

CITY OF PENSACOLA
FIREFIGHTERS' RELIEF AND PENSION FUND

ACTUARIAL VALUATION
AS OF OCTOBER 1, 2018

CONTRIBUTIONS APPLICABLE TO THE
PLAN/FISCAL YEAR ENDING SEPTEMBER 30, 2020

GASB 67/68 DISCLOSURE INFORMATION
AS OF SEPTEMBER 30, 2018



FOSTER & FOSTER
ACTUARIES AND CONSULTANTS

March 27, 2019

Board of Trustees
City of Pensacola
Firefighters' Relief and Pension
Fund 222 West Main Street
Pensacola, FL 32502

Re: City of Pensacola Firefighters' Relief and Pension Fund

Dear Board:

We are pleased to present to the Board this report of the annual actuarial valuation of the City of Pensacola Firefighters' Relief and Pension Fund. 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. Future actuarial measurements may differ significantly from the current measurements presented in this report for a variety of reasons including: changes in applicable laws, changes in plan provisions, changes in assumptions, or plan experience differing from expectations. Due to the limited scope of the valuation, we did not perform an analysis of the potential range of such future measurements.

In conducting the 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, 2017. The total pension liability was rolled-forward from the valuation date to the plan's fiscal year ending September 30, 2018 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.

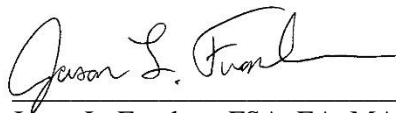
To our knowledge, no associate of Foster & Foster, Inc. working on valuations of the program has any direct financial interest or indirect material interest in the City of Pensacola, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the Firefighters' Relief and Pension Fund. Thus, there is no relationship existing that might affect our capacity to prepare and certify this actuarial report.

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

Respectfully submitted,

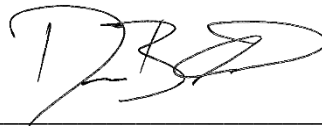
Foster & Foster, Inc.

By:



Jason L. Franken, FSA, EA, MAAA
Enrolled Actuary #17-6888

By:



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

Enclosures

TABLE OF CONTENTS

Section	Title	Page
I	Introduction	
	a. Summary of Report	5
	b. Changes Since Prior Valuation	6
	c. Contribution Impact of Annual Changes	7
	d. Comparative Summary of Principal Valuation Results	8
II	Valuation Information	
	a. Reconciliation of Unfunded Actuarial Accrued Liabilities	14
	b. Detailed Actuarial (Gain)/Loss Analysis	17
	c. Projected Unfunded Actuarial Accrued Liability	18
	d. Actuarial Assumptions and Methods	19
	e. Glossary	22
	f. Partial History of Premium Tax Refunds	23
	g. Recent Compensation and Investment Experience	24
III	Trust Fund	25
IV	Member Statistics	
	a. Statistical Data	30
	b. Age and Service Distribution	31
	c. Valuation Participant Reconciliation	32
V	Summary of Current Plan	33
VI	Governmental Accounting Standards Board Statements No. 67 and No. 68 Disclosure Information	36

SUMMARY OF REPORT

The regular annual actuarial valuation of the City of Pensacola Firefighters' Relief and Pension Fund, performed as of October 1, 2018, 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, 2020.

The contribution requirements, compared with those set forth in the October 1, 2017 actuarial valuation report, are as follows:

Valuation Date	10/1/2018	10/1/2017
Applicable to Fiscal Year Ending	<u>9/30/2020</u>	<u>9/30/2019</u>
Minimum Required Contribution	\$2,257,965	\$2,179,778
Member Contributions (Est.)	551,165	535,700
City And State Required Contribution	1,706,800	1,644,078
State Contribution (Est.) ¹	546,911	546,911
City Required Contribution ²	\$1,159,889	\$1,097,167

¹ As requested by the Division of Retirement, the required contribution from the combination of City and State sources for the year ending September 30, 2019 is \$1,644,078. The City and State contribution for the fiscal year ending September 30, 2020 is \$1,706,800 based on the City's policy of contributing on October 1st. This approach saves approximately \$65,000 over the prior approach of contributing uniformly over the year.

Plan experience was favorable overall on the basis of the plan's actuarial assumptions. Sources of favorable experience included a COLA rate of 2.40% which was lower than assumed, an average salary increase of 2.80% which fell short of the 5.67% assumption, and an investment return of 7.87% (Actuarial Asset Basis) which exceeded the 7.75% assumption. These gains were offset in part by losses associated with less inactive mortality than expected and more retirements than expected.

Despite the favorable plan experience, the Minimum Required Contribution has increased due to an amortization method change, as described on page 6.

CHANGES SINCE PRIOR VALUATION

Plan Changes

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

Actuarial Assumption/Method Changes

Since the prior valuation, all amortization bases of the Unfunded Actuarial Accrued Liability (UAAL) have been consolidated. The current UAAL will be amortized as a single base over 20 years, and bases established in future valuations will be amortized over 15 years.

CONTRIBUTION IMPACT OF ANNUAL CHANGES

(1) Contribution Determined as of October 1, 2017	\$1,105,418
(2) Summary of Contribution Impact by component:	
Change in Expected State Monies	(8,251)
Change in Normal Cost	22,392
Change in Administrative Expense	3,521
Investment Return (Actuarial Asset Basis)	(11,603)
Salary Increases	(24,426)
Active Decrements	22,030
Inactive Mortality	43,129
COLAs Lower Than Expected	(39,775)
UAAL Decreased More Than Expected	(89,122)
Change in Expected Member Contributions	(15,465)
Method Change	151,677
Other	<u>364</u>
Total Change in Contribution	54,471
(3) Contribution Determined as of October 1, 2018	\$1,159,889

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	New Method <u>10/1/2018</u>	Old Method <u>10/1/2018</u>	<u>10/1/2017</u>
A. Participant Data			
Actives	102	102	97
Service Retirees	87	87	87
DROP Retirees	19	19	17
Beneficiaries	29	29	31
Disability Retirees	55	55	54
Terminated Vested	<u>2</u>	<u>2</u>	<u>2</u>
Total	294	294	288
Total Annual Payroll	\$4,737,252	\$4,737,252	\$4,611,308
Payroll Under Assumed Ret. Age	4,737,252	4,737,252	4,611,308
Annual Rate of Payments to:			
Service Retirees	4,880,185	4,880,185	4,751,865
DROP Retirees	1,036,074	1,036,074	918,717
Beneficiaries	916,064	916,064	936,887
Disability Retirees	1,896,904	1,896,904	1,802,825
Terminated Vested	31,115	31,115	31,115
B. Assets			
Actuarial Value (AVA) ¹	123,223,090	123,223,090	120,059,817
Market Value (MVA) ¹	125,485,033	125,485,033	120,622,681
C. Liabilities			
Present Value of Benefits			
Actives			
Retirement Benefits	26,863,968	26,863,968	27,697,975
Disability Benefits	2,197,042	2,197,042	2,082,152
Death Benefits	336,201	336,201	322,145
Vested Benefits	418,745	418,745	398,108
Refund of Contributions	104,073	104,073	84,618
Service Retirees	64,253,189	64,253,189	62,494,465
DROP Retirees ¹	19,816,472	19,816,472	18,030,275
Beneficiaries	8,843,783	8,843,783	9,078,988
Disability Retirees	20,536,279	20,536,279	19,773,746
Terminated Vested	<u>332,698</u>	<u>332,698</u>	<u>308,112</u>
Total	143,702,450	143,702,450	140,270,584

C. Liabilities - (Continued)	New Method <u>10/1/2018</u>	Old Method <u>10/1/2018</u>	<u>10/1/2017</u>
Present Value of Future Salaries	47,433,734	47,433,734	43,438,771
Present Value of Future Member Contributions	5,217,711	5,217,711	4,778,265
Normal Cost (Retirement)	1,051,238	1,051,238	1,033,548
Normal Cost (Disability)	150,574	150,574	152,142
Normal Cost (Death)	25,979	25,979	25,586
Normal Cost (Vesting)	23,703	23,703	22,788
Normal Cost (Refunds)	<u>15,663</u>	<u>15,663</u>	<u>13,810</u>
Total Normal Cost	1,267,157	1,267,157	1,247,874
Present Value of Future Normal Costs	12,137,618	12,137,618	11,197,572
Accrued Liability (Retirement)	16,706,691	16,706,691	18,315,304
Accrued Liability (Disability)	780,901	780,901	780,918
Accrued Liability (Death)	100,378	100,378	100,686
Accrued Liability (Vesting)	132,587	132,587	136,880
Accrued Liability (Refunds)	61,854	61,854	53,638
Accrued Liability (Inactives) ¹	<u>113,782,421</u>	<u>113,782,421</u>	<u>109,685,586</u>
Total Actuarial Accrued Liability (EAN AL)	131,564,832	131,564,832	129,073,012
Unfunded Actuarial Accrued Liability (UAAL)	8,341,742	8,341,742	9,013,195
Funded Ratio (AVA / EAN AL)	93.7%	93.7%	93.0%

D. Actuarial Present Value of Accrued Benefits	New Method <u>10/1/2018</u>	Old Method <u>10/1/2018</u>	<u>10/1/2017</u>
Vested Accrued Benefits			
Inactives ¹	113,782,421	113,782,421	109,685,586
Actives	4,799,152	4,799,152	6,098,884
Member Contributions	<u>4,130,901</u>	<u>4,130,901</u>	<u>4,278,557</u>
Total	122,712,474	122,712,474	120,063,027
Non-vested Accrued Benefits	<u>4,544,357</u>	<u>4,544,357</u>	<u>4,715,544</u>
Total Present Value			
Accrued Benefits (PVAB)	127,256,831	127,256,831	124,778,571
Funded Ratio (MVA / PVAB)	98.6%	98.6%	96.7%
Increase (Decrease) in Present Value of Accrued Benefits Attributable to:			
Plan Amendments	0	0	
Assumption Changes	0	0	
New Accrued Benefits	0	1,573,784	
Benefits Paid	0	(8,438,858)	
Interest	0	9,343,334	
Other	<u>0</u>	<u>0</u>	
Total	0	2,478,260	

