

NORTH BAY FIRE DISTRICT
FIREFIGHTERS' PENSION TRUST FUND

ACTUARIAL VALUATION
AS OF OCTOBER 1, 2024

CONTRIBUTIONS APPLICABLE TO THE
PLAN/FISCAL YEAR ENDING SEPTEMBER 30, 2026



FOSTER & FOSTER
ACTUARIES AND CONSULTANTS

January 9, 2025

Board of Trustees
North Bay Fire District
Firefighters' Pension Board

Re: North Bay Fire District Firefighters' Pension Trust Fund

Dear Board:

We are pleased to present to the Board this report of the annual actuarial valuation of the North Bay Fire District Firefighters' Pension Trust Fund. 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 175, 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 North Bay Fire District, 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 North Bay Fire District, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the Firefighters' Pension Trust Fund. 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,

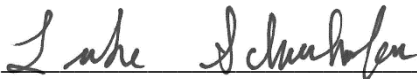
Foster & Foster, Inc.

By:



Joseph L. Griffin, ASA, EA, MAAA
Enrolled Actuary #23-6938

By:



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

JLG/ike

Enclosures

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SUMMARY OF REPORT

The regular annual actuarial valuation of the North Bay Fire District Firefighters' Pension Trust Fund, performed as of October 1, 2024, 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, 2026.

The contribution requirements, compared with those set forth in the October 1, 2023 actuarial valuation report, are as follows:

Valuation Date	10/1/2024	10/1/2023
Applicable to Fiscal Year Ending	<u>9/30/2026</u>	<u>9/30/2025</u>
Minimum Required Contribution	\$594,552	\$465,074
Member Contributions (Est.)	94,236	80,710
District And State Required Contribution	500,316	384,364
State Contribution (Est.) ¹	215,718	215,718
District Required Contribution (Est.) ²	\$284,598	\$168,646

¹ Represents the amount received in calendar 2024. As per a Mutual Consent Agreement between the Membership and the District, all State Monies received each year will be available to offset the District’s required contribution.

² Please note that the District has access to a prepaid contribution of \$222,511.30 that is available to offset a portion of the above stated requirements for the fiscal year ending September 30, 2025.

As you can see, the Minimum Required Contribution shows an increase when compared to the results set forth in the October 1, 2023 actuarial valuation report. The increase is mainly attributable to net unfavorable plan experience as described in the following paragraph and a reduction in the assumed rate of investment return from 7.25% to 7.125%.

Plan experience was unfavorable overall on the basis of the plan's actuarial assumptions. The primary source of actuarial loss was an average salary increase of 17.37% which exceeded the 5.23% assumption. This loss was offset in part by gains associated with fewer retirements than expected and an investment return of 7.75% (Actuarial Asset Basis) which exceeded the 7.25% assumption.

CHANGES SINCE PRIOR VALUATION

Plan Changes

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

Actuarial Assumption/Method Changes

The assumed rate of investment return was reduced from 7.25% to 7.125%, net of investment related expenses.

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	New Assump <u>10/1/2024</u>	Old Assump <u>10/1/2024</u>	<u>10/1/2023</u>
A. Participant Data			
Actives	16	16	16
Service Retirees	3	3	3
Beneficiaries	1	1	1
Disability Retirees	3	3	3
Terminated Vested	<u>8</u>	<u>8</u>	<u>7</u>
Total	31	31	30
 Projected Annual Payroll	 1,425,558	 1,425,558	 1,223,026
 Annual Rate of Payments to:			
Service Retirees	113,064	113,064	113,064
Beneficiaries	57,356	57,356	57,356
Disability Retirees	38,524	38,524	38,524
Terminated Vested	87,241	87,241	42,122
 B. Assets			
Actuarial Value (AVA) ¹	8,314,645	8,314,645	7,520,310
Market Value (MVA) ¹	8,665,681	8,665,681	6,998,258
 C. Liabilities			
Present Value of Benefits			
Actives			
Retirement Benefits	8,912,024	8,709,240	7,601,218
Disability Benefits	84,500	82,828	69,360
Death Benefits	47,873	46,966	39,724
Vested Benefits	599,968	584,495	498,017
Refund of Contributions	30,300	30,222	24,551
Service Retirees	1,348,344	1,332,612	1,346,985
Beneficiaries	660,703	653,466	661,070
Disability Retirees	439,299	434,130	438,810
Terminated Vested	729,319	717,061	249,355
Share Plan Balances ¹	<u>0</u>	<u>0</u>	<u>0</u>
 Total	 12,852,330	 12,591,020	 10,929,090

