, the actuary may disregard:

- Benefits that would not be payable under the hypothesized scenario
- Plan member earnings after the valuation date.

The hypothetical wind-up financial position as of the valuation date, compared with that at the previous valuation, is as follows:

	31.12.2016	31.12.2015
Assets		
Market value of assets	$543,400	$550,281
Face value of the letter of credit (LC)	20,933	14,703
Termination expense provision	(266)	(274)
Wind-up assets	$564,067	$564,710
Present value of accrued benefits for:		
• Active and disabled officers	$1,831	$1,898
• Retired officers	395,883	436,403
• Survivors	115,466	120,191
• Beneficiary Reserve	196	0
• Reserve for 50% Rule Refunds	11	11
Total wind-up liability	$513,387	$558,503
Wind-up excess (shortfall) – reflecting LC	$50,680	$6,207
Wind-up excess (shortfall) – not reflecting LC	$29,747	($8,496)

Wind-up Incremental Cost to December 31, 2019

The wind-up incremental cost is an estimate of the present value of the projected change in the hypothetical wind-up liabilities from the valuation date until the next scheduled valuation date, adjusted for the benefit payments expected to be made in that period.

The hypothetical wind-up incremental cost determined in this valuation is $5,548,000. Since the active members have reached the max service of 35.0 years and are no longer accruing benefits and there are no changes expected to the benefits for pensioners, except for COLA's which may be approved by the Board. The wind-up incremental cost is expected to be the cost of the COLA's provided in the next three years from the Indexation Reserve Account ("IRA"). The total wind-up incremental cost is based on the estimated cost the increase of 1.10% in 2017 being $5,548,000, and nil in subsequent years since the Indexation Reserve is fully utilized. More information on the IRA is provided in Section 8 of this report. If the Board does not recommend COLA's for pensions in pay, the hypothetical wind-up incremental cost would be nil.

Discount Rate Sensitivity

The following table summarizes the effect on the hypothetical wind-up liabilities shown in this report of using a discount rate which is 1% lower than that used in the valuation:

Scenario	Valuation Basis	Reduce Discount Rate by 1%
Total hypothetical wind-up liability	$513,387	$560,028

5

Valuation Results – Solvency

Overview

The Act also requires the financial position of the Plan to be determined on a solvency basis. The financial position on a solvency basis is determined in a similar manner to the Hypothetical Wind-up Basis, except for the following:

Exceptions	Reflected in valuation based on the terms of engagement
The circumstance under which the Plan is assumed to be wound up could differ for the solvency and hypothetical wind-up valuations.	The same circumstances were assumed for the solvency valuation as were assumed for the hypothetical wind-up valuation.
Certain benefits can be excluded from the solvency financial position. These include: (a) any escalated adjustment (e.g. indexing), (b) certain plant closure benefits, (c) certain permanent layoff benefits, (d) special allowances other than funded special allowances, (e) consent benefits other than funded consent benefits, (f) prospective benefit increases, (g) potential early retirement window benefit values, and (h) pension benefits and ancillary benefits payable under a qualifying annuity contract.	No benefits were excluded from the solvency liabilities shown in this valuation. We have not included the allowance for future potential COLA increases that may occur after the valuation date.
The financial position on the solvency basis needs to be adjusted for any Prior Year Credit Balance.	Not applicable.
The solvency financial position can be determined by smoothing assets and the solvency discount rate over a period of up to 5 years.	Solvency assets and liabilities were smoothed over 4 years.
The benefit rate increases coming into effect after the valuation date can be reflected in the solvency valuation.	Not applicable.

Financial Position ($000s)

The financial position on a solvency basis, compared with the corresponding figures from the previous valuation, is as follows:

	31.12.2016	31.12.2015
Assets		
Market value of assets	$543,400	$550,281
Face value of the letter of credit	20,933	14,703
Termination expense provision	(266)	(274)
Net assets	$564,067	$564,710
Liabilities		
Total hypothetical wind-up liabilities	$513,387	$558,503
Exclude allowance for potential future COLA	N/A	N/A
Difference in circumstances of assumed wind-up	0	0
Value of excluded benefits	0	0
Liabilities on a solvency basis	$513,387	$558,503
Surplus (shortfall) on a market value basis	$50,680	$6,207
Liability smoothing adjustment	$9,141	$29,040
Asset smoothing adjustment	($33,340)*	($40,783)**
Surplus (shortfall) on a solvency basis - reflecting LC	$26,481	($5,536)
Surplus (shortfall) on a solvency basis - not reflecting LC	$5,548	N/A
Transfer ratio	106%	98%

* Averaging method adjustment = 75% of investment gains from 2016, ($15,727,000), plus 50% of investment gains from 2015, ($7,028,000), plus 25% of investment gains from 2014, ($10,585,000).

** Averaging method adjustment = 75% of investment gains from 2015, ($10,542,000), plus 50% of investment gains from 2014, ($21,170,000), plus 25% of investment gains from 2013, ($9,071,000).

6

Minimum Funding Requirements

The Act prescribes the minimum contributions that City of Toronto must make to the Plan. The minimum contributions in respect of a defined benefit component of a pension plan are comprised of going concern current service cost and special payments to fund any going concern or solvency shortfalls.

