

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



December 12, 2023

Board of Trustees
City of Sebastian
Police Officers' Pension Board

Re: City of Sebastian Police Officers' Retirement System

Dear Board:

We are pleased to present to the Board this report of the annual actuarial valuation of the City of Sebastian Police Officers' Retirement System. 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 Sebastian, 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.

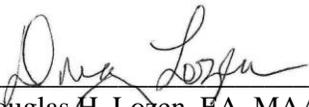
The undersigned are familiar with the immediate and long-term aspects of pension valuations, and meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. All of the sections of this report are considered an integral part of the 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 Sebastian, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the Police Officers' Retirement System. 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: 

Douglas H. Lozen, EA, MAAA
Enrolled Actuary #23-7778

By: 

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

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Enclosures

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SUMMARY OF REPORT

The regular annual actuarial valuation of the City of Sebastian Police Officers' Retirement System, 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 Applicable to Fiscal Year Ending	10/1/2023 <u>9/30/2025</u>	10/1/2022 <u>9/30/2024</u>
Minimum Required Contribution % of Projected Annual Payroll	39.3%	39.3%
Member Contributions (Est.) % of Projected Annual Payroll	8.0%	8.0%
City And State Required Contribution % of Projected Annual Payroll	31.3%	31.3%
State Contribution (Est.) ¹ % of Projected Annual Payroll (Est.)	\$272,496 9.5%	\$272,496 9.5%
City Required Contribution (Est.) ² % of Projected Annual Payroll (Est.)	21.8%	21.8%

¹ Represents the amount received in calendar 2023. As per a Mutual Consent Agreement between the Membership and the City, all State Monies received each year will be available to offset the City’s required contribution.

² The required contribution from the combination of City and State sources for the year ending September 30, 2025, is 31.3% of the actual payroll realized in that year. As a budgeting tool, the City may contribute 21.8% of each Member’s Salary and then make a one-time adjustment to account for the actual State Monies received.

As you can see, the Minimum Required Contribution is unchanged in comparison to the results set forth in the October 1, 2022 actuarial valuation report. The components of decrease included a 6% increase in Total Annual Payroll (thereby reducing payment for the Unfunded Actuarial Accrued Liability, when expressed as a percentage of payroll) and excess City contributions. The components of increase are due to net unfavorable actuarial experience described in the next paragraph.

Plan experience was unfavorable overall on the basis of the plan's actuarial assumptions. Sources of actuarial loss included an investment return of 4.62% (Actuarial Asset Basis) which fell short of the 7.10% assumption, an average salary increase of 9.65% which exceeded the 4.88% assumption, and inactive mortality experience. These losses were offset in part by a gain associated with favorable turnover experience.

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	22.9%
(2) Summary of Contribution Impact by component:	
Change in State Contribution Percentage	-1.1%
Change in Normal Cost Rate	-0.2%
Change in Administrative Expense Percentage	0.2%
Payroll Change Effect on UAAL Amortization	-0.6%
Investment Return (Actuarial Asset Basis)	1.8%
Salary Increases	1.5%
Active Decrements	-1.2%
Inactive Mortality	0.1%
UAAL Amortization Impact from Contribution Policy	-0.9%
Assumption Change	0.0%
Other	<u>-0.7%</u>
Total Change in Contribution	-1.1%
(3) Contribution Determined as of October 1, 2023	21.8%

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	<u>10/1/2023</u>	<u>10/1/2022</u>
A. Participant Data		
Actives	36	35
Service Retirees	15	14
DROP Retirees	2	3
Beneficiaries	2	2
Disability Retirees	4	4
Terminated Vested	<u>16</u>	<u>12</u>
 Total	 75	 70
 Projected Annual Payroll	 2,867,631	 2,704,277
Annual Rate of Payments to:		
Service Retirees	783,236	692,188
DROP Retirees	210,589	299,457
Beneficiaries	104,498	104,498
Disability Retirees	78,179	78,179
Terminated Vested	111,683	89,569
 B. Assets		
Actuarial Value (AVA) ¹	21,885,271	20,813,064
Market Value (MVA) ¹	20,766,051	18,482,915
 C. Liabilities		
Present Value of Benefits		
Actives		
Retirement Benefits	14,386,916	13,071,271
Disability Benefits	924,079	1,026,028
Death Benefits	56,672	57,433
Vested Benefits	249,871	243,795
Refund of Contributions	108,996	92,499
Service Retirees	8,643,513	7,623,624
DROP Retirees ¹	3,181,171	4,253,218
Beneficiaries	678,463	729,746
Disability Retirees	720,448	760,420
Terminated Vested	823,292	779,346
Share Plan Balances ¹	<u>0</u>	<u>0</u>
 Total	 29,773,421	 28,637,380

C. Liabilities - (Continued)	<u>10/1/2023</u>	<u>10/1/2022</u>
Present Value of Future Salaries	20,647,190	20,783,584
Present Value of Future Member Contributions	1,651,775	1,662,687
Normal Cost (Retirement)	472,611	438,723
Normal Cost (Disability)	71,051	81,115
Normal Cost (Death)	2,965	2,816
Normal Cost (Vesting)	20,823	17,531
Normal Cost (Refunds)	18,232	16,754
Total Normal Cost	<u>585,682</u>	<u>556,939</u>
Present Value of Future Normal Costs	4,140,741	4,161,736
Accrued Liability (Retirement)	10,969,075	9,669,108
Accrued Liability (Disability)	446,290	479,720
Accrued Liability (Death)	35,668	36,225
Accrued Liability (Vesting)	121,774	134,229
Accrued Liability (Refunds)	12,986	10,008
Accrued Liability (Inactives) ¹	14,046,887	14,146,354
Share Plan Balances ¹	0	0
Total Actuarial Accrued Liability (EAN AL)	<u>25,632,680</u>	<u>24,475,644</u>
Unfunded Actuarial Accrued Liability (UAAL)	3,747,409	3,662,580
Funded Ratio (AVA / EAN AL)	85.4%	85.0%

D. Actuarial Present Value of Accrued Benefits	<u>10/1/2023</u>	<u>10/1/2022</u>
Vested Accrued Benefits		
Inactives + Share Plan Balances ¹	14,046,887	14,146,354
Actives	5,682,180	4,721,031
Member Contributions	<u>1,706,341</u>	<u>1,606,424</u>
Total	21,435,408	20,473,809
Non-vested Accrued Benefits	<u>1,101,505</u>	<u>915,792</u>
Total Present Value		
Accrued Benefits (PVAB)	22,536,913	21,389,601
Funded Ratio (MVA / PVAB)	92.1%	86.4%
Increase (Decrease) in Present Value of Accrued Benefits Attributable to:		
Plan Amendments	0	
Assumption Changes	0	
Plan Experience	738,597	
Benefits Paid	(1,071,894)	
Interest	1,480,609	
Other	<u>0</u>	
Total	1,147,312	

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 ²	21.1	21.3
Administrative Expenses (with interest) % of Projected Annual Payroll ²	2.9	2.7
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 23 years (as of 10/1/2023, with interest) % of Projected Annual Payroll ²	15.3	15.3
Minimum Required Contribution % of Projected Annual Payroll ²	39.3	39.3
Expected Member Contributions % of Projected Annual Payroll ²	8.0	8.0
Expected City and State Contribution % of Projected Annual Payroll ²	31.3	31.3

F. Past Contributions

Plan Years Ending:	<u>9/30/2023</u>
City and State Requirement	897,058
Actual Contributions Made:	
City	763,666
State	<u>272,496</u>
Total	1,036,162

G. Net Actuarial (Gain)/Loss 452,564

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

² Contributions developed as of 10/1/2023 are expressed as a percentage of Projected Annual Payroll at 10/1/2023 of \$2,867,631.

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	3,747,409
2024	3,558,639
2025	3,349,598
2030	2,212,949
2036	632,271
2041	231,706
2046	0

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

		<u>Actual</u>	<u>Assumed</u>
Year Ended	9/30/2023	9.65%	4.88%
Year Ended	9/30/2022	9.11%	4.99%
Year Ended	9/30/2021	6.35%	4.97%
Year Ended	9/30/2020	2.64%	5.15%
Year Ended	9/30/2019	6.84%	7.13%

(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	11.66%	4.62%	7.10%
Year Ended	9/30/2022	-15.63%	3.85%	7.10%
Year Ended	9/30/2021	23.63%	9.57%	7.20%
Year Ended	9/30/2020	6.04%	6.09%	7.20%
Year Ended	9/30/2019	1.79%	7.10%	7.30%

(iii) Average Annual Payroll Growth

(a) Payroll as of:	10/1/2023	\$2,867,631
	10/1/2013	2,131,399
(b) Total Increase		34.54%
(c) Number of Years		10.00
(d) Average Annual Rate		3.01%

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.



Douglas H. Lozen, EA, MAAA
Enrolled Actuary #23-7778

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

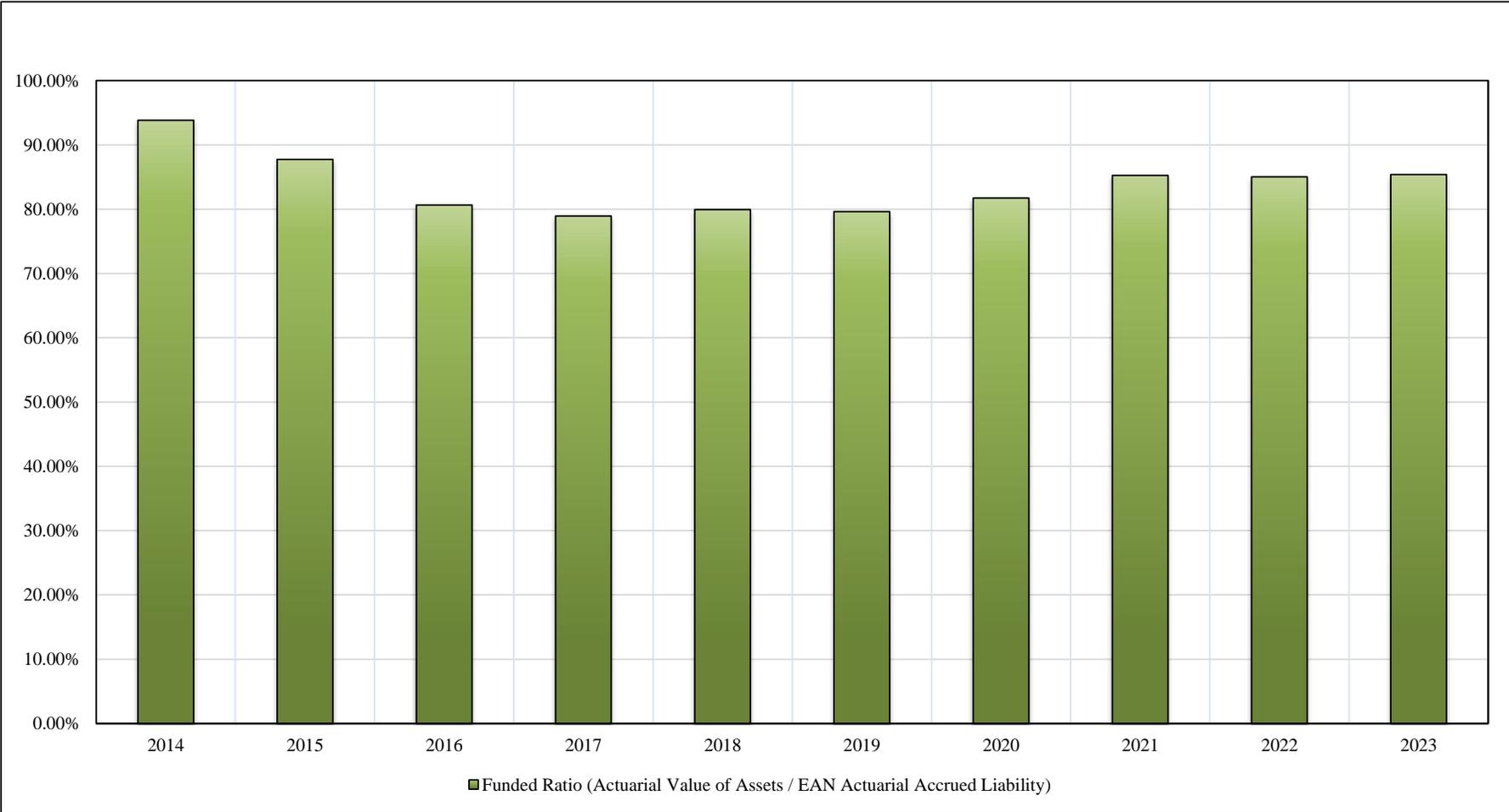
(1) Unfunded Actuarial Accrued Liability as of October 1, 2022	\$3,662,580
(2) Sponsor Normal Cost developed as of October 1, 2022	340,597
(3) Expected administrative expenses for the year ended September 30, 2023	70,286
(4) Expected interest on (1), (2) and (3)	286,721
(5) Sponsor contributions to the System during the year ended September 30, 2023	1,036,162
(6) Expected interest on (5)	29,177
(7) Expected Unfunded Actuarial Accrued Liability as of September 30, 2023 (1)+(2)+(3)+(4)-(5)-(6)	3,294,845
(8) Change to UAAL due to Assumption Change	0
(9) Change to UAAL due to Actuarial (Gain)/Loss	452,564
(10) Unfunded Actuarial Accrued Liability as of October 1, 2023	3,747,409

<u>Type of Base</u>	<u>Date Established</u>	<u>Years Remaining</u>	<u>10/1/2023 Amount</u>	<u>Amortization Amount</u>
Method & Benefit	10/1/2002	9	336,164	45,844
Assump Change	10/1/2010	17	118,643	10,355
Benefit Change	10/1/2010	17	6,010	525
Assump Change	10/1/2013	10	(19,990)	(2,514)
Benefit Change	10/1/2014	21	(3,324)	(257)
Assump Change	10/1/2015	12	159,311	17,527
Method Change	10/1/2015	12	540,749	59,491
Assump Change	10/1/2016	13	493,666	51,342
Benefit Change	10/1/2016	23	535,491	39,445
Actuarial Loss	10/1/2016	3	70,645	24,821
Actuarial Loss	10/1/2017	4	120,427	32,569
Assump Change	10/1/2017	14	293,492	29,020
Actuarial Loss	10/1/2018	5	43,878	9,741
Actuarial Loss	10/1/2019	11	225,528	26,423
Asmp/Mthd Change	10/1/2019	11	136,229	15,961
Actuarial Loss	10/1/2020	12	327,414	36,020
Assump Change	10/1/2020	12	(362,036)	(39,829)
Actuarial Gain	10/1/2021	13	(504,286)	(52,447)
Assump Change	10/1/2021	13	210,999	21,944
Actuarial Loss	10/1/2022	14	565,835	55,949
Actuarial Loss	10/1/2023	15	452,564	42,753
			3,747,409	424,683

DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

(1) Unfunded Actuarial Accrued Liability (UAAL) as of October 1, 2022	\$3,662,580
(2) Expected UAAL as of October 1, 2023	3,294,845
(3) Summary of Actuarial (Gain)/Loss, by component:	
Investment Return (Actuarial Asset Basis)	517,917
Salary Increases	443,675
Active Decrements	(346,380)
Inactive Mortality	30,822
Other	<u>(193,470)</u>
Increase in UAAL due to (Gain)/Loss	452,564
Assumption Changes	0
(4) Actual UAAL as of October 1, 2023	\$3,747,409

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

7.10% 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>Credited Service</u>	<u>Assumption</u>
< 1 Year	16.0%
Years 1 - 3	6.5%
Years 4 - 13	5.8%
14 Years and Greater	3.8%

This assumption was approved in conjunction with an actuarial experience study dated September 13, 2019.

Final Salary Load

Final salary is increased with a load assumption as shown below based on credited service on 10/1/2014:

<u>Service on 10/1/2014</u>	<u>Load Assumption</u>
5 or more years	20.0%
More than 2, less than 5 years	10.0%
Less than 2 years	0.0%

Termination Rate

The assumed rates of termination are displayed below:

<u>Credited Service</u>	<u>Assumption</u>
0 – 2	15.0%
3 – 14	4.0%
15 +	0.0%

This assumption was approved in conjunction with an actuarial experience study dated September 13, 2019.

Retirement Rates

Members with less than 25 years of credited service are assumed to retire at the following rates:

<u>Age</u>	<u>Assumption</u>
50	30%
51 – 54	5%
55 - 56	50%
57	100%

Members with at least 25 years of credited service are assumed to retire immediately. This assumption was approved in conjunction with an actuarial experience study dated September 13, 2019.

Disability Rate

Age-based rates with increasing probability of disablement at higher ages. A sample of rates are shown below:

<u>Age</u>	<u>Assumption</u>
30	0.24%
40	0.42%
50	1.08%
60	5.40%

Additionally, it is assumed that 75% of disablements and active Member deaths are service-related. This assumption was approved in conjunction with an actuarial experience study dated September 13, 2019.

Actuarial Asset Method

All assets are valued at market value with an adjustment made to uniformly spread actuarial investment gains and losses (as measured by actual market value investment return against expected market value investment return) over a four-year period.

Payroll Growth

1.51% 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

\$80,219 annually, based on the average of actual expenses incurred in the prior two fiscal years.

Amortization Method

New UAAL amortization bases are amortized over 15 years.

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.

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 7.10% assumption.

Salary - None.

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.

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.
- 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 269.2% on October 1, 2013 to 124.1% 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 54.8%. 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 stayed approximately the same from October 1, 2013 to 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 2.0% on October 1, 2013 to 0.5% on October 1, 2023. The current Net Cash Flow Ratio of 0.5% 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 8 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 \$33,312,006. 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	35	39	35
Total Inactives ¹	29	28	22	13
Actives / Inactives ¹	124.1%	125.0%	177.3%	269.2%
 <u>Asset Volatility Ratio</u>				
Market Value of Assets (MVA)	20,766,051	18,482,915	15,167,320	10,072,572
Total Annual Payroll	2,867,631	2,704,277	2,707,194	2,131,399
MVA / Total Annual Payroll	724.2%	683.5%	560.3%	472.6%
 <u>Accrued Liability (AL) Ratio</u>				
Inactive Accrued Liability	14,046,887	14,146,354	8,012,594	5,068,185
Total Accrued Liability (EAN)	25,632,680	24,475,644	18,637,807	11,812,926
Inactive AL / Total AL	54.8%	57.8%	43.0%	42.9%
 <u>Funded Ratio</u>				
Actuarial Value of Assets (AVA)	21,885,271	20,813,064	14,897,189	10,072,572
Total Accrued Liability (EAN)	25,632,680	24,475,644	18,637,807	11,812,926
AVA / Total Accrued Liability (EAN)	85.4%	85.0%	79.9%	85.3%
 <u>Net Cash Flow Ratio</u>				
Net Cash Flow ²	108,544	359,033	136,253	199,658
Market Value of Assets (MVA)	20,766,051	18,482,915	15,167,320	10,072,572
Ratio	0.5%	1.9%	0.9%	2.0%

¹ Excludes terminated participants awaiting a refund of member contributions.

² 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>
1998	39,753.00	_____%
1999	46,790.00	17.7%
2000	112,773.00	141.0%
2001	68,646.00	-39.1%
2002	82,877.00	20.7%
2003	92,713.77	11.9%
2004	106,715.77	15.1%
2005	117,621.48	10.2%
2006	117,621.48	0.0%
2007	117,621.48	0.0%
2008	122,800.00	4.4%
2009	137,781.90	12.2%
2010	134,851.83	-2.1%
2011	133,477.13	-1.0%
2012	139,262.54	4.3%
2013	145,960.60	4.8%
2014	147,867.54	1.3%
2015	145,700.02	-1.5%
2016	169,027.15	16.0%
2017	168,628.24	-0.2%
2018	188,923.04	12.0%
2019	198,770.00	5.2%
2020	208,644.92	5.0%
2021	206,017.47	-1.3%
2022	227,003.04	10.2%
2023	272,496.18	20.0%

STATEMENT OF FIDUCIARY NET POSITION
SEPTEMBER 30, 2023

<u>ASSETS</u>	COST VALUE	MARKET VALUE
Cash and Cash Equivalents:		
Short Term Investments	1,889,186.41	1,889,186.41
Cash	(2,250.61)	(2,250.61)
Total Cash and Equivalents	1,886,935.80	1,886,935.80
Receivables:		
Investment Income	25,838.09	25,838.09
Total Receivable	25,838.09	25,838.09
Investments:		
U. S. Bonds and Bills	1,341,692.05	1,314,454.38
Federal Agency Guaranteed Securities	699,121.71	636,455.18
Corporate Bonds	2,181,191.26	1,980,512.79
Municipal Obligations	161,265.56	127,329.39
Stocks	10,567,194.23	11,321,681.17
Mutual Funds:		
Equity	2,580,195.16	2,687,964.63
Pooled/Common/Commingled Funds:		
Real Estate	650,000.00	784,880.00
Total Investments	18,180,659.97	18,853,277.54
Total Assets	20,093,433.86	20,766,051.43
<u>LIABILITIES</u>		
Total Liabilities	0.00	0.00
NET POSITION RESTRICTED FOR PENSIONS	20,093,433.86	20,766,051.43

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

ADDITIONS

Contributions:		
Member		234,525.05
City		763,666.00
State		272,496.18
Total Contributions		1,270,687.23
Investment Income:		
Net Realized Gain (Loss)	12,429.33	
Unrealized Gain (Loss)	1,767,329.43	
Net Increase in Fair Value of Investments		1,779,758.76
Interest & Dividends		532,233.53
Less Investment Expense ¹		(137,399.17)
Net Investment Income		2,174,593.12
Total Additions		3,445,280.35

DEDUCTIONS

Distributions to Members:		
Benefit Payments		814,061.87
Lump Sum DROP Distributions		232,558.00
Refunds of Member Contributions		25,274.56
Total Distributions		1,071,894.43
Administrative Expense		90,249.17
Total Deductions		1,162,143.60
Net Increase in Net Position		2,283,136.75
NET POSITION RESTRICTED FOR PENSIONS		
Beginning of the Year		18,482,914.68
End of the Year		20,766,051.43

¹Investment related expenses include investment advisory, custodial and performance monitoring fees.

ACTUARIAL ASSET VALUATION
September 30, 2023

Actuarial Assets for funding purposes are developed by recognizing the total actuarial investment gain or loss for each Plan Year over a four year period. In the first year, 25% of the gain or loss is recognized. In the second year 50%, in the third year 75%, and in the fourth year 100% of the gain or loss is recognized. The actuarial investment gain or loss is defined as the actual return on investments minus the actuarial assumed investment return. Actuarial Assets shall not be less than 80% nor greater than 120% of Market Value of Assets.

Plan Year Ending	Gain/Loss	<u>Gains/(Losses) Not Yet Recognized</u>			
		Amounts Not Yet Recognized by Valuation Year			
		2023	2024	2025	2026
09/30/2020	(177,768)	0	0	0	0
09/30/2021	2,871,059	717,764	0	0	0
09/30/2022	(4,961,648)	(2,480,824)	(1,240,412)	0	0
09/30/2023	858,453	643,840	429,227	214,614	0
Total		(1,119,220)	(811,185)	214,614	0

<u>Development of Investment Gain/(Loss)</u>	
Market Value of Assets, 09/30/2022	18,482,915
Contributions Less Benefit Payments & Admin Expenses	108,544
Expected Investment Earnings*	1,316,140
Actual Net Investment Earnings	2,174,593
2023 Actuarial Investment Gain/(Loss)	858,453

*Expected Investment Earnings = $0.071 * (18,482,915 + 0.5 * 108,544)$

<u>Development of Actuarial Value of Assets</u>	
(1) Market Value of Assets, 09/30/2023	20,766,051
(2) Gains/(Losses) Not Yet Recognized	(1,119,220)
(3) Actuarial Value of Assets, 09/30/2023, (1) - (2)	21,885,271
(4) Limited Actuarial Value of Assets, 09/30/2023	21,885,271
 (A) 09/30/2022 Actuarial Assets:	 20,813,064
 (I) Net Investment Income:	
1. Interest and Dividends	532,234
2. Realized Gain (Loss)	12,429
3. Unrealized Gain (Loss)	1,767,329
4. Change in Actuarial Value	(1,210,929)
5. Investment Expenses	(137,399)
Total	963,664
 (B) 09/30/2023 Actuarial Assets:	 21,885,271
 Actuarial Asset Rate of Return = $2I/(A+B-I)$:	 4.62%
Market Value of Assets Rate of Return:	11.66%
 10/01/2023 Limited Actuarial Assets:	 21,885,271
 Actuarial Gain/(Loss) due to Investment Return (Actuarial Asset Basis)	 (517,917)

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

REVENUES

Contributions:		
Member	234,525.05	
City	763,666.00	
State	272,496.18	
 Total Contributions		 1,270,687.23
Earnings from Investments:		
Interest & Dividends	532,233.53	
Net Realized Gain (Loss)	12,429.33	
Unrealized Gain (Loss)	1,767,329.43	
Change in Actuarial Value	(1,210,929.00)	
 Total Earnings and Investment Gains		 1,101,063.29

EXPENDITURES

Distributions to Members:		
Benefit Payments	814,061.87	
Lump Sum DROP Distributions	232,558.00	
Refunds of Member Contributions	25,274.56	
 Total Distributions		 1,071,894.43
Expenses:		
Investment related ¹	137,399.17	
Administrative	90,249.17	
 Total Expenses		 227,648.34
 Change in Net Assets for the Year		 1,072,207.75
 Net Assets Beginning of the Year		 20,813,063.68
 Net Assets End of the Year ²		 21,885,271.43

¹Investment related expenses include investment advisory, custodial and performance monitoring fees.

²Net Assets may be limited for actuarial consideration.

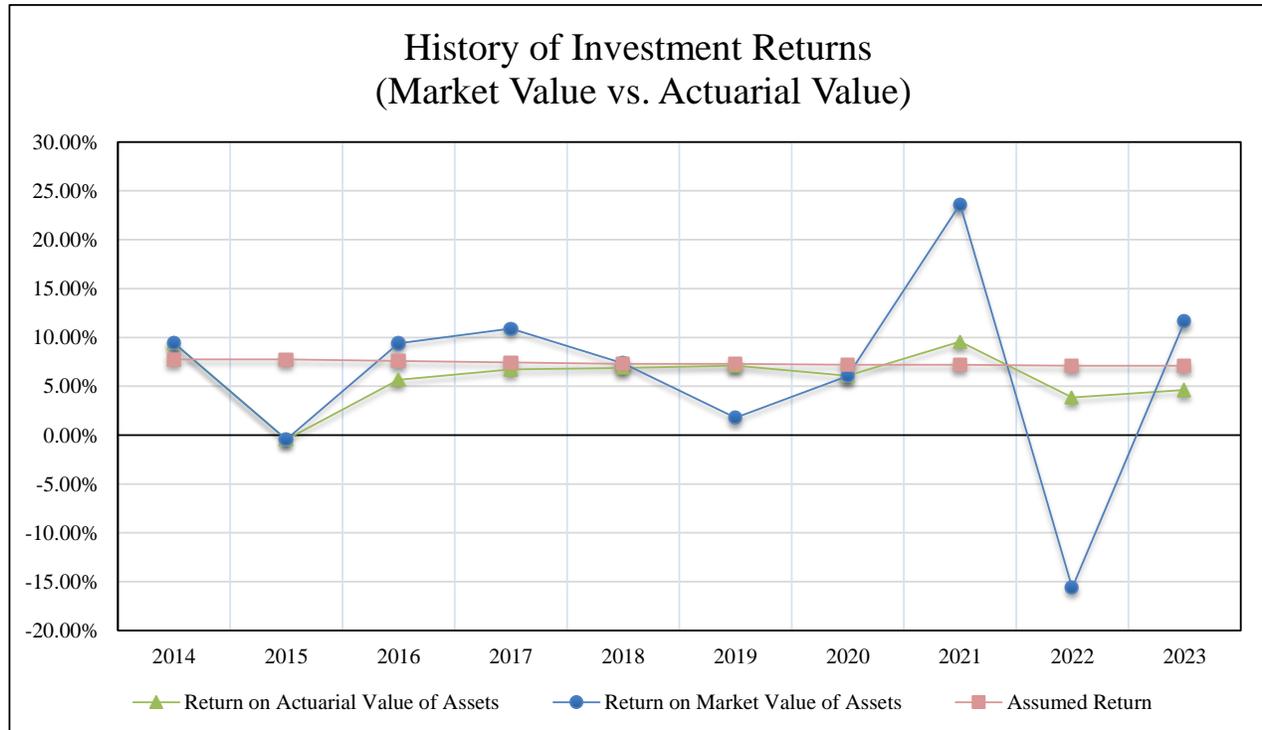
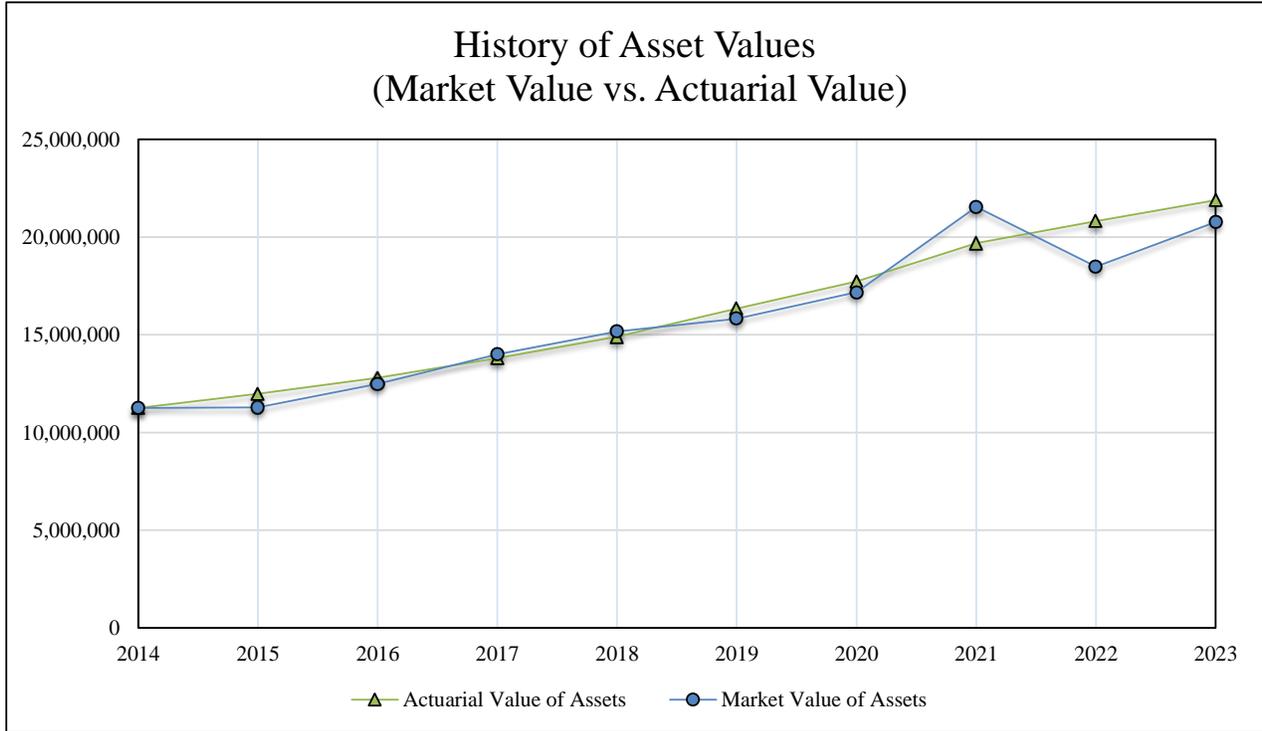
DEFERRED RETIREMENT OPTION PLAN ACTIVITY
October 1, 2022 to September 30, 2023

Beginning of the Year Balance	604,649.32
Plus Additions	284,432.16
Investment Return Earned	9,439.51
Less Distributions	(232,558.00)
End of the Year Balance	665,962.99

CITY CONTRIBUTIONS IN EXCESS OF MINIMUM REQUIREMENT
FOR THE FISCAL YEAR ENDED (FYE) SEPTEMBER 30, 2023

(1)	City and State Required Contribution Rate	30.6%
(2)	Pensionable Payroll Derived from Member Contributions	\$2,931,563.13
(3)	City and State Required Contribution (1) x (2)	897,058.32
(4)	Less Allowable State Contribution	<u>(272,496.18)</u>
(5)	Equals Required City Contribution for Fiscal 2023	624,562.14
(6)	Less 2022 Prepaid Contribution	0.00
(7)	Less Actual City Contributions	<u>(763,666.00)</u>
(8)	City Contributions in Excess of Minimum Requirement Applied to Reduce Unfunded Actuarial Accrued Liability as of September 30, 2023	(\$139,103.86)

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	35	39	40
Average Current Age	41.6	42.1	41.4	40.9
Average Age at Employment	31.1	31.4	31.1	30.9
Average Past Service	10.5	10.7	10.3	10.0
Average Annual Salary	\$79,656	\$77,265	\$71,463	\$69,362
<u>Service Retirees</u>				
Number	15	14	13	13
Average Current Age	62.9	62.1	61.7	62.2
Average Annual Benefit	\$52,216	\$49,442	\$50,873	\$52,021
<u>DROP Retirees</u>				
Number	2	3	2	1
Average Current Age	57.9	57.6	57.5	56.2
Average Annual Benefit	\$105,295	\$99,819	\$107,917	\$126,579
<u>Beneficiaries</u>				
Number	2	2	2	0
Average Current Age	66.5	65.5	64.5	N/A
Average Annual Benefit	\$52,249	\$52,249	\$52,249	N/A
<u>Disability Retirees</u>				
Number	4	4	4	4
Average Current Age	62.5	61.5	60.5	59.5
Average Annual Benefit	\$19,545	\$19,545	\$19,545	\$19,545
<u>Terminated Vested</u>				
Number	16	12	11	10
Average Current Age ¹	44.1	49.9	52.3	51.9
Average Annual Benefit ¹	\$18,614	\$17,914	\$16,758	\$26,279

¹ 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	1		1						4
30 - 34	2					1						3
35 - 39	1	1	1	1		1	1	1				7
40 - 44						1	2	3				6
45 - 49		1				1		1	2	2		7
50 - 54						1	2		1			4
55 - 59						2		1	1			4
60 - 64												0
65+												0
Total	5	2	2	2	0	8	5	6	4	2	0	36

VALUATION PARTICIPANT RECONCILIATION

1. Active lives

a. Number in prior valuation 10/1/2022	35
b. Terminations	
i. Vested (partial or full) with deferred annuity	(2)
ii. Vested in refund of member contributions only	(2)
iii. Refund of member contributions or full lump sum distribution	(2)
c. Deaths	
i. Beneficiary receiving benefits	0
ii. No future benefits payable	0
d. Disabled	0
e. Retired	0
f. DROP	<u>0</u>
g. Continuing participants	29
h. New entrants / Rehires	<u>7</u>
i. Total active life participants in valuation	36

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

	Service Retirees, Vested Receiving	DROP Benefits	Receiving Death Benefits	Receiving Disability Benefits	Vested (Deferred Annuity)	Vested (Due Refund)	<u>Total</u>
a. Number prior valuation	14	3	2	4	5	7	35
Retired	1	(1)					0
DROP							0
Vested (Deferred Annuity)					2		2
Vested (Due Refund)						2	2
Hired/Terminated in Same Year						1	1
Death, With Survivor							0
Death, No Survivor							0
Disabled							0
Refund of Contributions					(1)		(1)
Rehires							0
Expired Annuities							0
Data Corrections							0
b. Number current valuation	15	2	2	4	6	10	39

SUMMARY OF CURRENT PLAN
(Through Ordinance O-21-02)

<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.
<u>Salary</u>	Total cash compensation reportable on Form W-2, paid during the fiscal year, for services rendered to the City as a Police Officer. For Credited Service after July 1, 2011, annual overtime shall not exceed 300 hours. Additionally, payment for unused sick and annual leave time shall not be considered pensionable for hours accrued after July 1, 2011. Also, payment for overtime and unused sick and annual leave time at the time of termination shall not exceed the amounts in place on July 1, 2011.
<u>Average Final Compensation</u>	Average Earnings for the highest 5 years during the 10 years immediately preceding retirement or termination.
<u>Member Contributions</u>	8% of Salary.
<u>City and State Contributions</u>	Remaining amount required in order to pay current costs and amortize unfunded past service cost, if any, over a period not exceeding 30 years.
<u>Normal Retirement</u>	
Date	Earlier of: 1) age 55 and 10 years of Credited Service, or 2) age 52 and 25 years of Credited Service.
Benefit	
Members hired prior to 4/11/12	3.0% of Average Final Compensation for each year of Credited Service.
Members hired after 4/10/12	2.0% of Average Final Compensation for each year of Credited Service through September 30, 2016, plus 3.0% of Average Final Compensation for years of Credited Service after September 30, 2016.
Form of Benefit	Ten Year Certain and Life Annuity (options available).
<u>Early Retirement</u>	
Eligibility	Age 50 and 10 Years of Credited Service.
Benefit	Accrued benefit, reduced 3% per year prior to Normal Retirement.

Vesting

Schedule	100% after 10 years of Credited Service.
Benefit Amount	Member will receive the vested portion of his (her) accrued benefit payable at the otherwise Normal Retirement Date.

Deferred Retirement Option Plan

Eligibility	Satisfaction of Normal Retirement requirements.
Participation	Not to exceed 60 months.
Rate of Return	1.30% annual interest, compounded monthly
Form of Distribution	Lump sum (options available) at termination of employment.

Disability

Eligibility	
Service Incurred	Covered from Date of Employment.
Non-Service Incurred	10 years of Credited Service.
Benefit	
Service Incurred	Accrued benefit, but not less than 42% of Average Final Compensation.
Non-Service Incurred	Accrued benefit, but not less than 25% of Average Final Compensation.
Duration	Payable for life, with ten years certain, or until recovery (as determined by the Board).

Death Benefits

Pre-Retirement	
Non-vested	Refund of accumulated contributions.
Vested	Accrued benefit payable to Beneficiary for 10 years at otherwise Normal Retirement Date.
Post-Retirement	Benefits payable to beneficiary in accordance with option selected at retirement.

Cost-of-Living Adjustment

A 1% automatic cost-of-living adjustment (COLA), beginning on the first October 1 following age 58 for Members retiring after August 23, 2017 with at least 15 years of Credited Service. The COLA is applicable to all categories of retirement, including Normal, Early, Vesting, Disability, and pre-retirement death Beneficiaries.

Board of Trustees

- a. Two City Council appointees,
- b. Two Members of the System, elected by the Membership, and
- c. Fifth Trustee elected by other 4 and appointed by City Council.

Supplemental Benefit:
Chapter 185 Share Accounts

Effective September 30, 2015, excess Premium tax monies received pursuant to Chapter 185, Florida Statutes will be allocated to individual Member share accounts based on years of Credited Service.

Excess Monies

The current Mutual Consent between the City and Membership allows the City to utilize all future Chapter 185 Premium tax monies to assist with Plan funding. Therefore, no excess monies are available for Share Plan allocation.

Investment Earnings

Plan earnings, net of investment-related expenses.

Expenses

Based on expenses related to administration of the Share Plan, debited against individual accounts on a pro-rata basis.