

CITY OF PENSACOLA
FIREFIGHTERS' RELIEF AND PENSION FUND

ACTUARIAL VALUATION AND REPORT
AS OF OCTOBER 1, 2017

CONTRIBUTIONS APPLICABLE TO THE PLAN/
FISCAL YEAR ENDED SEPTEMBER 30, 2019

March 2, 2018

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 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.

In conducting the valuations, we have relied on personnel, plan design, and asset information supplied by the Board of Trustees, 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, 2016. The total pension liability was rolled-forward from the valuation date to the plan's fiscal year ending September 30, 2017 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.

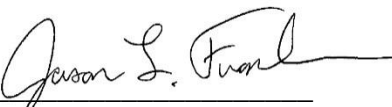
The undersigned is familiar with the immediate and long-term aspects of pension valuations, and meets the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. All of the sections of this report are considered an integral part of the 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 Pensacola 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 me at 239-433-5500.

Respectfully submitted,

Foster & Foster, Inc.

By: 
Jason L. Franken
Enrolled Actuary #17-06888

JLF/lke
Enclosures

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SUMMARY OF REPORT

The regular annual actuarial valuation of the City of Pensacola Firefighters' Relief and Pension Fund, performed as of October 1, 2017, has been completed, and the results are presented in this Report. The results of this valuation are applicable to the plan/fiscal year ended September 30, 2019.

The contribution requirements developed in this valuation, compared with amounts developed in the October 1, 2016 actuarial valuation, are as follows:

Valuation Date	10/1/2017	10/1/2016
Applicable Plan/Fiscal Year End	<u>9/30/2019</u>	<u>9/30/2018</u>
Total Required Contribution	2,179,778	2,484,307
Member Contributions (Est.)	535,700	490,664
City and State Required Contribution	1,644,078	1,993,643
State Contribution	538,660	538,660
Balance from City ¹	1,105,418	1,454,983

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, 2018 is \$1,993,643. The City and State contribution for the fiscal year ending September 30, 2019 is \$1,644,078 based on the City's policy of contributing on October 1st. This approach saves approximately \$60,000 over the prior approach of contributing uniformly throughout the year.

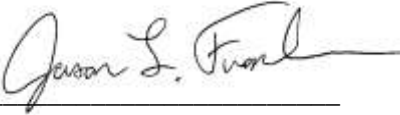
As can be seen, the Required Contribution from City and State sources has again decreased considerably since the prior valuation. The decrease was attributable to favorable experience realized by the plan during the year, the elimination of the October 1, 1987 "Plan Change" amortization base due to the base being fully amortized, and a change of actuarial assumptions. Offsetting the decrease was an increase associated with a decline in State Contributions available to offset the City's funding requirement.

The primary sources of favorable experience were as follows: a COLA rate of 2.40% which was less than assumed, and a 8.54% investment return (Actuarial Asset basis) exceeding the 7.75% assumption. The favorable experience was offset in part by losses associated with less than anticipated inactive mortality, average salary increases that were higher than assumed, and more retirements than expected.

The balance of this Report presents additional details of the actuarial valuation and the general operation of the Fund. The undersigned would be pleased to meet with the Board of Trustees in order to discuss the Report and any pending questions concerning its contents.

Respectfully submitted,

FOSTER & FOSTER, INC.

By: 
Jason L. Franken, FSA, EA, MAAA

By: 
Tyler A. Koftan

Plan Changes Since Prior Valuation

There were no plan changes since the prior valuation.

Actuarial Assumption/Method Changes Since Prior Valuation

The following changes of actuarial assumptions were made since the prior valuation:

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.

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	New Assump <u>10/1/2017</u>	Old Assump <u>10/1/2017</u>	<u>10/1/2016</u>
A. Participant Data			
Actives	97	97	88
Service Retirees	87	87	81
DROP Retirees	17	17	20
Beneficiaries	31	31	32
Disability Retirees	54	54	55
Terminated Vested	<u>2</u>	<u>2</u>	<u>3</u>
Total	288	288	279
Total Annual Payroll	\$4,611,308	\$4,685,086	\$4,164,100
Payroll Under Assumed Ret. Age	4,611,308	4,685,086	4,164,100
Annual Rate of Payments to:			
Service Retirees	4,751,865	4,751,865	4,325,107
DROP Retirees	918,717	918,717	1,055,898
Beneficiaries	936,887	936,887	952,207
Disability Retirees	1,802,825	1,802,825	1,812,730
Terminated Vested	31,115	31,115	31,115
B. Assets			
Actuarial Value (AVA) ¹	120,059,817	120,059,817	116,121,744
Market Value (MVA) ¹	120,622,681	120,622,681	113,883,891
C. Liabilities			
Present Value of Benefits			
Actives			
Retirement Benefits	27,697,975	29,843,569	27,558,582
Disability Benefits	2,082,152	2,871,416	2,576,215
Death Benefits	322,145	870,630	778,036
Vested Benefits	398,108	465,319	427,684
Refund of Contributions	84,618	80,854	60,033
Service Retirees	62,494,465	62,494,465	56,321,512
DROP Retirees ¹	18,030,275	18,030,275	20,725,567
Beneficiaries	9,078,988	9,078,988	9,351,810
Disability Retirees	19,773,746	19,773,746	20,589,654
Terminated Vested	<u>308,112</u>	<u>308,112</u>	<u>291,921</u>
Total	140,270,584	143,817,374	138,681,014

C. Liabilities - (Continued)	New Assump <u>10/1/2017</u>	Old Assump <u>10/1/2017</u>	<u>10/1/2016</u>
Present Value of Future Salaries	43,438,771	51,583,912	43,804,240
Present Value of Future Member Contributions	4,778,265	5,674,230	4,818,466
Normal Cost (Retirement)	1,033,548	1,138,660	1,024,360
Normal Cost (Disability)	152,142	204,519	180,905
Normal Cost (Death)	25,586	65,653	58,747
Normal Cost (Vesting)	22,788	26,428	24,159
Normal Cost (Refunds)	<u>13,810</u>	<u>10,919</u>	<u>9,974</u>
Total Normal Cost	1,247,874	1,446,179	1,298,145
Present Value of Future Normal Costs	11,197,572	15,124,553	13,021,506
Accrued Liability (Retirement)	18,315,304	17,624,611	17,046,967
Accrued Liability (Disability)	780,918	944,055	914,888
Accrued Liability (Death)	100,686	237,679	224,206
Accrued Liability (Vesting)	136,880	195,724	189,020
Accrued Liability (Refunds)	53,638	5,166	3,963
Accrued Liability (Inactives) ¹	<u>109,685,586</u>	<u>109,685,586</u>	<u>107,280,464</u>
Total Actuarial Accrued Liability (EAN AL)	129,073,012	128,692,821	125,659,508
Unfunded Actuarial Accrued Liability (UAAL)	9,013,195	8,633,004	9,537,764
Funded Ratio (AVA / EAN AL)	93.0%	93.3%	92.4%

D. Actuarial Present Value of Accrued Benefits	New Assump <u>10/1/2017</u>	Old Assump <u>10/1/2017</u>	<u>10/1/2016</u>
Vested Accrued Benefits			
Inactives ¹	109,685,586	109,685,586	107,280,464
Actives	6,098,884	5,499,156	5,730,828
Member Contributions	<u>4,278,557</u>	<u>4,278,557</u>	<u>4,203,776</u>
Total	120,063,027	119,463,299	117,215,068
Non-vested Accrued Benefits	<u>4,715,544</u>	<u>4,589,032</u>	<u>4,504,483</u>
Total Present Value			
Accrued Benefits (PVAB)	124,778,571	124,052,331	121,719,551
Funded Ratio (MVA / PVAB)	96.7%	97.2%	93.6%
Increase (Decrease) in Present Value of Accrued Benefits Attributable to:			
Plan Amendments	0	0	
Assumption Changes	726,240	0	
New Accrued Benefits	0	1,740,994	
Benefits Paid	0	(8,511,653)	
Interest	0	9,103,439	
Other	<u>0</u>	<u>0</u>	
Total	726,240	2,332,780	

Valuation Date	New Assump 10/1/2017	Old Assump 10/1/2017	10/1/2016
Applicable to Fiscal Year Ending	<u>9/30/2019</u>	<u>9/30/2019</u>	<u>9/30/2018</u>

E. Pension Cost

Normal Cost ²	\$1,317,880	\$1,551,750	\$1,390,573
Administrative Expenses ²	95,615	97,145	113,463
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 30 years (as of 10/1/2017) ²	766,283	745,705	980,271
Total Required Contribution	2,179,778	2,394,600	2,484,307
Expected Member Contributions ²	535,700	552,981	490,664
Expected City and State Contribution	1,644,078	1,841,619	1,993,643

F. Past Contributions

Plan Years Ending:	<u>9/30/2017</u>
City and State Requirement	2,321,285
Actual Contributions Made:	
Members (excluding buyback)	449,131
City	1,797,885
State	<u>538,660</u>
Total	2,785,676

G. Net Actuarial (Gain)/Loss (252,389)

¹ The asset values and liabilities include accumulated DROP Plan Balances as of 9/30/2017 and 9/30/2016.

² Contributions developed as of 10/1/2017 displayed above have been adjusted to account for assumed salary increase and interest components.

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

<u>Year</u>	<u>Projected Unfunded Actuarial Accrued Liability</u>
2017	9,013,195
2018	8,979,654
2019	8,943,513
2026	7,130,953
2033	2,119,199
2047	0

I. (i) 3 Year Comparison of Actual and Assumed Salary Increases

		<u>Actual</u>	<u>Assumed</u>
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%

(ii) 3 Year Comparison of Investment Return on Actuarial Value

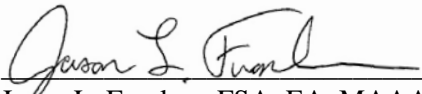
		<u>Actual</u>	<u>Assumed</u>
Year Ended	9/30/2017	8.54%	7.75%
Year Ended	9/30/2016	9.34%	7.75%
Year Ended	9/30/2015	7.54%	8.00%

(iii) Average Annual Payroll Growth

(a) Payroll as of:	10/1/2017	\$4,611,308
	10/1/2007	5,041,086
(b) Total Increase		-8.53%
(c) Number of Years		10.00
(d) Average Annual Rate		-0.89%

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.



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

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

Ms. Sarah Carr
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, 2016	\$9,537,764
(2)	Sponsor Normal Cost developed as of October 1, 2016	840,094
(3)	Expected administrative expenses for the year ended September 30, 2017	105,921
(4)	Expected interest on (1), (2) and (3)	808,388
(5)	Sponsor contributions to the System during the year ended September 30, 2017	2,336,544
(6)	Expected interest on (5)	70,230
(7)	Expected Unfunded Actuarial Accrued Liability as of September 30, 2017 (1)+(2)+(3)+(4)-(5)-(6)	8,885,393
(8)	Change to UAAL due to Assumption Change	380,191
(9)	Change to UAAL due to Actuarial (Gain)/Loss	(252,389)
(10)	Unfunded Actuarial Accrued Liability as of October 1, 2017	9,013,195

Type of <u>Base</u>	Date <u>Established</u>	Years <u>Remaining</u>	10/1/2017 <u>Amount</u>	Amortization <u>Amount</u>
Method Change	10/1/1994	7	(507,541)	(89,701)
Assump Change	10/1/1994	7	(3,202,365)	(565,974)
Assump Change	10/1/1999	12	(2,539,655)	(308,721)
Plan Change	10/1/1999	12	7,280,778	885,054
Plan Change	10/1/2001	14	123,170	13,665
Plan Change	10/1/2001	14	57,073	6,332
Method Change	10/1/2005	18	5,422,528	527,701
Actuarial Gain	10/1/2006	19	(45,682)	(4,336)
Assump Change	10/1/2006	19	1,119,049	106,205
Actuarial Gain	10/1/2007	20	(2,371,515)	(220,017)
Actuarial Loss	10/1/2008	21	4,204,919	382,143
Actuarial Gain	10/1/2009	22	(4,812,157)	(429,194)
Actuarial Loss	10/1/2010	23	568,598	49,852
Actuarial Loss	10/1/2011	24	4,301,954	371,329
Assump Change	10/1/2011	24	(268,998)	(23,219)
Actuarial Loss	10/1/2012	25	3,650,765	310,650
Actuarial Gain	10/1/2013	26	(3,203,516)	(269,051)
Actuarial Gain	10/1/2014	27	(705,303)	(58,530)
Benefit Change	10/1/2014	27	(3,042,404)	(252,475)
Actuarial Gain	10/1/2015	28	(403,101)	(33,086)
Assump Change	10/1/2015	28	6,922,611	568,191
Benefit Change	10/1/2015	28	(2,098)	(172)
Benefit Change	10/1/2016	29	701,057	56,963
Actuarial Gain	10/1/2016	29	(4,362,774)	(354,487)
Actuarial Gain	10/1/2017	30	(252,389)	(20,318)

Type of <u>Base</u>	Date <u>Established</u>	Years <u>Remaining</u>	10/1/2017 <u>Amount</u>	Amortization <u>Amount</u>
Assum. Change	10/1/2017	30	<u>380,191</u>	<u>30,606</u>
			9,013,195	679,410
Maximum of 30 Year Amortization of UAAL or Total of Individual Amortization Amounts, no Less Than Administrative Expenses				725,578

DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

(1) Unfunded Actuarial Accrued Liability (UAAL) as of October 1, 2016	\$9,537,764
(2) Expected UAAL as of October 1, 2017	8,885,393
(3) Summary of Actuarial (Gain)/Loss, by component:	
Investment Return (Actuarial Asset Basis)	(895,913)
Salary Increases	217,804
Active Decrements	160,408
Inactive Mortality	821,642
COLAs Lower Than Expected	(441,513)
Other	<u>(114,817)</u>
Increase in UAAL due to (Gain)/Loss	(252,389)
Assumption Changes	<u>380,191</u>
(4) Actual UAAL as of October 1, 2017	\$9,013,195

PROJECTED UNFUNDED ACTUARIAL ACCRUED LIABILITY

<u>Plan Year</u>	<u>Fiscal Year</u>	<u>Expected UAAL</u>	<u>Expected Amortization Payment UAAL</u>	<u>Expected UAAL on 9/30</u>
9/30/2017	9/30/2019	9,013,195	679,410	8,979,654
9/30/2018	9/30/2020	8,979,654	679,410	8,943,513
9/30/2019	9/30/2021	8,943,513	679,410	8,904,571
9/30/2020	9/30/2022	8,904,571	679,410	8,862,609
9/30/2021	9/30/2023	8,862,609	679,410	8,817,396
9/30/2022	9/30/2024	8,817,396	679,410	8,768,682
9/30/2023	9/30/2025	8,768,682	679,412	8,716,190
9/30/2024	9/30/2026	8,716,190	1,335,085	7,953,139
9/30/2025	9/30/2027	7,953,139	1,335,085	7,130,953
9/30/2026	9/30/2028	7,130,953	1,335,085	6,245,048
9/30/2027	9/30/2029	6,245,048	1,335,085	5,290,483
9/30/2028	9/30/2030	5,290,483	1,335,078	4,261,949
9/30/2029	9/30/2031	4,261,949	758,752	3,774,694
9/30/2030	9/30/2032	3,774,694	758,744	3,249,686
9/30/2031	9/30/2033	3,249,686	738,755	2,705,529
9/30/2032	9/30/2034	2,705,529	738,755	2,119,199
9/30/2033	9/30/2035	2,119,199	738,755	1,487,427
9/30/2034	9/30/2036	1,487,427	738,773	806,675
9/30/2035	9/30/2037	806,675	211,087	641,746
9/30/2036	9/30/2038	641,746	109,207	573,812
9/30/2037	9/30/2039	573,812	329,190	263,580
9/30/2038	9/30/2040	263,580	(52,914)	341,022
9/30/2039	9/30/2041	341,022	376,271	(37,981)
9/30/2040	9/30/2042	(37,981)	326,400	(392,621)
9/30/2041	9/30/2043	(392,621)	(21,699)	(399,668)
9/30/2042	9/30/2044	(399,668)	(332,335)	(72,551)
9/30/2043	9/30/2045	(72,551)	(63,250)	(10,022)
9/30/2044	9/30/2046	(10,022)	247,688	(277,682)
9/30/2045	9/30/2047	(277,682)	(287,261)	10,321
9/30/2046	9/30/2048	10,321	10,321	0

ACTUARIAL ASSUMPTIONS AND METHODS

Mortality Rates

Healthy Active Lives:

Female: RP2000 Generational, 100% Combined Healthy (previously Annuitant) White Collar, Scale BB

Male: RP2000 Generational, 10% Combined Healthy (previously Annuitant) White Collar / 90% Combined Healthy (previously Annuitant) 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 are 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 the July 1, 2016 FRS actuarial valuation report for special risk employees. We feel this assumption sufficiently accommodates future mortality improvements.

Previously, the rates were those outlined in the July 1, 2015 FRS actuarial valuation report for special risk employees.

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.

<u>Interest Rate</u>	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.
<u>Salary Increases</u>	See Table 4 below. This is based on the experience study dated October 9, 2017.
<u>Cost-of-Living Adjustment</u>	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.
<u>Payroll Growth</u>	None.
<u>Administrative Expenses</u>	\$90,536 annually. This is equal to the actual non-investment-related expenses paid out of the trust during the year.
<u>Marriage</u>	100% are assumed married with husbands 3 years older than wives.
<u>Actuarial Asset Method</u>	All assets are valued at market value with an adjustment made to uniformly spread actuarial investment gains and losses (as measured by actual actuarial value investment return against expected actuarial value investment return) over a five-year period.
<u>Funding Method</u>	Entry Age Normal Actuarial Cost Method. A load based on the salary increase at the current 5.61% assumption is used to develop the dollar funding requirements. There is no interest adjustment to reflect the October 1 st deposit.

Table 1: Termination Table

<u>Service</u>	<u>Rate</u>
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

<u>Received During Fiscal Year</u>	<u>Amount</u>	<u>Increase from 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%

RECENT COMPENSATION AND INVESTMENT EXPERIENCE

Valuation Date	Compensation		Investment Return*		
	% Increase (Decrease)	Assumed Increase	Market Value	Actuarial Value	Assumed
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%
10/1/2008	12.80%	7.70%	(13.30%)	5.70%	8.00%
Last 5 Years	3.20%	6.96%	8.49%	8.61%	7.90%
Last 10 Years	4.14%	7.14%	5.92%	6.51%	7.95%

*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, 2017

<u>ASSETS</u>	COST VALUE	MARKET VALUE
Cash and Cash Equivalents:		
Checking Account	169,414.45	169,414.45
Money Market	2,040,222.42	2,040,222.42
Total Cash and Equivalents	2,209,636.87	2,209,636.87
Receivables:		
Member Contributions in Transit	9,249.02	9,249.02
City Contributions in Transit	84.03	84.03
State Contributions	9,650.28	9,650.28
Investment Income	268,350.31	268,350.31
Total Receivable	287,333.64	287,333.64
Investments:		
Fixed Income	28,651,847.28	28,410,116.29
Equities	58,091,116.69	71,855,102.50
Mutual Funds:		
Equity	6,862,262.61	7,056,254.49
Pooled/Common/Commingled Funds:		
Master Limited Partnership	2,841,113.36	2,017,967.33
Equity	2,230,650.72	1,880,920.19
Real Estate	5,845,268.61	7,483,932.70
Total Investments	104,522,259.27	118,704,293.50
Total Assets	107,019,229.78	121,201,264.01
<u>LIABILITIES</u>		
Payables:		
Refunds of Member Contributions	3,836.35	3,836.35
DROP Distributions	420,665.44	420,665.44
Investment Expenses	148,903.65	148,903.65
Administrative Expenses	5,177.58	5,177.58
Total Liabilities	578,583.02	578,583.02
NET POSITION RESTRICTED FOR PENSIONS	106,440,646.76	120,622,680.99

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED SEPTEMBER 30, 2017
Market Value Basis

ADDITIONS

Contributions:

Member	449,131.36
City	1,797,884.69
State	538,659.52

Total Contributions	2,785,675.57
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Investment Income:

Net Realized Gain (Loss)	8,062,129.07	
Unrealized Gain (Loss)	1,991,027.27	
Net Increase in Fair Value of Investments		10,053,156.34
Interest & Dividends		3,138,012.00
Less Investment Expense ¹		(717,336.33)

Net Investment Income	12,473,832.01
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Other	81,471.02
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Total Additions	15,340,978.60
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DEDUCTIONS

Distributions to Members:

Benefit Payments	7,202,764.95
Lump Sum DROP Distributions	1,268,494.13
Refunds of Member Contributions	40,393.63

Total Distributions	8,511,652.71
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Administrative Expense	90,535.77
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Total Deductions	8,602,188.48
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Net Increase in Net Position	6,738,790.12
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NET POSITION RESTRICTED FOR PENSIONS

Beginning of the Year	113,883,890.87
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End of the Year	120,622,680.99
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¹Investment related expenses include investment advisory, custodial and performance monitoring fees.

ACTUARIAL ASSET VALUATION
September 30, 2017

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				
		2017	2018	2019	2020	2021
09/30/2013	5,633,537	0	0	0	0	0
09/30/2014	3,776,895	755,379	0	0	0	0
09/30/2015	(10,133,353)	(4,053,340)	(2,026,669)	0	0	0
09/30/2016	1,505,867	903,521	602,348	301,175	0	0
09/30/2017	3,696,630	2,957,304	2,217,978	1,478,652	739,326	0
Total		562,864	793,657	1,779,827	739,326	0

<u>Development of Investment Gain/(Loss)</u>	
Market Value of Assets, 09/30/2016	113,883,891
Actuarial Value of Assets, 09/30/2016	116,121,744
Contributions Less Benefit Payments & Admin Expenses	(5,735,042)
Expected Investment Earnings on Actuarial Value*	8,777,202
Actual Net Investment Earnings	12,473,832
2017 Actuarial Investment Gain/(Loss)	<u>3,696,630</u>

*Expected Investment Earnings = $0.0775 * [116,121,744 + 0.5 * (5,735,042)]$

<u>Development of Actuarial Value of Assets</u>	
(1) Market Value of Assets, 09/30/2017	120,622,681
(2) Gains/(Losses) Not Yet Recognized	<u>562,864</u>
(3) Actuarial Value of Assets, 09/30/2017, (1) - (2)	<u>120,059,817</u>
(A) 09/30/2016 Actuarial Assets:	116,121,744
(I) Net Investment Income:	
1. Interest and Dividends	3,138,012
2. Realized Gains (Losses)	8,062,129
3. Change in Actuarial Value	(809,690)
4. Investment Expenses	<u>(717,336)</u>
Total	<u>9,673,115</u>
(B) 09/30/2017 Actuarial Assets:	120,059,817
Actuarial Asset Rate of Return = $2I/(A+B-I)$:	8.54%
Market Value of Assets Rate of Return:	11.14%
Actuarial Gain/(Loss) due to Investment Return (Actuarial Asset Basis)	895,913
10/01/2017 Limited Actuarial Assets:	120,059,817

CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS
SEPTEMBER 30, 2017
Actuarial Asset Basis

REVENUES

Contributions:		
Member	449,131.36	
City	1,797,884.69	
State	538,659.52	
Total Contributions		2,785,675.57
Earnings from Investments:		
Interest & Dividends	3,138,012.00	
Net Realized Gain (Loss)	8,062,129.07	
Change in Actuarial Value	(809,689.73)	
Total Earnings and Investment Gains		10,390,451.34
Other		81,471.02

EXPENDITURES

Distributions to Members:		
Benefit Payments	7,202,764.95	
Lump Sum DROP Distributions	1,268,494.13	
Refunds of Member Contributions	40,393.63	
Total Distributions		8,511,652.71
Expenses:		
Investment related ¹	717,336.33	
Administrative	90,535.77	
Total Expenses		807,872.10
Change in Net Assets for the Year		3,938,073.12
Net Assets Beginning of the Year		116,121,743.87
Net Assets End of the Year ²		120,059,816.99

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, 2016 to September 30, 2017

Beginning of the Year Balance	2,983,867.90
Plus Additions	1,075,221.88
Investment Return Earned	115,864.71
Less Distributions	(1,268,494.13)
End of the Year Balance	2,906,460.36

STATISTICAL DATA

	<u>10/1/2014</u>	<u>10/1/2015</u>	<u>10/1/2016</u>	<u>10/1/2017</u>
<u>Actives</u>				
Number	89	86	88	97
Average Current Age	37.4	36.4	37.2	36.4
Average Age at Employment	25.9	25.8	26.0	26.2
Average Past Service	11.5	10.6	11.2	10.2
Average Annual Salary	\$48,091	\$49,742	\$47,319	\$47,539
<u>Service Retirees</u>				
Number	74	73	81	87
Average Current Age	66.5	66.9	66.5	66.2
Average Annual Benefit	\$52,391	\$52,589	\$53,396	\$54,619
<u>DROP Retirees</u>				
Number	24	30	20	17
Average Current Age	52.9	52.6	52.7	53.3
Average Annual Benefit	\$52,311	\$53,304	\$52,795	\$54,042
<u>Beneficiaries</u>				
Number	34	33	32	31
Average Current Age	74.2	73.8	75.9	76.5
Average Annual Benefit	\$27,363	\$28,442	\$29,756	\$30,222
<u>Disability Retirees</u>				
Number	56	55	55	54
Average Current Age	67.4	68.3	68.6	69.8
Average Annual Benefit	\$32,212	\$32,047	\$32,959	\$33,386
<u>Terminated Vested</u>				
Number	0	3	3	2
Average Current Age	N/A	47.2	48.2	49.2
Average Annual Benefit ¹	N/A	\$31,115	\$31,115	\$31,115

¹ The Average Annual Benefit and Average Current Age 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	6	0	2	0	0	0	0	0	0	0	0	8
25 - 29	7	2	1	3	1	1	1	0	0	0	0	16
30 - 34	3	1	2	2	2	2	10	0	0	0	0	22
35 - 39	1	1	0	0	0	3	6	2	0	0	0	13
40 - 44	0	0	0	1	0	1	8	6	2	0	0	18
45 - 49	1	0	0	0	0	0	1	3	7	0	0	12
50 - 54	0	0	0	0	0	0	0	2	6	0	0	8
55 - 59	0	0	0	0	0	0	0	0	0	0	0	0
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	18	4	5	6	3	7	26	13	15	0	0	97

VALUATION PARTICIPANT RECONCILIATION

1. Active lives

a. Number in prior valuation 10/1/2016	88
b. Terminations	
i. Vested (partial or full) with deferred benefits	0
ii. Non-vested or full lump sum distribution received	(6)
c. Deaths	
i. Beneficiary receiving benefits	0
ii. No future benefits payable	0
d. Disabled	0
e. Retired	0
f. DROP	<u>(3)</u>
g. Continuing participants	79
h. New entrants	<u>18</u>
i. Total active life participants in valuation	97

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	81	20	32	55	3	191
Retired	7	(6)	0	(1)	0	0
DROP	0	3	0	0	0	3
Vested Deferred	0	0	0	0	0	0
Death, With Survivor	0	0	0	0	0	0
Death, No Survivor	(1)	0	(1)	0	0	(2)
Disabled	0	0	0	0	0	0
Refund of Contributions	0	0	0	0	(1)	(1)
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	17	31	54	2	191

SUMMARY OF PLAN PROVISIONS
(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, <u>Florida Statutes</u> .
<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.

Early Retirement

Eligibility

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.

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.

Death Benefits

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.

Board of Trustees

- 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.

Deferred Retirement Option Plan

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.

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 were hired after July 1, 1999 and enter DROP after June 10, 2015.

STATEMENT OF FIDUCIARY NET POSITION
SEPTEMBER 30, 2017

<u>ASSETS</u>	MARKET VALUE
Cash and Cash Equivalents:	
Checking Account	169,415
Money Market	2,040,222
Total Cash and Equivalents	2,209,637
Receivables:	
Member Contributions in Transit	9,249
City Contributions in Transit	84
State Contributions	9,650
Investment Income	268,351
Total Receivable	287,334
Investments:	
Fixed Income	28,410,116
Equities	71,855,103
Mutual Funds:	
Equity	7,056,254
Pooled/Common/Commingled Funds:	
Master Limited Partnership	2,017,967
Equity	1,880,920
Real Estate	7,483,933
Total Investments	118,704,293
Total Assets	121,201,264
<u>LIABILITIES</u>	
Payables:	
Refunds of Member Contributions	3,836
DROP Distributions	420,665
Investment Expenses	148,904
Administrative Expenses	5,178
Total Liabilities	578,583
NET POSITION RESTRICTED FOR PENSIONS	120,622,681

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED SEPTEMBER 30, 2017
Market Value Basis

ADDITIONS

Contributions:

Member	449,131	
City	1,797,885	
State	538,660	
Total Contributions		2,785,676
Investment Income:		
Net Increase in Fair Value of Investments	10,053,156	
Interest & Dividends	3,138,012	
Less Investment Expense ¹	(717,336)	
Net Investment Income		12,473,832
Other		81,471
Total Additions		15,340,979

DEDUCTIONS

Distributions to Members:

Benefit Payments	7,202,765	
Lump Sum DROP Distributions	1,268,494	
Refunds of Member Contributions	40,394	
Total Distributions		8,511,653
Administrative Expense		90,536
Total Deductions		8,602,189
Net Increase in Net Position		6,738,790
NET POSITION RESTRICTED FOR PENSIONS		
Beginning of the Year		113,883,891
End of the Year		120,622,681

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

NOTES TO THE FINANCIAL STATEMENTS

(For the Year Ended September 30, 2017)

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, 2016:

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	188
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	3
Active Plan Members	88
	279

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, 2017:

<u>Asset Class</u>	<u>Target Allocation</u>
Domestic Equity	40%
International Equity	15%
Bonds	25%
Convertibles	10%
Private Real Estate	5%
MLPs	5%
<u>Total</u>	<u>100%</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, 2017, the annual money-weighted rate of return on Pension Plan investments, net of Pension Plan investment expense, was 11.14 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, 2017 is \$2,906,460.

NET PENSION LIABILITY OF THE SPONSOR

The components of the Net Pension Liability of the Sponsor on September 30, 2017 were as follows:

Total Pension Liability	\$ 128,570,903
Plan Fiduciary Net Position	\$ (120,622,681)
Sponsor's Net Pension Liability	<u>\$ 7,948,222</u>
Plan Fiduciary Net Position as a percentage of Total Pension Liability	93.82%

Actuarial Assumptions:

The Total Pension Liability was determined by an actuarial valuation as of October 1, 2016 updated to September 30, 2017 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 2017 the inflation rate assumption of the investment advisor was 2.60%.

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, 2017 are summarized in the following table:

Asset Class	Long Term Expected Real Rate of Return
Domestic Equity	7.0%
International Equity	3.7%
Bonds	4.0%
Convertibles	6.0%
Private Real Estate	4.8%
MLPs	9.7%

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	Current	1% Increase
	6.75%	Discount Rate	8.75%
		7.75%	
Sponsor's Net Pension Liability	\$ 22,836,457	\$ 7,948,222	\$ (4,337,384)

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

Last 10 Fiscal Years

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

Notes to Schedule:

¹ The Covered Employee 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 Employee Payroll ¹	\$ 7,494,388	\$ 4,157,835
Net Pension Liability as a percentage of Covered Employee Payroll	232.70%	155.07%

Notes to Schedule:

¹ The Covered Employee 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 Employee Payroll	Contributions as a percentage of Covered Employee Payroll
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%
09/30/2008	\$ 3,704,687	\$ 3,741,734	\$ (37,047)	\$ 5,512,891	67.87%

¹ The Covered Employee 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: 10/01/2015 (AIS 11/17/2016)

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 7.29% 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 10/01/2015 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 below. 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 below. 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

	<u>09/30/2017</u>	<u>09/30/2016</u>	<u>09/30/2015</u>	<u>09/30/2014</u>
Annual Money-Weighted Rate of Return				
Net of Investment Expense	11.14%	9.18%	-1.56%	10.16%

NOTES TO THE FINANCIAL STATEMENTS

(For the Year Ended September 30, 2018)

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, 2016:

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	188
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	3
Active Plan Members	88
	<hr/>
	279
	<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, 2017.

The measurement period for the pension expense was October 1, 2016 to September 30, 2017.

The reporting period is October 1, 2017 through September 30, 2018.

The Sponsor's Net Pension Liability was measured as of September 30, 2017.

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, 2016 updated to September 30, 2017 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 2017 the inflation rate assumption of the investment advisor was 2.60%.

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, 2017 are summarized in the following table:

Asset Class	Target Allocation	Long Term Expected Real Rate of Return
Domestic Equity	40%	7.00%
International Equity	15%	3.70%
Bonds	25%	4.00%
Convertibles	10%	6.00%
Private Real Estate	5%	4.80%
MLPs	5%	9.70%
Total	100%	

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, 2017	\$ 128,507,886	\$ 113,883,891	\$ 14,623,995
Changes for a Year:			
Service Cost	1,317,501	-	1,317,501
Interest	9,731,641	-	9,731,641
Differences between Expected and Actual Experience	(3,442,328)	-	(3,442,328)
Changes of assumptions	967,856	-	967,856
Changes of benefit terms	-	-	-
Contributions - Employer	-	1,797,885	(1,797,885)
Contributions - State	-	538,660	(538,660)
Contributions - Employee	-	449,131	(449,131)
Net Investment Income	-	12,473,832	(12,473,832)
Benefit Payments, including Refunds of Employee Contributions	(8,511,653)	(8,511,653)	-
Administrative Expense	-	(90,536)	90,536
Other Changes	-	81,471	(81,471)
Net Changes	63,017	6,738,790	(6,675,773)
Reporting Period Ending at September 30, 2018	\$ 128,570,903	\$ 120,622,681	\$ 7,948,222

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	\$ 22,836,457	\$ 7,948,222	\$ (4,337,384)

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, 2017**

For the year ended September 30, 2017, the Sponsor has recognized a Pension Expense of \$6,290,599.

On September 30, 2017, 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	15,292	361,719
Changes of assumptions	3,890,234	-
Net difference between Projected and Actual Earnings on Pension Plan investments	4,014,445	-
Employer and State Contributions subsequent to the measurement date	2,336,545	-
Total	<u>\$ 10,256,516</u>	<u>\$ 361,719</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, 2017.

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:	
2018	\$ 3,108,072
2019	\$ 3,108,072
2020	\$ 1,679,849
2021	\$ (337,741)
2022	\$ -
Thereafter	\$ -

**PRELIMINARY 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 will recognize 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	TBD	-
Total	<u>TBD</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 will be 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	\$ -

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

Last 10 Fiscal Years

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

Notes to Schedule:

¹ The Covered Employee 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 Employee Payroll ¹	\$ 7,494,388	\$ 4,157,835
Net Pension Liability as a percentage of Covered Employee Payroll	232.70%	155.07%

Notes to Schedule:

¹ The Covered Employee 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 Employee Payroll	Contributions as a percentage of Covered Employee Payroll
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%
09/30/2008	\$ 3,704,687	\$ 3,741,734	\$ (37,047)	\$ 5,512,891	67.87%

¹ The Covered Employee 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: 10/01/2015 (AIS 11/17/2016)

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

Amortization Method: Level % of Payroll, Closed.

Remaining Amortization Period: 30 Years (as of 10/01/2015 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 below. 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 below. This is based on an experience study for the period 2006 – 2011.

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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%

FINAL COMPONENTS OF PENSION EXPENSE
FISCAL YEAR SEPTEMBER 30, 2017

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Beginning balance	\$ 17,439,205	\$ 1,573,620	\$ 18,237,681	\$ -
Employer and State Contributions made after 09/30/2016	-	-	2,336,545	-
Total Pension Liability Factors:				
Service Cost	1,340,661	-	-	1,340,661
Interest	9,595,671	-	-	9,595,671
Changes in benefit terms	802,334	-	-	802,334
Contributions - Buy Back	44,064	-	-	44,064
Differences between Expected and Actual Experience with regard to economic or demographic assumptions	(482,293)	482,293	-	-
Current year amortization of experience difference	-	(120,574)	(7,646)	(112,928)
Change in assumptions about future economic or demographic factors or other inputs	-	-	-	-
Current year amortization of change in assumptions	-	-	(1,945,117)	1,945,117
Benefit Payments, including Refunds of Employee Contributions	(8,929,344)	-	-	-
Net change	<u>2,371,093</u>	<u>361,719</u>	<u>383,782</u>	<u>13,614,919</u>
Plan Fiduciary Net Position:				
Contributions - Employer	3,198,669	-	(3,198,669)	-
Contributions - State	628,071	-	(628,071)	-
Contributions - Employee	421,774	-	-	(421,774)
Contributions - Buy Back	44,064	-	-	(44,064)
Projected Net Investment Income	8,240,284	-	-	(8,240,284)
Difference between projected and actual earnings on Pension Plan investments	1,688,706	1,688,706	-	-
Current year amortization	-	(862,282)	(2,138,163)	1,275,881
Benefit Payments, including Refunds of Employee Contributions	(8,929,344)	-	-	-
Administrative Expenses	(105,921)	-	-	105,921
Net change	<u>5,186,303</u>	<u>826,424</u>	<u>(5,964,903)</u>	<u>(7,324,320)</u>
Ending Balance	<u>\$ 14,623,995</u>	<u>\$ 2,761,763</u>	<u>\$ 12,656,560</u>	<u>\$ 6,290,599</u>

PRELIMINARY 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	-	-	TBD*	-
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	(1,226,871)	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	TBD	\$ 3,723,274

* Employer and State Contributions subsequent to the measurement date made after September 30, 2017 but made on or before September 30, 2018 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)	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
2014	\$ (2,622,702)	5	\$ (524,540)	\$ (524,540)	\$ (524,540)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2015	\$ 10,690,815	5	\$ 2,138,163	\$ 2,138,163	\$ 2,138,163	\$ 2,138,163	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ (1,688,706)	5	\$ (337,742)	\$ (337,741)	\$ (337,741)	\$ (337,741)	\$ (337,741)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ (3,873,220)	5	\$ -	\$ (774,644)	\$ (774,644)	\$ (774,644)	\$ (774,644)	\$ (774,644)	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			<u>\$ 1,275,881</u>	<u>\$ 501,238</u>	<u>\$ 501,238</u>	<u>\$ 1,025,778</u>	<u>\$ (1,112,385)</u>	<u>\$ (774,644)</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>

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

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)	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
2015	\$ 30,585	4	\$ 7,646	\$ 7,646	\$ 7,646	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ (482,293)	4	\$ (120,574)	\$ (120,573)	\$ (120,573)	\$ (120,573)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ (3,442,328)	4	\$ -	\$ (860,582)	\$ (860,582)	\$ (860,582)	\$ (860,582)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ (112,928)	\$ (973,509)	\$ (973,509)	\$ (981,155)	\$ (860,582)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -