

CITY OF PENSACOLA
POLICE OFFICERS' RETIREMENT PLAN
ACTUARIAL VALUATION
AS OF OCTOBER 1, 2019
CONTRIBUTIONS APPLICABLE TO THE
PLAN/FISCAL YEAR ENDING SEPTEMBER 30, 2021
GASB 67/68 DISCLOSURE INFORMATION
AS OF SEPTEMBER 30, 2019



FOSTER & FOSTER
ACTUARIES AND CONSULTANTS

February 23, 2020

Board of Trustees
City of Pensacola
Police Officers' Pension Board

Re: City of Pensacola Police Officers' Retirement Plan

Dear Board:

We are pleased to present to the Board this report of the annual actuarial valuation of the City of Pensacola Police Officers' Retirement Plan. 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 185, 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. 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 Pensacola, 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.

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, 2018. The total pension liability was rolled-forward from the valuation date to the plan's fiscal year ending September 30, 2019 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 Pensacola, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the Police Officers' Retirement Plan. Thus, there is no relationship existing that might affect our capacity to prepare and certify this actuarial report.

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

Respectfully submitted,

By:



Drew D. Ballard, EA, MAAA
Enrolled Actuary #17-8193

By:



Sara E. Carlson, ASA, EA, MAAA
Enrolled Actuary #17-8546

Enclosures

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SUMMARY OF REPORT

The regular annual actuarial valuation of the City of Pensacola Police Officers' Retirement Plan, performed as of October 1, 2019, 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, 2021.

The contribution requirements, compared with those set forth in the October 1, 2018 actuarial valuation report, are as follows:

Valuation Date	10/1/2019	10/1/2018
Assumed Beginning of Year Contribution Date	10/1/2020	10/1/2019
Applicable to Fiscal Year Ending	<u>9/30/2021</u>	<u>9/30/2020</u>
Minimum Required Contribution	\$4,978,986	\$5,034,324
Member Contributions (Est.)	221,410	211,529
City And State Required Contribution	4,757,576	4,822,795
State Contribution (Est.) ¹	601,682	601,682
City Required Contribution ²	\$4,155,894	\$4,221,113

¹ Represents the amount received in calendar 2019.

² The required contribution from the combination of City and State sources of the year ending September 30, 2021 is \$4,757,576. The City and State contribution for the fiscal year ending September 30, 2020 is \$4,822,795. These amounts are based on the City's funding policy of contributing on October 1. Additionally, the City has access to the September 30, 2019 Contribution Surplus Account Balance of \$769,559.08 to help offset a portion of the above stated requirements for fiscal 2020. Please see page 17 of this report for detail of the account balance reconciliation.

As you can see, the Minimum Required Contribution shows a decrease when compared to the results determined in the October 1, 2018 actuarial valuation. The decrease is mainly attributable to a decrease in the Normal Cost due to the declining number of active employees.

Plan experience was unfavorable overall on the basis of the plan's actuarial assumptions. The primary source of actuarial loss was an average salary increase of 7.80% which exceeded the 4.00% assumption. This loss was offset in part by gains associated with an investment return of 7.96% (Actuarial Asset Basis) which exceeded the 7.125% assumption and an annual cost-of-living adjustment for the retirees that was lower than the assumption.

CHANGES SINCE PRIOR VALUATION

Plan Changes

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

Actuarial Assumption/Method Changes

In conjunction with this actuarial valuation, a "fresh-start" of the actuarial asset value has been implemented to be equal to the market value of assets. Effective October 1, 2019, the asset valuation method is such that all assets are valued at market value with an adjustment to uniformly spread investment gains and losses (as measured by actual market value investment return against expected market value investment return) over a five-year period. The fresh-start in conjunction with the change to the actuarial asset method has been implemented in order to align with the investment gain-loss recognition required by GASB.

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	New Method <u>10/1/2019</u>	Old Method <u>10/1/2019</u>	<u>10/1/2018</u>
A. Participant Data			
Actives	67	67	68
Service Retirees	116	116	118
DROP Retirees	12	12	11
Beneficiaries	26	26	27
Disability Retirees	15	15	15
Terminated Vested	<u>14</u>	<u>14</u>	<u>14</u>
Total	250	250	253
Covered Non-DROP Payroll	4,094,123	4,094,123	3,911,400
Annual Rate of Payments to:			
Service Retirees	5,452,115	5,452,115	5,373,497
DROP Retirees	714,524	714,524	617,617
Beneficiaries	606,730	606,730	617,247
Disability Retirees	273,403	273,403	267,256
Terminated Vested	130,199	130,199	130,199
B. Assets			
Actuarial Value (AVA) ¹	105,137,476	104,627,063	97,975,086
Market Value (MVA) ¹	105,137,476	105,137,476	101,955,040
C. Liabilities			
Present Value of Benefits			
Actives			
Retirement Benefits	29,636,326	29,636,326	27,295,830
Disability Benefits	2,853,193	2,853,193	2,711,707
Death Benefits	526,662	526,662	500,788
Vested Benefits	631,575	631,575	667,974
Refund of Contributions	19,375	19,375	24,365
Service Retirees	83,395,235	83,395,235	83,347,763
DROP Retirees ¹	14,163,795	14,163,795	12,051,298
Beneficiaries	6,733,766	6,733,766	6,944,446
Disability Retirees	3,636,721	3,636,721	3,626,834
Terminated Vested	<u>1,066,597</u>	<u>1,066,597</u>	<u>991,711</u>
Total	142,663,245	142,663,245	138,162,716

C. Liabilities - (Continued)	New Method <u>10/1/2019</u>	Old Method <u>10/1/2019</u>	<u>10/1/2018</u>
Present Value of Future Salaries	27,697,322	27,697,322	27,571,531
Present Value of Future Member Contributions	1,440,261	1,440,261	1,433,720
Normal Cost (Retirement)	618,415	618,415	589,075
Normal Cost (Disability)	120,193	120,193	115,389
Normal Cost (Death)	20,273	20,273	19,474
Normal Cost (Vesting)	34,972	34,972	35,157
Normal Cost (Refunds)	<u>3,141</u>	<u>3,141</u>	<u>4,535</u>
Total Normal Cost	796,994	796,994	763,630
Present Value of Future Normal Costs	5,279,504	5,279,504	5,297,187
Accrued Liability (Retirement)	25,460,786	25,460,786	23,129,121
Accrued Liability (Disability)	2,053,042	2,053,042	1,902,025
Accrued Liability (Death)	391,394	391,394	364,508
Accrued Liability (Vesting)	473,444	473,444	496,873
Accrued Liability (Refunds)	8,961	8,961	10,950
Accrued Liability (Inactives) ¹	<u>108,996,114</u>	<u>108,996,114</u>	<u>106,962,052</u>
Total Actuarial Accrued Liability (EAN AL)	137,383,741	137,383,741	132,865,529
Funded Ratio (AVA / EAN AL)	76.5%	76.2%	73.7%
Unfunded Actuarial Accrued Liability (UAAL)	32,246,265	32,756,678	34,890,443
Contribution Surplus Account	769,559	769,559	668,865
Total Amortization Charge	33,015,824	33,526,237	35,559,308
Amortization Amount	3,920,492	3,973,219	4,007,066

D. Actuarial Present Value of Accrued Benefits	New Method <u>10/1/2019</u>	Old Method <u>10/1/2019</u>	<u>10/1/2018</u>
Vested Accrued Benefits			
Inactives ¹	108,996,114	108,996,114	106,962,052
Actives	14,361,007	14,361,007	13,175,984
Member Contributions	<u>1,578,390</u>	<u>1,578,390</u>	<u>1,415,138</u>
Total	124,935,511	124,935,511	121,553,174
Non-vested Accrued Benefits	<u>3,948,751</u>	<u>3,948,751</u>	<u>3,584,276</u>
Total Present Value			
Accrued Benefits (PVAB)	128,884,262	128,884,262	125,137,450
Funded Ratio (MVA / PVAB)	81.6%	81.6%	81.5%
Increase (Decrease) in Present Value of Accrued Benefits Attributable to:			
Plan Amendments	0	0	
Assumption Changes	0	0	
Plan Experience	0	1,373,149	
Benefits Paid	0	(6,317,326)	
Interest	0	8,690,989	
Other	<u>0</u>	<u>0</u>	
Total	0	3,746,812	

	New Method	Old Method	
Valuation Date	10/1/2019	10/1/2019	10/1/2018
Applicable to Fiscal Year Ending	<u>9/30/2021</u>	<u>9/30/2021</u>	<u>9/30/2020</u>

E. Pension Cost

Normal Cost ²	\$828,874	\$828,874	\$794,175
Administrative Expenses ²	72,800	72,800	72,800
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 15 years (as of 10/1/2019) ²	4,077,312	4,132,148	4,167,349
Minimum Required Contribution	4,978,986	5,033,822	5,034,324
Expected Member Contributions ²	221,410	221,410	211,529
Expected City and State Contribution	4,757,576	4,812,412	4,822,795

F. Past Contributions

Plan Years Ending:	<u>9/30/2019</u>
City and State Requirement	4,983,613
Actual Contributions Made:	
Members (excluding buyback)	211,532
City	4,445,468
State	<u>601,682</u>
Total	5,258,682

G. Net Actuarial (Gain)/Loss

76,583

¹ The asset values and liabilities include accumulated DROP Plan Balances as of 9/30/2019 and 9/30/2018.

