



June 20, 2017

Via Electronic Transmission

Florida Division of Retirement

To whom it may concern:

Re: 2016 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 Deerfield Beach Municipal Firefighters' Pension Trust Fund (the Plan) formally approved the October 1, 2016 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 26 of our attached October 1, 2016 actuarial valuation of the Plan. The GASB 67 Supplement as of September 30, 2016 has also been attached.

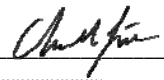
Please let us know if you have any questions or need additional information.

Sincerely,

A handwritten signature in black ink, appearing to read "Chad M. Little", is positioned above the typed name.

Chad M. Little, ASA, EA
Partner, Consulting Actuary

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 Deerfield Beach Deerfield Beach Firefighters' Pension Trust Fund
(b) Plan Name.....	
(c) Plan Type.....	Defined Benefit
(d) Valuation Date.....	10/01/2016
(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.....	14-6619
(f)(4) Signature Date.....	03/25/2017
(f)(5) Cover letter attached (pdf)?.....	Y

Section 112.664(1)(a), F.S. Total pension liability assuming mortality as used in FRS 7/1/2015 actuarial valuation

(g) Total pension liability:	
(g)(1) Service cost.....	\$2,793,233
(g)(2) Interest.....	10,371,874
(g)(3) Benefit changes.....	48,546
(g)(4) Difference between expected and actual experience.....	(82,819)
(g)(5) Changes in assumptions.....	140,613
(g)(6) Benefit payments.....	(6,795,446)
(g)(7) Contribution refunds.....	0
(g)(8) Net change in total pension liability.....	\$6,476,001
(g)(9) Total pension liability – beginning of year.....	<u>\$136,963,565</u>
(g)(10) Total pension liability – ending of year.....	\$143,439,566
(h) Plan fiduciary net position:	
(h)(1) Contributions – Employer.....	\$5,060,592
(h)(2) Contributions – State.....	667,147
(h)(3) Contributions – Member.....	883,740
(h)(4) Net investment income.....	7,926,978
(h)(5) Benefit payments.....	(6,795,446)
(h)(6) Contributions refunds.....	0
(h)(7) Administrative expense.....	(214,739)
(h)(8) Other.....	0
(h)(9) Net change in plan fiduciary net position.....	\$7,528,272
(h)(10) Plan fiduciary net position – beginning of year.....	<u>\$99,661,364</u>
(h)(11) Plan fiduciary net position – ending of year.....	\$107,189,636
(i) Net pension liability/(asset) [(g)(10) minus (h)(11)].....	\$36,249,930

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.....	\$4,315,408
(j)(2) Interest.....	9,580,386
(j)(3) Benefit changes.....	48,546
(j)(4) Difference between expected and actual experience.....	191,443
(j)(5) Changes in assumptions.....	603,839
(j)(6) Benefit payments.....	(6,795,446)
(j)(7) Contribution refunds.....	0
(j)(8) Net change in total pension liability.....	\$7,944,176
(j)(9) Total pension liability – beginning of year.....	<u>\$169,734,804</u>
(j)(10) Total pension liability – ending of year.....	\$177,678,980
(k) Plan fiduciary net position:	
(k)(1) Contributions – Employer.....	\$5,060,592
(k)(2) Contributions – State.....	667,147
(k)(3) Contributions – Member.....	883,740
(k)(4) Net investment income.....	7,926,978
(k)(5) Benefit payments.....	(6,795,446)
(k)(6) Contributions refunds.....	0
(k)(7) Administrative expense.....	(214,739)
(k)(8) Other.....	0
(k)(9) Net change in plan fiduciary net position.....	\$7,528,272
(k)(10) Plan fiduciary net position – beginning of year.....	<u>\$99,661,364</u>
(k)(11) Plan fiduciary net position – ending of year.....	\$107,189,636
(l) Net pension liability/(asset) [(j)(10) minus (k)(11)].....	\$70,489,344

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	14.26
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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	14.26
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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	12.06
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Section 112.664(1)(d), F.S. (on last valuation basis)

(p) Recommended Plan contributions in Annual Dollar Value.....	\$6,536,481
(q) Recommended Plan contributions as a Percentage of Valuation Payroll.....	67.29%

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

(r) Recommended Plan contributions in Annual Dollar Value.....	\$6,536,481
(s) Recommended Plan contributions as a Percentage of Valuation Payroll.....	67.29%

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

(t) Recommended Plan contributions in Annual Dollar Value.....	\$10,997,875
(u) Recommended Plan contributions as a Percentage of Valuation Payroll.....	113.22%

Deerfield Beach Municipal Firefighters' Pension Trust Fund

Actuarial Valuation as of October 1, 2016



March 23, 2017



March 23, 2017

Board of Trustees
Deerfield Beach Municipal Firefighters' Pension Trust Fund
Deerfield Beach, Florida

RE: Actuarial Valuation as of October 1, 2016

Dear Board Members:

We are pleased to present the actuarial valuation as of October 1, 2016 for the Deerfield Beach Municipal Firefighters' Pension Trust Fund (the Plan). This report provides a review of the current funded status of the Plan, establishes the minimum funding requirements for the fiscal year ending September 30, 2017 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 the presentation of these results to you in person and we are always available to answer any questions you may have.

Sincerely,

A handwritten signature in black ink, appearing to read 'Chad M. Little'.

Chad M. Little, ASA, EA
Partner, Consulting Actuary
Enrollment Number 14-6619

A handwritten signature in black ink, appearing to read 'Paula C. Freiman'.

Paula C. Freiman, ASA, EA
Partner, Consulting Actuary
Enrollment Number 14-5796

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Section

1

Board Summary

This report presents the results of the October 1, 2016 actuarial valuation of the Deerfield Beach Municipal Firefighters' Pension Trust Fund (the Plan).

Summary of Principal Valuation Results

A summary of the key valuation findings as of October 1, 2016 are compared with the results of the prior valuation below.

Fiscal Year Ending	September 30, 2016	September 30, 2017
Expected State Funding	\$618,479	\$618,479
Expected City Contributions	<u>5,060,592</u>	<u>5,043,729</u>
Employer Minimum Funding Requirement	\$5,679,071	\$5,662,208

Valuation Date	October 1, 2015	October 1, 2016
Accrued Liability (AL)	\$136,963,565	\$143,439,566
Actuarial Value of Assets	\$105,207,723	\$112,343,193
Unfunded Accrued Liability (UAL)	\$31,755,842	\$31,096,373
Funded Percentage	76.81%	78.32%

Valuation Date	October 1, 2015	October 1, 2016
Assumed Rate of Investment Return	7.625%	7.5%
Salary Increase Assumption	5% to 11%	5% to 11%
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 City and BSO. 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

While the number of active Members decreased by 3, the covered payroll used in the valuation increased by 0.6%. The following provides a summary of the actual to the expected pay increases for continuing active members, by individual, for the 12 month periods ending on the date specified.

Year Ending September 30,	Actual	Expected
2016	4%	6%
2015	6%	7%
2014	5%	7%
2013	3%	9%
2012	7%	9%
2011	6%	9%
2010	8%	9%
2009	8%	9%
2008	2%	9%
2007	10%	9%

Overall, there was a small demographic gain experienced. The pay increase less than expected and the demographic gain could have been due to the limitation of pay to include up to 300 hours of overtime. Note that the number of terminations has been low or non-existent since the Plan was closed to new entrants. We recommend an experience review be performed. The last review was performed as of October 1, 2004.

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 8.0%, the return on the Actuarial Value of Assets was 7.2% in comparison to the 7.625% assumed rate of return. This produced an investment loss on an actuarial value of assets 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.

Year End 9/30	Market Value	Actuarial Value	Assumed Return
2016	8.0%	7.2%	7.625%
2015	(3.1%)	6.5%	7.625%
2014	9.4%	8.7%	7.625%
2013	11.1%	6.5%	7.625%
2012	15.3%	0.8%	7.625%
2011	(1.1%)	0.1%	7.625%
2010	6.9%	1.5%	7.625%
2009	(1.2%)	2.5%	7.625%
2008	(12.8%)	5.7%	7.625%
2007	10.2%	11.8%	7.625%
Average	3.9%	5.1%	7.625%

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

Plan Provisions

A transfer of fire services to the Broward County Sheriff's Office (BSO) was effective October 1, 2011. We recommend the ordinance be amended to reflect how the Plan currently operates.

Ordinance 2016/016 was adopted effective September 6, 2016. We provided a statement of no impact for this ordinance dated June 17, 2016.

Assumptions and Methods

In the prior valuation, the mortality table was the RP-2000 Combined Mortality Table fully generational using Scale AA. 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 of July 1, 2015, as required by state statute. The mortality rates are as follows:

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.



The expected net rate of return has been revised from 7.625% to 7.5%. As the group of active participants approaches retirement the Board of Trustees should continue to review the investment allocations and consider lowering the net assumed rate of investment return further as we expect a change to reflect less risk in the asset allocation.

As all of the amortization bases are currently being amortized over 15 years, we have implemented a "Fresh Start" combining all of the outstanding bases into a single base amortized over 15 years.

