

CITY OF PANAMA CITY
MUNICIPAL FIREFIGHTERS'
PENSION TRUST FUND

ACTUARIAL VALUATION
AS OF OCTOBER 1, 2017

WITH RESULTS APPLICABLE TO THE PLAN/
FISCAL YEAR ENDED SEPTEMBER 30, 2019

January 15, 2018

Ms. Lauren Boatwright
Trustmark National Bank
107 Saint Francis Street
Mobile, AL 36602

Re: City of Panama City
Municipal Firefighters' Pension Trust Fund

Dear Lauren:

We are pleased to present to the Board this report of the annual actuarial valuation of the City of Panama City Municipal Firefighters' Pension Trust Fund. Included are the related results for GASB Statements No. 67 and No. 68. The funding valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits and to develop the appropriate funding requirements for the applicable plan year. The calculation of the liability for GASB results was performed for the purpose of satisfying the requirements of GASB Statements No. 67 and No. 68. Please note that this valuation may not be applicable for any other purposes.

The valuation has been conducted in accordance with generally accepted actuarial principles and practices, including the applicable Actuarial Standards of Practice as issued by the Actuarial Standards Board, and reflects laws and regulations issued to date pursuant to the provisions of Chapters 112, and 175, Florida Statutes, as well as applicable federal laws and regulations. In our opinion, the assumptions used in this valuation, as adopted by the Board of Trustees, represent reasonable expectations of anticipated plan experience. Future actuarial measurements may differ significantly from the current measurements presented in this report for a variety of reasons including: changes in applicable laws, changes in plan provisions, changes in assumptions, or plan experience differing from expectations.

In conducting the valuation, we have relied on personnel, plan design, and asset information supplied by the City of Panama City, financial reports prepared by the custodian bank, and the actuarial assumptions and methods described in the Actuarial Assumptions section of this report. While we cannot verify the accuracy of all this information, the supplied information was reviewed for consistency and reasonableness. As a result of this review, we have no reason to doubt the substantial accuracy of the information and believe that it has produced appropriate results. This information, along with any adjustments or modifications, is summarized in various sections of this report.

The total pension liability, net pension liability, and certain sensitivity information shown in this report are based on an actuarial valuation performed as of October 1, 2016. The total pension liability was rolled-forward from the valuation date to the plan's fiscal year ending September 30, 2017 using generally accepted actuarial principles. It is our opinion that the assumptions used for this purpose are internally consistent, reasonable, and comply with the requirements under GASB No. 67 and No. 68.


The undersigned is familiar with the immediate and long-term aspects of pension valuations, and meets the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. All of the sections of this report are considered an integral part of the actuarial opinions.

To our knowledge, no associate of Foster & Foster, Inc. working on valuations of the program has any direct financial interest or indirect material interest in the City of Panama City, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the City of Panama City Municipal Firefighters' Pension Trust Fund. Thus, there is no relationship existing that might affect our capacity to prepare and certify this actuarial report.

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

Respectfully submitted,

Foster & Foster, Inc.

By: 

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

DDB/lke

Enclosures

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SUMMARY OF REPORT

The regular annual actuarial valuation of the City of Panama City Municipal Firefighters' Pension Trust Fund, performed as of October 1, 2017, has been completed and the results are presented in this Report. The contribution amounts developed in this valuation are applicable to the plan/fiscal year ended September 30, 2019.

The contribution requirements, compared with those developed in the October 1, 2016 actuarial valuation, are as follows:

Valuation Date	10/1/2017	10/1/2016
Applicable Plan/Fiscal Yr. End	<u>9/30/2019</u>	<u>9/30/2018</u>
Total Required Contribution	\$2,524,806	\$2,517,363
Member Contributions (Est.)	\$292,895	\$264,498
City and State Required Contribution	\$2,231,911	\$2,252,865
State Contribution ¹	\$305,820	\$305,820
Balance from City ¹	\$1,926,091	\$1,947,045

¹ State Contribution shown is amount received during fiscal 2017.

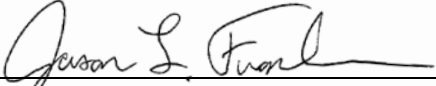
Please note the City has a prepaid contribution of \$36,289.03 that may be utilized to help offset the above stated requirements for fiscal 2018.

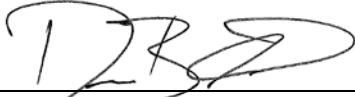
During the past year, the experience has been less favorable than expected, relative to the Plan's actuarial assumptions. The principal source of unfavorable experience included a 6.23% investment return (Actuarial Asset basis) which fell short of the 8.00% assumption. These investment losses were partially offset by favorable average individual increases in pensionable compensation and greater than expected inactive mortality.

The balance of this Report presents additional details of the actuarial valuation and the general operation of the Fund. The undersigned would be pleased to meet with the Board of Trustees in order to discuss the Report and answer any pending questions concerning its contents.

Respectfully submitted,

FOSTER & FOSTER, INC.

By: 
Jason L. Franken, FSA, EA, MAAA

By: 
Drew D. Ballard, EA, MAAA

CHANGES SINCE PRIOR VALUATION

Plan Changes

There have been no changes in benefits since the prior valuation.