Valuation Date	New Method 10/1/2018	Old Method 10/1/2018	10/1/2017
Applicable to Fiscal Year Ending	<u>9/30/2020</u>	<u>9/30/2020</u>	<u>9/30/2019</u>

E. Pension Cost

Normal Cost ²	\$1,340,272	\$1,340,272	\$1,317,880
Administrative Expenses ²	99,136	99,136	95,615
Payment Required to Amortize Unfunded Actuarial Accrued Liability (as of 10/1/2018) ²	818,557	666,880	766,283
Minimum Required Contribution	2,257,965	2,106,288	2,179,778
Expected Member Contributions ²	551,165	551,165	535,700
Expected City and State Contribution	1,706,800	1,555,123	1,644,078

F. Past Contributions

Plan Years Ending:	<u>9/30/2018</u>
City and State Requirement	1,993,643
Actual Contributions Made:	
Members (excluding buyback)	480,066
City	1,462,151
State	<u>546,911</u>
Total	2,489,128

G. Net Actuarial (Gain)/Loss (134,386)

¹ The asset values and liabilities include accumulated DROP Plan Balances as of 9/30/2018 and 9/30/2017.

² Contributions developed as of 10/1/2018 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>
2018	8,341,742
2019	8,154,347
2020	7,952,428
2025	6,682,395
2029	5,263,739
2034	2,777,341
2038	0

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

	<u>Actual</u>	<u>Assumed</u>
Year Ended 9/30/2018	2.80%	5.67%
Year Ended 9/30/2017	7.62%	7.04%
Year Ended 9/30/2016	-3.74%	7.15%
Year Ended 9/30/2015	11.22%	7.16%
Year Ended 9/30/2014	5.98%	6.86%

(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 9/30/2018	9.20%	7.87%	7.75%
Year Ended 9/30/2017	11.14%	8.54%	7.75%
Year Ended 9/30/2016	9.18%	9.34%	7.75%
Year Ended 9/30/2015	-1.56%	7.54%	8.00%
Year Ended 9/30/2014	10.49%	9.02%	8.00%

(iii) Average Annual Payroll Growth

(a) Payroll as of:	10/1/2018	\$4,737,252
	10/1/2008	5,512,891
(b) Total Increase		-14.07%
(c) Number of Years		10.00
(d) Average Annual Rate		-1.50%

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
(Before Method Change)

(1)	Unfunded Actuarial Accrued Liability as of October 1, 2017	\$9,013,195
(2)	Sponsor Normal Cost developed as of October 1, 2017	740,630
(3)	Expected administrative expenses for the year ended September 30, 2018	90,536
(4)	Expected interest on (1), (2) and (3)	759,430
(5)	Sponsor contributions to the System during the year ended September 30, 2018	2,009,062
(6)	Expected interest on (5)	118,601
(7)	Expected Unfunded Actuarial Accrued Liability as of September 30, 2018 (1)+(2)+(3)+(4)-(5)-(6)	8,476,128
(8)	Change to UAAL due to Assumption Change	0
(9)	Change to UAAL due to Actuarial (Gain)/Loss	(134,386)
(10)	Unfunded Actuarial Accrued Liability as of October 1, 2018	8,341,742

Type of <u>Base</u>	Date <u>Established</u>	Years <u>Remaining</u>	10/1/2018 <u>Amount</u>	Amortization <u>Amount</u>
Method Change	10/1/1994	6	(424,975)	(84,671)
Assump Change	10/1/1994	6	(2,681,421)	(534,237)
Assump Change	10/1/1999	11	(2,269,038)	(291,410)
Plan Change	10/1/1999	11	6,504,964	835,425
Plan Change	10/1/2001	13	111,376	12,899
Plan Change	10/1/2001	13	51,607	5,977
Method Change	10/1/2005	17	4,978,431	498,111
Actuarial Gain	10/1/2006	18	(42,052)	(4,092)
Assump Change	10/1/2006	18	1,030,143	100,250
Actuarial Gain	10/1/2007	19	(2,188,246)	(207,679)
Actuarial Loss	10/1/2008	20	3,888,069	360,714
Actuarial Gain	10/1/2009	21	(4,457,825)	(405,127)
Actuarial Loss	10/1/2010	22	527,606	47,057
Actuarial Loss	10/1/2011	23	3,997,760	350,507
Assump Change	10/1/2011	23	(249,977)	(21,917)
Actuarial Loss	10/1/2012	24	3,397,165	293,231
Actuarial Gain	10/1/2013	25	(2,984,586)	(253,964)
Actuarial Gain	10/1/2014	26	(657,820)	(55,248)

Type of <u>Base</u>	Date <u>Established</u>	Years <u>Remaining</u>	10/1/2018 <u>Amount</u>	Amortization <u>Amount</u>
Benefit Change	10/1/2014	26	(2,837,581)	(238,317)
Actuarial Gain	10/1/2015	27	(376,335)	(31,230)
Assump Change	10/1/2015	27	6,462,955	536,330
Benefit Change	10/1/2015	27	(1,959)	(163)
Benefit Change	10/1/2016	28	655,095	53,769
Actuarial Gain	10/1/2016	28	(4,076,749)	(334,609)
Actuarial Gain	10/1/2017	29	(236,035)	(19,178)
Assum. Change	10/1/2017	29	355,556	28,890
Actuarial Gain	10/1/2018	30	<u>(134,386)</u>	<u>(10,818)</u>
			8,341,742	630,500

RECONCILIATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITIES
(After Method Change)

(1)	Unfunded Actuarial Accrued Liability as of October 1, 2017	\$9,013,195
(2)	Sponsor Normal Cost developed as of October 1, 2017	740,630
(3)	Expected administrative expenses for the year ended September 30, 2018	90,536
(4)	Expected interest on (1), (2) and (3)	759,430
(5)	Sponsor contributions to the System during the year ended September 30, 2018	2,009,062
(6)	Expected interest on (5)	118,601
(7)	Expected Unfunded Actuarial Accrued Liability as of September 30, 2018 (1)+(2)+(3)+(4)-(5)-(6)	8,476,128
(8)	Change to UAAL due to Assumption Change	0
(9)	Change to UAAL due to Actuarial (Gain)/Loss	(134,386)
(10)	Unfunded Actuarial Accrued Liability as of October 1, 2018	8,341,742

Type of <u>Base</u>	Date <u>Established</u>	Years <u>Remaining</u>	10/1/2018 <u>Amount</u>	Amortization <u>Amount</u>
Fresh Start	10/1/2018	20	<u>8,341,742</u>	<u>773,903</u>
			8,341,742	773,903

DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

(1) Unfunded Actuarial Accrued Liability (UAAL) as of October 1, 2017	\$9,013,195
(2) Expected UAAL as of October 1, 2018	8,476,128
(3) Summary of Actuarial (Gain)/Loss, by component:	
Investment Return (Actuarial Asset Basis)	(136,279)
Salary Increases	(286,883)
Active Decrements	258,735
Inactive Mortality	506,542
COLAs Lower Than Expected	(467,154)
Other	<u>(9,347)</u>
Increase in UAAL due to (Gain)/Loss	(134,386)
Assumption Changes	<u>0</u>
(4) Actual UAAL as of October 1, 2018	\$8,341,742

PROJECTED UNFUNDED ACTUARIAL ACCRUED LIABILITY

Plan Year	Fiscal Year	Expected UAAL	Expected Amortization Payment UAAL	Expected UAAL on 9/30
9/30/2018	9/30/2020	8,341,742	773,903	8,154,347
9/30/2019	9/30/2021	8,154,347	773,903	7,952,428
9/30/2020	9/30/2022	7,952,428	773,903	7,734,861
9/30/2021	9/30/2023	7,734,861	773,903	7,500,432
9/30/2022	9/30/2024	7,500,432	773,903	7,247,835
9/30/2023	9/30/2025	7,247,835	773,903	6,975,662
9/30/2024	9/30/2026	6,975,662	773,903	6,682,395
9/30/2025	9/30/2027	6,682,395	773,903	6,366,400
9/30/2026	9/30/2028	6,366,400	773,903	6,025,916
9/30/2027	9/30/2029	6,025,916	773,903	5,659,044
9/30/2028	9/30/2030	5,659,044	773,903	5,263,739
9/30/2029	9/30/2031	5,263,739	773,903	4,837,798
9/30/2030	9/30/2032	4,837,798	773,903	4,378,847
9/30/2031	9/30/2033	4,378,847	773,903	3,884,327
9/30/2032	9/30/2034	3,884,327	773,903	3,351,482
9/30/2033	9/30/2035	3,351,482	773,903	2,777,341
9/30/2034	9/30/2036	2,777,341	773,903	2,158,704
9/30/2035	9/30/2037	2,158,704	773,903	1,492,123
9/30/2036	9/30/2038	1,492,123	773,903	773,882
9/30/2037	9/30/2039	773,882	773,882	0

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.

Interest Rate

7.75% 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

See Table 4 below. This is based on the experience study dated October 9, 2017.

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

\$93,728 annually, based on actual expenses incurred in the prior fiscal year.

Cost-of-Living Adjustment

1.25% for those hired on or after June 20, 2015.
2.00% for those retiring after June 10, 2015 and hired before that date.
2.875% per year for those retiring prior to June 10, 2015.

Termination Rates

See table below. This is based on the experience study dated October 9, 2017.

Disability Rates

See Table 2 below. 66.7% of disabilities are assumed to be In Line of Duty (ILOD). This is based on the experience study dated October 9, 2017.

Assumed Retirement Age

See Table 3 below. This is based on the experience study dated October 9, 2017.

Marriage

100% are assumed married with husbands 3 years older than wives.

Actuarial Asset Method

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

Funding Method

Entry Age Normal Actuarial Cost Method. A load based on the salary increase at the current 5.77% assumption is used to develop the dollar funding requirements. There is no interest adjustment to reflect the October 1st deposit.

Table 1: Termination Table

Service	Rate
0	10.00%
1	8.00%
2	6.00%
3	4.00%
4-5	2.00%
6	1.75%
7	1.50%
8	1.25%
9	1.00%
10+	0.50%

Table 2: Disability Table

Age	Rate
20	0.120%
25	0.134%
30	0.148%
35	0.254%
40	0.360%
45	1.062%
50	1.762%
55	2.100%
60	2.438%

Table 3: Retirement Table

Age	Retirement Rate	
	Service = 10 to 23 Years	Service = 24+ Years
<= 50	5%	80%
51	10%	80%
52	25%	80%
53	25%	80%
54	25%	80%
55	25%	80%
56+	100%	80%

In addition to the rates shown, 100% retirement is assumed at 27 or more years of service.

Table 4: Salary Increase Table

Service	Rate
0-1	8.00%
2-9	6.50%
10-19	5.00%
20+	4.00%

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.

PARTIAL HISTORY OF PREMIUM TAX REFUNDS

Received During <u>Fiscal Year</u>	<u>Amount</u>	Increase from <u>Previous Year</u>
1998	435,288.82	_____%
1999	446,175.43	2.5%
2000	430,632.86	-3.5%
2001	398,542.75	-7.5%
2002	467,483.17	17.3%
2003	426,820.13	-8.7%
2004	587,798.91	37.7%
2005	579,685.92	-1.4%
2006	674,181.18	16.3%
2007	766,923.14	13.8%
2008	799,134.89	4.2%
2009	530,169.21	-33.7%
2010	638,919.66	20.5%
2011	635,647.22	-0.5%
2012	667,019.50	4.9%
2013	666,509.03	-0.1%
2014	742,106.25	11.3%
2015	698,091.40	-5.9%
2016	628,070.73	-10.0%
2017	538,659.52	-14.2%
2018	546,910.96	1.5%

City of Pensacola
Firefighters' Relief and Pension Fund

RECENT COMPENSATION AND INVESTMENT EXPERIENCE

Valuation Date	Compensation		Investment Return*		
	% Increase (Decrease)	Assumed Increase	Market Value	Actuarial Value	Assumed
10/1/2018	2.80%	5.67%	9.20%	7.87%	7.75%
10/1/2017	7.62%	7.04%	11.14%	8.54%	7.75%
10/1/2016	(3.74%)	7.15%	9.18%	9.34%	7.75%
10/1/2015	11.22%	7.16%	(1.56%)	7.54%	8.00%
10/1/2014	5.98%	6.86%	10.49%	9.02%	8.00%
10/1/2013	(4.15%)	6.62%	13.88%	8.64%	8.00%
10/1/2012	6.19%	6.58%	18.62%	3.40%	8.00%
10/1/2011	6.55%	7.28%	(2.24%)	2.93%	8.00%
10/1/2010	0.94%	7.50%	10.19%	5.09%	8.00%
10/1/2009	(0.49%)	7.50%	6.71%	5.13%	8.00%
Last 5 Years	4.65%	6.77%	7.58%	8.46%	7.85%
Last 10 Years	3.18%	6.93%	8.39%	6.73%	7.92%

*Computed as $2I/(A+B-I)$, where A is beginning value, B is ending value and I is investment return

STATEMENT OF FIDUCIARY NET POSITION
SEPTEMBER 30, 2018

<u>ASSETS</u>	COST VALUE	MARKET VALUE
Cash and Cash Equivalents:		
Checking Account	102,525.51	102,525.51
Money Market	2,337,008.80	2,337,008.80
Cash	37,129.85	37,129.85
Total Cash and Equivalents	2,476,664.16	2,476,664.16
Receivables:		
Member Contributions in Transit	9,578.63	9,578.63
City Contributions in Transit	87.01	87.01
Investment Income	308,505.49	308,505.49
Total Receivable	318,171.13	318,171.13
Investments:		
U. S. Bonds and Bills	8,164,504.94	8,104,566.18
Federal Agency Guaranteed Securities	6,020,630.99	5,862,707.24
Corporate Bonds	26,326,874.22	26,915,388.01
Municipal Obligations	380,000.00	377,348.80
Equities	49,017,940.15	64,281,725.89
Mutual Funds:		
Equity	6,862,262.61	7,203,760.49
Pooled/Common/Commingled Funds:		
Master Limited Partnership	2,957,714.69	2,129,536.19
Real Estate	6,088,840.01	7,979,595.71
Total Investments	105,818,767.61	122,854,628.51
Total Assets	108,613,602.90	125,649,463.80
<u>LIABILITIES</u>		
Payables:		
Investment Expenses	156,025.84	156,025.84
Administrative Expenses	8,405.10	8,405.10
Total Liabilities	164,430.94	164,430.94
NET POSITION RESTRICTED FOR PENSIONS	108,449,171.96	125,485,032.86

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED SEPTEMBER 30, 2018
Market Value Basis

ADDITIONS

Contributions:

Member	480,066.08
City	1,462,151.06
State	546,910.96

Total Contributions	2,489,128.10
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Investment Income:

Net Realized Gain (Loss)	5,359,292.71	
Unrealized Gain (Loss)	2,719,888.95	
Net Increase in Fair Value of Investments		8,079,181.66
Interest & Dividends		3,545,038.21
Less Investment Expense ¹		(718,410.05)

Net Investment Income	10,905,809.82
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Total Additions	13,394,937.92
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DEDUCTIONS

Distributions to Members:

Benefit Payments	7,513,583.31
Lump Sum DROP Distributions	878,501.19
Refunds of Member Contributions	46,773.19

Total Distributions	8,438,857.69
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Administrative Expense	93,728.36
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Total Deductions	8,532,586.05
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Net Increase in Net Position	4,862,351.87
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NET POSITION RESTRICTED FOR PENSIONS

Beginning of the Year	120,622,680.99
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End of the Year	125,485,032.86
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¹Investment related expenses include investment advisory, custodial and performance monitoring fees.

ACTUARIAL ASSET VALUATION
September 30, 2018

Actuarial Assets for funding purposes are developed by recognizing the total actuarial investment gain or loss for each Plan Year over a five year period. In the first year, 20% of the gain or loss is recognized. In the second year 40%, in the third year 60%, in the fourth year 80%, and in the fifth year 100% of the gain or loss is recognized. The actuarial investment gain or loss is defined as the actual return on investments minus the actuarial assumed investment return. Actuarial Assets shall not be less than 80% nor greater than 120% of Market Value of Assets.

Plan Year Ending	Gain/(Loss)	<u>Gains/(Losses) Not Yet Recognized</u>				
		Amounts Not Yet Recognized by Valuation Year				
		2018	2019	2020	2021	2022
09/30/2014	3,776,895	0	0	0	0	0
09/30/2015	(10,133,353)	(2,026,669)	0	0	0	0
09/30/2016	1,505,867	602,348	301,175	0	0	0
09/30/2017	3,696,630	2,217,978	1,478,652	739,326	0	0
09/30/2018	1,835,358	1,468,286	1,101,214	734,142	367,070	0
Total		2,261,943	2,881,041	1,473,468	367,070	0

<u>Development of Investment Gain/(Loss)</u>	
Market Value of Assets, 09/30/2017	120,622,681
Actuarial Value of Assets, 09/30/2017	120,059,817
Contributions Less Benefit Payments & Admin Expenses	(6,043,458)
Expected Investment Earnings on Actuarial Value*	9,070,452
Actual Net Investment Earnings	10,905,810
2018 Actuarial Investment Gain/(Loss)	<u>1,835,358</u>

*Expected Investment Earnings = $0.0775 * [120,059,817 + 0.5 * (6,043,458)]$

<u>Development of Actuarial Value of Assets</u>	
(1) Market Value of Assets, 09/30/2018	125,485,033
(2) Gains/(Losses) Not Yet Recognized	<u>2,261,943</u>
(3) Actuarial Value of Assets, 09/30/2018, (1) - (2)	123,223,090
(A) 09/30/2017 Actuarial Assets:	120,059,817
(I) Net Investment Income:	
1. Interest and Dividends	3,545,038
2. Realized Gains (Losses)	5,359,293
3. Change in Actuarial Value	1,020,810
4. Investment Expenses	<u>(718,410)</u>
Total	9,206,731
(B) 09/30/2018 Actuarial Assets:	123,223,090
Actuarial Asset Rate of Return = $2I/(A+B-I)$:	7.87%
Market Value of Assets Rate of Return:	9.20%
Actuarial Gain/(Loss) due to Investment Return (Actuarial Asset Basis)	136,279
10/01/2018 Limited Actuarial Assets:	123,223,090

CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS
SEPTEMBER 30, 2018
Actuarial Asset Basis

REVENUES

Contributions:		
Member	480,066.08	
City	1,462,151.06	
State	546,910.96	
Total Contributions		2,489,128.10
Earnings from Investments:		
Interest & Dividends	3,545,038.21	
Net Realized Gain (Loss)	5,359,292.71	
Change in Actuarial Value	1,020,809.95	
Total Earnings and Investment Gains		9,925,140.87

EXPENDITURES

Distributions to Members:		
Benefit Payments	7,513,583.31	
Lump Sum DROP Distributions	878,501.19	
Refunds of Member Contributions	46,773.19	
Total Distributions		8,438,857.69
Expenses:		
Investment related ¹	718,410.05	
Administrative	93,728.36	
Total Expenses		812,138.41
Change in Net Assets for the Year		3,163,272.87
Net Assets Beginning of the Year		120,059,816.99
Net Assets End of the Year ²		123,223,089.86

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

²Net Assets may be limited for actuarial consideration.

DEFERRED RETIREMENT OPTION PLAN ACTIVITY
October 1, 2017 to September 30, 2018

Beginning of the Year Balance	2,906,460.36
Plus Additions	1,014,338.95
Investment Return Earned	112,698.09
Less Distributions	(878,501.19)
End of the Year Balance	3,154,996.21

STATISTICAL DATA

	<u>10/1/2015</u>	<u>10/1/2016</u>	<u>10/1/2017</u>	<u>10/1/2018</u>
<u>Actives</u>				
Number	86	88	97	102
Average Current Age	36.4	37.2	36.4	35.6
Average Age at Employment	25.8	26.0	26.2	26.3
Average Past Service	10.6	11.2	10.2	9.3
Average Annual Salary	\$49,742	\$47,319	\$47,539	\$46,444
<u>Service Retirees</u>				
Number	73	81	87	87
Average Current Age	66.9	66.5	66.2	66.5
Average Annual Benefit	\$52,589	\$53,396	\$54,619	\$56,094
<u>DROP Retirees</u>				
Number	30	20	17	19
Average Current Age	52.6	52.7	53.3	52.9
Average Annual Benefit	\$53,304	\$52,795	\$54,042	\$54,530
<u>Beneficiaries</u>				
Number	33	32	31	29
Average Current Age	73.8	75.9	76.5	76.4
Average Annual Benefit	\$28,442	\$29,756	\$30,222	\$31,588
<u>Disability Retirees</u>				
Number	55	55	54	55
Average Current Age	68.3	68.6	69.8	70.6
Average Annual Benefit	\$32,047	\$32,959	\$33,386	\$34,489
<u>Terminated Vested</u>				
Number	3	3	2	2
Average Current Age ¹	47.2	48.2	49.2	50.2
Average Annual Benefit ¹	\$31,115	\$31,115	\$31,115	\$31,115

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

AGE AND SERVICE DISTRIBUTION

PAST SERVICE

AGE	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30+	Total
15 - 19	0	0	0	0	0	0	0	0	0	0	0	0
20 - 24	5	4	0	1	0	0	0	0	0	0	0	10
25 - 29	8	6	2	2	2	1	0	0	0	0	0	21
30 - 34	1	4	1	1	2	3	10	0	0	0	0	22
35 - 39	1	1	1	0	0	2	7	3	0	0	0	15
40 - 44	0	0	0	0	1	0	8	5	1	0	0	15
45 - 49	0	1	0	0	0	0	2	4	6	0	0	13
50 - 54	0	0	0	0	0	0	0	2	3	0	0	5
55 - 59	0	0	0	0	0	0	0	0	1	0	0	1
60 - 64	0	0	0	0	0	0	0	0	0	0	0	0
65+	0	0	0	0	0	0	0	0	0	0	0	0
Total	15	16	4	4	5	6	27	14	11	0	0	102

VALUATION PARTICIPANT RECONCILIATION

1. Active lives

a. Number in prior valuation 10/1/2017	97
b. Terminations	
i. Vested (partial or full) with deferred benefits	0
ii. Non-vested or full lump sum distribution received	(5)
c. Deaths	
i. Beneficiary receiving benefits	0
ii. No future benefits payable	0
d. Disabled	0
e. Retired	0
f. DROP	<u>(5)</u>
g. Continuing participants	87
h. New entrants	<u>15</u>
i. Total active life participants in valuation	102

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	<u>Total</u>
a. Number prior valuation	87	17	31	54	2	191
Retired	3	(3)	0	0	0	0
DROP	0	5	0	0	0	5
Vested Deferred	0	0	0	0	0	0
Death, With Survivor	0	0	0	0	0	0
Death, No Survivor	(2)	0	(2)	0	0	(4)
Disabled	(1)	0	0	1	0	0
Refund of Contributions	0	0	0	0	0	0
Rehires	0	0	0	0	0	0
Expired Annuities	0	0	0	0	0	0
Data Corrections	0	0	0	0	0	0
b. Number current valuation	87	19	29	55	2	192

SUMMARY OF CURRENT PLAN
(Through Special Act Dated October 4, 2016)

<u>Eligibility</u>	Employees who are classified as full-time Firefighters shall participate in the System as a condition of employment.
<u>Credited Service</u>	Complete years of service. For vested members, service also includes major fractional parts of a year.
<u>Salary</u>	<p>Regular wages, longevity pay, station or watch captain pay, special duty pay, bonuses, lump-sum payments not made at termination, inclusive of elective deferrals, deferred compensation or tax-sheltered annuity programs.</p> <p>Employees hired on or after June 10, 2015 have no overtime included in Salary.</p> <p>Employees who were non-vested as of June 10, 2015 a maximum of 200 hours of overtime per plan year (including additional regular pay) are included in Salary.</p> <p>Employees who were vested as of June 10, 2015, a maximum of 300 hours of overtime per plan year (including additional regular pay) are included in Salary.</p>
<u>Average Final Compensation</u>	<p>Average Salary 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 June 10, 2015.</p> <p>Average Salary for the last 5 years of Credited Service for Members with less than 20 years of Credited Service as of June 10, 2015.</p>
<u>Member Contributions</u>	11.00% 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 Age 52 and 10 years of Credited Service, or 25 years of Credited Service.
Benefit	At 25 years of service, the retirement benefit is 75% of average final compensation. Otherwise, the benefit is 75% of first \$2,400 of average final compensation, plus

	70% of the next \$1,200 of average final compensation, plus 65% of any additional amount. This benefit is reduced by 2% for each of the first 18 years, 4% for the next year and 6% for each of the next 5 years by which service is less than 25 years.
Form of Benefit	If single, single life annuity (options available). If married, 75% joint and survivor annuity. For Members hired on or after June 10, 2015 the form of benefit is a 10-year Certain and Life Annuity.
<u>Early Retirement</u>	
Eligibility	Age 50 and 10 Years of Credited Service.
Benefit	Accrued benefit, reduced 3% per year.
<u>Vesting</u>	
Schedule	100% after 10 years of Credited Service.
Benefit Amount	Accrued benefit multiplied by the number of years of service at termination (maximum 25 years) divided by 25 years. Payable at age 52.
<u>Disability</u>	
Eligibility	Total and permanent disability.
Benefit	
Service Incurred	The benefit is 75% of first \$2,400 of average final compensation, plus 70% of the next \$1,200 of average final compensation, plus 65% of any additional amount. This benefit is reduced by 1% for each of the first 18 years, 2% for the next year and 4% for each of the next 5 years by which service is less than 25 years. Minimum benefit is 42% of AFC.
Non-Service Incurred	The benefit is 75% of first \$2,400 of average final compensation, plus 70% of the next \$1,200 of average final compensation, plus 65% of any additional amount. This benefit is reduced by 2% for each of the first 18 years, 4% for the next year and 6% for each of the next 5 years by which service is less than 25 years. Minimum benefit is 25% of AFC.

Duration	Payable as a 75% joint and survivor benefit. Options available.
<u>Death Benefits</u>	
Pre-Retirement	
Vested	75% of monthly accrued benefit payable to designated beneficiary for life.
Non-Vested	Refund of accumulated contributions without interest.
Post-Retirement	Benefits payable to beneficiary in accordance with option selected at retirement.
<u>Board of Trustees</u>	
	<ul style="list-style-type: none"> a. Two City Council appointees, b. Two Members of the Department elected by the membership, and c. Fifth Member elected by other 4 appointed by City Council.
<u>Deferred Retirement Option Plan</u>	
Eligibility	Satisfaction of Normal Retirement requirements (Earlier of Age 52 and 10 years of Credited Service, or 25 years of Credited Service).
Participation	Not to exceed 60 months.
Rate of Return	1.3% annually.
Form of Distribution	Cash lump sum (options available) at termination of employment.
<u>Cost-of-Living Adjustment</u>	
Eligibility	All members in payment status.
Increase	<p>Increased annually based on Consumer Price Index, limited to 3.00% per year for retirees who retired prior to June 10, 2015. The limit is 2.00% per year for retirees who are hired before June 10, 2015 and retire after June 10, 2015. The limit is 1.25% per year for Members who are hired on or after June 10, 2015.</p> <p>No increases are provided during DROP participation for Members who were hired after July 1, 1999 and enter DROP after June 10, 2015.</p>

STATEMENT OF FIDUCIARY NET POSITION
SEPTEMBER 30, 2018

<u>ASSETS</u>	MARKET VALUE
Cash and Cash Equivalents:	
Checking Account	102,525
Money Market	2,337,009
Cash	37,130
Total Cash and Equivalents	2,476,664
Receivables:	
Member Contributions in Transit	9,579
City Contributions in Transit	87
Investment Income	308,505
Total Receivable	318,171
Investments:	
U. S. Bonds and Bills	8,104,566
Federal Agency Guaranteed Securities	5,862,707
Corporate Bonds	26,915,388
Municipal Obligations	377,349
Equities	64,281,726
Mutual Funds:	
Equity	7,203,761
Pooled/Common/Commingled Funds:	
Master Limited Partnership	2,129,536
Equity	0
Real Estate	7,979,596
Total Investments	122,854,629
Total Assets	125,649,464
<u>LIABILITIES</u>	
Payables:	
Investment Expenses	156,026
Administrative Expenses	8,405
Total Liabilities	164,431
NET POSITION RESTRICTED FOR PENSIONS	125,485,033

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED SEPTEMBER 30, 2018
Market Value Basis

ADDITIONS

Contributions:

Member	480,066	
City	1,462,151	
State	546,911	
Total Contributions		2,489,128
Investment Income:		
Net Increase in Fair Value of Investments	8,079,182	
Interest & Dividends	3,545,038	
Less Investment Expense ¹	(718,410)	
Net Investment Income		10,905,810
Total Additions		13,394,938

DEDUCTIONS

Distributions to Members:

Benefit Payments	7,513,584	
Lump Sum DROP Distributions	878,501	
Refunds of Member Contributions	46,773	
Total Distributions		8,438,858
Administrative Expense		93,728
Total Deductions		8,532,586
Net Increase in Net Position		4,862,352
NET POSITION RESTRICTED FOR PENSIONS		
Beginning of the Year		120,622,681
End of the Year		125,485,033

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

NOTES TO THE FINANCIAL STATEMENTS

(For the Year Ended September 30, 2018)

Plan Description

Plan Administration

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

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

Plan Membership as of October 1, 2017:

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	189
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	2
Active Plan Members	97
	288

Benefits Provided

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

Normal Retirement:

Date: Earlier of Age 52 and 10 years of Credited Service, or 25 years of Credited Service.

