

ENGLEWOOD AREA FIRE CONTROL DISTRICT
FIREFIGHTER'S PENSION 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

December 7, 2018

Board of Trustees
Firefighters' Pension Board
Englewood Area Fire Control District
516 Paul Morris Dr.
Englewood, FL 34223-3960

Re: Englewood Area Fire Control District Firefighter's Pension Trust Fund

Dear Board:

We are pleased to present to the Board this report of the annual actuarial valuation of the Englewood Area Fire Control District Firefighter's 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. 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 Englewood Area Fire Control District, 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 Englewood Area Fire Control District, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the Firefighter's 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: 
Christine M. O'Neal, FSA, MAAA
Enrolled Actuary #17-7916

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Enclosures

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SUMMARY OF REPORT

The regular annual actuarial valuation of the Englewood Area Fire Control District Firefighter's Pension 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	10/1/2018	10/1/2017
Applicable to Fiscal Year Ending	<u>9/30/2020</u>	<u>9/30/2019</u>
Minimum Required Contribution	\$2,146,116	\$2,300,125
Member Contributions (Est.)	362,765	319,893
District And State Required Contribution	1,783,351	1,980,232
State Contribution (Est.) ¹	375,941	375,941
District Required Contribution	\$1,407,410	\$1,604,291

¹ Per Mutual Consent between the District and Plan Membership, the District may use up to \$396,874.44 in State Contributions for determining its minimum funding requirements. State Contributions in excess of this amount are allocated equally between a District funding credit and Membership Share Plan. The amount shown above is based on State Monies received during the 2018 Calendar Year.


Please note the district has a shortfall contribution of \$200,141.73 for the fiscal year ending September 30, 2018 that is due in addition to the amounts shown above.

Plan experience was favorable overall on the basis of the plan's actuarial assumptions. Sources of favorable experience included an investment return of 8.94% (Actuarial Asset Basis) which exceeded the 7.45% assumption and an average salary increase of 3.16% which fell short of the 6.54% assumption. These gains were offset in part by a loss associated with unfavorable retirement 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: 

Christine M. O'Neal, FSA, EA, MAAA

CHANGES SINCE PRIOR VALUATION

Plan Changes

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

Actuarial Assumption/Method Changes

Since the prior valuation the investment return assumption was lowered from 7.45% to 7.40%. The payroll growth assumption for the Unfunded Actuarial Accrued Liability bases established prior to October 1, 2017 was decreased to 0.87% to comply with Florida Statutes.

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	New Assump <u>10/1/2018</u>	Old Assump <u>10/1/2018</u>	<u>10/1/2017</u>
A. Participant Data			
Actives	49	49	50
Service Retirees	20	20	16
DROP Retirees	5	5	5
Beneficiaries	0	0	0
Disability Retirees	1	1	1
Terminated Vested	<u>2</u>	<u>2</u>	<u>1</u>
 Total	 77	 77	 73
 Total Annual Payroll	 \$3,351,784	 \$3,351,784	 \$3,485,640
Payroll Under Assumed Ret. Age	3,269,669	3,269,669	3,221,811
 Annual Rate of Payments to:			
Service Retirees	1,161,626	1,161,626	917,615
DROP Retirees	319,682	319,682	297,357
Beneficiaries	0	0	0
Disability Retirees	46,272	46,272	46,272
Terminated Vested	58,958	58,958	21,936
 B. Assets			
Actuarial Value (AVA) ¹	30,174,565	30,174,565	27,571,717
Market Value (MVA) ¹	32,423,561	32,423,561	28,624,281
 C. Liabilities			
Present Value of Benefits			
Actives			
Retirement Benefits	22,462,616	22,243,005	24,102,225
Disability Benefits	160,614	159,440	154,809
Death Benefits	216,597	214,596	210,190
Vested Benefits	0	0	0
Refund of Contributions	32,385	32,341	23,132
Service Retirees	15,604,141	15,524,309	12,200,752
DROP Retirees ¹	5,558,712	5,530,316	5,660,501
Beneficiaries	0	0	0
Disability Retirees	469,633	467,815	476,425
Terminated Vested	540,743	536,857	145,135
Share Plan Balances ¹	<u>228,940</u>	<u>228,940</u>	<u>202,648</u>
 Total	 45,274,381	 44,937,619	 43,175,817

C. Liabilities - (Continued)	New Assump <u>10/1/2018</u>	Old Assump <u>10/1/2018</u>	<u>10/1/2017</u>
Present Value of Future Salaries	30,105,310	30,020,118	28,612,728
Present Value of Future Member Contributions	3,010,531	3,002,012	2,575,146
Normal Cost (Retirement)	965,039	954,458	950,129
Normal Cost (Disability)	13,601	13,521	13,113
Normal Cost (Death)	13,019	12,896	12,482
Normal Cost (Vesting)	0	0	0
Normal Cost (Refunds)	<u>5,362</u>	<u>5,360</u>	<u>3,686</u>
Total Normal Cost	997,021	986,235	979,410
Present Value of Future Normal Costs	9,123,196	8,996,840	8,686,839
Accrued Liability (Retirement)	13,590,660	13,495,014	15,644,080
Accrued Liability (Disability)	51,393	51,177	51,675
Accrued Liability (Death)	104,071	103,458	106,279
Accrued Liability (Vesting)	0	0	0
Accrued Liability (Refunds)	2,892	2,893	1,483
Accrued Liability (Inactives) ¹	22,173,229	22,059,297	18,482,813
Share Plan Balances ¹	<u>228,940</u>	<u>228,940</u>	<u>202,648</u>
Total Actuarial Accrued Liability (EAN AL)	36,151,185	35,940,779	34,488,978
Unfunded Actuarial Accrued Liability (UAAL)	5,976,620	5,766,214	6,917,261
Funded Ratio (AVA / EAN AL)	83.5%	84.0%	79.9%

D. Actuarial Present Value of Accrued Benefits	New Assump <u>10/1/2018</u>	Old Assump <u>10/1/2018</u>	<u>10/1/2017</u>
Vested Accrued Benefits			
Inactives + Share Plan Balances ¹	22,402,169	22,288,237	18,685,461
Actives	7,775,135	7,703,860	9,452,700
Member Contributions	<u>2,181,607</u>	<u>2,181,607</u>	<u>2,350,407</u>
Total	32,358,911	32,173,704	30,488,568
Non-vested Accrued Benefits	<u>1,522,100</u>	<u>1,503,561</u>	<u>1,838,020</u>
Total Present Value Accrued Benefits (PVAB)	33,881,011	33,677,265	32,326,588
Funded Ratio (MVA / PVAB)	95.7%	96.3%	88.5%
Increase (Decrease) in Present Value of Accrued Benefits Attributable to:			
Plan Amendments	0	0	
Assumption Changes	203,746	0	
New Accrued Benefits	0	1,017,875	
Benefits Paid	0	(2,000,992)	
Interest	0	2,333,794	
Other	<u>0</u>	<u>0</u>	
Total	203,746	1,350,677	

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

E. Pension Cost

Normal Cost ²	\$1,106,181	\$1,094,478	\$1,080,504
Administrative Expenses ²	66,821	66,837	52,669
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 28 years (as of 10/1/2018) ²	973,114	912,987	1,166,952
Minimum Required Contribution	2,146,116	2,074,302	2,300,125
Expected Member Contributions ²	362,765	362,853	319,893
Expected District and State Contribution	1,783,351	1,711,449	1,980,232

F. Past Contributions

Plan Years Ending:	<u>9/30/2018</u>
District and State Requirement	1,934,443
Actual Contributions Made:	
Members (excluding buyback)	260,018
District	1,558,227
State	<u>376,216</u>
Total	2,194,461