Actuarial Assumption/Method Changes

As a result of an actuarial experience study dated November 16, 2017, the following changes have been incorporated in conjunction with this actuarial valuation:

- The assumed rate of investment return was lowered from 8.00% to 7.90% per year, net of investment related expenses.
- The assumed rates of salary increases were amended from a flat rate of 6.00% per year to a service-based table.
- As mandated by Chapter 2015-157, Laws of Florida, the assumed rates of mortality were changed from the rates used by the Florida Retirement System actuary in the July 1, 2015 actuarial valuation to the rates used in the July 1, 2016 actuarial valuation for special risk lives.
- The assumed rates of retirement were amended to remove the assumption that members eligible for normal retirement on the valuation date will continue employment for one additional year. Additionally, the retirement rates were amended to be 75% upon completion of 25 or 26 years of service (previously 100% at completion of 25 years), and the assumed rates of early retirement were amended from 2% per year to 0% per year.
- The assumed rates of withdrawal were amended from an age-based table to a service-based table.
- The assumed rates of disablement were reduced at each age by 30%.
- The payroll growth assumption was reduced from 0.9% to 0.0% per year.
- Prior to measuring the impact of the assumption changes stated directly above, a “fresh start” to the existing Unfunded Actuarial Accrued Liability (UAAL) was implemented. The “fresh start” effectively consolidated all existing UAAL layers into one single layer which will be amortized over a 16-year period. As approved by the Board of Trustees, all future UAAL layers will be amortized as a level dollar over a 15-year period.

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	New Assump <u>10/1/2017</u>	Old Assump <u>10/1/2017</u>	<u>10/1/2016</u>
A. Participant Data			
Actives	74	74	70
Service Retirees	65	65	63
DROP Retirees	2	2	5
Beneficiaries	10	10	9
Disability Retirees	2	2	2
Terminated Vested	<u>6</u>	<u>6</u>	<u>7</u>
Total	159	159	156
Total Annual Payroll	\$3,547,569	\$3,552,169	\$3,199,055
Payroll Under Assumed Ret. Age	3,547,569	3,552,169	3,199,055
Annual Rate of Payments to:			
Service Retirees	2,687,627	2,687,627	2,553,670
DROP Retirees	119,444	119,444	252,033
Beneficiaries	281,039	281,039	251,552
Disability Retirees	19,193	19,193	19,193
Terminated Vested	72,543	72,543	82,561
B. Assets			
Actuarial Value (AVA) ¹	35,532,865	35,532,865	34,901,612
Market Value (MVA) ¹	34,977,152	34,977,152	33,333,294
C. Liabilities			
Present Value of Benefits			
Actives			
Retirement Benefits	18,360,427	21,788,267	19,351,764
Disability Benefits	325,023	500,982	455,745
Death Benefits	210,269	496,955	463,620
Vested Benefits	467,260	264,369	243,963
Refund of Contributions	182,233	66,438	61,905
Service Retirees	31,177,719	30,897,679	29,597,276
DROP Retirees ¹	2,138,647	2,120,254	4,593,568
Beneficiaries	2,776,149	2,754,242	2,421,187
Disability Retirees	164,374	163,270	165,735
Terminated Vested	424,008	417,620	420,123
Share Plan Balances ¹	0	0	0
Excess State Monies Reserve	<u>6,303</u>	<u>6,303</u>	<u>6,303</u>
Total	56,232,412	59,476,379	57,781,189

C. Liabilities - (Continued)	New Assump <u>10/1/2017</u>	Old Assump <u>10/1/2017</u>	<u>10/1/2016</u>
Present Value of Future Salaries	30,562,090	34,891,037	32,311,626
Present Value of Future Member Contributions	2,292,157	2,616,828	2,423,372
Normal Cost (Retirement)	698,420	933,844	839,243
Normal Cost (Disability)	24,743	38,526	33,378
Normal Cost (Death)	14,102	34,574	31,439
Normal Cost (Vesting)	29,078	16,301	14,970
Normal Cost (Refunds)	<u>26,446</u>	<u>9,218</u>	<u>9,157</u>
Total Normal Cost	792,789	1,032,463	928,187
Present Value of Future Normal Costs	6,645,393	10,003,147	9,270,585
Accrued Liability (Retirement)	12,383,586	12,640,029	10,867,029
Accrued Liability (Disability)	127,825	152,739	140,534
Accrued Liability (Death)	105,032	199,115	186,591
Accrued Liability (Vesting)	245,582	110,801	102,396
Accrued Liability (Refunds)	37,794	11,180	9,862
Accrued Liability (Inactives) ¹	36,680,897	36,353,065	37,197,889
Share Plan Balances ¹	0	0	0
Excess State Monies Reserve	<u>6,303</u>	<u>6,303</u>	<u>6,303</u>
Total Actuarial Accrued Liability (EAN AL)	49,587,019	49,473,232	48,510,604
Unfunded Actuarial Accrued Liability (UAAL)	14,054,154	13,940,367	13,608,992
Funded Ratio (AVA / EAN AL)	71.7%	71.8%	71.9%

