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March 12, 2020

Mr. David M. Williams, Plan Administrator
West Palm Beach Police Pension Fund
2100 N. Florida Mango Road
West Palm Beach, Florida 33409

Re: West Palm Beach Police Pension Fund

Dear Dave:

As requested, we have prepared the enclosed Supplemental Actuarial Valuation Report to illustrate the first-year impact of increasing the benefit multiplier from 2.68% to 3.0% for Credited Service earned between October 1, 2011 and October 1, 2017. The change would apply to current active (non-DROP) participants as of the plan change effective date.

Additionally, we have included below a discussion on the proposed change in the DROP and Share Plan interest crediting rate.

With the exceptions described herein, all other assumptions, methods, benefit provisions, and data are the same as indicated in our September 30, 2019 Actuarial Valuation Report.

Summary of Findings

If the proposed benefit multiplier change is adopted:

- The required employer contribution in the first year would increase by $346,804, from $5,935,584 to $6,282,388, assuming the contribution is paid in full on October 1, 2020.
- The Plan's funded ratio (actuarial value of assets divided by actuarial accrued liability) would decrease from 94.0% to 93.3%.
- The Unfunded Actuarial Accrued Liability (UAAL) would increase by $2,971,308. This increase is being amortized over 30 years.
- The ultimate cost of the proposed benefit multiplier change is measured by the change in the Actuarial Present Value of Projected Benefits, which is approximately $3,837,000, as shown in item B5 on page 8. This represents the increase in benefit payments expected to be funded by the City in today's dollars. This assumes all of the actuarial assumptions are met each year.

Proposed Change in DROP and Share Plan Interest Crediting Rate

We were also requested to discuss the impact of changing the DROP and Share Plan interest crediting rate from the current rate of 8% or 4% depending on the fund's investment returns to a fixed rate of 7.5%, with the possibility of giving members the option to elect the 7.5% interest rate or maintain the current rates. In our opinion, this change would have no immediate actuarial impact for advance funding purposes, since the DROP and Share Plan interest crediting rate is not explicitly reflected. However, it is likely that gains generated from a 4% interest crediting rate would be eliminated over time.

Under the current DROP and Share Plan interest provisions, actuarial gains are realized in years when the investment return on plan assets is greater than the interest crediting rate, and actuarial losses are realized in years when the investment return is less than the interest crediting rate. The interest crediting rate for DROP and Share Plan accounts is based on the cumulative investment return since FYE 2012. In years when the cumulative return since FYE 2012 exceeds 8%, the interest crediting rate on DROP and Share Plan balances is 8%, and when the cumulative returns since FYE 2012 are below 8% per year, the interest crediting rate is lowered to 4%.

One way to compare the two interest rate options is to consider that crediting 7.5% for each of the next eight years is similar to the current provision if 8% is credited for seven years and 4% is credited for one year (i.e., both options would produce the same cumulative return over the eight-year period in this hypothetical example). However, if over the same period there would be more years limited to the 4% rate, then the 7.5% interest option would be costlier than the current provision. Based on the recent capital market forecasts, average investment returns are expected to be below 7.5%, and therefore, over time the cumulative investment return since FYE 2012 is expected to decrease below 8%. If this occurs, the interest crediting rate for DROP and Share Plan accounts will decrease to 4% under the current provisions. If the interest crediting rate is changed to a fixed 7.5%, this would result in 7.5% being credited in years when the 4% rate would have applied. Therefore, the 7.5% interest crediting rate would increase the probability of eliminating actuarial gains that are projected to occur over time.

Other Cost Considerations

As of September 30, 2019, the Actuarial Value of Assets exceeds the Market Value of Assets by approximately $6.2 million. This difference will be recognized over the next several years. In turn, the computed overall employer contribution rate will gradually increase by approximately 2.14% of covered payroll in the absence of offsetting gains.

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 this report 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 minimum contributions that comply 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.

Additional Risk Assessment

Additional risk assessment is outside the scope of this report. Additional 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.

Additional Disclosures

This report was prepared at the request of the Board and is intended for use by the Retirement Plan and those designated or approved by the Board. This report may be provided to parties other than the Plan only in its entirety and only with the permission of the Board.

The purpose of this report is to describe the financial effect of the proposed plan changes. This report should not be relied on for any purpose other than the purpose described above.

The calculations in this report are based upon information furnished by the Plan Administrator for the September 30, 2019 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.

The calculations in this report are based on data or other information through September 30, 2019. 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 author of the report prior to relying on information in the report.

Jeffrey Amrose and Trisha 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 undersigned actuaries are independent of the plan sponsor.

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 Plan 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.

We welcome your questions and comments.

Sincerely yours,

Jeffrey Amrose, EA, MAAA
Senior Consultant & Actuary

Trisha Amrose, EA, MAAA
Consultant & Actuary

Enclosures

This communication shall not be construed to provide tax advice, legal advice or investment advice.

SUPPLEMENTAL ACTUARIAL VALUATION REPORT

Plan

West Palm Beach Police Pension Fund

Valuation Date

September 30, 2019

Date of Report

March 12, 2020

Report Requested by

Board of Trustees

Prepared by

Jeffrey Amrose

Group Valued

All active and inactive members of the Plan.

Benefits Being Considered for Change

The benefit multiplier would be increased from 2.68% to 3.0% for Credited Service earned between October 1, 2011 and October 1, 2017. The change would apply to current active (non-DROP) participants as of the plan change effective date.

Participants Affected

Active participants as of the plan change effective date would be impacted if they have service prior to October 1, 2017 (at the 2.68% multiplier).

Actuarial Assumptions and Methods

Same as September 30, 2019 Actuarial Valuation Report.

Some of the key assumptions/methods are:

Investment Return	7.50%
Salary increase	5.00% per year
Cost Method	Entry Age Normal

Amortization Period for Any Change in Actuarial Accrued Liability

30 years

Summary of Data Used in Report

See attached page

Actuarial Impact of Proposal(s)

See attached page(s) for the first-year impact of the proposed benefit multiplier change; please refer to the accompanying letter for a discussion about the proposed change in the interest crediting rate for DROP and Share Plan balances.

Other Cost Considerations

As of September 30, 2019 the Actuarial Value of Assets exceeds the Market Value of Assets by approximately $6.2 million. This difference will be recognized over the next several years. In turn, the computed overall employer contribution rate will gradually increase by approximately 2.14% of covered payroll in the absence of offsetting gains.

Please refer to the accompanying letter for a discussion about the proposed change in the interest crediting rate for DROP and Share Plan balances.

ACTUARIALLY DETERMINED CONTRIBUTION (ADC)		
A. Valuation Date	September 30, 2019 *Valuation*	September 30, 2019 *Increase 2.68% Multiplier to 3%*
B. ADC to Be Paid During Fiscal Year Ending	9/30/2021	9/30/2021
C. Assumed Date of Employer Contrib.	Quarterly	Quarterly
D. Annual Payment to Amortize Unfunded Actuarial Accrued Liability (UAAL)	$ 1,865,856	$ 2,079,391
E. Normal Cost	6,746,272	6,876,629
F. Total Required Contribution if Paid Continuously During Year Beginning on Valuation Date	8,612,128	8,956,020
G. Covered Payroll	24,754,653	24,754,653
H. Total Required Contribution as % of Covered Payroll	34.79 %	36.18 %
I. Member Contribution as % of Covered Payroll	11.00 %	11.00 %
J. State Contribution as % of Covered Payroll	0.00 %	0.00 %
K. Required Employer Contribution (REC) as % of Covered Payroll	23.79 %	25.18 %
L. Projected Covered Payroll for Contribution Year	25,868,612	25,868,612
M. REC for Contribution Year: K x L	6,154,144	6,513,718
N. REC as % of Covered Payroll in Contribution Year: M ÷ L	23.79 %	25.18 %
O. Change in REC for Contribution Year		359,574
P. Change in REC as % of Covered Payroll in Contribution Year		1.39 %
If the City Makes its Contribution on October 1st:		
Q. REC for Contribution Year	5,935,584	6,282,388
R. REC as % of Covered Payroll in Contribution Year	22.95 %	24.29 %
S. Change in REC for Contribution Year		346,804
T. Change in REC as % of Covered Payroll in Contribution Year		1.34 %

ACTUARIAL VALUE OF BENEFITS AND ASSETS

A. Valuation Date	September 30, 2019 *Valuation*	September 30, 2019 *Increase 2.68% Multiplier to 3%*
B. Actuarial Present Value of All Projected Benefits for		
1. Active Members		
a. Service Retirement Benefits	$ 149,551,512	$ 153,189,491
b. Vesting Benefits	4,646,762	4,777,536
c. Disability Benefits	5,971,963	6,023,955
d. Preretirement Death Benefits	1,625,442	1,641,571
e. Return of Member Contributions	516,059	516,059
f. Total	162,311,738	166,148,612
2. Inactive Members		
a. Service Retirees & Beneficiaries	187,937,907	187,937,907
b. Terminated Vested Members	1,708,451	1,708,451
c. Total	189,646,358	189,646,358
3 Share Plan / DROP Accounts	112,701,915	112,701,915
4. Total for All Members	464,660,011	468,496,885
5. Change in Actuarial Present Value of All Projected Benefits	**N/A**	**3,836,874**
C. Actuarial Accrued (Past Service) Liability	414,552,779	417,524,087
D. Actuarial Value of Accumulated Plan Benefits per FASB No. 35	N/A	N/A
E. Plan Assets		
1. Market Value	383,442,225	383,442,225
2. Actuarial Value	389,635,162	389,635,162
F. Unfunded Actuarial Accrued Liability (UAAL)	24,917,617	27,888,925
G. Change in UAAL	**N/A**	**2,971,308**
H. Actuarial Present Value of Projected Covered Payroll	191,615,196	191,615,196
I. Actuarial Present Value of Projected Member Contributions	21,077,672	21,077,672
J. Funded Ratio: E2/C	94.0 %	93.3 %

CALCULATION OF NORMAL COST		
A. Valuation Date	September 30, 2019 *Valuation*	September 30, 2019 *Increase 2.68% Multiplier to 3%*
B. Normal Cost for		
1. Service Retirement Benefits	$ 5,488,173	$ 5,607,239
2. Vesting Benefits	308,182	316,009
3. Disability Benefits	414,728	417,387
4. Preretirement Death Benefits	95,178	95,983
5. Return of Member Contributions	192,464	192,464
6. Total for Future Benefits	6,498,725	6,629,082
As % of Covered Payroll	26.25 %	26.78 %
7. Assumed Amount for Administrative Expenses	247,547	247,547
As % of Covered Payroll	1.00 %	1.00 %
8. Total Normal Cost	6,746,272	6,876,629
As % of Covered Payroll	27.25 %	27.78 %

PARTICIPANT DATA		
	September 30, 2019 *Valuation*	September 30, 2019 *Increase 2.68% Multiplier to 3%*
ACTIVE MEMBERS		
Number	264	264
Covered Annual Payroll	24,754,653	24,754,653
Average Annual Payroll	$ 93,768	$ 93,768
Average Age	39.1	$ 39.1
Average Past Service	11.1	11.1
Average Age at Hire	28.0	28.0
RETIREES, BENEFICIARIES & DROP		
Number	246	246
Annual Benefits	$ 13,480,932	$ 13,480,932
Average Annual Benefit	$ 54,801	$ 54,801
Average Age	64.6	64.6
DISABILITY RETIREES		
Number	20	20
Annual Benefits	$ 958,616	$ 958,616
Average Annual Benefit	$ 47,931	$ 47,931
Average Age	54.2	54.2
TERMINATED VESTED MEMBERS		
Number	7	7
Annual Benefits	$ 167,053	$ 167,053
Average Annual Benefit	$ 23,865	$ 23,865
Average Age	45.0	45.0