FLA

FREIMAN LITTLE ACTUARIES

April 15, 2019

Via Electronic Transmission

To whom it may concern:

Re: 2018 Disclosure under F.S. 112.664

We understand that Florida Statutes (F.S.) 112.664(1) and F.S. 112.664(2)(b)2. require certain information to be disclosed to the Department of Management Services within 60 days of the date the Board of Trustees of the City of Melbourne Firefighters' Pension Plan (the Plan) formally approved the October 1, 2018 actuarial valuation of the Plan.

An attachment provides information under F.S. 112.664(1) in the format described in F.A.C. Rule 60T-1.0035. We have uploaded the semi-colon delimited file described by the rule.

The disclosure requirements for F.S. 112.664(2)(b)2. are found on page 24 of our attached October 1, 2018 actuarial valuation of the Plan. The GASB 67/68 Supplement as of September 30, 2018 has also been attached.

Please let us know if you have any questions or need additional information.

Sincerely,

Paula C Freiman

Paula C. Freiman, ASA, EA
Partner, Consulting Actuary

4105 SAVANNAHS TRAIL, MERRITT ISLAND, FL, 32953-8607 • OFFICE (321) 453-6542 • FAX (321) 453-6998 • MOBILE (321) 591-8265 • chad@flactuaries.com • www.flactuaries.com

With respect to the reporting standards for defined benefit retirement plans or systems contained in Section 112.664(1), F.S., the actuarial disclosures required under this section were 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, meet the requirements of Section 112.664(1), F.S., and Section 60T-1.0035, F.A.C.

(a)	City/District	City of Melbourne
(b)	Plan Name	City of Melbourne Firefighters' Pension Plan
(c)	Plan Type	Defined Benefit
(d)	Valuation Date	10/01/2018
(e)	Interest Rate:	
(e)(1)	Discount Rate, net of investment fees	7.50%
(e)(2)	Long-Term Expected Rate of Return, net of investment fees	7.50%
(f)	Certification Statement	
(f)(1)	Signature	
(f)(2)	Actuary's Name	Chad M. Little
(f)(3)	Enrollment Number	17-6619
(f)(4)	Signature Date	03/15/2019
(f)(5)	Cover letter attached (pdf)?	Y

Section 112.664(1)(a), F.S. Total pension liability
assuming mortality as used in FRS 7/1/2016 and 7/1/2017 actuarial valuation

(g)	Total pension liability:	
(g)(1)	Service cost	$1,824,715
(g)(2)	Interest	6,508,593
(g)(3)	Benefit changes	0
(g)(4)	Difference between expected and actual experience	(198,691)
(g)(5)	Changes in assumptions	2,094,555
(g)(6)	Benefit payments	(5,617,080)
(g)(7)	Contribution refunds	(24,055)
(g)(8)	Net change in total pension liability	$4,588,037
(g)(9)	Total pension liability – beginning of year	$85,195,006
(g)(10)	Total pension liability – ending of year	$89,783,043
(h)	Plan fiduciary net position:	
(h)(1)	Contributions – Employer	$2,633,114
(h)(2)	Contributions – State	546,838
(h)(3)	Contributions – Member	595,652
(h)(4)	Net investment income	5,650,567
(h)(5)	Benefit payments	(5,617,080)
(h)(6)	Contributions refunds	(24,055)
(h)(7)	Administrative expense	(161,017)
(h)(8)	Other	0
(h)(9)	Net change in plan fiduciary net position	$3,624,019
(h)(10)	Plan fiduciary net position – beginning of year	$69,272,334
(h)(11)	Plan fiduciary net position – ending of year	$72,896,353
(i)	Net pension liability/(asset) [(g)(10) minus (h)(11)]	$16,886,690

Section 112.664(1)(b), F.S. Total pension liability
assumed interest rate that is 200 basis points lower than that assumed in the valuation of the Plan

(j)	Total pension liability:	
(j)(1)	Service cost	$2,765,546
(j)(2)	Interest	5,987,167
(j)(3)	Benefit changes	0
(j)(4)	Difference between expected and actual experience	(62,051)
(j)(5)	Changes in assumptions	3,038,743
(j)(6)	Benefit payments	(5,617,080)
(j)(7)	Contribution refunds	(24,055)
(j)(8)	Net change in total pension liability	$6,088,270
(j)(9)	Total pension liability – beginning of year	$104,396,983
(j)(10)	Total pension liability – ending of year	$110,485,253
(k)	Plan fiduciary net position:	
(k)(1)	Contributions – Employer	$2,633,114
(k)(2)	Contributions – State	546,838
(k)(3)	Contributions – Member	595,652
(k)(4)	Net investment income	5,650,567
(k)(5)	Benefit payments	(5,617,080)
(k)(6)	Contributions refunds	(24,055)
(k)(7)	Administrative expense	(161,017)
(k)(8)	Other	0
(k)(9)	Net change in plan fiduciary net position	$3,624,019
(k)(10)	Plan fiduciary net position – beginning of year	$69,272,334
(k)(11)	Plan fiduciary net position – ending of year	$72,896,353
(l)	Net pension liability/(asset) [(j)(10) minus (k)(11)]	$37,588,900

Section 112.664(1)(c), F.S. (on last valuation basis)

(m)	Number of Years, and fractional parts of Years, for which the Market Value of Assets are adequate to sustain expected retirement benefits	15.94

Section 112.664(1)(c), F.S. (on Section 112.664(1)(a), F.S. basis)

(n)	Number of Years, and fractional parts of Years, for which the Market Value of Assets are adequate to sustain expected retirement benefits	15.94

Section 112.664(1)(c), F.S. (on Section 112.664(1)(b), F.S. basis)

(o)	Number of Years, and fractional parts of Years, for which the Market Value of Assets are adequate to sustain expected retirement benefits	13.25

Section 112.664(1)(d), F.S. (on last valuation basis)

(p)	Recommended Plan contributions in Annual Dollar Value	$4,395,034
(q)	Recommended Plan contributions as a Percentage of Valuation Payroll	54.49%

Section 112.664(1)(d), F.S. (on Section 112.664(1)(a), F.S. basis)

(r)	Recommended Plan contributions in Annual Dollar Value	$4,395,034
(s)	Recommended Plan contributions as a Percentage of Valuation Payroll	54.49%

Section 112.664(1)(d), F.S. (on Section 112.664(1)(b), F.S. basis)

(t)	Recommended Plan contributions in Annual Dollar Value	$6,726,182
(u)	Recommended Plan contributions as a Percentage of Valuation Payroll	83.39%

Freiman Little Actuaries, LLC
4105 Savannahs Trail
Merritt Island, FL 32953

Phone 321 453 6542
Fax 321 453 6998

City of Melbourne

Firefighters' Pension Plan

Actuarial Valuation as of October 1, 2018

January 25, 2019

REPORT TO DETERMINE MINIMUM FUNDING REQUIREMENTS
FOR THE PLAN AND FISCAL YEAR
ENDING SEPTEMBER 30, 2020

FLA
FREIMAN LITTLE ACTUARIES

January 25, 2019

Board of Trustees
City of Melbourne Firefighters' Pension Plan
Melbourne, Florida

RE: Actuarial Valuation as of October 1, 2018

Dear Board Members:

We are pleased to present the actuarial valuation as of October 1, 2018 for the City of Melbourne Firefighters' Pension Plan (the Plan). This report provides a review of the current funded status of the Plan, establishes the minimum funding requirements for the fiscal years ending September 30, 2020 and provides an analysis of experience since the last valuation. In addition to providing the summary and derivation of actuarial findings, this report describes the data, assumptions, and methods used to create these results.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

Statement by Enrolled Actuary:

"This actuarial valuation and/or cost determination 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."

We look forward to presenting these results to you in person and are always available to answer any questions you may have.

Sincerely,

Chad M. Little, ASA, EA
Partner, Consulting Actuary
Enrollment Number 17-6619

Paula C. Freiman, ASA, EA
Partner, Consulting Actuary
Enrollment Number 17-5796

Table of Contents

Section 1 Board Summary

This report presents the results of the October 1, 2018 actuarial valuation.

Summary of Principal Valuation Results

Fiscal Year Ending September 30,	**2019**	**2020**
Expected Contribution from City	$3,026,235	$3,243,235
Estimated State Contribution	514,983	546,838
City Plus State Contribution Requirement	$3,541,218	$3,790,073
Expected City Contribution % Pay	38.88%	40.21%
Estimated State Contribution % Pay	6.62%	6.78%
City Plus State Contribution % Pay	45.50%	46.99%
Expected Contribution from City % Pay Including DROP Pay	34.86%	37.77%

Plan Year Beginning October 1,	**2017**	**2018**
Accrued Liability (AL)	$85,195,006	$89,783,043
Actuarial Value of Assets	67,582,483	71,205,860
Unfunded Accrued Liability (UAL)	$17,612,523	$18,577,183
Funded Percentage	79.33%	79.31%

Plan Year Beginning October 1,	**2017**	**2018**
Assumed Net Investment Return	7.75%	7.50%
Individual Salary Increase Assumption	6.00%	6.00%
Funding Method	Entry Age	Entry Age

Summary of Significant Events

Determination of the funded status of the Plan and minimum funding requirements are based on participant data, asset information, Plan provisions, actuarial methods and assumptions, as well as contributions made to the Plan by the State of Florida. Any significant events associated with these items are discussed in the following.

In preparing our report we relied, without audit, on information (some oral and some written) supplied by the Plan Administrator. This information includes, but is not limited to, statutory provisions, employee census, and financial information. In our examination of these data, we have found them to be reasonably consistent and comparable with data used for other purposes. Since the valuation results are dependent on the integrity of the data supplied, the results can be expected to differ if the underlying data is incomplete or missing. It should be noted that if any data or other information is inaccurate or incomplete, our calculations may need to be revised.

Participant Data

The number of active members increased by 3 along with an increase in the inactive population of 2. Average individual salary increases amongst continuing active members were less than expected at 4.2% compared to the 6.0% individual salary increase assumption. A small demographic gain was experienced primarily due to the forfeiture of benefits for one disabled member and pay increases less than expected.

The following provides a summary of the actual to expected pay increases over the last ten years. The 6.0% long-term individual salary increase assumption still appears reasonable.

Fiscal Year Ending 9/30	Average Individual Salary		Actual Total Payroll	Actual Payroll Increase
	Actual	Expected		
2018	4.2 %	6.0 %	7,614,471	0.64%
2017	7.2 %	6.0 %	7,566,356	9.77%
2016	4.6 %	6.0 %	6,893,083	5.82 %
2015	3.7 %	6.0 %	6,513,920	7.21 %
2014	5.6 %	6.0 %	6,075,965	(2.73)%
2013	2.6 %	6.0 %	6,246,560	(10.32)%
2012	3.3 %	6.0 %	6,965,758	(2.65)%
2011	3.1 %	6.0 %	7,155,492	(8.47)%
2010	3.6 %	6.0 %	7,817,408	(2.11)%
2009	2.9 %	6.0 %	7,986,115	3.72 %
10-Yr Avg	4.1 %	6.0 %		(0.11)%

Florida Statutes 112.64(5)(a) requires that the payroll growth assumption not exceed the average payroll growth for the prior ten years. This requirement is met in that the Unfunded Accrued Liability is amortized as a level dollar amount.

In general, should a pattern of consistent gains or losses develop, assumptions may require revision.

Assets

While the return on the Market Value of Assets was 8.28%, the return on the Actuarial Value of Assets was 8.49% producing a gain on an actuarial basis. The following provides a summary of the actual to the expected return on investments for the 12-month periods ending on the date specified.

Fiscal Year Ending 9/30	% Market Return	% Actuarial Return	% Assumed Return
2018	8.3 %	8.5 %	7.75 %
2017	12.4 %	9.2 %	8.00 %
2016	10.6 %	9.9 %	8.00 %
2015	0.2 %	8.7 %	8.00 %
2014	11.2 %	10.2 %	8.00 %
2013	13.4 %	3.1 %	8.00 %
2012	19.3 %	(2.5)%	8.00 %
2011	(1.8)%	(0.2)%	8.00 %
2010	6.6 %	3.2 %	8.00 %
2009	(4.2)%	0.7 %	8.00 %
2008	(11.3)%	4.7 %	8.00 %
2007	12.7 %	10.4 %	8.00 %
2006	8.7 %	11.2 %	8.00 %
2005	10.7 %	7.0 %	8.00 %
2004	9.7 %	3.6 %	8.00 %
2003	16.5 %	3.6 %	8.00 %
2002	(7.4)%	2.7 %	8.00 %
2001	(3.0)%	6.0 %	8.00 %
2000	9.9 %	13.5 %	8.00 %
1999	12.5 %	14.5 %	8.00 %
1998	5.2 %	15.7 %	8.00 %
1997	30.2 %	17.2 %	8.00 %
1996	13.3 %	11.4 %	8.00 %
23 Yr Avg	7.6 %	7.4 %	7.99 %
10 Yr Avg	7.4 %	5.0 %	7.97 %
5 Yr Avg	8.4 %	9.3 %	7.95 %

Effective for the 12-month period ended September 30, 2009 the return on the market value of assets has been computed to include DROP balances. Effective for the 12-month period ended September 30, 2014 the return on the actuarial value of assets has been computed to include DROP balances.

Investment returns less than the assumed rate of return result in increased annual minimum required contributions.

Assumptions and Methods

The net assumed rate of investment return was revised from 7.75% used in the October 1, 2017 actuarial valuation to 7.5% for this October 1, 2018 actuarial valuation of the Plan as directed by the Board of Trustees. The 7.5% assumed return is a prescribed assumption as defined by Actuarial Standard of Practice No. 27 (ASOP 27), as it is set by the Board. The prescribed assumption significantly conflicts with our judgment regarding what would constitute a reasonable assumption for the purpose of the measurement as discussed in ASOP 27. As discussed with the Board we recommend lowering the net assumed return further.

A fresh start was implemented on the amortization of the Unfunded Accrued Liability retroactive effective October 1, 2017 at 18.15183 years such that the October 1, 2017 valuation amortization payment remains unchanged.

Plan Provisions

According to Ordinance No. 2017-46 which became effective upon adoption on October 10, 2017, the Share Plan becomes operative when the city and the union reach agreement on the details of the Share Plan. The draft IAFF local 1951 collective bargaining agreement for October 1, 2018 through September 30, 2021 states individual share accounts are established for active members and members in DROP effective October 1, 2018. However, the details associated with share account allocations, interest accruals and distributions have not been finalized. The October 1, 2016, 2017 and 2018 share balances have been set to $129,310. After details are finalized, the share balances may be revised.

State Contributions

Per Ordinance No. 2017-46 effective October 10, 2017, for premium tax revenues received in any Plan year after October 1, 2015 over that for calendar 2012 in the amount of $587,845, 50% is allocated to the Share Plan and 50% is used to reduce the City's annual required pension contributions.

The "Minimum Funding Requirement Expected Contribution from City" shown on page 1 assumes that the premium tax money received from the State will be in the same amount received in the prior year. Should the amounts received be less than expected, the City will need to contribute any potential shortfall to the Plan.

Section 2 Results Derivation

In this section, the assets and liabilities of the Plan are shown in detail. Assets and liabilities are then compared to determine the funded status and minimum funding requirements. Finally, analysis is performed to explain movement in results from the prior valuation.

While asset information is based on the fair market value of assets, along with any techniques used to smooth out market fluctuations, liabilities are determined through a combination of the benefit provisions, participant census data which contains information for the members who will receive those benefits, and the methods and assumptions used with regard to how benefits will be paid to members. A summary of participant data, an outline of the benefit provisions, and a description of the methods and assumptions used in this valuation are described in Section 4.

Financial Information

Over the life of the Plan, the majority of assets are typically generated from investment return. In this section, we describe how the assets of the Plan are invested, show how the actuarial value of assets is derived, and review the investment results since the prior valuation.

Investment Allocation

Valuation Date		**October 1, 2017**			**October 1, 2018**	
U.S. government obligations	$	7,486,440	11 %	$	7,003,689	10 %
Corporate bonds		6,730,922	10 %		7,665,761	11 %
Common/preferred stocks		53,041,173	76 %		55,217,247	75 %
Cash and cash equivalents		2,275,514	3 %		3,049,320	4 %
Net receivables		(261,715)	0 %		(39,664)	0 %
Fair Market Value of Assets	$	69,272,334	100 %	$	72,896,353	100 %

Reconciliation of Market Value of Assets

Year Ending		September 30, 2018 Market Value	Actuarial Value
1.	Beginning of year	$69,272,334	$67,582,483
2.	Contributions		
	a. City	$2,633,114	$2,633,114
	b. State	546,838	546,838
	c. Members	595,652	595,652
	d. Total	$3,775,604	$3,775,604
3.	Investment earnings		
	a. Unrealized gains and losses	$(1,194,784)	
	b. Realized gains and losses	5,325,191	
	c. Interest and dividends	1,876,699	
	d. Investment expense	(356,539)	
	e. Total	$5,650,567	$5,649,925
4.	Deductions		
	a. Pension benefits	$(5,617,080)	
	b. Contribution refunds	(24,055)	
	c. Administrative expenses	(161,017)	
	d. Total	$(5,802,152)	$(5,802,152)
5.	Net increase	$3,624,019	$3,623,377
6.	End of year	$72,896,353	$71,205,860

Development of Historical Asset Gains (Losses)

			2018		2017
1.	Market Value of Assets - Beginning of Year	$	69,272,334	$	63,638,996
2.	Expected Interest on Assets		5,368,606		5,091,120
3.	Contributions		3,775,604		4,030,785
4.	Benefit Payments + Administrative Expenses		(5,802,152)		(6,182,799)
5.	Interest on items (3) and (4)		(99,719)		(106,680)
6.	Expected Value of Assets at End of Year	$	72,514,673	$	66,471,422
7.	Market Value of Assets - End of Year	$	72,896,353	$	69,272,334
8.	Gain (Loss) for Plan Year = (7) - (6)	$	381,680	$	2,800,912

			2016		2015
1.	Market Value of Assets - Beginning of Year	$	58,341,219	$	58,760,194
2.	Expected Interest on Assets		4,667,298		4,700,816
3.	Contributions		3,746,662		3,738,624
4.	Benefit Payments + Administrative Expenses		(4,587,348)		(4,283,601)
5.	Interest on items (3) and (4)		(55,450)		(44,593)
6.	Expected Value of Assets at End of Year	$	62,112,381	$	62,871,440
7.	Market Value of Assets - End of Year	$	63,638,996	$	58,341,219
8.	Gain (Loss) for Plan Year = (7) - (6)	$	1,526,615	$	(4,530,221)

Note: These gain (loss) calculations include State contribution reserves, if any, and DROP account balances in the Market Value of Assets.

Development of Actuarial Value of Assets

The Market Value of Assets is adjusted to recognize investment earnings greater than (or less than) the assumed investment return over a five-year period. The Actuarial Value of Assets shall not be more than 120% or less than 80% of the Market Value of Assets.

1.	Gross Market Value of Assets as of September 30, 2018			$	72,896,353
2.	Phase-In Gains (Losses) Over Five Year Period				
	Year Ending	Original Gain (Loss)	Percent Unrecognized		Unrecognized Gain (Loss)
a.	September 30, 2018	$ 381,680	80%	$	305,344
b.	September 30, 2017	2,800,912	60%		1,680,547
c.	September 30, 2016	1,526,615	40%		610,646
d.	September 30, 2015	(4,530,221)	20%		(906,044)
e.	Total			$	1,690,493
3.	Preliminary Gross Actuarial Value of Assets			$	71,205,860
4.	Corridor Around Market Value				
a.	Minimum = 80% of Market Value of Assets			$	58,317,082
b.	Maximum = 120% of Market Value of Assets			$	87,475,624
c.	Corridor Adjustment to Preliminary Actuarial Value			$	0
5.	Actuarial Value of Assets as of September 30, 2018			$	71,205,860

Reconciliation of DROP Account Balances

Year Ending September 30,	**2017**	**2018**
DROP Balances as of Beginning of Year	$8,209,291	$7,501,040
Additions	697,136	498,460
Investment Return	505,826	464,978
Distributions	(1,911,213)	(1,215,837)
DROP Balances as of End of Year	$7,501,040	$7,248,641

State Contribution History

Year Ending September 30	Regular	Supplemental	Total
2018	$543,271	$3,567	$546,838
2017	508,280	6,703	514,983
2016	510,798	34,763	545,561
2015	499,843	69,994	569,837
2014	500,390	103,616	604,006
2013	512,084	75,762	587,845
2012	489,487	78,491	567,978
2011	495,487	49,815	545,302
2010	525,935	37,974	563,909
2009	505,855	62,143	567,998
2008	519,992	262,030	782,022
2007	497,785	187,105	684,890
2006	481,939	8,382	490,321
2005	468,885	0	468,885
2004	424,627	0	424,627
2003	392,038	0	392,038
2002	340,995	0	340,995
2001	295,965	0	295,965
2000	310,698	0	310,698
1999	286,709	0	286,709
1998	267,933	0	267,933

Enhanced Benefit Account

Year Ended September 30,			2017	2018
1.	Enhanced Benefit Account BOY		(4,988,926)	(4,533,105)
2.	Interest on Beginning Balance			
	a.	Return on Actuarial Value of Assets	9.2 %	8.5 %
	b.	Interest on Beginning Balance	0	0
3.	Net Investment Income Allocation			
	a.	Actuarial Value Beginning of Year (A)	63,929,282	67,582,483
	b.	Actuarial Value End of Year (B)	67,582,483	71,205,860
	c.	Contributions (C)	4,030,785	3,775,604
	d.	Benefits Paid (P)	(6,047,002)	(5,641,135)
	e.	Administrative Expenses (E)	(135,797)	(161,017)
	f.	Net Investment Income (I) = (B)-(A)-(C)-(P)-(E)	5,805,215	5,649,925
	g.	Return on Actuarial Value of Assets = 2I/(A + B - I)	9.2 %	8.5 %
	h.	Net Investment Income (if Expected Earned)	5,007,663	5,137,924
	i.	Net Investment Income in Excess of Expected	797,552	512,001
	j.	50% of (i)	398,776	256,001
4.	Premium Tax Distribution Allocation			
	a.	Premium Tax Distribution During Year	514,983	546,838
	b.	Covered Payroll During Year*	7,130,628	7,476,696
	c.	Premium Tax as % of Covered Payroll	7.2 %	7.3 %
	d.	Excess of Premium Tax Over 5.6%	1.6 %	1.7 %
	e.	50% x (b) x (d)	57,045	63,552
5.	Allocation to Members in Payment Status/DROP		0	0
6.	Net Allocation to Enhanced Benefit Account		455,821	319,553
7.	Enhanced Benefit Account at End of Year		(4,533,105)	(4,213,552)
8.	Comparison of Investment Income to Gains/Losses			
	a.	Annual Net Actuarial Gains and (Losses)	862,163	710,692
	b.	Cumulative Net Actuarial Gains and (Losses)	(3,075,192)	(2,364,500)
	c.	(3)(j)	398,776	256,001
	d.	Cumulative Net Investment Income Allocation	(5,059,993)	(4,803,992)

*The covered payroll during year is calculated as an average of the total valuation salary for the current and prior years.

Historical Enhanced Benefit Account Tracking

Year Ending 9/30	EBA BOY	Actuarial ROR	Interest on Beginning Balance	50% of Net Excess Actuarial Investment Income	50% of Excess of Premium Tax Over 5.6% Payroll	Allocation to Members in Payment Status/ DROP	Net Allocation to EBA	EBA EOY	Annual Net Actuarial Gains and (Losses)	Cumulative Net Actuarial Gains and (Losses)	Cumulative Net Investment Income Allocation
1996	0	11.4%	0	274,468	23,268	0	297,736	297,736	593,282	593,282	274,468
1997	297,736	17.2%	0	837,059	22,558	0	859,617	1,157,353	1,783,513	2,376,795	1,111,527
1998	1,157,353	15.7%	0	838,054	20,994	23,401	835,647	1,993,000	1,376,514	3,753,309	1,949,581
1999	1,993,000	14.5%	0	810,864	15,633	13,711	812,786	2,805,786	1,522,035	5,275,344	2,760,445
2000	2,805,786	13.5%	377,640	781,964	14,307	22,956	1,150,955	3,956,741	1,391,747	6,667,091	3,542,409
2001	3,956,741	6.0%	254,023	(226,370)	15,998	25,831	17,820	3,974,560	(42,738)	6,624,353	3,316,039
2002	3,974,560	2.7%	105,425	(887,504)	18,911	26,722	(789,890)	3,184,671	(154,495)	6,469,858	2,428,535
2003	3,184,671	3.6%	113,406	(736,209)	64,271	26,267	(584,799)	2,599,871	712,792	7,182,650	1,692,326
2004	2,599,871	3.6%	92,512	(744,155)	72,944	27,621	(606,320)	1,993,550	785,731	7,968,381	948,171
2005	1,993,550	7.0%	138,756	(176,580)	83,029	21,889	23,316	2,016,866	(1,470,591)	6,497,790	771,591
2006	2,016,866	11.2%	226,696	573,248	73,312	58,225	815,031	2,831,897	(880,911)	5,616,879	1,344,839
2007	2,831,897	10.4%	295,084	463,530	55,898	57,819	756,693	3,588,590	(302,886)	5,313,993	1,808,369
2008	3,588,590	4.7%	168,664	(684,570)	40,698	57,694	(2,605,934)	982,656	(887,818)	4,426,175	1,123,799
2009	982,656	0.7%	7,272	(1,617,980)	35,024	58,628	(1,634,312)	(651,656)	(2,537,911)	1,888,264	(494,181)
2010	(651,656)	3.2%	0	(1,082,281)	40,106	0	(1,042,175)	(1,693,831)	(1,396,478)	491,786	(1,576,462)
2011	(1,693,831)	(0.2%)	0	(1,848,820)	53,746	0	(1,795,074)	(3,488,905)	(3,758,443)	(3,266,657)	(3,425,282)
2012	(3,488,905)	(2.5%)	0	(2,313,548)	72,792	0	(2,240,756)	(5,729,661)	(4,711,885)	(7,978,542)	(5,738,830)
2013	(5,729,661)	3.1%	0	(1,055,525)	127,202	0	(928,323)	(6,657,984)	(459,535)	(8,438,077)	(6,794,355)
2014	(6,657,984)	10.2%	0	563,505	136,221	0	699,726	(5,958,258)	1,802,297	(6,635,780)	(6,230,850)
2015	(5,958,258)	8.7%	0	198,827	111,195	0	310,022	(5,648,236)	816,622	(5,819,158)	(6,032,023)
2016	(5,648,236)	9.9%	0	573,254	86,056	0	659,310	(4,988,926)	1,881,803	(3,937,355)	(5,458,769)
2017	(4,988,926)	9.2%	0	398,776	57,045	0	455,821	(4,533,105)	862,163	(3,075,192)	(5,059,993)
2018	(4,533,105)	8.5%	0	256,001	63,552	0	319,553	(4,213,552)	710,692	(2,364,500)	(4,803,992)

Note: Effective October 13, 2009, Ordinance No. 2009-35 reduced EBA funds retroactively to October 1, 2008 by a one-time deduction of $2,073,032, which was related to the cost to provide the increased 3.25% benefit accrual rate.

Present Value of Benefits

Valuation as of October 1,	2017	2018
1. **Active Members**		
a. Retirement Benefits	$36,700,576	$40,342,904
b. Deferred Benefits	775,095	826,243
c. Survivor Benefits	477,222	497,398
d. Disability Retirement	3,064,048	3,222,936
e. Total for Active Members	$41,016,941	$44,889,481
2. **Inactive Members**		
a. Retirement Including DROP	$54,923,853	$57,171,411
b. Terminated Vested	1,086,010	834,626
c. Beneficiaries	3,403,369	3,356,456
d. Disability Retirement	579,316	505,909
e. Total in Payment Status	$59,992,548	$61,868,402
3. **Enhanced Benefit Account Reserve***	$0	$0
4. **Share Plan**	$129,310	$129,310
5. **Present Value of Benefits**	$101,138,799	$106,887,193

*Enhanced Benefit Account balances less than zero are limited to zero.

Accrued Liability

Valuation as of October 1,			2017	2018
1.	**Active Members**			
	a.	Retirement Benefits	$ 24,181,511	$ 26,846,021
	b.	Deferred Benefits	151,267	161,751
	c.	Survivor Benefits	91,562	95,903
	d.	Disability Retirement	648,808	681,656
	e.	Total for Active Members	$ 25,073,148	$ 27,785,331
2.	**Inactive Members**			
	a.	Retirement Including DROP	$ 54,923,853	$ 57,171,411
	b.	Terminated Vested	1,086,010	834,626
	c.	Beneficiaries	3,403,369	3,356,456
	d.	Disability Retirement	579,316	505,909
	e.	Total in Payment Status	$ 59,992,548	$ 61,868,402
3.	**Enhanced Benefit Account Reserve***		$ 0	$ 0
4.	**Share Plan**		$ 129,310	$ 129,310
5.	**Accrued Liability**		$ 85,195,006	$ 89,783,043

*Enhanced Benefit Account balances less than zero are limited to zero.

Normal Cost

Valuation as of October 1,	2017	2018
1. **Preliminary Normal Cost**		
a. Retirement Benefits	$1,442,413	$1,554,337
b. Deferred Benefits	65,967	69,558
c. Survivor Benefits	43,949	46,195
d. Disability Retirement	272,386	287,928
e. Total	$1,824,715	$1,958,018
2. **Total Normal Cost**		
a. Preliminary Normal Cost	$1,824,715	$1,958,018
b. Estimated Administrative Expense	135,797	161,017
c. Total Normal Cost	$1,960,512	$2,119,035
d. Total Normal Cost as a % of Pay	25.18%	26.27%
3. **Employer Normal Cost**		
a. Total Normal Cost	$1,824,715	
b. Actual Administrative Expense	161,017	
c. Actual Employee Contributions	(595,652)	
d. Employer Normal Cost	$1,390,080	
e. Employer Normal Cost as a % of Pay	17.86%	
4. **Valuation Payroll**	$7,784,453	$8,066,142

Unfunded Accrued Liability

Actuarial Valuation as of October 1,	2018
Unfunded Accrued Liability	
1. Actuarial Accrued Liability	$89,783,043
2. Actuarial Value of Assets	(71,205,860)
3. Unfunded Accrued Liability	$18,577,183
Determination of Expected Unfunded Accrued Liability	
1. Unfunded Accrued Liability as of Prior Year	$17,612,523
2. Employer Normal Cost (Including Administrative Expenses)	1,390,080
3. Interest for a full year on (1) and (2)	1,472,702
4. Contribution from City and State	
a. Contribution from City	$(2,633,114)
b. Recognized Contribution from State	(546,838)
c. Total Contribution	$(3,179,952)
5. Interest on Contribution for Time on Deposit	(102,033)
6. Change in Plan, Methods or Assumptions	2,094,555
7. Expected Unfunded Accrued Liability	$19,287,875
Calculation of (Gain) or Loss	
1. Actual Unfunded Accrued Liability	$18,577,183
2. Expected Unfunded Accrued Liability	19,287,875
3. Total (Gain) or Loss	(710,692)
Reconciliation of Unfunded Accrued Liability	
1. Unfunded Actuarial Liability as of Prior Year	$17,612,523
2. Total Change in Unfunded Accrued Liability	
a. Expected Change in Unfunded Accrued Liability	(419,203)
b. Change in Plan, Methods or Assumptions	2,094,555
c. Change Due to (Gain) or Loss	
i. Portion of (Gain) / Loss Due to Investments	(512,001)
ii. Portion of (Gain) / Loss Due to Demographics	(198,691)
iii. Total (Gain) or Loss	(710,692)
d. Total Change in Unfunded Accrued Liability	$964,660
3. Unfunded Accrued Liability	$18,577,183
Calculation of Actuarial Asset (Gain) or Loss	
1. Actuarial Value of Assets - Beginning of Year	$67,582,483
2. Contributions	3,775,604
3. Benefit Payments + Administrative Expenses	(5,802,152)
4. Expected Return on Assets	5,137,924
5. Expected Actuarial Value at End of Year	$70,693,859
6. Actuarial Value of Assets - End of Year	$71,205,860
7. Gain (Loss) for Plan Year = (6) - (5)	$512,001
8. Actual Investment Income	$5,649,925
9. Actual % Return	8.49%

Amortization of Unfunded Liability

The Unfunded Accrued Liability is being amortized as a level dollar amount based on the assumed investment return. Future changes in UAL are amortized over a 25-year period.

A fresh start was implemented on the amortization of the Unfunded Accrued Liability retroactive effective October 1, 2017 at 18.15183 years such that the October 1, 2017 valuation amortization payment remains unchanged.

Amortization Bases

10/1	Type	Original Amount	Outstanding Amount	Years Remaining	Amortization Amount
2017	Fresh Start	17,612,523	17,193,320	17.15183	1,687,724
2018	(Gain)/Loss	(710,692)	(710,692)	25.00000	(59,309)
2018	Assumed Net 7.5%	2,094,555	2,094,555	25.00000	174,794
			18,577,183		1,803,209

Actions Taken to Reduce Unfunded Actuarial Accrued Liability

The required contributions calculated each year include a payment for the amortization of the unfunded actuarial accrued liability. This payment is designed to reduce the unfunded actuarial accrued liability in an orderly fashion over the next 25 years.

Projected Unfunded Accrued Liability and Amortization Payments

Plan Year Beginning October 1	Outstanding Bases	Amortization Payment
2018	$18,577,183	$1,803,209
2019	18,032,022	1,803,210
2020	17,445,973	1,803,209
2021	16,815,971	1,803,210
2022	16,138,718	1,803,210
2023	15,410,671	1,803,210
2024	14,628,021	1,803,210
2025	13,786,672	1,803,210
2026	12,882,222	1,803,209
2027	11,909,938	1,803,210
2028	10,864,733	1,803,209
2029	9,741,138	1,803,210
2030	8,533,273	1,803,209
2031	7,234,819	1,803,210
2032	5,838,980	1,803,209
2033	4,338,453	1,803,210
2034	2,725,387	1,803,208
2035	991,342	379,659
2036	657,559	115,486
2037	582,729	115,486
2038	502,286	115,485
2039	415,811	115,487
2040	322,849	115,486
2041	222,915	115,486
2042	115,486	115,486
2043	0	0

Minimum Funding Requirements

Actuarial Valuation as of October 1, **Minimum Funding for FYE September 30,**	**2017** **2019**	**2018** **2020**
1. **Total Required Contribution (Prior to Projection)**		
a. Total Normal Cost	$1,960,512	$2,119,035
b. Amortization of Unfunded Accrued Liability	1,707,198	1,803,209
c. Total Required Contribution	$3,667,710	$3,922,244
2. **Total Required Contribution (Projected to Beginning of Next Fiscal Year)**		
a. Total Required Contribution	$3,951,958	$4,216,412
b. Projection Rate to Next Fiscal Year	7.75%	7.50%
3. **Contribution (Adjusted for Periodic Payments)**	$4,125,052	$4,395,034
4. **Total Required Contribution (Adjusted for Periodic Payments)**		
a. Expected City Contributions	$3,026,235	$3,243,235
b. Estimated State Contributions	514,983	546,838
c. Expected Member Contributions	583,834	604,961
d. Total Required Contribution	$4,125,052	$4,395,034
e. Expected City Contributions as a % of Pay	38.88%	40.21%
f. Estimated State Contributions as a % of Pay	6.62%	6.78%
g. Expected Member Contributions as a % of Pay	7.50%	7.50%
h. Total Required Contribution as a % of Pay	53.00%	54.49%
5. **Valuation Payroll**		
a. Payroll Expected	$7,784,453	$8,066,142
b. Projected to Next Valuation Year	7,784,453	8,066,142

Reconciliations

Change in Funded Percentage

	Unfunded Accrued Liability	Funded Percentage	Change in Unfunded Accrued Liability	Change in Funded Percentage
Prior Valuation Report	$17,612,523	79.33%		
Changes in Funded Ratio due to:				
Normal Operation of Plan	$17,193,320	80.44%	$(419,203)	1.11%
Actuarial Investment Experience	16,681,319	81.02%	(512,001)	0.58%
Demographic Experience	16,482,628	81.20%	(198,691)	0.18%
Revise Net Interest Assumption	18,577,183	79.31%	2,094,555	(1.89%)
Total Changes			$964,660	(0.02%)
As of Current Valuation	$18,577,183	79.31%		

Change in City Contribution

	Dollar Amount	% of Pay
Prior Valuation Report	$3,026,235	38.88 %
Changes in Contribution due to:		
Normal Operation of Plan	$0	0.00 %
Change in Expected State Contribution	(30,621)	(0.40)%
Actuarial Investment Experience	(48,763)	(0.62)%
Demographic Experience	36,924	(0.87)%
Revise Net Interest Assumption	259,460	3.22 %
Total Changes	$217,000	1.33 %
As of Current Valuation	$3,243,235	40.21 %

Section 3 Accounting Information

Information Required by GASB 67/68

Supplemental reports provide information under Governmental Accounting Standards Board No. 67/68.

Statement of Accumulated Plan Benefits

Valuation as of October 1,	2017	2018
1. Actuarial present value of accumulated plan benefits		
a. Participants currently receiving benefits	$58,906,538	$61,033,776
b. Inactive vested with deferred benefits and active vested including contributions	18,288,486	20,174,145
c. Total vested plan benefits	$77,195,024	$81,207,921
d. Total non-vested plan benefits	2,257,416	2,603,222
e. Total accumulated plan benefits	$79,452,440	$83,811,143
2. Change in accumulated plan benefits		
a. Accumulated plan benefits beginning of year		$79,452,440
b. Increase (decrease) during year attributable to:		
i. Plan amendment		$0
ii. Change in assumptions or methods		1,964,817
iii. Benefits paid		(5,641,135)
iv. Increase for interest and probability of payment due to decrease in discount period and benefits accrued		8,035,021
v. Net increase (decrease)		$4,358,703
c. Accumulated plan benefits end of year		$83,811,143

Note: Share balances are excluded in the above accumulated benefit information. The share balance was $129,310 at both October 1, 2017 and October 1, 2018.

Other Disclosures Required by the State of Florida

Valuation as of October 1,	2017	2018
Other Disclosures (where applicable)		
Present value of active member:		
Future salaries (attained age)	$70,334,556	$71,892,903
Future contributions (attained age)	$5,275,092	$5,391,968
Employee contributions without interest	$3,615,453	$3,956,510

Required Disclosure Under F.S. 112.664(1)

As required under F.S. Section 112.664(1) we have produced the following information:

(a) Total pension liability calculated based on mortality used in one of the last two Florida Retirement System (FRS) valuations. This actuarial valuation assumes mortality as used in the July 1, 2016, 2017, and 2018 actuarial valuation for special risk members of FRS.

(b) Total pension liability calculated using an assumed interest rate that is 200 basis points lower than that assumed in the valuation of the Plan.

(c) Determination of the number of months or years for which the current market value of assets is adequate to sustain the payment of expected retirement benefits.

(d) Recommended contribution to the Plan using the most recent valuation and the contributions necessary prepared pursuant to (a) and (b) stated as a dollar amount and % of payroll.

	2% Decrease (5.50%)	Current Discount Rate (7.50%)	2% Increase (9.50%)
Total pension liability	$110,485,253	$89,783,043	$75,267,154
Plan fiduciary net position	(72,896,353)	(72,896,353)	(72,896,353)
Net pension liability	$37,588,900	$16,886,690	$2,370,801
Plan fiduciary net position as a percentage of the total pension liability	65.98%	81.19%	96.85%
Years of benefit payments:			
Expected for current members:	99	99	99
Paid for with current assets:	13.25	15.94	21.21
City Plus State Contribution Requirement, Plus Expected Employee Contributions			
Dollar Amount	$6,726,182	$4,395,034	$2,449,931
Percent of Payroll	83.39%	54.49%	30.37%

Required Disclosure Under F.S. 112.664(2)(b)2.

F.S. Section 112.664(2)(b)2. - For the previous five years, beginning with 2013, a side-by-side comparison of the plan's assumed rate of return compared to the actual rate of return, as well as the percentages of cash, equity, bond and alternative investments in the plan portfolio.

Year Ending September 30,	2018	2017	2016	2015	2014
Assumed rate of return	7.75%	8.0%	8.0%	8.0%	8.0%
Actual rate of return	8.28%	12.4%	10.6%	0.2%	11.2%
Percentages of assets in:					
Cash	4%	3%	3%	3%	5%
Equity	75%	76%	76%	74%	70%
Bond	21%	21%	22%	23%	25%
Alternative	0%	0%	(1%)	0%	0%
Total	100%	100%	100%	100%	100%

Section 4 Supplementary Information

Summary of Participant Data

Member Statistics

Valuation as of October 1,	**2017**	**2018**
Active Participants		
Number	121	124
Average Age	37.7	38.0
Average Credited Service	9.9	10.0
Percent Male	99.2	98.4
Average Valuation Salary	$60,693	$61,367
Total Valuation Salary	$7,343,824	$7,609,568
Total Valuation Salary (Imputed)	$7,784,453	$8,066,142
Terminated With Rights to Deferred Benefits		
Number	5	4
Average Age	44.2	42.9
Percent Male	80.0	100.0
Average Monthly Benefit	$2,222	$2,112
DROP Participants		
Number	10	7
Average Age	57.1	56.1
Percent Male	100.0	100.0
Average Monthly Benefit	$4,945	$4,562
DROP Account Balances	$1,826,534	$893,493

Member Statistics (Continued)

Valuation as of October 1,	2017	2018
Retirees		
Number	85	92
Average Age	65.1	65.4
Percent Male	96.5	94.6
Average Monthly Benefit	$3,688	$3,619
DROP Account Balances	$5,502,380	$6,193,547
Beneficiaries		
Number	12	12
Average Age	70.0	71.0
Percent Male	0.0	0.0
Average Monthly Benefit	$2,527	$2,494
DROP Account Balances	$172,126	$161,602
Disability Retirements		
Number	5	4
Average Age	54.9	55.4
Percent Male	80.0	75.0
Average Monthly Benefit	$953	$957
Total In Payment Status		
Number	102	108
Average Age	65.2	65.6
Percent Male	84.3	83.3
Average Monthly Benefit	$3,417	$3,396

Note: One survivor is in receipt of an annuity for the remainder of a 10-year certain period. The average age for beneficiaries shown above is the average for other survivors who are in receipt of a life only annuity.

Number of Active Members by Age and Service as of October 1, 2018

	x < 1	x < 5	x < 10	x < 15	x < 20	x < 25	x < 30	Total
x < 20								
x < 25	2	3						5
x < 30	5	11	4					20
x < 35	3	9	10	8				30
x < 40	1	2	4	6	2			15
x < 45	1	1	3	11	3	1		20
x < 50		1		6	7	10		24
x < 55				2	3	3		8
x < 60			1		1			2
60+								
Total	12	27	22	33	16	14		124

Active Valuation Pay by Age and Service as of October 1, 2018

	x < 1	x < 5	x < 10	x < 15	x < 20	x < 25	x < 30	Total
x < 20								
x < 25	31,557	49,047						42,051
x < 30	35,836	47,193	52,731					45,461
x < 35	35,702	48,959	56,841	63,188				54,055
x < 40	40,481	48,416	56,284	66,636	68,453			59,945
x < 45	17,385	51,637	57,754	66,178	75,574	125,798		66,138
x < 50		88,076		62,138	75,823	87,552		77,800
x < 55				66,224	75,803	75,461		73,280
x < 60			125,203		67,877			96,540
60+								
Total	33,939	49,757	59,224	64,805	74,355	87,693		61,367

Reconciliation of Plan Participants

	Active	Vested Term.	DROP	Retired	Survivor	Disabled	Total
October 1, 2017	121	5	10	85	12	5	238
Enter DROP	(1)		1				0
Retired	(2)	(1)	(4)	7			0
Nonvested	(6)						(6)
Forfeiture						(1)	(1)
New Hires	12	0	0	0	0	0	12
October 1, 2018	124	4	7	92	12	4	243

Outline of Plan Provisions

Plan Type: Single-employer Defined Benefit Pension Plan

Legal Authority: The Plan was established and is amended by local ordinance.

Board Composition: The Board consists of five Trustees, two of whom are legal residents of the City who are appointed by the City Commission, two of whom are full-time firefighters who are members of the Plan and who are elected by a majority of the Firefighter members, and a fifth Trustee who is chosen by a majority of the first four Trustees.

Plan Administrator: The Board of Trustees

Funding Requirements: Employer contributions are actuarially determined and subject to State statute. Employee contributions are as described below and may be amended by ordinance.

Effective Date: Ordinance No. 2006-07 adopted January 24, 2006 amended the Plan provisions in their entirety. The following provides the history of subsequent ordinances:

- Ordinance No. 2009-17 adopted effective May 12, 2009 amended the definition of Actuarial Equivalence to be based on assumptions adopted by the Board; included USERRA military service as Credited Service; updated ordinance language with respect to IRC Section 401(a) qualification, 401(a)(9) minimum required distributions, 401(a)(17) pay limitations, 414(d) qualification, 415 benefit limitations, and 503(b) prohibited transactions; simplified language to indicate City contributions are based on the applicable actuarial valuation; revised language regarding the optional form of benefits payable to disability retirees and when payments end; to indicate a survivor may be paid a lump sum if the present value of benefits is less than $1,000; and included language revision to pertaining to domestic relations orders, forfeitures and rollovers.
- Ordinance No. 2009-25 adopted effective June 23, 2009 amended the section of the Plan regarding finances and management to provide for more liberal investment options, including an increase in the allowable percentage allocated for international investments.
- Ordinance No. 2009-35 adopted effective October 13, 2009 changed employee contributions from 4.75% to 6.0% of pay, increased the benefit accrual rate from 3.0% to 3.25% for retirements on and after October 1, 2008 (which is partially paid for with a one-time deduction from the Enhanced Benefit Account), clarified the Enhanced Benefit Account carry-forward methodology, changed the Supplemental Benefit to be payable for the life of the member only, and provides for an additional Supplemental Benefit of $2.50 full years of Credited Service in the fifth year of retirement from available Enhanced Benefit Account funds.
- Ordinance No. 2010-04 adopted effective January 26, 2010 amended language regarding the repeal or termination of the system, allowing for retiree directed payments, to no longer allow the purchase of a non-forfeitable fixed annuity with respect to DROP distributions, to allow the purchase of military and prior firefighter service over up to a five year period, and to allow the purchase of certain prior firefighter outside the state of Florida.
- Ordinance 2011-57 was adopted December 13, 2011. This amendment provides for the use of up to 50% of the cumulative balance is State contributions available for benefit improvement to pay for any increase in the total normal cost rate more than 1.25% of pay. This ordinance states that the 6.0% employee contribution rate is set for three years and that for the fiscal year beginning October 1, 2011 and October 1, 2014 an actuarial valuation is performed to recalculate the cost of the benefit improvement.
- Ordinance No. 2015-06 became effective upon adoption on March 24, 2015 revising (1) the definition of Salary to exclude payments for overtime in excess of 300 hours per fiscal year and payments for accrued sick and annual leave from the definition of Salary [except that for

members employed on March 24, 2015 Salary does include the lesser of (a) the amount of sick and annual leave accrued as of March 24, 2015 and (b) the actual amount of sick and annual leave for which the member receives payment at retirement], (2) employee contributions effective April 1, 2015 from 6.0% to 7.5% of Salary, (3) the Supplemental Benefit to indicate that if there are insufficient funds available in the EBA to pay for both the increased supplement and the variable COLA, the monthly supplement is payable first and then for the remaining funds in the EBA are used to provide the variable COLA on a prorate basis, (4) the maximum pension benefit to be $90,000 annually for members hired on or after March 24, 2015 and also members employed on March 24, 2015 who have not reached the normal retirement date [except that the accrued a benefit in excess of $90,000 annually as of March 24, 2015 is not reduced to $90,000 but no additional benefits will accrue], and (5) DROP interest crediting for members who elect the fixed rate from an annual rate of 6.5% to 1.3% for those who enter the DROP on or after March 24, 2015.

- Ordinance No. 2017-46 became effective upon adoption on October 10, 2017. This ordinance (1) requires employee contributions of 6.5% of Salary from Members who enter the DROP after October 10, 2017, (2) for Members employed after October 10, 2017, the Accrued Benefit is 3.0% x Average Final Compensation x Credited Service, and for Members employed on or before October 10, 2017 and retiring on or after October 1, 2008 the Accrued Benefit is 3.25% x Average Final Compensation x Credited Service, and (3) a Share Plan is established where accumulated excess premium tax revenues as of October 1, 2015 (totaling $258,620) are split where 50% is allocated to the Share Plan and 50% is used to pay down the unfunded liability of the Plan. For premium tax revenues received in any Plan year after October 1, 2015 over that for calendar 2012 in the amount of $587,845, 50% is allocated to the Share Plan and 50% is used to reduce the city's annual required pension contributions. However, the Share Plan becomes operative when the city and the union reach agreement on the details of the Share Plan.

Plan Year: The 12-month period from October 1st to the following September 30th.

Member: Full-time firefighters become Members immediately upon hire.

Actuarial Equivalence: Using the funding assumptions as adopted by the board.

Credited Service: Total years and fractional parts of years of service as a firefighter with Member contributions, when required. Credited Service also includes certain military service. Additional Credited Service may be purchased.

Vesting: 100% upon the earlier of earning ten years of Credited Service and reaching the Normal Retirement Date.

Salary: Total compensation for services rendered to the City as a firefighter reported on Form W-2 plus all tax-deferred, tax sheltered, or tax-exempt items of income derived from elective employee payroll deductions.

Effective March 24, 2015 Salary excludes payments for overtime in excess of 300 hours per fiscal year and payments for accrued sick and annual leave from the definition of Salary [except that for members employed on March 24, 2015 Salary does include the lesser of (a) the amount of sick and annual leave accrued as of March 24, 2015 and (b) the actual amount of sick and annual leave for which the member receives payment at retirement].

Effective for benefits calculated after October, 2016, Salary used is that for the fiscal year.

Regular Base Salary: One-twelfth of the employee's annual base pay rate plus any incentive pay.

Employee Contributions: Prior to Ordinance No. 2009-35 adopted October 13, 2009, employees hired prior to May 9, 1978 contributed 5.0% of Salary. Employees hired after May 9, 1978 contributed 4.75%

of Salary. Effective October 13, 2009, Ordinance No. 2009-35 revised employee contributions to 6.0% of Salary. Effective December 13, 2011, Ordinance No. 2011-57 put special rules in place related to the multiplier increase from 3.0% to 3.25% associated with the 1.25% employee contribution rate increase from 4.75% to 6.0%. Effective April 1, 2015, Ordinance No. 2015-06 revised employee contributions from 6.0% to 7.5% of Salary. Ordinance No. 2017-46 requires employee contributions of 6.5% of Salary from Members who enter the DROP after October 10, 2017.

A Member who terminates non-vested is entitled to refund of accumulated Employee Contributions with interest at 4% per year. Contributions may be repaid with interest upon reentry into the Plan due to rehire. The annual 4% interest crediting is not applied to employee contributions associated with a service purchase.

Vested Members who terminate employment prior to being eligible to receive an annuity may leave their accumulated contributions in the fund, and upon reaching Early Retirement eligibility begin commencement of the reduced Accrued Benefit plus the Supplemental Benefit, as defined under Early Retirement.

Average Final Compensation: Average of Salary for the five highest years out of the last 10 years of Credited Service.

Normal Retirement Date: For those who were Members prior to May 9, 1978, the first day of the month coincident with or next following the earlier of (i) age 50, regardless of Credited Service, or (ii) 25 years Credited Service, regardless of age. For those becoming Members on or after May 9, 1978, the first day of the month coincident with or next following the earlier of (i) age 55 and completion of 10 years of Credited Service, or (ii) 25 years Credited Service, regardless of age.

For those who did not earn 25 years of Credited Service upon termination of employment, the Normal Retirement Date is the first day of the month coincident with or next following the earlier of (i) age 55 and completion of 10 years of Credited Service, or (ii) the date the member would have earned 25 years of Credited Service.

Normal Retirement Benefit: The Accrued Benefit plus the Supplemental Benefit.

Per Ordinance No. 2015-06, the maximum pension benefit is limited to $90,000 annually for members hired on or after March 24, 2015 and also members employed on March 24, 2015 who have not reached the normal retirement date [except that the accrued a benefit in excess of $90,000 annually as of March 24, 2015 is not reduced to $90,000 but no additional benefits will accrue].

The $90,000 limit does not apply to the Supplemental Benefit.

Accrued Benefit: Per Ordinance No. 2017-46, for Members employed after October 10, 2017:

3.0% x Average Final Compensation x Credited Service

For Members employed on or before October 10, 2017 and retiring on or after October 1, 2008:

3.25% x Average Final Compensation x Credited Service

For members retiring on or after October 1, 1995 the multiplier was 3.0%, as last used in the October 1, 2008 actuarial valuation of the Plan. Prior to October 1, 1995 the multiplier was 2.5%.

This benefit is payable as a 10-year certain and continuous annuity.

Supplemental Benefit: Effective October 1, 2003, a Supplemental Benefit is payable monthly for the joint lives of the member and their beneficiary equal to $5 for each full year of Credited Service. Effective October 13, 2009, Ordinance No. 2009-35 clarified that this benefit is payable over only the life of the

member. In addition, Ordinance No. 2009-35 provided for all current and future retirees to potentially receive an additional $2.50 for each full year of Credited Service (for a total of $7.50 for each full year of Credited Service) beginning on the fifth anniversary of retirement. DROP participation counts toward the satisfaction of the five years of retirement. The additional $2.50 is only provided through available funds from the Enhanced Benefit Account, if any.

Effective March 24, 2015 Ordinance No. 2015-06 provides that if there are insufficient funds available in the Enhanced Benefit Account to pay for both the $2.50 increased supplement and the variable cost of living adjustment, the monthly supplement is payable first and then the remaining funds in the Enhanced Benefit Account are used to provide the variable cost of living adjustment on a prorate basis.

Early Retirement Date: The first day of the month coincident with or next following the earlier of attainment of age 50 or the completion of 20 years of Credited Service.

For those who did not earn 20 years of Credited Service upon termination of employment, the Early Retirement Date is the first day of the month coincident with or next following the earlier of attainment of age 50 or the date the member would have earned 20 years of Credited Service.

Early Retirement Benefit: The Accrued Benefit reduced by 3% per year by which the commencement of benefits precedes the Normal Retirement Date, plus the Supplemental Benefit.

Enhanced Benefit Account (EBA): Provides for a lump sum variable cost of living adjustment for all members who retired, became disabled, or terminated vested on or after September 30, 1996, and their beneficiaries.

Commencing annually from March 1, 1997, the sum of (a) and (b), as follows, is credited to or deducted from the EBA to provide a lump sum variable cost of living adjustment:

(a) 50% of positive or negative net investment income compared to fund's investment objective for the preceding fiscal year, and
(b) 50% of the amount by which the premium taxes collected and distributed by the state exceed 5.6% of covered payroll during the preceding fiscal year.

Covered payroll during the preceding fiscal year has historically been the calculated as an average of the total valuation salary for the current and prior valuation.

The ordinance states that the cumulative value of the EBA allocation provided by (a), above, may not exceed the cumulative net actuarial gains and losses from all sources incurred from the inception of this provision. Note that any amount allocated to the EBA based on the language in (b) does not actually reduce premium taxes available to fund other benefits.

Effective October 13, 2009, Ordinance No. 2009-35 reduced EBA funds retroactively to October 1, 2008 by a one-time deduction equal to the cost to provide the increased 3.25% benefit accrual rate minus the amount of any unallocated premium tax money and defined use of EBA funds to first pay for an additional Supplemental Benefit of $2.50 for each full year of Credited Service after the fifth year of retirement (prior to the payment of any lump sum variable cost of living adjustment described in the following).

Each April 1 the EBA is allocated among the retirees as of the preceding September 30 based upon (i) the number of full months of retirement during the preceding fiscal year, and (ii) in proportion to the amount of each retiree's actual monthly retirement benefit. The allocation is limited to a maximum of 3% of the pension benefit (prorated if retired less than a full year). In the event that in any year the balance in the fund would result in a higher payment, the excess is returned to the EBA and carried forward to the next year. Any funds carried forward in the EBA are credited with the rate of return achieved by the fund. Per direction of the Board of Trustees at their January 25, 2017 meeting, in years when the beginning balance of the EBA is negative, there is no interest crediting applied in carrying

forward the EBA balance to the next year. This change was made retroactively to when the EBA first became negative with the October 1, 2017 actuarial valuation.

Effective March 24, 2015 Ordinance No. 2015-06 provides that if there are insufficient funds available in the EBA to pay for both the $2.50 increased supplement and the variable cost of living adjustment, the monthly supplement is payable first and then the remaining funds in the EBA are used to provide the variable cost of living adjustment on a prorate basis.

<u>Death Benefits:</u> In the event of death in the line of duty prior to retirement eligibility, 40% of Regular Base Salary is payable to the spouse until their death. If there is no spouse, or upon the death of the spouse, 15% of Regular Base Salary is payable for each unmarried child until the age of 18 (or age 22 if a full-time student). The maximum amount payable to all such children is 40% of Regular Base Salary.

In the event of death not in the line of duty prior to retirement eligibility, the Employee Contributions accumulated with interest is payable or 10-year certain annuity reduced actuarially from the early retirement date.

For Members eligible for retirement at their date of death, the benefit payable is that greater in actuarial value between (i) the benefit defined for line of duty death prior to retirement eligibility and (ii) the benefit payable if the Member had retired on the date of death. The resulting amount is payable on a monthly basis for ten years, or on such other actuarially equivalent basis as approved by the board.

<u>Disability Retirement:</u> The benefit payable to any Member who becomes totally and permanently disabled in the line of duty is the greater of (i) 2% x Average Final Compensation x Credited Service, (ii) 42% x Average Final Compensation, and (iii) 40% x Regular Base Salary. The Supplemental Benefit is also payable.

The benefit payable to any Member who becomes totally and permanently disabled not in the line of duty after having earned 10 years of Credited Service is the greater of (i) 2% x Average Final Compensation x Credited Service, (ii) the Accrued Benefit as reduced for Early Retirement, further reduced actuarially in the event of disability prior to the Early Retirement Date, and (iii) 25% x Average Final Compensation. The Supplemental Benefit is also payable.

Disability Retirement benefits are payable on the first day of the first month after the board determines such entitlement. However, the monthly benefit is payable as of the date the board determined entitlement and any portion due for a partial month is paid together with the first payment.

<u>Optional Forms of Benefit:</u> The Accrued Benefit described above is payable in the form of a 10 year certain and continuous annuity. Members may optionally choose an actuarially equivalent single life annuity, joint and survivor annuity (with 50%, 66 2/3, 75% or 100% continuance), or a Social Security level income option (if a member retires prior to the time at which Social Security benefits are payable). Members who do not participate in the DROP may elect to receive 20% of the present value of their benefits as a single lump sum and the remainder of the value of their benefits as a 10 year certain and continuous annuity, a single life annuity, or a joint and survivor annuity (with 50%, 66 2/3%, 75% or 100% continuance).

<u>Deferred Retirement Option Plan (DROP):</u> Members are eligible to enter the DROP at the Normal Retirement Date. DROP participants are not eligible for death or disability benefits. The maximum DROP participation duration is 60 months. The Accrued Benefit plus Supplemental Benefit is frozen and no further Employee Contributions are payable at DROP entry. The Accrued Benefit accumulates in the DROP account with interest, credited quarterly, as elected by the Member (where this election may be changed by the Member annually effective October 1):

(a) An annual rate of 6.5%, compounded monthly, on the prior month's ending balance for members who enter the DROP before March 24, 2015, and 1.3%, compounded monthly, on the prior month's ending balance for members who enter the DROP on or after March

24, 2015. However, any member who was Normal Retirement eligible by October 1, 2012 receives 6.5% annual crediting even if they enter the DROP on or after March 24, 2015 per the legal opinion dated August 13, 2012.

(b) The average daily balance in the member's DROP account is credited or debited at a rate equal to the net investment return realized for the quarter.

(c) 50% of (a) plus 50% of (b).

A Member's final DROP account value for distribution is the value of the account at the end of the quarter immediately preceding termination of participation in the DROP, plus any monthly periodic additions made to the DROP account subsequent to the end of the previous quarter and prior to distribution.

The Supplemental Benefit is payable once the member actually terminates from employment and begins to receive monthly pension payments after the end of the DROP.

The $90,000 annual limit does limit deposits to the DROP, but does not limit DROP balance payouts.

<u>Share Plan:</u> Per Section 175.351(6), Florida Statutes, a defined contribution component (Share Plan) is established to be funded exclusively with Chapter 175 premium tax revenues where the accumulated excess premium tax revenues as of October 1, 2015 (totaling $258,620) are split where 50% is allocated to the Share Plan and 50% is used to pay down the unfunded liability of the Plan. For premium tax revenues received in any Plan year after October 1, 2015 over that for calendar 2012 in the amount of $587,845, 50% is allocated to the Share Plan and 50% is used to reduce the city's annual required pension contributions. Per Ordinance 2017-46, the Share Plan becomes operative when the city and the union reach agreement on the details of the Share Plan.

As stated in the draft IAFF local 1951 collective bargaining agreement for October 1, 2018 through September 30, 2021, individual share accounts are established for active members and members in DROP effective October 1, 2018, as follows:

(a) $129,310 is split evenly among each member during the first pay period in October, 2018, or as soon as practicable thereafter.

(b) An equal share of 50% of premium tax revenues in excess of $587,845 is credited within 30 days of receipt, or as soon as practicable thereafter.

In order to receive a share allocation, active members must be employed on October 1 for the year in which premium tax revenues are received. Members vest in the share account after 10 years of employment as determined by their hire date. The share account of employees who terminate prior to vesting is reallocated to all other share accounts. Share account money is commingled with other assets of the Plan for investment purposes. Share accounts are credited with net gains and losses at the same rate as the other assets of the Plan at the end of each calendar quarter. Share accounts are adjusted annually to account for costs, fees and expenses of share account administration. The share account balance is paid to vested participants upon leaving employment with the City for any reason, other than entering DROP. The Board of Trustees is authorized to adopt any rules necessary for the efficient operation of the Share Plan.

Description of Assumptions and Methods

Assumed Rate of Investment Return: 7.5% per year, net of investment expenses (changed from 7.75% per year, net of investment expenses for the prior valuation).

Salary Increase – Individual: 6.0% per year. The final year salary is increased using individualized percentages equal to the actual total accrued leave hours as of October 1, 2014 multiplied by the hourly rate of pay at October 1, 2014 divided by annualized fiscal 2014 salary after removing pay for overtime in excess of 300 hours.

Administrative Expenses: Prior year's actual expenses added to Normal Cost

Salary Increase – Total Payroll: No payroll growth is assumed in the amortization of unfunded accrued liability.

Inflation: 2.5% per year

Mortality: The mortality table is that used for special risk employees in the valuation of the Florida Retirement System (FRS) as of July 1, 2016, 2017 and 2018, as required by state statute.

Healthy mortality (Pre-retirement):
Males: 10% RP-00 Combined Healthy White Collar +
90% RP-00 Combined Healthy Blue Collar
Females: 100% RP-00 Combined Healthy White Collar
Both male and female rates fully generational using Scale BB

Healthy mortality (Post-retirement):
Males: 10% RP-00 Annuitant White Collar +
90% RP-00 Annuitant Blue Collar
Females: 100% RP-00 Annuitant White Collar
Both male and female rates fully generational using Scale BB

Disabled mortality:
Males: 60% RP-00 Disabled Retiree Set Back 4 Years +
40% RP-00 Annuitant White Collar
Females: 60% RP-00 Disabled Retiree Set Forward 2 Yrs +
40% RP-00 Annuitant White Collar
No mortality improvement is assumed for disabled lives.

Retirement: Unisex rates, as follows:

	Service			
Age	<=9	10-19	20-24	>=25
<=39	0%	0%	0%	0%
40-49	0%	0%	5%	100%
50-54	5%	5%	5%	100%
>=55	5%	100%	100%	100%

Termination: Unisex rates, as follows:

Age	Rate	Age	Rate	Age	Rate	Age	Rate
<=19	0.00%	27	2.65%	35	1.90%	43	1.06%
20	3.00%	28	2.60%	36	1.78%	44	0.98%
21	2.95%	29	2.55%	37	1.66%	45	0.90%
22	2.90%	30	2.50%	38	1.54%	46	0.82%
23	2.85%	31	2.38%	39	1.42%	47	0.74%
24	2.80%	32	2.26%	40	1.30%	48	0.66%
25	2.75%	33	2.14%	41	1.22%	49	0.58%
26	2.70%	34	2.02%	42	1.14%	50	0.50%
						>=51	0.00%

Disability: Unisex rates, as follows:

Age	Rate	Age	Rate
<=19	0.000%	40	0.940%
20-30	0.300%	41	0.990%
31	0.364%	42	1.040%
32	0.428%	43	1.090%
33	0.492%	44	1.140%
34	0.556%	45	1.190%
35	0.620%	46	1.240%
36	0.684%	47	1.290%
37	0.748%	48	1.340%
38	0.812%	49	1.390%
39	0.876%	>=50	1.440%

On and Off Duty Disability and Death: 100% of deaths and disabilities are assumed to be in the line of duty.

Funding Method: Entry Age Normal (level percent of salary).

Glossary of Actuarial Terms

Present Value of Benefits (PVB): The present value, as of the valuation date, of all benefits that will become payable by the Plan for the current group of members in the census.

Normal Cost (NC): The value of the portion of the total benefit for active members which accrues in the year following the valuation date. Under the Entry Age Normal (Level Percent of Salary) funding method, the NC is a constant fraction of salary from the member's date of entry into the Plan to the member's assumed date of termination, retirement, disability or death.

Accrued Liability (AL): This is the portion of the PVB attributable to the past at the valuation date. For active members, AL is the annual NC accumulated from date of entry to the valuation date for each member. For retired and terminated members, the PVB and the AL are equal. The AL is the estimated liability owed by the pension fund at the valuation date.

Unfunded Accrued Liability (UAL): Any excess of the Accrued Liability over the fund assets. A negative UAL indicates fund assets are greater than the Accrued Liability, otherwise known as a surplus.

Actuarial Value of Assets: The value of assets used in the actuarial valuation of the Plan which is compared to the AL to determine the UAL and minimum funding requirements. A method may be used to smooth out short term volatility in the fair market value of assets.

FLA

FREIMAN LITTLE ACTUARIES

Freiman Little Actuaries, LLC
4105 Savannahs Trail
Merritt Island, FL 32953

Phone: (321) 453-6542
Fax: (321) 453-6998

City of Melbourne

Firefighters' Pension Plan

GASB 67 Supplement
As of September 30, 2018

REPORT TO PROVIDE DISCLOSURE UNDER GASB STATEMENT NO. 67
FOR THE PLAN FISCAL YEAR ENDING
SEPTEMBER 30, 2018

FLA

FREIMAN LITTLE ACTUARIES

January 25, 2019

Board of Trustees
City of Melbourne Firefighters' Pension Plan
Melbourne, Florida

RE: GASB 67 Supplement as of September 30, 2018

Dear Board Members:

We are pleased to present the Governmental Accounting Standards Board Statement No. 67 (GASB 67) Supplement as of September 30, 2018 for the City of City of Melbourne Firefighters' Pension Plan (the Plan).

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

This report provides information required to be disclosed under GASB 67 as described in the statement and the implementation guide. The relevant dates are as follows:

GASB 67	
Valuation Date	10/01/2017
Measurement Date	09/30/2018
Reporting Date	09/30/2018

Please let us know if you have any questions or need additional information.

Sincerely,

Chad M. Little, ASA, EA
Partner, Consulting Actuary
Enrollment Number 17-6619

Paula C. Freiman, ASA, EA
Partner, Consulting Actuary
Enrollment Number 17-5796

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Statement of Fiduciary Net Position

As of September 30,	2018	2017
Assets		
Cash and cash equivalents	$3,049,320	$2,275,514
Receivables:		
Interest receivable	125,914	76,562
Due from other funds	0	583
Total receivables	125,914	77,145
Investments, at fair value:		
U.S government obligations	7,003,689	7,486,440
Corporate bonds	7,665,761	6,730,922
Common and preferred stocks	55,217,247	53,041,173
Total investments	69,886,697	67,258,535
Total assets	73,061,931	69,611,194
Liabilities		
Accounts payable and accrued expenses	75,684	81,810
Prepaid contribution	85,254	257,050
Due to other funds	4,640	0
Total liabilities	165,578	338,860
Net position restricted for pensions	$72,896,353	$69,272,334

Statement of Changes in Fiduciary Net Position

As of September 30,	**2018**	**2017**
Additions		
Contributions:		
Employer	$2,633,114	$2,767,223
State of Florida	546,838	514,983
Employees	595,652	748,579
Total contributions	3,775,604	4,030,785
Investment income (loss):		
Net appreciation in fair value of investments	4,130,407	6,357,914
Interest and dividends	1,876,699	1,781,503
Total investment income	6,007,106	8,139,417
Less investment expenses:		
Investment expense	356,539	354,065
Net investment income	5,650,567	7,785,352
Total additions	9,426,171	11,816,137
Deductions		
Benefit payments	5,617,080	5,983,213
Refunds of contributions	24,055	63,789
Administrative expenses	161,017	135,797
Total deductions	5,802,152	6,182,799
Net increase in net position	3,624,019	5,633,338
Net position restricted for pensions		
Beginning of year	69,272,334	63,638,996
End of year	$72,896,353	$69,272,334

Net Pension Liability

The total pension liability under GASB 67 is based on the October 1, 2017 actuarial valuation which used the following actuarial assumptions applied to all periods included in the measurement.

Inflation: 2.5%
Salary increases: 6.0%, including inflation
Investment return: 7.75% net of investment expense, including inflation
Mortality: From the July 1, 2016 and 2017 FRS special risk actuarial valuations:
Healthy mortality (Pre-retirement):
Males: 10% RP-00 Combined Healthy White Collar +
90% RP-00 Combined Healthy Blue Collar
Females: 100% RP-00 Combined Healthy White Collar
Both male and female rates fully generational using Scale BB
Healthy mortality (Post-retirement):
Males: 10% RP-00 Annuitant White Collar +
90% RP-00 Annuitant Blue Collar
Females: 100% RP-00 Annuitant White Collar
Both male and female rates fully generational using Scale BB
Disabled mortality: Males: 60% RP-00 Disabled Retiree Set Back 4 Years +
40% RP-00 Annuitant White Collar
Females: 60% RP-00 Disabled Retiree Set Forward 2 Yrs +
40% RP-00 Annuitant White Collar
No mortality improvement is assumed for disabled lives.

Assumptions have been carried forward from the prior actuary. No recent actuarial experience study has been performed. See the paragraph entitled "Assumptions and Methods" on page 4 of the October 1, 2017 actuarial valuation report for details on changes from the prior valuation.

The long-term expected net rate of return on investments was determined using a building-block method. Best-estimate ranges of expected future real rates of return (expected returns net of investment expense and inflation) are developed for each major asset class. The long-term expected net rate of return on investments is the best-estimate ranges weighted by the asset allocation plus expected inflation. Best estimates of arithmetic real rates of return for each major asset class as provided by the investment monitor are shown in the following table:

Asset Class	Long-Term Expected Real Return	Target Allocation	Asset Group Contribution
Domestic Equity	7.50%	45.00%	3.38%
International Equity	8.50%	15.00%	1.28%
Domestic Bonds	2.50%	20.00%	0.50%
International Bonds	3.50%	5.00%	0.18%
Real Estate	4.50%	10.00%	0.45%
Alternative Assets	6.08%	5.00%	0.30%
		Weighted Real Return	6.09%

Note, however, that long-term expected net rates of return for actuarial valuations should be compared to geometric returns.

The discount rate used to measure the total pension liability was 7.75%. This is the single rate that reflects the long-term expected rate of return on pension plan investments expected to be used to finance the payment of benefits. A projection of cash flows used to determine the discount rate assumed that plan member contributions are made at the current contribution rate and that City contributions will be made equal to the difference between the actuarially determined contribution and the member contributions. Based on those assumptions, the pension plan's fiduciary net position is 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 is applied to all periods of projected benefit payments to determine the total pension liability. For purposes of this determination we understand pension plan assets are expected to be invested using a strategy to achieve the discount rate.

Note: See "Actuarial Assumptions and Methods" for a full description of the assumptions used in the determination of the total pension liability.

For GASB 67 the net pension liability is required to be measured as of the plan's fiscal year end. The net pension liability was measured as of September 30, 2018 under GASB 67 for the plan's fiscal year ending September 30, 2018. The total pension liability used to calculate the net pension liability as of September 30, 2018 was updated from an actuarial valuation as of October 1, 2017.

The components of the net pension liability are as shown below.

Measurement Date September 30,	**2018**
Total pension liability	$87,887,177
Plan fiduciary net position	(72,896,353)
Net pension liability	$14,990,824
Plan fiduciary net position as a percentage of the total pension liability	82.94%

Sensitivity of the net pension liability to changes in the discount rate follows.

	1% Decrease (6.75%)	Current Discount Rate (7.75%)	1% Increase (8.75%)
Net pension liability	$23,891,332	$14,990,824	$7,525,284

Schedule of Changes in Net Pension Liability and Related Ratios

This schedule will be updated each year until a 10-year history is accumulated.

Year Ending September 30,	2018	2017	2016	2015	2014
Total pension liability					
Service cost	$1,824,715	$1,643,241	$1,596,483	$1,465,467	$1,431,629
Interest	6,508,591	6,370,620	6,164,017	5,937,717	5,743,448
Changes of benefit terms	0	(139,655)	0	(1,042,704)	0
Differences between expected and actual experience	(64,611)	(735,297)	0	(418,968)	(604,020)
Changes of assumptions	2,112,977	586,277	0	76,676	1,189,708
Benefit payments	(5,617,080)	(5,983,213)	(4,459,046)	(4,136,588)	(4,113,250)
Contribution refunds	(24,055)	(63,789)	0	(14,935)	(47,795)
Net change in total pension liability	4,740,537	1,678,184	3,301,454	1,866,665	3,599,720
Total pension liability - beginning	83,146,640	81,468,456	78,167,002	76,300,337	72,700,617
Total pension liability - ending (a)	$87,887,177	$83,146,640	$81,468,456	$78,167,002	$76,300,337
Plan fiduciary net position					
Contributions - employer	$2,633,114	$2,767,223	$2,622,565	$2,702,209	$2,282,865
Contributions - State of Florida	546,838	514,983	545,561	569,837	604,006
Contributions - employee	595,652	748,579	578,536	466,578	442,286
Net investment income	5,650,567	7,785,352	6,138,463	126,002	5,965,296
Benefit payments	(5,617,080)	(5,983,213)	(4,459,046)	(4,136,588)	(4,113,250)
Contribution refunds	(24,055)	(63,789)	0	(14,935)	(47,795)
Administrative expense	(161,017)	(135,797)	(128,302)	(132,078)	(159,794)
Other	0	0	0	0	0
Net change in plan fiduciary net position	3,624,019	5,633,338	5,297,777	(418,975)	4,973,614
Plan fiduciary net position - beginning	69,272,334	63,638,996	58,341,219	58,760,194	53,786,580
Plan fiduciary net position - ending (b)	$72,896,353	$69,272,334	$63,638,996	$58,341,219	$58,760,194
Net pension liability - ending (a) - (b)	$14,990,824	$13,874,306	$17,829,460	$19,825,783	$17,540,143
Plan fiduciary net position as a percentage of the total pension liability	82.94 %	83.31 %	78.11 %	74.64 %	77.01 %
Covered employee payroll	$7,614,471	$7,566,356	$6,893,083	$6,513,920	$6,075,965
Net pension liability as a percentage of covered employee payroll	196.87 %	183.37 %	258.66 %	304.36 %	288.68 %

Notes to Schedule:
The total pension liability as of September 30, 2018 is the expected value based on the actuarial valuation results as of October 1, 2017 and the actual benefits paid during the year ending September 30, 2018.

Schedule of Contributions

Year Ending September 30,	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Actuarially determined contribution	$3,179,952	$3,282,206	$3,168,126	$3,272,046	$2,886,871	$2,291,959	$1,947,207	$1,698,189	$1,647,124	$1,152,907
Contributions in relation to the actuarially determined contribution	3,179,952	3,282,206	3,168,126	3,272,046	2,886,871	2,291,959	1,947,207	1,698,189	1,647,124	1,152,907
Contribution deficiency (excess)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Covered employee payroll	$7,614,471	$7,566,356	$6,893,083	$6,513,920	$6,075,965	$6,246,560	$6,965,758	$7,155,492	$7,817,408	$7,986,115
Contributions as a percentage of covered-employee payroll	41.76 %	43.38 %	45.96 %	50.23 %	47.51 %	36.69 %	27.95 %	23.73 %	21.07 %	14.44 %

Notes to Schedule

Actuarially determined contributions are calculated based on the valuation as of the beginning of the year prior to the fiscal year in which contributions are due.
For the years ending September 30, 2010 and 2011, the employer contributed the actuarially determined rate of actual payroll.

Methods and assumptions used to determine contributions for the 2018 fiscal year:

Actuarial cost method	Entry age
Amortization method	Level percent of pay, closed
Remaining amortization period	Effective with the October 1, 2015 actuarial valuation new bases are amortized over 25 years. Prior to the change a 30 year period was used.
Asset valuation method	5-year smoothed market
Inflation	2.5%
Salary increases	6%, including inflation
Investment rate of return	8% net of investment expenses, including inflation
Retirement age	See "Description of Assumptions and Methods" for the assumed retirement age assumption
Mortality	See "Description of Assumptions and Methods" for the mortality assumption

Schedule of Investment Returns

The following information is as provided by the investment monitor.

Year Ending September 30,	Annual money-weighted rate of return net of investment expense
2018	7.99%
2017	12.22%
2016	10.35%
2015	0.08%
2014	10.85%
2013	13.23%
2012	19.15%
2011	(2.00%)
2010	6.40%
2009	(4.30%)

Plan Membership Statistics

Valuation as of October 1,	2017	2016
Inactive members or beneficiaries currently receiving benefits	112	108
Inactive members entitled to but not yet receiving benefits	5	6
Active members	121	117
Total	238	231

Plan Description

Plan Type: Single-employer Defined Benefit Pension Plan

Legal Authority: The Plan was established and is amended by local ordinance.

Board Composition: The Board consists of five Trustees, two of whom are legal residents of the City who are appointed by the City Commission, two of whom are full-time firefighters who are members of the Plan and who are elected by a majority of the Firefighter members, and a fifth Trustee who is chosen by a majority of the first four Trustees.

Plan Administrator: The Board of Trustees

Funding Requirements: Employer contributions are actuarially determined and subject to State statute. Employee contributions are as described below and may be amended by ordinance.

Effective Date: Ordinance No. 2006-07 adopted January 24, 2006 amended the Plan provisions in their entirety. The following provides the history of subsequent ordinances:

- Ordinance No. 2009-17 adopted effective May 12, 2009 amended the definition of Actuarial Equivalence to be based on assumptions adopted by the Board; included USERRA military service as Credited Service; updated ordinance language with respect to IRC Section 401(a) qualification, 401(a)(9) minimum required distributions, 401(a)(17) pay limitations, 414(d) qualification, 415 benefit limitations, and 503(b) prohibited transactions; simplified language to indicate City contributions are based on the applicable actuarial valuation; revised language regarding the optional form of benefits payable to disability retirees and when payments end; to indicate a survivor may be paid a lump sum if the present value of benefits is less than $1,000; and included language revision to pertaining to domestic relations orders, forfeitures and rollovers.
- Ordinance No. 2009-25 adopted effective June 23, 2009 amended the section of the Plan regarding finances and management to provide for more liberal investment options, including an increase in the allowable percentage allocated for international investments.
- Ordinance No. 2009-35 adopted effective October 13, 2009 changed employee contributions from 4.75% to 6.0% of pay, increased the benefit accrual rate from 3.0% to 3.25% for retirements on and after October 1, 2008 (which is partially paid for with a one-time deduction from the Enhanced Benefit Account), clarified the Enhanced Benefit Account carry-forward methodology, changed the Supplemental Benefit to be payable for the life of the member only, and provides for an additional Supplemental Benefit of $2.50 full years of Credited Service in the fifth year of retirement from available Enhanced Benefit Account funds.
- Ordinance No. 2010-04 adopted effective January 26, 2010 amended language regarding the repeal or termination of the system, allowing for retiree directed payments, to no longer allow the purchase of a non-forfeitable fixed annuity with respect to DROP distributions, to allow the purchase of military and prior firefighter service over up to a five year period, and to allow the purchase of certain prior firefighter outside the state of Florida.
- Ordinance 2011-57 was adopted December 13, 2011. This amendment provides for the use of up to 50% of the cumulative balance is State contributions available for benefit improvement to pay for any increase in the total normal cost rate more than 1.25% of pay. This ordinance states that the 6.0% employee contribution rate is set for three years and that for the fiscal year beginning October 1, 2011 and October 1, 2014 an actuarial valuation is performed to recalculate the cost of the benefit improvement.
- Ordinance No. 2015-06 became effective upon adoption on March 24, 2015 revising (1) the definition of Salary to exclude payments for overtime in excess of 300 hours per fiscal year and payments for accrued sick and annual leave from the definition of Salary [except that for

members employed on March 24, 2015 Salary does include the lesser of (a) the amount of sick and annual leave accrued as of March 24, 2015 and (b) the actual amount of sick and annual leave for which the member receives payment at retirement], (2) employee contributions effective April 1, 2015 from 6.0% to 7.5% of Salary, (3) the Supplemental Benefit to indicate that if there are insufficient funds available in the EBA to pay for both the increased supplement and the variable COLA, the monthly supplement is payable first and then for the remaining funds in the EBA are used to provide the variable COLA on a prorate basis, (4) the maximum pension benefit to be $90,000 annually for members hired on or after March 24, 2015 and also members employed on March 24, 2015 who have not reached the normal retirement date [except that the accrued a benefit in excess of $90,000 annually as of March 24, 2015 is not reduced to $90,000 but no additional benefits will accrue], and (5) DROP interest crediting for members who elect the fixed rate from an annual rate of 6.5% to 1.3% for those who enter the DROP on or after March 24, 2015.

- Ordinance No. 2017-46 became effective upon adoption on October 10, 2017. This ordinance (1) requires employee contributions of 6.5% of Salary from Members who enter the DROP after October 10, 2017, (2) for Members employed after October 10, 2017, the Accrued Benefit is 3.0% x Average Final Compensation x Credited Service, and for Members employed on or before October 10, 2017 and retiring on or after October 1, 2008 the Accrued Benefit is 3.25% x Average Final Compensation x Credited Service, and (3) a Share Plan is established where accumulated excess premium tax revenues as of October 1, 2015 (totaling $258,620) are split where 50% is allocated to the Share Plan and 50% is used to pay down the unfunded liability of the Plan. For premium tax revenues received in any Plan year after October 1, 2015 over that for calendar 2012 in the amount of $587,845, 50% is allocated to the Share Plan and 50% is used to reduce the city's annual required pension contributions. However, the Share Plan becomes operative when the city and the union reach agreement on the details of the Share Plan.

Plan Year: The 12-month period from October 1st to the following September 30th.

Member: Full-time firefighters become Members immediately upon hire.

Actuarial Equivalence: Using the funding assumptions as adopted by the board.

Credited Service: Total years and fractional parts of years of service as a firefighter with Member contributions, when required. Credited Service also includes certain military service. Additional Credited Service may be purchased.

Vesting: 100% upon the earlier of earning ten years of Credited Service and reaching the Normal Retirement Date.

Salary: Total compensation for services rendered to the City as a firefighter reported on Form W-2 plus all tax-deferred, tax sheltered, or tax exempt items of income derived from elective employee payroll deductions.

Effective March 24, 2015 Salary excludes payments for overtime in excess of 300 hours per fiscal year and payments for accrued sick and annual leave from the definition of Salary [except that for members employed on March 24, 2015 Salary does include the lesser of (a) the amount of sick and annual leave accrued as of March 24, 2015 and (b) the actual amount of sick and annual leave for which the member receives payment at retirement].

Effective for benefits calculated after October, 2016, Salary used is that for the fiscal year.

Regular Base Salary: One-twelfth of the employee's annual base pay rate plus any incentive pay.

Employee Contributions: Prior to Ordinance No. 2009-35 adopted October 13, 2009, employees hired prior to May 9, 1978 contributed 5.0% of Salary. Employees hired after May 9, 1978 contributed 4.75%

of Salary. Effective October 13, 2009, Ordinance No. 2009-35 revised employee contributions to 6.0% of Salary. Special rules were put in place related to the multiplier increase from 3.0% to 3.25% associated with the 1.25% employee contribution rate increase from 4.75% to 6.5%. Effective April 1, 2015, Ordinance No. 2015-06 revised employee contributions from 6.0% to 7.5% of Salary. Ordinance No. 2017-46 requires employee contributions of 6.5% of Salary from Members who enter the DROP after October 10, 2017.

A Member who terminates non-vested is entitled to refund of accumulated Employee Contributions with interest at 4% per year. Contributions may be repaid with interest upon reentry into the Plan due to rehire. The annual 4% interest crediting is not applied to employee contributions associated with a service purchase.

Vested Members who terminate employment prior to being eligible to receive an annuity may leave their accumulated contributions in the fund, and upon reaching Early Retirement eligibility begin commencement of the reduced Accrued Benefit plus the Supplemental Benefit, as defined under Early Retirement.

Average Final Compensation: Average of Salary for the five highest years out of the last 10 years of Credited Service.

Normal Retirement Date: For those who were Members prior to May 9, 1978, the first day of the month coincident with or next following the earlier of (i) age 50, regardless of Credited Service, or (ii) 25 years Credited Service, regardless of age. For those becoming Members on or after May 9, 1978, the first day of the month coincident with or next following the earlier of (i) age 55 and completion of 10 years of Credited Service, or (ii) 25 years Credited Service, regardless of age.

For those who did not earn 25 years of Credited Service upon termination of employment, the Normal Retirement Date is the first day of the month coincident with or next following the earlier of (i) age 55 and completion of 10 years of Credited Service, or (ii) the date the member would have earned 25 years of Credited Service.

Normal Retirement Benefit: The Accrued Benefit plus the Supplemental Benefit.

Per Ordinance No. 2015-06, the maximum pension benefit is limited to $90,000 annually for members hired on or after March 24, 2015 and also members employed on March 24, 2015 who have not reached the normal retirement date [except that the accrued a benefit in excess of $90,000 annually as of March 24, 2015 is not reduced to $90,000 but no additional benefits will accrue].

The $90,000 limit does not apply to the Supplemental Benefit.

Accrued Benefit: Per Ordinance No. 2017-46, for Members employed after October 10, 2017:

3.0% x Average Final Compensation x Credited Service

For Members employed on or before October 10, 2017 and retiring on or after October 1, 2008:

3.25% x Average Final Compensation x Credited Service

For members retiring on or after October 1, 1995 the multiplier was 3.0%, as last used in the October 1, 2008 actuarial valuation of the Plan. Prior to October 1, 1995 the multiplier was 2.5%.

This benefit is payable as a 10 year certain and continuous annuity.

Supplemental Benefit: Effective October 1, 2003, a Supplemental Benefit is payable monthly for the joint lives of the member and their beneficiary equal to $5 for each full year of Credited Service. Effective October 13, 2009, Ordinance No. 2009-35 clarified that this benefit is payable over only the life of the

member. In addition, Ordinance No. 2009-35 provided for all current and future retirees to potentially receive an additional $2.50 for each full year of Credited Service (for a total of $7.50 for each full year of Credited Service) beginning on the fifth anniversary of retirement. DROP participation counts toward the satisfaction of the five years of retirement. The additional $2.50 is only provided through available funds from the Enhanced Benefit Account, if any.

Effective March 24, 2015 Ordinance No. 2015-06 provides that if there are insufficient funds available in the Enhanced Benefit Account to pay for both the $2.50 increased supplement and the variable cost of living adjustment, the monthly supplement is payable first and then the remaining funds in the Enhanced Benefit Account are used to provide the variable cost of living adjustment on a prorate basis.

Early Retirement Date: The first day of the month coincident with or next following the earlier of attainment of age 50 or the completion of 20 years of Credited Service.

For those who did not earn 20 years of Credited Service upon termination of employment, the Early Retirement Date is the first day of the month coincident with or next following the earlier of attainment of age 50 or the date the member would have earned 20 years of Credited Service.

Early Retirement Benefit: The Accrued Benefit reduced by 3% per year by which the commencement of benefits precedes the Normal Retirement Date, plus the Supplemental Benefit.

Enhanced Benefit Account (EBA): Provides for a lump sum variable cost of living adjustment for all members who retired, became disabled, or terminated vested on or after September 30, 1996, and their beneficiaries.

Commencing annually from March 1, 1997, the sum of (a) and (b), as follows, is credited to or deducted from the EBA to provide a lump sum variable cost of living adjustment:

(a) 50% of positive or negative net investment income compared to fund's investment objective for the preceding fiscal year, and
(b) 50% of the amount by which the premium taxes collected and distributed by the state exceed 5.6% of covered payroll during the preceding fiscal year.

Covered payroll during the preceding fiscal year has historically been the calculated as an average of the total valuation salary for the current and prior valuation.

The ordinance states that the cumulative value of the EBA allocation provided by (a), above, may not exceed the cumulative net actuarial gains and losses from all sources incurred from the inception of this provision. Note that any amount allocated to the EBA based on the language in (b) does not actually reduce premium taxes available to fund other benefits.

Effective October 13, 2009, Ordinance No. 2009-35 reduced EBA funds retroactively to October 1, 2008 by a one-time deduction equal to the cost to provide the increased 3.25% benefit accrual rate minus the amount of any unallocated premium tax money and defined use of EBA funds to first pay for an additional Supplemental Benefit of $2.50 for each full year of Credited Service after the fifth year of retirement (prior to the payment of any lump sum variable cost of living adjustment described in the following).

Each April 1 the EBA is allocated among the retirees as of the preceding September 30 based upon (i) the number of full months of retirement during the preceding fiscal year, and (ii) in proportion to the amount of each retiree's actual monthly retirement benefit. The allocation is limited to a maximum of 3% of the pension benefit (prorated if retired less than a full year). In the event that in any year the balance in the fund would result in a higher payment, the excess is returned to the EBA and carried forward to the next year. Any funds carried forward in the EBA are credited with the rate of return achieved by the fund. Per direction of the Board of Trustees at their January 25, 2017 meeting, in years when the beginning balance of the EBA is negative, there is no interest crediting applied in carrying

forward the EBA balance to the next year. This change was made retroactively to when the EBA first became negative with the October 1, 2017 actuarial valuation.

Effective March 24, 2015 Ordinance No. 2015-06 provides that if there are insufficient funds available in the EBA to pay for both the $2.50 increased supplement and the variable cost of living adjustment, the monthly supplement is payable first and then the remaining funds in the EBA are used to provide the variable cost of living adjustment on a prorate basis.

<u>Death Benefits:</u> In the event of death in the line of duty prior to retirement eligibility, 40% of Regular Base Salary is payable to the spouse until their death. If there is no spouse, or upon the death of the spouse, 15% of Regular Base Salary is payable for each unmarried child until the age of 18 (or age 22 if a full-time student). The maximum amount payable to all such children is 40% of Regular Base Salary.

In the event of death not in the line of duty prior to retirement eligibility, the Employee Contributions accumulated with interest is payable or 10-year certain annuity reduced actuarially from the early retirement date.

For Members eligible for retirement at their date of death, the benefit payable is that greater in actuarial value between (i) the benefit defined for line of duty death prior to retirement eligibility and (ii) the benefit payable if the Member had retired on the date of death. The resulting amount is payable on a monthly basis for ten years, or on such other actuarially equivalent basis as approved by the board.

<u>Disability Retirement:</u> The benefit payable to any Member who becomes totally and permanently disabled in the line of duty is the greater of (i) 2% x Average Final Compensation x Credited Service, (ii) 42% x Average Final Compensation, and (iii) 40% x Regular Base Salary. The Supplemental Benefit is also payable.

The benefit payable to any Member who becomes totally and permanently disabled not in the line of duty after having earned 10 years of Credited Service is the greater of (i) 2% x Average Final Compensation x Credited Service, (ii) the Accrued Benefit as reduced for Early Retirement, further reduced actuarially in the event of disability prior to the Early Retirement Date, and (iii) 25% x Average Final Compensation. The Supplemental Benefit is also payable.

Disability Retirement benefits are payable on the first day of the first month after the board determines such entitlement. However, the monthly benefit is payable as of the date the board determined entitlement and any portion due for a partial month is paid together with the first payment.

<u>Optional Forms of Benefit:</u> The Accrued Benefit described above is payable in the form of a 10 year certain and continuous annuity. Members may optionally choose an actuarially equivalent single life annuity, joint and survivor annuity (with 50%, 66 2/3, 75% or 100% continuance), or a Social Security level income option (if a member retires prior to the time at which Social Security benefits are payable). Members who do not participate in the DROP may elect to receive 20% of the present value of their benefits as a single lump sum and the remainder of the value of their benefits as a 10 year certain and continuous annuity, a single life annuity, or a joint and survivor annuity (with 50%, 66 2/3%, 75% or 100% continuance).

<u>Deferred Retirement Option Plan (DROP):</u> Members are eligible to enter the DROP at the Normal Retirement Date. DROP participants are not eligible for death or disability benefits. The maximum DROP participation duration is 60 months. The Accrued Benefit plus Supplemental Benefit is frozen and no further Employee Contributions are payable at DROP entry. The Accrued Benefit accumulates in the DROP account with interest, credited quarterly, as elected by the Member (where this election may be changed by the Member annually effective October 1):

(a) An annual rate of 6.5%, compounded monthly, on the prior month's ending balance for members who enter the DROP before March 24, 2015, and 1.3%, compounded monthly, on the prior month's ending balance for members who enter the DROP on or after March

24, 2015. However, any member who was Normal Retirement eligible by October 1, 2012 receives 6.5% annual crediting even if they enter the DROP on or after March 24, 2015 per the legal opinion dated August 13, 2012.

(b) The average daily balance in the member's DROP account is credited or debited at a rate equal to the net investment return realized for the quarter.

(c) 50% of (a) plus 50% of (b).

A Member's final DROP account value for distribution is the value of the account at the end of the quarter immediately preceding termination of participation in the DROP, plus any monthly periodic additions made to the DROP account subsequent to the end of the previous quarter and prior to distribution.

The Supplemental Benefit is payable once the member actually terminates from employment and begins to receive monthly pension payments after the end of the DROP.

The $90,000 annual limit does limit deposits to the DROP, but does not limit DROP balance payouts.

Share Plan: Per Section 175.351(6), Florida Statutes, a defined contribution component (Share Plan) is established to be funded exclusively with Chapter 175 premium tax revenues where the accumulated excess premium tax revenues as of October 1, 2015 (totaling $258,620) are split where 50% is allocated to the Share Plan and 50% is used to pay down the unfunded liability of the Plan. For premium tax revenues received in any Plan year after October 1, 2015 over that for calendar 2012 in the amount of $587,845, 50% is allocated to the Share Plan and 50% is used to reduce the city's annual required pension contributions. Per Ordinance 2017-46, the Share Plan becomes operative when the city and the union reach agreement on the details of the Share Plan.

Actuarial Assumptions and Methods

Assumed Rate of Investment Return: 7.75% per year, net of investment expenses (changed from 8.0% per year, net of investment expenses for the prior valuation).

Salary Increase – Individual: 6.0% per year. The final year salary is increased using individualized percentages equal to the actual total accrued leave hours as of October 1, 2014 multiplied by the hourly rate of pay at October 1, 2014 divided by annualized fiscal 2014 salary after removing pay for overtime in excess of 300 hours.

Administrative Expenses: Prior year's actual expenses added to Normal Cost

Salary Increase – Total Payroll: No payroll growth is assumed in the amortization of unfunded accrued liability effective October 1, 2017. In the prior valuation an assumption of 1.01% was used.

Inflation: 2.5% per year

Mortality: In the prior valuation, the mortality table was that used for special risk employees in the valuation of the Florida Retirement System (FRS) as of July 1, 2015, as required by state statute. The mortality table has been revised to that used for special risk employees in the valuation of FRS as of July 1, 2016 and 2017, as required by state statute. While healthy post-retirement mortality and disabled mortality rates were unchanged, healthy pre-retirement was revised. The mortality rates are as follows:

Healthy mortality (Pre-retirement):
Males: 10% RP-00 Combined Healthy White Collar +
90% RP-00 Combined Healthy Blue Collar
Females: 100% RP-00 Combined Healthy White Collar
Both male and female rates fully generational using Scale BB

Healthy mortality (Post-retirement):
Males: 10% RP-00 Annuitant White Collar +
90% RP-00 Annuitant Blue Collar
Females: 100% RP-00 Annuitant White Collar
Both male and female rates fully generational using Scale BB

Disabled mortality:
Males: 60% RP-00 Disabled Retiree Set Back 4 Years +
40% RP-00 Annuitant White Collar
Females: 60% RP-00 Disabled Retiree Set Forward 2 Yrs +
40% RP-00 Annuitant White Collar
No mortality improvement is assumed for disabled lives.

Retirement: Unisex rates, as follows:

	Service			
Age	<=9	10-19	20-24	>=25
<=39	0%	0%	0%	0%
40-49	0%	0%	5%	100%
50-54	5%	5%	5%	100%
>=55	5%	100%	100%	100%

Termination: Unisex rates, as follows:

Age	Rate	Age	Rate	Age	Rate	Age	Rate
<=19	0.00%	27	2.65%	35	1.90%	43	1.06%
20	3.00%	28	2.60%	36	1.78%	44	0.98%
21	2.95%	29	2.55%	37	1.66%	45	0.90%
22	2.90%	30	2.50%	38	1.54%	46	0.82%
23	2.85%	31	2.38%	39	1.42%	47	0.74%
24	2.80%	32	2.26%	40	1.30%	48	0.66%
25	2.75%	33	2.14%	41	1.22%	49	0.58%
26	2.70%	34	2.02%	42	1.14%	50	0.50%
						>=51	0.00%

Disability: Unisex rates, as follows:

Age	Rate	Age	Rate
<=19	0.000%	40	0.940%
20-30	0.300%	41	0.990%
31	0.364%	42	1.040%
32	0.428%	43	1.090%
33	0.492%	44	1.140%
34	0.556%	45	1.190%
35	0.620%	46	1.240%
36	0.684%	47	1.290%
37	0.748%	48	1.340%
38	0.812%	49	1.390%
39	0.876%	>=50	1.440%

On and Off Duty Disability and Death: 100% of deaths and disabilities are assumed to be in the line of duty.

Funding Method: Entry Age Normal (level percent of salary).

Freiman Little Actuaries, LLC
4105 Savannahs Trail
Merritt Island, FL 32953

Phone: (321) 453-6542
Fax: (321) 453-6998

City of Melbourne

Firefighters' Pension Plan

GASB 68 Supplement
As of September 30, 2018

REPORT TO PROVIDE DISCLOSURE UNDER GASB STATEMENT NO. 68
FOR THE CITY FISCAL YEARS ENDING
SEPTEMBER 30, 2018

October 18, 2018

Board of Trustees
City of Melbourne Firefighters' Pension Plan
Melbourne, Florida

RE: GASB 68 Supplement as of September 30, 2018

Dear Board Members:

We are pleased to present the Governmental Accounting Standards Board Statement No. 68 (GASB 68) Supplement as of September 30, 2018 for the City of City of Melbourne Firefighters' Pension Plan (the Plan).

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

This report provides information required to be disclosed under GASB 68 as described in the statement and the implementation guide. The relevant dates are as follows:

	GASB 68
Valuation Date	10/01/2016
Measurement Date	09/30/2017
Reporting Date	09/30/2018

Please let us know if you have any questions or need additional information.

Sincerely,

Chad M. Little, ASA, EA
Partner, Consulting Actuary
Enrollment Number 17-6619

Paula C. Freiman, ASA, EA
Partner, Consulting Actuary
Enrollment Number 17-5796

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Statement of Fiduciary Net Position

As of September 30,	2017	2016
Assets		
Cash and cash equivalents	$2,275,514	$2,007,693
Receivables:		
Interest receivable	76,562	75,540
Due from other funds	583	25,667
Total receivables	77,145	101,207
Investments, at fair value:		
U.S government obligations	7,486,440	8,301,428
Corporate bonds	6,730,922	5,406,161
Common and preferred stocks	53,041,173	48,299,941
Total investments	67,258,535	62,007,530
Total assets	69,611,194	64,116,430
Liabilities		
Accounts payable and accrued expenses	81,810	79,450
Prepaid contribution	257,050	397,984
Total liabilities	338,860	477,434
Net position restricted for pensions	$69,272,334	$63,638,996

Statement of Changes in Fiduciary Net Position

As of September 30,	2017	2016
Additions		
Contributions:		
Employer	$2,767,223	$2,622,565
State of Florida	514,983	545,561
Employees	748,579	578,536
Total contributions	4,030,785	3,746,662
Investment income (loss):		
Net appreciation in fair value of investments	6,357,914	4,599,573
Interest and dividends	1,781,503	1,882,708
Total investment income	8,139,417	6,482,281
Less investment expenses:		
Investment expense	354,065	343,818
Net investment income	7,785,352	6,138,463
Total additions	11,816,137	9,885,125
Deductions		
Benefit payments	5,983,213	4,459,046
Refunds of contributions	63,789	0
Administrative expenses	135,797	128,302
Total deductions	6,182,799	4,587,348
Net increase in net position	5,633,338	5,297,777
Net position restricted for pensions		
Beginning of year	63,638,996	58,341,219
End of year	$69,272,334	$63,638,996

Net Pension Liability

The total pension liability under GASB 68 is based on the October 1, 2016 actuarial valuation which used the following actuarial assumptions applied to all periods included in the measurement.

Inflation:	2.5%
Salary increases:	6.0%, including inflation
Investment rate of return:	8.0% net of investment expense, including inflation
Mortality:	From the July 1, 2015 FRS special risk actuarial valuation:
Healthy mortality:	Males: 10% RP-00 Annuitant White Collar + 90% RP-00 Annuitant Blue Collar
	Females: 100% RP-00 Annuitant White Collar
	Both male and female rates fully generational using Scale BB
Disabled mortality:	Males: 60% RP-00 Disabled Retiree Set Back 4 Years + 40% RP-00 Annuitant White Collar
	Females: 60% RP-00 Disabled Retiree Set Forward 2 Yrs + 40% RP-00 Annuitant White Collar
	No mortality improvement is assumed for disabled lives.

Assumptions have been carried forward from the prior actuary. No recent actuarial experience study has been performed. The mortality table has been changed from the prior year as required by State statute. See the paragraph entitled "Assumptions and Methods" on page 4 of the October 1, 2016 actuarial valuation report for details.

The long-term expected net rate of return on investments was determined using a building-block method. Best-estimate ranges of expected future real rates of return (expected returns net of investment expense and inflation) are developed for each major asset class. The long-term expected net rate of return on investments is the best-estimate ranges weighted by the asset allocation plus expected inflation. Best estimates of arithmetic real rates of return for each major asset class as provided by the investment monitor are shown in the following table:

Asset Class	**Long-Term Expected Real Return**	**Target Allocation**	**Asset Group Contribution**
Domestic Equity	7.50%	45.00%	3.38%
International Equity	8.50%	15.00%	1.28%
Domestic Bonds	2.50%	20.00%	0.50%
International Bonds	3.50%	5.00%	0.18%
Real Estate	4.50%	10.00%	0.45%
Alternative Assets	6.08%	5.00%	0.30%
		Weighted Real Return	6.09%

The discount rate used to measure the total pension liability was 8.0%. This is the single rate that reflects the long-term expected rate of return on pension plan investments expected to be used to finance the payment of benefits. A projection of cash flows used to determine the discount rate assumed that plan member contributions are made at the current contribution rate and that City contributions will be made equal to the difference between the actuarially determined contribution and the member contributions. Based on those assumptions, the pension plan's fiduciary net position is 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 is applied to all periods of projected benefit payments to determine the total pension liability. For purposes of this determination we understand pension plan assets are expected to be invested using a strategy to achieve the 8.0% discount rate.

Note: See "Actuarial Assumptions and Methods" for a full description of the assumptions used in the determination of the total pension liability.

For GASB 68 the net pension liability is required to be measured as of a date no earlier than the end of the employer's prior fiscal year (the measurement date), consistently applied from period to period. The net pension liability was measured as of September 30, 2017 under GASB 68 for the employer's fiscal year ending September 30, 2018. The total pension liability used to calculate the net pension liability as of September 30, 2017 was determined by an actuarial valuation as of October 1, 2016.

The components of the net pension liability are as shown below.

Measurement Date September 30,	**2017**
Total pension liability	$83,146,640
Plan fiduciary net position	(69,272,334)
Net pension liability	$13,874,306
Plan fiduciary net position as a percentage of the total pension liability	83.31%

Sensitivity of the net pension liability to changes in the discount rate follows.

	1% Decrease (7.0%)	Current Discount Rate (8.0%)	1% Increase (9.0%)
Net pension liability	$22,064,380	$13,874,306	$6,988,399

Schedule of Changes in Net Pension Liability and Related Ratios

This schedule will be updated each year until a 10-year history is accumulated.

Year Ending September 30,	**2017**	**2016**	**2015**	**2014**
Total pension liability				
Service cost	$1,643,241	$1,596,483	$1,465,467	$1,431,629
Interest	6,370,620	6,164,017	5,937,717	5,743,448
Changes of benefit terms	(139,655)	0	(1,042,704)	0
Differences between expected and actual experience	(735,297)	0	(418,968)	(604,020)
Changes of assumptions	586,277	0	76,676	1,189,708
Benefit payments	(5,983,213)	(4,459,046)	(4,136,588)	(4,113,250)
Contribution refunds	(63,789)	0	(14,935)	(47,795)
Net change in total pension liability	1,678,184	3,301,454	1,866,665	3,599,720
Total pension liability – beginning	81,468,456	78,167,002	76,300,337	72,700,617
Total pension liability - ending (a)	$83,146,640	$81,468,456	$78,167,002	$76,300,337
Plan fiduciary net position				
Contributions – employer	$2,767,223	$2,622,565	$2,702,209	$2,282,865
Contributions - State of Florida	514,983	545,561	569,837	604,006
Contributions – employee	748,579	578,536	466,578	442,286
Net investment income	7,785,352	6,138,463	126,002	5,965,296
Benefit payments	(5,983,213)	(4,459,046)	(4,136,588)	(4,113,250)
Contribution refunds	(63,789)	0	(14,935)	(47,795)
Administrative expense	(135,797)	(128,302)	(132,078)	(159,794)
Other	0	0	0	0
Net change in plan fiduciary net position	5,633,338	5,297,777	(418,975)	4,973,614
Plan fiduciary net position – beginning	63,638,996	58,341,219	58,760,194	53,786,580
Plan fiduciary net position - ending (b)	$69,272,334	$63,638,996	$58,341,219	$58,760,194
Net pension liability - ending (a) - (b)	$13,874,306	$17,829,460	$19,825,783	$17,540,143
Plan fiduciary net position as a percentage of the total pension liability	83.31 %	78.11 %	74.64 %	77.01 %
Covered employee payroll	$7,566,356	$6,893,083	$6,513,920	$6,075,965
Net pension liability as a percentage of covered employee payroll	183.37 %	258.66 %	304.36 %	288.68 %

Notes to Schedule:
The total pension liability as of September 30, 2017 is the expected value based on the actuarial valuation results as of October 1, 2016 and the actual benefits paid during the year ending September 30, 2017. Note that the Plan change shown above is for Ordinance No. 2017-46 which revised the results of the October 1, 2016 actuarial valuation. See the section entitled "Assumptions and Methods" for a description of changed assumptions.

Statement of Changes in Net Pension Liability

	Increase (Decrease)		
	Total Pension Liability (a)	**Plan Fiduciary Net Position (b)**	**Net Pension Liability (a) - (b)**
Balances at 9/30/2016	$81,468,456	$63,638,996	$17,829,460
Changes for the year:			
Service cost	1,643,241		1,643,241
Interest	6,370,620		6,370,620
Changes of benefit terms	(139,655)		(139,655)
Differences between expected and actual experience	(735,297)		(735,297)
Changes of assumptions	586,277		586,277
Contributions—employer		2,767,223	(2,767,223)
Contributions—State of Florida		514,983	(514,983)
Contributions—employee		748,579	(748,579)
Net investment income		7,785,352	(7,785,352)
Benefit payments, including refunds of employee contributions	(6,047,002)	(6,047,002)	0
Administrative expense		(135,797)	135,797
Other changes		0	0
Net changes	1,678,184	5,633,338	(3,955,154)
Balances at 9/30/2017	$83,146,640	$69,272,334	$13,874,306

Pension Expense and Deferred Outflows and Inflows of Resources

Pension expense for the year ended September 30, 2018 is as shown below using a measurement date of September 30, 2017.

Description	Amount
Service cost	$1,643,241
Interest on the total pension liability	6,370,620
Changes of benefit terms	(139,655)
Differences between expected and actual experience	(342,674)
Changes of assumptions	359,542
Employee contributions	(748,579)
Projected earnings on pension plan investments	(4,984,440)
Differences between projected and actual earnings on plan investments	(304,701)
Pension plan administrative expense	135,797
Other changes in fiduciary net position	0
Total pension expense	$1,989,151

At the September 30, 2017 measurement date used for GASB 68 there are deferred outflows and inflows of resources from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$0	$889,298
Changes of assumptions	761,995	0
Net difference between projected and actual earnings	1,812,089	3,501,937
Employer contributions subsequent to NPL measurement	3,179,952	0
Total	$5,754,036	$4,391,235

Amounts reported as deferred outflows and inflows of resources related to pensions will be recognized in pension expense as follows:

Year ended September 30:	
2018	$(287,831)
2019	(38,962)
2020	(893,622)
2021	(588,301)
2022	(8,435)
2023	0

Recognition of Deferred Outflows and Inflows of Resources

Year	Original Amount	Recognition Period	2017	2018	2019	2020	2021	2022
			Measurement Year Recognition					
Differences between Expected and Actual Experience								
2014	(604,020)	5.1	(118,435)	(118,435)	(11,845)	0	0	0
2015	(418,968)	4.9	(85,504)	(85,504)	(76,952)	0	0	0
2016	0	5.0	0	0	0	0	0	0
2017	(735,297)	5.3	(138,735)	(138,735)	(138,735)	(138,735)	(138,735)	(41,622)
Changes in Assumptions								
2014	1,189,708	5.1	233,276	233,276	23,328	0	0	0
2015	76,676	4.9	15,648	15,648	14,084	0	0	0
2016	0	5.0	0	0	0	0	0	0
2017	586,277	5.3	110,618	110,618	110,618	110,618	110,618	33,187
Differences between Projected and Actual Earnings on Pension Plan Investments								
2014	(1,726,198)	5.0	(345,240)	(345,238)	0	0	0	0
2015	4,530,221	5.0	906,044	906,044	906,045	0	0	0
2016	(1,526,615)	5.0	(305,323)	(305,323)	(305,323)	(305,323)	0	0
2017	(2,800,912)	5.0	(560,182)	(560,182)	(560,182)	(560,182)	(560,184)	0

Schedule of Contributions

Year Ending September 30,	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Actuarially determined contribution	$3,179,952	$3,282,206	$3,168,126	$3,272,046	$2,886,871	$2,291,959	$1,947,207	$1,698,189	$1,647,124	$1,152,907
Contributions in relation to the actuarially determined contribution	3,179,952	3,282,206	3,168,126	3,272,046	2,886,871	2,291,959	1,947,207	1,698,189	1,647,124	1,152,907
Contribution deficiency (excess)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Covered employee payroll	$7,614,471	$7,566,356	$6,893,083	$6,513,920	$6,075,965	$6,246,560	$6,965,758	$7,155,492	$7,817,408	$7,986,115
Contributions as a percentage of covered-employee payroll	41.76 %	43.38 %	45.96 %	50.23 %	47.51 %	36.69 %	27.95 %	23.73 %	21.07 %	14.44 %

Notes to Schedule

Actuarially determined contributions are calculated based on the valuation as of the beginning of the year prior to the fiscal year in which contributions are due.
For the years ending September 30, 2010 and 2011, the employer contributed the actuarially determined rate of actual payroll.

Methods and assumptions used to determine contributions for the 2018 fiscal year:

Actuarial cost method	Entry age
Amortization method	Level percent of pay, closed
Remaining amortization period	Effective with the October 1, 2015 actuarial valuation new bases are amortized over 25 years. Prior to the change a 30 year period was used.
Asset valuation method	5-year smoothed market
Inflation	2.5%
Salary increases	6%, including inflation
Investment rate of return	8% net of investment expenses, including inflation
Retirement age	See "Description of Assumptions and Methods" for the assumed retirement age assumption
Mortality	See "Description of Assumptions and Methods" for the mortality assumption

Schedule of Investment Returns

The following information is as provided by the investment monitor.

Year Ending September 30,	Annual money-weighted rate of return net of investment expense
2017	12.22%
2016	10.35%
2015	0.08%
2014	10.85%
2013	13.23%
2012	19.15%
2011	(2.00%)
2010	6.40%
2009	(4.30%)
2008	(10.69%)
2007	12.35%

Note: Information provided by the investment monitor in prior years shows a return of 10.36% for the year ending September 30, 2016 and 0.07% for the year ending September 30, 2015. This information is revised as shown above per information provided by the investment monitor for the year ending September 30, 2017.

Plan Membership Statistics

Valuation as of October 1,	2016	2015
Inactive members or beneficiaries currently receiving benefits	108	111
Inactive members entitled to but not yet receiving benefits	6	4
Active members	117	108
Total	231	223

Plan Description

Plan Type: Single-employer Defined Benefit Pension Plan

Legal Authority: The Plan was established and is amended by local ordinance.

Board Composition: The Board consists of five Trustees, two of whom are legal residents of the City who are appointed by the City Commission, two of whom are full-time firefighters who are members of the Plan and who are elected by a majority of the Firefighter members, and a fifth Trustee who is chosen by a majority of the first four Trustees.

Plan Administrator: The Board of Trustees

Funding Requirements: Employer contributions are actuarially determined and subject to State statute. Employee contributions are as described below and may be amended by ordinance.

Effective Date: Ordinance No. 2006-07 adopted January 24, 2006 amended the Plan provisions in their entirety. The following provides the history of subsequent ordinances:

- Ordinance No. 2009-17 adopted effective May 12, 2009 amended the definition of Actuarial Equivalence to be based on assumptions adopted by the Board; included USERRA military service as Credited Service; updated ordinance language with respect to IRC Section 401(a) qualification, 401(a)(9) minimum required distributions, 401(a)(17) pay limitations, 414(d) qualification, 415 benefit limitations, and 503(b) prohibited transactions; simplified language to indicate City contributions are based on the applicable actuarial valuation; revised language regarding the optional form of benefits payable to disability retirees and when payments end; to indicate a survivor may be paid a lump sum if the present value of benefits is less than $1,000; and included language revision to pertaining to domestic relations orders, forfeitures and rollovers.
- Ordinance No. 2009-25 adopted effective June 23, 2009 amended the section of the Plan regarding finances and management to provide for more liberal investment options, including an increase in the allowable percentage allocated for international investments.
- Ordinance No. 2009-35 adopted effective October 13, 2009 changed employee contributions from 4.75% to 6.0% of pay, increased the benefit accrual rate from 3.0% to 3.25% for retirements on and after October 1, 2008 (which is partially paid for with a one-time deduction from the Enhanced Benefit Account), clarified the Enhanced Benefit Account carry-forward methodology, changed the Supplemental Benefit to be payable for the life of the member only, and provides for an additional Supplemental Benefit of $2.50 full years of Credited Service in the fifth year of retirement from available Enhanced Benefit Account funds.
- Ordinance No. 2010-04 adopted effective January 26, 2010 amended language regarding the repeal or termination of the system, allowing for retiree directed payments, to no longer allow the purchase of a non-forfeitable fixed annuity with respect to DROP distributions, to allow the purchase of military and prior firefighter service over up to a five year period, and to allow the purchase of certain prior firefighter outside the state of Florida.
- Ordinance 2011-57 was adopted December 13, 2011. This amendment provides for the use of up to 50% of the cumulative balance is State contributions available for benefit improvement to pay for any increase in the total normal cost rate more than 1.25% of pay. This ordinance states that the 6.0% employee contribution rate is set for three years and that for the fiscal year beginning October 1, 2011 and October 1, 2014 an actuarial valuation is performed to recalculate the cost of the benefit improvement.
- Ordinance No. 2015-06 became effective upon adoption on March 24, 2015 revising (1) the definition of Salary to exclude payments for overtime in excess of 300 hours per fiscal year and payments for accrued sick and annual leave from the definition of Salary [except that for

members employed on March 24, 2015 Salary does include the lesser of (a) the amount of sick and annual leave accrued as of March 24, 2015 and (b) the actual amount of sick and annual leave for which the member receives payment at retirement], (2) employee contributions effective April 1, 2015 from 6.0% to 7.5% of Salary, (3) the Supplemental Benefit to indicate that if there are insufficient funds available in the EBA to pay for both the increased supplement and the variable COLA, the monthly supplement is payable first and then for the remaining funds in the EBA are used to provide the variable COLA on a prorate basis, (4) the maximum pension benefit to be $90,000 annually for members hired on or after March 24, 2015 and also members employed on March 24, 2015 who have not reached the normal retirement date [except that the accrued a benefit in excess of $90,000 annually as of March 24, 2015 is not reduced to $90,000 but no additional benefits will accrue], and (5) DROP interest crediting for members who elect the fixed rate from an annual rate of 6.5% to 1.3% for those who enter the DROP on or after March 24, 2015.

- Ordinance No. 2017-46 became effective upon adoption on October 10, 2017. This ordinance (1) requires employee contributions of 6.5% of Salary from Members who enter the DROP after October 10, 2017, (2) for Members employed after October 10, 2017, the Accrued Benefit is 3.0% x Average Final Compensation x Credited Service, and for Members employed on or before October 10, 2017 and retiring on or after October 1, 2008 the Accrued Benefit is 3.25% x Average Final Compensation x Credited Service, and (3) a Share Plan is established where accumulated excess premium tax revenues as of October 1, 2015 (totaling $258,620) are split where 50% is allocated to the Share Plan and 50% is used to pay down the unfunded liability of the Plan. For premium tax revenues received in any Plan year after October 1, 2015 over that for calendar 2012 in the amount of $587,845, 50% is allocated to the Share Plan and 50% is used to reduce the city's annual required pension contributions. However, the Share Plan becomes operative when the city and the union reach agreement on the details of the Share Plan.

<u>Plan Year:</u> The 12-month period from October 1st to the following September 30th.

<u>Member:</u> Full-time firefighters become Members immediately upon hire.

<u>Actuarial Equivalence:</u> Using the funding assumptions as adopted by the board.

<u>Credited Service:</u> Total years and fractional parts of years of service as a firefighter with Member contributions, when required. Credited Service also includes certain military service. Additional Credited Service may be purchased.

<u>Vesting:</u> 100% upon the earlier of earning ten years of Credited Service and reaching the Normal Retirement Date.

<u>Salary:</u> Total compensation for services rendered to the City as a firefighter reported on Form W-2 plus all tax-deferred, tax sheltered, or tax exempt items of income derived from elective employee payroll deductions.

Effective March 24, 2015 Salary excludes payments for overtime in excess of 300 hours per fiscal year and payments for accrued sick and annual leave from the definition of Salary [except that for members employed on March 24, 2015 Salary does include the lesser of (a) the amount of sick and annual leave accrued as of March 24, 2015 and (b) the actual amount of sick and annual leave for which the member receives payment at retirement].

Effective for benefits calculated after October, 2016, Salary used is that for the fiscal year.

<u>Regular Base Salary:</u> One-twelfth of the employee's annual base pay rate plus any incentive pay.

<u>Employee Contributions:</u> Prior to Ordinance No. 2009-35 adopted October 13, 2009, employees hired prior to May 9, 1978 contributed 5.0% of Salary. Employees hired after May 9, 1978 contributed 4.75%

of Salary. Effective October 13, 2009, Ordinance No. 2009-35 revised employee contributions to 6.0% of Salary. Special rules were put in place related to the multiplier increase from 3.0% to 3.25% associated with the 1.25% employee contribution rate increase from 4.75% to 6.5%. Effective April 1, 2015, Ordinance No. 2015-06 revised employee contributions from 6.0% to 7.5% of Salary. Ordinance No. 2017-46 requires employee contributions of 6.5% of Salary from Members who enter the DROP after October 10, 2017.

A Member who terminates non-vested is entitled to refund of accumulated Employee Contributions with interest at 4% per year. Contributions may be repaid with interest upon reentry into the Plan due to rehire. The annual 4% interest crediting is not applied to employee contributions associated with a service purchase.

Vested Members who terminate employment prior to being eligible to receive an annuity may leave their accumulated contributions in the fund, and upon reaching Early Retirement eligibility begin commencement of the reduced Accrued Benefit plus the Supplemental Benefit, as defined under Early Retirement.

<u>Average Final Compensation:</u> Average of Salary for the five highest years out of the last 10 years of Credited Service.

<u>Normal Retirement Date:</u> For those who were Members prior to May 9, 1978, the first day of the month coincident with or next following the earlier of (i) age 50, regardless of Credited Service, or (ii) 25 years Credited Service, regardless of age. For those becoming Members on or after May 9, 1978, the first day of the month coincident with or next following the earlier of (i) age 55 and completion of 10 years of Credited Service, or (ii) 25 years Credited Service, regardless of age.

For those who did not earn 25 years of Credited Service upon termination of employment, the Normal Retirement Date is the first day of the month coincident with or next following the earlier of (i) age 55 and completion of 10 years of Credited Service, or (ii) the date the member would have earned 25 years of Credited Service.

<u>Normal Retirement Benefit:</u> The Accrued Benefit plus the Supplemental Benefit.

Per Ordinance No. 2015-06, the maximum pension benefit is limited to $90,000 annually for members hired on or after March 24, 2015 and also members employed on March 24, 2015 who have not reached the normal retirement date [except that the accrued a benefit in excess of $90,000 annually as of March 24, 2015 is not reduced to $90,000 but no additional benefits will accrue].

The $90,000 limit does not apply to the Supplemental Benefit.

<u>Accrued Benefit:</u> Per Ordinance No. 2017-46, for Members employed after October 10, 2017:

3.0% x Average Final Compensation x Credited Service

For Members employed on or before October 10, 2017 and retiring on or after October 1, 2008:

3.25% x Average Final Compensation x Credited Service

For members retiring on or after October 1, 1995 the multiplier was 3.0%, as last used in the October 1, 2008 actuarial valuation of the Plan. Prior to October 1, 1995 the multiplier was 2.5%.

This benefit is payable as a 10 year certain and continuous annuity.

<u>Supplemental Benefit:</u> Effective October 1, 2003, a Supplemental Benefit is payable monthly for the joint lives of the member and their beneficiary equal to $5 for each full year of Credited Service. Effective October 13, 2009, Ordinance No. 2009-35 clarified that this benefit is payable over only the life of the

member. In addition, Ordinance No. 2009-35 provided for all current and future retirees to potentially receive an additional $2.50 for each full year of Credited Service (for a total of $7.50 for each full year of Credited Service) beginning on the fifth anniversary of retirement. DROP participation counts toward the satisfaction of the five years of retirement. The additional $2.50 is only provided through available funds from the Enhanced Benefit Account, if any.

Effective March 24, 2015 Ordinance No. 2015-06 provides that if there are insufficient funds available in the Enhanced Benefit Account to pay for both the $2.50 increased supplement and the variable cost of living adjustment, the monthly supplement is payable first and then the remaining funds in the Enhanced Benefit Account are used to provide the variable cost of living adjustment on a prorate basis.

Early Retirement Date: The first day of the month coincident with or next following the earlier of attainment of age 50 or the completion of 20 years of Credited Service.

For those who did not earn 20 years of Credited Service upon termination of employment, the Early Retirement Date is the first day of the month coincident with or next following the earlier of attainment of age 50 or the date the member would have earned 20 years of Credited Service.

Early Retirement Benefit: The Accrued Benefit reduced by 3% per year by which the commencement of benefits precedes the Normal Retirement Date, plus the Supplemental Benefit.

Enhanced Benefit Account (EBA): Provides for a lump sum variable cost of living adjustment for all members who retired, became disabled, or terminated vested on or after September 30, 1996, and their beneficiaries.

Commencing annually from March 1, 1997, the sum of (a) and (b), as follows, is credited to or deducted from the EBA to provide a lump sum variable cost of living adjustment:

(a) 50% of positive or negative net investment income compared to fund's investment objective for the preceding fiscal year, and
(b) 50% of the amount by which the premium taxes collected and distributed by the state exceed 5.6% of covered payroll during the preceding fiscal year.

Covered payroll during the preceding fiscal year has historically been the calculated as an average of the total valuation salary for the current and prior valuation.

The ordinance states that the cumulative value of the EBA allocation provided by (a), above, may not exceed the cumulative net actuarial gains and losses from all sources incurred from the inception of this provision. Note that any amount allocated to the EBA based on the language in (b) does not actually reduce premium taxes available to fund other benefits.

Effective October 13, 2009, Ordinance No. 2009-35 reduced EBA funds retroactively to October 1, 2008 by a one-time deduction equal to the cost to provide the increased 3.25% benefit accrual rate minus the amount of any unallocated premium tax money and defined use of EBA funds to first pay for an additional Supplemental Benefit of $2.50 for each full year of Credited Service after the fifth year of retirement (prior to the payment of any lump sum variable cost of living adjustment described in the following).

Each April 1 the EBA is allocated among the retirees as of the preceding September 30 based upon (i) the number of full months of retirement during the preceding fiscal year, and (ii) in proportion to the amount of each retiree's actual monthly retirement benefit. The allocation is limited to a maximum of 3% of the pension benefit (prorated if retired less than a full year). In the event that in any year the balance in the fund would result in a higher payment, the excess is returned to the EBA and carried forward to the next year. Any funds carried forward in the EBA are credited with the rate of return achieved by the fund. Per direction of the Board of Trustees at their January 25, 2017 meeting, in years when the beginning balance of the EBA is negative, there is no interest crediting applied in carrying

forward the EBA balance to the next year. This change was made retroactively to when the EBA first became negative with the October 1, 2017 actuarial valuation.

Effective March 24, 2015 Ordinance No. 2015-06 provides that if there are insufficient funds available in the EBA to pay for both the $2.50 increased supplement and the variable cost of living adjustment, the monthly supplement is payable first and then the remaining funds in the EBA are used to provide the variable cost of living adjustment on a prorate basis.

<u>Death Benefits:</u> In the event of death in the line of duty prior to retirement eligibility, 40% of Regular Base Salary is payable to the spouse until their death. If there is no spouse, or upon the death of the spouse, 15% of Regular Base Salary is payable for each unmarried child until the age of 18 (or age 22 if a full-time student). The maximum amount payable to all such children is 40% of Regular Base Salary.

In the event of death not in the line of duty prior to retirement eligibility, the Employee Contributions accumulated with interest is payable or 10-year certain annuity reduced actuarially from the early retirement date.

For Members eligible for retirement at their date of death, the benefit payable is that greater in actuarial value between (i) the benefit defined for line of duty death prior to retirement eligibility and (ii) the benefit payable if the Member had retired on the date of death. The resulting amount is payable on a monthly basis for ten years, or on such other actuarially equivalent basis as approved by the board.

<u>Disability Retirement:</u> The benefit payable to any Member who becomes totally and permanently disabled in the line of duty is the greater of (i) 2% x Average Final Compensation x Credited Service, (ii) 42% x Average Final Compensation, and (iii) 40% x Regular Base Salary. The Supplemental Benefit is also payable.

The benefit payable to any Member who becomes totally and permanently disabled not in the line of duty after having earned 10 years of Credited Service is the greater of (i) 2% x Average Final Compensation x Credited Service, (ii) the Accrued Benefit as reduced for Early Retirement, further reduced actuarially in the event of disability prior to the Early Retirement Date, and (iii) 25% x Average Final Compensation. The Supplemental Benefit is also payable.

Disability Retirement benefits are payable on the first day of the first month after the board determines such entitlement. However, the monthly benefit is payable as of the date the board determined entitlement and any portion due for a partial month is paid together with the first payment.

<u>Optional Forms of Benefit:</u> The Accrued Benefit described above is payable in the form of a 10 year certain and continuous annuity. Members may optionally choose an actuarially equivalent single life annuity, joint and survivor annuity (with 50%, 66 2/3, 75% or 100% continuance), or a Social Security level income option (if a member retires prior to the time at which Social Security benefits are payable). Members who do not participate in the DROP may elect to receive 20% of the present value of their benefits as a single lump sum and the remainder of the value of their benefits as a 10 year certain and continuous annuity, a single life annuity, or a joint and survivor annuity (with 50%, 66 2/3%, 75% or 100% continuance).

<u>Deferred Retirement Option Plan (DROP):</u> Members are eligible to enter the DROP at the Normal Retirement Date. DROP participants are not eligible for death or disability benefits. The maximum DROP participation duration is 60 months. The Accrued Benefit plus Supplemental Benefit is frozen and no further Employee Contributions are payable at DROP entry. The Accrued Benefit accumulates in the DROP account with interest, credited quarterly, as elected by the Member (where this election may be changed by the Member annually effective October 1):

(a) An annual rate of 6.5%, compounded monthly, on the prior month's ending balance for members who enter the DROP before March 24, 2015, and 1.3%, compounded monthly, on the prior month's ending balance for members who enter the DROP on or after March

24, 2015. However, any member who was Normal Retirement eligible by October 1, 2012 receives 6.5% annual crediting even if they enter the DROP on or after March 24, 2015 per the legal opinion dated August 13, 2012.

(b) The average daily balance in the member's DROP account is credited or debited at a rate equal to the net investment return realized for the quarter.

(c) 50% of (a) plus 50% of (b).

A Member's final DROP account value for distribution is the value of the account at the end of the quarter immediately preceding termination of participation in the DROP, plus any monthly periodic additions made to the DROP account subsequent to the end of the previous quarter and prior to distribution.

The Supplemental Benefit is payable once the member actually terminates from employment and begins to receive monthly pension payments after the end of the DROP.

The $90,000 annual limit does limit deposits to the DROP, but does not limit DROP balance payouts.

Share Plan: Per Section 175.351(6), Florida Statutes, a defined contribution component (Share Plan) is established to be funded exclusively with Chapter 175 premium tax revenues where the accumulated excess premium tax revenues as of October 1, 2015 (totaling $258,620) are split where 50% is allocated to the Share Plan and 50% is used to pay down the unfunded liability of the Plan. For premium tax revenues received in any Plan year after October 1, 2015 over that for calendar 2012 in the amount of $587,845, 50% is allocated to the Share Plan and 50% is used to reduce the city's annual required pension contributions. Per Ordinance 2017-46, the Share Plan becomes operative when the city and the union reach agreement on the details of the Share Plan.

Actuarial Assumptions and Methods

Assumed Rate of Investment Return: 8.0% per year, net of investment expenses

Salary Increase – Individual: 6.0% per year.

The final year salary is increased using individualized percentages equal to the actual total accrued leave hours as of October 1, 2014 multiplied by the hourly rate of pay at October 1, 2014 divided by annualized fiscal 2014 salary after removing pay for overtime in excess of 300 hours.

Administrative Expenses: Prior year's actual expenses added to Normal Cost

Salary Increase – Total Payroll: The payroll growth assumption has been lowered to 1.01% for this October 1, 2016 actuarial valuation of the plan. In the prior valuation an assumption of 1.26% was used.

Inflation: 2.5% per year

Mortality: In the prior valuation, the mortality table was the RP-2000 Combined Mortality Table where Scale AA was applied to reflect mortality improvements to the valuation year. The mortality table has been revised to the mortality assumption used for special risk employees in the valuation of the Florida Retirement System (FRS), as required by state statute. The mortality rates are as follows as of October 1, 2016:

Healthy mortality:	Males: 10% RP-00 Annuitant White Collar + 90% RP-00 Annuitant Blue Collar
	Females: 100% RP-00 Annuitant White Collar
	Both male and female rates fully generational using Scale BB
Disabled mortality:	Males: 60% RP-00 Disabled Retiree Set Back 4 Years + 40% RP-00 Annuitant White Collar
	Females: 60% RP-00 Disabled Retiree Set Forward 2 Yrs + 40% RP-00 Annuitant White Collar
	No mortality improvement is assumed for disabled lives.

Retirement: Unisex rates, as follows:

	Service			
Age	<=9	10-19	20-24	>=25
<=39	0%	0%	0%	0%
40-49	0%	0%	5%	100%
50-54	5%	5%	5%	100%
>=55	5%	100%	100%	100%

Termination: Unisex rates, as follows:

Age	Rate	Age	Rate	Age	Rate	Age	Rate
<=19	0.00%	27	2.65%	35	1.90%	43	1.06%
20	3.00%	28	2.60%	36	1.78%	44	0.98%
21	2.95%	29	2.55%	37	1.66%	45	0.90%
22	2.90%	30	2.50%	38	1.54%	46	0.82%
23	2.85%	31	2.38%	39	1.42%	47	0.74%
24	2.80%	32	2.26%	40	1.30%	48	0.66%
25	2.75%	33	2.14%	41	1.22%	49	0.58%
26	2.70%	34	2.02%	42	1.14%	50	0.50%
						>=51	0.00%

Disability: Unisex rates, as follows:

Age	Rate	Age	Rate
<=19	0.000%	40	0.940%
20-30	0.300%	41	0.990%
31	0.364%	42	1.040%
32	0.428%	43	1.090%
33	0.492%	44	1.140%
34	0.556%	45	1.190%
35	0.620%	46	1.240%
36	0.684%	47	1.290%
37	0.748%	48	1.340%
38	0.812%	49	1.390%
39	0.876%	>=50	1.440%

On and Off Duty Disability and Death: 100% of deaths and disabilities are assumed to be in the line of duty.

Funding Method: Entry Age Normal (level percent of salary).