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City of Rockledge

Police Employees Retirement Plan

Actuarial Valuation as of October 1, 2017

January 25, 2018

REPORT TO DETERMINE MINIMUM FUNDING REQUIREMENTS
FOR THE PLAN AND FISCAL YEAR
BEGINNING OCTOBER 1, 2018

January 25, 2018

Board of Trustees
City of Rockledge Police Employees Retirement Plan
Rockledge, Florida

RE: Actuarial Valuation as of October 1, 2017

Dear Board Members:

We are pleased to present the actuarial valuation as of October 1, 2017 for the City of Rockledge Police Employees Retirement Plan (the Plan). This report provides a review of the current funded status of the Plan, establishes the minimum funding requirements for the fiscal year ending September 30, 2019, and provides an analysis of experience since the last valuation. In addition to providing the summary and derivation of actuarial findings, this report describes the data, assumptions, and methods used to create these results.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

Statement by Enrolled Actuary:

"This actuarial valuation and/or cost determination 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."

Please let us know when we may present these results to you in person and answer any questions you may have.

Sincerely,

Chad M. Little, ASA, EA
Partner, Consulting Actuary
Enrollment Number 17-6619

Paula C. Freiman, ASA, EA
Partner, Consulting Actuary
Enrollment Number 17-5796

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Section 1 Board Summary

A summary of the key valuation findings are compared with the results of the prior valuation below.

Summary of Principal Valuation Results

Fiscal Year Ending September 30,	2018	2019
Minimum Funding Requirements		
Minimum Funding Requirement		
Minimum Required City Contribution	$259,625	$238,901
Estimated State Contribution	191,152	195,099
Total Minimum Funding Requirement (City plus State)	$450,777	$434,000
Minimum Required City Contribution	11.62%	11.98%
Estimated State Contribution	8.56%	9.78%
Total Minimum Funding Requirement (City plus State)	20.18%	21.76%

Note: $450,777 is the minimum funding requirement for fiscal 2018 including both contributions from the City and those from the State of Florida. We have estimated the City portion as $259,625 which must be deposited on December 15, 2017. The annual contribution paid by the City should take into account the actual amount of premium tax revenues received from the State of Florida that may be applied toward the actuarially determined contribution so that the total deposit for fiscal 2018 is $450,777.

Note: $434,000 is the minimum funding requirement for fiscal 2019 including both contributions from the City and those from the State of Florida. We have estimated the City portion as $238,901 which must be deposited on December 15, 2018. The annual contribution paid by the City should take into account the actual amount of premium tax revenues received from the State of Florida that may be applied toward the actuarially determined contribution so that the total deposit for fiscal 2019 is $434.000.

Funded Status

Valuation as of October 1,	2016	2017
Accrued Liability (AL)	$12,902,368	$13,925,025
Actuarial Value of Assets	(12,127,770)	(13,235,067)
Unfunded Accrued Liability (UAL)	$774,598	$689,958
Funded Percentage	94.00%	95.05%

Key Assumptions

Valuation as of October 1,	2016	2017
Assumed Investment Return, Net of Expenses	8.00%	8.00%
Salary Increase Assumption	6.00%	6.00%

Summary of Significant Events

Determination of the funded status of the Plan and minimum funding requirements are based on funding policy, participant data, asset information, Plan provisions, actuarial methods and assumptions, as well as contributions made to the Plan by the State of Florida. Any significant events associated with these items are discussed in the following.

In preparing our report we relied, without audit, on information (some oral and some written) supplied by the Plan Administrator and the City. This information includes, but is not limited to, statutory provisions, employee census, and financial information. In our examination of these data, we have found them to be reasonably consistent and comparable with data used for other purposes. Since the valuation results are dependent on the integrity of the data supplied, the results can be expected to differ if the underlying data is incomplete or missing. It should be noted that if any data or other information is inaccurate or incomplete, our calculations may need to be revised.

Participant Data

During the year active membership changed from 46 to 45 members due to 5 new hires, 1 vested termination, 2 non-vested terminations, and 3 DROP entrants. The following provides a summary comparing the actual and expected pay increases for the 12-month periods ending on the date specified.

Year Ended	Individual		Total Payroll
September 30,	Actual	Expected	Increase
2017	1.8%	6.0%	(8.0%)
2016	5.2%	6.0%	2.0%
2015	4.1%	6.0%	(3.3%)
2014	5.3%	6.0%	10.1%
2013	6.0%	6.0%	(7.5%)
2012	(6.7%)	6.0%	(5.7%)
2011	5.3%	6.0%	4.5%
2010	0.3%	6.0%	1.4%
2009	2.4%	6.0%	5.8%
2008	2.0%	6.0%	4.3%
Average:	2.5%	6.0%	0.2%

Pay increases were less than expected with the actual average pay increase amongst continuing actives at 1.8% in comparison to the 6.0% salary increase assumption. In addition, total payroll increased 0.2% on average over the last 10 years in comparison to the 1.5% payroll growth assumption used to amortize unfunded accrued liability as a level percentage of pay. Florida Statutes 112.64(5)(a) requires that the payroll growth assumption not exceed the average payroll growth for the prior ten years. Because the average payroll growth for the prior ten years was 0.2%, we recommend moving to level dollar amortization at this time.

Overall, there was a demographic gain. Should a pattern of consistent gains or losses develop, assumptions will be adjusted as needed. We recommend a review of actuarial experience be conducted.

Assets

The investment return on the Market Value of Assets was 12.80% and the return on the Actuarial Value of Assets was 8.08%, each in comparison to the 8.0% rate of return assumed for the fiscal year ending September 30, 2017. Because the return on the Actuarial Value of Assets was more than the assumed rate of net investment return, there was an actuarial investment gain for the year ending September 30, 2017.

Note only a portion of actual investment gains or losses are recognized in the current year Actuarial Value of Assets with the remainder recognized over the next four years. Even if all assumptions are realized in the next several years, the Plan will experience changes in the required contribution rate until prior gains and losses are fully recognized.

The table below provides a comparison of the investment return on the Market Value of Assets and the Actuarial Value of Assets in comparison to the investment return assumed in the valuation of the Plan.