Benefit: At 25 years of service, the retirement benefit is 75% of average final compensation. Otherwise, the benefit is 75% of first \$2,400 of average final compensation, plus 70% of the next \$1,200 of average final compensation, plus 65% of any additional amount. This benefit is reduced by 2% for each of the first 18 years, 4% for the next year and 6% for each of the next 5 years by which service is less than 25 years.

Early Retirement:

Date: Age 50 and 10 Years of Credited Service.

Benefit: Accrued benefit, reduced 3% per year.

Vesting:

Schedule: 100% after 10 years of Credited Service.

Benefit Amount: Accrued benefit multiplied by the number of years of service at termination (maximum 25 years) divided by 25 years. Payable at age 52.

Disability:

Eligibility: Total and permanent disability.

Benefit Service Incurred: The benefit is 75% of first \$2,400 of average final compensation, plus 70% of the next \$1,200 of average final compensation, plus 65% of any additional amount. This benefit is reduced by 1% for each of the first 18 years, 2% for the next year and 4% for each of the next 5 years by which service is less than 25 years. Minimum benefit is 42% of AFC.

Benefit Non-Service Incurred: The benefit is 75% of first \$2,400 of average final compensation, plus 70% of the next \$1,200 of average final compensation, plus 65% of any additional amount. This benefit is reduced by 2% for each of the first 18 years, 4% for the next year and 6% for each of the next 5 years by which service is less than 25 years. Minimum benefit is 25% of AFC.

Pre-Retirement Death Benefits:

Vested: 75% of monthly accrued benefit payable to designated beneficiary for life.

Non-Vested: Refund of accumulated contributions without interest.

Cost of Living Adjustment:

Eligibility: All members in payment status.

Increase: Increased annually based on Consumer Price Index, limited to 3.00% per year for retirees who retired prior to June 10, 2015. The limit is 2.00% per year for retirees who are hired before June 10, 2015 and retire after June 10, 2015. The limit is 1.25% per year for Members who are hired on or after June 10, 2015.

No increases are provided during DROP participation for Members who enter DROP after June 10, 2015.

Contributions

Member Contributions: 11.00% of Salary.

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

*Investments**Investment Policy:*

The following was the Board's adopted asset allocation policy as of September 30, 2018:

<u>Asset Class</u>	<u>Target Allocation</u>
Domestic Equity	40.0%
International Equity	15.0%
Bonds	25.0%
Convertibles	10.0%
Private Real Estate	5.0%
MLPs	5.0%
<u>Total</u>	<u>100.0%</u>

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, 2018, the annual money-weighted rate of return on Pension Plan investments, net of Pension Plan investment expense, was 9.20 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 (Earlier of Age 52 and 10 years of Credited Service, or 25 years of Credited Service).

Participation: Not to exceed 60 months.

Rate of Return: 1.3% annually.

The DROP balance as September 30, 2018 is \$3,154,996.

NET PENSION LIABILITY OF THE SPONSOR

The components of the Net Pension Liability of the Sponsor on September 30, 2018 were as follows:

Total Pension Liability	\$ 131,390,992
Plan Fiduciary Net Position	\$ (125,485,033)
Sponsor's Net Pension Liability	<u>\$ 5,905,959</u>
Plan Fiduciary Net Position as a percentage of Total Pension Liability	95.51%

Actuarial Assumptions:

The Total Pension Liability was determined by an actuarial valuation as of October 1, 2017 updated to September 30, 2018 using the following actuarial assumptions:

Inflation	2.70%
Salary Increases	Service based
Discount Rate	7.75%
Investment Rate of Return	7.75%

Mortality Rate Healthy Inactive Lives: □

Female: RP 2000 Generational, 100% Annuitant White Collar, Scale BB.

Male: RP 2000 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 most recent actuarial experience study used to review the other significant assumptions was dated October 9, 2017.

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 2018 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, 2018 are summarized in the following table:

Asset Class	Long Term Expected Real Rate of Return
Domestic Equity	8.1%
International Equity	3.4%
Bonds	3.6%
Convertibles	6.7%
Private Real Estate	4.9%
MLPs	9.4%

GASB 67

Discount Rate:

The Discount Rate used to measure the Total Pension Liability was 7.75 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 6.75%	Current Discount Rate 7.75%	1% Increase 8.75%
Sponsor's Net Pension Liability	\$ 21,001,503	\$ 5,905,959	\$ (6,564,699)

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

Last 10 Fiscal Years

	09/30/2018	09/30/2017	09/30/2016
Total Pension Liability			
Service Cost	1,263,734	1,317,501	1,340,661
Interest	9,735,179	9,731,641	9,595,671
Changes of benefit terms	-	-	802,334
Differences between Expected and Actual Experience	260,034	(3,442,328)	(482,293)
Changes of assumptions	-	967,856	-
Contributions - Buy Back	-	-	44,064
Benefit Payments, including Refunds of Employee Contributions	(8,438,858)	(8,511,653)	(8,929,344)
Net Change in Total Pension Liability	2,820,089	63,017	2,371,093
Total Pension Liability - Beginning	128,570,903	128,507,886	126,136,793
Total Pension Liability - Ending (a)	<u>\$131,390,992</u>	<u>\$128,570,903</u>	<u>\$128,507,886</u>
Plan Fiduciary Net Position			
Contributions - Employer	1,462,151	1,797,885	3,198,669
Contributions - State	546,911	538,660	628,071
Contributions - Employee	480,066	449,131	421,774
Contributions - Buy Back	-	-	44,064
Net Investment Income	10,905,810	12,473,832	9,928,990
Benefit Payments, including Refunds of Employee Contributions	(8,438,858)	(8,511,653)	(8,929,344)
Administrative Expense	(93,728)	(90,536)	(105,921)
Other	-	81,471	-
Net Change in Plan Fiduciary Net Position	4,862,352	6,738,790	5,186,303
Plan Fiduciary Net Position - Beginning	120,622,681	113,883,891	108,697,588
Plan Fiduciary Net Position - Ending (b)	<u>\$125,485,033</u>	<u>\$120,622,681</u>	<u>\$113,883,891</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 5,905,959</u>	<u>\$ 7,948,222</u>	<u>\$ 14,623,995</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	95.51%	93.82%	88.62%
Covered Payroll ¹	\$ 4,364,222	\$ 4,082,999	\$ 3,834,292
Net Pension Liability as a percentage of Covered Payroll	135.33%	194.67%	381.40%

Notes to Schedule:

¹ The Covered Payroll numbers shown are in compliance with GASB 82, except for the 09/30/2015 measurement period which includes DROP payroll.

Changes of assumptions:

For measurement date 09/30/2017, amounts reported as changes of assumptions resulted from the following changes:

1. Assumptions for salary increases, disability, retirement, and withdrawal were adjusted to be in line with actual plan experience, based on the experience study dated October 9, 2017.
2. As mandated by Chapter 2015-157, Laws of Florida, the assumed rates of mortality were changed from the rates used by the Florida Retirement System actuary in the July 1, 2015 actuarial valuation to the rates used in the July 1, 2016 actuarial valuation for special risk lives.

For measurement date 09/30/2016, the inflation assumption rate was lowered from 3.00% to 2.70%, matching the long-term inflation assumption utilized by the Plan's investment consultant.

Changes of benefit terms:

For measurement date 09/30/2016, amounts reported as changes of benefit terms resulted from the following plan changes:

1. The definition of Actuarial Equivalent was changed to be in line with the interest and mortality assumptions utilized in the most recent actuarial valuation.
2. The definitions of Compensation, Salary, and Earnings were changed to include additional regular pay, and to clarify that overtime pay maximums are per plan year.
3. The definition of Years of Service was changed to reflect only whole years of service. For vested members, service also includes major fractional parts of a year.
4. It was clarified that DROP members hired before July 1, 1999 receive COLAs during DROP participation.

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

	09/30/2015	09/30/2014
Total Pension Liability		
Service Cost	1,189,882	1,578,578
Interest	9,016,289	9,116,288
Changes of benefit terms	(4,080,439)	-
Differences between Expected and Actual Experience	30,585	-
Changes of assumptions	7,780,467	-
Contributions - Buy Back	-	-
Benefit Payments, including Refunds of Employee Contributions	(6,788,324)	(8,163,106)
Net Change in Total Pension Liability	7,148,460	2,531,760
Total Pension Liability - Beginning	118,988,333	116,456,573
Total Pension Liability - Ending (a)	<u>\$126,136,793</u>	<u>\$118,988,333</u>
Plan Fiduciary Net Position		
Contributions - Employer	3,636,173	2,355,481
Contributions - State	698,091	742,106
Contributions - Employee	474,193	457,361
Contributions - Buy Back	-	-
Net Investment Income	(1,770,463)	10,938,657
Benefit Payments, including Refunds of Employee Contributions	(6,788,324)	(8,163,106)
Administrative Expense	(92,821)	(86,564)
Other	-	-
Net Change in Plan Fiduciary Net Position	(3,843,151)	6,243,935
Plan Fiduciary Net Position - Beginning	112,540,739	106,296,804
Plan Fiduciary Net Position - Ending (b)	<u>\$108,697,588</u>	<u>\$112,540,739</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 17,439,205</u>	<u>\$ 6,447,594</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	86.17%	94.58%
Covered Payroll ¹	\$ 7,494,388	\$ 4,157,835
Net Pension Liability as a percentage of Covered Payroll	232.70%	155.07%

Notes to Schedule:

¹ The Covered Payroll numbers shown are in compliance with GASB 82, except for the 09/30/2015 measurement period which includes DROP payroll.

Changes of assumptions:

For measurement date 09/30/2015, amounts reported as changes of assumptions were resulted from lowering the investment rate of return from 8.00% to 7.75%.

As approved at the October 21, 2015 Board Meeting, we have employed the special risk mortality tables reflected in the Florida Retirement System Actuarial Valuation as of July 1, 2014.

Changes of benefit terms:

For measurement date 09/30/2015, amounts reported as changes of benefit terms resulted from the following plan changes:

1. COLA for those retiring after June 10, 2015:
 - a. Employees who retire or enter DROP after June 10, 2015 will receive a maximum COLA of 2.0%.
 - b. Employees hired after June 10, 2015 will receive a maximum COLA of 1.25%.
2. Employees hired after June 10, 2015 – spousal benefits shall be determined in conformity with those spousal benefits offered to Special Risk class members in the Florida Retirement System.
3. Overtime
 - a. Vested employees on June 10, 2015 – maximum 300 hours of overtime pensionable
 - b. Non-vested employees on June 10, 2015 – maximum 200 hours of overtime pensionable
 - c. Employees hired after June 10, 2015 – no overtime pensionable
4. Average Final Compensation
 - a. Employees with 20 or more years of service on June 10, 2015 will remain the same (highest 2 of the last 5 years)
 - b. Employees with less than 20 years of service on June 10, 2015 will be an average of the last 5 years of credited service
5. DROP – participants entering DROP after June 10, 2015:
 - a. Interest rate will be 1.3%
 - b. No Cost-of-Living Adjustment (COLA) while in DROP

SCHEDULE OF CONTRIBUTIONS

Last 10 Fiscal Years

Fiscal Year Ended	Actuarially Determined Contribution	Contributions in relation to the Actuarially Determined Contributions	Contribution Deficiency (Excess)	Covered Payroll ¹	Contributions as a percentage of Covered Payroll
09/30/2018	\$ 1,993,643	\$ 2,009,062	\$ (15,419)	\$ 4,364,222	46.03%
09/30/2017	\$ 2,321,285	\$ 2,336,545	\$ (15,260)	\$ 4,082,999	57.23%
09/30/2016	\$ 3,822,480	\$ 3,826,740	\$ (4,260)	\$ 3,834,292	99.80%
09/30/2015	\$ 4,334,264	\$ 4,334,264	\$ -	\$ 7,494,388	57.83%
09/30/2014	\$ 3,097,587	\$ 3,097,587	\$ -	\$ 4,157,835	74.50%
09/30/2013	\$ 3,234,358	\$ 3,234,358	\$ -	\$ 4,574,063	70.71%
09/30/2012	\$ 3,494,389	\$ 3,562,977	\$ (68,588)	\$ 4,847,354	73.50%
09/30/2011	\$ 3,286,284	\$ 3,321,453	\$ (35,169)	\$ 4,695,857	70.73%
09/30/2010	\$ 3,441,454	\$ 3,441,454	\$ -	\$ 5,009,434	68.70%
09/30/2009	\$ 3,691,271	\$ 3,699,133	\$ (7,862)	\$ 5,175,498	71.47%

¹ The Covered Payroll numbers shown are in compliance with GASB 82, except for the 09/30/2015 measurement period which includes DROP payroll.

Notes to Schedule

Valuation Date: 10/01/2016

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:

Funding Method: Entry Age Normal Actuarial Cost Method. A load based on the salary increase at the current 7.12% assumption is used to develop the dollar funding requirements. There is no interest adjustment to reflect the October 1st deposit.

Amortization Method: Level % of Payroll, Closed.

Remaining Amortization Period: 30 Years (as of 10/01/2016 valuation).

Mortality Rates: *Healthy 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 stated mortality rates are required by law, effective October 1, 2016 and have been early implemented in conjunction with this actuarial valuation.

Termination Rates: See Table 1 on following page. This is supported by the results of an experience study for the period 2006 – 2011.

Disability Rates: See Table 2 on following page. 66.7% of disabilities are assumed to be In Line of Duty (ILOD). This is based on an experience study performed in 2011.

Assumed Retirement Age: See Table 3 on following page. In addition to this table, 75% of members with 25 or more years of service are assumed to retire. This is based on an experience study for the period 2006 – 2011.

Interest Rate: 7.75% 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: See Table 4 on following page. This is based on an experience study for the period 2006 – 2011.

Cost-of-Living Adjustment: 1.25% for those hired on or after June 20, 2015. 2.00% for those retiring after June 10, 2015 and hired before that date. 2.875% per year for those retiring prior to June 10, 2015.

Payroll Growth: None.

Marriage: 100% are assumed married with husbands 3 years older than wives.

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

Table 1: Termination Table:	Years of Service	Termination Rates
	1	3.25%
	2	3.00%
	3	2.75%
	4	2.50%
	5	2.25%
	6	2.00%
	7	1.75%
	8	1.50%
	9	1.25%
	10	1.00%
	11+	0.50%

Table 2: Disability Table:	Age	Disability Rates
	20	0.15%
	25	0.17%
	30	0.19%
	35	0.32%
	40	0.45%
	45	1.32%
	50	2.20%
	55	2.63%
	60	3.05%

Table 3: Retirement Table:	Age	Retirement Rates
	50	5%
	51	10%
	52 - 55	25%
	56	100%

Table 4: Salary increase Table:	Age	Increase Rates
	20	12.68%
	25	11.09%
	30	8.55%
	35	6.73%
	40	6.09%
	45	5.64%
	50	5.32%
	55	5.00%

SCHEDULE OF INVESTMENT RETURNS
Last 10 Fiscal Years

Fiscal Year Ended	Annual Money-Weighted Rate of Return Net of Investment Expense
09/30/2018	9.20%
09/30/2017	11.14%
09/30/2016	9.18%
09/30/2015	-1.56%
09/30/2014	10.16%

NOTES TO THE FINANCIAL STATEMENTS

(For the Year Ended September 30, 2019)

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 Commission appointees,
- b. Two Members of the Department elected by the membership, and
- c. Fifth Member elected by other four appointed by Commission.

Employees who are classified as full-time Firefighters shall participate in the System as a condition of employment.

Plan Membership as of October 1, 2017:

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	189
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	2
Active Plan Members	97
	<hr/>
	288
	<hr/>

Benefits Provided

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

Normal Retirement:

Date: Earlier of Age 52 and 10 years of Credited Service, or 25 years of Credited Service.

Benefit: At 25 years of service, the retirement benefit is 75% of average final compensation. Otherwise, the benefit is 75% of first \$2,400 of average final compensation, plus 70% of the next \$1,200 of average final compensation, plus 65% of any additional amount. This benefit is reduced by 2% for each of the first 18 years, 4% for the next year and 6% for each of the next 5 years by which service is less than 25 years.

Early Retirement:

Date: Age 50 and 10 Years of Credited Service.

Benefit: Accrued benefit, reduced 3% per year.

Vesting:

Schedule: 100% after 10 years of Credited Service.

Benefit Amount: Accrued benefit multiplied by the number of years of service at termination (maximum 25 years) divided by 25 years. Payable at age 52.

Disability:

Eligibility: Total and permanent disability.

Benefit Service Incurred: The benefit is 75% of first \$2,400 of average final compensation, plus 70% of the next \$1,200 of average final compensation, plus 65% of any additional amount. This benefit is reduced by 1% for each of the first 18 years, 2% for the next year and 4% for each of the next 5 years by which service is less than 25 years. Minimum benefit is 42% of AFC.

Benefit Non-Service Incurred: The benefit is 75% of first \$2,400 of average final compensation, plus 70% of the next \$1,200 of average final compensation, plus 65% of any additional amount. This benefit is reduced by 2% for each of the first 18 years, 4% for the next year and 6% for each of the next 5 years by which service is less than 25 years. Minimum benefit is 25% of AFC.

Pre-Retirement Death Benefits:

Vested: 75% of monthly accrued benefit payable to designated beneficiary for life.

Non-Vested: Refund of accumulated contributions without interest.

Cost of Living Adjustment:

Eligibility: All members in payment status.

Increase: Increased annually based on Consumer Price Index, limited to 3.00% per year for retirees who retired prior to June 10, 2015. The limit is 2.00% per year for retirees who are hired before June 10, 2015 and retire after June 10, 2015. The limit is 1.25% per year for Members who are hired on or after June 10, 2015.

No increases are provided during DROP participation for Members who enter DROP after June 10, 2015.

Contributions

Member Contributions: 11.00% of Salary.

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

Net Pension Liability

The measurement date is September 30, 2018.

The measurement period for the pension expense was October 1, 2017 to September 30, 2018.

The reporting period is October 1, 2018 through September 30, 2019.

The Sponsor's Net Pension Liability was measured as of September 30, 2018.

