

The logo for nyhart, featuring the word "nyhart" in a white, lowercase, sans-serif font centered within a black rectangular box. This box is part of a larger graphic element on the left side of the page, which consists of a thick black vertical bar and a thin red vertical bar to its right.

City of Marathon
Firefighters' Pension Plan and Trust Fund

October 1, 2016
Actuarial Valuation Report

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At the request of the plan sponsor, this report summarizes the City of Marathon Firefighters' Pension Plan and Trust Fund as of October 1, 2016. The purpose of this report is to communicate the following results of the valuation:

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

This report has been prepared in accordance with the applicable Federal and State laws. 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 employer. 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, MAAA
Enrolled Actuary No. 14-5609

May 4, 2017
Date

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:

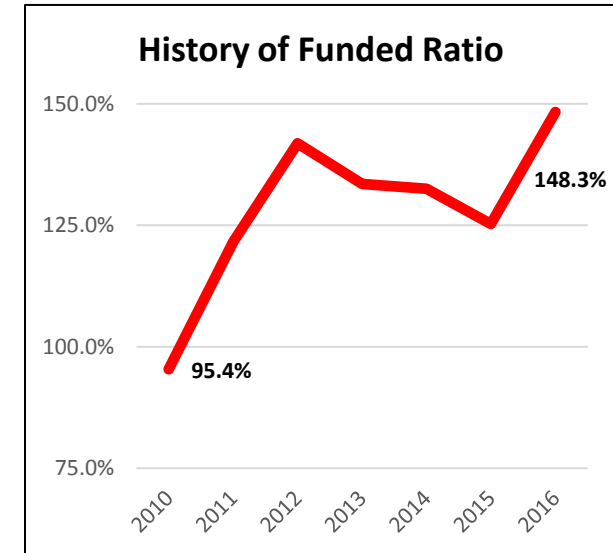
Ms. Sarah Carr
Benefits Administrator
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Firefighters' Trust Funds
Division of Retirement
Post Office Box 3010
Tallahassee, FL 32315-3010

Mr. Keith Brinkman
Bureau Chief, Bureau of Local Retirement Systems
Florida Department of Management Services
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	\$4,193,170	\$4,578,544
Actuarial Value of Assets	5,252,172	6,790,899
Unfunded Accrued Liability	\$(1,059,002)	\$(2,212,355)
Funded Percentage (AVA)	125.3%	148.3%
Funded percentage (MVA)	138.2%	144.4%
Cost Measures		
Recommended Contribution For Next Fiscal Year	\$186,183	\$130,853
Recommended Contribution (as a percentage of payroll)	11.9%	7.5%
Asset Performance		
Market Value of Assets (MVA)	\$5,796,422	\$6,612,931
Actuarial Value of Assets (AVA)	\$5,252,172	\$6,790,899
Actuarial Value/Market Value	90.6%	102.7%
Participant Information		
Active Members	25	25
Terminated Vested Members	2	5
Retirees, Beneficiaries, and Disabled Members	0	0
Inactive Due a Refund	4	5
Total	31	35
Expected Payroll	\$1,562,642	\$1,743,822
Total Payroll	\$1,502,540	\$1,676,752



Changes Since Prior Valuation and Key Notes

There have been no plan provision changes since the prior year.

The mortality assumption was changed to match the Florida Retirement System's special-risk mortality assumption used to develop the 7/1/2015 Florida Retirement System Actuarial Valuation. The impact on contributions is an increase of 1.7% of payroll.

Nyhart is recommending a change in the actuarial asset method to phase-in the difference between expected and actual return rather than to phase-in only actual return. Prior to this recommended change the contribution rate is 12.92%; after this recommended change, the contribution rate is 7.50%.

The City should plan to make the following contributions for the fiscal year starting October 1, 2017:

On or Before	Amount ⁽¹⁾
January 1, 2018	\$33,818
April 1, 2018	\$33,818
July 1, 2018	\$33,818
September 30, 2018	\$33,818

⁽¹⁾ These amounts assume that State Premium Tax Revenues received during the fiscal year is at least \$163,986. Any shortage in State Premium Tax Revenues will need to be made up for by additional contributions from the City.

Present Value of Future Benefits

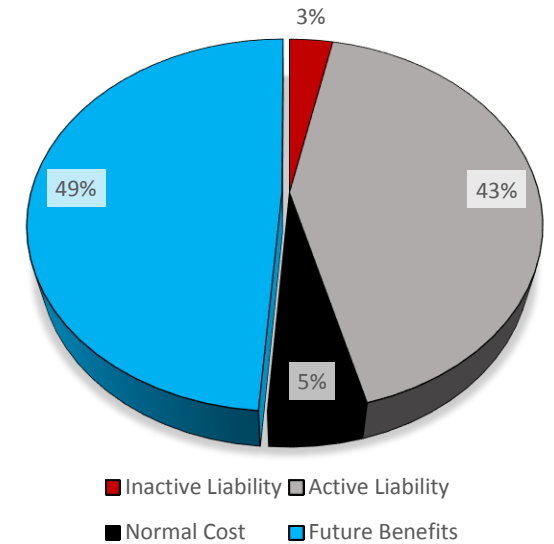
The Present Value of Future Benefits represents the current future benefits payable to the participant.

October 1, 2016

Present Value of Future Benefits

Active members	
Retirement	\$9,655,896
Disability	0
Death	0
Termination	0
Refund of contributions	0
Total active	\$9,655,896
Inactive members	
Retired members	\$0
DROP members	0
Beneficiaries	0
Disabled members	0
Terminated vested members	324,736
Total inactive	\$324,736
Total	\$9,980,632
Present value of future payrolls	\$16,565,847

Breakdown of Present Value of Future Benefits



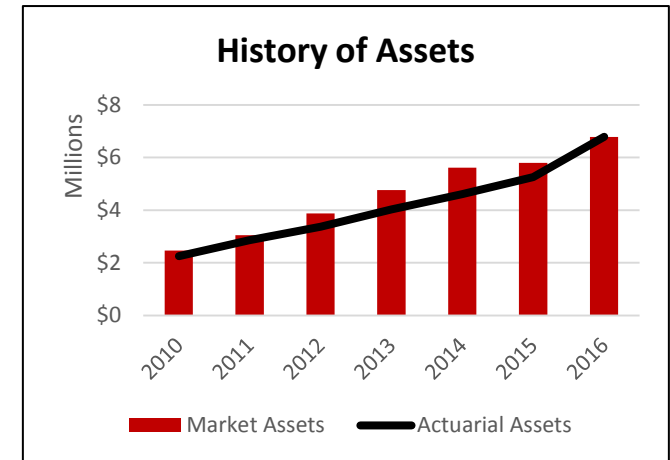
Asset Information

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	\$5,964,911
Employer contributions (incl. discounted accrued items)	175,817
Member contributions	79,045
Non-employer contributions	163,986
Investment income, net expenses	490,850
Benefit payments and refunds	(50,293)
Administrative expenses	(24,668)
Other expenses	0
Market value of asset, beginning of current year	\$6,799,648
Return on Market Value	8.01%
Accumulated Reserve	\$(165,909)
Prepaid Reserve	\$(20,808)
Market value of asset available	\$6,612,931
 Actuarial value of assets	
Value at beginning of current year	\$6,790,899



Asset Information (continued)

Plan Assets are used to develop funded percentages and contribution requirements

	October 1, 2016
1. Actuarial value of assets beginning of prior year (prior methodology)	\$5,252,172
2. Expected Market Value of Assets	
(a) Market value of assets – beginning of year	\$5,964,911
(b) Contributions	398,040
(c) Benefit payments	(50,293)
(d) Expenses	(24,668)
(e) Expected Return (7.50%)	453,993
(f) Expected market value end of year	\$6,741,983
3. Market value of assets, beginning of current year	\$6,778,840
4. Amount subject to phase-in ((3)-(2)(g))	\$36,857
5. Phase in of asset gain/(loss)	
(a) Current year [80% x \$36,857]	\$29,486
(b) First prior year [60% x (\$438,430)]	(263,058)
(c) Second prior year [40% x \$47,916]	19,166
(d) Third prior year [20% x 182,190]	36,438
(e) Total phase-in	\$(177,968)
5. Preliminary actuarial value of assets, beginning of current year [(2) - (4e)]	\$6,956,808
6. 80% Market value of assets	\$5,423,072
7. 120% Market value of assets	\$8,134,608
8. Adjusted actuarial value of assets	\$6,956,808
9. Reserved assets	\$165,909
10. Final actuarial value of assets [(8) + (9)]	\$6,790,899
11. Return on actuarial value of assets	4.3%

Reconciliation of Gain/Loss

October 1, 2016

Liability (gain)/loss

Present value of future benefits	\$9,031,028
Present value of employee contributions	(727,002)
Expected employee contribution	69,634
Benefit payments	(50,293)
Interest	626,173
Expected liability	\$8,949,540
Assumption change	\$257,386
Actual liability	\$9,181,756
Liability (gain)/loss	(\$25,170)

Asset (gain)/loss

Actuarial value of assets, beginning of prior year	\$5,252,172
Contributions	418,848
Benefit payments and expenses	(74,961)
Expected investment return	406,576
Asset methodology change	829,480
Expected actuarial value of assets, beginning of current year	\$6,832,115
Actual actuarial value of assets, beginning of current year	\$6,790,899
Asset (gain)/loss	\$41,216