G. Net Actuarial (Gain)/Loss (462,543)

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

² Contributions developed as of 10/1/2018 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>
2018	5,976,620
2019	5,476,901
2020	5,164,888
2027	3,179,276
2033	28,277
2040	349
2046	0

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

	<u>Actual</u>	<u>Assumed</u>
Year Ended 9/30/2018	3.16%	6.54%
Year Ended 9/30/2017	1.48%	6.00%
Year Ended 9/30/2016	1.39%	6.00%
Year Ended 9/30/2015	1.65%	6.00%
Year Ended 9/30/2014	1.28%	6.00%

(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	12.99%	8.94%	7.45%
Year Ended 9/30/2017	14.23%	8.51%	7.50%
Year Ended 9/30/2016	9.25%	8.07%	7.50%
Year Ended 9/30/2015	-0.13%	10.15%	7.50%
Year Ended 9/30/2014	11.24%	10.22%	7.50%

(iii) Average Annual Payroll Growth

(a) Payroll as of:	10/1/2018	\$3,351,784
	10/1/2008	3,073,296
(b) Total Increase		9.06%
(c) Number of Years		10.00
(d) Average Annual Rate		0.87%

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.



Christine M. O'Neal, FSA, EA, MAAA
Enrolled Actuary #17-7916

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

(1) Unfunded Actuarial Accrued Liability as of October 1, 2017	\$6,917,261
(2) Sponsor Normal Cost developed as of October 1, 2017	689,447
(3) Expected administrative expenses for the year ended September 30, 2018	47,741
(4) Expected interest on (1), (2) and (3)	568,478
(5) Sponsor contributions to the System during the year ended September 30, 2018	1,934,443
(6) Expected interest on (5)	59,727
(7) Expected Unfunded Actuarial Accrued Liability as of September 30, 2018 (1)+(2)+(3)+(4)-(5)-(6)	6,228,757
(8) Change to UAAL due to Assumption Change	210,406
(9) Change to UAAL due to Actuarial (Gain)/Loss	(462,543)
(10) Unfunded Actuarial Accrued Liability as of October 1, 2018	5,976,620

<u>Type of Base</u>	<u>Date Established</u>	<u>Years Remaining</u>	<u>10/1/2018 Amount</u>	<u>Amortization Amount</u>
	12/1/1995	17	284,816	26,408
	10/1/1998	10	57,823	7,545
	10/1/1999	11	89,983	10,977
	10/1/2000	12	(43,331)	(4,981)
method change	10/1/2004	16	1,167,367	112,047
prior losses	10/1/2004	10	953,918	124,473
benefit change	10/1/2004	16	1,912,511	183,567
actuarial loss	10/1/2005	10	506,729	66,121
actuarial loss	10/1/2006	10	537,256	70,104
actuarial loss	10/1/2007	10	390,335	50,933
method change	10/1/2008	10	(150,459)	(19,633)
benefit change	10/1/2008	20	2,832,262	240,913
actuarial loss	10/1/2009	1	216,366	216,366
actuarial loss	10/1/2010	2	302,768	156,130
assumption change	10/1/2010	12	2,018,067	231,981
benefit change	10/1/2010	22	(3,306,883)	(268,646)
actuarial loss	10/1/2011	3	306,031	108,472
actuarial gain	10/1/2012	4	(99,541)	(27,273)
actuarial gain	10/1/2013	5	(236,236)	(53,352)

Type of <u>Base</u>	Date <u>Established</u>	Years <u>Remaining</u>	10/1/2018 <u>Amount</u>	Amortization <u>Amount</u>
software change	10/1/2013	15	326,750	32,583
actuarial gain	10/1/2014	6	(431,837)	(83,712)
actuarial gain	10/1/2015	7	(887,289)	(151,803)
assumption change	10/1/2016	18	953,851	85,706
actuarial gain	10/1/2016	8	(490,066)	(75,516)
benefit change	10/1/2016	28	737	54
actuarial gain	10/1/2017	9	(528,082)	(76,758)
assumption change	10/1/2017	19	(455,089)	(42,235)
actuarial gain	10/1/2018	10	(462,543)	(62,457)
assumption change	10/1/2018	20	<u>210,406</u>	<u>19,071</u>
			5,976,620	877,085

DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

(1) Unfunded Actuarial Accrued Liability (UAAL) as of October 1, 2017	\$6,917,261
(2) Expected UAAL as of October 1, 2018	6,228,757
(3) Summary of Actuarial (Gain)/Loss, by component:	
Investment Return (Actuarial Asset Basis)	(411,601)
Salary Increases	(226,426)
Active Decrements	113,190
Inactive Mortality	93,842
Other	<u>(31,548)</u>
Increase in UAAL due to (Gain)/Loss	(462,543)
Assumption Changes	<u>210,406</u>
(4) Actual UAAL as of October 1, 2018	\$5,976,620

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

7.40% (prior year 7.45%) 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.

Salary Increases

<u>Credited Service</u>	<u>Salary Increase</u>
Less than 2	16.0%
2-4	13.0%
5+	5.0%

The above rates were developed and adopted as a result of the September 22, 2017 experience study.

Payroll Growth

0.87% (prior year 1.83%) per year, in compliance with Chapter 112, Florida Statutes. This assumption is reasonable, given that it is based on the Plan’s actual ten-year payroll growth average. No payroll growth assumption is utilized for UAAL bases developed on and after October 1, 2017.

Normal Retirement

Less than 20 years of Credited Service

<u>Age</u>	<u>Probability of Retirement</u>
55	20%
56	20%
57	20%
58+	100%

20 or more years of Credited Service

<u>Credited Service</u>	<u>Probability of Retirement</u>
20	60%
21	20%
22	20%
23	20%
24+	100%

The above rates were developed and adopted as a result of the September 22, 2017 experience study.

Early Retirement

None, based on results of the September 22, 2017 Experience Study.

Administrative Expenses

\$60,227 annually, based on actual expenses incurred in the prior fiscal year.

Funding Method

Entry Age Normal Actuarial Cost Method. The following loads are applied for determination of the Sponsor funding requirement:

Interest – A half year, based on the current 7.40% assumption.

Salary – A full year, based on the current average assumption of 6.99%.

Asset Smoothing Methodology

The Actuarial Value of Assets is brought forward using the historical four-year geometric average of Market Value Returns (net-of-fees). Over time, this may result in an insignificant bias that is above or below the Market Value of Assets.

Disability Rate

See table below (1201). 75% of Disability Retirements are assumed to be Line-of-Duty related. This assumption is consistent with rates utilized by other Florida Municipal Defined Benefit Plans for Firefighters.

<u>Age</u>	<u>% Becoming Disabled During the Year</u>
20	0.03%
30	0.04
40	0.07
50	0.18

Termination Rate

<u>Credited Service</u>	<u>Probability of Withdrawal</u>
Less than 3	4.5%
3-4	3.0%
5-7	2.0%
8+	0.0%

The above rates were developed and adopted as a result of the September 22, 2017 experience study.

GLOSSARY

Total Annual Payroll is the projected annual rate of pay for the fiscal year following 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.

Normal (Current Year's) Cost is the current year's cost for benefits yet to be funded.

Unfunded Actuarial Accrued Liability (UAAL) is a liability which arises when a pension plan is initially established or improved and such establishment or improvement is applicable to all years of past service. Under the Entry Age Normal Actuarial Cost Method, there is also a new UAAL created each year equal to the actuarial gain or loss for that year.

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.

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.

PARTIAL HISTORY OF PREMIUM TAX REFUNDS

<u>Received During Fiscal Year</u>	<u>Amount</u>	<u>Increase from Previous Year</u>
1998	51,446.44	_____ %
1999	50,617.76	-1.6%
2000	93,178.26	84.1%
2001	107,623.20	15.5%
2002	122,563.49	13.9%
2003	144,260.17	17.7%
2004	175,152.10	21.4%
2005	226,110.94	29.1%
2006	266,526.13	17.9%
2007	361,092.49	35.5%
2008	481,783.20	33.4%
2009	448,435.76	-6.9%
2010	418,639.65	-6.6%
2011	406,217.60	-3.0%
2012	457,151.32	12.5%
2013	486,198.18	6.4%
2014	434,645.78	-10.6%
2015	488,784.67	12.5%
2016	450,933.65	-7.7%
2017	421,395.71	-6.6%
2018	376,216.47	-10.7%

STATEMENT OF FIDUCIARY NET POSITION
SEPTEMBER 30, 2018

<u>ASSETS</u>	COST VALUE	MARKET VALUE
Cash and Cash Equivalents:		
Short Term Investments	867,215.67	867,215.67
Cash	(1,372.22)	(1,372.22)
Total Cash and Equivalents	865,843.45	865,843.45
Receivables:		
Member Contributions in Transit	7,219.64	7,219.64
Additional District Contributions	200,141.73	200,141.73
State Contributions	368,397.99	368,397.99
Investment Income	46,899.29	46,899.29
Total Receivable	622,658.65	622,658.65
Investments:		
U. S. Bonds and Bills	2,604,920.22	2,585,173.55
Federal Agency Guaranteed Securities	460,707.69	439,507.49
Corporate Bonds	2,169,364.30	2,172,733.74
Stocks	3,266,157.16	4,163,537.35
Mutual Funds:		
Fixed Income	1,135,954.93	1,016,432.34
Equity	11,771,249.78	17,237,038.80
Pooled/Common/Commingled Funds:		
Real Estate	2,862,705.07	3,336,375.72
Total Investments	24,271,059.15	30,950,798.99
Total Assets	25,759,561.25	32,439,301.09
<u>LIABILITIES</u>		
Payables:		
Investment Expenses	14,637.19	14,637.19
Administrative Expenses	1,102.92	1,102.92
Total Liabilities	15,740.11	15,740.11
NET POSITION RESTRICTED FOR PENSIONS	25,743,821.14	32,423,560.98

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

ADDITIONS

Contributions:

Member	260,017.77
District	1,558,226.53
State	376,216.47

Total Contributions 2,194,460.77

Investment Income:

Net Realized Gain (Loss)	316,753.36
Unrealized Gain (Loss)	2,561,670.48
Net Increase in Fair Value of Investments	2,878,423.84
Interest & Dividends	890,312.26
Less Investment Expense ¹	(102,698.40)

Net Investment Income 3,666,037.70

Total Additions 5,860,498.47

DEDUCTIONS

Distributions to Members:

Benefit Payments	1,114,070.42
Lump Sum DROP Distributions	885,843.83
Lump Sum Share Distributions	0.00
Refunds of Member Contributions	1,077.38

Total Distributions 2,000,991.63

Administrative Expense 60,227.15

Total Deductions 2,061,218.78

Net Increase in Net Position 3,799,279.69

NET POSITION RESTRICTED FOR PENSIONS

Beginning of the Year 28,624,281.29

End of the Year 32,423,560.98

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	-0.13%	
09/30/2016	9.25%	
09/30/2017	14.23%	
09/30/2018	12.99%	
Annualized Rate of Return for prior four (4) years:		8.94%
(A) 10/01/2017 Actuarial Assets:		\$27,571,717.04
(I) Net Investment Income:		
1. Interest and Dividends	890,312.26	
2. Realized Gains (Losses)	316,753.36	
3. Change in Actuarial Value	1,365,238.39	
4. Investment Related Expenses	(102,698.40)	
Total		2,469,605.61
(B) 10/01/2018 Actuarial Assets:		\$30,174,564.64
Actuarial Asset Rate of Return = 2I/(A+B-I):		8.94%
10/01/2018 Limited Actuarial Assets:		\$30,174,564.64
10/01/2018 Market Value of Assets:		\$32,423,560.98
Actuarial Gain/(Loss) due to Investment Return (Actuarial Asset Basis)		\$411,600.94

¹Market Value Basis, net of investment related expenses.

CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS
 SEPTEMBER 30, 2018
 Actuarial Asset Basis

REVENUES

Contributions:		
Member	260,017.77	
District	1,558,226.53	
State	376,216.47	
Total Contributions		2,194,460.77
Earnings from Investments:		
Interest & Dividends	890,312.26	
Net Realized Gain (Loss)	316,753.36	
Change in Actuarial Value	1,365,238.39	
Total Earnings and Investment Gains		2,572,304.01
EXPENDITURES		
Distributions to Members:		
Benefit Payments	1,114,070.42	
Lump Sum DROP Distributions	885,843.83	
Lump Sum Share Distributions	0.00	
Refunds of Member Contributions	1,077.38	
Total Distributions		2,000,991.63
Expenses:		
Investment related ¹	102,698.40	
Administrative	60,227.15	
Total Expenses		162,925.55
Change in Net Assets for the Year		2,602,847.60
Net Assets Beginning of the Year		27,571,717.04
Net Assets End of the Year ²		30,174,564.64

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

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	202,648.00
Prior Year Adjustment	(13.54)
Plus Additions	0.00
Investment Return Earned (est)	26,320.27
Administrative Fees (est)	(15.00)
Less Distributions	0.00
9/30/2018 Balance (est)	228,939.73

DEFERRED RETIREMENT OPTION PLAN ACTIVITY
October 1, 2017 to September 30, 2018

Beginning of the Year Balance	1,278,394.56
Plus Additions	293,024.74
Investment Return Earned	18,588.66
Less Distributions	(885,843.83)
End of the Year Balance	704,164.13

Note: Investment Return Earned is based on available data through June 30, 2018.
One member has not chosen an option therefore using Normal Form as an estimate.

RECONCILIATION OF DISTRICT'S SHORTFALL/(PREPAID) CONTRIBUTION
FOR THE FISCAL YEAR ENDED (FYE) SEPTEMBER 30, 2018

(1) Required District and State Contributions	\$1,934,443.00
(2) Less Allowable State Contribution	<u>(376,216.47)</u>
(3) Required District Contribution for Fiscal 2018	1,558,226.53
(4) Less 2017 Prepaid Contribution	(233,084.80)
(5) Less Actual District Contributions	<u>(1,125,000.00)</u>
(6) Equals District's Shortfall/(Prepaid) Contribution as of September 30, 2018	\$200,141.73

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	41	47	50	49
Average Current Age	40.5	39.8	39.9	39.4
Average Age at Employment	28.3	28.2	28.2	28.6
Average Past Service	12.2	11.6	11.7	10.8
Average Annual Salary	\$74,055	\$70,841	\$69,713	\$68,404
<u>Service Retirees</u>				
Number	12	13	16	20
Average Current Age	56.1	57.2	58.0	57.7
Average Annual Benefit	\$53,067	\$52,282	\$57,351	\$58,081
<u>DROP Retirees</u>				
Number	9	8	5	5
Average Current Age	53.7	54.1	54.0	52.2
Average Annual Benefit	\$59,867	\$64,434	\$59,471	\$63,936
<u>Beneficiaries</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>Disability Retirees</u>				
Number	1	1	1	1
Average Current Age	51.4	52.4	53.4	54.4
Average Annual Benefit	\$46,272	\$46,272	\$46,272	\$46,272
<u>Terminated Vested</u>				
Number	0	0	1	2
Average Current Age ¹	N/A	N/A	42.6	40.4
Average Annual Benefit	N/A	N/A	\$21,936	\$29,479

¹ Effective 10/1/2018, the Average Current Age 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	0	1	1	1	0	0	0	0	0	0	0	3
25 - 29	2	1	1	0	0	1	0	0	0	0	0	5
30 - 34	2	2	0	0	0	0	2	0	0	0	0	6
35 - 39	0	1	1	0	0	1	9	2	0	0	0	14
40 - 44	0	0	0	0	0	0	4	1	1	0	0	6
45 - 49	0	0	1	0	0	0	3	1	1	0	0	6
50 - 54	0	0	0	0	0	0	3	2	2	0	0	7
55 - 59	0	0	0	0	0	0	1	0	0	1	0	2
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	4	5	4	1	0	2	22	6	4	1	0	49

VALUATION PARTICIPANT RECONCILIATION

1. Active lives

a. Number in prior valuation 10/1/2017	50
b. Terminations	
i. Vested (partial or full) with deferred benefits	(1)
ii. Non-vested or full lump sum distribution received	0
c. Deaths	
i. Beneficiary receiving benefits	0
ii. No future benefits payable	0
d. Disabled	0
e. Retired	(1)
f. DROP	<u>(3)</u>
g. Continuing participants	45
h. New entrants	<u>4</u>
i. Total active life participants in valuation	49

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	16	5	0	1	1	23
Retired	4	(3)	0	0	0	1
DROP	0	3	0	0	0	3
Vested Deferred	0	0	0	0	1	1
Death, With Survivor	0	0	0	0	0	0
Death, No Survivor	0	0	0	0	0	0
Disabled	0	0	0	0	0	0
Refund of Contributions	0	0	0	0	0	0
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	20	5	0	1	2	28

SUMMARY OF CURRENT PLAN
(Through Resolution 2017-1394)

<u>Eligibility</u>	Full-time employees who are classified as full-time Firefighters shall participate in the System as a condition of employment.
<u>Credited Service</u>	Total years and fractional parts of years of employment with the District as a Firefighter.
<u>Salary</u>	Base pay plus longevity pay and tax exempt/deferred items.
<u>Average Final Compensation (AFC)</u>	Average Salary for the highest 5 years during the 10 years immediately preceding retirement or termination.
<u>Accrued Benefit</u>	The sum of the following: <ul style="list-style-type: none">a) 3.50% of Average Final Compensation (using the highest two-year average of pensionable earnings prior to January 6, 2012) for each year of Credited Service prior to January 6, 2012, plusb) 3.25% of Average Final Compensation (using the highest five-year average of pensionable earnings earned after January 5, 2012) for each year of Credited Service earned after January 5, 2012.c) Members hired after September 30, 2017 accrue benefits at 3.00% for each year of Credited Service, subject to an 80% of Average Final Compensation maximum, but not less than 2.75% for each year of Credited Service.
<u>Normal Retirement</u>	
Date	Earlier of age 55 and 10 years of Credited Service, or 20 years (25 years for Members hired after September 30, 2017) of Credited Service, regardless of age
Form of Benefit	Ten Year Certain and Life Annuity (options available).

Early Retirement

Eligibility Age 50 with 10 years of Credited Service.
Benefit Accrued Benefit, reduced 3% per year.

Cost of Living Adjustment

Each October 1, after one full year of retirement, Normal and Early Retirees receive a 1.7% (1.0% for Members hired after September 30, 2017) increase in their monthly benefit.

Vesting

Schedule 100% after 10 years of Credited Service.
Benefit Amount Member will receive the vested portion of his (her) accrued benefit payable at the otherwise Normal Retirement Date.

Disability

Eligibility
 Service Incurred Covered from Date of Employment.
 Non-Service Incurred 10 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 but not less than 42% of Average Final Compensation (Service Incurred).
Duration Payable for life with 120 payments guaranteed or until recovery (as determined by the Board). Options available.

Death Benefits

Pre-Retirement
 Vested Monthly accrued benefit payable to designated beneficiary for 10 years.
 Non-Vested Refund of accumulated contributions without interest.
Post-Retirement Benefits payable to beneficiary in accordance with option selected at retirement.

District Contributions

Remaining amount necessary to pay current costs and amortize past service cost, if any, over a period up to 30 years. Minimum Contribution by District is 16.6% of total Salary of the Members.

Member Contributions

According to the following schedule:

<u>Period</u>	<u>Rate</u>
Current through 9/30/2018	8.0%
10/1/2018 – 9/30/2019	9.0%
10/1/2019 and later	10.0%

Members hired after September 30, 2017 have a 10.0% Member Contribution Rate.

Chapter 175 Share Plan

Eligibility

Individual Share Accounts shall be established as of September 30, 2016 for all active Members. Members who retired or entered DROP after September 30, 2015, and prior to September 30, 2016, are also entitled to an allocation of Share Monies.

Annual Crediting

In addition to the initial \$166,670.70 allocation as of September 30, 2016 (based on a Mutual Consent Agreement between the District and Membership), 50% of state monies received by the District in excess of \$396,874.44 shall be allocated to participant accounts on a pro-rata basis (based on Credited Service).

Investment earnings

Net-of-fees Plan performance realized for the fiscal year.

Expenses

Administrative expenses associated with the Share Plan are allocated to participant accounts on a pro-rata basis (based on the percentage of each Share balance to Total Plan Assets).

Board of Trustees

- a. Two District Board appointees,
- b. Two Members of the Department elected by the membership, and
- c. Fifth Member elected by other 4 Trustees.

STATEMENT OF FIDUCIARY NET POSITION
SEPTEMBER 30, 2018

<u>ASSETS</u>	MARKET VALUE
Cash and Cash Equivalents:	
Short Term Investments	867,215
Cash	(1,372)
Total Cash and Equivalents	865,843
Receivables:	
Member Contributions in Transit	7,220
Additional District Contributions	200,142
State Contributions	368,398
Investment Income	46,899
Total Receivable	622,659
Investments:	
U. S. Bonds and Bills	2,585,174
Federal Agency Guaranteed Securities	439,507
Corporate Bonds	2,172,734
Stocks	4,163,537
Mutual Funds:	
Fixed Income	1,016,432
Equity	17,237,039
Pooled/Common/Commingled Funds:	
Real Estate	3,336,376
Total Investments	30,950,799
Total Assets	32,439,301
<u>LIABILITIES</u>	
Payables:	
Investment Expenses	14,637
Administrative Expenses	1,103
Total Liabilities	15,740
NET POSITION RESTRICTED FOR PENSIONS	32,423,561

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

ADDITIONS

Contributions:

Member	260,018	
District	1,325,142	
State	376,216	
 Total Contributions		 1,961,376
 Investment Income:		
Net Increase in Fair Value of Investments	2,878,424	
Interest & Dividends	890,312	
Less Investment Expense ¹	(102,698)	
 Net Investment Income		 3,666,038
 Total Additions		 5,627,414

DEDUCTIONS

Distributions to Members:

Benefit Payments	1,114,071	
Lump Sum DROP Distributions	885,844	
Lump Sum Share Distributions	0	
Refunds of Member Contributions	1,077	
 Total Distributions		 2,000,992
 Administrative Expense		 60,227
 Total Deductions		 2,061,219
 Net Increase in Net Position		 3,566,195
 NET POSITION RESTRICTED FOR PENSIONS		
Beginning of the Year		28,857,366
 End of the Year		 32,423,561

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 District Board appointees,
- b. Two Members of the Department elected by the membership, and
- c. Fifth Member elected by other 4 Trustees.

Plan Membership as of October 1, 2017:

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	22
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	1
Active Plan Members	50
	73

Benefits Provided

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

Accrued Benefit:

The sum of the following:

- a) 3.50% of Average Final Compensation (using the highest two-year average of pensionable earnings prior to January 6, 2012) for each year of Credited Service prior to January 6, 2012, plus
- b) 3.25% of Average Final Compensation (using the highest five-year average of pensionable earnings earned after January 5, 2012) for each year of Credited Service earned after January 5, 2012.
- c) Members hired after September 30, 2017 accrue benefits at 3.00% for each year of Credited Service, subject to an 80% of Average Final Compensation maximum, but not less than 2.75% for each year of Credited Service.

Normal Retirement:

Date: Earlier of age 55 and 10 years of Credited Service, or 20 years (25 years for Members hired after September 30, 2017) of Credited Service, regardless of age.

Early Retirement:

Eligibility: Age 50 with 10 years of Credited Service.

Benefit: Accrued Benefit, reduced 3% per year.

Cost of Living Adjustment:

Each October 1, after one full year of retirement, Normal and Early Retirees receive a 1.7% (1.0% for Members hired after September 30, 2017) increase in their monthly benefit.

Vesting:

Schedule: 100% after 10 years of Credited Service.

Benefit: Member will receive the vested portion of his (her) accrued benefit payable at the otherwise Normal Retirement Date.

Disability:

Service Incurred: Covered from Date of Employment.

Non-Service Incurred: 10 years of Credited Service.

Benefit accrued to date of disability but not less than 42% of Average Final Compensation (Service Incurred).

Pre-Retirement Death Benefits:

Vested: Monthly accrued benefit payable to designated beneficiary for 10 years.

Non-Vested: Refund of accumulated contributions without interest.

Chapter 175 Share Plan:

Eligibility: Individual Share Accounts shall be established as of September 30, 2016 for all active Members. Members who retired or entered DROP after September 30, 2015, and prior to September 30, 2016, are also entitled to an allocation of Share Monies.

Annual Crediting: In addition to the initial \$166,670.70 allocation as of September 30, 2016 (based on a Mutual Consent Agreement between the District and Membership), 50% of state monies received by the District in excess of \$396,874.44 shall be allocated to participant accounts on a pro-rata basis (based on Credited Service).

Investment earnings: Net-of-fees Plan performance realized for the fiscal year.

Expenses: Administrative expenses associated with the Share Plan are allocated to participant accounts on a pro-rata basis (based on the percentage of each Share balance to Total Plan Assets).

Contributions

Member Contributions: According to the following schedule:

<u>Period</u>	<u>Rate</u>
Current through 09/30/2018	8.0%
10/1/2018 - 09/30/2019	9.0%
10/1/2019 and later	10.0%

Members hired after September 30, 2017 have a 10.0% Member Contribution Rate.

District Contributions: Remaining amount necessary to pay current costs and amortize past service cost, if any, over a period up to 30 years. Minimum Contribution by District is 16.6% of total Salary of the Members.

Investments

Investment Policy:

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

<u>Asset Class</u>	<u>Target Allocation</u>
Domestic Equity	50.00%
International Equity	10.00%
Broad Market Fixed Income	20.00%
Global Bond	5.00%
Real Estate	15.00%
Total	100.00%

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 12.99 percent.

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

Deferred Retirement Option Program

Eligibility: Satisfaction of Normal Retirement requirements.

Participation: Not to Exceed 60 Months.

Rate of Return: You may elect to either have your account credited with interest at the rate of 2.65% per annum or credited or debited with an investment return or loss equal to the net investment return realized by the System for that quarter. One change in election is permitted.

The DROP balance as September 30, 2018 is \$704,164.

¹ Investment Return Earned is based on available data through June 30, 2018.

One member has not chosen an option therefore using Normal Form as an estimate.

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	\$ 36,168,646
Plan Fiduciary Net Position	\$ (32,423,561)
Sponsor's Net Pension Liability	\$ 3,745,085
Plan Fiduciary Net Position as a percentage of Total Pension Liability	89.65%

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	2.50%
Salary Increases	Service based
Discount Rate	7.40%
Investment Rate of Return	7.40%

Mortality Rate Healthy Inactive Lives:

Female: RP 2000 Generational, 100% Annuitant White Collar, Scale BB.

Male: RP 2000 Generational, 10% Annuitant White Collar / 90% Annuitant Blue Collar, Scale BB.

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.

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 most recent actuarial experience study used to review the other significant assumptions was dated September 22, 2017.

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 2.50%.

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
Domestic Equity	7.50%
International Equity	8.50%
Broad Market Fixed Income	2.50%
Global Bond	3.50%
Real Estate	4.50%

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Discount Rate:

The Discount Rate used to measure the Total Pension Liability was 7.40 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 6.40%	Current Discount Rate 7.40%	1% Increase 8.40%
Sponsor's Net Pension Liability	\$ 8,400,144	\$ 3,745,085	\$ (72,065)

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	982,723	924,574	812,539
Interest	2,599,311	2,527,569	2,360,906
Change in Excess State Money	24,522	(357,863)	54,059
Share Plan Allocation	-	178,931	-
Changes of benefit terms	-	2,287	-
Differences between Expected and Actual Experience	(529,451)	(392,858)	(631,754)
Changes of assumptions	209,205	(129,288)	933,482
Benefit Payments, including Refunds of Employee Contributions	(2,000,992)	(1,954,853)	(779,795)
Net Change in Total Pension Liability	1,285,318	798,499	2,749,437
Total Pension Liability - Beginning	34,883,328	34,084,829	31,335,392
Total Pension Liability - Ending (a)	\$ 36,168,646	\$ 34,883,328	\$ 34,084,829
Plan Fiduciary Net Position			
Contributions - Employer	1,325,142	1,439,455	1,315,488
Contributions - State	376,216	421,396	450,934
Contributions - Employee	260,018	229,766	214,858
Net Investment Income	3,666,038	3,510,405	2,043,545
Benefit Payments, including Refunds of Employee Contributions	(2,000,992)	(1,954,853)	(779,795)
Administrative Expense	(60,227)	(47,741)	(40,861)
Net Change in Plan Fiduciary Net Position	3,566,195	3,598,428	3,204,169
Plan Fiduciary Net Position - Beginning	28,857,366	25,258,938	22,054,769
Plan Fiduciary Net Position - Ending (b)	\$ 32,423,561	\$ 28,857,366	\$ 25,258,938
Net Pension Liability - Ending (a) - (b)	\$ 3,745,085	\$ 6,025,962	\$ 8,825,891
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	89.65%	82.73%	74.11%
Covered Employee Payroll ¹	\$ 3,235,813	\$ 3,283,434	\$ 3,068,303
Net Pension Liability as a percentage of Covered Employee Payroll	115.74%	183.53%	287.65%

Notes to Schedule:

¹ The Covered Employee Payroll numbers shown are in compliance with GASB 82, except for the 09/30/2015 measurement period which includes DROP payroll.

Changes of benefit terms:

For measurement date 09/30/2017, amounts reported as changes of benefit terms resulted from:

- For Members hired prior to October 1, 2017, an increase in the Member Contribution Rate, to be phased in through October 1, 2019.
- A change in the Normal Retirement Date, benefit accrual rate, maximum benefit percentage, cost-of-living adjustment, and Member Contribution Rate for Members hired after September 30, 2017.

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Changes of Assumptions:

For measurement date 09/30/2018, amounts reported as changes of assumptions resulted from lowering the investment rate of return from 7.45% to 7.40%.

For measurement date 09/30/2017, as a result of the Experience Study dated September 22, 2017, the Board has adopted changes to the following assumptions in conjunction with the 10/01/2017 valuation of the Plan:

- Payroll Growth
- Salary Increases
- Investment Return
- Mortality Rates
- Normal and Early Retirement Rates
- Withdrawal Rates

For measurement date 09/30/2016, 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 inflation assumption rate was lowered from 3.00% to 2.50%, matching the long-term inflation assumption utilized by the Plan's investment consultant.

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

	<u>09/30/2015</u>	<u>09/30/2014</u>
Total Pension Liability		
Service Cost	830,190	907,603
Interest	2,206,787	2,048,033
Change in Excess State Money	91,911	37,771
Share Plan Allocation	-	-
Changes of benefit terms	-	-
Differences between Expected and Actual Experience	(117,198)	-
Changes of assumptions	-	-
Benefit Payments, including Refunds of Employee Contributions	(914,610)	(608,388)
Net Change in Total Pension Liability	<u>2,097,080</u>	<u>2,385,019</u>
Total Pension Liability - Beginning	<u>29,238,312</u>	<u>26,853,293</u>
Total Pension Liability - Ending (a)	<u><u>\$ 31,335,392</u></u>	<u><u>\$ 29,238,312</u></u>
Plan Fiduciary Net Position		
Contributions - Employer	1,098,040	1,022,327
Contributions - State	488,785	434,646
Contributions - Employee	204,823	215,077
Net Investment Income	(27,879)	2,051,288
Benefit Payments, including Refunds of Employee Contributions	(914,610)	(608,388)
Administrative Expense	(51,582)	(30,621)
Net Change in Plan Fiduciary Net Position	<u>797,577</u>	<u>3,084,328</u>
Plan Fiduciary Net Position - Beginning	<u>21,257,192</u>	<u>18,172,863</u>
Plan Fiduciary Net Position - Ending (b)	<u><u>\$ 22,054,769</u></u>	<u><u>\$ 21,257,192</u></u>
Net Pension Liability - Ending (a) - (b)	<u><u>\$ 9,280,623</u></u>	<u><u>\$ 7,981,120</u></u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	70.38%	72.70%
Covered Employee Payroll ¹	\$ 3,689,554	\$ 3,072,530
Net Pension Liability as a percentage of Covered Employee Payroll	251.54%	259.76%

Notes to Schedule:

¹ The Covered Employee Payroll numbers shown are in compliance with GASB 82, except for the 09/30/2015 measurement period which includes DROP payroll.

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 ¹	Contributions as a percentage of Covered Employee Payroll
09/30/2018	\$ 1,934,443	\$ 1,904,006	\$ 30,437	\$ 3,235,813	58.84%
09/30/2017	\$ 1,823,234	\$ 2,015,261	\$ (192,027)	\$ 3,283,434	56.30%
09/30/2016	\$ 1,671,305	\$ 1,712,362	\$ (41,057)	\$ 3,068,303	55.81%
09/30/2015	\$ 1,494,914	\$ 1,494,914	\$ -	\$ 3,689,554	40.52%
09/30/2014	\$ 1,419,201	\$ 1,419,201	\$ -	\$ 3,072,530	46.19%

¹ The Covered Employee Payroll numbers shown are in compliance with GASB 82, except for the 09/30/2015 measurement period which includes DROP payroll.

Notes to Schedule

Valuation Date: 10/01/2016 (AIS 11/22/2017)
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: *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 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, 2015 FRS actuarial valuation report. We feel this assumption sufficiently accommodates future mortality improvements.

Interest Rate: 7.5% per year compounded annually, net of investment-related expenses. This assumption is supported by the target asset allocation of the trust and the expected long-term return by asset class.

Retirement Age: Earlier age 55 and 10 years of service or 23 years of service, regardless of age. Also, any member who has reached Normal Retirement is assumed to continue employment for one additional year.

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

Cost-of-Living Adjustment: 1.7% beginning one year after retirement for Normal and Early Retirees.

Payroll Growth: 3.41% per year. This assumption is limited by State Statute to not exceed the ten-year average payroll growth determined as of the valuation date.

Funding Method: Entry Age Normal Actuarial Cost Method.

GASB 67

Asset Smoothing Methodology:	The Actuarial Value of Assets is brought forward using the historical four-year geometric average of Market Value Returns (net-of-fees). Over time, this may result in an insignificant bias that is above or below the Market Value of Assets.
Disability Rates:	See table below (1201). 75% of Disability Retirements are assumed to be Line-of-Duty related. This assumption is consistent with rates utilized by other Florida Municipal Defined Benefit Plans for Firefighters.
Termination Rates:	See table below (1302). This assumption is consistent with rates utilized by other Florida Municipal Defined Benefit Plans for Firefighters.
Salary Increases:	6.0% per year until the assumed retirement age; see table below. This assumption is consistent with the Plan's long-term experience.

Termination and Disability Rate Table:

Age	% Terminating During the Year	% Becoming Disabled During the Year
20	6.0%	0.03%
30	5.0%	0.04%
40	2.6%	0.07%
50	0.8%	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	12.99%
09/30/2017	14.23%
09/30/2016	9.25%
09/30/2015	-0.13%
09/30/2014	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 District Board appointees,
- b. Two Members of the Department elected by the membership, and
- c. Fifth Member elected by other 4 Trustees.

Full-time employees who are classified as full-time Firefighters shall participate in the System as a condition of employment.

Plan Membership as of October 1, 2017:

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	22
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	1
Active Plan Members	50
	73

Benefits Provided

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

Accrued Benefit:

The sum of the following:

- a) 3.50% of Average Final Compensation (using the highest two-year average of pensionable earnings prior to January 6, 2012) for each year of Credited Service prior to January 6, 2012, plus
- b) 3.25% of Average Final Compensation (using the highest five-year average of pensionable earnings earned after January 5, 2012) for each year of Credited Service earned after January 5, 2012.
- c) Members hired after September 30, 2017 accrue benefits at 3.00% for each year of Credited Service, subject to an 80% of Average Final Compensation maximum, but not less than 2.75% for each year of Credited Service.

Normal Retirement:

Date: Earlier of age 55 and 10 years of Credited Service, or 20 years (25 years for Members hired after September 30, 2017) of Credited Service, regardless of age.

Early Retirement:

Eligibility: Age 50 with 10 years of Credited Service.

Benefit: Accrued Benefit, reduced 3% per year.

Cost of Living Adjustment:

Each October 1, after one full year of retirement, Normal and Early Retirees receive a 1.7% (1.0% for Members hired after September 30, 2017) increase in their monthly benefit.

Vesting:

Schedule: 100% after 10 years of Credited Service.

Benefit: Member will receive the vested portion of his (her) accrued benefit payable at the otherwise Normal Retirement Date.

Disability:

Service Incurred: Covered from Date of Employment.

Non-Service Incurred: 10 years of Credited Service.

Benefit accrued to date of disability but not less than 42% of Average Final Compensation (Service Incurred).

Pre-Retirement Death Benefits:

Vested: Monthly accrued benefit payable to designated beneficiary for 10 years.

Non-Vested: Refund of accumulated contributions without interest.

Chapter 175 Share Plan:

Eligibility: Individual Share Accounts shall be established as of September 30, 2016 for all active Members. Members who retired or entered DROP after September 30, 2015, and prior to September 30, 2016, are also entitled to an allocation of Share Monies.

Annual Crediting: In addition to the initial \$166,670.70 allocation as of September 30, 2016 (based on a Mutual Consent Agreement between the District and Membership), 50% of state monies received by the District in excess of \$396,874.44 shall be allocated to participant accounts on a pro-rata basis (based on Credited Service).

Investment earnings: Net-of-fees Plan performance realized for the fiscal year. □

Expenses: Administrative expenses associated with the Share Plan are allocated to participant accounts on a pro-rata basis (based on the percentage of each Share balance to Total Plan Assets).

Contributions

Member Contributions: According to the following schedule:

<u>Period</u>	<u>Rate</u>
Current through 09/30/2018	8.0%
10/1/2018 - 09/30/2019	9.0%
10/1/2019 and later	10.0%

Members hired after September 30, 2017 have a 10.0% Member Contribution Rate. □

District Contributions: Remaining amount necessary to pay current costs and amortize past service cost, if any, over a period up to 30 years. Minimum Contribution by District is 16.6% of total Salary of the Members.

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	2.50%
Salary Increases	Service based
Discount Rate	7.40%
Investment Rate of Return	7.40%

Mortality Rate Healthy Inactive Lives:

Female: RP 2000 Generational, 100% Annuitant White Collar, Scale BB.

Male: RP 2000 Generational, 10% Annuitant White Collar / 90% Annuitant Blue Collar, Scale BB.

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.

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 most recent actuarial experience study used to review the other significant assumptions was dated September 22, 2017.

GASB 68

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 2.50%.

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:

<u>Asset Class</u>	<u>Target Allocation</u>	<u>Long Term Expected Real Rate of Return</u>
Domestic Equity	50.00%	7.50%
International Equity	10.00%	8.50%
Broad Market Fixed Income	20.00%	2.50%
Global Bond	5.00%	3.50%
Real Estate	15.00%	4.50%
<u>Total</u>	<u>100.00%</u>	

Discount Rate:

The Discount Rate used to measure the Total Pension Liability was 7.40 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	\$ 34,883,328	\$ 28,857,366	\$ 6,025,962
Changes for a Year:			
Service Cost	982,723	-	982,723
Interest	2,599,311	-	2,599,311
Change in Excess State Money	24,522	-	24,522
Share Plan Allocation	-	-	-
Differences between Expected and Actual Experience	(529,451)	-	(529,451)
Changes of assumptions	209,205	-	209,205
Changes of benefit terms	-	-	-
Contributions - Employer	-	1,325,142	(1,325,142)
Contributions - State	-	376,216	(376,216)
Contributions - Employee	-	260,018	(260,018)
Net Investment Income	-	3,666,038	(3,666,038)
Benefit Payments, including Refunds of Employee Contributions	(2,000,992)	(2,000,992)	-
Administrative Expense	-	(60,227)	60,227
Net Changes	1,285,318	3,566,195	(2,280,877)
Balances at September 30, 2018	\$ 36,168,646	\$ 32,423,561	\$ 3,745,085

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

	Current Discount		
	1% Decrease	Rate	1% Increase
	6.40%	7.40%	8.40%
Sponsor's Net Pension Liability	\$ 8,400,144	\$ 3,745,085	\$ (72,065)

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
FISCAL YEAR SEPTEMBER 30, 2018**

For the year ended September 30, 2018, the Sponsor will recognize a Pension Expense of \$676,039.

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	-	1,089,373
Changes of assumptions	646,056	92,350
Net difference between Projected and Actual Earnings on Pension Plan investments	-	1,991,260
Total	\$ 646,056	\$ 3,172,983

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:		
2020	\$	(785,285)
2021	\$	(696,569)
2022	\$	(424,320)
2023	\$	(120,343)
2024	\$	(45,750)
Thereafter	\$	(454,660)

Payable to the Pension Plan

On September 30, 2018, the Sponsor reported a payable of \$200,142 for the outstanding amount of contributions of the Pension Plan required for the year ended September 30, 2018.

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

Last 10 Fiscal Years

Measurement Date ²	09/30/2018	09/30/2017	09/30/2016
Total Pension Liability			
Service Cost	982,723	924,574	812,539
Interest	2,599,311	2,527,569	2,360,906
Change in Excess State Money	24,522	(357,863)	54,059
Share Plan Allocation	-	178,931	-
Changes of benefit terms	-	2,287	-
Differences between Expected and Actual Experience	(529,451)	(392,858)	(631,754)
Changes of assumptions	209,205	(129,288)	933,482
Benefit Payments, including Refunds of Employee Contributions	(2,000,992)	(1,954,853)	(779,795)
Net Change in Total Pension Liability	1,285,318	798,499	2,749,437
Total Pension Liability - Beginning	34,883,328	34,084,829	31,335,392
Total Pension Liability - Ending (a)	\$ 36,168,646	\$ 34,883,328	\$ 34,084,829
Plan Fiduciary Net Position			
Contributions - Employer	1,325,142	1,439,455	1,315,488
Contributions - State	376,216	421,396	450,934
Contributions - Employee	260,018	229,766	214,858
Net Investment Income	3,666,038	3,510,405	2,043,545
Benefit Payments, including Refunds of Employee Contributions	(2,000,992)	(1,954,853)	(779,795)
Administrative Expense	(60,227)	(47,741)	(40,861)
Net Change in Plan Fiduciary Net Position	3,566,195	3,598,428	3,204,169
Plan Fiduciary Net Position - Beginning	28,857,366	25,258,938	22,054,769
Plan Fiduciary Net Position - Ending (b)	\$ 32,423,561	\$ 28,857,366	\$ 25,258,938
Net Pension Liability - Ending (a) - (b)	\$ 3,745,085	\$ 6,025,962	\$ 8,825,891
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	89.65%	82.73%	74.11%
Covered Employee Payroll ¹	\$ 3,235,813	\$ 3,283,434	\$ 3,068,303
Net Pension Liability as a percentage of Covered Employee Payroll	115.74%	183.53%	287.65%

Notes to Schedule:

¹ The Covered Employee Payroll numbers shown are in compliance with GASB 82, except for the 09/30/2015 measurement period which includes DROP payroll.

² Effective for the City's fiscal year ending 09/30/2018, the GASB 68 measurement date of the Pension Expense has been changed from 09/30/2017 to 09/30/2018.

Changes of benefit terms:

For measurement date 09/30/2017, amounts reported as changes of benefit terms resulted from:

- For Members hired prior to October 1, 2017, an increase in the Member Contribution Rate, to be phased in through October 1, 2019.
- A change in the Normal Retirement Date, benefit accrual rate, maximum benefit percentage, cost-of-living adjustment, and Member Contribution Rate for Members hired after September 30, 2017.

Changes of Assumptions:

For measurement date 09/30/2017, as a result of the Experience Study dated September 22, 2017, the Board has adopted changes to the following assumptions in conjunction with the 10/01/2017 valuation of the Plan:

- Payroll Growth
- Salary Increases
- Investment Return
- Mortality Rates
- Normal and Early Retirement Rates
- Withdrawal Rates

For measurement date 09/30/2016, 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 inflation assumption rate was lowered from 3.00% to 2.50%, matching the long-term inflation assumption utilized by the Plan's investment consultant.

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

Measurement Date ²	09/30/2015	09/30/2014
Total Pension Liability		
Service Cost	830,190	907,603
Interest	2,206,787	2,048,033
Change in Excess State Money	91,911	37,771
Share Plan Allocation	-	-
Changes of benefit terms	-	-
Differences between Expected and Actual Experience	(117,198)	-
Changes of assumptions	-	-
Benefit Payments, including Refunds of Employee Contributions	(914,610)	(608,388)
Net Change in Total Pension Liability	2,097,080	2,385,019
Total Pension Liability - Beginning	29,238,312	26,853,293
Total Pension Liability - Ending (a)	<u>\$ 31,335,392</u>	<u>\$ 29,238,312</u>
Plan Fiduciary Net Position		
Contributions - Employer	1,098,040	1,022,327
Contributions - State	488,785	434,646
Contributions - Employee	204,823	215,077
Net Investment Income	(27,879)	2,051,288
Benefit Payments, including Refunds of Employee Contributions	(914,610)	(608,388)
Administrative Expense	(51,582)	(30,621)
Net Change in Plan Fiduciary Net Position	797,577	3,084,328
Plan Fiduciary Net Position - Beginning	21,257,192	18,172,863
Plan Fiduciary Net Position - Ending (b)	<u>\$ 22,054,769</u>	<u>\$ 21,257,192</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 9,280,623</u>	<u>\$ 7,981,120</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	70.38%	72.70%
Covered Employee Payroll ¹	\$ 3,689,554	\$ 3,072,530
Net Pension Liability as a percentage of Covered Employee Payroll	251.54%	259.76%

Notes to Schedule:

¹ The Covered Employee Payroll numbers shown are in compliance with GASB 82, except for the 09/30/2015 measurement period which includes DROP payroll.

² Effective for the City's fiscal year ending 09/30/2018, the GASB 68 measurement date of the Pension Expense has been changed from 09/30/2017 to 09/30/2018.

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 ¹	Contributions as a percentage of Covered Employee Payroll
09/30/2018	\$ 1,934,443	\$ 1,904,006	\$ 30,437	\$ 3,235,813	58.84%
09/30/2017	\$ 1,823,234	\$ 2,015,261	\$ (192,027)	\$ 3,283,434	56.30%
09/30/2016	\$ 1,671,305	\$ 1,712,362	\$ (41,057)	\$ 3,068,303	55.81%
09/30/2015	\$ 1,494,914	\$ 1,494,914	\$ -	\$ 3,689,554	40.52%
09/30/2014	\$ 1,419,201	\$ 1,419,201	\$ -	\$ 3,072,530	46.19%

¹ The Covered Employee Payroll numbers shown are in compliance with GASB 82, except for the 09/30/2015 measurement period which includes DROP payroll.

Notes to Schedule

Valuation Date: 10/01/2016 (AIS 11/22/2017)

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:

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 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, 2015 FRS actuarial valuation report. We feel this assumption sufficiently accommodates future mortality improvements.

Interest Rate:

7.5% per year compounded annually, net of investment-related expenses. This assumption is supported by the target asset allocation of the trust and the expected long-term return by asset class.

Retirement Age:

Earlier age 55 and 10 years of service or 23 years of service, regardless of age. Also, any member who has reached Normal Retirement is assumed to continue employment for one additional year.

Early Retirement:

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

Cost-of-Living Adjustment:

1.7% beginning one year after retirement for Normal and Early Retirees.

Payroll Growth:

3.41% per year. This assumption is limited by State Statute to not exceed the ten-year average payroll growth determined as of the valuation date.

Funding Method:

Entry Age Normal Actuarial Cost Method.

GASB 68

Asset Smoothing Methodology: The Actuarial Value of Assets is brought forward using the historical four-year geometric average of Market Value Returns (net-of-fees). Over time, this may result in an insignificant bias that is above or below the Market Value of Assets.

Disability Rates: See table below (1201). 75% of Disability Retirements are assumed to be Line-of-Duty related. This assumption is consistent with rates utilized by other Florida Municipal Defined Benefit Plans for Firefighters.

Termination Rates: See table below (1302). This assumption is consistent with rates utilized by other Florida Municipal Defined Benefit Plans for Firefighters.

Salary Increases: 6.0% per year until the assumed retirement age; see table below. This assumption is consistent with the Plan's long-term experience.

Termination and Disability Rate Table:

Age	% Terminating During the Year	% Becoming Disabled During the Year
20	6.0%	0.03%
30	5.0%	0.04%
40	2.6%	0.07%
50	0.8%	0.18%

EXPENSE DEVELOPMENT AND AMORTIZATION SCHEDULES

The following information is not required to be disclosed but is provided for informational purposes.

COMPONENTS OF PENSION EXPENSE
FISCAL YEAR SEPTEMBER 30, 2018

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Beginning balance	\$ 6,025,962	\$ 2,554,939	\$ 1,283,570	\$ -
Total Pension Liability Factors:				
Service Cost	982,723	-	-	982,723
Interest	2,599,311	-	-	2,599,311
Change in Excess State Money	24,522	-	-	24,522
Share Plan Allocation	-	-	-	-
Changes in benefit terms	-	-	-	-
Differences between Expected and Actual Experience with regard to economic or demographic assumptions	(529,451)	529,451	-	-
Current year amortization of experience difference	-	(256,583)	-	(256,583)
Change in assumptions about future economic or demographic factors or other inputs	209,205	-	209,205	-
Current year amortization of change in assumptions	-	(18,470)	(185,469)	166,999
Benefit Payments, including Refunds of Employee Contributions	(2,000,992)	-	-	-
Net change	<u>1,285,318</u>	<u>254,398</u>	<u>23,736</u>	<u>3,516,972</u>
Plan Fiduciary Net Position:				
Contributions - Employer	1,325,142	-	-	-
Contributions - State	376,216	-	-	-
Contributions - Employee	260,018	-	-	(260,018)
Projected Net Investment Income	2,146,155	-	-	(2,146,155)
Difference between projected and actual earnings on Pension Plan investments	1,519,883	1,519,883	-	-
Current year amortization	-	(825,612)	(330,625)	(494,987)
Benefit Payments, including Refunds of Employee Contributions	(2,000,992)	-	-	-
Administrative Expenses	(60,227)	-	-	60,227
Net change	<u>3,566,195</u>	<u>694,271</u>	<u>(330,625)</u>	<u>(2,840,933)</u>
Ending Balance	<u>\$ 3,745,085</u>	<u>\$ 3,503,608</u>	<u>\$ 976,681</u>	<u>\$ 676,039</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
2014	\$ (649,584)	5	\$ (129,917)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2015	\$ 1,653,123	5	\$ 330,625	\$ 330,625	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ (345,914)	5	\$ (69,183)	\$ (69,183)	\$ (69,183)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ (1,612,684)	5	\$ (322,537)	\$ (322,537)	\$ (322,537)	\$ (322,537)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ (1,519,883)	5	\$ (303,975)	\$ (303,977)	\$ (303,977)	\$ (303,977)	\$ (303,977)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ (494,987)	\$ (365,072)	\$ (695,697)	\$ (626,514)	\$ (303,977)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

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	\$ 933,482	6	\$ 155,580	\$ 155,580	\$ 155,580	\$ 155,580	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ (129,288)	7	\$ (18,470)	\$ (18,470)	\$ (18,470)	\$ (18,470)	\$ (18,470)	\$ (18,470)	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ 209,205	7	\$ 29,889	\$ 29,886	\$ 29,886	\$ 29,886	\$ 29,886	\$ 29,886	\$ 29,886	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 166,999	\$ 166,996	\$ 166,996	\$ 166,996	\$ 11,416	\$ 11,416	\$ 29,886	\$ -	\$ -	\$ -	\$ -

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	\$ (117,198)	6	\$ (19,533)	\$ (19,533)	\$ (19,533)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ (631,754)	6	\$ (105,292)	\$ (105,292)	\$ (105,292)	\$ (105,292)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ (392,858)	7	\$ (56,123)	\$ (56,123)	\$ (56,123)	\$ (56,123)	\$ (56,123)	\$ (56,123)	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ (529,451)	7	\$ (75,635)	\$ (75,636)	\$ (75,636)	\$ (75,636)	\$ (75,636)	\$ (75,636)	\$ (75,636)	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ (256,583)	\$ (256,584)	\$ (256,584)	\$ (237,051)	\$ (131,759)	\$ (131,759)	\$ (75,636)	\$ -	\$ -	\$ -	\$ -