

CITY OF FORT LAUDERDALE  
POLICE AND FIREFIGHTERS' RETIREMENT SYSTEM  
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

April 11, 2019

Board of Trustees  
City of Fort Lauderdale  
Police and Firefighters' Retirement System  
888 South Andrews Ave., Suite 202  
Fort Lauderdale, FL 33316

Re: City of Fort Lauderdale Police and Firefighters' Retirement System

Dear Board:

We are pleased to present to the Board this report of the annual actuarial valuation of the City of Fort Lauderdale Police and Firefighters' Retirement System. 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, 175, and 185, Florida Statutes, as well as applicable federal laws and regulations. In our opinion, the assumptions used in the valuations, as adopted by the Board of Trustees, represent reasonable expectations of anticipated plan experience. Future actuarial measurements may differ significantly from the current measurements presented in this report for a variety of reasons including: changes in applicable laws, changes in plan provisions, changes in assumptions, or plan experience differing from expectations. Due to the limited scope of the 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 Fort Lauderdale, 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.

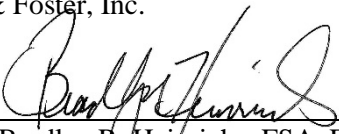
The undersigned is familiar with the immediate and long-term aspects of pension valuations, and meets the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. All of the sections of this report are considered an integral part of the 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 Fort Lauderdale, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the Police and Firefighters' Retirement System. Thus, there is no relationship existing that might affect our capacity to prepare and certify this actuarial report.

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

Respectfully submitted,

Foster & Foster, Inc.

By:   
Bradley R. Heinrichs, FSA, EA, MAAA  
Enrolled Actuary #17-6901

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

## TABLE OF CONTENTS

Section	Title	Page
I	Introduction	
	a. Summary of Report	5
	b. Changes Since Prior Valuation	7
	c. Comparative Summary of Principal Valuation Results	8
II	Valuation Information	
	a. Reconciliation of Unfunded Actuarial Accrued Liabilities	14
	b. Detailed Actuarial (Gain)/Loss Analysis	16
	c. Determination of Cumulative Gain/Loss Experience Position	17
	d. Actuarial Assumptions and Methods	18
	e. Glossary	21
III	Trust Fund	22
IV	Member Statistics	
	a. Statistical Data	27
	b. Age and Service Distribution	30
	c. Valuation Participant Reconciliation	33
V	Summary of Current Plan	34
VI	Governmental Accounting Standards Board Statements No. 67 and No. 68 Disclosure Information	38

SUMMARY OF REPORT

The regular annual actuarial valuation of the City of Fort Lauderdale Police and Firefighters' Retirement System, 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 July 2, 2018 Actuarial Impact Statement, are as follows:

Valuation Date	10/1/2018	10/1/2017
Applicable Plan Year Ended	9/30/2020	9/30/2019
Applicable City Fiscal Year Ended	<u>9/30/2020</u>	<u>9/30/2019</u>
<b>Assumed City Contribution Date</b>	<b>10/1/2019</b>	<b>10/1/2018</b>
Minimum Required Contribution	\$30,875,785	\$30,326,510
Member Contributions (Est.)	8,161,816	7,790,533
City And State Required Contribution	22,713,969	22,535,977
State Contribution (Est.) <sup>1</sup>	4,790,890	4,790,890
City Required Contribution	\$17,923,079	\$17,745,087
As % of Covered Payroll <sup>2</sup>	23.6%	24.3%
As % of Total Payroll (incl. DROP) <sup>2</sup>	19.8%	21.3%

<sup>1</sup> Reflects updated per capita amounts based on recent premium tax distributions. It is important to keep in mind that a slight adjustment to the City's bottom line funding requirement may be necessary, based on actual allowable State Monies received.

<sup>2</sup> Please note the percentage-of-payroll rates included in the table shown above are for illustration purposes only. The City should budget based on the actual dollar contribution requirements.

As can be seen, the Minimum Required Contribution has increased by approximately \$550,000. This increase is due to a reduction in the investment return assumption from 7.40% to 7.35% per year, as previously approved by the Board of Trustees. Had the investment return assumption remained unchanged, the Minimum Required Contribution would have decreased slightly.

Plan experience was favorable overall on the basis of the plan's actuarial assumptions. The primary source of favorable experience was an investment return of 8.60% (Actuarial Asset Basis) which exceeded the 7.40% assumption. There were no significant sources of unfavorable experience.

## CHANGES SINCE PRIOR VALUATION

### Plan Changes

As outlined in our July 2, 2018 actuarial impact statement, there have been a number of changes to the plan provisions since completion of the prior valuation report. The specific changes are as follows:

- 1) Provided provisional language for firefighters to purchase prior firefighter or military service at an amount equal to the full actuarial cost, as determined by the actuary for the retirement system.
- 2) Increased the member contribution rate for all active members to 10% of pensionable earnings. This increase was effective October 1, 2018 for firefighters and October 1, 2017 for police officers.
- 3) Provided for a permissible DROP extension for members who were participating in the DROP with a DROP period of less than ninety-six (96) months. The applicable extension would be for an additional twelve (12) or twenty-four (24) months of DROP participation, such that the total DROP participation would not exceed ninety-six (96) months.
- 4) Tier 1 members participating in DROP shall contribute 1.75% of salary. This requirement was effective October 1, 2018 for firefighters and October 1, 2017 for police officers. It is our understanding that no DROP participants will receive a refund of contributions made while in DROP, regardless of length of participation.
- 5) Tier 2 members participating in DROP shall contribute 10% of salary for the first five (5) years of DROP participation, and 1.50% of salary for each year thereafter. It is our understanding that no DROP participants will receive a refund of contributions made while in DROP, regardless of length of participation.

### Actuarial Assumption/Method Changes

As previously approved by the Board of Trustees, the investment return assumption has been lowered from 7.40% to 7.35% per year, net of investment related expenses.

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	New Assump <u>10/1/2018</u>	Old Assump <u>10/1/2018</u>	<u>10/1/2017</u>
<b>A. Participant Data</b>			
Actives	793	793	786
Service Retirees	755	755	768
DROP Retirees	133	133	113
Beneficiaries	166	166	156
Disability Retirees	26	26	26
Terminated Vested	<u>24</u>	<u>24</u>	<u>25</u>
<b>Total</b>	<b>1,897</b>	<b>1,897</b>	<b>1,874</b>
Total Annual Payroll	\$76,011,651	\$76,011,651	\$73,231,488
Payroll Under Assumed Ret. Age	75,841,699	75,841,699	73,080,224
Annual Rate of Payments to:			
Service Retirees	36,627,548	36,627,548	36,872,495
DROP Retirees	10,078,934	10,078,934	8,556,708
Beneficiaries	4,296,023	4,296,023	3,729,295
Disability Retirees	1,095,660	1,095,660	1,111,063
Terminated Vested	622,882	622,882	558,342
<b>B. Assets</b>			
Actuarial Value (AVA)	883,827,216	883,827,216	824,951,911
Market Value (MVA)	905,150,399	905,150,399	857,734,650
<b>C. Liabilities</b>			
<b>Present Value of Benefits</b>			
<b>Actives</b>			
Retirement Benefits	463,103,652	458,904,200	439,964,410
Disability Benefits	8,579,356	8,519,626	8,624,008
Death Benefits	6,148,038	6,099,660	6,055,061
Vested Benefits	12,618,845	12,474,201	12,328,964
Refund of Contributions	524,606	523,903	755,035
Service Retirees	400,252,912	398,508,274	403,313,303
DROP Retirees	170,330,213	169,655,759	141,131,382
Beneficiaries	37,170,964	37,034,644	32,522,931
Disability Retirees	12,369,437	12,312,873	12,583,157
Terminated Vested	<u>5,828,728</u>	<u>5,786,526</u>	<u>5,263,011</u>
<b>Total</b>	<b>1,116,926,751</b>	<b>1,109,819,666</b>	<b>1,062,541,262</b>



C. Liabilities - (Continued)	New Assump <u>10/1/2018</u>	Old Assump <u>10/1/2018</u>	<u>10/1/2017</u>
Present Value of Future Salaries	634,544,922	632,844,855	617,867,139
Normal Cost (Retirement)	18,666,993	18,461,906	17,902,523
Normal Cost (Disability)	905,416	900,331	929,240
Normal Cost (Death)	529,455	526,069	513,820
Normal Cost (Vesting)	869,918	859,746	830,592
Normal Cost (Refunds)	<u>100,736</u>	<u>100,699</u>	<u>146,764</u>
Total Normal Cost	21,072,518	20,848,751	20,322,939
Present Value of Future Normal Costs	169,185,042	166,946,908	165,669,349
Accrued Liability (Retirement)	311,209,511	309,072,331	291,328,468
Accrued Liability (Disability)	2,159,286	2,150,092	2,276,459
Accrued Liability (Death)	1,787,596	1,778,510	1,763,461
Accrued Liability (Vesting)	6,551,623	6,492,291	6,575,659
Accrued Liability (Refunds)	81,439	81,458	114,082
Accrued Liability (Inactives)	<u>625,952,254</u>	<u>623,298,076</u>	<u>594,813,784</u>
Total Actuarial Accrued Liability (EAN AL)	947,741,709	942,872,758	896,871,913
Unfunded Actuarial Accrued Liability (UAAL)	63,914,493	59,045,542	71,920,002
Funded Ratio (AVA / EAN AL)	93.3%	93.7%	92.0%

D. Actuarial Present Value of Accrued Benefits	New Assump <u>10/1/2018</u>	Old Assump <u>10/1/2018</u>	<u>10/1/2017</u>
Vested Accrued Benefits			
Inactives	625,952,254	623,298,076	594,813,784
Actives	162,870,999	161,196,663	149,047,885
Member Contributions	<u>58,051,354</u>	<u>58,051,354</u>	<u>53,266,545</u>
Total	846,874,607	842,546,093	797,128,214
Non-vested Accrued Benefits	<u>42,445,683</u>	<u>42,119,942</u>	<u>41,756,476</u>
Total Present Value Accrued Benefits (PVAB)	889,320,290	884,666,035	838,884,690
Funded Ratio (MVA / PVAB)	101.8%	102.3%	102.2%
Increase (Decrease) in Present Value of Accrued Benefits Attributable to:			
Plan Amendments	0	0	
Assumption Changes	4,654,255	0	
New Accrued Benefits	0	32,875,592	
Benefits Paid	0	(47,417,275)	
Interest	0	60,323,028	
Other	<u>0</u>	<u>0</u>	
Total	4,654,255	45,781,345	

Valuation Date	New Assump 10/1/2018	Old Assump 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>

<b>Assumed City Contribution Date</b>	<b>October 1, 2019</b>	<b>October 1, 2019</b>	<b>October 1, 2018</b>
<b>E. Pension Cost</b>			
Normal Cost <sup>1</sup>	\$22,020,781	\$21,786,945	\$21,196,825
Administrative Expenses <sup>1</sup>	637,450	637,450	603,897
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 20 years <sup>1</sup>	8,217,554	7,836,704	8,525,788
Applicable Interest <sup>1</sup>	0	0	0
Minimum Required Contribution	30,875,785	30,261,099	30,326,510
Expected Member Contributions <sup>1</sup>	8,161,816	8,161,816	7,790,533
Expected City and State Contribution	22,713,969	22,099,283	22,535,977
Less Expected State Contributions <sup>2</sup>	4,790,890	4,790,890	4,790,890
<b>Equals Expected City Required Contribution</b>	<b>\$17,923,079</b>	<b>\$17,308,393</b>	<b>\$17,745,087</b>

**F. Past Contributions**

Plan Years Ending:	<u>9/30/2018</u>
City and State Requirement	23,513,971
Actual Contributions Made:	
Members (excluding buyback)	6,838,045
City	19,328,568
State	<u>4,781,171</u>
Total	30,947,784

G. Net Actuarial (Gain)/Loss (7,061,664)

<sup>1</sup> Contribution requirements developed above have been adjusted to account for an applicable assumed salary increase component. Additionally, the above stated requirements reflect no interest as a result of the assumed beginning of year City contribution date. If the required contributions are deposited at a later date, additional interest at the assumed 7.35% annual rate must be added.

<sup>2</sup> Reflects updated per capita amounts based on recent premium tax distributions.

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	63,914,493
2019	60,170,537
2020	55,982,571
2025	35,353,603
2029	21,194,189
2034	6,581,209
2038	0

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

	<u>Actual</u>	<u>Assumed</u>
Year Ended 9/30/2018	5.10%	4.59%
Year Ended 9/30/2017	3.34%	4.68%
Year Ended 9/30/2016	4.95%	4.67%
Year Ended 9/30/2015	3.00%	4.65%
Year Ended 9/30/2014	2.40%	4.60%

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

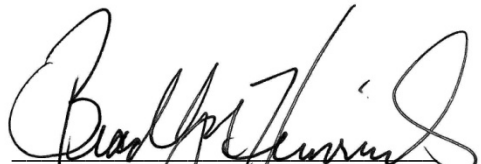
	<u>Market Value</u>	<u>Actuarial Value</u>	<u>Assumed</u>
Year Ended 9/30/2018	6.99%	8.60%	7.40%
Year Ended 9/30/2017	11.98%	8.61%	7.50%
Year Ended 9/30/2016	8.35%	7.67%	7.50%
Year Ended 9/30/2015	0.77%	6.33%	7.50%
Year Ended 9/30/2014	8.60%	7.82%	7.50%

(iii) Average Annual Payroll Growth

(a) Payroll as of:	10/1/2018	\$75,841,699
	10/1/2008	N/A
(b) Total Increase		N/A
(c) Number of Years		10.00
(d) Average Annual Rate		N/A

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.



Bradley R. Heinrichs, FSA, EA, MAAA  
Enrolled Actuary #17-6901

Please let us know when the report is approved by the Board and unless otherwise directed we will provide copies of the report to the following offices to comply with Chapter 112 Florida Statutes:

Mr. Keith Brinkman  
Bureau of Local  
Retirement Systems  
Post Office Box 9000  
Tallahassee, FL 32315-9000

Mr. Steve Bardin  
Municipal Police and Fire  
Pension Trust Funds  
Division of Retirement  
Post Office Box 3010  
Tallahassee, FL 32315-3010

RECONCILIATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITIES

(1)	Unfunded Actuarial Accrued Liability as of October 1, 2017	\$71,920,002
(2)	Sponsor Normal Cost developed as of October 1, 2017	12,853,588
(3)	Expected administrative expenses for the year ended September 30, 2018	579,000
(4)	Expected interest on (1), (2) and (3)	6,294,669
(5)	Sponsor contributions to the System during the year ended September 30, 2018	24,109,739
(6)	Expected interest on (5)	1,430,314
(7)	Expected Unfunded Actuarial Accrued Liability as of September 30, 2018 (1)+(2)+(3)+(4)-(5)-(6)	66,107,206
(8)	Change to UAAL due to Assumption Change	4,868,951
(9)	Change to UAAL due to Actuarial (Gain)/Loss	(7,061,664)
(10)	Unfunded Actuarial Accrued Liability as of October 1, 2018	63,914,493

Type of Base	Date Established	Years Remaining	10/1/2018 Amount	Amortization Amount
Re-initialized Base	1/1/2003	4.25	7,259,414	1,852,610
Actuarial Loss	1/1/2004	5.25	3,178,217	672,896
Software Change	1/1/2005	6.25	(383,331)	(69,851)
Actuarial Loss	1/1/2005	6.25	3,025,973	551,400
Share Plan Gain	1/1/2006	7.25	(45,308)	(7,291)
Actuarial Loss	1/1/2006	7.25	1,281,331	206,190
Actuarial Loss	1/1/2007	8.25	491,814	71,230
Actuarial Gain	1/1/2008	9.25	(29,033)	(3,840)
Assum Change	1/1/2008	9.25	499,492	66,066
Asset Smooth Change	1/1/2008	9.25	(3,771,919)	(498,898)
Actuarial Loss	1/1/2009	10.25	12,072,557	1,475,194
Plan Amendment	1/1/2010	11.25	769,511	87,685
Actuarial Loss	1/1/2010	11.25	5,198,155	592,324
Actuarial Gain	1/1/2011	12.25	(169,405)	(18,141)
Actuarial Loss	1/1/2012	13.25	2,884,298	292,137
Assum Change	1/1/2012	13.25	3,673,478	372,070
Actuarial Gain	1/1/2013	14.25	(10,727,376)	(1,033,362)
Assum Change	1/1/2013	14.25	(393,770)	(37,932)
Actuarial Gain	10/1/2013	15	(1,557,039)	(144,904)
Plan Amendment	10/1/2013	15	(25,587)	(2,381)
Actuarial Gain	10/1/2014	16	(8,808,731)	(785,805)
Plan Amendment	10/1/2014	16	1,160,061	103,486
Actuarial Loss	10/1/2015	17	4,939,568	423,955
Assum/Method Changes	10/1/2015	17	31,996,021	2,746,168
Actuarial Gain	10/1/2016	18	(3,356,208)	(278,051)
Assum Change	10/1/2016	18	16,025,840	1,327,687
Actuarial Gain	10/1/2017	19	(9,488,580)	(760,977)
Assum. Change	10/1/2017	19	10,396,889	833,823
Plan Amendment	10/1/2017	19	10,874	872
Actuarial Gain	10/1/2018	20	(7,061,664)	(549,652)
Assump Change	10/1/2018	20	<u>4,868,951</u>	<u>378,980</u>
			63,914,493	7,863,688

DETERMINATION OF CUMULATIVE GAIN/(LOSS) EXPERIENCE POSITION

<u>Valuation Date</u>	<u>Year Ended</u>	<u>Gain/(Loss)</u>	<u>Balance</u>
1/1/1995	12/31/1994	(7,367,475)	(7,367,475)
1/1/1996	12/31/1995	5,757,825	(1,609,650)
1/1/1997	12/31/1996	8,249,398	6,639,748
1/1/1998	12/31/1997	14,303,191	20,942,939
1/1/1999	12/31/1998	26,177,594	47,120,533
1/1/2000	12/31/1999	26,361,263	73,481,796
1/1/2001	12/31/2000	18,708,226	92,190,022
1/1/2002	12/31/2001	(15,137,682)	77,052,340
1/1/2003	12/31/2002	(51,423,738)	25,628,602
1/1/2004	12/31/2003	(28,715,070)	(3,086,468)
1/1/2005	12/31/2004	(23,810,048)	(26,896,516)
1/1/2006	12/31/2005	(8,656,358)	(35,552,874)
1/1/2007	12/31/2006	(3,123,728)	(38,676,602)
1/1/2008	12/31/2007	169,648	(38,506,954)
1/1/2009	12/31/2008	(66,572,825)	(105,079,779)
1/1/2010	12/31/2009	(27,303,032)	(132,382,811)
1/1/2011	12/31/2010	854,077	(131,528,734)
1/1/2012	12/31/2011	(14,047,611)	(145,576,345)
1/1/2013	12/31/2012	12,807,830	(132,768,515)
10/1/2013	9/30/2013	1,811,169	(130,957,346)
10/1/2014	9/30/2014	9,867,338	(121,090,008)
10/1/2015	9/30/2015	(4,973,675)	(126,063,683)
10/1/2016	9/30/2016	3,492,745	(122,570,938)
10/1/2017	9/30/2017	9,924,966	(112,645,972)
10/1/2018	9/30/2018	7,061,664	<b>(105,584,308)</b>



## DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

(1) Unfunded Actuarial Accrued Liability (UAAL) as of October 1, 2017	\$71,920,002
(2) Expected UAAL as of October 1, 2018	66,107,206
(3) Summary of Actuarial (Gain)/Loss, by component:	
Investment Return (Actuarial Asset Basis)	(10,210,855)
Salary Increases	(1,150,846)
Active Decrements	1,592,639
Inactive Mortality	1,058,827
Other	<u>1,648,571</u>
Increase in UAAL due to (Gain)/Loss	(7,061,664)
Assumption Changes	<u>4,868,951</u>
(4) Actual UAAL as of October 1, 2018	\$63,914,493

## 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.

75% of active deaths are assumed to be service-incurred.

### Interest Rate

7.35% (prior year 7.40%) per year compounded annually, net of investment related expenses. This is supported by the target asset allocation of the trust and the expected long-term return by asset class.

### Payroll Growth

2.00% for purposes of amortizing the Unfunded Actuarial Accrued Liability. We feel this is reasonable based on long-term expectations and historical increases in inflation.

Salary Increases

Service	Annual % Increase*
1 – 6	3.0%
7 – 10	2.5
11 – 25	1.0
26+	0.5

Expected increase in annual salary in addition to 2.75% inflationary component. The assumed rates of salary received approval from the Division of Retirement based on historical data and long-term expectations.

Administrative Expenses

\$610,000 annually, based on actual expenses incurred in the prior fiscal year.

Retirement Rates

Service	Probability of Retirement (Police)	Probability of Retirement (Fire)
10 – 19	5%	5%
20	30	25
21	30	35
22	30	45
23	50	50
24	80	50
25 – 34	10	20
35+	100	100

No Members are expected to take reduced Early Retirement. The assumed rates of retirement were approved in conjunction with an actuarial experience study dated July 10, 2015.

Cost of Living Adjustments

None.

Funding Method

Entry Age Normal Actuarial Cost Method. Beginning with the pension fund's plan year ended September 30, 2015, a full year salary load based on the current 4.5% assumption is utilized under the projection funding method, as mandated by the Division of Retirement.

Marital Status

All employed Members and all retired Members are assumed to be married. Females are assumed to be 3 years younger than males. This assumption was approved in conjunction with an actuarial experience study dated July 10, 2015.

Termination Rates

Age	Years of Service	% Separating from Employment Within the Next Year	
		<u>Police</u>	<u>Fire</u>
All Ages	0	15.0%	15.0%
	1	5.0	5.0
	2	3.0	1.0
	3	3.0	1.0
	4	3.0	1.0
<50	5+	1.5	1.0
50+	5+	0.0	0.0

The assumed rates of termination were approved in conjunction with an actuarial experience study dated July 10, 2015.

Disability Rates

Age	% Become Disabled within Next Year	
	<u>Police</u>	<u>Fire</u>
20	0.07%	0.14%
25	0.08	0.15
30	0.09	0.18
35	0.12	0.23
40	0.15	0.30
45	0.26	0.51
50	0.50	1.00
55	0.78	1.55

It is assumed that 75% of disablements are service related. The assumed rates of disablement were approved in conjunction with an actuarial experience study dated July 10, 2015.

Actuarial Value of Assets

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

## GLOSSARY

Total Annual Payroll is the projected annual rate of pay as of the valuation date of all covered Members.

Present Value of Benefits is the single sum value on the valuation date of all future benefits to be paid to current Members, Retirees, Beneficiaries, Disability Retirees and Vested Terminations.

Normal (Current Year's) Cost is determined for each participant as the present value of future benefits, determined as of the Member's entry age, amortized as a level percentage of compensation over the anticipated number of years of participation, determined as of the entry age.

Individual Entry Age Normal Actuarial Cost Method (Level Percent of Compensation) is the method used to determine required contributions under the Plan. The use of this method involves the systematic funding of the Normal Cost (described above) and the Unfunded Accrued (Past Service) Liability. The actuarial accrued liability for active participants is the difference between the present value of future benefits and the present value of future Normal Costs. The actuarial accrued liability for inactive participants is the present value of future benefits.

Unfunded Actuarial Accrued Liability (UAAL) is the difference between the actuarial accrued liability (described above) and the actuarial value of assets. Under the Entry Age Normal Actuarial Cost Method, an actuarial gain or loss, based on actual versus expected UAAL, is determined in conjunction with each valuation of the plan.

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.

STATEMENT OF FIDUCIARY NET POSITION  
SEPTEMBER 30, 2018

<u>ASSETS</u>	MARKET VALUE
Cash and Cash Equivalents:	
Money Market	24,245,887.00
Cash and Short Term Investments	3,257.00
Total Cash and Equivalents	24,249,144.00
Receivables:	
State Contributions	3,864.53
From Broker for Investments Sold	576,175.00
Investment Income	2,259,012.00
Total Receivable	2,839,051.53
Investments:	
U. S. Bonds and Bills	54,722,648.00
Federal Agency Guaranteed Securities	189,443.00
Corporate Bonds and Other Fixed Income	135,594,011.00
Real Estate	134,882,047.00
Hedge Fund of Funds	37,716,504.00
Stocks	120,911,005.00
Venture Capital and Partnerships	15,730,748.00
Mutual Funds	197,300,179.00
Pooled/Common/Commingled Funds	224,807,074.00
Total Investments	921,853,659.00
Total Assets	948,941,854.53
<u>LIABILITIES</u>	
Payables:	
To Broker for Investments Purchased	4,902,726.00
Accounts Payable and Accrued Liabilities	476,481.00
To City of Fort Lauderdale	2,035,075.00
Total Liabilities	7,414,282.00
Net Assets:	
Active and Retired Members' Equity	905,150,399.37
Share Plan Benefits	36,377,173.16
NET POSITION RESTRICTED FOR PENSIONS	941,527,572.53

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

ADDITIONS

Contributions:

Member	6,838,045.08
Member for Buy-Back	53,542.02
Member Share for Buy-back	2,317,793.32
City	19,328,568.00
State for Share Plan	1,599,747.00
State for Contribution	4,781,170.85

Total Contributions 34,918,866.27

Investment Income:

Miscellaneous Income	8,890,952.00
Net Realized and Unrealized Gain (Loss)	44,390,968.86
Net Increase in Fair Value of Investments	53,281,920.86
Interest & Dividends	11,640,654.00
Less Investment Expense <sup>1</sup>	(3,018,617.00)

Net Investment Income 61,903,957.86

Total Additions 96,822,824.13

DEDUCTIONS

Distributions to Members:

Benefit Payments	41,962,119.26
Lump Sum DROP Distributions	2,675,964.60
Lump Sum Share Distributions	338,111.14
Lump Sum Share for Buybacks	2,317,793.32
Refunds of Member Contributions	123,286.22

Total Distributions 47,417,274.54

Administrative Expense 609,551.00

Administrative Expense for Share 38,902.00

Share Account Net Change 1,341,346.84

Total Deductions 49,407,074.38

Net Increase in Net Position 47,415,749.75

NET POSITION RESTRICTED FOR PENSIONS

Beginning of the Year 857,734,649.62

End of the Year 905,150,399.37

<sup>1</sup>Investment 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
09/30/2016	6,483,477	2,593,392	1,296,697	0	0	0
09/30/2017	36,115,815	21,669,489	14,446,326	7,223,163	0	0
09/30/2018	(3,674,623)	(2,939,698)	(2,204,773)	(1,469,848)	(734,923)	0
Total		21,323,183	13,538,250	5,753,315	(734,923)	0

<u>Development of Investment Gain/(Loss)</u>	
Market Value of Assets, including Share Account, 09/30/2017	892,770,476
Contributions Less Benefit Payments & Admin Expenses	(13,146,861)
Expected Investment Earnings*	65,578,581
Actual Net Investment Earnings	61,903,958
2018 Actuarial Investment Gain/(Loss)	<u>(3,674,623)</u>

\*Expected Investment Earnings = 0.074 \* [892,770,476 + 0.5 \* (13,146,861)]

<u>Development of Actuarial Value of Assets</u>	
(1) Market Value of Assets, net of Share, 09/30/2018	905,150,399
(2) Gains/(Losses) Not Yet Recognized	21,323,183
(3) Actuarial Value of Assets, net of Share, 09/30/2018, (1) - (2)	<u>883,827,216</u>
(A) 09/30/2017 Actuarial Assets, including Share:	859,987,737
(I) Net Investment Income:	
1. Interest, Dividends and Other Income	20,531,606
2. Change in Actuarial Value	55,850,525
3. Investment Expenses	(3,018,617)
Total	<u>73,363,514</u>
(B) 09/30/2018 Actuarial Assets, including Share:	920,204,390
Actuarial Asset Rate of Return = 2I/(A+B-I):	8.60%
Market Value of Assets Rate of Return:	6.99%
Actuarial Gain/(Loss) due to Investment Return (Actuarial Asset Basis)	10,210,855
10/01/2018 Limited Net Actuarial Assets (not including Share):	883,827,216



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

REVENUES

Contributions:		
Member	6,838,045.08	
Member for Buy-Back	53,542.02	
Member Share for Buy-back	2,317,793.32	
City	19,328,568.00	
State for Share Plan	1,599,747.00	
State for Contribution	4,781,170.85	
 Total Contributions		 34,918,866.27
Earnings from Investments:		
Interest & Dividends	11,640,654.00	
Miscellaneous Income	8,890,952.00	
Change in Actuarial Value	55,850,524.86	
 Total Earnings and Investment Gains		 76,382,130.86

EXPENDITURES

Distributions to Members:		
Benefit Payments	41,962,119.26	
Lump Sum DROP Distributions	2,675,964.60	
Lump Sum Share Distributions	338,111.14	
Lump Sum Share for Buybacks	2,317,793.32	
Refunds of Member Contributions	123,286.22	
 Total Distributions		 47,417,274.54
Expenses:		
Investment related <sup>1</sup>	3,018,617.00	
Administrative	609,551.00	
Administrative for Share	38,902.00	
 Total Expenses		 3,667,070.00
 Share Account Net Change		 1,341,346.84
 Change in Net Assets for the Year		 58,875,305.75
 Net Assets Beginning of the Year		 824,951,910.62
 Net Assets End of the Year <sup>2</sup>		 883,827,216.37

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

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

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

Beginning of the Year Balance	32,721,165.87
Plus Additions	9,386,692.89
Investment Return Earned	2,056,179.19
Less Distributions	(2,675,964.60)
End of the Year Balance	41,488,073.35

STATISTICAL DATA

	<u>10/1/2016</u>	<u>10/1/2017</u>	<u>10/1/2018</u>
<u>Actives - Hired before 10/1/2014</u>			
Number	724	689	655
Average Current Age	40.1	40.7	41.4
Average Age at Employment	28.2	28.1	28.1
Average Past Service	11.9	12.6	13.3
Average Annual Salary	\$95,133	\$97,726	\$101,535
<u>Actives - Hired on or after 10/1/2014</u>			
Number	55	97	138
Average Current Age	28.8	29.2	29.4
Average Age at Employment	28.0	27.9	27.7
Average Past Service	0.8	1.3	1.7
Average Annual Salary	\$59,437	\$60,807	\$68,886
<u>Service Retirees</u>			
Number	761	768	755
Average Current Age	66.1	66.6	67.0
Average Annual Benefit	\$47,248	\$48,011	\$48,513
<u>DROP Retirees</u>			
Number	102	113	133
Average Current Age	51.8	52.3	52.7
Average Annual Benefit	\$74,877	\$75,723	\$75,781
<u>Beneficiaries</u>			
Number	159	156	166
Average Current Age	73.9	73.6	74.3
Average Annual Benefit	\$23,498	\$23,906	\$25,880
<u>Disability Retirees</u>			
Number	28	26	26
Average Current Age	53.4	54.2	55.2
Average Annual Benefit	\$42,598	\$42,733	\$42,141

STATISTICAL DATA  
(Police Only)

	<u>10/1/2016</u>	<u>10/1/2017</u>	<u>10/1/2018</u>
<u>Actives - Hired before 10/1/2014</u>			
Number	402	385	364
Average Current Age	39.4	40.2	40.8
Average Age at Employment	28.2	28.3	28.3
Average Past Service	11.2	11.9	12.5
Average Annual Salary	\$92,685	\$95,799	\$101,062
<u>Actives - Hired on or after 10/1/2014</u>			
Number	40	50	75
Average Current Age	28.2	28.1	28.3
Average Age at Employment	27.4	26.7	26.6
Average Past Service	0.8	1.4	1.7
Average Annual Salary	\$58,729	\$62,053	\$68,584

STATISTICAL DATA  
(Fire Only)

	<u>10/1/2016</u>	<u>10/1/2017</u>	<u>10/1/2018</u>
<u>Actives - Hired before 10/1/2014</u>			
Number	322	304	291
Average Current Age	41.0	41.4	42.0
Average Age at Employment	28.2	28.1	27.7
Average Past Service	12.8	13.3	14.3
Average Annual Salary	\$98,189	\$100,167	\$102,126
<u>Actives - Hired on or after 10/1/2014</u>			
Number	15	47	63
Average Current Age	30.4	30.4	30.8
Average Age at Employment	29.6	29.3	29.0
Average Past Service	0.8	1.1	1.8
Average Annual Salary	\$61,325	\$59,481	\$69,245

## 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	16	8	1	0	0	0	0	0	0	0	0	25
25 - 29	13	17	15	8	16	10	0	0	0	0	0	79
30 - 34	9	13	12	4	19	62	28	0	0	0	0	147
35 - 39	4	7	3	1	4	44	78	22	0	0	0	163
40 - 44	1	0	1	1	3	20	38	67	7	0	0	138
45 - 49	0	2	2	0	1	12	37	58	40	0	0	152
50 - 54	0	0	0	0	0	7	10	32	11	0	0	60
55 - 59	0	0	0	0	0	2	5	14	2	0	0	23
60 - 64	0	0	0	0	0	1	0	4	0	0	1	6
65+	0	0	0	0	0	0	0	0	0	0	0	0
Total	43	47	34	14	43	158	196	197	60	0	1	793

AGE AND SERVICE DISTRIBUTION  
(Police Only)

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	10	5	1	0	0	0	0	0	0	0	0	16
25 - 29	10	6	11	8	8	7	0	0	0	0	0	50
30 - 34	6	2	6	4	10	37	16	0	0	0	0	81
35 - 39	1	1	0	1	0	28	51	13	0	0	0	95
40 - 44	0	0	1	1	2	13	27	31	3	0	0	78
45 - 49	0	0	1	0	0	8	21	24	19	0	0	73
50 - 54	0	0	0	0	0	7	8	11	4	0	0	30
55 - 59	0	0	0	0	0	1	4	9	0	0	0	14
60 - 64	0	0	0	0	0	0	0	1	0	0	1	2
65+	0	0	0	0	0	0	0	0	0	0	0	0
Total	27	14	20	14	20	101	127	89	26	0	1	439

AGE AND SERVICE DISTRIBUTION  
(Fire Only)

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	3	0	0	0	0	0	0	0	0	0	9
25 - 29	3	11	4	0	8	3	0	0	0	0	0	29
30 - 34	3	11	6	0	9	25	12	0	0	0	0	66
35 - 39	3	6	3	0	4	16	27	9	0	0	0	68
40 - 44	1	0	0	0	1	7	11	36	4	0	0	60
45 - 49	0	2	1	0	1	4	16	34	21	0	0	79
50 - 54	0	0	0	0	0	0	2	21	7	0	0	30
55 - 59	0	0	0	0	0	1	1	5	2	0	0	9
60 - 64	0	0	0	0	0	1	0	3	0	0	0	4
65+	0	0	0	0	0	0	0	0	0	0	0	0
Total	16	33	14	0	23	57	69	108	34	0	0	354



VALUATION PARTICIPANT RECONCILIATION

1. Active lives

a. Number in prior valuation 10/1/2017	786
b. Terminations	
i. Vested (partial or full) with deferred benefits	(6)
ii. Non-vested or full lump sum distribution received	(7)
c. Deaths	
i. Beneficiary receiving benefits	0
ii. No future benefits payable	0
d. Disabled	0
e. Retired	(1)
f. DROP	<u>(27)</u>
g. Continuing participants	745
h. New entrants	<u>48</u>
i. Total active life participants in valuation	793

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 <u>Deferred</u>	<u>Total</u>
a. Number prior valuation	768	113	156	26	25	1,088
Retired	10	(7)	0	0	(2)	1
DROP	0	27	0	0	0	27
Vested Deferred	0	0	0	0	6	6
Death, With Survivor	(15)	0	15	0	0	0
Death, No Survivor	(8)	0	(5)	0	0	(13)
Disabled	0	0	0	0	0	0
Refund of Contributions	0	0	0	0	(2)	(2)
Rehires	0	0	0	0	(3)	(3)
Expired Annuities	0	0	0	0	0	0
Data Corrections	0	0	0	0	0	0
b. Number current valuation	755	133	166	26	24	1,104

## SUMMARY OF CURRENT PLAN

<u>Membership</u>	Police officers and firefighters.
<u>Credited Service</u>	Total years and fractional parts of years of years of service of any Member, from the date he first entered employment as a Police Officer or Firefighter until either the date of his DROP Retirement or the date his employment shall be terminated by death, retirement, or discharge.
<u>Compensation</u>	Base pay, assignment pay, and longevity bonuses, including pick-up contributions, and up to forty (40) hours of overtime for police officers.
<u>Average Final Compensation</u>	<i>Firefighters hired prior October 1, 2014: Average Compensation during the highest 2 years of Credited Service.</i>  <i>Firefighters hired after September 30, 2014: Average Compensation during the highest 5 years of Credited Service.</i>  <i>Police Officers hired prior to April 1, 2014: Average Compensation during the highest 2 years of Credited Service.</i>  <i>Police Officers hired after March 31, 2014: Average Compensation during the highest 5 years of Credited Service.</i>
<u>Member Contributions</u>	10.00% of Compensation.
<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, Chapter 112, F.S.
<u>Normal Retirement</u>	
Date	Earlier of: 1) Age 55 with 10 years of Credited Service, or 2) attainment of 20 years of Credited Service, regardless of Age.
Plan 1 Benefit	
Firefighters	<i>Hired prior to October 1, 2014: 3.38% of Average Final Compensation times Credited Service, with a maximum of 81% of Average Final Compensation. Firefighters with 25 or more years of Credited Service on October 1, 2002 are subject to a maximum of 91.26% of Average Final Compensation. Firefighters employed before</i>

December 11, 1993 receive an additional 2.0% of Average Final Compensation (excluded from the 81% maximum percentage).

*Hired after September 30, 2014:* 3.00% of Average Final Compensation times Credited Service, with a maximum of 75% of Average Final Compensation.

Police Officers

*Hired prior to April 1, 2014:* 3.38% of Average Final Compensation times Credited Service, with a maximum of 81% of Average Final Compensation. Police Officers with 25 or more years of Credited Service on January 1, 2002 are subject to a maximum of 91.26%.

*Hired after March 31, 2014:* 3.00% of Average Final Compensation times Credited Service, with a maximum of 75% of Average Final Compensation.

Plan 2 Benefit

3.0% of Average Final Compensation for the first 20 years of Credited Service, plus 2.0% of Average Final Compensation for each year in excess of 20. Firefighters employed before December 11, 1993 receive an additional 2.0% of Average Final Compensation.

Form of Benefit

*Firefighters hired prior to October 1, 2014:* 60% Joint and Survivor, with an additional 40% death benefit during the first year of retirement (Optional forms available).

*Firefighters hired after September 30, 2014:* 10-Year Certain and Life (Optional forms available).

*Police Officers hired prior to April 1, 2014:* 60% Joint and Survivor, with an additional 40% death benefit during the first year of retirement (Optional forms available).

*Police Officers hired after March 31, 2014:* 10-Year Certain and Life (Optional forms available).

Early Retirement (Firefighters Only)

Eligibility

Age 50 with 10 years of Credited Service.

Benefit

Accrued benefit, reduced 3.0% per year that the benefit commencement date precedes the Normal Retirement date.

Vesting

Less than 10 Years of Credited Service

Refund of Member contributions. For Police Officers who separate employment with the City on or after December 3, 2013 and Firefighters who separate employment with the City on or after October 1, 2014, no interest will be credited when determining the refund amount.

10 years of Credited Service

Accrued benefit deferred to Normal Retirement date.

Disability

Eligibility

Covered from Date of Employment.

Exclusions

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

Benefit

Non-Service Connected

50% of Average Final Compensation offset by 100% of Social Security Disability benefits, Workers' Compensation benefits, and earned income.

Service Connected

65% of Average Final Compensation.

Duration

Payable for life or until recovery.

Death Benefits

Eligibility

Covered from Date of Employment.

Benefit

Non-Service Connected

50% of the Member's monthly Compensation for eight (8) years. For a Member with at least 10 years of Credited Service, not less than the benefits otherwise payable at early or normal retirement age. The minimum benefit payable is four (4) times the rate of the Member's annual compensation.

Service Connected

50% of Member's monthly Compensation to spouse until death or remarriage. Children's benefits of 10% of Member's monthly benefits per child (50% maximum) until age 18, and a maximum of 80% to spouse and children. For Members who are not married and have no children, a 10-year benefit will be paid to the designated beneficiary. The minimum benefit payable is four (4) times the rate of the Member's annual compensation.

COLA

Adjustment Date	July 1st
Eligibility	Receipt of retirement benefits for one year. Additionally, must have entered Retirement status prior to July 1, 2008.
Amount	Lesser of 1) percentage not greater than CPI (all Urban Consumers) for preceding calendar year, or 2) percentage increase limited to present value of which can be funded by excess gains for preceding calendar year. Maximum cost-of-living adjustment is 5.0%.  The COLA increase may be granted only if the System remains in a net positive experience position, determined on a cumulative basis from January 1, 1987 (in State Statute – not in Ordinance)

DROP

Members eligible for Normal Retirement may elect either a Deferred Retirement Option Plan for up to 96 months or a Benefit Actuarially Calculated Deferred Retirement Option Program for up to 36 months, but not both. For Police Officers hired after March 31, 2014 and Firefighters hired after September 30, 2014, each month a Member delays entry into DROP following completion of 25 years of Credited Service, the 96 month maximum DROP participation period shall be correspondingly reduced by one month. Tier 1 DROP participants shall contribute 1.75% of salary during DROP participation. Tier 2 DROP participants shall contribute 10% of salary for the first five (5) years of DROP participation, and 1.50% of salary for each year thereafter. Members will not receive a refund of contributions made while participating in DROP.

STATEMENT OF FIDUCIARY NET POSITION  
SEPTEMBER 30, 2018

<u>ASSETS</u>	MARKET VALUE
Cash and Cash Equivalents:	
Money Market	24,245,887
Cash and Short Term Investments	3,257
Total Cash and Equivalents	24,249,144
Receivables:	
State Contributions	3,865
From Broker for Investments Sold	576,175
Investment Income	2,259,012
Total Receivable	2,839,052
Investments:	
U. S. Bonds and Bills	54,722,648
Federal Agency Guaranteed Securities	189,443
Corporate Bonds and Other Fixed Income	135,594,011
Real Estate	134,882,047
Hedge Fund of Funds	37,716,504
Stocks	120,911,005
Venture Capital and Partnerships	15,730,748
Mutual Funds	197,300,179
Pooled/Common/Commingled Funds	224,807,074
Total Investments	921,853,659
Total Assets	948,941,855
<u>LIABILITIES</u>	
Payables:	
To Broker for Investments Purchased	4,902,726
Accounts Payable and Accrued Liabilities	476,481
To City of Fort Lauderdale	2,035,075
Total Liabilities	7,414,282
NET POSITION RESTRICTED FOR PENSIONS	941,527,573

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

ADDITIONS

## Contributions:

Member	6,838,045	
Member for Buy-Back	53,542	
Member Share for Buy-back	2,317,793	
City	19,328,568	
State for Share Plan	1,599,747	
State for Contribution	4,781,171	
 Total Contributions		 34,918,866
 Investment Income:		
Net Increase in Fair Value of Investments	53,281,921	
Interest & Dividends	11,640,654	
Less Investment Expense <sup>1</sup>	(3,018,617)	
 Net Investment Income		 61,903,958
 Total Additions		 96,822,824

DEDUCTIONS

## Distributions to Members:

Benefit Payments	41,962,119	
Lump Sum DROP Distributions	2,675,965	
Lump Sum Share Distributions	338,111	
Lump Sum Share for Buybacks	2,317,793	
Refunds of Member Contributions	123,286	
 Total Distributions		 47,417,274
 Administrative Expense		 648,453
 Total Deductions		 48,065,727
 Net Increase in Net Position		 48,757,097
 NET POSITION RESTRICTED FOR PENSIONS		
Beginning of the Year		892,770,476
 End of the Year		 941,527,573

**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: Two of the three appointive Members shall be appointed by the City Commission, each of whom must be a legal resident of the City. The two above appointive Members appointed after September 18, 2012 shall serve as trustee for a period of 4 years, unless sooner replaced by the City Commission at whose pleasure they shall serve. The third appointive Member shall be chosen by a majority of the previous six Members and such person's name shall be submitted to the City Commission. Upon receipt of the seventh person's name, the City Commission shall, as a ministerial duty, appoint such person to the Board of Trustees as its seventh Member. The seventh Member shall have the same rights as each of the other six Members appointed or elected as herein provided, shall serve on the Board for a period of four years, and may succeed himself or herself in office. The term of office of the seventh Member appointed after September 18, 2012 shall be four years.

*Plan Membership as of October 1, 2017:*

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	1,063
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	25
Active Plan Members	786
	1,874
	1,874

*Benefits Provided*

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

Normal Retirement:

Earlier of: 1) Age 55 with 10 years of Credited Service, or 2) attainment of 20 years of Credited Service, regardless of Age.

Plan 1 Benefit Firefighters:

*Hired prior to October 1, 2014:*

3.38% of Average Final Compensation times Credited Service, with a maximum of 81% of Average Final Compensation. Firefighters with 25 or more years of Credited Service on October 1, 2002 are subject to a maximum of 91.26% of Average Final Compensation. Firefighters employed before December 11, 1993 receive an additional 2.0% of Average Final Compensation (excluded from the 81% maximum percentage).

*Hired after September 30, 2014:*

3.00% of Average Final Compensation times Credited Service, with a maximum of 75% of Average Final Compensation.

Plan 1 Benefit Police Officers:

*Hired prior to April 1, 2014:*

3.38% of Average Final Compensation times Credited Service, with a maximum of 81% of Average Final Compensation. Police Officers with 25 or more years of Credited Service on January 1, 2002 are subject to a maximum of 91.26%.

*Hired after March 31, 2014:*

3.00% of Average Final Compensation times Credited Service, with a maximum of 75% of Average Final Compensation.

Plan 2 Benefit: 3.0% of Average Final Compensation for the first 20 years of Credited Service, plus 2.0% of Average Final Compensation for each year in excess of 20. Firefighters employed before December 11, 1993 receive an additional 2.0% of Average Final Compensation.

Early Retirement (Firefighters Only):

Age 50 and 10 Years of Credited Service.

Accrued benefit, reduced 3.00% per year that the benefit commencement date precedes the Normal Retirement date.

Vesting:

Less than 10 Years of Credited Service: Refund of Member contributions. For Police Officers who separate employment with the City on or after December 3, 2013 and Firefighters who separate employment with the City on or after October 1, 2014, no interest will be credited when determining the refund amount.

10 Years of Credited Service: Accrued benefit deferred to Normal Retirement date.



Disability:

Covered from Date of Employment.

Non-Service Connected: 50% of Average Final Compensation offset by 100% of Social Security Disability benefits, Workers' Compensation benefits, and earned income.

Service Connected: 65% of Average Final Compensation.

Death Benefits:

Covered from Date of Employment.

Non-Service Connected: 50% of the Member's monthly Compensation for eight (8) years. For a Member with at least 10 years of Credited Service, not less than the benefits otherwise payable at early or normal retirement age. The minimum benefit payable is four (4) times the rate of the Member's annual compensation.

Service Connected: 50% of Member's monthly Compensation to spouse until death or remarriage. Children's benefits of 10% of Member's monthly benefits per child (50% maximum) until age 18, and a maximum of 80% to spouse and children. For Members who are not married and have no children, a 10-year benefit will be paid to the designated beneficiary. The minimum benefit payable is four (4) times the rate of the Member's annual compensation.

COLA

Adjustment Date: July 1st.

Eligibility: Receipt of retirement benefits for one year. Additionally, must have entered Retirement status prior to July 1, 2008.

Amount: Lesser of 1) percentage not greater than CPI (all Urban Consumers) for preceding calendar year, or 2) percentage increase limited to present value of which can be funded by excess gains for preceding calendar year. Maximum cost-of-living adjustment is 5.0%.

The COLA increase may be granted only if the System remains in a net positive experience position, determined on a cumulative basis from January 1, 1987 (in State Statute – not in Ordinance)

*Contributions*

Member Contributions: 10.00% of Compensation.

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, F.S.

*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	30.00%
International Equity	15.00%
Domestic Bonds	30.00%
Real Estate	12.50%
Other	12.50%
Total	100.00%

*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 6.99 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

Members eligible for Normal Retirement may elect either a Deferred Retirement Option Plan for up to 96 months or a Benefit Actuarially Calculated Deferred Retirement Option Program for up to 36 months, but not both. For Police Officers hired after March 31, 2014 and Firefighters hired after September 30, 2014, each month a Member delays entry into DROP following completion of 25 years of Credited Service, the 96 month maximum DROP participation period shall be correspondingly reduced by one month. Tier 1 DROP participants shall contribute 1.75% of salary during DROP participation. Tier 2 DROP participants shall contribute 10% of salary for the first five (5) years of DROP participation, and 1.50% of salary for each year thereafter. Members will not receive a refund of contributions made while participating in DROP.

The DROP balance as September 30, 2018 is \$41,488,073.

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	\$ 977,637,343
Plan Fiduciary Net Position	\$ (941,527,573)
Sponsor's Net Pension Liability	<u>\$ 36,109,770</u>
Plan Fiduciary Net Position as a percentage of Total Pension Liability	96.31%

*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	2.75%
Salary Increases	0.50% - 3.00% *Expected increase in annual salary in addition to 2.75% inflationary component.
Discount Rate	7.35%
Investment Rate of Return	7.35%

*Mortality Rate Healthy Active Lives:*

Female: RP2000 Generational, 100% Combined Healthy White Collar, Scale BB.  
 Male: RP2000 Generational, 10% Combined Healthy White Collar / 90% Combined Healthy Blue Collar, Scale BB.

*Mortality Rate Healthy Inactive Lives:*

Female: RP2000 Generational, 100% Annuitant White Collar, Scale BB.  
 Male: RP2000 Generational, 10% Annuitant White Collar / 90% Annuitant Blue Collar, Scale BB.

*Mortality Rate Disabled Lives:*

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

The most recent actuarial experience study used to review the other significant assumptions was dated July 10, 2015.

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 arithmetic 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 <sup>1</sup>
Domestic Equity	4.80%
International Equity	5.00%
Domestic Bonds	0.80%
Real Estate	3.80%
Other	2.00%

<sup>1</sup>Based on 5-7 year projected returns

## GASB 67

### Discount Rate:

The Discount Rate used to measure the Total Pension Liability was 7.35 percent.

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

	1% Decrease	Current Discount Rate	1% Increase
	6.35%	7.35%	8.35%
Sponsor's Net Pension Liability	\$ 141,803,385	\$ 36,109,770	\$ (51,365,489)

**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	20,478,769	20,106,284	19,199,538
Interest	68,505,318	65,765,964	62,181,617
Change in Excess State Money	-	-	-
Share Plan Allocation	1,599,747	1,653,054	1,732,185
Changes of benefit terms	6,411	-	-
Differences between Expected and Actual Experience	(1,668,323)	(2,762,831)	(5,100,657)
Changes of assumptions	4,790,360	10,692,637	16,504,779
Contributions - Buy Back	2,371,335	24,749	73,763
Contributions - Transfer from General Plan	-	-	-
Benefit Payments, including Refunds of Employee Contributions	(47,417,274)	(46,564,184)	(48,849,184)
Net Change in Total Pension Liability	48,666,343	48,915,673	45,742,041
Total Pension Liability - Beginning	928,971,000	880,055,327	834,313,286
Total Pension Liability - Ending (a)	<u>\$977,637,343</u>	<u>\$928,971,000</u>	<u>\$880,055,327</u>
Plan Fiduciary Net Position			
Contributions - Employer	19,328,568	17,325,393	13,867,934
Contributions - State	6,380,918	5,932,068	5,860,782
Contributions - Employee	6,838,045	5,901,141	5,732,925
Contributions - Buy Back	2,371,335	24,749	73,763
Contributions - Transfer from General Plan	-	-	-
Net Investment Income	61,903,958	96,510,340	63,676,002
Benefit Payments, including Refunds of Employee Contributions	(47,417,274)	(46,564,184)	(48,849,184)
Administrative Expense	(648,453)	(619,575)	(651,146)
Other	-	-	-
Net Change in Plan Fiduciary Net Position	48,757,097	78,509,932	39,711,076
Plan Fiduciary Net Position - Beginning	892,770,476	814,260,544	774,549,468
Plan Fiduciary Net Position - Ending (b)	<u>\$941,527,573</u>	<u>\$892,770,476</u>	<u>\$814,260,544</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 36,109,770</u>	<u>\$ 36,200,524</u>	<u>\$ 65,794,783</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	96.31%	96.10%	92.52%
Covered Payroll <sup>1</sup>	\$ 72,960,842	\$ 71,050,792	\$ 69,471,501
Net Pension Liability as a percentage of Covered Payroll	49.49%	50.95%	94.71%

**Notes to Schedule:**

<sup>1</sup> The Covered Payroll numbers shown are in compliance with GASB 82.

*Changes of benefit terms:*

For measurement date 09/30/2018, as outlined in the July 2, 2018 actuarial impact statement, there have been a number of changes to the plan provisions. The specific changes are as follows:

- 1) Provided provisional language for firefighters to purchase prior firefighter or military service at an amount equal to the full actuarial cost, as determined by the actuary for the retirement system.
- 2) Increased the member contribution rate for all active members to 10% of pensionable earnings. This increase was effective October 1, 2018 for firefighters and October 1, 2017 for police officers.
- 3) Provided for a permissible DROP extension for members who were participating in the DROP with a DROP period of less than ninety-six (96) months. The applicable extension would be for an additional twelve (12) or twenty-four (24) months of DROP participation, such that the total DROP participation would not exceed ninety-six (96) months.
- 4) Tier 1 members participating in DROP shall contribute 1.75% of salary. This requirement was effective October 1, 2018 for firefighters and October 1, 2017 for police officers. It is our understanding that no DROP participants will receive a refund of contributions made while in DROP, regardless of length of participation.
- 5) Tier 2 members participating in DROP shall contribute 10% of salary for the first five (5) years of DROP participation, and 1.50% of salary for each year thereafter. It is our understanding that no DROP participants will receive a refund of contributions made while in DROP, regardless of length of participation.

*Changes of assumptions:*

For measurement date 09/30/2018, amounts reported as changes of assumptions resulted from lowering the investment return assumption from 7.40% to 7.35% per year, net of investment related expenses.

For measurement date 09/30/2017, as required by Chapter 2015-157, Laws of Florida, the assumed rates of mortality have been changed from those in the July 1, 2015 FRS valuation report to those used in the July 1, 2016 FRS valuation report. Additionally, the investment rate of return was lowered from 7.50% to 7.40%, net of investment related expenses. Finally, the inflation rate assumption has been updated from 2.30% to 2.75% to match the long-term inflation rate assumption of the valuation report.

For measurement date 09/30/2016, as a result of Chapter 2015-157, Laws of Florida, the assumed rates of mortality were changed to the assumptions used by the Florida Retirement System for special risk employees. The inflation assumption rate was lowered from 3.00% to 2.30%, matching the long-term inflation assumption utilized by the Plan's investment consultant.

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

	09/30/2015	09/30/2014	09/30/2013
Total Pension Liability			
Service Cost	18,531,300	18,025,712	16,768,104
Interest	60,367,031	57,797,227	55,119,489
Change in Excess State Money	-	(1,223,158)	-
Share Plan Allocation	1,826,197	2,561,814	-
Changes of benefit terms	1,097,988	-	-
Differences between Expected and Actual Experience	(7,319,054)	-	-
Changes of assumptions	(2,194,981)	-	-
Contributions - Buy Back	43,865	-	-
Contributions - Transfer from General Plan	26,692	-	-
Benefit Payments, including Refunds of Employee Contributions	(46,660,430)	(44,137,555)	(31,351,671)
Net Change in Total Pension Liability	25,718,608	33,024,040	40,535,922
Total Pension Liability - Beginning	808,594,678	775,570,638	735,034,716
Total Pension Liability - Ending (a)	<u>\$834,313,286</u>	<u>\$808,594,678</u>	<u>\$775,570,638</u>
Plan Fiduciary Net Position			
Contributions - Employer	15,599,916	14,498,457	11,219,401
Contributions - State	5,799,228	5,875,363	6,053,952
Contributions - Employee	5,584,263	5,581,044	4,113,451
Contributions - Buy Back	43,865	-	-
Contributions - Transfer from General Plan	26,692	-	-
Net Investment Income	5,969,880	59,358,824	69,488,348
Benefit Payments, including Refunds of Employee Contributions	(46,660,430)	(44,137,555)	(31,351,671)
Administrative Expense	(692,348)	(647,397)	(507,376)
Other	-	4,000,034	-
Net Change in Plan Fiduciary Net Position	(14,328,934)	44,528,770	59,016,105
Plan Fiduciary Net Position - Beginning	788,878,402	744,349,632	685,333,527
Plan Fiduciary Net Position - Ending (b)	<u>\$774,549,468</u>	<u>\$788,878,402</u>	<u>\$744,349,632</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 59,763,818</u>	<u>\$ 19,716,276</u>	<u>\$ 31,221,006</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	92.84%	97.56%	95.97%
Covered Payroll <sup>1</sup>	\$ 68,064,001	\$ 67,279,327	\$ 65,886,733
Net Pension Liability as a percentage of Covered Payroll	87.81%	29.31%	47.39%

**Notes to Schedule:**

<sup>1</sup> The Covered Payroll numbers shown are in compliance with GASB 82.

*Changes of benefit terms:*

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

- 1) For Firefighters hired on or after October 1, 2014:
  - a. The Average Monthly Earnings period will be increased from 2 to 5 years.
  - b. The benefit accrual rate will be decreased from 3.38% to 3.0% for each year of Credited Service.
  - c. The maximum accrual rate will be decreased from 81.0% to 75.0% of Average Monthly Earnings.
  - d. For each month a Firefighter delays entry into DROP following completion of 25 years of Credited Service, the 96 month maximum DROP participation period shall be correspondingly reduced by one month.
  - e. The Normal Form of Benefit will be changed from 60% joint and contingent survivor to 10-Year Certain and Life.
- 2) Eliminating the interest component on refunds of Member Contributions for all Firefighters who separate employment with the City on or after October 1, 2014.
- 3) Amending the definition of Salary to provide that pensionable earnings for Firefighters will be increased from 144 hours to 159 hours for each 21-day period.
- 4) Implementing a special formula to determine the amount of Chapter 175 premium tax revenues that the City will be able to utilize to offset its funding requirements, effective for the plan year beginning on October 1, 2014.

For the impact these changes had on the valuation results, please refer to our September 10, 2015 Revised Actuarial Impact Statement.

For measurement date 09/30/2014, a number of benefits were amended for Police Officers hired on or after April 1, 2014. Additionally, the entire balance of the Chapter 185 premium tax revenues reserve account in the Plan as of December 31, 2013 was applied to reduce the City's annual required contribution for the October 15, 2014 payment. Additionally, all future Chapter 185 premium tax revenues received shall be available to reduce the City's annual contribution requirements. For the specific changes made to the Police Officers' benefit structure and the impact these changes had on the valuation results, please refer to our March 14, 2014 Actuarial Impact Statement.

*Changes of assumptions:*

For measurement date 09/30/2015, amounts reported as assumption changes were resulted from an actuarial experience study dated July 10, 2015 the Board approved numerous changes to the actuarial assumptions and methods in conjunction with the 10/01/2015 Valuation. The below assumptions/methods have been changed, and the specifics of the approved assumptions are displayed in the actuarial assumptions and methods section of the 10/01/2015 Valuation.

- 1) Asset Valuation Method (with a "Fresh Start")
- 2) Retirement Rates
- 3) Withdrawal Rates
- 4) Disability Rates (Police only)



**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 <sup>1</sup>	Contributions as a percentage of Covered Payroll
09/30/2018	\$ 23,513,971	\$ 24,109,739	\$ (595,768)	\$ 72,960,842	33.04%
09/30/2017	\$ 21,265,207	\$ 21,604,408	\$ (339,201)	\$ 71,050,792	30.41%
09/30/2016	\$ 17,665,942	\$ 17,665,942	\$ -	\$ 69,471,501	25.43%
09/30/2015	\$ 18,913,469	\$ 18,913,469	\$ -	\$ 68,064,001	28.11%
09/30/2014	\$ 19,012,474	\$ 19,012,474	\$ -	\$ 67,279,327	28.26%
09/30/2013	\$ 14,208,593	\$ 14,208,593	\$ -	\$ 65,886,733	21.57%

<sup>1</sup> The Covered Payroll numbers shown are in compliance with GASB 82.

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:

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 assumed rates of mortality 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 the July 1, 2015 FRS actuarial valuation report for special risk employees. We feel this assumption sufficiently accommodates future mortality improvements.

Interest Rate:

7.50% per year compounded annually, net of investment related expenses. We believe this is reasonable based on the target asset allocation of the trust and the expected long-term return by asset class.

GASB 67

Retirement Rates:

<u>Service</u>	<u>Probability of</u>	<u>Probability of</u>
	<u>Retirement</u>	<u>Retirement</u>
	<u>(Police)</u>	<u>(Fire)</u>
10-19	5%	5%
20	30%	25%
21	30%	35%
22	30%	45%
23	50%	50%
24	80%	50%
25-34	10%	20%
35+	100%	100%

No Members are expected to take reduced Early Retirement. The assumed rates of retirement were approved in conjunction with an actuarial experience study dated July 10, 2015.

Salary Increases:

<u>Service</u>	<u>Annual % Increase</u>
1 - 6	3.0%
7 - 10	2.5%
11 - 25	1.0%
26+	0.5%

Expected increase in annual salary in addition to 2.75% inflationary component. The assumed rates of salary received approval from the Division of Retirement based on historical data and long-term expectations.

Cost of Living Adjustments:

None.

Funding Method:

Entry Age Normal Actuarial Cost Method. Beginning with the pension fund's plan year ended September 30, 2015, a full year salary load based on the current 4.7% assumption is utilized under the projection funding method, as mandated by the Division of Retirement.

Amortization Method:

Level Percentage of Pay, Closed.

Remaining Amortization Period:

20 Years.

Payroll Increases:

2.0% per year. We feel this is reasonable based on longterm expectations and historical increases in inflation.

Termination Rates:

<u>Age</u>	<u>Years of</u>	<u>% Separating from Employment</u>		
		<u>Service</u>	<u>within the Next Year</u>	
			<u>Police</u>	<u>Fire</u>
All Ages	0	15.0%	15.0%	
	1	5.0%	5.0%	
	2	3.0%	1.0%	
	3	3.0%	1.0%	
	4	3.0%	1.0%	
<50	5+	1.5%	1.0%	
50+	5+	0.0%	0.0%	

The assumed rates of termination were approved in conjunction with an actuarial experience study dated July 10, 2015.

GASB 67

Disability Rates:

<u>Age</u>	<u>% Becoming Disabled within</u>	
	<u>Next Year</u>	
	<u>Police</u>	<u>Fire</u>
20	0.07%	0.14%
25	0.08%	0.15%
30	0.09%	0.18%
35	0.12%	0.23%
40	0.15%	0.30%
45	0.26%	0.51%
50	0.50%	1.00%
55	0.78%	1.55%

It is assumed that 75% of disablements and active Member deaths are service related. The assumed rates of disablement were approved in conjunction with an actuarial experience study dated July 10, 2015.

Marital Status:

All employed Members and all retired Members are assumed to be married. Females are assumed to be 3 years younger than males. This assumption was approved in conjunction with an actuarial experience study dated July 10, 2015.

Actuarial Value of Assets:

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

**SCHEDULE OF INVESTMENT RETURNS**  
Last 10 Fiscal Years

Fiscal Year Ended	Annual Money-Weighted Rate of Return Net of Investment Expense
09/30/2018	6.99%
09/30/2017	11.98%
09/30/2016	8.35%
09/30/2015	0.77%
09/30/2014	8.60%
09/30/2013	10.10%

**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: Two of the three appointive Members shall be appointed by the City Commission, each of whom must be a legal resident of the City. The two above appointive Members appointed after September 18, 2012 shall serve as trustee for a period of 4 years, unless sooner replaced by the City Commission at whose pleasure they shall serve. The third appointive Member shall be chosen by a majority of the previous six Members and such person's name shall be submitted to the City Commission. Upon receipt of the seventh person's name, the City Commission shall, as a ministerial duty, appoint such person to the Board of Trustees as its seventh Member. The seventh Member shall have the same rights as each of the other six Members appointed or elected as herein provided, shall serve on the Board for a period of four years, and may succeed himself or herself in office. The term of office of the seventh Member appointed after September 18, 2012 shall be four years.

The Plan provides pensions for each sworn police officer and firefighter of the City who is eligible to participate in the Plan and who fulfills the prescribed eligibility requirements is considered a Member of the Plan.

*Plan Membership as of October 1, 2017:*

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	1,063
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	25
Active Plan Members	786
	1,874

*Benefits Provided*

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

Normal Retirement:

Earlier of: 1) Age 55 with 10 years of Credited Service, or 2) attainment of 20 years of Credited Service, regardless of Age.

Plan 1 Benefit Firefighters:

*Hired prior to October 1, 2014:*

3.38% of Average Final Compensation times Credited Service, with a maximum of 81% of Average Final Compensation. Firefighters with 25 or more years of Credited Service on October 1, 2002 are subject to a maximum of 91.26% of Average Final Compensation. Firefighters employed before December 11, 1993 receive an additional 2.0% of Average Final Compensation (excluded from the 81% maximum percentage).

*Hired after September 30, 2014:*

3.00% of Average Final Compensation times Credited Service, with a maximum of 75% of Average Final Compensation.

Plan 1 Benefit Police Officers:

*Hired prior to April 1, 2014:*

3.38% of Average Final Compensation times Credited Service, with a maximum of 81% of Average Final Compensation. Police Officers with 25 or more years of Credited Service on January 1, 2002 are subject to a maximum of 91.26%.

*Hired after March 31, 2014:*

3.00% of Average Final Compensation times Credited Service, with a maximum of 75% of Average Final Compensation.

Plan 2 Benefit: 3.0% of Average Final Compensation for the first 20 years of Credited Service, plus 2.0% of Average Final Compensation for each year in excess of 20. Firefighters employed before December 11, 1993 receive an additional 2.0% of Average Final Compensation.

Early Retirement (Firefighters Only):

Age 50 and 10 Years of Credited Service.

Accrued benefit, reduced 3.00% per year that the benefit commencement date precedes the Normal Retirement date.

Vesting:

Less than 10 Years of Credited Service: Refund of Member contributions. For Police Officers who separate employment with the City on or after December 3, 2013 and Firefighters who separate employment with the City on or after October 1, 2014, no interest will be credited when determining the refund amount.

10 Years of Credited Service: Accrued benefit deferred to Normal Retirement date.

## GASB 68

### Disability:

Covered from Date of Employment.

Non-Service Connected: 50% of Average Final Compensation offset by 100% of Social Security Disability benefits, Workers' Compensation benefits, and earned income.

Service Connected: 65% of Average Final Compensation.

### Death Benefits:

Covered from Date of Employment.

Non-Service Connected: 50% of the Member's monthly Compensation for eight (8) years. For a Member with at least 10 years of Credited Service, not less than the benefits otherwise payable at early or normal retirement age. The minimum benefit payable is four (4) times the rate of the Member's annual compensation.

Service Connected: 50% of Member's monthly Compensation to spouse until death or remarriage. Children's benefits of 10% of Member's monthly benefits per child (50% maximum) until age 18, and a maximum of 80% to spouse and children. For Members who are not married and have no children, a 10-year benefit will be paid to the designated beneficiary. The minimum benefit payable is four (4) times the rate of the Member's annual compensation.

### COLA

Adjustment Date: July 1st.

Eligibility: Receipt of retirement benefits for one year. Additionally, must have entered Retirement status prior to July 1, 2008.

Amount: Lesser of 1) percentage not greater than CPI (all Urban Consumers) for preceding calendar year, or 2) percentage increase limited to present value of which can be funded by excess gains for preceding calendar year. Maximum cost-of-living adjustment is 5.0%.

The COLA increase may be granted only if the System remains in a net positive experience position, determined on a cumulative basis from January 1, 1987 (in State Statute – not in Ordinance)

### *Contributions*

Member Contributions: 10.00% of Compensation.

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, F.S.

### 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, 2017 through September 30, 2018.

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	2.75%
Salary Increases	0.50% - 3.00% *Expected increase in annual salary in addition to 2.75% inflationary component.
Discount Rate	7.35%
Investment Rate of Return	7.35%

*Mortality Rate Healthy Active Lives:*

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

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

*Mortality Rate Healthy Inactive Lives:*

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

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

*Mortality Rate Disabled Lives:*

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

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

The most recent actuarial experience study used to review the other significant assumptions was dated July 10, 2015.

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 arithmetic 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 <sup>1</sup>
Domestic Equity	30.00%	4.80%
International Equity	15.00%	5.00%
Domestic Bonds	30.00%	0.80%
Real Estate	12.50%	3.80%
Other	12.50%	2.00%
Total	100.00%	

<sup>1</sup>Based on 5-7 year projected returns

Discount Rate:

The Discount Rate used to measure the Total Pension Liability was 7.35 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	Plan Fiduciary	Net Pension
	Liability	Net Position	Liability
	(a)	(b)	(a)-(b)
Balance at September 30, 2017	\$ 928,971,000	\$ 892,770,476	\$ 36,200,524
Changes for a Year:			
Service Cost	20,478,769	-	20,478,769
Interest	68,505,318	-	68,505,318
Share Plan Allocation	1,599,747	-	1,599,747
Differences between Expected and Actual Experience	(1,668,323)	-	(1,668,323)
Changes of assumptions	4,790,360	-	4,790,360
Changes of benefit terms	6,411	-	6,411
Contributions - Employer	-	19,328,568	(19,328,568)
Contributions - State	-	6,380,918	(6,380,918)
Contributions - Employee	-	6,838,045	(6,838,045)
Contributions - Buy Back	2,371,335	2,371,335	-
Net Investment Income	-	61,903,958	(61,903,958)
Benefit Payments, including Refunds of Employee Contributions	(47,417,274)	(47,417,274)	-
Administrative Expense	-	(648,453)	648,453
Net Changes	48,666,343	48,757,097	(90,754)
Balance at September 30, 2018	\$ 977,637,343	\$ 941,527,573	\$ 36,109,770

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

	Current Discount		
	1% Decrease	Rate	1% Increase
	6.35%	7.35%	8.35%
Sponsor's Net Pension Liability	\$ 141,803,385	\$ 36,109,770	\$ (51,365,489)

*Pension Plan Fiduciary Net Position.*

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



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

For the year ended September 30, 2018, the Sponsor will recognize a Pension Expense of \$24,112,484.

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	-	6,496,431
Changes of assumptions	16,849,781	438,996
Net difference between Projected and Actual Earnings on Pension Plan investments	-	10,836,220
<b>Total</b>	<b>\$ 16,849,781</b>	<b>\$ 17,771,647</b>

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	\$	5,290,412	
2020	\$	(3,293,740)	
2021	\$	(4,277,870)	
2022	\$	1,359,332	
2023	\$	-	
Thereafter	\$	-	

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	20,478,769	20,106,284	19,199,538
Interest	68,505,318	65,765,964	62,181,617
Change in Excess State Money	-	-	-
Share Plan Allocation	1,599,747	1,653,054	1,732,185
Changes of benefit terms	6,411	-	-
Differences between Expected and Actual Experience	(1,668,323)	(2,762,831)	(5,100,657)
Changes of assumptions	4,790,360	10,692,637	16,504,779
Contributions - Buy Back	2,371,335	24,749	73,763
Contributions - Transfer from General Plan	-	-	-
Benefit Payments, including Refunds of Employee Contributions	(47,417,274)	(46,564,184)	(48,849,184)
Net Change in Total Pension Liability	48,666,343	48,915,673	45,742,041
Total Pension Liability - Beginning	928,971,000	880,055,327	834,313,286
Total Pension Liability - Ending (a)	<u>\$977,637,343</u>	<u>\$928,971,000</u>	<u>\$880,055,327</u>
Plan Fiduciary Net Position			
Contributions - Employer	19,328,568	17,325,393	13,867,934
Contributions - State	6,380,918	5,932,068	5,860,782
Contributions - Employee	6,838,045	5,901,141	5,732,925
Contributions - Buy Back	2,371,335	24,749	73,763
Contributions - Transfer from General Plan	-	-	-
Net Investment Income	61,903,958	96,510,340	63,676,002
Benefit Payments, including Refunds of Employee Contributions	(47,417,274)	(46,564,184)	(48,849,184)
Administrative Expense	(648,453)	(619,575)	(651,146)
Other	-	-	-
Net Change in Plan Fiduciary Net Position	48,757,097	78,509,932	39,711,076
Plan Fiduciary Net Position - Beginning	892,770,476	814,260,544	774,549,468
Plan Fiduciary Net Position - Ending (b)	<u>\$941,527,573</u>	<u>\$892,770,476</u>	<u>\$814,260,544</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 36,109,770</u>	<u>\$ 36,200,524</u>	<u>\$ 65,794,783</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	96.31%	96.10%	92.52%
Covered Payroll <sup>1</sup>	\$ 72,960,842	\$ 71,050,792	\$ 69,471,501
Net Pension Liability as a percentage of Covered Payroll	49.49%	50.95%	94.71%

**Notes to Schedule:**

<sup>1</sup> The Covered Payroll numbers shown are in compliance with GASB 82.

*Changes of benefit terms:*

For measurement date 09/30/2018, as outlined in the July 2, 2018 actuarial impact statement, there have been a number of changes to the plan provisions. The specific changes are as follows:

- 1) Provided provisional language for firefighters to purchase prior firefighter or military service at an amount equal to the full actuarial cost, as determined by the actuary for the retirement system.
- 2) Increased the member contribution rate for all active members to 10% of pensionable earnings. This increase was effective October 1, 2018 for firefighters and October 1, 2017 for police officers.
- 3) Provided for a permissible DROP extension for members who were participating in the DROP with a DROP period of less than ninety-six (96) months. The applicable extension would be for an additional twelve (12) or twenty-four (24) months of DROP participation, such that the total DROP participation would not exceed ninety-six (96) months.
- 4) Tier 1 members participating in DROP shall contribute 1.75% of salary. This requirement was effective October 1, 2018 for firefighters and October 1, 2017 for police officers. It is our understanding that no DROP participants will receive a refund of contributions made while in DROP, regardless of length of participation.
- 5) Tier 2 members participating in DROP shall contribute 10% of salary for the first five (5) years of DROP participation, and 1.50% of salary for each year thereafter. It is our understanding that no DROP participants will receive a refund of contributions made while in DROP, regardless of length of participation.

*Changes of assumptions:*

For measurement date 09/30/2018, amounts reported as changes of assumptions resulted from lowering the investment return assumption from 7.40% to 7.35% per year, net of investment related expenses.

For measurement date 09/30/2017, as required by Chapter 2015-157, Laws of Florida, the assumed rates of mortality have been changed from those in the July 1, 2015 FRS valuation report to those used in the July 1, 2016 FRS valuation report. Additionally, the investment rate of return was lowered from 7.50% to 7.40%, net of investment related expenses. Finally, the inflation rate assumption has been updated from 2.30% to 2.75% to match the long-term inflation rate assumption of the valuation report.

For measurement date 09/30/2016, as a result of Chapter 2015-157, Laws of Florida, the assumed rates of mortality were changed to the assumptions used by the Florida Retirement System for special risk employees. The inflation assumption rate was lowered from 3.00% to 2.30%, matching the long-term inflation assumption utilized by the Plan's investment consultant.

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

	09/30/2015	09/30/2014	09/30/2013
Total Pension Liability			
Service Cost	18,531,300	18,025,712	16,768,104
Interest	60,367,031	57,797,227	55,119,489
Change in Excess State Money	-	(1,223,158)	-
Share Plan Allocation	1,826,197	2,561,814	-
Changes of benefit terms	1,097,988	-	-
Differences between Expected and Actual Experience	(7,319,054)	-	-
Changes of assumptions	(2,194,981)	-	-
Contributions - Buy Back	43,865	-	-
Contributions - Transfer from General Plan	26,692	-	-
Benefit Payments, including Refunds of Employee Contributions	(46,660,430)	(44,137,555)	(31,351,671)
Net Change in Total Pension Liability	25,718,608	33,024,040	40,535,922
Total Pension Liability - Beginning	808,594,678	775,570,638	735,034,716
Total Pension Liability - Ending (a)	<u>\$834,313,286</u>	<u>\$808,594,678</u>	<u>\$775,570,638</u>
Contributions - Employer	15,599,916	14,498,457	11,219,401
Contributions - State	5,799,228	5,875,363	6,053,952
Contributions - Employee	5,584,263	5,581,044	4,113,451
Contributions - Buy Back	43,865	-	-
Contributions - Transfer from General Plan	26,692	-	-
Net Investment Income	5,969,880	59,358,824	69,488,348
Benefit Payments, including Refunds of Employee Contributions	(46,660,430)	(44,137,555)	(31,351,671)
Administrative Expense	(692,348)	(647,397)	(507,376)
Other	-	4,000,034	-
Net Change in Plan Fiduciary Net Position	(14,328,934)	44,528,770	59,016,105
Plan Fiduciary Net Position - Beginning	788,878,402	744,349,632	685,333,527
Plan Fiduciary Net Position - Ending (b)	<u>\$774,549,468</u>	<u>\$788,878,402</u>	<u>\$744,349,632</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 59,763,818</u>	<u>\$ 19,716,276</u>	<u>\$ 31,221,006</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	92.84%	97.56%	95.97%
Covered Payroll <sup>1</sup>	\$ 68,064,001	\$ 67,279,327	\$ 65,886,733
Net Pension Liability as a percentage of Covered Payroll	87.81%	29.31%	47.39%

**Notes to Schedule:**

<sup>1</sup> The Covered Payroll numbers shown are in compliance with GASB 82.

*Changes of benefit terms:*

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

- 1) For Firefighters hired on or after October 1, 2014:
  - a. The Average Monthly Earnings period will be increased from 2 to 5 years.
  - b. The benefit accrual rate will be decreased from 3.38% to 3.0% for each year of Credited Service.
  - c. The maximum accrual rate will be decreased from 81.0% to 75.0% of Average Monthly Earnings.
  - d. For each month a Firefighter delays entry into DROP following completion of 25 years of Credited Service, the 96 month maximum DROP participation period shall be correspondingly reduced by one month.
  - e. The Normal Form of Benefit will be changed from 60% joint and contingent survivor to 10-Year Certain and Life.
- 2) Eliminating the interest component on refunds of Member Contributions for all Firefighters who separate employment with the City on or after October 1, 2014.
- 3) Amending the definition of Salary to provide that pensionable earnings for Firefighters will be increased from 144 hours to 159 hours for each 21-day period.
- 4) Implementing a special formula to determine the amount of Chapter 175 premium tax revenues that the City will be able to utilize to offset its funding requirements, effective for the plan year beginning on October 1, 2014.

For the impact these changes had on the valuation results, please refer to our September 10, 2015 Revised Actuarial Impact Statement.

For measurement date 09/30/2014, a number of benefits were amended for Police Officers hired on or after April 1, 2014. Additionally, the entire balance of the Chapter 185 premium tax revenues reserve account in the Plan as of December 31, 2013 was applied to reduce the City's annual required contribution for the October 15, 2014 payment. Additionally, all future Chapter 185 premium tax revenues received shall be available to reduce the City's annual contribution requirements. For the specific changes made to the Police Officers' benefit structure and the impact these changes had on the valuation results, please refer to our March 14, 2014 Actuarial Impact Statement.

*Changes of assumptions:*

For measurement date 09/30/2015, amounts reported as assumption changes were resulted from an actuarial experience study dated July 10, 2015 the Board approved numerous changes to the actuarial assumptions and methods in conjunction with the 10/01/2015 Valuation. The below assumptions/methods have been changed, and the specifics of the approved assumptions are displayed in the actuarial assumptions and methods section of the 10/01/2015 Valuation.

- 1) Asset Valuation Method (with a "Fresh Start")
- 2) Retirement Rates
- 3) Withdrawal Rates
- 4) Disability Rates (Police only)

**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 <sup>1</sup>	Contributions as a percentage of Covered Payroll
09/30/2018	\$ 23,513,971	\$ 24,109,739	\$ (595,768)	\$ 72,960,842	33.04%
09/30/2017	\$ 21,265,207	\$ 21,604,408	\$ (339,201)	\$ 71,050,792	30.41%
09/30/2016	\$ 17,665,942	\$ 17,665,942	\$ -	\$ 69,471,501	25.43%
09/30/2015	\$ 18,913,469	\$ 18,913,469	\$ -	\$ 68,064,001	28.11%
09/30/2014	\$ 19,012,474	\$ 19,012,474	\$ -	\$ 67,279,327	28.26%
09/30/2013	\$ 14,208,593	\$ 14,208,593	\$ -	\$ 65,886,733	21.57%

<sup>1</sup> The Covered Payroll numbers shown are in compliance with GASB 82.

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:

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 assumed rates of mortality 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 the July 1, 2015 FRS actuarial valuation report for special risk employees. We feel this assumption sufficiently accommodates future mortality improvements.

Interest Rate:

7.50% per year compounded annually, net of investment related expenses. We believe this is reasonable based on the target asset allocation of the trust and the expected long-term return by asset class.

GASB 68

Retirement Rates:

<u>Service</u>	<u>Probability of</u>	<u>Probability of</u>
	<u>Retirement</u>	<u>Retirement</u>
	<u>(Police)</u>	<u>(Fire)</u>
10-19	5%	5%
20	30%	25%
21	30%	35%
22	30%	45%
23	50%	50%
24	80%	50%
25-34	10%	20%
35+	100%	100%

No Members are expected to take reduced Early Retirement. The assumed rates of retirement were approved in conjunction with an actuarial experience study dated July 10, 2015.

Salary Increases:

<u>Service</u>	<u>Annual % Increase</u>
1 - 6	3.0%
7 - 10	2.5%
11 - 25	1.0%
26+	0.5%

Expected increase in annual salary in addition to 2.75% inflationary component. The assumed rates of salary received approval from the Division of Retirement based on historical data and long-term expectations.

Cost of Living Adjustments:

None.

Funding Method:

Entry Age Normal Actuarial Cost Method. Beginning with the pension fund's plan year ended September 30, 2015, a full year salary load based on the current 4.7% assumption is utilized under the projection funding method, as mandated by the Division of Retirement.

Amortization Method:

Level Percentage of Pay, Closed.

Remaining Amortization Period:

20 Years.

Payroll Increases:

2.0% per year. We feel this is reasonable based on longterm expectations and historical increases in inflation.

Termination Rates:

<u>Age</u>	<u>Years of</u>	<u>% Separating from Employment</u>	
		<u>Service</u>	<u>within the Next Year</u>
		<u>Police</u>	<u>Fire</u>
All Ages	0	15.0%	15.0%
	1	5.0%	5.0%
	2	3.0%	1.0%
	3	3.0%	1.0%
	4	3.0%	1.0%
<50	5+	1.5%	1.0%
50+	5+	0.0%	0.0%

The assumed rates of termination were approved in conjunction with an actuarial experience study dated July 10, 2015.

GASB 68

Disability Rates:

<u>Age</u>	<u>% Becoming Disabled within</u>	
	<u>Next Year</u>	
	<u>Police</u>	<u>Fire</u>
20	0.07%	0.14%
25	0.08%	0.15%
30	0.09%	0.18%
35	0.12%	0.23%
40	0.15%	0.30%
45	0.26%	0.51%
50	0.50%	1.00%
55	0.78%	1.55%

It is assumed that 75% of disablements and active Member deaths are service related. The assumed rates of disablement were approved in conjunction with an actuarial experience study dated July 10, 2015.

Marital Status:

All employed Members and all retired Members are assumed to be married. Females are assumed to be 3 years younger than males. This assumption was approved in conjunction with an actuarial experience study dated July 10, 2015.

Actuarial Value of Assets:

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



EXPENSE DEVELOPMENT AND AMORTIZATION SCHEDULES

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

**COMPONENTS OF PENSION EXPENSE**  
**FISCAL YEAR SEPTEMBER 30, 2018**

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Balance at September 30, 2017	\$ 36,200,524	\$ 41,859,008	\$ 39,430,894	\$ -
<b>Total Pension Liability Factors:</b>				
Service Cost	20,478,769	-	-	20,478,769
Interest	68,505,318	-	-	68,505,318
Share Plan Allocation	1,599,747	-	-	1,599,747
Changes in benefit terms	6,411	-	-	6,411
Contributions - Buy Back	2,371,335	-	-	2,371,335
Differences between Expected and Actual Experience with regard to economic or demographic assumptions	(1,668,323)	1,668,323	-	-
Current year amortization of experience difference	-	(3,370,171)	-	(3,370,171)
Change in assumptions about future economic or demographic factors or other inputs	4,790,360	-	4,790,360	-
Current year amortization of change in assumptions	-	(438,996)	(6,397,555)	5,958,559
Benefit Payments, including Refunds of Employee Contributions	(47,417,274)	-	-	-
Net change	<u>48,666,343</u>	<u>(2,140,844)</u>	<u>(1,607,195)</u>	<u>95,549,968</u>
<b>Plan Fiduciary Net Position:</b>				
Contributions - Employer	19,328,568	-	-	-
Contributions - State	6,380,918	-	-	-
Contributions - Employee	6,838,045	-	-	(6,838,045)
Contributions - Buy Back	2,371,335	-	-	(2,371,335)
Projected Net Investment Income	65,578,581	-	-	(65,578,581)
Difference between projected and actual earnings on Pension Plan investments	(3,674,623)	-	3,674,623	-
Current year amortization	-	(8,519,858)	(11,221,882)	2,702,024
Benefit Payments, including Refunds of Employee Contributions	(47,417,274)	-	-	-
Administrative Expenses	(648,453)	-	-	648,453
Net change	<u>48,757,097</u>	<u>(8,519,858)</u>	<u>(7,547,259)</u>	<u>(71,437,484)</u>
Balance at September 30, 2018	<u>\$ 36,109,770</u>	<u>\$ 31,198,306</u>	<u>\$ 30,276,440</u>	<u>\$ 24,112,484</u>

AMORTIZATION SCHEDULE - INVESTMENTS

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

Plan Year Ending	Differences Between Projected and Actual Earnings	Recognition Period (Years)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
2015	\$ 52,434,795	5	\$10,486,959	\$10,486,959	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ (6,483,477)	5	\$ (1,296,695)	\$ (1,296,695)	\$ (1,296,695)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ (36,115,814)	5	\$ (7,223,163)	\$ (7,223,163)	\$ (7,223,163)	\$ (7,223,163)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ 3,674,623	5	\$ 734,923	\$ 734,925	\$ 734,925	\$ 734,925	\$ 734,925	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 2,702,024	\$ 2,702,026	\$ (7,784,933)	\$ (6,488,238)	\$ 734,925	\$ -	\$ -	\$ -	\$ -	\$ -

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	\$ (2,194,981)	5	\$ (438,996)	\$ (438,996)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ 16,504,779	5	\$ 3,300,956	\$ 3,300,956	\$ 3,300,956	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ 10,692,637	5	\$ 2,138,527	\$ 2,138,527	\$ 2,138,527	\$ 2,138,527	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ 4,790,360	5	\$ 958,072	\$ 958,072	\$ 958,072	\$ 958,072	\$ 958,072	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 5,958,559	\$ 5,958,559	\$ 6,397,555	\$ 3,096,599	\$ 958,072	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

AMORTIZATION SCHEDULE - EXPERIENCE

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

Plan Year	Differences Between	Recognition	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Ending	Expected and Actual	Period (Years)											
	Experience												
2015	\$ (7,319,054)	5	\$(1,463,811)	\$(1,463,811)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ (5,100,657)	5	\$(1,020,131)	\$(1,020,131)	\$(1,020,131)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ (2,762,831)	5	\$ (552,566)	\$ (552,566)	\$ (552,566)	\$ (552,566)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ (1,668,323)	5	\$ (333,663)	\$ (333,665)	\$ (333,665)	\$ (333,665)	\$ (333,665)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$(3,370,171)	\$(3,370,173)	\$(1,906,362)	\$ (886,231)	\$ (333,665)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -