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Calgary Firefighters
Supplementary Pension Plan

Calgary Firefighters Supplementary Pension Plan Funding Policy

May 8, 2015

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Introduction

This document sets out the purpose of the funding policy of the Calgary Firefighters Supplementary Pension Plan (the “Plan”, as set out in the Plan Text) and outlines other related aspects and governance procedures/duties related to the funding policy.

- The purpose of this funding policy is to set out the principles and guidelines governing the funding requirements of the benefits in respect of service under the Plan in accordance with the Plan's Text and legislation and the objectives of the Board of Trustees of the Plan (the "Board").
- This funding policy serves as a guide to the Board and the Plan’s actuary relating to decision making involving the funding of the Plan’s benefits.
- The authority for this policy is found in the Plan. This funding policy should be read in conjunction with the Plan.
- The funding policy shall guide the conduct of the periodic actuarial valuations and shall be taken into consideration in the development and periodic review of the Plan's Investment Policy.
- The funding policy is to be reviewed by the Board and the Plan’s actuary prior to any actuarial valuation of the Plan to ensure it continues to meet the objectives of the Plan.

Section A: Plan Funding Provisions

The following is a summary of the main provisions of the Plan related to its funding.

Provision	Description
Cost Sharing Arrangement (Article 3.5 of the Plan Text)	➢ Active Members are required to contribute as follows: o contributions equal to 45% of the current service cost; and o contributions sufficient to finance 45% of any unfunded liabilities. ➢ The City of Calgary (the “City”) is required to contribute as follows: o contributions equal to 55% of the current service cost; and o contributions sufficient to finance 55% of any unfunded liabilities. ➢ The City is also responsible to fund any solvency deficiency upon termination of the plan in accordance with the *Employment Pension Plans Act and Regulation*.

Section A: Plan Funding Provisions

Provision	Description
Plan Benefits (Articles 5, 6, 7, 8, 9, 12 and 14 of the Plan Text)	➢ The Plan is a supplemental plan to the Local Authorities Pension Plan (LAPP) providing enhanced early retirement and death benefits.
Going-Concern Excess Assets Management (Article 19.1 and 21.6 of the Plan Text)	➢ The Board, in consultation with the Plan's actuary, shall determine the amount of contingency reserve to be established at each valuation. The contingency reserve shall not exceed the maximum limits imposed by the *Income Tax Act (Canada)*. ➢ Any going-concern excess assets disclosed in an actuarial valuation are to be managed in accordance with the funding policy in Section E. Where going-concern excess assets arise that are larger than the maximum contingency reserve established by the Board, such excess going-concern excess assets will be used to reduce contributions payable by Active Members and the City for current service over a 15-year period, subject to any restrictions imposed by the *Employment Pension Plans Act and Regulation*. Specifically, no reduction in contribution rates will occur if the actuarial value of assets is less than 105% of the actuarial value of Plan liabilities on a Funding-assumption basis (per Section E), as reported in the most recent actuarial valuation report filed with the Alberta Superintendent of Pensions. Only that portion of the actuarial value of assets in excess of 105% of the actuarial value of Plan liabilities on a Funding-assumption basis is eligible to be used to reduce contribution rates and the amount utilized in any calendar year may not exceed 20% of the eligible amount.
Plan Termination Excess Asset Management	➢ The Plan Text provides that any excess assets in the Plan, after all benefits and expenses related to plan termination are paid, are subject to negotiations by the City and the International Association of Firefighters Local 255 (the "Association") as to its allocation. If no agreement is reached within a reasonable time, then such excess assets are to be divided between the City and the Association on the same basis as the cost sharing arrangement in place for current service cost immediately prior to Plan termination.

Section B: Stakeholders

The following stakeholders have an interest in the funding of the Plan:

Stakeholder	Funding Issues and Responsibilities
City	➢ Contributes its share of the total cost of the Plan as per Section A of this policy ➢ Interest in level of contribution rate, contribution rate stability and benefit security ➢ Negotiates and approves any Plan benefit amendments that are not otherwise required by applicable legislation ➢ Promotes intergenerational equity
Association	➢ Negotiates and approves any Plan benefit amendments that are not otherwise required by applicable legislation ➢ Interest in level of contribution rate, contribution rate stability and benefit security ➢ Promotes intergenerational equity
Pensioners and beneficiaries	➢ Interest in benefit security
Active Members	➢ Contribute their share of the total cost of the Plan as per Section A of this policy ➢ Interest in level of contribution rate, contribution rate stability and benefit security
Canada Revenue Agency	➢ Establishes maximum contribution limits to a pension plan
Alberta Superintendent of Pensions	➢ Establishes minimum plan funding rules.

Section B: Stakeholders

Stakeholder	Funding Issues and Responsibilities
Board	➢ Administers the Plan ➢ Recommends any Plan amendments ➢ Determines timing of funding actuarial valuations and actuarial valuations for financial statement purposes, subject to legislative minimums ➢ Selects the Plan's actuary and the actuarial assumptions relating to actuarial valuations for financial statement purposes ➢ Consults with the Plan's actuary in setting the actuarial assumptions relating to actuarial valuations for setting funding valuations and funding costs ➢ Oversees level of contribution rate, contribution rate stability and benefit security ➢ Promotes intergenerational equity

Section C: Funding Policy Objectives

The following are the main objectives of the funding policy:

Funding Policy Objective	Descriptions
Sustainability of the Plan and Security of Plan Benefits	➢ The overall objective is to ensure the sustainability of the Plan over the long term and to ensure the provision of benefits to Plan members and their beneficiaries. ➢ The primary objective is benefit security, which is a crucial element of sustainability of this mandatory Plan, and is enhanced by the governance structure of Plan, the extremely low likelihood of the Plan winding up, and the City's responsibility to fund any solvency deficiency upon termination of the plan in accordance with the *Employment Pension Plans Act and Regulation*. ➢ Funding assessments and planning are to be focused on maximizing the likelihood of maintaining a Plan going-concern funded ratio of at least 100% on a Funding-assumption basis as outlined in Section E.
Stability of Required Contributions	➢ Contribution rate stability is a key secondary objective. The cost of the Plan should be sustainable over time and reflect a long-term view of the Plan's assets and liabilities. ➢ The Plan should be funded to ensure that the level of required contributions remains relatively stable, without undue fluctuations.
Intergenerational Equity	➢ Based on the cost sharing arrangement as described in Section A of this policy, it is expected that, to the extent possible, each generation of active members and the City will fund the benefits accruing for that generation of active members.

Section D: Funding Risks

The following are the main funding risks of the funding policy:

Risk	Description
Assumption Risk	➢ Risk that actual Plan experience differs from that expected, thus affecting contribution rates and the funded ratio of the Plan
Cashflow Mismatch Risk	➢ Risk that investments have to be liquidated to pay pensions and other payouts
Contribution Rate Volatility Risk	➢ Risk that contribution rates will fluctuate with investment performance and/or other Plan experience
Contribution Rate Level Risk	➢ Risk that contribution rates will become unaffordable for current Active Members and the City

Section E: Statement of Funding Policy

The following summarizes the methodology to be used in determining the appropriate actuarial valuation assumptions and methods, and for the management of going-concern excess assets and deficits.

1. Actuarial Cost Method

The Projected Accrued Benefit (Unit Credit) actuarial cost method is used to determine the funding requirements of the Plan. Under this method, the balance sheet at each valuation date reflects the actuarial value of the Plan's assets and the present value of the accrued benefits of the Plan.

2. Actuarial Asset Value

To further enhance the probability of achieving the Plan's funding objectives, effective with the 2015 calendar year, a smoothing method is employed to determine the actuarial value of the invested assets. Under this method, the difference between the Plan fund's rate of return and the valuation discount rate, on the Funding-assumption basis (as outlined in Step 2), is recognized over a five-year period. The resulting asset value is then constrained to lie between 90% and 110% of the market value of assets. This constrained asset value is equal to the actuarial value of assets. The smoothing adjustment is the difference between the actuarial value of assets and the market value of assets.

3. Selection of Actuarial Assumptions

- **Step 1:** For each actuarial assumption taken independently, an assumption is determined so that it represents, in the Plan actuary's opinion, the best estimate of the Plan's future experience on a long-term basis (hereinafter referred to as “Best Estimate assumptions"). More specifically:
  - The discount rate is based on the long-term expected net rate of return of the fund considering the long-term target asset mix of the Investment Policy.
  - The earnings increase assumption is based on the actual collective bargaining agreements in place and on general financial and economic expectations for the period after the expiration of any such agreements.
  - All demographic assumptions are based on actual Plan experience, where practicable, or general Canadian pension plan experience when actual Plan experience is not sufficiently credible.

- **Step 2:** The actuarial liability of the Plan is determined under both the Best-Estimate assumption basis and a Funding-assumption basis. The Funding-assumption basis represents a modification of the Best-Estimate assumption basis where the discount rate assumption is adjusted for a provision for adverse deviation. All other assumptions, to the extent practicable, should be Best-Estimate assumptions.

  The Funding-assumption basis should be determined by the Plan's actuary, in consultation with the Board to achieve the funding objectives set out in Section C. The provision for adverse deviation (funding margin) is set by the Board.

  The Funding-assumption basis should be set such that the liabilities based on the Funding-assumption basis fall within a range of 100% and 125% of the liabilities based on the Best-Estimate assumption basis, with a target range of 112% to 120% of the Best-Estimate liabilities. Should market conditions change or the plan's asset mix change causing a necessary adjustment to the target ranges of 112% to 120% of Best Estimate liabilities, the ranges will be reset to ensure the objectives in Section C continue to be met.

  In conducting the valuation, the following steps will be taken:

  (a) Prior to conducting the actuarial valuation, the Plan's actuary will estimate the most likely appropriate adjustment required to the discount rate Best-Estimate assumption (i.e. what margin needs to be added to this assumption) to achieve a target range for the actuarial liabilities of the Plan of 112% to 120% of the Best-Estimate liabilities. This will represent the initial Funding-assumption basis.

  (b) A valuation will be run using both the Best-Estimate assumption basis and initial Funding-assumption basis. The Plan's actuary, together with the Board, will review the contribution rates on both the Best-Estimate assumption basis and initial Funding-assumption basis, and the initial Funding-assumption basis may be adjusted to better achieve stability in contribution rates. Any adjustment to the initial Funding-assumption basis will be restricted to ensure that liabilities fall within the 100% to 125% range outlined above.

Section E: Statement of Funding Policy

To achieve stability in contribution rates, the Funding-assumption basis could be adjusted to achieve liabilities of up to 125% of Best-Estimate liabilities, thereby reducing going-concern excess assets, or to achieve liabilities not less than 100% of Best-Estimate liabilities in order to reduce deficits where the Plan and fund are under more extreme financial pressures. For example, if a valuation using a Funding-assumption basis had at least a 15% margin, the contribution rate increase related to a new unfunded liability of up to 15% of liabilities could be eliminated and stable contributions preserved by adjusting the Funding-assumption basis to achieve liabilities equal to 100% of Best-Estimate liabilities. However, an examination of what was happening to Plan assets at the time would be required to determine if such an adjustment would be prudent.

The initial Funding-assumption basis, as adjusted, will become the Funding-assumption basis for conducting the funding valuation of the Plan and the recommended contribution rates.

- **Step 3:** The actuarial valuation and the recommended contribution rates for the purposes of Article 3.5 of the Plan are to be prepared using the Funding-assumption basis.

4. Risk Analysis

Each actuarial valuation will include a risk analysis illustrating the potential effect of adverse experience on the funded status of the Plan. This analysis will provide stakeholders with important information regarding risks; particularly investment returns and interest rate changes that could materially affect the funded status of the Plan and, as a result, could affect the security of benefits. The Board will determine the nature of this risk analysis with the Plan's actuary prior to any actuarial valuation.

5. Solvency Valuation

In conjunction with each actuarial valuation, the Plan's actuary will determine the solvency deficiencies under the Plan, if any, in accordance with the requirements of Article 3.5 of the Plan Text and the *Employment Pension Plans Act*. The solvency deficiencies and related actuarial solvency assumptions and methods will be disclosed in the actuarial valuation report. The Plan and the *Employment Pension Plans Act* do not require that solvency deficiencies be funded.

Section E: Statement of Funding Policy

6. Frequency of Actuarial Valuations

An actuarial funding valuation report determined on a Funding-assumption basis will be prepared at least once every three years.

An actuarial funding study may be conducted annually for information and planning purposes. Based on the results of the actuarial funding study, the Board will determine whether it is prudent to have the actuary prepare an actuarial funding valuation report determined on a Funding-assumption basis.

An actuarial funding valuation report determined on a Funding-assumption basis will be discussed at a meeting of the Board and any resulting contribution rate changes dealt with in accordance with the requirements of the Plan. Changes to contribution rates as a result of an actuarial funding valuation will commence on the first pay period following the acceptance of the actuarial funding valuation by the Board.

7. Going-Concern Excess Assets/Deficit Management

a) Management of Going-Concern Excess Assets

Any going-concern excess assets, determined using the Funding assumption basis, shall be used as per Section A of this policy.

b) Management of Deficits

Any unfunded liabilities that are revealed in an actuarial funding valuation are to be financed by contributions commencing on the first pay period following the acceptance of the actuarial funding valuation by the Board and continuing for a period not to exceed 15 years. The amortization periods will be established by the Plan's actuary, in consultation with the Board, in such a way as to meet the requirements of the *Employment Pension Plans Act and Regulation* and achieve the funding objectives as outlined in Section C of this policy.

APPROVED BY THE BOARD OF TRUSTEES ON MAY 8, 2015.