

CITY OF PALM COAST
VOLUNTEER FIREFIGHTERS' RETIREMENT TRUST FUND
ACTUARIAL VALUATION
AS OF OCTOBER 1, 2018
CONTRIBUTIONS APPLICABLE TO THE
PLAN/FISCAL YEAR ENDING SEPTEMBER 30, 2020
GASB 67/68 DISCLOSURE INFORMATION
AS OF SEPTEMBER 30, 2018



FOSTER & FOSTER
ACTUARIES AND CONSULTANTS

January 15, 2019

Board of Trustees
City of Palm Coast
Volunteer Firefighters' Retirement Trust Fund Board
160 Lake Avenue
Palm Coast, FL 32164

Re: City of Palm Coast Volunteer Firefighters' Retirement Trust Fund

Dear Board:

We are pleased to present to the Board this report of the annual actuarial valuation of the City of Palm Coast Volunteer Firefighters' Retirement 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. Use of the results for other purposes may not be applicable and may produce significantly different results.

The valuations have 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 reflect 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 the valuations, 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. Due to the limited scope of the valuation, we did not perform an analysis of the potential range of such future measurements.

In conducting the valuations, we have relied on personnel, plan design, and asset information supplied by the City of Palm Coast, 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, 2017. The total pension liability was rolled-forward from the valuation date to the plan's fiscal year ending September 30, 2018 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 Palm Coast, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the City of Palm Coast Volunteer Firefighters' Retirement 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: 
Douglas H. Lozen, EA, MAAA
Enrolled Actuary #17-7778

TABLE OF CONTENTS

Section	Title	Page
I	Introduction	
	a. Summary of Report	5
	b. Changes Since Prior Valuation	7
	c. Comparative Summary of Principal Valuation Results	8
II	Valuation Information	
	a. Reconciliation of Unfunded Actuarial Accrued Liabilities	14
	b. Detailed Actuarial (Gain)/Loss Analysis	15
	c. Actuarial Assumptions and Methods	16
	d. Glossary	18
	e. Partial History of Premium Tax Refunds	20
III	Trust Fund	21
IV	Member Statistics	
	a. Statistical Data	26
	b. Age and Service Distribution	27
	c. Valuation Participant Reconciliation	28
V	Summary of Current Plan	29
VI	Governmental Accounting Standards Board Statements No. 67 and No. 68 Disclosure Information	32

SUMMARY OF REPORT

The regular annual actuarial valuation of the City of Palm Coast Volunteer Firefighters' Retirement Trust Fund, performed as of October 1, 2018, has been completed and the results are presented in this Report. The contribution amounts set forth herein are applicable to the plan/fiscal year ending September 30, 2020.

The contribution requirements, compared with those set forth in the October 1, 2017 actuarial valuation report, are as follows:

Valuation Date Applicable to Fiscal Year Ending	10/1/2018 <u>9/30/2020</u>	10/1/2017 <u>9/30/2019</u>
Minimum Required Contribution ¹	\$91,485	\$149,747
Member Contributions (Est.)	0	0
City And State Required Contribution	91,485	149,747
State Contribution (Est.) ²	200,000	200,000
City Required Contribution ³	\$0	\$0

¹ The City must contribute an amount equal to the applicable Normal Cost (adjusted for interest), less the applicable State Contribution. The Minimum Required Contribution for the fiscal years ending September 30, 2019 and September 30, 2020 reflects this statutory funding requirement (Chapter 112.66(13)).

² Mutual Consent reached per Chapter 2015-39, Laws of Florida. Annual State Monies in excess of \$200,000 are allocated to the Share Plan.

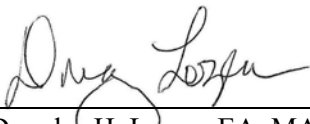
³ The City has access to a \$301,147.26 reserve in the event its contribution requirement is ever greater than \$0.

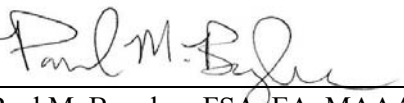
Plan experience was favorable overall on the basis of the plan's actuarial assumptions. The primary source of favorable experience was greater than expected active turnover. There were no significant sources of unfavorable experience.

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 any pending questions concerning its contents.

Respectfully submitted,

FOSTER & FOSTER, INC.

By: 
Douglas H. Lozen, EA, MAAA

By: 
Paul M. Baugher, FSA, EA, MAAA

CHANGES SINCE PRIOR VALUATION

Plan Changes

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

Actuarial Assumption/Method Changes

There have been no changes of actuarial assumptions or methods since the prior valuation.

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	<u>10/1/2018</u>	<u>10/1/2017</u>
A. Participant Data		
Actives	27	39
Service Retirees	25	22
Beneficiaries	0	1
Disability Retirees	0	0
Terminated Vested	<u>4</u>	<u>3</u>
Total	56	65
Total Annual Payroll	\$0	\$0
Payroll Under Assumed Ret. Age	0	0
Annual Rate of Payments to:		
Service Retirees	135,752	119,190
Beneficiaries	0	3,600
Disability Retirees	0	0
Terminated Vested	15,600	11,700
B. Assets		
Actuarial Value (AVA) ¹	4,246,433	3,905,224
Market Value (MVA) ¹	4,396,693	4,040,315
C. Liabilities		
Present Value of Benefits		
Actives		
Retirement Benefits	797,448	1,166,426
Disability Benefits	14,904	23,459
Death Benefits	7,079	11,729
Vested Benefits	144,079	180,954
Refund of Contributions	0	0
Service Retirees	1,118,048	963,740
Beneficiaries	0	6,753
Disability Retirees	0	0
Terminated Vested	46,519	13,079
Share Plan Balances ¹	880,778	823,203
City Reserve ¹	<u>301,147</u>	<u>301,147</u>
Total	3,310,002	3,490,490

C. Liabilities - (Continued)	<u>10/1/2018</u>	<u>10/1/2017</u>
Present Value of Future Salaries	139	0
Present Value of Future Member Contributions	0	0
Normal Cost (Retirement)	66,272	110,915
Normal Cost (Disability)	1,604	2,899
Normal Cost (Death)	693	1,337
Normal Cost (Vesting)	14,223	20,367
Normal Cost (Refunds)	<u>0</u>	<u>0</u>
Total Normal Cost	82,792	135,518
Present Value of Future Normal Costs	364,320	640,709
Accrued Liability (Retirement)	516,173	649,741
Accrued Liability (Disability)	7,980	10,586
Accrued Liability (Death)	4,072	6,161
Accrued Liability (Vesting)	70,965	75,371
Accrued Liability (Refunds)	0	0
Accrued Liability (Inactives)	1,164,567	983,572
Share Plan Balances ¹	880,778	823,203
City Reserve ¹	<u>301,147</u>	<u>301,147</u>
Total Actuarial Accrued Liability (EAN AL)	2,945,682	2,849,781
Unfunded Actuarial Accrued Liability (UAAL)	(1,300,751)	(1,055,443)
Funded Ratio (AVA / EAN AL)	144.2%	137.0%

D. Actuarial Present Value of		
Accrued Benefits	<u>10/1/2018</u>	<u>10/1/2017</u>
Vested Accrued Benefits		
Inactives + Share Plan Balances ¹	2,045,345	1,806,775
Actives	356,225	483,158
Member Contributions	<u>0</u>	<u>0</u>
Total	2,401,570	2,289,933
Non-vested Accrued Benefits	<u>101,535</u>	<u>113,738</u>
Total Present Value		
Accrued Benefits (PVAB)	2,503,105	2,403,671
Funded Ratio (MVA / PVAB)	175.6%	168.1%
Increase (Decrease) in Present Value of		
Accrued Benefits Attributable to:		
Plan Amendments	0	
Assumption Changes	0	
New Accrued Benefits	104,799	
Benefits Paid	(167,751)	
Interest	162,386	
Other	<u>0</u>	
Total	99,434	

Valuation Date	10/1/2018	10/1/2017
Applicable to Fiscal Year Ending	<u>9/30/2020</u>	<u>9/30/2019</u>

E. Pension Cost

Normal Cost ²	\$91,485	\$149,747
Administrative Expenses ²	32,067	28,059
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 30 years (as of 10/1/2018) ²	(115,290)	(92,813)
Minimum Required Contribution ²	8,262	84,993
Expected Member Contributions	0	0
Expected City and State Contribution ²	8,262	84,993

F. Past Contributions

Plan Years Ending:	<u>9/30/2018</u>
City and State Requirement	146,847
Actual Contributions Made:	
Members (excluding buyback)	0
City	0
State	<u>200,000</u> ³
Total	200,000

G. Net Actuarial (Gain)/Loss	(140,910)
------------------------------	-----------

¹ The asset values and liabilities include accumulated Share Plan Balances and City Reserve as of 9/30/2018 and 9/30/2017.

² Includes a 1.5 year interest load.

³ Reflects Mutual Consent.

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

<u>Year</u>	<u>Projected Unfunded Actuarial Accrued Liability</u>
2018	(1,300,751) ¹

I. (i) 5 Year Comparison of Actual and Assumed Salary Increases

		<u>Actual</u>	<u>Assumed</u>
Year Ended	9/30/2018	N/A	N/A
Year Ended	9/30/2017	N/A	N/A
Year Ended	9/30/2016	N/A	N/A
Year Ended	9/30/2015	N/A	N/A
Year Ended	9/30/2014	N/A	N/A

(ii) 5 Year Comparison of Investment Return on Market Value and Actuarial Value

		<u>Market Value</u>	<u>Actuarial Value</u>	<u>Assumed</u>
Year Ended	9/30/2018	7.30%	6.98%	7.00%
Year Ended	9/30/2017	13.21%	7.22%	7.00%
Year Ended	9/30/2016	8.02%	6.75%	7.65%
Year Ended	9/30/2015	-0.18%	8.60%	7.65%
Year Ended	9/30/2014	8.26%	8.95%	7.65%

(iii) Average Annual Payroll Growth

(a) Payroll as of:	10/1/2018	\$0
	10/1/2018	0
(b) Total Increase		0.00%
(c) Number of Years		0.00
(d) Average Annual Rate		0.00%

¹ Since the City may not offset its funding requirement with a negative amortization payment, no projection of the UAAL is provided with this valuation.

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.



Douglas H. Lozen, EA, MAAA
Enrolled Actuary #17-7778

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

Mr. Steve Bardin
Municipal Police and Fire
Pension Trust Funds
Division of Retirement
Post Office Box 3010
Tallahassee, FL 32315-3010

RECONCILIATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITIES

(1)	Unfunded Actuarial Accrued Liability as of October 1, 2017	(\$1,055,443)
(2)	Sponsor Normal Cost developed as of October 1, 2017	135,518
(3)	Expected administrative expenses for the year ended September 30, 2018	25,393
(4)	Expected interest on (1), (2) and (3)	(63,506)
(5)	Sponsor contributions to the System during the year ended September 30, 2018	200,000
(6)	Expected interest on (5)	1,803
(7)	Expected Unfunded Actuarial Accrued Liability as of September 30, 2018 (1)+(2)+(3)+(4)-(5)-(6)	(1,159,841)
(8)	Change to UAAL due to Assumption Change	0
(9)	Change to UAAL due to Actuarial (Gain)/Loss	(140,910)
(10)	Unfunded Actuarial Accrued Liability as of October 1, 2018	(1,300,751)

Type of Base	Date Established	Years Remaining	10/1/2018 Amount	Amortization Amount
method change	10/1/2005	17	805,257	77,083
actuarial gain	10/1/2006	18	(314,873)	(29,255)
actuarial gain	10/1/2007	19	(651,014)	(58,867)
benefit change	10/1/2007	19	3,597	325
actuarial gain	10/1/2008	20	(209,153)	(18,451)
method change	10/1/2008	20	(138,389)	(12,208)
actuarial loss	10/1/2009	21	105,526	9,102
actuarial loss	10/1/2010	22	13,451	1,136
assumption	10/1/2010	22	17,316	1,463
benefit change	10/1/2010	22	(224,904)	(19,002)
actuarial gain	10/1/2011	23	(23,591)	(1,956)
actuarial gain	10/1/2012	24	(126,999)	(10,349)
assumption	10/1/2012	24	45,160	3,680
actuarial gain	10/1/2013	25	(136,530)	(10,949)
software change	10/1/2013	25	72,237	5,793
actuarial gain	10/1/2014	26	(239,589)	(18,934)
actuarial gain	10/1/2015	27	(307,206)	(23,952)
assumptions	10/1/2016	28	228,601	17,603
actuarial loss	10/1/2016	28	10,762	829
actuarial gain	10/1/2017	29	(89,500)	(6,813)
actuarial gain	10/1/2018	30	<u>(140,910)</u>	<u>(10,613)</u>
			(1,300,751)	(104,335)

DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

(1) Unfunded Actuarial Accrued Liability (UAAL) as of October 1, 2017	(\$1,055,443)
(2) Expected UAAL as of October 1, 2018	(1,159,841)
(3) Summary of Actuarial (Gain)/Loss, by component:	
Investment Return (Actuarial Asset Basis)	788
Active Decrements	(107,550)
Inactive Mortality	19,648
Other	<u>(53,796)</u>
Increase in UAAL due to (Gain)/Loss	(140,910)
Assumption Changes	<u>0</u>
(4) Actual UAAL as of October 1, 2018	(\$1,300,751)

ACTUARIAL ASSUMPTIONS AND METHODS

Mortality Rate

Healthy Active Lives:

Female: RP2000 Generational, 100% Combined Healthy White Collar, Scale BB

Male: RP2000 Generational, 10% Combined Healthy White Collar / 90% Combined Healthy 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 above assumption rates were mandated by Chapter 2015-157, Laws of Florida. This law mandates the use of the assumptions used in either of the two most recent valuations of the Florida Retirement System (FRS). The above rates are those outlined in Milliman's July 1, 2016 FRS valuation report for special risk employees. We feel this assumption sufficiently accommodates future mortality improvements.

Interest Rate

7.00% per year compounded annually, net of investment related expenses. This is supported by the target asset allocation of the trust and the expected long-term return by asset class.

Payroll Growth

None.

Administrative Expenses

\$29,020 annually, based on actual expenses incurred in the prior fiscal year.

Retirement Age

The earlier of attainment of age 55 with 10 years of credited service, age 52 with 25 years of credited service, or age 62 with 5 years of credited service. Also, any member who has reached Normal Retirement is assumed to continue employment for one additional year. This assumption is consistent with historical plan experience.

Early Retirement

Commencing with attainment of Early Retirement Status (age 50 with 10 years of service), members are assumed to retire with an immediate subsidized benefit at the rate of 5% per year. This assumption is reasonable for the existing plan provisions regarding Early Retirement.

Termination Rates

See table below (1304B). This assumption is consistent with other Florida public safety plans.

Disability Rates

See table below (1201); 75% of disabled lives are assumed to be service-related. This assumption is consistent with other Florida public safety plans.

Funding Method

Entry Age Normal Actuarial Cost Method.

An interest load of 1.5 years (at the current valuation assumption of 7.00%) has been applied for the determination of Sponsor funding requirement.

Asset Valuation Method

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

<u>Age</u>	<u>% Terminating During the Year</u>	<u>% Becoming Disabled During the Year</u>
20	14.4%	0.03%
30	12.5	0.04
40	7.7	0.07
50	3.5	0.18

GLOSSARY

Total Annual Payroll not applicable.

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.

Normal (Current Year's) Cost is determined for each participant as the present value of future benefits, determined as of the Member's entry age, amortized as a level percentage of compensation over the anticipated number of years of participation, determined as of the entry age.

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.

PARTIAL HISTORY OF PREMIUM TAX REFUNDS

<u>Received During Fiscal Year</u>	<u>Amount</u>	<u>Increase from Previous Year</u>
2003	14,328.55	_____ %
2004	62,129.98	333.6%
2005	96,546.34	55.4%
2006	128,816.42	33.4%
2007	242,231.00	88.0%
2008	380,757.00	57.2%
2009	499,181.00	31.1%
2010	339,246.90	-32.0%
2011	359,373.51	5.9%
2012	377,962.48	5.2%
2013	364,571.49	-3.5%
2014	381,967.45	4.8%
2015	324,642.30	-15.0%
2016	273,487.45	-15.8%
2017	232,596.92	-15.0%
2018	263,090.68	13.1%

STATEMENT OF FIDUCIARY NET POSITION
SEPTEMBER 30, 2018

<u>ASSETS</u>	MARKET VALUE
Cash and Cash Equivalents:	
Cash	17,544.22
Total Cash and Equivalents	17,544.22
Receivables:	
Due from City	8,000.00
Lump Sum Overpayment	2,637.61
Total Receivable	10,637.61
Investments:	
Mutual Funds:	
Fixed Income	1,390,379.56
Equity	2,583,386.64
Pooled/Common/Commingled Funds:	
Real Estate	394,744.99
Total Investments	4,368,511.19
Total Assets	4,396,693.02
<u>LIABILITIES</u>	
Total Liabilities	0.00
NET POSITION RESTRICTED FOR PENSIONS	4,396,693.02

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED SEPTEMBER 30, 2018
Market Value Basis

ADDITIONS

Contributions:

State	263,090.68	
-------	------------	--

Total Contributions		263,090.68
---------------------	--	------------

Investment Income:

Earnings/(Losses) as disclosed in FMPTF statement	298,219.75	
Less Investment Expense ¹	(8,161.20)	

Net Investment Income		290,058.55
-----------------------	--	------------

Total Additions		553,149.23
-----------------	--	------------

DEDUCTIONS

Distributions to Members:

Benefit Payments	122,989.45	
Lump Sum Distributions	5,722.26	
Lump Sum Share Distributions	39,039.37	

Total Distributions		167,751.08
---------------------	--	------------

Administrative Expense		29,020.32
------------------------	--	-----------

Total Deductions		196,771.40
------------------	--	------------

Net Increase in Net Position		356,377.83
------------------------------	--	------------

NET POSITION RESTRICTED FOR PENSIONS

Beginning of the Year		4,040,315.19
-----------------------	--	--------------

End of the Year		4,396,693.02
-----------------	--	--------------

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

ACTUARIAL ASSET VALUATION
SEPTEMBER 30, 2018

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	
09/30/2015	-0.18%	
09/30/2016	8.02%	
09/30/2017	13.21%	
09/30/2018	7.30%	
Annualized Rate of Return for prior four (4) years:		6.98%
(A) 10/01/2017 Actuarial Assets:		\$3,905,224.46
(I) Net Investment Income:		
1. Interest and Dividends	298,219.75	
2. Realized Gains (Losses)	0.00	
3. Change in Actuarial Value	(15,169.34)	
4. Investment Related Expenses	(8,161.20)	
Total		274,889.21
(B) 10/01/2018 Actuarial Assets:		\$4,246,432.95
Actuarial Asset Rate of Return = 2I/(A+B-I):		6.98%
10/01/2018 Limited Actuarial Assets:		\$4,246,432.95
10/01/2018 Market Value of Assets:		\$4,396,693.02
Actuarial Gain/(Loss) due to Investment Return (Actuarial Asset Basis)		(\$787.65)

¹Market Value Basis, net of investment related expenses.

REVENUES

²Net Assets may be limited for actuarial consideration.

SUPPLEMENTAL CHAPTER 175 SHARE PLAN ACTIVITY
October 1, 2017 through September 30, 2018

9/30/2017 Balance	823,203
Prior Year Adjustment	(24,763)
Plus Additions	63,091
Investment Return Earned	58,286
Administrative Fees	0
Less Distributions	(39,039)
9/30/2018 Balance (est.)	880,778

STATISTICAL DATA

	<u>10/1/2015</u>	<u>10/1/2016</u>	<u>10/1/2017</u>	<u>10/1/2018</u>
<u>Actives</u>				
Number	31	37	39	27
Average Current Age	43.2	43.4	41.5	39.2
Average Age at Employment	40.1	40.4	38.6	35.3
Average Past Service	3.1	3.0	2.9	3.9
<u>Service Retirees</u>				
Number	21	21	22	25
Average Current Age	74.5	75.5	75.9	75.8
Average Annual Benefit	\$5,479	\$5,479	\$5,418	\$5,430
<u>Beneficiaries</u>				
Number	1	1	1	0
Average Current Age	83.4	84.4	85.4	N/A
Average Annual Benefit	\$3,600	\$3,600	\$3,600	N/A
<u>Disability Retirees</u>				
Number	0	0	0	0
Average Current Age	N/A	N/A	N/A	N/A
Average Annual Benefit	N/A	N/A	N/A	N/A
<u>Terminated Vested</u>				
Number	1	2	3	4
Average Current Age	29.0	28.7	29.2	37.3
Average Annual Benefit	\$3,900	\$3,900	\$3,900	\$3,900

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	4	2	0	0	0	0	0	0	0	0	0	6
25 - 29	4	0	0	0	0	0	0	0	0	0	0	4
30 - 34	1	0	1	0	1	0	0	0	0	0	0	3
35 - 39	0	0	1	0	0	0	0	0	0	0	0	1
40 - 44	2	0	0	0	0	0	2	0	0	0	0	4
45 - 49	0	0	0	0	0	1	1	0	0	0	0	2
50 - 54	1	0	0	0	0	1	0	0	0	0	0	2
55 - 59	0	0	0	0	0	2	0	0	0	0	0	2
60 - 64	0	0	0	0	0	0	1	0	0	0	0	1
65+	0	0	0	1	1	0	0	0	0	0	0	2
Total	12	2	2	1	2	4	4	0	0	0	0	27

VALUATION PARTICIPANT RECONCILIATION

1. Active lives

a. Number in prior valuation 10/1/2017	39
b. Terminations	
i. Vested (partial or full) with deferred benefits	(1)
ii. Non-vested or full lump sum distribution received	(19)
c. Deaths	
i. Beneficiary receiving benefits	0
ii. No future benefits payable	0
d. Disabled	0
e. Retired	(3)
f. Continuing participants	16
g. New entrants	<u>11</u>
h. Total active life participants in valuation	<u>27</u>

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

	Service Retirees, Vested Receiving <u>Benefits</u>	Receiving Death <u>Benefits</u>	Receiving Disability <u>Benefits</u>	Vested Deferred	<u>Total</u>
a. Number prior valuation	22	1	0	3	26
Retired	3	0	0	0	3
Vested Deferred	0	0	0	1	1
Death, With Survivor	0	0	0	0	0
Death, No Survivor	0	(1)	0	0	(1)
Disabled	0	0	0	0	0
Refund of Contributions	0	0	0	0	0
Rehires	0	0	0	0	0
Expired Annuities	0	0	0	0	0
Data Corrections	0	0	0	0	0
b. Number current valuation	25	0	0	4	29

SUMMARY OF CURRENT PLAN
(Through Ordinance No. 2017-21)

Credited Service

Total years and fractional parts of years of service with the City as Firefighter. Credited Service is based on “Length of Service Award Pension Program – Qualification Criteria.”

Normal Retirement

Date	Earlier of age 62 with the completion of 5 years of Credited Service, age 55 with the completion of 10 years of Credited Service, or age 52 with the completion of 25 years of Credited Service.
Benefit (Monthly)	\$65.00 times Credited Service.
Form of Benefit	10 Year Certain and Life thereafter (options available).

Early Retirement

Date	Age 50 & 10 years of Credited Service.
Benefit Amount	Accrued benefit, reduced 3% per year, from age 55 or age 62.

Disability

Eligibility	
Service Incurred	Covered from Date of Employment.
Non-Service Incurred	Ten years of Credited Service.
Exclusions	Disability resulting from use of drugs, illegal participation in riots, service in military, etc.
Benefit	Benefit accrued to date of disability.
Duration	Payable for life (with 120 payments guaranteed) or until recovery (as determined by the Board).

Death

Eligibility	Five years of Credited Service.
Benefit	Accrued benefit paid to Beneficiary for ten years, beginning at the Member's Normal Retirement Date (unreduced) or Early Retirement Date (reduced).
Post-Retirement	According to option selected, if any.

Vesting (Termination)

Eligibility	Five years of Credited Service.
Benefit	Accrued benefit payable at the Member's election, on his otherwise Early or Normal Retirement Date.

Contributions

Premium Tax	1.85% tax on premiums for fire insurance policies.
City	Remaining amount necessary for payment of Normal (current year's) Cost and amortization of the accrued past service liability over 30 years.

Supplement Benefit (Share Accounts)

Initial Crediting	80% of the \$1,505,738 Excess State Monies Reserve, established as of September 30, 2014, is allocated to eligible participants.
Annual Crediting	Annual Premium tax revenues received by the City in excess of the \$200,000 applicable frozen amount shall be allocated to participant accounts on a pro-rata basis (based on Credited Service).
Investment earnings	Eligible Share Accounts shall be credited or debited annually, based on the Plan's net-of-fees investment performance for the immediately preceding Plan Year.
Maximum Benefit	\$3,000 combined for benefits payable under the "Length of Service Award Pension Program" and allocations pursuant to the Supplement Benefit program.
Vesting	Five years of Credited Service.
Eligibility for Distribution	Eligible for Normal or Early Retirement.

Board of Trustees

- a. Two appointees of City Council;
- b. Two Firefighters elected by the members of the department; and
- c. Fifth member elected by the other four and appointed by Council (as a ministerial

STATEMENT OF FIDUCIARY NET POSITION
SEPTEMBER 30, 2018

<u>ASSETS</u>	MARKET VALUE
Cash and Cash Equivalents:	
Cash	17,544
Total Cash and Equivalents	17,544
Receivables:	
Due from City	8,000
Lump Sum Overpayment	2,638
Total Receivable	10,638
Investments:	
Mutual Funds:	
Fixed Income	1,390,379
Equity	2,583,387
Pooled/Common/Commingled Funds:	
Real Estate	394,745
Total Investments	4,368,511
Total Assets	4,396,693
Total Liabilities	0
NET POSITION RESTRICTED FOR PENSIONS	4,396,693

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED SEPTEMBER 30, 2018
Market Value Basis

ADDITIONS

Contributions:

State	263,091	
Total Contributions		263,091
Investment Income:		
Earnings/(Losses) as disclosed in FMPTF statement	298,219	
Less Investment Expense ¹	(8,161)	
Net Investment Income		290,058
Total Additions		553,149

DEDUCTIONS

Distributions to Members:

Benefit Payments	122,990	
Lump Sum Distributions	5,722	
Lump Sum Share Distributions	39,039	
Total Distributions		167,751
Administrative Expense		29,020
Total Deductions		196,771
Net Increase in Net Position		356,378

NET POSITION RESTRICTED FOR PENSIONS

Beginning of the Year	4,040,315
End of the Year	4,396,693

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

NOTES TO THE FINANCIAL STATEMENTS

(For the Year Ended September 30, 2018)

Plan Description

Plan Administration

The Plan is a single-employer defined benefit pension plan administered by the Plan's Board of Trustees comprised of:

- a. Two appointees of City Council;
- b. Two Firefighters elected by the members of the department; and
- c. Fifth member elected by the other four and appointed by Council (as a ministerial duty).

Plan Membership as of October 1, 2017:

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	23
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	3
Active Plan Members	39
	65
	65

Benefits Provided

The Plan provides retirement, termination, disability and death benefits.

Normal Retirement:

Date: Earlier of age 62 with the completion of 5 years of Credited Service, age 55 with the completion of 10 years of Credited Service, or age 52 with the completion of 25 years of Credited Service.

Benefit: \$65.00 times Credited Service.

Early Retirement:

Date: Age 50 & 10 years of Credited Service.

Benefit: Accrued benefit, reduced 3% per year, from age 55 or age 62.

Disability:

Eligibility: Service Incurred: Covered from Date of Employment.

Non-Service Incurred: 10 years of Credited Service.

Benefit: Benefit accrued to date of disability.

Pre-Retirement Death Benefits:

Eligibility: Five years of Credited Service.

Benefit: Accrued benefit paid to beneficiary for ten years, beginning at the Member's Normal Retirement Date (unreduced) or Early Retirement Date (reduced).

Vesting (Termination):

Eligibility: Five years of Credited Service.

Accrued benefit payable at the Member's election, on his otherwise Early or Normal Retirement Date.

Supplement Benefit (Share Accounts):

Initial Crediting: 80% of the \$1,505,738 Excess State Monies Reserve, established as of September 30, 2014, is allocated to eligible participants.

Annual Crediting: Annual Premium tax revenues received by the City in excess of the \$144,307 applicable frozen amount shall be allocated to participant accounts on a pro-rata basis (based on Credited Service).

Investment earnings: Eligible Share Accounts shall be credited or debited annually, based on the Plan's net-of-fees investment performance for the immediately preceding Plan Year.

Maximum Benefit: \$3,000 combined for benefits payable under the "Length of Service Award Pension Program" and allocations pursuant to the Supplement Benefit program.

Vesting: Five years of Credited Service.

Contributions

Premium Tax: 1.85% tax on premiums for fire insurance policies.

City: Remaining amount necessary for payment of Normal (current year's) Cost and amortization of the accrued past service liability over 30 years.

Investments*Investment Policy:*

The following was the Board's adopted asset allocation policy as of September 30, 2018:

Asset Class	Target Allocation
Core Bonds	15.0%
Core Plus	15.0%
U.S. Large Cap Equity	34.0%
U.S. Small Cap Equity	11.0%
Non - U.S. Equity	15.0%
Core Real Estate	10.0%
Total	100.0%

Concentrations:

The Plan did not hold investments in any one organization that represent 5 percent or more of the Pension Plan's Fiduciary Net Position.

Rate of Return:

For the year ended September 30, 2018, the annual money-weighted rate of return on Pension Plan investments, net of Pension Plan investment expense, was 7.30 percent.

The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

NET PENSION LIABILITY OF THE SPONSOR

The components of the Net Pension Liability of the Sponsor on September 30, 2018 were as follows:

Total Pension Liability	\$ 3,053,773
Plan Fiduciary Net Position	<u>\$ (4,396,693)</u>
Sponsor's Net Pension Liability	<u>\$ (1,342,920)</u>
Plan Fiduciary Net Position as a percentage of Total Pension Liability	143.98%

Actuarial Assumptions:

The Total Pension Liability was determined by an actuarial valuation as of October 1, 2017 updated to September 30, 2018 using the following actuarial assumptions:

Inflation	3.00%
Salary Increases	N/A
Discount Rate	7.00%
Investment Rate of Return	7.00%

Mortality Rate Healthy Lives:

Female: RP2000 Generational, 100% Combined Healthy White Collar, Scale BB.

Male: RP2000 Generational, 10% Combined Healthy White Collar / 90% Combined Healthy Blue Collar, Scale BB.

Mortality Rate 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.

Mortality Rate 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 date of the most recent experience study for which significant assumptions are based upon is not available.

The Long-Term Expected Rate of Return on Pension Plan investments can be determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of Pension Plan investment expenses and inflation) are developed for each major asset class.

For 2018 the inflation rate assumption of the investment advisor was 2.80%.

These ranges are combined to produce the Long-Term Expected Rate of Return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

Best estimates of geometric real rates of return for each major asset class included in the Pension Plan's target asset allocation as of September 30, 2018 are summarized in the following table:

Asset Class	Long Term Expected Real Rate of Return
Core Bonds	1.5%
Core Plus	1.7%
U.S. Large Cap Equity	5.3%
U.S. Small Cap Equity	5.7%
Non - U.S. Equity	5.7%
Core Real Estate	4.5%

Discount Rate:
The Discount Rate used to measure the Total Pension Liability was 7.00 percent.
The projection of cash flows used to determine the Discount Rate assumed that Plan Member contributions will be made at the current contribution rate and that Sponsor contributions will be made at rates equal to the difference between actuarially determined contribution rates and the Member rate. Based on those assumptions, the Pension Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the Long-Term Expected Rate of Return on Pension Plan investments was applied to all periods of projected benefit payments to determine the Total Pension Liability.

	1% Decrease	Current	1% Increase
	6.00%	Discount Rate	8.00%
		7.00%	
Sponsor's Net Pension Liability	\$ (1,149,102)	\$ (1,342,920)	\$ (1,502,639)

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS
Last 10 Fiscal Years

	09/30/2018	09/30/2017	09/30/2016
Total Pension Liability			
Service Cost	135,458	132,449	97,464
Interest	184,393	170,580	169,505
Change in Excess State Money	-	-	-
Share Plan Allocation	63,091	32,597	129,180
Changes of benefit terms	-	-	-
Differences between Expected and Actual Experience	(45,171)	23,865	(57,517)
Changes of assumptions	-	-	185,644
Benefit Payments, including Refunds of Employee Contributions	(167,751)	(162,594)	(513,703)
Net Change in Total Pension Liability	170,020	196,897	10,573
Total Pension Liability - Beginning	2,883,753	2,686,856	2,676,283
Total Pension Liability - Ending (a)	<u>\$ 3,053,773</u>	<u>\$ 2,883,753</u>	<u>\$ 2,686,856</u>
Plan Fiduciary Net Position			
Contributions - State	263,091	232,597	273,487
Net Investment Income	290,058	458,612	262,259
Benefit Payments, including Refunds of Employee Contributions	(167,751)	(162,594)	(513,703)
Administrative Expense	(29,020)	(25,393)	(29,092)
Net Change in Plan Fiduciary Net Position	356,378	503,222	(7,049)
Plan Fiduciary Net Position - Beginning	4,040,315	3,537,093	3,544,142
Plan Fiduciary Net Position - Ending (b)	<u>\$ 4,396,693</u>	<u>\$ 4,040,315</u>	<u>\$ 3,537,093</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ (1,342,920)</u>	<u>\$ (1,156,562)</u>	<u>\$ (850,237)</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	143.98%	140.11%	131.64%
Covered Employee Payroll	N/A	N/A	N/A
Net Pension Liability as a percentage of Covered Employee Payroll	N/A	N/A	N/A

Notes to Schedule:

Ordinance 2015-10, adopted August 4, 2015, and effective March 3, 2015, amended the "Reserve Amount" utilized for the initial Share Plan allocation. A letter of no actuarial impact was submitted for this amendment.

Changes of assumptions:

For measurement date 09/30/2016, amounts reported as changes of assumptions resulted from the following changes:

- As a result of Chapter 2015-157, Laws of Florida, the assumed rates of mortality were changed to the assumptions used by the Florida Retirement System for special risk employees.
- The investment rate of return was lowered from 7.65% to 7.00% per year, compounded annually, net of investment-related expenses.

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS
Last 10 Fiscal Years

	09/30/2015	09/30/2014	09/30/2013
Total Pension Liability			
Service Cost	104,091	113,712	105,631
Interest	94,316	103,447	95,623
Change in Excess State Money	-	237,659	-
Share Plan Allocation	180,335	-	-
Changes of benefit terms	-	-	-
Differences between Expected and Actual Experience	(65,491)	-	-
Changes of assumptions	-	-	-
Benefit Payments, including Refunds of Employee Contributions	(543,000)	(110,810)	(103,288)
Net Change in Total Pension Liability	(229,749)	344,008	97,966
Total Pension Liability - Beginning	2,906,032	2,562,024	2,464,058
Total Pension Liability - Ending (a)	<u>\$ 2,676,283</u>	<u>\$ 2,906,032</u>	<u>\$ 2,562,024</u>
Plan Fiduciary Net Position			
Contributions - State	324,642	381,967	364,571
Net Investment Income	(6,801)	270,512	324,552
Benefit Payments, including Refunds of Employee Contributions	(543,000)	(110,810)	(103,288)
Administrative Expense	(41,443)	(60,987)	(25,630)
Net Change in Plan Fiduciary Net Position	(266,602)	480,682	560,205
Plan Fiduciary Net Position - Beginning	3,810,744	3,330,062	2,769,857
Plan Fiduciary Net Position - Ending (b)	<u>\$ 3,544,142</u>	<u>\$ 3,810,744</u>	<u>\$ 3,330,062</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ (867,859)</u>	<u>\$ (904,712)</u>	<u>\$ (768,038)</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	132.43%	131.13%	129.98%
Covered Employee Payroll	N/A	N/A	N/A
Net Pension Liability as a percentage of Covered Employee Payroll	N/A	N/A	N/A

SCHEDULE OF CONTRIBUTIONS

Last 10 Fiscal Years

Fiscal Year Ended	Actuarially Determined Contribution	Contributions in relation to the Actuarially Determined Contributions	Contribution Deficiency (Excess)	Covered Employee Payroll	Contributions as a percentage of Covered Employee Payroll
09/30/2018	\$ 146,847	\$ 200,000	\$ (53,153)	N/A	N/A
09/30/2017	\$ 109,250	\$ 200,000	\$ (90,750)	N/A	N/A
09/30/2016	\$ 117,326	\$ 144,307	\$ (26,981)	N/A	N/A
09/30/2015	\$ 127,816	\$ 127,816	\$ -	N/A	N/A
09/30/2014	\$ 130,671	\$ 130,671	\$ -	N/A	N/A
09/30/2013	\$ 120,718	\$ 120,718	\$ -	N/A	N/A

Notes to Schedule

Valuation Date: 10/01/2016

Actuarially determined contribution rates are calculated as of October 1, two years prior to the end of the fiscal year in which contributions are reported.

Methods and assumptions used to determine contribution rates:

Mortality Rates:

Healthy 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 were mandated by Chapter 2015-157, Laws of Florida. This law mandates the use of the assumptions 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, 2015 FRS actuarial valuation report for special risk employees. We feel this assumption sufficiently accommodates future mortality improvements.

Termination Rates:

See table on following page (1304B). These rates are conservative compared to long-term plan experience.

Disability Rates:

See table on following page (1201); 75% of disabled lives are assumed to be service-related. This assumption is consistent with other Florida public safety plans.

Retirement Age:

The earlier of attainment of age 55 with 10 years of credited service, age 52 with 25 years of credited service, or age 62 with 5 years of credited service. Also, any member who has reached Normal Retirement is assumed to continue employment for one additional year.

The above assumption is consistent with historical plan experience.

Interest Rate:

7.00% per year, compounded annually, net of investment-related expenses. This assumption is reasonable, given the plan's investment policy and long-term target returns by asset class.

GASB 67

Early Retirement:	Commencing with attainment of Early Retirement Status (age 50 with 10 years of service), members are assumed to retire with an immediate subsidized benefit at the rate of 5% per year. The above assumption is reasonable for the existing plan provisions regarding Early Retirement.
Payroll Growth:	None.
Asset Valuation Method:	Each year, the prior Actuarial Value of Assets is brought forward utilizing the historical geometric 4-year average Market Value return. It is possible that over time this technique will produce an insignificant bias above or below Market Value.

Termination and Disability Rate Table:

Age	% Terminating During the Year	% Becoming Disabled During the Year
20	14.4%	0.03%
30	12.5%	0.04%
40	7.7%	0.07%
50	3.5%	0.18%

SCHEDULE OF INVESTMENT RETURNS
Last 10 Fiscal Years

Fiscal Year Ended	Annual Money-Weighted Rate of Return Net of Investment Expense
09/30/2018	7.30%
09/30/2017	13.21%
09/30/2016	8.02%
09/30/2015	-0.18%
09/30/2014	8.26%
09/30/2013	11.24%

NOTES TO THE FINANCIAL STATEMENTS

(For the Year Ended September 30, 2018)

General Information about the Pension Plan

Plan Description

The Plan is a single-employer defined benefit pension plan administered by the Plan's Board of Trustees comprised of:

- a. Two appointees of City Council;
- b. Two Firefighters elected by the members of the department; and
- c. Fifth member elected by the other four and appointed by Council (as a ministerial duty).

All volunteer firefighters as of February 17, 2009, and all future new volunteer firefighters, shall become members of this system as a condition of employment or upon being added to the roll of volunteer firefighters by the fire chief. All volunteer firefighters are therefore eligible for plan benefits as provided for in the plan document and by applicable law.

Plan Membership as of October 1, 2017:

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	23
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	3
Active Plan Members	<u>39</u>
	<u>65</u>

Benefits Provided

The Plan provides retirement, termination, disability and death benefits.

Normal Retirement:

Date: Earlier of age 62 with the completion of 5 years of Credited Service, age 55 with the completion of 10 years of Credited Service, or age 52 with the completion of 25 years of Credited Service.

Benefit: \$65.00 times Credited Service.

Early Retirement:

Date: Age 50 & 10 years of Credited Service.

Benefit: Accrued benefit, reduced 3% per year, from age 55 or age 62.

Disability:

Eligibility: Service Incurred: Covered from Date of Employment.

Non-Service Incurred: 10 years of Credited Service.

Benefit: Benefit accrued to date of disability.

Pre-Retirement Death Benefits:

Eligibility: Five years of Credited Service.

Benefit: Accrued benefit paid to beneficiary for ten years, beginning at the Member's Normal Retirement Date (unreduced) or Early Retirement Date (reduced).

Vesting (Termination):

Eligibility: Five years of Credited Service.

Accrued benefit payable at the Member's election, on his otherwise Early or Normal Retirement Date.

Supplement Benefit (Share Accounts):

Initial Crediting: 80% of the \$1,505,738 Excess State Monies Reserve, established as of September 30, 2014, is allocated to eligible participants.

Annual Crediting: Annual Premium tax revenues received by the City in excess of the \$144,307 applicable frozen amount shall be allocated to participant accounts on a pro-rata basis (based on Credited Service).

Investment earnings: Eligible Share Accounts shall be credited or debited annually, based on the Plan's net-of-fees investment performance for the immediately preceding Plan Year.

Maximum Benefit: \$3,000 combined for benefits payable under the "Length of Service Award Pension Program" and allocations pursuant to the Supplement Benefit program.

Vesting: Five years of Credited Service.

Contributions

Premium Tax: 1.85% tax on premiums for fire insurance policies.

City: Remaining amount necessary for payment of Normal (current year's) Cost and amortization of the accrued past service liability over 30 years.

Net Pension Liability

The measurement date is September 30, 2018.

The measurement period for the pension expense was October 1, 2017 to September 30, 2018.

The reporting period is October 1, 2017 through September 30, 2018.

The Sponsor's Net Pension Liability was measured as of September 30, 2018.

The Total Pension Liability used to calculate the Net Pension Liability was determined as of that date.

Actuarial Assumptions:

The Total Pension Liability was determined by an actuarial valuation as of October 1, 2017 updated to September 30, 2018 using the following actuarial assumptions:

Inflation	3.00%
Salary Increases	N/A
Discount Rate	7.00%
Investment Rate of Return	7.00%

Mortality Rate Healthy Lives:

Female: RP2000 Generational, 100% Combined Healthy White Collar, Scale BB.

Male: RP2000 Generational, 10% Combined Healthy White Collar / 90% Combined Healthy Blue Collar, Scale BB.

Mortality Rate 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.

Mortality Rate 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 date of the most recent experience study for which significant assumptions are based upon is not available.

The Long-Term Expected Rate of Return on Pension Plan investments can be determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, Net of Pension Plan investment expenses and inflation) are developed for each major asset class.

For 2018 the inflation rate assumption of the investment advisor was 2.80%.

These ranges are combined to produce the Long-Term Expected Rate of Return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

Best estimates of geometric real rates of return for each major asset class included in the Pension Plan's target asset allocation as of September 30, 2018 are summarized in the following table:

Asset Class	Target Allocation	Long Term Expected Real Rate of Return
Core Bonds	15.0%	1.5%
Core Plus	15.0%	1.7%
U.S. Large Cap Equity	34.0%	5.3%
U.S. Small Cap Equity	11.0%	5.7%
Non - U.S. Equity	15.0%	5.7%
Core Real Estate	10.0%	4.5%
Total	100.0%	

Discount Rate:

The Discount Rate used to measure the Total Pension Liability was 7.00 percent.

The projection of cash flows used to determine the Discount Rate assumed that Plan Member contributions will be made at the current contribution rate and that Sponsor contributions will be made at rates equal to the difference between actuarially determined contribution rates and the Member rate. Based on those assumptions, the Pension Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the Long-Term Expected Rate of Return on Pension Plan investments was applied to all periods of projected benefit payments to determine the Total Pension Liability.

CHANGES IN NET PENSION LIABILITY

	Increase (Decrease)		
	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
	(a)	(b)	(a)-(b)
Balances at September 30, 2017	\$ 2,883,753	\$ 4,040,315	\$ (1,156,562)
Changes for a Year:			
Service Cost	135,458	-	135,458
Interest	184,393	-	184,393
Share Plan Allocation	63,091	-	63,091
Differences between Expected and Actual Experience	(45,171)	-	(45,171)
Changes of assumptions	-	-	-
Changes of benefit terms	-	-	-
Contributions - State	-	263,091	(263,091)
Net Investment Income	-	290,058	(290,058)
Benefit Payments, including Refunds of Employee Contributions	(167,751)	(167,751)	-
Administrative Expense	-	(29,020)	29,020
Net Changes	170,020	356,378	(186,358)
Balances at September 30, 2018	\$ 3,053,773	\$ 4,396,693	\$ (1,342,920)

Sensitivity of the Net Pension Liability to changes in the Discount Rate.

	Current Discount		
	1% Decrease	Rate	1% Increase
	6.00%	7.00%	8.00%
Sponsor's Net Pension Liability	\$ (1,149,102)	\$ (1,342,920)	\$ (1,502,639)

Pension Plan Fiduciary Net Position.

Detailed information about the pension Plan's Fiduciary Net Position is available in a separately issued Plan financial report.

PENSION EXPENSE AND DEFERRED OUTFLOWS OF RESOURCES AND DEFERRED INFLOWS OF RESOURCES RELATED TO PENSIONS

For the year ended September 30, 2018, the Sponsor will recognize a Pension Expense of \$151,784.

On September 30, 2018, the Sponsor reported Deferred Outflows of Resources and Deferred Inflows of Resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between Expected and Actual Experience	14,319	80,972
Changes of assumptions	74,258	-
Net difference between Projected and Actual Earnings on Pension Plan investments	-	72,502
Total	<u>\$ 88,577</u>	<u>\$ 153,474</u>

Amounts reported as Deferred Outflows of Resources and Deferred Inflows of Resources related to pensions will be recognized in Pension Expense as follows:

Year ended September 30:	
2019	\$ 24,966
2020	\$ (32,711)
2021	\$ (47,135)
2022	\$ (10,017)
2023	\$ -
Thereafter	\$ -

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS
Last 10 Fiscal Years

	09/30/2018	09/30/2017	09/30/2016
Total Pension Liability			
Service Cost	135,458	132,449	97,464
Interest	184,393	170,580	169,505
Change in Excess State Money	-	-	-
Share Plan Allocation	63,091	32,597	129,180
Changes of benefit terms	-	-	-
Differences between Expected and Actual Experience	(45,171)	23,865	(57,517)
Changes of assumptions	-	-	185,644
Benefit Payments, including Refunds of Employee Contributions	(167,751)	(162,594)	(513,703)
Net Change in Total Pension Liability	170,020	196,897	10,573
Total Pension Liability - Beginning	2,883,753	2,686,856	2,676,283
Total Pension Liability - Ending (a)	<u>\$ 3,053,773</u>	<u>\$ 2,883,753</u>	<u>\$ 2,686,856</u>
Plan Fiduciary Net Position			
Contributions - State	263,091	232,597	273,487
Net Investment Income	290,058	458,612	262,259
Benefit Payments, including Refunds of Employee Contributions	(167,751)	(162,594)	(513,703)
Administrative Expense	(29,020)	(25,393)	(29,092)
Net Change in Plan Fiduciary Net Position	356,378	503,222	(7,049)
Plan Fiduciary Net Position - Beginning	4,040,315	3,537,093	3,544,142
Plan Fiduciary Net Position - Ending (b)	<u>\$ 4,396,693</u>	<u>\$ 4,040,315</u>	<u>\$ 3,537,093</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ (1,342,920)</u>	<u>\$ (1,156,562)</u>	<u>\$ (850,237)</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	143.98%	140.11%	131.64%
Covered Employee Payroll	N/A	N/A	N/A
Net Pension Liability as a percentage of Covered Employee Payroll	N/A	N/A	N/A

Notes to Schedule:

Ordinance 2015-10, adopted August 4, 2015, and effective March 3, 2015, amended the "Reserve Amount" utilized for the initial Share Plan allocation. A letter of no actuarial impact was submitted for this amendment.

Changes of assumptions:

For measurement date 09/30/2016, amounts reported as changes of assumptions resulted from the following changes:

- As a result of Chapter 2015-157, Laws of Florida, the assumed rates of mortality were changed to the assumptions used by the Florida Retirement System for special risk employees.
- The investment rate of return was lowered from 7.65% to 7.00% per year, compounded annually, net of investment-related expenses.

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS
Last 10 Fiscal Years

	09/30/2015	09/30/2014	09/30/2013
Total Pension Liability			
Service Cost	104,091	113,712	105,631
Interest	94,316	103,447	95,623
Change in Excess State Money	-	237,659	-
Share Plan Allocation	180,335	-	-
Changes of benefit terms	-	-	-
Differences between Expected and Actual Experience	(65,491)	-	-
Changes of assumptions	-	-	-
Benefit Payments, including Refunds of Employee Contributions	(543,000)	(110,810)	(103,288)
Net Change in Total Pension Liability	(229,749)	344,008	97,966
Total Pension Liability - Beginning	2,906,032	2,562,024	2,464,058
Total Pension Liability - Ending (a)	<u>\$ 2,676,283</u>	<u>\$ 2,906,032</u>	<u>\$ 2,562,024</u>
Plan Fiduciary Net Position			
Contributions - State	324,642	381,967	364,571
Net Investment Income	(6,801)	270,512	324,552
Benefit Payments, including Refunds of Employee Contributions	(543,000)	(110,810)	(103,288)
Administrative Expense	(41,443)	(60,987)	(25,630)
Net Change in Plan Fiduciary Net Position	(266,602)	480,682	560,205
Plan Fiduciary Net Position - Beginning	3,810,744	3,330,062	2,769,857
Plan Fiduciary Net Position - Ending (b)	<u>\$ 3,544,142</u>	<u>\$ 3,810,744</u>	<u>\$ 3,330,062</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ (867,859)</u>	<u>\$ (904,712)</u>	<u>\$ (768,038)</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	132.43%	131.13%	129.98%
Covered Employee Payroll	N/A	N/A	N/A
Net Pension Liability as a percentage of Covered Employee Payroll	N/A	N/A	N/A

SCHEDULE OF CONTRIBUTIONS

Last 10 Fiscal Years

Fiscal Year Ended	Actuarially Determined Contribution	Contributions in relation to the Actuarially Determined Contributions	Contribution Deficiency (Excess)	Covered Employee Payroll	Contributions as a percentage of Covered Employee Payroll
09/30/2018	\$ 146,847	\$ 200,000	\$ (53,153)	N/A	N/A
09/30/2017	\$ 109,250	\$ 200,000	\$ (90,750)	N/A	N/A
09/30/2016	\$ 117,326	\$ 144,307	\$ (26,981)	N/A	N/A
09/30/2015	\$ 127,816	\$ 127,816	\$ -	N/A	N/A
09/30/2014	\$ 130,671	\$ 130,671	\$ -	N/A	N/A
09/30/2013	\$ 120,718	\$ 120,718	\$ -	N/A	N/A

Notes to Schedule

Valuation Date: 10/01/2016

Actuarially determined contribution rates are calculated as of October 1, two years prior to the end of the fiscal year in which contributions are reported.

Methods and assumptions used to determine contribution rates:

Mortality Rates:

Healthy 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 were mandated by Chapter 2015-157, Laws of Florida. This law mandates the use of the assumptions 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, 2015 FRS actuarial valuation report for special risk employees. We feel this assumption sufficiently accommodates future mortality improvements.

Termination Rates:

See table on following page (1304B). These rates are conservative compared to long-term plan experience.

Disability Rates:

See table on following page (1201); 75% of disabled lives are assumed to be service-related. This assumption is consistent with other Florida public safety plans.

Retirement Age:

The earlier of attainment of age 55 with 10 years of credited service, age 52 with 25 years of credited service, or age 62 with 5 years of credited service. Also, any member who has reached Normal Retirement is assumed to continue employment for one additional year.

The above assumption is consistent with historical plan experience.

Interest Rate:

7.00% per year, compounded annually, net of investment-related expenses. This assumption is reasonable, given the plan's investment policy and long-term target returns by asset class.

GASB 68

Early Retirement:

Commencing with attainment of Early Retirement Status (age 50 with 10 years of service), members are assumed to retire with an immediate subsidized benefit at the rate of 5% per year.

The above assumption is reasonable for the existing plan provisions regarding Early Retirement.

Payroll Growth:

None.

Asset Valuation Method:

Each year, the prior Actuarial Value of Assets is brought forward utilizing the historical geometric 4-year average Market Value return. It is possible that over time this technique will produce an insignificant bias above or below Market Value.

Termination and Disability Rate Table:

Age	% Terminating	% Becoming
	During the	Disabled
	Year	During the
		Year
20	14.4%	0.03%
30	12.5%	0.04%
40	7.7%	0.07%
50	3.5%	0.18%

COMPONENTS OF PENSION EXPENSE
FISCAL YEAR SEPTEMBER 30, 2018

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Beginning balance	\$ (1,156,562)	\$ 235,679	\$ 245,833	\$ -
Total Pension Liability Factors:				
Service Cost	135,458	-	-	135,458
Interest	184,393	-	-	184,393
Share Plan Allocation	63,091	-	-	63,091
Changes in benefit terms	-	-	-	-
Differences between Expected and Actual Experience with regard to economic or demographic assumptions	(45,171)	45,171	-	-
Current year amortization of experience difference	-	(31,453)	(4,773)	(26,680)
Change in assumptions about future economic or demographic factors or other inputs	-	-	-	-
Current year amortization of change in assumptions	-	-	(37,129)	37,129
Benefit Payments	(167,751)	-	-	-
Net change	<u>170,020</u>	<u>13,718</u>	<u>(41,902)</u>	<u>393,391</u>
Plan Fiduciary Net Position:				
Contributions - State	263,091	-	-	-
Projected Net Investment Income	285,143	-	-	(285,143)
Difference between projected and actual earnings on Pension Plan investments	4,915	4,915	-	-
Current year amortization	-	(43,161)	(57,677)	14,516
Benefit Payments	(167,751)	-	-	-
Administrative Expenses	(29,020)	-	-	29,020
Net change	<u>356,378</u>	<u>(38,246)</u>	<u>(57,677)</u>	<u>(241,607)</u>
Ending Balance	<u><u>\$ (1,342,920)</u></u>	<u><u>\$ 211,151</u></u>	<u><u>\$ 146,254</u></u>	<u><u>\$ 151,784</u></u>

AMORTIZATION SCHEDULE - INVESTMENTS

Increase (Decrease) in Pension Expense Arising from the Recognition of the of Differences Between Projected and Actual Earnings on Pension
Plan Investments

Plan Year Ending	Differences Between Projected and Actual Earnings	Recognition Period (Years)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
2015	\$ 288,386	5	\$ 57,677	\$ 57,677	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ (1,433)	5	\$ (287)	\$ (287)	\$ (287)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ (209,454)	5	\$ (41,891)	\$ (41,891)	\$ (41,891)	\$ (41,891)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ (4,915)	5	\$ (983)	\$ (983)	\$ (983)	\$ (983)	\$ (983)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 14,516	\$ 14,516	\$ (43,161)	\$ (42,874)	\$ (983)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

AMORTIZATION SCHEDULE - CHANGES OF ASSUMPTIONS

Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of Changes of Assumptions													
Plan Year Ending	Changes of Assumptions	Recognition Period (Years)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
2016	\$ 185,644	5	\$ 37,129	\$ 37,129	\$ 37,129	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 37,129	\$ 37,129	\$ 37,129	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

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)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
2015	\$ (65,491)	6	\$ (10,915)	\$ (10,915)	\$ (10,915)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ (57,517)	5	\$ (11,503)	\$ (11,503)	\$ (11,503)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ 23,865	5	\$ 4,773	\$ 4,773	\$ 4,773	\$ 4,773	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ (45,171)	5	\$ (9,035)	\$ (9,034)	\$ (9,034)	\$ (9,034)	\$ (9,034)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ (26,680)	\$ (26,679)	\$ (26,679)	\$ (4,261)	\$ (9,034)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -