

CITY OF COCOA
POLICE OFFICERS' RETIREMENT PLAN
ACTUARIAL VALUATION
AS OF OCTOBER 1, 2019
CONTRIBUTIONS APPLICABLE TO THE
PLAN/FISCAL YEAR ENDING SEPTEMBER 30, 2021
GASB 67/68 DISCLOSURE INFORMATION
AS OF SEPTEMBER 30, 2019



FOSTER & FOSTER
ACTUARIES AND CONSULTANTS

December 26, 2019

Board of Trustees
City of Cocoa
Police Officers' Pension Board
c/o Robert Bobay
1226 West King St.
Cocoa, FL 32922

Re: City of Cocoa Police Officers' Retirement Plan

Dear Board:

We are pleased to present to the Board this report of the annual actuarial valuation of the City of Cocoa Police Officers' Retirement Plan. Included are the related results for GASB Statements No. 67 and No. 68. The funding valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits and to develop the appropriate funding requirements for the applicable plan year. The calculation of the liability for GASB results was performed for the purpose of satisfying the requirements of GASB Statements No. 67 and No. 68. Use of the results for other purposes may not be applicable and may produce significantly different results.

The valuations have been conducted in accordance with generally accepted actuarial principles and practices, including the applicable Actuarial Standards of Practice as issued by the Actuarial Standards Board, and reflect laws and regulations issued to date pursuant to the provisions of Chapters 112 and 185, Florida Statutes, as well as applicable federal laws and regulations. In our opinion, the assumptions used in the valuations, as adopted by the Board of Trustees, represent reasonable expectations of anticipated plan experience. Future actuarial measurements may differ significantly from the current measurements presented in this report for a variety of reasons including: changes in applicable laws, changes in plan provisions, changes in assumptions, or plan experience differing from expectations. Due to the limited scope of the valuation, we did not perform an analysis of the potential range of such future measurements.

In conducting the valuations, we have relied on personnel, plan design, and asset information supplied by the City of Cocoa, financial reports prepared by the custodian bank, and the actuarial assumptions and methods described in the Actuarial Assumptions section of this report. While we cannot verify the accuracy of all this information, the supplied information was reviewed for consistency and reasonableness. As a result of this review, we have no reason to doubt the substantial accuracy of the

information and believe that it has produced appropriate results. This information, along with any adjustments or modifications, is summarized in various sections of this report.

The total pension liability, net pension liability, and certain sensitivity information shown in this report are based on an actuarial valuation performed as of October 1, 2018. The total pension liability was rolled-forward from the valuation date to the plan's fiscal year ending September 30, 2019 using generally accepted actuarial principles. It is our opinion that the assumptions used for this purpose are internally consistent, reasonable, and comply with the requirements under GASB No. 67 and No. 68.

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

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

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

Respectfully submitted,

Foster & Foster, Inc.

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


By: Sara Carlson

Sara E. Carlson, ASA, EA, MAAA
Enrolled Actuary #17-8546

Enclosures

TABLE OF CONTENTS

Section	Title	Page
I	Introduction	
	a. Summary of Report	5
	b. Changes Since Prior Valuation	7
	c. Contribution Impact of Annual Changes	8
	d. Comparative Summary of Principal Valuation Results	9
II	Valuation Information	
	a. Reconciliation of Unfunded Actuarial Accrued Liabilities	15
	b. Detailed Actuarial (Gain)/Loss Analysis	18
	c. Actuarial Assumptions and Methods	19
	d. Glossary	22
	e. Discussion of Risk	23
	f. Partial History of Premium Tax Refunds	26
III	Trust Fund	27
IV	Member Statistics	
	a. Statistical Data	33
	b. Age and Service Distribution	34
	c. Valuation Participant Reconciliation	35
V	Summary of Current Plan	36
VI	Governmental Accounting Standards Board Statements No. 67 and No. 68 Disclosure Information	39

SUMMARY OF REPORT

The regular annual actuarial valuation of the City of Cocoa Police Officers' Retirement Plan, performed as of October 1, 2019, has been completed and the results are presented in this Report. The contribution amounts set forth herein are applicable to the plan/fiscal year ending September 30, 2021. Funding requirements are projected for a lump sum deposit on October 1, 2020, based on the Board's adoption of a Beginning of Year Funding Method.

The contribution requirements, compared with those set forth in the October 1, 2018 actuarial valuation report, are as follows:

Valuation Date Applicable to Fiscal Year Ending	10/1/2019 <u>9/30/2021</u>	10/1/2018 <u>9/30/2020</u>
Minimum Required Contribution % of Projected Annual Payroll	30.42%	34.82%
Member Contributions (Est.) % of Projected Annual Payroll	6.50%	6.50%
City And State Required Contribution % of Projected Annual Payroll	23.92%	28.32%
State Contribution (Est.) ¹ % of Projected Annual Payroll	\$182,386 5.26%	\$182,386 5.26%
City Required Contribution ² % of Projected Annual Payroll	18.66%	23.06%

¹ Represents the amount received in calendar 2019. As per a Mutual Consent Agreement between the Membership and the City, all State Monies received each year will be available to offset the City's required contribution.

² The required contribution from the combination of City and State sources for the year ending September 30, 2021, is 23.92% of the actual payroll realized in that year. As a budgeting tool, the City may contribute 18.66% of each Member's Salary and then make a one-time adjustment to account for the actual State Monies received.

As you can see, the Minimum Required Contribution shows a decrease when compared to the results determined in the October 1, 2018 actuarial valuation. The decrease is mainly attributable to the full recognition of a past loss amortization base during the past year.

Plan experience was unfavorable overall on the basis of the plan's actuarial assumptions. Sources of actuarial loss included an average salary increase of 7.74% which exceeded the 4.45% assumption and inactive mortality experience. These losses were offset in part by a gain associated with more turnover than expected, and an investment return of 7.55% (Actuarial Asset Basis) which exceeded the 7.50% assumption.

CHANGES SINCE PRIOR VALUATION

Plan Changes

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

Actuarial Assumption/Method Changes

In conjunction with this valuation, we consolidated the Unfunded Actuarial Accrued Liability (UAAL) into a single base, amortized as a level dollar over 13 years (roughly the period over which the UAAL will be fully amortized based on the amortization without regard to the consolidation). All future changes to the UAAL will be amortized as a level dollar over 15 years.

CONTRIBUTION IMPACT OF ANNUAL CHANGES

(1) Contribution Determined as of October 1, 2018	22.91%
(2) Summary of Contribution Impact by component:	
Change in State Contribution Percentage	0.15%
Change in Normal Cost Rate	-0.22%
Change in Administrative Expense Percentage	0.00%
Full Recognition of Prior Actuarial Loss Base	-4.40%
Payroll Change Effect on UAAL Amortization	-0.70%
Greater Than Expected Decrease in UAAL	-0.53%
Investment Return (Actuarial Asset Basis)	-0.06%
Salary Increases	1.23%
Active Decrements	-0.72%
Inactive Mortality	0.62%
Method Change	0.19%
Other	<u>0.19%</u>
Total Change in Contribution	-4.25%
(3) Contribution Determined as of October 1, 2019	18.66%

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	New Method <u>10/1/2019</u>	Old Method <u>10/1/2019</u>	<u>10/1/2018</u>
A. Participant Data			
Actives	62	62	59
Service Retirees	39	39	37
DROP Retirees	2	2	3
Beneficiaries	3	3	3
Disability Retirees	8	8	8
Terminated Vested	<u>10</u>	<u>10</u>	<u>12</u>
Total	124	124	122
Total Annual Payroll	\$3,469,625	\$3,469,625	\$3,172,849
Payroll Under Assumed Ret. Age	3,469,625	3,469,625	3,172,849
Annual Rate of Payments to:			
Service Retirees	1,351,959	1,351,959	1,305,068
DROP Retirees	110,937	110,937	127,440
Beneficiaries	66,896	66,896	66,443
Disability Retirees	143,318	143,318	143,181
Terminated Vested	126,356	126,356	128,834
B. Assets			
Actuarial Value (AVA) ¹	32,412,586	32,412,586	30,640,756
Market Value (MVA) ¹	31,345,463	31,345,463	30,379,434
C. Liabilities			
Present Value of Benefits			
Actives			
Retirement Benefits	14,053,660	14,053,660	12,540,546
Disability Benefits	662,412	662,412	641,106
Death Benefits	72,919	72,919	71,547
Vested Benefits	1,118,448	1,118,448	1,164,579
Refund of Contributions	120,420	120,420	110,440
Service Retirees	17,688,711	17,688,711	17,163,618
DROP Retirees ¹	2,083,028	2,083,028	2,214,504
Beneficiaries	814,375	814,375	817,949
Disability Retirees	1,775,606	1,775,606	1,775,944
Terminated Vested	1,161,326	1,161,326	1,163,770
Share Plan Balances ¹	<u>0</u>	<u>0</u>	<u>0</u>
Total	39,550,905	39,550,905	37,664,003

C. Liabilities - (Continued)	New Method <u>10/1/2019</u>	Old Method <u>10/1/2019</u>	<u>10/1/2018</u>
Present Value of Future Salaries	24,692,763	24,692,763	23,643,896
Present Value of Future Member Contributions	1,605,030	1,605,030	1,536,853
Normal Cost (Retirement)	492,996	492,996	450,608
Normal Cost (Disability)	59,264	59,264	55,022
Normal Cost (Death)	4,032	4,032	3,791
Normal Cost (Vesting)	78,313	78,313	78,067
Normal Cost (Refunds)	<u>21,763</u>	<u>21,763</u>	<u>19,875</u>
Total Normal Cost	656,368	656,368	607,363
Present Value of Future Normal Costs	4,421,587	4,421,587	4,238,439
Accrued Liability (Retirement)	10,648,552	10,648,552	9,279,445
Accrued Liability (Disability)	274,582	274,582	264,800
Accrued Liability (Death)	45,694	45,694	44,993
Accrued Liability (Vesting)	619,884	619,884	682,634
Accrued Liability (Refunds)	17,560	17,560	17,907
Accrued Liability (Inactives) ¹	23,523,046	23,523,046	23,135,785
Share Plan Balances ¹	<u>0</u>	<u>0</u>	<u>0</u>
Total Actuarial Accrued Liability (EAN AL)	35,129,318	35,129,318	33,425,564
Unfunded Actuarial Accrued Liability (UAAL)	2,716,732	2,716,732	2,784,808
Funded Ratio (AVA / EAN AL)	92.3%	92.3%	91.7%

D. Actuarial Present Value of Accrued Benefits	New Method <u>10/1/2019</u>	Old Method <u>10/1/2019</u>	<u>10/1/2018</u>
Vested Accrued Benefits			
Inactives + Share Plan Balances ¹	23,523,046	23,523,046	23,135,785
Actives	5,485,531	5,485,531	4,667,156
Member Contributions	<u>1,852,657</u>	<u>1,852,657</u>	<u>1,750,969</u>
Total	30,861,234	30,861,234	29,553,910
Non-vested Accrued Benefits	<u>1,373,221</u>	<u>1,373,221</u>	<u>1,184,804</u>
Total Present Value Accrued Benefits (PVAB)	32,234,455	32,234,455	30,738,714
Funded Ratio (MVA / PVAB)	97.2%	97.2%	98.8%
Increase (Decrease) in Present Value of Accrued Benefits Attributable to:			
Plan Amendments	0	0	
Assumption Changes	0	0	
Plan Experience	0	942,399	
Benefits Paid	0	(1,688,734)	
Interest	0	2,242,076	
Other	<u>0</u>	<u>0</u>	
Total	0	1,495,741	

	New Method	Old Method	
Valuation Date	10/1/2019	10/1/2019	10/1/2018
Applicable to Fiscal Year Ending	<u>9/30/2021</u>	<u>9/30/2021</u>	<u>9/30/2020</u>

E. Pension Cost

Normal Cost (with interest)			
% of Total Annual Payroll ²	18.92	18.92	19.14
Administrative Expenses (with interest)			
% of Total Annual Payroll ²	2.54	2.54	2.54
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 13 years (as of 10/1/2019, with interest)			
% of Total Annual Payroll ²	8.96	8.77	13.14
Minimum Required Contribution			
% of Total Annual Payroll ²	30.42	30.23	34.82
Expected Member Contributions			
% of Total Annual Payroll ²	6.50	6.50	6.50
Expected City and State Contribution			
% of Total Annual Payroll ²	23.92	23.73	28.32

F. Past Contributions

Plan Years Ending:	<u>9/30/2019</u>
Total Required Contribution	1,262,090
City and State Requirement	1,049,727
Actual Contributions Made:	
Members (excluding buyback)	212,363
City	867,341
State	<u>182,386</u>
Total	1,262,090

G. Net Actuarial (Gain)/Loss 324,423

¹ The asset values and liabilities include accumulated DROP and Share Plan Balances as of 9/30/2019 and 9/30/2018.

² Contributions developed as of 10/1/2019 are expressed as a percentage of total annual payroll at 10/1/2019 of \$3,469,625.

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

<u>Year</u>	<u>Projected Unfunded Actuarial Accrued Liability</u>
2019	2,716,732
2020	2,586,154
2021	2,445,783
2024	1,958,286
2027	1,352,669
2029	869,439
2032	0

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

	<u>Actual</u>	<u>Assumed</u>
Year Ended 9/30/2019	7.74%	4.45%
Year Ended 9/30/2018	0.09%	6.50%
Year Ended 9/30/2017	1.23%	6.50%
Year Ended 9/30/2016	17.96%	6.50%
Year Ended 9/30/2015	4.13%	6.50%

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

	<u>Market Value</u>	<u>Actuarial Value</u>	<u>Assumed</u>
Year Ended 9/30/2019	4.93%	7.55%	7.50%
Year Ended 9/30/2018	6.41%	5.51%	8.00%
Year Ended 9/30/2017	9.83%	6.46%	8.00%
Year Ended 9/30/2016	9.11%	6.82%	8.00%
Year Ended 9/30/2015	-2.80%	8.46%	8.00%

(iii) Average Annual Payroll Growth

(a) Payroll as of:	10/1/2019	\$3,469,625
	10/1/2009	3,604,650
(b) Total Increase		-3.75%
(c) Number of Years		10.00
(d) Average Annual Rate		-0.38%

STATEMENT BY ENROLLED ACTUARY

This actuarial valuation was prepared and completed by me or under my direct supervision, and I acknowledge responsibility for the results. To the best of my knowledge, the results are complete and accurate, and in my opinion, the techniques and assumptions used are reasonable and meet the requirements and intent of Part VII, Chapter 112, Florida Statutes. There is no benefit or expense to be provided by the plan and/or paid from the plan's assets for which liabilities or current costs have not been established or otherwise taken into account in the valuation. All known events or trends which may require a material increase in plan costs or required contribution rates have been taken into account in the valuation.



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

Please let us know when the report is approved by the Board and unless otherwise directed we will provide a copy of the report to the following office 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
(Before Method Change)

(1) Unfunded Actuarial Accrued Liability as of October 1, 2018	\$2,784,808
(2) Sponsor Normal Cost developed as of October 1, 2018	401,128
(3) Expected administrative expenses for the year ended September 30, 2019	80,643
(4) Expected interest on (1), (2) and (3)	241,969
(5) Sponsor contributions to the System during the year ended September 30, 2019	1,049,727
(6) Expected interest on (5)	66,512
(7) Expected Unfunded Actuarial Accrued Liability as of September 30, 2019 (1)+(2)+(3)+(4)-(5)-(6)	2,392,309
(8) Change to UAAL due to Method Change	0
(9) Change to UAAL due to Actuarial (Gain)/Loss	324,423
(10) Unfunded Actuarial Accrued Liability as of October 1, 2019	2,716,732

<u>Type of Base</u>	<u>Date Established</u>	<u>Years Remaining</u>	<u>10/1/2019 Amount</u>	<u>Amortization Amount</u>
method change	10/1/1998	9	50,955	7,431
assum. change	10/1/2007	18	323,631	31,017
method change	10/1/2007	18	(156,327)	(14,983)
benefit change	10/1/2007	18	(2,839)	(272)
method change	10/1/2008	9	350,307	51,085
actuarial loss	10/1/2010	1	82,913	82,913
actuarial gain	10/1/2011	2	(44,752)	(23,185)
actuarial loss	10/1/2012	3	91,519	32,737
actuarial gain	10/1/2013	4	(412,123)	(114,462)
actuarial gain	10/1/2014	5	(286,622)	(65,900)
benefit change	10/1/2014	15	(387,226)	(40,807)
use of excess reserve	10/1/2014	15	(181,733)	(19,152)
actuarial gain	10/1/2015	6	(385,222)	(76,344)
reconciliation base	10/1/2016	17	(443,158)	(43,697)
assum. change	10/1/2016	17	1,124,935	110,924
actuarial loss	10/1/2016	7	1,014,525	178,179
benefit change	10/1/2017	18	287,367	27,542
actuarial gain	10/1/2017	8	(72,542)	(11,521)
actuarial loss	10/1/2018	9	278,140	40,561

Type of <u>Base</u>	Date <u>Established</u>	Years <u>Remaining</u>	10/1/2019 <u>Amount</u>	Amortization <u>Amount</u>
assum. change	10/1/2018	19	1,160,561	108,403
actuarial loss	10/1/2019	10	<u>324,423</u>	<u>43,966</u>
			2,716,732	304,435

RECONCILIATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITIES
(After Method Change)

(1) Unfunded Actuarial Accrued Liability as of October 1, 2018	\$2,784,808
(2) Sponsor Normal Cost developed as of October 1, 2018	401,128
(3) Expected administrative expenses for the year ended September 30, 2019	80,643
(4) Expected interest on (1), (2) and (3)	241,969
(5) Sponsor contributions to the System during the year ended September 30, 2019	1,049,727
(6) Expected interest on (5)	66,512
(7) Expected Unfunded Actuarial Accrued Liability as of September 30, 2019 (1)+(2)+(3)+(4)-(5)-(6)	2,392,309
(8) Change to UAAL due to Method Change	0
(9) Change to UAAL due to Actuarial (Gain)/Loss	324,423
(10) Unfunded Actuarial Accrued Liability as of October 1, 2019	2,716,732

<u>Type of Base</u>	<u>Date Established</u>	<u>Years Remaining</u>	<u>10/1/2019 Amount</u>	<u>Amortization Amount</u>
Consolidation Base	10/1/2019	13	2,716,732	311,007

DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

(1) Unfunded Actuarial Accrued Liability (UAAL) as of October 1, 2018	\$2,784,808
(2) Expected UAAL as of October 1, 2019	2,392,309
(3) Summary of Actuarial (Gain)/Loss, by component:	
Investment Return (Actuarial Asset Basis)	(15,193)
Salary Increases	314,357
Active Decrements	(183,526)
Inactive Mortality	159,397
Other	<u>49,388</u>
Increase in UAAL due to (Gain)/Loss	324,423
Method Changes	<u>0</u>
(4) Actual UAAL as of October 1, 2019	\$2,716,732

ACTUARIAL ASSUMPTIONS AND METHODS

Mortality Rate

Healthy Active Lives:

Female: RP2000 Generational, 100% Combined Healthy White Collar, Scale BB
Male: RP2000 Generational, 10% Combined Healthy White Collar / 90% Combined Healthy Blue Collar, Scale BB

Healthy Inactive Lives:

Female: RP2000 Generational, 100% Annuitant White Collar, Scale BB
Male: RP2000 Generational, 10% Annuitant White Collar / 90% Annuitant Blue Collar, Scale BB

Disabled Lives:

Female: 60% RP2000 Disabled Female set forward two years / 40% Annuitant White Collar with no setback, no projection scale
Male: 60% RP2000 Disabled Male setback four years / 40% Annuitant White Collar with no setback, no projection scale

The above assumption rates were mandated by Chapter 2015-157, Laws of Florida. This law mandates the use of the assumptions used in either of the two most recent valuations of the Florida Retirement System (FRS). The above rates are those outlined in Milliman’s July 1, 2018 FRS valuation report for special risk employees. We feel this assumption sufficiently accommodates future mortality improvements.

Interest Rate

7.50 % per year compounded annually, net of investment related expenses. This is supported by the target asset allocation of the trust and the expected long-term return by asset class.

Salary Increases

<u>Salary Scale</u>	
<u>Service</u>	<u>Rate</u>
0	6.5%
1 - 5	4.5%
6+	4.0%

These rates were developed in an August 17, 2018 Experience Study.

Payroll Growth

0.00% for purposes of amortizing the Unfunded Actuarial Accrued Liability. This assumption cannot exceed the ten-year average payroll growth, in compliance with Part VII of Chapter 112, Florida Statutes.

Retirement

% Retiring During the
Year (< 25 Years of Service)

<u>Age</u>	<u>Rate</u>
50	50%
51 - 52	10%
53	50%
54+	100%

% Retiring During the
Year (25+ Years of Service)

<u>Service</u>	<u>Rate</u>
25	90%
26+	100%

These rates were developed in an August 17, 2018 Experience Study.

Termination

% Terminating
During the Year

<u>Service</u>	<u>Rate</u>
0 - 1	17%
2	10%
3 - 19	4%
20+	0%

These rates were developed in an August 17, 2018 Experience Study.

Disability Rate

Sample rates below:

% Becoming Disabled
During the Year

<u>Age</u>	<u>Rate</u>
20	0.14%
30	0.18%
40	0.30%
50	1.00%
60+	2.09%

75% of Disability Retirements are assumed to be Line-of-Duty related. These rates were confirmed in an August 17, 2018 Experience Study.

Cost-of-Living Adjustment

3.0% per year beginning at age 65.

Administrative Expenses

\$88,159 annually, based on the average of actual expenses incurred in the prior two fiscal years. Previously, the actual expense in the prior fiscal year was used. Using a two-year average results in a less volatile estimate than the prior method.

Funding Method

Entry Age Normal Actuarial Cost Method.

Asset Smoothing Methodology

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

Amortization Method

Existing UAAL amortization bases as of October 1, 2019 were combined and re-amortized over a 13-year period. Future UAAL amortization bases will be amortized over 15 years.

GLOSSARY

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

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

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

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

- (a) The normal cost accrual rate equals:
 - (i) the present value of future benefits for the participant, determined as of the participant's entry age, divided by
 - (ii) the present value of the compensation expected to be paid to the participant for each year of the participant's anticipated future service, determined as of the participant's entry age.
- (b) In calculating the present value of future compensation, the salary scale is applied both retrospectively and prospectively to estimate compensation in years prior to and subsequent to the valuation year based on the compensation used for the valuation.
- (c) The accrued liability is the sum of the individual accrued liabilities for all participants and beneficiaries. A participant's accrued liability equals the present value, at the participant's attained age, of future benefits less the present value at the participant's attained age of the individual normal costs payable in the future. A beneficiary's accrued liability equals the present value, at the beneficiary's attained age, of future benefits. The unfunded accrued liability equals the total accrued liability less the actuarial value of assets.
- (d) Under this method, the entry age used for each active participant is the participant's age at the time he or she would have commenced participation if the plan had always been in existence under current terms, or the age as of which he or she first earns service credits for purposes of benefit accrual under the current terms of the plan.

Unfunded Actuarial Accrued Liability (UAAL) is the difference between the actuarial accrued liability (described above) and the actuarial value of assets. Under the Entry Age Normal Actuarial Cost Method, an actuarial gain or loss, based on actual versus expected UAAL, is determined in conjunction with each valuation of the plan.

DISCUSSION OF RISK

ASOP No. 51, Assessment and Disclosure of Risk Associated with Measuring Pension Obligations and Determining Pension Plan Contributions, states that the actuary should identify risks that, in the actuary's professional judgment, may reasonably be anticipated to significantly affect the plan's future financial condition.

Throughout this report, actuarial results are determined using various actuarial assumptions. These results are based on the premise that all future plan experience will align with the plan's actuarial assumptions; however, there is no guarantee that actual plan experience will align with the plan's assumptions. It is possible that actual plan experience will differ from anticipated experience in an unfavorable manner that will negatively impact the plan's funded position.

Below are examples of ways in which plan experience can deviate from assumptions and the potential impact of that deviation. Typically, this results in an actuarial gain or loss representing the current-year financial impact on the plan's unfunded liability of the experience differing from assumptions; this gain or loss is amortized over a period of time determined by the plan's amortization method. When assumptions are selected that adequately reflect plan experience, gains and losses typically offset one another in the long term, resulting in a relatively low impact on the plan's contribution requirements associated with plan experience. When assumptions are too optimistic, losses can accumulate over time and the plan's amortization payment could potentially grow to an unmanageable level.

- Investment Return: When the rate of return on the Actuarial Value of Assets falls short of the assumption, this produces a loss representing assumed investment earnings that were not realized. Further, it is unlikely that the plan will experience a scenario that matches the assumed return in each year as capital markets can be volatile from year to year. Therefore, contribution amounts can vary in the future.
- Salary Increases: When a plan participant experiences a salary increase that was greater than assumed, this produces a loss representing the cost of an increase in anticipated plan benefits for the participant as compared to the previous year. The total gain or loss associated with salary increases for the plan is the sum of salary gains and losses for all active participants.
- Payroll Growth: The plan's payroll growth assumption, if one is used, causes a predictable annual increase in the plan's amortization payment in order to produce an amortization payment that remains constant as a percentage of payroll if all assumptions are realized. If payroll does not increase according to the plan's payroll growth assumption, the plan's amortization payment can increase significantly as a percentage of payroll even if all assumptions other than the payroll growth assumption are realized. Your plan currently utilizes level dollar amortization of the UAAL.
- Demographic Assumptions: Actuarial results take into account various potential events that could happen to a plan participant, such as retirement, termination, disability, and death. Each of these potential events is assigned a liability based on the likelihood of the event and the financial consequence of the event for the plan. Accordingly, actuarial liabilities reflect a blend of financial consequences associated with various possible outcomes (such as retirement at one of various possible ages). Once the outcome is known (e.g. the participant retires) the liability is adjusted to reflect the known outcome. This adjustment produces a gain or loss depending on whether the outcome was more or less favorable than other outcomes that could have occurred.

Impact of Plan Maturity on Risk

For newer pension plans, most of the participants and associated liabilities are related to active members who have not yet reached retirement age. As pension plans continue in operation and active members reach retirement ages, liabilities begin to shift from being primarily related to active members to being shared amongst active and retired members. Plan maturity is a measure of the extent to which this shift has occurred. It is important to understand that plan maturity can have an impact on risk tolerance and the overall risk characteristics of the plan. For example, closed plans with a large amount of retired liability do not have as long of a time horizon to recover from losses (such as losses on investments due to lower than expected investment returns) as plans where the majority of the liability is attributable to active members. For this reason, less tolerance for investment risk may be warranted for highly mature closed plans with a substantial inactive liability. Similarly, mature closed plans paying substantial retirement benefits resulting in a small positive or net negative cash flow can be more sensitive to near term investment volatility, particularly if the size of the fund is shrinking, which can result in less assets being available for investment in the market.

To assist with determining the maturity of the plan, we have provided some relevant metrics in the table following titled “Plan Maturity Measures and Other Risk Metrics”. Highlights of this information are discussed below:

- The Support Ratio, determined as the ratio of active to inactive members, has increased from 101.9% on October 1, 2016 to 108.8% on October 1, 2019, indicating that the plan has experienced a significant growth in active population.
- The Accrued Liability Ratio, determined as the ratio of the Inactive Accrued Liability, which is the liability associated with members who are no longer employed but are due a benefit from the plan, to the Total Accrued Liability, is 67.0%. With a plan of this maturity, losses due to lower than expected investment returns or demographic factors may result in larger increases in contribution requirements than would be needed for a less mature plan. Please note Chapter 112, Florida Statutes, requires that the plan sponsor contributes the minimum required contribution; thus, there is minimal solvency risk to the plan.
- The Funded Ratio, determined as the ratio of the Actuarial Value of Assets to the Total Accrued Liability, has decreased from 95.3% on October 1, 2016 to 92.3% on October 1, 2019, due to net unfavorable experience and assumption changes realized by the plan during the period.
- The Net Cash Flow Ratio, determined as the ratio of the Net Cash Flow (contributions minus benefit payments and administrative expenses) to the Market Value of Assets, stayed approximately the same from October 1, 2016 to October 1, 2019. The current Net Cash Flow Ratio of -1.7% indicates that contributions are not currently covering the plan's benefit payments and administrative expenses.

It is important to note that the actuary has identified the risks in this section as the most significant risks based on the characteristics of the plan and the nature of the project, however, it is not an exhaustive list of potential risks that could be considered. Additional advanced modeling, as well as the identification of additional risks, can be provided at the request of the audience addressed on page 2 of this report.

PLAN MATURITY MEASURES AND OTHER RISK METRICS

	<u>10/1/2016</u>	<u>10/1/2017</u>	<u>10/1/2018</u>	<u>10/1/2019</u>
<u>Support Ratio</u>				
Total Actives	55	56	59	62
Total Inactives ¹	54	56	56	57
Actives / Inactives ¹	101.9%	100.0%	105.4%	108.8%
 <u>Asset Volatility Ratio</u>				
Market Value of Assets (MVA)	27,645,211	29,151,747	30,379,434	31,345,463
Total Annual Payroll	2,991,183	3,119,012	3,172,849	3,469,625
MVA / Total Annual Payroll	924.2%	934.6%	957.5%	903.4%
 <u>Accrued Liability (AL) Ratio</u>				
Inactive Accrued Liability	21,640,519	21,835,174	23,135,785	23,523,046
Total Accrued Liability (EAN)	30,422,946	31,194,848	33,425,564	35,129,318
Inactive AL / Total AL	71.1%	70.0%	69.2%	67.0%
 <u>Funded Ratio</u>				
Actuarial Value of Assets (AVA)	28,981,964	29,645,334	30,640,756	32,412,586
Total Accrued Liability (EAN)	30,422,946	31,194,848	33,425,564	35,129,318
AVA / Total Accrued Liability (EAN)	95.3%	95.0%	91.7%	92.3%
 <u>Net Cash Flow Ratio</u>				
Net Cash Flow ²	(726,645)	(1,170,422)	(621,965)	(522,319)
Market Value of Assets (MVA)	27,645,211	29,151,747	30,379,434	31,345,463
Ratio	-2.6%	-4.0%	-2.0%	-1.7%

¹ Excludes terminated participants awaiting a refund of member contributions.

² Determined as total contributions minus benefit payments and administrative expenses.

PARTIAL HISTORY OF PREMIUM TAX REFUNDS

<u>Received During Fiscal Year</u>	<u>Amount</u>	<u>Increase from Previous Year</u>
1998	143,695.40	_____%
1999	141,752.28	-1.4%
2000	135,662.56	-4.3%
2001	145,197.30	7.0%
2002	169,611.54	16.8%
2003	186,057.17	9.7%
2004	192,650.24	3.5%
2005	187,085.43	-2.9%
2006	199,412.31	6.6%
2007	187,085.43	-6.2%
2008	187,085.43	0.0%
2009	150,383.40	-19.6%
2010	142,316.42	-5.4%
2011	156,269.16	9.8%
2012	138,587.90	-11.3%
2013	136,448.65	-1.5%
2014	137,207.18	0.6%
2015	135,035.87	-1.6%
2016	146,530.42	8.5%
2017	154,134.45	5.2%
2018	171,607.84	11.3%
2019	182,386.17	6.3%

STATEMENT OF FIDUCIARY NET POSITION

SEPTEMBER 30, 2019

<u>ASSETS</u>	COST VALUE	MARKET VALUE
Cash and Cash Equivalents:		
Transfer in Transit	1,500,000.00	1,500,000.00
Money Market	706,485.57	706,485.57
Total Cash and Equivalents	2,206,485.57	2,206,485.57
Receivables:		
Member Contributions in Transit	2,861.56	2,861.56
City Contributions in Transit	52,648.78	52,648.78
Investment Income	26,977.00	26,977.00
Total Receivable	82,487.34	82,487.34
Investments:		
Corporate Bonds	2,161,297.56	2,232,385.13
Stocks	740,379.00	827,711.70
Mutual Funds:		
Fixed Income	7,530,691.90	7,801,015.21
Equity	10,418,024.41	16,114,278.76
Pooled/Common/Commingled Funds:		
Equity	509,542.00	598,009.42
Real Estate	1,512,151.78	1,517,062.60
Total Investments	22,872,086.65	29,090,462.82
Total Assets	25,161,059.56	31,379,435.73
<u>LIABILITIES</u>		
Payables:		
Investment Expenses	31,850.72	31,850.72
Administrative Expenses	2,121.60	2,121.60
Total Liabilities	33,972.32	33,972.32
NET POSITION RESTRICTED FOR PENSIONS	25,127,087.24	31,345,463.41

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED SEPTEMBER 30, 2019
Market Value Basis

ADDITIONS

Contributions:

Member	212,363.07
City	867,341.12
State	182,386.17

Total Contributions 1,262,090.36

Investment Income:

Net Realized Gain (Loss)	676,815.03
Unrealized Gain (Loss)	(11,232.09)
Net Increase in Fair Value of Investments	665,582.94
Interest & Dividends	963,445.43
Less Investment Expense ¹	(140,680.60)

Net Investment Income 1,488,347.77

Total Additions 2,750,438.13

DEDUCTIONS

Distributions to Members:

Benefit Payments	1,529,567.77
Lump Sum DROP Distributions	75,428.24
Benefits Reimbursed by Metlife	(2,727.84)
Refunds of Member Contributions	86,466.19

Total Distributions 1,688,734.36

Administrative Expense 95,674.68

Total Deductions 1,784,409.04

Net Increase in Net Position 966,029.09

NET POSITION RESTRICTED FOR PENSIONS

Beginning of the Year 30,379,434.32

End of the Year 31,345,463.41

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

ACTUARIAL ASSET VALUATION
SEPTEMBER 30, 2019

Actuarial Assets for funding purposes are developed by increasing the Actuarial Assets used in the most recent actuarial valuation of the Fund by the average annual market value rate of return (net of investment related expenses) for the past four years. Actuarial Assets shall not be less than 80% nor greater than 120% of Market Value of Assets.

Details of the derivation are set forth as follows:

Plan Year End	Rate of Return ¹	
09/30/2016	9.11%	
09/30/2017	9.83%	
09/30/2018	6.41%	
09/30/2019	4.93%	
Annualized Rate of Return for prior four (4) years:		7.55%
(A) 10/01/2018 Actuarial Assets:		\$30,640,756.14
(I) Net Investment Income:		
1. Interest and Dividends		963,445.43
2. Realized Gains (Losses)		676,815.03
3. Unrealized Gains (Losses)		(11,232.09)
4. Change in Actuarial Value		805,800.74
5. Investment Related Expenses		(140,680.60)
	Total	2,294,148.51
(B) 10/01/2019 Actuarial Assets:		\$32,412,585.97
Actuarial Asset Rate of Return = 2I/(A+B-I):		7.55%
10/01/2019 Limited Actuarial Assets:		\$32,412,585.97
10/01/2019 Market Value of Assets:		\$31,345,463.41
Actuarial Gain/(Loss) due to Investment Return (Actuarial Asset Basis)		\$15,193.04

¹Market Value Basis, net of investment related expenses.

CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS
 SEPTEMBER 30, 2019
 Actuarial Asset Basis

REVENUES

Contributions:		
Member	212,363.07	
City	867,341.12	
State	182,386.17	
Total Contributions		1,262,090.36
Earnings from Investments:		
Interest & Dividends	963,445.43	
Net Realized Gain (Loss)	676,815.03	
Unrealized Gain (Loss)	(11,232.09)	
Change in Actuarial Value	805,800.74	
Total Earnings and Investment Gains		2,434,829.11

EXPENDITURES

Distributions to Members:		
Benefit Payments	1,529,567.77	
Lump Sum DROP Distributions	75,428.24	
Benefits Reimbursed by Metlife	(2,727.84)	
Refunds of Member Contributions	86,466.19	
Total Distributions		1,688,734.36
Expenses:		
Investment related ¹	140,680.60	
Administrative	95,674.68	
Total Expenses		236,355.28
Change in Net Assets for the Year		1,771,829.83
Net Assets Beginning of the Year		30,640,756.14
Net Assets End of the Year ²		32,412,585.97

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

²Net Assets may be limited for actuarial consideration.

DEFERRED RETIREMENT OPTION PLAN ACTIVITY
October 1, 2018 to September 30, 2019

Beginning of the Year Balance	381,239.23
Plus Additions	116,596.04
Investment Return Earned	25,735.41
Less Distributions	(75,428.24)
End of the Year Balance	448,142.44

CITY CONTRIBUTIONS IN EXCESS OF MINIMUM REQUIREMENT
FOR THE FISCAL YEAR ENDED (FYE) SEPTEMBER 30, 2019

(1)	Total Required Contribution Rate	38.63%
(2)	Pensionable Payroll Derived from Member Contributions	\$3,267,124.15
(3)	Total Required Contribution (1) x (2)	1,262,090.06
(4)	Less Actual Member Contributions	(212,363.07)
(5)	Less Allowable State Contribution	<u>(182,386.17)</u>
(6)	Equals Required City Contribution for Fiscal 2019	867,340.82
(7)	Plus 2018 Shortfall Contribution	31,073.02
(8)	Less Actual City Contributions	<u>(898,414.14)</u>
(9)	City Contributions in Excess of Minimum Requirement Applied to Reduce Unfunded Actuarial Accrued Liability as of September 30, 2019	(\$0.30)

STATISTICAL DATA

	<u>10/1/2016</u>	<u>10/1/2017</u>	<u>10/1/2018</u>	<u>10/1/2019</u>
<u>Actives</u>				
Number	55	56	59	62
Average Current Age	37.7	37.6	38.1	38.1
Average Age at Employment	29.2	29.1	29.3	29.4
Average Past Service	8.5	8.5	8.8	8.7
Average Annual Salary	\$54,385	\$55,697	\$53,777	\$55,962
<u>Service Retirees</u>				
Number	30	33	37	39
Average Current Age	61.9	62.2	62.2	62.9
Average Annual Benefit	\$34,712	\$36,518	\$35,272	\$34,666
<u>DROP Retirees</u>				
Number	7	6	3	2
Average Current Age	56.0	55.0	57.3	54.3
Average Annual Benefit	\$41,883	\$32,164	\$42,480	\$55,469
<u>Beneficiaries</u>				
Number	3	3	3	3
Average Current Age	61.5	62.5	63.5	64.5
Average Annual Benefit	\$21,750	\$21,893	\$22,148	\$22,299
<u>Disability Retirees</u>				
Number	9	8	8	8
Average Current Age	56.9	55.2	56.2	57.2
Average Annual Benefit	\$17,868	\$17,869	\$17,898	\$17,915
<u>Terminated Vested</u>				
Number	11	12	12	10
Average Current Age	45.9	40.7	44.7	45.0
Average Annual Benefit ¹	\$27,790	\$25,670	\$25,767	\$25,271

¹ The Average Annual Benefit excludes participants awaiting a refund of contributions.

AGE AND SERVICE DISTRIBUTION

PAST SERVICE

AGE	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30+	Total
15 - 19												0
20 - 24	3											3
25 - 29	1	3	2			1						7
30 - 34	4	1	1	3		3	2					14
35 - 39	1			1	1	2	4	3				12
40 - 44		2				3	2	3				10
45 - 49						1	2	1	3			7
50 - 54							1	2	4			7
55 - 59						2						2
60 - 64												0
65+												0
Total	9	6	3	4	1	12	11	9	7	0	0	62

VALUATION PARTICIPANT RECONCILIATION

1. Active lives

a. Number in prior valuation 10/1/2018	59
b. Terminations	
i. Vested (partial or full) with deferred annuity	(1)
ii. Vested in refund of member contributions only	0
iii. Refund of member contributions 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	0
f. DROP	<u>0</u>
g. Continuing participants	53
h. New entrants	<u>9</u>
i. Total active life participants in valuation	62

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 (Deferred <u>Annuity</u>)	Vested (Due <u>Refund</u>)	<u>Total</u>
a. Number prior valuation	37	3	3	8	5	7	63
Retired	2	(1)	0	0	(1)	0	0
DROP	0	0	0	0	0	0	0
Vested (Deferred Annuity)	0	0	0	0	1	0	1
Vested (Due Refund)	0	0	0	0	0	0	0
Hired/Terminated in Same Year	0	0	0	0	0	0	0
Death, With Survivor	0	0	0	0	0	0	0
Death, No Survivor	0	0	0	0	0	0	0
Disabled	0	0	0	0	0	0	0
Refund of Contributions	0	0	0	0	0	(2)	(2)
Rehires	0	0	0	0	0	0	0
Expired Annuities	0	0	0	0	0	0	0
Data Corrections	0	0	0	0	0	0	0
b. Number current valuation	39	2	3	8	5	5	62

SUMMARY OF CURRENT PLAN
(THROUGH ORDINANCE 08-2019)

<u>Original Effective Date</u>	August 1, 1969
<u>Effective Date Latest Amendment</u>	June 26, 2019
<u>Eligibility</u>	Full time sworn Police Officers from date of employment, including probationary period. Mandatory as a condition of employment.
<u>Credited Service</u>	Total years and fractional parts of years with the City as a Police Officer, whether continuous or not, so long as Member contributions attributable to such periods of service remain in Fund in the event of termination of employment with the City and subsequent reemployment within 5 years.
<u>Salary</u>	<p>Salary means total compensation reportable on Form W-2 for services rendered as a Police Officer, plus tax deferred, tax exempt, and tax-sheltered items of income derived from elective employee payroll deductions or salary reductions.</p> <p>Effective October 27, 2015, Salary means base pay, including state funded incentives, holiday pay and overtime pay up to 150 hours per fiscal year, but excluding special detail pay, payments for unused sick and annual leave, and overtime pay in excess of 150 hours per fiscal year.</p> <p>Additionally, in order to comply with the regulations set forth in Senate Bill 1128, Salary will include the lesser of the amount of sick and annual leave time accrued as of June 7, 2013, or the actual amount of sick and annual leave time for which the retiree receives payment at the time of retirement.</p>
<u>Average Monthly Earnings</u>	Average Salary for the highest 5 years during the 10 years immediately preceding retirement or termination.
<u>Member Contributions</u>	6.5% of Compensation.
<u>Interest on Member Contributions</u>	4.5% per year.
<u>City Contributions</u>	Amount required after Member contributions and State premium tax refunds in order to pay current costs and amortize unfunded past service cost over 40 years.

Normal Retirement

Date	Earlier of: 1) Age 50 and 10 years of Credited Service, or 2) 25 years of Credited Service, regardless of age.
Benefit	3% of Average Monthly Earnings times Years of Credited Service.
Form of Benefit	Ten Year Certain and Life Annuity (options available).

Cost-of-Living Adjustment

Up to 3% per year beginning at 65.

Vesting (Termination of Employment)

Less than 10 Years	Refund of Member Contributions with interest.
10 Years or More	Accrued pension payable at age 50, <u>or</u> Refund of contributions with interest.

Disability

Eligibility	Total and permanent; not able to perform useful and efficient service as a police officer. Board can require periodic re-examination. 10 years of service required for non-service incurred benefits.
Exclusions	Disability resulting from use of drugs, illegal participation in riots, service in military, etc.
Benefit	
Service Connected	Greater of 1) Accrued benefit, 2) 42% of Average Monthly Earnings, or 3) 50% of regular base pay on date of disability.
Non-Service Connected	Accrued benefit.
Duration	Benefit payable for life with 120 payments guaranteed, or until recovery (options available).
Benefit Offsets	If the 50% or 25% of pay benefit plus all Primary and Family Social Security benefits and/or all regular or periodic payments under Worker's Compensation exceeds 100% of regular base pay on the date of disability, the Plan benefit will be reduced so that the sum of all such payments equal 100% of pay. (In no event will offset reduce benefits below 42% of AME for service connected, or 25% of AME for non-service connected disability).

Board of Trustees a. Two City Council appointees,

b. Two Members of the System elected by a majority of the other covered Police Officers, and

c. A fifth Member elected by the other 4 and appointed by Council.

Pre-Retirement Death

If Not Vested or Eligible
for Early or Normal
Retirement

Refund of contributions plus 4.5% interest

Vested or Eligible to Retire

Accrued benefits payable to beneficiary for 10 years, or
in accordance with available options.

Death After Retirement

Benefit payable in accordance with optional form of
pension selected at time of retirement.

Deferred Retirement Option Plan

Eligibility

Satisfaction of Normal Retirement requirements.

Participation

Not to exceed 60 months.

Rate of Return

Actual net investment rate or fixed interest, at member's
election.

Distribution

Lump sum at termination of employment.

Chapter 185 Share Account

Pursuant to Chapter 2015-39, Laws of Florida, a share
plan exists but is currently not funded as the City and
Membership mutually consented to allow the City to use
all annual State Monies to offset its funding
requirements.

STATEMENT OF FIDUCIARY NET POSITION
SEPTEMBER 30, 2019

<u>ASSETS</u>	MARKET VALUE
Cash and Cash Equivalents:	
Transfer in Transit	1,500,000
Money Market	706,486
Total Cash and Equivalents	2,206,486
Receivables:	
Member Contributions in Transit	2,861
City Contributions in Transit	52,649
Investment Income	26,977
Total Receivable	82,487
Investments:	
Corporate Bonds	2,232,385
Stocks	827,712
Mutual Funds:	
Fixed Income	7,801,015
Equity	16,114,279
Pooled/Common/Commingled Funds:	
Equity	598,009
Real Estate	1,517,063
Total Investments	29,090,463
Total Assets	31,379,436
<u>LIABILITIES</u>	
Payables:	
Investment Expenses	31,851
Administrative Expenses	2,122
Total Liabilities	33,973
NET POSITION RESTRICTED FOR PENSIONS	31,345,463

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED SEPTEMBER 30, 2019
Market Value Basis

ADDITIONS

Contributions:

Member	212,363	
City	867,341	
State	182,386	
 Total Contributions		 1,262,090
 Investment Income:		
Net Increase in Fair Value of Investments	665,583	
Interest & Dividends	963,446	
Less Investment Expense ¹	(140,681)	
 Net Investment Income		 1,488,348
 Total Additions		 2,750,438

DEDUCTIONS

Distributions to Members:

Benefit Payments	1,529,568	
Lump Sum DROP Distributions	75,428	
Lump Sum Share Distributions	(2,728)	
Refunds of Member Contributions	86,466	
 Total Distributions		 1,688,734
 Administrative Expense		 95,675
 Total Deductions		 1,784,409
 Net Increase in Net Position		 966,029

NET POSITION RESTRICTED FOR PENSIONS

Beginning of the Year	30,379,434
 End of the Year	 31,345,463

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

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

Plan Administration

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

- a. Two City Council appointees,
- b. Two Members of the System elected by a majority of the other covered Police Officers, and
- c. A fifth Member elected by the other 4 and appointed by Council.

<i>Plan Membership as of October 1, 2018:</i>	51
Inactive Plan Members or Beneficiaries Currently Receiving Benefits	12
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	59
Active Plan Members	122

Benefits Provided

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

A summary of the benefit provisions can be found in the October 1, 2018 Actuarial Valuation Report for the City of Cocoa Police Officers' Retirement Plan prepared by Foster & Foster Actuaries and Consultants.

Contributions

Member Contributions: 6.5% of Compensation.

Interest on Member Contributions: 4.5% per year.

City Contributions: Amount required after Member contributions and State premium tax refunds in order to pay current costs and amortize unfunded past service cost over 40 years.

*Investments**Investment Policy:*

The following was the Board's adopted asset allocation policy as of September 30, 2019:

Asset Class	Target Allocation
Domestic Equity	35.0%
International Equity	15.0%
Bonds	25.0%
Convertibles	10.0%
Private Real Estate	10.0%
Infrastructure	5.0%
Total	100.0%

Concentrations:

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

Rate of Return:

For the year ended September 30, 2019, the annual money-weighted rate of return on Pension Plan investments, net of Pension Plan investment expense, was 4.93 percent.

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

Deferred Retirement Option Program

Eligibility: Satisfaction of Normal Retirement requirements.

Participation: Not to exceed 60 months.

Rate of Return: Actual net investment rate or fixed interest, at member's election.

The DROP balance as September 30, 2019 is \$448,142.

NET PENSION LIABILITY OF THE SPONSOR

The components of the Net Pension Liability of the Sponsor on September 30, 2019 were as follows:

Total Pension Liability	\$ 34,567,360
Plan Fiduciary Net Position	<u>\$ (31,345,463)</u>
Sponsor's Net Pension Liability	<u>\$ 3,221,897</u>
Plan Fiduciary Net Position as a percentage of Total Pension Liability	90.68%

Actuarial Assumptions:

The Total Pension Liability was determined by an actuarial valuation as of October 1, 2018 updated to September 30, 2019 using the following actuarial assumptions:

Inflation	2.70%
Salary Increases	Service based
Discount Rate	7.50%
Investment Rate of Return	7.50%

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

The most recent actuarial experience study used to review the other significant assumptions was dated August 17, 2018.

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 2019 the inflation rate assumption of the investment advisor was 2.40%.

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 rates of return for each major asset class included in the Pension Plan's target asset allocation as of September 30, 2019 are summarized in the following table:

Asset Class	Long Term Expected Real Rate of Return
Domestic Equity	7.3%
International Equity	2.7%
Bonds	3.6%
Convertibles	6.3%
Private Real Estate	4.9%
Infrastructure	8.1%

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	\$ 7,830,763	\$ 3,221,897	\$ (534,002)

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

Last 10 Fiscal Years

	09/30/2019	09/30/2018	09/30/2017
Total Pension Liability			
Service Cost	622,141	674,529	635,256
Interest	2,416,957	2,446,824	2,321,762
Changes of benefit terms	-	308,630	-
Differences between Expected and Actual Experience	768,679	(562,521)	153,793
Changes of assumptions	-	854,009	-
Contributions - Buy Back	-	-	-
Benefit Payments, including Refunds of Employee Contributions	(1,688,734)	(1,750,601)	(2,040,254)
Net Change in Total Pension Liability	2,119,043	1,970,870	1,070,557
Total Pension Liability - Beginning	32,448,317	30,477,447	29,406,890
Total Pension Liability - Ending (a)	<u>\$ 34,567,360</u>	<u>\$ 32,448,317</u>	<u>\$ 30,477,447</u>
Plan Fiduciary Net Position			
Contributions - Employer		867,341	829,616
Contributions - State		182,386	171,608
Contributions - Employee		212,363	208,055
Contributions - Buy Back		-	-
Net Investment Income		1,488,348	1,849,653
Benefit Payments, including Refunds of Employee Contributions		(1,688,734)	(1,750,601)
Administrative Expense		(95,675)	(80,644)
Net Change in Plan Fiduciary Net Position		966,029	1,227,687
Plan Fiduciary Net Position - Beginning		30,379,434	29,151,747
Plan Fiduciary Net Position - Ending (b)		<u>\$ 31,345,463</u>	<u>\$ 30,379,434</u>
Net Pension Liability - Ending (a) - (b)		<u>\$ 3,221,897</u>	<u>\$ 2,068,883</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability		90.68%	93.62%
Covered Payroll ¹	\$ 3,267,124	\$ 3,200,845	\$ 3,001,194
Net Pension Liability as a percentage of Covered Payroll		98.62%	64.64%
			44.17%

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

Last 10 Fiscal Years

	09/30/2016	09/30/2015
Total Pension Liability		
Service Cost	618,297	618,844
Interest	2,201,265	2,131,633
Changes of benefit terms	-	(997,832)
Differences between Expected and Actual Experience	(374,962)	(513,866)
Changes of assumptions	1,036,841	-
Contributions - Buy Back	10,045	6,362
Benefit Payments, including Refunds of Employee Contributions	(1,964,221)	(1,414,928)
Net Change in Total Pension Liability	1,527,265	(169,787)
Total Pension Liability - Beginning	27,879,625	28,049,412
Total Pension Liability - Ending (a)	<u>\$ 29,406,890</u>	<u>\$ 27,879,625</u>
Plan Fiduciary Net Position		
Contributions - Employer	943,008	1,052,280
Contributions - State	146,531	135,036
Contributions - Employee	206,653	197,582
Contributions - Buy Back	10,045	6,362
Net Investment Income	2,337,754	(751,053)
Benefit Payments, including Refunds of Employee Contributions	(1,964,221)	(1,414,928)
Administrative Expense	(68,661)	(70,689)
Net Change in Plan Fiduciary Net Position	1,611,109	(845,410)
Plan Fiduciary Net Position - Beginning	26,034,102	26,879,512
Plan Fiduciary Net Position - Ending (b)	<u>\$ 27,645,211</u>	<u>\$ 26,034,102</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 1,761,679</u>	<u>\$ 1,845,523</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability		94.01% 93.38%
Covered Payroll ¹	\$ 3,179,278	\$ 3,657,284
Net Pension Liability as a percentage of Covered Payroll	55.41%	50.46%

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

Last 10 Fiscal Years

	09/30/2014	09/30/2013
Total Pension Liability		
Service Cost	674,987	624,988
Interest	2,089,717	1,956,594
Changes of benefit terms	-	-
Differences between Expected and Actual Experience	-	-
Changes of assumptions	-	-
Contributions - Buy Back	-	-
Benefit Payments, including Refunds of Employee Contributions	(958,641)	(976,443)
Net Change in Total Pension Liability	1,806,063	1,605,139
Total Pension Liability - Beginning	26,243,349	24,638,210
Total Pension Liability - Ending (a)	<u>\$ 28,049,412</u>	<u>\$ 26,243,349</u>
Plan Fiduciary Net Position		
Contributions - Employer	1,247,515	1,090,855
Contributions - State	137,207	136,449
Contributions - Employee	188,931	192,321
Contributions - Buy Back	-	-
Net Investment Income	2,455,052	2,407,284
Benefit Payments, including Refunds of Employee Contributions	(958,641)	(976,443)
Administrative Expense	(64,627)	(60,034)
Net Change in Plan Fiduciary Net Position	3,005,437	2,790,432
Plan Fiduciary Net Position - Beginning	23,874,075	21,083,643
Plan Fiduciary Net Position - Ending (b)	<u>\$ 26,879,512</u>	<u>\$ 23,874,075</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 1,169,900</u>	<u>\$ 2,369,274</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability		95.83% 90.97%
Covered Payroll ¹	\$ 2,906,638	\$ 2,958,783
Net Pension Liability as a percentage of Covered Payroll	40.25%	80.08%

Notes to Schedule of Changes in Net Pension Liability and Related Ratios

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

Changes of Benefit Terms:

For measurement date 09/30/2018, the following benefit change has been adopted, as noted in our September 10, 2018 Actuarial Impact Statement:

- The inclusion of Holiday Pay in the definition of Salary (which includes amounts retroactively applied through the fiscal year ending September 30, 2017)

For measurement date 09/30/2015, amounts reported as changes of benefit terms were resulted from below changes:

- 1) The definition of Salary shall mean base pay including state funded incentives and overtime pay up to 150 hours per fiscal year, but excluding special detail pay, payments for unused sick and annual leave, and overtime pay in excess of 150 hours per fiscal year.
- 2) Effective September 30, 2015, all funds in the excess premium tax reserve shall be applied to reduce the unfunded actuarial accrued liability of the Plan. All premium tax revenues received pursuant to Chapter 185, Florida Statutes, beginning with the fiscal year ending September 30, 2015, and each fiscal year thereafter, shall be applied to reduce the City's annual required contribution.
- 3) A Share Plan shall be created in order to comply with Chapter 2015-39, Laws of Florida. Please note the City and the Coastal Police Benevolent Association (PBA) have mutually agreed that the Share Plan will not be funded during the term of the 2015-2018 collective bargaining agreement.

Changes of Assumptions:

For measurement date 09/30/2018, based on the actuarial experience study dated August 17, 2018, the Board made the following changes to assumptions:

- Reduced interest rate to 7.50%
- Modified salary increase rates to use a service-based table
- Updated retirement and termination rates

For measurement date 09/30/2016, as a result of Chapter 2015-157, Laws of Florida, the assumed rates of mortality were changed to the assumptions used by the Florida Retirement System for special risk employees.

Furthermore 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 purposes of the 1) benefit change listed for measurement date 09/30/2015, the load assumption for the projected salary at retirement to account for lump sum accrued sick and vacation leave payouts was modified from a fixed 20% per individual to an amount equal to their individual accruals as of June 7, 2013, as provided by the City. It is important to out that the load assumption will be subject to further modification based on future experience. Subsequent changes will reflected in future actuarial valuations.

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 ¹	Contributions as a percentage of Covered Payroll
09/30/2019	\$ 1,049,727	\$ 1,049,727	\$ -	\$ 3,267,124	32.13%
09/30/2018	\$ 1,001,224	\$ 1,001,224	\$ -	\$ 3,200,845	31.28%
09/30/2017	\$ 740,394	\$ 740,394	\$ -	\$ 3,001,194	24.67%
09/30/2016	\$ 1,089,539	\$ 1,089,539	\$ -	\$ 3,179,278	34.27%
09/30/2015	\$ 1,187,316	\$ 1,187,316	\$ -	\$ 3,657,284	32.46%
09/30/2014	\$ 1,384,722	\$ 1,384,722	\$ -	\$ 2,906,638	47.64%
09/30/2013	\$ 1,227,303	\$ 1,227,303	\$ -	\$ 2,958,783	41.48%

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

Notes to Schedule

Valuation Date: 10/01/2017 (AIS 09/10/2018)
Actuarially determined contribution rates are calculated as of October 1, two years prior to the end of the fiscal year in which contributions are reported.

Methods and assumptions used to determine contribution rates:

Mortality:

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

Interest Rate: 8.00% per year compounded annually, net of investment related expenses. This assumption is supported by the Plan's Investment Policy Statement and long-term expected returns by asset class.

Retirement Age: Earlier of age 50 with 10 years of Credited Service or 25 years of service, regardless of age. Also, any member who has reached Normal Retirement is assumed to continue employment for one additional year. This assumption is reasonable for the associated benefit provision.

Disability Rates: See table below (1205). 75% of Disability Retirements are assumed to be Line-of-Duty related. These assumptions are consistent with other Florida municipal special risk pension plans.

Termination Rates: See table below (W1304A). This assumption was previously adopted as the result of an Experience Study for the period October 1, 1992 through October 1, 2006.

Salary Increases: 6.5% per year until the assumed retirement age. This assumption is consistent with long-term Plan experience.
To account for non-regular compensation, projected salary at retirement is increased individually, based on census data provided by the City.

Cost-of-Living Adjustment: 3% per year beginning at age 65.

Payroll Growth: None.

Funding Method: Entry Age Normal Actuarial Cost Method.

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

Termination and Disability Rate Table:

Age	% Terminating During the Year	% Becoming Disabled During the Year
20	9.3%	0.14%
30	7.9%	0.18%
40	4.3%	0.30%
50	1.1%	1.00%

SCHEDULE OF INVESTMENT RETURNS
Last 10 Fiscal Years

Fiscal Year Ended	Annual Money-Weighted Rate of Return Net of Investment Expense
09/30/2019	4.93%
09/30/2018	6.41%
09/30/2017	9.83%
09/30/2016	9.11%
09/30/2015	-2.80%
09/30/2014	10.27%
09/30/2013	11.31%

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 City Council appointees,
- b. Two Members of the System elected by a majority of the other covered Police Officers, and
- c. A fifth Member elected by the other 4 and appointed by Council.

Each Person employed by the City Police Department as a full-time Police Officer becomes a Member of the Plan as a condition of his employment, except that the current police chief and any future police chief may, in the event he has elected to participate in another pension program offered by the City, within the first 30 days of his employment as police chief, notify the Board and the City, in writing, of his election to not be a Member of the System.

<i>Plan Membership as of October 1, 2018:</i>	51
Inactive Plan Members or Beneficiaries Currently Receiving Benefits	12
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	59
Active Plan Members	122

Benefits Provided

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

A summary of the benefit provisions can be found in the October 1, 2018 Actuarial Valuation Report for the City of Cocoa Police Officers' Retirement Plan prepared by Foster & Foster Actuaries and Consultants.

Incorporated are the benefit changes for measurement date 09/30/2019 as noted under the Notes to Schedule of Changes in Net Pension Liability and Related Ratios.

Contributions

Member Contributions: 6.5% of Compensation.

Interest on Member Contributions: 4.5% per year.

City Contributions: Amount required after Member contributions and State premium tax refunds in order to pay current costs and amortize unfunded past service cost over 40 years.

Net Pension Liability

The measurement date is September 30, 2019.

The measurement period for the pension expense was October 1, 2018 to September 30, 2019.

The reporting period is October 1, 2018 through September 30, 2019.

The Sponsor's Net Pension Liability was measured as of September 30, 2019.

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, 2018 updated to September 30, 2019 using the following actuarial assumptions:

Inflation	2.70%
Salary Increases	Service based
Discount Rate	7.50%
Investment Rate of Return	7.50%

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

The most recent actuarial experience study used to review the other significant assumptions was dated August 17, 2018.

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 2019 the inflation rate assumption of the investment advisor was 2.40%.

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 rates of return for each major asset class included in the Pension Plan's target asset allocation as of September 30, 2019 are summarized in the following table:

Asset Class	Target Allocation	Long Term Expected Real Rate of Return
Domestic Equity	35.0%	
International Equity	15.0%	7.3%
Bonds	25.0%	2.7%
Convertibles	10.0%	3.6%
Private Real Estate	10.0%	6.3%
Infrastructure	5.0%	4.9%
Total	100.0%	8.1%

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)
Balance at September 30, 2018	\$ 32,448,317	\$ 30,379,434	\$ 2,068,883
Changes for a Year:			
Service Cost	622,141	-	622,141
Interest	2,416,957	-	2,416,957
Differences between Expected and Actual Experience	768,679	-	768,679
Changes of assumptions	-	-	-
Changes of benefit terms	-	-	-
Contributions - Employer	-	867,341	(867,341)
Contributions - State	-	182,386	(182,386)
Contributions - Employee	-	212,363	(212,363)
Net Investment Income	-	1,488,348	(1,488,348)
Benefit Payments, including Refunds of Employee Contributions	(1,688,734)	(1,688,734)	-
Administrative Expense	-	(95,675)	95,675
Net Changes	2,119,043	966,029	1,153,014
Balance at September 30, 2019	\$ 34,567,360	\$ 31,345,463	\$ 3,221,897

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	\$ 7,830,763	\$ 3,221,897	\$ (534,002)

Pension Plan Fiduciary Net Position.

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

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

For the year ended September 30, 2019, the Sponsor will recognize a Pension Expense of \$1,745,392.

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	653,392	337,512
Changes of assumptions	512,406	-
Net difference between Projected and Actual Earnings on Pension Plan investments	629,304	-
Total	<u>\$ 1,795,102</u>	<u>\$ 337,512</u>

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

Year ended September 30:				
2020		\$	336,859	
2021		\$	355,229	
2022		\$	457,661	
2023		\$	307,841	
2024		\$	-	
Thereafter		\$	-	

GASB 68 SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS
Last 10 Fiscal Years

	09/30/2019	09/30/2018	09/30/2017
Total Pension Liability			
Service Cost	622,141	674,529	635,256
Interest	2,416,957	2,446,824	2,321,762
Changes of benefit terms	-	308,630	-
Differences between Expected and Actual Experience	768,679	(562,521)	153,793
Changes of assumptions	-	854,009	-
Contributions - Buy Back	-	-	-
Benefit Payments, including Refunds of Employee Contributions	(1,688,734)	(1,750,601)	(2,040,254)
Net Change in Total Pension Liability	2,119,043	1,970,870	1,070,557
Total Pension Liability - Beginning	32,448,317	30,477,447	29,406,890
Total Pension Liability - Ending (a)	\$ 34,567,360	\$ 32,448,317	\$ 30,477,447
Plan Fiduciary Net Position			
Contributions - Employer	867,341	829,616	586,260
Contributions - State	182,386	171,608	154,134
Contributions - Employee	212,363	208,055	195,078
Contributions - Buy Back	-	-	-
Net Investment Income	1,488,348	1,849,653	2,676,958
Benefit Payments, including Refunds of Employee Contributions	(1,688,734)	(1,750,601)	(2,040,254)
Administrative Expense	(95,675)	(80,644)	(65,640)
Net Change in Plan Fiduciary Net Position	966,029	1,227,687	1,506,536
Plan Fiduciary Net Position - Beginning	30,379,434	29,151,747	27,645,211
Plan Fiduciary Net Position - Ending (b)	\$ 31,345,463	\$ 30,379,434	\$ 29,151,747
Net Pension Liability - Ending (a) - (b)	\$ 3,221,897	\$ 2,068,883	\$ 1,325,700
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	90.68%	93.62%	95.65%
	\$	3,200,845	\$ 3,001,194
		64.64%	44.17%
Covered Payroll ¹	\$ 3,267,124		
Net Pension Liability as a percentage of Covered Payroll	98.62%		

GASB 68 SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS
Last 10 Fiscal Years

	09/30/2016	09/30/2015
Total Pension Liability		
Service Cost	618,297	618,844
Interest	2,201,265	2,131,633
Changes of benefit terms	-	(997,832)
Differences between Expected and Actual Experience	(374,962)	(513,866)
Changes of assumptions	1,036,841	-
Contributions - Buy Back	10,045	6,362
Benefit Payments, including Refunds of Employee Contributions	(1,964,221)	(1,414,928)
Net Change in Total Pension Liability	1,527,265	(169,787)
Total Pension Liability - Beginning	27,879,625	28,049,412
Total Pension Liability - Ending (a)	<u>\$ 29,406,890</u>	<u>\$ 27,879,625</u>
Plan Fiduciary Net Position		
Contributions - Employer	943,008	1,052,280
Contributions - State	146,531	135,036
Contributions - Employee	206,653	197,582
Contributions - Buy Back	10,045	6,362
Net Investment Income	2,337,754	(751,053)
Benefit Payments, including Refunds of Employee Contributions	(1,964,221)	(1,414,928)
Administrative Expense	(68,661)	(70,689)
Net Change in Plan Fiduciary Net Position	1,611,109	(845,410)
Plan Fiduciary Net Position - Beginning	26,034,102	26,879,512
Plan Fiduciary Net Position - Ending (b)	<u>\$ 27,645,211</u>	<u>\$ 26,034,102</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 1,761,679</u>	<u>\$ 1,845,523</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	94.01%	93.38%
Covered Payroll ¹	\$ 3,179,278	\$ 3,657,284
Net Pension Liability as a percentage of Covered Payroll	55.41%	50.46%

GASB 68 SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS
Last 10 Fiscal Years

	09/30/2014	09/30/2013
Total Pension Liability		
Service Cost	674,987	624,988
Interest	2,089,717	1,956,594
Changes of benefit terms	-	-
Differences between Expected and Actual Experience	-	-
Changes of assumptions	-	-
Contributions - Buy Back	-	-
Benefit Payments, including Refunds of Employee Contributions	(958,641)	(976,443)
Net Change in Total Pension Liability	1,806,063	1,605,139
Total Pension Liability - Beginning	26,243,349	24,638,210
Total Pension Liability - Ending (a)	<u>\$ 28,049,412</u>	<u>\$ 26,243,349</u>
Plan Fiduciary Net Position		
Contributions - Employer	1,247,515	1,090,855
Contributions - State	137,207	136,449
Contributions - Employee	188,931	192,321
Contributions - Buy Back	-	-
Net Investment Income	2,455,052	2,407,284
Benefit Payments, including Refunds of Employee Contributions	(958,641)	(976,443)
Administrative Expense	(64,627)	(60,034)
Net Change in Plan Fiduciary Net Position	3,005,437	2,790,432
Plan Fiduciary Net Position - Beginning	23,874,075	21,083,643
Plan Fiduciary Net Position - Ending (b)	<u>\$ 26,879,512</u>	<u>\$ 23,874,075</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 1,169,900</u>	<u>\$ 2,369,274</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	95.83%	90.97%
Covered Payroll ¹	\$ 2,906,638	\$ 2,958,783
Net Pension Liability as a percentage of Covered Payroll	40.25%	80.08%

Notes to Schedule of Changes in Net Pension Liability and Related Ratios

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

Changes of Benefit Terms:

For measurement date 09/30/2018, the following benefit change has been adopted, as noted in our September 10, 2018 Actuarial Impact Statement:

- The inclusion of Holiday Pay in the definition of Salary (which includes amounts retroactively applied through the fiscal year ending September 30, 2017)

For measurement date 09/30/2015, amounts reported as changes of benefit terms were resulted from below changes:

- 1) The definition of Salary shall mean base pay including state funded incentives and overtime pay up to 150 hours per fiscal year, but excluding special detail pay, payments for unused sick and annual leave, and overtime pay in excess of 150 hours per fiscal year.
- 2) Effective September 30, 2015, all funds in the excess premium tax reserve shall be applied to reduce the unfunded actuarial accrued liability of the Plan. All premium tax revenues received pursuant to Chapter 185, Florida Statutes, beginning with the fiscal year ending September 30, 2015, and each fiscal year thereafter, shall be applied to reduce the City's annual required contribution.
- 3) A Share Plan shall be created in order to comply with Chapter 2015-39, Laws of Florida. Please note the City and the Coastal Police Benevolent Association (PBA) have mutually agreed that the Share Plan will not be funded during the term of the 2015-2018 collective bargaining agreement.

Changes of Assumptions:

For measurement date 09/30/2018, based on the actuarial experience study dated August 17, 2018, the Board made the following changes to assumptions:

- Reduced interest rate to 7.50%
- Modified salary increase rates to use a service-based table
- Updated retirement and termination rates

For measurement date 09/30/2016, as a result of Chapter 2015-157, Laws of Florida, the assumed rates of mortality were changed to the assumptions used by the Florida Retirement System for special risk employees.

Furthermore 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 purposes of the 1) benefit change listed for measurement date 09/30/2015, the load assumption for the projected salary at retirement to account for lump sum accrued sick and vacation leave payouts was modified from a fixed 20% per individual to an amount equal to their individual accruals as of June 7, 2013, as provided by the City. It is important to point out that the load assumption will be subject to further modification based on future experience. Subsequent changes will be reflected in future actuarial valuations.

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 ¹	Contributions as a percentage of Covered Payroll
09/30/2019	\$ 1,049,727	\$ 1,049,727	\$ -	\$ 3,267,124	32.13%
09/30/2018	\$ 1,001,224	\$ 1,001,224	\$ -	\$ 3,200,845	31.28%
09/30/2017	\$ 740,394	\$ 740,394	\$ -	\$ 3,001,194	24.67%
09/30/2016	\$ 1,089,539	\$ 1,089,539	\$ -	\$ 3,179,278	34.27%
09/30/2015	\$ 1,187,316	\$ 1,187,316	\$ -	\$ 3,657,284	32.46%
09/30/2014	\$ 1,384,722	\$ 1,384,722	\$ -	\$ 2,906,638	47.64%
09/30/2013	\$ 1,227,303	\$ 1,227,303	\$ -	\$ 2,958,783	41.48%

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

Notes to Schedule

Valuation Date: 10/01/2017 (AIS 09/10/2018)

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

Methods and assumptions used to determine contribution rates:

Mortality:

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

Interest Rate:

8.00% per year compounded annually, net of investment related expenses. This assumption is supported by the Plan's Investment Policy Statement and long-term expected returns by asset class.

Retirement Age:

Earlier of age 50 with 10 years of Credited Service or 25 years of service, regardless of age. Also, any member who has reached Normal Retirement is assumed to continue employment for one additional year. This assumption is reasonable for the associated benefit provision.

Disability Rates:

See table below (1205). 75% of Disability Retirements are assumed to be Line-of-Duty related. These assumptions are consistent with other Florida municipal special risk pension plans.

Termination Rates:

See table below (W1304A). This assumption was previously adopted as the result of an Experience Study for the period October 1, 1992 through October 1, 2006. 6.5% per year until the assumed retirement age. This assumption is consistent with long-term Plan experience.

Salary Increases:

To account for non-regular compensation, projected salary at retirement is increased individually, based on census data provided by the City.

Cost-of-Living Adjustment:

3% per year beginning at age 65.

Payroll Growth:

None.

Funding Method:

Entry Age Normal Actuarial Cost Method.

Asset Smoothing Methodology:

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

Termination and Disability Rate Table:

Age	% Terminating During the Year	% Becoming Disabled During the Year
20	9.3%	0.14%
30	7.9%	0.18%
40	4.3%	0.30%
50	1.1%	1.00%

EXPENSE DEVELOPMENT AND AMORTIZATION SCHEDULES

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

COMPONENTS OF PENSION EXPENSE
FISCAL YEAR SEPTEMBER 30, 2019

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Beginning balance	\$ 2,068,883	\$ 964,689	\$ 1,964,930	\$ -
Total Pension Liability Factors:				
Service Cost	622,141	-	-	622,141
Interest	2,416,957	-	-	2,416,957
Changes in benefit terms	-	-	-	-
Differences between Expected and Actual Experience with regard to economic or demographic assumptions	768,679	-	768,679	-
Current year amortization of experience difference	-	(206,245)	(192,183)	(14,062)
Change in assumptions about future economic or demographic factors or other inputs	-	-	-	-
Current year amortization of change in assumptions	-	-	(430,012)	430,012
Benefit Payments, including Refunds of Employee Contributions	(1,688,734)	-	-	-
Net change	<u>2,119,043</u>	(206,245)	<u>146,484</u>	<u>3,455,048</u>
Plan Fiduciary Net Position:				
Contributions - Employer	867,341	-	-	-
Contributions - State	182,386	-	-	-
Contributions - Employee	212,363	-	-	(212,363)
Projected Net Investment Income	2,258,871	-	-	(2,258,871)
Difference between projected and actual earnings on Pension Plan investments	(770,523)	-	770,523	-
Current year amortization	-	(159,250)	(825,153)	665,903
Benefit Payments, including Refunds of Employee Contributions	(1,688,734)	-	-	-
Administrative Expenses	(95,675)	-	-	95,675
Net change	<u>966,029</u>	(159,250)	<u>(54,630)</u>	<u>(1,709,656)</u>
Ending Balance	\$ 3,221,897	\$ 599,194	\$ 2,056,784	\$ 1,745,392

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)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
2019	\$ 770,523	5	\$ 154,103	\$ 154,105	\$ 154,105	\$ 154,105	\$ 154,105	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ 457,608	5	\$ 91,522	\$ 91,522	\$ 91,522	\$ 91,522	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ (512,158)	5	\$ (102,432)	\$ (102,432)	\$ (102,432)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ (284,092)	5	\$ (56,818)	\$ (56,818)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2015	\$ 2,897,640	5	\$ 579,528	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 665,903	\$ 86,377	\$ 143,195	\$ 245,627	\$ 154,105	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

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)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
2018	\$ 854,009	5	\$ 170,802	\$ 170,802	\$ 170,802	\$ 170,802	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ 1,036,841	4	\$ 259,210	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 430,012	\$ 170,802	\$ 170,802	\$ 170,802	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

GASB 68 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)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
2019	\$ 768,679	5	\$ 153,735	\$ 153,736	\$ 153,736	\$ 153,736	\$ 153,736	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ (562,521)	5	\$ (112,504)	\$ (112,504)	\$ (112,504)	\$ (112,504)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ 153,793	4	\$ 38,448	\$ 38,448	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ (374,962)	4	\$ (93,741)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ (14,062)	\$ 79,680	\$ 41,232	\$ 41,232	\$ 153,736	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -