

CITY OF PALM BAY  
POLICE AND FIREFIGHTERS' PENSION FUND (FIREFIGHTERS)  
ACTUARIAL VALUATION  
AS OF OCTOBER 1, 2021  
CONTRIBUTIONS APPLICABLE TO THE  
PLAN/FISCAL YEAR ENDING SEPTEMBER 30, 2023  
GASB 67/68 DISCLOSURE INFORMATION  
AS OF SEPTEMBER 30, 2021



**FOSTER & FOSTER**  
ACTUARIES AND CONSULTANTS

March 31, 2022

Board of Trustees  
City of Palm Bay Police & Firefighters' Pension Fund  
Conlan Professional Center  
1501 Robert J. Conlan Blvd. NE Suite 260  
Palm Bay, FL 32905-3567

Re: City of Palm Bay Police and Firefighters' Pension Fund (Firefighters)

Dear Board:

We are pleased to present to the Board this report of the annual actuarial valuation of the City of Palm Bay Police and Firefighters' Pension Fund (Firefighters). Included are the related results for GASB Statements No. 67 and No. 68. The funding 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. The calculation of the liability for GASB results was performed for the purpose of satisfying the requirements of GASB Statements No. 67 and No. 68. Use of the results for other purposes may not be applicable and may produce significantly different results.

The valuations have 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 reflect 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 valuations, 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 valuations, we did not perform an analysis of the potential range of such future measurements.

In conducting the valuations, we have relied on personnel, plan design, and asset information supplied by the City of Palm Bay, 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 and accounting 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.

The total pension liability, net pension liability, and certain sensitivity information shown in this report are based on an actuarial valuation performed as of October 1, 2020. The total pension liability was rolled-forward from the valuation date to the plan's fiscal year ending September 30, 2021 using generally accepted actuarial principles. It is our opinion that the assumptions used for this purpose are internally consistent, reasonable, and comply with the requirements under GASB No. 67 and No. 68.


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 Bay, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the Police and Firefighters' Pension Fund (Firefighters). 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:   
Bradley R. Heinrichs, FSA, EA, MAAA  
Enrolled Actuary #20-6901

By:   
Patrick T. Donlan, EA, ASA, MAAA  
Enrolled Actuary #20-6595

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Enclosures

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SUMMARY OF REPORT

The regular annual actuarial valuation of the City of Palm Bay Police and Firefighters' Pension Fund (Firefighters), performed as of October 1, 2021, 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, 2023.

The contribution requirements, compared with those set forth in the January 11, 2022 actuarial impact statement, are as follows:

Valuation Date	10/1/2021	10/1/2020
Applicable to Fiscal Year Ending	<u>9/30/2023</u>	<u>9/30/2022</u>
Minimum Required Contribution	\$4,177,221	\$4,425,258
Member Contributions (Est.)	633,666	625,209
City And State Required Contribution	3,543,555	3,800,049
State Contribution (Est.) <sup>1</sup>	549,529	549,529
City Required Contribution <sup>2</sup>	\$2,994,026	\$3,250,520

<sup>1</sup> Represents the amount received in calendar 2021. As per a Mutual Consent Agreement between the Membership and the City, State Monies received each year up to \$825,324 will be available to offset the City's required contribution.

<sup>2</sup> Please note that the City has access to a prepaid contribution of \$52,050.97 that is available to offset a portion of the above stated requirements for the fiscal year ending September 30, 2022.

As you can see, the Minimum Required Contribution shows a decrease when compared to the results determined in the January 11, 2022 actuarial impact statement. The decrease is attributable to favorable experience as described below.

Plan experience was favorable overall on the basis of the plan's actuarial assumptions. The primary source of actuarial gain was an investment return of 11.04% (Actuarial Asset Basis) which exceeded the 7.65% assumption. There were no significant sources of actuarial loss.

## CHANGES SINCE PRIOR VALUATION

### Plan Changes

Ordinance 2022-16 was adopted on February 3, 2022. This ordinance provided the following change for Firefighters Members only:

Effective October 1, 2021, the longevity pay will be included in the pensionable compensation to determine the pension benefits.

Please refer to the January 11, 2022, Actuarial Impact Statement for details regarding the impact on liabilities and funding requirements for the above change.

### Actuarial Assumption/Method Changes

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



COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	<u>10/1/2021</u>	<u>10/1/2020</u>
A. Participant Data		
Actives	107	105
Service Retirees	72	68
DROP Retirees	12	10
Beneficiaries	3	3
Disability Retirees	10	9
Terminated Vested	<u>5</u>	<u>7</u>
 Total	 209	 202
 Total Annual Payroll	 \$6,641,064	 \$6,556,805
Payroll Under Assumed Ret. Age	6,641,064	6,556,805
 Annual Rate of Payments to:		
Service Retirees	4,675,205	4,368,154
DROP Retirees	903,648	755,057
Beneficiaries	133,161	129,936
Disability Retirees	389,657	347,798
Terminated Vested	49,223	108,537
 B. Assets		
Actuarial Value (AVA) <sup>1</sup>	101,715,205	93,560,253
Market Value (MVA) <sup>1</sup>	111,352,935	94,443,946
 C. Liabilities		
Present Value of Benefits		
Actives		
Retirement Benefits	40,352,157	41,596,636
Disability Benefits	2,635,804	2,576,079
Death Benefits	710,043	692,524
Vested Benefits	1,283,762	1,239,082
Refund of Contributions	181,931	166,462
Service Retirees	64,789,468	60,904,300
DROP Retirees <sup>1</sup>	18,195,502	15,338,560
Beneficiaries	1,794,160	1,780,989
Disability Retirees	5,165,724	4,290,169
Terminated Vested	785,366	1,493,074
Share Plan Balances <sup>1</sup>	<u>6,911</u>	<u>6,395</u>
 Total	 135,900,828	 130,084,270

C. Liabilities - (Continued)	<u>10/1/2021</u>	<u>10/1/2020</u>
Present Value of Future Salaries	59,243,048	56,923,956
Present Value of Future Member Contributions	5,189,691	4,986,539
Normal Cost (Retirement)	1,403,488	1,393,360
Normal Cost (Disability)	206,065	205,836
Normal Cost (Death)	62,525	62,412
Normal Cost (Vesting)	70,454	72,412
Normal Cost (Refunds)	31,976	26,967
Total Normal Cost	<u>1,774,508</u>	<u>1,760,987</u>
Present Value of Future Normal Costs	15,272,185	14,786,405
Accrued Liability (Retirement)	28,047,597	29,698,670
Accrued Liability (Disability)	931,658	899,431
Accrued Liability (Death)	173,172	167,837
Accrued Liability (Vesting)	709,455	691,016
Accrued Liability (Refunds)	29,630	27,424
Accrued Liability (Inactives) <sup>1</sup>	90,730,220	83,807,092
Share Plan Balances <sup>1</sup>	6,911	6,395
Total Actuarial Accrued Liability (EAN AL)	<u>120,628,643</u>	<u>115,297,865</u>
Unfunded Actuarial Accrued Liability (UAAL)	18,913,438	21,737,612
Funded Ratio (AVA / EAN AL)	84.3%	81.1%

D. Actuarial Present Value of

Accrued Benefits	<u>10/1/2021</u>	<u>10/1/2020</u>
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Vested Accrued Benefits

Inactives + Share Plan Balances <sup>1</sup>	90,737,131	83,813,487
Actives	12,640,090	13,143,996
Member Contributions	<u>4,505,612</u>	<u>4,425,750</u>
Total	107,882,833	101,383,233

Non-vested Accrued Benefits	<u>4,466,770</u>	<u>5,295,285</u>
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Total Present Value

Accrued Benefits (PVAB)	112,349,603	106,678,518
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Funded Ratio (MVA / PVAB)	99.1%	88.5%
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Increase (Decrease) in Present Value of  
Accrued Benefits Attributable to:

Plan Amendments	0
Assumption Changes	0
Plan Experience	3,479,224
Benefits Paid	(5,749,141)
Interest	7,941,002
Other	<u>0</u>
Total	5,671,085

Valuation Date	10/1/2021	10/1/2020
Applicable to Fiscal Year Ending	<u>9/30/2023</u>	<u>9/30/2022</u>

E. Pension Cost

Normal Cost <sup>2</sup>	\$1,932,844	\$1,916,837
Administrative Expenses <sup>2</sup>	259,386	260,117
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 28 years (as of 10/1/2021) <sup>2</sup>	1,984,991	2,248,304
Minimum Required Contribution	4,177,221	4,425,258
Expected Member Contributions <sup>2</sup>	633,666	625,209
Expected City and State Contribution	3,543,555	3,800,049

F. Past Contributions

Plan Years Ending:	<u>9/30/2021</u>
City and State Requirement	3,333,608
Actual Contributions Made:	
City	2,784,079
State	<u>549,529</u>
Total	3,333,608

G. Net Actuarial (Gain)/Loss (2,572,498)

<sup>1</sup> The asset values and liabilities include accumulated DROP and Share Plan Balances as of 9/30/2021 and 9/30/2020.

<sup>2</sup> Contributions developed as of 10/1/2021 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>
2021	18,913,438
2022	18,398,522
2023	17,844,215
2030	12,576,583
2036	5,769,484
2043	1,333,128
2049	0

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

		<u>Actual</u>	<u>Assumed</u>
Year Ended	9/30/2021	3.59%	4.79%
Year Ended	9/30/2020	3.71%	5.44%
Year Ended	9/30/2019	5.79%	5.49%
Year Ended	9/30/2018	5.20%	5.69%
Year Ended	9/30/2017	6.86%	5.59%

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

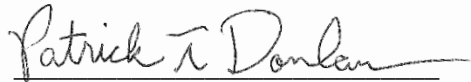
		<u>Market Value</u>	<u>Actuarial Value</u>	<u>Assumed</u>
Year Ended	9/30/2021	20.31%	11.04%	7.65%
Year Ended	9/30/2020	11.37%	8.50%	7.75%
Year Ended	9/30/2019	4.03%	8.06%	7.75%
Year Ended	9/30/2018	8.38%	7.04%	7.75%
Year Ended	9/30/2017	11.25%	7.22%	7.75%

(iii) Average Annual Payroll Growth

(a) Payroll as of:	10/1/2021	\$6,641,064
	10/1/2011	5,265,268
(b) Total Increase		26.13%
(c) Number of Years		10.00
(d) Average Annual Rate		2.35%

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.



Patrick T. Donlan, EA, ASA, MAAA  
Enrolled Actuary #20-6595

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, 2020	\$21,737,612
(2) Sponsor Normal Cost developed as of October 1, 2020	1,186,611
(3) Expected administrative expenses for the year ended September 30, 2021	238,968
(4) Expected interest on (1), (2) and (3)	1,762,844
(5) Sponsor contributions to the System during the year ended September 30, 2021	3,333,608
(6) Expected interest on (5)	106,491
(7) Expected Unfunded Actuarial Accrued Liability as of September 30, 2021 (1)+(2)+(3)+(4)-(5)-(6)	21,485,936
(8) Change to UAAL due to Assumption Change	0
(9) Change to UAAL due to Actuarial (Gain)/Loss	(2,572,498)
(10) Unfunded Actuarial Accrued Liability as of October 1, 2021	18,913,438

<u>Type of Base</u>	<u>Date Established</u>	<u>Years Remaining</u>	<u>10/1/2021 Amount</u>	<u>Amortization Amount</u>
A	10/1/2003	12	3,100	375
B	10/1/2004	13	347	40
C	10/1/2005	14	39,948	4,410
D	10/1/2005	14	10,212	1,127
E	10/1/2006	15	(738)	(78)
F	10/1/2006	15	25,470	2,705
Actuarial Loss	10/1/2007	16	4,478,625	459,559
Actuarial Loss	10/1/2008	17	2,589,790	257,615
Actuarial Loss	10/1/2009	18	3,220,364	311,491
Actuarial Loss	10/1/2010	19	1,425,584	134,440
Method Change	10/1/2010	19	(2,295,380)	(216,467)
Benefit Change	10/1/2010	19	(202,002)	(19,050)
Actuarial Loss	10/1/2011	20	2,287,473	210,821
Assumption Change	10/1/2011	20	3,644,900	335,926
Actuarial Gain	10/1/2012	21	(1,028,213)	(92,805)
Actuarial Gain	10/1/2013	22	(1,399,371)	(123,927)
Actuarial Loss	10/1/2014	23	468,629	40,788
Assumption Change	10/1/2015	24	2,209,336	189,269
Actuarial Gain	10/1/2015	24	(1,422,762)	(121,885)

Type of <u>Base</u>	Date <u>Established</u>	Years <u>Remaining</u>	10/1/2021 <u>Amount</u>	Amortization <u>Amount</u>
Actuarial Loss	10/1/2016	25	530,074	44,757
Actuarial Loss	10/1/2017	26	1,432,561	119,362
Actuarial Loss	10/1/2018	27	1,239,400	102,017
Benefits Change	10/1/2018	27	(25,123)	(2,068)
Actuarial Loss	10/1/2019	28	427,148	34,768
Asmp/Mthd Change	10/1/2020	14	3,472,583	383,363
Actuarial Gain	10/1/2020	14	(166,735)	(18,407)
Benefits Change	10/1/2020	14	520,716	57,485
Actuarial Gain	10/1/2021	15	<u>(2,572,498)</u>	<u>(273,248)</u>
			18,913,438	1,822,383

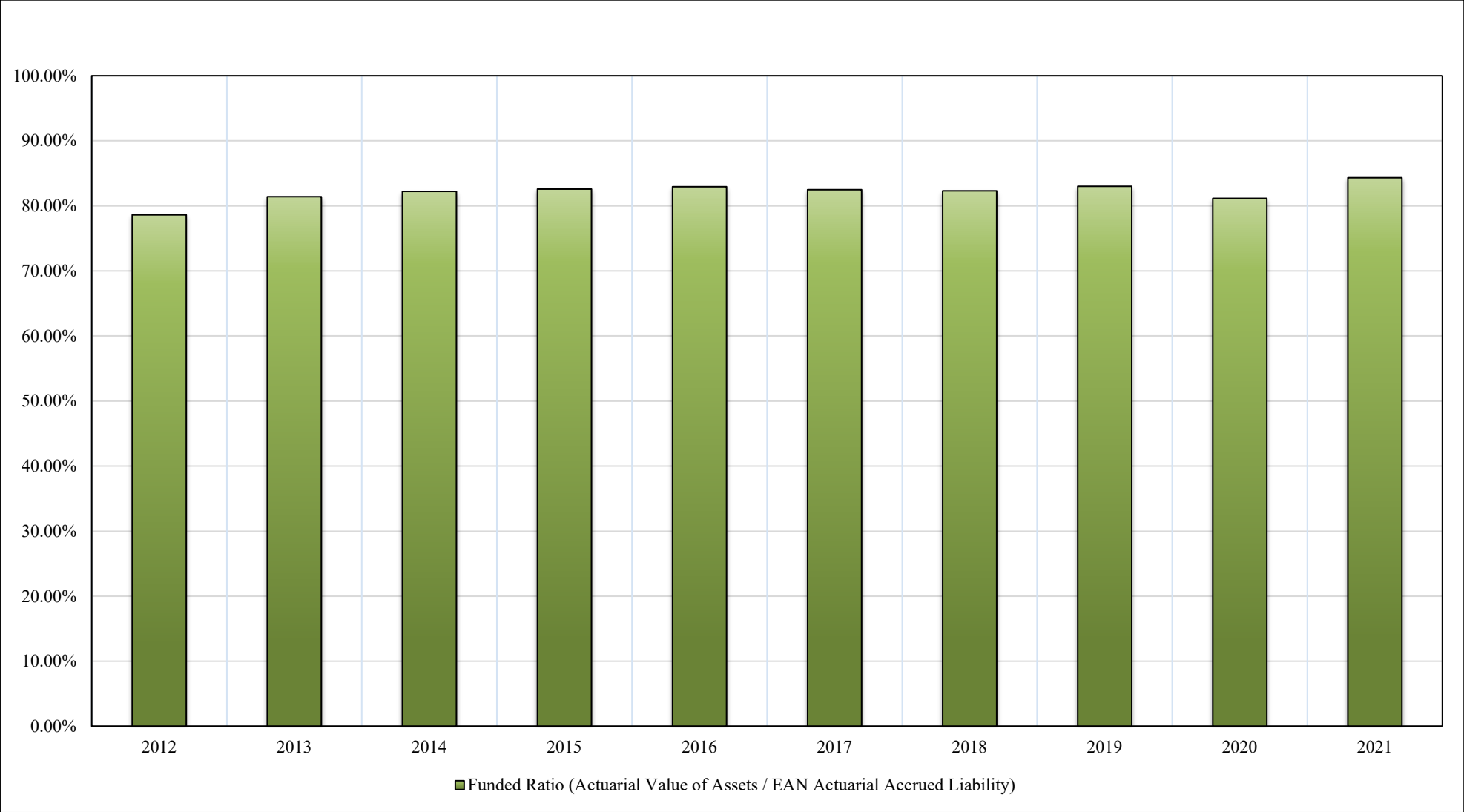


DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

(1) Unfunded Actuarial Accrued Liability (UAAL) as of October 1, 2020	\$21,737,612
(2) Expected UAAL as of October 1, 2021	21,485,936
(3) Summary of Actuarial (Gain)/Loss, by component:	
Investment Return (Actuarial Asset Basis)	(3,139,421)
Salary Increases	(272,874)
Active Decrements	110,968
Inactive Mortality	340,479
DROP Interest Crediting <sup>1</sup>	540,610
Other	<u>(152,260)</u>
Increase in UAAL due to (Gain)/Loss	(2,572,498)
Assumption Changes	<u>0</u>
(4) Actual UAAL as of October 1, 2021	\$18,913,438

<sup>1</sup> The DROP balances are included in both the assets of the Plan and the liabilities. The 10/1/2020 valuation expected that these liabilities would grow at 7.65%. The fact that credited earnings were on average larger than 7.65% this year caused an actuarial loss on the liability side of the equation. If the DROP balances were not included in the assets or liabilities, then the asset gain would have been smaller this year.

# 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 (Above Median) for Healthy Retirees, set forward one year.

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

#### *Beneficiary Lives:*

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

**Male:** PubG.H-2010 (Above 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 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.

90% of active deaths are assumed to be service-incurred.

### Interest Rate

7.65% 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 Increase – Individual

See table later in this section. This assumption was adopted based on the July 7, 2020 experience study.

<u>Payroll Growth</u>	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.
<u>Termination</u>	See table later in this section. This assumption was adopted based on the July 7, 2020 experience study.
<u>Disability:</u>	See sample rates in the table later in this section. This assumption was adopted based on the July 7, 2020 experience study. 90% of Disabilities are assumed to be service connected.
<u>Service Retirement</u>	See table later in this section. This assumption was adopted based on the July 7, 2020 experience study.
<u>Form of Payment:</u>	10-Year Certain and Continuous annuity.
<u>Percentage Married At Retirement</u>	100% of active members are assumed married at retirement.
<u>Spouse Ages:</u>	For active members reaching retirement, wives are assumed to be three years younger than husbands. Where spousal information was included for retirees, that information was used. If the age of the spouse was not provided, we have assumed that all spouses are still alive, and that female spouses are three years younger than their husbands.
<u>Administrative Expenses</u>	\$238,137 annually, based on the average of actual expenses incurred in the prior two fiscal years.
<u>Amortization Method</u>	New UAAL amortization bases are amortized over 15 years.
<u>Funding Method:</u>	Entry Age Normal Cost Method.
<u>Actuarial Value of Assets:</u>	The market value of assets is adjusted to recognize, over a four-year period, investment earnings greater than (or less than) the assumed investment return. The Actuarial Value of Assets shall not be more than 120% nor less than 80% of the market value of assets. Details are shown in the Asset Information Section of the report.
<u>Funding Load:</u>	A load equal to half a year's interest and a full year of salary scale at 4.92% is applied.

Assumption Tables

% Terminating During the Year		% Becoming Disabled During the Year	
Service	Rate	Age	Rate
<5	6.00%	20	0.14%
5-9	2.50%	25	0.15%
10+	2.00%	30	0.18%
		35	0.23%
		40	0.30%
		45	0.51%
		50	1.00%
		55	1.55%
		60	2.09%

Salary Scale		% Retiring During the Year		
Age	Rate	Service	Age	Rate
<25	7.25%	<10	55-59	20.00%
25 -29	6.25%		60+	100.00%
30 - 34	5.25%	10-19	50-54	5.00%
35 - 39	4.75%		55	75.00%
40 - 44	4.25%		56-57	50.00%
45 - 49	4.00%		58+	100.00%
50+	4.00%	20-24	45-54	5.00%
			55	75.00%
			56-57	50.00%
			58+	100.00%
		25	45-55	75.00%
			56-57	50.00%
			58+	100.00%
		26-27	45-57	50.00%
			58+	100.00%
		28+	Any	100.00%

## 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.

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 177.2% on October 1, 2011 to 108.1% on October 1, 2021, 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 75.2%. With a plan of this maturity, losses due to lower than expected investment returns or demographic factors may result in larger increases in contribution requirements than would be needed for a less mature plan. Please note Chapter 112, Florida Statutes, requires that the plan sponsor contributes the minimum required contribution; thus, there is minimal solvency risk to the plan.
- The Funded Ratio, determined as the ratio of the Actuarial Value of Assets to the Total Accrued Liability, has increased from 77.1% on October 1, 2011 to 84.3% on October 1, 2021.
- 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 1.9% on October 1, 2011 to -1.9% on October 1, 2021. The current Net Cash Flow Ratio of -1.9% indicates that contributions are not currently covering the plan's benefit payments and administrative expenses.

It is important to note that the actuary has identified the risks in this section 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>10/1/2011</u>	<u>10/1/2016</u>	<u>10/1/2020</u>	<u>10/1/2021</u>
<u>Support Ratio</u>				
Total Actives	101	108	105	107
Total Inactives <sup>1</sup>	57	79	94	99
Actives / Inactives <sup>1</sup>	177.2%	136.7%	111.7%	108.1%
 <u>Asset Volatility Ratio</u>				
Market Value of Assets (MVA)	52,555,618	76,241,499	94,443,946	111,352,935
Total Annual Payroll	5,934,481	6,042,297	6,556,805	6,641,064
MVA / Total Annual Payroll	885.6%	1,261.8%	1,440.4%	1,676.7%
 <u>Accrued Liability (AL) Ratio</u>				
Inactive Accrued Liability	39,157,965	67,068,138	83,807,092	90,730,220
Total Accrued Liability (EAN)	72,751,893	94,549,621	115,297,865	120,628,643
Inactive AL / Total AL	53.8%	70.9%	72.7%	75.2%
 <u>Funded Ratio</u>				
Actuarial Value of Assets (AVA)	56,100,001	78,419,861	93,560,253	101,715,205
Total Accrued Liability (EAN)	72,751,893	94,549,621	115,297,865	120,628,643
AVA / Total Accrued Liability (EAN)	77.1%	82.9%	81.1%	84.3%
 <u>Net Cash Flow Ratio</u>				
Net Cash Flow <sup>2</sup>	1,023,194	(1,595,549)	(3,072,453)	(2,064,839)
Market Value of Assets (MVA)	52,555,618	76,241,499	94,443,946	111,352,935
Ratio	1.9%	-2.1%	-3.3%	-1.9%

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

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

PARTIAL HISTORY OF PREMIUM TAX REFUNDS

<u>Received During Fiscal Year</u>	<u>Amount</u>	<u>Increase from Previous Year</u>
1998	137,359.61	_____%
1999	183,210.18	33.4%
2000	194,012.88	5.9%
2001	202,046.08	4.1%
2002	241,347.74	19.5%
2003	267,090.23	10.7%
2004	304,874.85	14.1%
2005	361,705.29	18.6%
2006	442,391.15	22.3%
2007	562,486.88	27.1%
2008	724,397.17	28.8%
2009	610,510.09	-15.7%
2010	603,953.91	-1.1%
2011	595,169.63	-1.5%
2012	614,483.16	3.2%
2013	622,785.72	1.4%
2014	639,517.60	2.7%
2015	590,203.45	-7.7%
2016	559,910.41	-5.1%
2017	506,773.86	-9.5%
2018	522,880.25	3.2%
2019	497,478.45	-4.9%
2020	526,140.72	5.8%
2021	549,528.93	4.4%

STATEMENT OF FIDUCIARY NET POSITION  
SEPTEMBER 30, 2021

<u>ASSETS</u>	MARKET VALUE
Cash and Cash Equivalents:	
Short Term Investments	4,141,243.26
Deposits	852.03
Prepaid Expenses	13,001.26
Cash	10,671.99
 Total Cash and Equivalents	 4,165,768.54
 Receivables:	
Accounts Receivable	1,297.83
From General Employees' Trust Fund	3,685.59
From Broker for Investments Sold	535,101.04
Investment Income	130,465.59
 Total Receivable	 670,550.05
 Investments:	
Federal Agency Guaranteed Securities	12,830,774.23
Corporate Bonds	20,071,087.62
Stocks	31,380,753.24
Pooled/Common/Commingled Funds:	
Equity	30,519,629.89
Real Estate	13,207,530.09
 Total Investments	 108,009,775.07
 Total Assets	 112,846,093.66
 <u>LIABILITIES</u>	
Payables:	
DROP Plan Distributions	423,937.02
Accounts Payable	138,448.20
To Broker for Investments Purchased	878,721.99
Prepaid City Contribution	52,050.97
 Total Liabilities	 1,493,158.18
 NET POSITION RESTRICTED FOR PENSIONS	 111,352,935.48

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION  
FOR THE YEAR ENDED SEPTEMBER 30, 2021  
Market Value Basis

ADDITIONS

Contributions:

Member	547,791.59
Buy-Back	45,543.00
City	2,784,079.07
State	549,528.93

Total Contributions 3,926,942.59

Investment Income:

Miscellaneous Income	5,027.66
Realized & Unrealized Gain (Loss)	17,261,697.58
Net Increase in Fair Value of Investments	17,266,725.24
Interest & Dividends	2,235,576.85
Less Investment Expense <sup>1</sup>	(528,473.45)

Net Investment Income 18,973,828.64

Total Additions 22,900,771.23

DEDUCTIONS

Distributions to Members:

Benefit Payments	5,017,291.70
Lump Sum DROP Distributions	712,121.61
Lump Sum Share Distributions	655.72
Refunds of Member Contributions	19,071.65

Total Distributions 5,749,140.68

Administrative Expense 242,640.64

Total Deductions 5,991,781.32

Net Increase in Net Position 16,908,989.91

NET POSITION RESTRICTED FOR PENSIONS

Beginning of the Year 94,443,945.57

End of the Year 111,352,935.48

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

ACTUARIAL ASSET VALUATION  
SEPTEMBER 30, 2021

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			
		2021	2022	2023	2024
09/30/2018	510,614	0	0	0	0
09/30/2019	(3,171,718)	(792,928)	0	0	0
09/30/2020	3,122,532	1,561,266	780,633	0	0
09/30/2021	11,825,856	8,869,392	5,912,928	2,956,464	0
<b>Total</b>		<b>9,637,730</b>	<b>6,693,561</b>	<b>2,956,464</b>	<b>0</b>

<u>Development of Investment Gain/Loss</u>	
Market Value of Assets, 09/30/2020	94,443,946
Contributions Less Benefit Payments & Admin Expenses	(2,012,788)
Expected Investment Earnings <sup>1</sup>	7,147,973
Actual Net Investment Earnings	18,973,829
2021 Actuarial Investment Gain/(Loss)	<u>11,825,856</u>

<sup>1</sup> Expected Investment Earnings = 0.0765 \* [94,443,946 + 0.5 \* (2,012,788)]

<u>Development of Actuarial Value of Assets</u>	
(1) Market Value of Assets, 09/30/2021	111,352,935
(2) Gains/(Losses) Not Yet Recognized	9,637,730
(3) Actuarial Value of Assets, 09/30/2021, (1) - (2)	<u>101,715,205</u>
(A) 09/30/2020 Actuarial Assets:	93,560,253
(I) Net Investment Income:	
1. Interest, Dividends and Misc Income	2,240,605
2. Realized & Unrealized Gain (Loss)	17,261,698
3. Change in Actuarial Value	(8,754,037)
4. Investment Expenses	(528,473)
Total	<u>10,219,792</u>
(B) 09/30/2021 Actuarial Assets, including Prepaid Contributions:	101,767,256
Actuarial Assets Rate of Return = 2I/(A+B-I):	11.04%
Market Value of Assets Rate of Return:	20.31%
Actuarial Gain/(Loss) due to Investment Return (Actuarial Asset Basis)	3,139,421
10/01/2021 Limited Actuarial Assets (not including Prepaid):	101,715,205

CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS  
 SEPTEMBER 30, 2021  
 Actuarial Asset Basis

REVENUES

Contributions:		
Member	547,791.59	
Buy-Back	45,543.00	
City	2,784,079.07	
State	549,528.93	
 Total Contributions		 3,926,942.59
Earnings from Investments:		
Interest & Dividends	2,235,576.85	
Miscellaneous Income	5,027.66	
Realized & Unrealized Gain (Loss)	17,261,697.58	
Change in Actuarial Value	(8,754,037.00)	
 Total Earnings and Investment Gains		 10,748,265.09

EXPENDITURES

Distributions to Members:		
Benefit Payments	5,017,291.70	
Lump Sum DROP Distributions	712,121.61	
Lump Sum Share Distributions	655.72	
Refunds of Member Contributions	19,071.65	
 Total Distributions		 5,749,140.68
Expenses:		
Investment related <sup>1</sup>	528,473.45	
Administrative	242,640.64	
 Total Expenses		 771,114.09
 Change in Net Assets for the Year		 8,154,952.91
 Net Assets Beginning of the Year		 93,560,252.57
 Net Assets End of the Year <sup>2</sup>		 101,715,205.48

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

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

DEFERRED RETIREMENT OPTION PLAN ACTIVITY  
October 1, 2020 to September 30, 2021

Beginning of the Year Balance	4,237,093.33
Plus Additions	855,553.16
Investment Return Earned	882,494.30
Less Distributions	(712,121.61)
End of the Year Balance	5,263,019.18



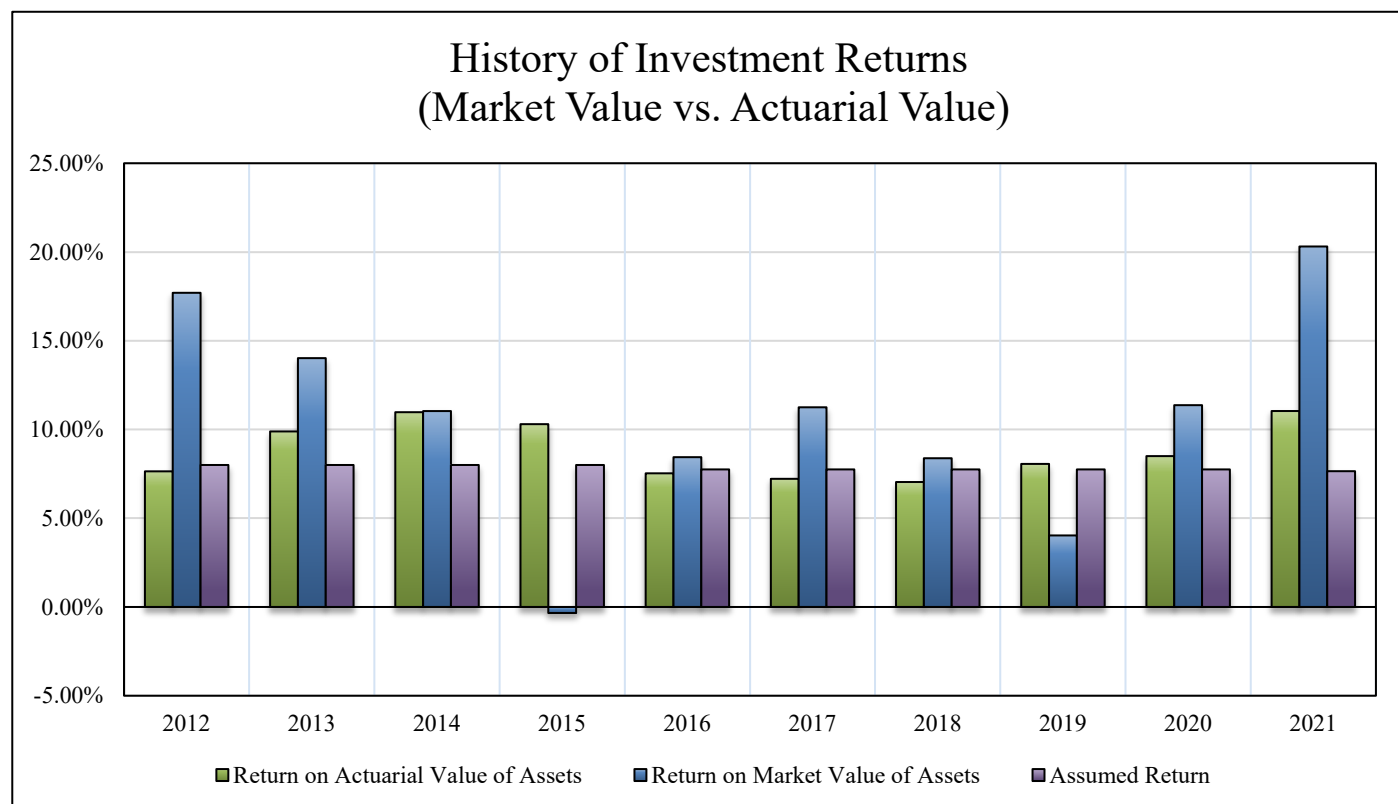
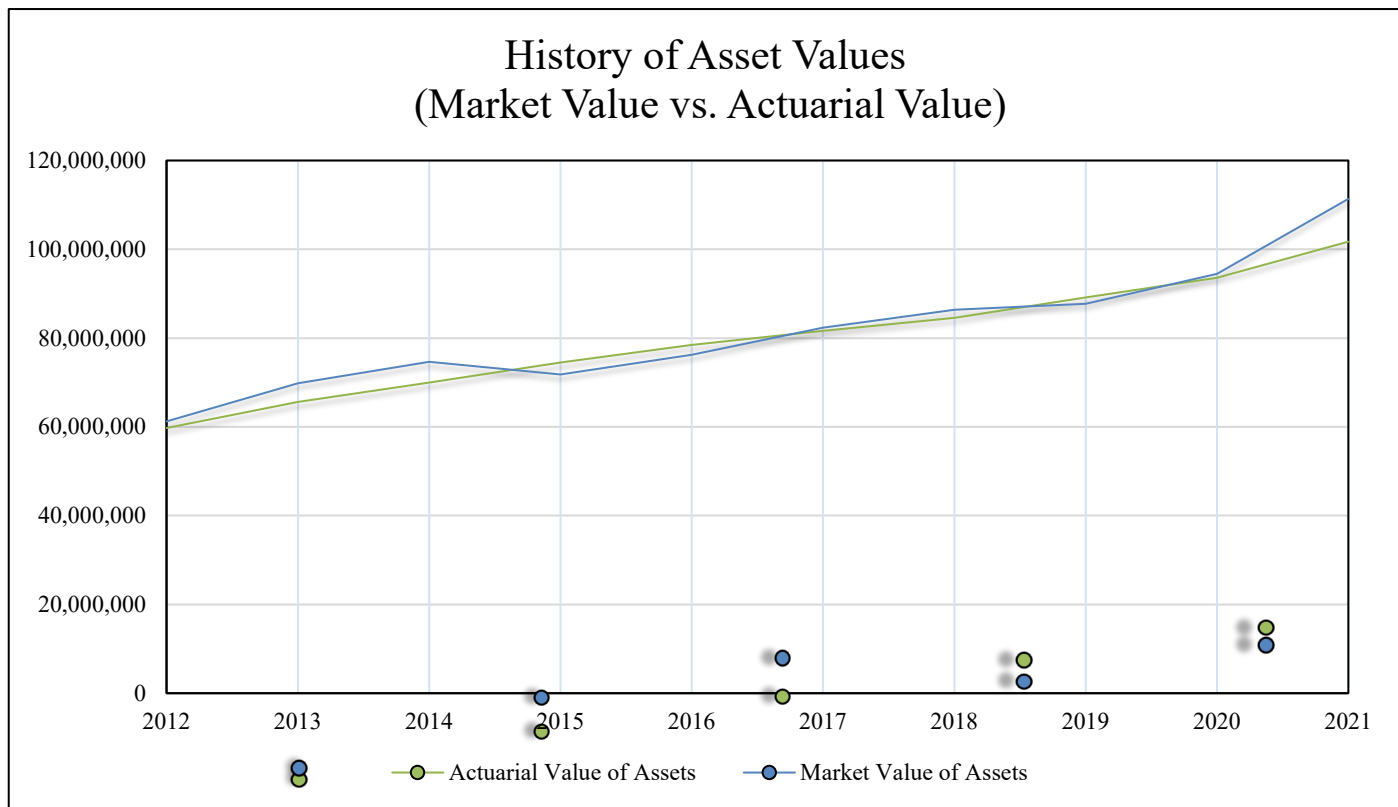
SUPPLEMENTAL CHAPTER 175 SHARE PLAN ACTIVITY  
October 1, 2020 through September 30, 2021

9/30/2020 Balance	6,395.36
Prior Year Adjustment	0.00
Plus Additions	0.00
Investment Return Earned	1,170.89
Administrative Fees	0.00
Less Distributions	<u>(655.72)</u>
9/30/2021 Balance	6,910.53

RECONCILIATION OF CITY'S SHORTFALL/(PREPAID) CONTRIBUTION  
FOR THE FISCAL YEAR ENDED (FYE) SEPTEMBER 30, 2021

(1) Required City and State Contributions	\$3,333,608.00
(2) Less Allowable State Contribution	<u>(549,528.93)</u>
(3) Required City Contribution for Fiscal 2021	2,784,079.07
(4) Plus 2020 Shortfall Contribution	21,679.28
(5) Less Actual City Contributions	<u>(2,857,809.32)</u>
(6) Equals City's Shortfall/(Prepaid) Contribution as of September 30, 2021	(\$52,050.97)

# HISTORY OF ASSET VALUES AND INVESTMENT RETURNS



STATISTICAL DATA

	<u>10/1/2018</u>	<u>10/1/2019</u>	<u>10/1/2020</u>	<u>10/1/2021</u>
<u>Actives</u>				
Number	108	109	105	107
Average Current Age	36.5	37.1	38.1	37.6
Average Age at Employment	27.3	27.5	27.5	27.4
Average Past Service	9.2	9.6	10.6	10.2
Average Annual Salary	\$56,987	\$59,687	\$62,446	\$62,066
<u>Service Retirees</u>				
Number	62	65	68	72
Average Current Age	60.4	61.2	62.0	62.4
Average Annual Benefit	\$62,612	\$63,160	\$64,238	\$64,933
<u>DROP Retirees</u>				
Number	14	12	10	12
Average Current Age	54.3	54.9	55.4	55.2
Average Annual Benefit	\$71,104	\$74,146	\$75,506	\$75,304
<u>Beneficiaries</u>				
Number	3	3	3	3
Average Current Age	64.9	65.9	66.9	67.9
Average Annual Benefit	\$41,255	\$42,269	\$43,312	\$44,387
<u>Disability Retirees</u>				
Number	9	9	9	10
Average Current Age	58.9	59.9	60.9	60.6
Average Annual Benefit	\$39,012	\$39,696	\$38,644	\$38,966
<u>Terminated Vested</u>				
Number	10	10	7	5
Average Current Age <sup>1</sup>	47.3	49.0	50.0	51.1
Average Annual Benefit <sup>1</sup>	\$25,888	\$27,134	\$27,134	\$24,612

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

## AGE AND SERVICE DISTRIBUTION

### PAST SERVICE

AGE	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30+	Total
15 - 19												0
20 - 24	6		1									7
25 - 29	2	1	3	1	4	3						14
30 - 34			2	3	1	12	3					21
35 - 39	1		1		2	5	13					22
40 - 44						2	6	8	4			20
45 - 49						2	3	1	3	2		11
50 - 54								2	5			7
55 - 59			1			1		1	1			4
60 - 64				1								1
65+												0
<b>Total</b>	<b>9</b>	<b>1</b>	<b>8</b>	<b>5</b>	<b>7</b>	<b>25</b>	<b>25</b>	<b>12</b>	<b>13</b>	<b>2</b>	<b>0</b>	<b>107</b>

## VALUATION PARTICIPANT RECONCILIATION

### 1. Active lives

a. Number in prior valuation 10/1/2020	105
b. Terminations	
i. Vested (partial or full) with deferred annuity	0
ii. Vested in refund of member contributions only	(1)
iii. Refund of member contributions or full lump sum distribution received	(1)
c. Deaths	
i. Beneficiary receiving benefits	0
ii. No future benefits payable	0
d. Disabled	(1)
e. Retired	0
f. DROP	<u>(4)</u>
g. Continuing participants	98
h. New entrants	<u>9</u>
i. Total active life participants in valuation	107

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

	Service Retirees, Vested Receiving <u>Benefits</u>	DROP <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	68	10	3	9	4	3	97
Retired	4	(2)	0	0	(2)	0	0
DROP	0	4	0	0	0	0	4
Vested (Deferred Annuity)	0	0	0	0	0	0	0
Vested (Due Refund)	0	0	0	0	0	1	1
Hired/Terminated in Same Year	0	0	0	0	0	0	0
Death, With Survivor	0	0	0	0	0	0	0
Death, No Survivor	0	0	0	0	0	0	0
Disabled	0	0	0	1	0	0	1
Refund of Contributions	0	0	0	0	0	(1)	(1)
Rehires	0	0	0	0	0	0	0
Expired Annuities	0	0	0	0	0	0	0
Data Corrections	0	0	0	0	0	0	0
b. Number current valuation	72	12	3	10	2	3	102

## SUMMARY OF CURRENT PLAN

The following summary is intended to state the plan of benefits valued in this report. It is not intended as a restatement or summary of benefits for any other purposes.

**Membership:** Effective May 2, 1974, any full-time firefighter or police officer having permanent status becomes a Plan Member immediately upon hire.

**Collective Bargaining Agreements:** Certain employees covered by the Plan are members of the Palm Bay Professional Firefighters (PBPF), IAFF, Local 2446.

**Average Final Compensation (AFC):** 1/12 of the average annual compensation of the best five years of the last ten years of credited service prior to retirement, DROP, termination or death.

**Compensation:** Base pay, excluding overtime, bonuses, and any other non-regular compensation received by a Member.

For firefighter Members, Compensation also includes holiday pay. Effective October 1, 2021, longevity pay is also included.

**Credited Service:** Years and complete months of uninterrupted service. Service is not considered to be interrupted by authorized leave of absence, vacation, or service (voluntary or involuntary) in the Armed Forces of the United States, with certain stipulations.

Service is not considered to be interrupted for purposes of vesting or eligibility where leave is granted pursuant to the Family and Medical Leave Act. The Member may receive Credited Service for purposes of benefit accrual if the Member contributes the employee contributions (with interest) that would have been contributed during the period of absence within 90 days after the member's return from leave.

Members may voluntarily leave accumulated contributions in the fund for a period of five years after leaving the employ of the police or fire department pending the possibility of being re-employed without losing credit for that time.

Re-employed Members do not receive credit for time where accumulated contributions were withdrawn.

Members may purchase up to 4 years of service for prior military or sworn firefighter service/law enforcement experience (for which no benefit is payable). Firefighters must pay the full actuarial cost at the time of purchase.

## NORMAL RETIREMENT

**Fire Eligibility:**  
**(Normal Retirement Date)**

The earlier of (1) age 55 (with 10 years of service if hired on or after March 15, 2012) or (2) upon completion of 25 years of Credited Service, regardless of age.

Members are 100% vested upon Normal Retirement Benefit eligibility.

**Firefighter Benefit:**

For firefighters with less than 20 years service:

2.00% x Credited Service prior to October 1, 1991, plus 2.50% x AFC x Credited Service on and after October 1, 1991.

For firefighters with 20 or more years of service:

3.00% x AFC x Credited Service for the first 20 years of Credited Service (3.20% if hired on or after March 15, 2012), plus 5.00% x AFC x Credited Service over 20 years (3.20% if hired on or after March 15, 2012).

In addition, Firefighters receive a Supplemental Benefit of \$189 per month payable over the life of the retiree only. Firefighters who retire on or after October 1, 2006, receive \$458 per month, instead of \$189.

In addition, Firefighters who terminate after October 1, 2008, receive a Supplemental Benefit equal to \$25 per month times years of Credited Service accrued prior to March 15, 2012, plus \$12 per month times years of Credited Service earned after March 15, 2012. The benefit is \$25 per month for all years of Credited Service for those firefighters eligible for Normal Retirement on March 15, 2012. This benefit will be payable for the life of the retiree, but shall cease when the member attains the age of Medicare eligibility.

**Maximum Benefit:**

100% of Average Final Compensation for firefighters hired before March 15, 2012 and 90% of Average Final Compensation for firefighters hired after that date, exclusive of the Supplemental Benefits.

**Normal Form of Benefit:**

10-year Certain and Continuous annuity.

**COLA:**

Firefighters that retire on or after September 30, 2001 are eligible to receive a 3.00% (2.00% if hired on or after March 15, 2012) annual increase each September 30<sup>th</sup> after having been retired for six years (the supplemental benefits are not increased).

## EARLY RETIREMENT

**Eligibility:**

Members may retire and receive the Early Retirement Benefit on the first day of any month prior to their Normal Retirement Date after attaining the earlier of (1) age 45 and completion of 20 years of Credited Service, or (2) age 50 and completion of 10 years of Credited Service.



**Benefit:** The monthly Early Retirement Benefit payable is reduced by 3.00% each year the Early Retirement Benefit commences prior to the Normal Retirement Date.

The Supplemental Benefits payable to firefighters are not reduced for early commencement.

**Normal Form of Benefit:**

10-year Certain and Continuous annuity.

**COLA:**

Firefighters that retire on or after September 30, 2001 are eligible to receive a 3.00% (2.00% if hired on or after March 15, 2012) annual increase each September 30<sup>th</sup> after having been retired for six years (the supplemental benefits are not increased).

### **DEFERRED RETIREMENT OPTION PLAN (DROP)**

**Eligibility - Fire:**

The earlier of the completion of 25 years of Credited Service, regardless of age, or age 55 and the completion of 10 years of Credited Service.

**Benefit:**

Once the DROP is entered into, monthly benefits are frozen and no further Participant Contributions are made. The benefit payable under the DROP is calculated as described upon the Normal Retirement Benefit. Upon DROP participation, monthly benefits that would have been payable had the Member terminated employment and elected to receive monthly pension payments are paid into the DROP account.

**Maximum DROP Period:**

Members are limited to 60 months of DROP participation.

**Interest Rate Credited To DROP Account:**

DROP account interest crediting is posted quarterly based on the actual pension fund returns, net of money manager fees and other expenses.

**Normal Form of DROP Account:**

At the end of a Member's participation in the DROP, the distribution of the accumulated DROP account is payable in the following forms of distribution: (1) Annual installments payable each December (no less than 10% or \$10,000, whichever is greater), (2) Rollover to another qualified retirement plan, or (3) Lump sum balance paid directly to the Member.

**Normal Form of Monthly Benefit:**

10-year Certain and Continuous annuity.  
Cost of Living Adjustments, if any, are applicable to the benefit of the Member while in the DROP.

**COLA:**

Firefighters that retire on or after September 30, 2001 are eligible to receive a 3.00% (2.00% if hired on or after March 15, 2012) annual increase each September 30<sup>th</sup> after having been retired for six years (the supplemental benefits are not increased).

## DISABILITY RETIREMENT

**Eligibility:**

In Line of Duty: Immediate.  
Not In Line of Duty: 10 years.  
DROP participants are not eligible for this benefit.

**Disabled Definition:**

Unable, by reason of medically determinable physical or mental impairment, to render useful and efficient service as a police officer or firefighter.

**Benefit:**

In Line of Duty Disability: 75% of Average Final Compensation, but not less than the accrued Normal Retirement Benefit. For firefighters hired after March 15, 2012 the minimum Line of Duty Disability benefit will be 66% of Average Final Compensation.

Not In Line of Duty Disability: 25% of Average Final Compensation, but not less than the accrued Normal Retirement Benefit.

**Normal Form of Benefit:**

10-year Certain and Continuous annuity, ceasing upon recovery prior to Normal Retirement Eligibility.

In addition, Firefighters who become Disabled after October 1, 2008, receive a Supplemental Benefit equal to \$25 per month times years of Credited Service accrued prior to March 15, 2012, plus \$12 per month times years of Credited Service earned after March 15, 2012. The benefit is \$25 per month for all years of Credited Service for those firefighters eligible for Normal Retirement on March 15, 2012. This benefit will be payable for the life of the retiree, but shall cease when the member attains the age of Medicare eligibility.

**COLA:**

Firefighters that retire on or after September 30, 2001 are eligible to receive a 3.00% annual increase each September 30<sup>th</sup> after having been retired for six years. Firefighters that are hired after March 15, 2012 will receive a 2.00% annual increase each September 30<sup>th</sup> after six years of retirement.

## DEATH WHILE IN SERVICE (FIREFIGHTER)

**Benefit:**

Effective October 1, 2006, the beneficiary of any member whose death was directly caused by performance of the member's duty as a firefighter (as approved by the Board) shall be entitled to a monthly pension equal to the greater of the member's accrued benefit or 75% of the member's average final compensation.

**Normal Form of Benefit:**

Life annuity to the designated beneficiary.

**COLA:**

Beneficiaries of Firefighters that die on or after September 30, 2001 are eligible to receive a 3.00% annual increase each September 30<sup>th</sup> after having been retired for six years. Beneficiaries of Firefighters that are hired after March 15, 2012 will receive a 2.00% annual increase each September 30<sup>th</sup> after six years of retirement.

**DEATH WHILE NOT IN SERVICE WITH MORE THAN 10 YEARS OF SERVICE(FIREFIGHTER)**

**Benefit:**

Effective October 1, 2006, the beneficiary of any member who had at least 10 years of Credited Service, whose death was not directly caused by performance of the member's duty as a firefighter, shall be entitled to a monthly pension equal to the greater of the member's accrued benefit or 25% of the member's average final compensation.

**COLA:**

Beneficiaries of Firefighters that die on or after September 30, 2001 are eligible to receive a 3.00% annual increase each September 30<sup>th</sup> after having been retired for six years. Beneficiaries of Firefighters that are hired after March 15, 2012 will receive a 2.00% annual increase each September 30<sup>th</sup> after six years of retirement.

**WITHDRAWAL – LESS THAN 5 YEARS OF CREDITED SERVICE (10 YEARS IF HIRED ON OR AFTER MARCH 15, 2012)**

**Eligibility :**

First day of work, up to 5 years (10 years if hired on or after March 15, 2012) of Credited Service.

**Benefit:**

Accumulated contributions with 0.00% interest.

**Form of Benefit:**

Lump Sum.

**WITHDRAWAL – AFTER EARNING AT LEAST 5 YEARS OF CREDITED SERVICE (10 YEARS IF HIRED ON OR AFTER MARCH 15, 2012)**

**Eligibility:**

At least 5 years (10 years if hired on or after March 15, 2012) of Credited Service.

**Benefit:**

Participants who terminate employment prior to their Normal Retirement Date are entitled to their Normal Retirement Benefit calculated based on Credited Service and Average Final Compensation at their date of termination, multiplied by the Vesting Percentage, with deferred commencement at their Normal Retirement Date. This benefit is payable on a reduced basis as described under Early Retirement.

In addition, Firefighters who terminate after October 1, 2008, receive a Supplemental Benefit equal to \$25 per month times years of Credited Service accrued prior to March 15, 2012, plus \$12 per month times years of Credited Service earned after March 15, 2012. The benefit is \$25 per month for all years of Credited Service for those firefighters eligible for Normal Retirement on March 15, 2012. This benefit will be payable for the life of the retiree, but shall cease when the member attains the age of Medicare eligibility.

**Vesting Percentage:**

<b><u>Completed Years of Credited Service</u></b>	<b><u>Vesting Percentage</u></b>
<5	0%
5	50%
6	60%
7	70%
8	80%
9	90%
10 +	100%

**Form of Benefit:**

10-year Certain and Continuous annuity.

**COLA:**

Firefighters that terminate on or after September 30, 2001 are eligible to receive a 3.00% annual increase each September 30<sup>th</sup> after having been retired for six years. Firefighters that are hired after March 15, 2012 will receive a 2.00% annual increase each September 30<sup>th</sup> after six years of retirement.

**MEMBER CONTRIBUTIONS**

**Contributions:**

Firefighters are required to contribute 8.76% of compensation effective October 1, 2008.

**Interest Crediting  
Rate:**

3.0% per year.

**DATA SOURCES**

**Asset Data:**

The asset information is taken from audited statements furnished by the Retirement Office.

**Member Data:**

The member data is supplied by the Retirement Office. It is reviewed for reasonableness and consistency, but no audit was performed. Foster & Foster, Inc. is not aware of any errors or omissions in the data that would have a significant effect on the results of our calculations.

**Furlough Impact:**

For the 2012 actuarial valuation report, individual Salaries were adjusted up by a ratio of the total number of normal work days in a year divided by the number of days actually worked after taking mandatory furloughs.

**SHARE PLAN**

**Initial Allocation as of October 1, 2015**

\$7,840.02

**Future Allocations**

½ of Annual State Monies received above  
\$825,324

**Earnings**

Annually equal to the net of fees return for the  
overall Trust Fund.

**Expenses**

Members share in actual expenses specific to the  
Share Plan administration.

STATEMENT OF FIDUCIARY NET POSITION  
SEPTEMBER 30, 2021

<u>ASSETS</u>	MARKET VALUE
Cash and Cash Equivalents:	
Short Term Investments	4,141,243
Deposits	852
Prepaid Expenses	13,001
Cash	10,672
 Total Cash and Equivalents	 4,165,768
Receivables:	
Accounts Receivable	1,298
From General Employees' Trust Fund	3,685
From Broker for Investments Sold	535,101
Investment Income	130,466
 Total Receivable	 670,550
Investments:	
Federal Agency Guaranteed Securities	12,830,774
Corporate Bonds	20,071,088
Stocks	31,380,753
Mutual Funds:	
Pooled/Common/Commingled Funds:	
Equity	30,519,630
Real Estate	13,207,530
 Total Investments	 108,009,775
 Total Assets	 112,846,093
 <u>LIABILITIES</u>	
Payables:	
DROP Plan Distributions	423,937
Accounts Payable	138,448
To Broker for Investments Purchased	878,722
 Total Liabilities	 1,441,107
 NET POSITION RESTRICTED FOR PENSIONS	 111,404,986

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION  
FOR THE YEAR ENDED SEPTEMBER 30, 2021  
Market Value Basis

ADDITIONS

## Contributions:

Member	547,792
Buy-Back	45,543
City	2,836,130
State	549,529

Total Contributions	3,978,994
---------------------	-----------

## Investment Income:

Net Increase in Fair Value of Investments	17,266,725
Interest & Dividends	2,235,577
Less Investment Expense <sup>1</sup>	(528,474)

Net Investment Income	18,973,828
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Total Additions	22,952,822
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DEDUCTIONS

## Distributions to Members:

Benefit Payments	5,017,292
Lump Sum DROP Distributions	712,121
Lump Sum Share Distributions	656
Refunds of Member Contributions	19,072

Total Distributions	5,749,141
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Administrative Expense	242,641
------------------------	---------

Total Deductions	5,991,782
------------------	-----------

Net Increase in Net Position	16,961,040
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## NET POSITION RESTRICTED FOR PENSIONS

Beginning of the Year	94,443,946
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End of the Year	111,404,986
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<sup>1</sup>Investment related expenses include investment advisory, custodial and performance monitoring fees.

**NOTES TO THE FINANCIAL STATEMENTS**  
(For the Year Ended September 30, 2021)

*Plan Administration*

The Plan is a single-employer defined benefit pension plan administered by the Plan's Board of Trustees comprised of:

- a. Chairman Board Appointee,
- b. Vice Chairman Police Elected Representative,
- c. Secretary, Fire Elected Representative,
- d. Two City Council Appointees.

*Plan Membership as of October 1, 2020:*

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	90
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	7
Active Plan Members	105
	202
	202

*Benefits Provided*

The Plan provides retirement, termination, disability and death benefits.

A summary of the benefit provisions can be found in the October 1, 2020 Actuarial Valuation Report for the City of Palm Bay Police and Firefighters' Pension Fund (Firefighters) prepared by Foster & Foster Actuaries and Consultants.

*Contributions*

Member Contributions: Firefighters are required to contribute 8.76% of compensation effective October 1, 2008.

Interest Crediting Rate: 3.0% per year.

City: Remaining amount required in order to pay current costs and amortize unfunded past service cost, if any, as provided in Chapter 112, Florida Statutes.

*Investment Policy:*

The following was the Board's adopted asset allocation policy as of September 30, 2021:

Asset Class	Target Allocation
Domestic Equity	35.0%
International Equity	15.0%
Bonds	25.0%
Convertibles	10.0%
Private Real Estate	10.0%
Infrastructure	5.0%
Total	100.0%

*Concentrations:*

The Plan did not hold investments in any one organization that represent 5 percent or more of the Pension Plan's Fiduciary Net Position.

*Rate of Return:*

For the year ended September 30, 2021, the annual money-weighted rate of return on Pension Plan investments, net of Pension Plan investment expense, was 20.31 percent.

The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.



## GASB 67

### Deferred Retirement Option Program

**Eligibility:** The earlier of the completion of 25 years of Credited Service, regardless of age, or age 55 and the completion of 10 years of Credited Service.

**Benefit:** Once the DROP is entered into, monthly benefits are frozen and no further Participant Contributions are made. The benefit payable under the DROP is calculated as described upon the Normal Retirement Benefit. Upon DROP participation, monthly benefits that would have been payable had the Member terminated employment and elected to receive monthly pension payments are paid into the DROP account.

**Maximum DROP Period:** Members are limited to 60 months of DROP participation.

**Interest Rate Credited to DROP Account:** DROP account interest crediting is posted quarterly based on the actual pension fund returns, net of money manager fees and other expenses.

**Normal Form of DROP Account:** At the end of a Member's participation in the DROP, the distribution of the accumulated DROP account is payable in the following forms of distribution: (1) Annual installments payable each December (no less than 10% or \$10,000, whichever is greater), (2) Rollover to another qualified retirement plan, or (3) Lump sum balance paid directly to the Member.

**Normal Form of Monthly Benefit:** 10-year Certain and Continuous annuity. Cost of Living Adjustments, if any, are applicable to the benefit of the Member while in the DROP.

**COLA:** Firefighters that retire on or after September 30, 2001 are eligible to receive a 3.00% (2.00% if hired on or after March 15, 2012) annual increase each September 30th after having been retired for six years (the supplemental benefits are not increased).

The DROP balance as September 30, 2021 is \$5,263,019.

## NET PENSION LIABILITY OF THE SPONSOR

The components of the Net Pension Liability of the Sponsor on September 30, 2021 were as follows:

Total Pension Liability	\$ 119,045,436
Plan Fiduciary Net Position	<u>\$(111,404,986)</u>
Sponsor's Net Pension Liability	<u>\$ 7,640,450</u>
Plan Fiduciary Net Position as a percentage of Total Pension Liability	93.58%

*Actuarial Assumptions:*

The Total Pension Liability was determined by an actuarial valuation as of October 1, 2020 updated to September 30, 2021 using the following actuarial assumptions:

Inflation	2.70%
Salary Increases	Varies by age
Discount Rate	7.65%
Investment Rate of Return	7.65%

*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.

*Mortality Rate Healthy Retiree Lives:*

Female: PubS.H-2010 (Above Median) for Healthy Retirees, set forward one year.

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

*Mortality Rate Beneficiary Lives:*

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

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

*Mortality Rate Disabled Lives:*

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

All rates are projected generationally with Mortality Improvement Scale MP-2018.

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, 2019 FRS valuation report for special risk employees, with appropriate risk and collar adjustments made based on plan demographics. We feel this assumption sufficiently accommodates future mortality improvements. 90% of active deaths are assumed to be service-incurred.

The most recent actuarial experience study used to review the other significant assumptions was dated, July 7, 2020.

The Long-Term Expected Rate of Return on Pension Plan investments can be determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of Pension Plan investment expenses and inflation) are developed for each major asset class.

For 2021 the inflation rate assumption of the investment advisor was 2.30%.

These ranges are combined to produce the Long-Term Expected Rate of Return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

## GASB 67

Best estimates of geometric real rates of return for each major asset class included in the Pension Plan's target asset allocation as of September 30, 2021 are summarized in the following table:

Asset Class	Long Term Expected Real Rate of Return <sup>1</sup>
Domestic Equity	8.3%
International Equity	4.1%
Bonds	3.1%
Convertibles	7.8%
Private Real Estate	5.5%
Infrastructure	7.0%

<sup>1</sup> Source: Burgess Chambers

### *Discount Rate:*

The Discount Rate used to measure the Total Pension Liability was 7.65 percent.

The projection of cash flows used to determine the Discount Rate assumed that Plan Member contributions will be made at the current contribution rate and that Sponsor contributions will be made at rates equal to the difference between actuarially determined contribution rates and the Member rate. Based on those assumptions, the Pension Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the Long-Term Expected Rate of Return on Pension Plan investments was applied to all periods of projected benefit payments to determine the Total Pension Liability.

	1% Decrease	Current Discount Rate	1% Increase
	6.65%	7.65%	8.65%
Sponsor's Net Pension Liability	\$ 22,742,979	\$ 7,640,450	\$ (4,724,402)

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS  
Last 2 Fiscal Years

	09/30/2021	09/30/2020
Total Pension Liability		
Service Cost	1,784,228	1,725,050
Interest	8,638,064	8,112,876
Changes of benefit terms	-	-
Differences between Expected and Actual Experience	320,532	695,678
Changes of assumptions	-	3,825,109
Contributions - Buy Back	45,543	-
Benefit Payments, including Refunds of Employee Contributions	(5,749,141)	(6,619,446)
Net Change in Total Pension Liability	5,039,226	7,739,267
Total Pension Liability - Beginning	114,006,210	106,266,943
Total Pension Liability - Ending (a)	<u>\$ 119,045,436</u>	<u>\$ 114,006,210</u>
Plan Fiduciary Net Position		
Contributions - Employer	2,836,130	2,699,071
Contributions - State	549,529	526,141
Contributions - Employee	547,792	555,414
Contributions - Buy Back	45,543	-
Net Investment Income	18,973,828	9,801,388
Benefit Payments, including Refunds of Employee Contributions	(5,749,141)	(6,619,446)
Administrative Expense	(242,641)	(233,632)
Net Change in Plan Fiduciary Net Position	16,961,040	6,728,936
Plan Fiduciary Net Position - Beginning	94,443,946	87,715,010
Plan Fiduciary Net Position - Ending (b)	<u>\$ 111,404,986</u>	<u>\$ 94,443,946</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 7,640,450</u>	<u>\$ 19,562,264</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	93.58%	82.84%
Covered Payroll	\$ 6,253,060	\$ 6,338,780
Net Pension Liability as a percentage of Covered Payroll	122.19%	308.61%

**Notes to Schedule:***Changes of assumptions:*

For measurement date 09/30/2020, the following changes are incorporated based on the Board's review of the July 7, 2020 Actuarial Experience Study:

- Investment Return - was lowered from 7.75% to 7.65%.
- Salary Increases - were lowered for all ages.
- Mortality Rates - As mandated by Chapter 2015-157, Laws of Florida, the assumed rates of mortality were changed to the rates used in Milliman's July 1, 2019 FRS valuation report for special risk employees, with appropriate risk and collar adjustments made based on plan demographics.
- Retirement Rates - were amended to be generally lower than previously assumed for early retirement and higher than previously assumed for normal retirement.
- Termination Rates - were changed from age-based assumption to service-based assumption with diminishing rates of withdrawal as services increases.

**SCHEDULE OF CONTRIBUTIONS**  
Last 2 Fiscal Years

Fiscal Year Ended	Actuarially Determined Contribution	Contributions in relation to the Actuarially Determined Contributions	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a percentage of Covered Payroll
09/30/2021	\$ 3,333,608	\$ 3,385,659	\$ (52,051)	\$ 6,253,060	54.14%
09/30/2020	\$ 3,225,212	\$ 3,225,212	\$ -	\$ 6,338,780	50.88%

Notes to Schedule

Valuation Date: 10/01/2019

Actuarially determined contribution rates are calculated as of October 1, two years prior to the end of the fiscal year in which contributions are reported.

Methods and assumptions used to determine contribution rates can be found in the October 1, 2019 Actuarial Valuation for the City of Palm Bay Police and Firefighters' Pension Fund (Firefighters) prepared by Foster & Foster Actuaries and Consultants.

SCHEDULE OF INVESTMENT RETURNS  
Last 2 Fiscal Years

Fiscal Year Ended	Annual Money-Weighted Rate of Return Net of Investment Expense
09/30/2021	20.31%
09/30/2020	11.37%

**NOTES TO THE FINANCIAL STATEMENTS**  
(For the Year Ended September 30, 2021)

*Plan Description*

The Plan is a single-employer defined benefit pension plan administered by the Plan's Board of Trustees comprised of:

- a. Chairman Board Appointee,
- b. Vice Chairman Police Elected Representative,
- c. Secretary, Fire Elected Representative,
- d. Two City Council Appointees.

Effective May 2, 1974, any full-time firefighter or police officer having permanent status becomes a Plan Member immediately upon hire.

*Plan Membership as of October 1, 2020:*

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	90
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	7
Active Plan Members	105
	202

*Benefits Provided*

The Plan provides retirement, termination, disability and death benefits.

A summary of the benefit provisions can be found in the October 1, 2020 Actuarial Valuation Report for the City of Palm Bay Police and Firefighters' Pension Fund (Firefighters) prepared by Foster & Foster Actuaries and Consultants.

*Contributions*

Member Contributions: Firefighters are required to contribute 8.76% of compensation effective October 1, 2008.

Interest Crediting Rate: 3.0% per year.

City: Remaining amount required in order to pay current costs and amortize unfunded past service cost, if any, as provided in Chapter 112, Florida Statutes.

*Net Pension Liability*

The measurement date is September 30, 2021.

The measurement period for the pension expense was October 1, 2020 to September 30, 2021.

The reporting period is October 1, 2020 through September 30, 2021.

The Sponsor's Net Pension Liability was measured as of September 30, 2021.

The Total Pension Liability used to calculate the Net Pension Liability was determined as of that date.

*Actuarial Assumptions:*

The Total Pension Liability was determined by an actuarial valuation as of October 1, 2020 updated to September 30, 2021 using the following actuarial assumptions:

Inflation	2.70%	
Salary Increases	Varies by age	
Discount Rate	7.65%	
Investment Rate of Return	7.65%	

## GASB 68

### *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.

### *Mortality Rate Healthy Retiree Lives:*

Female: PubS.H-2010 (Above Median) for Healthy Retirees, set forward one year.

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

### *Mortality Rate Beneficiary Lives:*

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

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

### *Mortality Rate Disabled Lives:*

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

All rates are projected generationally with Mortality Improvement Scale MP-2018.

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, 2019 FRS valuation report for special risk employees, with appropriate risk and collar adjustments made based on plan demographics. We feel this assumption sufficiently accommodates future mortality improvements.

90% of active deaths are assumed to be service-incurred.

The most recent actuarial experience study used to review the other significant assumptions was dated, July 7, 2020.

The Long-Term Expected Rate of Return on Pension Plan investments can be determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, Net of Pension Plan investment expenses and inflation) are developed for each major asset class.

For 2021 the inflation rate assumption of the investment advisor was 2.30%.

These ranges are combined to produce the Long-Term Expected Rate of Return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

Best estimates of geometric real rates of return for each major asset class included in the Pension Plan's target asset allocation as of September 30, 2021 are summarized in the following table:

<u>Asset Class</u>	<u>Target Allocation</u>	<u>Long Term Expected Real Rate of Return<sup>1</sup></u>
Domestic Equity	35.0%	8.3%
International Equity	15.0%	4.1%
Bonds	25.0%	3.1%
Convertibles	10.0%	7.8%
Private Real Estate	10.0%	5.5%
Infrastructure	5.0%	7.0%
<u>Total</u>	<u>100.0%</u>	

<sup>1</sup> Source: Burgess Chambers

### *Discount Rate:*

The Discount Rate used to measure the Total Pension Liability was 7.65 percent.

The projection of cash flows used to determine the Discount Rate assumed that Plan Member contributions will be made at the current contribution rate and that Sponsor contributions will be made at rates equal to the difference between actuarially determined contribution rates and the Member rate. Based on those assumptions, the Pension Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the Long-Term Expected Rate of Return on Pension Plan investments was applied to all periods of projected benefit payments to determine the Total Pension Liability.



## CHANGES IN NET PENSION LIABILITY

	Increase (Decrease)		
	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a)-(b)
Balances at September 30, 2020	\$ 114,006,210	\$ 94,443,946	\$ 19,562,264
Changes for a Year:			
Service Cost	1,784,228	-	1,784,228
Interest	8,638,064	-	8,638,064
Differences between Expected and Actual Experience	320,532	-	320,532
Changes of assumptions	-	-	-
Changes of benefit terms	-	-	-
Contributions - Employer	-	2,836,130	(2,836,130)
Contributions - State	-	549,529	(549,529)
Contributions - Employee	-	547,792	(547,792)
Contributions - Buy Back	45,543	45,543	-
Net Investment Income	-	18,973,828	(18,973,828)
Benefit Payments, including Refunds of Employee Contributions	(5,749,141)	(5,749,141)	-
Administrative Expense	-	(242,641)	242,641
Net Changes	5,039,226	16,961,040	(11,921,814)
Balances at September 30, 2021	\$ 119,045,436	\$ 111,404,986	\$ 7,640,450

*Sensitivity of the Net Pension Liability to changes in the Discount Rate.*

	Current Discount		
	1% Decrease 6.65%	Rate 7.65%	1% Increase 8.65%
Sponsor's Net Pension Liability	\$ 22,742,979	\$ 7,640,450	\$ (4,724,402)

*Pension Plan Fiduciary Net Position.*

Detailed information about the pension Plan's Fiduciary Net Position is available in a separately issued Plan financial report.

**PENSION EXPENSE AND DEFERRED OUTFLOWS OF RESOURCES AND DEFERRED  
INFLOWS OF RESOURCES RELATED TO PENSIONS**

For the year ended September 30, 2021, the Sponsor will recognize a Pension Expense of \$1,574,920.

On September 30, 2021, the Sponsor reported Deferred Outflows of Resources and Deferred Inflows of Resources related to pensions from the following sources:

	<u>Deferred Outflows of Resources</u>	<u>Deferred Inflows of Resources</u>
Differences between Expected and Actual Experience	1,543,079	-
Changes of assumptions	2,550,072	-
Net difference between Projected and Actual Earnings on Pension Plan investments	-	10,167,637
Total	<u>\$ 4,093,151</u>	<u>\$ 10,167,637</u>

Amounts reported as Deferred Outflows of Resources and Deferred Inflows of Resources related to pensions will be recognized in Pension Expense as follows:

Year ended September 30:	
2022	\$ (1,276,602)
2023	\$ (1,235,598)
2024	\$ (2,057,423)
2025	\$ (1,558,285)
2026	\$ 53,422
Thereafter	\$ -

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS  
Last 2 Fiscal Years

	09/30/2021	09/30/2020
Total Pension Liability		
Service Cost	1,784,228	1,725,050
Interest	8,638,064	8,112,876
Changes of benefit terms	-	-
Differences between Expected and Actual Experience	320,532	695,678
Changes of assumptions	-	3,825,109
Contributions - Buy Back	45,543	-
Benefit Payments, including Refunds of Employee Contributions	(5,749,141)	(6,619,446)
Net Change in Total Pension Liability	5,039,226	7,739,267
Total Pension Liability - Beginning	114,006,210	106,266,943
Total Pension Liability - Ending (a)	<u>\$ 119,045,436</u>	<u>\$ 114,006,210</u>
Plan Fiduciary Net Position		
Contributions - Employer	2,836,130	2,699,071
Contributions - State	549,529	526,141
Contributions - Employee	547,792	555,414
Contributions - Buy Back	45,543	-
Net Investment Income	18,973,828	9,801,388
Benefit Payments, including Refunds of Employee Contributions	(5,749,141)	(6,619,446)
Administrative Expense	(242,641)	(233,632)
Net Change in Plan Fiduciary Net Position	16,961,040	6,728,936
Plan Fiduciary Net Position - Beginning	94,443,946	87,715,010
Plan Fiduciary Net Position - Ending (b)	<u>\$ 111,404,986</u>	<u>\$ 94,443,946</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 7,640,450</u>	<u>\$ 19,562,264</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	93.58%	82.84%
Covered Payroll	\$ 6,253,060	\$ 6,338,780
Net Pension Liability as a percentage of Covered Payroll	122.19%	308.61%

**Notes to Schedule:***Changes of assumptions:*

For measurement date 09/30/2020, the following changes are incorporated based on the Board's review of the July 7, 2020

- Investment Return - was lowered from 7.75% to 7.65%.
- Salary Increases - were lowered for all ages.
- Mortality Rates - As mandated by Chapter 2015-157, Laws of Florida, the assumed rates of mortality were changed to the rates used in Milliman's July 1, 2019 FRS valuation report for special risk employees, with appropriate risk and collar adjustments made based on plan demographics.
- Retirement Rates - were amended to be generally lower than previously assumed for early retirement and higher than previously assumed for normal retirement.
- Termination Rates - were changed from age-based assumption to service-based assumption with diminishing rates of withdrawal as services increases.

**SCHEDULE OF CONTRIBUTIONS**  
Last 2 Fiscal Years

Fiscal Year Ended	Actuarially Determined Contribution	Contributions in relation to the Actuarially Determined Contributions	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a percentage of Covered Payroll
09/30/2021	\$ 3,333,608	\$ 3,385,659	\$ (52,051)	\$ 6,253,060	54.14%
09/30/2020	\$ 3,225,212	\$ 3,225,212	\$ -	\$ 6,338,780	50.88%

Notes to Schedule

Valuation Date:

10/01/2019

Actuarially determined contribution rates are calculated as of October 1, two years prior to the end of the fiscal year in which contributions are reported.

Methods and assumptions used to determine contribution rates can be found in the October 1, 2019 Actuarial Valuation for the City of Palm Bay Police and Firefighters' Pension Fund (Firefighters) prepared by Foster & Foster Actuaries and Consultants.

EXPENSE DEVELOPMENT AND AMORTIZATION SCHEDULES

**The following information is not required to be disclosed but is provided for informational purposes.**

COMPONENTS OF PENSION EXPENSE  
FISCAL YEAR SEPTEMBER 30, 2021

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Beginning balance	\$ 19,562,264	\$ 3,227,721	\$ 7,264,310	\$ -
Total Pension Liability Factors:				
Service Cost	1,784,228	-	-	1,784,228
Interest	8,638,064	-	-	8,638,064
Changes in benefit terms	-	-	-	-
Contributions - Buy Back	45,543	-	-	45,543
Differences between Expected and Actual Experience with regard to economic or demographic assumptions	320,532	-	320,532	-
Current year amortization of experience difference	-	-	(558,139)	558,139
Change in assumptions about future economic or demographic factors or other inputs	-	-	-	-
Current year amortization of change in assumptions	-	-	(1,030,520)	1,030,520
Benefit Payments	(5,749,141)	-	-	-
Net change	<u>5,039,226</u>	<u>-</u>	<u>(1,268,127)</u>	<u>12,056,494</u>
Plan Fiduciary Net Position:				
Contributions - Employer	2,836,130	-	-	-
Contributions - State	549,529	-	-	-
Contributions - Employee	547,792	-	-	(547,792)
Contributions - Buy Back	45,543	-	-	(45,543)
Projected Net Investment Income	7,147,973	-	-	(7,147,973)
Difference between projected and actual earnings on Pension Plan investments	11,825,855	11,825,855	-	-
Current year amortization	-	(3,617,251)	(634,344)	(2,982,907)
Benefit Payments	(5,749,141)	-	-	-
Administrative Expenses	(242,641)	-	-	242,641
Net change	<u>16,961,040</u>	<u>8,208,604</u>	<u>(634,344)</u>	<u>(10,481,574)</u>
Ending Balance	<u>\$ 7,640,450</u>	<u>\$ 11,436,325</u>	<u>\$ 5,361,839</u>	<u>\$ 1,574,920</u>

AMORTIZATION SCHEDULE - INVESTMENTS

Increase (Decrease) in Pension Expense Arising from the Recognition of the of Differences Between Projected and Actual Earnings on Pension Plan Investments

Plan Year Ending	Differences Between Projected and Actual Earnings	Recognition Period (Years)	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
2021	\$ (11,825,855)	5	\$ (2,365,171)	\$ (2,365,171)	\$ (2,365,171)	\$ (2,365,171)	\$ (2,365,171)	\$ -	\$ -	\$ -	\$ -	\$ -
2020	\$ (3,122,532)	5	\$ (624,506)	\$ (624,506)	\$ (624,506)	\$ (624,506)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2019	\$ 3,171,719	5	\$ 634,344	\$ 634,344	\$ 634,344	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ (510,614)	5	\$ (102,123)	\$ (102,123)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ (2,627,257)	5	\$ (525,451)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ (2,982,907)	\$ (2,457,456)	\$ (2,355,333)	\$ (2,989,677)	\$ (2,365,171)	\$ -	\$ -	\$ -	\$ -	\$ -

AMORTIZATION SCHEDULE - CHANGES OF ASSUMPTIONS

Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of Changes of Assumptions

Plan Year Ending	Changes of Assumptions	Recognition Period (Years)	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
2020	\$ 3,825,109	6	\$ 637,518	\$ 637,518	\$ 637,518	\$ 637,518	\$ 637,518	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ 2,358,009	6	\$ 393,002	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 1,030,520	\$ 637,518	\$ 637,518	\$ 637,518	\$ 637,518	\$ -	\$ -	\$ -	\$ -	\$ -



AMORTIZATION SCHEDULE - EXPERIENCE

Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of Differences between Expected and Actual Experience

Plan Year Ending	Differences Between Expected and Actual Experience	Recognition Period (Years)	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
2021	\$ 320,532	6	\$ 53,422	\$ 53,422	\$ 53,422	\$ 53,422	\$ 53,422	\$ 53,422	\$ -	\$ -	\$ -	\$ -
2020	\$ 695,678	6	\$ 115,946	\$ 115,946	\$ 115,946	\$ 115,946	\$ 115,946	\$ -	\$ -	\$ -	\$ -	\$ -
2019	\$ 752,209	6	\$ 125,368	\$ 125,368	\$ 125,368	\$ 125,368	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ 1,124,887	6	\$ 187,481	\$ 187,481	\$ 187,481	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ 366,711	6	\$ 61,119	\$ 61,119	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ 88,819	6	\$ 14,803	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 558,139	\$ 543,336	\$ 482,217	\$ 294,736	\$ 169,368	\$ 53,422	\$ -	\$ -	\$ -	\$ -