D. Actuarial Present Value of Accrued Benefits	New Assump <u>10/1/2017</u>	Old Assump <u>10/1/2017</u>	<u>10/1/2016</u>
Vested Accrued Benefits			
Inactives + Share Plan Balances ¹	36,680,897	36,353,065	37,197,889
Actives	3,387,407	3,512,582	2,725,211
Member Contributions	<u>1,879,850</u>	<u>1,879,850</u>	<u>1,664,557</u>
Total	41,948,154	41,745,497	41,587,657
Non-vested Accrued Benefits	<u>3,620,013</u>	<u>3,753,406</u>	<u>3,224,565</u>
Total Present Value Accrued Benefits (PVAB)	45,568,167	45,498,903	44,812,222
Funded Ratio (MVA / PVAB)	76.8%	76.9%	74.4%
Increase (Decrease) in Present Value of Accrued Benefits Attributable to:			
Plan Amendments	0	0	
Assumption Changes	69,264	0	
New Accrued Benefits	0	959,188	
Benefits Paid	0	(3,709,120)	
Interest	0	3,436,613	
Other	<u>0</u>	<u>0</u>	
Total	69,264	686,681	

	New Assump	Old Assump	
Valuation Date	10/1/2017	10/1/2017	10/1/2016
Applicable to Fiscal Year Ending	<u>9/30/2019</u>	<u>9/30/2019</u>	<u>9/30/2018</u>

E. Pension Cost

Normal Cost ²	\$872,726	\$1,138,187	\$1,023,233
Administrative Expenses ²	42,055	42,115	42,704
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 16 years (as of 10/1/2017) ²	1,610,025	1,523,553	1,451,426
Total Required Contribution	2,524,806	2,703,855	2,517,363
Expected Member Contributions ²	292,895	293,693	264,498
Expected City and State Contribution	2,231,911	2,410,162	2,252,865

F. Past Contributions

Plan Years Ending:	<u>9/30/2017</u>
City and State Requirement	2,003,301
Actual Contributions Made:	
Members (excluding buyback)	248,753
City	1,697,481
State	<u>305,820</u>
Total	2,252,054

G. Net Actuarial (Gain)/Loss 533,784

¹ The asset values and liabilities include accumulated DROP and Share Plan Balances as of 9/30/2017 and 9/30/2016.

² Contributions developed as of 10/1/2017 displayed above have been adjusted to account for assumed salary increase and interest components.

H. Schedule Illustrating the Amortization of the Total Unfunded Actuarial Accrued Liability as of:

<u>Year</u>	<u>Projected Unfunded Actuarial Accrued Liability</u>
2017	14,054,154
2018	13,586,336
2019	13,081,559
2023	10,630,913
2026	8,236,575
2030	4,063,746
2033	0

I. (i) 3 Year Comparison of Actual and Assumed Salary Increases

		<u>Actual</u>	<u>Assumed</u>
Year Ended	9/30/2017	7.36%	6.00%
Year Ended	9/30/2016	7.36%	6.00%
Year Ended	9/30/2015	4.10%	6.00%

(ii) 3 Year Comparison of Investment Return on Actuarial Value

		<u>Actual</u>	<u>Assumed</u>
Year Ended	9/30/2017	6.23%	8.00%
Year Ended	9/30/2016	6.55%	8.00%
Year Ended	9/30/2015	8.34%	8.00%

(iii) Average Annual Payroll Growth

(a) Payroll as of:	10/1/2017	\$3,547,569
	10/1/2007	3,134,471
(b) Total Increase		13.18%
(c) Number of Years		10.00
(d) Average Annual Rate		1.25%

STATEMENT BY ENROLLED ACTUARY

This actuarial valuation was prepared and completed by me or under my direct supervision, and I acknowledge responsibility for the results. To the best of my knowledge, the results are complete and accurate, and in my opinion, the techniques and assumptions used are reasonable and meet the requirements and intent of Part VII, Chapter 112, Florida Statutes. There is no benefit or expense to be provided by the plan and/or paid from the plan's assets for which liabilities or current costs have not been established or otherwise taken into account in the valuation. All known events or trends which may require a material increase in plan costs or required contribution rates have been taken into account in the valuation.



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

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

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

Ms. Sarah Carr
Municipal Police and Fire
Pension Trust Funds
Division of Retirement
Post Office Box 3010
Tallahassee, FL 32315-3010

RECONCILIATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITIES
(Including UAAL Fresh Start)

(1)	Unfunded Actuarial Accrued Liability as of October 1, 2016	\$13,608,992
(2)	Sponsor Normal Cost developed as of October 1, 2016	688,258
(3)	Expected administrative expenses for the year ended September 30, 2017	38,737
(4)	Expected interest on (1), (2) and (3)	1,145,329
(5)	Sponsor contributions to the System during the year ended September 30, 2017	2,003,301
(6)	Expected interest on (5)	71,432
(7)	Expected Unfunded Actuarial Accrued Liability as of September 30, 2017 (1)+(2)+(3)+(4)-(5)-(6)	13,406,583
(8)	Change to UAAL due to Assumption Change	113,787
(9)	Change to UAAL due to Actuarial (Gain)/Loss	533,784
(10)	Unfunded Actuarial Accrued Liability as of October 1, 2017	14,054,154

Type of <u>Base</u>	Date <u>Established</u>	Years <u>Remaining</u>	10/1/2017 <u>Amount</u>	Amortization <u>Amount</u>
UAAL Fresh Start	10/1/2017	16	13,940,367	1,450,310
Assumption Change	10/1/2017	15	<u>113,787</u>	<u>12,245</u>
			14,054,154	1,462,555

RECONCILIATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITIES
(Prior to UAAL Fresh Start)

(1)	Unfunded Actuarial Accrued Liability as of October 1, 2016	\$13,608,992
(2)	Sponsor Normal Cost developed as of October 1, 2016	688,258
(3)	Expected administrative expenses for the year ended September 30, 2017	38,737
(4)	Expected interest on (1), (2) and (3)	1,145,329
(5)	Sponsor contributions to the System during the year ended September 30, 2017	2,003,301
(6)	Expected interest on (5)	71,432
(7)	Expected Unfunded Actuarial Accrued Liability as of September 30, 2017 (1)+(2)+(3)+(4)-(5)-(6)	13,406,583
(8)	Change to UAAL due to Actuarial (Gain)/Loss	533,784
(9)	Unfunded Actuarial Accrued Liability as of October 1, 2017	13,940,367

Type of <u>Base</u>	Date <u>Established</u>	Years <u>Remaining</u>	10/1/2017 <u>Amount</u>	Amortization <u>Amount</u>
	1/1/1988	0.25	1,977	1,977
	1/1/1988	0.25	(434)	(434)
	1/1/1989	1.25	821	662
	10/1/1992	5	49,211	11,224
	10/1/1994	7	357,989	62,138
	10/1/1995	8	299,799	46,973
	10/1/1995	8	98,634	15,454
	10/1/1997	10	603,469	80,408
	10/1/1997	10	1,148,277	153,000
	10/1/1998	11	993,291	123,980
	10/1/1998	11	(699,548)	(87,316)
	10/1/1999	12	516,338	60,853
	10/1/2000	13	702,031	78,640
	10/1/2001	14	(818,538)	(87,635)
	10/1/2001	14	157,376	16,849
Method	10/1/2004	17	1,878,791	180,242
Benefit	10/1/2005	18	14,448	1,345
Loss	10/1/2005	18	8,357	778
Benefit	10/1/2006	19	370,289	33,563
Gain	10/1/2006	19	(402,036)	(36,441)
Gain	10/1/2007	20	(496,230)	(43,886)

Loss	10/1/2008	21	186,605	16,137
Method	10/1/2008	21	464,409	40,160
Benefit ¹	10/1/2008	21	932,262	86,176
Loss	10/1/2009	22	1,924,690	163,059
Loss	10/1/2010	23	1,278,481	106,295
Assump	10/1/2010	23	408,610	33,972
Loss	10/1/2011	24	2,888,660	236,060
Loss	10/1/2012	25	1,217,346	97,916
Gain	10/1/2013	26	(1,334,241)	(105,765)
Gain	10/1/2014	27	(69,912)	(5,468)
Gain	10/1/2015	28	(872,819)	(67,424)
Gain	10/1/2016	29	(132,804)	(10,142)
Assump	10/1/2016	29	1,730,984	132,194
Loss	10/1/2017	30	<u>533,784</u>	<u>40,336</u>
			13,940,367	1,375,880

¹ The 2008 benefit base is amortized as a level dollar over 30 years.

DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

(1) Unfunded Actuarial Accrued Liability (UAAL) as of October 1, 2016	\$13,608,992
(2) Expected UAAL as of October 1, 2017	13,406,583
(3) Summary of Actuarial (Gain)/Loss, by component:	
Investment Return (Actuarial Asset Basis)	604,164
Salary Increases	(104,160)
Active Decrements	38,527
Inactive Mortality	(47,284)
Other ¹	<u>42,537</u>
Increase in UAAL due to (Gain)/Loss	533,784
Assumption Changes	<u>113,787</u>
(4) Actual UAAL as of October 1, 2017	\$14,054,154

¹ Reflects the effect of the mandated change to the mortality assumption.

ACTUARIAL ASSUMPTIONS AND METHODS

Mortality Rate

Healthy Active Lives:

Female: RP2000 Generational, 100% Combined Healthy (previously Annuitant) White Collar, Scale BB

Male: RP2000 Generational, 10% Combined Healthy (previously Annuitant) White Collar / 90% Combined Healthy (previously Annuitant) Blue Collar, Scale BB

Healthy Inactive Lives:

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

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

Disabled Lives:

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

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

The assumed rates of mortality are mandated by Chapter 2015-157, Laws of Florida. This law mandates the use of the assumption used in either of the two most recent valuations of the Florida Retirement System (FRS). The above rates are those outlined in the July 1, 2016 FRS actuarial valuation report. We feel this assumption sufficiently accommodates future mortality improvements.

Interest Rate

7.90% (previously 8.00%) per year, compounded annually, net of investment related expenses. This is supported by the target asset class allocation of the trust and the expected long-term return by asset class.

Retirement Age

<u>Age</u>	<u>Service</u>	<u>Rate</u>
55+	Less than 25 years	100%
All	25 years	75%
All	26 years	75%
All	27+ years	100%

Previously, the earlier of: 1) Age 55 and 10 years of credited service, or 2) the completion of 25 years of credited service, regardless of age. Also, any Member who had reached Normal Retirement was assumed to continue employment for one additional year. The assumed rates were approved in conjunction with an actuarial experience study dated November 2017.

Early Retirement

Commencing with the earliest Early Retirement Age (45), Members are assumed to retire with an immediate subsidized benefit at the rate of 0% (previously 2%) per year. The assumed rates were approved in conjunction with an actuarial experience study dated November 2017.

Disability Rate

Sample rates below (1207 * 0.7). It is assumed that 75% of disablements are service related. Previously, table 1207 was utilized. The assumed rates were approved in conjunction with an actuarial experience study dated November 2017.

<u>Age</u>	<u>Rate</u>
20	0.049%
30	0.077
40	0.133
50	0.357

Termination Rate

<u>Service</u>	<u>Rate</u>
<10	6.0%
10-15	4.0
16+	2.0

Previously, an age-based table was utilized. The assumed rates were approved in conjunction with an actuarial experience study dated November 2017.

Salary Increases

<u>Service</u>	<u>Increase</u>
<1	10.00%
1-9	5.50
10-15	5.00
16+	4.50

Previously, 6.00% per year until the assumed retirement age. The assumed rates were approved in conjunction with an actuarial experience study dated November 2017.

Payroll Growth

None. The assumed rate was approved in conjunction with an actuarial experience study dated November 2017.

Administrative Expenses

\$38,203 annually. This assumption is equal to the amount paid out of the trust in the prior year.

Cost-of-Living Increase

3% per year from retirement to Social Security Retirement Age.

Actuarial Asset Method

Each year, the prior Actuarial Value of Assets is brought forward utilizing the historical geometric four-year average Market Value return (net of fees). It is possible that over time this technique will produce an insignificant bias above or below Market Value of Assets.

Funding Method

Entry Age Normal Actuarial Cost Method. The following loads are utilized for determination of the Total Required Contribution:

- Interest – a half-year, based on the current 7.9% assumption
- Salary – a full-year, based on the current 5.9% assumption

VALUATION NOTES

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

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

Entry Age Normal Cost Method - Under this method, the normal cost is the sum of the individual normal costs for all active participants. For an active participant, the normal cost is the participant's normal cost accrual rate, multiplied by the participant's current compensation.

(a) The normal cost accrual rate equals

(i) the present value of future benefits for the participant, determined as of the participant's entry age, divided by

(ii) the present value of the compensation expected to be paid to the participant for each year of the participant's anticipated future service, determined as of the participant's entry age.

(b) In calculating the present value of future compensation, the salary scale is applied both retrospectively and prospectively to estimate compensation in years prior to and subsequent to the valuation year based on the compensation used for the valuation.

(c) The accrued liability is the sum of the individual accrued liabilities for all participants and beneficiaries. A participant's accrued liability equals the present value, at the participant's attained age, of future benefits less the present value at the participant's attained age of the individual normal costs payable in the future. A beneficiary's accrued liability equals the present value, at the beneficiary's attained age, of future benefits. The unfunded accrued liability equals the total accrued liability less the actuarial value of assets.

(d) Under this method, the entry age used for each active participant is the participant's age at the time he or she would have commenced participation if the plan had always been in existence under current terms, or the age as of which he or she first earns service credits for purposes of benefit accrual under the current terms of the plan.

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

Total Required Contribution is equal to the Normal Cost plus an amount sufficient to amortize the Unfunded Accrued Liability over no more than 30 years. The required amount is adjusted for interest according to the timing of contributions during the year.

PARTIAL HISTORY OF PREMIUM TAX REFUNDS

<u>Received During Fiscal Year</u>	<u>Amount</u>	<u>Increase from Previous Year</u>
1998	158,284.20	_____%
1999	192,570.56	21.7%
2000	191,144.33	-0.7%
2001	197,701.48	3.4%
2002	198,483.26	0.4%
2003	228,800.14	15.3%
2004	232,759.80	1.7%
2005	246,342.48	5.8%
2006	251,065.82	1.9%
2007	273,210.69	8.8%
2008	434,733.32	59.1%
2009	415,632.80	-4.4%
2010	339,262.71	-18.4%
2011	339,755.40	0.1%
2012	320,682.27	-5.6%
2013	339,844.71	6.0%
2014	355,575.72	4.6%
2015	327,138.89	-8.0%
2016	331,495.90	1.3%
2017	305,820.04	-7.7%

EXCESS STATE MONIES RESERVE

Firefighters' Distribution						
Regular Distribution			Special Distribution			
	Actual State Contribution	Applicable "Frozen" Amount	Excess State Monies Reserve	Actual State Contribution	Applicable "Frozen" Amount	Excess State Monies Reserve
1999	170,050.08	158,284.20	11,765.88	22,520.48	22,520.48	0.00
2000	164,854.92	158,284.20	6,570.72	26,289.41	22,520.48	3,768.93
2001	169,310.88	158,284.20	11,026.68	28,390.60	22,520.48	5,870.12
2002	176,377.62	158,284.20	18,093.42	22,105.64	22,520.48	0.00
2003	186,513.90	170,932.20	15,581.70	42,286.24	22,520.48	19,765.76
2004	196,017.60	170,932.20	25,085.40	36,742.20	22,520.48	14,221.72
2005	194,540.40	170,932.20	23,608.20	51,802.08	22,520.48	29,281.60
2006	201,686.10	180,663.20	21,022.90	49,379.72	22,520.48	26,859.24
2007	205,736.87	180,663.20	25,073.67	67,473.82	22,520.48	44,953.34
2008	282,666.57	231,500.20	51,166.37	152,066.75	22,520.48	129,546.27
2009	314,398.99	308,095.87	6,303.12	101,233.81	101,233.81	0.00
2010	311,212.67	381,279.64	0.00	28,050.04	28,050.04	0.00
2011	322,094.92	391,669.20	0.00	17,660.48	17,660.48	0.00
2012	316,643.29	405,290.70	0.00	4,038.98	4,038.98	0.00
2013	339,844.71	409,329.68	0.00	0.00	0.00	0.00
2014	355,575.72	409,329.68	0.00	0.00	0.00	0.00
2015	327,138.89	409,329.68	0.00	0.00	0.00	0.00
2016	331,495.90	409,329.68	0.00	0.00	0.00	0.00
2017	305,820.04	409,329.68	<u>0.00</u>	0.00	0.00	<u>0.00</u>
			215,298.06			274,266.98
	Accumulated Regular Excess		215,298.06			
	Accumulated Special Excess		<u>274,266.98</u>			
	Total Excess State Monies		489,565.04			
	Less Excess Used in Funding Ordinance No. 1888		(17,987.75)			
	Less Excess Used in Funding Ordinance No. 2222		(166,652.38)			
	Less Excess Used in Funding Ordinance No. 2279		(47,882.14)			
	Less Excess Used in Funding Ordinance No. 2367		<u>(250,740.00)</u>			
	Equals Current State Monies Reserve		\$6,302.77			

STATEMENT OF FIDUCIARY NET POSITION
SEPTEMBER 30, 2017

<u>ASSETS</u>	COST VALUE	MARKET VALUE
Cash and Cash Equivalents:		
Money Market	8,474,596.78	8,474,596.78
Total Cash and Equivalents	8,474,596.78	8,474,596.78
Receivables:		
Member Contributions in Transit	5,199.53	5,199.53
City Contributions in Transit	36,174.87	36,174.87
Investment Income	6,766.62	6,766.62
Total Receivable	48,141.02	48,141.02
Investments:		
Stocks	6,513,452.66	8,194,586.35
Mutual Funds:		
Fixed Income	11,488,538.35	11,916,480.78
Equity	6,166,982.98	9,867,066.97
Pooled/Common/Commingled Funds:		
Real Estate	3,914,584.78	3,909,736.35
Total Investments	28,083,558.77	33,887,870.45
Total Assets	36,606,296.57	42,410,608.25
<u>LIABILITIES</u>		
Payables:		
Prior Refunds	575.05	575.05
To Broker for Investments Purchased	7,396,592.19	7,396,592.19
Prepaid City Contribution	36,289.03	36,289.03
Total Liabilities	7,433,456.27	7,433,456.27
NET POSITION RESTRICTED FOR PENSIONS	29,172,840.30	34,977,151.98

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED SEPTEMBER 30, 2017
Market Value Basis

ADDITIONS

Contributions:		
Member		248,753.34
City		1,697,480.96
State		305,820.04
Total Contributions		2,252,054.34
Investment Income:		
Net Realized Gain (Loss)	1,135,825.15	
Unrealized Gain (Loss)	1,249,211.40	
Net Increase in Fair Value of Investments		2,385,036.55
Interest & Dividends		1,011,320.70
Less Investment Expense ¹		(257,231.13)
Net Investment Income		3,139,126.12
Total Additions		5,391,180.46

DEDUCTIONS

Distributions to Members:		
Benefit Payments		2,924,361.62
Lump Sum DROP Distributions		651,733.99
Lump Sum Death Distributions		105,271.92
Refunds of Member Contributions		27,751.98
Total Distributions		3,709,119.51
Administrative Expense		38,203.45
Other		0.00
Total Deductions		3,747,322.96
Net Increase in Net Position		1,643,857.50
NET POSITION RESTRICTED FOR PENSIONS		
Beginning of the Year		33,333,294.48
End of the Year		34,977,151.98

¹Investment related expenses include investment advisory, custodial and performance monitoring fees.

ACTUARIAL ASSET VALUATION
SEPTEMBER 30, 2017

Actuarial Assets for funding purposes are developed by increasing the Actuarial Assets used in the most recent actuarial valuation of the Fund by the average annual market value rate of return (net of investment related expenses) for the past four years. Actuarial Assets shall not be less than 80% nor greater than 120% of Market Value of Assets.

Details of the derivation are set forth as follows:

Plan Year End	Rate of Return ¹	
09/30/2014	10.13%	
09/30/2015	-3.45%	
09/30/2016	9.15%	
09/30/2017	9.71%	
Annualized Rate of Return for prior four (4) years:		6.23%
(A) 10/01/2016 Actuarial Assets:		\$34,901,612.05
(I) Net Investment Income:		
1. Interest and Dividends	1,011,320.70	
2. Realized Gains (Losses)	1,135,825.15	
3. Change in Actuarial Value	236,607.16	
4. Investment Related Expenses	(257,231.13)	
Total		2,126,521.88
(B) 10/01/2017 Actuarial Assets:		\$35,532,865.31
Actuarial Asset Rate of Return = 2I/(A+B-I):		6.23%
10/01/2017 Limited Actuarial Assets:		\$35,532,865.31
10/01/2017 Market Value of Assets:		\$34,977,151.98
Actuarial Gain/(Loss) due to Investment Return (Actuarial Asset Basis)		(\$604,164.32)

¹Market Value Basis, net of investment related expenses.

CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS
 SEPTEMBER 30, 2017
 Actuarial Asset Basis

REVENUES

Contributions:		
Member	248,753.34	
City	1,697,480.96	
State	305,820.04	
 Total Contributions		 2,252,054.34
Earnings from Investments:		
Interest & Dividends	1,011,320.70	
Net Realized Gain (Loss)	1,135,825.15	
Change in Actuarial Value	236,607.16	
 Total Earnings and Investment Gains		 2,383,753.01

EXPENDITURES

Distributions to Members:		
Benefit Payments	2,924,361.62	
Lump Sum DROP Distributions	651,733.99	
Lump Sum Death Distributions	105,271.92	
Refunds of Member Contributions	27,751.98	
 Total Distributions		 3,709,119.51
Expenses:		
Investment related ¹	257,231.13	
Administrative	38,203.45	
 Total Expenses		 295,434.58
 Change in Net Assets for the Year		 631,253.26
 Net Assets Beginning of the Year		 34,901,612.05
 Net Assets End of the Year ²		 35,532,865.31

¹Investment related expenses include investment advisory, custodial and performance monitoring fees.

²Net Assets may be limited for actuarial consideration.

DEFERRED RETIREMENT OPTION PLAN ACTIVITY
October 1, 2016 to September 30, 2017

Beginning of the Year Balance	882,225.84
Plus Additions	138,927.91
Investment Return Earned	25,014.18
Less Distributions	(651,733.99)
End of the Year Balance	394,433.94

RECONCILIATION OF CITY'S SHORTFALL/(PREPAID) CONTRIBUTION
FOR THE FISCAL YEAR ENDED (FYE) SEPTEMBER 30, 2017

(1) Required City and State Contributions	\$2,003,301.00
(2) Less Allowable State Contribution	<u>(305,820.04)</u>
(3) Required City Contribution for Fiscal 2017	1,697,480.96
(4) Less 2016 Prepaid Contribution	(2,861.49)
(5) Less Actual City Contributions	<u>(1,730,908.50)</u>
(6) Equals City's Shortfall/(Prepaid) Contribution as of September 30, 2017	(\$36,289.03)

STATISTICAL DATA

	<u>10/1/2014</u>	<u>10/1/2015</u>	<u>10/1/2016</u>	<u>10/1/2017</u>
<u>Actives</u>				
Number	66	63	70	74
Average Current Age	37.0	37.0	35.9	36.2
Average Age at Employment	27.6	27.7	27.6	27.5
Average Past Service	9.4	9.3	8.3	8.7
Average Annual Salary	\$45,418	\$46,252	\$45,701	\$47,940
<u>Service Retirees</u>				
Number	57	57	63	65
Average Current Age	64.1	64.4	63.8	64.6
Average Annual Benefit	\$38,948	\$40,579	\$40,534	\$41,348
<u>DROP Retirees</u>				
Number	10	10	5	2
Average Current Age	52.2	53.5	53.1	54.7
Average Annual Benefit	\$45,912	\$45,919	\$50,407	\$59,722
<u>Beneficiaries</u>				
Number	9	8	9	10
Average Current Age	75.7	71.5	69.1	66.1
Average Annual Benefit	\$18,845	\$22,099	\$27,950	\$28,104
<u>Disability Retirees</u>				
Number	2	2	2	2
Average Current Age	58.3	59.3	60.3	61.3
Average Annual Benefit	\$9,597	\$9,597	\$9,597	\$9,597
<u>Terminated Vested</u>				
Number	2	6	7	6
Average Current Age	47.8	43.0	42.5	42.6
Average Annual Benefit ¹	N/A	\$16,879	\$20,640	\$24,181

¹ The Average Annual Benefit excludes participants awaiting a refund of contributions.

AGE AND SERVICE DISTRIBUTION

PAST SERVICE

AGE	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30+	Total
15 - 19	0	0	0	0	0	0	0	0	0	0	0	0
20 - 24	7	3	1	0	1	0	0	0	0	0	0	12
25 - 29	1	4	1	1	1	1	0	0	0	0	0	9
30 - 34	2	1	0	1	1	5	2	0	0	0	0	12
35 - 39	0	1	1	1	0	2	6	4	0	0	0	15
40 - 44	0	0	1	1	1	0	5	1	1	0	0	10
45 - 49	0	1	0	0	0	0	1	5	0	0	0	7
50 - 54	1	0	0	1	0	0	0	2	5	0	0	9
55 - 59	0	0	0	0	0	0	0	0	0	0	0	0
60 - 64	0	0	0	0	0	0	0	0	0	0	0	0
65+	0	0	0	0	0	0	0	0	0	0	0	0
Total	11	10	4	5	4	8	14	12	6	0	0	74

VALUATION PARTICIPANT RECONCILIATION

1. Active lives

a. Number in prior valuation 10/1/2016	70
b. Terminations	
i. Vested (partial or full) with deferred benefits	(1)
ii. Non-vested or full lump sum distribution received	(6)
c. Deaths	
i. Beneficiary receiving benefits	0
ii. No future benefits payable	0
d. Disabled	0
e. Retired	0
f. DROP	<u>0</u>
g. Continuing participants	63
h. New entrants	<u>11</u>
i. Total active life participants in valuation	74

2. Non-Active lives (including beneficiaries receiving benefits)

	Service Retirees, Vested Receiving <u>Benefits</u>	DROP <u>Benefits</u>	Receiving Death <u>Benefits</u>	Receiving Disability <u>Benefits</u>	Vested <u>Deferred</u>	<u>Total</u>
a. Number prior valuation	63	5	9	2	7	86
Retired	3	(3)	0	0	0	0
DROP	0	0	0	0	0	0
Vested Deferred	0	0	0	0	1	1
Death, With Survivor	(1)	0	1	0	(1)	(1)
Death, No Survivor	0	0	0	0	0	0
Disabled	0	0	0	0	0	0
Refund of Contributions	0	0	0	0	(1)	(1)
Rehires	0	0	0	0	0	0
Expired Annuities	0	0	0	0	0	0
Data Corrections	0	0	0	0	0	0
b. Number current valuation	65	2	10	2	6	85

SUMMARY OF CURRENT PLAN

<u>Eligibility</u>	Full-time firefighters participate as a condition of employment.
<u>Salary</u>	Total compensation reportable on W-2, plus all tax deferred, tax sheltered or tax exempt items, but excluding termination sick leave pay, sick leave bonus pay, health incentive pay, termination annual leave pay and uniform allowances.
<u>Average Final Compensation</u>	One twelfth of the average of the 3 best years of Salary of the last 5.
<u>Credited Service</u>	Years and fractional parts of years of service with the City as a Firefighter (with Member contributions when required).
<u>Normal Retirement</u>	
Date	The earlier of: 1) age 55 and the completion of 10 years of Credited Service, or 2) the completion of 25 years of Credited Service, regardless of age.
Benefit	2.9% of Average Final Compensation times Credited Service
Minimum Benefit	2.0% of Average Final Compensation times Credited Service.
Form of Benefit	Life with 10 years certain.
Supplement	\$575 per month to earlier of death or Social Security Retirement Age.
Cost-of-Living Increase	Each January 1 following retirement, the base benefit is increased annually by 3.0% (1.0% if retired prior to January 1, 1999). Adjustments cease at Social Security Retirement Age (Age 65 if retired between 1/1/94 and 9/30/97). Supplemental benefits are not adjusted.
<u>Early Retirement</u>	
Date	Age 45 and completion of 10 years of Credited Service.
Benefit	Determined as for Normal Retirement (without supplement) reduced 3% per year to age 50 and actuarially for years prior to age 50.
Form of Benefit	Life with 10 years certain.

Disability Benefit

Eligibility	Total and permanent as determined by the Board (medical proof required.) One year of service required for not-in-line of duty.
Benefit	Accrued benefit but not less than 42% of Average Final Compensation (service incurred) and 25% of Average Final Compensation (non-service incurred).
Duration	Payable for life and 10 years certain, or until recovery (as determined by the Board; optional forms of income are available).

Death Benefit

Pre-Retirement	Prior to vesting: 3 times annual Salary. Vested: Greater of: 1) Actuarial equivalent of participant's accrued benefit payable as a Ten Year Certain and Life Annuity, or 2) 3 times annual Salary.
Post-Retirement	According to optional form of benefit selected.

Termination of Employment

Benefit	
Less than 10 years	Refund of Accumulated Member Contributions without interest.
10 or more	Refund of Contributions or Vested Accrued benefit (supplemental benefit not included) payable at age 55 (or reduced as early as age 45)

Member Contributions

7.5% of Salary.

State Contributions

1.85% tax on insurance premiums.

City Contributions

Remaining amount necessary after Member and State Contributions for payment of Normal Cost and amortization of accrued past service liability over 30 years. In no event will the City's contribution be less than 7.5% of the total salaries of the Members.

Deferred Retirement Option Plan

Eligibility	Satisfaction of Normal Retirement requirements (earlier of (1) Age 55 and 10 years of Credited Service, or (2) 25 years of Credited Service).
Participation	If Normal Retirement is 55 with 10 years of service, not to exceed 36 months. If Member has completed 25-27 years of service, not to exceed 60 months. If Member has completed 27-30 years of service, not to exceed 36 months. Members with 30 years and 1 day of service are ineligible.
Rate of Return	6.5% per annum, credited quarterly.
Form of Distribution	Cash lump sum (options available) at termination of employment.

Chapter 175 Share Account

Pursuant to Chapter 2015-39, Laws of Florida, a supplemental benefit component for special benefits exists but is currently not funded as no premium tax allocations have been made to the share accounts.

AMORTIZATION SCHEDULE - EXPERIENCE

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

Plan Year Ending	Differences Between Expected and Actual Experience	Recognition Period (Years)	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
2015	\$ 196,997	6	\$ 32,833	\$ 32,833	\$ 32,833	\$ 32,833	\$ 32,833	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ (839,486)	6	\$ (139,915)	\$ (139,915)	\$ (139,914)	\$ (139,914)	\$ (139,914)	\$ (139,914)	\$ -	\$ -	\$ -	\$ -
2017	\$ (656,507)	5	\$ -	\$ (131,303)	\$ (131,301)	\$ (131,301)	\$ (131,301)	\$ (131,301)	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ (107,082)	\$ (238,385)	\$ (238,382)	\$ (238,382)	\$ (238,382)	\$ (271,215)	\$ -	\$ -	\$ -	\$ -