State Contributions

There have been significant changes in state law related to the use of premium tax revenues. Florida Statutes Section 175.131(1) states changes become effective upon entering into a Collective Bargaining Agreement (CBA) on or after July 1, 2015. The Board has indicated that no change should be made to the treatment of premium tax dollars. Up to \$618,479 is used toward the actuarially determined contribution where premium tax dollars over that level have been used to provide share benefits. The "Expected City Contribution" 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 amount received in the fiscal year ending September 30, 2017 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

	October 1, 2015		October 1, 2016	
Equity Securities	\$41,707,546	42 %	\$39,551,471	37 %
Fixed Income (Corp./Gov't. Bonds)	26,887,656	27 %	32,652,009	30 %
Hedge Funds	10,482,267	11 %	10,243,509	10 %
Real Estate Investments	11,692,842	12 %	11,320,151	11 %
MLPs	3,060,392	3 %	3,272,968	3 %
Cash & Cash Equivalents	2,032,142	2 %	2,948,813	3 %
Net Receivables/Payables	325,795	0 %	3,529,535	3 %
Self-Directed DROP	<u>3,472,724</u>	<u>3 %</u>	<u>3,671,180</u>	<u>3 %</u>
Fair Market Value of Assets	<u>\$99,661,364</u>	100 %	<u>\$107,189,636</u>	100 %

Reconciliation of Market Value of Assets

Year Ending September 30,	2015	2016
1. Market Value Beginning of Year	\$103,894,584	\$99,661,364
2. Contributions		
a. City	\$5,064,382	\$5,060,592
b. State	725,199	667,147
c. Member	<u>868,805</u>	<u>883,740</u>
d. Total Contributions	\$6,658,386	\$6,611,479
3. Investment earnings		
a. Unrealized Gains and Losses	\$(7,116,278)	\$5,656,298
b. Realized Gains and Losses	2,318,083	729,433
c. Interest and Dividends	2,226,603	2,165,156
d. Other Income	8,812	0
e. Investment Expenses	<u>(625,356)</u>	<u>(623,909)</u>
f. Net Investment Income	\$(3,188,136)	\$7,926,978
4. Deductions		
a. Retirement Benefits	\$(6,164,295)	\$(6,356,992)
b. Share Account Distribution	(134,477)	(78,663)
c. Refunds	(47,544)	0
d. DROP Account Distribution	(1,119,482)	(359,791)
e. Administrative Expenses	<u>(237,672)</u>	<u>(214,739)</u>
f. Total	\$(7,703,470)	\$(7,010,185)
5. Net Increase (Decrease)	\$(4,233,220)	\$7,528,272
6. Market Value End of Year	<u>\$99,661,364</u>	<u>\$107,189,636</u>

Reconciliation of DROP Account Balances

Year Ending September 30,	2015	2016
1. Beginning Balance	\$12,758,630.38	\$12,608,002.49
2. Additions	\$1,237,407.62	\$1,291,806.10
3. Interest	\$(268,553.57)	\$835,017.45
4. Distributions	\$1,119,481.94	\$359,790.97
5. Ending Balance	\$12,608,002.49	\$14,375,035.07

Note: DROP account balances are included in the reconciliation of the market value of Plan assets shown on the prior page.

Development of Historical Gain or Loss on Market Value of Assets

	2016	2015
1. Market Value of Assets - Beginning of Year	\$99,661,364	\$103,894,584
2. Contributions	6,611,479	6,658,386
3. Benefit Payments + Administrative Expenses	(7,010,185)	(7,703,470)
4. Interest	<u>7,598,755</u>	<u>7,894,728</u>
5. Expected Value of Assets at End of Year	\$106,861,413	\$110,744,228
6. Market Value of Assets - End of Year	\$107,189,636	\$99,661,364
7. Gain (Loss) for Plan Year = (6) - (5)	\$328,223	\$(11,082,864)
	2014	2013
1. Market Value of Assets - Beginning of Year	\$95,798,355	\$85,969,494
2. Contributions	6,725,573	6,833,173
3. Benefit Payments + Administrative Expenses	(7,560,487)	(6,574,543)
4. Interest	<u>7,360,640</u>	<u>6,543,964</u>
5. Expected Value of Assets at End of Year	\$102,324,081	\$92,772,088
6. Market Value of Assets - End of Year	\$103,894,584	\$95,798,355
7. Gain (Loss) for Plan Year = (6) - (5)	\$1,570,503	\$3,026,267

Development of Actuarial Value of Assets

1.	Market Value of Assets as of 9/30/2016			\$	107,189,636
2.	Phase-In Gains (Losses) Over Five Year Period				
		Original Gain (Loss)	Percent Unrecognized		Unrecognized Gain (Loss)
a.	Year Ending 9/30/2016	\$ 328,223	80%	\$	262,578
b.	Year Ending 9/30/2015	(11,082,864)	60%		(6,649,718)
c.	Year Ending 9/30/2014	1,570,503	40%		628,201
d.	Year Ending 9/30/2013	3,026,267	20%		605,253
e.	Total			\$	(5,153,686)
3.	Cumulative Balance of State Monies Available for Benefit Improvement			\$	129
4.	Preliminary Actuarial Value of Assets as of 9/30/2016 = 1. - 2.e. - 3.			\$	112,343,193
5.	Corridor Around Market Value				
a.	Minimum = 80% of Market Value of Assets			\$	85,751,709
b.	Maximum = 120% of Market Value of Assets			\$	128,627,563
c.	Corridor Adjustment to Preliminary Actuarial Value			\$	0
6.	Actuarial Value of Assets as of 9/30/2016 (4. + 5.c.)			\$	112,343,193

Historical Asset Values

Year Ending 9/30	Market Value	Actuarial Value
2016	\$107,189,636	\$112,343,193
2015	99,661,364	105,207,723
2014	103,894,584	99,807,840
2013	95,798,355	92,608,974
2012	85,969,494	86,701,434
2011	75,109,266	86,605,981
2010	76,415,091	86,997,197
2009	72,425,351	86,680,011
2008	72,652,519	83,960,958
2007	82,980,679	79,039,657

10-Year Average of Historical Rates of Investment Return

Year Ending 9/30	Market Value	Actuarial Value	Assumed Return
2016	8.0%	7.2%	7.625%
2015	(3.1%)	6.5%	7.625%
2014	9.4%	8.7%	7.625%
2013	11.1%	6.5%	7.625%
2012	15.3%	0.8%	7.625%
2011	(1.1%)	0.1%	7.625%
2010	6.9%	1.5%	7.625%
2009	(1.2%)	2.5%	7.625%
2008	(12.8%)	5.7%	7.625%
2007	10.2%	11.8%	7.625%
Average	3.9%	5.1%	7.625%

Historical Contribution Amounts (as a Dollar Amount)

Year Ending 9/30	Recognized State Funding	City Contributions	Actual City Plus State Contributions
2016	667,025	5,060,592	5,727,617
2015	725,299	5,064,382	5,789,681
2014	791,034	5,051,768	5,842,802
2013	803,172	5,105,188	5,908,360
2012	823,567	4,130,730	4,954,297
2011	820,216	2,501,215	3,321,431
2010	835,023	2,240,989	3,076,012
2009	890,684	1,860,792	2,751,476
2008	957,389	1,648,569	2,605,958
2007	618,479	1,837,841	2,456,320

Note: The recognized state funding shown above includes premium tax dollars up to \$618,479 toward minimum funding plus any premium tax dollars used toward share allocations.

Derivation of State Contribution Funding Reserves

Year Ending 9/30				Recurring Cost Benefit	Recurring Cost Benefit	Use Benefit Improvements (Share Account Allocations)	Recognized State Funding	Balance Available Upon Benefit Improvement
	Regular	Supplemental	Total	Improvements	Improvements			
2016	\$602,937	\$64,210	\$667,147	\$0	\$618,479	\$48,546	\$667,025	\$129
2015	577,551	147,648	725,199	0	618,479	106,820	725,299	7
2014	600,473	190,540	791,013	0	618,479	172,555	791,034	107
2013	640,735	142,149	782,884	0	618,479	184,693	803,172	128
2012	823,518	20,326	843,844	0	618,479	205,088	823,567	20,416
2011	820,253	0	820,253	0	618,479	201,737	820,216	139
2010	835,016	0	835,016	0	618,479	216,544	835,023	102
2009	763,718	127,026	890,744	0	618,479	272,205	890,684	109
2008	802,571	6,122	808,693	0	618,479	338,910	957,389	49
2007	767,224	0	767,224	0	618,479	0	618,479	148,745
2006	561,509	0	561,509	0	618,479	0	561,509	0
2005	482,526	0	482,526	0	618,479	0	482,526	0
2004	456,783	0	456,783	0	618,479	0	456,783	0
2003	433,349	0	433,349	0	618,479	0	585,796	0
2002	346,039	0	346,039	355,978	618,479	0	346,039	0
2001	301,242	0	301,242	0	262,501	0	262,501	152,447
2000	319,774	0	319,774	13,964	262,501	0	262,501	113,706
1999	304,970	0	304,970	0	248,537	0	248,537	56,433
1998	248,537	0	248,537	0	248,537	0	248,537	0



Historical Payment Amounts

Year Ending 9/30	Retirement Benefits	Refunds	Administrative Expenses	Total
2016	\$6,795,466	\$0	\$214,739	\$7,010,185
2015	7,418,254	47,544	237,672	7,703,470
2014	7,328,455	0	232,032	7,560,487
2013	6,203,989	69,581	300,973	6,574,543
2012	6,282,382	0	268,862	6,551,244
2011	4,646,600	21,064	253,223	4,920,887
2010	4,817,243	4,343	284,552	5,106,138
2009	2,808,889	28,018	332,191	3,169,098
2008	2,869,511	92,294	156,342	3,118,147
2007	2,262,220		126,427	2,388,647

*Refunds were not separated from retirement benefits for the fiscal year ending September 30, 2007.

Historical Share Allocations

Year Ending 9/30	State Contribution Over 618,479	Available Funds	Eligible Members	Individual Share Allocation	Total Share Allocations	Forfeitures
2016	48,668	49,821	202	246	49,692	
2015	106,720	117,472	205	573	117,465	1,146
2014	172,534	173,559	206	842	173,452	10,644
2013	184,731	185,807	207	897	185,679	897
2012	205,039	205,178	208	986	205,088	986
2011	201,774	202,948	201	1,009	202,809	
2010	216,537	216,646	202	1,072	216,544	1,072
2009	272,265	275,725	198	1,392	275,616	
2008	190,214	191,139	194	985	191,090	3,411
2007		148,745	191	778	148,598	778

Present Value of Benefits

Valuation Date October 1,	2015	2016
1. Active Members		
a. Service Retirement	\$49,551,938	\$51,963,915
b. Deferred Benefits	5,036,508	4,957,433
c. Survivor Benefits	163,622	509,043
d. Disability Benefits	<u>1,189,167</u>	<u>1,007,229</u>
e. Total for Active Members	\$55,941,235	\$58,437,620
2. Vested Terminated Members	\$0	\$0
3. Members in Payment Status		
a. Monthly Retirement Benefits	\$81,442,006	\$82,409,208
b. Current DROP Balance	12,608,002	14,375,035
c. Beneficiaries	1,178,220	1,160,247
d. Disability Retirement	<u>2,289,381</u>	<u>2,086,127</u>
e. Total in Payment Status	\$97,517,609	\$100,030,617
4. Share Account Balances		
a. Active Members	\$863,314	\$920,928
b. Members Currently in DROP	195,859	180,588
c. Members in Payment Status	<u>57,300</u>	<u>72,510</u>
d. Total Share Account Balances	\$1,116,473	\$1,174,026
5. All Members	<u>\$154,575,317</u>	<u>\$159,642,263</u>

Accrued Liability

Valuation Date October 1,	2015	2016
1. Active Members		
a. Service Retirement	\$35,199,031	\$38,910,745
b. Deferred Benefits	2,558,386	2,611,636
c. Survivor Benefits	94,853	304,878
d. Disability Benefits	<u>477,213</u>	<u>407,664</u>
e. Total for Active Members	\$38,329,483	\$42,234,923
2. Vested Terminated Members	\$0	\$0
3. Members in Payment Status		
a. Monthly Retirement Benefits	\$81,442,006	\$82,409,208
b. Current DROP Balance	12,608,002	14,375,035
c. Beneficiaries	1,178,220	1,160,247
d. Disability Retirement	<u>2,289,381</u>	<u>2,086,127</u>
e. Total for Members in Payment Status	\$97,517,609	\$100,030,617
4. Share Account Balances		
a. Active Members	\$863,314	\$920,928
b. Members Currently in DROP	195,859	180,588
c. Members in Payment Status	<u>57,300</u>	<u>72,510</u>
d. Total Share Account Balances	\$1,116,473	\$1,174,026
5. All Members	<u>\$136,963,565</u>	<u>\$143,439,566</u>

Normal Cost

Valuation Date October 1,	2015	2016
1. Preliminary Normal Cost		
a. Service Retirement	\$2,280,312	\$2,244,061
b. Deferred Benefits	388,221	402,982
c. Survivor Benefits	10,958	35,457
d. Disability Benefits	<u>113,742</u>	<u>103,585</u>
e. Preliminary Normal Cost	\$2,793,233	\$2,786,085
f. Preliminary Normal Cost as a % of Pay	28.9%	28.7%
2. Total Normal Cost		
a. Preliminary Normal Cost	\$2,793,233	\$2,786,085
b. Administrative Expense	<u>237,672</u>	<u>214,739</u>
c. Total Normal Cost	\$3,030,905	\$3,000,824
d. Total Normal Cost as a % of Pay	31.4%	30.9%
3. Actual Employer Normal Cost		
a. Preliminary Normal Cost	\$2,793,233	
b. Actual Administrative Expense	214,739	
c. Actual Employee Contributions	<u>(883,740)</u>	
d. Employer Normal Cost	\$2,124,232	
4. Valuation Payroll	\$9,655,892	\$9,714,148

Unfunded Accrued Liability

Derivation of Unfunded Accrued Liability (UAL)

Unfunded Accrued Liability as of October 1,	2016
1. Actuarial Accrued Liability	\$143,439,566
2. Actuarial Value of Assets	<u>(112,343,193)</u>
3. Unfunded Accrued Liability	\$31,096,373

Determination of Expected Unfunded Accrued Liability

1. Unfunded Accrued Liability for Prior Year	\$31,755,842
2. Employer Normal Cost (Including Administrative Expenses)	2,124,232
3. Interest on UAL and NC	2,583,356
4. Contributions	
a. City	\$(5,060,592)
b. Recognized State of Florida Contributions	<u>(667,025)</u>
c. Total	\$(5,727,617)
5. Interest on Contributions for Time on Deposit	(233,147)
6. Change in Plan, Methods or Assumptions	<u>189,159</u>
7. Expected Unfunded Accrued Liability	\$30,691,825

Calculation of (Gain) or Loss

1. Actual Unfunded Accrued Liability	\$31,096,373
2. Expected Unfunded Accrued Liability	<u>30,691,825</u>
3. Total (Gain) or Loss	\$404,548
4. Breakdown of (Gain) or Loss	
a. Investment Experience	\$487,367
b. Demographic Experience	<u>(82,819)</u>
c. Total (Gain) or Loss	\$404,548

Amortization of Unfunded Liability

The Unfunded Actuarial Accrued Liability is being amortized as a level dollar amount. Changes in the Unfunded Actuarial Accrued Liability due to plan changes, assumption changes, method changes, or gains and losses are all amortized over a period not to exceed the longest expected working lifetime of the active group.

Amortization Bases

Effective October 1,	Source	Balance	Years Remain	Amortization Payment
2016	Unfunded Accrued Liability	\$31,096,373	15	\$3,277,044

Projected Unfunded Accrued Liability and Amortization Payments

Plan Year Beginning October 1,	UAL Outstanding Bases	Amortization Payment
2016	\$31,096,373	\$3,277,044
2017	29,905,779	3,277,044
2018	28,625,890	3,277,044
2019	27,250,009	3,277,044
2020	25,770,937	3,277,044
2021	24,180,935	3,277,044
2022	22,471,683	3,277,044
2023	20,634,237	3,277,044
2024	18,658,982	3,277,044
2025	16,535,583	3,277,044
2026	14,252,929	3,277,044
2027	11,799,076	3,277,044
2028	9,161,184	3,277,044
2029	6,325,451	3,277,044
2030	3,277,038	3,277,038

Actions Taken to Reduce Unfunded Accrued Liability

The required contributions calculated each year include a payment for the amortization of the unfunded accrued liability. This payment is designed to reduce the unfunded accrued liability in an orderly fashion over the next 15 years.

Cumulative Actuarial Experience (for Variable Benefit Determination)

Valuation Date	Actuarial Gain (Loss) Total	Portion of Gain Used for Variable Benefit	Variable Benefit Granted	Cumulative Actuarial Experience
10/1/1979	92,476	5,517	4.0%	86,959
10/1/1980	10,007	8,536	4.0%	88,430
10/1/1981	(1,095)	0	0.0%	87,335
10/1/1982	(171,763)	0	0.0%	(84,428)
10/1/1983	436,967	8,088	4.0%	344,451
10/1/1984	(537,204)	0	0.0%	(192,753)
10/1/1985	1,330,535	54,254	4.0%	1,083,528
10/1/1986	1,346,574	55,436	4.0%	2,374,666
10/1/1987	256,745	61,295	4.0%	2,570,116
10/1/1988	(949,158)	0	0.0%	1,620,958
10/1/1989	1,648,108	77,266	4.0%	3,191,800
10/1/1990	(1,307,591)	0	0.0%	1,884,209
10/1/1991	1,498,270	114,106	4.0%	3,268,373
10/1/1992	(1,175,149)	0	0.0%	2,093,224
10/1/1993	1,054,865	0	0.0%	3,148,089
10/1/1994	61,555	0	0.0%	3,209,644
10/1/1995	1,256,280	196,663	4.0%	4,269,261
10/1/1996	1,646,817	242,272	4.0%	5,673,806
10/1/1997	2,253,047	286,389	4.0%	7,640,464
10/1/1998	865,890	314,208	4.0%	8,192,146
10/1/1999	(5,803)	0	0.0%	8,186,343
10/1/2000	739,211	336,087	4.0%	8,589,467
10/1/2001	(10,466,741)	0	0.0%	(1,877,274)
10/1/2002	(5,619,214)	0	0.0%	(7,496,488)
10/1/2003	(799,969)	0	0.0%	(8,296,457)
10/1/2004	(4,443,626)	0	0.0%	(12,740,083)
10/1/2005	(3,376,482)	0	0.0%	(16,116,565)
10/1/2006	267,777	0	0.0%	(15,848,788)
10/1/2007	3,252,734	0	0.0%	(12,596,054)
10/1/2008	907,703	0	0.0%	(11,688,351)
10/1/2009	(3,855,896)	0	0.0%	(15,544,247)
10/1/2010	(5,648,520)	0	0.0%	(21,192,767)
10/1/2011	(6,064,957)	0	0.0%	(27,257,724)
10/1/2012	(5,729,463)	0	0.0%	(32,987,187)
10/1/2013	(7,552)	0	0.0%	(32,994,739)
10/1/2014	69,471	0	0.0%	(32,925,268)
10/1/2015	275,760	0	0.0%	(32,649,508)
10/1/2016	(404,548)	0	0.0%	(33,054,056)

Note: Information in the above table prior to October 1, 2006 is as shown in the report of the prior actuary. Because a cumulative loss exists as of October 1, 2016 no Variable Benefit is payable.



Minimum Funding Requirements

Valuation as of October 1, Funding For Fiscal Year Ending September 30,	2015 2016	2016 2017
1. Total Normal Cost	\$3,030,905	\$3,000,824
2. Amortization of UAL	<u>3,254,004</u>	<u>3,277,044</u>
3. Minimum Required Contribution BOY	\$6,284,909	\$6,277,868
4. Interest Assuming Periodic Payment	<u>263,192</u>	<u>258,613</u>
5. Total Minimum Required Contribution	\$6,548,101	\$6,536,481

Contributions as a Dollar Amount

1. Expected Employee Contributions	\$869,030	\$874,273
2. Expected State Funding	618,479	618,479
3. Expected City Contributions	<u>5,060,592</u>	<u>5,043,729</u>
4. Total Minimum Required Contribution	\$6,548,101	\$6,536,481

Contributions as a Percent of Payroll*

1. Valuation Payroll	\$9,655,892	\$9,714,148
2. Expected Employee Contributions	9.00%	9.00%
3. Expected State Funding	6.41%	6.37%
4. Expected City Contributions	<u>52.41%</u>	<u>51.92%</u>
5. Total Minimum Required Contribution	67.82%	67.29%

*Contributions as a percent of payroll are provided for reporting purposes only. With a closed plan, the payroll levels continue to decrease over time creating percent of payroll results which increase even if the dollar contributions remain the same.

Reconciliations

Reconciliation of Funded Status

	Unfunded Accrued Liability	Funded Percentage	Change in Unfunded Accrued Liability	Change in Funded Percentage
As of Prior Valuation	\$31,755,842	76.81 %		
Changes in Contribution Rate due to:				
Normal Operation of Plan	30,551,212	78.69 %	\$(1,204,630)	1.88 %
Investment Experience	31,038,579	78.35 %	487,367	(0.34)%
Demographic Experience	30,955,760	78.40 %	(82,819)	0.05 %
Required Mortality Change	29,372,808	79.27 %	(1,582,952)	0.87 %
Change Net Assumed Return	31,096,373	78.32 %	<u>1,723,565</u>	<u>(0.95)%</u>
Total Changes			\$(659,469)	1.51 %
As of Current Valuation	\$31,096,373	78.32 %		

Reconciliation of City Minimum Funding Requirement

	Dollar Amount
As of Prior Valuation	\$5,060,592
Changes in Contribution due to:	
Normal Operation of Plan	\$(35,507)
Change in Expenses	(23,807)
Investment Experience	53,671
Demographic Experience	8,923
Required Mortality Change	(256,373)
Change Net Assumed Return to 7.5%	<u>236,230</u>
Total Changes	\$(16,863)
As of Current Valuation	\$5,043,729

Section 3 Accounting Information

Information Required by GASB 67/68

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

Statement of Accumulated Plan Benefits (FASB 35)

The following table is based on prior accounting standards and is required by the State. The present value of accrued benefits is an estimate of the liability for all benefits accrued to date.

Valuation as of October 1,	2015	2016
1. Actuarial present value of accumulated plan benefits		
a. Participants currently receiving benefits	\$97,770,768	\$100,283,715
b. Other participants	<u>24,675,246</u>	<u>29,701,739</u>
c. Total vested plan benefits	\$122,446,014	\$129,985,454
d. Total non-vested plan benefits	<u>3,176,358</u>	<u>2,027,171</u>
e. Total accumulated plan benefits	\$125,622,372	\$132,012,625
2. Change in accumulated plan benefits		
a. Accumulated plan benefits beginning of year		\$125,622,372
b. Increase (decrease) during year attributable to:		
i. Plan amendment		\$48,546
ii. Change in assumptions		329,492
iii. Benefits paid		(6,795,446)
iv. Increase for interest and probability of payment due to decrease in discount period and benefits accrued		<u>12,807,661</u>
v. Net increase (decrease)		\$6,390,253
c. Accumulated plan benefits end of year		\$132,012,625

Other Disclosures Required by the State of Florida

Valuation as of October 1,	2015	2016
Other Disclosures (where applicable)		
Present value of active member:		
Future salaries (attained age)	\$61,267,601	\$56,566,096
Future contributions (attained age)	\$5,514,084	\$5,090,949
Current contribution balance for active members*	\$7,053,957	\$7,613,116

*Note: Non-vested terminations receive a refund of contributions without interest.

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 healthy mortality as follows: Male: 10% RP-2000 Annuitant White Collar + 90% RP-2000 Annuitant Blue Collar / Female: 100% RP-2000 Annuitant White Collar, where both the male and female rates are fully generational from 2000 using Scale BB. Disabled mortality is as follows: Male: 60% RP-2000 Disabled Retiree Set Back 4 years + 40% RP-2000 Annuitant White Collar / Female: 60% RP-2000 Disabled Retiree Set Forward 2 Years + 40% RP-2000 Annuitant White Collar, where no mortality improvement is assumed for disabled lives.
- (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%)	Actual Valuation Current Discount Rate (7.50%)	2% Increase (9.50%)
Total pension liability	\$177,678,980	\$143,439,566	\$120,040,593
Plan fiduciary net position	<u>(107,189,636)</u>	<u>(107,189,636)</u>	<u>(107,189,636)</u>
Net pension liability	<u>\$70,489,344</u>	<u>\$36,249,930</u>	<u>\$12,850,957</u>
 Plan fiduciary net position as a percentage of the total pension liability	 60.33%	 74.73%	 89.29%
 Years of benefit payments:			
Expected for current members:	99	99	99
Paid for with current assets:	12.06	14.26	18.21
 City Plus State Contribution Requirement, Plus Expected Employee Contributions			
Dollar Amount	\$10,997,875	\$6,536,481	\$3,168,287
Percent of Payroll	113.22%	67.29%	32.62%

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,	2016	2015	2014	2013	2012	2011
Assumed rate of return	7.625%	7.625%	7.625%	7.625%	7.625%	7.625%
Actual rate of return	8.0%	(3.1%)	9.4%	11.1%	15.3%	(1.1%)
Percentages of assets in:						
Cash	3%	2%	2%	4%	4%	4%
Equity	37%	42%	42%	45%	43%	45%
Bond	30%	27%	27%	24%	30%	25%
Alternative	30%	29%	29%	27%	23%	26%
Total	100%	100%	100%	100%	100%	100%

Section
4Supplementary
Information

Summary of Participant Data

Member Statistics

Fiscal Year Beginning	October 1, 2015	October 1, 2016
<u>Active Participants</u>		
Number	87	84
Average Age	36.4	37.0
Average Service	11.4	12.4
Percent Male	90.8%	91.7%
Average Annual Pay	\$ 112,485	\$ 117,172
Total Covered Payroll	\$ 9,786,166	\$ 9,842,479
Valuation Payroll	\$ 9,655,892	\$ 9,714,148
Annual Report	\$ 9,628,949	\$ 9,412,235
<u>Terminated Vested Participants</u>		
Number	0	0
Average Age	0.0	0.0
Percent Male	0%	0%
Average Monthly Benefit	\$ 0	\$ 0
<u>DROP Participants</u>		
Number	18	15
Average Age	50.9	50.6
Percent Male	88.9%	86.7%
Average Monthly Benefit	\$ 5,943	\$ 5,103

Member Statistics (Continued)

Fiscal Year Beginning	October 1, 2015	October 1, 2016
<u>Service Retirements</u>		
Number	85	91
Average Age	58.9	59.5
Percent Male	100.0%	98.9%
Average Monthly Benefit	\$ 5,820 ⁽¹⁾	\$ 5,809 ⁽²⁾
<u>Beneficiaries</u>		
Number	5	4
Average Age	78.0	79.4
Percent Male	0.0%	0.0%
Average Monthly Benefit	\$ 3,057	\$ 3,173
<u>Disabled</u>		
Number	8	8
Average Age	58.4	59.4
Percent Male	75.0%	75.0%
Average Monthly Benefit	\$ 2,031	\$ 2,031
<u>Total in Payment Status</u>		
Number	98	103
Average Age	59.9	60.2
Percent Male	92.9%	93.2%
Average Monthly Benefit	\$ 5,369	\$ 5,413

Notes:

- (1) As of October 1, 2015, an average monthly benefit of \$5,519 is payable to retirees after every Social Security level income option annuity is at the reduced level.
- (2) As of October 1, 2016, an average monthly benefit of \$5,591 is payable to retirees after every Social Security level income option annuity is at the reduced level.

Number of Active Members by Age and Service as of October 1, 2016

Age	Service						Total
	<1	<5	<10	<15	<20	<25	
<25							0
<30			7				7
<35			8	11			19
<40			3	24	9		36
<45				6	11		17
<50				1	3		4
<55					1		1
<60							0
Total	0	0	18	42	24	0	84

Active Valuation Pay by Age and Service as of October 1, 2016

Age	Service						Total
	<1	<5	<10	<15	<20	<25	
<25							
<30			110,818				110,818
<35			105,027	113,525			109,947
<40			104,910	110,906	137,099		116,955
<45				120,443	127,695		125,136
<50				130,599	127,056		127,942
<55					128,331		128,331
<60							
Total			107,260	113,423	131,168		117,172

Reconciliation of Plan Participants

	Active	TV	DROP	Retire	Survivor	Disabled	Totals
As of October 1, 2012	111	1	20	64	5	7	208
Active							
To DROP Participant	(5)		5				0
To Retiree	(4)			4			0
DROP Participant							
To Retiree			(6)	6			0
Vested Termination Refunded		(1)					(1)
Survivor Death					(1)		(1)
As of October 1, 2013	102	0	19	74	4	7	206
Active							
To DROP Participant	(1)		1				0
To Retiree	(7)			7			0
To Disability Retiree	(1)					1	0
To Nonvested Termination	(1)						(1)
DROP Participant							
To Retiree			(3)	3			0
As of October 1, 2014	92	0	17	84	4	8	205
Active							
To Service Retiree	(1)			1			0
To DROP Participant	(4)		4				0
Service Retiree							
To Death With No Survivor				(1)			(1)
To Death With Survivor				(2)	2		0
DROP Participant							
To DROP Retiree			(3)	3			0
Survivor							
To Death					(1)		(1)
As of October 1, 2015	87	0	18	85	5	8	203
Active							
To Service Retiree	(1)			1			0
To DROP Participant	(2)		2				0
DROP Participant							
To DROP Retiree			(5)	5			0
Survivor							
To Death					(1)		(1)
As of October 1, 2016	84	0	15	91	4	8	202

Number of Participants Eligible for Retirement or DROP as of October 1, 2016

Age	Eligible for Early Retirement	Eligible for Normal Retirement	Eligible for DROP
40			
41			
42			
43			
44			
45			
46			
47			
48			
49			
50	1		1
51			
52			
53			
54			
Total	1	0	1

Early Retirement Eligibility: Age 47 with 10 years Credited Service

Normal Retirement Eligibility: Earlier of (1) age 52 with 10 years of Credited Service, or (2) 20 years of Credited Service

DROP Eligibility: The earlier of age 47 and 20 years of Service.

Outline of Plan Provisions

Plan Type: Single-employer Defined Benefit Pension Plan

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

Effective Date: March 22, 1977. The last amendment to the Plan was Ordinance 2016/016 adopted effective September 6, 2016.

Plan Administrator: The Board of Trustees

Board Composition: Two members are elected from among the fire employees of the City, who are members of the plan, two city residents appointed by the Commission and one person is chosen by a majority of the previous four members.

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

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: Per Ordinance 2016/016 adopted effective September 6, 2016, optional forms of benefit are determined using a 7.625% interest rate and the RP-2000 Combined Mortality Table projected to 2013 using male improvement scale AA for members and the female RP-2000 Combined Mortality projected to 2013 using female improvement scale AA for beneficiaries. Prior to this change Actuarial Equivalence was determined using the interest rate and mortality used in the actuarial funding valuation of the Plan where in the event of a change in valuation funding assumptions, the factors used to determine optional forms of benefit are changed effective the October 1 subsequent to the October 1 in which the valuation funding assumptions were changed.

Credited Service: Total number of years, and fractional parts of years, while Employee Contributions were made. Employee Contributions with interest may be repaid within 90 days of rehire to reinstate prior service. Accumulated leave time over 350 hours of annual leave and 520 hours of sick leave, is includable as part of Credited Service, if no payment is received for such time directly by the Member. Time spent in the military service while on leave of absence is included if the Member returns as a firefighter within 1 year of release from military service.

Per Ordinance 2016/016 adopted effective September 6, 2016, qualified military service is not only as provided in IRC Section 414(u) but also in accordance with the Uniformed Services Employment and Reemployment Rights Act of 1994 and the Heroes Earnings Assistance and Relief Tax Act of 2008.

A Member with an honorable discharge from prior military service may purchase up to four years of such prior military service to be used in the determination of the amount of benefits payable, but not towards eligibility for such benefits. Prior military service may be purchased at any time, but may not be credited until a Member has attained 16 years of Credited Service without inclusion of the prior military service purchase. Members who separate from service prior to attaining 16 years are refunded the amount paid for purchase without interest. Additionally, prior firefighter service for which no current or future retirement benefit is payable may be purchased according to the same rules applicable to the purchase of prior military service. The total aggregate number of prior military service years and prior service as a firefighter that may be purchased is four.

Vesting: 100% upon earning ten years of Credited Service.

Salary: Total cash remuneration paid to a firefighter for services rendered. Ordinance 2016/016 adopted effective September 6, 2016 amended the definition of Salary to indicate all overtime in excess of 300 hours are excluded and that all accrued unused sick or annual leave is excluded for purposes of determining Plan benefits. We understand that Salary should have included only up to 300 hours of overtime for service earned under collective bargaining agreements entered into on or after July 1, 2011. The Plan attorney indicated that the 300 hour limit on overtime should be applied as of the February 10, 2014 date the collective bargaining agreement was signed at BSO. For this reason the 300 hour limit was first applied, retroactively, to fiscal 2014. In addition, we understand no change has been made with respect to the inclusion of an equivalent payment for up to 350 hours accrued unused annual leave and up to 520 hours accrued unused sick leave in the determination of average final compensation used in the computation of the benefit payable under the Plan where accrued hours over these levels may be used to increase service used in the computation of the benefit payable.

Employee Contributions: 9.0% of Salary. A Member who terminates non-vested is entitled to refund of accumulated Employee Contributions without interest.

Vested Members who terminate employment prior to being eligible to receive an annuity may leave their accumulated contributions in the fund, and upon as early as age 47 begin commencement of the reduced Accrued Benefit, as defined under Early Retirement.

Average Final Compensation (AFC): Average of Salary for the three highest years of Credited Service. Effective December 2002, AFC is determined by inclusion of the three highest nonconsecutive and non-overlapping years of Salary consisting of 79 pay periods total.

All or a portion of accumulated leave, up to 350 hours of annual leave and 520 hours of sick leave, is includable as part of compensation during the highest three years of contributing service. Any firefighter who did not have 25 years of Credited Service as of December 31, 1994 may elect to receive actual payment for the annual leave or sick leave hours accumulated. If such an election is made, the annual leave or sick leave for which payment is received does not go toward the Credited Service or the Average Final Compensation determination, and no Employee Contributions are deducted for such payment.

Normal Retirement Date: First day of the month coincident with or next following the earlier of (1) completion of 20 years of Credited Service without regard to age, or (2) attainment of age 52 and completion of 10 years of Credited Service.

Normal Retirement Benefit: The Accrued Benefit.

Accrued Benefit: The Accrued Benefit is computed according to the following formula, limited to no more than 90% of Average Final Compensation:

$3.0\% \times \text{Average Final Compensation} \times \text{Credited Service up to 10}$

Plus

$3.25\% \times \text{Average Final Compensation} \times \text{Credited Service Over 10}$

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

Early Retirement Date: The first day of any month prior to the Normal Retirement Date after attainment of age 47 or the completion of 10 years of Credited Service.

Early Retirement Benefit: The Accrued Benefit reduced by 1% per year by which the commencement of benefits precedes the Normal Retirement Date.

Disability Benefit: 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 prior to the Normal Retirement



Date is the greater of (1) the Accrued Benefit and (2) 25% of Average Final Compensation as of the disability retirement date, payable as a 10 year certain and continuous annuity commencing the first day of the month after the board of trustees determines such entitlement. Any portion due for a partial month is paid together with the first payment.

Members are not required to meet the 10 years of Credited Service requirement for Disability Benefits payable in the event of total and permanent disability in the line of duty. The line of duty Disability Benefit is the greater of (1) the Accrued Benefit and (2) 42% of Average Final Compensation as of the disability retirement date, payable as a 10 year certain and continuous annuity commencing the first day of the month next following the date of disability.

Disability Benefit payments cease at the earlier of (1) the payment due preceding recovery prior to Normal Retirement Date, (2) the payment due preceding the date of death or the 120th monthly payment, whichever is later, for death without recovery, or (3) the payment due preceding the Normal Retirement Date while still disabled. The Credited Service of a Member who recovers from disability and reenters the service of the City as a firefighter will be deemed to have been continuous, but the period beginning with the first month for which Disability Benefits were payable and ending with the date of reentry to service is not counted as Credited Service.

Death Benefits: The beneficiary of a Member who dies after completion of 10 years Credited Service is paid the Accrued Benefit commencing on the first day of the month following the date of death. This benefit is payable as a 10 year certain annuity, or on an actuarially equivalent basis.

Members who terminate non-vested due to death are entitled to a return of Employee Contributions with interest.

Optional Forms of Benefit: 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 (1) joint and survivor option (with 50%, 75% or 100% continuance), (2) a period certain and life option with 5, 10 or 15 years certain, (3) a single life annuity, (4) a joint and last survivor option with (50%, 66 2/3%, 75%, or 100% continuance), or (5) such other amount and form of payment will best meet the circumstances of the Member.

Deferred Retirement Option Plan (DROP): Members are eligible to enter the DROP at the earlier of age 47 with at least 10 years of service and their Normal Retirement Date. DROP participants are not eligible for death or disability benefits. The Accrued Benefit is frozen and no further Employee Contributions are payable at DROP entry. Per Ordinance 2016/016 adopted effective September 6, 2016, two options are offered for the investment of DROP money: a self-directed option and a general trust fund option. The ordinance defines the specific allowable self-directed investments and the computation of the crediting rate under the general trust fund option. The Accrued Benefit is credited or debited according to the Member's self-directed investment option or using the net fund return (or a combination thereof).

The maximum DROP participation duration is determined based on Credited Service at DROP entry, as follows:

Credited Service	Maximum DROP Years
<28	5
<29	4
<30	3
30	2
>30	0

Election to participate in the DROP is forfeited if not exercised within the first 30 years of Credited Service.

Upon termination of employment, firefighters in the DROP receive the balance in the DROP account either as a lump sum, installment or annuity payments.

Variable Benefit: A uniform percentage increase no more than 4% in any one calendar year is granted to retirees and beneficiaries, where the cost of this benefit increase is financed solely from the investment return on fund assets greater than the investment return assumed for purposes of the actuarial valuation of the fund, limited by the total experience gained under the Plan as compared to all actuarial assumptions.

Share Account: Effective June 17, 2008, Ordinance No. 2008-017 was adopted establishing a Share Plan where revenues received from the State of Florida under Chapter 175 in excess of \$618,479 (the adjusted base amount) that are not specifically allocated to a different benefit enacted after that date are divided equally amongst Plan participants (excluding vested terminations) as of the first of the year for which the revenues were received.

Transfer of Fire Services to BSO: Effective October 1, 2011 the City transferred fire services to the Broward County Sheriff's Office (BSO) with the following effect on how the Plan operates:

- Members actively employed on October 1, 2011 chose whether to continue benefit accruals under this Plan or whether they instead chose to begin benefit accruals under the Florida Retirement System (FRS). All members of the fund opted to continue as members of this Plan. Active members continue to accrue benefits under the Plan in the way they would have had the transfer of services not occurred. Pensionable pay is that being paid by BSO effective October 1, 2011.
- Members in the Deferred Retirement Option Program (DROP) at the time of the transfer of services began to accrue services under FRS immediately. DROP members may choose to allow their monthly benefit to continue to be credited to their DROP account or to alternatively retire for purposes of the Plan and begin receipt of monthly benefits and their DROP balance.
- Members retired at the time of the transfer of services continue to be paid their monthly benefits and DROP balance, if any, in exactly the way benefits would have been paid had the transfer of services not occurred.

There are no future new entrants to the Plan effective October 1, 2011.

Description of Assumptions and Methods

Assumed Investment Return (Net of Expenses): 7.5% per year revised from 7.625% per year used in the prior valuation of the Plan.

Salary Increase – Individual: 11.0% per year up to 8 years, 5% each year thereafter. Salary in year of retirement is increased 30%.

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

Percentage Married at Retirement: 80% of active Members are assumed to be married at retirement.

Spouse Ages: Where spousal information was supplied, that information was used. Otherwise, wives are assumed to be three years younger than their husbands.

Mortality: In the prior valuation, the mortality table was the RP-2000 Combined Mortality Table fully generational using Scale AA. 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 of July 1, 2015, as required by state statute. The mortality rates are as follows:

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: Members are assumed to retire at a rate of 100% upon retirement eligibility.

Termination: Unisex rates, as follows:

<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
<=19	0.000	31	0.044	38	0.037	45	0.030
20-25	0.050	32	0.043	39	0.036	46	0.029
26	0.049	33	0.042	40	0.035	47	0.028
27	0.048	34	0.041	41	0.034	>=48	0.000
28	0.047	35	0.040	42	0.033		
29	0.046	36	0.039	43	0.032		
30	0.045	37	0.038	44	0.031		

Disability: Unisex rates, as follows:

<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
<=15	0.0000	34	0.0022	43	0.0039	52	0.0120
16-21	0.0014	35	0.0023	44	0.0044	53	0.0131
22-25	0.0015	36	0.0024	45	0.0051	54	0.0143
26-27	0.0016	37	0.0025	46	0.0059	55	0.0155
28-29	0.0017	38	0.0026	47	0.0070	56	0.0168
30	0.0018	39	0.0028	48	0.0079	57	0.0181
31	0.0019	40	0.0030	49	0.0090	58	0.0195
32	0.0020	41	0.0032	50	0.0100	59	0.0209
33	0.0021	42	0.0035	51	0.0110	>=60	0.0000

On and Off Duty Disability and Death: 75% of disabilities are assumed to be in the line of duty.

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

Actuarial Value of Assets: The market value of assets is adjusted to recognize gains and losses 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.

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.

Deerfield Beach Municipal Firefighters' Pension Trust Fund

GASB 67 Supplement As of September 30, 2016





March 23, 2017

Board of Trustees
Deerfield Beach Municipal Firefighters' Pension Trust Fund
Deerfield Beach, Florida

RE: GASB 67 Supplement as of September 30, 2016

Dear Board Members:

We are pleased to present the Governmental Accounting Standards Board Statement No. 67 (GASB 67) Supplement as of September 30, 2016 for the Deerfield Beach Municipal Firefighters' Pension Trust Fund (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	10/01/2016
Measurement Date	09/30/2016
Reporting Date	09/30/2016

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

Sincerely,

A handwritten signature in black ink, appearing to read 'Chad M. Little'.

Chad M. Little, ASA, EA
Partner, Consulting Actuary
Enrollment Number 14-6619

A handwritten signature in black ink, appearing to read 'Paula C. Freiman'.

Paula C. Freiman, ASA, EA
Partner, Consulting Actuary
Enrollment Number 14-5796

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Statement of Fiduciary Net Position

As of September 30,	2016	2015
Assets		
Receivables:		
Due for securities sold	4,281,233	817,354
State contribution	64,210	147,648
Accrued interest and dividends	<u>115,522</u>	<u>168,630</u>
Total receivables	<u>4,460,965</u>	<u>1,133,632</u>
Investments, at fair value:		
Common and preferred stock	19,913,554	28,922,453
Mutual funds	28,563,277	21,411,285
Hedge funds	10,243,509	10,482,267
Government securities	14,337,726	12,862,713
Corporate bonds	14,130,663	10,024,034
Money market funds	5,151,221	3,939,976
Real estate funds	<u>11,320,151</u>	<u>11,692,842</u>
Total investments	<u>103,660,101</u>	<u>99,335,570</u>
Other assets	<u>0</u>	<u>2,115</u>
Total assets	<u>108,121,066</u>	<u>100,471,317</u>
Liabilities		
Due for securities purchased	<u>931,430</u>	<u>809,953</u>
Total liabilities	<u>931,430</u>	<u>809,953</u>
Net position restricted for pensions	<u>\$107,189,636</u>	<u>\$99,661,364</u>

Statement of Changes in Fiduciary Net Position

As of September 30,	2016	2015
Additions		
Contributions:		
Employer	\$5,060,592	\$5,064,382
State of Florida	667,147	725,199
Member	<u>883,740</u>	<u>868,805</u>
Total contributions	<u>6,611,479</u>	<u>6,658,386</u>
Investment income (loss):		
Net (depreciation) appreciation in fair value of investments	6,385,731	(4,798,195)
Interest and dividends	2,165,156	2,226,603
Other income	<u>0</u>	<u>8,812</u>
Total investment income	<u>8,550,887</u>	<u>(2,562,780)</u>
Less investment expenses:		
Investment expense	<u>623,909</u>	<u>625,356</u>
Net investment income	<u>7,926,978</u>	<u>(3,188,136)</u>
Total additions	<u>14,538,457</u>	<u>3,470,250</u>
Deductions		
Benefit payments	6,795,446	7,418,254
Refunds of contributions	0	47,544
Administrative expenses	<u>214,739</u>	<u>237,672</u>
Total deductions	<u>7,010,185</u>	<u>7,703,470</u>
Net increase in net position	7,528,272	(4,233,220)
Net position restricted for pensions		
Beginning of year	<u>99,661,364</u>	<u>103,894,584</u>
End of year	<u>\$107,189,636</u>	<u>\$99,661,364</u>

Net Pension Liability

The total pension liability under GASB 67 is based on the October 1, 2016 actuarial valuation. The October 1, 2016 actuarial valuation was based on the following assumptions applied to all periods in the measurement.

Inflation:	2.75%
Salary increases:	5% to 11%
Investment rate of return:	7.5% net of investment expense, including inflation
Mortality:	Mortality as used in the actuarial valuation of FRS, as follows:
Healthy Mortality:	Male:10% RP-2000 Annuitant White Collar+90% Annuitant Blue Collar Female:100% Annuitant White Collar – both male and female tables fully generational from 2000 using Scale BB
Disabled Mortality:	Male: 60% RP-2000 Disabled Retiree set back 4 years + 40% Annuitant White Collar Female: 60% Disabled Retiree set forward 2 years + 40% Annuitant White Collar - no projection scale applied to either the male or female table

Assumptions are based on the results of an actuarial experience study for the period October 1, 1999 to September 30, 2004.

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	Target Allocation	Long-Term Expected Real Rate of Return
Domestic Equity	28%	7.50%
Int'l Equity	15%	3.14%
Bonds	20%	3.92%
TIPS	5%	3.17%
Convertibles	9%	6.41%
Private Real Estate	8%	4.66%
MLPs	5%	10.43%
Hedge Fund	10%	4.05%
Long-term Expected Real Rate of Return:	100%	5.39%

The discount rate used to measure the total pension liability was 7.5% as of October 1, 2016. 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.

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,	2016	2015	2014
Total pension liability			
Service cost	\$2,793,233	\$2,745,537	\$2,859,229
Interest	10,371,874	10,038,296	9,456,530
Changes of benefit terms	48,546	106,820	172,555
Differences between expected and actual experience	(82,819)	(1,414,007)	846,838
Changes of assumptions	140,613	0	1,795,582
Benefit payments	(6,795,446)	(7,418,254)	(7,328,455)
Refunds of member contributions	0	(47,544)	0
Net change in total pension liability	6,476,001	4,010,848	7,802,279
Total pension liability - beginning	<u>136,963,565</u>	<u>132,952,717</u>	<u>125,150,438</u>
Total pension liability - ending (a)	\$143,439,566	\$136,963,565	\$132,952,717
Plan fiduciary net position			
Contributions - employer	\$5,060,592	\$5,064,382	\$5,051,768
Contributions - State of Florida	667,147	725,199	791,013
Contributions - employee	883,740	868,805	882,792
Net investment income	7,926,978	(3,188,136)	8,931,143
Benefit payments	(6,795,446)	(7,418,254)	(7,328,455)
Refunds of member contributions	0	(47,544)	0
Administrative expense	(214,739)	(237,672)	(232,032)
Net change in plan fiduciary net position	7,528,272	(4,233,220)	8,096,229
Plan fiduciary net position - beginning	<u>99,661,364</u>	<u>103,894,584</u>	<u>95,798,355</u>
Plan fiduciary net position - ending (b)	\$107,189,636	\$99,661,364	\$103,894,584
Net pension liability - ending (a) - (b)	\$36,249,930	\$37,302,201	\$29,058,133
Plan fiduciary net position as a percentage of the total pension liability	74.73 %	72.76 %	78.14 %
Covered employee payroll	\$9,412,235	\$9,628,949	\$9,687,400
Net pension liability as a percentage of covered employee payroll	385.14 %	387.40 %	299.96 %



Schedule of Contributions

Year Ending September 30,	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Actuarially determined contribution	\$5,727,617	\$5,789,681	\$5,842,802	\$5,908,360	\$4,954,297	\$3,321,431	\$3,076,012	\$2,751,476	\$2,605,958	\$2,399,350
Contributions in relation to the actuarially determined contribution	<u>5,727,617</u>	<u>5,789,681</u>	<u>5,842,802</u>	<u>5,908,360</u>	<u>4,954,297</u>	<u>3,321,431</u>	<u>3,076,012</u>	<u>2,751,476</u>	<u>2,605,958</u>	<u>2,456,320</u>
Contribution deficiency (excess)	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$(56,970)</u>
Covered employee payroll	\$9,412,235	\$9,628,949	\$9,687,400	\$10,187,273	\$10,662,698	\$11,314,341	\$11,385,985	\$11,273,175	\$10,209,732	\$10,056,010
Contributions as a percentage of covered-employee payroll	60.9 %	60.1 %	60.3 %	58.0 %	46.5 %	29.4 %	27.0 %	24.4 %	25.5 %	23.9 %

Notes to Schedule

The actuarially determined contribution shown above includes state contributions up to \$618,479 toward minimum funding plus any state contributions used toward share allocations.

Methods and assumptions used to determine contributions:

Actuarial cost method	Entry age
Amortization method	Level dollar, closed
Remaining amortization period	15 years as of October 1, 2016, 16 years as of October 1, 2015, 17 years as of October 1, 2014
Asset valuation method	5-year smoothed market
Inflation	2.75%
Salary increases	5% to 11%, including inflation
Investment rate of return	Effective for the October 1, 2016 actuarial valuation 7.5% net of investment expenses, including inflation changed from 7.625% used as of October 1, 2015.
Retirement age	See "Description of Assumptions and Methods" for the assumed retirement age assumption
Mortality	Effective for the October 1, 2016 valuation, mortality is as assumed in the FRS valuation as of July 1, 2015, as required by state statute. In the October 1, 2015 valuation mortality was assumed using RP-2000 Combined Mortality Table Fully Generational using Scale AA.

Schedule of Investment Returns

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

Year Ending September 30,	Annual money-weighted rate of return net of investment expense
2016	6.2 %
2015	(3.1)%
2014	9.7 %
2013	11.6 %
2012	17.1 %
2011	(1.2)%
2010	7.5 %
2009	(1.2)%

Plan Membership Statistics

Valuation as of October 1,	2015	2016
Inactive members or beneficiaries currently receiving benefits	116	118
Inactive members entitled to but not yet receiving benefits	0	0
Active members	<u>87</u>	<u>84</u>
Total	<u>203</u>	<u>202</u>

Plan Description

Plan Type: Single-employer Defined Benefit Pension Plan

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

Effective Date: March 22, 1977. The last amendment to the Plan was Ordinance 2016/016 adopted effective September 6, 2016.

Plan Administrator: The Board of Trustees

Board Composition: Two members are elected from among the fire employees of the City, who are members of the plan, two city residents appointed by the Commission and one person is chosen by a majority of the previous four members.

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

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: Per Ordinance 2016/016 adopted effective September 6, 2016, optional forms of benefit are determined using a 7.625% interest rate and the RP-2000 Combined Mortality Table projected to 2013 using male improvement scale AA for members and the female RP-2000 Combined Mortality projected to 2013 using female improvement scale AA for beneficiaries. Prior to this change Actuarial Equivalence was determined using the interest rate and mortality used in the actuarial funding valuation of the Plan where in the event of a change in valuation funding assumptions, the factors used to determine optional forms of benefit are changed effective the October 1 subsequent to the October 1 in which the valuation funding assumptions were changed.

Credited Service: Total number of years, and fractional parts of years, while Employee Contributions were made. Employee Contributions with interest may be repaid within 90 days of rehire to reinstate prior service. Accumulated leave time over 350 hours of annual leave and 520 hours of sick leave, is includable as part of Credited Service, if no payment is received for such time directly by the Member. Time spent in the military service while on leave of absence is included if the Member returns as a firefighter within 1 year of release from military service.

Per Ordinance 2016/016 adopted effective September 6, 2016, qualified military service is not only as provided in IRC Section 414(u) but also in accordance with the Uniformed Services Employment and Reemployment Rights Act of 1994 and the Heroes Earnings Assistance and Relief Tax Act of 2008.

A Member with an honorable discharge from prior military service may purchase up to four years of such prior military service to be used in the determination of the amount of benefits payable, but not towards eligibility for such benefits. Prior military service may be purchased at any time, but may not be credited until a Member has attained 16 years of Credited Service without inclusion of the prior military service purchase. Members who separate from service prior to attaining 16 years are refunded the amount paid for purchase without interest. Additionally, prior firefighter service for which no current or future retirement benefit is payable may be purchased according to the same rules applicable to the purchase of prior military service. The total aggregate number of prior military service years and prior service as a firefighter that may be purchased is four.

Vesting: 100% upon earning ten years of Credited Service.

Salary: Total cash remuneration paid to a firefighter for services rendered. Ordinance 2016/016 adopted effective September 6, 2016 amended the definition of Salary to indicate all overtime in excess of 300 hours are excluded and that all accrued unused sick or annual leave is excluded for purposes of determining Plan benefits. We understand that Salary should have included only up to 300 hours of overtime for service earned under collective bargaining agreements entered into on or after July 1, 2011. The Plan attorney indicated that the 300 hour limit on overtime should be applied as of the February 10, 2014 date the collective bargaining agreement was signed at BSO. For this reason the 300 hour limit was first applied, retroactively, to fiscal 2014. In addition, we understand no change has been made with respect to the inclusion of an equivalent payment for up to 350 hours accrued unused annual leave and up to 520 hours accrued unused sick leave in the determination of average final compensation used in the computation of the benefit payable under the Plan where accrued hours over these levels may be used to increase service used in the computation of the benefit payable.

Employee Contributions: 9.0% of Salary. A Member who terminates non-vested is entitled to refund of accumulated Employee Contributions without interest.

Vested Members who terminate employment prior to being eligible to receive an annuity may leave their accumulated contributions in the fund, and upon as early as age 47 begin commencement of the reduced Accrued Benefit, as defined under Early Retirement.

Average Final Compensation (AFC): Average of Salary for the three highest years of Credited Service. Effective December 2002, AFC is determined by inclusion of the three highest nonconsecutive and non-overlapping years of Salary consisting of 79 pay periods total.

All or a portion of accumulated leave, up to 350 hours of annual leave and 520 hours of sick leave, is includable as part of compensation during the highest three years of contributing service. Any firefighter who did not have 25 years of Credited Service as of December 31, 1994 may elect to receive actual payment for the annual leave or sick leave hours accumulated. If such an election is made, the annual leave or sick leave for which payment is received does not go toward the Credited Service or the Average Final Compensation determination, and no Employee Contributions are deducted for such payment.

Normal Retirement Date: First day of the month coincident with or next following the earlier of (1) completion of 20 years of Credited Service without regard to age, or (2) attainment of age 52 and completion of 10 years of Credited Service.

Normal Retirement Benefit: The Accrued Benefit.

Accrued Benefit: The Accrued Benefit is computed according to the following formula, limited to no more than 90% of Average Final Compensation:

$3.0\% \times \text{Average Final Compensation} \times \text{Credited Service up to 10}$

Plus

$3.25\% \times \text{Average Final Compensation} \times \text{Credited Service Over 10}$

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

Early Retirement Date: The first day of any month prior to the Normal Retirement Date after attainment of age 47 or the completion of 10 years of Credited Service.

Early Retirement Benefit: The Accrued Benefit reduced by 1% per year by which the commencement of benefits precedes the Normal Retirement Date.

Disability Benefit: 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 prior to the Normal Retirement

Date is the greater of (1) the Accrued Benefit and (2) 25% of Average Final Compensation as of the disability retirement date, payable as a 10 year certain and continuous annuity commencing the first day of the month after the board of trustees determines such entitlement. Any portion due for a partial month is paid together with the first payment.

Members are not required to meet the 10 years of Credited Service requirement for Disability Benefits payable in the event of total and permanent disability in the line of duty. The line of duty Disability Benefit is the greater of (1) the Accrued Benefit and (2) 42% of Average Final Compensation as of the disability retirement date, payable as a 10 year certain and continuous annuity commencing the first day of the month next following the date of disability.

Disability Benefit payments cease at the earlier of (1) the payment due preceding recovery prior to Normal Retirement Date, (2) the payment due preceding the date of death or the 120th monthly payment, whichever is later, for death without recovery, or (3) the payment due preceding the Normal Retirement Date while still disabled. The Credited Service of a Member who recovers from disability and reenters the service of the City as a firefighter will be deemed to have been continuous, but the period beginning with the first month for which Disability Benefits were payable and ending with the date of reentry to service is not counted as Credited Service.

Death Benefits: The beneficiary of a Member who dies after completion of 10 years Credited Service is paid the Accrued Benefit commencing on the first day of the month following the date of death. This benefit is payable as a 10 year certain annuity, or on an actuarially equivalent basis.

Members who terminate non-vested due to death are entitled to a return of Employee Contributions with interest.

Optional Forms of Benefit: 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 (1) joint and survivor option (with 50%, 75% or 100% continuance), (2) a period certain and life option with 5, 10 or 15 years certain, (3) a single life annuity, (4) a joint and last survivor option with (50%, 66 2/3%, 75%, or 100% continuance), or (5) such other amount and form of payment will best meet the circumstances of the Member.

Deferred Retirement Option Plan (DROP): Members are eligible to enter the DROP at the earlier of age 47 with at least 10 years of service and their Normal Retirement Date. DROP participants are not eligible for death or disability benefits. The Accrued Benefit is frozen and no further Employee Contributions are payable at DROP entry. Per Ordinance 2016/016 adopted effective September 6, 2016, two options are offered for the investment of DROP money: a self-directed option and a general trust fund option. The ordinance defines the specific allowable self-directed investments and the computation of the crediting rate under the general trust fund option. The Accrued Benefit is credited or debited according to the Member's self-directed investment option or using the net fund return (or a combination thereof).

The maximum DROP participation duration is determined based on Credited Service at DROP entry, as follows:

Credited Service	Maximum DROP Years
<28	5
<29	4
<30	3
30	2
>30	0

Election to participate in the DROP is forfeited if not exercised within the first 30 years of Credited Service.

Upon termination of employment, firefighters in the DROP receive the balance in the DROP account either as a lump sum, installment or annuity payments.

Variable Benefit: A uniform percentage increase no more than 4% in any one calendar year is granted to retirees and beneficiaries, where the cost of this benefit increase is financed solely from the investment return on fund assets greater than the investment return assumed for purposes of the actuarial valuation of the fund, limited by the total experience gained under the Plan as compared to all actuarial assumptions.

Share Account: Effective June 17, 2008, Ordinance No. 2008-017 was adopted establishing a Share Plan where revenues received from the State of Florida under Chapter 175 in excess of \$618,479 (the adjusted base amount) that are not specifically allocated to a different benefit enacted after that date are divided equally amongst Plan participants (excluding vested terminations) as of the first of the year for which the revenues were received.

Transfer of Fire Services to BSO: Effective October 1, 2011 the City transferred fire services to the Broward County Sheriff's Office (BSO) with the following effect on how the Plan operates:

- Members actively employed on October 1, 2011 chose whether to continue benefit accruals under this Plan or whether they instead chose to begin benefit accruals under the Florida Retirement System (FRS). All members of the fund opted to continue as members of this Plan. Active members continue to accrue benefits under the Plan in the way they would have had the transfer of services not occurred. Pensionable pay is that being paid by BSO effective October 1, 2011.
- Members in the Deferred Retirement Option Program (DROP) at the time of the transfer of services began to accrue services under FRS immediately. DROP members may choose to allow their monthly benefit to continue to be credited to their DROP account or to alternatively retire for purposes of the Plan and begin receipt of monthly benefits and their DROP balance.
- Members retired at the time of the transfer of services continue to be paid their monthly benefits and DROP balance, if any, in exactly the way benefits would have been paid had the transfer of services not occurred.

There are no future new entrants to the Plan effective October 1, 2011.

Actuarial Assumptions and Methods

Assumed Investment Return (Net of Expenses): 7.5% per year revised from 7.625% per year used in the prior valuation of the Plan.

Salary Increase – Individual: 11.0% per year up to 8 years, 5% each year thereafter. Salary in year of retirement is increased 30%.

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

Percentage Married at Retirement: 80% of active Members are assumed to be married at retirement.

Spouse Ages: Where spousal information was supplied, that information was used. Otherwise, wives are assumed to be three years younger than their husbands.

Mortality: In the prior valuation, the mortality table was the RP-2000 Combined Mortality Table fully generational using Scale AA. 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 of July 1, 2015, as required by state statute. The mortality rates are as follows:

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: Members are assumed to retire at a rate of 100% upon retirement eligibility.

Termination: Unisex rates, as follows:

<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
<=19	0.000	31	0.044	38	0.037	45	0.030
20-25	0.050	32	0.043	39	0.036	46	0.029
26	0.049	33	0.042	40	0.035	47	0.028
27	0.048	34	0.041	41	0.034	>=48	0.000
28	0.047	35	0.040	42	0.033		
29	0.046	36	0.039	43	0.032		
30	0.045	37	0.038	44	0.031		

Disability: Unisex rates, as follows:

<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
<=15	0.0000	34	0.0022	43	0.0039	52	0.0120
16-21	0.0014	35	0.0023	44	0.0044	53	0.0131
22-25	0.0015	36	0.0024	45	0.0051	54	0.0143
26-27	0.0016	37	0.0025	46	0.0059	55	0.0155
28-29	0.0017	38	0.0026	47	0.0070	56	0.0168
30	0.0018	39	0.0028	48	0.0079	57	0.0181
31	0.0019	40	0.0030	49	0.0090	58	0.0195
32	0.0020	41	0.0032	50	0.0100	59	0.0209
33	0.0021	42	0.0035	51	0.0110	>=60	0.0000

On and Off Duty Disability and Death: 75% of disabilities are assumed to be in the line of duty.

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

Actuarial Value of Assets: The market value of assets is adjusted to recognize gains and losses 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.