

ST. LUCIE COUNTY FIRE 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

September 16, 2019

Board of Trustees
St. Lucie County Fire District
Firefighters' Pension Trust Fund
5160 N.W. Milner Dr.
Port St. Lucie, FL 34983

Re: St. Lucie County Fire 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 St. Lucie County Fire 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 St. Lucie County Fire 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.

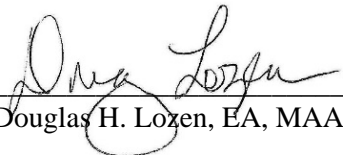
The undersigned are familiar with the immediate and long-term aspects of pension valuations, and meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. All of the sections of this report are considered an integral part of the 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 St. Lucie County Fire 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 us at 239-433-5500.

Respectfully submitted,

Foster & Foster, Inc.

By: 
Douglas H. Lozen, EA, MAAA

By: 
Drew D. Ballard, EA, MAAA

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SUMMARY OF REPORT

The regular annual actuarial valuation of the St. Lucie County Fire 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 District's requirement is payable as a lump sum on or before January 1, 2020.

The contribution requirements, compared with those set forth in the September 13, 2019, Actuarial Impact Statement (determined as of October 1, 2017), 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	\$18,402,461	\$16,968,323
Member Contributions (Est.)	2,087,413	1,695,078
District And State Required Contribution	16,315,048	15,273,245
State Contribution (Est.) ¹	2,212,862	2,112,321
District Required Contribution ²	\$14,102,186	\$13,160,924
District % of payroll estimate under the Assumed Retirement Age (est.) ³	41.35%	39.60%

¹ As established with Resolution 605-15 and the associated May 3, 2016 Actuarial Impact Statement, the District has access to annual State Contributions up to \$2,112,321 for determination of its minimum funding requirements; the State Contribution disclosed in the right-hand column of the above table reflects this amount. Per proposed Resolution 674-19, the District has access to all State Monies for fiscal 2019/2020; accordingly, the State Contribution estimate in the left-hand column above reflects State Monies reported by the Division of Retirement for the fiscal year ended September 30, 2019.

¹ Additionally, it is our understanding that the Union and District have a tentative agreement allowing the District access to all State Contributions for fiscal 2019 (per August 27, 2019 email correspondence between the District Attorney and Pension Board Attorney). Upon ratification of this agreement, we will submit a revised funding letter to reflect the additional State Monies for the fiscal year ended September 30, 2019.

² Please note that the District has access to a prepaid contribution of \$132,149.59 that is available to offset a portion of the above stated requirements for the fiscal year ending September 30, 2019.

³ The estimated District percentage of payroll funding requirement is based on Payroll Under the Assumed Retirement Age, projected one year utilizing the applicable assumed salary increase average.

For budgeting purposes, the estimated District Contribution is \$14,102,186 and is assumed to be paid as a lump sum on or before January 1, 2020. Please note the District's precise obligation must be adjusted to reflect any difference in the receipt and agreed use of Chapter 175 monies received during the applicable fiscal year. The above estimates are based on the described use of State Monies from the prior page.

As you can see, the Minimum Required Contribution shows an increase when compared to the results determined in the October 1, 2017 actuarial valuation report (as modified by the September 13, 2019, Actuarial Impact Statement). The increase is attributable to plan experience realized by the plan during the year and a decrease in the payroll growth assumption.

Plan experience was unfavorable overall on the basis of the plan's actuarial assumptions. Sources of unfavorable experience included an investment return of 6.37% (Actuarial Asset Basis) which fell short of the 8.00% assumption and less inactive mortality than expected. These losses were offset in part by a gain associated with an average salary increase of 4.20% which fell short of the 6.86% assumption.

CHANGES SINCE PRIOR VALUATION

Plan Changes

Per a recent Collective Bargaining Agreement, Proposed Resolution No. 674-19 incorporates changes to the Member Contribution Rate and payment of accumulated sick and vacation leave time for future Members entering DROP with less than 10 years of service. Please refer to the September 13, 2019 Actuarial Impact Statement for additional details.

Actuarial Assumption/Method Changes

Effective October 1, 2017, the valuation of the Plan incorporates a quarter-year interest load (using the current 8% valuation assumption for investment return) for determination of the Total and District funding requirements to reflect the District's lump sum funding approach.

Effective October 1, 2018, the payroll growth assumption was lowered from 2.90% to 1.58%, in compliance with Chapter 112, Florida Statutes. This change had an impact only on the amortization payment for the 10/1/2015 UAAL Fresh Start Base.

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	<u>10/1/2018</u>	<u>10/1/2017</u>
A. Participant Data		
Actives	353	345
Service Retirees	144	136
DROP Retirees	35	36
Beneficiaries	16	16
Disability Retirees	17	17
Terminated Vested	<u>56</u>	<u>54</u>
Total	621	604
Total Annual Payroll	\$32,038,980	\$31,241,424
Payroll Under Assumed Ret. Age	31,906,504	31,114,789
Annual Rate of Payments to:		
Service Retirees	10,997,517	10,230,164
DROP Retirees	2,916,463	2,889,803
Beneficiaries	607,943	686,892
Disability Retirees	917,120	917,120
Terminated Vested	770,061	778,691
B. Assets		
Actuarial Value (AVA) ¹	252,105,896	235,393,178
Market Value (MVA) ¹	248,361,567	230,573,754
C. Liabilities		
Present Value of Benefits		
Actives		
Retirement Benefits	201,652,672	194,208,407
Disability Benefits	9,003,772	8,880,458
Death Benefits	4,002,091	3,975,025
Vested Benefits	5,619,188	5,632,343
Refund of Contributions	48,744	25,432
Service Retirees	116,727,390	108,743,499
DROP Retirees ¹	68,575,066	65,263,696
Beneficiaries	5,168,172	5,391,314
Disability Retirees	9,946,396	10,024,368
Terminated Vested	5,323,905	5,606,167
Excess State Monies Reserve	<u>268,056</u>	<u>248,393</u>
Total	426,335,452	407,999,102

C. Liabilities - (Continued)	<u>10/1/2018</u>	<u>10/1/2017</u>
Present Value of Future Salaries	312,254,237	311,424,217
Present Value of Future Member Contributions	18,416,189	18,374,305
Normal Cost (Retirement)	7,325,732	7,152,906
Normal Cost (Disability)	523,034	502,804
Normal Cost (Death)	260,716	251,800
Normal Cost (Vesting)	420,329	407,588
Normal Cost (Refunds)	<u>15,924</u>	<u>7,014</u>
Total Normal Cost	8,545,735	8,322,112
Present Value of Future Normal Costs	80,473,347	80,201,740
Accrued Liability (Retirement)	131,773,809	124,543,884
Accrued Liability (Disability)	4,123,982	4,032,629
Accrued Liability (Death)	1,582,027	1,564,250
Accrued Liability (Vesting)	2,369,132	2,375,303
Accrued Liability (Refunds)	4,170	3,859
Accrued Liability (Inactives) ¹	205,740,929	195,029,044
Excess State Monies Reserve	<u>268,056</u>	<u>248,393</u>
Total Actuarial Accrued Liability (EAN AL)	345,862,105	327,797,362
Unfunded Actuarial Accrued Liability (UAAL)	93,756,209	92,404,184
Funded Ratio (AVA / EAN AL)	72.9%	71.8%

D. Actuarial Present Value of Accrued Benefits	<u>10/1/2018</u>	<u>10/1/2017</u>
Vested Accrued Benefits		
Inactives ¹	205,740,929	195,029,044
Actives	78,007,707	73,306,375
Member Contributions	<u>5,738,260</u>	<u>4,467,845</u>
Total	289,486,896	272,803,264
Non-vested Accrued Benefits	<u>22,956,851</u>	<u>21,092,611</u>
Total Present Value Accrued Benefits (PVAB)	312,443,747	293,895,875
Funded Ratio (MVA / PVAB)	79.5%	78.5%
Increase (Decrease) in Present Value of Accrued Benefits Attributable to:		
Plan Amendments	0	
Assumption Changes	0	
New Accrued Benefits	9,759,994	
Benefits Paid	(14,157,492)	
Interest	22,945,370	
Other	<u>0</u>	
Total	18,547,872	

