

May 22, 2019

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

RE: GASB Statement No.67 and No.68 – St. Lucie County Fire District Firefighters' Pension Trust Fund

Dear Board:

We are pleased to present to the Board a GASB Statement No.67 and No.68 measured as of September 30, 2018 for St. Lucie County Fire District Firefighters' Pension Trust Fund.

The calculation of the liability associated with the benefits referenced in this report was performed for the purpose of satisfying the requirements of GASB No.67 and No.68 and is not applicable for other purposes, such as determining the plan's funding requirements. A calculation of the plan's liability for other purposes may produce significantly different results.

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<sup>th</sup>, 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.

Certain schedules should include a 10-year history of information. As provided for in GASB No.67 and No.68, this historical information is only presented for the years in which the information was measured in conformity with the requirements of GASB No.67 and No.68.

To the best of our knowledge, these statements are complete and accurate and are in accordance with generally recognized actuarial practices and methods. 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.

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

DHL/lke  
Enclosures

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 <sup>1</sup>	(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

<sup>1</sup>Investment 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.

## GASB 67

### 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	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%
<u>Total</u>	<u>100.0%</u>

#### *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.

## GASB 67

### *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.

**GASB 67**

**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%

## GASB 67

### 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.

## GASB 68

### *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:

<u>Asset Class</u>	<u>Target Allocation</u>	<u>Long Term Expected Real Rate of Return</u>
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%
<u>Total</u>	<u>100.0%</u>	



## GASB 68

### 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	-
<b>Total</b>	<b>\$ 24,383,839</b>	<b>\$ 3,405,198</b>

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	-
<b>Total</b>	<b>TBD</b>	<b>\$ 3,094,878</b>

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)
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.

## GASB 68

### *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.



## GASB 68

### 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%

## GASB 68

### 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)	\$ -	\$ -	\$ -