² Contributions developed as of 10/1/2019 displayed above have been adjusted to account for assumed salary increase 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>
2019	33,015,824
2020	31,168,375
2021	29,189,295
2024	22,365,095
2028	10,771,773
2030	3,662,544
2034	0

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

	<u>Actual</u>	<u>Assumed</u>
Year Ended 9/30/2019	7.80%	4.00%
Year Ended 9/30/2018	5.49%	4.00%
Year Ended 9/30/2017	4.39%	4.00%
Year Ended 9/30/2016	3.03%	4.00%
Year Ended 9/30/2015	4.85%	4.00%

(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 9/30/2019	4.15%	7.96%	7.125%
Year Ended 9/30/2018	9.92%	9.46%	7.125%
Year Ended 9/30/2017	13.48%	9.18%	7.125%
Year Ended 9/30/2016	10.96%	7.25%	7.125%
Year Ended 9/30/2015	-2.83%	6.23%	7.250%

(iii) Average Annual Payroll Growth

(a) Payroll as of:	10/1/2019	\$4,094,123
	10/1/2009	7,093,224
(b) Total Increase		-42.28%
(c) Number of Years		10.00
(d) Average Annual Rate		-5.35%

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.



Drew D. Ballard, EA, MAAA
Enrolled Actuary #17-8193

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, 2018	\$34,890,443
(2)	Sponsor Normal Cost developed as of October 1, 2018	560,237
(3)	Expected administrative expenses for the year ended September 30, 2019	70,000
(4)	Expected interest on (1), (2) and (3)	2,528,355
(5)	Sponsor contributions to the System during the year ended September 30, 2019	5,047,150
(6)	Expected interest on (5)	321,790
(7)	Expected Unfunded Actuarial Accrued Liability as of September 30, 2019 (1)+(2)+(3)+(4)-(5)-(6)	32,680,095
(8)	Change to UAAL due to Asset Method Change	(510,413)
(9)	Change to UAAL due to Actuarial (Gain)/Loss	76,583
(10)	Unfunded Actuarial Accrued Liability as of October 1, 2019	32,246,265
(11)	Contribution Surplus Account as of October 1, 2019	769,559
(12)	Total Amortization Charge as of October 1, 2019	33,015,824

Type of <u>Base</u>	Date <u>Established</u>	Years <u>Remaining</u>	10/1/2019 <u>Amount</u>	Amortization <u>Amount</u>
		12	34,174,101	4,043,216
Actuarial Gain	10/1/2018	14	(724,447)	(77,908)
Actuarial Loss	10/1/2019	15	76,583	7,911
Method Change	10/1/2019	15	<u>(510,413)</u>	<u>(52,727)</u>
			33,015,824	3,920,492

PROJECTED OUTSTANDING AMORTIZATION BASES

Plan Year	Fiscal Year	Expected Outstanding Amortization Bases	Expected Amortization Payment	Expected Outstanding Amortization Bases on 9/30
9/30/2019	9/30/2021	33,015,824	3,920,492	31,168,375
9/30/2020	9/30/2022	31,168,375	3,920,492	29,189,295
9/30/2021	9/30/2023	29,189,295	3,920,492	27,069,205
9/30/2022	9/30/2024	27,069,205	3,920,492	24,798,060
9/30/2023	9/30/2025	24,798,060	3,920,492	22,365,095
9/30/2024	9/30/2026	22,365,095	3,920,492	19,758,781
9/30/2025	9/30/2027	19,758,781	3,920,492	16,966,767
9/30/2026	9/30/2028	16,966,767	3,920,492	13,975,822
9/30/2027	9/30/2029	13,975,822	3,920,492	10,771,773
9/30/2028	9/30/2030	10,771,773	3,920,492	7,339,436
9/30/2029	9/30/2031	7,339,436	3,920,492	3,662,544
9/30/2030	9/30/2032	3,662,544	3,920,496	(276,332)
9/30/2031	9/30/2033	(276,332)	(122,724)	(164,553)
9/30/2032	9/30/2034	(164,553)	(122,723)	(44,810)
9/30/2033	9/30/2035	(44,810)	(44,810)	0
9/30/2034	9/30/2036	0	0	

DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

(1) Unfunded Actuarial Accrued Liability (UAAL) as of October 1, 2018	\$34,890,443
(2) Expected UAAL as of October 1, 2019	32,680,095
(3) Summary of Actuarial (Gain)/Loss, by component:	
Investment Return (Actuarial Asset Basis)	(818,068)
Salary Increases	837,008
Active Decrements	501,341
Inactive Mortality	(194,213)
Lower Than Expected Cost-of-Living Adjustment	(456,265)
Other	<u>206,780</u>
Increase in UAAL due to (Gain)/Loss	76,583
Asset Method Change	<u>(510,413)</u>
(4) Actual UAAL as of October 1, 2019	\$32,246,265

CONTRIBUTION SURPLUS ACCOUNT RECONCILIATION

October 1, 2018 through September 30, 2019

(1) 9/30/2018 Contribution Surplus Account Balance	668,864.64
(2) Minimum Required City and State Contribution for Plan Year Beginning 10/1/2018	4,983,613.00
(3) City Contributions Deposited on or around 10/1/2018	4,445,467.87
(4) State Contributions Deposited on 8/19/2019	601,682.12
(5) Shortfall/(Excess) Contribution for Plan Year Beginning 10/1/2018 (with interest) $\{[(2) - (3)] \times 1.07125\} - [(4) \times (1 + (0.07125 \times (43/365)))]$	(30,244.57)
(6) Actual Non-Investment Expenses for Plan Year Beginning 10/1/2018	48,722.74
(7) Expected Non-Investment Expenses for Plan Year Beginning 10/1/2018	70,000.00
(8) Interest at 7.125%	49,172.61
(9) 9/30/2019 Contribution Surplus Account Balance (1) - (5) - [(6) - (7)] + (8)	769,559.08

ACTUARIAL ASSUMPTIONS AND METHODS

Mortality Rate

Healthy Active Lives:

Female: RP2000 Generational, 100% Combined Healthy White Collar, Scale BB

Male: RP2000 Generational, 10% Combined Healthy White Collar / 90% Combined Healthy Blue Collar, Scale BB

Healthy Inactive Lives:

Female: RP2000 Generational, 100% Annuitant White Collar, Scale BB

Male: RP2000 Generational, 10% Annuitant White Collar / 90% Annuitant Blue Collar, Scale BB

Disabled Lives:

Female: 60% RP2000 Disabled Female set forward two years / 40% Annuitant White Collar with no setback, no projection scale

Male: 60% RP2000 Disabled Male setback four years / 40% Annuitant White Collar with no setback, no projection scale

The above 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, 2018 FRS valuation report for special risk employees. We feel this assumption sufficiently accommodates future mortality improvements.

15% of active deaths are assumed to be service-incurred.

Interest Rate

7.125% per year compounded annually, net of investment related expenses. This is supported by the target asset allocation of the trust and the expected long-term return by asset class.

Salary Increases

4.00% compounded annually. This assumption was utilized by the prior actuary.

Payroll Growth

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

Administrative Expenses

\$70,000 annually. This assumption was utilized by the prior actuary.

Retirement Rates

% Retiring During the Year		
Service	Age	Rate
< 25 Years	45 - 49	5%
	50 - 56	10%
	57	50%
	58	70%
	59	90%
	60	100%
25 Years	45 - 57	50%
	58	70%
	59	90%
	60	100%
26 - 29 Years	45 - 56	25%
	57	50%
	58	70%
	59	90%
	60	100%
30+ Years	All Ages	100%

The assumed rates of retirement were utilized by the prior actuary.

Termination Rates

% Terminating During the Year	
Age	Rate
25 - 39	6.0%
40 - 44	2.0%
45+	0.0%

The assumed rates of termination were utilized by the prior actuary.

Disability Rates

See sample rates in table that follows. 45% of disabilities are assumed to be in Line of Duty. The disability assumptions were utilized by the prior actuary.

<u>Age</u>	<u>Probability of Disablement</u>
25	0.2387%
30	0.2800%
35	0.3867%
40	0.5733%
45	1.0600%
50	1.8467%
55	3.0600%
60	4.7867%
65	0.0000%

Marriage

80% of active participants are assumed to be married with spouses three years younger. This assumption was utilized by the prior actuary.

Actuarial Asset Method

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

Funding Method

Entry Age Normal Actuarial Cost Method.

The following loads are applied for determination of the Sponsor dollar funding requirement for the following year:

Interest – None; assuming an October 1 deposit.

Salary – A full year, based on the current 4.00% assumption.

Amortization Method

New UAAL amortization bases are amortized over 15 years.

GLOSSARY

Total Annual Payroll is the projected annual rate of pay as of the valuation date for 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 Members, Retirees, Beneficiaries, Disability Retirees and Vested Terminations.

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.

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.

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 40.3% on October 1, 2017 to 36.8% on October 1, 2019, 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 79.3%. 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 70.6% on October 1, 2017 to 76.5% on October 1, 2019.
- 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, increased from -4.0% on October 1, 2017 to -1.1% on October 1, 2019. The current Net Cash Flow Ratio of -1.1% 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>10/1/2017</u>	<u>10/1/2018</u>	<u>10/1/2019</u>
<u>Support Ratio</u>			
Total Actives	73	68	67
Total Inactives ¹	181	184	182
Actives / Inactives ¹	40.3%	37.0%	36.8%
 <u>Asset Volatility Ratio</u>			
Market Value of Assets (MVA)	93,617,461	101,955,040	105,137,476
Covered Non-DROP Payroll	4,048,557	3,911,400	4,094,123
MVA / Covered Non-DROP Payroll	2,312.4%	2,606.6%	2,568.0%
 <u>Accrued Liability (AL) Ratio</u>			
Inactive Accrued Liability	102,516,721	106,962,052	108,996,114
Total Accrued Liability (EAN)	128,266,462	132,865,529	137,383,741
Inactive AL / Total AL	79.9%	80.5%	79.3%
 <u>Funded Ratio</u>			
Actuarial Value of Assets (AVA)	90,550,803	97,975,086	105,137,476
Total Accrued Liability (EAN)	128,266,462	132,865,529	137,383,741
AVA / Total Accrued Liability (EAN)	70.6%	73.7%	76.5%
 <u>Net Cash Flow Ratio</u>			
Net Cash Flow ²	(3,737,152)	(1,092,121)	(1,107,366)
Market Value of Assets (MVA)	93,617,461	101,955,040	105,137,476
Ratio	-4.0%	-1.1%	-1.1%

¹ Excludes terminated participants awaiting a refund of member contributions.

² Determined as total contributions minus benefit payments and administrative expenses.

PARTIAL HISTORY OF PREMIUM TAX REFUNDS

<u>Received During Fiscal Year</u>	<u>Amount</u>	<u>Increase from Previous Year</u>
1998	619,399.23	_____%
1999	584,429.37	-5.6%
2000	579,318.13	-0.9%
2001	581,500.95	0.4%
2002	657,853.43	13.1%
2003	717,421.06	9.1%
2004	706,380.19	-1.5%
2005	662,758.94	-6.2%
2006	662,758.94	0.0%
2007	662,758.94	0.0%
2008	662,758.94	0.0%
2009	527,249.04	-20.4%
2010	486,189.84	-7.8%
2011	474,151.54	-2.5%
2012	477,013.80	0.6%
2013	473,910.37	-0.7%
2014	473,282.65	-0.1%
2015	512,807.52	8.4%
2016	533,483.40	4.0%
2017	542,276.76	1.6%
2018	572,693.45	5.6%
2019	601,682.12	5.1%

STATEMENT OF FIDUCIARY NET POSITION
SEPTEMBER 30, 2019

<u>ASSETS</u>	COST VALUE	MARKET VALUE
Cash and Cash Equivalents:		
Checking Account	139,345.42	139,345.42
Money Market	2,123,835.00	2,123,835.00
Cash	(184,636.68)	(184,636.68)
Total Cash and Equivalents	2,078,543.74	2,078,543.74
Receivables:		
Member Contributions in Transit	5,118.10	5,118.10
City Contributions in Transit	98.59	98.59
Investment Income	181,478.32	181,478.32
Total Receivable	186,695.01	186,695.01
Investments:		
U. S. Bonds and Bills	7,376,579.09	7,420,272.36
Federal Agency Guaranteed Securities	6,485,415.99	6,697,937.89
Corporate Bonds	9,477,371.36	9,599,115.21
Stocks	48,487,624.75	58,903,057.90
Mutual Funds:		
Fixed Income	2,931,901.81	2,931,901.81
Pooled/Common/Commingled Funds:		
Equity	7,042,109.40	7,042,109.40
Real Estate	8,830,423.81	10,315,544.81
Total Investments	90,631,426.21	102,909,939.38
Total Assets	92,896,664.96	105,175,178.13
<u>LIABILITIES</u>		
Payables:		
Investment Expenses	37,702.16	37,702.16
Total Liabilities	37,702.16	37,702.16
NET POSITION RESTRICTED FOR PENSIONS	92,858,962.80	105,137,475.97

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED SEPTEMBER 30, 2019
Market Value Basis

ADDITIONS

Contributions:

Member	211,532.49
City	4,445,467.87
State	601,682.12

Total Contributions	5,258,682.48
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Investment Income:

Net Increase in Fair Value of Investments	2,284,661.38
Interest & Dividends	2,431,405.17
Less Investment Expense ¹	(426,264.47)

Net Investment Income	4,289,802.08
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Total Additions	9,548,484.56
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DEDUCTIONS

Distributions to Members:

Benefit Payments	6,317,325.94
Lump Sum DROP Distributions	0.00
Refunds of Member Contributions	0.00

Total Distributions	6,317,325.94
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Administrative Expense	48,722.74
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Total Deductions	6,366,048.68
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Net Increase in Net Position	3,182,435.88
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NET POSITION RESTRICTED FOR PENSIONS

Beginning of the Year	101,955,040.09
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End of the Year	105,137,475.97
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¹Investment related expenses include investment advisory, custodial and performance monitoring fees.

ACTUARIAL ASSET VALUATION
September 30, 2019

Actuarial Assets for funding purposes are developed by recognizing the total actuarial investment gain or loss for each Plan Year over a five year period. 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	Index	Proponents for Calculation of Adjustment Factor			Weighted Value
		Market Yield in Following Year	Growth Factor	Relative Weight	
09/30/2015	97.17	10.96%	1.31693	1	8.53
09/30/2016	107.82	13.48%	1.22934	2	17.67
09/30/2017	122.35	9.92%	1.14758	3	28.08
09/30/2018	134.49	4.15%	1.07125	4	38.42
09/30/2019	140.07		1.00000	5	46.69
Total				15	139.39

<u>Development of Actuarial Value of Assets</u>	
(1) Market Value of Assets, 09/30/2019	105,137,476
(2) Adjustment Factor, 139.39 divided by 140.07	0.9951
(3) Actuarial Value of Assets, 09/30/2019, (1) x (2)	104,627,063
(A) 09/30/2018 Actuarial Assets:	97,975,086
(I) Net Investment Income	
1. Interest and Dividends	2,431,405
2. Net Increase in Fair Value of Investments	2,284,661
3. Change in Actuarial Value	3,469,541
4. Investment Expenses	(426,264)
Total	7,759,343
(B) 09/30/2019 Actuarial Assets ¹ :	104,627,063
Actuarial Assets Rate of Return = $2I/(A+B-I)$:	7.96%
Market Value of Assets Rate of Return:	4.15%
Actuarial Gain/(Loss) due to Investment Return (Actuarial Asset Basis)	818,068
10/01/2019 Limited Actuarial Assets:	104,627,063

¹Due to the asset method change, the Actuarial Value of Assets reflected in this valuation is \$105,137,475.97.

CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS
SEPTEMBER 30, 2019
Actuarial Asset Basis

REVENUES

Contributions:		
Member	211,532.49	
City	4,445,467.87	
State	601,682.12	
Total Contributions		5,258,682.48
Earnings from Investments:		
Interest & Dividends	2,431,405.17	
Net Increase in Fair Value of Investments	2,284,661.38	
Change in Actuarial Value	3,469,541.08	
Total Earnings and Investment Gains		8,185,607.63
EXPENDITURES		
Distributions to Members:		
Benefit Payments	6,317,325.94	
Lump Sum DROP Distributions	0.00	
Refunds of Member Contributions	0.00	
Total Distributions		6,317,325.94
Expenses:		
Investment related ¹	426,264.47	
Administrative	48,722.74	
Total Expenses		474,987.21
Change in Net Assets for the Year		6,651,976.96
Net Assets Beginning of the Year		97,975,086.48
Net Assets End of the Year ²		104,627,063.44

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

²Net Assets may be limited for actuarial consideration. Due to the asset method change, the Actuarial Value of Assets reflected in this valuation is \$105,137,475.97.

DEFERRED RETIREMENT OPTION PLAN ACTIVITY
October 1, 2018 to September 30, 2019

Beginning of the Year Balance	982,791.10
Plus Additions	675,694.62
Investment Return Earned	16,953.82
Less Distributions	0.00
End of the Year Balance	1,675,439.54

STATISTICAL DATA

	<u>10/1/2017</u>	<u>10/1/2018</u>	<u>10/1/2019</u>
<u>Actives</u>			
Number	73	68	67
Average Current Age	42.2	42.8	43.7
Average Age at Employment	27.2	27.1	27.1
Average Past Service	15.0	15.7	16.6
Average Annual Salary	\$56,580	\$58,760	\$62,407
<u>Service Retirees</u>			
Number	116	118	116
Average Current Age	64.2	64.8	65.5
Average Annual Benefit	\$44,832	\$45,538	\$47,001
<u>DROP Retirees</u>			
Number	9	11	12
Average Current Age	53.1	53.4	54.1
Average Annual Benefit	\$53,328	\$56,147	\$59,544
<u>Beneficiaries</u>			
Number	28	27	26
Average Current Age	73.4	74.0	74.7
Average Annual Benefit	\$21,913	\$22,861	\$23,336
<u>Disability Retirees</u>			
Number	15	15	15
Average Current Age	69.6	70.6	71.6
Average Annual Benefit	\$17,434	\$17,817	\$18,227
<u>Terminated Vested</u>			
Number	14	14	14
Average Current Age ¹	40.7	42.0	43.0
Average Annual Benefit ²	\$10,015	\$10,015	\$10,015

¹ Effective 10/1/2018, the Average Current Age excludes participants awaiting a refund of contributions.

² The Average Annual Benefit excludes participants awaiting a refund of contributions.

AGE AND SERVICE DISTRIBUTION

PAST SERVICE

AGE	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30+	Total
15 - 19												0
20 - 24												0
25 - 29						1						1
30 - 34						1						1
35 - 39						3	10	4				17
40 - 44						1	2	12	4			19
45 - 49						1	3	5	10			19
50 - 54						1		4	1	2		8
55 - 59										1		1
60 - 64												0
65+									1			1
Total	0	0	0	0	0	8	15	25	16	3	0	67

VALUATION PARTICIPANT RECONCILIATION

1. Active lives

a. Number in prior valuation 10/1/2018	68
b. Terminations	
i. Vested (partial or full) with deferred annuity	0
ii. Vested in refund of member contributions only	0
iii. Refund of member contributions or full lump sum distribution received	0
c. Deaths	
i. Beneficiary receiving benefits	0
ii. No future benefits payable	0
d. Disabled	0
e. Retired	0
f. DROP	<u>(1)</u>
g. Continuing participants	67
h. New entrants	<u>0</u>
i. Total active life participants in valuation	67

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) <u>Annuit</u>	Vested (Due Refund) <u>Refund</u>	<u>Total</u>
a. Number prior valuation	118	11	27	15	13	1	185
Retired	0	0	0	0	0	0	0
DROP	0	1	0	0	0	0	1
Vested (Deferred Annuity)	0	0	0	0	0	0	0
Vested (Due Refund)	0	0	0	0	0	0	0
Hired/Terminated in Same Year	0	0	0	0	0	0	0
Death, With Survivor	(1)	0	1	0	0	0	0
Death, No Survivor	(1)	0	(2)	0	0	0	(3)
Disabled	0	0	0	0	0	0	0
Refund of Contributions	0	0	0	0	0	0	0
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	116	12	26	15	13	1	183

SUMMARY OF CURRENT PLAN

<u>Eligibility</u>	Employees who are classified as full-time Police Officers hired prior to January 1, 2013 shall participate in the System as a condition of employment.
<u>Credited Service</u>	Aggregate number of years of service and fractional parts of years of service
<u>Compensation</u>	<p>Total cash compensation, educational incentive pay, court pay, automobile and/or meals and uniform expense, accumulated sick leave at retirement and vacation pay at retirement, special duty pay, shift differential pay, or special bonuses.</p> <p>Effective January 1, 2013, compensation shall be limited to an officer's base pay and senior officer pay exclusive of overtime for earnings on or after January 1, 2013, but shall include overtime which had been earned as of December 31, 2012.</p>
<u>Average Final Compensation</u>	<p>Average Compensation for the best 2 years out of the last 5 years of Credited Service for Members with 20 or more years of Credited Service as of January 1, 2013.</p> <p>Average Compensation for the last 5 years of Credited Service for Members with less than 20 years of Credited Service as of January 1, 2013.</p>
<u>Member Contributions</u>	5.20% of Salary.
<u>City and State Contributions</u>	Remaining amount required in order to pay current costs and amortize unfunded past service cost, if any, as provided in Part VII of Chapter 112, Florida Statutes.
<u>Normal Retirement</u>	
Date	Earlier of (1) Age 55 and 12 years of Credited Service, or (2) 25 years of Credited Service, regardless of Age.
Benefit	3.00% of Average Final Compensation for each full year of Credited Service.
Form of Benefit	Ten Year Certain and Life Annuity (options available).
<u>Early Retirement</u>	
Eligibility	Age 50 and 12 Years of Credited Service.
Benefit	Accrued benefit, reduced 3% per year for each year preceding age 55.

Vesting

Less than 12 years of
Credited Service

Refund of Member Contributions.

12 or more years of
Credited Service

Accrued benefit payable at the Member's otherwise
Normal Retirement Date
or
Refund of Member Contributions

Disability

Eligibility

Line of Duty

Total and permanent disability.

Non Line of Duty

Total and permanent disability with at least 12 years of
Credited Service.

Benefit

Line of Duty

3.00% of Average Final Compensation for each full year
of Credited Service. Minimum benefit is 42% of AFC.

Non Line of Duty

3.00% of Average Final Compensation for each full year
of Credited Service. Minimum benefit is 25% of AFC.

Form of Benefit

Payable as a 10-year Certain and Life Annuity. Options
available.

Death Benefits

Pre-Retirement

Line of Duty

3.00% of Average Final Compensation for each full year
of Credited Service. Minimum benefit is 42% of AFC.

Non Line of Duty

For members with 12 or more years of Credited Service:
3.00% of Average Final Compensation for each full year
of Credited Service. Minimum benefit is 25% of AFC.

For members with less than 12 years of Credited
Service: Refund of accumulated contributions without
interest.

Post-Retirement

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

Board of Trustees

- a. Two City Council appointees,
- b. Two Members of the Department elected by the membership, and
- c. Fifth Member chosen by a majority of the other four trustees

Deferred Retirement Option Plan

Eligibility

Satisfaction of Retirement requirements.

Participation

Not to exceed 60 months.

Rate of Return

Members who entered DROP
Prior to January 1, 2013

4.00% annual interest.

Members who entered DROP
On or after January 1, 2013

1.30% annual interest.

Form of Distribution

Cash lump sum (options available) at termination of employment.

Cost-of-Living Adjustment

Eligibility

All members in payment status.

Increase

Increased annually effective each January 1st based on Consumer Price Index as of the previous September 30th, limited to 3.00% per year for retirees and DROP participants. The limit is 2.00% per year after 10 years of benefit payments for retirees who retire on or after January 1, 2013. Additionally, Members who entered the DROP on or after January 1, 2013 shall not receive any cost-of-living adjustments while participating in the DROP.

STATEMENT OF FIDUCIARY NET POSITION
SEPTEMBER 30, 2019

<u>ASSETS</u>	MARKET VALUE
Cash and Cash Equivalents:	
Checking Account	139,346
Money Market	2,123,835
Cash	(184,637)
Total Cash and Equivalents	2,078,544
Receivables:	
Member Contributions in Transit	5,118
City Contributions in Transit	99
Investment Income	181,478
Total Receivable	186,695
Investments:	
U. S. Bonds and Bills	7,420,272
Federal Agency Guaranteed Securities	6,697,938
Corporate Bonds	9,599,115
Stocks	58,903,058
Mutual Funds:	
Fixed Income	2,931,902
Pooled/Common/Commingled Funds:	
Equity	7,042,109
Real Estate	10,315,545
Total Investments	102,909,939
Total Assets	105,175,178
<u>LIABILITIES</u>	
Payables:	
Investment Expenses	37,702
Total Liabilities	37,702
NET POSITION RESTRICTED FOR PENSIONS	105,137,476

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED SEPTEMBER 30, 2019
Market Value Basis

ADDITIONS

Contributions:

Member	211,533	
City	4,445,468	
State	601,682	
Total Contributions		5,258,683
Investment Income:		
Net Increase in Fair Value of Investments	2,284,661	
Interest & Dividends	2,431,405	
Less Investment Expense ¹	(426,264)	
Net Investment Income		4,289,802
Total Additions		9,548,485

DEDUCTIONS

Distributions to Members:

Benefit Payments	6,317,326	
Lump Sum DROP Distributions	0	
Lump Sum Share Distributions	0	
Refunds of Member Contributions	0	
Total Distributions		6,317,326
Administrative Expense		48,723
Total Deductions		6,366,049
Net Increase in Net Position		3,182,436
NET POSITION RESTRICTED FOR PENSIONS		
Beginning of the Year		101,955,040
End of the Year		105,137,476

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

NOTES TO THE FINANCIAL STATEMENTS

(For the Year Ended September 30, 2019)

Plan Administration

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

- a. Two City Council appointees,
- b. Two Members of the Department elected by the membership, and
- c. Fifth Member chosen by a majority of the other four.

Employees who are classified as full-time Police Officers hired prior to January 1, 2013 shall participate in the System as a condition of employment.

Plan Membership as of October 1, 2018:

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	171
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	14
Active Plan Members	68
	253

Benefits Provided

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

A summary of the benefit provisions can be found in the October 1, 2018 Actuarial Valuation Report for the City of Pensacola Police Officers' Retirement Plan prepared by Foster & Foster Actuaries and Consultants.

Contributions

Member: 5.20% of Salary.

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

Investments

Investment Policy:

The following was the Board's adopted asset allocation policy as of September 30, 2019:

Asset Class	Target Allocation
All Cap Value Equity	22.5%
Broad Growth Equity	22.5%
International Equity	15.0%
Fixed Income (Core)	25.0%
Global Bond	5.0%
Real Estate	10.0%
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, 2019, the annual money-weighted rate of return on Pension Plan investments, net of Pension Plan investment expense, was 4.15 percent.

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

Deferred Retirement Option Program

Eligibility: Satisfaction of Normal Retirement requirements.

Participation: Not to exceed 60 months.

Rate of Return Member who entered DROP Prior to January 1, 2013: 4.00% annual interest.

Rate of Return Member who entered DROP On or after January 1, 2013: 1.30% annual interest.

The DROP balance as September 30, 2019 is \$1,675,440.

NET PENSION LIABILITY OF THE SPONSOR

The components of the Net Pension Liability of the Sponsor on September 30, 2019 were as follows:

Total Pension Liability	\$ 136,434,444
Plan Fiduciary Net Position	\$ (105,137,476)
Less reserve accounts	\$ 668,865
Sponsor's Net Pension Liability	<u>\$ 31,965,833</u>
Plan Fiduciary Net Position as a percentage of Total Pension Liability	77.06%

Actuarial Assumptions:

The Total Pension Liability was determined by an actuarial valuation as of October 1, 2018 updated to September 30, 2019 using the following actuarial assumptions:

Inflation	2.50%
Salary Increases	4.00%
Discount Rate	7.125%
Investment Rate of Return	7.125%

Mortality Rate Healthy Active Lives:

Female: RP2000 Generational, 100% Combined Healthy White Collar, Scale BB.

Male: RP2000 Generational, 10% Combined Healthy White Collar / 90% Combined Healthy Blue Collar, Scale BB.

Mortality Rate Healthy Inactive Lives:

Female: RP2000 Generational, 100% Annuitant White Collar, Scale BB.

Male: RP2000 Generational, 10% Annuitant White Collar / 90% Annuitant Blue Collar, Scale BB.

Mortality Rate Disabled Lives:

Female: 60% RP2000 Disabled Female set forward two years / 40% Annuitant White Collar with no setback, no projection scale.

Male: 60% RP2000 Disabled Male setback four years / 40% Annuitant White Collar with no setback, no projection scale.

The above 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, 2018 FRS valuation report for special risk employees. We feel this assumption sufficiently accommodates future mortality improvements.

15% of active deaths are assumed to be service-incurred.

The most recent actuarial experience study used to review the other significant assumptions was not available.

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 2019 the inflation rate assumption of the investment advisor was 2.50%.

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, 2019 are summarized in the following table:

Asset Class	Long Term Expected Real Rate of Return
All Cap Value Equity	7.50%
Broad Growth Equity	7.50%
International Equity	8.50%
Fixed Income (Core)	2.50%
Global Bond	3.50%
Real Estate	4.50%

Discount Rate:
The Discount Rate used to measure the Total Pension Liability was 7.125 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
	6.125%	7.125%	8.125%
Sponsor's Net Pension Liability	\$ 50,174,119	\$ 31,965,833	\$ 17,125,710

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS
Last 10 Fiscal Years

	09/30/2019	09/30/2018	09/30/2017
Total Pension Liability			
Service Cost	786,760	816,071	761,793
Interest	9,193,908	8,949,790	8,977,910
Changes of benefit terms	-	-	-
Differences between Expected and Actual Experience	1,361,896	-	(2,653,681)
Changes of assumptions	-	-	-
Contributions - Buy Back	-	47,123	41,367
Benefit Payments, including Refunds of Employee Contributions	(6,317,326)	(6,397,599)	(8,755,072)
Net Change in Total Pension Liability	\$ 5,025,238	3,415,385	(1,627,683)
Total Pension Liability - Beginning	\$ 131,409,206	127,993,821	129,621,504
Total Pension Liability - Ending (a)	<u>\$ 136,434,444</u>	<u>\$ 131,409,206</u>	<u>\$ 127,993,821</u>
Plan Fiduciary Net Position			
Contributions - Employer	4,445,468	4,528,544	4,331,190
Contributions - State	601,682	572,693	542,277
Contributions - Employee	211,533	209,565	218,457
Contributions - Buy Back	-	47,123	41,367
Net Investment Income	4,289,802	9,429,700	11,614,044
Benefit Payments, including Refunds of Employee Contributions	(6,317,326)	(6,397,599)	(8,755,072)
Administrative Expense	(48,723)	(52,447)	(115,371)
Net Change in Plan Fiduciary Net Position	3,182,436	8,337,579	7,876,892
Plan Fiduciary Net Position - Beginning	101,955,040	93,617,461	85,740,569
	<u>\$ 105,137,476</u>	<u>\$ 101,955,040</u>	<u>\$ 93,617,461</u>
Less reserve accounts	\$ 668,865	\$ 371,687	\$ 775,007
Plan Fiduciary Net Position - Ending (b)	<u>\$ 104,468,611</u>	<u>\$ 101,583,353</u>	<u>\$ 92,842,454</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 31,965,833</u>	<u>\$ 29,825,853</u>	<u>\$ 35,151,367</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	77.06%	77.59%	73.14%
Covered Payroll	\$ 4,067,890	\$ 4,030,069	\$ 4,201,063
Net Pension Liability as a percentage of Covered Payroll	785.81%	740.08%	836.73%

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

Last 10 Fiscal Years

	09/30/2016 ¹	09/30/2015 ¹	09/30/2014 ¹
Total Pension Liability			
Service Cost	912,596	818,742	860,340
Interest	8,876,315	8,390,513	8,151,071
Changes of benefit terms	-	-	-
Differences between Expected and Actual Experience	-	312,274	866,959
Changes of assumptions	-	6,217,609	3,431,350
Contributions - Buy Back	-	-	-
Benefit Payments, including Refunds of Employee Contributions	(7,539,629)	(6,446,003)	(5,994,107)
Net Change in Total Pension Liability	2,249,282	9,293,135	7,315,613
Total Pension Liability - Beginning	127,372,222	118,079,087	110,763,474
Total Pension Liability - Ending (a)	<u>\$129,621,504</u>	<u>\$127,372,222</u>	<u>\$118,079,087</u>
Plan Fiduciary Net Position			
Contributions - Employer	3,830,736	3,830,839	3,825,656
Contributions - State	533,483	512,808	473,283
Contributions - Employee	227,357	240,097	156,000
Contributions - Buy Back	-	-	12,024
Net Investment Income	8,651,676	(2,362,487)	6,881,022
Benefit Payments, including Refunds of Employee Contributions	(7,539,629)	(6,446,003)	(5,994,107)
Administrative Expense	(93,853)	(82,441)	(69,051)
Net Change in Plan Fiduciary Net Position	5,609,770	(4,307,187)	5,284,827
Plan Fiduciary Net Position - Beginning	80,130,799	84,437,986	79,153,159
	<u>\$ 85,740,569</u>	<u>\$ 80,130,799</u>	<u>\$ 84,437,986</u>
Less reserve accounts	<u>\$ 1,168,510</u>	<u>\$ 1,203,293</u>	<u>\$ 1,097,405</u>
Plan Fiduciary Net Position - Ending (b)	<u>\$ 84,572,059</u>	<u>\$ 78,927,506</u>	<u>\$ 83,340,581</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 45,049,445</u>	<u>\$ 48,444,716</u>	<u>\$ 34,738,506</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	65.2%	62.0%	70.6%
Covered Payroll	\$ 4,372,250	\$ 4,423,864	\$ 4,377,970
Net Pension Liability as a percentage of Covered Payroll	2964.6%	2879.2%	2697.1%

Notes to Schedule:¹ These results were provided by the prior actuary, Pension Board Consultants, Inc., Atlanta, Georgia.

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS
Last 10 Fiscal Years

	09/30/2013 ¹	09/30/2012 ¹
Total Pension Liability		
Service Cost	1,282,649	1,605,230
Interest	8,164,809	7,835,535
Changes of benefit terms	(5,724,271)	-
Differences between Expected and Actual Experience	1,943,060	(2,734,414)
Changes of assumptions	3,373,204	2,145,252
Contributions - Buy Back	-	
Benefit Payments, including Refunds of Employee Contributions	(4,605,472)	(3,967,087)
Net Change in Total Pension Liability	4,433,979	4,884,516
Total Pension Liability - Beginning	106,329,495	101,444,979
Total Pension Liability - Ending (a)	<u>\$110,763,474</u>	<u>\$106,329,495</u>
Plan Fiduciary Net Position		
Contributions - Employer	2,485,715	3,025,714
Contributions - State	473,910	477,014
Contributions - Employee	61,590	29,199
Contributions - Buy Back	237,089	763,031
Net Investment Income	9,839,718	11,504,769
Benefit Payments, including Refunds of Employee Contributions	(4,605,472)	(3,967,087)
Administrative Expense	(74,488)	(73,465)
Net Change in Plan Fiduciary Net Position	8,418,062	11,759,175
Plan Fiduciary Net Position - Beginning	70,735,097	58,975,922
	<u>\$ 79,153,159</u>	<u>\$ 70,735,097</u>
Less reserve accounts	<u>\$ 1,019,927</u>	<u>\$ 847,359</u>
Plan Fiduciary Net Position - Ending (b)	<u>\$ 78,133,232</u>	<u>\$ 69,887,738</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 32,630,242</u>	<u>\$ 36,441,757</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	70.5%	65.7%
Covered Payroll	\$ 4,870,112	\$ 5,296,929
Net Pension Liability as a percentage of Covered Payroll	2274.4%	2007.4%

Notes to Schedule:

¹ These results were provided by the prior actuary, Pension Board Consultants, Inc., Atlanta, Georgia.

SCHEDULE OF CONTRIBUTIONS

Last 10 Fiscal Years

Fiscal Year Ended	Contributions in relation to the		Contribution Deficiency (Excess)	Covered Payroll	Contributions as a percentage of Covered Payroll
	Actuarially Determined Contribution	Actuarially Determined Contributions ²			
09/30/2019	\$4,983,613	\$4,983,613	\$ -	\$4,067,890	122.51%
09/30/2018	\$5,236,129	\$5,236,129	\$ -	\$4,030,069	129.93%
09/30/2017	\$5,236,129	\$5,236,129	\$ -	\$4,201,063	124.64%
09/30/2016 ¹	\$5,256,803	\$5,256,803	\$ -	\$4,372,250	120.23%
09/30/2015 ¹	\$4,452,427	\$4,452,427	\$ -	\$4,423,864	100.65%
09/30/2014 ¹	\$4,298,939	\$4,298,939	\$ -	\$4,466,862	96.24%
09/30/2013 ¹	\$2,832,155	\$2,832,155	\$ -	\$4,870,112	58.15%
09/30/2012 ¹	\$3,356,717	\$3,356,717	\$ -	\$5,296,929	63.37%
09/30/2011 ¹	\$4,017,967	\$4,017,967	\$ -	\$6,766,158	59.38%
09/30/2010 ¹	\$3,133,416	\$3,133,416	\$ -	\$6,966,752	44.98%

¹ These results were provided by the prior actuary, Pension Board Consultants, Inc., Atlanta, Georgia.

² Including amounts from Contribution Surplus Account.

Notes to Schedule

Valuation Date: 10/01/2017

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:

Mortality Rates:

Healthy Active Lives:

Female: RP2000 Generational, 100% Combined Healthy White Collar, Scale BB.

Male: RP2000 Generational, 10% Combined Healthy White Collar / 90% Combined Healthy Blue Collar, Scale BB.

Healthy Inactive Lives:

Female: RP2000 Generational, 100% Annuitant White Collar, Scale BB.

Male: RP2000 Generational, 10% Annuitant White Collar / 90% Annuitant Blue Collar, Scale BB.

Disabled Lives:

Female: 60% RP2000 Disabled Female set forward two years / 40% Annuitant White Collar with no setback, no projection scale.

Male: 60% RP2000 Disabled Male setback four years / 40% Annuitant White Collar with no setback, no projection scale.

The assumed rates of mortality were mandated by Chapter 2015-157, Laws of Florida. This law mandates the use of the assumption used in either of the two most recent valuations of the Florida Retirement System (FRS). The above rates are those outlined in the July 1, 2016 FRS actuarial valuation report for special risk employees. We feel this assumption sufficiently accommodates future mortality improvements.

Interest Rate:

7.125% per year, compounded annually, net of investment related expenses. This assumption is in line with other Florida special risk pension plans.

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Termination Rates:

<u>Age</u>	<u>Probability of Termination</u>
25-39	6.00%
40-44	2.00%
45+	0.00%

The assumed rates of termination were utilized by the prior actuary.

Salary Increases:

4.00% compounded annually. This assumption was utilized by the prior actuary.

Payroll Growth:

None. This is in compliance with Part VII of Chapter 112, Florida Statutes.

Disability Rates:

<u>Age</u>	<u>Probability of Disablement</u>
25	0.2387%
30	0.2800%
35	0.3867%
40	0.5733%
45	1.0600%
50	1.8467%
55	3.0600%
60	4.7867%
65	0.0000%

45% of disabilities are assumed to be in Line of Duty. The disability assumptions were utilized by the prior actuary.

Retirement Rates:

<u>Service</u>	<u>Age</u>	<u>Probability of Retirement</u>
< 25 Years	45-49	5%
	50-56	10%
	57	50%
	58	70%
	59	90%
	60	100%
25 Years	45-57	50%
	58	70%
	59	90%
	60	100%
26-29 Years	45-56	25%
	57	50%
	58	70%
	59	90%
	60	100%
30+ Years	All Ages	100%

The assumed rates of retirement were utilized by the prior actuary.

Marriage:

80% of active participants are assumed to be married with spouses three years younger. This assumption was utilized by the prior actuary.

Actuarial Asset Method:

Five year Smoothing.

Funding Method:

Entry Age Normal Actuarial Cost Method.

The following loads are applied for determination of the Sponsor dollar funding requirement for the following year:

Interest - None; assuming an October 1 deposit.

Salary - A full year, based on the current 4.00% assumption.

SCHEDULE OF INVESTMENT RETURNS
Last 10 Fiscal Years

Fiscal Year Ended	Annual Money-Weighted Rate of Return Net of Investment Expense
09/30/2019	4.15%
09/30/2018	9.92%
09/30/2017	13.48%
09/30/2016 ¹	11.11%
09/30/2015 ¹	-2.34%
09/30/2014 ¹	9.00%
09/30/2013 ¹	14.64%
09/30/2012 ¹	20.16%
09/30/2011 ¹	1.77%
09/30/2010 ¹	9.70%

¹ These results were provided by the prior actuary, Pension Board Consultants, Inc., Atlanta, Georgia.

NOTES TO THE FINANCIAL STATEMENTS

(For the Year Ended September 30, 2020)

General Information about the Pension Plan

Plan Description

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

- a. Two City Council appointees,
- b. Two Members of the Department elected by the membership, and
- c. Fifth Member chosen by a majority of the other four.

Employees who are classified as full-time Police Officers hired prior to January 1, 2013 shall participate in the System as a condition of employment.

Plan Membership as of October 1, 2018:

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	171
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	14
Active Plan Members	68
	<u>253</u>

Benefits Provided

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

A summary of the benefit provisions can be found in the October 1, 2018 Actuarial Valuation Report for the City of Pensacola Police Officers' Retirement Plan prepared by Foster & Foster Actuaries and Consultants.

Contributions

Member: 5.20% of Salary.

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

Net Pension Liability

The measurement date is September 30, 2019.

The measurement period for the pension expense was October 1, 2018 to September 30, 2019.

The reporting period is October 1, 2019 through September 30, 2020.

The Sponsor's Net Pension Liability was measured as of September 30, 2019.

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, 2018 updated to September 30, 2019 using the following actuarial assumptions:

Inflation	2.50%
Salary Increases	4.00%
Discount Rate	7.125%
Investment Rate of Return	7.125%

Mortality Rate Healthy Inactive Lives:

Female: RP2000 Generational, 100% Annuitant White Collar, Scale BB.

Male: RP2000 Generational, 10% Annuitant White Collar / 90% Annuitant Blue Collar, Scale BB.

Mortality Rate Healthy Active Lives:

Female: RP2000 Generational, 100% Combined Healthy White Collar, Scale BB.

Male: RP2000 Generational, 10% Combined Healthy White Collar / 90% Combined Healthy Blue Collar, Scale BB.

Mortality Rate Disabled Lives:

Female: 60% RP2000 Disabled Female set forward two years / 40% Annuitant White Collar with no setback, no projection scale.

Male: 60% RP2000 Disabled Male setback four years / 40% Annuitant White Collar with no setback, no projection scale.

The above 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, 2018 FRS valuation report for special risk employees. We feel this assumption sufficiently accommodates future mortality improvements.

15% of active deaths are assumed to be service-incurred.

The most recent actuarial experience study used to review the other significant assumptions was not available.

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 2019 the inflation rate assumption of the investment advisor was 2.50%.

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, 2019 are summarized in the following table:

Asset Class	Target Allocation	Long Term Expected Real Rate of Return
All Cap Value Equity	22.50%	7.50%
Broad Growth Equity	22.50%	7.50%
International Equity	15.00%	8.50%
Fixed Income (Core)	25.00%	2.50%
Global Bond	5.00%	3.50%
Real Estate	10.00%	4.50%
Total	100.00%	

Discount Rate:

The Discount Rate used to measure the Total Pension Liability was 7.125 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	Plan Fiduciary Net Position	Net Pension Liability
	(a)	(b)	(a)-(b)
Reporting Period Ending September 30, 2019	\$ 131,409,206	\$ 101,583,353	\$ 29,825,853
Changes for a Year:			
Service Cost	786,760	-	786,760
Interest	9,193,908	-	9,193,908
Differences between Expected and Actual Experience	1,361,896	-	1,361,896
Changes of assumptions	-	-	-
Changes of benefit terms	-	-	-
Contributions - Employer	-	4,445,468	(4,445,468)
Contributions - State	-	601,682	(601,682)
Contributions - Employee	-	211,533	(211,533)
Contributions - Buy Back	-	-	-
Net Investment Income	-	4,289,802	(4,289,802)
Benefit Payments, including Refunds of Employee Contributions	(6,317,326)	(6,317,326)	-
Administrative Expense	-	(48,723)	48,723
Change in reserve accounts	-	(297,178)	297,178
Net Changes	5,025,238	2,885,258	2,139,980
Reporting Period Ending September 30, 2020	\$ 136,434,444	\$ 104,468,611	\$ 31,965,833

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

	Current Discount		
	1% Decrease	Rate	1% Increase
	6.125%	7.125%	8.125%
Sponsor's Net Pension Liability	\$ 50,174,119	\$ 31,965,833	\$ 17,125,710

Pension Plan Fiduciary Net Position.

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

**FINAL PENSION EXPENSE AND DEFERRED OUTFLOWS OF RESOURCES AND DEFERRED
INFLOWS OF RESOURCES RELATED TO PENSIONS**
FISCAL YEAR SEPTEMBER 30, 2019

For the year ended September 30, 2019, the Sponsor has recognized a Pension Expense of \$2,400,366.

On September 30, 2019, the Sponsor reported Deferred Outflows of Resources and Deferred Inflows of Resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between Expected and Actual Experience	-	884,560
Changes of assumptions	-	-
Net difference between Projected and Actual Earnings on Pension Plan investments	-	5,031,287
Employer and State contributions subsequent to the measurement date	5,047,150	-
Total	<u>\$ 5,047,150</u>	<u>\$ 5,915,847</u>

The outcome of the Deferred Outflows of resources related to pensions resulting from Employer and State contributions subsequent to the measurement date will be recognized as a reduction of the Net Pension Liability in the year ended September 30, 2019.

Other 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:	
2020	\$ (1,440,000)
2021	\$ (2,228,868)
2022	\$ (1,687,306)
2023	\$ (559,673)
2024	\$ -
Thereafter	\$ -

**PRELIMINARY PENSION EXPENSE AND DEFERRED OUTFLOWS OF RESOURCES AND
DEFERRED INFLOWS OF RESOURCES RELATED TO PENSIONS
FISCAL YEAR SEPTEMBER 30, 2020**

For the year ended September 30, 2020, the Sponsor will recognize a Pension Expense of \$2,491,164.

On September 30, 2020, 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	907,930	-
Changes of assumptions	-	-
Net difference between Projected and Actual Earnings on Pension Plan investments	-	2,127,811
Employer and State contributions subsequent to the measurement date	<u>TBD</u>	<u>-</u>
Total	<u><u>TBD</u></u>	<u><u>\$ 2,127,811</u></u>

The outcome of the Deferred Outflows of resources related to pensions resulting from Employer and State contributions subsequent to the measurement date will be recognized as a reduction of the Net Pension Liability in the year ended September 30, 2020.

Other 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:	
2021	\$ (1,187,894)
2022	\$ (646,332)
2023	\$ 27,336
2024	\$ 587,009
2025	\$ -
Thereafter	\$ -

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

Last 10 Fiscal Years

Reporting Period Ending Measurement date	09/30/2020 09/30/2019	09/30/2019 09/30/2018	09/30/2018 09/30/2017
Total Pension Liability			
Service Cost	786,760	816,071	761,793
Interest	9,193,908	8,949,790	8,977,910
Changes of benefit terms	-	-	-
Differences between Expected and Actual Experience	1,361,896	-	(2,653,681)
Changes of assumptions	-	-	-
Contributions - Buy Back	-	47,123	41,367
Benefit Payments, including Refunds of Employee Contributions	(6,317,326)	(6,397,599)	(8,755,072)
Net Change in Total Pension Liability	\$ 5,025,238	\$ 3,415,385	\$ (1,627,683)
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Total Pension Liability - Ending (a)	\$ 136,434,444	\$ 131,409,206	\$ 127,993,821
Plan Fiduciary Net Position			
Contributions - Employer	4,445,468	4,528,544	4,331,190
Contributions - State	601,682	572,693	542,277
Contributions - Employee	211,533	209,565	218,457
Contributions - Buy Back	-	47,123	41,367
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Benefit Payments, including Refunds of Employee Contributions	(6,317,326)	(6,397,599)	(8,755,072)
Administrative Expense	(48,723)	(52,447)	(115,371)
Net Change in Plan Fiduciary Net Position	3,182,436	8,337,579	7,876,892
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	\$ 105,137,476	\$ 101,955,040	\$ 93,617,461
Less reserve accounts	\$ 668,865	\$ 371,687	\$ 775,007
Plan Fiduciary Net Position - Ending (b)	\$ 104,468,611	\$ 101,583,353	\$ 92,842,454
Net Pension Liability - Ending (a) - (b)	\$ 31,965,833	\$ 29,825,853	\$ 35,151,367
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	77.06%	77.59%	73.1%
Covered Payroll	\$ 4,067,890	\$ 4,030,069	\$ 4,201,063
Net Pension Liability as a percentage of Covered Payroll	785.81%	740.1%	836.7%

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS
Last 10 Fiscal Years

Reporting Period Ending Measurement date	09/30/2017 09/30/2016 ¹	09/30/2016 ¹ 09/30/2015 ¹	09/30/2015 ¹ 09/30/2014 ¹
Total Pension Liability			
Service Cost	912,596	818,742	860,340
Interest	8,876,315	8,390,513	8,151,071
Changes of benefit terms	-	-	-
Differences between Expected and Actual Experience	-	312,274	866,959
Changes of assumptions	-	6,217,609	3,431,350
Contributions - Buy Back	-	-	-
Benefit Payments, including Refunds of Employee Contributions	(7,539,629)	(6,446,003)	(5,994,107)
Net Change in Total Pension Liability	\$ 2,249,282	\$ 9,293,135	\$ 7,315,613
Total Pension Liability - Beginning	\$127,372,222	\$118,079,087	\$110,763,474
Total Pension Liability - Ending (a)	\$129,621,504	\$127,372,222	\$118,079,087
Plan Fiduciary Net Position			
Contributions - Employer	3,830,736	3,830,839	3,825,656
Contributions - State	533,483	512,808	473,283
Contributions - Employee	227,357	240,097	156,000
Contributions - Buy Back	-	-	12,024
Net Investment Income	8,651,676	(2,362,487)	6,881,022
Benefit Payments, including Refunds of Employee Contributions	(7,539,629)	(6,446,003)	(5,994,107)
Administrative Expense	(93,853)	(82,441)	(69,051)
Net Change in Plan Fiduciary Net Position	5,609,770	(4,307,187)	5,284,827
Plan Fiduciary Net Position - Beginning	80,130,799	84,437,986	79,153,159
	\$ 85,740,569	\$ 80,130,799	\$ 84,437,986
Less reserve accounts	\$ 1,168,510	\$ 1,203,293	\$ 1,097,405
Plan Fiduciary Net Position - Ending (b)	\$ 84,572,059	\$ 78,927,506	\$ 83,340,581
Net Pension Liability - Ending (a) - (b)	\$ 45,049,445	\$ 48,444,716	\$ 34,738,506
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	65.2%	62.0%	70.6%
Covered Payroll	\$ 4,372,250	\$ 4,423,864	\$ 4,377,970
Net Pension Liability as a percentage of Covered Payroll	2964.6%	2879.2%	2697.1%

Notes to Schedule:

¹ These results were provided by the prior actuary, Pension Board Consultants, Inc., Atlanta, Georgia.

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

Last 10 Fiscal Years

Reporting Period Ending	09/30/2014	09/30/2013
Measurement date	09/30/2013 ¹	09/30/2012 ¹
Total Pension Liability		
Service Cost	1,282,649	1,605,230
Interest	8,164,809	7,835,535
Changes of benefit terms	(5,724,271)	-
Differences between Expected and Actual Experience	1,943,060	(2,734,414)
Changes of assumptions	3,373,204	2,145,252
Contributions - Buy Back	-	-
Benefit Payments, including Refunds of Employee Contributions	(4,605,472)	(3,967,087)
Net Change in Total Pension Liability	\$ 4,433,979	\$ 4,884,516
Total Pension Liability - Beginning	\$106,329,495	\$101,444,979
Total Pension Liability - Ending (a)	\$110,763,474	\$106,329,495
Plan Fiduciary Net Position		
Contributions - Employer	2,485,715	3,025,714
Contributions - State	473,910	477,014
Contributions - Employee	61,590	29,199
Contributions - Buy Back	237,089	763,031
Net Investment Income	9,839,718	11,504,769
Benefit Payments, including Refunds of Employee Contributions	(4,605,472)	(3,967,087)
Administrative Expense	(74,488)	(73,465)
Net Change in Plan Fiduciary Net Position	8,418,062	11,759,175
Plan Fiduciary Net Position - Beginning	70,735,097	58,975,922
	\$ 79,153,159	\$ 70,735,097
Less reserve accounts	\$ 1,019,927	\$ 847,359
Plan Fiduciary Net Position - Ending (b)	\$ 78,133,232	\$ 69,887,738
Net Pension Liability - Ending (a) - (b)	\$ 32,630,242	\$ 36,441,757
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	70.5%	65.7%
Covered Payroll	\$ 4,870,112	\$ 5,296,929
Net Pension Liability as a percentage of Covered Payroll	2274.4%	2007.4%

Notes to Schedule:¹ These results were provided by the prior actuary, Pension Board Consultants, Inc., Atlanta, Georgia.

