

CITY OF MARCO ISLAND  
POLICE OFFICERS' PENSION PLAN  
ACTUARIAL VALUATION  
AS OF OCTOBER 1, 2023  
CONTRIBUTIONS APPLICABLE TO THE  
PLAN/FISCAL YEAR ENDING SEPTEMBER 30, 2025



**FOSTER & FOSTER**  
ACTUARIES AND CONSULTANTS

April 4, 2024

Board of Trustees  
City of Marco Island  
Police Officers' Pension Board

Re: City of Marco Island Police Officers' Pension Plan

Dear Board:

We are pleased to present to the Board this report of the annual actuarial valuation of the City of Marco Island Police Officers' Pension Plan. The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits and to develop the appropriate funding requirements for the applicable plan year. Use of the results for other purposes may not be applicable and may produce significantly different results.

The valuation has been conducted in accordance with generally accepted actuarial principles and practices, including the applicable Actuarial Standards of Practice as issued by the Actuarial Standards Board, and reflects laws and regulations issued to date pursuant to the provisions of Chapters 112 and 185, Florida Statutes, as well as applicable federal laws and regulations. In our opinion, the assumptions used in the valuation, as adopted by the Board of Trustees, represent reasonable expectations of anticipated plan experience.

The funding percentages and unfunded accrued liability as measured based on the actuarial value of assets will differ from similar measures based on the market value of assets. These measures, as provided, are appropriate for determining the adequacy of future contributions, but may not be appropriate for the purpose of settling a portion or all of its liabilities. Future actuarial measurements may differ significantly from the current measurements presented in this report for a variety of reasons including: changes in applicable laws, changes in plan provisions, changes in assumptions, or plan experience differing from expectations. Due to the limited scope of the valuation, we did not perform an analysis of the potential range of such future measurements.

In conducting the valuation, we have relied on personnel, plan design, and asset information supplied by the City of Marco Island, financial reports prepared by the custodian bank, and the actuarial assumptions and methods described in the Actuarial Assumptions section of this report. While we cannot verify the accuracy of all this information, the supplied information was reviewed for consistency and reasonableness. As a result of this review, we have no reason to doubt the substantial accuracy of the information and believe that it has produced appropriate results. This information, along with any adjustments or modifications, is summarized in various sections of this report.

Additionally, we used third-party software to model (calculate) the underlying liabilities and costs. These results are reviewed in the aggregate and for individual sample lives. The output from the software is either used directly or input into internally developed models that apply the funding rules to generate the results. All internally developed models are reviewed as part of the valuation process. As a result of this review, we believe that the models have produced reasonable results. We do not believe there are any material inconsistencies among assumptions or unreasonable output produced due to the aggregation of assumptions.

In our opinion, the Minimum Required Contribution set forth in this report constitutes a reasonable actuarially determined contribution under Actuarial Standard of Practice No. 4.

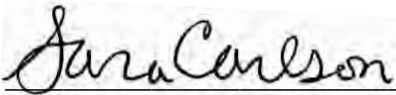
The undersigned are familiar with the immediate and long-term aspects of pension valuations and meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. All of the sections of this report are considered an integral part of the actuarial opinions.

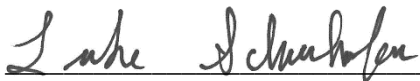
To our knowledge, no associate of Foster & Foster, Inc. working on valuations of the program has any direct financial interest or indirect material interest in the City of Marco Island, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the Police Officers' Pension Plan. Thus, there is no relationship existing that might affect our capacity to prepare and certify this actuarial report.

If there are any questions, concerns, or comments about any of the items contained in this report, please contact us at 239-433-5500.

Respectfully submitted,

Foster & Foster, Inc.

By:   
Sara E. Carlson, ASA, EA, MAAA  
Enrolled Actuary #23-8546

By:   
Luke M. Schoenhofen, FSA, EA, MAAA  
Enrolled Actuary #23-8968

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Enclosures

## TABLE OF CONTENTS

Section	Title	Page
I	Introduction	
	a. Summary of Report	6
	b. Changes Since Prior Valuation	8
	c. Contribution Impact of Annual Changes	9
	d. Comparative Summary of Principal Valuation Results	10
II	Valuation Information	
	a. Reconciliation of Unfunded Actuarial Accrued Liabilities	16
	b. Detailed Actuarial (Gain)/Loss Analysis	17
	c. History of Funding Progress	18
	d. Actuarial Assumptions and Methods	19
	e. Glossary	23
	f. Discussion of Risk	25
	g. Partial History of Premium Tax Refunds	29
III	Trust Fund	30
IV	Member Statistics	
	a. Statistical Data	37
	b. Age and Service Distribution	38
	c. Valuation Participant Reconciliation	39
V	Summary of Current Plan	40

SUMMARY OF REPORT

The regular annual actuarial valuation of the City of Marco Island Police Officers' Pension Plan, performed as of October 1, 2023, has been completed and the results are presented in this Report. The contribution amounts set forth herein are applicable to the plan/fiscal year ending September 30, 2025.

The contribution requirements, compared with those set forth in the October 1, 2022 actuarial valuation report, are as follows:

Valuation Date	10/1/2023	10/1/2022
Applicable to Fiscal Year Ending	<u>9/30/2025</u>	<u>9/30/2024</u>
Minimum Required Contribution		
% of Projected Annual Payroll	44.89%	39.09%
Member Contributions (Est.)		
% of Projected Annual Payroll	3.00%	3.00%
<b>City And State Required Contribution</b>		
<b>% of Projected Annual Payroll</b>	<b>41.89%</b>	<b>36.09%</b>
State Contribution (Est.) <sup>1</sup>	\$184,559	\$184,559
% of Projected Annual Payroll (Est.)	6.20%	6.20%
City Required Contribution (Est.) <sup>2</sup>		
% of Projected Annual Payroll (Est.)	35.69%	29.89%

<sup>1</sup> Represents the amount received in calendar 2022. As per a Mutual Consent Agreement between the Membership and the City, the City will use any State Monies up to \$137,352.30 to offset its required contribution. 65% of the State Monies received by the City in excess of \$137,352.30 shall be allocated to the Share Plan, with the remaining 35% used by the City.

<sup>2</sup> The required contribution from the combination of City and State sources for the year ending September 30, 2025, is 41.89% of the actual payroll realized in that year. As a budgeting tool, the City may contribute 35.69% of each Member's Salary and then make a one-time adjustment to account for the actual State Monies received. Please note that a shortfall contribution of \$19,169.52 is due in addition to the above stated requirements for the fiscal year ending September 30, 2024.

As you can see, the Minimum Required Contribution shows an increase when compared to the results set forth in the October 1, 2022 actuarial valuation report. The increase is mainly attributable to net unfavorable plan experience outlined in the following paragraph.

Plan experience was unfavorable overall on the basis of the plan's actuarial assumptions. Sources of actuarial loss included an investment return of 5.39% (Actuarial Asset Basis) which fell short of the 7.00% assumption and unfavorable turnover experience. There were no significant sources of actuarial gain.

## CHANGES SINCE PRIOR VALUATION

### Plan Changes

There have been no changes in benefits since the prior valuation.

### Actuarial Assumption/Method Changes

There have been no assumption or method changes since the prior valuation.



## CONTRIBUTION IMPACT OF ANNUAL CHANGES

(1) Contribution Determined as of October 1, 2022	30.15%
(2) Summary of Contribution Impact by component:	
Change in State Contribution Percentage	-0.26%
Change in Normal Cost Rate	1.18%
Change in Administrative Expense Percentage	-0.07%
Payroll Change Effect on UAAL Amortization	-0.22%
Investment Return (Actuarial Asset Basis)	1.59%
Salary Increases	0.22%
Active Decrements	2.01%
Inactive Mortality	0.06%
UAAL Amortization Impact from Contribution Policy	1.02%
Assumption Change	0.00%
Other	<u>0.01%</u>
Total Change in Contribution	5.54%
(3) Contribution Determined as of October 1, 2023	35.69%

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	<u>10/1/2023</u>	<u>10/1/2022</u>
<b>A. Participant Data</b>		
Actives	36	38
Service Retirees	24	23
Beneficiaries	1	1
Disability Retirees	2	2
Terminated Vested	<u>31</u>	<u>30</u>
<b>Total</b>	<b>94</b>	<b>94</b>
Projected Annual Payroll	2,977,925	2,927,762
Annual Rate of Payments to:		
Service Retirees	881,205	764,594
Beneficiaries	14,115	13,714
Disability Retirees	69,458	67,460
Terminated Vested	258,489	255,053
<b>B. Assets</b>		
Actuarial Value (AVA) <sup>1</sup>	22,629,394	21,335,886
Market Value (MVA) <sup>1</sup>	22,076,653	19,968,674
<b>C. Liabilities</b>		
Present Value of Benefits		
Actives		
Retirement Benefits	9,457,219	9,374,553
Disability Benefits	384,017	392,801
Death Benefits	40,661	38,256
Vested Benefits	1,497,473	1,345,621
Refund of Contributions	9,027	10,687
Service Retirees	13,416,915	11,861,536
Beneficiaries	80,927	88,933
Disability Retirees	798,773	842,881
Terminated Vested	3,529,312	3,394,557
Share Plan Balances <sup>1</sup>	<u>301,240</u>	<u>200,732</u>
<b>Total</b>	<b>29,515,564</b>	<b>27,550,557</b>

C. Liabilities - (Continued)	<u>10/1/2023</u>	<u>10/1/2022</u>
Present Value of Future Salaries	18,372,959	18,554,006
Present Value of Future Member Contributions	551,189	556,620
Normal Cost (Retirement)	621,761	576,677
Normal Cost (Disability)	46,255	45,273
Normal Cost (Death)	2,379	2,385
Normal Cost (Vesting)	89,186	88,712
Normal Cost (Refunds)	<u>2,111</u>	<u>2,335</u>
Total Normal Cost	761,692	715,382
Present Value of Future Normal Costs	4,271,378	4,347,335
Accrued Liability (Retirement)	5,968,048	5,835,954
Accrued Liability (Disability)	141,883	129,734
Accrued Liability (Death)	24,616	22,237
Accrued Liability (Vesting)	978,949	823,701
Accrued Liability (Refunds)	3,523	2,957
Accrued Liability (Inactives)	17,825,927	16,187,907
Share Plan Balances <sup>1</sup>	<u>301,240</u>	<u>200,732</u>
Total Actuarial Accrued Liability (EAN AL)	25,244,186	23,203,222
Unfunded Actuarial Accrued Liability (UAAL)	2,614,792	1,867,336
Funded Ratio (AVA / EAN AL)	89.6%	92.0%

D. Actuarial Present Value of Accrued Benefits	<u>10/1/2023</u>	<u>10/1/2022</u>
Vested Accrued Benefits		
Inactives + Share Plan Balances <sup>1</sup>	18,127,167	16,388,639
Actives	3,219,792	3,670,881
Member Contributions	<u>108,202</u>	<u>125,631</u>
Total	21,455,161	20,185,151
Non-vested Accrued Benefits	<u>1,309,384</u>	<u>879,465</u>
Total Present Value Accrued Benefits (PVAB)	22,764,545	21,064,616
Funded Ratio (MVA / PVAB)	97.0%	94.8%
Increase (Decrease) in Present Value of Accrued Benefits Attributable to:		
Plan Amendments	0	
Assumption Changes	0	
Plan Experience	1,170,698	
Benefits Paid	(913,326)	
Interest	1,442,557	
Other	<u>0</u>	
Total	1,699,929	

Valuation Date	10/1/2023	10/1/2022
Applicable to Fiscal Year Ending	<u>9/30/2025</u>	<u>9/30/2024</u>

E. Pension Cost

Normal Cost (with interest) % of Projected Annual Payroll <sup>2</sup>	26.47	25.29
Administrative Expenses (with interest) % of Projected Annual Payroll <sup>2</sup>	1.72	1.79
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 27 years (as of 10/1/2023, with interest) % of Projected Annual Payroll <sup>2</sup>	16.70	12.01
Minimum Required Contribution % of Projected Annual Payroll <sup>2</sup>	44.89	39.09
Expected Member Contributions % of Projected Annual Payroll <sup>2</sup>	3.00	3.00
Expected City and State Contribution % of Projected Annual Payroll <sup>2</sup>	41.89	36.09

F. Past Contributions

Plan Years Ending:	<u>9/30/2023</u>
Total Required Contribution	1,014,506
City and State Requirement	998,609
Actual Contributions Made:	
Members (excluding buyback)	15,896
City	814,050
State	184,560
Total	<u>1,014,506</u>

G. Net Actuarial (Gain)/Loss 841,046

<sup>1</sup> The asset values and liabilities include accumulated Share Plan Balances as of 9/30/2023 and 9/30/2022.

<sup>2</sup> Contributions developed as of 10/1/2023 are expressed as a percentage of Projected Annual Payroll at 10/1/2023 of \$2,977,925.

H. Schedule Illustrating the Amortization of the Total Unfunded Actuarial Accrued Liability as of:

<u>Year</u>	<u>Projected Unfunded Actuarial Accrued Liability</u>
2023	2,614,792
2024	2,283,772
2025	1,929,582
2050	0

I. (i) 5 Year Comparison of Actual and Assumed Salary Increases

	<u>Actual</u>	<u>Assumed</u>
Year Ended 9/30/2023	9.87%	5.87%
Year Ended 9/30/2022	12.15%	5.90%
Year Ended 9/30/2021	5.81%	5.73%
Year Ended 9/30/2020	20.55%	5.65%
Year Ended 9/30/2019	7.90%	5.60%

(ii) 5 Year Comparison of Investment Return on Market Value and Actuarial Value

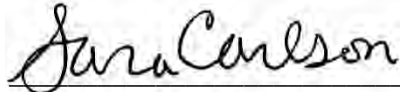
	<u>Market Value</u>	<u>Actuarial Value</u>	<u>Assumed</u>
Year Ended 9/30/2023	9.93%	5.39%	7.00%
Year Ended 9/30/2022	-11.27%	3.70%	7.00%
Year Ended 9/30/2021	17.31%	8.73%	7.00%
Year Ended 9/30/2020	7.81%	7.31%	7.00%
Year Ended 9/30/2019	3.06%	7.00%	7.00%

(iii) Average Annual Payroll Growth

(a) Payroll as of:	10/1/2023	\$2,977,925
	10/1/2013	2,045,756
(b) Total Increase		45.57%
(c) Number of Years		10.00
(d) Average Annual Rate		3.83%

STATEMENT BY ENROLLED ACTUARY

This actuarial valuation was prepared and completed by me or under my direct supervision, and I acknowledge responsibility for the results. To the best of my knowledge, the results are complete and accurate, and in my opinion, the techniques and assumptions used are reasonable and meet the requirements and intent of Part VII, Chapter 112, Florida Statutes. There is no benefit or expense to be provided by the plan and/or paid from the plan's assets for which liabilities or current costs have not been established or otherwise taken into account in the valuation. All known events or trends which may require a material increase in plan costs or required contribution rates have been taken into account in the valuation.



Sara E. Carlson, ASA, EA, MAAA  
Enrolled Actuary #23-8546

Please let us know when the report is approved by the Board and unless otherwise directed we will provide copies of the report to the following offices to comply with Chapter 112, Florida Statutes:

Mr. Keith Brinkman  
Bureau of Local  
Retirement Systems  
Post Office Box 9000  
Tallahassee, FL 32315-9000

Mr. Steve Bardin  
Municipal Police and Fire  
Pension Trust Funds  
Division of Retirement  
Post Office Box 3010  
Tallahassee, FL 32315-3010

RECONCILIATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITIES

(1) Unfunded Actuarial Accrued Liability as of October 1, 2022	\$1,867,336
(2) Sponsor Normal Cost developed as of October 1, 2022	700,743
(3) Expected administrative expenses for the year ended September 30, 2023	50,562
(4) Expected interest on (1), (2) and (3)	181,535
(5) Sponsor contributions to the System during the year ended September 30, 2023	998,609
(6) Expected interest on (5)	27,821
(7) Expected Unfunded Actuarial Accrued Liability as of September 30, 2023 (1)+(2)+(3)+(4)-(5)-(6)	1,773,746
(8) Change to UAAL due to Assumption Change	0
(9) Change to UAAL due to Actuarial (Gain)/Loss	841,046
(10) Unfunded Actuarial Accrued Liability as of October 1, 2023	2,614,792

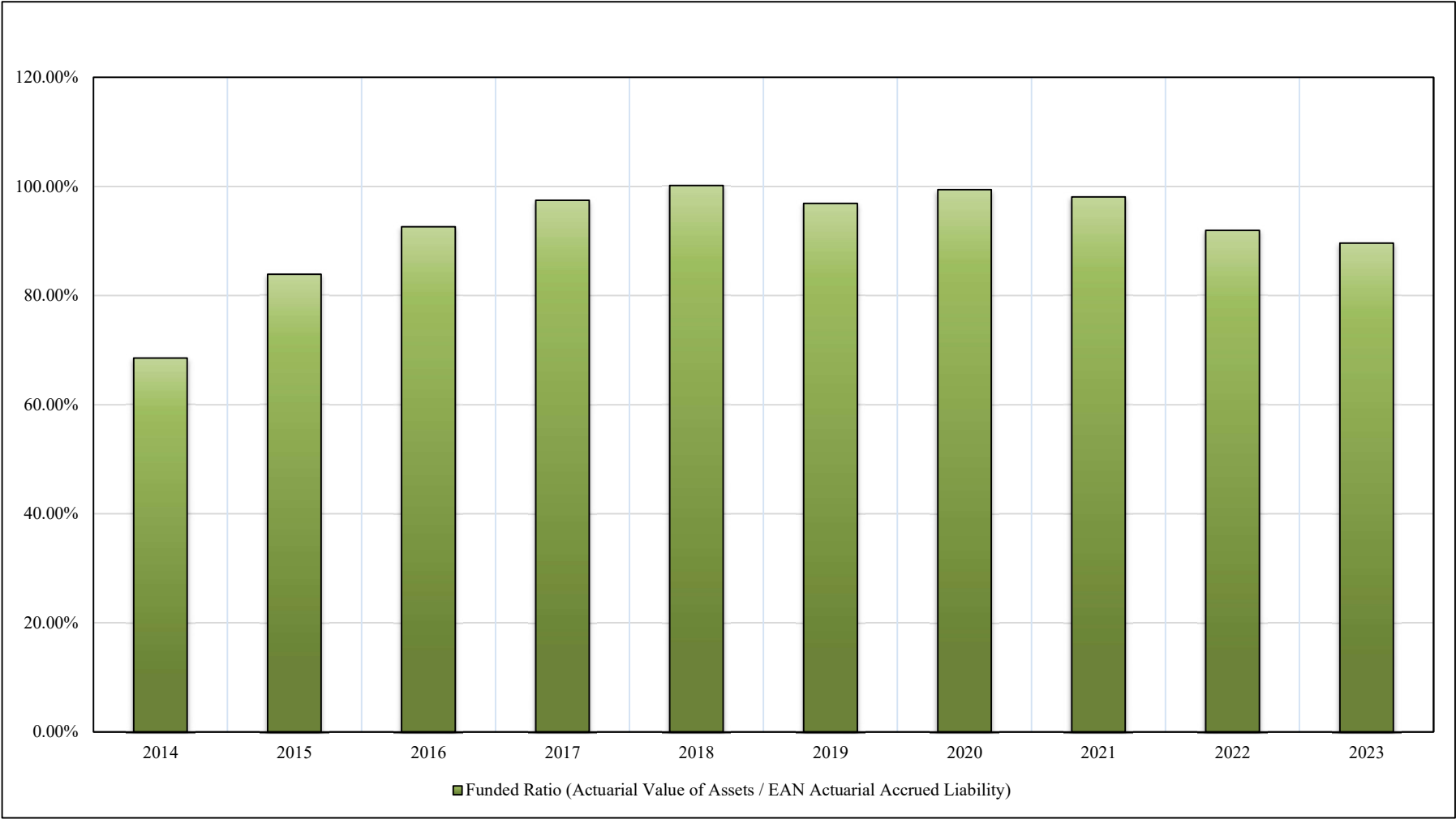
<u>Type of Base</u>	<u>Date Established</u>	<u>Years Remaining</u>	<u>10/1/2023 Amount</u>	<u>Amortization Amount</u>
Fresh Start	10/1/2016	13	18,223	2,038
Assump Change	10/1/2016	13	127,283	14,233
Actuarial Loss	10/1/2016	3	27,896	9,934
Reconciliation Base	10/1/2017	14	(341,327)	(36,476)
Actuarial Loss	10/1/2017	4	26,562	7,329
Assump Change	10/1/2017	14	175,976	18,806
Actuarial Gain	10/1/2018	5	(73,714)	(16,802)
Reconciliation Base	10/1/2019	16	(221,032)	(21,867)
Actuarial Loss	10/1/2019	6	556,619	109,137
Actuarial Loss	10/1/2020	7	385,235	66,805
Assump Change	10/1/2020	17	(599,756)	(57,411)
Benefit Change	10/1/2020	27	(218,852)	(17,063)
Reconciliation Base	10/1/2021	18	(184,191)	(17,113)
Actuarial Loss	10/1/2021	8	495,174	77,501
Actuarial Loss	10/1/2022	9	1,599,650	229,462
Actuarial Loss	10/1/2023	10	841,046	111,912
			2,614,792	480,425



DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

(1) Unfunded Actuarial Accrued Liability (UAAL) as of October 1, 2022	\$1,867,336
(2) Expected UAAL as of October 1, 2023	1,773,746
(3) Summary of Actuarial (Gain)/Loss, by component:	
Investment Return (Actuarial Asset Basis)	344,419
Salary Increases	46,842
Active Decrements	434,144
Inactive Mortality	13,932
Interest Crediting on Share Plan Balances	5,021
Other	<u>(3,312)</u>
Increase in UAAL due to (Gain)/Loss	841,046
Assumption Changes	<u>0</u>
(4) Actual UAAL as of October 1, 2023	\$2,614,792

# HISTORY OF FUNDING PROGRESS



## ACTUARIAL ASSUMPTIONS AND METHODS

### Mortality Rate

#### *Healthy Active Lives:*

**Female:** PubS.H-2010 (Below Median) for Employees, set forward one year.

**Male:** PubS.H-2010 (Below Median) for Employees, set forward one year.

#### *Healthy Retiree Lives:*

**Female:** PubS.H-2010 for Healthy Retirees, set forward one year.

**Male:** PubS.H-2010 (Below Median) for Healthy Retirees, set forward one year.

#### *Beneficiary Lives:*

**Female:** PubG.H-2010 (Below Median) for Healthy Retirees.

**Male:** PubG.H-2010 (Below Median) for Healthy Retirees, set back one year.

#### *Disabled Lives:*

80% PubG.H-2010 for Disabled Retirees / 20% PubS.H-2010 for Disabled Retirees.

All rates for healthy lives are projected generationally with Mortality Improvement Scale MP-2018. We feel this assumption sufficiently accommodates future mortality improvements.

The previously described mortality assumption rates were mandated by Chapter 2015-157, Laws of Florida. This law mandates the use of the assumptions used in either of the two most recent valuations of the Florida Retirement System (FRS). The above rates are those outlined in Milliman's July 1, 2021 FRS valuation report for special risk employees, with appropriate adjustments made based on plan demographics.

### Interest Rate

7.00% per year compounded annually, net of investment related expenses. This is supported by the target asset allocation of the trust and the expected long-term return by asset class.

### Salary Increases

<u>Salary Scale</u>	
<u>Service</u>	<u>Rate</u>
0-1	7.00%
2-5	6.00%
6+	5.00%

This assumption was covered and changed as a result of our August 2, 2017 Experience Study.

Payroll Growth

0.00% for purposes of amortizing the Unfunded Actuarial Accrued Liability. This assumption cannot exceed the ten-year average payroll growth, in compliance with Part VII of Chapter 112, Florida Statutes.

Administrative Expenses

\$49,542 annually, based on the average of actual expenses incurred in the prior two fiscal years.

Amortization Method

New UAAL amortization bases are amortized over the following amortization periods:

Experience: 10 Years.  
 Assumption/Method Changes: 20 Years.  
 Benefit Changes: 30 Years.

The amortization payment is subject to a minimum based on a 30-year amortization of the UAAL in order to comply with Actuarial Standard of Practice No. 4.

Bases established prior to the valuation date are adjusted proportionally to match the Expected Unfunded Actuarial Accrued Liability as of the valuation date, in order to align prior year bases with the portion of the current year UAAL associated with prior year sources.

COLA Rate

3.0% for service earned before October 1, 2021 and 1.5% for service earned on and after October 1, 2021.

Retirement Age

Hired before October 1, 2021      Hired on or after October 1, 2021

% Retiring During the Year (<25 Yrs. of Service)		% Retiring During the Year (<25 Yrs. of Service)	
Age	Rate	Age	Rate
55-59	50.0%	57-59	50.0%
60+	100.0%	60+	100.0%

% Retiring During the Year (>= 25 Yrs. of Service)		% Retiring During the Year (>= 25 Yrs. of Service)	
Age	Rate	Age	Rate
All Ages	100.0%	52+	100.0%

This assumption was covered and changed as a result of our August 2, 2017 Experience Study, and modified to reflect benefit changes for those hired on or after October 1, 2021.

Early Retirement

Hired before October 1, 2021

Hired on or after October 1, 2021

% Retiring During the Year		% Retiring During the Year	
Age	Rate	Age	Rate
50-53	5.0%	50-55	5.0%
54	25.0%	56	25.0%

This assumption was covered and changed as a result of our August 2, 2017 Experience Study, and modified to reflect benefit changes for those hired on or after October 1, 2021.

Disability Rate

See sample rates later in this section. It is assumed that 75% of disablements and active Member deaths are service related. We believe this assumption is in line with the experience incurred by other plans containing Florida Police Employees.

Termination Rate

See sample rates later in this section. This assumption was reviewed and modified as a result of our August 2, 2017 Experience Study.

Funding Method

Entry Age Normal Actuarial Cost Method. The following loads are applied for determining the minimum required contribution:

Interest - A half year, based on current 7.00% assumption.

Salary - None.

Actuarial Asset Method

Each year, the prior Actuarial Value of Assets is brought forward utilizing the historical geometric four-year average Market Value returns, net of fees. It is possible that over time this technique will produce an insignificant bias above or below Market Value.

Low-Default-Risk Obligation Measure

Based on the Entry Age Normal Actuarial Cost Method and an interest rate of 4.87% per year compounded annually, net of investment related expenses. This rate is consistent with the Yield to Maturity of the S&P Municipal Bond 20-Year High Grade Rate Index as of September 30, 2023. All other assumptions for the Low-Default-Risk Obligation Measure are consistent with the assumptions shown in this section unless otherwise noted.

% Terminating During the Year		% Becoming Disabled During the Year	
Age	Rate	Age	Rate
20	21.5%	20	0.05%
25	20.8%	25	0.05%
30	18.8%	30	0.06%
35	14.8%	35	0.07%
40	10.3%	40	0.12%
45	6.0%	45	0.22%
50	2.1%	50	0.43%
55	0.8%	55	0.89%
60	0.6%	60	1.61%
65+	0.0%	65+	2.80%

## GLOSSARY

Actuarial Value of Assets is the asset value used in the valuation to determine contribution requirements. It represents the plan's Market Value of Assets (see below), with adjustments according to the plan's Actuarial Asset Method. These adjustments produce a "smoothed" value that is likely to be less volatile from year to year than the Market Value of Assets.

Entry Age Normal Cost Method - Under this method, the normal cost is the sum of the individual normal costs for all active participants. For an active participant, the normal cost is the participant's normal cost accrual rate, multiplied by the participant's current compensation.

(a) The normal cost accrual rate equals:

(i) the present value of future benefits for the participant, determined as of the participant's entry age, divided by

(ii) the present value of the compensation expected to be paid to the participant for each year of the participant's anticipated future service, determined as of the participant's entry age.

(b) In calculating the present value of future compensation, the salary scale is applied both retrospectively and prospectively to estimate compensation in years prior to and subsequent to the valuation year based on the compensation used for the valuation.

(c) The accrued liability is the sum of the individual accrued liabilities for all participants and beneficiaries. A participant's accrued liability equals the present value, at the participant's attained age, of future benefits less the present value at the participant's attained age of the individual normal costs payable in the future. A beneficiary's accrued liability equals the present value, at the beneficiary's attained age, of future benefits. The unfunded accrued liability equals the total accrued liability less the actuarial value of assets.

(d) Under this method, the entry age used for each active participant is the participant's age at the time he or she would have commenced participation if the plan had always been in existence under current terms, or the age as of which he or she first earns service credits for purposes of benefit accrual under the current terms of the plan.

Market Value of Assets is the fair market value of plan assets as of the valuation date. This amount may be adjusted to produce an Actuarial Value of Assets for plan funding purposes.

Normal (Current Year's) Cost is the current year's cost for benefits yet to be funded. Under the Entry Age Normal cost method, it is determined for each participant as the present value of future benefits, determined as of the Member's entry age, amortized as a level percentage of compensation over the anticipated number of years of participation, determined as of the entry age.

Payroll Under Assumed Ret. Age is the projected annual rate of pay for the fiscal year beginning on the valuation date of all covered Members, excluding any Members who are assumed to retire with 100% probability on the valuation date.

Projected Annual Payroll is the projected annual rate of pay for the fiscal year following the fiscal year beginning on the valuation date of all covered Members.

Present Value of Benefits is the single sum value on the valuation date of all future benefits to be paid to current plan participants.

Total Annual Payroll is the projected annual rate of pay for the fiscal year beginning on the valuation date of all covered Members.

Total Required Contribution is equal to the Normal Cost plus an amount sufficient to amortize the Unfunded Accrued Liability over no more than 30 years. The required amount is adjusted for interest according to the timing of contributions during the year.

Unfunded Actuarial Accrued Liability (UAAL) is the difference between the actuarial accrued liability (described above) and the Actuarial Value of Assets. Under the Entry Age Normal Actuarial Cost Method, an actuarial gain or loss, based on actual versus expected UAAL, is determined in conjunction with each valuation of the plan.



## DISCUSSION OF RISK

ASOP No. 51, Assessment and Disclosure of Risk Associated with Measuring Pension Obligations and Determining Pension Plan Contributions, states that the actuary should identify risks that, in the actuary's professional judgment, may reasonably be anticipated to significantly affect the plan's future financial condition.

Throughout this report, actuarial results are determined using various actuarial assumptions. These results are based on the premise that all future plan experience will align with the plan's actuarial assumptions; however, there is no guarantee that actual plan experience will align with the plan's assumptions. It is possible that actual plan experience will differ from anticipated experience in an unfavorable manner that will negatively impact the plan's funded position.

Below are examples of ways in which plan experience can deviate from assumptions and the potential impact of that deviation. Typically, this results in an actuarial gain or loss representing the current-year financial impact on the plan's unfunded liability of the experience differing from assumptions; this gain or loss is amortized over a period of time determined by the plan's amortization method. When assumptions are selected that adequately reflect plan experience, gains and losses typically offset one another in the long term, resulting in a relatively low impact on the plan's contribution requirements associated with plan experience. When assumptions are too optimistic, losses can accumulate over time and the plan's amortization payment could potentially grow to an unmanageable level.

- Investment Return: When the rate of return on the Actuarial Value of Assets falls short of the assumption, this produces a loss representing assumed investment earnings that were not realized. Further, it is unlikely that the plan will experience a scenario that matches the assumed return in each year as capital markets can be volatile from year to year. Therefore, contribution amounts can vary in the future.
- Salary Increases: When a plan participant experiences a salary increase that was greater than assumed, this produces a loss representing the cost of an increase in anticipated plan benefits for the participant as compared to the previous year. The total gain or loss associated with salary increases for the plan is the sum of salary gains and losses for all active participants.
- Payroll Growth: The plan's payroll growth assumption, if one is used, causes a predictable annual increase in the plan's amortization payment in order to produce an amortization payment that remains constant as a percentage of payroll if all assumptions are realized. If payroll increases less than the plan's payroll growth assumption, the plan's amortization payment can increase significantly as a percentage of payroll even if all assumptions other than the payroll growth assumption are realized. Currently, this plan utilizes a 0% payroll growth assumption.
- Demographic Assumptions: Actuarial results take into account various potential events that could happen to a plan participant, such as retirement, termination, disability, and death. Each of these potential events is assigned a liability based on the likelihood of the event and the financial consequence of the event for the plan. Accordingly, actuarial liabilities reflect a blend of financial consequences associated with various possible outcomes (such as retirement at one of various possible ages). Once the outcome is known (e.g. the participant retires) the liability is adjusted to reflect the known outcome. This adjustment produces a gain or loss depending on whether the outcome was more or less favorable than other outcomes that could have occurred.

### Impact of Plan Maturity on Risk

For newer pension plans, most of the participants and associated liabilities are related to active members who have not yet reached retirement age. As pension plans continue in operation and active members reach retirement ages, liabilities begin to shift from being primarily related to active members to being shared amongst active and retired members. Plan maturity is a measure of the extent to which this shift has occurred. It is important to understand that plan maturity can have an impact on risk tolerance and the overall risk characteristics of the plan. For example, closed plans with a large amount of retired liability do not have as long of a time horizon to recover from losses (such as losses on investments due to lower than expected investment returns) as plans where the majority of the liability is attributable to active members. For this reason, less tolerance for investment risk may be warranted for highly mature closed plans with a substantial inactive liability. Similarly, mature closed plans paying substantial retirement benefits resulting in a small positive or net negative cash flow can be more sensitive to near term investment volatility, particularly if the size of the fund is shrinking, which can result in less assets being available for investment in the market.

To assist with determining the maturity of the plan, we have provided some relevant metrics in the table following titled “Plan Maturity Measures and Other Risk Metrics”. Highlights of this information are discussed below:

- The Support Ratio, determined as the ratio of active to inactive members, has decreased from 188.9% on October 1, 2013 to 94.7% on October 1, 2023, indicating that the plan has been maturing during the period.
- The Accrued Liability Ratio, determined as the ratio of the Inactive Accrued Liability, which is the liability associated with members who are no longer employed but are due a benefit from the plan, to the Total Accrued Liability, is 70.6%. With a plan of this maturity, losses due to lower than expected investment returns or demographic factors may result in larger increases in contribution requirements than would be needed for a less mature plan. Please note Chapter 112, Florida Statutes, requires that the plan sponsor contributes the minimum required contribution; thus, there is minimal solvency risk to the plan.
- The Funded Ratio, determined as the ratio of the Actuarial Value of Assets to the Total Accrued Liability, has increased from 65.7% on October 1, 2013 to 89.6% on October 1, 2023.
- The Net Cash Flow Ratio, determined as the ratio of the Net Cash Flow (contributions minus benefit payments and administrative expenses) to the Market Value of Assets, decreased from 12.9% on October 1, 2013 to 0.6% on October 1, 2023. The current Net Cash Flow Ratio of 0.6% indicates that contributions are generally covering the plan's benefit payments and administrative expenses.

### Low Default-Risk Obligation Measure

ASOP No. 4, Measuring Pension Obligations and Determining Pension Plan Costs or Contributions, was revised as of December 2021 to include a “low-default-risk obligation measure” (LDROM). This liability measure is consistent with the determination of the actuarial accrued liability shown on page 11 in terms of member data, plan provisions, and assumptions/methods, under the Entry Age Normal Cost Method, except that the interest rate is tied to low-default-risk fixed income securities. The S&P Municipal Bond 20 Year High Grade Rate Index (daily rate closest to, but not later than, the measurement date) was selected to represent a current market rate of low risk but longer-term investments that could be included in a low-risk asset portfolio. The interest rate used in this valuation was 4.87%, resulting in an LDROM of \$33,856,286. The LDROM should not be considered the “correct” liability measurement; it simply shows a possible outcome if the Board elected to hold a very low risk asset portfolio. The Board actually invests the pension plan’s contributions in a diversified portfolio of stocks and bonds and other investments with the objective of maximizing investment returns at a reasonable level of risk. Consequently, the difference between the plan’s Actuarial Accrued Liability disclosed earlier in this section and the LDROM can be thought of as representing the expected taxpayer savings from investing in the plan’s diversified portfolio compared to investing only in high quality bonds.

The actuarial valuation reports the funded status and develops contributions based on the expected return of the plan’s investment portfolio. If instead, the plan switched to investing exclusively in high quality bonds, the LDROM illustrates that reported funded status would be lower (which also implies that the Actuarially Determined Contributions would be higher), perhaps significantly. Unnecessarily high contribution requirements in the near term may not be affordable and could imperil plan sustainability and benefit security.

It is important to note that the actuary has identified the risks above as the most significant risks based on the characteristics of the plan and the nature of the project, however, it is not an exhaustive list of potential risks that could be considered. Additional advanced modeling, as well as the identification of additional risks, can be provided at the request of the audience addressed on page 2 of this report.

PLAN MATURITY MEASURES AND OTHER RISK METRICS

	<u>10/1/2023</u>	<u>10/1/2022</u>	<u>10/1/2018</u>	<u>10/1/2013</u>
<u>Support Ratio</u>				
Total Actives	36	38	35	34
Total Inactives <sup>1</sup>	38	37	25	18
Actives / Inactives <sup>1</sup>	94.7%	102.7%	140.0%	188.9%

Asset Volatility Ratio

Market Value of Assets (MVA)	22,076,653	19,968,674	16,357,942	6,095,776
Total Annual Payroll	3,211,961	3,144,567	2,346,321	2,045,756
MVA / Total Annual Payroll	687.3%	635.0%	697.2%	298.0%

Accrued Liability (AL) Ratio

Inactive Accrued Liability	17,825,927	16,187,907	6,303,099	3,748,902
Total Accrued Liability (EAN)	25,244,186	23,203,222	15,543,568	8,590,379
Inactive AL / Total AL	70.6%	69.8%	40.6%	43.6%

Funded Ratio

Actuarial Value of Assets (AVA)	22,629,394	21,335,886	15,575,849	5,643,836
Total Accrued Liability (EAN)	25,244,186	23,203,222	15,543,568	8,590,379
AVA / Total Accrued Liability (EAN)	89.6%	92.0%	100.2%	65.7%

Net Cash Flow Ratio

Net Cash Flow <sup>2</sup>	140,453	27,110	610,074	785,654
Market Value of Assets (MVA)	22,076,653	19,968,674	16,357,942	6,095,776
Ratio	0.6%	0.1%	3.7%	12.9%

<sup>1</sup> Excludes terminated participants awaiting a refund of member contributions.

<sup>2</sup> Determined as total contributions minus benefit payments and administrative expenses.

PARTIAL HISTORY OF PREMIUM TAX REFUNDS

<u>Received During Fiscal Year</u>	<u>Amount</u>	<u>Increase from Previous Year</u>
2006	54,781.00	N/A
2007	92,192.71	68.3%
2008	95,758.33	3.9%
2009	99,567.96	4.0%
2010	102,822.00	3.3%
2011	96,375.00	-6.3%
2012	133,463.61	38.5%
2013	137,352.30	2.9%
2014	145,004.00	5.6%
2015	161,275.89	11.2%
2016	194,971.83	20.9%
2017	180,792.33	-7.3%
2018	201,135.14	11.3%
2019	221,811.84	10.3%
2020	268,941.30	21.2%
2021	220,841.99	-17.9%
2022	241,995.17	9.6%
2023	272,229.75	12.5%

STATEMENT OF FIDUCIARY NET POSITION  
SEPTEMBER 30, 2023

<u>ASSETS</u>	COST VALUE	MARKET VALUE
Cash and Cash Equivalents:		
Checking Account	23,128.34	23,128.34
Prepaid Benefits	79,818.82	79,818.82
Money Market	723,971.67	723,971.67
Cash	58,666.54	58,666.54
 Total Cash and Equivalents	 885,585.37	 885,585.37
Receivables:		
Additional City Contributions	19,169.52	19,169.52
State Contributions	272,229.75	272,229.75
From Broker for Investments Sold	34,299.45	34,299.45
Investment Income	63,045.31	63,045.31
 Total Receivable	 388,744.03	 388,744.03
Investments:		
U. S. Bonds and Bills	3,437,397.53	3,329,774.36
Federal Agency Guaranteed Securities	372,158.13	371,089.36
Corporate Bonds	1,962,644.45	1,778,198.36
Equities	11,247,149.07	12,983,309.64
Mutual Funds:		
Fixed Income	83,114.08	83,404.85
Pooled/Common/Commingled Funds:		
Real Estate	2,056,671.64	2,272,257.37
 Total Investments	 19,159,134.90	 20,818,033.94
 Total Assets	 20,433,464.30	 22,092,363.34
 <u>LIABILITIES</u>		
Payables:		
To Broker for Investments Purchased	15,710.53	15,710.53
 Total Liabilities	 15,710.53	 15,710.53
 NET POSITION RESTRICTED FOR PENSIONS	 20,417,753.77	 22,076,652.81

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION  
FOR THE YEAR ENDED SEPTEMBER 30, 2023  
Market Value Basis

ADDITIONS

Contributions:

Member	15,896.36
City	814,049.93
State	272,229.75

Total Contributions 1,102,176.04

Investment Income:

Net Realized Gain (Loss)	664,745.98	
Unrealized Gain (Loss)	983,628.36	
Net Increase in Fair Value of Investments		1,648,374.34
Interest & Dividends		476,663.91
Less Investment Expense <sup>1</sup>		(157,512.87)

Net Investment Income 1,967,525.38

Total Additions 3,069,701.42

DEDUCTIONS

Distributions to Members:

Benefit Payments	907,498.62
Lump Sum Share Distributions	5,826.95
Refunds of Member Contributions	0.00

Total Distributions 913,325.57

Administrative Expense 48,397.35

Total Deductions 961,722.92

Net Increase in Net Position 2,107,978.50

NET POSITION RESTRICTED FOR PENSIONS

Beginning of the Year 19,968,674.31

End of the Year 22,076,652.81

<sup>1</sup>Investment related expenses include investment advisory, custodial and performance monitoring fees.

ACTUARIAL ASSET VALUATION  
SEPTEMBER 30, 2023

Actuarial Assets for funding purposes are developed by increasing the Actuarial Assets used in the most recent actuarial valuation of the Fund by the average annual market value rate of return (net of investment related expenses) for the past four years. Actuarial Assets shall not be less than 80% nor greater than 120% of Market Value of Assets.

Details of the derivation are set forth as follows:

Plan Year End	Rate of Return <sup>1</sup>	
09/30/2020	7.81%	
09/30/2021	17.31%	
09/30/2022	-11.27%	
09/30/2023	9.93%	
Annualized Rate of Return for prior four (4) years:		5.39%
(A) 10/01/2022 Actuarial Assets:		\$21,335,886.21
(I) Net Investment Income:		
1. Interest and Dividends	476,663.91	
2. Realized Gain (Loss)	664,745.98	
3. Unrealized Gain (Loss)	983,628.36	
4. Change in Actuarial Value	(814,470.96)	
5. Investment Related Expenses	(157,512.87)	
Total		1,153,054.42
(B) 10/01/2023 Actuarial Assets, excluding Shortfall Contribution:		\$22,610,224.23
Actuarial Asset Rate of Return = $2I/(A+B-I)$ , based on Unlimited Actuarial Assets:		5.39%
10/01/2023 Limited Actuarial Assets, including Shortfall Contribution		\$22,629,393.75
10/01/2023 Market Value of Assets, including Shortfall Contribution		\$22,076,652.81
Actuarial Asset Rate of Return, based on Limited Actuarial Assets:		5.39%
Actuarial Gain/(Loss) due to Investment Return (Limited Actuarial Asset Basis)		(\$344,418.85)

<sup>1</sup>Market Value Basis, net of investment related expenses.



CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS  
 SEPTEMBER 30, 2023  
 Actuarial Asset Basis

REVENUES

Contributions:		
Member	15,896.36	
City	814,049.93	
State	272,229.75	
 Total Contributions		 1,102,176.04
Earnings from Investments:		
Interest & Dividends	476,663.91	
Net Realized Gain (Loss)	664,745.98	
Unrealized Gain (Loss)	983,628.36	
Change in Actuarial Value	(814,470.96)	
 Total Earnings and Investment Gains		 1,310,567.29

EXPENDITURES

Distributions to Members:		
Benefit Payments	907,498.62	
Lump Sum Share Distributions	5,826.95	
Refunds of Member Contributions	0.00	
 Total Distributions		 913,325.57
Expenses:		
Investment related <sup>1</sup>	157,512.87	
Administrative	48,397.35	
 Total Expenses		 205,910.22
 Change in Net Assets for the Year		 1,293,507.54
 Net Assets Beginning of the Year		 21,335,886.21
 Net Assets End of the Year <sup>2</sup>		 22,629,393.75

<sup>1</sup>Investment related expenses include investment advisory, custodial and performance monitoring fees.

<sup>2</sup>Net Assets may be limited for actuarial consideration.

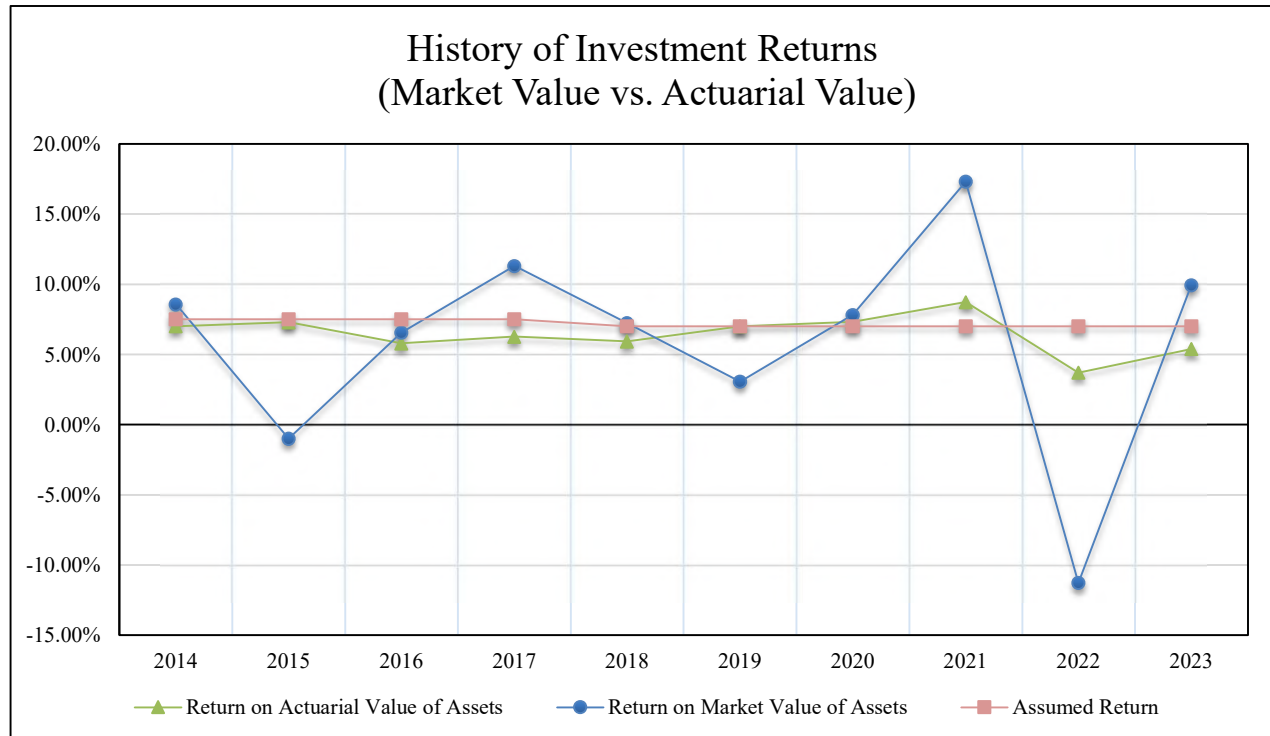
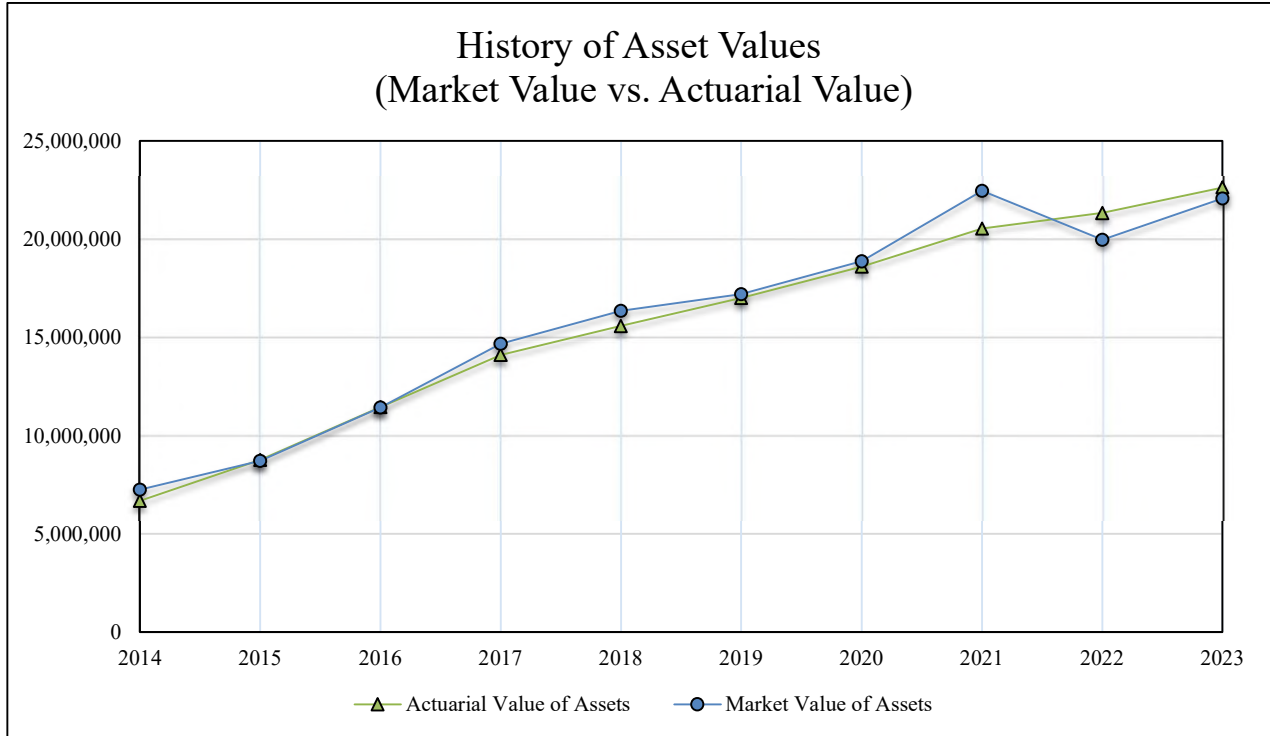
SUPPLEMENTAL CHAPTER 185 SHARE PLAN ACTIVITY  
October 1, 2022 through September 30, 2023

9/30/2022 Balance	200,732.20
Prior Year Adjustment	0.00
Plus Additions	87,670.34
Investment Return Earned	18,664.34
Administrative Fees	0.00
Less Distributions	<u>(5,826.95)</u>
9/30/2023 Balance	301,239.93

RECONCILIATION OF CITY SHORTFALL/(PREPAID) CONTRIBUTION  
FOR THE FISCAL YEAR ENDED (FYE) SEPTEMBER 30, 2023

(1)	Total Required Contribution Rate	31.91%
(2)	Pensionable Payroll Derived from Member Contributions	\$3,179,272.00
(3)	Total Required Contribution (1) x (2)	1,014,505.70
(4)	Less Actual Member Contributions	(15,896.36)
(5)	Less Allowable State Contribution	<u>(184,559.41)</u>
(6)	Equals Required City Contribution for Fiscal 2023	814,049.93
(7)	Plus 2022 Shortfall Contribution	3,482.48
(8)	Less Actual City Contributions	<u>(798,362.89)</u>
(9)	Equals City's Shortfall/(Prepaid) Contribution as of September 30, 2023	\$19,169.52

# HISTORY OF ASSET VALUES AND INVESTMENT RETURNS



## STATISTICAL DATA

	<u>10/1/2023</u>	<u>10/1/2022</u>	<u>10/1/2021</u>	<u>10/1/2020</u>
<u>Actives</u>				
Number	36	38	37	32
Average Current Age	46.0	44.8	43.1	44.9
Average Age at Employment	40.1	39.5	37.8	37.5
Average Past Service	5.9	5.3	5.3	7.4
Average Annual Salary	\$89,221	\$82,752	\$76,738	\$82,093
<u>Service Retirees</u>				
Number	24	23	21	17
Average Current Age	63.1	62.3	62.3	62.5
Average Annual Benefit	\$36,717	\$33,243	\$31,177	\$22,984
<u>Beneficiaries</u>				
Number	1	1	1	1
Average Current Age	58.4	57.4	56.4	55.4
Average Annual Benefit	\$14,115	\$13,714	\$13,325	\$12,854
<u>Disability Retirees</u>				
Number	2	2	2	1
Average Current Age	64.2	63.2	62.2	56.9
Average Annual Benefit	\$34,729	\$33,730	\$31,345	\$34,569
<u>Terminated Vested</u>				
Number	31	30	27	27
Average Current Age <sup>1</sup>	49.2	48.2	47.4	47.0
Average Annual Benefit <sup>1</sup>	\$23,499	\$23,187	\$22,832	\$22,119

<sup>1</sup> The Average Current Age and Average Annual Benefit exclude participants awaiting a refund of contributions.

## AGE AND SERVICE DISTRIBUTION

### PAST SERVICE

AGE	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30+	Total
15 - 19												0
20 - 24			1									1
25 - 29					1	1						2
30 - 34			1			1						2
35 - 39		1				2	2					5
40 - 44			1			1	3					5
45 - 49		1	2			3	1					7
50 - 54			1	2	1	1		1				6
55 - 59		1	1	1		1						4
60 - 64		1	1			2						4
65+												0
<b>Total</b>	<b>0</b>	<b>4</b>	<b>8</b>	<b>3</b>	<b>2</b>	<b>12</b>	<b>6</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>36</b>

## VALUATION PARTICIPANT RECONCILIATION

### 1. Active lives

a. Number in prior valuation 10/1/2022	38
b. Terminations	
i. Vested (partial or full) with deferred annuity	0
ii. Vested in refund of member contributions only	(2)
iii. Refund of member contributions or full lump sum distribution	0
c. Deaths	
i. Beneficiary receiving benefits	0
ii. No future benefits payable	0
d. Disabled	0
e. Retired	(1)
f. Continuing participants	35
g. New entrants / Rehires	1
h. Total active life participants in valuation	36

### 2. Non-Active lives (including beneficiaries receiving benefits)

	Service Retirees, Vested Receiving <u>Benefits</u>	Receiving Death <u>Benefits</u>	Receiving Disability <u>Benefits</u>	Vested (Deferred Annuity)	Vested (Due Refund)	<u>Total</u>
a. Number prior valuation	23	1	2	11	19	56
Retired	1					1
Vested (Deferred Annuity)						0
Vested (Due Refund)					2	2
Hired/Terminated in Same Year						0
Death, With Survivor						0
Death, No Survivor						0
Disabled						0
Refund of Contributions						0
Rehires					(1)	(1)
Expired Annuities						0
Data Corrections						0
b. Number current valuation	24	1	2	11	20	58

SUMMARY OF CURRENT PLAN  
(Through Ordinance 21-17)

<u>Eligibility</u>	Full-time employees who are classified as full-time sworn police officers participate in the System as a condition of employment.
<u>Credited Service</u>	Total years and fractional parts of years of employment with the City as a Police Officer. Credited Service is used for determining eligibility for Retirement and Vesting.
<u>Compensation</u>	Total remuneration for services rendered to the city as a Police Officer, including up to 300 hours of overtime pay annually and lump sum payments for unused leave to the extent permitted under Section 185.02(4), Florida Statutes, but excluding pay for special duty or extra-detail work performed for an employer other than the city.
<u>Average Final Compensation</u>	Average Salary for the best 5 years during the 10 years immediately preceding retirement or termination.
<u>Member Contributions</u>	This valuation of the Plan additionally reflects a 0.50% Member Contribution Rate for the fiscal year beginning October 1, 2014. Effective October 1, 2023, the Member Contribution Rate will increase to 3.00%.
<u>Normal Retirement</u>	
Date	If hired before October 1, 2021, earlier of: 1) age 55 and 6 years of Credited Service, or 2) 25 years of Credited Service, regardless of age.  If hired on or after October 1, 2021, earlier of: 1) age 57 and 6 years of Credited Service, or 2) age 52 and 25 years of Credited Service.
Benefit	3.00% of Average Final Compensation times Credited Service.
Form of Benefit	Ten Year Certain and Life Annuity (options available).
<u>Early Retirement</u>	
Eligibility	Age 50 and 6 Years of Credited Service.
Benefit	Accrued benefit, reduced 3.00% for each year prior to Normal Retirement.
<u>Benefit Supplement</u>	\$3.00 per month per year of Credited Service, subject to minimum benefit of \$30.00 per month and maximum benefit of \$90.00 per month.



Cost-of-Living Increase (COLA)

For credited service earned before October 1, 2021, 3.00% automatic lifetime COLA, beginning the first July 1<sup>st</sup> following the later of termination or otherwise Normal Retirement Date.

For credited service earned on and after October 1, 2021, rate equal to the COLA under title II of the Social Security Act, with a minimum of 1.00% and maximum of 1.50%, automatic lifetime COLA, beginning the first July 1<sup>st</sup> following the later of termination or otherwise Normal Retirement Date.

The Benefit Supplement is not subject to the COLA.

Vesting

Schedule

100% after 6 years of Credited Service.

Benefit Amount

Member will receive the vested portion of his/her accrued benefit payable at the otherwise Normal Retirement Date.

Disability

Eligibility

Service Incurred

Covered from Date of Employment.

Non-Service Incurred

8 years of Credited Service.

Benefit

Benefit accrued to date of disability but not less than 42% of Average Final Compensation (if Service Incurred).

Duration

Payable for life and ten years certain or until recovery (as determined by the Board). Options are available.

Death Benefits

Pre-Retirement

Vested

Monthly accrued benefit payable to designated beneficiary for 10 years beginning at the otherwise Normal Retirement Date.

Non-Vested

Refund of accumulated contributions.

Post-Retirement

Benefits payable to beneficiary in accordance with option selected at retirement.

City and State Contributions

Remaining amount required in order to pay current costs and amortize any unfunded past service cost as provided in Part VII of Chapter 112, F.S.