CITY OF PALM COAST
VOLUNTEER FIREFIGHTERS' RETIREMENT TRUST FUND

ACTUARIAL VALUATION
AS OF OCTOBER 1, 2023

CONTRIBUTIONS APPLICABLE TO THE
PLAN/FISCAL YEAR ENDING SEPTEMBER 30, 2025

FOSTER & FOSTER
ACTUARIES AND CONSULTANTS

January 15, 2024

Board of Trustees
City of Palm Coast
Firefighters' Pension Board

Re: City of Palm Coast Volunteer Firefighters' Retirement Trust Fund

Dear Board:

We are pleased to present to the Board this report of the annual actuarial valuation of the City of Palm Coast Volunteer Firefighters' Retirement 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 City of Palm Coast, 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 Palm Coast, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the Volunteer Firefighters' Retirement 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: ______________________

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

By: ______________________

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Enclosures

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SUMMARY OF REPORT

The regular annual actuarial valuation of the City of Palm Coast Volunteer Firefighters' Retirement Trust Fund, 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 9/30/2025	10/1/2022 9/30/2024
Minimum Required Contribution [1]	$142,779	$140,193
Member Contributions	0	0
City And State Required Contribution	**142,779**	**140,193**
State Contribution (Est.) [2]	200,000	200,000
City Required Contribution (Est.) [3]	$0	$0

[1] The City must contribute an amount equal to the applicable Normal Cost (adjusted for interest), less the available State Contribution. The Minimum Required Contribution disclosed above reflects this statutory requirement under Chapter 112.66(13).

[2] The City may use up to $200,000 in annual State Monies to offset the required contribution. State Monies in excess of $200,000 are allocated to the Membership Share Plan.

[3] The City has access to a $301,147.26 reserve in the event its contribution requirement is ever greater than $0.

Net plan experience since the prior valuation was unfavorable on the basis of the plan's actuarial assumptions. The primary source of actuarial loss is due to the 4.34% investment return (net of fees, Actuarial Asset Basis), falling short of the 6.00% assumption. This loss was partially offset by favorable turnover experience and inactive mortality 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.

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	10/1/2023	10/1/2022
A. Participant Data		
Actives	28	27
Service Retirees	28	31
Beneficiaries	2	1
Disability Retirees	0	0
Terminated Vested	6	6
Total	64	65
Projected Annual Payroll	0	0
Annual Rate of Payments to:		
Service Retirees	210,956	230,807
Beneficiaries	4,604	1,879
Disability Retirees	0	0
Terminated Vested	36,300	36,300
B. Assets		
Actuarial Value (AVA) [1]	5,965,944	5,638,062
Market Value (MVA) [1]	5,564,274	5,052,699
C. Liabilities		
Present Value of Benefits		
Actives		
Retirement Benefits	1,453,495	1,368,987
Disability Benefits	25,193	24,669
Death Benefits	7,132	7,438
Vested Benefits	64,155	60,412
Service Retirees	1,804,908	2,010,525
Beneficiaries	47,452	28,751
Disability Retirees	0	0
Terminated Vested	220,445	207,200
Share Plan Balances [1]	1,196,684	912,051
City Reserve [1]	301,147	301,147
Total	5,120,611	4,921,180

C. Liabilities - (Continued)	10/1/2023	10/1/2022
Present Value of Future Salaries	0	0
Present Value of Future Member Contributions	0	0
Normal Cost (Retirement)	117,954	115,577
Normal Cost (Disability)	3,125	2,686
Normal Cost (Death)	545	595
Normal Cost (Vesting)	9,366	9,759
Total Normal Cost	130,990	128,617
Present Value of Future Normal Costs	600,939	646,483
Accrued Liability (Retirement)	905,518	776,665
Accrued Liability (Disability)	12,153	11,449
Accrued Liability (Death)	4,116	3,992
Accrued Liability (Vesting)	27,249	22,917
Accrued Liability (Inactives)	2,072,805	2,246,476
Share Plan Balances [1]	1,196,684	912,051
City Reserve [1]	301,147	301,147
Total Actuarial Accrued Liability (EAN AL)	4,519,672	4,274,697
Unfunded Actuarial Accrued Liability (UAAL)	(1,446,272)	(1,363,365)
Funded Ratio (AVA / EAN AL)	132.0%	131.9%

D. Actuarial Present Value of Accrued Benefits

	10/1/2023	10/1/2022
Vested Accrued Benefits		
Inactives + Share Plan Balances [1]	3,269,489	3,158,527
Actives	469,760	355,119
Member Contributions	0	0
Total	3,739,249	3,513,646
Non-vested Accrued Benefits	182,122	172,695
Total Present Value Accrued Benefits (PVAB)	3,921,371	3,686,341
Funded Ratio (MVA / PVAB)	141.9%	137.1%
Increase (Decrease) in Present Value of Accrued Benefits Attributable to:		
Plan Amendments	0	
Assumption Changes	0	
Plan Experience	593,211	
Benefits Paid	(562,487)	
Interest	204,306	
Other	0	
Total	235,030	

Valuation Date	10/1/2023	10/1/2022
Applicable to Fiscal Year Ending	9/30/2025	9/30/2024
E. Pension Cost		
Normal Cost [2]	$142,779	$140,193
Administrative Expenses [2]	36,151	42,502
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 28 years (as of 10/1/2023) [2]	(83,985)	(80,392)
Minimum Required Contribution [3]	142,779	140,193
Expected Member Contributions [2]	0	0
Expected City and State Contribution	142,779	140,193
F. Past Contributions		
Plan Years Ending:	9/30/2023	
City and State Requirement	176,301	
Actual Contributions Made:		
City	0	
State	200,000	
Total	200,000	
G. Net Actuarial (Gain)/Loss	22,727	

[1] The asset values and liabilities include accumulated Share Plan and City Reserve Balances as of 9/30/2023 and 9/30/2022.

[2] Contribution requirements include a 1.5 year interest load using the applicable assumption for investment return.

[3] Reflects normal cost minimum funding requirements of Chapter 112, Florida Statutes.

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

Year	Projected Unfunded Actuarial Accrued Liability
2023	(1,446,272) [1]

I. 5 Year Comparison of Investment Return on Market Value and Actuarial Value

		Market Value	Actuarial Value	Assumed
Year Ended	9/30/2023	8.99%	4.34%	6.00%
Year Ended	9/30/2022	-13.59%	3.39%	6.00%
Year Ended	9/30/2021	19.22%	9.14%	6.00%
Year Ended	9/30/2020	5.57%	7.74%	7.00%
Year Ended	9/30/2019	5.08%	8.36%	7.00%

[1] Based on current State law and the existing UAAL bases, the UAAL is projected to never be positive.

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.

Doug Lozen

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
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Pension Trust Funds
Division of Retirement
Post Office Box 3010
Tallahassee, FL 32315-3010

RECONCILIATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITIES

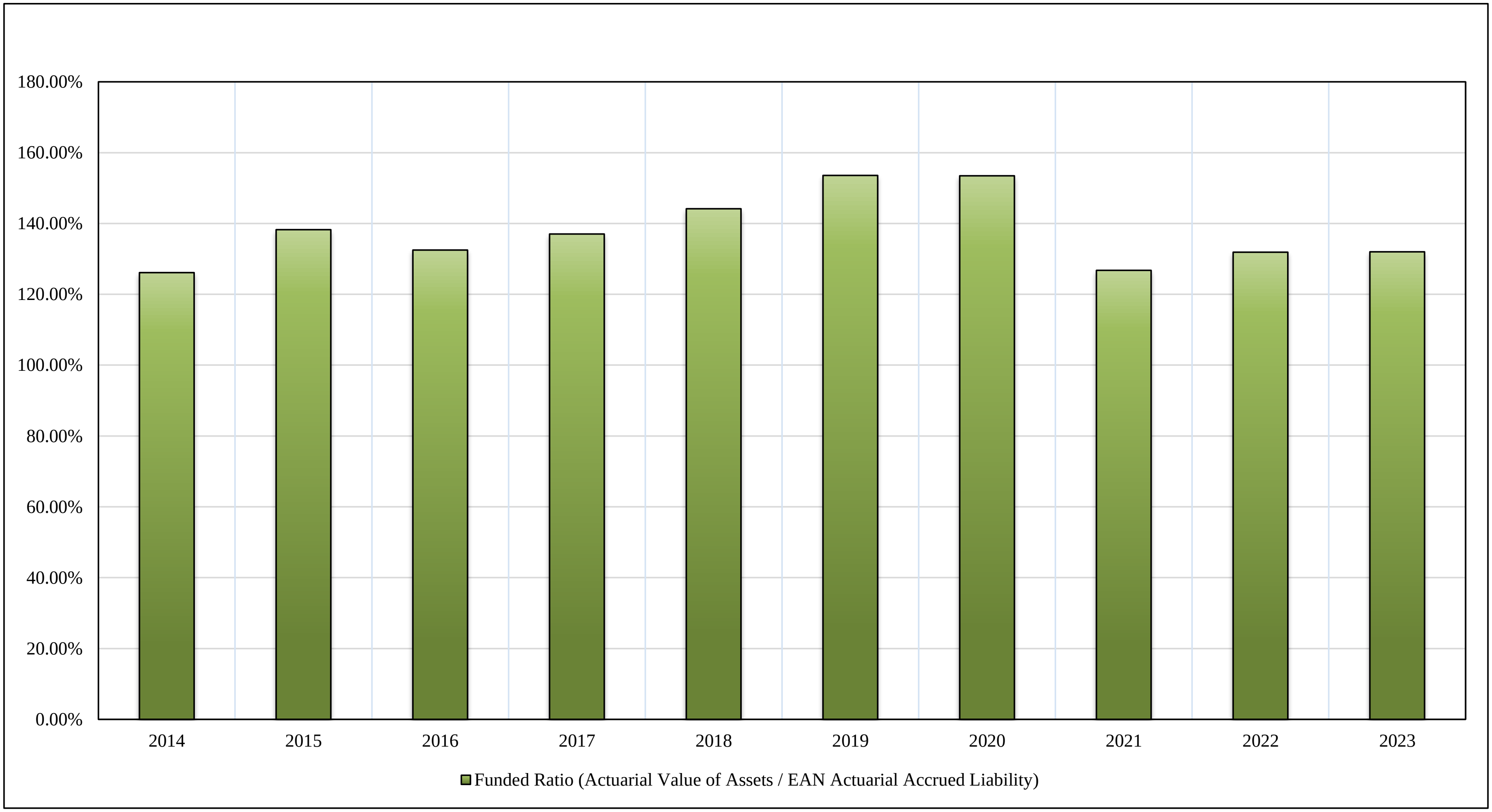
(1)	Unfunded Actuarial Accrued Liability as of October 1, 2022	($1,363,365)
(2)	Sponsor Normal Cost developed as of October 1, 2022	128,617
(3)	Expected administrative expenses for the year ended September 30, 2023	38,993
(4)	Expected interest on (1), (2) and (3)	(72,915)
(5)	Sponsor contributions to the System during the year ended September 30, 2023	200,000
(6)	Expected interest on (5)	329
(7)	Expected Unfunded Actuarial Accrued Liability as of September 30, 2023 (1)+(2)+(3)+(4)-(5)-(6)	(1,468,999)
(8)	Change to UAAL due to Assumption Change	0
(9)	Change to UAAL due to Actuarial (Gain)/Loss	22,727
(10)	Unfunded Actuarial Accrued Liability as of October 1, 2023	(1,446,272)

Type of Base	Date Established	Years Remaining	10/1/2023 Amount	Amortization Amount
Consolidation Base	10/1/2021	28	(2,109,304)	(148,432)
Benefit Change	10/1/2021	13	825,504	87,971
Actuarial Gain	10/1/2022	14	(185,199)	(18,797)
Actuarial Loss	10/1/2023	15	22,727	2,208
			(1,446,272)	(77,050)

DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

(1)	Unfunded Actuarial Accrued Liability (UAAL) as of October 1, 2022	($1,363,365)
(2)	Expected UAAL as of October 1, 2023	(1,468,999)
(3)	Summary of Actuarial (Gain)/Loss, by component:	
	Investment Return (Actuarial Asset Basis)	94,315
	Active Decrements	(76,958)
	Inactive Mortality	(77,312)
	Interest Crediting on Share Plan Balances	19,755
	Other	62,927
	Increase in UAAL due to (Gain)/Loss	22,727
	Assumption Changes	0
(4)	Actual UAAL as of October 1, 2023	($1,446,272)

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	6.00% per year compounded annually, net of investment related expenses. This is supported by the target asset allocation of the trust and the expected long-term return by asset class.
Payroll Growth	None.

Administrative Expenses	$33,166 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. 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.
Funding Method	Entry Age Normal Actuarial Cost Method. An interest load of 1.5 years at the valuation assumption is applied for determination of the Minimum Required Contribution.
Asset Valuation Method	Each year, the prior Actuarial Value of Assets is brought forward utilizing the historical geometric four-year average Market Value return. It is possible that over time this technique will produce an insignificant bias above or below Market Value.
Normal Retirement	The earlier of attainment of age 55 with 10 years of credited service, age 52 with 25 years of credited service, or age 62 with 5 years of credited service. Also, any member who has reached Normal Retirement is assumed to continue employment for one additional year. This assumption was evaluated in conjunction with a November 2020 actuarial experience study.
Early Retirement	None. This assumption was updated in conjunction with a November 2020 actuarial experience study.
Termination Rates	Below are assumed termination rates:

Years of Service	Termination Rate
0 – 1	25.0%
2 – 5	15.0%
6 – 10	5.0%
11+	0.0%

This assumption was updated in conjunction with a November 2020 actuarial experience study.

Disability Rates

75% of disabled lives are assumed to be service-related. Below are sample disability rates:

Age	Disability Rate
20	0.03%
30	0.04%
40	0.07%
50	0.18%

This assumption was evaluated in conjunction with a November 2020 actuarial experience study.

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.

- <u>Investment Return</u>: 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.

- <u>Demographic Assumptions:</u> 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 214.3% on October 1, 2013 to 77.8% 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, has increased from 34.5% as of October 1, 2013 to 45.9% as of October 1, 2023.

- The Funded Ratio, determined as the ratio of the Actuarial Value of Assets to the Total Accrued Liability, has increased from 120.7% on October 1, 2013 to 132.0% on October 1, 2023.

- The Net Cash Flow Ratio, determined as the ratio of the Net Cash Flow (contributions minus benefit payments and administrative expenses) to the Market Value of Assets, decreased from 7.1% on October 1, 2013 to 1.5% on October 1, 2023. The current Net Cash Flow Ratio of 1.5% 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 9 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 $4,949,818. 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

	10/1/2023	10/1/2022	10/1/2018	10/1/2013
Support Ratio				
Total Actives	28	27	27	45
Total Inactives	36	38	29	21
Actives / Inactives	77.8%	71.1%	93.1%	214.3%
Accrued Liability (AL) Ratio				
Inactive Accrued Liability	2,072,805	2,246,476	1,164,567	885,549
Total Accrued Liability (EAN)	4,519,672	4,274,697	2,945,682	2,565,972
Inactive AL / Total AL	45.9%	52.6%	39.5%	34.5%
Funded Ratio				
Actuarial Value of Assets (AVA)	5,965,944	5,638,062	4,246,433	3,097,640
Total Accrued Liability (EAN)	4,519,672	4,274,697	2,945,682	2,565,972
AVA / Total Accrued Liability (EAN)	132.0%	131.9%	144.2%	120.7%
Net Cash Flow Ratio				
Net Cash Flow [1]	81,300	136,162	66,320	235,654
Market Value of Assets (MVA)	5,564,274	5,052,699	4,396,693	3,330,062
Ratio	1.5%	2.7%	1.5%	7.1%

[1] Determined as total contributions minus benefit payments and administrative expenses.

PARTIAL HISTORY OF PREMIUM TAX REFUNDS

Received During Fiscal Year	Amount	Increase from Previous Year
2003	14,328.55	N/A
2004	62,129.98	333.6%
2005	96,546.34	55.4%
2006	128,816.42	33.4%
2007	242,231.00	88.0%
2008	380,757.00	57.2%
2009	499,181.00	31.1%
2010	339,246.90	-32.0%
2011	359,373.51	5.9%
2012	377,962.48	5.2%
2013	364,571.49	-3.5%
2014	381,967.45	4.8%
2015	324,642.30	-15.0%
2016	273,487.45	-15.8%
2017	232,596.92	-15.0%
2018	263,090.68	13.1%
2019	247,471.42	-5.9%
2020	271,790.64	9.8%
2021	308,196.92	13.4%
2022	350,084.88	13.6%
2023	676,590.95	93.3%

STATEMENT OF FIDUCIARY NET POSITION
SEPTEMBER 30, 2023

ASSETS	MARKET VALUE
Cash and Cash Equivalents:	
Cash	74,563.01
Total Cash and Equivalents	74,563.01
Receivables:	
State Contributions	238,345.21
Total Receivable	238,345.21
Investments:	
Mutual Funds:	
Fixed Income	1,501,912.03
Equity	3,067,735.22
Pooled/Common/Commingled Funds:	
Real Estate	681,718.94
Total Investments	5,251,366.19
Total Assets	5,564,274.41
LIABILITIES	
Total Liabilities	0.00
NET POSITION RESTRICTED FOR PENSIONS	5,564,274.41

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

ADDITIONS		
Contributions:		
State	676,590.95	
Total Contributions		676,590.95
Investment Income:		
Earnings/(Losses) as disclosed in FMPTF statement	440,603.71	
Less Investment Expense[1]	(10,328.70)	
Net Investment Income		430,275.01
Total Additions		1,106,865.96
DEDUCTIONS		
Distributions to Members:		
Benefit Payments	266,597.61	
Lump Sum Share Distributions	295,889.04	
Total Distributions		562,486.65
Administrative Expense		32,804.20
Total Deductions		595,290.85
Net Increase in Net Position		511,575.11
NET POSITION RESTRICTED FOR PENSIONS		
Beginning of the Year		5,052,699.30
End of the Year		5,564,274.41

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

ACTUARIAL ASSET VALUATION
SEPTEMBER 30, 2023

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

Details of the derivation are set forth as follows:

Plan Year End	Rate of Return[1]
09/30/2020	5.57%
09/30/2021	19.22%
09/30/2022	-13.59%
09/30/2023	8.99%

Annualized Rate of Return for prior four (4) years: 4.34%

(A) 10/01/2022 Actuarial Assets:		$5,638,061.73
(I) Net Investment Income:		
1. Earnings/(Losses) in FMPTF	440,603.71	
2. Change in Actuarial Value	(183,692.83)	
3. Investment Related Expenses	(10,328.70)	
Total		246,582.18
(B) 10/01/2023 Actuarial Assets:		$5,965,944.01

Actuarial Asset Rate of Return = 2I/(A+B-I), based on Unlimited Actuarial Assets: 4.34%

10/01/2023 Limited Actuarial Assets	$5,965,944.01
10/01/2023 Market Value of Assets	$5,564,274.41

Actuarial Asset Rate of Return, based on Limited Actuarial Assets: 4.34%

Actuarial Gain/(Loss) due to Investment Return (Limited Actuarial Asset Basis) ($94,314.84)

[1]Market Value Basis, net of investment related expenses.

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

REVENUES		
Contributions:		
State	676,590.95	
Total Contributions		676,590.95
Earnings from Investments:		
Earnings/(Losses) as disclosed in FMPTF statement	440,603.71	
Change in Actuarial Value	(183,692.83)	
Total Earnings and Investment Gains		256,910.88
EXPENDITURES		
Distributions to Members:		
Benefit Payments	266,597.61	
Lump Sum Share Distributions	295,889.04	
Total Distributions		562,486.65
Expenses:		
Investment related[1]	10,328.70	
Administrative	32,804.20	
Total Expenses		43,132.90
Change in Net Assets for the Year		327,882.28
Net Assets Beginning of the Year		5,638,061.73
Net Assets End of the Year[2]		5,965,944.01

[1]Investment related expenses include investment advisory, custodial and performance monitoring fees.
[2]Net Assets may be limited for actuarial consideration.

SUPPLEMENTAL CHAPTER 175 SHARE PLAN ACTIVITY

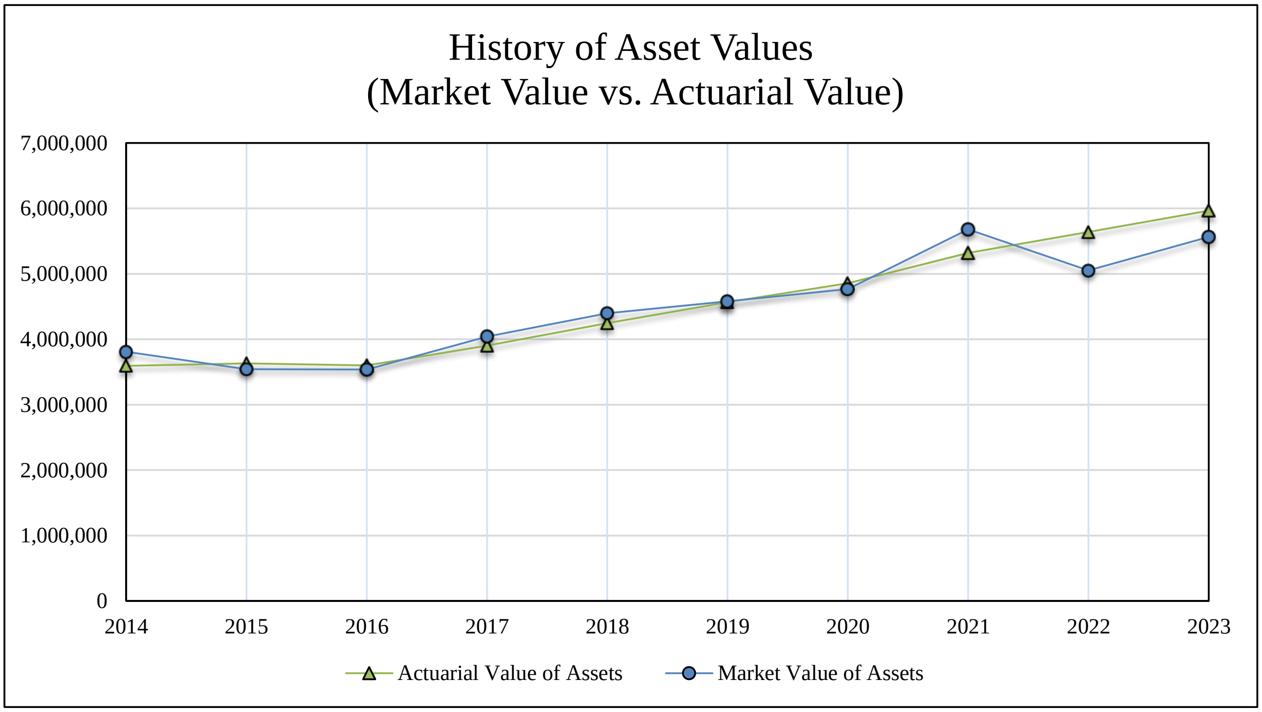
October 1, 2022 through September 30, 2023

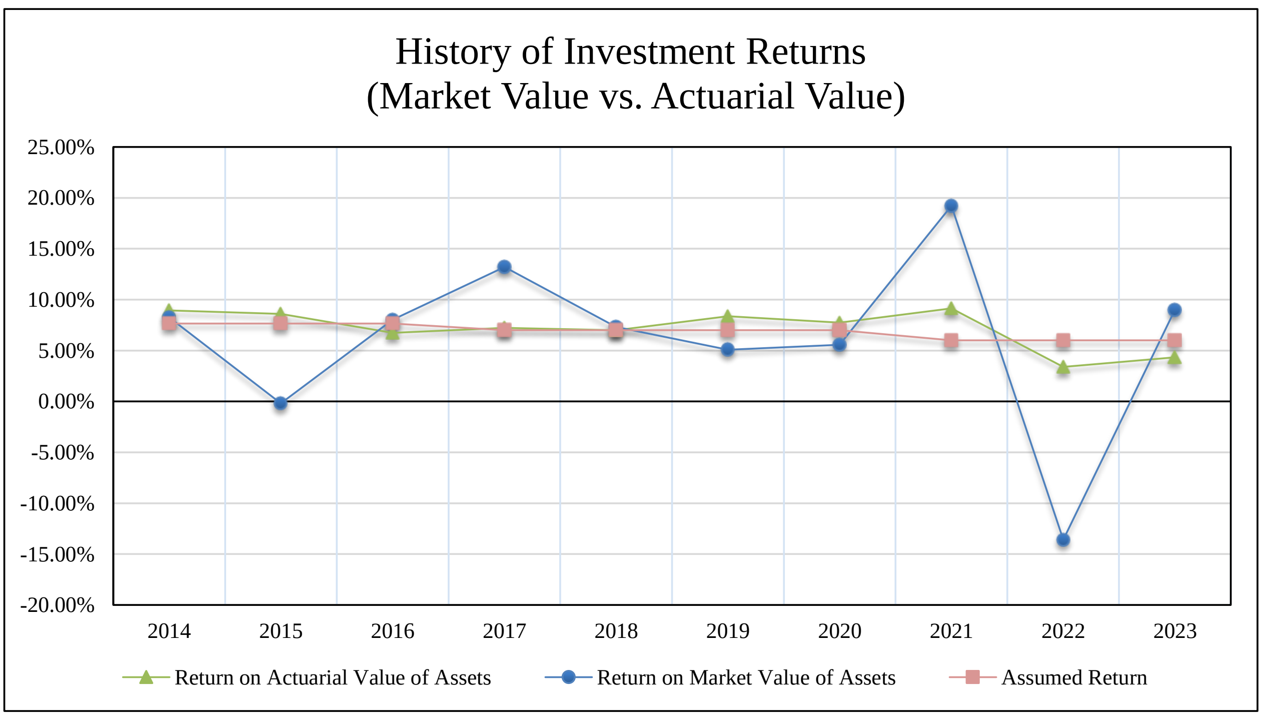
9/30/2022 Balance	912,051.11
Prior Year Adjustment	44,534.32
Plus Additions	476,590.95
Investment Return Earned (Est.)	59,397.00
Administrative Fees (Est.)	0.00
Less Distributions	(295,889.04)
9/30/2023 Balance (Est.)	1,196,684.34

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

(1)	Required City and State Contributions	$176,301.00
(2)	Less Allowable State Contribution	(200,000.00)
(3)	Required City Contribution for Fiscal 2023	0.00
(4)	Less 2022 Prepaid Contribution	0.00
(5)	Less Actual City Contributions	0.00
(6)	Equals City's Shortfall/(Prepaid) Contribution as of September 30, 2023	$0.00

HISTORY OF ASSET VALUES AND INVESTMENT RETURNS





STATISTICAL DATA

	10/1/2023	10/1/2022	10/1/2021	10/1/2020
Actives				
Number	28	27	33	23
Average Current Age	45.5	39.7	40.1	41.1
Average Age at Employment	42.7	37.1	36.9	37.1
Average Past Service	2.8	2.6	3.2	4.0
Service Retirees				
Number	28	31	28	28
Average Current Age	76.7	76.0	77.5	76.5
Average Annual Benefit	$7,534	$7,445	$7,128	$5,339
Beneficiaries				
Number	2	1	0	0
Average Current Age	61.2	39.8	N/A	N/A
Average Annual Benefit	$2,302	$1,879	N/A	N/A
Disability Retirees				
Number	0	0	0	0
Average Current Age	N/A	N/A	N/A	N/A
Average Annual Benefit	N/A	N/A	N/A	N/A
Terminated Vested				
Number	6	6	5	5
Average Current Age	39.1	38.1	38.9	37.9
Average Annual Benefit	$6,050	$6,050	$3,900	$3,900

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	2											2
20 - 24	3		1									4
25 - 29												0
30 - 34	1											1
35 - 39	1					1						2
40 - 44	1		2	2								5
45 - 49		1						2				3
50 - 54				1			1					2
55 - 59	2											2
60 - 64			1									1
65+	3	1	2									6
Total	13	2	6	3	0	1	1	2	0	0	0	28

VALUATION PARTICIPANT RECONCILIATION

1. Active lives

a. Number in prior valuation 10/1/2022	27
b. Terminations	
i. Vested (partial or full) with deferred annuity	0
ii. Nonvested termination	(12)
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	13
h. Total active life participants in valuation	28

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

	Service Retirees, Vested Receiving Benefits	Receiving Death Benefits	Receiving Disability Benefits	Vested (Deferred Annuity)	Total
a. Number prior valuation	31	1	0	6	38
Retired					0
Vested (Deferred Annuity)					0
Vested (Due Refund)					0
Hired/Terminated in Same Year					0
Death, With Survivor	(1)	1			0
Death, No Survivor	(2)				(2)
Disabled					0
Refund of Contributions					0
Rehires					0
Expired Annuities					0
Data Corrections					0
b. Number current valuation	28	2	0	6	36

SUMMARY OF CURRENT PLAN
(Through Ordinance 2022-18)

<u>Credited Service</u>

Total years and fractional parts of years of service with the City as Firefighter. Credited Service is based on "Length of Service Award Pension Program – Qualification Criteria."

<u>Normal Retirement</u>

Date

Earlier of age 62 with the completion of 5 years of Credited Service, age 55 with the completion of 10 years of Credited Service, or age 52 with the completion of 25 years of Credited Service.

Benefit Accrual Rate

Credited Service	Monthly Benefit Accrual (for each year of Credited Service)
Less than 10 years	$85
At least 10 years	$100

Form of Benefit

10 Year Certain and Life thereafter (options available).

<u>Early Retirement</u>

Date

Age 50 & 10 years of Credited Service.

Benefit Amount

Accrued benefit, reduced 3% per year, from Age 55 or 62.

<u>Disability Benefits</u>

Eligibility

Service Incurred

Covered from Date of Employment.

Non-Service Incurred

Ten years of Credited Service.

Exclusions

Disability resulting from use of drugs, illegal participation in riots, service in military, etc.

Benefit

Benefit accrued to date of disability.

Duration

Payable for life (with 120 payments guaranteed) or until recovery (as determined by the Board).

Death Benefits

Eligibility	Five years of Credited Service.
Benefit	Accrued benefit paid to Beneficiary for ten years, beginning at the Member's Normal Retirement Date (unreduced) or Early Retirement Date (reduced).
Post-Retirement	According to option selected, if any.

Vesting (Termination)

Eligibility	Five years of Credited Service.
Benefit	Accrued benefit payable at the Member's election, on his otherwise Early or Normal Retirement Date.

Contributions

Premium Tax	1.85% tax on premiums for fire insurance policies.
City	Remaining amount necessary for payment of Normal (current year's) Cost and amortization of the accrued past service liability over 30 years.

Supplement Benefit (Share Accounts)

Initial Crediting	80% of the $1,505,738 Excess State Monies Reserve, established as of September 30, 2014, is allocated to eligible participants.
Annual Crediting	Annual Premium tax revenues received by the City in excess of the $200,000 applicable frozen amount shall be allocated to participant accounts on a pro-rata basis (based on Credited Service).
Investment earnings	Eligible Share Accounts shall be credited or debited annually, based on the Plan's net-of-fees investment performance for the immediately preceding Plan Year.
Maximum Benefit	$3,000 combined for benefits payable under the "Length of Service Award Pension Program" and allocations pursuant to the Supplement Benefit program.
Vesting	Five years of Credited Service.
Eligibility for Distribution	Eligible for Normal or Early Retirement.

Board of Trustees

a. Two appointees of City Council;

b. Two Firefighters elected by the members of the department; and

c. Fifth member elected by the other four and appointed by Council as a ministerial duty.