12-Month Period Ended September 30,	% Market Return	% Actuarial Return	% Assumed Return
2017	12.80 %	8.08 %	8.0 %
2016	9.68 %	7.51 %	8.0 %
2015	0.11 %	4.77 %	8.0 %
2014	9.65 %	7.59 %	8.0 %
2013	8.84 %	5.84 %	8.0 %
2012	12.43 %	0.96 %	8.0 %
2011	(2.80) %	0.57 %	8.0 %
2010	7.44 %	2.13 %	8.0 %
2009	0.78 %	2.10 %	8.0 %
2008	(13.54)%	(13.79)%	8.0 %
Average	4.22 %	2.38 %	8.0 %

Investment returns less than the assumed rate of return result in increased annual minimum required contributions in the future.

Plan Provisions

Ordinance 1709-2017 was adopted effective June 7, 2017. The ordinance created a defined contribution (DC) component which will be funded by a portion of the premium tax revenues if the City and the collective bargaining representative do not reach mutual consent to use the premium tax revenues for an alternative means. In years when the DC component is funded, moneys that would have been used toward offsetting the City's portion of the actuarially determined minimum required contribution are used toward funding benefits under this DC component. The increase in cost to the City would be equal to the contributions made to the DC component. Our statement of no impact dated March 13, 2017 indicated that as currently all of the premium tax revenues are used to offset the City's minimum required contributions, there is no impact on the funding of the Plan at this time.

We understand that members of this Plan are covered by one of the following two unions:

- The Coastal Florida Police Benevolent Association (PBA) CBA was ratified by the bargaining unit members August 17, 2015 and authorized by the City council on September 9, 2015. The agreement expires September 30, 2018.

- The Fraternal Order of Police representing Lieutenants CBA covers the period from October 1, 2014 through September 30, 2017.

We were provided with a memorandum of understanding (MOU) pertaining to premium tax use from the PBA which states, "…the CFPBA and the City hereby agree that the accumulated balance of Chapter 185 Premium Tax Funds, in the amount of $359,515 is available and will be used as additional funding for said retirement plan in its entirety." The MOU is not clear and we ask the Board of Trustees to confirm their understanding regarding premium tax use. The Plan attorney has indicated the valuation should be performed assuming all premium tax contributions should be used toward the actuarially required contributions.

Methods

There have been no changes in Methods since the prior valuation of the Plan.

Assumptions

Florida Statutes 112.64(5)(a) requires that the payroll growth assumption not exceed the average payroll growth for the prior ten years. While an assumption of 1.5% was used to amortize the Unfunded Accrued Liability as a percent of pay effective October 1, 2016, this October 1, 2017 actuarial valuation uses level dollar amortization.

In the prior valuation, the mortality table was that used for special risk employees in the valuation of the Florida Retirement System (FRS) as of July 1, 2015, as required by state statute. The mortality table has been revised to that used for special risk employees in the valuation of FRS as of July 1, 2016 and 2017, as required by state statute. While healthy post-retirement mortality and disabled mortality rates were unchanged, healthy pre-retirement was revised.

As directed by the Board, we have continued to use an assumed investment return of 8.0% net of investment expenses. We recommend additional discussions regarding lowering the net assumed return.

State Contributions

The Estimated Minimum Required City Contribution shown on page 1 assumes that the premium tax money received from the State will be in the same amount received in the prior year. Should the amount received in the fiscal year ending September 30, 2018 or 2019 be less than expected, or should a portion of the State contribution be used towards the DC component of the Plan, the City will need to contribute any potential shortfall to the Plan.

Section 2 Results Derivation

In this section, the assets and liabilities of the Plan are shown in detail. Assets and liabilities are then compared to determine the funded status and minimum funding requirements.

While asset information is based on the fair market value of assets, along with any techniques used to smooth out market fluctuations, liabilities are determined through a combination of the benefit provisions, participant census data which contains information for the members who will receive those benefits, and the methods and assumptions used with regard to how benefits will be paid to members. A summary of participant data, an outline of the benefit provisions, and a description of the methods and assumptions used in this valuation are described in Section 4.

Financial Information

Over the life of the Plan, the majority of assets are typically generated from investment return. In this section, we describe how the assets of the Plan are invested, show how the actuarial value of assets is derived, and review the investment results since the prior valuation.

Investment Allocation

Valuation Date	**October 1, 2016**		**October 1, 2017**	
Stocks	$8,399,981	71%	$10,037,567	74%
Fixed Income Securities	2,484,600	21%	2,508,481	19%
Cash and Cash Equivalents	129,278	1%	308,194	2%
Real Estate	626,486	5%	641,007	5%
Net Receivables	220,244	2%	13,908	0%
Fair Market Value of Assets	$11,860,589	100%	$13,509,157	100%

Reconciliation of Market Value of Assets

Year Ending September 30,			2016	2017
1.	**Market Value of Assets at Beginning of Year**		$10,698,704	$11,860,589
2.	Contributions			
	a.	Employer	$214,124	$218,130
	b.	State	191,152	195,099
	c.	Plan Members	162,989	155,403
	d.	Total Contributions	$568,265	$568,632
3.	Investment Income			
	a.	Realized Appreciation (Depreciation)	$20,417	$(7,203)
	b.	Unrealized Appreciation (Depreciation)	795,735	1,275,652
	c.	Interest plus Dividends	276,195	296,190
	d.	Investment Expense	(50,562)	(38,698)
	e.	Net Investment Income	$1,041,785	$1,525,941
4.	Deductions			
	a.	Benefits	$(357,372)	$(373,818)
	b.	Refund of Contributions	(37,934)	(9,133)
	c.	DROP Balance Disbursement	0	0
	d.	Administrative Expense	(52,859)	(63,054)
	e.	Total Deductions	$(448,165)	$(446,005)
5.	Net Increase		$1,161,885	$1,648,568
6.	**Market Value of Assets at End of Year**		$11,860,589	$13,509,157
7.	**Return on Market Value of Assets = 2I / (A + B – I)**		9.68%	12.80%

Development of Actuarial Value of Assets

The Market Value of Assets is adjusted to recognize investment earnings greater than (or less than) the assumed net investment return over a five-year period. The Actuarial Value of Assets is no more than 120% and no less than 80% of the Market Value of Assets.

1.	Market Value of Assets as of October 1, 2017				$13,509,157
2.	Phase-In Gains (Losses) Over Five Year Period				
		Year Ending	Original Gain (Loss)	Percent Unrecognized	Unrecognized Gain (Loss)
	a.	September 30, 2017	$577,029	80%	$461,623
	b.	September 30, 2016	188,731	60%	113,239
	c.	September 30, 2015	(835,973)	40%	(334,389)
	d.	September 30, 2014	168,086	20%	33,617
	e.	Total			$274,090
3.	Preliminary Actuarial Value of Assets				$13,235,067
4.	Corridor Around Market Value				
	a.	Minimum = 80% of Market Value of Assets			$10,807,326
	b.	Maximum = 120% of Market Value of Assets			$16,210,988
	c.	Corridor Adjustment to Preliminary Actuarial Value			$0
5.	Actuarial Value of Assets as of October 1, 2017				$13,235,067

Development of Historical Gain or Loss on Market Value of Assets

Fiscal Year End		**2017**	**2016**
1.	Market Value of Assets - Beginning of Year	$11,860,589	$10,698,704
2.	Expected Interest on Assets	948,847	855,896
3.	Contributions	568,632	568,265
4.	Benefit Payments + Administrative Expenses	(446,005)	(448,165)
5.	Interest on items (3) and (4)	65	(2,842)
6.	Expected Value of Assets at End of Year	$12,932,128	$11,671,858
7.	Market Value of Assets - End of Year	$13,509,157	$11,860,589
8.	Gain (Loss) for Plan Year = (7) - (6)	$577,029	$188,731

Fiscal Year End		**2015**	**2014**
1.	Market Value of Assets - Beginning of Year	$10,674,501	$9,694,311
2.	Expected Interest on Assets	853,960	775,545
3.	Contributions	553,522	509,115
4.	Benefit Payments + Administrative Expenses	(540,777)	(347,005)
5.	Interest on items (3) and (4)	(6,529)	(551)
6.	Expected Value of Assets at End of Year	$11,534,677	$10,631,415
7.	Market Value of Assets - End of Year	$10,698,704	$10,799,501
8.	Gain (Loss) for Plan Year = (7) - (6)	$(835,973)	$168,086

Historical Asset Values

Year Ending September 30,	Actuarial Value of Assets	Market Value of Assets	% Market Return	% Actuarial Return	% Assumed Return
2017	$13,235,067	$13,509,157	12.80 %	8.08 %	8.00 %
2016	12,127,770	11,860,589	9.68 %	7.51 %	8.00 %
2015	11,164,802	10,698,704	0.11 %	4.77 %	8.00 %
2014	10,643,865	10,799,501	9.65 %	7.59 %	8.00 %
2013	9,402,198	9,694,311	8.84 %	5.84 %	8.00 %
2012	8,736,203	8,762,060	12.43 %	0.96 %	8.00 %
2011	8,414,417	7,566,604	(2.80)%	0.57 %	8.00 %
2010	8,262,345	7,614,445	7.44 %	2.13 %	8.00 %
2009	8,021,574	6,963,511	0.78 %	2.10 %	8.00 %
2008	7,682,097	6,671,261	(13.54)%	(13.79)%	8.00 %

Historical Contribution Amounts

Year Ending September 30,	Employer	State	Members	Total
2017	$218,130	$195,099	$155,403	$568,632
2016	214,124	191,152	162,989	568,265
2015	218,903	175,977	158,642	553,522
2014	175,170	175,891	158,054	509,115
2013	170,374	170,685	202,692	543,751
2012	176,060	174,478	162,601	513,139
2011	167,856	166,718	167,856	502,430
2010	159,519	162,716	159,519	481,754
2009	161,204	167,324	161,204	489,732
2008	157,357	166,345	157,357	481,059

Historical Deductions from Fund

Year Ending September 30,	Benefits	Refunds	Administrative Expense	Total
2017	$373,818	$9,133	$63,054	$446,005
2016	357,372	37,934	52,859	448,165
2015	414,338	56,004	70,435	540,777
2014	241,507	35,759	69,739	347,005
2013	241,507	93,581	57,516	392,604
2012	242,060	2,045	28,833	272,938
2011	247,648	38,828	48,140	334,616
2010	247,648	61,665	44,177	353,490
2009	211,230	8,015	30,998	250,243
2008	180,589	17,654	35,844	234,087

Historical State Contributions

Year Ending September 30	State Contributions
2017	$195,099
2016	191,152
2015	175,977
2014	175,891
2013	170,685
2012	174,478
2011	166,718
2010	162,716
2009	167,324
2008	166,345
2007	169,433
2006	164,202
2005	155,180
2004	144,978
2003	110,868
2002	101,126
2001	85,770
2000	78,865
1999	79,929
1998	80,871

Present Value of Benefits

Valuation as of October 1,			**2016**	**2017**
1.	**Active Members**			
	a.	Retirement Benefits	$9,163,308	$8,287,709
	b.	Deferred Benefits	512,617	520,919
	c.	Survivor Benefits	407,624	184,286
	d.	Disability Retirement	319,384	301,288
	e.	Total for Active Members	$10,402,933	$9,294,202
2.	**Inactive Members**			
	a.	Retired Members	$4,827,614	$7,155,453
	b.	Terminated members	1,336,864	1,061,588
	c.	Beneficiaries	0	0
	d.	Disability Retirement	137,712	135,984
	e.	Total for Inactive Members	$6,302,190	$8,353,025
3.	**Present Value of Benefits**		$16,705,123	$17,647,227

Accrued Liability

Valuation as of October 1,			2016	2017
1.	**Active Members**			
	a.	Retirement Benefits	$6,260,958	$5,326,168
	b.	Deferred Benefits	31,217	50,683
	c.	Survivor Benefits	171,669	76,381
	d.	Disability Retirement	136,334	118,768
	e.	Total for Active Members	$6,600,178	$5,572,000
2.	**Inactive Members**			
	a.	Retired Members	$4,827,614	$7,155,453
	b.	Terminated members	1,336,864	1,061,588
	c.	Beneficiaries	0	0
	d.	Disability Retirement	137,712	135,984
	e.	Total for Inactive Members	$6,302,190	$8,353,025
3.	**Accrued Liability**		$12,902,368	$13,925,025

Normal Cost

Valuation as of October 1,			2016	2017
1.	**Preliminary Normal Cost**			
	a.	Retirement Benefits	$327,422	$307,579
	b.	Deferred Benefits	52,761	47,546
	c.	Survivor Benefits	26,520	11,013
	d.	Disability Retirement	21,004	19,283
	e.	Total	$427,707	$385,421
2.	**Total Normal Cost**			
	a.	Preliminary Normal Cost	$427,707	$385,421
	b.	Estimated Administrative Expense	52,859	63,054
	c.	Total Normal Cost	$480,566	$448,475
	d.	Total Normal Cost as a Percent of Pay	21.0%	21.3%
3.	**Employer Normal Cost**			
	a.	Preliminary Normal Cost	$427,707	
	b.	Actual Administrative Expense	63,054	
	c.	Actual Employee Contributions	(155,403)	
	d.	Employer Normal Cost	$335,358	
4.	**Valuation Payroll**		$2,285,615	$2,101,925

Unfunded Accrued Liability

Derivation of Unfunded Accrued Liability (UAL)

Unfunded Accrued Liability

1.	Accrued Liability	$13,925,025
2.	Actuarial Value of Assets	(13,235,067)
3.	Unfunded Accrued Liability	$689,958

Determination of Expected Unfunded Accrued Liability

1.	Unfunded Accrued Liability as of Prior Year	$774,598
2.	Interest for a full year on (1)	61,968
3.	Employer Normal Cost (Including Administrative Expenses) as of Prior Yr.	335,358
4.	Interest for a full year on (3)	26,829
5.	City Plus State Contribution	(413,229)
6.	Interest on Contribution for Time on Deposit	(11,689)
7.	Change in Plan, Methods or Assumptions	(3,883)
8.	Expected Unfunded Accrued Liability	$769,952

Calculation of (Gain) or Loss

1.	Actual Unfunded Accrued Liability	$689,958
2.	Expected Unfunded Accrued Liability	769,952
3.	Total (Gain) or Loss	$(79,994)

Reconciliation of Unfunded Accrued Liability

1.	Unfunded Accrued Liability as of Prior Year	$774,598
2.	Total Change in Unfunded Accrued Liability	
	a. Expected Change in Unfunded Accrued Liability	$(763)
	b. Change in Plan, Methods or Assumptions	(3,883)
	c. Change Due to (Gain) or Loss	
	i. Portion of (Gain) / Loss Due to Investments	$(14,383)
	ii. Portion of (Gain) / Loss Due to Demographic Experience	(65,611)
	iii. Total (Gain) or Loss	$(79,994)
	d. Total Change in Unfunded Accrued Liability	$(84,640)
3.	Unfunded Accrued Liability	$689,958

Amortization of Unfunded Liability

The Unfunded Actuarial Accrued Liability is being amortized as a level dollar amount based on the interest assumption. Changes in the Unfunded Actuarial Accrued Liability due to plan changes, assumption changes, method changes, or gains and losses are all amortized over a 25-year period.

Amortization Bases

	Effective 10/1	**Source**	**Original Balance**	**Remaining Balance**	**Adjusted Remaining Balance**	**Years Remain**	**Level $ Amortization**
1.	2005	Method Change	$(129,220)	$(66,189)	$(66,316)	18	$(6,552)
2.	2006	Actuarial Gain	(154,247)	(79,054)	(79,206)	19	(7,637)
3.	2007	Actuarial Gain	(538,306)	(275,320)	(275,851)	20	(26,015)
4.	2008	Actuarial Loss	1,693,799	854,240	855,887	20	80,717
5.	2008	Method Change	7,606	3,873	3,880	21	359
6.	2008	Method Change	(1,183,820)	(602,797)	(603,959)	21	(55,828)
7.	2009	Actuarial Loss	449,531	227,407	227,845	22	20,682
8.	2010	Actuarial Loss	46,391	23,271	23,316	23	2,082
9.	2011	Actuarial Loss	489,026	242,812	243,280	24	21,395
10.	2012	Actuarial Gain	(278,260)	(136,543)	(136,806)	25	(11,866)
11.	2012	Asmp/Method Chg	363,487	178,366	178,710	25	15,501
12.	2013	Actuarial Loss	22,767	11,026	11,047	26	946
13.	2013	Assumption Change	10,161	4,919	4,928	26	422
14.	2014	Actuarial Loss	42,565	40,543	40,621	27	3,440
15.	2014	Assumption Change	11,211	10,679	10,700	27	906
16.	2015	Actuarial Loss	217,978	206,382	206,780	23	18,461
17.	2015	Assumption Change	11,608	10,991	11,012	23	983
18.	2016	Actuarial Gain	(108,646)	(108,377)	(108,586)	24	(9,549)
19.	2016	Assumption Change	226,678	226,117	226,553	24	19,924
20.	2017	Actuarial Gain	(79,994)	(79,994)	(79,994)	25	(6,939)
21.	2017	Assumption Change	(3,883)	(3,883)	(3,883)	25	(337)

Scheduled Amortization Payment			$61,095
Outstanding Bases	$688,469	$689,958	
Unfunded Accrued Liability	689,958		

Projected Unfunded Accrued Liability and Amortization Payments

Plan Year Beginning October 1	Total Outstanding Bases	Total Amortization Payment
2017	$689,958	$61,095
2018	679,172	61,094
2019	667,524	61,093
2020	654,946	61,095
2021	641,359	61,090
2022	626,690	61,092
2023	610,846	61,090
2024	593,737	61,092
2025	575,256	61,092
2026	555,297	61,094
2027	533,740	61,093
2028	510,458	61,093
2029	485,315	61,093
2030	458,159	61,097
2031	428,827	61,096
2032	397,150	61,093
2033	362,941	61,095
2034	325,994	61,096
2035	286,090	67,647
2036	235,918	75,281
2037	173,488	20,580
2038	165,141	76,052
2039	96,216	55,371
2040	44,113	33,843
2041	11,091	2,073
2042	9,740	5,716
2043	4,346	4,346
2044	0	0

Actions Taken to Reduce Unfunded Actuarial Accrued Liability

The required contributions calculated each year include a payment for the amortization of the unfunded actuarial accrued liability. This payment is designed to reduce the unfunded actuarial accrued liability in an orderly fashion over the next 25 years.

Minimum Funding Requirements

Determination of Required Contribution

Valuation as of October 1, **Funding for Year Ending September 30,**	**2016** **2018**	**2017** **2019**
1. **Minimum Required Contribution**		
a. Total Normal Cost	$480,566	$448,475
b. Amortization of Unfunded Accrued Liability	59,462	61,095
c. Beginning of Year Contribution	$540,028	$509,570
d. Interest	67,095	64,015
e. Minimum Required Contribution	$607,123	$573,585
f. Percent of Pay	27.18 %	28.76 %
2. **Expected Member Contributions**		
a. Expected Member Contributions	$156,346	$139,585
b. Percent of Pay	7.00 %	7.00 %
3. **Expected Contributions from State**		
a. Expected State Contribution	$191,152	$195,099
b. Percent of Pay	8.56 %	9.78 %
4. **City Policy Contribution**		
a. City Policy Contribution	$259,625	$238,901
b. Percent of Valuation Payroll	11.62 %	11.98 %
5. **Valuation Payroll**	$2,233,509	$1,994,069

Note: The $259,625 minimum funding requirement for fiscal 2018 must be deposited on December 15, 2017. The $238,901 minimum funding requirement for fiscal 2019 must be deposited on December 15, 2018. The actual premium tax distributions for the fiscal years ending September 30, 2018 and 2019 are not yet known. If state contributions are less than expected the City contributions must be increased to make up the difference.

Reconciliations

Reconciliation of Funded Status

	Unfunded Actuarial Accrued Liability	Funded Percentage	Change in Unfunded Actuarial Accrued Liability	Change in Funded Percentage
As of Prior Valuation	**$774,598**	**94.00 %**		
Changes in due to:				
Normal Operation of Plan	773,835	94.47 %	$(763)	0.47 %
Investment Experience	759,452	94.57 %	(14,383)	0.10 %
Demographic Experience	693,841	95.02 %	(65,611)	0.45 %
Required Mortality Change	689,958	95.05 %	(3,883)	0.03 %
Total Changes			$(84,640)	1.05 %
As of Current Valuation	**$689,958**	**95.05 %**		

Reconciliation of City Minimum Funding Requirement

	Dollar Amount	% of Pay
City Required Contribution for Fiscal 2018	**$259,625**	**11.62 %**
Changes in Contribution due to:		
Normal Operation of Plan	$(19,288)	(0.62)%
Change in Expenses	11,180	0.51 %
Change in State $	(3,711)	(0.17)%
Investment Experience	(1,204)	(0.06)%
Demographic Experience	(11,507)	0.51 %
Required Mortality Change	(3,901)	(0.19)%
Effect of F.S. 112.64(5)(a)	7,707	0.38 %
Total Changes	$(20,724)	0.36 %
City Required Contribution for Fiscal 2019	**$238,901**	**11.98 %**

Note: The City required contributions shown above must be deposited on December 15.

Section 3 Accounting Information

Information Required by GASB 67/68

A supplemental report provides information under the Governmental Accounting Standards Board No. 67/68.

Statement of Accumulated Plan Benefits

The present value of accrued benefits is an estimate of the liability for all benefits accrued to date.

Valuation as of October 1,			2016	2017
1.	Actuarial present value of accumulated benefits			
	a.	Participants currently receiving benefits	$4,965,326	$7,291,437
	b.	Other participants	5,946,846	4,890,736
	c.	Vested participants	$10,912,172	$12,182,173
	d.	Nonvested participants	705,654	661,096
	e.	Total	$11,617,826	$12,843,269
2.	Change in actuarial present value of accumulated benefits			
	a.	Actuarial present value of accumulated benefits beginning of year		$11,617,826
	b.	Increase (decrease) during year attributable to:		
		i. Plan amendment		$0
		ii. Change in assumptions or methods		(31,721)
		iii. Increase for interest and probability of payment due to decrease in discount period and benefits accrued		1,640,115
		iv. Benefits paid		(382,951)
		v. Other		0
		vi. Net increase (decrease)		$1,225,443
	c.	Actuarial present value of accumulated benefits end of year		$12,843,269

Other Disclosures Required by the State of Florida

Valuation as of October 1,	2016	2017
Present value of active member:		
Future salaries (attained age)	$21,215,703	$21,131,617
Future contributions (attained age)	$1,485,099	$1,479,213
Balance of contributions with interest for actives	$1,951,782	$1,686,325

Required Disclosure Under F.S. 112.664(1)

As required under F.S. Section 112.664(1) we have produced the following information:

(a) Total pension liability calculated based on mortality used in one of the last two Florida Retirement System (FRS) valuations. This actuarial valuation assumes mortality as used in the July 1, 2016 and 2017 actuarial valuations for special risk members of FRS.

(b) Total pension liability calculated using an assumed interest rate that is 200 basis points lower than that assumed in the valuation of the Plan.

(c) Determination of the number of months or years for which the current market value of assets is adequate to sustain the payment of expected retirement benefits.

(d) Recommended contribution to the Plan using the most recent valuation and the contributions necessary prepared pursuant to (a) and (b) stated as a dollar amount and % of payroll.

	2% Decrease (6.00%)	Current Discount Rate (8.00%)	2% Increase (10.00%)
Total pension liability	$17,596,632	$13,925,025	$11,358,631
Plan fiduciary net position	(13,509,157)	(13,509,157)	(13,509,157)
Net pension liability	$4,087,475	$415,868	$(2,150,526)
Plan fiduciary net position as a percentage of the total pension liability	76.77%	97.01%	118.93%
Years of benefit payments:			
Expected for current members:	100	100	100
Paid for with current assets:	17.34	22.08	42.80
City Plus State Contribution Requirement, Plus Expected Employee Contributions			
Dollar Amount	$1,065,290	$573,585	$377,824
Percent of Payroll	53.42%	28.76%	18.95%

Required Disclosure Under F.S. 112.664(2)(b)2.

F.S. Section 112.664(2)(b)2. - For the previous five years, beginning with 2013, a side-by-side comparison of the plan's assumed rate of return compared to the actual rate of return, as well as the percentages of cash, equity, bond and alternative investments in the plan portfolio.

Year Ending September 30,	**2017**	**2016**	**2015**	**2014**	**2013**
Assumed rate of return	8.0%	8.0%	8.0%	8.0%	8.0%
Actual rate of return	12.8%	9.7%	0.1%	9.6%	8.8%
Percentages of assets in:					
Cash	3%	1%	1%	2%	0%
Equity	74%	71%	66%	66%	57%
Bond	19%	21%	31%	29%	40%
Alternative	5%	7%	2%	3%	3%
Total	100%	100%	100%	100%	100%

Section 4 Supplementary Information

Summary of Participant Data

Member Statistics

Valuation as of October 1,	**2016**	**2017**
Active Participants		
Number	46	45
Average Age	39.3	38.4
Average Credited Service	10.2	9.1
Percent Male	78.3	75.6
Average Valuation Salary	$49,687	$47,944
Total Valuation Salary	$2,285,615	$2,157,464
Payroll Covered in Valuation	$2,285,615	$2,101,925
Terminated With Rights to Deferred Benefits		
Number	5	5
Average Age	45.4	44.8
Percent Male	80.0	80.0
Average Monthly Benefit	$2,454	$2,117
Retirements (DROP and Service Retirees)		
Number	11	15
Average Age	61.5	59.9
Percent Male	100.0	100.0
Average Monthly Benefit	$3,142	$3,386
Total of DROP Account Balances September 30	$64,740	$185,925
Beneficiaries		
Number	0	0
Average Age	0.0	0.0
Percent Male	0.0	0.0
Average Monthly Benefit	$0	$0
Disability Retirements		
Number	1	1
Average Age	55.1	56.1
Percent Male	100.0	100.0
Average Monthly Benefit	$1,239	$1,239

Number of Active Members by Age and Service as of October 1, 2017

Age	< 1	< 5	< 10	< 15	< 20	< 25	< 30	< 35	Total
< 20	1								1
< 25	2	3							5
< 30	1	5							6
< 35	1	2	3	1					7
< 40		1	2	2					5
< 45		1	1	4	1				7
< 50		1	2		1	1	1		6
< 55		1		1	1	3	1		7
< 60									
< 65					1				1
Total	5	14	8	8	4	4	2		45

Active Valuation Pay by Age and Service as of October 1, 2017

Age	< 1	< 5	< 10	< 15	< 20	< 25	< 30	< 35	Total
< 20	36,500								36,500
< 25	36,980	37,275							37,157
< 30	37,250	38,468							38,265
< 35	36,860	41,992	51,148	58,259					47,507
< 40		38,627	43,062	51,483					45,543
< 45		40,573	41,591	46,610	54,259				46,123
< 50		38,537	41,515		50,568	63,161	74,571		51,645
< 55		97,535		49,187	56,369	60,378	72,836		65,294
< 60									
< 65					55,539				55,539
Total	36,914	43,101	45,524	49,606	54,184	61,074	73,704		47,944

Reconciliation of Plan Participants

	Active	Retired	DROP	Deferred Vested	Disabled	Survivor	Total
October 1, 2016	**46**	**9**	**2**	**5**	**1**	**0**	**63**
Active							
To DROP	(3)		3				0
To Deferred Vested	(1)			1			0
To Nonvested Termination	(2)						(2)
Retired							
To Deferred Vested Termination		1		(1)			0
Additions	5	0	0	0	0	0	5
October 1, 2017	**45**	**10**	**5**	**5**	**1**	**0**	**66**

Outline of Plan Provisions

Plan Type: Single-employer Defined Benefit Pension Plan

Effective Date: November 1, 1969. Amended and restated effective October 1, 1999 and subsequently amended by Ordinance No. 1222-2000, 1262-2001, 1336-2004, 1366-2005, 1492-2008, 1509-2008, 1520-2009, 1545-2010, 1546-2010, 1570-2010, 1588-2011, 1589-2011, 1630-2013, 1645-2014, 1662-2014,1672-2015, 1687-2016, and 1709-2017.

Plan Administrator: The Board of Trustees

Board Composition: Two members are elected from among the police employees of the City, who are members of the plan, two city residents appointed by the Commission and one person is chosen by a majority of the previous four members.

Funding Requirements: Employer contributions are actuarially determined and subject to State statute. Employee contributions are as described below and may be amended by ordinance.

Plan Year: The 12-month period from October 1st to the next September 30th.

Member: Full-time police officers participate in the Plan immediately upon hire.

Credited Service: Employee service computed in years and completed calendar months. Military service purchases up to five years are allowed.

Vesting: Members become 100% vested after earning 10 years of Credited Service.

Basic Compensation: Total compensation actually paid in a Plan Year by the City including tax deferred compensation, as well as educational incentive monies, and excluding overtime in excess of 300 hours, commissions, bonuses, expense allowances and payment for accrued annual leave, accrued sick leave, and accrued compensatory leave.

Employee Contributions: 7.0% of Basic Compensation credited with 5% interest compounded annually. Members receive benefits under the Plan no less than the value of their accumulated Employee Contributions with interest.

Members who terminate non-vested are entitled to the return of Employee Contributions accumulated with interest at 5% to the first day of the month in which termination occurs.

Average Monthly Compensation: The sum of the highest five successive Plan Years of Basic Compensation in the last ten Plan Years of employment divided by 60.

Normal Retirement Date: The first day of the month coincident with or next following attainment of age 52 and 10 years of Credited Service.

Accrued Benefit: For Members hired before January 2, 2013, the amount of monthly retirement income payable at the Normal Retirement Date is determined according to the following formula:

3% x Average Monthly Compensation x Credited Service up to 25 years

Plus

1.5% x Average Monthly Compensation x Credited Service between 25 and 35 years

For Members hired on or after January 2, 2013, the amount of monthly retirement income payable at the Normal Retirement Date is determined according to the following formula:

3% x Average Monthly Compensation x Credited Service up to 25 years

The Accrued Benefit is payable in the form of a 10-year certain and continuous annuity. However, any member with a spouse shall receive an actuarially equivalent 50% joint and survivor annuity unless the member chooses another Optional Form of Retirement Income with spousal consent.

Members who terminate employment 100% vested prior the Normal Retirement Date are eligible to receive their Accrued Benefit once the age requirements for the Normal Retirement Date are met, provided Employee Contributions remain in the Plan.

Late Retirement Benefit: The amount of monthly retirement income payable to a Member who retires after the Normal Retirement Date is the greater of (i) the monthly retirement income which can be provided by the single-sum value of the Accrued Benefit payable if he had retired at the Normal Retirement Date, accumulated with interest from the Normal Retirement Date to the date the monthly retirement income payments are to commence, and (ii) the monthly retirement income computed as described for the Accrued Benefit using Credited Service and Average Monthly Compensation determined at the Member's actual retirement date.

Early Retirement Date: The first day of the month coincident with or next following the date an employee retires prior to the Normal Retirement Date after the earlier of attainment of age 44 and 25 years of Credited Service or age 50 and 10 years of Credited Service.

Early Retirement Benefit: The Accrued Benefit is reduced for commencement earlier than the Normal Retirement Date at a rate of 3/12% per month. However, the minimum monthly retirement income for a Member who retires before the Normal Retirement Date with 25 years Credited Service is 50% x Average Monthly Compensation.

Members who terminate employment 100% vested prior to reaching the Early Retirement Date age requirements may elect to receive an Early Retirement Benefit once the age requirements are met, provided Employee Contributions remain in the Plan.

Members who terminate employment 100% vested prior the Normal Retirement Date but on or after their Early Retirement Date but do not commence receipt of an Early Retirement Benefit at that time will receive a monthly retirement income not less than the monthly retirement income which can be provided by the single-sum value of the monthly early retirement income which would have been payable if he had retired immediately upon termination, accumulated with interest from termination to the date the monthly retirement income payments are to commence.

Members who recover from Disability Retirement and who were eligible for an Early Retirement Benefit at the date of disability may elect to receive this benefit upon recovery from disability.

Disability Retirement: This benefit is payable from the first day of the month coincident with or next following the date the Retirement Committee approves the Member's Disability Retirement. The benefit is payable in the form of a 10 year certain and continuous annuity. The last payment is that due next preceding the earlier of (1) the date of recovery prior to the Normal Retirement Date and (2) the later of the date of death or the 120th payment. The amount of monthly retirement income is determined as follows:

(a) Non-Line of Duty: Members with less than 10 years of Credited Service upon disability receive a monthly retirement income which can be provided by the greater of (i) the single-sum value of the Accrued Benefit and (ii) 2 x Basic Compensation paid in the Plan Year immediately preceding disability. The monthly retirement income which can be provided by (ii) is limited to 60% x Anticipated Monthly Retirement Income at the Normal Retirement

Date. In no event shall the benefit payable be less than the benefit required under section 185.18 of the Florida Statutes.

(b) Non-Line of Duty: Members with 10 years of Credited Service or more upon disability receive a monthly retirement income which is the greater of (i) the monthly retirement income which can be provided by the single-sum value of the Accrued Benefit and (ii) 30% x Basic Compensation paid in the Plan Year immediately preceding disability where the single-sum value of this monthly amount does not exceed 100 x the Anticipated Monthly Retirement Income at the Normal Retirement Date. in no event shall the benefit payable be less than the benefit required under section 185.18 of the Florida Statutes.

(c) Line of Duty: Members receive a monthly retirement income which is 50% x Basic Compensation paid in the Plan Year immediately preceding disability where the single-sum value of this monthly amount does not exceed 100 x the Anticipated Monthly Retirement Income at the Normal Retirement Date. In no event shall the benefit payable be less than the benefit required under section 185.18 of the Florida Statutes.

Members who recover from disability and re-enter the service of the City within 30 days of recovery will be deemed to have continuous service except that the period beginning with the first month for which Disability Retirement income was received and ending with the date of service re-entry is not considered as Credited Service.

Anticipated Monthly Retirement Income at the Normal Retirement Date: Determined as described for the Accrued Benefit, but instead using Anticipated Credited Service and Anticipated Average Monthly Compensation. Anticipated Credited Service is employee service computed in years and completed calendar months as if the member remains employed to the Normal Retirement Date. Anticipated Average Monthly Compensation is computed assuming that the last complete Plan Year of Basic Compensation is paid in each Plan Year, without change, to the Normal Retirement Date.

Survivor Benefit at Death of Disabled Member Prior to Disability Retirement: The designated beneficiary of a disabled Member who dies prior to receipt of Disability Retirement benefits is eligible to receive a monthly retirement income payable in the form of a 10 year certain and continuous annuity payable commencing on the first of the month coincident with or next following the date of the disabled Member's death. The designated beneficiary will receive a monthly retirement income which can be provided by the greater of (i) the single-sum value of the Accrued Benefit and (ii) 2 x Basic Compensation paid in the Plan Year immediately preceding disability not more than 100 x Anticipated Monthly Retirement Income at the Normal Retirement Date.

Survivor Benefit at Death of Vested Terminated Members: The designated beneficiary of vested Member who dies prior to retirement is eligible to receive a monthly retirement income payable in the form of a 10 year certain and continuous annuity payable commencing on the first of the month coincident with or next following the Member's death, which can be provided by the single-sum value of the Member's Accrued Benefit or Early Retirement Benefit.

Survivor Benefit at Death of Active Employee Prior to Normal Retirement Date: The designated beneficiary of a Member who dies while in active service prior to the Normal Retirement Date is eligible to receive, commencing on the first of the month coincident with or next following the Member's death, a monthly retirement income (payable in the form of a 10 year certain and continuous annuity) which can be provided by the greater of (i) the single-sum value of the Accrued Benefit as of the date of death, not less than the single-sum value of the Early Retirement Benefit which would have been payable if the Member had retired early on the date of death, and (ii) 2 x Basic Compensation paid in the Plan Year immediately preceding death not more than 100 x Anticipated Monthly Retirement Income at the Normal Retirement Date.

Survivor Benefit at Death of Active Employee After Normal Retirement Date: The designated beneficiary of a Member who dies while in active service after the Normal Retirement Date is eligible to receive, commencing on the first of the month coincident with or next following the Member's death, a monthly retirement income (payable in the form of a 10 year certain and continuous annuity) which can be provided by the single-sum value of the Late Retirement Benefit.

Optional Forms of Retirement Income: In addition to the 10 year certain and continuous form of annuity, also available under the terms of the Plan are the life only annuity and the joint and 50%, 66 2/3%, 75%, or 100% survivor annuity. With the joint and survivor options, the member may also elect the pop-up feature. The Plan also allows for other amounts and forms of retirement income that will meet the circumstances of the Participant, in the opinion of the Retirement Committee, and will not substantially affect the actuarial soundness of the Plan.

Deferred Retirement Option Program (DROP): Members are eligible to enter the DROP at the Normal Retirement Date. The Accrued Benefit is frozen and no further Employee Contributions are payable at DROP entry. The Accrued Benefit accumulates with interest in the DROP account and is payable as a single-lump sum (or as an actuarially equivalent annuity) upon DROP exit. The DROP account earns interest at a rate equal to the funds net rate of investment return minus 1% in administration fees, unless the DROP participant, as a one-time irrevocable option, elects a self-directed DROP as approved by the board of trustees. The maximum DROP participation duration is 5 years and participation will end if the employee resigns, dies or is terminated with cause prior to completion of the 5 years.

Defined Contribution (DC) Component: Ordinance 1709-2017 was adopted effective June 7, 2017 creating a DC component which will be funded by a portion of the premium tax revenues if the City and the collective bargaining representative do not reach mutual consent to use the premium tax revenues for an alternative means.

Description of Assumptions and Methods

Assumed Rate of Investment Return: 8.0% per year net of investment expenses

Inflation: 2.5% per year

Salary Increase – Individual: 6.0% per year (It is assumed that overtime hours are not increased at the end of the member's career.)

Salary Increase – Total Payroll: Based on individual salary increase assumptions and other decrements assumed in the valuation of Plan liabilities.

For the current valuation, unfunded accrued liability is amortized as a level dollar amount. In the prior year the payroll growth assumption used to amortize unfunded accrued liability as a level percent of payroll was 1.5%.

Mortality: In the prior valuation, the mortality table was that used for special risk employees in the valuation of the Florida Retirement System (FRS) as of July 1, 2015, as required by state statute. The mortality table has been revised to that used for special risk employees in the valuation of FRS as of July 1, 2016 and 2017, as required by state statute. While healthy post-retirement mortality and disabled mortality rates were unchanged, healthy pre-retirement was revised. The mortality rates are as follows:

Healthy mortality (Pre-retirement):

Males: 10% RP-00 Combined Healthy White Collar +
90% RP-00 Combined Healthy Blue Collar

Females: 100% RP-00 Combined Healthy White Collar

Both male and female rates fully generational using Scale BB

Healthy mortality (Post-retirement):

Males: 10% RP-00 Annuitant White Collar +
90% RP-00 Annuitant Blue Collar

Females: 100% RP-00 Annuitant White Collar

Both male and female rates fully generational using Scale BB

Disabled mortality:

Males: 60% RP-00 Disabled Retiree Set Back 4 Years +
40% RP-00 Annuitant White Collar

Females: 60% RP-00 Disabled Retiree Set Forward 2 Yrs +
40% RP-00 Annuitant White Collar

No mortality improvement is assumed for disabled lives.

Retirement: Unisex rates based on the experience of the Rockledge police officers from 1999 through 2005 (and expectations of the future), as follows:

Age	Rate	Age	Rate
52	0.250	57	0.350
53	0.300	58	0.400
54	0.300	59	0.500
55	0.300	60	1.000
56	0.300		

Termination: Unisex rates based on the experience of the Rockledge police officers from 1999 through 2005, as follows:

Service	Rate	Service	Rate	Service	Rate	Service	Rate
0	0.0600	7	0.0425	14	0.0250	21	0.0150
1	0.0575	8	0.0400	15	0.0200	22	0.0150
2	0.0550	9	0.0375	16	0.0175	23	0.0150
3	0.0525	10	0.0350	17	0.0150	24	0.0150
4	0.0500	11	0.0325	18	0.0150	>=25	0.0000
5	0.0475	12	0.0300	19	0.0150		
6	0.0450	13	0.0275	20	0.0150		

Disability: Sex distinct rates as used for special risk employees in the Florida Retirement System actuarial valuation report as of July 1, 2005. Linear interpolation has been used between the rates shown in five year age increments, as follows:

	Line-of-Duty			Not Line-of-Duty	
Age	Male	Female	Age	Male	Female
20	0.012%	0.008%	20	0.037%	0.036%
25	0.012%	0.008%	25	0.037%	0.036%
30	0.017%	0.016%	30	0.043%	0.046%
35	0.029%	0.037%	35	0.055%	0.075%
40	0.051%	0.068%	40	0.087%	0.118%
45	0.087%	0.106%	45	0.140%	0.259%
50	0.138%	0.153%	50	0.292%	0.318%
55	0.215%	0.230%	55	0.446%	0.492%
60	0.301%	0.285%	60	0.628%	0.597%
65+	0.231%	0.143%	65+	0.698%	0.380%

Funding Method: Entry Age Normal (level percent of salary)

Glossary of Actuarial Terms

Present Value of Benefits (PVB): The present value, as of the valuation date, of all benefits that will become payable by the Plan for the current group of members in the census.

Normal Cost (NC): The value of the portion of the total benefit for active members which accrues in the year following the valuation date. Under the Entry Age Normal (Level Percent of Salary) funding method, the NC is a constant fraction of salary from the member's date of entry into the Plan to the member's assumed date of termination, retirement, disability or death.

Accrued Liability (AL): This is the portion of the PVB attributable to the past at the valuation date. For active members, AL is the annual NC accumulated from date of entry to the valuation date for each member. For retired and terminated members, the PVB and the AL are equal. The AL is the estimated liability owed by the pension fund at the valuation date.

Unfunded Accrued Liability (UAL): Any excess of the Accrued Liability over the fund assets. A negative UAL indicates fund assets are greater than the Accrued Liability, otherwise known as a surplus.

Actuarial Value of Assets: The value of assets used in the actuarial valuation of the Plan which is compared to the AL to determine the UAL and minimum funding requirements. A method may be used to smooth out short term volatility in the fair market value of assets.