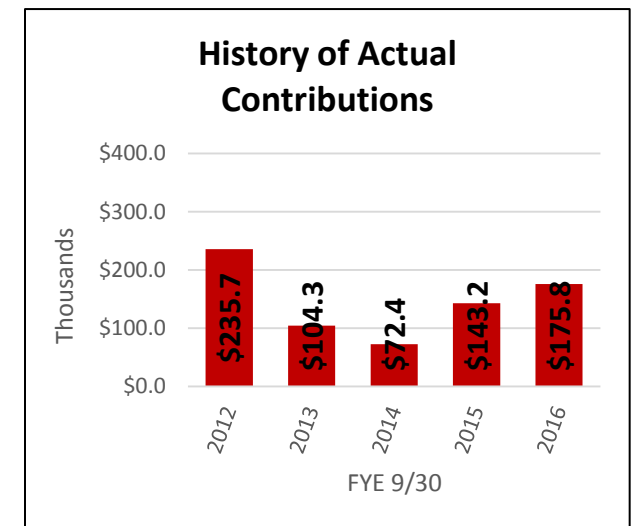
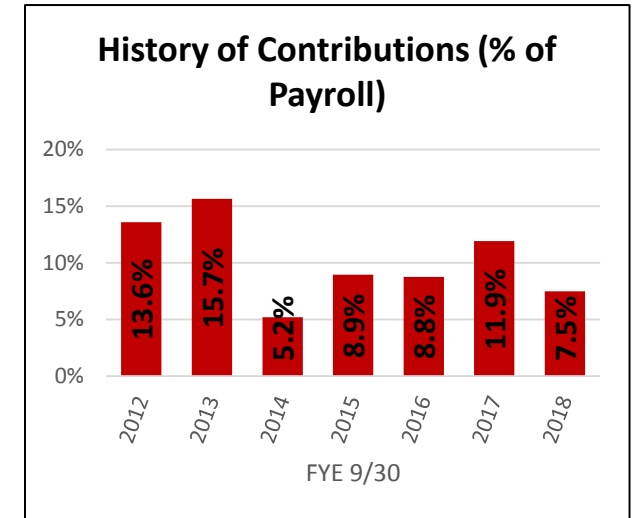
Total (gain)/loss

\$16,046

Development of Recommended Contribution

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

	October 1, 2016
1. Present value of future benefits	\$9,980,632
2. Actuarial value of assets	6,790,899
3. Present value of future member contributions	798,876
4. Present value of future normal Cost [(1)-(2)-(3)]	\$2,390,857
5. Present value of future payroll	\$16,565,847
6. Normal cost actual rate [(4)/(5)]	14.43%
7. Administrative expenses	\$20,204
8. Expected payroll	\$1,676,752
9. Applicable interest	7.50%
10. Normal cost [(6)x(8)+(7)]	\$262,200
11. Interest to estimated payment date	\$19,665
12. Adjustment for quarterly contributions	\$12,974
13. Total recommended contribution as of end of year [(10)+(11)]	\$294,839
14. Expected State Contribution	\$163,986
15. City recommended contribution [(13)-(14)]	\$130,853
16. As a percentage of expected payroll	7.50%
17. As a percentage of total payroll	7.80%



Demographic Information

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

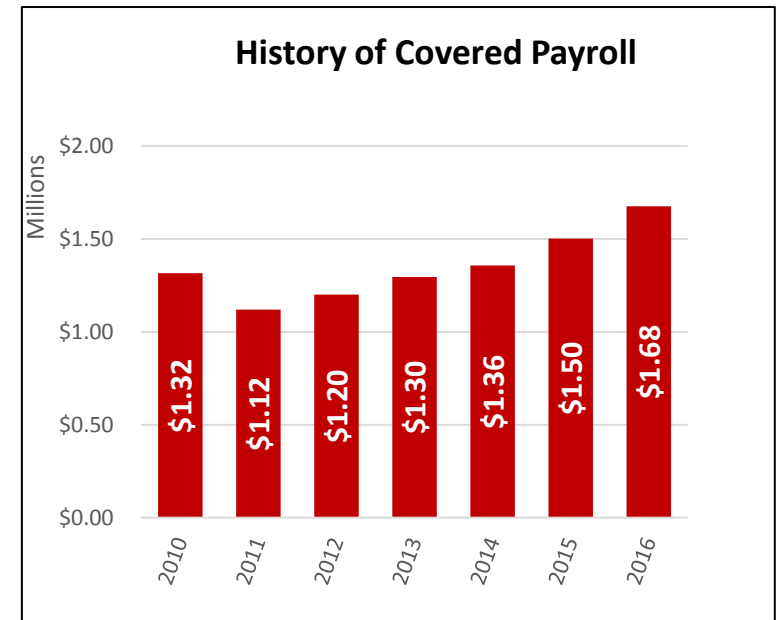
October 1, 2016

Member Counts

Active Members	25
Retired Members	0
Beneficiaries	0
Disabled Members	0
Terminated Vested Members	5
Inactive Members Due A Refund	5
Total	35

Active Participant Demographics

Average Age	37.85
Average Service	5.64
Average Compensation	\$67,070
Payroll	\$1,676,752



Demographic Information (continued)

October 1, 2016

Retired Member Statistics

Average Age	0.00
Average Monthly Benefit	\$0

Beneficiary Statistics

Average Age	0.00
Average Monthly Benefit	\$0

Disabled Member Statistics

Average Age	0.00
Average Monthly Benefit	\$0

Terminated Member Statistics

Average Age	37.40
Average Monthly Benefit	\$1,296

Inactive Due A Refund Statistics

Average Age	30.80
Total Refunds Due	\$20,325

Participant Reconciliation

	Active	Terminated Vested	Disabled	Retired	Beneficiaries	Totals
Prior Year	25	6	0	0	0	31
Active						
To Refund Due	(2)	2				0
To Refund	(2)	(2)				(4)
To Terminated Vested	(3)	3				0
Additions	7	1				8
Current Year	25	10 ¹	0	0	0	35

¹ 5 of the terminated vested reported are due an employee contribution refund

Active Participant Schedule

Active participant information grouped based on age and service.

Age Group	Years of Service										Total	
	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		
Under 25	1											1
25 to 29	1	1	1									3
30 to 34	2	4	2									8
35 to 39	1		1	1								3
40 to 44	1	1	1	3								6
45 to 49				1								1
50 to 54		1										1
55 to 59	1			1								2
60 to 64												0
65 to 69												0
70 & up												0
Total	7	7	5	7	0	0	0	0	0	0	0	25

Plan Status

Established October 1, 2005

Eligibility for Participation

Any full time firefighter. Fire Chief may elect to participate within 10 days of employment.

Accrual of Benefits

The accrued benefit is determined as 3.50% of Average Final Compensation multiplied by Credited Service as of date of determination.

Benefits

Normal Retirement

Eligibility Attainment of age 55 and 6 Years of Credited Service, or 20 Years of Credited Service.

Benefit Unreduced Accrued Benefit payable immediately.

Early Retirement

Eligibility Attainment of Age 50 and 6 years of Credited Service.

Benefit Accrued Benefit reduced 3% for each year by which the member's early retirement date precedes normal retirement.

Late Retirement

Eligibility Participation continues after normal retirement date.

Benefit Accrued retirement benefit

Death before Retirement In Line of Duty

Eligibility Death during performance of duties.

Benefit Beneficiary receives a pension equal to 50% of the member's monthly compensation. If member is vested, beneficiary receives not less than Accrued Benefit reduced for timing of receipt.

Death before Retirement Not In Line of Duty

Eligibility	Death not during performance of duties.
Benefit	Beneficiary receives the Accrued Benefit payable to the member beginning on the participant's Early or Normal Retirement Date; If not vested, beneficiary receives refund of member's accumulated contributions.

Termination Benefit

Eligibility	Fully vested after completion of 6 years of Credited Service.
Benefit	Accrued Benefit payable at the participants Early or Normal Retirement Date. For termination prior to 6 years of credited service, refund of accumulated contributions.

Disability Benefit In Line of Duty

Eligibility	Immediately upon permanent disability
Benefit	Accrued retirement benefit based on Average Compensation and Credited Service at disability or 65% of Average Final Compensation if larger. Reduced by 100% Social Security disability benefit and workers' compensation benefits, not reduced below Average Final Compensation. Benefit terminates upon the earlier of death, recovery, or Normal Retirement eligibility.

Disability Benefit Not In Line of Duty

Eligibility	Completion of 8 years of Credited Service.
Benefit	Accrued retirement benefit determined as of disability date offset by 100% of Social Security disability benefits and workers' compensation, but not reduced below 25% of Average Final Compensation. If permanently disabled prior to eligibility, refund of accumulated employee contributions.

Compensation

Compensation	An employees' base pay, including pick-up contributions
Average Final Compensation	Average Compensation during the highest 5 years of credited service

Credited Service

For Vesting and Benefit Accrual

Continuous full-time service credited, from most recent date of employment, during which the required Contributions were made. Participant may purchase up to 5 additional years of governmental service, which cannot be used for eligibility or vesting, at full actuarial cost. Purchased service other than military service must be for employment as a firefighter, and the participant must not be eligible to receive benefits from another plan based on such service.

Employee Contributions

5% of Compensation

DROP

Eligibility Retiree eligible for Normal Retirement

Benefit Deferred Retirement Option Plan for up to 84 months with 6.5% annual interest credited.

COLA

Eligibility Participant or Beneficiary

Benefit 1.5% adjustment on October 1

Payment Forms

Normal Form
10 years Certain and Life

Optional Forms
50%, 66 2/3%, 75%, and 100% Joint and Survivor Annuity
Lump Sum

Actuarial Equivalence

7.00%; 1994 Group Annuity Reserving Table projected to 2002 using Scale AA

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 Valuation

None

Cost Method (CO)	Aggregate Cost Method
Asset Valuation Method (CO)	20% Phase-In Method: Actuarial value of assets is equal to expected market value adjusted by phase-in of 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 (CO)	7.50% net of investment expenses
Annual Pay Increases (FE)	4.00% per annum.
Expense and/or Contingency Loading (FE)	2% of the present value of projected benefits
Mortality Rates (CO)	
Healthy	Florida Retirement System special risk mortality projected with scale BB generationally
Disabled	Florida Retirement System disabled mortality projected with scale BB generationally
	No pre-retirement mortality is assumed
Retirement Rates (FE)	100% at Normal Retirement Age (Age 55 and 6 years of credited service or 20 years of credited service).
Disability Rates (FE)	None assumed
Withdrawal Rates (FE)	None assumed
Marital Status and Ages	100% of Members are assumed to be married. Female spouses assumed to be the same age as male spouses.
State Contributions	Premium tax revenues are assumed to be the same as in prior year.
Withdrawal of Employee Contributions	It is assumed that employees withdraw their contribution balances upon employment termination at the end of the current fiscal year.
DROP Participation	No distinction is made between retirement and DROP entry

Changes Since Prior Report

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

Asset smoothing method changed to 5 year phase-in of gains and losses method. Gains and losses are based on the difference between the actual market value of assets and the expected market value of assets.