C. Liabilities - (Continued)	New Assump <u>10/1/2024</u>	Old Assump <u>10/1/2024</u>	<u>10/1/2023</u>
Present Value of Future Salaries	11,907,752	11,825,148	9,839,305
Present Value of Future Member Contributions	714,465	709,509	590,358
Normal Cost (Retirement)	342,386	332,944	288,629
Normal Cost (Disability)	6,213	6,105	4,987
Normal Cost (Death)	2,824	2,769	2,405
Normal Cost (Vesting)	31,760	30,852	25,711
Normal Cost (Refunds)	<u>6,117</u>	<u>6,108</u>	<u>4,432</u>
Total Normal Cost	389,300	378,778	326,164
Present Value of Future Normal Costs	3,357,681	3,243,992	2,689,053
Accrued Liability (Retirement)	5,937,452	5,836,432	5,220,187
Accrued Liability (Disability)	32,010	31,605	29,579
Accrued Liability (Death)	25,266	24,974	21,572
Accrued Liability (Vesting)	314,509	308,990	265,864
Accrued Liability (Refunds)	7,747	7,758	6,615
Accrued Liability (Inactives)	3,177,665	3,137,269	2,696,220
Share Plan Balances ¹	<u>0</u>	<u>0</u>	<u>0</u>
Total Actuarial Accrued Liability (EAN AL)	9,494,649	9,347,028	8,240,037
Unfunded Actuarial Accrued Liability (UAAL)	1,180,004	1,032,383	719,727
Funded Ratio (AVA / EAN AL)	87.6%	89.0%	91.3%

D. Actuarial Present Value of Accrued Benefits	New Assump <u>10/1/2024</u>	Old Assump <u>10/1/2024</u>	<u>10/1/2023</u>
Vested Accrued Benefits			
Inactives + Share Plan Balances ¹	3,177,665	3,137,269	2,696,220
Actives	2,942,777	2,886,829	2,950,519
Member Contributions	<u>580,306</u>	<u>580,306</u>	<u>513,967</u>
Total	6,700,748	6,604,404	6,160,706
Non-vested Accrued Benefits	<u>707,729</u>	<u>688,761</u>	<u>521,017</u>
Total Present Value Accrued Benefits (PVAB)	7,408,477	7,293,165	6,681,723
Funded Ratio (MVA / PVAB)	117.0%	118.8%	104.7%
Increase (Decrease) in Present Value of Accrued Benefits Attributable to:			
Plan Amendments	0	0	
Assumption Changes	115,312	0	
Plan Experience	0	343,535	
Benefits Paid	0	(208,944)	
Interest	0	476,851	
Other	<u>0</u>	<u>0</u>	
Total	115,312	611,442	

	New Assump	Old Assump	
Valuation Date	10/1/2024	10/1/2024	10/1/2023
Applicable to Fiscal Year Ending	<u>9/30/2026</u>	<u>9/30/2026</u>	<u>9/30/2025</u>
E. Pension Cost			
Normal Cost ²	\$428,910	\$417,317	\$358,736
Administrative Expenses ²	49,738	49,738	36,633
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 23 years (as of 10/1/2024) ²	115,904	102,295	69,705
Minimum Required Contribution	594,552	569,350	465,074
Expected Member Contributions ²	94,236	94,236	80,710
Expected District and State Contribution	500,316	475,114	384,364
F. Past Contributions			
Plan Years Ending:	<u>9/30/2024</u>		
District and State Requirement	360,537		
Actual Contributions Made:			
District	144,819		
State	<u>215,718</u>		
Total	360,537		
G. Net Actuarial (Gain)/Loss	327,363		

¹ The asset values and liabilities include accumulated Share Plan Balances as of 9/30/2024 and 9/30/2023.

² Contributions developed as of 10/1/2024 displayed above have been adjusted to account for assumed salary increase and interest components.

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

<u>Year</u>	<u>Projected Unfunded Actuarial Accrued Liability</u>
2024	1,180,004
2025	1,151,382
2026	1,120,721
2031	931,372
2037	598,892
2042	223,859
2047	0

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

	<u>Actual</u>	<u>Assumed</u>
Year Ended 9/30/2024	17.37%	5.23%
Year Ended 9/30/2023	1.59%	5.28%
Year Ended 9/30/2022	2.51%	6.16%
Year Ended 9/30/2021	13.22%	6.25%
Year Ended 9/30/2020	9.57%	6.60%

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

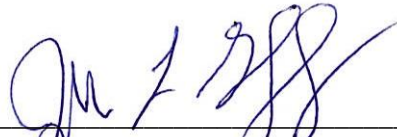
	<u>Market Value</u>	<u>Actuarial Value</u>	<u>Assumed</u>
Year Ended 9/30/2024	20.74%	7.75%	7.25%
Year Ended 9/30/2023	9.28%	4.55%	7.25%
Year Ended 9/30/2022	-14.88%	5.52%	7.25%
Year Ended 9/30/2021	21.45%	10.20%	7.50%
Year Ended 9/30/2020	9.82%	7.30%	7.50%

(iii) Average Annual Payroll Growth

(a) Payroll as of:	10/1/2024	\$1,425,558
	10/1/2014	740,577
(b) Total Increase		92.49%
(c) Number of Years		10.00
(d) Average Annual Rate		6.77%

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.



Joseph L. Griffin, EA, ASA, MAAA
Enrolled Actuary #23-6938

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

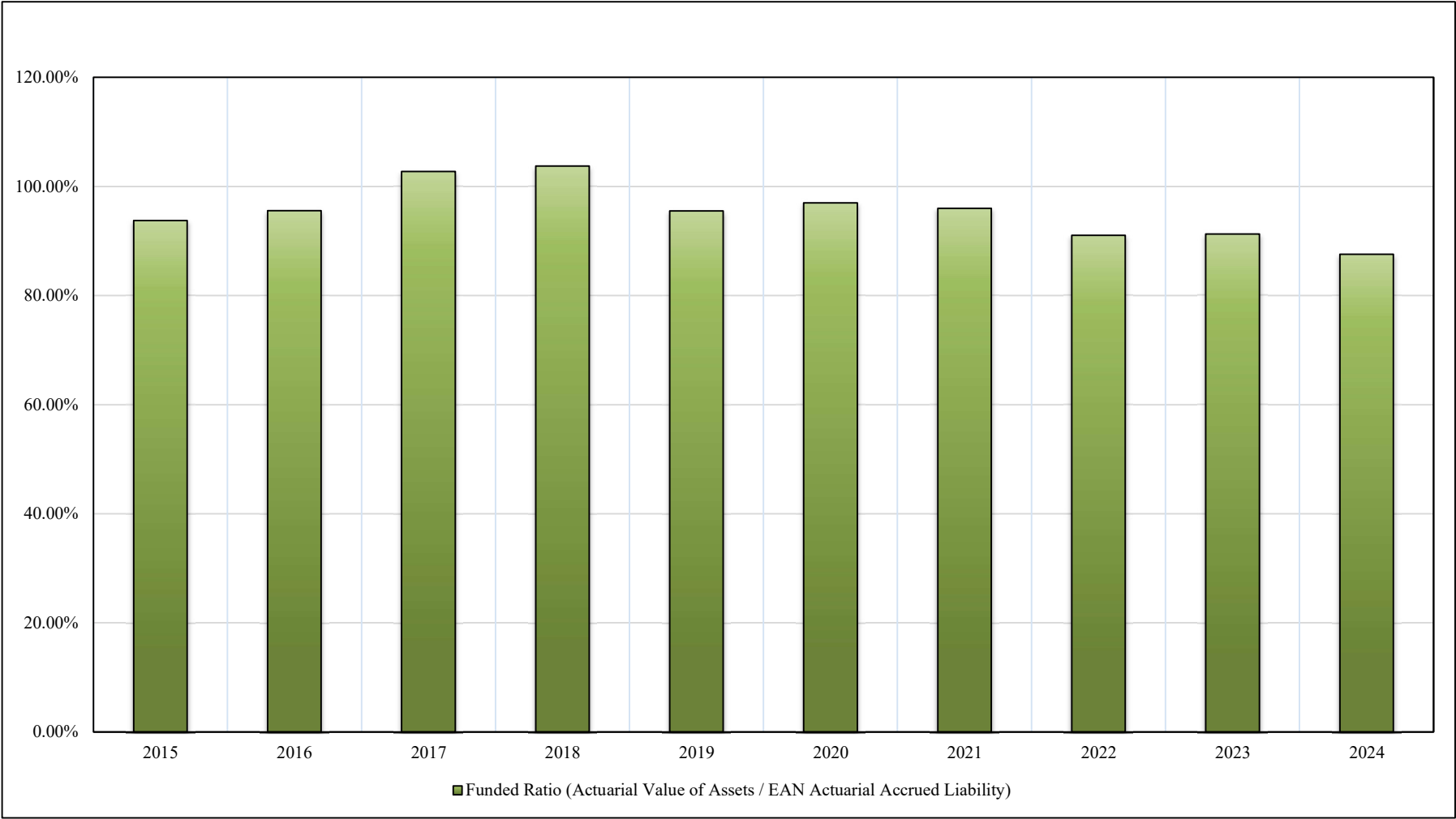
(1) Unfunded Actuarial Accrued Liability as of October 1, 2023	\$719,727
(2) Sponsor Normal Cost developed as of October 1, 2023	252,782
(3) Expected administrative expenses for the year ended September 30, 2024	33,307
(4) Expected interest on (1), (2) and (3)	71,714
(5) Sponsor contributions to the System during the year ended September 30, 2024	360,537
(6) Expected interest on (5)	11,973
(7) Expected Unfunded Actuarial Accrued Liability as of September 30, 2024 (1)+(2)+(3)+(4)-(5)-(6)	705,020
(8) Change to UAAL due to Assumption Change	147,621
(9) Change to UAAL due to Actuarial (Gain)/Loss	327,363
(10) Unfunded Actuarial Accrued Liability as of October 1, 2024	1,180,004

<u>Type of Base</u>	<u>Date Established</u>	<u>Years Remaining</u>	<u>10/1/2024 Amount</u>	<u>Amortization Amount</u>
Initial Base	10/1/2017	13	(83,456)	(9,388)
Actuarial Loss	10/1/2018	14	56,121	6,035
Method Change	10/1/2018	14	(91,369)	(9,826)
Benefits Change	10/1/2018	14	(181)	(19)
Actuarial Loss	10/1/2019	15	171,737	17,741
Assump Change	10/1/2019	15	116,876	12,074
Actuarial Gain	10/1/2020	16	(26,478)	(2,638)
Assump Change	10/1/2020	16	(35,597)	(3,547)
Actuarial Gain	10/1/2021	17	(54,705)	(5,276)
Assump Change	10/1/2021	17	206,903	19,954
Actuarial Loss	10/1/2022	18	70,479	6,600
Benefits Change	10/1/2022	23	392,342	32,839
Actuarial Gain	10/1/2023	19	(17,652)	(1,609)
Actuarial Loss	10/1/2024	20	327,363	29,126
Assump Change	10/1/2024	20	147,621	13,134
			1,180,004	105,200

DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

(1) Unfunded Actuarial Accrued Liability (UAAL) as of October 1, 2023	\$719,727
(2) Expected UAAL as of October 1, 2024	705,020
 (3) Summary of Actuarial (Gain)/Loss, by component:	
Investment Return (Actuarial Asset Basis)	(39,040)
Salary Increases	411,246
Active Decrements	(46,099)
Inactive Mortality	13,893
Other	<u>(12,637)</u>
Increase in UAAL due to (Gain)/Loss	327,363
Assumption Changes	<u>147,621</u>
(4) Actual UAAL as of October 1, 2024	\$1,180,004

HISTORY OF FUNDING PROGRESS



ACTUARIAL ASSUMPTIONS AND METHODS

Mortality Rate

Healthy Active Lives:

Female: PubS.H-2010 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

7.125% (prior year 7.25%) 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

8.0% for the first 4 years of Credited Service and 5.0% thereafter. This assumption was adopted based on the June 6, 2017 actuarial 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

\$45,145 annually, based on the average of actual expenses incurred in the prior two fiscal years.

Amortization Method

New UAAL amortization bases are amortized over 20 years.

The amortization payment is subject to a minimum based on a 30-year amortization of the UAAL, if the UAAL is positive, 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.

Retirement Age

Earlier of Age 55 and 10 years of service or 25 years of service regardless of age. Also, any Member who has reached Normal Retirement is assumed to continue employment for one additional year. We feel this assumption is reasonable based on the plan provisions.

Early Retirement

Commencing with the earliest Early Retirement Age (50), Members are assumed to retire with an immediate subsidized benefit at the rate of 5% per year. We feel this assumption is reasonable based on the plan provisions.

Disability Rate

See table later in this section. It is assumed that 90% of disablements and active Member deaths are service related. This assumption was developed from those used by other plans containing Florida municipal Firefighters.

Termination Rate

See table later in this section. This assumption was developed from those used by other plans containing Florida municipal Firefighters.

Funding Method

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

Interest - To reflect payments made at the end of each quarter, based on the current 7.25% assumption.

Salary - A full year, based on current 5.40% assumption.

Asset Valuation Method

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

Low-Default-Risk Obligation Measure

Based on the Entry Age Normal Actuarial Cost Method and an interest rate of 4.06% 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, 2024. All other assumptions for the Low-Default-Risk Obligation Measure are consistent with the assumptions shown in this section unless otherwise noted.

<u>% Terminating During the Year</u>		<u>% Becoming Disabled During the Year</u>	
<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
20	6.0%	20	0.03%
25	5.7%	25	0.03%
30	5.0%	30	0.04%
35	3.8%	35	0.05%
40	2.6%	40	0.07%
45	1.6%	45	0.10%
50	0.8%	50	0.18%
55	0.3%	55	0.36%
60	0.2%	60	0.90%
65	0.2%	65+	2.22%
70	0.2%		

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.
- 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 433.3% on October 1, 2014 to 160.0% on October 1, 2024, 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 33.5%. With a plan of this maturity, losses due to lower than expected investment returns or demographic factors may result in lower volatility in contribution requirements when compared to a more 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 decreased from 88.8% on October 1, 2014 to 87.6% on October 1, 2024.
- 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 8.2% on October 1, 2014 to 2.2% on October 1, 2024. The current Net Cash Flow Ratio of 2.2% indicates that contributions are generally in excess of 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 10 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 4.06%, resulting in an LDROM of \$14,566,886. 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>10/1/2024</u>	<u>10/1/2023</u>	<u>10/1/2019</u>	<u>10/1/2014</u>
<u>Support Ratio</u>				
Total Actives	16	16	16	13
Total Inactives ¹	10	9	8	3
Actives / Inactives ¹	160.0%	177.8%	200.0%	433.3%

Asset Volatility Ratio

Market Value of Assets (MVA)	8,665,681	6,998,258	5,231,892	3,274,026
Total Annual Payroll	1,425,558	1,223,026	973,182	740,577
MVA / Total Annual Payroll	607.9%	572.2%	537.6%	442.1%

Accrued Liability (AL) Ratio

Inactive Accrued Liability	3,177,665	2,696,220	2,645,706	741,760
Total Accrued Liability (EAN)	9,494,649	8,240,037	5,585,613	3,462,936
Inactive AL / Total AL	33.5%	32.7%	47.4%	21.4%

Funded Ratio

Actuarial Value of Assets (AVA)	8,314,645	7,520,310	5,335,648	3,075,736
Total Accrued Liability (EAN)	9,494,649	8,240,037	5,585,613	3,462,936
AVA / Total Accrued Liability (EAN)	87.6%	91.3%	95.5%	88.8%

Net Cash Flow Ratio

Net Cash Flow ²	189,503	122,046	57,619	267,192
Market Value of Assets (MVA)	8,665,681	6,998,258	5,231,892	3,274,026
Ratio	2.2%	1.7%	1.1%	8.2%

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	12,899.20	_____ %
1999	16,762.16	29.9%
2000	19,060.35	13.7%
2001	22,546.42	18.3%
2002	24,345.00	8.0%
2003	30,197.67	24.0%
2004	32,799.43	8.6%
2005	38,385.97	17.0%
2006	44,709.46	16.5%
2007	65,574.57	46.7%
2008	104,942.35	60.0%
2009	107,950.54	2.9%
2010	91,832.55	-14.9%
2011	117,749.32	28.2%
2012	96,458.03	-18.1%
2013	108,137.86	12.1%
2014	122,408.31	13.2%
2015	103,271.36	-15.6%
2016	92,377.22	-10.5%
2017	70,246.48	-24.0%
2018	69,082.65	-1.7%
2019	67,868.16	-1.8%
2020	74,986.86	10.5%
2021	76,434.90	1.9%
2022	123,429.35	61.5%
2023	163,596.37	32.5%
2024	215,717.81	31.9%

STATEMENT OF FIDUCIARY NET POSITION
SEPTEMBER 30, 2024

<u>ASSETS</u>	COST VALUE	MARKET VALUE
Cash and Cash Equivalents:		
Short Term Investments	248,600.71	248,600.71
Total Cash and Equivalents	248,600.71	248,600.71
Receivables:		
District Contributions in Transit	51,997.52	51,997.52
State Contributions	63,745.98	63,745.98
Total Receivable	115,743.50	115,743.50
Investments:		
Mutual Funds:		
Fixed Income	1,954,948.30	1,861,857.81
Equity	4,491,981.33	6,122,176.35
Pooled/Common/Commingled Funds:		
Real Estate	652,897.05	545,096.57
Total Investments	7,099,826.68	8,529,130.73
Total Assets	7,464,170.89	8,893,474.94
<u>LIABILITIES</u>		
Payables:		
Investment Expenses	5,183.16	5,183.16
Administrative Expenses	99.20	99.20
Prepaid District Contribution	222,511.30	222,511.30
Total Liabilities	227,793.66	227,793.66
NET POSITION RESTRICTED FOR PENSIONS	7,236,377.23	8,665,681.28

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED SEPTEMBER 30, 2024
Market Value Basis

ADDITIONS

Contributions:

Member	85,665.45
District	144,819.19
State	215,717.81

Total Contributions 446,202.45

Investment Income:

Net Realized Gain (Loss)	(114,520.08)
Unrealized Gain (Loss)	1,406,490.60
Net Increase in Fair Value of Investments	1,291,970.52
Interest & Dividends	211,991.07
Less Investment Expense ¹	(26,041.63)

Net Investment Income 1,477,919.96

Total Additions 1,924,122.41

DEDUCTIONS

Distributions to Members:

Benefit Payments	208,944.48
Refunds of Member Contributions	0.00

Total Distributions 208,944.48

Administrative Expense 47,754.62

Total Deductions 256,699.10

Net Increase in Net Position 1,667,423.31

NET POSITION RESTRICTED FOR PENSIONS

Beginning of the Year 6,998,257.97

End of the Year 8,665,681.28

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

ACTUARIAL ASSET VALUATION
September 30, 2024

Actuarial Assets for funding purposes are developed by recognizing the total actuarial investment gain or loss for each Plan Year over a five year period. In the first year, 20% of the gain or loss is recognized. In the second year 40%, in the third year 60%, in the fourth year 80%, and in the fifth 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				
		2024	2025	2026	2027	2028
09/30/2020	116,223	0	0	0	0	0
09/30/2021	800,116	160,024	0	0	0	0
09/30/2022	(1,600,718)	(640,286)	(320,142)	0	0	0
09/30/2023	118,860	71,316	47,544	23,772	0	0
09/30/2024	949,977	759,982	569,987	379,992	189,997	0
Total		351,036	297,389	403,764	189,997	0

Development of Investment Gain/Loss

Market Value of Assets, including Prepaid Contributions, 09/30/2023	7,153,670
Contributions Less Benefit Payments & Admin Expenses	256,603
Expected Investment Earnings*	527,943
Actual Net Investment Earnings	1,477,920
2024 Actuarial Investment Gain/(Loss)	949,977

*Expected Investment Earnings = $0.0725 * (7,153,670 + 0.5 * 256,603)$

Development of Actuarial Value of Assets

(1) Market Value of Assets, 09/30/2024	8,665,681
(2) Gains/(Losses) Not Yet Recognized	351,036
(3) Actuarial Value of Assets, 09/30/2024, (1) - (2)	8,314,645
(4) Limited Actuarial Value of Assets, 09/30/2024	8,314,645
 (A) 09/30/2023 Actuarial Assets, including Prepaid Contributions:	 7,675,722
 (I) Net Investment Income:	
1. Interest and Dividends	211,991
2. Realized Gain (Loss)	(114,520)
3. Unrealized Gain (Loss)	1,406,491
4. Change in Actuarial Value	(873,088)
5. Investment Expenses	(26,042)
Total	604,832

(B) 09/30/2024 Actuarial Assets, including Prepaid Contributions: 8,537,157

Actuarial Assets Rate of Return = $2I/(A+B-I)$: 7.75%
Market Value of Assets Rate of Return: 20.74%

Actuarial Gain/(Loss) due to Investment Return (Actuarial Asset Basis) 39,040

CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS
 SEPTEMBER 30, 2024
 Actuarial Asset Basis

REVENUES

Contributions:		
Member	85,665.45	
District	144,819.19	
State	215,717.81	
 Total Contributions		 446,202.45
Earnings from Investments:		
Interest & Dividends	211,991.07	
Net Realized Gain (Loss)	(114,520.08)	
Unrealized Gain (Loss)	1,406,490.60	
Change in Actuarial Value	(873,088.00)	
 Total Earnings and Investment Gains		 630,873.59
 EXPENDITURES		
Distributions to Members:		
Benefit Payments	208,944.48	
Refunds of Member Contributions	0.00	
 Total Distributions		 208,944.48
Expenses:		
Investment related ¹	26,041.63	
Administrative	47,754.62	
 Total Expenses		 73,796.25
 Change in Net Assets for the Year		 794,335.31
 Net Assets Beginning of the Year		 7,520,309.97
 Net Assets End of the Year ²		 8,314,645.28

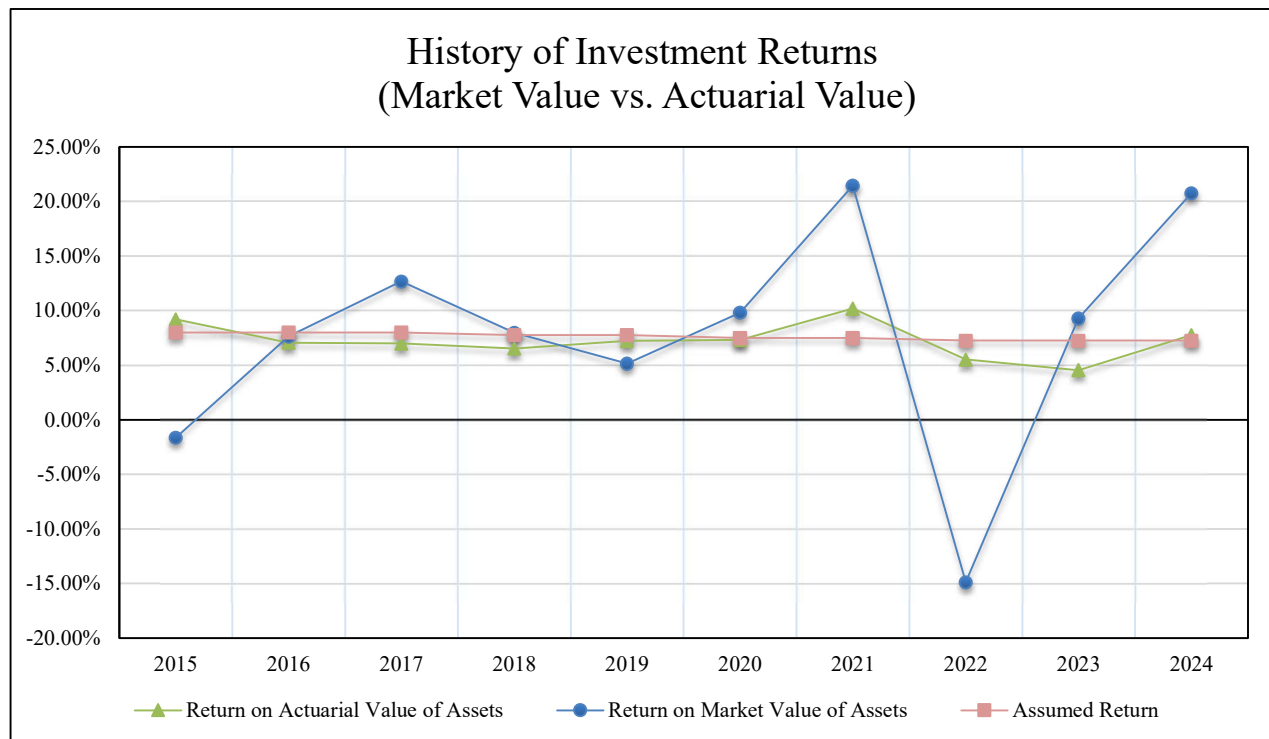
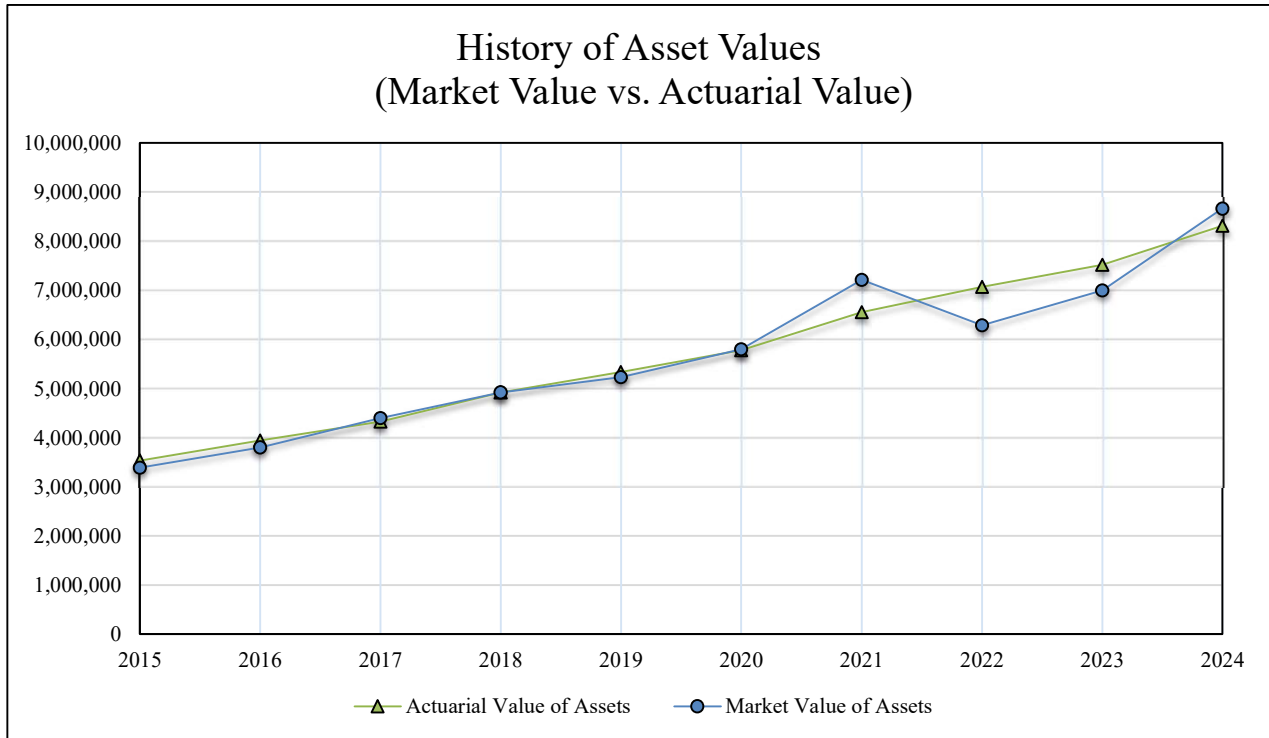
¹Investment related expenses include investment advisory, custodial and performance monitoring fees.

²Net Assets may be limited for actuarial consideration.