There is a funding excess and no special payments are required for solvency purposes on the basis of the assumptions and methods described in this report. Under these circumstances the Act does not require the employer to contribute to the Plan until after the funding excess has been applied towards the employer's current service cost.

Once the funding excess has been so applied, employer contributions must resume. On the basis of the assumptions and methods described in this report, the rule for determining the minimum required employer monthly contributions, as well as an estimate of the employer contributions, from the valuation date until the next required valuation are as follows:

	Employer's contribution rule		Estimated employer's contributions		
Period beginning	**Monthly current service cost**	**Explicit monthly expense allowance**	**Monthly current service cost including expense allowance**	**Funding excess applied**	**Minimum monthly contributions**
January 1, 2017	$0	$0	$0	$0	$0
January 1, 2018	$0	$0	$0	$0	$0
January 1, 2019	$0	$0	$0	$0	$0

Other Considerations

Payment of Benefits

The Act imposes certain restrictions on the payment of lump sums from the Plan when the transfer ratio revealed in an actuarial valuation is less than one. If the transfer ratio shown in this report is less than one, the plan administrator should ensure that the monthly special payments are sufficient to meet the requirements of the Act to allow for the full payment of benefits, and otherwise should take the prescribed actions.

Additional restrictions are imposed when:

- The transfer ratio revealed in the most recently filed actuarial valuation is less than one and the administrator knows or 'ought to know' that the transfer ratio of the Plan has declined by 10% or more since the date the last valuation was filed; or

- The transfer ratio revealed in the most recently filed actuarial valuation is greater than or equal to one and the administrator knows or ‘ought to know’ that the transfer ratio of the Plan has declined to less than 0.9 since the date the last valuation was filed.

As such, the administrator should monitor the transfer ratio of the Plan and, if necessary, take the prescribed actions.

Letters of Credit

Minimum funding requirements in respect of solvency deficiencies that otherwise require monthly contributions to the pension fund may be met, in the alternative, by establishing an irrevocable letter of credit subject to the conditions established by the Act. Required solvency special payments in excess of those met by a letter of credit must be met by monthly contributions to the pension fund.

The solvency assets exceed the solvency liabilities of the Plan (both before and after smoothing). Therefore, the existing letter of credit can be eliminated following the filing of this report.

7

Maximum Eligible Contributions

The *Income Tax Act* (the "ITA") limits the amount of employer contributions that can be remitted to the defined benefit component of a registered pension plan. However, notwithstanding the limit imposed by the ITA, for plans which are not 'Designated' as defined in the ITA, in general, the minimum required contributions under the Act can be remitted.

In accordance with Section 147.2 of the ITA and *Income Tax Regulation* 8516, for a plan which is underfunded on either a going concern or on a hypothetical wind-up basis, the maximum permitted contributions are equal to the employer's current service cost, including the explicit expense allowance if applicable, plus the greater of the going concern funding shortfall and hypothetical wind-up shortfall.

For a plan which is fully funded on both going concern and hypothetical wind-up bases, the employer can remit a contribution equal to the employer's current service cost, including the explicit expense allowance if applicable, as long as the surplus in the plan does not exceed a prescribed threshold. Specifically, in accordance with Section 147.2 of the ITA, for a plan which is fully funded on both going concern and hypothetical wind-up bases, the plan may not retain its registered status if the employer makes a contribution while the going concern funding excess exceeds 25% of the going concern funding target.

Notwithstanding the above, any contributions that are required to be made in accordance with pension benefits legislation are eligible contributions in accordance with Section 147.2 of the ITA and can be remitted.

Schedule of Maximum Contributions

The Employer is permitted to fully fund the greater of the going concern and hypothetical wind-up shortfalls; $0, as well as make current service cost contributions, which are nil.

8

Indexation Reserve Account

General

In 1991 a policy was adopted by the Board that:

a) assets not required to meet specific current pension liabilities be held in an Indexation Reserve Account (IRA);

b) the IRA be limited to 30% of the going-concern liability for non-indexed benefits;

c) the IRA be built up to the maximum before any allocation of surplus be considered; and

d) minor improvements in pension benefits and increases in pensions due to cost-of-living inflation should be limited to the extent that the IRA is sufficient.

Indexation Reserve Account

The change in the Indexation Reserve Account during 2016 is outlined below.

		($000)
Indexation Reserve Account at December 31, 2015		**$0**
January 1, 2016 cost-of-living increases to pensions		0
Indexation Reserve Account at January 1, 2016		**$0**
Indexation Reserve Account at December 31, 2016		
a) Going-concern excess (deficiency)	$79,705	
b) Solvency excess (deficiency)[5]	$5,548	
Indexation Reserve Account at December 31, 2016 (lesser of (a) and (b) but not less than 0)		**$5,548**

[5] Without letter of credit.

Impact of Providing a COLA

If the Board recommends a cost-of-living adjustment of 1.10% to pensions in pay then the impact on the Indexation Reserve Account is illustrated in the table below.

Indexation Reserve Account at December 31, 2016		**$5,548**
a) Cost of COLA on going-concern basis	$4,890	
b) Cost of COLA on solvency basis	$5,548	
Charge to Indexation Reserve Account (greater of (a) and (b))		($5,548)
Indexation Reserve Account at January 1, 2017		**$0**

9

Actuarial Opinion

In our opinion, for the purposes of the valuations,

- The membership data on which the valuation is based are sufficient and reliable.
- The assumptions are appropriate.
- The methods employed in the valuation are appropriate.

This report has been prepared, and our opinions given, in accordance with accepted actuarial practice in Canada. It has also been prepared in accordance with the funding and solvency standards set by the *Pension Benefits Act (Ontario).*

Armando Fernandes
Fellow of the Society of Actuaries
Fellow of the Canadian Institute of Actuaries

April 28, 2017

Date

Manuel Monteiro
Fellow of the Society of Actuaries
Fellow of the Canadian Institute of Actuaries

April 28, 2017

Date

APPENDIX A

Prescribed Disclosure

Definitions

The Act defines a number of terms as follows:

Defined Term	Description	Result (000's)
Transfer Ratio	The ratio of: (a) Solvency Assets minus the lesser of the Prior Year Credit Balance and the minimum required employer contributions until the next required valuation; to (b) the sum of the Solvency Liabilities and liabilities for benefits, other than benefits payable under qualifying annuity contracts that were excluded in calculating the Solvency Liabilities.	1.06
Prior Year Credit Balance	Accumulated excess of contributions made to the pension plan in excess of the minimum required contributions (note: only applies if the Company chooses to treat the excess contributions as a Prior Year Credit Balance).	$0
Solvency Assets	Market value of assets including accrued or receivable income and excluding the value of any qualifying annuity contracts[6].	$543,134
Solvency Asset Adjustment	The sum of:	
	(a) the difference between smoothed value of assets and the market value of assets	($33,340)
	(b) the present value of going concern special payments (including those identified in this report) within 5 years following the valuation date	$0
	(c) the present value of any previously scheduled solvency special payments (excluding those identified in this report)	$0
	(d) the face value of the letter of credit	$20,933
		($12,407)

[6] In accordance with accepted actuarial practice, for purposes of determining the financial position, the market value of plan assets was adjusted for any in-transit benefit payments, contributions, and other in-transit cash flows, and reduced by a provision for estimated termination expenses payable from the Plan's assets that may reasonably be expected to be incurred in terminating the Plan and to be charged to the Plan.

Defined Term	Description	Result (000's)
Solvency Liabilities	Liabilities determined as if the plan had been wound up on the valuation date, including liabilities for plant closure benefits or permanent layoff benefits that would be immediately payable if the employer's business were discontinued on the valuation date of the report, but, if elected by the plan sponsor, excluding liabilities for, (a) any escalated adjustment, (b) excluded plant closure benefits, (c) excluded permanent layoff benefits, (d) special allowances other than funded special allowances, (e) consent benefits other than funded consent benefits, (f) prospective benefit increases, (g) potential early retirement window benefit values, and (h) pension benefits and ancillary benefits payable under a qualifying annuity contract.	$513,387
Solvency Liability Adjustment	The amount by which Solvency Liabilities are adjusted as a result of using a solvency valuation interest rate that is the average of market interest rates calculated over the period of time used in the determination of the smoothed value of assets.	($9,141)
Solvency Deficiency	The amount, if any, by which the sum of:	
	(a) the Solvency Liabilities	$513,387
	(b) the Solvency Liability Adjustment	($9,141)
	(c) the Prior Year Credit Balance	$0
		$504,246
	Exceeds the sum of	
	(d) the Solvency Assets net of estimated termination expenses[7]	$543,134
	(e) the Solvency Asset Adjustment	($12,407)
		$530,727
	Solvency Deficiency	$0

Timing of Next Required Valuation

In accordance with the Act the next valuation of the Plan would be required at an effective date within one year of the current valuation date if:

- The ratio of solvency assets to solvency liabilities is less than 85%.

Otherwise, the next valuation of the Plan would be required at an effective date no later than three years after the current valuation date.

[7] In accordance with accepted actuarial practice, for purposes of determining the financial position, the market value of plan assets was reduced by a provision for estimated termination expenses payable from the Plan's assets that may reasonably be expected to be incurred in terminating the Plan and to be charged to the Plan.

Accordingly, since the ratio of solvency assets to solvency liabilities is greater than 85% as at December 31, 2016, the next valuation of the Plan will be required as of December 31, 2019.

Special Payments

As the Plan does not have a going concern deficit or a solvency deficit, no special payments are required.

As the Plan does not have a solvency shortfall, solvency special payments revealed in the previous valuation are no longer required.

Pension Benefit Guarantee Fund (PBGF) Assessment

In accordance with subsection 47(1)(p.14) 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).

Letter of Credit

The Employer implemented a letter of Credit to meet solvency funding requirements (including interest thereon) starting with the solvency special payment due in January 1, 2016 through December 31, 2016. The accumulated face amount of the Letter of Credit was $20,932,561 on December 31, 2016. As the Plan has a solvency surplus of $5,548,000 without taking into account the letter of credit, the Employer may terminate the letter of credit upon filing this report.

APPENDIX B

Plan Assets

As at December 31, 2016, the pension fund is held by CIBC Mellon and is invested in accordance with the investment policy described below.

In preparing this report, we have relied upon the assets as at December 31, 2016 without further audit including the information reported in the following statements:

- CIBC Mellon statements ($539,542,843)
- Bank Payroll account information provided by the City of Toronto ($3,707,609)
- CIBC Business Operating Account Statement provided by the City of Toronto ($149,219)

Customarily, this information would not be verified by a plan's actuary. We have reviewed the information for internal consistency and we have no reason to doubt its substantial accuracy.

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 going-concern discount rate used in the previous valuations; 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 $525,885 at December 31, 2016.

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

Assets of the Pension Fund at December 31, 2016		Market Value	Actuarial Value
I.	Cash and Equivalents		
	Cash and short-term investments	23,280	23,280
II.	Active Management		
	Bonds	307,540	307,540
	Canadian equities	85,787	85,787
	Foreign equities	126,793	126,793
	Subtotal	531,858	531,858
III.	Smoothing Adjustment		(17,515)
Total		**543,400**	**525,885**

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

2017	25% of 2014 gain	8,130	
	25% of 2015 gain	293	
	25% of 2016 gain	2,933	11,356
2018	25% of 2015 gain	293	
	25% of 2016 gain	2,933	3,226
2019	25% of 2016 gain	2,933	2,933
Total			**17,515**

Under this adopted asset valuation method, the Plan's investment rate of return in 2016 was equal to 8.96% (net of investment management expenses).

Reconciliation of Fund Assets ($000)

		Market Value	Actuarial Value
Value at 31.12.2015		**550,281**	**526,126**
Net amount in-transit		0	0
Adjusted Value at 31.12.2015		**550,281**	**526,126**
I. Contributions			
Employee Contributions	0		
Employer Contributions	0	0	0
II. Adjusted Investment Income		39,252	45,892
III. Pensions & Other Benefits			
Pensions for Members	$32,336		
Pensions for Widows & Others	12,667		
50% Rule Refunds	0	(45,003)	(45,003)
IV. Actuarial, Legal and Other Fees			
Actuarial Fees	$220		
Custodial Fees	107		
Investment Management Fees	806		
Other Fees (audit, legal, etc.)	(3)	(1,130)	(1,130)
Value at 31.12.2016		**$543,400**	**$525,885**

We have tested the pensions paid, the lump-sums paid, and the contributions for consistency with the membership data for the Plan members who have received benefits or made contributions. The results of these tests were satisfactory.

Investment Policy

The plan administrator has adopted a statement of investment policy and procedures (January 2017). This policy is intended to provide guidelines for the manager(s) as to the level of risk that is consistent with the Plan's investment objectives. A significant component of this investment policy is the asset mix.

The plan administrator is solely responsible for selecting the plan's investment policies, asset allocations, and individual investments.

The constraints on the asset mix and the actual asset mix at the valuation date are provided for information purposes:

	Investment Policy			Actual Asset Mix as at 31.12.2016
	Minimum	Target	Maximum	
Canadian Equities	0%	15%	30%	15.9%
Foreign Equities	15%	23%*	35%	23.5%
Canadian Bonds	40%	58%**	80%	57.0%
Cash and cash equivalents	0%	4%	20%	3.6%
		100%		100.0%

** 14.3% US and 9.2% foreign non-US*

*** 43.5% universe bonds and 14.5% long bonds*

Historical Fund Performance

Annual rates of return, net of investment expenses, for the last 18 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
2016	$543,400,000	7.29%	$525,885,000	8.96%
2015	550,281,000	5.78%	526,126,000	9.66%
2014	565,800,000	11.78%	524,590,000	8.01%
2013	542,818,000	11.13%	522,954,000	7.50%
2012	523,880,000	7.79%	522,438,000	8.78%
2011	521,981,000	0.82%	516,059,000	2.02%
2010	559,290,000	10.58%	545,826,000	1.75%
2009	549,657,000	16.03%	582,273,000	1.73%
2008	522,040,000	-14.47%	624,022,000	2.56%
2007	673,066,000	1.54%	665,248,000	8.71%
2006	719,666,000	10.86%	666,841,000	10.78%
2005	698,384,000	11.78%	651,137,000	5.28%
2004	675,192,000	8.53%	670,341,000	2.73%
2003	686,160,000	9.89%	718,335,000	2.56%
2002	689,130,000	-4.84%	767,318,000	2.30%
2001	793,752,000	0.97%	817,167,000	8.72%
2000	855,847,000	6.02%	818,830,000	13.30%
1999	875,285,000	7.10%	788,636,000	16.22%

Historical Updates to Pensions In-Payment

Annual cost-of-living adjustments (COLA) for the last 30 years, applicable to pensions that have been in payment for at least one year on the effective date, are provided below. Adjustments are currently based on a ratio of the index determined on a 12 month average to September of the current year over the average to September of the prior year.

Effective Date	COLA Update	Effective Date	COLA Update
July 1, 1987	4.75%	January 1, 2002	2.62%
July 1, 1988	3.00%	January 1, 2003	2.30%
July 1, 1989	5.21%	January 1, 2004	0.00%
July 1, 1990	5.10%	January 1, 2005	0.00%
July 1, 1991	5.00%	January 1, 2006	0.00%
July 1, 1992	3.80%	January 1, 2007	0.00%
July 1, 1993	2.10%	January 1, 2008	0.00%
July 1, 1994	1.70%	January 1, 2009	0.00%
July 1, 1995	0.20%	January 1, 2010	0.00%
July 1, 1996	1.80%	January 1, 2011	0.00%
July 1, 1997	2.20%	January 1, 2012	0.00%
July 1, 1998	0.70%	January 1, 2013	0.00%
January 1, 1999	0.90%	January 1, 2014	0.00%
January 1, 2000	2.58%	January 1, 2015	0.00%
January 1, 2001	2.69%	January 1, 2016	0.00%

APPENDIX C

Methods and Assumptions – Going Concern

Valuation of Assets

For this valuation, we have used an adjusted market-value method to determine the smoothed value of assets. This method is described in Appendix B.

Going Concern Funding Target

Over time, the real cost to the employer of a pension plan is the excess of benefits and expenses over member contributions and investment earnings. The actuarial cost method allocates this cost to annual time periods.

For purposes of the going concern valuation, we have continued to use the projected unit credit actuarial cost method. Under this method, we determine the present value of benefit cash flows expected to be paid in respect of service accrued prior to the valuation date. This is referred to as the funding target.

The funding excess or funding shortfall, as the case may be, is the difference between the market or smoothed value of assets and the funding target. A funding excess on a market value basis indicates that the current market value of assets and expected investment earnings are expected to be sufficient to meet the cash flows in respect of benefits accrued to the valuation date as well as expected expenses – assuming the plan is maintained indefinitely. A funding shortfall on a market value basis indicates the opposite – that the current market value of the assets is not expected to be sufficient to meet the plan’s cash flow requirements in respect of accrued benefits, absent additional contributions.

As required under the Act, a funding shortfall must be amortized over no more than 15 years through special payments. A funding excess may, from an actuarial standpoint, be applied immediately to reduce required employer current service contributions unless precluded by the terms of the plan or by legislation.

The actuarial cost method used for the purposes of this valuation produces a reasonable matching of contributions with accruing benefits. Because benefits are recognized as they accrue, the actuarial cost method provides an effective funding target for a plan that is maintained indefinitely.

Current Service Cost

The current service cost is the present value of projected benefits to be paid under the plan with respect to service expected to accrue during the period until the next valuation.

Since all Plan members have accrued 35 years of pensionable service at the valuation date, there are no further benefit accruals and therefore no current service cost.

Actuarial Assumptions – Going Concern Basis

The present value of future benefit payment cash flows 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 them, if necessary. Emerging experience will result in gains or losses that will be revealed and considered in future actuarial valuations.

The table below shows the various assumptions used in the current valuation in comparison with those used in the previous valuation.

Assumption	Current valuation	Previous valuation
Discount rate:	4.25%	5.00%
Explicit expenses:	$0	$0
ITA limit / YMPE increases:	3.00%	3.00%
Pensionable earnings increases:	3.00%	3.00%
Post-retirement pension increases:	0.00%	0.00%
Retirement rates:	Current age +1	Current age +1
Mortality rates:	125% of the rates of the 2014 Public Sector Canadian Pensioners Mortality Table (CPM2014Publ)	125% of the rates of the 2014 Public Sector Canadian Pensioners Mortality Table (CPM2014Publ)
Mortality improvements:	Fully generational using CPM Improvement Scale B (CPM-B)	Fully generational using CPM Improvement Scale B (CPM-B)
Eligible spouse at retirement:	Based on actual data	Based on actual data
Allowance for Remarriage	0.75% of pensioner liability	0.75% of pensioner liability

The assumptions are best-estimate with the exception that the discount rate includes a margin for adverse deviations, as shown below.

Rationale for Assumptions

A rationale for each of the assumptions used in the current valuation is provided below.

Discount Rate

We have discounted the expected benefit payment cash flows using the expected investment return on the market value of the fund. Other bases for discounting the expected benefit payment cash flows may be appropriate, particularly for purposes other than those specifically identified in this valuation report.

The discount rate is comprised of the following:

- Estimated returns for each major asset class consistent with market conditions on the valuation date, the expected time horizon over which benefits are expected to be paid, and the target asset mix specified in the Plan's investment policy.
- Additional returns assumed to be achievable due to active equity management, equal to the fees related to active equity management. *We have assumed no additional return due to active equity management.*
- Implicit provision for passive investment expenses based on passive index funds available in the Canadian market for plans of this size. *We have determined an implicit investment management fee to be 0.03%.*
- Implicit provision for expenses determined as the average rate of administrative expenses paid from the fund over the last 3 years. *On this basis, we have determined an implicit expense provision of 0.07%.*
- A margin for adverse deviations of 0.15%

The discount rate was developed as follows:

Assumed investment return	4.50%
Additional returns for active management	0.00%
Passive management investment expense provision	(0.03%)
Implicit non-investment expense provision	(0.07%)
Margin for adverse deviation	(0.15%)
Net discount rate	4.25%

Post-Retirement Pension Increases

No assumption has been made for future pension increases.

Mortality Rates

The assumption for the mortality rates is based on the Canadian Pensioners' Mortality (CPM) study published by the Canadian Institute of Actuaries in February 2014.

The mortality rates selected reflect plan-specific experience over the years 2005 to 2014.

There is broad consensus among actuaries and other longevity experts that mortality improvement will continue in the future, but the degree of future mortality improvement is uncertain. The mortality improvement scale published in the CPM study represents one reasonable outlook for future improvement. We have used the CPM mortality improvement scale B without adjustment.

Based on the assumption used, the life expectancy of a member age 65 at the valuation date is 21.2 years for males and 23.1 years for females.

Eligible Spouse

Actual status used for retirees.

- The survivor benefit assumption is based on actual data provided and an allowance for remarriage of 0.75% of the pensioner liability.
- Subject to the entitlement of the prior spouse, if any, the 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. 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 2 years, with a pro rata share of the spousal pension for spousal relationships of less than 2 years. In order to make allowance for the possible increase in future liabilities on remarriage of a pensioner, based on remarriage rates for older adults in Canada, we have loaded the pensioner liabilities by 0.75% as an allowance for remarriage.

It has been assumed that 100% of active members are married. Female spouses are assumed to be 4 years younger than males for active members. Actual spouse age is used for pensioners.

Allowance for stepped pensions

Upon the death of a pensioner whose pension has been stepped at retirement, the Plan provides a pension to the spouse whereby the survivor percentage is applied to the post-65 pre-stepped pension rather than the post-65 pension in payment. A stepped pension is a pension that has been increased before age 65 and reduced after age 65 to produce a level pension in anticipation of the OAS pension commencing from age 65.

We have performed a calculation based on the membership data supplied to estimate the spousal pension.

Reserve for 50% Rule Refunds

It has been discovered that, in respect of members who retired since January 1, 1987, the 50% rule refund of excess contributions amount was not processed. Since there were no payments made in 2016, the reserve is equal to the reserve as at December 31, 2015 increased with the employee crediting rate in 2016.

APPENDIX D

Methods and Assumptions – Hypothetical Wind-up and Solvency

Hypothetical Wind-up Basis

The Canadian Institute of Actuaries requires actuaries to report the financial position of a pension plan on the assumption that the plan is wound up on the effective date of the valuation, with benefits determined on the assumption that the pension plan has neither a surplus nor a deficit. For the purposes of the hypothetical wind-up valuation, the plan wind-up is assumed to occur in circumstances that maximize the actuarial liability.

To determine the actuarial liability on the hypothetical wind-up basis, we have valued those benefits that would have been paid had the Plan been wound up on the valuation date, including benefits that would be immediately payable if the employer's business were discontinued on the valuation date, with all members fully vested in their accrued benefits. No benefits payable on plan wind-up under the above postulated scenario were excluded from our calculations.

Upon plan wind-up, members are given options for the method of settling their benefit entitlements. The options vary by eligibility and by province of employment, but in general, involve either a lump sum transfer or an immediate or deferred pension.

The value of benefits assumed to be settled through a lump sum transfer is based on the assumptions described in Section 3500 – *Pension Commuted Values* of the Canadian Institute of Actuaries' Standards of Practice applicable for December 31, 2016.

Benefits provided as an immediate or deferred pension are assumed to be settled through the purchase of annuities based on an estimate of the cost of purchasing annuities.

We have estimated the cost of settlement through purchase of annuities in accordance with the *Canadian Institute of Actuaries Educational Note: Assumptions for Hypothetical Wind-up and Solvency Valuations with Effective Dates Between December 31, 2016 and December 30, 2017 (the "Educational Note").*

The Educational Note provides guidance on estimating the cost of annuity purchases assuming a typical group of annuitants. That is, no adjustments for sub- or super-standard mortality are considered. However, it is expected that insurers will consider plan experience and certain plan-specific characteristics when determining the mortality basis for a particular group. The Educational Note states that the actuary would be expected to make an adjustment to the regular annuity purchase assumptions where there is demonstrated substandard or super-standard mortality or where an insurer might be expected to assume so. In such cases, the actuary would be expected to make an adjustment to the mortality assumption in a manner consistent with the underlying annuity purchase basis. Given the uncertainty surrounding the actual mortality basis that would be typical of a group annuity purchase, it is reasonable to assume that there is a range of bases that can be expected not to be materially different from the actual mortality basis. Therefore, an adjustment to the regular annuity purchase assumptions would be warranted when the plan's assumed basis falls outside that range.

In this context, we have determined that an adjustment to the mortality rates used in the regular annuity purchase assumptions is appropriate.

We have not included a margin for adverse deviation in the solvency and hypothetical wind-up valuations.

Assumptions

Assumptions for determination of the hypothetical wind-up and solvency liability are as follows:

Actuarial Assumptions – Windup and Solvency Liability

Mortality rates:	100% of the rates of the 2014 Canadian Pensioners Mortality Table (CPM2014) table with fully generational improvements using scale CPM-B
Adjustment to mortality rates:	Above mortality rates increased by 10% to reflect substandard mortality
Interest rate for benefits to be settled through annuity purchase:	2.91% per year
Allowance for re-marriage:	0.75% of pensioner liability
Post retirement cost-of-living increases	0.00 %

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

Actuarial Assumptions – Solvency Liability Adjustment

Mortality rates:	100% of the rates of the 2014 Canadian Pensioners Mortality Table (CPM2014) table with fully generational improvements using scale CPM-B
Adjustment to mortality rates:	Above mortality rates increased by 10% to reflect substandard mortality
Interest rate for benefits to be settled through annuity purchase:	3.125% per year
Allowance for re-marriage:	0.75% of pensioner liability
Post retirement cost-of-living increases	0.00 %

We have used an average of the annuity proxy rates as at December 31, 2013 (4.19% per year), December 31, 2014 (2.76% per year), December 31, 2015 (2.63% per year) and December 31, 2016 (2.91% per year) which produces a rate of 3.125% per year (rounded to the nearest 1/8%). We have adjusted the interest rates prior to this valuation such that the annuity cost is the same at those dates, but the mortality basis being consistent with the assumptions noted above.

Other assumptions are, as follows:

Other Assumptions	
Special payments:	Discounted at the average smoothed interest rate of 3.125% per year
Termination expenses:	$265,750 (based on $150 per pensioner/survivor and $250 per other member)

We have not included a margin for adverse deviations in the solvency and hypothetical windup valuations.

To determine the hypothetical wind-up position of the Plan, a provision has been made for estimated termination expenses payable from the Plan's assets in respect of actuarial and administration expenses that may reasonably be expected to be incurred in terminating the Plan and to be charged to the Plan.

Because the settlement of all benefits on wind-up is assumed to occur on the valuation date and is assumed to be uncontested, the provision for termination expenses does not include custodial, investment management, auditing, consulting, and legal expenses that would be incurred between the wind-up date and the settlement date or due to the terms of a wind-up being contested.

Expenses associated with the distribution of any surplus assets that might arise on an actual wind-up are also not included in the estimated termination expense provisions.

In determining the provision for termination expenses payable from the Plan's assets, we have assumed that the plan sponsor would be solvent on the wind-up date. We have also assumed, without analysis, that the Plan's terms as well as applicable legislation and court decisions would permit the relevant expenses to be paid from the Plan.

Actual fees incurred on an actual plan wind-up may differ materially from the estimates disclosed in this report.

Incremental Cost

There is no incremental cost other than for ad-hoc COLA's which are limited to the sufficiency of the IRA. The incremental cost is assumed to be the lessor of the IRA and the expected COLA's until the next required actuarial valuation. The IRA is $5,548,000 as at December 31, 2016.

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 virtually 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 CPM 2014 mortality table, provides an estimate of group annuity purchase rates for non-indexed pensions.

The solvency position is determined in accordance with the requirements of the Act.

APPENDIX E

Membership Data

Analysis of Membership Data

The actuarial valuation is based on membership data as at October 31, 2016, provided by City of Toronto.

We have applied tests for internal consistency, as well as for consistency with the data used for the previous valuation. These tests were applied to membership reconciliation, basic information (date of birth, date of hire, date of membership, gender, etc.), pensionable earnings, credited service, contributions accumulated with interest, and pensions to retirees and other members entitled to a deferred pension. Pensions to retirees were compared with corresponding amounts reported in financial statements. The results of these tests were satisfactory.

If the data supplied are not sufficient and reliable for its intended purpose, the results of our calculation may differ significantly from the results that would be obtained with such data. Although Mercer has reviewed the suitability of the data for its intended use in accordance with accepted actuarial practice in Canada, Mercer has not verified or audited any of the data or information provided.

Plan membership data are summarized below. For comparison, we have also summarized corresponding data from the previous valuation.

	31.12.2016	**31.12.2015**
Active Members		
Number	1	1
Average years of pensionable service	*	*
Average age	*	*
Average pensionable earnings in year	*	*
Pensioners		
Number	1,070	1,125
Total annual lifetime pension	$31,847,301	$ 33,513,242
Total annual bridge pension	$0	$0
Average annual lifetime pension	$29,764	$ 29,790
Average age	77.4	76.8
Spousal Pensioners		
Number	700	703
Total annual lifetime pension	$12,664,882	$12,480,323
Total annual bridge pension	$74,618	$122,550
Average annual lifetime pension	$18,093	$17,753
Average age	81.0	80.2

**Not shown for reasons of confidentiality*

The membership movement for all categories of membership since the previous actuarial valuation is as follows:

	Actives	Pensioners	Spousal Pensioners	Total
Total at 31.12.2015	1	1,125	703	1,829
Pension Splits				
Exits By:				
• Retirement				
• Marriage Breakdown				
• Death – no spouse		(22)	(33)	(55)
• Death – with spouse		(33)	33	0
Data Corrections			(3)	(3)
Pension Splits				
Total at 31.12.2016	1	1,070	700	1,771

The distribution of the inactive members by age as at the valuation date is summarized as follows:

	Pensioners		Surviving Spouses	
Age	Number	Average Pension	Number	Average Pension
40 – 44				
45 – 49			2	16,449
50 – 54			3	21,655
55 – 59			3	16,284
60 – 64			22	19,161
65 – 69	98	31,529	53	17,374
70 – 74	400	29,302	93	17,772
75 – 79	220	30,240	106	18,990
80 – 84	172	29,994	164	18,435
85 – 89	148	29,124	149	18,946
90 – 94	27	28,909	87	16,195
95 – 99	5	26,764	16	14,143
100 +			2	14,203
Total	1,070	29,764	700	18,093
Males	1,032	30,038	34	23,966
Females	38	22,329	666	17,961

APPENDIX F

Summary of Plan Provisions

The following is a summary of the main provisions of the Plan, contained in By-law no. 15-92, which are relevant to the actuarial valuation. For complete details reference should be made to the formal plan document

The following is a summary of the main provisions of the Plan in effect on December 31, 2016. This summary is not intended as a complete description of the Plan.

Background	The Plan became effective January 1, 1957. Benefits are based on a set formula and are entirely paid for by the Employer.
Eligibility for Membership	Police officers hired before July 1, 1968.
Employee Contributions	There are no further employee contributions to the Plan as all remaining members have completed 35 years of service.
Retirement Dates	Normal Retirement • Age 60 Early Retirement • Attainment of age 50, or completion of 25 years of service
Disability Retirement	Permitted, with full accrued pensions, (a) if disability occurred in the line of duty; or (b) if on total and permanent disability; or (c) after 20 years service, on a "worn-out" basis.
Normal Retirement Pension	2% of employee's highest consecutive 5-year average earnings MULTIPLIED BY number of years of service up to a maximum of 35 years, MINUS (after age 65 or total disability) 0.7% of final 3 year average of YMPE MULTIPLIED BY number of years of service after 1.1.66, up to a maximum of 35 years.
Pensionable Earnings	Base pay.
Early Retirement Pension	Unreduced pensions upon completion of 25 years of service, or upon attainment of age 55. Reduced pensions are available from age 50. The reduction is 4% per year from earlier of age 55 or completion of 25 years of service.
Maximum Pension	All pensions are subject to the maximum limitation imposed by the Municipal Act and the Income Tax Act (ITA). Pensions accrued after 1991 are subject to the maximum pension limitations under the ITA.
Minimum Death Benefits	Return of the deceased member's contributions plus interest.
Spousal Benefits	66.67% of the deceased member's normal pension.
Orphans'	If there is no spouse, 66.67% of the deceased member's normal pension payable

Pensions	until youngest orphan reaches 21. If there is a spouse, an amount per child under age 21 where the total paid to spouse and orphans is not to exceed 100% of the deceased member's normal pension.
Stepped Up Pension	Upon the death of a pensioner whose pension has been stepped at retirement, the Plan provides a pension to the spouse whereby the survivor percentage is applied to the post-65 pre-stepped pension rather than the post-65 pension in payment. A stepped pension is a pension that has been increased before age 65 and reduced after age 65 to produce a level pension in anticipation of the OAS pension commencing from age 65.
Other Pre-Retirement Death Benefits	Return of deceased member's pre-1987 contributions plus interest, plus the commuted value of the deceased member's post-1986 accrual pension, in lieu of the spouse pension.
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.

Notes:

a. The Fund is subject to the provisions of the Pension Benefits Act (Ontario).

b. In the case of an officer who retires on or after the attainment age of age 50 or after the completion of 30 years of service, or because of total and permanent disability, a special benefit is paid equivalent to 1% of salary from January 1, 1980 to April 3, 1984 plus 0.5% of salary thereafter, all accumulated with interest. These Section 24 special benefits were refunded in 2001 or 2002 to existing pensioners and surviving spouses who did not take advantage of this retirement provision and are refunded to any future retirees who do not take advantage of this provision.

APPENDIX G

Employer Certification

With respect to the Report on the Actuarial Valuation for Funding Purposes as at December 31, 2016 of the Metropolitan Toronto Police Benefit Fund, I hereby certify that, to the best of my knowledge and belief:

- The valuation reflects the terms of the Trustee's engagement with the actuary described in Section 2 of this report, particularly the requirement to include a margin of 0.15% in the discount rate used to perform the going concern valuation and the Employer's decisions in regards to determining the going-concern and solvency funding requirements.
- A copy of the official plan documents and of all amendments made up to December 31, 2016 was provided to the actuary and is reflected appropriately in the summary of plan provisions contained herein.
- The Employer has secured a letter of credit in the amount of $20,932,561 as at December 31, 2016.
- The asset information summarized in Appendix B is reflective of the Plan's assets.
- The membership data provided to the actuary included a complete and accurate description of every person who is entitled to benefits under the terms of the Plan for service up to October 31, 2016.
- All events subsequent to December 31, 2016 that may have an impact on the Plan have been communicated to the actuary.

May 1/2017

Date

Signed

Mike Wiseman

Name

Director, Pension, Payroll & Employee Benefits