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	\$9,318,099	\$9,067,473
Administrative Expenses ²	149,519	158,328
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 29 years (as of 10/1/2018) ²	8,934,843	7,742,522
Minimum Required Contribution	18,402,461	16,968,323
Expected Member Contributions ²	2,087,413	1,695,078
Expected District and State Contribution	16,315,048	15,273,245

F. Past Contributions

Plan Years Ending: 9/30/2018

District and State Requirement 14,412,592

Actual Contributions Made:

Members (excluding buyback)	1,375,276
District	12,300,271
State	<u>2,112,321</u>
Total	15,787,868

G. Net Actuarial (Gain)/Loss 1,069,446

¹ The asset values and liabilities include accumulated DROP 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	93,756,209
2019	92,406,919
2020	90,809,859
2026	74,730,688
2033	41,886,212
2035	27,501,530
2047	0

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

		<u>Actual</u>	<u>Assumed</u>
Year Ended	9/30/2018	4.20%	6.86%
Year Ended	9/30/2017	6.22%	7.19%
Year Ended	9/30/2016	4.15%	6.56%
Year Ended	9/30/2015	9.97%	6.40%
Year Ended	9/30/2014	4.20%	6.40%

(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	6.87%	6.37%	8.00%
Year Ended	9/30/2017	9.59%	6.73%	8.00%
Year Ended	9/30/2016	8.02%	7.29%	8.00%
Year Ended	9/30/2015	-2.38%	6.61%	8.00%
Year Ended	9/30/2014	8.84%	4.56%	8.00%

(iii) Average Annual Payroll Growth

(a) Payroll as of:	10/1/2018	\$31,906,504
	10/1/2008	27,276,000
(b) Total Increase		16.98%
(c) Number of Years		10.00
(d) Average Annual Rate		1.58%

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	\$92,404,184
(2)	Sponsor Normal Cost developed as of October 1, 2017	7,077,520
(3)	Expected administrative expenses for the year ended September 30, 2018	145,313
(4)	Expected interest on (1), (2) and (3)	7,964,349
(5)	Sponsor contributions to the System during the year ended September 30, 2018	14,412,592
(6)	Expected interest on (5)	492,011
(7)	Expected Unfunded Actuarial Accrued Liability as of September 30, 2018 (1)+(2)+(3)+(4)-(5)-(6)	92,686,763
(8)	Change to UAAL due to Assumption Change	0
(9)	Change to UAAL due to Actuarial (Gain)/Loss	1,069,446
(10)	Unfunded Actuarial Accrued Liability as of October 1, 2018	93,756,209

<u>Type of Base</u>	<u>Date Established</u>	<u>Years Remaining</u>	<u>10/1/2018 Amount</u>	<u>Amortization Amount</u>
Fresh Start	10/1/2015	20	88,618,493	7,456,879
Benefit Change	10/1/2015	27	1,458	123
Assumption Change	10/1/2016	18	472,752	46,707
Actuarial Loss	10/1/2016	8	795,875	128,235
Actuarial Loss	10/1/2017	9	2,797,841	414,701
Benefit Change	10/1/2017	29	344	29
Actuarial Loss	10/1/2018	10	<u>1,069,446</u>	<u>147,573</u>
			93,756,209	8,194,247

DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

(1) Unfunded Actuarial Accrued Liability (UAAL) as of October 1, 2017	\$92,404,184
(2) Expected UAAL as of October 1, 2018	92,686,763
(3) Summary of Actuarial (Gain)/Loss, by component:	
Investment Return (Actuarial Asset Basis)	3,852,290
Salary Increases	(4,011,440)
Active Decrements	(129,951)
Inactive Mortality	998,492
Other	<u>360,055</u>
Increase in UAAL due to (Gain)/Loss	1,069,446
Assumption Changes	<u>0</u>
(4) Actual UAAL as of October 1, 2018	\$93,756,209

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, 2018 FRS valuation report for special risk employees. We feel this assumption sufficiently accommodates future mortality improvements.

75% of active deaths are assumed to be service-incurred.

Interest Rate

8.00% per year compounded annually, net of investment related expenses. This assumption is reasonable, based on the Plan's investment policy statement and long-term expected returns by asset class.

Payroll Growth

1.58% (prior year 2.90%) for purposes of amortizing the UAAL Fresh Start established October 1, 2015. This assumption cannot exceed the ten-year average payroll growth, in compliance with Part VII of Chapter 112, Florida Statutes. No payroll growth assumption is utilized for changes to the UAAL after October 1, 2015.

Administrative Expenses

\$137,126 annually, based on actual expenses incurred in the prior fiscal year.

Salary Increases

The below rates were established with the September 12, 2016 Experience Study.

Additionally, projected benefit at retirement or termination is increased 11.0% to account for non-regular compensation.

<u>Credited Service</u>	<u>% Increase</u>
First year	25.0%
1-3	10.0
4-9	7.5
10-14	6.0
15+	5.5

Normal Retirement Rates

Based on results of an Experience Study dated September 12, 2016, the below table reflects the assumed rates of retirement once a member attains Normal Retirement eligibility with at least 25 years of Credited Service:

<u>Credited Service</u>	<u>New Rates</u>
25	40%
26	40%
27	40%
28	40%
29	40%
30	40%
31+	100%

Also as part of the September 12, 2016 Experience Study, the below table provides rates of retirement for members attaining Normal Retirement eligibility with less than 25 years of Credited Service:

<u>Age</u>	<u>New Rates</u>
55	30%
56	40%
57	50%
58	100%
59	100%
60+	100%

Early Retirement

10.0% for each year eligible. This assumption was introduced in conjunction with a recent Plan amendment allowing DROP participation upon Early Retirement eligibility. This assumption was reviewed and maintained with the September 12, 2016 Experience Study.

Termination Rates

The below rates were established with the September 12, 2016 Experience Study.

<u>Credited Service</u>	<u>Assumed Withdrawal</u>
0-2	3.0%
3-9	2.0
10+	1.0

Disability Rates

See table below. 75% of Disability Retirements are assumed to be service-related. This assumption was established with an Experience Study performed by the Plan's prior actuary.

<u>Age</u>	<u>% Becoming Disabled During the Year</u>
20	0.07%
25	0.09
30	0.10
35	0.14
40	0.21
45	0.32
50	0.52
55	0.92
60	1.53
65	1.65

Actuarial Value of Assets

The Actuarial Value of Assets utilizes a five-year smoothing methodology. The annual difference between expected and actual investment earnings (Market Value, net of investment-related expenses), is phased-in over a five-year period.

Funding Method

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

- Interest – A quarter-year, based on the current 8.00% assumption for investment return.
- Salary – A full-year, based on the current 6.90% assumption.

GLOSSARY

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

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

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.

EXCESS STATE MONIES RESERVE

Firefighters' Distribution

	Regular Distribution			Special Distribution		
	<u>Actual State Contribution</u>	<u>Applicable "Frozen" Amount</u>	<u>Excess State Monies Reserve</u>	<u>Actual State Contribution</u>	<u>Applicable "Frozen" Amount</u>	<u>Excess State Monies Reserve</u>
2010	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
2011	1,912,210.85	1,631,988.59	280,222.26	0.00	0.00	609,421.00
2012	2,053,649.59	1,631,988.59	421,661.00	14,675.22	0.00	14,675.22
2013	2,029,658.53	1,919,727.59	109,930.94	68,007.84	0.00	68,007.84
2014	2,204,449.91	1,919,727.59	284,722.32	0.00	0.00	0.00
2015	2,066,680.27	1,919,727.59	146,952.68	0.00	0.00	0.00
2016	2,019,112.62	2,019,112.62	0.00	0.00	0.00	0.00
2017	1,980,170.86	1,980,170.86	0.00	0.00	0.00	0.00
2018	2,131,983.35	2,112,320.59	<u>19,662.76</u>	0.00	0.00	<u>0.00</u>
			1,263,151.96			692,104.06
Accumulated Regular Excess			1,263,151.96			
Accumulated Special Excess			<u>692,104.06</u>			
Total Excess State Monies			1,955,256.02			
Less Excess Used in Funding Resolution 583-14			(1,087,200.00)			
Less Excess Used in Funding Resolution 622-16			<u>(600,000.00)</u>			
Equals Current State Monies Reserve			\$268,056.02			

STATEMENT OF FIDUCIARY NET POSITION
SEPTEMBER 30, 2018

<u>ASSETS</u>	COST VALUE	MARKET VALUE
Cash and Cash Equivalents:		
Prepaid Expenses	1,959.40	1,959.40
Money Market	7,729,096.39	7,729,096.39
Cash	(1,279,855.91)	(1,279,855.91)
Total Cash and Equivalents	6,451,199.88	6,451,199.88
Receivables:		
Member Contributions in Transit	48,704.50	48,704.50
State Contributions	2,131,983.35	2,131,983.35
From Broker for Investments Sold	2,062,811.02	2,062,811.02
Investment Income	442,640.58	442,640.58
Total Receivable	4,686,139.45	4,686,139.45
Investments:		
Fixed Income	74,691,216.84	74,433,705.43
Equities	51,869,076.02	57,383,714.32
Mutual Funds:		
Equity	65,497,466.85	97,461,111.35
Pooled/Common/Commingled Funds:		
Real Estate	6,869,581.24	9,195,054.45
Total Investments	198,927,340.95	238,473,585.55
Total Assets	210,064,680.28	249,610,924.88
 <u>LIABILITIES</u>		
Payables:		
Investment Expenses	212,795.56	212,795.56
Administrative Expenses	6,583.25	6,583.25
Prior Refunds	14,363.00	14,363.00
To Broker for Investments Purchased	883,341.66	883,341.66
Prepaid Member Contribution	124.34	124.34
Prepaid District Contribution	132,149.59	132,149.59
Total Liabilities	1,249,357.40	1,249,357.40
NET POSITION RESTRICTED FOR PENSIONS	208,815,322.88	248,361,567.48

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

ADDITIONS

Contributions:			
Member		1,375,275.64	
Buy-Back		148,879.34	
District		12,300,271.41	
State		2,131,983.35	
Total Contributions			15,956,409.74
Investment Income:			
Net Realized Gain (Loss)	5,471,819.66		
Unrealized Gain (Loss)	4,460,302.53		
Net Increase in Fair Value of Investments		9,932,122.19	
Interest & Dividends		7,159,548.76	
Less Investment Expense ¹		(965,649.49)	
Net Investment Income			16,126,021.46
Total Additions			32,082,431.20
<u>DEDUCTIONS</u>			
Distributions to Members:			
Benefit Payments		12,118,555.89	
Lump Sum DROP Distributions		2,038,936.21	
Refunds of Member Contributions		0.00	
Total Distributions			14,157,492.10
Administrative Expense			137,125.65
Total Deductions			14,294,617.75
Net Increase in Net Position			17,787,813.45
NET POSITION RESTRICTED FOR PENSIONS			
Beginning of the Year			230,573,754.03
End of the Year			248,361,567.48

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 recognizing the total actuarial investment gain or loss for each Plan Year over a five year period. In the first year, 20% of the gain or loss is recognized. In the second year 40%, in the third year 60%, in the fourth year 80%, and in the fifth year 100% of the gain or loss is recognized. The actuarial investment gain or loss is defined as the actual return on investments minus the actuarial assumed investment return on the market value of assets. Actuarial Assets shall not be less than 80% nor greater than 120% of Market Value of Assets.

Plan Year Ending	Gain/(Loss)	<u>Gains/Losses Not Yet Recognized</u>				
		Amounts Not Yet Recognized by Valuation Year				
		2018	2019	2020	2021	2022
09/30/2014	1,657,545	0	0	0	0	0
09/30/2015	(20,464,725)	(4,092,945)	0	0	0	0
09/30/2016	285,772	114,310	57,156	0	0	0
09/30/2017	3,579,366	2,147,620	1,431,747	715,874	0	0
09/30/2018	(2,391,642)	(1,913,314)	(1,434,986)	(956,658)	(478,330)	0
Total		(3,744,329)	53,917	(240,784)	(478,330)	0

<u>Development of Investment Gain/Loss</u>	
Market Value of Assets, 09/30/2017	230,573,754
Contributions Less Benefit Payments & Admin Expenses	1,794,066
Expected Investment Earnings on Market Value*	18,517,663
Actual Net Investment Earnings	16,126,021
2018 Actuarial Investment Gain/(Loss)	<u>(2,391,642)</u>

*Expected Investment Earnings = 0.08 * (230,573,754 + 0.5 * 1,794,066)

<u>Development of Actuarial Value of Assets</u>	
(1) Market Value of Assets, 09/30/2018	248,361,567
(2) Gains/(Losses) Not Yet Recognized	<u>(3,744,329)</u>
(3) Actuarial Value of Assets, 09/30/2018, (1) - (2)	252,105,896
(A) 09/30/2017 Actuarial Assets:	235,393,178
(I) Net Investment Income:	
1. Interest and Dividends	7,159,549
2. Realized Gains (Losses)	5,471,820
3. Change in Actuarial Value	3,385,208
4. Investment Expenses	<u>(965,649)</u>
Total	15,050,926
(B) 09/30/2018 Actuarial Assets, including Prepaid Contributions:	252,238,170
Actuarial Assets Rate of Return = 2I/(A+B-I):	6.37%
Market Value of Assets Rate of Return:	6.87%
Actuarial Gain/(Loss) due to Investment Return (Actuarial Asset Basis)	(3,852,290)
10/01/2018 Limited Actuarial Assets (not including Prepaid):	252,105,896

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

REVENUES

Contributions:		
Member	1,375,275.64	
Buy-Back	148,879.34	
District	12,300,271.41	
State	2,131,983.35	
Total Contributions		15,956,409.74
Earnings from Investments:		
Interest & Dividends	7,159,548.76	
Net Realized Gain (Loss)	5,471,819.66	
Change in Actuarial Value	3,385,207.53	
Total Earnings and Investment Gains		16,016,575.95
EXPENDITURES		
Distributions to Members:		
Benefit Payments	12,118,555.89	
Lump Sum DROP Distributions	2,038,936.21	
Refunds of Member Contributions	0.00	
Total Distributions		14,157,492.10
Expenses:		
Investment related ¹	965,649.49	
Administrative	137,125.65	
Total Expenses		1,102,775.14
Change in Net Assets for the Year		16,712,718.45
Net Assets Beginning of the Year		235,393,178.03
Net Assets End of the Year²		252,105,896.48

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

²Net Assets may be limited for actuarial consideration.

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

Beginning of the Year Balance	30,577,009.67
Plus Additions	2,899,045.61
Investment Return Earned	2,421,518.12
Less Distributions	(2,038,936.21)
End of the Year Balance	33,858,637.19

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

(1) Required District and State Contributions	\$14,412,592.00
(2) Less Allowable State Contribution	<u>(2,112,320.59)</u>
(3) Required District Contribution for Fiscal 2018	12,300,271.41
(4) Less 2017 Prepaid Contribution	0.00
(5) Less Actual District Contributions	<u>(12,432,421.00)</u>
(6) Equals District's Shortfall/(Prepaid) Contribution as of September 30, 2018	(\$132,149.59)

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	348	341	345	353
Average Current Age	38.5	38.7	39.1	39.4
Average Age at Employment	26.7	26.7	26.9	27.0
Average Past Service	11.8	12.0	12.2	12.4
Average Annual Salary	\$86,656	\$88,251	\$90,555	\$90,762
<u>Service Retirees</u>				
Number	113	121	136	144
Average Current Age	63.4	63.7	63.2	63.8
Average Annual Benefit	\$70,587	\$73,615	\$75,222	\$76,372
<u>DROP Retirees</u>				
Number	38	41	36	35
Average Current Age	52.2	51.9	52.4	51.9
Average Annual Benefit	\$80,225	\$80,377	\$80,272	\$83,328
<u>Beneficiaries</u>				
Number	14	15	16	16
Average Current Age	68.8	69.4	70.5	71.5
Average Annual Benefit	\$43,952	\$44,268	\$42,931	\$37,996
<u>Disability Retirees</u>				
Number	14	16	17	17
Average Current Age	56.4	56.7	56.6	57.6
Average Annual Benefit	\$48,362	\$52,511	\$53,948	\$53,948
<u>Terminated Vested</u>				
Number ¹	59	61	54	56
Average Current Age	48.8	48.8	49.0	48.6
Average Annual Benefit	\$15,860	\$14,909	\$14,420	\$14,001

¹ The Terminated Vested head count includes DROP Members due a supplemental benefit upon DROP exit.

AGE AND SERVICE DISTRIBUTION

PAST SERVICE

AGE	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30+	Total
15 - 19	0	0	0	0	0	0	0	0	0	0	0	0
20 - 24	7	2	1	1	0	0	0	0	0	0	0	11
25 - 29	5	5	1	18	0	6	0	0	0	0	0	35
30 - 34	3	2	4	11	0	9	16	0	0	0	0	45
35 - 39	1	4	1	8	0	5	54	20	0	0	0	93
40 - 44	2	1	0	4	0	2	28	20	12	0	0	69
45 - 49	0	1	0	1	0	3	11	12	37	0	0	65
50 - 54	0	0	0	0	0	0	7	6	14	1	0	28
55 - 59	0	0	0	0	0	0	1	2	4	0	0	7
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	18	15	7	43	0	25	117	60	67	1	0	353

VALUATION PARTICIPANT RECONCILIATION

1. Active lives

a. Number in prior valuation 10/1/2017	345
b. Terminations	
i. Vested (partial or full) with deferred benefits	(3)
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	0
f. DROP	<u>(7)</u>
g. Continuing participants	335
h. New entrants	<u>18</u>
i. Total active life participants in valuation	353

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

	Service Retirees, Vested Receiving <u>Benefits</u>	<u>DROP Benefits</u>	Receiving Death <u>Benefits</u>	Receiving Disability <u>Benefits</u>	Vested Deferred ¹ <u></u>	<u>Total</u>
a. Number prior valuation	136	36	16	17	54	259
Retired	8	(8)	0	0	(8)	(8)
DROP	0	7	0	0	7	14
Vested Deferred	0	0	0	0	3	3
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	144	35	16	17	56	268

¹ The Terminated Vested head count includes DROP Members due a supplemental benefit upon DROP exit.

SUMMARY OF CURRENT PLAN
(Through Proposed Resolution No. 674-19)

CREDITED SERVICE

Total years and fractional parts of years of service with the District as a Firefighter.

FINAL AVERAGE SALARY

Average Salary during the four (4) highest years out of the last ten (10).

SALARY

Total salary or wages, including lump sum payments.

Members who enter into the DROP with less than ten consecutive years of service will not have payments for accumulated sick leave included in the Pensionable Wages, nor will Pensionable Wages include vacation leave payments that exceed twice the annual accrual.

NORMAL RETIREMENT

Eligibility

First day of the month following attainment of Age 55 and the completion of 5 years of Credited Service (the service requirement is 10 years if hired after September 30, 2014), or the completion of 25 years of Credited Service, regardless of age.

Benefit Amount

3.0% of Average Final Compensation times total Credited Service

EARLY RETIREMENT

Eligibility

First day of the month following attainment of Age 50 and the completion of 5 years of Credited Service (the service requirement is 10 years if hired after September 30, 2014).

Benefit Amount

Accrued benefit, reduced 3.0% for each year that Early Retirement precedes Normal Retirement.

VESTING (TERMINATION)

Less than 5 years of
Contributing Service

Refund of Member Contributions without interest.

5 years or more

Accrued benefit payable at age earliest Normal Retirement Date (unreduced), age 50 (reduced), or refund of Member Contributions without interest.

Members hired after September 30, 2014 will become vested upon the completion of 10 years of Contributing Service.

DISABILITY BENEFIT

Eligibility	Service Incurred – No requirements. Non-Service Incurred – 5 years of Credited Service.
Benefit Amount	Service-Incurred - Computed as a Normal Retirement benefit based upon service and Final Average Salary at time of disability. Minimum benefit of 75% of Final Average Salary during the disability period. Non-Service Incurred – Accrued benefit payable immediately, with 120 monthly payments guaranteed.

PRE-RETIREMENT DEATH

Eligibility	Service Incurred – No requirements. Non-Service Incurred – 5 years of Credited Service.
Benefit Amount	Service Incurred – Greater of accrued benefit or 75% of Average Final Compensation. Non-Service Incurred – Accrued benefit payable immediately.

CONTRIBUTIONS

Employee	4.0% of Salary. Effective October 1, 2018, the Member Contribution rate increases from 4.0% to 5.0% (including Members entering DROP on and after October 1, 2018). Effective October 1, 2019, the Member Contribution rate increases from 5.0% to 6.0% (including Members entering DROP on and after October 1, 2019). Contributions from DROP participants are applied to the Unfunded Actuarial Accrued Liability.
District	Remaining amount necessary for payment of Normal (current year's) Cost and amortization of the accrued past service liability, if any, over 30 years.

SUPPLEMENTAL BENEFIT

Eligibility	5 years of Credited Service (no service requirement for duty-related Death or Disability).
Monthly Benefit	Age-based Pension Factor for each year of Credited Service. The Pension Factor ranges from \$12 for age 40, up to \$44 for ages 55 and older at the time benefits commence.

BOARD OF TRUSTEES

- a.) Two legal residents appointed by the Fire District.
- b.) Two Members of the System elected by the other covered Plan Members, and
- c.) Fifth Trustee elected by the other four Trustees by majority vote.

DEFERRED RETIREMENT OPTION PLAN

Eligibility	Satisfaction of Normal or Early Retirement requirements.
Participation	Not to exceed 60 months.
Rate of Return	At Member's election: <ul style="list-style-type: none">(a) Actual net rate of investment return (total return net of brokerage commissions, management fees, and transaction costs) credited each fiscal quarter, or(b) Actuarial rate of return provided for in the most recent actuarial valuation.
Form of Distribution	Cash lump sum (options available) at termination of employment.

STATEMENT OF FIDUCIARY NET POSITION
SEPTEMBER 30, 2018

<u>ASSETS</u>	MARKET VALUE
Cash and Cash Equivalents:	
Prepaid Expenses	1,960
Money Market	7,729,096
Cash	(1,279,856)
Total Cash and Equivalents	6,451,200
Receivables:	
Member Contributions in Transit	48,704
State Contributions	2,131,983
From Broker for Investments Sold	2,062,811
Investment Income	442,641
Total Receivable	4,686,139
Investments:	
Fixed Income	74,433,706
Equities	57,383,714
Mutual Funds:	
Equity	97,461,111
Pooled/Common/Commingled Funds:	
Real Estate	9,195,055
Total Investments	238,473,586
Total Assets	249,610,925
<u>LIABILITIES</u>	
Payables:	
Investment Expenses	212,796
Administrative Expenses	6,583
Prior Refunds	14,363
To General Employees' Trust Fund	0
To Broker for Investments Purchased	883,342
Total Liabilities	1,117,084
NET POSITION RESTRICTED FOR PENSIONS	248,493,841

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

ADDITIONS

Contributions:

Member	1,375,400	
Buy-Back	148,879	
District	12,432,420	
State	2,131,983	
 Total Contributions		 16,088,682
 Investment Income:		
Net Increase in Fair Value of Investments	9,932,123	
Interest & Dividends	7,159,549	
Less Investment Expense ¹	(965,649)	
 Net Investment Income		 16,126,023
 Total Additions		 32,214,705

DEDUCTIONS

Distributions to Members:

Benefit Payments	12,118,556	
Lump Sum DROP Distributions	2,038,936	
Refunds of Member Contributions	0	
 Total Distributions		 14,157,492
 Administrative Expense		 137,126
 Total Deductions		 14,294,618
 Net Increase in Net Position		 17,920,087
 NET POSITION RESTRICTED FOR PENSIONS		
Beginning of the Year		230,573,754
 End of the Year		 248,493,841

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 legal residents appointed by the Fire District.
- b.) Two Members of the System elected by the other covered Plan Members, and
- c.) Fifth Trustee elected by the other four Trustees by majority vote.

Plan Membership as of October 1, 2017:

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	205
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	54
Active Plan Members	345
	604

Benefits Provided

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

Normal Retirement:

Eligibility: First day of the month following attainment of Age 55 and the completion of 5 years of Credited Service (the service requirement is 10 years if hired after September 30, 2014), or the completion of 25 years of Credited Service, regardless of age.

Benefit Amount: 3.0% of Average Final Compensation times total Credited Service.

Early Retirement:

Eligibility: First day of the month following attainment of Age 50 and the completion of 5 years of Credited Service (the service requirement is 10 years if hired after September 30, 2014).

Benefit Amount: Accrued benefit, reduced 3.0% for each year that Early Retirement precedes Normal Retirement.

Vesting (Termination):

Less than 5 years of Contributing Service: Refund of Member Contributions without interest.

5 years or more: Accrued benefit payable at age earliest Normal Retirement Date (unreduced), age 50 (reduced), or refund of Member Contributions without interest.

Members hired after September 30, 2014 will become vested upon the completion of 10 years of Contributing Service.

Disability:

Eligibility: Service Incurred – No requirements.

Non-Service Incurred – 5 years of Credited Service.

Benefit Amount: Service Incurred – Computed as a Normal Retirement benefit based upon service and Final Average Salary at time of disability. Minimum benefit of 75% of Final Average Salary during the disability period.

Non-Service Incurred – Accrued benefit payable immediately, with 120 monthly payments guaranteed.

Pre-Retirement Death Benefits:

Eligibility: Service Incurred – No requirements.

Non-Service Incurred – 5 years of Credited Service.

Benefit Amount: Service Incurred – Greater of accrued benefit or 75% of Average Final Compensation.

Non-Service Incurred – Accrued benefit payable immediately.

Supplemental Benefit:

Eligibility: 5 years of Credited Service (no service requirement for duty-related Death or Disability).

Monthly Benefit: Age based Pension Factor for each year of Credited Service. The Pension Factor ranges from \$12 for age 40, up to \$44 for ages 55 and older at the time benefits commence.

Contributions

Employee: 4.0% of Salary.

District: Remaining amount necessary for payment of Normal (current year's) Cost and amortization of the accrued past service liability, if any, 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
Domestic Equity	42.0%
International Equity	12.0%
Bonds	18.0%
High Yield Bonds	5.0%
Convertibles	12.0%
Private Real Estate	6.0%
Infrastructure	4.0%
Cash	1.0%
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 6.87 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 or Early Retirement requirements.

Participation: Not to exceed 60 months.

Rate of Return: At Member's election:

(a) Actual net rate of investment return (total return net of brokerage commissions, management fees, and transaction costs) credited each fiscal quarter, or

(b) Actuarial rate of return provided for in the most recent actuarial valuation.

The DROP balance as September 30, 2018 is \$33,858,637.

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	\$ 347,067,984
Plan Fiduciary Net Position	\$ (248,493,841)
Sponsor's Net Pension Liability	<u>\$ 98,574,143</u>
Plan Fiduciary Net Position as a percentage of Total Pension Liability	71.60%

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	2.70%
Salary Increases	Service based
Discount Rate	8.00%
Investment Rate of Return	8.00%

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 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 most recent actuarial experience study used to review the other significant assumptions was dated September 12, 2016.

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	8.1%
International Equity	3.4%
Bonds	3.6%
High Yield Bonds	5.6%
Convertibles	6.7%
Private Real Estate	4.9%
Infrastructure	9.1%
Cash	0.7%

GASB 67

Discount Rate:

The Discount Rate used to measure the Total Pension Liability was 8.00 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 7.00%	Current Discount Rate 8.00%	1% Increase 9.00%
Sponsor's Net Pension Liability	\$ 136,098,073	\$ 98,574,143	\$ 67,157,836

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

	<u>09/30/2018</u>	<u>09/30/2017</u>
Total Pension Liability		
Service Cost	8,739,717	8,413,158
Interest	26,235,299	24,806,668
Change in Excess State Money	19,663	(600,000)
Changes of benefit terms	-	-
Differences between Expected and Actual Experience	(446,737)	(2,212,835)
Changes of assumptions	-	-
Contributions - Buy Back	148,879	66,116
Benefit Payments, including Refunds of Employee Contributions	<u>(14,157,492)</u>	<u>(12,926,081)</u>
Net Change in Total Pension Liability	20,539,329	17,547,026
Total Pension Liability - Beginning	<u>326,528,655</u>	<u>308,981,629</u>
Total Pension Liability - Ending (a)	<u>\$347,067,984</u>	<u>\$326,528,655</u>
Plan Fiduciary Net Position		
Contributions - Employer	12,432,420	10,491,862
Contributions - State	2,131,983	1,980,171
Contributions - Employee	1,375,400	1,360,489
Contributions - Buy Back	148,879	66,116
Net Investment Income	16,126,023	20,363,126
Benefit Payments, including Refunds of Employee Contributions	(14,157,492)	(12,926,081)
Administrative Expense	<u>(137,126)</u>	<u>(145,313)</u>
Net Change in Plan Fiduciary Net Position	17,920,087	21,190,370
Plan Fiduciary Net Position - Beginning	<u>230,573,754</u>	<u>209,383,384</u>
Plan Fiduciary Net Position - Ending (b)	<u>\$248,493,841</u>	<u>\$230,573,754</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 98,574,143</u>	<u>\$ 95,954,901</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	71.60%	70.61%
Covered Payroll	\$ 34,385,000	29,737,023
Net Pension Liability as a percentage of Covered Payroll	286.68%	322.68%

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

Last 10 Fiscal Years

	09/30/2016	09/30/2015	09/30/2014
Total Pension Liability			
Service Cost	7,617,762	6,756,436	6,448,008
Interest	22,704,064	21,443,603	20,052,241
Change in Excess State Money	-	146,952	341,222
Changes of benefit terms	-	-	-
Differences between Expected and Actual Experience	5,799,419	(2,639,844)	-
Changes of assumptions	880,921	-	-
Contributions - Buy Back	436,534	181,859	62,591
Benefit Payments, including Refunds of Employee Contributions	(11,090,001)	(10,605,241)	(8,353,250)
Net Change in Total Pension Liability	26,348,699	15,283,765	18,550,812
Total Pension Liability - Beginning	282,632,930	267,349,165	248,798,353
Total Pension Liability - Ending (a)	<u>\$308,981,629</u>	<u>\$282,632,930</u>	<u>\$267,349,165</u>
Plan Fiduciary Net Position			
Contributions - Employer	9,857,950	8,012,096	6,715,212
Contributions - State	2,019,113	2,066,680	2,260,950
Contributions - Employee	769,108	736,011	156,280
Contributions - Buy Back	436,534	181,859	62,591
Net Investment Income	15,705,167	(4,740,495)	16,072,750
Benefit Payments, including Refunds of Employee Contributions	(11,090,001)	(10,605,241)	(8,353,250)
Administrative Expense	(121,137)	(118,004)	(109,156)
Net Change in Plan Fiduciary Net Position	17,576,734	(4,467,094)	16,805,377
Plan Fiduciary Net Position - Beginning	191,806,650	196,273,744	179,468,367
Plan Fiduciary Net Position - Ending (b)	<u>\$209,383,384</u>	<u>\$191,806,650</u>	<u>\$196,273,744</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 99,598,245</u>	<u>\$ 90,826,280</u>	<u>\$ 71,075,421</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	67.77%	67.86%	73.41%
Covered Payroll	30,282,933	32,510,512	31,156,266
Net Pension Liability as a percentage of Covered Payroll	328.89%	279.38%	228.13%

Notes to Schedule:*Changes of benefit terms:*

For measurement date 09/30/2016, amounts reported as changes of benefit terms resulted from Resolution 622-16, effective the first payroll following October 1, 2016, an increase in the Member Contribution Rate from 0.5% to 4.0% of Pensionable Wages for active and DROP participants (the 2.0% of Base Pay contribution requirement is eliminated). Contributions collected from DROP participants will continue to offset the Plan's future Unfunded Actuarial Accrued Liability.

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Changes of assumptions:

For measurement date 09/30/2016, as the result of a special Experience Study, the Board of Trustees adopted changes to the following assumptions:

- Normal Retirement rates
- Salary increases
- Mortality (as mandated by Chapter 2015-157, Laws of Florida)
- Turnover rates

Details of the above changes are set forth in the Actuarial Assumptions and Methods section of the 10/01/2016 Valuation report. Additionally, the inflation assumption rate was lowered from 3.00% to 2.70%, matching the long-term inflation assumption utilized by the Plan's investment consultant.

For measurement date 09/30/2015 the inflation assumption rate was lowered from 3.50% to 3.00%.

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 Payroll	Contributions as a percentage of Covered Payroll
09/30/2018	\$ 14,412,592	\$ 14,544,741	\$ (132,149)	\$ 34,385,000	42.30%
09/30/2017	\$ 13,072,033	\$ 13,072,033	\$ -	\$ 29,737,023	43.96%
09/30/2016	\$ 11,877,063	\$ 11,877,063	\$ -	\$ 30,282,933	39.22%
09/30/2015	\$ 9,931,824	\$ 9,931,824	\$ -	\$ 32,510,512	30.55%
09/30/2014	\$ 8,634,940	\$ 8,634,940	\$ -	\$ 31,156,266	27.71%

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:

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

- Interest – none, assuming a lump sum Sponsor contribution at the beginning of each fiscal year.
- Salary – a full-year, based on the current 7.15% assumption.

Amortization Method: Level percentage of pay, closed.
Remaining Amortization Method: 29 Years (as of 10/01/2016).
Mortality Table: *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.
It is assumed that 25% of deaths are duty related.
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, 2015 FRS valuation report for special risk employees. We feel this assumption sufficiently accommodates future mortality improvements.

Interest Rate: 8% per year compounded annually, net of investment related expenses. This assumption is reasonable, based on the Plan’s investment policy statement and long-term expected returns by asset class.

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Salary Increases:

The below rates were established with the September 12, 2016 Experience Study. Additionally, projected benefit at retirement or termination is increased 11.0% to account for nonregular compensation.

Credit Service	% Increase
First year	25.0%
1-3	10.0%
4-9	7.5%
10-14	6.0%
15+	5.5%

Payroll Growth:

Limited to actual ten-year average payroll growth by Florida Statute. In conjunction with the October 1, 2015 valuation, a 3% payroll growth assumption was utilized for the UAAL Fresh Start. The payroll growth assumption will be 0% for all future changes to the UAAL.

Actuarial Value of Assets:

The Actuarial Value of Assets utilizes a five-year smoothing methodology. The annual difference between expected and actual investment earnings (Market Value, net of investment-related expenses), is phased-in over a five-year period.

Normal Retirement Rates:

Based on results of an Experience Study dated September 12, 2016, the below table reflects the assumed rates of retirement once a member attains Normal Retirement eligibility with at least 25 years of Credited Service:

Credited Service	Rates
25	40%
26	40%
27	40%
28	40%
29	40%
30	40%
31+	100%

Also as part of the September 12, 2016 Experience Study, the below table provides rates of retirement for members attaining Normal Retirement eligibility with less than 25 years of Credited Service:

Age	Rates
55	30%
56	40%
57	50%
58	100%
59	100%
60+	100%

Early Retirement:

10.0% for each year eligible. This assumption was introduced in conjunction with a recent Plan amendment allowing DROP participation upon Early Retirement eligibility. This assumption was reviewed and maintained with the September 12, 2016 Experience Study.

Termination Rates:

The below rates were established with the September 12, 2016 Experience Study.

Credited Service	Assumed Withdrawal
0-2	3.0%
3-9	2.0%
10+	1.0%

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Disability Rates:

See table below. 75% of Disability and Pre-Retirement Death Retirements are assumed to be service-related. This assumption was established with an Experience Study performed by the Plan's prior actuary.

% Becoming Disabled During the	
Age	Year
20	0.07%
25	0.09%
30	0.10%
35	0.14%
40	0.21%
45	0.32%
50	0.52%
55	0.92%
60	1.53%
65	1.65%

SCHEDULE OF INVESTMENT RETURNS
Last 10 Fiscal Years

Fiscal Year Ended	Annual Money-Weighted Rate of Return Net of Investment Expense
09/30/2018	6.87%
09/30/2017	9.59%
09/30/2016	8.02%
09/30/2015	-2.38%
09/30/2014	8.84%

NOTES TO THE FINANCIAL STATEMENTS
(For the Year Ended September 30, 2019)

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 legal residents appointed by the Fire District.
- b.) Two Members of the System elected by the other covered Plan Members, and
- c.) Fifth Trustee elected by the other four Trustees by majority vote.

Each Firefighter employed by the St. Lucie County Fire District is a Pension Fund Member. A Firefighter is a full-time employee who is certified as a firefighter as a condition of employment in accordance with the provisions of §633.35, Florida Statutes. The Fire Chief may elect not to participate in the Plan.

Plan Membership as of October 1, 2017:

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	205
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	54
Active Plan Members	345
	604
	604

Benefits Provided

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

Normal Retirement:

Eligibility: First day of the month following attainment of Age 55 and the completion of 5 years of Credited Service (the service requirement is 10 years if hired after September 30, 2014), or the completion of 25 years of Credited Service, regardless of age.

Benefit Amount: 3.0% of Average Final Compensation times total Credited Service.

Early Retirement:

Eligibility: First day of the month following attainment of Age 50 and the completion of 5 years of Credited Service (the service requirement is 10 years if hired after September 30, 2014).

Benefit Amount: Accrued benefit, reduced 3.0% for each year that Early Retirement precedes Normal Retirement.

Vesting (Termination):

Less than 5 years of Contributing Service: Refund of Member Contributions without interest.

5 years or more: Accrued benefit payable at age earliest Normal Retirement Date (unreduced), age 50 (reduced), or refund of Member Contributions without interest.

Members hired after September 30, 2014 will become vested upon the completion of 10 years of Contributing Service.

Disability:

Eligibility: Service Incurred – No requirements.

Non-Service Incurred – 5 years of Credited Service.

Benefit Amount: Service Incurred – Computed as a Normal Retirement benefit based upon service and Final Average Salary at time of disability. Minimum benefit of 75% of Final Average Salary during the disability period.

Non-Service Incurred – Accrued benefit payable immediately, with 120 monthly payments guaranteed.

Pre-Retirement Death Benefits:

Eligibility: Service Incurred – No requirements.

Non-Service Incurred – 5 years of Credited Service.

Benefit Amount: Service Incurred – Greater of accrued benefit or 75% of Average Final Compensation.

Non-Service Incurred – Accrued benefit payable immediately.

Supplemental Benefit:

Eligibility: 5 years of Credited Service (no service requirement for duty-related Death or Disability).

Monthly Benefit: Age based Pension Factor for each year of Credited Service. The Pension Factor ranges from \$12 for age 40, up to \$44 for ages 55 and older at the time benefits commence.

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Contributions

Employee: 4.0% of Salary.

District: Remaining amount necessary for payment of Normal (current year's) Cost and amortization of the accrued past service liability, if any, 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, 2018 through September 30, 2019.

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	2.70%
Salary Increases	Service based
Discount Rate	8.00%
Investment Rate of Return	8.00%

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 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 most recent actuarial experience study used to review the other significant assumptions was dated September 12, 2016.

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	Target Allocation	Long Term Expected Real Rate of Return
Domestic Equity	42.0%	8.1%
International Equity	12.0%	3.4%
Bonds	18.0%	3.6%
High Yield Bonds	5.0%	5.6%
Convertibles	12.0%	6.7%
Private Real Estate	6.0%	4.9%
Infrastructure	4.0%	9.1%
Cash	1.0%	0.7%
Total	100.0%	

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Discount Rate:

The Discount Rate used to measure the Total Pension Liability was 8.00 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	Plan Fiduciary	Net Pension
	Liability	Net Position	Liability
	(a)	(b)	(a)-(b)
Reporting Period Ending September 30, 2018	\$ 326,528,655	\$ 230,573,754	\$ 95,954,901
Changes for a Year:			
Service Cost	8,739,717	-	8,739,717
Interest	26,235,299	-	26,235,299
Change in Excess State Money	19,663	-	19,663
Differences between Expected and Actual Experience	(446,737)	-	(446,737)
Changes of assumptions	-	-	-
Changes of benefit terms	-	-	-
Contributions - Employer	-	12,432,420	(12,432,420)
Contributions - State	-	2,131,983	(2,131,983)
Contributions - Employee	-	1,375,400	(1,375,400)
Contributions - Buy Back	148,879	148,879	-
Net Investment Income	-	16,126,023	(16,126,023)
Benefit Payments, including Refunds of Employee Contributions	(14,157,492)	(14,157,492)	-
Administrative Expense	-	(137,126)	137,126
Net Changes	20,539,329	17,920,087	2,619,242
Reporting Period Ending September 30, 2019	\$ 347,067,984	\$ 248,493,841	\$ 98,574,143

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

	Current Discount		
	1% Decrease	Rate	1% Increase
	7.00%	8.00%	9.00%
Sponsor's Net Pension Liability	\$ 136,098,073	\$ 98,574,143	\$ 67,157,836

Pension Plan Fiduciary Net Position.

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

**FINAL 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 has recognized a Pension Expense of \$17,743,134.

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	4,349,563	3,405,198
Changes of assumptions	660,690	-
Net difference between Projected and Actual Earnings on Pension Plan investments	4,809,183	-
Employer and State contributions subsequent to the measurement date	14,564,403	-
Total	\$ 24,383,839	\$ 3,405,198

The outcome of the Deferred Outflows of resources related to pensions resulting from Employer and State contributions subsequent to the measurement date has been recognized as a reduction of the Net Pension Liability in the year ended September 30, 2018. 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	\$	3,122,247	
2020	\$	3,459,441	
2021	\$	(631,225)	
2022	\$	(574,071)	
2023	\$	518,923	
Thereafter	\$	518,923	

Payable to the Pension Plan:

On September 30, 2017, the Sponsor reported a payable of \$56,500 for the outstanding amount of contributions of the Pension Plan required for the year ended September 30, 2017.

**PRELIMINARY PENSION EXPENSE AND DEFERRED OUTFLOWS OF RESOURCES AND
DEFERRED INFLOWS OF RESOURCES RELATED TO PENSIONS
FISCAL YEAR SEPTEMBER 30, 2019**

For the year ended September 30, 2019, the Sponsor will recognize a Pension Expense of \$18,775,500.

On September 30, 2019, 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	3,624,635	3,094,878
Changes of assumptions	550,575	-
Net difference between Projected and Actual Earnings on Pension Plan investments	3,742,051	-
Employer and State contributions subsequent to the measurement date	TBD	-
Total	TBD	\$ 3,094,878

The outcome of the Deferred Outflows of resources related to pensions resulting from Employer and State contributions subsequent to the measurement date will be recognized as a reduction of the Net Pension Liability in the year ended September 30, 2019.

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	\$	3,873,949	
2021	\$	(216,717)	
2022	\$	(159,563)	
2023	\$	933,431	
2024	\$	455,103	
Thereafter	\$	(63,820)	

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

Last 10 Fiscal Years

Reporting Period Ending	09/30/2019	09/30/2018
Measurement Date	09/30/2018	09/30/2017
Total Pension Liability		
Service Cost	8,739,717	8,413,158
Interest	26,235,299	24,806,668
Change in Excess State Money	19,663	(600,000)
Changes of benefit terms	-	-
Differences between Expected and Actual Experience	(446,737)	(2,212,835)
Changes of assumptions	-	-
Contributions - Buy Back	148,879	66,116
Benefit Payments, including Refunds of Employee Contributions	(14,157,492)	(12,926,081)
Net Change in Total Pension Liability	20,539,329	17,547,026
Total Pension Liability - Beginning	326,528,655	308,981,629
Total Pension Liability - Ending (a)	\$347,067,984	\$326,528,655
Plan Fiduciary Net Position		
Contributions - Employer	12,432,420	10,491,862
Contributions - State	2,131,983	1,980,171
Contributions - Employee	1,375,400	1,360,489
Contributions - Buy Back	148,879	66,116
Net Investment Income	16,126,023	20,363,126
Benefit Payments, including Refunds of Employee Contributions	(14,157,492)	(12,926,081)
Administrative Expense	(137,126)	(145,313)
Net Change in Plan Fiduciary Net Position	17,920,087	21,190,370
Plan Fiduciary Net Position - Beginning	230,573,754	209,383,384
Plan Fiduciary Net Position - Ending (b)	\$248,493,841	\$230,573,754
Net Pension Liability - Ending (a) - (b)	\$ 98,574,143	\$ 95,954,901
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	71.60%	70.61%
Covered Payroll	\$ 34,385,000	29,737,023
Net Pension Liability as a percentage of Covered Payroll	286.68%	322.68%

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

Last 10 Fiscal Years

Reporting Period Ending	09/30/2017	09/30/2016	09/30/2015
Measurement Date	09/30/2016	09/30/2015	09/30/2014
Total Pension Liability			
Service Cost	7,617,762	6,756,436	6,448,008
Interest	22,704,064	21,443,603	20,052,241
Change in Excess State Money	-	146,952	341,222
Changes of benefit terms	-	-	-
Differences between Expected and Actual Experience	5,799,419	(2,639,844)	-
Changes of assumptions	880,921	-	-
Contributions - Buy Back	436,534	181,859	62,591
Benefit Payments, including Refunds of Employee Contributions	(11,090,001)	(10,605,241)	(8,353,250)
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Total Pension Liability - Beginning	282,632,930	267,349,165	248,798,353
Total Pension Liability - Ending (a)	<u>\$308,981,629</u>	<u>\$282,632,930</u>	<u>\$267,349,165</u>
Plan Fiduciary Net Position			
Contributions - Employer	9,857,950	8,012,096	6,715,212
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Plan Fiduciary Net Position - Ending (b)	<u>\$209,383,384</u>	<u>\$191,806,650</u>	<u>\$196,273,744</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 99,598,245</u>	<u>\$ 90,826,280</u>	<u>\$ 71,075,421</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	67.77%	67.86%	73.41%
Covered Payroll	30,282,933	32,510,512	31,156,266
Net Pension Liability as a percentage of Covered Payroll	328.89%	279.38%	228.13%

Notes to Schedule:*Changes of benefit terms:*

For measurement date 09/30/2016, amounts reported as changes of benefit terms resulted from Resolution 622-16, effective the first payroll following October 1, 2016, an increase in the Member Contribution Rate from 0.5% to 4.0% of Pensionable Wages for active and DROP participants (the 2.0% of Base Pay contribution requirement is eliminated). Contributions collected from DROP participants will continue to offset the Plan's future Unfunded Actuarial Accrued Liability.

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Changes of assumptions:

For measurement date 09/30/2016, as the result of a special Experience Study, the Board of Trustees adopted changes to the following assumptions:

- Normal Retirement rates
- Salary increases
- Mortality (as mandated by Chapter 2015-157, Laws of Florida)
- Turnover rates

Details of the above changes are set forth in the Actuarial Assumptions and Methods section of the 10/01/2016 Valuation report. Additionally, the inflation assumption rate was lowered from 3.00% to 2.70%, matching the long-term inflation assumption utilized by the Plan's investment consultant.

For measurement date 09/30/2015 the inflation assumption rate was lowered from 3.50% to 3.00%.

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 Payroll	Contributions as a percentage of Covered Payroll
09/30/2018	\$ 14,412,592	14,544,741	\$ (132,149)	\$ 34,385,000	42.30%
09/30/2017	\$ 13,072,033	\$ 13,072,033	\$ -	\$ 29,737,023	43.96%
09/30/2016	\$ 11,877,063	\$ 11,877,063	\$ -	\$ 30,282,933	39.22%
09/30/2015	\$ 9,931,824	\$ 9,931,824	\$ -	\$ 32,510,512	30.55%
09/30/2014	\$ 8,634,940	\$ 8,634,940	\$ -	\$ 31,156,266	27.71%

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:

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

- Interest – none, assuming a lump sum Sponsor contribution at the beginning of each fiscal year.
- Salary – a full-year, based on the current 7.15% assumption.

Amortization Method: Level percentage of pay, closed.

Remaining Amortization Method: 29 Years (as of 10/01/2016).

Mortality Table: *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.
 It is assumed that 25% of deaths are duty related.

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, 2015 FRS valuation report for special risk employees. We feel this assumption sufficiently accommodates future mortality improvements.

Interest Rate: 8% per year compounded annually, net of investment related expenses. This assumption is reasonable, based on the Plan’s investment policy statement and long-term expected returns by asset class.

Salary Increases: The below rates were established with the September 12, 2016 Experience Study.

Additionally, projected benefit at retirement or termination is increased 11.0% to account for nonregular compensation.

Credit Service	% Increase
First year	25.0%
1-3	10.0%
4-9	7.5%
10-14	6.0%
15+	5.5%

Payroll Growth: Limited to actual ten-year average payroll growth by Florida Statute. In conjunction with the October 1, 2015 valuation, a 3% payroll growth assumption was utilized for the UAAL Fresh Start. The payroll growth assumption will be 0% for all future changes to the UAAL.

Actuarial Value of Assets: The Actuarial Value of Assets utilizes a five-year smoothing methodology. The annual difference between expected and actual investment earnings (Market Value, net of investment-related expenses), is phased-in over a five-year period.

Normal Retirement Rates: Based on results of an Experience Study dated September 12, 2016, the below table reflects the assumed rates of retirement once a member attains Normal Retirement eligibility with at least 25 years of Credited Service:

Credited Service	Rates
25	40%
26	40%
27	40%
28	40%
29	40%
30	40%
31+	100%

Also as part of the September 12, 2016 Experience Study, the below table provides rates of retirement for members attaining Normal Retirement eligibility with less than 25 years of Credited Service:

Age	Rates
55	30%
56	40%
57	50%
58	100%
59	100%
60+	100%

Early Retirement: 10.0% for each year eligible. This assumption was introduced in conjunction with a recent Plan amendment allowing DROP participation upon Early Retirement eligibility. This assumption was reviewed and maintained with the September 12, 2016 Experience Study.

Termination Rates: The below rates were established with the September 12, 2016 Experience Study.

Credited Service	Assumed Withdrawal
0-2	3.0%
3-9	2.0%
10+	1.0%

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Disability Rates:

See table below. 75% of Disability and Pre-Retirement Death Retirements are assumed to be service-related. This assumption was established with an Experience Study performed by the Plan's prior actuary.

Age	% Becoming Disabled During the Year
20	0.07%
25	0.09%
30	0.10%
35	0.14%
40	0.21%
45	0.32%
50	0.52%
55	0.92%
60	1.53%
65	1.65%

EXPENSE DEVELOPMENT AND AMORTIZATION SCHEDULES

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

FINAL COMPONENTS OF PENSION EXPENSE
FISCAL YEAR SEPTEMBER 30, 2018

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Beginning Balance	\$ 99,598,245	\$ 2,788,611	\$ 30,589,327	\$ -
Employer and State contributions made after 09/30/2017	-	-	14,564,403	-
Total Pension Liability Factors:				
Service Cost	8,413,158	-	-	8,413,158
Interest	24,806,668	-	-	24,806,668
Change in Excess State Money	(600,000)	-	-	(600,000)
Changes in benefit terms	-	-	-	-
Contributions - Buy Back	66,116	-	-	66,116
Differences between Expected and Actual Experience with regard to economic or demographic assumptions	(2,212,835)	2,212,835	-	-
Current year amortization of experience difference	-	(693,241)	(724,928)	31,687
Change in assumptions about future economic or demographic factors or other inputs	-	-	-	-
Current year amortization of change in assumptions	-	-	(110,115)	110,115
Benefit Payments, including Refunds of Employee Contributions	(12,926,081)	-	-	-
Net change	<u>17,547,026</u>	<u>1,519,594</u>	<u>13,729,360</u>	<u>32,827,744</u>
Plan Fiduciary Net Position:				
Contributions - Employer	10,491,862	-	(10,491,862)	-
Contributions - State	1,980,171	-	(1,980,171)	-
Contributions - Employee	1,360,489	-	-	(1,360,489)
Contributions - Buy Back	66,116	-	-	(66,116)
Projected Net Investment Income	16,783,760	-	-	(16,783,760)
Difference between projected and actual earnings on Pension Plan investments	3,579,366	3,579,366	-	-
Current year amortization	-	(1,110,224)	(4,090,666)	2,980,442
Benefit Payments, including Refunds of Employee Contributions	(12,926,081)	-	-	-
Administrative Expenses	(145,313)	-	-	145,313
Net change	<u>21,190,370</u>	<u>2,469,142</u>	<u>(16,562,699)</u>	<u>(15,084,610)</u>
Ending Balance	<u>\$ 95,954,901</u>	<u>\$ 6,777,347</u>	<u>\$ 27,755,988</u>	<u>\$ 17,743,134</u>

PRELIMINARY COMPONENTS OF PENSION EXPENSE
FISCAL YEAR SEPTEMBER 30, 2019

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Beginning balance	\$ 95,954,901	\$ 6,777,347	\$ 27,755,988	\$ -
Employer and State Contributions made after 09/30/2018	-	-	TBD*	-
Total Pension Liability Factors:				
Service Cost	8,739,717	-	-	8,739,717
Interest	26,235,299	-	-	26,235,299
Change in Excess State Money	19,663	-	-	19,663
Changes in benefit terms	-	-	-	-
Contributions - Buy Back	148,879	-	-	148,879
Differences between Expected and Actual Experience with regard to economic or demographic assumptions	(446,737)	446,737	-	-
Current year amortization of experience difference	-	(757,057)	(724,928)	(32,129)
Change in assumptions about future economic or demographic factors or other inputs	-	-	-	-
Current year amortization of change in assumptions	-	-	(110,115)	110,115
Benefit Payments, including Refunds of Employee Contributions	(14,157,492)	-	-	-
Net change	<u>20,539,329</u>	<u>(310,320)</u>	<u>(835,043)</u>	<u>35,221,544</u>
Plan Fiduciary Net Position:				
Contributions - Employer	12,432,420	-	(12,432,420)	-
Contributions - State	2,131,983	-	(2,131,983)	-
Contributions - Employee	1,375,400	-	-	(1,375,400)
Contributions - Buy Back	148,879	-	-	(148,879)
Projected Net Investment Income	18,517,663	-	-	(18,517,663)
Difference between projected and actual earnings on Pension Plan investments	(2,391,640)	-	2,391,640	-
Current year amortization	-	(1,110,222)	(4,568,994)	3,458,772
Benefit Payments, including Refunds of Employee Contributions	(14,157,492)	-	-	-
Administrative Expenses	(137,126)	-	-	137,126
Net change	<u>17,920,087</u>	<u>(1,110,222)</u>	<u>(16,741,757)</u>	<u>(16,446,044)</u>
Ending Balance	<u>\$ 98,574,143</u>	<u>\$ 5,356,805</u>	<u>TBD</u>	<u>\$ 18,775,500</u>

* Employer and State Contributions subsequent to the measurement date made after September 30, 2018 but made on or before September 30, 2019 need to be added.

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
2014	\$ (1,685,976)	5	\$ (337,195)	\$ (337,195)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2015	\$ 20,453,331	5	\$ 4,090,666	\$ 4,090,666	\$ 4,090,666	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ (285,772)	5	\$ (57,155)	\$ (57,154)	\$ (57,154)	\$ (57,154)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ (3,579,366)	5	\$ (715,874)	\$ (715,873)	\$ (715,873)	\$ (715,873)	\$ (715,873)	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ 2,391,640	5	\$ -	\$ 478,328	\$ 478,328	\$ 478,328	\$ 478,328	\$ 478,328	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 2,980,442	\$ 3,458,772	\$ 3,795,967	\$ (294,699)	\$ (237,545)	\$ 478,328	\$ -	\$ -	\$ -	\$ -

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	\$ 880,921	8	\$ 110,115	\$ 110,115	\$ 110,115	\$ 110,115	\$ 110,115	\$ 110,115	\$ 110,115	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 110,115	\$ 110,115	\$ 110,115	\$ 110,115	\$ 110,115	\$ 110,115	\$ 110,115	\$ -	\$ -	\$ -	\$ -

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	\$ (2,639,844)	7	\$ (377,120)	\$ (377,121)	\$ (377,121)	\$ (377,121)	\$ (377,121)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ 5,799,419	8	\$ 724,928	\$ 724,928	\$ 724,927	\$ 724,927	\$ 724,927	\$ 724,927	\$ 724,927	\$ -	\$ -	\$ -	\$ -
2017	\$ (2,212,835)	7	\$ (316,121)	\$ (316,119)	\$ (316,119)	\$ (316,119)	\$ (316,119)	\$ (316,119)	\$ (316,119)	\$ -	\$ -	\$ -	\$ -
2018	\$ (446,737)	7	\$ -	\$ (63,817)	\$ (63,820)	\$ (63,820)	\$ (63,820)	\$ (63,820)	\$ (63,820)	\$ (63,820)	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 31,687	\$ (32,129)	\$ (32,133)	\$ (32,133)	\$ (32,133)	\$ 344,988	\$ 344,988	\$ (63,820)	\$ -	\$ -	\$ -