

RETIREMENT SYSTEM FOR EMPLOYEES OF THE  
HOUSING AUTHORITY OF THE CITY OF KEY WEST

ACTUARIAL VALUATION  
AS OF JANUARY 1, 2018  
(Revised April 27, 2018)

CONTRIBUTIONS APPLICABLE TO THE  
PLAN/FISCAL YEAR ENDED DECEMBER 31, 2019

April 27, 2018

Mr. J. Manuel Castillo, Sr.  
Executive Director  
Housing Authority of the City of Key West  
1400 Kennedy Drive  
Key West, FL 33045

Re: Retirement System for the Employees of the  
Housing Authority of the City of Key West

Dear J. Manuel:

We are pleased to present to the Board this report of the annual actuarial valuation of the Retirement System of the Housing Authority of the City of Key West. Included are the related results for GASB Statements No. 67 and No. 68. The funding valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits and to develop the appropriate funding requirements for the applicable plan year. The calculation of the liability for GASB results was performed for the purpose of satisfying the requirements of GASB Statements No. 67 and No. 68. Please note that these valuations may not be applicable for any other purposes.

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, Florida Statutes, as well as applicable federal laws and regulations. In our opinion, the assumptions used in these 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.

In conducting the valuations, we have relied on personnel, plan design, and asset information supplied by the Housing Authority of the City of Key West and the Board of Trustees, 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 January 1, 2017. The total pension liability was rolled-forward from the valuation date to the plan's fiscal year ending December 30, 2017 using generally accepted actuarial principles. It is our opinion that the assumptions used for this purpose are internally consistent, reasonable, and comply with the requirements under GASB No. 67 and No. 68.

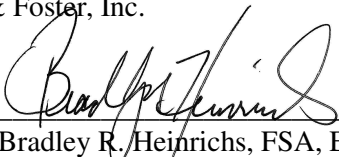
The undersigned is familiar with the immediate and long-term aspects of pension valuations, and meets the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. All of the sections of this report are considered an integral part of the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

To our knowledge, no associate of Foster & Foster, Inc. working on valuations of the program has any direct financial interest or indirect material interest in the Housing Authority of the City of Key West, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the Retirement System for Employees of the Housing Authority of the City of Key West. Thus, there is no relationship existing that might affect our capacity to prepare and certify this actuarial report.

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

Respectfully submitted,

Foster & Foster, Inc.

By:   
Bradley R. Heinrichs, FSA, EA, MAAA  
Enrolled Actuary #17-6901

BRH/lke

Enclosures

## TABLE OF CONTENTS

Section	Title	Page
I	<u>Introduction</u>	
	a. Summary of Report	5
	b. Changes Since Prior Valuation	7
	c. Comparative Summary of Principal Valuation Results	8
II	<u>Valuation Information</u>	
	a. Reconciliation of Unfunded Actuarial Accrued Liabilities	14
	b. Detailed Actuarial (Gain)/Loss Analysis	15
	c. Actuarial Assumptions and Methods	16
	d. Valuation Notes	19
III	Trust Fund	21
IV	<u>Member Statistics</u>	
	a. Statistical Data	26
	b. Age and Service Distribution	27
	c. Valuation Participant Reconciliation	28
V	Summary of Plan Provisions	29
VI	Governmental Accounting Standards Board Statements Disclosure Information	32

## SUMMARY OF REPORT

The regular annual actuarial valuation of the Retirement System for Employees of the Housing Authority of the City of Key West, performed as of January 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 ended December 31, 2019.

The contribution requirements developed in this valuation, compared with amounts developed in the revised January 1, 2017 Actuarial Valuation Report dated April 16, 2018 (and updated with the “projection method” as adopted by the Board), are as follows:

Valuation Date	1/1/2018	1/1/2017
Applicable Plan/Fiscal Yr. End	<u>12/31/2019</u>	<u>12/31/2018</u>
Total Required Contribution (TRC)	\$271,750	\$266,301
Projected Total Annual Payroll (including DROP participants)	\$3,118,370	\$3,143,977
TRC as a % of Total Annual Payroll (including DROP participants) <sup>1</sup>	8.7%	8.5%

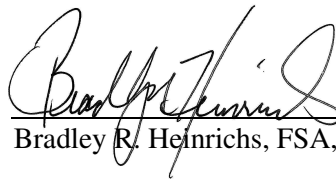
<sup>1</sup> These contributions shall be no less than the Total Required Contribution when expressed as a dollar amount (\$266,301 for the fiscal year ending December 31, 2018 and \$271,750 for the fiscal year ending December 31, 2019).

Experience during the prior twelve months has been more favorable than expected, relative to the Plan’s actuarial assumptions. The primary components of favorable experience included greater than expected turnover, and average increases in Pensionable Earnings that were below the assumed rate. These gains were partially offset by losses due to a 7.05% investment return (Actuarial Value Basis) that fell short of the 7.50% assumption, and no inactive mortality.

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

Respectfully submitted,

FOSTER & FOSTER, INC.

By:   
Bradley R. Heinrichs, FSA, EA, MAAA

By:   
Sara E. Carlson, ASA, EA, MAAA

## CHANGES SINCE PRIOR VALUATION

### Plan Changes

There have been no plan changes since the prior valuation.

### Actuarial Assumption/Method Changes

Since the prior valuation, the Board adopted the “projection method” in determining their required contributions. Under this methodology, we project the valuation results to the fiscal year beginning on the following January 1.

There have been no assumption changes since the prior valuation.

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	<u>1/1/2018</u>	<u>1/1/2017</u>
<b>A. Participant Data</b>		
Actives	57	51
Service Retirees	32	25
DROP Retirees	3	8
Beneficiaries	4	4
Disability Retirees	0	0
Terminated Vested	<u>16</u>	<u>15</u>
<b>Total</b>	<b>112</b>	<b>103</b>
Total Annual Valuation Payroll	\$2,610,810	\$2,377,042
Valuation Payroll Under Assumed Ret. Age	2,543,363	2,312,858
Total Annual Payroll Incl. DROP	3,005,658	3,030,339
Annual Rate of Payments to:		
Service Retirees	281,328	188,119
DROP Retirees	171,105	244,257
Beneficiaries	43,274	42,635
Disability Retirees	0	0
Terminated Vested	45,864	26,977
<b>B. Assets</b>		
Actuarial Value (AVA) <sup>1</sup>	11,134,985	10,420,186
Market Value (MVA) <sup>1</sup>	11,333,392	9,930,577
<b>C. Liabilities</b>		
<b>Present Value of Benefits</b>		
Actives		
Retirement Benefits	4,955,983	4,880,516
Disability Benefits	172,334	179,138
Death Benefits	153,872	155,208
Vested Benefits	133,782	138,024
Service Retirees	2,997,159	1,916,809
DROP Retirees <sup>1</sup>	3,101,194	3,847,156
Beneficiaries	394,268	401,627
Disability Retirees	0	0
Terminated Vested	480,381	249,243
Miscellaneous Liability	<u>2,481</u>	<u>2,172</u>
(Employee Account Balances)		
<b>Total</b>	<b>12,391,454</b>	<b>11,769,893</b>



C. Liabilities - (Continued)	<u>1/1/2018</u>	<u>1/1/2017</u>
Present Value of Future Salaries	17,935,799	16,746,905
Present Value of Future Member Contributions	0	0
Normal Cost (Retirement)	192,327	173,238
Normal Cost (Disability)	10,177	9,536
Normal Cost (Death)	11,918	10,782
Normal Cost (Vesting)	<u>10,304</u>	<u>9,870</u>
Total Normal Cost	224,726	203,426
Present Value of Future Normal Costs	1,506,923	1,391,624
Accrued Liability (Retirement)	3,702,287	3,730,596
Accrued Liability (Disability)	98,912	108,369
Accrued Liability (Death)	56,982	66,360
Accrued Liability (Vesting)	50,867	55,937
Accrued Liability (Inactives) <sup>1</sup>	6,973,002	6,414,835
Miscellaneous (Employee Account Balances)	<u>2,481</u>	<u>2,172</u>
Total Actuarial Accrued Liability (EAN AL)	10,884,531	10,378,269
Unfunded Actuarial Accrued Liability (UAAL)	(250,454)	(41,917)
Funded Ratio (AVA / EAN AL)	102.3%	100.4%

D. Actuarial Present Value of Accrued Benefits	<u>1/1/2018</u>	<u>1/1/2017</u>
Vested Accrued Benefits		
Inactives <sup>1</sup>	6,973,002	6,414,835
Actives	2,189,874	2,117,596
Member Contributions	<u>0</u>	<u>0</u>
Total	9,162,876	8,532,431
Non-vested Accrued Benefits	<u>581,365</u>	<u>556,595</u>
Total Present Value		
Accrued Benefits (PVAB)	9,744,241	9,089,026
Funded Ratio (MVA / PVAB)	116.3%	109.3%
Increase (Decrease) in Present Value of Accrued Benefits Attributable to:		
Plan Amendments	0	
Assumption Changes	0	
New Accrued Benefits	359,770	
Benefits Paid	(372,272)	
Interest	667,717	
Other	<u>0</u>	
Total	655,215	

Valuation Date	1/1/2018	1/1/2017
Applicable to Fiscal Year Ending	<u>12/31/2019</u>	<u>12/31/2018</u>

E. Pension Cost

Normal Cost <sup>2</sup>	\$241,896	\$218,969
Administrative Expenses <sup>2</sup>	59,217	52,086
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 20 years (as of 01/1/2018) <sup>2</sup>	(29,363)	(4,754)
Total Required Contribution	271,750	266,301

F. Past Contributions

Plan Years Ending:	<u>12/31/2017</u>
Total Required Contribution	256,675
Actual Contributions Made:	
Authority	<u>419,196</u>
Total	419,196

G. Net Actuarial (Gain)/Loss (39,364)

<sup>1</sup> The asset values and liabilities include accumulated DROP Plan Balances as of 12/31/2017 and 12/31/2016.

<sup>2</sup> Contributions developed as of 01/1/2018 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> <sup>1</sup>
2018	(250,454)

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

		<u>Actual</u>	<u>Assumed</u>
Year Ended	12/31/2017	3.40%	3.75%
Year Ended	12/31/2016	1.92%	3.75%
Year Ended	12/31/2015	4.09%	3.75%

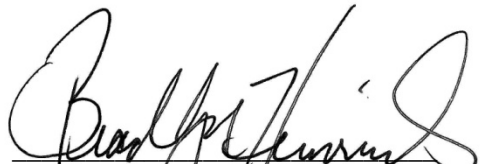
(ii) 3 Year Comparison of Investment Return on Actuarial Value

		<u>Actual</u>	<u>Assumed</u>
Year Ended	12/31/2017	7.05%	7.50%
Year Ended	12/31/2016	5.89%	7.75%
Year Ended	12/31/2015	4.91%	7.75%

<sup>1</sup> Based on current State law, the UAAL will never be positive.

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.



Bradley R. Heinrichs, FSA, EA, MAAA  
Enrolled Actuary #17-6901

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

RECONCILIATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITIES

(1)	Unfunded Actuarial Accrued Liability as of January 1, 2017	(\$41,917)
(2)	Sponsor Normal Cost developed as of January 1, 2017	203,426
(3)	Expected administrative expenses for the year ended December 31, 2017	48,389
(4)	Expected interest on (1), (2) and (3)	13,928
(5)	Sponsor contributions to the System during the year ended December 31, 2017	419,196
(6)	Expected interest on (5)	15,720
(7)	Expected Unfunded Actuarial Accrued Liability as of December 31, 2017 (1)+(2)+(3)+(4)-(5)-(6)	(211,090)
(9)	Change to UAAL due to Actuarial (Gain)/Loss	(39,364)
(10)	Unfunded Actuarial Accrued Liability as of January 1, 2018	(250,454)

Type of <u>Base</u>	Date <u>Established</u>	Years <u>Remaining</u>	1/1/2018 <u>Amount</u>	Amortization <u>Amount</u>
Fresh Start	1/1/2017	14	(211,090)	(23,131)
Actuarial Gain	1/1/2018	15	<u>(39,364)</u>	<u>(4,148)</u>
			(250,454)	(27,279)

DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

(1) Unfunded Actuarial Accrued Liability (UAAL) as of January 1, 2017	(\$41,917)
(2) Expected UAAL as of January 1, 2018	(211,090)
(3) Summary of Actuarial (Gain)/Loss, by component:	
Investment Return (Actuarial Asset Basis)	47,036
Salary Increases	(77,599)
Active Decrements	(98,470)
Inactive Mortality	53,520
Other	<u>36,149</u>
Increase in UAAL due to (Gain)/Loss	(39,364)
Assumption Changes	<u>0</u>
(4) Actual UAAL as of January 1, 2018	(\$250,454)

## ACTUARIAL ASSUMPTIONS AND METHODS

### Mortality Rate

#### *Healthy Active Lives:*

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

**Male:** RP2000 Generational, 50% White Collar / 50% Blue Collar, Scale BB

#### *Healthy Inactive Lives:*

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

**Male:** RP2000 Generational, 50% Annuitant White Collar / 50% Annuitant Blue Collar, Scale BB

#### *Disabled Lives:*

**Female:** 100% RP2000 Disabled Female set forward two years

**Male:** 100% RP2000 Disabled Male setback four years

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

### Interest Rate

7.50% per year, compounded annually, net of investment related assumptions. We will continue to monitor this assumption against the expected asset allocation and future returns by asset class.

### Salary Increases

3.75% per year up to the assumed retirement age. This assumption was utilized by the prior actuary.

### Future Cost of Living Adjustments

Future cost of living increases are assumed to be 1.5% per annum.

### Payroll Growth Assumption

None.



Retirement Rates

Rates of retirement are used in accordance with the following table.

<u>Age</u>	<u>Retirement Rate</u>
Less than 60	6%
60-64	25%
65-67	35%
68-69	20%
70 & Above	100%

Additionally, any member who has reached eligibility for Retirement is assumed to continue employment for one additional year.

The assumed rates of retirement were utilized by the prior actuary.

Termination Rates

<u>Age</u>	<u>Males</u>		<u>Females</u>		
	<7 Years <u>%</u>	7+ Years <u>%</u>	<5 Years <u>%</u>	5-6 Years <u>%</u>	7+ Years <u>%</u>
20	12.75	10.00	20.00	12.75	12.00
25	12.75	10.00	20.00	12.75	12.00
30	12.75	10.00	20.00	12.75	8.94
35	12.75	9.90	20.00	12.75	6.24
40	12.75	5.80	20.00	12.75	4.44
45	12.75	3.70	20.00	12.75	2.61
50	12.75	1.50	20.00	12.75	1.67
55	12.75	0.00	20.00	12.75	0.63
60 & Over	0.00	0.00	0.00	0.00	0.00

The assumed rates of termination were utilized by the prior actuary.

Disability Rates

Class 1 Inter-Company Disability Male Rates were used for males and females. This table was utilized by the prior actuary.

Pre-Retirement Death

It is assumed that 90% of pre-retirement deaths are service connected.

Administrative Expenses

The average of actual administrative expenses during prior three (3) years. This average was \$55,014 for the January 1, 2018 valuation.

Cost Method

Entry Age Normal Actuarial Cost Method.

Amortization Method

Future UAAL bases will be amortized over fifteen years.

### Asset Valuation Method

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.

## VALUATION NOTES

Total Annual Payroll is the projected annual rate of pay as of the valuation date for 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.

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

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

- (a) The normal cost accrual rate equals
  - (i) the present value of future benefits for the participant, determined as of the participant's entry age, divided by
  - (ii) the present value of the compensation expected to be paid to the participant for each year of the participant's anticipated future service, determined as of the participant's entry age.
- (b) In calculating the present value of future compensation, the salary scale is applied both retrospectively and prospectively to estimate compensation in years prior to and subsequent to the valuation year based on the compensation used for the valuation.
- (c) The accrued liability is the sum of the individual accrued liabilities for all participants and beneficiaries. A participant's accrued liability equals the present value, at the participant's attained age, of future benefits less the present value at the participant's attained age of the individual normal costs payable in the future. A beneficiary's accrued liability equals the present value, at the beneficiary's attained age, of future benefits. The unfunded accrued liability equals the total accrued liability less the actuarial value of assets.

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

STATEMENT OF FIDUCIARY NET POSITION  
DECEMBER 31, 2017

<u>ASSETS</u>	COST VALUE	MARKET VALUE
Cash and Cash Equivalents:		
Short Term Investments	2,000.00	2,000.00
Checking Account	86,077.78	86,077.78
Prepaid Expenses	3,378.58	3,378.58
Total Cash and Equivalents	91,456.36	91,456.36
Receivables:		
Participant Loans	33,804.17	33,804.17
Investment Income	5,261.48	5,261.48
Total Receivable	39,065.65	39,065.65
Investments:		
Mutual Funds:		
Fixed Income	1,939,217.91	1,922,786.26
Equity	7,800,714.56	9,294,304.20
Total Investments	9,739,932.47	11,217,090.46
Total Assets	9,870,454.48	11,347,612.47
<u>LIABILITIES</u>		
Payables:		
To Key West General Fund	14,220.00	14,220.00
Total Liabilities	14,220.00	14,220.00
NET POSITION RESTRICTED FOR PENSIONS	9,856,234.48	11,333,392.47

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION  
FOR THE YEAR ENDED DECEMBER 31, 2017  
Market Value Basis

ADDITIONS

Contributions:			
Employer		419,196.48	
Total Contributions			419,196.48
Investment Income:			
Net Realized Gain (Loss)	243,946.69		
Unrealized Gain (Loss)	851,816.84		
Net Increase in Fair Value of Investments		1,095,763.53	
Interest & Dividends		382,424.06	
Less Investment Expense <sup>1</sup>		(56,404.77)	
Net Investment Income			1,421,782.82
Total Additions			1,840,979.30
<u>DEDUCTIONS</u>			
Distributions to Members:			
Benefit Payments		283,260.14	
Lump Sum DROP Distributions		89,011.96	
Total Distributions			372,272.10
Administrative Expense			65,891.50
Total Deductions			438,163.60
Net Increase in Net Position			1,402,815.70
<b>NET POSITION RESTRICTED FOR PENSIONS</b>			
Beginning of the Year			9,930,576.77
End of the Year			11,333,392.47

<sup>1</sup>Investment related expenses include investment advisory, custodial and performance monitoring fees.

ACTUARIAL ASSET VALUATION  
December 31, 2017

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. 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
12/31/2013	162,787	0	0	0	0	0
12/31/2014	(164,097)	(32,821)	0	0	0	0
12/31/2015	(629,243)	(251,696)	(125,847)	0	0	0
12/31/2016	(98,729)	(59,237)	(39,491)	(19,745)	0	0
12/31/2017	677,701	542,161	406,621	271,081	135,541	0
Total		198,407	241,283	251,336	135,541	0

<u>Development of Investment Gain/(Loss)</u>	
Market Value of Assets, 12/31/2016	9,930,577
Contributions Less Benefit Payments & Admin Expenses	(18,967)
Expected Investment Earnings*	744,082
Actual Net Investment Earnings	1,421,783
2017 Actuarial Investment Gain/(Loss)	<u>677,701</u>

\*Expected Investment Earnings = 0.075 \* [9,930,577 + 0.5 \* (18,967)]

<u>Development of Actuarial Value of Assets</u>	
(1) Market Value of Assets, 12/31/2017	11,333,392
(2) Gains/(Losses) Not Yet Recognized	198,407
(3) Actuarial Value of Assets, 12/31/2017, (1) - (2)	<u>11,134,985</u>
(A) 12/31/2016 Actuarial Assets:	10,420,186
(I) Net Investment Income:	
1. Interest, Dividends and Misc Income	382,424
2. Realized Gains (Losses)	243,947
3. Change in Actuarial Value	163,801
4. Investment Expenses	(56,405)
Total	<u>733,767</u>
(B) 12/31/2017 Actuarial Assets:	11,134,985
Actuarial Asset Rate of Return = 2I/(A+B-I):	7.05%
Market Value of Assets Rate of Return:	14.22%
12/31/2017 Limited Actuarial Assets:	11,134,985
Actuarial Gain/(Loss) due to Investment Return (Actuarial Asset Basis)	(47,036)

CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS  
 DECEMBER 31, 2017  
 Actuarial Asset Basis

REVENUES

Contributions:		
Employer	419,196.48	
<b>Total Contributions</b>		<b>419,196.48</b>
Earnings from Investments:		
Interest & Dividends	382,424.06	
Net Realized Gain (Loss)	243,946.69	
Change in Actuarial Value	163,800.84	
<b>Total Earnings and Investment Gains</b>		<b>790,171.59</b>

EXPENDITURES

Distributions to Members:		
Benefit Payments	283,260.14	
Lump Sum DROP Distributions	89,011.96	
<b>Total Distributions</b>		<b>372,272.10</b>
Expenses:		
Investment related <sup>1</sup>	56,404.77	
Administrative	65,891.50	
<b>Total Expenses</b>		<b>122,296.27</b>
<b>Change in Net Assets for the Year</b>		<b>714,799.70</b>
<b>Net Assets Beginning of the Year</b>		<b>10,420,185.77</b>
<b>Net Assets End of the Year<sup>2</sup></b>		<b>11,134,985.47</b>

<sup>1</sup>Investment related expenses include investment advisory, custodial and performance monitoring fees.

<sup>2</sup>Net Assets may be limited for actuarial consideration.



DEFERRED RETIREMENT OPTION PLAN ACTIVITY  
January 1, 2017 to December 31, 2017

Beginning of the Year Balance	807,568.75
Plus Additions	199,708.24
Investment Return Earned	90,661.72
Less Distributions	(89,011.96)
End of the Year Balance	1,008,926.75

## STATISTICAL DATA

	<u>1/1/2015</u>	<u>1/1/2016</u>	<u>1/1/2017</u>	<u>1/1/2018</u>
<u>Actives</u>				
Number	54	57	51	57
Average Current Age	50.2	49.9	48.4	48.1
Average Age at Employment	41.7	41.3	39.5	40.1
Average Past Service	8.5	8.6	8.9	8.0
Average Annual Salary	\$48,402	\$49,896	\$46,609	\$45,804
<u>Service Retirees</u>				
Number			25	32
Average Current Age			70.3	70.1
Average Annual Benefit			\$7,525	\$8,792
<u>DROP Retirees</u>				
Number			8	3
Average Current Age			64.3	62.3
Average Annual Benefit			\$30,532	\$57,035
<u>Beneficiaries</u>				
Number			4	4
Average Current Age			66.1	67.1
Average Annual Benefit			\$10,659	\$10,819
<u>Disability Retirees</u>				
Number			0	0
Average Current Age			N/A	N/A
Average Annual Benefit			N/A	N/A
<u>Terminated Vested</u>				
Number			15	16
Average Current Age			54.7	54.4
Average Annual Benefit			\$1,798	\$2,867

## 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	2	0	1	1	0	0	0	0	0	0	0	4
25 - 29	3	1	0	0	0	0	0	0	0	0	0	4
30 - 34	0	0	1	1	0	1	1	0	0	0	0	4
35 - 39	1	0	0	0	0	2	0	0	0	0	0	3
40 - 44	2	0	0	0	0	1	0	1	0	0	0	4
45 - 49	2	0	1	0	2	1	3	0	1	0	0	10
50 - 54	1	0	0	0	0	0	1	1	1	0	0	4
55 - 59	0	0	0	0	2	5	1	1	0	0	0	9
60 - 64	3	0	0	1	0	2	1	2	2	0	0	11
65+	0	0	0	0	0	1	1	2	0	0	0	4
Total	14	1	3	3	4	13	8	7	4	0	0	57

VALUATION PARTICIPANT RECONCILIATION

1. Active lives

a. Number in prior valuation 1/1/2017	51
b. Terminations	
i. Vested (partial or full) with deferred benefits	(2)
ii. Non-vested or full lump sum distribution received	(5)
c. Deaths	
i. Beneficiary receiving benefits	0
ii. No future benefits payable	0
d. Disabled	0
e. Retired	(1)
f. DROP	<u>0</u>
g. Continuing participants	43
h. New entrants	<u>14</u>
i. Total active life participants in valuation	57

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

	Service Retirees, Vested Receiving <u>Benefits</u>	DROP <u>Benefits</u>	Receiving Death <u>Benefits</u>	Receiving Disability <u>Benefits</u>	Vested <u>Deferred</u>	<u>Total</u>
a. Number prior valuation	25	8	4	0	15	52
Retired	7	(5)	0	0	(1)	1
DROP	0	0	0	0	0	0
Vested Deferred	0	0	0	0	2	2
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	32	3	4	0	16	55

## SUMMARY OF PLAN PROVISIONS

<u>Eligibility</u>	Full-time employees of the Housing Authority.
<u>Credited Service</u>	The amount of time that a member worked as a full-time employee of the Housing Authority. Maximum credited service is 35 years.
<u>Average Final Salary</u>	Average of the actual base pay received by a Member during the highest five of the ten years of service immediately preceding termination of service. Base pay shall be defined to include pay received in any form from the Housing Authority or other affiliated agencies excluding in all cases overtime pay. Income earned from other affiliated agencies may be applied retroactively, in accordance with the definition herein and the actual percentage of the contribution utilized shall be included in the determination.
<u>Normal Retirement</u>	
Date	Earlier of 1.) Age 60 and 5 years of Credited Service, or 2.) 30 years of Credited Service.
Benefit	1.85% of Average Final Salary for each year of Credited Service.
Form of Benefit	Life Annuity (options available).
<u>Early Retirement</u>	
Eligibility	Earlier of 1.) Age 55 and 15 years of Credited Service, or 2.) 20 years of Credited Service.
Benefit	Accrued benefit reduced by 5.0% for each year by which retirement precedes age 60.
<u>Member Contributions</u>	None required or permitted.
<u>Housing Authority Contributions</u>	Amount which will be actuarially determined necessary to pay for System benefits.

Vesting (Termination of Employment)

Vesting Schedule

<u>Years of Credited Service</u>	<u>Vested Percentage</u>
Less than 5	0%
5	25%
6	30%
7	35%
8	40%
9	45%
10	50%
11	60%
12	70%
13	80%
14	90%
15	100%

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

Disability

Eligibility 5 years of Credited Service.

Benefit Accrued benefit based on average basic compensation during 3 years immediately preceding disability, with a minimum benefit of 20% of final three-year average basic compensation.

Death Benefits

Service Connected The spouse shall receive 75% of the projected retirement benefit which such member would have received had he continued employment until his normal retirement date at his current rate of pay. A spouse with children under 19 years of age shall receive 100% of the projected retirement benefit such member would have received.

Non-Service Connected The spouse shall receive a monthly benefit equal to 60% of the projected retirement benefit which such member would have received had he continued employment until his normal retirement date at his current rate of pay. A spouse with children under 19 years of age shall receive 75% of the projected retirement benefit such member would have received.

Deferred Retirement Option Plan

Eligibility	Satisfaction of Early or Normal Retirement requirements.
Participation	Not to exceed 5 years.
Rate of Return	<p>Members who are eligible for Normal Retirement prior to 10/1/16 are credited with interest at the rate of 8%, compounded annually while in the DROP and then at the actual rate earned by the Plan (less a nominal handling fee) after the Member separates from service.</p> <p>Members who are not eligible for Normal Retirement prior to 10/1/16 are credited with interest at the valuation interest rate while in the DROP and then at the actual rate earned by the Plan (less a nominal handling fee) after the Member separates from service.</p> <p>Members who entered the DROP prior to 11/10/03 are credited with interest at the rate of 8% while in the DROP and after the Member separates from service.</p>
Form of Distribution	Cash lump sum.

STATEMENT OF FIDUCIARY NET POSITION  
DECEMBER 31, 2017

<u>ASSETS</u>	MARKET VALUE
Cash and Cash Equivalents:	
Short Term Investments	2,000
Checking Account	86,078
Prepaid Expenses	3,378
Total Cash and Equivalents	91,456
Receivables:	
Participant Loans	33,804
Investment Income	5,262
Total Receivable	39,066
Investments:	
Mutual Funds:	
Fixed Income	1,922,786
Equity	9,294,304
Total Investments	11,217,090
Total Assets	11,347,612
<u>LIABILITIES</u>	
Payables:	
To Key West General Fund	14,220
Total Liabilities	14,220
NET POSITION RESTRICTED FOR PENSIONS	11,333,392



STATEMENT OF CHANGES IN FIDUCIARY NET POSITION  
FOR THE YEAR ENDED DECEMBER 31, 2017  
Market Value Basis

ADDITIONS

## Contributions:

Employer	419,196	
Total Contributions		419,196
Investment Income:		
Net Increase in Fair Value of Investments	1,095,764	
Interest & Dividends	382,424	
Less Investment Expense <sup>1</sup>	(56,405)	
Net Investment Income		1,421,783
Total Additions		1,840,979

DEDUCTIONS

## Distributions to Members:

Benefit Payments	283,260	
Lump Sum DROP Distributions	89,012	
Total Distributions		372,272
Administrative Expense		65,892
Total Deductions		438,164
Net Increase in Net Position		1,402,815

## NET POSITION RESTRICTED FOR PENSIONS

Beginning of the Year		9,930,577
End of the Year		11,333,392

<sup>1</sup>Investment related expenses include investment advisory, custodial and performance monitoring fees.

**NOTES TO THE FINANCIAL STATEMENTS**  
(For the Year Ended December 31, 2017)

Plan Description

*Plan Administration*

The Plan is a single-employer defined benefit pension plan administered by the Authority.  
All full-time employees of the Housing Authority shall become members of the System immediately upon employment.

*Plan Membership as of January 1, 2017:*

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	37
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	15
Active Plan Members	51
	103

*Benefits Provided*

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

Normal Retirement:

Date: Earlier of 1.) Age 60 and 5 years of Credited Service, or 2.) 30 years of Credited Service.

Benefit: 1.85% of Average Final Salary for each year of Credited Service.

Early Retirement:

Eligibility: Earlier of 1.) Age 55 and 15 years of Credited Service, or 2.) 20 years of Credited Service.

Benefit: Accrued benefit reduced by 5.0% for each year by which retirement precedes age 60.

Vesting (Termination of Employment):

Vesting Schedule:	Years of Credited Service	Vested Percentage
	Less Than 5	0%
	5	25%
	6	30%
	7	35%
	8	40%
	9	45%
	10	50%
	11	60%
	12	70%
	13	80%
	14	90%
	15	100%

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

Disability:

Eligibility: 5 years of Credited Service.

Benefit: Accrued benefit based on average basic compensation during 3 years immediately preceding disability, with a minimum benefit of 20% of final three-year average basic compensation.

Death Benefits:

Service Connected: The spouse shall receive 75% of the projected retirement benefit which such member would have received had he continued employment until his normal retirement date at his current rate of pay. A spouse with children under 19 years of age shall receive 100% of the projected retirement benefit such member would have received.

Non-Service Connected: The spouse shall receive a monthly benefit equal to 60% of the projected retirement benefit which such member would have received had he continued employment until his normal retirement date at his current rate of pay. A spouse with children under 19 years of age shall receive 75% of the projected retirement benefit such member would have received.

*Contributions*

Employee Contributions: None required or permitted.

Housing Authority Contributions: Amount which will be actuarially determined necessary to pay for System benefits.

**Investments**

*Investment Policy:*

The following was the Board's adopted asset allocation policy as of December 31, 2017:

Asset Class	Target Allocation
US Large Cap Equity	40%
International Equity	20%
Absolute Return	20%
US Aggregate Bond	20%
Total	100%

*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 December 31, 2017, the annual money-weighted rate of return on Pension Plan investments, net of Pension Plan investment expense, was 14.22 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 Early or Normal Retirement requirements.

Participation: Not to exceed 5 years.

Rate of Return: Members who are eligible for Normal Retirement prior to 10/1/16 are credited with interest at the rate of 8%, compounded annually while in the DROP and then at the actual rate earned by the Plan (less a nominal handling fee) after the Member separates from service.

Members who are not eligible for Normal Retirement prior to 10/1/16 are credited with interest at the valuation interest rate while in the DROP and then at the actual rate earned by the Plan (less a nominal handling fee) after the Member separates from service.

Members who entered the DROP prior to 11/10/03 are credited with interest at the rate of 8% while in the DROP and after the Member separates from service.

The DROP balance as December 31, 2017 is \$1,008,927.

NET PENSION LIABILITY OF THE SPONSOR

The components of the Net Pension Liability of the Sponsor on December 31, 2017 were as follows:

Total Pension Liability	\$ 10,990,650
Plan Fiduciary Net Position	\$ (11,333,392)
Sponsor's Net Pension Liability	<u>\$ (342,742)</u>
Plan Fiduciary Net Position as a percentage of Total Pension Liability	103.12%

*Actuarial Assumptions:*

The Total Pension Liability was determined by an actuarial valuation as of January 1, 2017 updated to December 31, 2017 using the following actuarial assumptions:

Inflation	3.00%
Salary Increases	3.75%
Discount Rate	7.50%
Investment Rate of Return	7.50%

*Mortality Rate Healthy Active Lives:*

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

Male: RP2000 Generational, 50% White Collar / 50% Blue Collar, Scale BB.

*Mortality Rate Healthy Inactive Lives:*

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

Male: RP2000 Generational, 50% Annuitant White Collar / 50% Annuitant Blue Collar, Scale BB.

*Mortality Rate Disabled Lives:*

Female: 100% RP2000 Disabled Female set forward two years .

Male: 100% RP2000 Disabled Male setback four years.

The most recent actuarial experience study used to review the other significant assumptions was performed by Gabriel Roeder Smith & Company, dated June 2, 2014.

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 2017, the inflation rate assumption of the investment advisor was 3.00%.

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 December 31, 2017 are summarized in the following table:

<u>Asset Class</u>	<u>Long Term Expected Real Rate of Return</u>
US Large Cap Equity	3.75%
International Equity	4.75%
Absolute Return	3.50%
US Aggregate Bond	0.75%

## GASB 67

### Discount Rate:

The Discount Rate used to measure the Total Pension Liability was 7.50 percent.

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

	1% Decrease 6.50%	Current Discount Rate 7.50%	1% Increase 8.50%
Sponsor's Net Pension Liability	\$ 846,312	\$ (342,742)	\$ (1,337,368)

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

	<u>12/31/2017</u>	<u>12/31/2016<sup>1</sup></u>
Total Pension Liability		
Service Cost	193,005	254,915
Interest	836,436	785,234
Changes of benefit terms	-	-
Differences between Expected and Actual Experience	(719,162)	(70,582)
Changes of assumptions	266,784	279,907
Benefit Payments, including Refunds of Employee Contributions	<u>(372,272)</u>	<u>(265,544)</u>
Net Change in Total Pension Liability	204,791	983,930
Total Pension Liability - Beginning	<u>10,785,859</u>	<u>9,801,929</u>
Total Pension Liability - Ending (a)	<u>\$ 10,990,650</u>	<u>\$ 10,785,859</u>
Plan Fiduciary Net Position		
Contributions - Employer	419,196	2,551,364
Net Investment Income	1,421,783	546,208
Benefit Payments, including Refunds of Employee Contributions	(372,272)	(265,544)
Administrative Expense	<u>(65,892)</u>	<u>(60,250)</u>
Net Change in Plan Fiduciary Net Position	1,402,815	2,771,778
Plan Fiduciary Net Position - Beginning	<u>9,930,577</u>	<u>7,158,799</u>
Plan Fiduciary Net Position - Ending (b)	<u>\$ 11,333,392</u>	<u>\$ 9,930,577</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ (342,742)</u>	<u>\$ 855,282</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	103.12%	92.07%
Covered Employee Payroll <sup>2</sup>	\$ 2,873,176	\$ 3,073,967
Net Pension Liability as a percentage of Covered Employee Payroll	-11.93%	27.82%

**Notes to Schedule:**

<sup>1</sup> The 2014-2016 measurement date results were provided by the prior actuary, Gabriel Roeder Smith & Company, Consultants & Actuaries, Ft. Lauderdale (FL).

<sup>2</sup> The 2017 Covered Employee Payroll includes DROP payroll.

*Changes of assumptions:*

For measurement date 12/31/2017, amounts reported as changes of assumptions resulted from lowering the interest rate from 7.75% to 7.50% per year, compounded annually, net of investment related assumptions.

Additionally, the inflation assumption rate was lowered from 3.25% to 3.00%, matching the long-term inflation assumption Plan's investment consultant.

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

	<u>12/31/2015<sup>1</sup></u>	<u>12/31/2014<sup>1</sup></u>
Total Pension Liability		
Service Cost	223,159	209,477
Interest	714,969	699,929
Changes of benefit terms	-	-
Differences between Expected and Actual Experience	(152,973)	28,621
Changes of assumptions	14,586	-
Benefit Payments, including Refunds of Employee Contributions	<u>(275,901)</u>	<u>(347,169)</u>
Net Change in Total Pension Liability	523,840	590,858
Total Pension Liability - Beginning	<u>9,278,089</u>	<u>8,687,231</u>
Total Pension Liability - Ending (a)	<u><u>\$ 9,801,929</u></u>	<u><u>\$ 9,278,089</u></u>
Plan Fiduciary Net Position		
Contributions - Employer	464,186	457,983
Net Investment Income	(74,320)	370,657
Benefit Payments, including Refunds of Employee Contributions	(275,901)	(347,169)
Administrative Expense	<u>(42,645)</u>	<u>(46,017)</u>
Net Change in Plan Fiduciary Net Position	71,320	435,454
Plan Fiduciary Net Position - Beginning	<u>7,087,479</u>	<u>6,652,025</u>
Plan Fiduciary Net Position - Ending (b)	<u><u>\$ 7,158,799</u></u>	<u><u>\$ 7,087,479</u></u>
Net Pension Liability - Ending (a) - (b)	<u><u>\$ 2,643,130</u></u>	<u><u>\$ 2,190,610</u></u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	73.03%	76.39%
Covered Employee Payroll	\$ 2,680,502	\$ 2,539,765
Net Pension Liability as a percentage of Covered Employee Payroll	98.61%	86.25%

**Notes to Schedule:**

<sup>1</sup> The 2014-2016 measurement date results were provided by the prior actuary, Gabriel Roeder Smith & Company, Consultants & Actuaries, Ft. Lauderdale (FL).

**SCHEDULE OF CONTRIBUTIONS**  
Last 10 Fiscal Years

Fiscal Year Ended	Actuarially Determined Contribution	Contributions in relation to the Actuarially Determined Contributions	Contribution Deficiency (Excess)	Covered Employee Payroll	Contributions as a percentage of Covered Employee Payroll
12/31/2017	\$ 256,675	\$ 419,196	\$ (162,521)	\$ 2,873,176	14.59%
12/31/2016 <sup>1</sup>	\$ 568,684	\$ 2,551,364	\$ (1,982,680)	\$ 3,073,967	83.00%
12/31/2015 <sup>1</sup>	\$ 464,186	\$ 464,186	\$ -	\$ 2,680,502	17.32%
12/31/2014 <sup>1</sup>	\$ 441,143	\$ 457,983	\$ (16,840)	\$ 2,539,765	18.03%
12/31/2013 <sup>1</sup>	\$ 458,146	\$ 461,286	\$ (3,140)	\$ 2,783,925	16.57%
12/31/2012 <sup>1</sup>	\$ 443,829	\$ 456,928	\$ (13,099)	\$ 2,872,889	15.90%
12/31/2011 <sup>1</sup>	\$ 453,984	\$ 481,432	\$ (27,448)	\$ 3,140,065	15.33%
12/31/2010 <sup>1</sup>	\$ 471,009	\$ 471,009	\$ -	\$ 2,696,621	17.47%
12/31/2009 <sup>1</sup>	\$ 405,822	\$ 422,931	\$ (17,109)	\$ 2,461,446	17.18%
12/31/2008 <sup>1</sup>	\$ 340,638	\$ 363,044	\$ (22,406)	\$ 2,276,895	15.94%

<sup>1</sup> The 2014-2008 measurement date results were provided by the prior actuary, Gabriel Roeder Smith & Company, Consultants & Actuaries, Ft. Lauderdale (FL).

<sup>2</sup> The 2017 Covered Employee Payroll includes DROP payroll.

Notes to Schedule

Valuation Date: 01/01/2017  
Actuarially determined contribution rates are calculated using a January 1<sup>st</sup> valuation date for the plan year in which contributions are reported.

Methods and assumptions used to determine contribution rates:

Actuarial Cost Method: Entry Age Normal Actuarial Cost Method.  
 Amortization Method: Future UAAL bases will be amortized over one year.  
 Amortization Method: 30 years.  
 Mortality: *Healthy Actives Lives:*  
 Female: RP2000 Generational, 100% White Collar, Scale BB.  
 Male: RP2000 Generational, 50% White Collar / 50% Blue Collar, Scale BB.  
*Healthy Inactives Lives:*  
 Female: RP2000 Generational, 100% Annuitant White Collar, Scale BB.  
 Male: RP2000 Generational, 50% Annuitant White Collar / 50% Annuitant Blue Collar, Scale BB.  
*Disabled Lives:*  
 Female: 100% RP2000 Disabled Female set forward two years.  
 Male: 100% RP2000 Disabled Male setback four years.  
 The above assumption rates were mandated by Chapter 2015-157, Laws of Florida. This law mandates the use of the assumption used in either of the two most recent valuations of the Florida Retirement System (FRS). The above rates are those outlined in Milliman’s July 1, 2016 FRS valuation report for other than special risk participants. We feel this assumption sufficiently accommodates future mortality improvements.  
 Interest Rate: 7.50% per year, compounded annually, net of investment related assumptions. We will continue to monitor this assumption against the expected asset allocation and future returns by asset class.



**GASB 67**

Salary Increases: 3.75% per year up to the assumed retirement age. This assumption was utilized by the prior actuary.  
 Future Cost of Living Adjustments: Future cost of living increases are assumed to be 1.5% per annum.  
 Payroll Growth Assumption: None.  
 Retirement Rates: Rates of retirement are used in accordance with the following table.

Retirement	
Age	Rate
Less than 60	6%
60-64	25%
65-67	35%
68-69	20%
70 & above	100%

Termination Rates:

Males		
Age	<7 Years	7+ Years
20	12.75	10.00
25	12.75	10.00
30	12.75	10.00
35	12.75	9.90
40	12.75	5.80
45	12.75	3.70
50	12.75	1.50
55	12.75	0.00
60&Over	0.00	0.00

Females			
Age	<5 Years	5-6 Years	7+ Years
20	20.00	12.75	12.00
25	20.00	12.75	12.00
30	20.00	12.75	8.94
35	20.00	12.75	6.24
40	20.00	12.75	4.44
45	20.00	12.75	2.61
50	20.00	12.75	1.67
55	20.00	12.75	0.63
60&Over	0.00	0.00	0.00

The assumed rates of termination were utilized by the prior actuary.  
 Disability Rates: Class 1 Inter-Company Disability Male Rates were used for males and females.  
 Pre-Retirement Death: It is assumed that 90% of pre-retirement deaths are service connected.  
 Asset Valuation Method: 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.

**SCHEDULE OF INVESTMENT RETURNS**  
Last 10 Fiscal Years

	<u>12/31/2017</u>	<u>12/31/2016</u>	<u>12/31/2015</u>	<u>12/31/2014</u>
Annual Money-Weighted Rate of Return				
Net of Investment Expense	14.22%	N/A	N/A	N/A

NOTES TO THE FINANCIAL STATEMENTS  
(For the Year Ended December 31, 2017)

General Information about the Pension Plan

*Plan Description*

The Plan is a single-employer defined benefit pension plan administered by the Authority. All full-time employees of the Housing Authority shall become members of the System immediately upon employment.

*Plan Membership as of January 1, 2017:*

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	37
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	15
Active Plan Members	51
	103

*Benefits Provided*

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

Normal Retirement:

Date: Earlier of 1.) Age 60 and 5 years of Credited Service, or 2.) 30 years of Credited Service.

Benefit: 1.85% of Average Final Salary for each year of Credited Service.

Early Retirement:

Eligibility: Earlier of 1.) Age 55 and 15 years of Credited Service, or 2.) 20 years of Credited Service.

Benefit: Accrued benefit reduced by 5.0% for each year by which retirement precedes age 60.

Vesting (Termination of Employment):

Vesting Schedule:	Years of Credited Service	Vested Percentage
	Less Than 5	0%
	5	25%
	6	30%
	7	35%
	8	40%
	9	45%
	10	50%
	11	60%
	12	70%
	13	80%
	14	90%
	15	100%

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

Disability:

Eligibility: 5 years of Credited Service.

Benefit: Accrued benefit based on average basic compensation during 3 years immediately preceding disability, with a minimum benefit of 20% of final three-year average basic compensation.

Death Benefits:

Service Connected: The spouse shall receive 75% of the projected retirement benefit which such member would have received had he continued employment until his normal retirement date at his current rate of pay. A spouse with children under 19 years of age shall receive 100% of the projected retirement benefit such member would have received.

Non-Service Connected: The spouse shall receive a monthly benefit equal to 60% of the projected retirement benefit which such member would have received had he continued employment until his normal retirement date at his current rate of pay. A spouse with children under 19 years of age shall receive 75% of the projected retirement benefit such member would have received.

*Contributions*

Employee Contributions: None required or permitted.

Housing Authority Contributions: Amount which will be actuarially determined necessary to pay for System benefits.

## GASB 68

### Net Pension Liability

The measurement date is December 31, 2017.

The measurement period for the pension expense was January 1, 2017 to December 31, 2017.

The reporting period is January 1, 2017 through December 31, 2017.

The Sponsor's Net Pension Liability was measured as of December 31, 2017.

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 January 1, 2017 updated to December 31, 2017 using the following actuarial assumptions:

Inflation	3.00%
Salary Increases	3.75%
Discount Rate	7.50%
Investment Rate of Return	7.50%

#### *Mortality Rate Healthy Active Lives:*

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

Male: RP2000 Generational, 50% White Collar / 50% Blue Collar, Scale BB.

#### *Mortality Rate Healthy Inactive Lives:*

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

Male: RP2000 Generational, 50% Annuitant White Collar / 50% Annuitant Blue Collar, Scale BB.

#### *Mortality Rate Disabled Lives:*

Female: 100% RP2000 Disabled Female set forward two years .

Male: 100% RP2000 Disabled Male setback four years.

The most recent actuarial experience study used to review the other significant assumptions was performed by Gabriel Roeder Smith & Company, dated June 2, 2014.

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 2017, the inflation rate assumption of the investment advisor was 3.00%.

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 December 31, 2017 are summarized in the following table:

Asset Class	Target Allocation	Long Term Expected Real Rate of Return
US Large Cap Equity	40%	3.75%
International Equity	20%	4.75%
Absolute Return	20%	3.50%
US Aggregate Bond	20%	0.75%
Total	100%	

## GASB 68

### Discount Rate:

The Discount Rate used to measure the Total Pension Liability was 7.50 percent.

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

CHANGES IN NET PENSION LIABILITY

	Increase (Decrease)		
	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
	(a)	(b)	(a)-(b)
Balances at December 31, 2016	\$ 10,785,859	\$ 9,930,577	\$ 855,282
Changes for a Year:			
Service Cost	193,005	-	193,005
Interest	836,436	-	836,436
Differences between Expected and Actual Experience	(719,162)	-	(719,162)
Changes of assumptions	266,784	-	266,784
Changes of benefit terms	-	-	-
Contributions - Employer	-	419,196	(419,196)
Net Investment Income	-	1,421,783	(1,421,783)
Benefit Payments, including Refunds of Employee Contributions	(372,272)	(372,272)	-
Administrative Expense	-	(65,892)	65,892
Net Changes	204,791	1,402,815	(1,198,024)
Balances at December 31, 2017	\$ 10,990,650	\$ 11,333,392	\$ (342,742)

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

	Current Discount		
	1% Decrease	Rate	1% Increase
	6.50%	7.50%	8.50%
Sponsor's Net Pension Liability	\$ 846,312	\$ (342,742)	\$ (1,337,368)

*Pension Plan Fiduciary Net Position.*

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

**PENSION EXPENSE AND DEFERRED OUTFLOWS OF RESOURCES AND DEFERRED  
INFLOWS OF RESOURCES RELATED TO PENSIONS  
FISCAL YEAR DECEMBER 31, 2017**

For the year ended December 31, 2017, the Sponsor will recognize a Pension Expense of \$307,368.

On December 31, 2017, 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	-	648,862
Changes of assumptions	357,025	-
Net difference between Projected and Actual Earnings on Pension Plan investments	-	180,899
<b>Total</b>	<b>\$ 357,025</b>	<b>\$ 829,761</b>

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 December 31:	
2018	\$ (25,684)
2019	\$ (23,910)
2020	\$ (202,087)
2021	\$ (221,055)
2022	\$ -
Thereafter	\$ -

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

	<u>12/31/2017</u>	<u>12/31/2016<sup>1</sup></u>
Total Pension Liability		
Service Cost	193,005	254,915
Interest	836,436	785,234
Changes of benefit terms	-	-
Differences between Expected and Actual Experience	(719,162)	(70,582)
Changes of assumptions	266,784	279,907
Benefit Payments, including Refunds of Employee Contributions	(372,272)	(265,544)
Net Change in Total Pension Liability	<u>204,791</u>	<u>983,930</u>
Total Pension Liability - Beginning	<u>10,785,859</u>	<u>9,801,929</u>
Total Pension Liability - Ending (a)	<u><u>\$ 10,990,650</u></u>	<u><u>\$ 10,785,859</u></u>
Plan Fiduciary Net Position		
Contributions - Employer	419,196	2,551,364
Net Investment Income	1,421,783	546,208
Benefit Payments, including Refunds of Employee Contributions	(372,272)	(265,544)
Administrative Expense	(65,892)	(60,250)
Net Change in Plan Fiduciary Net Position	<u>1,402,815</u>	<u>2,771,778</u>
Plan Fiduciary Net Position - Beginning	<u>9,930,577</u>	<u>7,158,799</u>
Plan Fiduciary Net Position - Ending (b)	<u><u>\$ 11,333,392</u></u>	<u><u>\$ 9,930,577</u></u>
Net Pension Liability - Ending (a) - (b)	<u><u>\$ (342,742)</u></u>	<u><u>\$ 855,282</u></u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	103.12%	92.07%
Covered Employee Payroll <sup>2</sup>	\$ 2,873,176	\$ 3,073,967
Net Pension Liability as a percentage of Covered Employee Payroll	-11.93%	27.82%

**Notes to Schedule:**

<sup>1</sup> The 2014-2016 measurement date results were provided by the prior actuary, Gabriel Roeder Smith & Company, Consultants & Actuaries, Ft. Lauderdale (FL).

<sup>2</sup> The 2017 Covered Employee Payroll includes DROP payroll.

*Changes of assumptions:*

For measurement date 12/31/2017, amounts reported as changes of assumptions resulted from lowering the interest rate from 7.75% to 7.50% per year, compounded annually, net of investment related assumptions.

Additionally, the inflation assumption rate was lowered from 3.25% to 3.00%, matching the long-term inflation assumption Plan's investment consultant.



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

	<u>12/31/2015<sup>1</sup></u>	<u>12/31/2014<sup>1</sup></u>
Total Pension Liability		
Service Cost	223,159	209,477
Interest	714,969	699,929
Changes of benefit terms	-	-
Differences between Expected and Actual Experience	(152,973)	28,621
Changes of assumptions	14,586	-
Benefit Payments, including Refunds of Employee Contributions	<u>(275,901)</u>	<u>(347,169)</u>
Net Change in Total Pension Liability	523,840	590,858
Total Pension Liability - Beginning	<u>9,278,089</u>	<u>8,687,231</u>
Total Pension Liability - Ending (a)	<u><u>\$ 9,801,929</u></u>	<u><u>\$ 9,278,089</u></u>
Plan Fiduciary Net Position		
Contributions - Employer	464,186	457,983
Net Investment Income	(74,320)	370,657
Benefit Payments, including Refunds of Employee Contributions	(275,901)	(347,169)
Administrative Expense	<u>(42,645)</u>	<u>(46,017)</u>
Net Change in Plan Fiduciary Net Position	71,320	435,454
Plan Fiduciary Net Position - Beginning	<u>7,087,479</u>	<u>6,652,025</u>
Plan Fiduciary Net Position - Ending (b)	<u><u>\$ 7,158,799</u></u>	<u><u>\$ 7,087,479</u></u>
Net Pension Liability - Ending (a) - (b)	<u><u>\$ 2,643,130</u></u>	<u><u>\$ 2,190,610</u></u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	73.03%	76.39%
Covered Employee Payroll	\$ 2,680,502	\$ 2,539,765
Net Pension Liability as a percentage of Covered Employee Payroll	98.61%	86.25%

**Notes to Schedule:**

<sup>1</sup> The 2014-2016 measurement date results were provided by the prior actuary, Gabriel Roeder Smith & Company, Consultants & Actuaries, Ft. Lauderdale (FL).

**SCHEDULE OF CONTRIBUTIONS**  
Last 10 Fiscal Years

Fiscal Year Ended	Actuarially Determined Contribution	Contributions in relation to the Actuarially Determined Contributions	Contribution Deficiency (Excess)	Covered Employee Payroll	Contributions as a percentage of Covered Employee Payroll
12/31/2017	\$ 256,675	\$ 419,196	\$ (162,521)	\$ 2,873,176	14.59%
12/31/2016 <sup>1</sup>	\$ 568,684	\$ 2,551,364	\$ (1,982,680)	\$ 3,073,967	83.00%
12/31/2015 <sup>1</sup>	\$ 464,186	\$ 464,186	\$ -	\$ 2,680,502	17.32%
12/31/2014 <sup>1</sup>	\$ 441,143	\$ 457,983	\$ (16,840)	\$ 2,539,765	18.03%
12/31/2013 <sup>1</sup>	\$ 458,146	\$ 461,286	\$ (3,140)	\$ 2,783,925	16.57%
12/31/2012 <sup>1</sup>	\$ 443,829	\$ 456,928	\$ (13,099)	\$ 2,872,889	15.90%
12/31/2011 <sup>1</sup>	\$ 453,984	\$ 481,432	\$ (27,448)	\$ 3,140,065	15.33%
12/31/2010 <sup>1</sup>	\$ 471,009	\$ 471,009	\$ -	\$ 2,696,621	17.47%
12/31/2009 <sup>1</sup>	\$ 405,822	\$ 422,931	\$ (17,109)	\$ 2,461,446	17.18%
12/31/2008 <sup>1</sup>	\$ 340,638	\$ 363,044	\$ (22,406)	\$ 2,276,895	15.94%

<sup>1</sup> The 2014-2016 measurement date results were provided by the prior actuary, Gabriel Roeder Smith & Company, Consultants & Actuaries, Ft. Lauderdale (FL).

<sup>2</sup> The 2017 Covered Employee Payroll includes DROP payroll.

Notes to Schedule

Valuation Date: 01/01/2017

Actuarially determined contribution rates are calculated using a January 1st valuation date for the plan year in which contributions are reported.

Methods and assumptions used to determine contribution rates:

Actuarial Cost Method: Entry Age Normal Actuarial Cost Method.  
 Amortization Method: Future UAAL bases will be amortized over one year.  
 Amortization Method: 30 years.  
 Mortality: *Healthy Actives Lives:*  
 Female: RP2000 Generational, 100% White Collar, Scale BB.  
 Male: RP2000 Generational, 50% White Collar / 50% Blue Collar, Scale BB.  
*Healthy Inactives Lives:*  
 Female: RP2000 Generational, 100% Annuitant White Collar, Scale BB.  
 Male: RP2000 Generational, 50% Annuitant White Collar / 50% Annuitant Blue  
*Disabled Lives:*  
 Female: 100% RP2000 Disabled Female set forward two years.  
 Male: 100% RP2000 Disabled Male setback four years.  
 The above assumption rates were mandated by Chapter 2015-157, Laws of Florida. This law mandates the use of the assumption used in either of the two most recent valuations of the Florida Retirement System (FRS). The above rates are those outlined in Milliman’s July 1, 2016 FRS valuation report for other than special risk participants. We feel this assumption sufficiently accommodates future mortality improvements.

Interest Rate: 7.50% per year, compounded annually, net of investment related assumptions. We will continue to monitor this assumption against the expected asset allocation and future returns by asset class.

## GASB 68

Salary Increases: 3.75% per year up to the assumed retirement age. This assumption was utilized by the prior actuary.

Future Cost of Living Adjustments: Future cost of living increases are assumed to be 1.5% per annum.

Payroll Growth Assumption: None.

Retirement Rates: Rates of retirement are used in accordance with the following table.

Age	Retirement Rate
Less than 60	6%
60-64	25%
65-67	35%
68-69	20%
70 & above	100%

Termination Rates:

Age	Males	
	<7 Years	7+ Years
20	12.75	10.00
25	12.75	10.00
30	12.75	10.00
35	12.75	9.90
40	12.75	5.80
45	12.75	3.70
50	12.75	1.50
55	12.75	0.00
60&Over	0.00	0.00

Age	Females		
	<5 Years	5-6 Years	7+ Years
20	20.00	12.75	12.00
25	20.00	12.75	12.00
30	20.00	12.75	8.94
35	20.00	12.75	6.24
40	20.00	12.75	4.44
45	20.00	12.75	2.61
50	20.00	12.75	1.67
55	20.00	12.75	0.63
60&Over	0.00	0.00	0.00

The assumed rates of termination were utilized by the prior actuary.

Disability Rates: Class 1 Inter-Company Disability Male Rates were used for males and females.

Pre-Retirement Death: It is assumed that 90% of pre-retirement deaths are service connected.

Asset Valuation Method: 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.

**COMPONENTS OF PENSION EXPENSE**  
FISCAL YEAR DECEMBER 31, 2017

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Beginning balance	\$ 855,282	\$ 129,423	\$ 742,883	\$ -
Total Pension Liability Factors:				
Service Cost	193,005	-	-	193,005
Interest	836,436	-	-	836,436
Changes in benefit terms	-	-	-	-
Differences between Expected and Actual Experience with regard to economic or demographic assumptions	(719,162)	719,162	-	-
Current year amortization of experience difference	-	(199,723)	(6,604)	(193,119)
Change in assumptions about future economic or demographic factors or other inputs	266,784	-	266,784	-
Current year amortization of change in assumptions	-	-	(126,981)	126,981
Benefit Payments, including Refunds of Employee Contributions	(372,272)	-	-	-
Net change	<u>204,791</u>	<u>519,439</u>	<u>133,199</u>	<u>963,303</u>
Plan Fiduciary Net Position:				
Contributions - Employer	419,196	-	-	-
Projected Net Investment Income	768,885	-	-	(768,885)
Difference between projected and actual earnings on Pension Plan investments	652,898	652,898	-	-
Current year amortization	-	(130,578)	(177,636)	47,058
Benefit Payments, including Refunds of Employee Contributions	(372,272)	-	-	-
Administrative Expenses	(65,892)	-	-	65,892
Net change	<u>1,402,815</u>	<u>522,320</u>	<u>(177,636)</u>	<u>(655,935)</u>
Ending Balance	<u>\$ (342,742)</u>	<u>\$ 1,171,182</u>	<u>\$ 698,446</u>	<u>\$ 307,368</u>

AMORTIZATION SCHEDULE - INVESTMENTS

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

Plan Year Ending	Differences Between Projected and Actual Earnings	Recognition Period (Years)	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
2014	\$ 164,097	5	\$ 32,819	\$ 32,821	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2015	\$ 629,243	5	\$ 125,849	\$ 125,849	\$ 125,847	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ 94,840	5	\$ 18,968	\$ 18,968	\$ 18,968	\$ 18,968	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ (652,898)	5	\$ (130,578)	\$ (130,580)	\$ (130,580)	\$ (130,580)	\$ (130,580)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 47,058	\$ 47,058	\$ 14,235	\$ (111,612)	\$ (130,580)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

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)	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
2015	\$ 14,586	3.9999	\$ 3,647	\$ 3,645	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ 279,907	3.9999	\$ 69,978	\$ 69,978	\$ 69,974	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ 266,784	5	\$ 53,356	\$ 53,357	\$ 53,357	\$ 53,357	\$ 53,357	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 126,981	\$ 126,980	\$ 123,331	\$ 53,357	\$ 53,357	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

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		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
	Expected and Actual Experience	Recognition Period (Years)											
2014	\$ 28,621	4	\$ 6,604	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2015	\$ (152,973)	4	\$ (38,243)	\$ (38,244)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ (70,582)	4	\$ (17,646)	\$ (17,646)	\$ (17,644)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ (719,162)	5	\$ (143,834)	\$ (143,832)	\$ (143,832)	\$ (143,832)	\$ (143,832)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ (193,119)	\$ (199,722)	\$ (161,476)	\$ (143,832)	\$ (143,832)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -