nyhart

City of Pompano Beach Police & Firefighters' Retirement Plan

October 1, 2016
Actuarial Valuation Report

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At the request of the plan sponsor, this report summarizes the Police and Firefighters' Retirement System for the City of Pompano Beach as of October 1, 2016. The purpose of this report is to communicate the following results of the valuation:

- Determine Funded Status; and
- Determine Actuarial Contribution for the fiscal year October 1, 2017 through September 30, 2018

This report has been prepared in accordance with the laws and accounting standards indicated above and their applicable regulations. Consequently, it may not be appropriate for other purposes. Please contact Nyhart prior to disclosing this report to any other party or relying on its content for any purpose other than that explained above. Failure to do so may result in misrepresentation or misinterpretation of this report.

The results in this report were prepared using information provided to us by other parties. The census information has been provided to us by the employer. Asset information has been provided to us by the trustee. We have reviewed the provided data for reasonableness when compared to prior information provided, but have not audited the data. Where relevant data may be missing, we have made assumptions we believe to be reasonable. We are not aware of any significant issues with and have relied on the data provided. Any errors in the data provided may result in a different result than those provided in this report. A summary of the data used in the valuation is included in this report.

The actuarial assumptions and methods were chosen by the Board. In our opinion, all actuarial assumptions and methods are individually reasonable and in combination represent our best estimate of anticipated experience of 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) and;
- changes in plan provisions or applicable law.

We did not perform an analysis of the potential range of future measurements due to the limited scope of our engagement. This report has been prepared in accordance with generally accepted actuarial principles and practice.

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.



With respect to 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), Florida Statutes, and Rule 60T-1.0035, Florida Administrative Code.

Neither Nyhart nor any of its employees have any relationship with the plan or its sponsor which could impair or appear to impair the objectivity of this report. To the extent that this report or any attachment concerns tax matters, it is not intended to be used and cannot be used by a taxpayer for the purpose of avoiding penalties that may be imposed by law.

The undersigned are compliant with the continuing education requirements of the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States and are available for any questions.

Nyhart

David D. Harris, ASA, EA Enrolled Actuary No. 14-5609

February 15, 2017 Date David Guy, ASA, EA

Enrolled Actuary No. 14-8368

David Dung

Copies of this Report are to be furnished to the Division of Retirement within 60 days of receipt from the actuary at the following addresses:

Ms. Sarah Carr Benefits Administrator Municipal Police Officers' & Firefighters' Trust Funds Division of Retirement Post Office Box 3010 Tallahassee, FL 32315-3010

David D. Harris

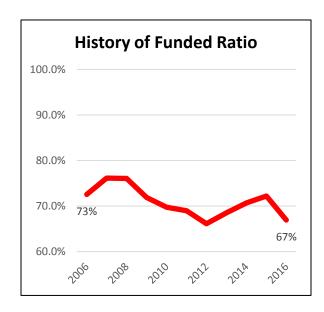
Mr. Keith Brinkman Bureau & Chief Local Retirement Systems Division of Retirement Department of Management Services P. O. Box 9000 Tallahassee, FL 32315-9000



Summary Results

The actuarial valuation's primary purpose is to produce a scorecard measure displaying the funding progress of the plan toward the ultimate goal of paying benefits at retirement. The accrued liability is based on an entry age level percentage of pay.

	October 1, 2015	October 1, 2016
Funded Status Measures		
Accrued Liability	\$283,802,820	\$318,200,086
Actuarial Value of Assets	\$204,931,915	213,099,980
Unfunded Accrued Liability	\$78,870,905	\$105,100,106
Funded Percentage (AVA)	72%	67%
Funded percentage (MVA)	71%	65%
Cost Measures		
Recommended Contribution	\$8,093,069	\$10,734,952
Recommended Contribution (as a percentage of payroll)	60.9%	77.9%
Asset Performance		
Market Value of Assets	\$200,181,169	\$205,991,445
Actuarial Value of Assets	204,931,915	213,099,980
Actuarial Value/Market Value	102.4%	103.5%
Member Information		
Active Members	160	162
Terminated Vested Members	3	4
Retirees, Beneficiaries, and Disabled Members	354	364
DROP Participants	43	35
Total	560	565
Expected Payroll	\$13,061,612	\$13,527,197





Changes Since Prior Valuation and Key Notes

There have been no changes to the plan provisions since the last valuation.

The mortality assumption was updated to match the Florida Retirement System mortality for Special risk members. This raised the recommended contribution to \$10,734,952 (77.9% of payroll) from \$8,229,485 (59.8% of payroll).

The Police State Premium Tax Revenues are being reserved in the Trust based on proposed ordinances for allocation to a share plan. The balance of these premiums as of September 30, 2016 is \$197,979.

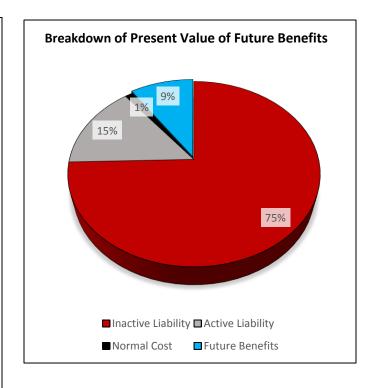


Present Value of Future Benefits

The Present Value of Future Benefits represents the discounted value of all future benefits expected to be payable to current members, considering future service and compensation not yet earned.

October 1, 2016

Present Value of Future Benefits				
Active members				
Retirement	\$78,439,297			
Disability	5,952,696			
Death	4,656,874			
Termination	1,331,036			
Return of contributions	227,789			
Total active	\$90,607,692			
Inactive members				
Retired members	\$230,861,514			
Beneficiaries	10,811,012			
Disableds	21,641,128			
Terminated vested members	2,042,789			
Total inactive	\$265,356,443			
Total	\$355,964,135			
Present value of future payrolls	\$125,729,164			



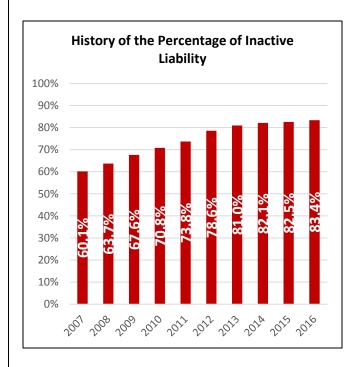


Accrued Liability

The Accrued Liability measures the present value of benefits earned as of the valuation date, using a specified set of actuarial assumptions. It is not a long-term snapshot of the liabilities.

October 1, 2016

Accrued Liabilities	
Active members	
Retirement	\$49,103,315
Disability	1,941,640
Death	1,175,965
Termination	591,652
Refund of contributions	31,071
Total Active	\$52,843,643
Inactive members	
Retired members	\$230,861,514
Beneficiaries	10,811,012
Disableds	21,641,128
Terminated vested members	2,042,789
Total Inactive	\$265,356,443
Total	\$318,200,086
Normal Cost	\$4,117,315

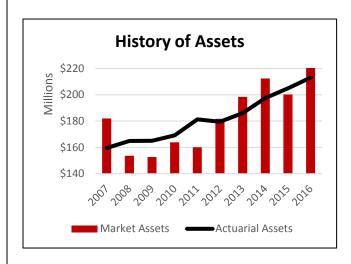




Asset Information

The amount of assets backing the pension promise is the most significant driver of volatility and future costs within a pension plan. The investment performance of the assets directly offsets the ultimate cost.

	October 1, 2016
Market Value Reconciliation	
Market value of assets, beginning of prior year	\$219,256,301
Employer contributions (incl. discounted accrued items)	8,154,934
Member contributions	1,492,330
Non-employer contributing entity	2,273,774
Investment income	17,670,949
Investment expenses	(1,426,195)
Benefit payments	(22,946,120)
Administrative expenses	(604,460)
Other expenses	0
Market value of asset, beginning of current year	\$223,871,513
Return on Market Value	7.63%
Reserve assets	\$593,639
DROP account	\$17,286,429
Market value of assets available for pension benefits	\$205,991,445
Actuarial value of plan assets	
Value at beginning of current year	\$213,099,980





Asset Information (continued)

Plan Assets are used to develop funded percentages and contribution requirements.

	October 1, 2016
 Expected actuarial value of assets (a) Actuarial value of assets, beginning of prior year (b) Contributions (c) Benefit payments (d) Expenses (e) Expected return (f) Expected actuarial value of assets, beginning of current year 	\$224,007,047 11,921,038 (22,946,120) (604,460) 16,372,305 \$228,749,810
2. Market value of assets, beginning of current year	\$223,871,513
3. Actual return on market value	\$16,244,754
4. Amount subject to phase in [(3)-(1e)]	(\$127,551)
 5. Phase in of asset gain/(loss) (a) Current year (20% x (\$127,551)) (b) First prior year (20% x \$(19,874,699)) (c) Second prior year (20% x \$6,982,137) (d) Third prior year (20% x \$10,627,316) (e) Fourth prior year (20% x \$13,543,992) (f) Total phase-in 	\$(25,510) (3,974,940) 1,396,427 2,125,463 2,708,798 \$2,230,238
6. Preliminary actuarial value of assets, beginning of current year [(1f)+(5f)]	\$230,980,048
7. 80% Market value of assets	\$179,097,211
8. 120% Market value of assets	\$268,645,815
9. Adjusted actuarial value of assets	\$230,980,048
10. Reserved Assets	(\$17,880,068)
11. Final actuarial value of assets [(9+10)]	\$213,099,980
12. Return on actuarial value of assets	8.54%



Reconciliation of Gain/Loss

	October 1, 2016
Liability (gain)/loss	
Actuarial liability, beginning of prior year	\$283,802,820
Normal cost	3,703,208
Benefit payments	(22,946,120)
Interest	20,718,029
1-year lag adjustment	978,172
Expected actuarial liability, beginning of current year	\$286,256,109
Assumption change	\$28,953,758
Actual actuarial liability	\$318,200,086
Liability (gain)/loss	\$2,990,219
Asset (gain)/loss	
Actuarial value of assets, beginning of prior year	\$204,931,915
Contributions	11,921,038
Benefit payments and expenses	(23,550,580)
Investment return	14,941,669
Expected actuarial value of assets, beginning of current year	\$208,244,042
Actual actuarial value of assets, beginning of current year (before accumulated reserve adjustment)	\$213,099,980
Asset (gain)/loss	(\$4,855,938)
Total (gain)/loss	(\$1,865,719)



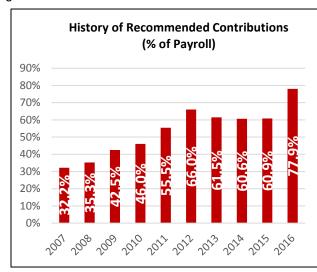
Development of Recommended Contribution

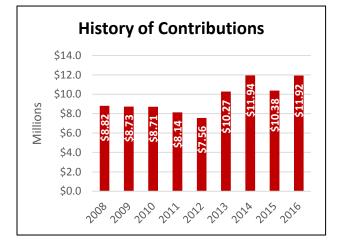
The minimum recommended contribution is the annual amount necessary to fund the plan according to funding policies and/or applicable laws.

The recommended contribution is composed of the normal cost, administrative expenses, plus an amortization charge.

October 1	, 2016
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Funded Position	
Entry age accrued liability	\$318,200,086
2. Actuarial value of assets	213,099,980
3. Unfunded actuarial accrued liability (UAAL)	\$105,100,106
Employer Contributions	
 Normal Cost (a) Total normal cost (b) Expected participant contributions (c) Net normal cost 	\$4,117,315 1,616,669 \$2,500,646
2. Administrative expenses	\$596,249
3. Amortization of UAAL	8,373,779
Applicable interest	860,301
5. Total required contribution	\$12,330,975
6. Expected non-employer contributions	1,787,716
7. Total recommended contribution	\$10,543,259
As a percentage of expected payroll	77.94%
8. Recommended contributions to be paid on 12/31/2017	\$10,734,952





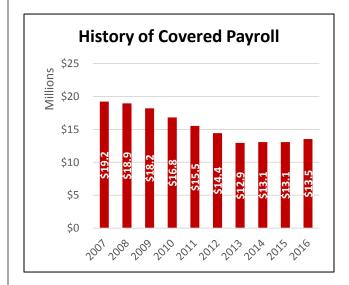


Demographic Information

The foundation of a reliable actuarial report is the participant information provided by the plan sponsor. Monitoring trends in demographic information is crucial for long-term pension planning.

October 1, 2016

Participant Counts	<u>Police</u>	<u>Fire</u>	<u>Total</u>
Active Participants	5	157	162
Retired Participants	185	114	299
Beneficiaries	21	12	33
Disabled Participants	17	15	32
Terminated Vested Participants	1	3	4
DROP Participants	7	28	<u>35</u>
Total Participants	236	329	565
Active Participant Demographics			
Average Age			39.08
Average Service			10.79
Average Compensation			\$83,501
Covered Payroll			\$13,527,197





Demographic Information (continued)

	October 1, 2016
Retiree Statistics	
Average Age	63.46
Average Monthly Benefit	\$4,340
Beneficiary Statistics	
Average Age	70.1
Average Monthly Benefit	\$2,657
Disabled Participants Statistics	
Average Age	57.89
Average Monthly Benefit	\$4,619
Terminated Participants Statistics	
Average Age	40.92
Average Monthly Benefit	\$3,736
DROP Participants Statistics	
Average Age	54.18
Average Monthly Benefit	\$5,570



Participant Reconciliation

	Active	Terminated Vested	Disabled	Retired	Beneficiaries	DROP	Totals
Prior Year	160	3	32	291	31	43	560
Active							
To Terminated Vested	(2)	2	0	0	0	0	0
To Disabled	0	0	0	0	0	0	0
To Retired	(3)	0	0	3	0	0	0
To DROP	(3)	0	0	0	0	3	0
To Death	(1)	0	0	0	0	0	(1)
To Terminated Non-Vested	0	0	0	0	0	0	0
Terminated Vested							
To Retired	0	(1)	0	1	0	0	0
Retired							
To Disabled	0	0	0	0	0	0	0
To Death	0	0	0	(6)	0	0	(6)
Survivor							
To Death	0	0	0	0	(2)	0	(2)
DROP							
To Retired	0	0	0	11	0	(11)	0
Additions	11	0	0	1	5	1	18
Departures	0	0	0	(2)	(1)	(1)	(4)
Current Year	162	4	32	299	33	35	565



Active Participant Schedule

Active participant information grouped based on age and service.

					Years o	f Service						
Age Group	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & Up	Total	Average Pay
Under 25	1										1	50,976
25 to 29	4	10	7								21	69,764
30 to 34	5	15	6	7							33	71,733
35 to 39		3	8	14	5						30	85,629
40 to 44		1	2	15	17	2					37	89,960
45 to 49	1		1	11	7	7					27	92,015
50 to 54		1		1	5	2					9	98,928
55 to 59				1	3						4	92,964
60 to 64												
65 to 69												
70 & up												
Total	11	30	24	49	37	11					162	83,501



Plan Status

Plan established under the Code of Ordinances for the City of Pompano Beach, Florida, Sections 34.045-34.073 and was most recently amended under Ordinance No. 2015-45, passed and adopted on April 14, 2015. The Plan is also governed by certain provisions of Chapters 175 and 185, Florida Statutes, Part VII, Chapter 112, Florida Statutes and the Internal Revenue Code.

Eligibility for Participation

- (1) All Police Officers and Dispatchers who were participants of the prior Employees' Pension Plan and
- (2) Police Officers and Dispatchers who elected to remain in the Plan prior to the takeover of the police department by the Broward Sheriff's Office on 8/1/99.
- (3) All Firefighters who were participants in the prior Employees' Pension Plan; and
- (4) All regular, full time Firefighters (20 hours per week and 5 months per year) from age 18, upon date of employment.

Benefits

Normal Retirement

Eligibility A member hired before May 27, 2014 may retire on the first day of the month coincident with or next following the earlier of:

(1) age 47 with 20 years of Continuous Service, or (2) age 55 with 10 years of Continuous Service.

A Firefighter member hired on or after May 27, 2014 may retire on the first day of the month coincident with or next following

the earlier of:

(1) age 50 with 20 years of Continuous Service, or(2) age 55 with 10 years of Continuous Service.

Police Benefit: 3.0% of Average Monthly Earnings (AME) multiplied by years of Continuous Service up to a maximum of 25 years, plus 2.0% of

AME multiplied by years of Continuous Service in excess of 37.5.

Firefighter Benefit: 3.0% of AME multiplied by the first 10 years Continuous Service, plus 4.0% of AME multiplied by the next 10 years, plus

2.0% of AME multiplied by the next 5 years with a maximum benefit equal to 80% of AME; plus 2% of AME multiplied by

each year of service in excess of 40.

Normal Form of Benefit 10 Years Certain and Life; other options are also available.

COLA Beginning five years after benefit payments begin, retirees receive an automatic annual increase of 2% on each October 1.

An additional annual increase of up to 1% is payable if certain conditions are met



Early Retirement

Eligibility A member may elect to retire earlier than the Normal Retirement Eligibility upon the completion of 20 years of Continuous

Service or the attainment of age 50 with 10 years of Continuous Service.

Benefit The member's accrued Normal Retirement Benefit based upon the member's AME and Continuous Service as of the date of

termination. Benefit is actuarially reduced for each year by which the Early Retirement date precedes the member's Normal

Retirement date. The Early Retirement reduction is 3% per year if early retirement occurs after age 50.

Normal Form of Benefit 10 Years Certain and Life; other options are also available.

COLA Beginning five years after benefit payments begin, retirees receive an automatic annual increase of 2% on each October 1. An

additional annual increase of up to 1% is payable if certain conditions are met.

Late Retirement

Eligibility Same as Normal Retirement taking into account compensation earned and service credited until the date of actual retirement.

Benefit Accrued Benefit

Normal Form of Benefit 10 Years Certain and Life; other options are also available.

COLA Beginning five years after benefit payments begin, retirees receive an automatic annual increase of 2% on each October 1.

An additional annual increase of up to 1% is payable if certain conditions are met.



Ordinary Death before Retirement

Eligibility

Any member with 1 or more years of Continuous Service who dies while employed by the City is eligible for survivor benefits.

Benefit

- (A) For members with less than 1 year of Continuous Service, no survivor benefits are payable.
- (B) For members with 1 year, but less than 5 years, of Continuous Service, the designated beneficiary will be paid a \$5,000 lump sum.
- (C) For members with 5 years, but less than 10 years, of Continuous Service:
 - (1) \$5,000 lump sum paid to the member's designated beneficiary; plus
 - (2) Member's spouse will receive 65% of member's accrued pension as of the date of death subject to a minimum of 20% of AME; plus
 - (3) Each unmarried child under age 18 (22 if full-time student) will receive 7 ½% of member's Earnings. If there is no spouse, benefits increase to 15% of member's Earnings per child.

Maximum benefit to spouse and children is 50% of earnings.

(D) For members with 10 or more years of Continuous Service, the designated beneficiary can elect to receive benefits described under subsection (C) above or the member's accrued benefit as of the date of death. Benefits are payable at the member's Normal or Early Retirement date and will be reduced for Early Retirement, when applicable.

Normal Form of Benefit

Spouse's benefits are paid until death or remarriage; children's benefits are paid until the earlier of age 18 (22 if full-time student), marriage or death.

COLA

Beginning five years after benefit payments begin, beneficiaries receive an automatic annual increase of 2% on each October 1. An additional annual increase of up to 1% is payable if certain conditions are met.



Accidental Death before Retirement

Eligibility

Any member who dies as a direct result of an occurrence arising in the performance of service for the City is eligible for survivor benefits.

Benefit

- (1) \$5,000 lump sum paid to the member's designated beneficiary; plus
- (2) Member's spouse will receive 75% of member's Earnings; plus
- (3) Each unmarried child under age 18 (22 if full-time student) will receive 7 ½% of member's Earnings. If there is no spouse, benefits increase to 15% per child.

Maximum benefit to spouse and children is 90% of earnings; if no spouse, maximum for children is 50% of Earnings.

Normal Form of Benefit Spouse's benefits are paid until death or remarriage; children's benefits are paid until the earlier of age 18 (22 if full-time student),

marriage or death.

COLA Beginning five years after benefit payments begin, beneficiaries receive an automatic annual increase of 2% on each October 1.

An additional annual increase of up to 1% is payable if certain conditions are met.

Termination Benefit

Eligibility A member has earned a non-forfeitable right to Plan benefits after the completion of 10 years of Credited Service (See vesting table

below).

Years of % of Normal

Credited Service Retirement Benefits
Less Than 10 0%

ess Than 10 0% 10 or more 100%

Benefit The member's accrued Normal Retirement Benefit as of the date of termination. Benefit begins on the member's Normal

Retirement date. Alternatively, members may elect to receive an actuarially reduced Early Retirement Benefit.

Normal Form of Benefit 10 Years Certain and Life thereafter; other options are also available.

COLA Beginning five years after benefit payments begin, beneficiaries receive an automatic annual increase of 2% on each October 1.

An additional annual increase of up to 1% is payable if certain conditions are met.

Plan members with less than 10 years of Credited Service will receive a refund of accumulated contributions with interest



Ordinary Disability Benefit

Eligibility Any member who becomes totally and permanently disabled and unable to perform regular duties or any other duties available in

the Department from an act occurring in the performance of duty for the City is eligible for a disability benefit.

Benefit 75% of rate of Earnings in effect on the date of disability (for Firefighters, not to be less than the accrued benefit).

Normal Form of Benefit Benefits begin on the first day of the month following the date the Board approves the disability and are payable until death or

recovery from disability. If the member dies before receiving payments for 10 years, the member's designated beneficiary will

receive the same monthly benefit for the remainder of the 10 year period. Other options are also available.

COLA Beginning five years after benefit payments begin, retirees receive an automatic annual increase of 2% on each October 1. An

additional annual increase of up to 1% is payable if certain conditions are met.

Accidental Disability Benefit

Eligibility Any active member with 10 or more years of Continuous Service who becomes totally and permanently disabled and unable to

perform regular duties or any other duties available in the Department from an act not directly caused by the performance of duty for

the City is eligible for a disability benefit.

Benefit 3.0% of AME multiplied by years of Continuous Service subject to a maximum of 60% of the rate of Earnings on the date of

disability, plus 2.0% of AME multiplied by years of Continuous Service in excess of 25. Disability benefit is guaranteed to be no less

than 25% of AME.

Normal Form of Benefit Benefits begin on the first day of the month following the date the Board approves the disability and are payable until death or

recovery from disability. If the member dies before receiving payments for 10 years, the member's designated beneficiary will

receive the same monthly benefit for the remainder of the 10 year period. Other options are also available.

COLA Beginning five years after benefit payments begin, retirees receive an automatic annual increase of 2% on each October 1. An

additional annual increase of up to 1% is payable if certain conditions are met.



Compensation

Earnable Compensation

Police Officers: Basic compensation and regular longevity pay, increased for temporary upgrade pay. Also includes up to 25 hours per year of overtime pay. Firefighters: Basic compensation and regular longevity pay, increased for temporary upgrade pay.

Average Monthly Earnings (AME)

For members hired before May 27, 2014:

The average of Earnings during the highest 3 years preceding termination; not including lump sum payments of unused leave For members hired after May 27, 2014:

The average of Earnings during the highest 5 years preceding termination; not including lump sum payments of unused leave

Continuous Service

For Vesting and Benefit Accrual, total number of years and completed months from date of employment to date of termination or retirement No service is credited for any periods of employment for which a member received a refund of contributions.

Employee Contributions

Police: 8.6% of Earnings, paid by BSO.

Firefighters: 11.6% of Earnings "picked up" by the City, reduced to 0.5% after 25 years of service and reaching maximum benefit of 80%,

reverting back to 11.6% if member does not enter DROP.



DROP

Eligibility

Plan members hired before May 27, 2014 are eligible for the DROP on the first day of the month coincident with or next following the earlier of:

- (1) age 47 with 20 years of Continuous Service, or
- (2) age 55 with 10 years of Continuous Service.

Plan members hired after May 27, 2014 are eligible for DROP on the first day of the month coincident with or next following the earlier of:

- (1) age 50 with 20 years of Continuous Service, or
- (2) age 55 with 10 years of Continuous Service.

Members who meet eligibility must submit a written election to participate in the DROP.

Benefit

The member's Credited Service and AME are frozen upon entry into the DROP. The monthly retirement benefit as described under Normal Retirement is calculated based upon the frozen Credited Service and AME.

In addition, the members accumulated sick and annual leave pay will be paid in 5 equal annual installments on the member's DROP participation anniversary dates.

Maximum Period

60 months (police) & 96 months (firefighters)

Interest Credited

The member's DROP account is credited or debited quarterly at a rate equal to one of the following elected by the member:

- (1) the actual net rate of investment return realized by the Plan for that quarter, or
- (2) a rate set quarterly by the Board of Trustees, or
- (3) the actual net rate of investment return realized by a separate investment account made available by the Board of Trustees but the investment proportions designated by the member.

Normal Form of Benefit

The member's DROP account is paid out under one of the following options as elected by the member:

- (1) a full single lump sum payment, or
- (2) annual installments in amounts as requested by the member by June 30th of each year, or
- (3) equal monthly installments as requested by the member by June 30th of each year, or
- (4) a single lump sum of the remaining balance after any annual or monthly installments have been made under options (2) or (3) above.

COLA

Beginning five years after benefit payments begin, retirees receive an automatic annual increase of 2% on each October 1. An additional increase of up to 1% is payable if certain conditions are met. For Firefighters, if participant leaves the DROP after five years, the COLA begins when participant leaves the DROP.



Payment Forms

Normal Form: 10 Years Certain and Life Annuity

Optional Forms: Single Life Annuity

Joint and 100% Contingent Survivor Annuity
Joint and 75% Contingent Survivor Annuity
Joint and 66 2/3% Contingent Survivor Annuity
Joint and 50% Contingent Survivor Annuity

Any Board-approved, actuarially equivalent benefit

Plan Provisions Not Included

We are not aware of any plan provisions not included in the valuation.

Adjustments Made for Subsequent Events

We are not aware of any event following the measurement date and prior to the date of this report that would materially impact the results.

Changes Since Prior Report

None



Cost Method

Individual Entry Age Normal Cost Method; Closed Group; All new bases are to be amortized over 30 years from the date established using a level dollar for police and a level percent of pay for firefighters.

Asset Valuation Method

20% Phase-In Method: Actuarial value of assets is equal to expected value phase in the difference between the expected investment earnings and actual investment earnings at the rate of 20% per year. The result cannot be greater than 120% of market value or less than 80% of market value.

Interest Rates

7.5%, compounded annually, net of investment expenses.

Annual Pay Increases

2.5%, compounded annually for inflation plus a seniority/merit scale using the following representative rates:

Years of Service	Merit and Seniority
1	8.5%
2	7.5%
3	7.0%
4	6.0%
5	4.5%
6	4.5%
7	3.5%
8-20	1.5%
21 and Higher	0.5%

Expense and/or Contingency Loading

One year term cost method; average of prior two years' expenses

Mortality Rates

Healthy Florida Retirement System special risk mortality projected with scale BB generationally.

Disabled Florida Retirement System disabled mortality projected with scale BB generationally.



Retirement Rates

If eligible for Retirement, the following decrements apply, based on service.

After First Eligibility		
for Normal Retirement	Police %	Fire %
0	80	35
1	50	30
2	75	30
3	100	30
4		30
5+		100

Disability Rates

Specimen rates for all groups are shown below:

Sample	% Becoming Disabled
<u>Ages</u>	Within Next Year
25	0.15%
30	0.18
35	0.23
40	0.30
45	0.51
50	1.00
55	1.59

Type of Disability or Death:

Workers' Compensation Offsets

Withdrawal Rates

Withdrawal of Employee Contributions

Marital Status and Ages

State Contributions

Changes Since Prior Report

75% of disabilities and deaths are assumed to be service-related

Current offsets are assumed to continue.

Decreasing rates from 1 to 10 years of service, then 0.5% thereafter.

It is assumed that employees withdraw their contribution balances upon employment termination, if not vested. If vested, employees are assumed to not withdraw contributions, with monthly benefit deferred to age 52.

100% of employees are assumed to be married. Females are assumed to be 3 years younger than males

Assumed to be the same as in the prior year

The mortality assumption was updated to match the Florida Retirement System mortality assumption used in the July 1, 2015 FRS Actuarial Valuation.



The actuarial report also shows the necessary items required for plan reporting and the any state requirements.

- ✓ Reconciliation of unfunded actuarial liability
- ✓ Statement of changes on value of assets
- ✓ Distribution Assets
- ✓ Schedule of amortizations
- ✓ Florida State requirements

Corporative Summary of Principal Valuation Results

Separation for Police & Fire

Comparison of payroll growth, salary increases and investment returns

Requirements under Florida Statute 112.664 and F.A.C. 60T – 1.0035

Reserve account for benefit improvements under 99-1 and SB 172



Reconciliation of Unfunded Actuarial Liability

	October 1, 2016
1. Unfunded Actuarial Accrued Liability beginning of prior year	\$78,870,905
2. Normal Cost	\$3,703,208
3. Expenses	\$604,460
4. Employer Contributions	\$(8,154,934)
5. Employee Contributions	(1,492,330)
6. Non-Employer Contributions	\$(2,273,774)
7. Interest	\$5,776,360
8. 1-year lag adjustment	\$978,172
9. Expected Unfunded Actuarial Accrued Liability, beginning of current year	\$78,012,067
10. Accumulated Reserve Adjustment	\$0
11. Liability changes due to:	
(a) Amendments	\$0
(b) Assumptions	\$28,953,758
(c) Funding Methods	0
(d) (Gain)/Loss	\$(1,865,719)
(e) Total	\$27,088,039
12. Unfunded Actuarial Liability beginning of current year	\$105,100,106



Statement of Changes on Value of Assets	September 30, 2015	September 30, 2016
Additions		
Contributions:		
Employer	\$8,129,211	\$8,154,934
Member	1,453,342	1,492,330
Nonemployer contributing entity	2,255,095	2,273,774
Total contributions	\$11,837,648	\$11,921,038
Investment income		
Net increase in fair value of investments	\$(7,098,065)	\$13,050,965
Interest and dividends	4,665,224	4,609,209
Less investment expense, other than from securities lending	(1,497,351)	(1,426,195)
Net income other than from securities lending	\$(3,930,192)	16,233,979
Securities lending income	\$0	\$0
Less securities lending expense	0	0
Net income from securities lending	\$0	\$0
Net investment income	\$(3,930,192)	\$16,233,979
Other	43,955	10,775
Total additions	\$7,951,411	\$28,165,792
Deductions		
Benefit payments, including refunds of member contributions	\$21,144,686	\$22,946,120
Administrative expense	588,036	604,460
Other	0	0
Total deductions	\$21,732,722	\$23,550,580
Net increase in market value	\$(13,781,311)	\$4,615,212
Market Value as of		
Beginning of year	233,037,612	219,256,301
End of year	\$219,256,301	\$223,871,513



Distribution of Assets	September 30, 2015	September 30, 2016
Cash and deposits	\$74,968	\$1,574,470
Securities lending cash collateral	0	0
Total cash	\$74,968	\$1,574,470
Receivables:		
Contributions	\$0	\$0
Due from broker for investments sold	867,248	583,208
Investment income	402,819	348,107
Other	365,776	304,286
Total receivables	\$1,635,843	\$1,235,601
Investments:		
Equity	\$113,146,938	\$118,890,349
Fixed Income	51,732,925	48,647,891
Real Estate	3,035,000	3,027,796
Hedge Funds & Private Equity	42,647,461	44,239,676
Short Term Investments	9,575,447	7,696,123
Total investments	\$220,137,771	\$222,501,835
Sub-total Sub-total	\$221,848,582	\$225,311,906
Payables:		
Investment management fees	\$254,945	\$247,925
Due to broker for investments purchased	2,337,336	1,192,468
Collateral payable for securities lending	0	0
Other	0	0
Total liabilities	\$2,592,281	\$1,440,393
Total	\$219,256,301	\$223,871,513



Schedule of Amortizations - Police

					October 1, 2016
			Total	\$59,247,726	\$5,066,762
Date Established	<u>Description</u>	Original Amount	Remaining Period <u>Years</u>	Remaining <u>Balance</u>	Annual <u>Payment</u>
10/1/1987	Method Change	670,685	1	65,937	65,937
10/1/1987	Actuarial Loss (Gain)	(592,770)	1	(64,983)	(64,983)
10/1/1988	Actuarial Loss (Gain)	260,282	2	48,923	25,346
10/1/1989	Actuarial Loss (Gain)	67,725	3	17,840	6,382
10/1/1990	Actuarial Loss (Gain)	(173,266)	4	(64,104)	(17,804)
10/1/1991	Assumption Change	(4,082)	5	(1,887)	(434)
10/1/1991	Actuarial Loss (Gain)	(298,306)	5	(137,876)	(31,701)
10/1/1992	Assumption Change	(3,250)	6	(1,704)	(338)
10/1/1992	Actuarial Loss (Gain)	(721,063)	6	(377,969)	(74,906)
10/1/1993	Assumption Change	(53,335)	7	(31,287)	(5,495)
10/1/1993	Actuarial Loss (Gain)	(301,531)	7	(176,872)	(31,064)
10/1/1994	Assumption Change	768,410	8	449,073	71,320
10/1/1994	Actuarial Loss (Gain)	422,754	8	247,063	39,238
10/1/1995	Assumption Change	(311,136)	9	(221,626)	(32,320)
10/1/1995	Actuarial Loss (Gain)	(271,042)	9	(193,065)	(28,155)
10/1/1996	Assumption Change	(374,561)	10	(295,026)	(39,982)
10/1/1996	Actuarial Loss (Gain)	(276,460)	10	(217,755)	(29,511)
10/1/1997	Assumption Change	1,345,971	11	1,122,286	142,710
10/1/1997	Actuarial Loss (Gain)	(3,074,778)	11	(2,858,792)	(363,525)
10/1/1998	Plan Amendment	(337,295)	12	(321,294)	(38,638)



Schedule of Amortizations - Police

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Date Established	<u>Description</u>	<u>Original Amount</u>	Remaining Period <u>Years</u>	Remaining <u>Balance</u>	Annual <u>Payment</u>
10/1/1998	Actuarial Loss (Gain)	(3,155,507)	12	(3,005,803)	(361,473)
10/1/1999	Actuarial Loss (Gain)	(2,565,536)	13	(2,496,467)	(285,791)
10/1/2000	Assumption Change	(18,775,480)	14	(17,896,503)	(1,961,080)
10/1/2000	Plan Amendment	11,651,128	14	11,105,680	1,216,949
10/1/2000	Actuarial Loss (Gain)	3,153,187	14	3,005,571	329,347
10/1/2001	Variable COLA	484,615	15	469,641	49,492
10/1/2001	Plan Amendment	377,521	15	365,855	38,555
10/1/2001	Actuarial Loss (Gain)	5,917,320	15	5,734,462	604,318
10/1/2002	Actuarial Loss (Gain)	13,547,635	16	14,234,411	1,448,483
10/1/2003	Actuarial Loss (Gain)	8,453,577	17	7,911,953	780,156
10/1/2004	Actuarial Loss (Gain)	7,733,735	18	7,060,605	676,695
10/1/2005	Plan Amendment	528,766	19	399,082	37,276
10/1/2005	Actuarial Loss (Gain)	1,811,918	19	1,639,830	153,169
10/1/2006	Actuarial Loss (Gain)	(2,245,390)	20	(2,054,373)	(187,459)
10/1/2007	Actuarial Loss (Gain)	(3,930,059)	21	(3,677,085)	(328,473)
10/1/2008	Assumption Change	(2,460,748)	22	(2,376,086)	(208,182)
10/1/2008	Actuarial Loss (Gain)	4,312,669	22	4,164,292	364,857
10/1/2009	Assumption Change	2,211,808	23	2,156,997	185,673
10/1/2009	Actuarial Loss (Gain)	4,953,816	23	4,831,056	415,854
10/1/2010	Assumption Change	2,351,731	24	2,281,350	193,225
10/1/2010	Actuarial Loss (Gain)	4,329,632	24	4,200,058	355,735



Schedule of Amortizations - Police

October 1.	. 2010	6
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Date Established	<u>Description</u>	<u>Original Amount</u>	Remaining Period <u>Years</u>	Remaining <u>Balance</u>	Annual <u>Payment</u>
10/1/2011	Assumption Change	2,628,245	25	2,477,592	206,759
10/1/2011	Actuarial Loss (Gain)	2,882,428	25	2,717,207	226,756
10/1/2012	Valuation Software	(955,577)	26	(912,490)	(75,121)
10/1/2012	Assumption Change	2,734,348	26	2,611,054	214,956
10/1/2012	Actuarial Loss (Gain)	7,401,751	26	7,067,998	581,874
10/1/2013	Assumption Change	(2,014,446)	27	(1,947,088)	(158,306)
10/1/2013	Actuarial Loss (Gain)	1,279,029	27	1,236,264	100,513
10/1/2014	Actuarial Loss (Gain)	(1,640,207)	28	(1,603,653)	(128,897)
10/1/2015	Actuarial Loss (Gain)	(532,193)	29	(527,046)	(41,918)
10/1/2016	Actuarial Loss (Gain)	(1,637,449)	30	(1,637,449)	(\$128,972)
10/1/2016	Assumption Changes	14,723,929	30	14,723,929	\$1,159,715



Schedule of Amortizations - Fire

					October 1, 2016
			Total	\$45,852,380	\$3,307,017
Date Established	<u>Description</u>	Original Amount	Remaining Period <u>Years</u>	Remaining <u>Balance</u>	Annual <u>Payment</u>
10/1/1987	Method Change	533,126	1	45,622	45,622
10/1/1987	Actuarial Loss (Gain)	(471,191)	1	(44,961)	(44,961)
10/1/1988	Actuarial Loss (Gain)	206,898	2	34,767	17,776
10/1/1989	Actuarial Loss (Gain)	53,834	3	12,975	4,522
10/1/1990	Actuarial Loss (Gain)	(137,729)	4	(47,581)	(12,713)
10/1/1991	Assumption Change	(3,244)	5	(1,425)	(311)
10/1/1991	Actuarial Loss (Gain)	(237,123)	5	(104,203)	(22,765)
10/1/1992	Assumption Change	(2,583)	6	(1,307)	(243)
10/1/1992	Actuarial Loss (Gain)	(573,171)	6	(290,344)	(54,018)
10/1/1993	Assumption Change	(42,396)	7	(24,387)	(3,973)
10/1/1993	Actuarial Loss (Gain)	(239,687)	7	(137,884)	(22,466)
10/1/1994	Assumption Change	610,808	8	354,834	51,678
10/1/1994	Actuarial Loss (Gain)	336,046	8	195,212	28,430
10/1/1995	Assumption Change	(247,322)	9	(177,297)	(23,443)
10/1/1995	Actuarial Loss (Gain)	(215,450)	9	(154,450)	(20,422)
10/1/1996	Assumption Change	(297,737)	10	(238,740)	(29,013)
10/1/1996	Actuarial Loss (Gain)	(219,757)	10	(176,212)	(21,414)
10/1/1997	Assumption Change	1,069,910	11	917,888	103,539
10/1/1997	Actuarial Loss (Gain)	(2,444,135)	11	(2,338,128)	(263,744)
10/1/1998	Plan Amendment	(268,116)	12	(265,400)	(28,015)



Schedule of Amortizations - Fire

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Date Established	Description	<u>Original Amount</u>	Remaining Period <u>Years</u>	Remaining <u>Balance</u>	Annual <u>Payment</u>
10/1/1998	Actuarial Loss (Gain)	(2,508,306)	12	(2,482,915)	(262,093)
10/1/1999	Plan Amendment	114,009	13	116,366	11,573
10/1/1999	Actuarial Loss (Gain)	(2,039,340)	13	(2,081,453)	(207,010)
10/1/2000	Assumption Change	(13,798,204)	14	(13,725,715)	(1,293,592)
10/1/2000	Plan Amendment	8,646,272	14	8,600,849	810,595
10/1/2000	Actuarial Loss (Gain)	676,828	14	673,273	63,453
10/1/2000	Plan Amendment	299,541	14	297,970	28,082
10/1/2001	Actuarial Loss (Gain)	7,539,001	15	7,591,350	681,346
10/1/2002	Actuarial Loss (Gain)	9,466,755	16	12,281,960	1,054,300
10/1/2003	Actuarial Loss (Gain)	7,616,087	17	9,096,717	749,648
10/1/2004	Actuarial Loss (Gain)	6,692,396	18	7,760,321	615,973
10/1/2005	Plan Amendment	4,413,733	19	5,018,579	384,807
10/1/2005	Actuarial Loss (Gain)	2,591,529	19	2,946,659	225,940
10/1/2006	Actuarial Loss (Gain)	(2,040,207)	20	(2,295,560)	(170,477)
10/1/2007	Actuarial Loss (Gain)	(868,128)	21	(976,328)	(70,389)
10/1/2008	Assumption Change	(2,812,893)	22	(3,151,297)	(221,025)
10/1/2008	Actuarial Loss (Gain)	3,519,341	22	3,942,736	276,535
10/1/2009	Assumption Change	2,293,100	23	2,546,017	174,055
10/1/2009	Plan Amendment	23,114	23	25,665	1,755
10/1/2009	Actuarial Loss (Gain)	3,014,143	23	3,346,588	228,785
10/1/2010	Assumption Change	2,377,230	24	2,595,889	173,275



Schedule of Amortizations - Fire

October	1,	201	15
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Date Established	<u>Description</u>	Original Amount	Remaining Period <u>Years</u>	Remaining <u>Balance</u>	Annual <u>Payment</u>
10/1/2010	Actuarial Loss (Gain)	(904,732)	24	(987,950)	(65,945)
10/1/2011	Actuarial Loss (Gain)	(1,874,268)	25	(1,976,882)	(129,045)
10/1/2011	Assumption Change	2,629,741	25	2,773,718	181,060
10/1/2012	Valuation Software	(2,713,381)	26	(2,829,396)	(180,879)
10/1/2012	Assumption Change	2,714,228	26	2,830,280	180,936
10/1/2012	Actuarial Loss (Gain)	1,168,034	26	1,217,976	77,863
10/1/2013	Assumption Change	(3,541,424)	27	(3,648,000)	(228,696)
10/1/2013	Actuarial Loss (Gain)	(1,830,796)	27	(1,885,894)	(118,228)
10/1/2014	Actuarial Loss (Gain)	(1,597,600)	28	(1,631,272)	(100,408)
10/1/2014	Plan Amendment	589	28	602	37
10/1/2015	Actuarial Loss (Gain)	(1,680,516)	29	(1,699,011)	(102,792)
10/1/2016	Actuarial Loss (Gain)	(228,270)	30	(228,270)	(\$13,589)
10/1/2016	Assumption Changes	14,229,829	30	14,229,829	\$847,101



Comparative Summary Of Principal Valuation Results			
	10/1/2016	10/1/2016	10/1/2015
	7.50%	7.50%	7.50%
	(current methods & assumptions)	(prior methods & assumptions)	
Participant Data		<u> </u>	
Active members	162	162	160
Total annual payroll	\$13,527,197	\$13,527,197	\$13,061,612
Members in DROP	35	35	43
Total annualized benefit	\$2,339,561	\$2,339,561	\$2,870,347
Retired members and beneficiaries	332	332	321
Total annualized benefit	\$16,625,454	\$16,625,454	\$15,440,532
Disabled members receiving benefits	32	32	32
Total annualized benefit	\$1,773,657	\$1,773,657	\$1,743,264
Terminated vested members	4	4	3
Total annualized benefit	\$179,326	\$179,326	\$152,429
Assets			
Actuarial value of assets	\$213,099,980	\$213,099,980	\$204,931,915
Market value of assets	\$205,991,445	\$205,991,445	\$200,181,169



Comparative Summary Of Principal Valuation Results (continued)			
	10/1/2016	10/1/2016	10/1/2015
	7.50%	7.50%	7.50%
	(current methods & assumptions)	(prior methods & assumptions)	
Liabilities, present value of all future expected benefit payments			
Active members			
Retirement benefits	\$78,439,297	\$76,773,266	\$74,588,795
Vesting benefits	\$1,331,035	\$1,310,949	\$1,274,379
Disability benefits	\$5,952,696	\$5,798,414	\$5,432,559
Death benefits	\$4,656,874	\$2,148,166	\$2,075,201
Return of contribution	227,789	228,585	190,933
Total	\$90,607,691	\$86,259,380	\$83,561,867
Terminated vested members	\$2,042,788	\$1,978,337	\$1,738,940
Retired members and beneficiaries	\$241,672,526	\$217,271,047	\$213,166,528
Disabled members	\$21,641,128	\$19,377,931	\$19,314,840
Total	\$355,964,133	\$324,886,695	\$317,782,175
Liabilities due and unpaid	\$0	\$0	\$0
Actuarial accrued liability	\$318,200,086	\$289,246,329	\$283,802,820
Unfunded actuarial accrued liability	\$105,100,106	\$76,146,349	\$78,870,905



Comparative Summary Of Principal Valuation Results (continued)			
	10/1/2016	10/1/2016	10/1/2015
	7.50%	7.50%	7.50%
	(current methods &	(prior methods	
	assumptions)	& assumptions)	
Actuarial present value of accrued benefits			
Statement of actuarial present value of all accrued benefits			
Vested accrued benefits			
Inactive members and beneficiaries	\$265,356,442	\$238,627,315	\$234,220,308
Active members	36,678,559	33,813,966	32,250,183
Total value of all vested accrued benefits	\$302,035,001	\$272,441,281	\$266,470,491
Non-vested accrued benefits	5,934,233	5,865,842	6,406,896
Total actuarial present value of all accrued benefits	\$307,969,234	\$278,307,123	\$272,877,387
Statement of changes in total actuarial present value of all accrued benefits (ASC 960)			
Actuarial present value of accrued benefits, beginning of year	\$272,877,387	\$272,877,387	\$262,386,839
Increase (decrease) during year			
Benefits accumulated	\$6,887,209	\$6,887,209	\$12,262,175
Plan amendment	0	0	3,653
Changes in actuarial assumptions	29,662,111	0	0
Interest	19,687,213	19,687,213	18,903,557
Benefits paid	(21,144,686)	(21,144,686)	(20,678,837)
Other changes	0	0	0
Net increase (decrease)	\$35,091,847	\$5,429,736	\$10,490,548
Actuarial present value of accrued benefits, end of year	\$307,969,234	\$278,307,123	\$272,877,387



Comparative Summary Of Principal Valuation Results (continued)			
	10/1/2016 7.50% (current methods & assumptions)	10/1/2016 7.50% (prior methods & assumptions)	10/1/2015 7.50%
Pension cost			
Normal Cost	\$4,117,315	\$3,835,612	\$3,703,208
Member contributions	\$1,616,669	\$1,617,198	\$1,558,927
Expected plan sponsor contribution As % of payroll Member Contributions as % of payroll	\$10,734,952 77.94% 11.95%	\$8,229,485 59.75% 11.96%	\$8,093,069 60.85% 11.94%
Past contributions Required plan sponsor contribution	9/30/2016 \$10,033,048		9/30/2015 \$9,950,848
Required member contribution	\$1,492,330		\$1,453,242
Actual contributions made by: Plan's sponsor Members Other	\$10,033,048 \$1,492,330 \$0		\$9,950,848 \$1,453,242 \$0
Net actuarial gain (loss) (if applicable)	\$1,865,719	\$1,865,719	\$2,212,709
Other disclosures (where applicable)			
Present value of active member Future salaries at attained age Future contributions at attained age	\$125,729,164 \$12,995,653	\$126,986,016 \$13,145,032	\$121,064,716 \$12,496,426



Hypothetical City Contribution Requirement for 2016/2017 Fiscal Year			_
	Police	Fire	Total
Unfunded actuarial accrued liability	\$59,322,617	\$45,852,380	\$105,174,997
Liabilities, present value of all future expected benefit payments			
Active members			
Retirement benefits	\$3,794,414	\$74,644,883	\$78,439,297
Vesting benefits	29,317	1,301,719	1,331,036
Disability benefits	120,331	5,832,365	5,952,696
Death benefits	46,899	4,609,975	4,656,874
Return of contribution	0	227,789	227,789
Total	\$3,990,961	\$86,616,731	\$90,607,692
Terminated vested members	\$912,733	\$1,130,056	\$2,042,789
Retired members and beneficiaries	\$140,767,152	\$100,905,374	\$241,672,526
Disabled members	\$10,843,950	\$10,797,178	\$21,641,128
Total	\$156,514,796	\$199,449,339	\$355,964,135
Entry age reserve			
Active	\$3,404,893	\$49,438,750	\$52,843,643
Inactive	152,523,835	112,832,608	265,356,443
Total	\$155,928,728	\$162,271,358	\$318,200,086
Accumulated Employee Contributions	\$1,035,194	\$13,523,923	\$14,559,117
Present Value of Future Salaries	\$1,989,538	\$123,739,626	\$125,729,164
Present Value of Future Member Contributions	\$130,135	\$12,865,518	\$12,995,653
Annual Inactive Benefits	\$11,650,537	\$9,267,461	\$20,917,998
Valuation Payroll	485,714	13,041,483	13,527,197
ASC 960 Information			
Present Value of Vested Benefits	155,051,116	146,983,885	302,035,001
Present Value of Accrued Benefits	155,591,667	152,377,567	307,969,234



Hypothetical City Contribution Requirement for 2015/2016 Fiscal Year

	Police	Fire	Total
Actuarial Value at 10/1/15	100,222,868	123,784,179	\$224,007,047
Contribution by			
- Members	50,479	1,441,851	1,492,330
- City	0	4,139,731	4,139,731
- BSO	4,015,203	0	4,015,203
- State	1,056,884	1,216,890	2,273,774
- Total	5,122,566	6,798,472	11,921,038
Net Earnings Recognized ¹	8,276,136	10,326,407	18,602,543
Disbursements			
- Benefit Payment	11,155,086	11,787,273	22,942,359
- Refunds	0	3,761	3,761
- Administrative Expenses ²	268,920	335,540	604,460
- Total	11,424,006	12,126,574	23,550,580
Actuarial Value at 10/1/15	102,197,564	128,782,484	230,980,048
DROP Account Balance	5,318,583	11,967,846	17,286,429
State Contribution Reserve	0	395,660	395,660
Member Plan	197,979	0	197,979
Adjusted Actuarial Value at 10/1/16	96,681,002	116,418,978	213,099,980
Market Value of Assets ³	93,455,942	112,535,503	\$205,991,445



¹Allocated based on Return of Actuarial Value of Assets

²Allocated based on Net Earnings Recognized

³Allocation based on Adjusted Actuarial Value as of 10/1/2016

Hypothetical City Contribution Requirement for 2015/2016 Fiscal Year

	Police	Fire	Total
Employer Contributions			
Normal Cost	\$145,322	\$3,971,993	\$4,117,315
Expected Member Contributions	(\$50,133)	(\$1,566,536)	(\$1,616,669)
Net Normal Cost	\$95,189	\$2,405,457	\$2,500,646
Administrative expense ¹	\$272,848	\$323,401	\$596,249
Amortization of UAAL	\$5,066,762	\$3,307,017	\$8,373,779
Applicable Interest	407,610	452,691	860,301
Total Recommended Contribution	\$5,842,409	\$6,488,566	\$12,330,975
Expected Non-Employer Contributions	(966,486)	(821,230)	(1,787,716)
Total Recommended Contribution	\$4,875,923	\$5,667,336	\$10,543,259
As a percentage of payroll	1003.87%	43.46%	77.94%
Hypothetical Total			10,543,259
Total Recommended Contribution (paid in Lump Sum)	4,964,575	5,770,377	10,734,952
Total Recommended Contribution (paid in Quarterly Installments)	5,100,332	5,928,168	11,028,500



¹Allocated based on Net Earnings Recognized

September 30, 2015

Historical Salary Increases and Asset Performance

Year Ending	Payroll Growth	Salary Growth	Expected Salary Growth	Asset Return (Market)	Asset Return (Actuarial)	Asset Return (Expected)
9/30/2016	3.56%	6.06%	5.27%	7.63%	8.54%	7.50%
9/30/2015	(0.03%)	4.84%	5.41%	(1.71%)	7.46%	7.50%
9/30/2014	0.90%	5.50%	5.20%	10.00%	9.60%	7.50%
9/30/2013	(9.00%)	1.40%	7.00%	13.70%	8.00%	7.70%
9/30/2012	(7.00%)	1.60%	6.90%	16.80%	2.80%	7.90%
9/30/2011	(7.70%)	(1.50%)	6.40%	1.70%	1.20%	8.10%
9/30/2010	(7.60%)	5.00%	6.50%	10.40%	5.60%	8.30%
9/30/2009	(4.00%)	3.00%	7.00%	1.80%	2.30%	8.50%
9/30/2008	(1.40%)	7.40%	7.00%	(14.30%)	3.60%	8.50%
9/30/2007	2.80%	6.20%	6.00%	12.80%	10.00%	8.50%
Averages						
3-year				5.18%	8.53%	
5-year				9.10%	7.25%	
10-year				5.50%	5.87%	
20-year				6.33%	5.71%	
Amortization of	Unfunded Actuarial Ac	crued Liability				
					UAAL	Amortization
10/1/2016					\$105,100,106	\$8,373,779
10/1/2017					\$103,980,797	\$8,463,080
10/1/2018					\$102,681,549	\$8,512,396
10/1/2019					\$101,231,836	\$8,596,585
10/1/2045					\$2,861,308	\$2,861,308



				October 1, 2016
	Valuation	- 200 bp ²	Funding Rate ²	+ 200 bp ²
	7.50%	5.50%	7.50%	9.50%
Total pension liability				
Service Cost	\$3,703,207	\$3,703,207	\$3,703,207	\$3,703,207
Interest	21,977,143	21,977,143	21,977,143	21,977,143
Benefit changes	0	0	0	0
Difference between expected and actual experience	(983,846)	(983,846)	(983,846)	(983,846)
Changes in assumptions	32,937,705	70,791,070	32,937,705	1,561,843
Benefit payments	(22,942,359)	(22,942,359)	(22,942,359)	(22,942,359)
Contribution refunds	(3,761)	(3,761)	(3,761)	(3,761)
Net change in pension liability	\$34,688,089	\$72,541,454	\$34,688,089	\$3,312,227
Total pension liability, beginning of year	\$300,798,426	\$300,798,426	\$300,798,426	\$300,798,426
Total pension liability, end of year	\$335,486,515	\$373,339,880	\$335,486,515	\$304,110,653
Plan fiduciary net position				
Contributions - Employer	\$8,154,934	\$8,154,934	\$8,154,934	\$8,154,934
Contributions - State	1,492,330	1,492,330	1,492,330	1,492,330
Contributions - Member	2,273,774	2,273,774	2,273,774	2,273,774
Net investment income	16,233,979	16,233,979	16,233,979	16,233,979
Benefit payments	(22,942,359)	(22,942,359)	(22,942,359)	(22,942,359)
Contribution refunds	(3,761)	(3,761)	(3,761)	(3,761)
Administrative expense	(604,460)	(604,460)	(604,460)	(604,460)
Other	10,775	10,775	10,775	10,775
Net change in plan fiduciary net position	\$4,615,030	\$4,615,030	\$4,615,030	\$4,615,030
Plan fiduciary net position, beginning of year	\$219,256,301	\$219,256,301	\$219,256,301	\$219,256,301
Plan fiduciary net position, end of year	\$223,871,513	\$223,871,513	\$223,871,513	\$223,871,513
Net pension liability/(asset)	\$111,615,002	\$149,468,367	\$111,615,002	\$80,239,140
Funded ratio	66.73%	59.96%	66.73%	73.62%
Years that Assets support expected benefit payments	13	11	13	16
Estimated city contribution	10	1 1	10	10
Annual dollar value	\$10,543,259	\$12,849,833	\$10,543,259	\$9,271,540
Percentage of payroll	77.94%	94.99%	77.94%	68.54%
1 elcellage of payroll	11.5470	54.5576	11.5470	00.0470

¹Includes DROP assets and liabilities

-interest rate (as noted)



²Based on valuation assumption with the following changes

October 1, 2016

Sustainment of Expected Benefit Payments

Mortality	Valuation
Interest	7.50%

<u>Year</u>	Market Value of Assets	Investment Return	Benefit Payments
1	\$223,871,513	\$15,386,273	\$38,131,767 ¹
2	201,126,019	14,295,360	21,429,859
3	193,991,520	13,741,928	21,928,033
4	185,805,415	13,115,485	22,267,113
5	176,653,787	12,400,070	23,055,850
6	165,998,007	11,576,633	23,714,503
7	153,860,137	10,637,980	24,483,427
8	140,014,690	9,574,547	25,163,019
9	124,426,218	8,375,811	25,966,906
10	106,835,123	7,023,540	26,861,466
11	86,997,197	5,508,584	27,597,749
12	64,908,032	3,825,614	28,311,502
13	40,422,144	1,964,164	28,990,674
14	13,395,634		29,677,935



¹Benefit payments include the DROP Balance at 9/30/2016

October 1, 2016

Sustainment of Expected Benefit Payments

Mortality FRS Special Risk Scale BB Generational Interest 5.50%

<u>Year</u>	Market Value of Assets	Investment Return	Benefit Payments
1	\$223,871,513	\$11,278,345	\$38,131,767 ¹
2	197,018,091	10,254,562	21,429,859
3	185,842,794	9,626,404	21,928,033
4	173,541,165	8,940,614	22,267,113
5	160,214,666	8,186,257	23,055,850
6	145,345,073	7,350,559	23,714,503
7	128,981,129	6,429,679	24,483,427
8	110,927,381	5,418,285	25,163,019
9	91,182,647	4,310,513	25,966,906
10	69,526,254	3,095,141	26,861,466
11	45,759,929	1,768,016	27,597,749
12	19,930,196		28,311,502



¹Benefit payments include the DROP balance at 9/30/2016

October 1, 2016

Sustainment of Expected Benefit Payments

Mortality FRS Special Risk Scale BB Generational Interest 7.50%

<u>Year</u>	Market Value of Assets	Investment Return	Benefit Payments
1	\$223,871,513	\$15,386,273	\$38,131,767 ¹
2	201,126,019	14,295,360	21,429,859
3	193,991,520	13,741,928	21,928,033
4	185,805,415	13,115,485	22,267,113
5	176,653,787	12,400,070	23,055,850
6	165,998,007	11,576,633	23,714,503
7	153,860,137	10,637,980	24,483,427
8	140,014,690	9,574,547	25,163,019
9	124,426,218	8,375,811	25,966,906
10	106,835,123	7,023,540	26,861,466
11	86,997,197	5,508,584	27,597,749
12	64,908,032	3,825,614	28,311,502
13	40,422,144	1,964,164	28,990,674
14	13,395,634		29,677,935



¹Benefit payments include the DROP balance at 9/30/2016

October 1, 2015

Sustainment of Expected Benefit Payments

Mortality FRS Special Risk Scale BB Generational Interest 9.50%

<u>Year</u>	Market Value of Assets	Investment Return	Benefit Payments
1	\$223,871,513	\$19,497,623	\$38,131,767 ¹
2	205,237,369	18,502,723	21,429,859
3	202,310,233	18,201,519	21,928,033
4	198,583,719	17,831,759	22,267,113
5	194,148,365	17,373,785	23,055,850
6	188,466,300	16,803,413	23,714,503
7	181,555,210	16,111,164	24,483,427
8	173,182,947	15,284,250	25,163,019
9	163,304,178	14,308,449	25,966,906
10	151,645,721	13,159,368	26,861,466
11	137,943,623	11,823,488	27,597,749
12	122,169,362	10,291,799	28,311,502
13	104,149,659	8,548,399	28,990,674
14	83,707,384	6,574,478	29,677,935
15	60,603,927	4,353,391	30,243,586
16	34,713,732	1,871,484	30,724,778
17	5,860,438		31,091,552



¹Benefit payments include the DROP balance at 9/30/2016

Reserve Account For Future Benefit Improvements Under F.L. 99-1

1. Adjusted Base Amount at 10/1/2016

	Year		Ch. 185	Ch. 175	Suppl.	Total
	<u>Established</u>	Description	<u>Police</u>	<u>Fire</u>	<u>Fire</u>	<u>Fire</u>
			-\$-	-\$-	-\$-	-\$-
		Adjusted Base Amount as of 10/1/10	798,463	704,031	28,723	732,754
	2012	Ordinances 2012-30/31	0	88,476	0	88,476
		Adjusted Base Amount	798,463	792,507	28,723	821,230
2.	Reserve Account for 2015/2016					
			Ch. 185			Total
			<u>Police</u>			<u>Fire</u>
			-\$-			-\$-
	(a)	Reserve Account at September 30, 2015	107,581			433,458
	(b)	Share Plan Allocation Paid Out	0			(433,458)
	(c)	Share Plan Allocation for Reserve	90,398			395,660
	(d)	Reserve Account at September 30, 2016 (1 + 2 + 3)	197,979			395,660
	(e)	City Contribution Receivable for State Premium Shortfa	all			
	i.	Premium Tax Distribution for 2015	1,056,884			1,216,890
	ii.	Adjusted Base Amount	876,088			821,230
	iii.	Shortfall of State Premium Tax Distribution	0			0
			Ch. 185			
3.	Allocation of A	Accumulated Reserve Account under SB 172	<u>Police</u>			<u>Total</u>
			-\$-			-\$-
	(a)	Amount allocated to contribution	(90,398)			0
	(b)	Amount allocated to Member Plan	0			0
	(c)	Total	(90,398)			0
	(d)	Final Reserve Account at September 30, 2016	197,979			395,660
	(e)	Amount to be allocated to Member Plan	197,979			395,660