FE indicates an assumption representing an estimate of future experience.

MO indicates an assumption representing an observation of estimates inherit to market data.

CO indicates an assumption representing a combination of an estimate of future experience and observations of market data.

Other Measurements

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

- ✓ Statement of Changes on Value of Assets
- ✓ Distribution of Assets
- ✓ Florida State Requirements
 - Comparative Summary of Principal Valuation Results
 - Comparison of payroll growth, salary increases and investment returns
 - Requirements under Florida Statute 112.664 and F.A.C. 60T-1.0035
 - Reserve amount for benefit improvements under F.L. 99-1

Statement of Changes in Plan Net Assets

	<u>September 30, 2015</u>	<u>September 30, 2016</u>
1. Additions		
(a) Contributions:		
(i) Employer	\$143,152	\$157,589
(ii) Member	79,753	79,045
(iii) Nonemployer contributing entity	176,093	163,986
(iv) Total	<u>\$398,998</u>	<u>\$400,620</u>
(b) Investment income		
(i) Net increase in fair value of investments	\$(10,345)	\$490,850
(ii) Interest and dividends	0	0
(iii) Investment expense, other than from securities lending	0	0
(iv) Securities lending income	0	0
(v) Securities lending expense	0	0
(vi) Total	<u>\$(10,345)</u>	<u>\$490,850</u>
(c) Other	<u>0</u>	<u>0</u>
(d) Total additions [(a)+(b)+(c)]	<u>\$388,653</u>	<u>\$891,470</u>
2. Deductions		
(a) Benefit payments, including refunds of member contributions	\$16,003	\$50,293
(b) Administrative expense	27,473	24,668
(c) Other	0	0
(d) Total deductions	<u>\$43,476</u>	<u>\$74,961</u>
3. Net increase [(1d)-(2d)]	\$345,177	\$816,509
4. Net assets held in trust for pension benefits, beginning of year	<u>5,451,245</u>	<u>5,796,422</u>
5. Net assets held in trust for pension benefits, end of year [(3)+(4)]	<u>\$5,796,422</u>	<u>\$6,612,931</u>

Distribution of Assets

	September 30, 2015	September 30, 2016
Cash and deposits	\$46,901	\$53,604
Securities lending cash collateral	0	0
Total cash	\$46,901	\$53,604
Receivables		
Contributions	\$99,730	\$78,289
Other	0	0
Total receivables	\$99,730	\$78,289
Investments		
Core Bonds	\$984,917	\$1,045,286
Multi-Sector	1,348,398	1,594,731
U.S. Large Cap Equity	2,245,376	2,593,114
U.S. Small Cap Equity	685,924	757,162
Non-U.S. Equity	551,085	656,654
Total investments	\$5,815,700	\$6,646,947
Payables		
Investment management fees	\$0	\$0
Due to broker for investments purchased	0	0
Collateral payable for securities lending	0	0
Other	0	0
Total liabilities	\$0	\$0
Reserved Assets		
Accumulated Reserve	\$(165,909)	\$(165,909)
Assets available for benefits	\$5,796,422	\$6,612,931

Information to Comply with Florida 60T-1.003(4)(i)

Comparative Summary Of Principal Valuation Results

	10/1/2016 7.50% Assumptions & Methodology Change	10/1/2016 7.50% Assumption Change	10/1/2016 7.50% Prior Methods & Assumptions	10/1/2015 7.50%
Participant Data				
Active members	25	25	25	25
	\$1,676,752	\$1,676,752	\$1,672,752	\$1,502,540
Retired members and beneficiaries	0	0	0	0
Total annualized benefit	\$0	\$0	\$0	\$0
Disabled members receiving benefits	0	0	0	0
Total annualized benefit	\$0	\$0	\$0	\$0
Terminated vested members	10	10	10	6
Total annualized benefit	\$77,765	\$77,765	\$77,765	\$28,726
Assets				
Actuarial value of assets	\$6,790,899	\$5,961,419	\$5,961,419	\$5,252,172
Market value of assets	\$6,612,931	\$6,612,931	\$6,612,931	\$5,796,422

Information to Comply with Florida 60T-1.003(4)(i)

Comparative Summary Of Principal Valuation Results (continued)

	10/1/2016 7.50% Assumptions & Methodology Change	10/1/2016 7.50% Assumption Change	10/1/2016 7.50% Prior Methods & Assumptions	10/1/2015 7.50%
<i>Liabilities, present value of all future expected benefit payments</i>				
Active members				
Retirement benefits	\$9,655,896	\$9,655,896	\$9,402,249	\$8,884,268
Vesting benefits	0	0	0	0
Disability benefits	0	0	0	0
Death benefits	0	0	0	0
Return of contribution	0	0	0	0
Total	<u>\$9,655,896</u>	<u>\$9,655,896</u>	<u>\$9,402,249</u>	<u>\$8,884,268</u>
Terminated vested members	\$324,736	\$324,736	\$320,997	\$146,760
Retired members and beneficiaries	\$0	\$0	\$0	\$0
Disabled members	\$0	\$0	\$0	\$0
Total	\$9,980,632	\$9,980,632	\$9,723,246	\$9,031,028
Liabilities due and unpaid	\$0	\$0	\$0	\$0
Actuarial accrued liability	N/A	N/A	N/A	N/A
Unfunded actuarial accrued liability	N/A	N/A	N/A	N/A

Information to Comply with Florida 60T-1.003(4)(i)

Comparative Summary Of Principal Valuation Results (continued)

	10/1/2016 7.50% Assumption & Methodology Change	10/1/2016 7.50% Assumption Change	10/1/2016 7.50% Prior Methods & Assumptions	10/1/2015 7.50%
Actuarial present value of accrued benefits				
Statement of actuarial present value of all accrued benefits				
Vested accrued benefits				
Inactive members and beneficiaries	\$324,736	\$324,736	\$320,997	\$161,079
Active members	1,563,754	1,563,754	1,515,864	1,412,351
Total value of all vested accrued benefits	\$1,888,490	\$1,888,490	\$1,836,861	\$1,573,430
Non-vested accrued benefits	966,793	966,793	955,671	897,649
Total actuarial present value of all accrued benefits	\$2,855,283	\$2,855,283	\$2,792,532	\$2,471,079
Statement of changes in total actuarial present value of all accrued benefits (ASC 960)				
Actuarial present value of accrued benefits, beginning of year	\$2,456,760	\$2,456,760	\$2,456,760	\$2,094,930
Increase (decrease) during year				
Benefits accumulated	\$203,660	\$203,660	\$203,660	\$221,303
Plan amendment	0	0	0	0
Changes in actuarial assumptions	62,751	62,751	0	0
Interest	182,405	182,405	182,405	156,530
Benefits paid	(50,293)	(50,293)	(50,293)	(16,003)
Other changes	0	0	0	0
Net increase (decrease)	\$398,523	\$398,523	\$335,772	\$361,830
Actuarial present value of accrued benefits, end of year	\$2,855,283	\$2,855,283	\$2,792,532	\$2,456,760

Information to Comply with Florida 60T-1.003(4)(i)

**Comparative Summary Of Principal Valuation Results
(continued)**

	10/1/2016 7.50% Assumptions & Methodology Change	10/1/2016 7.50% Assumption Change	10/1/2016 7.50% Prior Methods & Assumptions	10/1/2015 7.50%
Pension cost				
Normal Cost	\$382,030	\$476,439	\$446,557	\$440,408
Member contributions	\$87,191	\$87,191	\$87,191	\$78,132
Expected plan sponsor contribution	\$130,853	\$225,262	\$195,380	\$186,183
As % of payroll	7.50%	12.92%	11.20%	11.91%
Member Contributions as % of payroll	5.00%	5.00%	5.00%	5.00%
Past contributions	9/30/2016			9/30/2015
Required plan sponsor contribution	\$123,894			\$120,564
Required member contribution	\$70,638			\$67,367
Actual contributions made by:				
Plan's sponsor	\$157,589			\$143,206
Members	\$79,045			\$79,753
Other	\$163,986			\$176,093
Other disclosures				
Present value of active member				
Future salaries at attained age	\$16,565,847			\$15,075,428
Future contributions at attained age	\$798,876			\$727,002

Information to Comply with Florida 60T-1.003(3) (f)

Historical Salary Increases and Asset Performance¹

Year Ending	Payroll Growth	Salary Growth	Expected Salary Growth	Asset Return (Market)	Asset Return (Actuarial)	Asset Return (Expected)
9/30/2016	11.60%	22.94%	4.00%	8.01%	4.34%	7.50%
9/30/2015	10.61%	13.04%	4.00%	(0.18%)	6.08%	7.50%
9/30/2014	4.85%	0.88%	4.00%	8.27%	7.68%	7.50%
9/30/2013	11.27%	7.30%	4.00%	11.62%	9.38%	7.50%
9/30/2012	(14.95%)	(7.00%)	5.00%	16.33%	4.00%	7.50%
9/30/2011	0.29%	0.29%	5.00%	(0.30%)	0.64%	7.50%
9/30/2010	N/A	0.12%	5.00%	7.98%	3.04%	7.50%
9/30/2009	N/A	N/A	5.00%	5.25%	(3.70%)	7.50%
9/30/2008	N/A	13.82%	5.00%	(11.83%)	(2.60%)	8.00%
9/30/2007	N/A	N/A	5.00%	8.83%	9.30%	8.00%
<u>Averages</u>						
3-year				5.29%	6.02%	
5-year				8.67%	6.28%	
10-year				5.12%	3.72%	

¹ Numbers for years prior to 9/30/2011 are from Southern Actuarial Services

Information to Comply with Florida Statute 112.664 and Florida Administrative Code 60T-1.0035

October 1, 2016

	Valuation 7.50%	- 200 bp ¹ 5.50%	Funding Rate ¹ 7.50%	+ 200 bp ¹ 9.50%
Total pension liability				
Service Cost	\$511,437	\$511,437	\$511,437	\$511,437
Interest	350,994	350,994	350,994	350,994
Benefit changes	0	0	0	0
Difference between expected and actual experience	(528,109)	(528,109)	(528,109)	(528,109)
Changes in assumptions	101,345	1,946,683	101,345	(1,234,144)
Benefit payments	0	0	0	0
Contribution refunds	(50,293)	(50,293)	(50,293)	(50,293)
Net change in pension liability	\$385,374	\$2,230,712	\$385,374	(\$950,115)
Total pension liability, beginning of year	\$4,193,170	\$4,193,170	\$4,193,170	\$4,193,170
Total pension liability, end of year	\$4,578,544	\$6,423,882	\$4,578,544	\$3,243,055
Plan fiduciary net position				
Contributions - Employer	\$157,589	\$157,589	\$157,589	\$157,589
Contributions - State	79,045	79,045	79,045	79,045
Contributions - Member	163,986	163,986	163,986	163,986
Net investment income	490,850	490,850	490,850	490,850
Benefit payments	0	0	0	0
Contribution refunds	(50,293)	(50,293)	(50,293)	(50,293)
Administrative expense	(24,668)	(24,668)	(24,668)	(24,668)
Other	0	0	0	0
Net change in plan fiduciary net position	\$816,509	\$816,509	\$816,509	\$816,509
Plan fiduciary net position, beginning of year	\$5,796,422	\$5,796,422	\$5,796,422	\$5,796,422
Plan fiduciary net position, end of year	\$6,612,931	\$6,612,931	\$6,612,931	\$6,612,931
Net pension liability/(asset)	(\$2,034,387)	(\$189,049)	(\$2,034,387)	(\$3,369,876)
Funded ratio	144.43%	102.94%	144.43%	203.91%
Years that Assets support expected benefit payments	27	22	27	100
Estimated city contribution				
Annual dollar value	\$130,853	\$692,522	\$130,853	\$0
Percentage of payroll	7.50%	39.71%	7.50%	0.00%

¹Based on valuation assumption with the following changes
-interest rate (as noted)

Information to Comply with Florida Statute 112.664 and Florida Administrative Code 60T-1.0035

October 1, 2016

Sustainment of Expected Benefit Payments

Mortality Valuation
Interest 7.50%

<u>Year</u>	<u>Market Value of Assets</u>	<u>Investment Return</u>	<u>Benefit Payments</u>
1	\$6,612,931	\$495,067	\$24,529
2	7,083,469	529,595	45,222
3	7,567,842	566,658	25,270
4	8,109,230	607,248	25,649
5	8,690,829	650,169	44,631
6	9,296,367	695,559	45,300
7	9,946,626	743,768	60,545
8	10,629,849	787,128	274,574
9	11,142,403	822,379	361,222
10	11,603,560	856,767	366,641
11	12,093,686	890,081	460,205
12	12,523,562	911,400	756,797
13	12,678,165	921,065	809,225
14	12,790,005	925,884	906,141
15	12,809,748	926,954	917,313
16	12,819,389	924,776	996,098
17	12,748,067	917,724	1,042,350
18	12,623,441	901,346	1,233,286
19	12,291,501	870,497	1,394,968
20	11,767,030	824,351	1,579,928
21	11,011,453	756,098	1,894,537
22	9,873,014	670,551	1,898,993
23	8,644,572	577,832	1,914,919
24	7,307,485	477,000	1,929,862
25	5,854,623	367,355	1,948,325
26	4,273,653	248,296	1,961,528
27	2,560,421	118,737	1,990,497
28	688,661		1,993,974

Information to Comply with Florida Statute 112.664 and Florida Administrative Code 60T-1.0035

October 1, 2016

Sustainment of Expected Benefit Payments

Mortality FRS Special-Risk Mortality Scale BB Generational
 Interest 5.50%

<u>Year</u>	<u>Market Value of Assets</u>	<u>Investment Return</u>	<u>Benefit Payments</u>
1	\$6,612,931	\$363,046	\$24,529
2	6,951,448	381,103	45,222
3	7,287,329	400,117	25,270
4	7,662,176	420,724	25,649
5	8,057,251	441,938	44,631
6	8,454,558	463,772	45,300
7	8,873,030	486,374	60,545
8	9,298,859	503,988	274,574
9	9,528,273	514,254	361,222
10	9,681,305	522,524	366,641
11	9,837,188	528,559	460,205
12	9,905,542	524,271	756,797
13	9,673,016	510,060	809,225
14	9,373,851	490,976	906,141
15	8,958,686	467,839	917,313
16	8,509,212	440,981	996,098
17	7,954,095	409,194	1,042,350
18	7,320,939	369,190	1,233,286
19	6,456,843	317,278	1,394,968
20	5,379,153	252,987	1,579,928
21	4,052,212	171,469	1,894,537
22	2,329,144	76,580	1,898,993
23	506,731		1,914,919

Information to Comply with Florida Statute 112.664 and Florida Administrative Code 60T-1.0035

October 1, 2015

Sustainment of Expected Benefit Payments

Mortality FRS Special-Risk Mortality Scale BB Generational
 Interest 7.50%

<u>Year</u>	<u>Market Value of Assets</u>	<u>Investment Return</u>	<u>Benefit Payments</u>
1	\$6,612,931	\$495,067	\$24,529
2	7,083,469	529,595	45,222
3	7,567,842	566,658	25,270
4	8,109,230	607,248	25,649
5	8,690,829	650,169	44,631
6	9,296,367	695,559	45,300
7	9,946,626	743,768	60,545
8	10,629,849	787,128	274,574
9	11,142,403	822,379	361,222
10	11,603,560	856,767	366,641
11	12,093,686	890,081	460,205
12	12,523,562	911,400	756,797
13	12,678,165	921,065	809,225
14	12,790,005	925,884	906,141
15	12,809,748	926,954	917,313
16	12,819,389	924,776	996,098
17	12,748,067	917,724	1,042,350
18	12,623,441	901,346	1,233,286
19	12,291,501	870,497	1,394,968
20	11,767,030	824,351	1,579,928
21	11,011,453	756,098	1,894,537
22	9,873,014	670,551	1,898,993
23	8,644,572	577,832	1,914,919
24	7,307,485	477,000	1,929,862
25	5,854,623	367,355	1,948,325
26	4,273,653	248,296	1,961,528
27	2,560,421	118,737	1,990,497
28	688,661		1,993,974

Information to Comply with Florida Statute 112.664 and Florida Administrative Code 60T-1.0035

October 1, 2016

Sustainment of Expected Benefit Payments

Mortality FRS Special-Risk Mortality Scale BB Generational
Interest 9.50%

<u>Year</u>	<u>Market Value of Assets</u>	<u>Investment Return</u>	<u>Benefit Payments</u>	<u>Year</u>	<u>Market Value of Assets</u>	<u>Investment Return</u>	<u>Benefit Payments</u>
1	\$6,612,931	\$627,090	\$24,529	30	\$21,457,481	\$1,945,773	\$1,996,621
2	7,215,492	683,372	45,222	31	21,406,633	1,941,504	1,984,509
3	7,853,642	744,923	25,270	32	21,363,628	1,937,170	1,989,867
4	8,573,295	813,272	25,649	33	21,310,931	1,931,986	1,993,708
5	9,360,918	887,215	44,631	34	21,249,209	1,926,019	1,995,935
6	10,203,502	967,230	45,300	35	21,179,293	1,919,353	1,996,443
7	11,125,432	1,054,105	60,545	36	21,102,203	1,912,091	1,995,114
8	12,118,992	1,138,558	274,574	37	21,019,180	1,904,357	1,991,816
9	12,982,976	1,216,614	361,222	38	20,931,721	1,896,301	1,986,372
10	13,838,368	1,297,625	366,641	39	20,841,650	1,888,107	1,978,567
11	14,769,352	1,381,725	460,205	40	20,751,190	1,879,993	1,968,233
12	15,690,872	1,455,500	756,797	41	20,662,950	1,872,214	1,955,228
13	16,389,575	1,519,443	809,225	42	20,579,936	1,865,061	1,939,420
14	17,099,793	1,582,415	906,141	43	20,505,577	1,858,870	1,920,608
15	17,776,067	1,646,142	917,313	44	20,443,839	1,854,037	1,898,390
16	18,504,896	1,711,724	996,098	45	20,399,486	1,851,035	1,872,284
17	19,220,522	1,777,561	1,042,350	46	20,378,237	1,850,424	1,841,969
18	19,955,733	1,838,542	1,233,286	47	20,386,692	1,852,844	1,807,140
19	20,560,989	1,888,536	1,394,968	48	20,432,396	1,859,031	1,767,391
20	21,054,557	1,926,839	1,579,928	49	20,524,036	1,869,825	1,722,417
21	21,401,468	1,945,190	1,894,537	50	20,671,444	1,886,159	1,672,218
22	21,452,121	1,949,796	1,898,993	51	20,885,385	1,909,037	1,617,201
23	21,502,924	1,953,882	1,914,919	52	21,177,221	1,939,523	1,557,705
24	21,541,887	1,956,890	1,929,862	53	21,559,039	1,978,754	1,493,979
25	21,568,915	1,958,601	1,948,325	54	22,043,814	2,027,943	1,426,454
26	21,579,191	1,958,964	1,961,528	55	22,645,303	2,088,354	1,356,009
27	21,576,627	1,957,376	1,990,497	56	23,377,648	2,161,307	1,283,205
28	21,543,506	1,954,068	1,993,974	57	24,255,750	2,248,223	1,207,890
29	21,503,600	1,950,169	1,996,288	58	25,296,083	2,350,643	1,130,601

Reserve Amount for Benefit Improvement Under F.L. 99-1

Adjusted Base Amount at 10/1/2016

<u>Year Established</u>	<u>Description</u>	<u>Ch. 175 Fire</u>	<u>Suppl. Fire</u>	<u>Total</u>
1998	Base Year Premium Tax Distribution	\$ 0	\$ 0	\$ 0
2005	Ordinance 2005-21			195,515
	Adjusted Base Amount			\$ 195,515

Reserve Account for 2015/2016

	<u>Total</u>
1. Reserve Account at September 30, 2015	\$ 165,909
2. Increase in Reserve Account	
(a) Premium Tax Distribution for 2015	163,986
(b) Adjusted Base Amount	193,515
(c) Increase in Reserve Distribution	0
3. Reserve Account at September 30, 2016 [(1)+ (2c)]	\$ 165,909