GRS Retirement Consulting

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February 8, 2019

Mr. David Williams
Boynton Beach Firefighters' Retirement Plan
Precision Pension Administration
2100 North Florida Mango Road
West Palm Beach, Florida 33409

Re: City of Boynton Beach Municipal Firefighters' Pension Trust Fund - Actuarial Impact Statement

Dear Dave:

As requested, we are enclosing an Actuarial Impact Statement showing the estimated impact of the proposed changes in Plan provisions to the City of Boynton Beach Municipal Firefighters' Pension Trust Fund (Plan). The results are based on census and asset data as of October 1, 2017. **This is an approximate first-year impact based on the October 1, 2017 actuarial valuation. The actual first-year impact will be reflected in the October 1, 2018 actuarial valuation.** The fiscal year 2019 required city contribution will not change.

Please refer to the enclosed exhibits for details. The following is a brief description of the proposed changes considered in this Actuarial Impact Statement.

- Current Plan Provisions and Assumptions – Same plan provisions and actuarial assumptions as used in the October 1, 2017 Actuarial Valuation Report. The benefit formula is equal to the Average Final Compensation (AFC) multiplied by 3% per year of Credited Service (there is no maximum benefit). The normal retirement date is the earlier of the attainment of 20 years of Credited Service regardless of age or age 55 with 10 years of Credited Service. Vested members terminating service with less than 20 years of Credited Service and under age 55 are eligible for a deferred Normal Retirement benefit that begins on the date that would have been the member's Normal Retirement date had they continued employment.

- Plan Changes – Reflecting the proposed changes in accordance with the proposed ordinance, as listed below:

  - Effective October 1, 2018, for all Firefighters who are not eligible for Normal Retirement as of October 1, 2018 the normal retirement benefit shall be limited to a "maximum benefit cap", initially set at $95,000 per year. The maximum benefit cap will be increased annually beginning on October 1, 2023 (and on each October 1st thereafter) by 1.5%. The maximum benefit cap shall also apply to early retirement, deferred vested retirement and disability retirement benefits. For early retirement and deferred vested retirement, the maximum benefit cap shall be applied to the normal retirement benefit before reflecting any reductions for early retirement.

    Based on the valuation census data as of October 1, 2018, there were no Firefighters who are not eligible for Normal Retirement as of October 1, 2018 with an accrued normal retirement benefit as of October 1, 2018 that exceeded $95,000. Firefighters who are eligible for Normal Retirement as of October 1, 2018 are not subject to the maximum benefit cap.

The ordinance also amends the Plan as follows:

- All new members hired on or after the effective date of the Ordinance are classified as "Tier 2 members". All members hired before the effective date of the Ordinance are classified as "Tier 1 members". Tier 2 benefit provisions that differ from Tier 1 benefit provisions include the following:
  - The normal retirement date will be the earlier of completion of 25 years of Credited Service regardless of age, or attainment of age 55 years with 10 years of Credited Service.
  - Vested members terminating service with less than 25 years of Credited Service will be eligible for a deferred Normal Retirement benefit that begins at age 55.

Because these changes only apply to future hires, they do not have an immediate actuarial impact on the Plan. We estimate that the normal cost rate (i.e., the cost of benefits earned each year, as a percentage of covered payroll) will be approximately 3.83% of covered payroll lower for Tier 2 members than for Tier 1 members.

Although not specifically stated in the Ordinance, we have assumed that the Plan will maintain compliance with Chapter 175 minimum benefit provisions, so the overall minimum benefit is 2.75% of AFC multiplied by all years of credited service, without regard to the maximum benefit cap.

Summary of Findings

- If the proposed Plan changes had been recognized as of October 1, 2017, the actuarially determined employer contribution (ADEC) for the fiscal year ending September 30, 2019 would have decreased by $180,420 (1.56% of covered payroll, from 55.42% to 53.86%).

- If the proposed Plan changes had been recognized as of October 1, 2017, the funded ratio (actuarial value of assets divided by actuarial accrued liability) would have increased by 0.6%, from 62.6% to 63.2%. The amount of the unfunded actuarial accrued liability would have decreased by $1,358,526.

Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution

The determination of the accrued liability and the actuarially determined contribution requires the use of assumptions regarding future economic and demographic experience. Risk measures are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the accrued liability and the actuarially determined contribution that result from the differences between actual experience and the actuarial assumptions.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: Plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions due to changing conditions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period, or additional cost or contribution requirements based on the Plan's funded status); and changes in Plan provisions or applicable law. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the Plan's future financial condition include:

1. Investment risk – actual investment returns may differ from the either assumed or forecasted returns;
2. Contribution risk – actual contributions may differ from expected future contributions. For example, actual contributions may not be made in accordance with the Plan's funding policy or material changes may occur in the anticipated number of covered employees, covered payroll, or other relevant contribution base;
3. Salary and Payroll risk – actual salaries and total payroll may differ from expected, resulting in actual future accrued liability and contributions differing from expected;
4. Longevity risk – members may live longer or shorter than expected and receive pensions for a period of time other than assumed;
5. Other demographic risks – members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected.

The effects of certain trends in experience can generally be anticipated. For example, if the investment return is less (or more) than the assumed rate, the cost of the Plan can be expected to increase (or decrease). Likewise if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.

The computed contribution amounts may be considered as a minimum contribution that complies with the pension Board's funding policy and the State statutes. The timely receipt of the actuarially determined contributions is critical to support the financial health of the Plan. Users of this report should be aware that contributions made at the actuarially determined rate do not necessarily guarantee benefit security.

Risk Assessment

Risk assessment was outside the scope of this report. Risk assessment may include scenario tests, sensitivity tests, stochastic modeling, stress tests, and a comparison of the present value of accrued benefits at low-risk discount rates with the actuarial accrued liability. We are prepared to perform such assessment to aid in the decision making process.

Disclosures

This report was prepared at the request of the Plan Administrator and is intended for use by the Retirement System and those designated or approved by the Board. This report may be provided to parties other than the System only in its entirety and only with the Board's permission. GRS is not responsible for unauthorized use of this report.

The purpose of this report is to describe the approximate financial effect of the proposed plan changes summarized above. This report should not be relied on for any purpose other than the purpose described above. Determinations of financial results associated with the benefits described in this report, for purposes other than those identified above may be significantly different.

The results in this report are based on census and asset data as of October 1, 2017, as provided by the Plan Administrator for the October 1, 2017 Actuarial Valuation concerning Plan benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We reviewed this information for internal and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by the Plan Administrator. Refer to that Actuarial Valuation Report dated February 7, 2018 for all actuarial assumptions, methods and disclosures.

The calculations are based upon assumptions regarding future events, which may or may not materialize. They are also based on the assumptions, methods, and plan provisions outlined in this report. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. If you have reason to believe that the assumptions that were used are unreasonable, that the plan provisions are incorrectly described, that important plan provisions relevant to this proposal are not described, or that conditions have changed since the calculations were made, you should contact the authors of this report prior to relying on information in this report.

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge the information contained in this report is accurate and fairly presents the actuarial position of the City of Boynton Beach Municipal Firefighters' pension Trust Fund as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board and with applicable statutes.

Peter N. Strong and Jeffrey Amrose are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. The signing actuaries are independent of the plan sponsor.

Respectfully submitted,

Peter N. Strong, FSA, MAAA, FCA
Enrolled Actuary No. 17-06975

Jeffrey Amrose, MAAA, FCA
Enrolled Actuary No. 17-06599

CITY OF BOYNTON BEACH
MUNICIPAL FIREFIGHTERS' PENSION TRUST FUND

Impact Statement – February 8, 2019

Description of Amendments

The proposed ordinance would amend the Plan as follows:

- Effective October 1, 2018, for all Firefighters who are not eligible for Normal Retirement as of October 1, 2018 the normal retirement benefit shall be limited to a "maximum benefit cap", initially set at $95,000 per year. The maximum benefit cap will be increased annually beginning on October 1, 2023 (and on each October 1st thereafter) by 1.5%. The maximum benefit cap shall also apply to early retirement, deferred vested retirement and disability retirement benefits. For early retirement and deferred vested retirement, the maximum benefit cap shall be applied to the normal retirement benefit before reflecting any reductions for early retirement.

Based on the valuation census data as of October 1, 2018, there were no Firefighters who are not eligible for Normal Retirement as of October 1, 2018 with an accrued normal retirement benefit as of October 1, 2018 that exceeded $95,000.

The ordinance also amends the Plan as follows:

- All new members hired on or after the effective date of the Ordinance are classified as "Tier 2 members". All members hired before the effective date of the Ordinance are classified as "Tier 1 members". Tier 2 benefit provisions that differ from Tier 1 benefit provisions include the following:
    - The normal retirement date will be the earlier of completion of 25 years of Credited Service regardless of age, or attainment of age 55 with 10 years of Credited Service.
    - Vested members terminating service with less than 25 years of Credited Service will be eligible for a deferred Normal Retirement benefit that begins at age 55.

Because these changes only apply to future hires, they do not have an immediate actuarial impact on the Plan. We estimate that the normal cost rate (i.e., the cost of benefits earned each year, as a percentage of covered payroll) will be approximately 3.83% of covered payroll lower for Tier 2 members than for Tier 1 members.

Funding Implications of Amendment

An actuarial cost estimate is attached.

Certification of Administrator

I believe the amendment to be in compliance with Part VII, Chapter 112, Florida Statutes and Section 14, Article X of the Constitution of the State of Florida.

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For the Board of Trustees
as Plan Administrator

SUPPLEMENTAL ACTUARIAL VALUATION REPORT

Plan

City of Boynton Beach Municipal Firefighters' Pension Trust Fund

Valuation Date

October 1, 2017 (Note: Actual impact for required contribution purposes will be reflected as of October 1, 2018)

Date of Report

February 8, 2019

Report Requested by

Board of Trustees

Prepared by

Peter N. Strong

Group Valued

All active and inactive Firefighters

Changes in Plan Provisions

Current Provisions (Before Proposed Changes)

- The benefit formula is equal to the Average Final Compensation (AFC) multiplied by 3% per year of Credited Service (there is no maximum benefit).

- The normal retirement date is the earlier of the attainment of 20 years of Credited Service regardless of age or age 55 with 10 years of Credited Service.

- Vested members terminating service with less than 20 years of Credited Service and under age 55 are eligible for a deferred Normal Retirement benefit that begins on the date that would have been the member's Normal Retirement date had they continued employment.

Revised Provisions (After Proposed Changes)

- Effective October 1, 2018, for all Firefighters who are not eligible for Normal Retirement as of October 1, 2018 the normal retirement benefit shall be limited to a "maximum benefit cap", initially set at $95,000 per year. The maximum benefit cap will be increased annually beginning on October 1, 2023 (and on each October 1st thereafter) by 1.5%. The maximum benefit cap shall also apply to early retirement, deferred vested retirement and disability retirement benefits. For early retirement and deferred vested retirement, the maximum benefit cap shall be applied to the normal retirement benefit before reflecting any reductions for early retirement.

The following benefit changes will not have an immediate impact on the Plan because the changes only apply to future hires:

- All new members hired on or after the effective date of the ordinance are classified as "Tier 2 members". All members hired before the effective date of the Ordinance are classified as "Tier 1 members". Tier 2 benefit provisions that differ from Tier 1 benefit changes include the following:
  - The normal retirement date will be the earlier of completion of 25 years of Credited Service regardless of age, or attainment of age 55 with 10 years of Credited Service.
  - Vested members terminating service with less than 25 years of Credited Service will be eligible for a deferred Normal Retirement benefit that begins at age 55.

Changes in Actuarial Assumptions and Methods

Although not specifically stated in the Ordinance, we have assumed that the Plan will maintain compliance with Chapter 175 minimum benefit provisions, so the overall minimum benefit is 2.75% of AFC multiplied by all years of Credited Service, without regard to the maximum benefit cap.

All other actuarial assumptions and methods are the same as those used in the October 1, 2017 Actuarial Valuation Report.

Some of the key assumptions/methods are:
Investment Return – 7.50%
Salary Increase – 3.5% to 14.5% per year depending on service
Cost Method – Entry Age Normal

Amortization Period for Any Change in Actuarial Accrued Liability

25 years

Summary of Data Used in Report

See attached page.

Actuarial Impact of Changes

See attached page(s).

Special Risks Involved with the Changes That the Plan Has Not Been Exposed to Previously

None

ACTUARIALLY DETERMINED EMPLOYER CONTRIBUTION (ADEC)			
A. Valuation Date	October 1, 2017 *Valuation*	October 1, 2017 *Proposed Ordinance*	*Increase (Decrease) from Valuation*
B. ADEC to Be Paid During Fiscal Year Ending	9/30/2019	9/30/2019	
C. Assumed Date of Employer Contrib.	10/1/2018	10/1/2018	
D. Annual Payment to Amortize Unfunded Actuarial Liability	$ 3,732,868	$ 3,642,165	$ (90,703)
E. Employer Normal Cost	2,519,728	2,434,616	(85,112)
F. ADEC if Paid on the Valuation Date: D+E	6,252,596	6,076,781	(175,815)
G. ADEC Adjusted for Frequency of Payments	6,252,596	6,076,781	(175,815)
H. ADEC as % of Covered Payroll	55.42 %	53.86 %	(1.56) %
I. Covered Payroll per Valuation	11,282,228	11,282,228	0
J. Assumed Rate of Increase in Covered Payroll to Contribution Year	2.51 %	2.51 %	0.00 %
K. Covered Payroll for Contribution Year	11,565,412	11,565,412	0
L. ADEC for Contribution Year: H x L	6,409,551	6,229,131	(180,420)
M. Estimate of State Revenue in Contribution Year	781,954	781,954	0
N. Actuarially Determined Employer Contribution (ADEC) in Contribution Year	5,627,597	5,447,177	(180,420)

ACTUARIAL VALUE OF BENEFITS AND ASSETS

A. Valuation Date	October 1, 2017	October 1, 2017	
	Valuation	*Proposed Ordinance*	*Increase (Decrease) from Valuation*
B. Actuarial Present Value of All Projected Benefits for			
1. Active Members			
a. Service Retirement Benefits	$ 76,149,671	$ 74,001,736	$ (2,147,935)
b. Vesting Benefits	4,279,645	4,279,516	(129)
c. Disability Benefits	1,891,907	1,924,507	32,600
d. Preretirement Death Benefits	672,670	730,590	57,920
e. Return of Member Contributions	156,915	156,915	0
f. Total	83,150,808	81,093,264	(2,057,544)
2. Inactive Members			
a. Service Retirees & Beneficiaries	75,205,990	75,205,990	0
b. Disability Retirees	1,691,379	1,691,379	0
c. Terminated Vested Members	1,339,205	1,339,205	0
d. Total	78,236,574	78,236,574	0
3. Total for All Members	161,387,382	159,329,838	(2,057,544)
C. Actuarial Accrued (Past Service) Liability per GASB No. 25	132,091,634	130,733,108	(1,358,526)
D. Actuarial Value of Accumulated Plan Benefits per FASB No. 35	N/A	N/A	N/A
E. Plan Assets			
1. Market Value	86,807,764	86,807,764	0
2. Actuarial Value	82,643,710	82,643,710	0
F. Unfunded Actuarial Accrued Liability:	49,447,924	48,089,398	(1,358,526)
G. Actuarial Present Value of Projected Covered Payroll	90,721,035	90,721,035	0
H. Actuarial Present Value of Projected Member Contributions	10,886,524	10,886,524	0
I. Funded Ratio: E2/C	62.6 %	63.2 %	0.6 %

CALCULATION OF EMPLOYER NORMAL COST

A. Valuation Date	October 1, 2017	October 1, 2017	
	Valuation	*Proposed Ordinance*	*Increase (Decrease) from Valuation*
B. Normal Cost for			
1. Service Retirement Benefits	$ 3,192,014	$ 3,102,070	$ (89,944)
2. Vesting Benefits	286,466	286,461	(5)
3. Disability Benefits	156,770	158,511	1,741
4. Preretirement Death Benefits	37,960	41,056	3,096
5. Return of Member Contributions	44,319	44,319	0
6. Total for Future Benefits	3,717,529	3,632,417	(85,112)
7. Assumed Amount for Administrative Expenses	156,066	156,066	0
8. Total Normal Cost	3,873,595	3,788,483	(85,112)
As % of Covered Payroll	34.33 %	33.58 %	(0.75) %
C. Expected Member Contribution	1,353,867	1,353,867	0
As % of Covered Payroll	12.00 %	12.00 %	0.00 %
D. Net Employer Normal Cost: B8-C	2,519,728	2,434,616	(85,112)
As % of Covered Payroll	22.33 %	21.58 %	(0.75) %

PARTICIPANT DATA		
	October 1, 2017 *Valuation*	October 1, 2017 *Proposed Ordinance*
ACTIVE MEMBERS		
Number	124	124
Covered Annual Payroll	$ 11,282,228	$ 11,282,228
Average Annual Payroll	$ 90,986	$ 90,986
Average Age	38.4	38.4
Average Past Service	10.6	10.6
Average Age at Hire	27.8	27.8
RETIREES, BENEFICIARIES & DROP		
Number	107	107
Annual Benefits	$ 6,061,150	$ 6,061,150
Average Annual Benefit	$ 56,646	$ 56,646
Average Age	62.2	62.2
DISABILITY RETIREES		
Number	2	2
Annual Benefits	$ 112,644	$ 112,644
Average Annual Benefit	$ 56,322	$ 56,322
Average Age	47.8	47.8
TERMINATED VESTED MEMBERS		
Number	3	3
Annual Benefits	$ 109,334	$ 109,334
Average Annual Benefit	$ 36,445	$ 36,445
Average Age	44.8	44.8