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, 2017 updated to September 30, 2018 using the following actuarial assumptions:

Inflation	2.70%
Salary Increases	Service based
Discount Rate	7.75%
Investment Rate of Return	7.75%

Mortality Rate Healthy Inactive Lives:

Female: RP 2000 Generational, 100% Annuitant White Collar, Scale BB.

Male: RP 2000 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 most recent actuarial experience study used to review the other significant assumptions was dated October 9, 2017.

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 2018 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, 2018 are summarized in the following table:

Asset Class	Target Allocation	Long Term Expected Real Rate of Return
Domestic Equity	40.0%	8.1%
International Equity	15.0%	3.4%
Bonds	25.0%	3.6%
Convertibles	10.0%	6.7%
Private Real Estate	5.0%	4.9%
MLPs	5.0%	9.4%
Total	100.0%	

Discount Rate:

The Discount Rate used to measure the Total Pension Liability was 7.75 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, 2018	\$ 128,570,903	\$ 120,622,681	\$ 7,948,222
Changes for a Year:			
Service Cost	1,263,734	-	1,263,734
Interest	9,735,179	-	9,735,179
Differences between Expected and Actual Experience	260,034	-	260,034
Changes of assumptions	-	-	-
Changes of benefit terms	-	-	-
Contributions - Employer	-	1,462,151	(1,462,151)
Contributions - State	-	546,911	(546,911)
Contributions - Employee	-	480,066	(480,066)
Net Investment Income	-	10,905,810	(10,905,810)
Benefit Payments, including Refunds of Employee Contributions	(8,438,858)	(8,438,858)	-
Administrative Expense	-	(93,728)	93,728
Net Changes	2,820,089	4,862,352	(2,042,263)
Reporting Period Ending at September 30, 2019	\$ 131,390,992	\$ 125,485,033	\$ 5,905,959

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

	Current Discount		
	1% Decrease	Rate	1% Increase
	6.75%	7.75%	8.75%
Sponsor's Net Pension Liability	\$ 21,001,503	\$ 5,905,959	\$ (6,564,699)

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, 2018**

For the year ended September 30, 2018, the Sponsor has recognized a Pension Expense of \$3,723,274.

On September 30, 2018, 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	7,646	2,822,892
Changes of assumptions	2,671,009	-
Net difference between Projected and Actual Earnings on Pension Plan investments		360,013
Employer and State Contributions subsequent to the measurement date	2,009,062	-
Total	<u>\$ 4,687,717</u>	<u>\$ 3,182,905</u>

The outcome of the Deferred Outflows of resources related to pensions resulting from Employer and State Contributions subsequent to the measurement date has been recognized as a reduction of the Net Pension Liability in the year ended September 30, 2018.

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:	
2019	\$ 1,714,810
2020	\$ 286,587
2021	\$ (1,731,003)
2022	\$ (774,644)
2023	\$ -
Thereafter	\$ -

**PRELIMINARY 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 will recognize a Pension Expense of \$2,919,970.

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	195,027	1,841,737
Changes of assumptions	483,928	-
Net difference between Projected and Actual Earnings on Pension Plan investments	-	2,294,639
Employer and State Contributions subsequent to the measurement date	TBD	-
Total	<u>TBD</u>	<u>\$ 4,136,376</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	\$ (6,751)
2021	\$ (2,024,341)
2022	\$ (1,067,982)
2023	\$ (358,347)
2024	\$ -
Thereafter	\$ -

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

Last 10 Fiscal Years

Reporting Period Ending Measurement Date	09/30/2019 09/30/2018	09/30/2018 09/30/2017	09/30/2017 09/30/2016
Total Pension Liability			
Service Cost	1,263,734	1,317,501	1,340,661
Interest	9,735,179	9,731,641	9,595,671
Changes of benefit terms	-	-	802,334
Differences between Expected and Actual Experience	260,034	(3,442,328)	(482,293)
Changes of assumptions	-	967,856	-
Contributions - Buy Back	-	-	44,064
Benefit Payments, including Refunds of Employee Contributions	(8,438,858)	(8,511,653)	(8,929,344)
Net Change in Total Pension Liability	2,820,089	63,017	2,371,093
Total Pension Liability - Beginning	128,570,903	128,507,886	126,136,793
Total Pension Liability - Ending (a)	<u>\$131,390,992</u>	<u>\$128,570,903</u>	<u>\$128,507,886</u>
Plan Fiduciary Net Position			
Contributions - Employer	1,462,151	1,797,885	3,198,669
Contributions - State	546,911	538,660	628,071
Contributions - Employee	480,066	449,131	421,774
Contributions - Buy Back	-	-	44,064
Net Investment Income	10,905,810	12,473,832	9,928,990
Benefit Payments, including Refunds of Employee Contributions	(8,438,858)	(8,511,653)	(8,929,344)
Administrative Expense	(93,728)	(90,536)	(105,921)
Other	-	81,471	-
Net Change in Plan Fiduciary Net Position	4,862,352	6,738,790	5,186,303
Plan Fiduciary Net Position - Beginning	120,622,681	113,883,891	108,697,588
Plan Fiduciary Net Position - Ending (b)	<u>\$125,485,033</u>	<u>\$120,622,681</u>	<u>\$113,883,891</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 5,905,959</u>	<u>\$ 7,948,222</u>	<u>\$ 14,623,995</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	95.51%	93.82%	88.62%
Covered Payroll ¹	\$ 4,364,222	\$ 4,082,999	\$ 3,834,292
Net Pension Liability as a percentage of Covered Payroll	135.33%	194.67%	381.40%

Notes to Schedule:

¹ The Covered Payroll numbers shown are in compliance with GASB 82, except for the 09/30/2015 measurement period which includes DROP payroll.

Changes of assumptions:

For measurement date 09/30/2017, amounts reported as changes of assumptions resulted from the following changes:

1. Assumptions for salary increases, disability, retirement, and withdrawal were adjusted to be in line with actual plan experience, based on the experience study dated October 9, 2017.
2. As mandated by Chapter 2015-157, Laws of Florida, the assumed rates of mortality were changed from the rates used by the Florida Retirement System actuary in the July 1, 2015 actuarial valuation to the rates used in the July 1, 2016 actuarial valuation for special risk lives.

For measurement date 09/30/2016, the inflation assumption rate was lowered from 3.00% to 2.70%, matching the long-term inflation assumption utilized by the Plan's investment consultant.

Changes of benefit terms:

For measurement date 09/30/2016, amounts reported as changes of benefit terms resulted from the following plan changes:

1. The definition of Actuarial Equivalent was changed to be in line with the interest and mortality assumptions utilized in the most recent actuarial valuation.
2. The definitions of Compensation, Salary, and Earnings were changed to include additional regular pay, and to clarify that overtime pay maximums are per plan year.
3. The definition of Years of Service was changed to reflect only whole years of service. For vested members, service also includes major fractional parts of a year.
4. It was clarified that DROP members hired before July 1, 1999 receive COLAs during DROP participation.

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

Last 10 Fiscal Years

Reporting Period Ending	09/30/2016	09/30/2015
Measurement Date	09/30/2015	09/30/2014
Total Pension Liability		
Service Cost	1,189,882	1,578,578
Interest	9,016,289	9,116,288
Changes of benefit terms	(4,080,439)	-
Differences between Expected and Actual Experience	30,585	-
Changes of assumptions	7,780,467	-
Contributions - Buy Back	-	-
Benefit Payments, including Refunds of Employee Contributions	(6,788,324)	(8,163,106)
Net Change in Total Pension Liability	7,148,460	2,531,760
Total Pension Liability - Beginning	118,988,333	116,456,573
Total Pension Liability - Ending (a)	<u>\$126,136,793</u>	<u>\$118,988,333</u>
Plan Fiduciary Net Position		
Contributions - Employer	3,636,173	2,355,481
Contributions - State	698,091	742,106
Contributions - Employee	474,193	457,361
Contributions - Buy Back	-	-
Net Investment Income	(1,770,463)	10,938,657
Benefit Payments, including Refunds of Employee Contributions	(6,788,324)	(8,163,106)
Administrative Expense	(92,821)	(86,564)
Other	-	-
Net Change in Plan Fiduciary Net Position	(3,843,151)	6,243,935
Plan Fiduciary Net Position - Beginning	112,540,739	106,296,804
Plan Fiduciary Net Position - Ending (b)	<u>\$108,697,588</u>	<u>\$112,540,739</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 17,439,205</u>	<u>\$ 6,447,594</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	86.17%	94.58%
Covered Payroll ¹	\$ 7,494,388	\$ 4,157,835
Net Pension Liability as a percentage of Covered Payroll	232.70%	155.07%

Notes to Schedule:

¹ The Covered Payroll numbers shown are in compliance with GASB 82, except for the 09/30/2015 measurement period which includes DROP payroll.

Changes of assumptions:

For measurement date 09/30/2015, amounts reported as changes of assumptions were resulted from lowering the investment rate of return from 8.00% to 7.75%.

As approved at the October 21, 2015 Board Meeting, we have employed the special risk mortality tables reflected in the Florida Retirement System Actuarial Valuation as of July 1, 2014.

Changes of benefit terms:

For measurement date 09/30/2015, amounts reported as changes of benefit terms resulted from the following plan changes:

1. COLA for those retiring after June 10, 2015:
 - a. Employees who retire or enter DROP after June 10, 2015 will receive a maximum COLA of 2.0%.
 - b. Employees hired after June 10, 2015 will receive a maximum COLA of 1.25%.
2. Employees hired after June 10, 2015 – spousal benefits shall be determined in conformity with those spousal benefits offered to Special Risk class members in the Florida Retirement System.
3. Overtime
 - a. Vested employees on June 10, 2015 – maximum 300 hours of overtime pensionable
 - b. Non-vested employees on June 10, 2015 – maximum 200 hours of overtime pensionable
 - c. Employees hired after June 10, 2015 – no overtime pensionable
4. Average Final Compensation
 - a. Employees with 20 or more years of service on June 10, 2015 will remain the same (highest 2 of the last 5 years)
 - b. Employees with less than 20 years of service on June 10, 2015 will be an average of the last 5 years of credited service
5. DROP – participants entering DROP after June 10, 2015:
 - a. Interest rate will be 1.3%
 - b. No Cost-of-Living Adjustment (COLA) while in DROP

SCHEDULE OF CONTRIBUTIONS

Last 10 Fiscal Years

Fiscal Year Ended	Actuarially Determined Contribution	Contributions in relation to the Actuarially Determined Contributions	Contribution Deficiency (Excess)	Covered Payroll ¹	Contributions as a percentage of Covered Payroll
09/30/2018	\$ 1,993,643	\$ 2,009,062	\$ (15,419)	\$ 4,364,222	46.03%
09/30/2017	\$ 2,321,285	\$ 2,336,545	\$ (15,260)	\$ 4,082,999	57.23%
09/30/2016	\$ 3,822,480	\$ 3,826,740	\$ (4,260)	\$ 3,834,292	99.80%
09/30/2015	\$ 4,334,264	\$ 4,334,264	\$ -	\$ 7,494,388	57.83%
09/30/2014	\$ 3,097,587	\$ 3,097,587	\$ -	\$ 4,157,835	74.50%
09/30/2013	\$ 3,234,358	\$ 3,234,358	\$ -	\$ 4,574,063	70.71%
09/30/2012	\$ 3,494,389	\$ 3,562,977	\$ (68,588)	\$ 4,847,354	73.50%
09/30/2011	\$ 3,286,284	\$ 3,321,453	\$ (35,169)	\$ 4,695,857	70.73%
09/30/2010	\$ 3,441,454	\$ 3,441,454	\$ -	\$ 5,009,434	68.70%
09/30/2009	\$ 3,691,271	\$ 3,699,133	\$ (7,862)	\$ 5,175,498	71.47%

¹ The Covered Payroll numbers shown are in compliance with GASB 82, except for the 09/30/2015 measurement period which includes DROP payroll.

Notes to Schedule

Valuation Date: 10/01/2016

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:

Funding Method: Entry Age Normal Actuarial Cost Method. A load based on the salary increase at the current 7.12% assumption is used to develop the dollar funding requirements. There is no interest adjustment to reflect the October 1st deposit.

Amortization Method: Level % of Payroll, Closed.

Remaining Amortization Period: 30 Years (as of 10/01/2016 valuation).

Mortality Rates: *Healthy 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 stated mortality rates are required by law, effective October 1, 2016 and have been early implemented in conjunction with this actuarial valuation.

Termination Rates: See Table 1 on following page. This is supported by the results of an experience study for the period 2006 – 2011.

Disability Rates: See Table 2 on following page. 66.7% of disabilities are assumed to be In Line of Duty (ILOD). This is based on an experience study performed in 2011.

Assumed Retirement Age: See Table 3 on following page. In addition to this table, 75% of members with 25 or more years of service are assumed to retire. This is based on an experience study for the period 2006 – 2011.

Interest Rate: 7.75% 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: See Table 4 on following page. This is based on an experience study for the period 2006 – 2011.

GASB 68

Cost-of-Living Adjustment: 1.25% for those hired on or after June 20, 2015. 2.00% for those retiring after June 10, 2015 and hired before that date. 2.875% per year for those retiring prior to June 10, 2015.

Payroll Growth: None.

Marriage: 100% are assumed married with husbands 3 years older than wives.

Table 1: Termination Table:

Years of Service	Termination Rates
1	3.25%
2	3.00%
3	2.75%
4	2.50%
5	2.25%
6	2.00%
7	1.75%
8	1.50%
9	1.25%
10	1.00%
11+	0.50%

Table 2: Disability Table:

Age	Disability Rates
20	0.15%
25	0.17%
30	0.19%
35	0.32%
40	0.45%
45	1.32%
50	2.20%
55	2.63%
60	3.05%

Table 3: Retirement Table:

Age	Retirement Rates
50	5%
51	10%
52 - 55	25%
56	100%

Table 4: Salary increase Table:

Age	Increase Rates
20	12.68%
25	11.09%
30	8.55%
35	6.73%
40	6.09%
45	5.64%
50	5.32%
55	5.00%

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, 2018

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Beginning balance	\$ 14,623,995	\$ 2,761,763	\$ 12,656,560	\$ -
Employer and State Contributions made after 09/30/2017	-	-	2,009,062	-
Total Pension Liability Factors:				
Service Cost	1,317,501	-	-	1,317,501
Interest	9,731,641	-	-	9,731,641
Changes in benefit terms	-	-	-	-
Differences between Expected and Actual Experience with regard to economic or demographic assumptions	(3,442,328)	3,442,328	-	-
Current year amortization of experience difference	-	(981,155)	(7,646)	(973,509)
Change in assumptions about future economic or demographic factors or other inputs	967,856	-	967,856	-
Current year amortization of change in assumptions	-	-	(2,187,081)	2,187,081
Benefit Payments, including Refunds of Employee Contributions	(8,511,653)	-	-	-
Net change	63,017	2,461,173	782,191	12,262,714
Plan Fiduciary Net Position:				
Contributions - Employer	1,797,885	-	(1,797,885)	-
Contributions - State	538,660	-	(538,660)	-
Contributions - Employee	449,131	-	-	(449,131)
Projected Net Investment Income	8,600,612	-	-	(8,600,612)
Difference between projected and actual earnings on Pension Plan investments	3,873,220	3,873,220	-	-
Current year amortization	-	(1,636,925)	(2,138,163)	501,238
Benefit Payments, including Refunds of Employee Contributions	(8,511,653)	-	-	-
Administrative Expenses	(90,536)	-	-	90,536
Other	81,471	-	-	(81,471)
Net change	6,738,790	2,236,295	(4,474,708)	(8,539,440)
Ending Balance	\$ 7,948,222	\$ 7,459,231	\$ 8,964,043	\$ 3,723,274

PRELIMINARY COMPONENTS OF PENSION EXPENSE
FISCAL YEAR SEPTEMBER 30, 2019

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Beginning balance	\$ 7,948,222	\$ 7,459,231	\$ 8,964,043	\$ -
Employer and State Contributions made after 09/30/2018	-	-	TBD*	-
Total Pension Liability Factors:				
Service Cost	1,263,734	-	-	1,263,734
Interest	9,735,179	-	-	9,735,179
Changes in benefit terms	-	-	-	-
Differences between Expected and Actual Experience with regard to economic or demographic assumptions	260,034	-	260,034	-
Current year amortization of experience difference	-	(981,155)	(72,653)	(908,502)
Change in assumptions about future economic or demographic factors or other inputs	-	-	-	-
Current year amortization of change in assumptions	-	-	(2,187,081)	2,187,081
Benefit Payments, including Refunds of Employee Contributions	(8,438,858)	-	-	-
Net change	<u>2,820,089</u>	<u>(981,155)</u>	<u>(1,999,700)</u>	<u>12,277,492</u>
Plan Fiduciary Net Position:				
Contributions - Employer	1,462,151	-	(1,462,151)	-
Contributions - State	546,911	-	(546,911)	-
Contributions - Employee	480,066	-	-	(480,066)
Projected Net Investment Income	9,114,074	-	-	(9,114,074)
Difference between projected and actual earnings on Pension Plan investments	1,791,736	1,791,736	-	-
Current year amortization	-	(1,995,273)	(2,138,163)	142,890
Benefit Payments, including Refunds of Employee Contributions	(8,438,858)	-	-	-
Administrative Expenses	(93,728)	-	-	93,728
Net change	<u>4,862,352</u>	<u>(203,537)</u>	<u>(4,147,225)</u>	<u>(9,357,522)</u>
Ending Balance	<u>\$ 5,905,959</u>	<u>\$ 6,274,539</u>	<u>TBD</u>	<u>\$ 2,919,970</u>

* Employer and State Contributions subsequent to the measurement date made after September 30, 2018 but made on or before September 30, 2019 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)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
2014	\$ (2,622,702)	5	\$ (524,540)	\$ (524,540)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2015	\$ 10,690,815	5	\$ 2,138,163	\$ 2,138,163	\$ 2,138,163	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ (1,688,706)	5	\$ (337,741)	\$ (337,741)	\$ (337,741)	\$ (337,741)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ (3,873,220)	5	\$ (774,644)	\$ (774,644)	\$ (774,644)	\$ (774,644)	\$ (774,644)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ (1,791,736)	5	\$ -	\$ (358,348)	\$ (358,347)	\$ (358,347)	\$ (358,347)	\$ (358,347)	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 501,238	\$ 142,890	\$ 667,431	\$ (1,470,732)	\$ (1,132,991)	\$ (358,347)	\$ -	\$ -	\$ -	\$ -	\$ -

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)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
2015	\$ 7,780,467	4	\$ 1,945,117	\$ 1,945,117	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ 967,856	4	\$ 241,964	\$ 241,964	\$ 241,964	\$ 241,964	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			<u>\$ 2,187,081</u>	<u>\$ 2,187,081</u>	<u>\$ 241,964</u>	<u>\$ 241,964</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>

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)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
2015	\$ 30,585	4	\$ 7,646	\$ 7,646	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ (482,293)	4	\$ (120,573)	\$ (120,573)	\$ (120,573)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ (3,442,328)	4	\$ (860,582)	\$ (860,582)	\$ (860,582)	\$ (860,582)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ 260,034	4	\$ -	\$ 65,007	\$ 65,009	\$ 65,009	\$ 65,009	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ (973,509)	\$ (908,502)	\$ (916,146)	\$ (795,573)	\$ 65,009	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -