1. Master Trust Pension Investment Performance, December 31, 2011 (FCS11083(a)) (City Wide) (Item 4.1)

That Report FCS11083(a), respecting the Master Trust Pension Investment Performance as of December 31, 2011, be received.

2. Master Trust Pension Investment Performance, June 30, 2012 (FCS12070) (City Wide) (Item 4.2)

That Report FCS12070, respecting the Master Trust Pension Investment Performance as of June 30, 2012, be received.

3. 2012 Master Trust Pension Statement of Investment Policies and Procedures (FCS12084) (City Wide) (Item 5.1)


(b) That the 2012 Master Trust Statement of Investment Policies and Procedures (attached as Appendix “A” to Report 12-001) be forwarded to the Hamilton Street (HSR) Pension Advisory Committee for their information.
4. Hamilton Municipal Retirement Fund (HWRF) – December 31, 2011, Valuation (FCS12081) (City Wide) (Item 6.1)

(a) That the Treasurer be authorized to file the December 31, 2011, actuarial valuation for the Hamilton Municipal Retirement Fund (HMRF) attached as Appendix “B” to Report 12-001;

(b) That, the Hamilton Municipal Retirement Fund adopt the smoothing technique, which allows for 5 year averaging, for solvency funding purposes for both solvency assets and liability purposes.

5. Survivor Spouse Change (Item 7.1)

(a) That correspondence respecting a Survivor Spouse Change be received.

(b) That the correspondence, respecting a Survivor Spouse Change, remain confidential and restricted from public disclosure.

FOR THE INFORMATION OF COMMITTEE:

(a) CHANGES TO THE AGENDA (Item 1)

There were no changes to the agenda.

The agenda for the October 22, 2012 meeting of the HMRF/HWRF Pension Administration Sub-committee was approved, as presented.

(b) DECLARATIONS OF INTEREST (Item 2)

There were none declared.

(c) APPROVAL OF MINUTES OF PREVIOUS MEETING (Item 3)

(i) June 6, 2011 (Item 3.1)

The minutes of the June 6, 2011 meeting of the HMRF/HWRF Pension Administration Sub-Committee were approved, as presented.
(d) Hamilton Municipal Retirement Fund (HWRF) – December 31, 2011, Valuation (FCS12081) (City Wide) (Item 6.1)

Bill Lui, Towers Watson, provided a verbal presentation and a handout, which outlined the Hamilton Municipal Retirement Fund (HWRF) – December 31, 2011, Valuation, which is attached as Appendix “A” to Report 12-001.

Copies of the complete handout are available through the Office of the City Clerk.

The presentation provided by Bill Lui, of Towers Watson, respecting Hamilton Municipal Retirement Fund (HWRF) – December 31, 2011, Valuation, was received.

(e) PRIVATE & CONFIDENTIAL

(i) Survivor Spouse Change (Item 7.1)

The HMRF/HWRF Pension Administration Sub-Committee moved into Closed Session, at 11:00 a.m., respecting a Survivor Spouse Change matter, pursuant to Section 8.1, Sub-section (b) of the City's Procedural By-law 10-053, and Section 239, Sub-section (b) of the Ontario Municipal Act, 2001, as amended, as the subject matter pertains to personal matters about an identifiable individual, including municipal or local board employees

For disposition of this matter, please refer to Item 5 above. Staff was also provided further direction in Closed Session.

(f) Survivor Benefits Review (Item 8.1)

Staff was directed to review the HMRF/HWRF spousal survivor benefits, the Pension Benefits Act, the Family Law Act and any other relevant legislation, in consultation with OMERS Benefit and Legal staff, and compare with the existing By-law #7970, as amended, and report back to the HMRF/HWRF Pension Administration Committee.
(g) ADJOURNMENT (Item 8)

There being no further business, the HMRF/HWRF Pension Administration Sub-Committee adjourned at 11:55 a.m.

Respectfully submitted,

Councillor M. Pearson, Chair
HMRF/HWRF Pension Administration
Sub-Committee

Stephanie Paparella
Legislative Coordinator
Office of the City Clerk
Statement of Investment Policies and Procedures

City of Hamilton Defined Benefit Pension Plans Master Trust

October 2012
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Section 1—Overview

1.01 Purpose of Statement
This Statement of Investment Policies and Procedures (the “Policy”) provides the framework for the investment of the assets of the City of Hamilton Defined Benefit Pension Plans Master Trust (the “Master Trust”).

This Policy is based on the “prudent person portfolio approach” to ensure the prudent investment and administration of the assets of the Master Trust are within the parameters set out in the Pension Benefits Act, (Ontario) and the Regulations thereunder.

1.02 Background of the Master Trust
The inception date of the Master Trust is November 1, 1999, when three defined benefit pension plans (the Hamilton Municipal Retirement Fund (Registration number 0027512), the Hamilton Street Railway Pension Plan (Registration number 0253344), and the Hamilton Wentworth Retirement Fund (Registration number 1073352)) commingled their assets in the Master Trust for investment purposes. These Plans hold units of the Master Trust and share, on a pro-rata basis, in all income, expenses and capital gains and losses of the Master Trust.

For reference purposes, the details of the Statement of Investment Policies and Procedures for each of the above mentioned pension plans participating in the Master Trust have been attached to Appendix A of this policy.

1.03 Objective of The Plans
The objective of the Plans is to provide members of the Plans with retirement benefits prescribed under the terms thereof.

1.04 Investment and Risk Philosophy
The primary investment objective is to provide an economic return on assets sufficient to fund plan liabilities over the long-term, while adhering to prudent investment practices.

The investment philosophies and strategies must take into account both return and risk objectives of the Plans and the City of Hamilton.

In recognition of the risk and return objectives of the Plans and the City of Hamilton, an initial Asset Allocation Policy was developed based on the Plans’ current funded status and the characteristics of the Plans and City of Hamilton. It is recognized, however, that the Plans return requirements and risk tolerance will change over time, and the intent is to reallocate the portfolio to lower risk allocations dynamically as the Plans’ funded statuses improve.
1.05 Administration
The General Manager, Finance and Corporate Services for the City of Hamilton (the General Manager) is the designated contact person at the City for administrative purposes.
Section 2—Asset Mix and Diversification Policy

2.01 Master Trust Return Expectations
Each of the Investment Managers appointed to invest the assets of the Master Trust (the “Investment Managers”) is directed to achieve a satisfactory long-term real rate of return through a diversified portfolio, consistent with acceptable risks, performance objectives and prudent management.

The overall goal of this Policy is to maximize the return of the Fund while bearing a reasonable level of risk relative to the liabilities in order to ensure the solvency of the Fund over time. The weights applied to each of the asset classes are based on the targets in the Initial Asset Allocation outlined in Section 2.03 and adjusted based on the target allocation in the Dynamic Investment Policy Schedule in Section 2.03.

2.02 Expected Volatility
The volatility of the Master Trust is directly related to its asset mix, specifically, the balance between Canadian bonds, Canadian equities and foreign equities. Since the Investment Managers do not have the authority to make any type of leveraged investment on behalf of the Master Trust, the volatility of the Master Trust should be similar to the volatility of the Benchmark Portfolio set out in Section 4.02 (Performance Measurement).

2.03 Asset Mix
(a) In order to achieve the long term objective within the risk/return considerations described in Section 1.04, the following asset mix policy (Benchmark Portfolio) and ranges were selected for the Initial Asset Allocation:

<table>
<thead>
<tr>
<th>Assets</th>
<th>Minimum %</th>
<th>Initial Target Weight %</th>
<th>Maximum %</th>
<th>Asset Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canadian Equity</td>
<td>25</td>
<td>30</td>
<td>35</td>
<td>Return-Seeking</td>
</tr>
<tr>
<td>Global Equity</td>
<td>25</td>
<td>30</td>
<td>35</td>
<td>Return-Seeking</td>
</tr>
<tr>
<td>Total Equities</td>
<td>50</td>
<td>60</td>
<td>70</td>
<td>Return-Seeking</td>
</tr>
<tr>
<td>Fixed Income</td>
<td>30</td>
<td>40</td>
<td>50</td>
<td>Liability-Hedging</td>
</tr>
</tbody>
</table>

For purpose of the total asset mix described above, the Investment Managers’ asset class pooled funds are deemed to be 100% invested, even though these funds may contain a portion held in cash and cash equivalent instruments.
(b) **Return-Seeking Assets:** These assets generally will consist of all non-fixed income investments, such as equities and alternatives, with a main focus on price appreciation with generally higher expected long-term returns.

(c) **Liability-Hedging Assets:** These assets generally will be fixed-income investments, such as bonds, with similar duration characteristics as the pension liabilities (i.e., these assets generally behave like pension liabilities). Since these assets focus mainly on current income, their expected long-term returns will generally be lower than return-seeking assets.

(d) **Sub-AlLOCATIONS and Rebalancing Ranges:** The sub-allocations and rebalancing ranges within the return-seeking portfolio will be reviewed from time to time as the total return-seeking allocation changes due to the Dynamic Investment Policy Schedule below. The rebalancing ranges for the total return-seeking assets and liability-hedging assets (fixed income) are also determined by the Dynamic Investment Policy Schedule below.

(e) In recognition of the risk and return objectives of the Plans and the City of Hamilton, an initial Asset Allocation Policy was developed based on the Plans’ current funded statuses and the characteristics of the Plans and City of Hamilton. It is recognized, however, that the Plans’ return requirements and risk tolerance will change over time, and the intent is to reallocate the portfolio dynamically as the Plans’ funded statuses improve.

Based on an assessment of the Plans’ long-term goals and desired risk levels, the Investment Committee has developed an investment policy that dynamically adjusts the allocation to return-seeking assets and liability-hedging assets as the Plans’ funded statuses improve. Funded status may change due to any combination of investment returns, contributions, benefit payments, fund expenses, and changes to liabilities (including discount rate changes). This policy is based on the results of the 2010 Dynamic Investment Policy Study and is as follows:

<table>
<thead>
<tr>
<th>Funded Ratio</th>
<th>Return Seeking Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Minimum</td>
</tr>
<tr>
<td>&lt;65%</td>
<td>50%</td>
</tr>
<tr>
<td>65%</td>
<td>50%</td>
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<tr>
<td>66%</td>
<td>50%</td>
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<tr>
<td>67%</td>
<td>50%</td>
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<tr>
<td>68%</td>
<td>50%</td>
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<td>69%</td>
<td>50%</td>
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<td>70%</td>
<td>50%</td>
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<td>71%</td>
<td>49%</td>
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<td>72%</td>
<td>47%</td>
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<td>73%</td>
<td>46%</td>
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<td>74%</td>
<td>44%</td>
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<tr>
<td>75%</td>
<td>43%</td>
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<td>76%</td>
<td>41%</td>
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<tr>
<td>77%</td>
<td>40%</td>
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<tr>
<td>78%</td>
<td>38%</td>
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<tr>
<td>79%</td>
<td>37%</td>
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<tr>
<td>80%</td>
<td>35%</td>
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<tr>
<td>81%</td>
<td>34%</td>
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<tr>
<td>82%</td>
<td>32%</td>
</tr>
<tr>
<td>83%</td>
<td>31%</td>
</tr>
</tbody>
</table>
Sub-Allocations: The sub-allocations within the liability hedging and return seeking categories will be drawn down approximately based on the table below. However, allocations to illiquid assets may be adjusted at a slower rate. Sub-allocations should be within 5% of their targets. The sub-allocations would be adjusted proportionately when the return-seeking allocation is between levels listed in the table below.

<table>
<thead>
<tr>
<th>Return - Seeking Allocation</th>
<th>Minimum</th>
<th>Target</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>84%</td>
<td>29%</td>
<td>39%</td>
<td>49%</td>
</tr>
<tr>
<td>85%</td>
<td>28%</td>
<td>38%</td>
<td>48%</td>
</tr>
<tr>
<td>86%</td>
<td>26%</td>
<td>36%</td>
<td>46%</td>
</tr>
<tr>
<td>87%</td>
<td>25%</td>
<td>35%</td>
<td>45%</td>
</tr>
<tr>
<td>88%</td>
<td>23%</td>
<td>33%</td>
<td>43%</td>
</tr>
<tr>
<td>89%</td>
<td>22%</td>
<td>32%</td>
<td>42%</td>
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<tr>
<td>90%</td>
<td>20%</td>
<td>30%</td>
<td>40%</td>
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<tr>
<td>91%</td>
<td>19%</td>
<td>29%</td>
<td>39%</td>
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<tr>
<td>92%</td>
<td>17%</td>
<td>27%</td>
<td>37%</td>
</tr>
<tr>
<td>93%</td>
<td>16%</td>
<td>26%</td>
<td>36%</td>
</tr>
<tr>
<td>94%</td>
<td>14%</td>
<td>24%</td>
<td>34%</td>
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<tr>
<td>95%</td>
<td>13%</td>
<td>23%</td>
<td>33%</td>
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<tr>
<td>96%</td>
<td>11%</td>
<td>21%</td>
<td>31%</td>
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<tr>
<td>97%</td>
<td>10%</td>
<td>20%</td>
<td>30%</td>
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<tr>
<td>98%</td>
<td>8%</td>
<td>18%</td>
<td>28%</td>
</tr>
<tr>
<td>99%</td>
<td>7%</td>
<td>17%</td>
<td>27%</td>
</tr>
<tr>
<td>100%</td>
<td>5%</td>
<td>15%</td>
<td>25%</td>
</tr>
<tr>
<td>&gt;100%</td>
<td>5%</td>
<td>15%</td>
<td>25%</td>
</tr>
</tbody>
</table>

1 Funded ratio defined on a Wind-up basis.

2 Funded ratio will change based on any combination of investment returns, contributions, benefits payments, expenses and changes in liabilities.

Duration Strategy: Based on the Dynamic Investment Policy Study completed in 2010, the portfolio interest rate dollar duration will increase as the funded status improves and the allocation to liability hedging assets increases. Interest rate derivatives may be used on either a strategic or opportunistic basis to mitigate risk by increasing the hedge ratio up to 100%. This will be at the discretion of the Investment Committee and based on the duration of the plan liabilities.

Rebalancing and Monitoring: A systematic rebalancing procedure will be utilized to ensure that the asset allocation of the Fund stays within the ranges defined above. As
the return-seeking asset allocation changes, the sub-category allocations will be kept approximately proportional to the initial allocation specified above. However, the allocations to illiquid investments may be adjusted more slowly. The funded ratio and asset allocation will be reviewed regularly or when significant cash flows occur, but no less than on a monthly basis. The Fund will be rebalanced as necessary, making use of benefit payments and contributions to the extent possible and considering the transaction costs involved in the rebalancing.

2.04 Management Structure
The Master Trust may employ a mix of active and passive management styles. Active management provides the opportunity to outperform specific investment benchmarks and it can provide lower absolute volatility of returns. Passive, or index, management minimizes the risk of underperformance relative to a benchmark index and is generally less expensive than active management. This approach also diversifies the manager risk, making the Master Trust less reliant on the skills of a single Investment Manager.

Because holding large amounts of foreign assets can expose the Master Trust to fluctuations in the level of the Canadian dollar, a portion of the foreign assets may be hedged back into Canadian dollars.
Section 3—Permitted and Prohibited Investments

3.01 General Guidelines
The investments of the Master Trust must comply with the requirements and restrictions set out in the *Income Tax Act (Canada)* and the *Pension Benefits Act (Ontario)*, and their respective Regulations.

3.02 Permitted Investments
In general, and subject to the restrictions in this Section 3, the Investment Managers may invest in any of the following asset classes and in any of the investment instruments listed below:

(a) **Canadian and Foreign Equities**
   (i) Common and convertible preferred stock the shares of which are (a) listed on a prescribed stock exchange in Canada; or (b) listed on a prescribed stock exchange outside Canada;
   (ii) Debentures convertible into common or convertible preferred stock, provided such instruments are traded on a recognized public exchange or through established investment dealers;
   (iii) Rights, warrants and special warrants for common or convertible preferred stock the shares of which are (a) listed on a prescribed stock exchange in Canada; or (b) listed on a prescribed stock exchange outside Canada;
   (iv) Private placement equities, where the security will be eligible for trading on a recognized public exchange within a reasonable and defined time frame;
   (v) Instalment receipts, American Depository Receipts, Global Depository Receipts and similar exchange traded instruments;
   (vi) Units of real estate investment trusts (REITs);
   (vii) Exchange traded index-participation units (e.g., iUnits; SPDRs);
   (viii) Income trusts registered as reporting issuers under the Securities Act, domiciled in a Canadian jurisdiction that provides limited liability protection to unit holders; and
   (ix) Units of limited partnerships which are listed on the TSX exchange.
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(b) Canadian and Foreign Fixed Income
(i) Bonds, debentures, notes, non-convertible preferred stock and other evidence of indebtedness of Canadian or developed market foreign issuers whether denominated and payable in Canadian dollars or a foreign currency, provided such instruments are traded on a recognized public exchange or through established investment dealers, subject to Section 3.04 below;

(ii) Real return bonds;

(iii) Mortgages secured against Canadian real estate subject to Section 3.05 below;

(iv) Mortgage-backed securities, guaranteed under the National Housing Act;

(v) Term deposits and guaranteed investment certificates;

(vi) Private placements of bonds subject to Section 3.03 below; and,

(vii) Investment in bond and debenture issues of the City of Hamilton and affiliated bodies is neither encouraged nor discouraged. The decision by the Investment Manager(s) to invest in such issues is entirely their responsibility and they should be governed by the same degree of due diligence and prudence that they would apply when assessing any other investment.

c) Cash and Short Term Investments
(i) Cash on hand and demand deposits;

(ii) Canadian and U.S. Treasury bills and bonds (with remaining maturities not exceeding 365 days) issued by the federal and provincial governments and their agencies;

(iii) Sovereign short-term debt instruments of developed countries, with maturities not exceeding 365 days;

(iv) Obligations of trust companies and Canadian and foreign banks chartered to operate in Canada, including bankers’ acceptances;

(v) Commercial paper and term deposits; and

(vi) Other money market instruments (maturity not exceeding 365 days).

d) Derivatives
The following uses of non-leveraged derivative instruments are permitted:

(i) Covered put and/or call options with respect to publicly traded securities that are held in the portfolio
The Manager of an index portfolio may utilize fully backed, i.e. non-leveraged, derivative strategies designed to replicate the performance of specific market indices, i.e.- exchange-traded equity index futures contracts;

Investment Managers may use currency futures contracts and forward contracts to hedge foreign currency exposure; and

Interest rate derivatives can be used to hedge the interest rate risk in the liabilities.

Other Investments
Investments in open-ended or closed-ended pooled funds provided that the assets of such funds are permissible investments under this Policy, and

Deposit accounts of the Custodian can be used to invest surplus cash holdings.

Index Mandates
For managers of index mandates, permitted investment vehicles may include all instruments that may form part of the respective index.

3.03 Minimum Quality Requirements
(a) Quality Standards
Within the investment restrictions for individual portfolios, all portfolios should hold a prudently diversified exposure to the intended market.

The minimum quality standard for individual bonds and debentures is ‘BBB’ or equivalent as rated by a Recognized Bond Rating Agency, at the time of purchase.

The minimum quality standard for individual short term investments is ‘R-1’ low or equivalent as rated by a Recognized Bond Rating Agency, at the time of purchase.

The minimum quality standard for individual preferred shares is ‘P-1’ or equivalent as rated by a Recognized Bond Rating Agency, at the time of purchase.

All investments shall be reasonably liquid (i.e. in normal circumstances they should be capable of liquidation within 1 month).

(b) Split Ratings
In cases where the Recognized Bond Rating Agencies do not agree on the credit rating, the bond will be classified according to the methodology used by DEX, which states:

If two agencies rate a security, use the lower of the two ratings;

If three agencies rate a security, use the most common; and
(iii) If all three agencies disagree, use the middle rating

(c) **Downgrades in Credit Quality**
A Manager will take the following steps in the event of a downgrade in the credit rating of a portfolio asset by a Recognized Rating Agency to below the purchase standards set out in Section 3.03 (a) Quality Standards:

(i) The client will be notified of the downgrade by telephone at the earliest possible opportunity;

(ii) Within ten business days of the downgrade, the Manager will advise the Client in writing of the course of action taken or to be taken by the Manager, and its rationale; and

(iii) Immediately upon downgrade, the Manager will place the asset on a Watch List subject to monthly review by the Manager with the Client until such time as the security matures, is sold or until it is upgraded to a level consistent with the purchase quality standards as expressed in the above guidelines.

(d) **Rating Agencies**
For the purposes of this Policy, the following rating agencies shall be considered to be ‘Recognized Bond Rating Agencies’:

(i) Dominion Bond Rating Service;

(ii) Standard and Poor’s;

(iii) Moody’s Investors Services; and

(iv) Fitch Ratings

(e) **Private Placement Bonds**
Private placement bonds are permitted subject to all of the following conditions:

(i) The issues acquired must be ‘A’ or equivalent rated;

(ii) The total investment in such issues must not exceed 10% of the market value of the Investment Manager(s) bond portfolio;

(iii) The Investment Manager’s portfolio may not hold more than 5% of the market value of any one private placement;

(iv) The Investment Manager(s) must be satisfied that there is sufficient liquidity to ensure sale at a reasonable price; and

(v) The minimum issue size for any single security must be at least $150 million.
3.04 Maximum Quantity Restrictions

(a) Total Fund Level
No one equity holding shall represent more than 10% of the total book value of the Master Trust’s assets.

(b) Individual Investment Manager Level
The Investment Manager(s) shall adhere to the following restrictions:

(i) Equities
(A) No one equity holding shall represent more than the greater of 10% of the market value of any one Manager’s equity portfolio.

(B) No one equity holding shall represent more than 10% of the voting shares of a corporation.

(C) No one equity holding shall represent more than 10% of the available public float of such equity security.

(D) Income Trusts shall not comprise more than 15% of any Investment Manager’s Canadian equity portfolio.

(ii) Bonds and Short Term
(A) Except for federal and provincial bonds (including government guaranteed bonds), no more than 10% of a manager’s bond portfolio may be invested in the bonds of a single issuer and its related companies.

(B) Except for federal and provincial bonds, no one bond holding shall represent more than 10% of the market value of the total outstanding for that bond issue.

(C) No more than 8% of the market value of a manager’s bond portfolio shall be invested in bonds rated ‘BBB’ or equivalent.

(D) This Policy will permit the continued holding of instruments whose ratings are downgraded below BBB after purchase, provided that such instruments are disposed of in an orderly fashion.

(E) No more than 10% of the market value of a manager’s bond portfolio shall be invested in bonds denominated in a currency other than Canadian dollars.

(F) Except for the dedicated real return bond mandate, no more than 10% of the market value of the bond portfolio may be held in real return bonds.

(iii) Other
The use of derivative securities shall be supported at all times by the explicit allocation of sufficient assets to back the intended derivative strategy. For greater certainty, Investment Managers are not permitted to
leverage the assets of the Master Trust. The use of derivative securities is only permitted for the uses described in this Policy. Purchase or sale of any of these instruments for speculative purposes is prohibited.

Notwithstanding the limits described in this Section, the single security limits do not apply to an Investment Manager’s index mandate.

3.05 Prior Permission Required

The following investments are permitted provided that prior permission for such investments has been obtained from the General Manager:

(a) Investments in private placement equities (except for the foreign equity managers investing in pooled funds where the pooled fund policy permits private placement equities).

(b) Direct investments in mortgages.

(c) Direct investments in any one parcel of real property that has a book value less than or equal to 5% of the book value of the Master Trust’s assets. The aggregate book value of all investments in real property and Canadian resource properties shall not exceed 25% of the book value of the Master Trust’s assets.

(d) Direct investments in venture capital financing or private equity partnerships; and

(e) Derivatives other than those described in 3.02(d).

3.06 Prohibited Investments

The Investment managers shall not:

(a) Invest in companies for the purpose of managing them;

(b) Invest in securities that would result in the imposition of a tax on the Fund under the Income Tax Act (Canada) unless they provide a prior written acknowledgement that such investments will result in a tax and receive prior written permission for such investments from the Committee; or;

(c) Make any investments not specifically permitted by this Policy.

3.07 Securities Lending

The investments of the Master Trust may be loaned, for the purpose of generating revenue for the Fund, subject to the provisions of the Pension Benefits Act (Ontario) and the Income Tax Act (Canada), and applicable regulations.

For securities held in segregated accounts, such loans must be secured by cash and/or readily marketable government bonds, treasury bills and/or letters of credit, discount notes and bankers’ acceptances of chartered banks. For bonds, the security held must have a market value of at least 105% of the market value of the loaned securities. For equities, the security held must have a market value of at least 105% of the market value of the loaned securities for Canadian and Non-North American equities, and 102% for U.S. equities. This market value relationship must be calculated at least daily.
The terms and conditions of any securities lending program will be set out in a contract with the custodian. The custodian shall, at all times, ensure that the Chief Investments Officer has a current list of those institutions that are approved to borrow the Fund’s investments.

Lending of the portion of the Master Trust’s assets held in a pooled fund is governed by the terms of the conditions set out in the pooled fund Statement of Investment Policies and Goals or similar document.

3.08 Borrowing
The Master Trust shall not borrow money, except to cover short-term contingency and the borrowing is for a period that does not exceed ninety days, subject to the Pension Benefits Act (Ontario), the Income Tax Act (Canada) and the written permission of the General Manager.

3.09 Conflicts Between the Policy and Pooled Fund Investment Policies
While the guidelines in this Policy are intended to guide the management of the Master Trust, it is recognized that, due to the use of pooled funds, there may be instances where there is a conflict between the Policy and the investment policy of a pooled fund. In that case, the Investment Manager is expected to notify General Manager upon the initial review of the Policy and whenever a change in the pooled fund policy creates a conflict. However, it is understood that the pooled fund policy shall dominate.
Section 4—Monitoring and Control

4.01 Delegation of Responsibilities

The General Manager, Finance and Corporate Services, for the City of Hamilton is the designated contact person for administrative matters. Overall responsibility for the Master Trust ultimately rests with City Council. However, City Council has delegated certain administrative duties and responsibilities to internal and external agents.

(a) Chief Investments Officer

The Chief Investments Officer is responsible for:

(i) monitoring the Master Trust asset mix and rebalancing as required, including executing asset mix changes required per the Dynamic Policy schedules outlined in section 2.03;

(ii) day-to-day liaison including contract management with external Investment Managers and the Investment Consultant;

(iii) monitoring and budgeting for cash flow within the pension fund;

(iv) researching, recommending and implementing improvements to asset management of the Master Trust, and

(v) directing and implementing strategy for self managed portfolios, if any.

(b) Investment Managers

The Investment Managers will:

(i) invest the assets of the Master Trust in accordance with this Policy;

(ii) meet with the Chief Investments Officer as required and provide written reports regarding the Investment Manager’s past performance, their future strategies and other issues as requested;

(iii) notify the Master Trust, in writing of any significant changes in the Investment Manager’s philosophies and policies, personnel or organization and procedures;

(iv) will provide periodically, but no less than quarterly, lists of assets and such other information as may be requested by the Chief Investments Officer; and,

(v) file quarterly compliance reports (see section 4.03).
(c) **Custodian/Trustee**
The custodian/trustee will:

(i) Fulfil the regular duties of a Custodian/Trustee as required by law;

(ii) maintain safe custody over the assets of the Master Trust Plans;

(iii) execute the instructions of the Chief Investments Officer and the Investment Managers; and,

(iv) record income and provide financial statements to the Chief Investments Officer monthly, or as required.

(d) **Investment Consultant**
The investment consultant will:

(i) assist the Chief Investments Officer in developing a prudent long-term asset mix, and specific investment objectives and policies;

(ii) monitor, analyse and report on the Master Trust’s investment performance and to support the Chief Investments Officer on any investment related matters;

(iii) monitor and report the funded status of the Plans on a monthly basis to the Chief Investments Officer;

(iv) assist with the selection of Investment Managers, custodians and other suppliers; and

(v) meet with the Chief Investments Officer as required.

(e) **Actuary**
The actuary will:

(i) perform actuarial valuations of the Plan as required; and,

(ii) advise the Chief Investment Officer on any matters relating to Plan design, membership and contributions.

4.02 **Performance Measurement**
For purposes of evaluating the performance of the Master Trust and the Investment Managers, all rates of returns are measured over moving four-year periods. Return objectives are net of fees and include realized and unrealized capital gains or losses plus income from all sources. Returns will be measured quarterly and will be calculated as time-weighted rates of return.
(a) **Active and Index Canadian Equity Managers**
Investment results of the active and index Canadian Equity Managers are to be tested regularly against a Benchmark Portfolio comprising:

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>S&amp;P/TSX Composite Index</td>
<td>100</td>
</tr>
</tbody>
</table>

(b) **Active and Index Global Equity Managers**
Investment results of the active and index Global Equity Managers are to be tested regularly against a long-term Benchmark Portfolio comprising:

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSCI World Index (C$)</td>
<td>100</td>
</tr>
</tbody>
</table>

(c) **Active and Index Canadian Bond Managers – Long Bonds**
Investment results of the active and index Canadian Bond Managers for Long Bonds are to be tested regularly against a Benchmark Portfolio comprising:

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEX Long Bond Index</td>
<td>100</td>
</tr>
</tbody>
</table>

(d) **Active and Index Canadian Bond Managers – Real Return Bonds**
Investment results of the active and index Canadian Bond Managers for Real Return Bonds are to be tested regularly against a Benchmark Portfolio comprising:

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEX Real Return Bond Index</td>
<td>100</td>
</tr>
</tbody>
</table>
4.03 Compliance Reporting by Investment Manager

The Investment Managers are required to complete and deliver a compliance report to the Chief Investments Officer and the Investment Consultant each quarter. The compliance report will indicate whether or not the Investment Manager was in compliance with this Policy during the quarter.

In the event that an Investment Manager is not in compliance with this Policy, the Investment Manager is required to advise the Chief Investments Officer immediately, detail the nature of the non-compliance and recommend an appropriate course of action to remedy the situation.

The Master Trust invests in pooled funds with separate investment policies. In that case, the Investment Manager must confirm compliance to the pooled fund policy. In addition, should a conflict arise between a pooled fund policy and this Policy, the Investment Manager is required to advise the Chief Investments Officer immediately and detail the nature of the conflict.

4.04 Standard of Professional Conduct

The Investment Managers are expected to comply, at all times and in all respects, with the Code of Ethics and Standards of Professional Conduct as promulgated by the CFA Institute.

The Investment Managers will manage the assets with the care, diligence and skill that an investment manager of ordinary prudence would use in dealing with pension plan assets. The Investment Managers will also use all relevant knowledge and skill that they possess or ought to possess as prudent investment managers.
Section 5—Administration

5.01 Conflicts of Interest

(a) Responsibilities
This standard applies to the City’s staff, as well as to all agents employed by the City, in the execution of their responsibilities under the Pension Benefits Act (Ontario) (the “Affected Persons”).

An “agent” is defined to mean a company, organization, association or individual, as well as its employees who are retained by the Administrator to provide specific services with respect to the investment, administration and management of the assets of the Master Trust.

(b) Disclosure
In the execution of their duties, the Affected Persons shall disclose any material conflict of interest relating to them, or any material ownership of securities, which could impair their ability to render unbiased advice, or to make unbiased decisions, affecting the administration of the Master Trust assets.

Further, it is expected that no Affected Person shall make any personal financial gain (direct or indirect) because of his or her fiduciary position. However, normal and reasonable fees and expenses incurred in the discharge of their responsibilities are permitted if documented and approved by the Administrator.

No Affected Person shall accept a gift or gratuity or other personal favour, other than one of nominal value, from a person with whom the employee deals in the course of performance of his or her duties and responsibilities for the Master Trust.

It is incumbent on any Affected Person who believes that he or she may have a conflict of interest, or who is aware of any conflict of interest, to disclose full details of the situation to the attention of the General Manager immediately. The General Manager, in turn, will decide what action is appropriate under the circumstances.

No Affected Person who has or is required to make a disclosure as contemplated in this Policy shall participate in any discussion, decision or vote relating to any proposed investment or transaction in respect of which he or she has made or is required to make disclosure, unless otherwise determined permissible by decision of the General Manager.
5.02 Related Party Transactions
The Chief Investments Officer, on behalf of the Master Trust, may not enter into a transaction with a related party unless:

(a) the transaction is both required for operation and or administration of the Master Trust and the terms and conditions of the transaction are not less favourable than market terms and conditions;

(b) securities of the related party are acquired at a public exchange; or,

(c) the combined value of all transactions with the same related party is nominal or the transaction(s) is immaterial to the Master Trust.

For the purposes of this Section 5.02, only the market value of the combined assets of the Fund shall be used as the criteria to determine whether a transaction is nominal or immaterial to the Master Trust. Transactions less than (0.5%) of the combined market value of the assets of the plan are considered nominal.

A “related party” is defined to mean the administrator of the plan, including any officer, director or employee of the administrator. It also includes, the Investment Managers and their employees, a union representing employees of the employer, a member of the Master Trust, a spouse or child of the persons named previously, or a corporation that is directly or indirectly controlled by the persons named previously, among others. Related party does not include government or a government agency, or a bank, trust company or other financial institution that holds the assets of the Master Trust.

5.03 Selecting Investment Managers
In the event that a new Investment Manager must be selected or additional Investment Manager(s) added to the existing Investment Manager, the Chief Investments Officer will undertake an Investment Manager search with or without the assistance of a third-party investment consultant depending on the expertise required. The criteria used for selecting an Investment Manager will be consistent with the investment and risk philosophy set out in Section 1.05 (Investment and Risk Philosophy).

5.04 Directed Brokerage Commissions
Investment Managers may use directed brokerage to pay for research and other investment related services provided they comply with, and provide the disclosure required by, the Soft Dollar Standards promulgated by the CFA Institute.
5.05 Monitoring of Asset Mix
In order to ensure that the Master Trust operates within the minimum and maximum
guidelines stated in this Policy as outlined in Section 2, the Chief Investments Officer
shall monitor the asset mix on a calendar quarterly basis. Rebalancing between the
investment mandates can take place over a reasonably short period of time after an
imbalance has been identified. Rebalancing may be effected by redirecting the net cash
flows to and from the Master Trust, or by transferring cash or securities between
portfolios/managers.

5.06 Monitoring of Investment Managers
An important element in the success of this policy is the link between the Investment
Managers and the Chief Investments Officer. It is expected that the Investment Managers
will communicate with the Chief Investments Officer whenever necessary between
regularly scheduled meetings.

Regular meetings between the active Canadian Equity, Canadian Bond, and Global
Equity Managers and the Chief Investments Officer will be scheduled annually.
Meetings will be scheduled with the Index managers as required. At each meeting, it is
expected that the managers will prepare a general economic and capital markets
overview, which will be distributed prior to the meeting. They should also address the
following issues in their presentations:

- review the previous period’s strategy and investment results,
- discuss how the condition of the capital markets affects the investment strategy of
  their respective portfolios,
- economic and market expectations,
- anticipated changes in the asset mix within the limits provided in this Policy, and,
- discuss compliance and any exceptions.

5.07 Dismissal of an Investment Manager
Reasons for considering the termination of the services of an Investment Manager
include, but are not limited to, the following factors:

(a) performance results which are below the stated performance benchmarks;

(b) changes in the overall structure of the Master Trusts’ assets such that the
    Investment Manager’s services are no longer required;

(c) change in personnel, firm structure or investment philosophy which might
    adversely affect the potential return and/or risk level of the portfolio; and/or

(d) failure to adhere to this Policy.

5.08 Voting Rights
The Administrator has delegated voting rights acquired through the investments held by
the Master Trust to the custodian of the securities to be exercised in accordance with the
Investment Manager’s instructions. Investment Managers are expected to exercise all
voting rights related to investments held by the Master Trust in the interests of the

Aon Hewitt
Hamilton MT SIP&P Oct 2012.doc
members of the underlying pension plans. At least annually, the Investment Managers shall report their voting activities to the Chief Investments Officer.

5.09 Valuation of Investments Not Regularly Traded
The following principles will apply for the valuation of investments that are not traded regularly:

(a) **Equities**
Average of bid-and-ask prices from two major investment dealers, at least once every calendar quarter.

(b) **Bonds**
Same as for equities.

(c) **Mortgages**
Unless in arrears, the outstanding principal plus/minus the premium/discount resulting from the differential between face rate and the currently available rate for a mortgage of similar quality and term, determined at least once every month.

(d) **Real Estate**
A certified written appraisal from a qualified independent appraiser at least every two years.

5.10 Policy Review
This Policy may be reviewed and revised at any time, but at least once every calendar year it must be formally reviewed. Should the Investment Manager(s) wish to review this policy at any time, it is his/her responsibility to contact the Chief Investments Officer with specific recommendations.

The appropriateness of the Dynamic Investment Policy asset allocation parameters should be reviewed on an ongoing basis. An new Dynamic Investment Policy Study (Dynamic Asset-Liability Modeling Study) may be undertaken if any of the following events occur:

(a) The plan gets significantly closer to the end-state of the flight path, including if the flight path funded ratio measurement changes significantly (over 15%) from the starting point of the 2010 study, which was 69%;

(b) There are significant changes to the regulations that affect the key metrics used in making decisions in the 2010 Dynamic Investment Policy Study or should affect the asset allocation in the future;

(c) Capital market conditions change significantly such that the assumptions embedded in the 2010 Dynamic Investment Policy Study are no longer reasonable; or

(d) The sponsor’s risk posture changes significantly.
Appendix A – Statement of Investment Policies & Procedures
Overview

1.01 Purpose of Statement
This Statement of Investment Policies and Procedures (the “Policy”) provides the framework for the investment of the assets of the Hamilton Municipal Retirement Fund, registration number 0027512 (the “Plan”); The objective of this Policy is to ensure that the assets of the Plan, together with expected contributions made by both the City of Hamilton and the Plan members, shall be invested in a continued prudent and effective manner.

This Policy is based on the “prudent person portfolio approach” to ensure the prudent investment and administration of the assets of the Plan (the “Fund”) are within the parameters set out in the Pension Benefits Act, (Ontario) and the Regulations thereunder.

1.02 Background of the Plan
The Hamilton Municipal Retirement Fund is a contributory defined benefit plan. The plan has been closed to new entrants since 1965. Municipal employees hired after June 30, 1965 participate in the OMERS Pension Plan. Therefore, this is a closed fund and will terminate upon retirement of the last retiree or successor.

1.03 Plan Profile
a) Contributions
Under the terms of the Plan text:

For normal retirement age 60 class: 7% of contributory earnings up to YMPE plus 8.5% of contributory earnings in excess of the YMPE.

For normal retirement age 65 class: 6% of contributory earnings up to the YMPE plus 7.5% of contributory earnings in excess of the YMPE.

Effective August 1, 1998, employee contributions to the Plan ceased.

b) Benefits
2% of average annual earnings in best 5 years before retirement for each year of credited service up to 35 years reduced by 0.675% of the 5-year average earnings up to the final year’s YMPE for each year of contributory service after January 1, 1966. Reduction suspended from date of retirement to age 65 for CPP benefit. On an ad hoc basis, annual increases will not be less than the increase provided by OMERS, up to 100% of the increase in the Consumer Price Index.

c) Liabilities
As of the most recent actuarial valuation of the Plan as at December 31, 2008, there was no active member, 3 deferred members and 283 retirees and beneficiaries.
As of December 31, 2008, the going-concern liability of the plan was $92,043,500 compared to the actuarial value of assets of $103,121,000. On a solvency basis, the liability was $83,959,000, while the assets (at market) were $83,963,900.

1.04 Objective of the Plan
The objective of the Plans is to provide members of the Plans with retirement benefits prescribed under the terms thereof.

1.05 Investment and Risk Philosophy
The primary investment objective is to provide an economic return on assets sufficient to fund plan liabilities over the long-term, while adhering to prudent investment practices.

The investment philosophies and strategies must take into account both return and risk objectives of the Plan and the City of Hamilton.

In recognition of the risk and return objectives of the Plan and the City of Hamilton, an initial Asset Allocation Policy was developed based on the Plan’s current funded status and the characteristics of the Plan and City of Hamilton. It is recognized, however, that the Plan return requirements and risk tolerance will change over time, and the intent is to reallocate the portfolio to lower risk allocations dynamically as the Plan’s funded statuses improve.

1.06 Administration
The General Manager, Finance and Corporate Services for the City of Hamilton is the designated contact at the City for administrative purposes.

1.07 Pooling of Assets
For investment purposes, the assets of the Plan are combined with the assets of the Hamilton-Wentworth Retirement Fund and the Hamilton Street Railway Company. The combined assets are included in the City of Hamilton Defined Benefit Plans Master Trust.

1.08 Master Trust SIP&P
The Master Trust SIP&P is the policy that should be followed while investing the assets, both commingled and uncommingled, of the Hamilton Municipal Retirement Fund.
Overview

1.01 Purpose of Statement

This Statement of Investment Policies and Procedures (the “Policy”) provides the framework for the investment of the assets of the Hamilton Street Railway Company Pension Plan, registration number 0253344 (the “Plan”);

The objective of this Policy is to ensure that the assets of the Plan, together with expected contributions made by both the Hamilton Street Railway Company (the “Company”) and the Plan members, shall be invested in a continued prudent and effective manner.

This Policy is based on the “prudent person portfolio approach” to ensure the prudent investment and administration of the assets of the Plan (the “Fund”) are within the parameters set out in the Pension Benefits Act, (Ontario) and the Regulations thereunder.

1.02 Background of the Plan

The effective date of the Plan is January 1, 1994, when two predecessor plans, the Canada Coach Lines and the Hamilton Street Railway plans, were merged. The Plan is a contributory defined benefit Plan. Effective January 1, 2009, the Plan is closed to all new members. Furthermore, active members no longer accrue credited service under this Plan with respect to service after December 31, 2008.

1.03 Plan Profile

a) Contributions

Under the terms of the Plan text, members’ contributions should be 7.5% of earnings less contributions which are made to the Canada Pension Plan.

b) Benefits

Members receive a pension equal to 1.5% of average pensionable earnings up to the average Year’s Maximum Pensionable Earnings (YMPE) as established under the Canada Pension Plan, plus 2% of the excess, multiplied by years of credited service. The “average pensionable earnings” are defined as the average of best five years’ earnings as a contributory member. The average YMPE is the average of the YMPE for the last thirty-six months of the plan membership.

In the event that pensions accrued under the prior plan exceed the pension accrued under this plan for service prior to July 1, 1980, then the pension is increased accordingly.

Benefits are subject to annual indexing at the rate of 100% of the change in the Consumer Price Index for the prior calendar year less 1.5%. The maximum adjustment is 6% per annum and the minimum 0%.
c) **Liabilities**

As of the most recent actuarial valuation of the Plan as at January 1, 2011, there were 520 active members, 27 deferred members and 533 retirees and beneficiaries. The average age of the active members was approximately 49.7 years with average pensionable earnings of $59,337.

As of January 1, 2011, the going-concern liability of the plan was $185,625,500 compared to the actuarial value of assets of $173,610,000. Approximately 46.4% of the accrued liability was related to active members, approximately 53.2% was related to retirees, approximately 0.4% was related to deferred members. On a solvency basis, the liability was $179,637,500, while the assets (at market) were $178,868,700. The going-concern deficit is being eliminated through a series of special payments.

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1.04 **Objective of the Plan**

The objective of the Plans is to provide members of the Plans with retirement benefits prescribed under the terms thereof.

1.05 **Investment and Risk Philosophy**

The primary investment objective is to provide an economic return on assets sufficient to fund plan liabilities over the long-term, while adhering to prudent investment practices.

The investment philosophies and strategies must take into account both return and risk objectives of the Plan and the City of Hamilton.

In recognition of the risk and return objectives of the Plan and the City of Hamilton, an initial Asset Allocation Policy was developed based on the Plan’s current funded status and the characteristics of the Plan and City of Hamilton. It is recognized, however, that the Plan return requirements and risk tolerance will change over time, and the intent is to reallocate the portfolio to lower risk allocations dynamically as the Plan’s funded statuses improve.

1.06 **Administration**

The General Manager, Finance and Corporate Services for the City of Hamilton is the designated contact at the City for administrative purposes.

1.07 **Pooling of Assets**

For investment purposes, the assets of the Plan are combined with the assets of the Hamilton-Wentworth Retirement Fund and the Hamilton Municipal Retirement Fund. The combined assets are included in the City of Hamilton Defined Benefit Plans Master Trust.

1.08 **Master Trust SIP&P**

The Master Trust SIP&P is the policy that should be followed while investing the assets, both commingled and uncommingled, of the Hamilton Street Railway Pension Plan.
SIP&P - The Hamilton-Wentworth Retirement Fund Pension Plan

Overview

1.01 Purpose of Statement
This Statement of Investment Policies and Procedures (the “Policy”) provides the framework for the investment of the assets of the Hamilton-Wentworth Retirement Fund, registration number 1073352 (the “Plan”);

The objective of this Policy is to ensure that the assets of the Plan, together with expected contributions made by both the Regional Municipality of Hamilton-Wentworth and the Plan members, shall be invested in a continued prudent and effective manner.

This Policy is based on the “prudent person portfolio approach” to ensure the prudent investment and administration of the assets of the Plan (the “Fund”) are within the parameters set out in the Pension Benefits Act, (Ontario) and the Regulations thereunder.

1.02 Background of the Plan
The Plan is a contributory, defined benefit Plan. Effective January 1, 1985 all active Region Other Participants, excluding Police Civilians, were transferred to OMERS. The liability to transfer such members to OMERS was met by monthly payments of $115,187 until December 31, 2000 and monthly payments of $361, concluding September 30, 2003. The outstanding balance of such payments is taken as adjustment to the assets of the Plan. There are no active members remaining in the Plan.

1.03 Plan Profile
   a) Contributions
      Under the terms of the Plan text:

      For normal retirement age 60 class:

      1) Senior Police Officers: contributions should be 7% of earnings up to the YMPE plus 8.5% of contributory earnings in excess of YMPE.

      2) Other Police Officers: contributions should be 6.5% of earnings up to YMPE plus 8% of contributory earnings up to YMPE plus 8% of contributory earnings in excess of YMPE.

      For a normal retirement age of 65 contributions should be 5.75% of earnings.

   b) Benefits
      2% of average annual earnings in best 5 years before retirement for each year of credited service up to 35 years reduced by 0.7% of the 5-year average earnings up to
the final year’s YMPE for each year of contributory service after January 1, 1966. Reduction suspended from date of retirement to age 65 for CPP benefit. On an ad hoc basis, annual increases will not be less than the increase provided by OMERS, up to 100% of the increase in the Consumer Price Index.

c) Liabilities
As of the most recent actuarial valuation of the Plan as at December 31, 2010, there were no active members, no deferred members and 236 retirees and beneficiaries.

As of December 31, 2010, the going-concern liability of the plan was $69,247,000 compared to the actuarial value of assets of $68,446,000. On a solvency basis, the liability was $74,897,000, while the assets were $69,662,000. Both deficits are being eliminated through a series of special payments.

1.04 Objective of the Plan
The objective of the Plans is to provide members of the Plans with retirement benefits prescribed under the terms thereof.

1.05 Investment and Risk Philosophy
The primary investment objective is to provide an economic return on assets sufficient to fund plan liabilities over the long-term, while adhering to prudent investment practices.

The investment philosophies and strategies must take into account both return and risk objectives of the Plan and the City of Hamilton.

In recognition of the risk and return objectives of the Plan and the City of Hamilton, an initial Asset Allocation Policy was developed based on the Plan’s current funded status and the characteristics of the Plan and City of Hamilton. It is recognized, however, that the Plan return requirements and risk tolerance will change over time, and the intent is to reallocate the portfolio to lower risk allocations dynamically as the Plan’s funded statuses improve.

1.06 Administration
The General Manager, Finance and Corporate Services for the City of Hamilton is the designated contact at the City for administrative purposes.

1.07 Pooling of Assets
For investment purposes, the assets of the Plan are combined with the assets of the Hamilton Street Railway Company and the Hamilton Municipal Retirement Fund. The combined assets are included in the City of Hamilton Defined Benefit Plans Master Trust.

1.08 Master Trust SIP&P
The Master Trust SIP&P is the policy that should be followed while investing the assets, both commingled and uncommingled, of the Hamilton-Wentworth Retirement Fund Pension Plan.
Appendix B – Compliance Reports
### The City of Hamilton Master Trust

Index Bond Manager

Compliance Report for the Quarter Ended ____________

*(date)*

<table>
<thead>
<tr>
<th>ASSET MIX (at Market Value)</th>
<th>GUIDELINES</th>
<th>POLICY COMPLIED WITH</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIXED INCOME BONDS</td>
<td>100%</td>
<td><strong>YES/NO</strong> *</td>
</tr>
<tr>
<td>CASH SHORT-TERM &amp; CASH</td>
<td>0%</td>
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</tbody>
</table>

### CONSTRAINTS

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<thead>
<tr>
<th>GENERAL</th>
<th>Investment Policy Section 3.01 – General Guidelines</th>
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<tbody>
<tr>
<td>BONDS</td>
<td>Investment Policy Section 3.02 (b) – Bonds</td>
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<td>CASH</td>
<td>Investment Policy Section 3.02 (c) – Cash</td>
</tr>
<tr>
<td>DERIVATIVES</td>
<td>Investment Policy Section 3.02 (c) – Derivatives</td>
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<tr>
<td>OTHER</td>
<td>Investment Policy Section 3.02 (e) – Other Investments</td>
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<td>INDEX</td>
<td>Investment Policy Section 3.02 (f) – Index Mandates</td>
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<tr>
<td>QUALITY REQUIREMENTS</td>
<td>Investment Policy Section 3.03 – Minimum Quality Requirements</td>
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<td>QUANTITY RESTRICTIONS</td>
<td>Investment Policy Section 3.04 – Maximum Quantity Restrictions</td>
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<td>PRIOR PERMISSION</td>
<td>Investment Policy Section 3.05 – Prior Permission Required</td>
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<td>PROHIBITED INVESTMENTS</td>
<td>Investment Policy Section 3.06 – Prohibited Investments</td>
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<td>SECURITIES LENDING</td>
<td>Investment Policy Section 3.07 – Securities Lending</td>
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<td>RESPONSIBILITIES</td>
<td>Investment Policy Section 4.01 (b) – Delegation of Responsibilities – Investment Managers</td>
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<tr>
<td>STANDARDS OF PROFESSIONAL CONDUCT</td>
<td>Investment Policy Section 4.04 - Standards of Professional Conduct</td>
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<td>Investment Policy Section 5.01 - Conflicts of Interest</td>
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<tr>
<td>VOTING RIGHTS</td>
<td>Investment Policy Section 5.08 - Voting Rights</td>
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* If policy not complied with, comment on specifics

COMPLETED BY: __________________ SIGNED BY: __________________
Appendix “A” to Item 3 of HMRF/HWRF Report 12-001  
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The City of Hamilton Master Trust  
Index Equity Manager

Compliance Report for the Quarter Ended _____________  
(date)

<table>
<thead>
<tr>
<th>ASSET MIX (at Market Value)</th>
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<tbody>
<tr>
<td>EQUITIES</td>
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<tr>
<td>U.S.</td>
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<tr>
<td>EAFE</td>
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<td></td>
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<tr>
<td>TOTAL FOREIGN</td>
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<tr>
<td>CASH</td>
<td>YES/NO *</td>
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<tr>
<td>SHORT-TERM &amp; CASH</td>
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**GUIDELINES**  

**POLICY COMPLIED WITH**

**CONSTRAINTS**

- **GENERAL**  
  Investment Policy Section 3.01 – General Guidelines

- **EQUITIES**  
  Investment Policy Section 3.02 (a) – Canadian and Foreign Equities

- **CASH**  
  Investment Policy Section 3.02 (c) – Cash and Short Term Investments

- **DERIVATIVES**  
  Investment Policy Section 3.02 (d) – Derivatives

- **OTHER INVESTMENTS**  
  Investment Policy Section 3.02 (e) – Other Investments

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  Investment Policy Section 3.02 (f) – Index Mandates

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  Investment Policy Section 3.03 – Minimum Quality Requirements

- **QUANTITY RESTRICTIONS**  
  Investment Policy Section 3.04 – Maximum Quantity Restrictions

- **PRIOR PERMISSION**  
  Investment Policy Section 3.05 – Prior Permission Required

- **PROHIBITED INVESTMENTS**  
  Investment Policy Section 3.06 – Prohibited Investments

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- **RESPONSIBILITIES**  
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- **STANDARDS OF PROFESSIONAL CONDUCT**  
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  Investment Policy Section 5.01 - Conflicts of Interest

- **VOTING RIGHTS**  
  Investment Policy Section 5.08 - Voting Rights

* If policy not complied with, comment on specifics

COMPLETED BY:_________________________  
SIGNED BY:_________________________
The City of Hamilton Master Trust  
Active Bond Manager  

Compliance Report for the Quarter Ended __________________

<table>
<thead>
<tr>
<th>ASSET MIX (at Market Value)</th>
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CONSTRAINTS

| GENERAL | Investment Policy Section 3.01 – General Guidelines |
| BONDS | Investment Policy Section 3.02 (b) – Bonds |
| CASH | Investment Policy Section 3.02 (c) – Cash |
| DERIVATIVES | Investment Policy Section 3.02 (c) – Derivatives |
| OTHER | Investment Policy Section 3.02 (e) – Other Investments |
| INDEX | Investment Policy Section 3.02 (f) – Index Mandates |
| QUALITY REQUIREMENTS | Investment Policy Section 3.03 – Minimum Quality Requirements |
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| VOTING RIGHTS | Investment Policy Section 5.08 - Voting Rights |

* If policy not complied with, comment on specifics

COMPLETED BY:_________________________ SIGNED BY:_________________________
The City of Hamilton Master Trust  
Active Equity Manager

Compliance Report for the Quarter Ended ____________ (date)

<table>
<thead>
<tr>
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<th>POLICY COMPLIED WITH</th>
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<td>CASH</td>
<td>SHORT-TERM &amp; CASH</td>
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</table>

<table>
<thead>
<tr>
<th>CONSTRAINTS</th>
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<td>EQUITIES</td>
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<td>Investment Policy Section 3.02 (c) – Cash and Short Term Investments</td>
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<td>DERIVATIVES</td>
<td>Investment Policy Section 3.02 (d) – Derivatives</td>
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<td>OTHER INVESTMENTS</td>
<td>Investment Policy Section 3.02 (e) – Other Investments</td>
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<tr>
<td>INDEX</td>
<td>Investment Policy Section 3.02 (f) – Index Mandates</td>
<td></td>
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<td>QUALITY REQUIREMENTS</td>
<td>Investment Policy Section 3.03 – Minimum Quality Requirements</td>
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<td>QUANTITY RESTRICTIONS</td>
<td>Investment Policy Section 3.04 – Maximum Quantity Restrictions</td>
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<tr>
<td>PRIOR PERMISSION</td>
<td>Investment Policy Section 3.05 – Prior Permission Required</td>
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<tr>
<td>PROHIBITED INVESTMENTS</td>
<td>Investment Policy Section 3.06 – Prohibited Investments</td>
<td></td>
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<tr>
<td>SECURITIES LENDING</td>
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<td>BORROWING</td>
<td>Investment Policy Section 3.08 – Borrowing</td>
<td></td>
</tr>
<tr>
<td>RESPONSIBILITIES</td>
<td>Investment Policy Section 4.01 (b) – Delegation of Responsibilities – Investment Managers</td>
<td></td>
</tr>
<tr>
<td>STANDARDS OF PROFESSIONAL CONDUCT</td>
<td>Investment Policy Section 4.04 - Standards of Professional Conduct</td>
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<tr>
<td>CONFLICTS OF INTEREST</td>
<td>Investment Policy Section 5.01 - Conflicts of Interest</td>
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<tr>
<td>VOTING RIGHTS</td>
<td>Investment Policy Section 5.08 - Voting Rights</td>
<td></td>
</tr>
</tbody>
</table>

* If policy not complied with, comment on specifics

COMPLETED BY: ___________________________  SIGNED BY: ______________________
THE CORPORATION OF THE CITY OF HAMILTON
HAMILTON MUNICIPAL RETIREMENT FUND

Actuarial Valuation as at December 31, 2011

October 9, 2012

Registration Number 0275123
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Introduction

Purpose

This report with respect to the Hamilton Municipal Retirement Fund (the “Plan”) has been prepared for The Corporation of The City of Hamilton (the “Employer” or “City”) and presents the results of the actuarial valuation of the plan as at December 31, 2011.

The principal purposes of the report are:

• to present information on the financial position of the plan on both going concern and solvency bases;

• to review the hypothetical windup status of the plan;

• to provide the basis for employer contributions; and

• to provide certain additional information required to assist in the administration of the plan.

This report outlines the changes in the plan’s financial situation since the previous actuarial valuation at December 31, 2008, provides the information and the actuarial opinion required by the Pension Benefits Act (Ontario) and Regulation thereto and provides the information required to maintain plan registration under the Income Tax Act (Canada) and Regulations thereto.

This report summarizes the results of the actuarial valuation and contains an actuarial opinion as an integral part of the report. Supporting detailed information on the significant terms of engagement, assets, actuarial basis, membership data and plan provisions is contained in the Appendices.

The information contained in this report was prepared for the Employer, for its internal use and for filing with the Financial Services Commission of Ontario and the Canada Revenue Agency, in connection with the actuarial valuation of the Plan prepared by Towers Watson Canada Inc. ("Towers Watson"). This report is not intended, nor necessarily suitable, for other parties or for other purposes. Further distribution of all or part of this report to other parties (except where such distribution is required by applicable legislation) or other use of this report is expressly prohibited without Towers Watson’s prior written consent. Towers Watson is available to provide additional information with respect to this report to the above-mentioned intended users upon request.
Significant Events Since Previous Actuarial Valuation

Actuarial Basis

Since the previous actuarial valuation, the assumptions used in the solvency and hypothetical windup valuations have been updated to reflect market conditions at the valuation date. In addition, there have been changes to the going concern and solvency actuarial basis, as follows:

- For the going concern valuation:
  - the discount rate assumption was changed from 5.75% per annum net of all expenses to 5.00% per annum net of all expenses;
  - the assumed rate of inflation was changed from 2.25% per annum to 2.00% per annum;
  - the assumed post-retirement indexation was changed from 2.25% per annum to 2.00% per annum; and
  - the assumed rates of mortality were updated from UP94 projected to 2008 using mortality projection scale AA (sex distinct) to UP94 projected to 2011 using mortality projection scale AA (sex distinct).

- For the solvency statutory position:
  - the solvency asset valuation method was changed from the market value of asset to an actuarial value of assets (smoothed value of assets) and smoothed discount rates were used to calculate the adjusted solvency liability.

Plan Provisions

This actuarial valuation reflects the plan provisions as at December 31, 2011 and does not make any provision for the possibility that a change or action (retroactive or otherwise) may be imposed by order of a regulatory body or a court as we were not aware of any definitive events that would require such change or action at the time this valuation was completed.

There have been no changes to the plan provisions since the previous actuarial valuation that affect the valuation's results.
Legislative and Actuarial Standards Updates

Since the previous actuarial valuation, the Canadian Institute of Actuaries published new Standards of Practice for Pension Commuted Values effective April 1, 2009. The new standards have been reflected for purposes of the solvency and hypothetical windup valuations.

The Standards of Practice for Pension Commuted Values published by the Canadian Institute of Actuaries effective April 1, 2009 provide for, effective February 1, 2011, an update to the mortality assumption. Such update has been reflected for purposes of the solvency and hypothetical windup valuations.

Since the previous actuarial valuation, the Canadian Institute of Actuaries’ Practice-Specific Standards for Pension Plans were revised effective December 31, 2010 to enhance disclosures regarding the security of member benefits and to redefine the practice for going concern valuations. The revised standards have been reflected for purposes of the going concern, solvency and hypothetical windup valuations.

On May 18, 2010, the Pension Benefits Amendment Act (Ontario), 2010 ("Amendment Act") received Royal Assent. The Amendment Act provides that, effective July 1, 2012, certain members employed in the province of Ontario whose employment is terminated involuntarily will be eligible to grow-in to the plan’s early retirement subsidies. Also, the Amendment Act provides that, effective at a date to be proclaimed, members employed in the province of Ontario will vest immediately in their accrued pension. The Amendment Act has no impact on this report since the Plan is closed to new entrants and there are no active members in the Plan at December 31, 2011.

On December 8, 2010, Ontario Bill 120, Securing Pension Benefits Now and for the Future Act, 2010, received Royal Assent. The amendments under Bill 120 provide a framework for changes in funding rules for plans registered in the province of Ontario and will be effective at a date to be proclaimed. The effect of the future changes to funding rules resulting from Bill 120 has not been reflected in this report. Future changes to contribution requirements resulting from Bill 120 will be reflected in the first actuarial opinion prepared and filed on or after the effective date of Bill 120.

Subsequent Events

We completed this actuarial valuation on October 9, 2012.

Other than the legislative and actuarial standards updates mentioned above, to the best of our knowledge and on the basis of our discussions with The Corporation of The City of Hamilton, no events which would have a material financial effect on the actuarial valuation occurred between the actuarial valuation date and the date this actuarial valuation was completed.
## Section 1: Going Concern Financial Position

### 1.1 Statement of Financial Position

<table>
<thead>
<tr>
<th>Going Concern Value of Assets</th>
<th>Fire</th>
<th>Others</th>
<th>Total</th>
<th>December 31, 2011</th>
<th>Total</th>
<th>December 31, 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$ 72,146,100</td>
<td>$ 11,366,000</td>
<td>$ 83,512,100</td>
<td>$ 103,121,000</td>
<td></td>
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</tr>
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</table>

#### Actuarial Liability

<table>
<thead>
<tr>
<th></th>
<th>Active members</th>
<th>Others</th>
<th>Total</th>
<th>December 31, 2011</th>
<th>Total</th>
<th>December 31, 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active members</td>
<td>$ 0</td>
<td>$ 0</td>
<td>$ 0</td>
<td>$ 0</td>
<td>$ 0</td>
<td>$ 0</td>
</tr>
<tr>
<td>Retired members</td>
<td>53,248,700</td>
<td>3,723,400</td>
<td>56,972,100</td>
<td>63,153,400</td>
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<tr>
<td>Beneficiaries</td>
<td>11,967,700</td>
<td>3,096,100</td>
<td>15,063,800</td>
<td>14,590,500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Terminated vested members</td>
<td>0</td>
<td>116,800</td>
<td>116,800</td>
<td>110,800</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provision for future pension increases</td>
<td>10,326,900</td>
<td>729,900</td>
<td>11,056,800</td>
<td>14,188,800</td>
<td></td>
<td></td>
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<tr>
<td>Total actuarial liability</td>
<td>$ 75,543,300</td>
<td>$ 7,666,200</td>
<td>$ 83,209,500</td>
<td>$ 92,043,500</td>
<td></td>
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</table>

#### Actuarial Surplus (Unfunded Actuarial Liability)

<table>
<thead>
<tr>
<th></th>
<th>Fire</th>
<th>Others</th>
<th>Total</th>
<th>December 31, 2011</th>
<th>Total</th>
<th>December 31, 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actuarial Surplus (Unfunded Actuarial Liability)</td>
<td>$ (3,397,200)</td>
<td>$ 3,699,800</td>
<td>$ 302,600</td>
<td>$ 11,077,500</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Comments:**

- The financial position of the plan on a going concern basis is determined by comparing the going concern value of assets to the actuarial liability and is a reflection of the assets available for the benefits accrued in respect of credited service prior to the valuation date assuming the plan continues indefinitely.

- The split of assets between "Fire" and "Other" groups is provided by the City, based on the pension payroll in effect at the valuation date.

- The increase in the actuarial liability as at December 31, 2011, which would result from a 1% decrease in the assumed liability discount rate, is $6,805,800. For purposes of this calculation, no changes were made to any of the other actuarial assumptions or actuarial methods.
1.2 Reconciliation of Financial Position

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
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</thead>
<tbody>
<tr>
<td>Actuarial surplus (unfunded actuarial liability) as at December 31, 2008</td>
<td>$11,077,500</td>
</tr>
<tr>
<td>Expected interest on actuarial surplus (unfunded actuarial liability)</td>
<td></td>
</tr>
<tr>
<td>Plan experience:</td>
<td></td>
</tr>
<tr>
<td>Investment gains (losses)</td>
<td>($12,697,300)</td>
</tr>
<tr>
<td>Mortality gains (losses)</td>
<td>2,474,700</td>
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<tr>
<td>Pension increases less than 2.25% per annum assumed*</td>
<td>1,764,100</td>
</tr>
<tr>
<td>Data update gains (losses)</td>
<td>(716,200)</td>
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<tr>
<td>Gains (losses) from miscellaneous sources</td>
<td>14,400</td>
</tr>
<tr>
<td>Change in actuarial basis</td>
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<tr>
<td>Demographic assumption</td>
<td>(531,500)</td>
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<tr>
<td>Economic assumptions</td>
<td>(3,105,900)</td>
</tr>
<tr>
<td>$(9,160,300)</td>
<td></td>
</tr>
<tr>
<td>Actuarial surplus (unfunded actuarial liability) as at December 31, 2011</td>
<td>$302,600</td>
</tr>
</tbody>
</table>

Comment:
- The actual pension increases were 0.37%, 1.61% and 2.84% effective January 1, 2010, January 1, 2011 and January 1, 2012 respectively.
Section 2: Solvency and Hypothetical Windup Financial Position

2.1 Statement of Solvency Financial Position

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire</td>
<td>Others</td>
<td>Total</td>
</tr>
<tr>
<td>Market value of assets</td>
<td>$ 67,460,000</td>
<td>$ 10,627,700</td>
</tr>
<tr>
<td>Provision for plan windup expenses</td>
<td>(86,400)</td>
<td>(13,600)</td>
</tr>
<tr>
<td>Total</td>
<td>$ 67,373,600</td>
<td>$ 10,614,100</td>
</tr>
</tbody>
</table>

| Solvency Liability       |                  |                  | Active members           |                  |                  |
|                          | Fire             | Others           | Total                   | Fire             | Others           |
| Active members           | $ 0              | $ 0              | $ 0                     | $ 0              | $ 0              |
| Retired members          | 61,784,500       | 4,115,300        | 65,899,800              | 68,238,600       |
| Beneficiaries            | 13,684,800       | 3,438,200        | 17,123,000              | 15,609,600       |
| Terminated vested members| 0                | 116,800          | 116,800                 | 110,800          |
| Total actuarial liability| $ 75,469,300     | $ 7,670,300      | $ 83,139,600            | $ 83,959,000     |

| Solvency Surplus         |                  |                  |火                         | Others           |
| (Unfunded Solvency Liability) | 10,957,700 | 2,943,800        | $ (5,151,900)            | $ 4,900          |

Comments:

- The financial position of the plan on a solvency basis is determined by comparing the solvency value of assets to the solvency liability (the actuarial present value of benefits accrued in respect of credited service prior to the valuation date, calculated as if the plan were wound up on that date). No allowance was made for subsequent benefit changes which will become effective after January 1st of the ensuing year.

- The split of assets between "Fire" and "Others" groups is provided by the City, based on the pension payroll in effect at the valuation date.
The solvency actuarial valuation results presented in this report are determined under a scenario where, following a plan windup, the employer continues its operations.

Under an amendment to the Regulation to the Pension Benefits Act (Ontario), the employer had the option prior to November 26, 1992 to make an election to exclude from the solvency liability any benefits relating to plant closure and permanent layoff. This plan does not have any such benefits.

In addition, the Regulation permits certain benefits to be excluded from the solvency liability, without requiring the employer to make an election. Pursuant to the directions from the Employer, the cost-of-living adjustments have been excluded from the solvency valuation. The full solvency liability, taking into account all of the benefits excluded under the Regulation, is $105,465,200 as at December 31, 2011.

The increase in the solvency liability as at December 31, 2011, which would result from a 1% decrease in the assumed liability discount rate, is $6,952,800. For purposes of this calculation, no changes were made to any of the other actuarial assumptions or actuarial methods.

2.2 Hypothetical Windup Financial Position

The hypothetical windup valuation results presented in this report are determined under a scenario where, following a plan windup, the employer continues its operations.

If the plan were to be wound up on the valuation date, the hypothetical windup value of assets would be equal to the solvency value of assets. As permitted by the Regulation to the Pension Benefits Act (Ontario), the employer has elected to exclude certain benefits from the solvency liability. The full hypothetical windup liability, taking into account the post-retirement indexing as at December 31, 2011, is $105,465,200 as at December 31, 2011. Consequently, the hypothetical windup surplus (unfunded hypothetical windup liability) as at the valuation date is $(27,477,500).
2.3 Solvency Incremental Cost

The solvency incremental cost for a given year represents the present value, at the valuation date, of the expected aggregate change in the solvency liability during the year, increased for expected benefit payments during the year. The solvency incremental costs in respect of each year between December 31, 2011 and December 31, 2014, the next valuation date, are derived from the projection of the solvency liability, as follows:

<table>
<thead>
<tr>
<th></th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projected solvency liability as at beginning of year</td>
<td>$83,139,600</td>
<td>$79,136,500</td>
<td>$75,090,100</td>
</tr>
<tr>
<td>Solvency incremental cost for the year</td>
<td>$977,500</td>
<td>927,100</td>
<td>876,100</td>
</tr>
<tr>
<td>Interest on projected solvency liability, solvency incremental cost and expected benefit payments</td>
<td>2,651,000</td>
<td>2,519,500</td>
<td>2,386,800</td>
</tr>
<tr>
<td>Expected benefit payments during year</td>
<td>(7,631,600)</td>
<td>(7,493,000)</td>
<td>(7,338,900)</td>
</tr>
<tr>
<td>Projected solvency liability as at end of year</td>
<td>$79,136,500</td>
<td>$75,090,100</td>
<td>$71,014,100</td>
</tr>
</tbody>
</table>

Note:

1 These amounts are as at the beginning of the year. The solvency incremental cost, adjusted with interest as at December 31, 2011, is $897,500 for 2013 and $821,000 for 2014.
2.4 Determination of the Statutory Solvency Excess (Statutory Solvency Deficiency)

The minimum funding requirements under the Regulation to the Pension Benefits Act (Ontario) are based on the statutory solvency excess (statutory solvency deficiency) as at the valuation date. In calculating the statutory solvency excess (statutory solvency deficiency), various adjustments can be made to the solvency financial position including:

- recognition of the present value of existing amortization payments, including any going concern amortization payments established at the valuation date, due to be paid within the periods prescribed by the Regulation (however, amortization payments for future benefit increases excluded in the calculation of the solvency liability have not been included in the present value of existing amortization payments);

- smoothing of the asset value by use of an averaging technique;

- adjustment to the solvency liability by use of an averaging technique in determining the discount rate used to value the liabilities; and

- removal of any prior year credit balance from the asset value.

To the extent that there exists a statutory solvency deficiency, after taking account of these adjustments, additional amortization payments must be made. If there is no statutory solvency deficiency, the statutory solvency excess may be used to reduce the period of existing solvency amortization payments, if any.
### Statutory Solvency Excess (Statutory Solvency Deficiency)

<table>
<thead>
<tr>
<th></th>
<th>December 31, 2011</th>
<th>December 31, 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solvency surplus (unfunded solvency liability)</td>
<td>$ (5,151,900)</td>
<td>$ 4,900</td>
</tr>
<tr>
<td>Adjustments to solvency position:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Present value of existing amortization payments</td>
<td>$ 0</td>
<td>$ 0</td>
</tr>
<tr>
<td>• Smoothing of asset value</td>
<td>5,424,400</td>
<td>0</td>
</tr>
<tr>
<td>• Averaging of liability discount rate</td>
<td>6,620,800</td>
<td>0</td>
</tr>
<tr>
<td>• Prior year credit balance</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>• Total</td>
<td>$ 12,045,200</td>
<td>$ 0</td>
</tr>
<tr>
<td>Statutory solvency excess</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(statutory solvency deficiency)</td>
<td>$ 6,893,300</td>
<td>$ 4,900</td>
</tr>
</tbody>
</table>
Section 3: Contribution Requirements

3.1 Contributions for Current Service (Ensuing Year)

There are no active members in the plan and therefore no contributions required for current service.

3.2 Contributions for Past Service

The Plan has a net actuarial surplus on the going concern basis and a statutory solvency excess as at December 31, 2011. There are no special payments required to be made with respect to past service.

3.3 Estimated Minimum Employer Contribution (Ensuing Year)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Amortization Payments</td>
<td>$ 0</td>
<td>$ 0</td>
</tr>
<tr>
<td>Going concern</td>
<td>$ 0</td>
<td>$ 0</td>
</tr>
<tr>
<td>Solvency</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>$ 0</td>
<td>$ 0</td>
</tr>
<tr>
<td>Application of Surplus</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Estimated Minimum Employer Contribution</td>
<td>$ 0</td>
<td>$ 0</td>
</tr>
</tbody>
</table>
### 3.4 Estimated Maximum Employer Contribution (Ensuing Year)

<table>
<thead>
<tr>
<th></th>
<th>December 31, 2011</th>
<th>December 31, 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employer Normal Actuarial Cost</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Greater of the Unfunded Actuarial Liability and the Unfunded Hypothetical Windup Liability</td>
<td>27,477,500</td>
<td>21,751,200</td>
</tr>
<tr>
<td>Required Application of Excess Surplus</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Estimated Maximum Employer Contribution</td>
<td>$27,477,500</td>
<td>$21,751,200</td>
</tr>
</tbody>
</table>

**Comment:**
- The *Income Tax Act (Canada)* permits the employer to make contributions up to the above amount less the amortization payments made in respect of periods since December 31, 2011, provided that all assumptions made for the purposes of the hypothetical windup valuation remain reasonable at the time each contribution is made. In addition, the maximum employer contribution is to be adjusted with interest for the period between the actuarial valuation date and the date each contribution is made.
3.5 Timing of Contributions

To satisfy the requirements of Ontario pension legislation, the employer normal actuarial cost must be paid monthly and within 30 days of the month to which it pertains while the amortization payments must also be paid monthly but within the period to which they are applicable.

In addition, within 60 days after this report is filed with the Financial Services Commission of Ontario, the employer must make a special contribution equal to the excess, if any, of:

- the amount of employer contributions (employer normal actuarial cost and amortization payments) that should have been paid after December 31, 2011 according to the minimum contribution requirements revealed by this report (determined with regard to any reported prior year credit balance available to meet these minimum contribution requirements), over

- the actual amount of employer contributions made in respect of periods after December 31, 2011.

Interest must be added to this excess, with such interest determined by reference to the going concern discount rate for payments in respect of employer normal actuarial cost or going concern amortization payments and the solvency discount rate for payments in respect of solvency amortization payments.

To satisfy the requirements of the Income Tax Act (Canada), employer contributions that are remitted to the plan in the taxation year or within 120 days after the end of such taxation year are deductible in such taxation year provided they were made to fund benefits in respect of periods preceding the end of the taxation year.

3.6 Other Statutory Contributions

Additional contributions may be required in respect of the transfer values for terminating members. Where applicable, such additional contributions must be remitted before the related transfer value may be paid in full to the terminated member. Details are provided in Appendix G.

3.7 Future Contribution Levels

Future contribution levels may change as a result of future changes in the actuarial methods and assumptions, the membership data, the plan provisions and the legislative rules, or as a result of future experience gains or losses, none of which has been anticipated at this time. Emerging experience, differing from the assumptions, will result in gains or losses that will be revealed in future actuarial valuations.
Section 4: Actuarial Certification and Opinion

4.1 Actuarial Certification

Based on the results of these valuations, we hereby certify that, in our opinion, as at December 31, 2011:

- The plan does not have a prior year credit balance.

- The actuarial surplus (unfunded actuarial liability), determined by comparing the actuarial liability, the measure of obligations of the plan on a going concern basis, to the going concern value of assets, is $302,600.

- The solvency surplus (unfunded solvency liability), determined by comparing the solvency liability, as defined in the Regulation to the Pension Benefits Act (Ontario), to the solvency value of assets, is $(5,151,900).

- The statutory solvency excess (statutory solvency deficiency) revealed at this actuarial valuation is $6,893,300. Since there is no statutory solvency deficiency, no solvency amortization payments are required in order to comply with the Regulation to the Pension Benefits Act (Ontario).

- The hypothetical windup surplus (unfunded hypothetical windup liability), determined by comparing the hypothetical windup liability, the measure of the obligations of the plan on a hypothetical windup basis including the value of any potential obligations that may have been excluded for purposes of the solvency valuation, to the hypothetical windup value of assets, is $(27,477,500).

- The excess actuarial surplus, pursuant to section 147.2(2) of the Income Tax Act (Canada), is $0.

- There are no active members in the Plan and therefore no contributions required for current service.

- The maximum employer contributions permissible under the Income Tax Act (Canada) are described in Section 3.

- The transfer ratio, as defined in the Regulation to the Pension Benefits Act (Ontario), is 0.74. The solvency ratio, defined as the ratio of the solvency value of assets prior to deduction of the provision for plan windup expenses to the solvency liabilities, is 0.94.
As a result of Ontario Regulation 73/95, coverage under the Pension Benefit Guarantee Fund is exempted and Fund Assessment is not required.

In accordance with the Regulation to the *Pension Benefits Act (Ontario)*, the next actuarial valuation should be performed with an effective date not later than December 31, 2014. The basis for employer contributions presented in this report is effective until the next actuarial opinion is filed.
4.2 Actuarial Opinion

In our opinion:

- the membership data on which the actuarial valuations are based are sufficient and reliable for the purposes of the going concern, solvency and hypothetical windup valuations,

- the assumptions are appropriate for the purposes of the going concern, solvency and hypothetical windup valuations, and

- the methods employed in the valuations are appropriate for the purposes of the going concern, solvency and hypothetical windup valuations.

This report has been prepared, and our opinions given, in accordance with accepted actuarial practice in Canada. The valuations have been conducted in accordance with our understanding of the funding and solvency standards prescribed by the Pension Benefits Act (Ontario) and Regulation thereto, and in accordance with our understanding of the requirements of the Income Tax Act (Canada) and Regulations thereto. This actuarial opinion forms an integral part of the report.

The results presented in this report have been developed using a particular set of actuarial assumptions. Other results could have been developed by selecting different actuarial assumptions. The results presented in this report are reasonable actuarial results based on actuarial assumptions reflecting our expectation of future events.

Towers Watson Canada Inc.

Bill Liu, FSA
Fellow of the Canadian Institute of Actuaries

Martine Sohier, FSA
Fellow of the Canadian Institute of Actuaries

Toronto, Ontario
October 9, 2012
Appendix A: Significant Terms of Engagement

For purposes of preparing this valuation report, the Employer has directed that:

- The actuarial valuation is to be prepared as at December 31, 2011.

- For purposes of the going concern valuation, the terms of engagement require the use of the margins for adverse deviations mentioned in Appendix C.

- For purposes of determining the going concern liability discount rate, the target asset class distribution is to be established in accordance with the investment policy dated March 2011, which is the most up to date version.

- For purposes of determining the going concern financial position of the plan, the going concern value of assets is to be determined using the averaging technique described in the Going Concern Asset Valuation Method section in Appendix C.

- For purposes of determining the solvency liabilities of the plan, certain benefits are to be excluded, as permitted by the Regulation to the Pension Benefits Act (Ontario), without requiring an election from the employer.

- For purposes of determining the statutory solvency financial position of the plan, the asset value and liability discount rates are to be determined using the averaging techniques described in the Solvency and Hypothetical Windup Asset Valuation Method and Solvency and Hypothetical Windup Rationale for Actuarial Assumptions sections in Appendix D.

- Since to the best of the knowledge of the plan administrator, there is no partial plan windup with an effective date prior to the date of this valuation, involving members employed in Ontario, not yet completed where the partial windup portion of the plan is in a surplus position on the date of this valuation, this report is to be prepared on the basis that there will be no retroactive changes to previously filed partial windup reports, if any, and neither the applicable pension regulator nor the plan sponsor will order/declare any partial plan windup with an effective date prior to the valuation date.

- The hypothetical windup valuation results presented in this report are to be determined under a scenario where all expenses are paid from the pension fund.
## Appendix B: Assets

### Statement of Market Value

<table>
<thead>
<tr>
<th></th>
<th>December 31, 2011</th>
<th>December 31, 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Invested assets:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Canadian equities</td>
<td>$29,291,600</td>
<td>$26,497,400</td>
</tr>
<tr>
<td>• Foreign equities</td>
<td>13,472,600</td>
<td>11,898,400</td>
</tr>
<tr>
<td>• Fixed income</td>
<td>34,027,000</td>
<td>42,917,200</td>
</tr>
<tr>
<td>• Cash and short-term investments</td>
<td>1,120,000</td>
<td>2,521,000</td>
</tr>
<tr>
<td>• Total invested assets</td>
<td>$77,911,200</td>
<td>$83,834,000</td>
</tr>
</tbody>
</table>

| **Net outstanding amounts:** |                   |                   |
| • Contributions receivable | $0                | $0                |
| • Investment income receivable | 235,300     | 287,500           |
| • Benefits payable         | 0                | 0                |
| • Expenses and other payables | (58,800)  | (72,600)          |
| • Total net outstanding amounts | $176,500   | $214,900          |

| **Total**                  | $78,087,700       | $84,048,900       |

### Comments:

- The invested assets are held by Royal Trust.
- The data relating to the invested assets are based on the audited financial statements provided by the City. All such data has been relied upon by Towers Watson following tests of reasonableness with respect to contributions, benefit payments and investment income. However, Towers Watson has not independently audited or verified this data.
### Asset Class Distribution

The following table shows the target asset allocation stipulated by the plan's investment policy in respect of various major asset classes and the actual asset allocation as at December 31, 2011.

<table>
<thead>
<tr>
<th>Asset Class</th>
<th>Target asset allocation</th>
<th>Asset allocation as at December 31, 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canadian equities</td>
<td>30%</td>
<td>38%</td>
</tr>
<tr>
<td>Foreign equities</td>
<td>30%</td>
<td>17%</td>
</tr>
<tr>
<td>Fixed income</td>
<td>40%</td>
<td>44%</td>
</tr>
<tr>
<td>Cash and short-term investments</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

**Notes:**

1. This information was obtained from the investment policy in effect for the plan as at December 31, 2011. This is the initial target allocation and is subject to adjustment based on the transfer ratio of the plan.

2. This information was obtained from The Corporation of The City of Hamilton. All such data has been relied upon by Towers Watson and compared against the target asset allocation to assess reasonableness. However, Towers Watson has not independently audited or verified this data.
Reconciliation of Total Assets (Market Value)

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2010</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assets as at January 1</td>
<td>$85,667,000</td>
<td>$85,606,800</td>
<td>$84,048,900</td>
</tr>
<tr>
<td>Receipts:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Contributions</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>• Investment income</td>
<td>$466,800</td>
<td>$8,242,300</td>
<td>$10,053,100</td>
</tr>
<tr>
<td>• Total receipts</td>
<td>$466,800</td>
<td>$8,242,300</td>
<td>$10,053,100</td>
</tr>
<tr>
<td>Disbursements:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Pension payments</td>
<td>$7,701,900</td>
<td>$7,806,600</td>
<td>$8,115,300</td>
</tr>
<tr>
<td>• Fees</td>
<td>$344,200</td>
<td>$375,500</td>
<td>$379,900</td>
</tr>
<tr>
<td>• Total disbursements</td>
<td>$8,046,100</td>
<td>$8,182,100</td>
<td>$8,495,200</td>
</tr>
<tr>
<td>Assets as at December 31</td>
<td>$78,087,700</td>
<td>$85,667,000</td>
<td>$85,606,800</td>
</tr>
</tbody>
</table>

Comments:

- This reconciliation is based on the financial statements provided by the City. All such data has been relied upon by Towers Watson following tests of reasonableness with respect to contributions, benefit payments and investment income. However, Towers Watson has not independently audited or verified this data.

- The rate of return earned on the market value of assets, net of all expenses, from December 31, 2008 to December 31, 2011 is approximately 7.2% per annum.
## Development of the Actuarial Value of Assets

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjusted market value as at December 31, 2007</td>
<td>$110,637,413</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net cash flow for 2008</td>
<td>(8,273,848)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assumed investment return (6.75%)</td>
<td>7,193,343</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted market value as at December 31, 2008</td>
<td>109,556,908</td>
<td>$84,048,865</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net cash flow for 2009</td>
<td>(8,115,342)</td>
<td>(8,115,342)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assumed investment return (5.75%)</td>
<td>6,069,467</td>
<td>4,602,754</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted market value as at December 31, 2009</td>
<td>107,511,033</td>
<td>80,536,277</td>
<td>$85,606,814</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net cash flow for 2010</td>
<td>(7,806,576)</td>
<td>(7,806,576)</td>
<td>(7,806,576)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assumed investment return (5.75%)</td>
<td>5,960,562</td>
<td>4,409,534</td>
<td>4,701,090</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted market value as at December 31, 2010</td>
<td>105,665,039</td>
<td>77,139,235</td>
<td>82,501,328</td>
<td>$85,666,986</td>
<td></td>
</tr>
<tr>
<td>Net cash flow for 2011</td>
<td>(7,701,865)</td>
<td>(7,701,865)</td>
<td>(7,701,865)</td>
<td>(7,701,865)</td>
<td></td>
</tr>
<tr>
<td>Assumed investment return (5.75%)</td>
<td>5,857,406</td>
<td>4,217,172</td>
<td>4,525,492</td>
<td>4,707,518</td>
<td></td>
</tr>
<tr>
<td>Adjusted market value as at December 31, 2011</td>
<td>$103,820,580</td>
<td>$73,654,542</td>
<td>$79,324,955</td>
<td>$82,672,639</td>
<td>$78,087,732</td>
</tr>
</tbody>
</table>

### Actuarial Value of Assets

- Average of the five adjusted market values as at December 31, 2011: $83,512,090
- Actuarial value of assets as at December 31, 2011 (rounded): $83,512,100

### Comments:

- The asset valuation method is described in Appendix C.
- The starting value of each column is the actual market value of total assets at the indicated date.
- Net cash flow was calculated as contributions less benefit payments on an accrued basis during the year.
- The rate of return earned on the going concern value of assets, net of all expenses, from December 31, 2008 to December 31, 2011 is approximately 1.3% per annum.
Appendix C: Actuarial Basis – Going Concern

Methods

Asset Valuation Method

The actuarial value of assets was calculated as the average of the market value of total assets at the valuation date and the four previous years’ adjusted market values. To obtain these adjusted market values, the market values at December 31 of each of the four preceding years were accumulated to the valuation date with net cash flow (contributions less benefit payments) and assumed investment return. Net cash flow was assumed to occur uniformly throughout each year. Assumed investment return for a year was calculated as the applicable going concern interest rate for those periods.

The objective of the asset valuation method is to produce a smoother pattern of going-concern surplus (deficit) and hence a smoother pattern of contributions, consistent with the long-term nature of a going concern valuation.

The going concern liability discount rate has been selected to equal the expected return on the assets over long periods of time, having regard to the investment policy of the pension fund. As such, no bias is expected in the asset valuation method.

Actuarial Cost Method

The actuarial liability was calculated using the projected unit credit cost method.

The actuarial liability for retired members and beneficiaries and terminated vested members was calculated as the actuarial present value of their respective benefits.

Since there are no more active members remaining in the plan, there is no normal actuarial cost for this plan.
## Actuarial Assumptions

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Liability discount rate</td>
<td>5.00%</td>
<td>5.75%</td>
</tr>
<tr>
<td>Rate of inflation</td>
<td>2.00%</td>
<td>2.25%</td>
</tr>
<tr>
<td>Post-retirement pension increases</td>
<td>2.00%</td>
<td>2.25%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Demographic Assumptions</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mortality</td>
<td>1994 Uninsured Pensioner Mortality Table, projected to 2011 using Scale AA (refer to Table 1)</td>
</tr>
<tr>
<td>Other</td>
<td>1994 Uninsured Pensioner Mortality Table, projected to 2008 using Scale AA (refer to Table 1)</td>
</tr>
<tr>
<td>Years male spouse older than female spouse</td>
<td>3</td>
</tr>
<tr>
<td>Provision for non-investment expenses</td>
<td>None; return on plan assets is net of all expenses</td>
</tr>
</tbody>
</table>
# Table 1 — Sample Mortality Rates

<table>
<thead>
<tr>
<th>Age</th>
<th>Male</th>
<th>Female</th>
<th>Age</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>0.000545</td>
<td>0.000305</td>
<td>20</td>
<td>0.019</td>
<td>0.016</td>
</tr>
<tr>
<td>25</td>
<td>0.000711</td>
<td>0.000313</td>
<td>25</td>
<td>0.010</td>
<td>0.014</td>
</tr>
<tr>
<td>30</td>
<td>0.000862</td>
<td>0.000377</td>
<td>30</td>
<td>0.006</td>
<td>0.010</td>
</tr>
<tr>
<td>35</td>
<td>0.000915</td>
<td>0.000514</td>
<td>35</td>
<td>0.006</td>
<td>0.011</td>
</tr>
<tr>
<td>40</td>
<td>0.001153</td>
<td>0.000753</td>
<td>40</td>
<td>0.009</td>
<td>0.015</td>
</tr>
<tr>
<td>45</td>
<td>0.001697</td>
<td>0.001046</td>
<td>45</td>
<td>0.013</td>
<td>0.016</td>
</tr>
<tr>
<td>50</td>
<td>0.002773</td>
<td>0.001538</td>
<td>50</td>
<td>0.019</td>
<td>0.017</td>
</tr>
<tr>
<td>55</td>
<td>0.004758</td>
<td>0.002466</td>
<td>55</td>
<td>0.016</td>
<td>0.008</td>
</tr>
<tr>
<td>60</td>
<td>0.008576</td>
<td>0.004773</td>
<td>60</td>
<td>0.016</td>
<td>0.005</td>
</tr>
<tr>
<td>65</td>
<td>0.015629</td>
<td>0.009286</td>
<td>65</td>
<td>0.014</td>
<td>0.005</td>
</tr>
<tr>
<td>70</td>
<td>0.025516</td>
<td>0.014763</td>
<td>70</td>
<td>0.015</td>
<td>0.005</td>
</tr>
<tr>
<td>75</td>
<td>0.040012</td>
<td>0.024393</td>
<td>75</td>
<td>0.014</td>
<td>0.008</td>
</tr>
<tr>
<td>80</td>
<td>0.066696</td>
<td>0.042361</td>
<td>80</td>
<td>0.010</td>
<td>0.007</td>
</tr>
<tr>
<td>85</td>
<td>0.104559</td>
<td>0.072836</td>
<td>85</td>
<td>0.007</td>
<td>0.006</td>
</tr>
<tr>
<td>90</td>
<td>0.164442</td>
<td>0.125016</td>
<td>90</td>
<td>0.004</td>
<td>0.003</td>
</tr>
<tr>
<td>95</td>
<td>0.251189</td>
<td>0.200229</td>
<td>95</td>
<td>0.002</td>
<td>0.002</td>
</tr>
<tr>
<td>100</td>
<td>0.341116</td>
<td>0.297233</td>
<td>100</td>
<td>0.001</td>
<td>0.001</td>
</tr>
<tr>
<td>105</td>
<td>0.440585</td>
<td>0.415180</td>
<td>105</td>
<td>0.000</td>
<td>0.000</td>
</tr>
</tbody>
</table>

**Notes:**

1. For the year 1994 with no improvement. The mortality rates for years after 1994 are computed using the mortality rates for the year 1994 ($q_{x}^{1994}$ rates) and mortality improvement rates ($\Delta A_{x}$ rates).

2. Using the $q_{x}^{1994}$ rates and the $\Delta A_{x}$ rates defined above, the resulting mortality rate for age $x$ in calendar year $y$ is:

$$q_{xy} = q_{x}^{1994} \times (1 - \Delta A_{x})^{y-1994}.$$
Rationale for Actuarial Assumptions

The rationale for the material actuarial assumptions used in the going concern valuation is summarized below.

The going concern assumptions do not include margins for adverse deviations, except as noted below.

Liability Discount Rate

Valuation economic assumptions used for establishing the liability discount rate have been developed based on Towers Watson’s capital market model. The capital market model simulates economic variables (e.g. inflation and yields) and asset class returns, with the assumptions being developed through both the analysis of historical rates and returns, and the application of econometric theory. In modeling inflation and bond yields, current conditions and long term expectations are used and the serial correlation inherent in these parameters is recognized.

Our long term nominal rate of return assumption was determined using the expected long term asset mix for the plan, which is consistent with the target mix found in the investment policy in effect for the plan as at the valuation date.

Based on Towers Watson’s capital market model, a best estimate long term gross nominal rate of return as at December 31, 2011 of 5.74% is appropriate. The following adjustments were subsequently made before selecting the long term nominal rate of return assumption:

- Best estimate long term nominal rate of return before adjustments 5.74%
- Adjustment for non-investment expenses paid by the plan (0.47)
- Adjustment for passive investment management expenses paid by the plan (excluding active management fees) (0.08)
- Best estimate long term nominal rate of return after adjustments 5.19%

In the selection of the discount rate, we have assumed that additional returns associated with employing an active investment management strategy would equal the additional expenses associated with employing such strategy. Consequently, we have disregarded any potential additional returns.

We established 5.00% as the nominal rate of return assumption for the plan allowing for a 0.19% margin for adverse deviations.

In carrying out the plan’s investment policy, the plan administrator has opted to invest the plan’s assets in a diversified portfolio, which includes certain asset classes subject to risk that provide potential for higher return. The investment return assumption used in this actuarial valuation to discount future expected benefit payments includes an estimated risk premium for investment of fund assets in
instruments subject to risk. Based on historical experience, assets invested in instruments subject to
to risk are normally expected to yield higher returns in the long-run than assets invested in low-risk
investments, but these returns may fluctuate significantly from year to year and not necessarily in line
with changes in the plan's liabilities over long periods of time. As a result, investing in riskier asset
classes will generally increase the potential for future asset-liability mismatch, which could lead to
greater volatility in the plan's financial position and minimum contribution requirements.

*Rate of Inflation*

The assumption reflects an estimate of future rates of inflation considering economic and financial
market conditions at the valuation date.

*Post-retirement Pension Increases*

The assumption has been determined by applying the post-retirement increase provision specified in
the plan to the inflation assumption.

*Mortality*

The 1994 Uninsured Pensioner Mortality Table reflects the mortality experience projected to 1994 for a
large sample of North American pension plans. Applying Projection Scale AA to 2011 provides
allowance for improvements in mortality after 1994 and is considered reasonable for projecting
mortality experience into the future for the plan.

*Years Male Spouse Older Than Female Spouse*

When provided, the actual data on the spouse were used for retired members. For other members, the
assumption is based on surveys of the age difference in the general population and an assessment of
future expectations for members of the plan.

*Provision for Non-Investment Expenses.*

The liability discount rate is net of all expenses (with the exception of any fees associated with
employing an active investment management strategy). The assumed level of expenses reflected in
the liability discount rate is based on recent experience of the plan and an assessment of future
expectations.
Appendix D: Actuarial Basis – Solvency and Hypothetical Windup

Methods

Asset Valuation Method

Assets deemed to be available for purposes of the hypothetical wind-up valuation are equal to the market value of assets, reduced by a provision for plan windup expenses.

Assets deemed to be available for purposes of the solvency valuation are equal to the sum of:

i. the market value of assets, reduced by a provision for plan windup expenses; and

ii. the amount by which the actuarial value of assets (smoothed value of assets) exceeds (or is exceeded by) the market value.

The asset valuation method for purposes of the solvency valuation has changed since the last valuation. The objective of the change is to smooth out short term market fluctuations and produce a smoother pattern of solvency surplus (deficit) and hence a smoother pattern of contributions.

The adjustment in respect of the smoothing of solvency assets for purposes of determining the statutory solvency position was calculated as the difference between the 5-year average of adjusted market values and the market value of total assets. Details on this technique are discussed in Appendix C.

Liability Calculation Method

The solvency and hypothetical windup liabilities for retired members and beneficiaries and terminated vested members were calculated as the actuarial present value of their respective benefits. Smoothed discount rates were used to calculate the adjusted solvency liability.

Other Considerations

The solvency and hypothetical windup actuarial valuations have been prepared on a hypothetical basis. In the event of an actual plan windup, the plan assets may have to be allocated between various classes of plan members or beneficiaries as required by applicable pension legislation. Such potential allocation has not been performed as part of these solvency and hypothetical windup valuations.
Solvency Incremental Cost Actuarial Method

The solvency incremental cost for a given year represents the present value, at the valuation date, of the expected aggregate change in the solvency liability during the year, increased for expected benefit payments during the year.

The solvency incremental cost reflects expected decrements and related changes in membership status, any expected changes in benefits, entitlements, and pension formula or increases in the maximum pension limits during the year.

The solvency incremental cost has been calculated for each year until the next valuation date as the projected solvency liability at the end of the year, minus the solvency liability at the beginning of the year, increased for expected benefit payments during the year. Each of these amounts is discounted to the valuation date using the projected solvency liability discount rate.

The method used to calculate the projected solvency liabilities at each projection date is the same as used in the solvency valuation.
## Actuarial Assumptions

<table>
<thead>
<tr>
<th>Economic Assumptions (per annum)</th>
<th>December 31, 2011</th>
<th>December 31, 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liability discount rate (non-smoothed)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Annuity purchase (solvency) 3.30%</td>
<td>4.90%</td>
<td></td>
</tr>
<tr>
<td>• Annuity purchase (windup) 0.50%</td>
<td>2.10%</td>
<td></td>
</tr>
<tr>
<td>Liability discount rate (smoothed)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annuity purchase (solvency) 4.40%</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Consumer Price Index (CPI)¹</td>
<td>1.31% for 10 years and 2.44% thereafter</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### Demographic Assumptions

<table>
<thead>
<tr>
<th>Mortality</th>
<th>1994 Uninsured Pensioner Mortality Table, projected generationally using Scale AA</th>
<th>1994 Uninsured Pensioner Mortality Table, projected to 2015 using Scale AA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other</td>
<td>Years male spouse older than female spouse</td>
<td>3</td>
</tr>
<tr>
<td>Provision for expenses</td>
<td></td>
<td>$100,000</td>
</tr>
<tr>
<td>• Solvency</td>
<td>$100,000</td>
<td>$85,000</td>
</tr>
<tr>
<td>• Hypothetical windup</td>
<td>$100,000</td>
<td>$85,000</td>
</tr>
</tbody>
</table>

### Notes:

¹ For solvency incremental cost purposes only.
Rationale for Actuarial Assumptions

The rationale for the material actuarial assumptions used in the solvency and hypothetical windup valuations is summarized below.

The actuarial assumptions used in the solvency and hypothetical windup valuations do not include margins for adverse deviations.

Liability Discount Rate

Discount Rates for Solvency (before averaging) and Hypothetical Windup

In the event of a plan windup, it is expected that all liabilities will be settled by a group annuity purchase.

For the calculation of the solvency and hypothetical windup liability, the liability discount rate corresponds to an approximation of the annuity purchase rates as at the valuation date following application of the relevant guidance on assumptions for solvency and hypothetical windup valuations issued by the Canadian Institute of Actuaries' Committee on Pension Plan Financial Reporting.

Discount Rates for Solvency (after averaging)

The average discount rates for calculation of the statutory solvency deficiency are based on the following, rounded to the nearest 10 basis point:

- Benefits that are expected to be settled by a group annuity purchase:

  The average of the annualized approximate annuity purchase rates at December 31, 2011 and the four previous year-ends, determined as follows:

<table>
<thead>
<tr>
<th>Date</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>December 31, 2007</td>
<td>4.62%</td>
</tr>
<tr>
<td>December 31, 2008</td>
<td>4.97%</td>
</tr>
<tr>
<td>December 31, 2009</td>
<td>4.46%</td>
</tr>
<tr>
<td>December 31, 2010</td>
<td>4.45%</td>
</tr>
<tr>
<td>December 31, 2011</td>
<td>3.31%</td>
</tr>
<tr>
<td>Average</td>
<td>4.36%</td>
</tr>
</tbody>
</table>
Note:

1 The approximate annuity purchase interest rates prior to February 1, 2011 have been adjusted to reflect the change in the mortality table assumption applicable to the determination of liabilities settled by group annuity purchase.

Mortality

The assumption has been set following application of the relevant guidance on assumptions for solvency and hypothetical windup valuations issued by the Canadian Institute of Actuaries' Committee on Pension Plan Financial Reporting.

Years Male Spouse Older Than Female Spouse

See rationale for going concern assumptions in Appendix C.

Provision for Expenses

Allowance was made for normal administrative, actuarial, legal and other costs which would be incurred if the plan were to be wound up (excluding costs relating to the resolution of surplus or deficit issues). The valuation is premised on a scenario in which all costs incurred as a result of plan windup were assumed to be paid from the pension fund.
Solvency Incremental Cost Actuarial Assumptions

Demographic Actuarial Assumptions

Except as noted below, the projected population and benefits valued in the solvency liability projection are based on the demographic assumptions used for the going concern valuation described in Appendix C.

New Entrants

No allowance has been made for new entrants between the current valuation date and next valuation date in the demographic projections on the basis that the plan is closed to new entrants.

Solvency Liability Projection Actuarial Assumptions

Except as noted below, the assumptions for the solvency liability projections for purposes of calculating the solvency incremental cost are the same assumptions as those used in the solvency valuation described previously.

Liability Discount Rate

At the projection date, the unsmoothed solvency discount rates (before averaging for purposes of the statutory solvency deficiency calculation) are assumed to remain at the same levels applicable at the valuation date. The discount rates used for calculation of the solvency incremental cost are the unsmoothed solvency discount rates.

Post-retirement Pension Increases

The assumed pension increase is 1.31% as at December 31, 2012, December 31, 2013 and December 31, 2014.
Appendix E: Membership Data

Summary of Membership Data

Active and Disabled Members

There are no remaining active members.

Retired Members

<table>
<thead>
<tr>
<th></th>
<th>Fire December 31, 2011</th>
<th>Others December 31, 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>Number</td>
<td>142</td>
<td>0</td>
</tr>
<tr>
<td>Average age</td>
<td>75.9</td>
<td>0</td>
</tr>
<tr>
<td>Average annual lifetime pension</td>
<td>$37,475</td>
<td>0</td>
</tr>
</tbody>
</table>

Comment:

- The lifetime pension as at December 31, 2011 includes the January 1, 2012 pension increase of 2.84%.
- All members have reached the bridge benefit expiry date as of December 31, 2011.

<table>
<thead>
<tr>
<th>Age</th>
<th>Fire December 31, 2011</th>
<th>Others December 31, 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Monthly Pension</td>
</tr>
<tr>
<td>65 - 69</td>
<td>18</td>
<td>$61,957</td>
</tr>
<tr>
<td>70 - 74</td>
<td>46</td>
<td>$137,592</td>
</tr>
<tr>
<td>75 - 79</td>
<td>49</td>
<td>$150,283</td>
</tr>
<tr>
<td>80 +</td>
<td>29</td>
<td>$93,617</td>
</tr>
<tr>
<td>Total</td>
<td>142</td>
<td>$443,449</td>
</tr>
</tbody>
</table>
Beneficiaries

<table>
<thead>
<tr>
<th></th>
<th>Fire December 31, 2011</th>
<th>Others December 31, 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>Number</td>
<td>0</td>
<td>58</td>
</tr>
<tr>
<td>Average age</td>
<td>0</td>
<td>77.0</td>
</tr>
<tr>
<td>Average annual lifetime pension</td>
<td>$0</td>
<td>$23,891</td>
</tr>
</tbody>
</table>

Comment:

- The lifetime pension as at December 31, 2011 includes the January 1, 2012 pension increase of 2.84%.

<table>
<thead>
<tr>
<th>Age</th>
<th>Fire December 31, 2011</th>
<th>Monthly Pension*</th>
<th>Others December 31, 2011</th>
<th>Monthly Pension*</th>
</tr>
</thead>
<tbody>
<tr>
<td>55 - 59</td>
<td>1</td>
<td>$1,967</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>60 - 64</td>
<td>1</td>
<td>1,685</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>65 - 69</td>
<td>4</td>
<td>8,477</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>70 - 74</td>
<td>20</td>
<td>39,670</td>
<td>2</td>
<td>$5,231</td>
</tr>
<tr>
<td>75 - 79</td>
<td>13</td>
<td>29,278</td>
<td>5</td>
<td>3,994</td>
</tr>
<tr>
<td>80 +</td>
<td>19</td>
<td>34,396</td>
<td>25</td>
<td>29,781</td>
</tr>
<tr>
<td>Total</td>
<td>58</td>
<td>$115,473</td>
<td>32</td>
<td>$39,006</td>
</tr>
</tbody>
</table>

TOWERS WATSON Confidential
## Terminated Vested Members

<table>
<thead>
<tr>
<th>Terminated vested members:</th>
<th>December 31, 2011</th>
<th>December 31, 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Average age</td>
<td>90.2</td>
<td>87.2</td>
</tr>
<tr>
<td>Average annual pension*</td>
<td>$1,137</td>
<td>$1,085</td>
</tr>
<tr>
<td>Average accumulated employee contributions</td>
<td>$38,937</td>
<td>$36,940</td>
</tr>
</tbody>
</table>

### Comment:

- The annual pension as at December 31, 2011 includes the January 1, 2012 pension increase of 2.84%.
- The annual pension as at December 31, 2008 includes the January 1, 2009 pension increase of 2.51%.
Review of Membership Data

The membership data were supplied by The Corporation of The City of Hamilton as at December 31, 2011.

The membership data have been relied upon by Towers Watson following tests for reasonableness and found to be sufficient and reliable for the purposes of the valuations. Elements of the data review included the following:

- ensuring that the data were intelligible (i.e., that an appropriate number of records was obtained, that the appropriate data fields were provided and that the data fields contained valid information);

- preparation and review of membership reconciliations to ascertain that the complete membership of the pension plan was accounted for;

- review of consistency of individual data items and statistical summaries between the current valuation and the previous valuation;

- review of reasonableness of individual data items, statistical summaries and changes in such information since the previous valuation date; and

- comparison of the membership data and the plan's financial statements for consistency.

However, the tests conducted as part of the membership data review may not have captured certain deficiencies in the data.
# Membership Reconciliation

<table>
<thead>
<tr>
<th></th>
<th>Actives</th>
<th>Deferred</th>
<th>Pensioners</th>
<th>Beneficiaries</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>As at December 31, 2008</strong></td>
<td>0</td>
<td>3</td>
<td>188</td>
<td>95</td>
<td>286</td>
</tr>
<tr>
<td>• New entrants</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Non-vested termination</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Vested termination</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Disability</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Retirement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Deceased</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(without beneficiary)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Deceased (with beneficiary)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Data corrections</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Net change</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>As at December 31, 2011</strong></td>
<td>0</td>
<td>3</td>
<td>159</td>
<td>90</td>
<td>252</td>
</tr>
<tr>
<td>(11)</td>
<td>23</td>
<td>18</td>
<td>(29)</td>
<td>(5)</td>
<td>(34)</td>
</tr>
</tbody>
</table>
Appendix F: Summary of Plan Provisions

The following is an outline of the principal features of the plan which are of financial significance to valuing the plan benefits. This summary is based on the plan provisions as at December 31, 2011 including the 2007 amendment with an effective date of January 1, 2006, as provided by The Corporation of The City of Hamilton, and does not make any provisions for the possibility that a change or action (retroactive or otherwise) could be imposed by order of a regulatory body or a court. As the plan consists entirely of pensioners and deferred vested members, plan provisions relating to active members have not been included. It is not a complete description of the plan terms and should not be relied upon for administration or interpretation of benefits. For a detailed description of the benefits, please refer to the plan document.

Normal Retirement Age

Age 60 for Fire employees other than Fire Chief, age 65 for all others.

Amounts of Annual Pension

Normal and Disability Retirement: 2% of average annual earnings in best 5 years before retirement for each year of credited service up to 35 years reduced by 0.675% of the 5 year average earnings up to the average YMPE over the last five years for each year of contributory service after January 1, 1966. Reduction suspended from date of retirement to age 65 for CPP benefit.

Death Benefit

After retirement: Based on election made within range of allowable options.

Withdrawal Benefit

Deferred pensions commence at the normal retirement age.

Inflation Protection

Pension benefits, pensions and deferred pensions shall be inindexed beginning on January 1, 2006, by an inflation related adjustment formula equal to the inflation related adjustment formula used to increase pension benefits, pensions and deferred pensions under the Ontario Municipal Employees Retirement Systems Act, 2006, as amended from time to time, subject to the Income Tax Act.
Appendix G: PBGF Assessment, Transfer Ratio and Solvency Ratio

Pension Benefit Guarantee Fund Assessment

As a result of Ontario Regulation 73/95, coverage under the Pension Benefit Guarantee Fund (PBGF) is exempted and PBGF assessment is not required.

Transfer Ratio and Solvency Ratio

<table>
<thead>
<tr>
<th></th>
<th>December 31, 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Transfer Ratio</strong></td>
<td></td>
</tr>
<tr>
<td>Solvency value of assets</td>
<td>$78,087,700</td>
</tr>
<tr>
<td>Lesser of estimated employer contributions for the period until the next valuation and the prior year credit balance</td>
<td>$0</td>
</tr>
<tr>
<td>Hypothetical windup liability</td>
<td>$105,465,200</td>
</tr>
<tr>
<td>Transfer ratio</td>
<td>0.74</td>
</tr>
<tr>
<td><strong>Solvency Ratio</strong></td>
<td></td>
</tr>
<tr>
<td>Solvency value of assets</td>
<td>$78,087,700</td>
</tr>
<tr>
<td>Solvency liability</td>
<td>$83,139,600</td>
</tr>
<tr>
<td>Solvency ratio</td>
<td>0.94</td>
</tr>
</tbody>
</table>

Comments:

- The solvency value of assets reflects net outstanding amounts. The solvency value of assets is prior to deduction of a provision for plan windup expenses.

- As the transfer ratio is less than 1.00, transfer deficiencies must be paid over a maximum period of five years unless the cumulative transfer deficiencies are within the limits prescribed by the
Regulation to the *Pension Benefits Act (Ontario)* or the employer remits additional contributions in respect of the transfer deficiencies. Pursuant to Regulations 19(4) or 19(5) to the *Pension Benefits Act (Ontario)*, approval of the Superintendent will be required to make commuted value transfers if there has been a significant decline in the transfer ratio after the valuation date.

- Based on the solvency ratio defined as the ratio of solvency value of assets to solvency liabilities, the next valuation of the plan is due with an effective date not later than December 31, 2014.
Appendix H: Certificate of the Plan Administrator

I hereby certify that to the best of my knowledge and belief:

- the significant terms of engagement contained in Appendix A of this report are accurate and reflect the Plan administrator's judgement of the plan provisions and/or an appropriate basis for the actuarial valuation of the plan;

- the information on plan assets forwarded to Towers Watson Canada Inc and summarized in Appendix B of this report is complete and accurate;

- the data forwarded to Towers Watson Canada Inc. and summarized in Appendix E of this report are a complete and accurate description of all persons who are members of the plan, including beneficiaries who are in receipt of a retirement income, in respect of service up to the date of the actuarial valuation;

- the summary of plan provisions contained in Appendix F of this report is accurate; and

- there have been no events which occurred between the actuarial valuation date and the date this actuarial valuation was completed that may have a material financial effect on the actuarial valuation.

Signature:  

Date: 10/12/2012

Name: TONY TOLLI

Title: CITY TREASURER
Appendix I: Actuarial Information Summary