RECONCILIATION OF DISTRICT SHORTFALL/(PREPAID) CONTRIBUTION
FOR THE FISCAL YEAR ENDED (FYE) SEPTEMBER 30, 2024

(1) Required District and State Contributions	\$360,537.00
(2) Less Allowable State Contribution	<u>(215,717.81)</u>
(3) Required District Contribution for Fiscal 2024	144,819.19
(4) Less 2023 Prepaid Contribution	(155,412.09)
(5) Less Actual District Contributions	<u>(211,918.40)</u>
(6) Equals District's Shortfall/(Prepaid) Contribution as of September 30, 2024	(\$222,511.30)

HISTORY OF ASSET VALUES AND INVESTMENT RETURNS



STATISTICAL DATA

	<u>10/1/2024</u>	<u>10/1/2023</u>	<u>10/1/2022</u>	<u>10/1/2021</u>
<u>Actives</u>				
Number	16	16	16	15
Average Current Age	39.3	39.8	38.2	38.2
Average Age at Employment	28.2	28.5	27.5	27.8
Average Past Service	11.1	11.3	10.7	10.4
Average Annual Salary	\$89,097	\$76,439	\$76,302	\$76,620
<u>Service Retirees</u>				
Number	3	3	2	2
Average Current Age	62.8	61.8	64.0	63.0
Average Annual Benefit	\$37,688	\$37,688	\$45,641	\$45,641
<u>Beneficiaries</u>				
Number	1	1	1	1
Average Current Age	61.8	60.8	59.8	58.8
Average Annual Benefit	\$57,356	\$57,356	\$57,356	\$57,356
<u>Disability Retirees</u>				
Number	3	3	3	3
Average Current Age	57.5	56.5	55.5	54.5
Average Annual Benefit	\$12,841	\$12,841	\$12,841	\$12,841
<u>Terminated Vested</u>				
Number	8	7	7	7
Average Current Age ¹	46.1	41.7	45.3	44.3
Average Annual Benefit ¹	\$29,080	\$21,061	\$21,734	\$21,734

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												0
25 - 29			1									1
30 - 34	1					3						4
35 - 39						2		2				4
40 - 44		1				1		1				3
45 - 49						2				1		3
50 - 54												0
55 - 59										1		1
60 - 64												0
65+												0
Total	1	1	1	0	0	8	0	3	0	2	0	16

VALUATION PARTICIPANT RECONCILIATION

1. Active lives

a. Number in prior valuation 10/1/2023	16
b. Terminations	
i. Vested (partial or full) with deferred annuity	(1)
ii. Vested in refund of member contributions only	0
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	0
f. Continuing participants	15
g. New entrants / Rehires	<u>1</u>
h. Total active life participants in valuation	16

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	3	1	3	2	5	14
Retired						0
Vested (Deferred Annuity)				1		1
Vested (Due Refund)						0
Hired/Terminated in Same Year						0
Death, With Survivor						0
Death, No Survivor						0
Disabled						0
Refund of Contributions						0
Rehires						0
Expired Annuities						0
Data Corrections						0
b. Number current valuation	3	1	3	3	5	15

SUMMARY OF CURRENT PLAN
(Through Resolution No. 23-01)

<u>Eligibility</u>	Full-time employees who are classified as full-time Firefighters shall participate in the System as a condition of employment.
<u>Credited Service</u>	Total years and fractional parts of years of employment with the District after June 1, 1997, as a Firefighter. Members may purchase service prior to June 1, 1997, by depositing amounts actuarially determined to fully fund the credits.
<u>Salary</u>	Fixed compensation, including tax-deferred and tax-exempt items of income.
<u>Average Final Compensation</u>	Average Salary for the highest 3 years during the 5 years immediately preceding retirement or termination.
<u>Member Contributions</u>	6.0% of Salary.
<u>District / State Contributions</u>	Remaining amounts required in order to pay current costs and amortize unfunded past service cost, if any, as provided in Part VII of Chapter 112, Florida Statutes.
<u>Normal Retirement</u>	
Date	Earlier of: 1) age 55 and 10 years of Credited Service, or 2) age 25 years of Credited Service regardless of age.
Benefit	3.5% of Average Final Compensation <u>times</u> Credited Service through September 30, 2023 plus 3.75% per year of Credited Service on and after October 1, 2023. A member is permitted to buy an increased multiplier of one quarter percent (0.25%) for all service accrued prior to October 1, 2023, by paying the full actuarial cost of the service being purchased.
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 Date.

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.

Disability

Eligibility	
Service Incurred	Covered from Date of Employment.
Non-Service Incurred	10 years of Credited Service.
Benefit	Benefit accrued to date of disability but not less than 42% of Average Final Compensation (Service Incurred), or 25% of Average Final Compensation (Non-Service Incurred).
Duration	Payable for life with 10 year guarantee or until recovery (as determined by the Board). Options available.

Death Benefits

Pre-Retirement	
Vested	Monthly accrued benefit payable to designated beneficiary for 15 years.
Non-Vested	Refund of accumulated contributions without interest.
Post-Retirement	Benefits payable to beneficiary in accordance with option selected at retirement.

Board of Trustees

- a. Two District appointees,
- b. Two Members of the Department elected by the membership, and
- c. Fifth Member elected by other 4 and appointed by District.

Share Plan

A Share Plan exists, but is not currently funded.