SCHEDULE OF CONTRIBUTIONS

Last 10 Fiscal Years

Fiscal Year Ended	Actuarially Determined Contribution	Contributions in relation to the Actuarially Determined Contributions ²	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a percentage of Covered Payroll
09/30/2019	\$4,983,613	\$4,983,613	\$ -	\$4,067,890	122.51%
09/30/2018	\$5,236,129	\$5,236,129	\$ -	\$4,030,069	129.93%
09/30/2017	\$5,236,129	\$5,236,129	\$ -	\$4,201,063	124.64%
09/30/2016 ¹	\$5,256,803	\$5,256,803	\$ -	\$4,372,250	120.23%
09/30/2015 ¹	\$4,452,427	\$4,452,427	\$ -	\$4,423,864	100.65%
09/30/2014 ¹	\$4,298,939	\$4,298,939	\$ -	\$4,466,862	96.24%
09/30/2013 ¹	\$2,832,155	\$2,832,155	\$ -	\$4,870,112	58.15%
09/30/2012 ¹	\$3,356,717	\$3,356,717	\$ -	\$5,296,929	63.37%
09/30/2011 ¹	\$4,017,967	\$4,017,967	\$ -	\$6,766,158	59.38%
09/30/2010 ¹	\$3,133,416	\$3,133,416	\$ -	\$6,966,752	44.98%

¹ These results were provided by the prior actuary, Pension Board Consultants, Inc., Atlanta, Georgia.

² Including amounts from Contribution Surplus Account.

Notes to Schedule

Valuation Date: 10/01/2017

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:

Mortality Rates:

Healthy Active Lives:

Female: RP2000 Generational, 100% Combined Healthy White Collar, Scale BB.

Male: RP2000 Generational, 10% Combined Healthy White Collar / 90% Combined Healthy Blue Collar, Scale BB.

Healthy Inactive Lives:

Female: RP2000 Generational, 100% Annuitant White Collar, Scale BB.

Male: RP2000 Generational, 10% Annuitant White Collar / 90% Annuitant Blue Collar, Scale BB.

Disabled Lives:

Female: 60% RP2000 Disabled Female set forward two years / 40% Annuitant White Collar with no setback, no projection scale.

Male: 60% RP2000 Disabled Male setback four years / 40% Annuitant White Collar with no setback, no projection scale.

The assumed rates of mortality were mandated by Chapter 2015-157, Laws of Florida. This law mandates the use of the assumption used in either of the two most recent valuations of the Florida Retirement System (FRS). The above rates are those outlined in the July 1, 2016 FRS actuarial valuation report for special risk employees. We feel this assumption sufficiently accommodates future mortality improvements.

Interest Rate:

7.125% per year, compounded annually, net of investment related expenses. This assumption is in line with other Florida special risk pension plans.

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Termination Rates:

Age	Probability of Termination
25-39	6.00%
40-44	2.00%
45+	0.00%

The assumed rates of termination were utilized by the prior actuary.

Salary Increases:

4.00% compounded annually. This assumption was utilized by the prior actuary.

Payroll Growth:

None. This is in compliance with Part VII of Chapter 112, Florida Statutes.

Disability Rates:

Age	Probability of Disablement
25	0.2387%
30	0.2800%
35	0.3867%
40	0.5733%
45	1.0600%
50	1.8467%
55	3.0600%
60	4.7867%
65	0.0000%

45% of disabilities are assumed to be in Line of Duty. The disability assumptions were utilized by the prior actuary.

Retirement Rates:

Service	Age	Probability of Retirement
< 25 Years	45-49	5%
	50-56	10%
	57	50%
	58	70%
	59	90%
	60	100%
25 Years	45-57	50%
	58	70%
	59	90%
	60	100%
26-29 Years	45-56	25%
	57	50%
	58	70%
	59	90%
	60	100%
30+ Years	All Ages	100%

The assumed rates of retirement were utilized by the prior actuary.

Marriage:

80% of active participants are assumed to be married with spouses three years younger. This assumption was utilized by the prior actuary.

Actuarial Asset Method:

Five year Smoothing.

Funding Method:

Entry Age Normal Actuarial Cost Method.

The following loads are applied for determination of the Sponsor dollar funding requirement for the following year:

Interest - None; assuming an October 1 deposit.

Salary - A full year, based on the current 4.00% assumption.

EXPENSE DEVELOPMENT AND AMORTIZATION SCHEDULES

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

FINAL COMPONENTS OF PENSION EXPENSE
FISCAL YEAR SEPTEMBER 30, 2019

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Beginning balance	\$ 35,151,367	\$ 6,279,652	\$ 8,089,685	\$ -
Employer and State Contributions made after 09/30/2018	-	-	5,047,150	-
Total Pension Liability Factors:				
Service Cost	816,071	-	-	816,071
Interest	8,949,790	-	-	8,949,790
Changes in benefit terms	-	-	-	-
Contributions - Buy Back	47,123	-	-	47,123
Differences between Expected and Actual Experience with regard to economic or demographic assumptions	-	-	-	-
Current year amortization of experience difference	-	(884,560)	(88,165)	(796,395)
Change in assumptions about future economic or demographic factors or other inputs	-	-	-	-
Current year amortization of change in assumptions	-	-	(1,352,629)	1,352,629
Benefit Payments, including Refunds of Employee Contributions	(6,397,599)	-	-	-
Net change	3,415,385	(884,560)	(1,440,794)	10,369,218
Plan Fiduciary Net Position:				
Contributions - Employer	4,528,544	-	(4,528,544)	-
Contributions - State	572,693	-	(572,693)	-
Contributions - Employee	209,565	-	-	(209,565)
Contributions - Buy Back	47,123	-	-	(47,123)
Projected Net Investment Income	6,631,337	-	-	(6,631,337)
Difference between projected and actual earnings on Pension Plan investments	2,798,363	2,798,363	-	-
Current year amortization	-	(1,687,304)	(957,350)	(729,954)
Benefit Payments, including Refunds of Employee Contributions	(6,397,599)	-	-	-
Administrative Expenses	(52,447)	-	-	52,447
Other: Change in reserve accounts	403,320	-	-	(403,320)
Net change	8,740,899	1,111,059	(6,058,587)	(7,968,852)
Ending Balance	\$ 29,825,853	\$ 6,506,151	\$ 5,637,454	\$ 2,400,366

PRELIMINARY COMPONENTS OF PENSION EXPENSE
FISCAL YEAR SEPTEMBER 30, 2020

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Beginning balance	\$ 29,825,853	\$ 6,506,151	\$ 5,637,454	\$ -
Employer and State Contributions made after 09/30/2019	-	-	TBD*	-
Total Pension Liability Factors:				
Service Cost	786,760	-	-	786,760
Interest	9,193,908	-	-	9,193,908
Changes in benefit terms	-	-	-	-
Contributions - Buy Back	-	-	-	-
Differences between Expected and Actual Experience with regard to economic or demographic assumptions	1,361,896	-	1,361,896	-
Current year amortization of experience difference	-	(884,560)	(453,966)	(430,594)
Change in assumptions about future economic or demographic factors or other inputs	-	-	-	-
Current year amortization of change in assumptions	-	-	-	-
Benefit Payments, including Refunds of Employee Contributions	(6,317,326)	-	-	-
Net change	5,025,238	(884,560)	907,930	9,550,074
Plan Fiduciary Net Position:				
Contributions - Employer	4,445,468	-	(4,445,468)	-
Contributions - State	601,682	-	(601,682)	-
Contributions - Employee	211,533	-	-	(211,533)
Contributions - Buy Back	-	-	-	-
Projected Net Investment Income	7,224,847	-	-	(7,224,847)
Difference between projected and actual earnings on Pension Plan investments	(2,935,045)	-	2,935,045	-
Current year amortization	-	(1,687,306)	(1,718,875)	31,569
Benefit Payments, including Refunds of Employee Contributions	(6,317,326)	-	-	-
Administrative Expenses	(48,723)	-	-	48,723
Other: Change in reserve accounts	(297,178)	-	-	297,178
Net change	2,885,258	(1,687,306)	(3,830,980)	(7,058,910)
Ending Balance	\$ 31,965,833	\$ 3,934,285	TBD	\$ 2,491,164

* Employer and State Contributions subsequent to the measurement date made after September 30, 2019 but made on or before September 30, 2020 need to be added.

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)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
2019	\$ 2,935,045	5	\$ -	\$ 587,009	\$ 587,009	\$ 587,009	\$ 587,009	\$ 587,009	\$ -	\$ -	\$ -	\$ -
2018	\$ (2,798,363)	5	\$ (559,671)	\$ (559,673)	\$ (559,673)	\$ (559,673)	\$ (559,673)	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ (5,638,164)	5	\$ (1,127,633)	\$ (1,127,633)	\$ (1,127,633)	\$ (1,127,633)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ (2,505,006)	5	\$ 957,350	\$ 1,131,866	\$ (541,562)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ (729,954)	\$ 31,569	\$ (1,641,859)	\$ (1,100,297)	\$ 27,336	\$ 587,009	\$ -	\$ -	\$ -	\$ -

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)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
2016	\$ -	3	\$ 1,352,629	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 1,352,629	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

AMORITZATION 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)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
2019	\$ 1,361,896	3	\$ -	\$ 453,966	\$ 453,965	\$ 453,965	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ (2,653,681)	3	\$ (884,560)	\$ (884,560)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ 381,712	3	\$ 88,165	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ (796,395)	\$ (430,594)	\$ 453,965	\$ 453,965	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -