

CITY OF SAFETY HARBOR  
FIREFIGHTERS' PENSION FUND

ACTUARIAL VALUATION  
AS OF OCTOBER 1, 2018

DETERMINES THE CONTRIBUTION  
FOR THE 2019/20 FISCAL YEAR



	<u>Page</u>
Discussion	1
 <b><u>Funding Results</u></b>	
Table I-A Minimum Required Contribution	I-1
Table I-B Sensitivity Analysis	I-3
Table I-C Gain and Loss Analysis	I-4
Table I-D Present Value of Future Benefits	I-5
Table I-E Present Value of Accrued Benefits	I-6
Table I-F Present Value of Vested Benefits	I-7
Table I-G Entry Age Normal Accrued Liability	I-8
 <b><u>Accounting Results</u></b>	
GASB 67/68 Supplement as of September 30, 2018	
 <b><u>Assets</u></b>	
Table II-A Actuarial Value of Assets	II-1
Table II-B Market Value of Assets	II-2
Table II-C Investment Return	II-3
Table II-D Asset Reconciliation	II-4
Table II-E Historical Trust Fund Detail	II-5
Table II-F Other Reconciliations	II-6
Table II-G Historical Chapter 175/185 Contributions	II-7
 <b><u>Data</u></b>	
Table III-A Summary of Participant Data	III-1
Table III-B Data Reconciliation	III-2
Table III-C Active Participant Data	III-3
Table III-D Active Age-Service Distribution	III-4
Table III-E Active Age-Service-Salary Table	III-5
Table III-F Inactive Participant Data	III-6
Table III-G Projected Benefit Payments	III-7
 <b><u>Methods &amp; Assumptions</u></b>	
Table IV-A Summary of Actuarial Methods and Assumptions	IV-1
Table IV-B Changes in Actuarial Methods and Assumptions	IV-3
 <b><u>Plan Provisions</u></b>	
Table V-A Summary of Plan Provisions	V-1
Table V-B Summary of Plan Amendments	V-5





March 17, 2019

## Introduction

This report presents the results of the October 1, 2018 actuarial valuation for the City of Safety Harbor Firefighters' Pension Fund. The report is based on the participant data and asset information provided by the pension plan administrator and, except for a cursory review for reasonableness including a comparison to the data provided for the previous valuation, we have not attempted to verify the accuracy of this information.

The primary purpose of this report is to provide a summary of the funded status of the plan as of October 1, 2018 and to determine the minimum required contribution under Chapter 112, Florida Statutes, for the 2019/20 plan year. In addition, this report provides a projection of the long-term funding requirements of the plan, statistical information concerning the assets held in the trust, statistical information concerning the participant population, and a summary of any recent plan changes.

The liabilities and cost presented in this report are based on numerous assumptions concerning the cost of benefits to be provided in the future, long-term investment returns, and the future demographic experience of the current participants. Anyone referring to this report should remember that the cost developed herein is only an *estimate* of the true cost of providing post-employment pension benefits. No one can predict with certainty whether the true cost will be higher or lower than the cost presented in this report. The calculated cost is entirely dependent upon the assumptions that are described in Table IV-A. If any of the assumptions is changed, then the cost shown in this report will change accordingly. Likewise, if any of the assumptions is not completely realized, then the cost shown in this report will change in the future.

Certain assumptions play a bigger role than others in determining the cost of the post-employment pension benefits. In some cases, relatively small changes in a particular assumption can have a dramatic impact on the anticipated cost of benefits. Although a thorough analysis of the impact of such changes is beyond the scope of this report, Table I-B illustrates the impact that alternative long-term investment returns would have on the normal cost rate.

## Minimum Required Contribution

Table I-A shows the development of the minimum required contribution for the 2019/20 plan year. The minimum required contribution rate is 28.11% of covered payroll, which represents a decrease of 4.59% of payroll from the prior valuation.

The normal cost rate is 29.59%, which is 3.35% lower than the normal cost rate that was developed in the prior valuation. Table I-C provides a breakdown of the sources of change in the normal cost rate. Significantly, the rate decreased by 0.07% of payroll due to investment gains and decreased by another 3.28% of payroll due to demographic experience. Although the market value of assets earned 7.54% during the 2017/18 plan year, the actuarial value of assets is based on a five-year phase-in of the net investment gains and losses. On this basis, the





actuarial value of assets earned only 7.19% during the 2017/18 plan year, whereas a 7.00% annual investment return was required to maintain a stable contribution rate.

Chapter 112, Florida Statutes, sets forth the rules concerning the minimum required contribution for public pension plans within the state. Essentially, the City must contribute an amount equal to the annual normal cost of the plan plus an adjustment as necessary to reflect interest on any delayed payment of the contribution beyond the valuation date. On this basis, the City's 2019/20 minimum required contribution will be equal to 28.11% multiplied by the total pensionable earnings for the 2019/20 plan year for the active employees who are covered by the plan and reduced by the portion of the Chapter 175/185 contribution that is allowed to be recognized during the 2019/20 plan year.

Based on the current assets, participant data, and actuarial assumptions and methods that are used to value the plan, the present-day value of the total long-term funding requirement is \$12,852,364. As illustrated in Table I-A, current assets are sufficient to cover \$7,167,545 of this amount, the employer's 2018/19 expected contribution will cover \$486,645 of this amount, the employer's 2019/20 expected contribution will cover \$437,106 of this amount, and future employee contributions are expected to cover \$171,556 of this amount, leaving \$4,589,512 to be covered by future employer funding beyond the 2019/20 fiscal year. Again, demographic and investment experience that differs from that assumed will either increase or decrease the future employer funding requirement.

#### Advance Employer Contribution

The City has made contributions to the plan in excess of the minimum amount that was required to be contributed pursuant to Chapter 112. In this report, the excess contributions are referred to as an "advance employer contribution." As of October 1, 2018, the advance employer contribution is \$469,056, which reflects the advance employer contribution of \$467,185 as of October 1, 2017 plus \$1,871 of employer contributions in excess of the minimum required contribution for the 2017/18 plan year as shown in Table II-F.

The City may apply all or any portion of the advance employer contribution towards the minimum required contribution for the 2018/19 plan year or for any later plan year. The minimum required contribution for that plan year will be reduced dollar-for-dollar by the amount of the advance employer contribution that is applied in this manner.

Alternatively, at any time, the City may apply all or any portion of the advance employer contribution as an extra contribution in excess of the minimum required contribution. In this case, the immediate application of the entire balance of the advance employer contribution as of October 1, 2018 would reduce the minimum required contribution for the 2019/20 plan year to 25.31% of payroll.

#### Contents of the Report

Tables I-D through I-G provide a detailed breakdown of various liability amounts by type of benefit and by participant group. Tables II-A through II-F provide information concerning the assets of the trust fund. Tables III-A through III-G provide statistical information concerning the plan's participant population. In particular, Table III-G gives a 10-year projection of the cash that is expected to be required from the trust fund in order to pay benefits to the current group of



participants. Finally, Tables IV-A through V-B provide a summary of the actuarial assumptions and methods that are used to value the plan's benefits and of the relevant plan provisions as of October 1, 2018, as well as a summary of the changes that have occurred since the previous valuation report was prepared.

### Certification

This actuarial valuation was prepared 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 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 change in plan costs or required contribution rates have been taken into account in the valuation.

For the firm,



Charles T. Carr  
Consulting Actuary  
Southern Actuarial Services Company, Inc.

Enrolled Actuary No. 17-04927

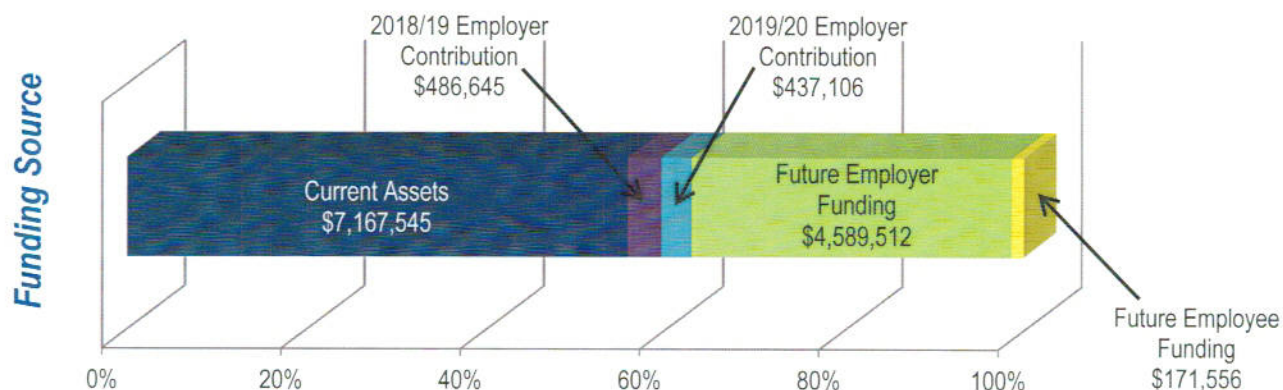
*The individual above is a member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.*





## Minimum Required Contribution

Table I-A



### For the 2019/20 Plan Year

Present Value of Future Benefits	\$11,995,418
Present Value of Future Administrative Expenses	\$419,840
Actuarial Value of Assets	(\$7,167,545)
Present Value of Future Employee Contributions	(\$171,556)
Present Value of Future Normal Costs	\$5,076,157
Present Value of Future Payroll	÷ \$17,155,551
Normal Cost Rate	= 29.589%
Expected Payroll	x \$1,488,212
Normal Cost	\$440,347
Adjustment to Reflect Bi-Weekly Employer Contributions	\$0
Expected Employer Contribution for the 2018/19 Plan Year	(\$486,645)
Remaining Contribution Due/(Credit) for the 2018/19 Plan Year	(\$46,298)
	x 0.07
One Year's Interest Charge/(Credit) on the Remaining Contribution	(\$3,241)
Preliminary Employer Contribution for the 2019/20 Plan Year	\$437,106
Expected Payroll for the 2019/20 Plan Year	÷ \$1,555,182

**Minimum Required Contribution Rate** **28.11%**

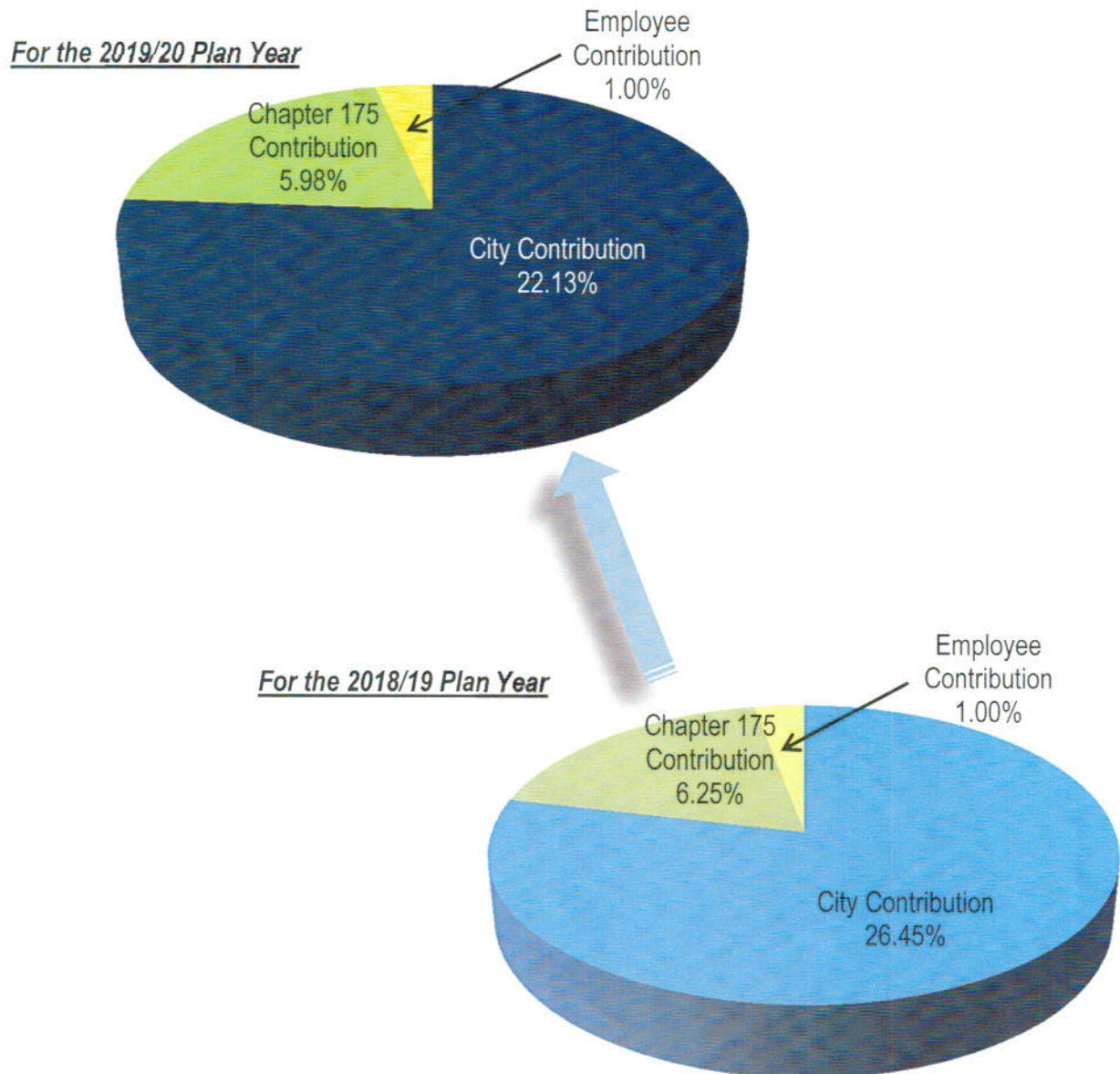
(The actual contribution should be based on the minimum required contribution rate multiplied by the actual payroll for the year.)



## Minimum Required Contribution

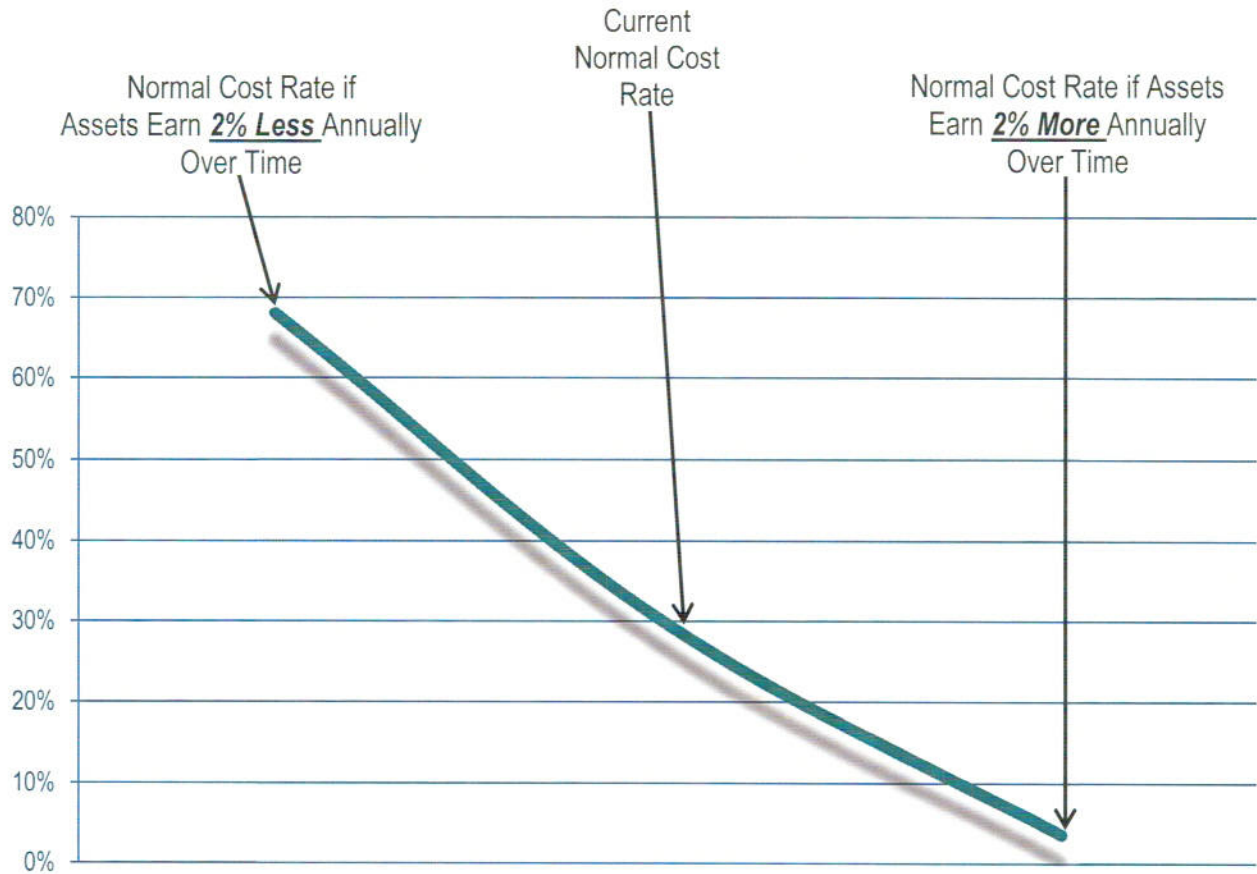
Table I-A  
(continued)

The minimum required contribution rate of 28.11% includes both the City contribution and the allowable Chapter 175 contribution. In addition, employees are required to contribute 1.00% of pensionable earnings. The actual City contribution rate is expected to be approximately 22.13% based on the allowable Chapter 175 contribution for the previous year. The chart below shows the expected contribution rate by source for the 2019/20 plan year based on the expected payroll. A comparative chart shows the contribution rate by source for the previous plan year.



Sensitivity Analysis

Table I-B



*The line above illustrates the sensitivity of the normal cost rate to changes in the long-term investment return.*





## Gain and Loss Analysis

Table I-C

Previous normal cost rate	32.94%
Increase (decrease) due to investment gains and losses	-0.07%
Increase (decrease) due to demographic experience	-3.28%
Increase (decrease) due to plan amendments	0.00%
Increase (decrease) due to actuarial assumption changes	0.00%
Increase (decrease) due to actuarial method changes	0.00%
Current normal cost rate	<u>29.59%</u>



## Present Value of Future Benefits

Table I-D

	Old Assumptions <u>w/o Amendment</u>	Old Assumptions <u>w/ Amendment</u>	New Assumptions <u>w/ Amendment</u>
<u>Actively Employed Participants</u>			
Retirement benefits	\$11,597,389	\$11,597,389	\$11,597,389
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	<b>\$11,597,389</b>	<b>\$11,597,389</b>	<b>\$11,597,389</b>
<u>Deferred Vested Participants</u>			
Retirement benefits	\$208,432	\$208,432	\$208,432
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	<b>\$208,432</b>	<b>\$208,432</b>	<b>\$208,432</b>
<u>Due a Refund of Contributions</u>	<b>\$5,439</b>	<b>\$5,439</b>	<b>\$5,439</b>
<u>Deferred Beneficiaries</u>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Retired Participants</u>			
Service retirements	\$0	\$0	\$0
Disability retirements	\$0	\$0	\$0
Beneficiaries receiving	\$184,158	\$184,158	\$184,158
DROP participants	\$0	\$0	\$0
Sub-total	<b>\$184,158</b>	<b>\$184,158</b>	<b>\$184,158</b>
<u>Grand Total</u>	<b><u>\$11,995,418</u></b>	<b><u>\$11,995,418</u></b>	<b><u>\$11,995,418</u></b>
Present Value of Future Payroll	\$17,155,551	\$17,155,551	\$17,155,551
Present Value of Future Employee Contribs.	\$171,556	\$171,556	\$171,556
Present Value of Future Employer Contribs.	\$5,076,157	\$5,076,157	\$5,076,157





## Present Value of Accrued Benefits

Table I-E

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
<u>Actively Employed Participants</u>			
Retirement benefits	\$3,719,180	\$3,719,180	\$3,719,180
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	<b>\$3,719,180</b>	<b>\$3,719,180</b>	<b>\$3,719,180</b>
<u>Deferred Vested Participants</u>			
Retirement benefits	\$208,432	\$208,432	\$208,432
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	<b>\$208,432</b>	<b>\$208,432</b>	<b>\$208,432</b>
<u>Due a Refund of Contributions</u>	<b>\$5,439</b>	<b>\$5,439</b>	<b>\$5,439</b>
<u>Deferred Beneficiaries</u>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Retired Participants</u>			
Service retirements	\$0	\$0	\$0
Disability retirements	\$0	\$0	\$0
Beneficiaries receiving	\$184,158	\$184,158	\$184,158
DROP participants	\$0	\$0	\$0
Sub-total	<b>\$184,158</b>	<b>\$184,158</b>	<b>\$184,158</b>
<u>Grand Total</u>	<b><u>\$4,117,209</u></b>	<b><u>\$4,117,209</u></b>	<b><u>\$4,117,209</u></b>
<u>Funded Percentage</u>	214.18%	214.18%	214.18%

(Note: Funded percentage is equal to the ratio of the usable portion of the market value of assets divided by the present value of accrued benefits.)



## Present Value of Vested Benefits

Table I-F

	Old Assumptions <u>w/o Amendment</u>	Old Assumptions <u>w/ Amendment</u>	New Assumptions <u>w/ Amendment</u>
<u>Actively Employed Participants</u>			
Retirement benefits	\$3,036,563	\$3,036,563	\$3,036,563
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	<b>\$3,036,563</b>	<b>\$3,036,563</b>	<b>\$3,036,563</b>
<u>Deferred Vested Participants</u>			
Retirement benefits	\$208,432	\$208,432	\$208,432
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	<b>\$208,432</b>	<b>\$208,432</b>	<b>\$208,432</b>
<u>Due a Refund of Contributions</u>	<b>\$5,439</b>	<b>\$5,439</b>	<b>\$5,439</b>
<u>Deferred Beneficiaries</u>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Retired Participants</u>			
Service retirements	\$0	\$0	\$0
Disability retirements	\$0	\$0	\$0
Beneficiaries receiving	\$184,158	\$184,158	\$184,158
DROP participants	\$0	\$0	\$0
Sub-total	<b>\$184,158</b>	<b>\$184,158</b>	<b>\$184,158</b>
<u>Grand Total</u>	<b><u>\$3,434,592</u></b>	<b><u>\$3,434,592</u></b>	<b><u>\$3,434,592</u></b>





## Entry Age Normal Accrued Liability

Table I-G

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
<u>Actively Employed Participants</u>			
Retirement benefits	\$5,915,388	\$5,915,388	\$5,915,388
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	<b>\$5,915,388</b>	<b>\$5,915,388</b>	<b>\$5,915,388</b>
<u>Deferred Vested Participants</u>			
Retirement benefits	\$208,432	\$208,432	\$208,432
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	<b>\$208,432</b>	<b>\$208,432</b>	<b>\$208,432</b>
<u>Due a Refund of Contributions</u>	<b>\$5,439</b>	<b>\$5,439</b>	<b>\$5,439</b>
<u>Deferred Beneficiaries</u>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Retired Participants</u>			
Service retirements	\$0	\$0	\$0
Disability retirements	\$0	\$0	\$0
Beneficiaries receiving	\$184,158	\$184,158	\$184,158
DROP participants	\$0	\$0	\$0
Sub-total	<b>\$184,158</b>	<b>\$184,158</b>	<b>\$184,158</b>
<u>Grand Total</u>	<b><u>\$6,313,417</u></b>	<b><u>\$6,313,417</u></b>	<b><u>\$6,313,417</u></b>



## Actuarial Value of Assets

Table II-A

	<u>Net Investment Gain (Loss)</u>		<u>Unrecognized Gain (Loss)</u>
For the 2014/15 plan year	(\$88,704)	x 20%	(\$17,741)
For the 2015/16 plan year	\$463,903	x 40%	\$185,561
For the 2016/17 plan year	\$887,972	x 60%	\$532,783
For the 2017/18 plan year	\$601,055	x 80%	\$480,844
			<u>\$1,181,447</u>

Market Value of Assets as of October 1, 2018 \$8,818,048

Minus advance employer contributions (\$469,056)

Minus excess Chapter 175/185 contributions \$0

Adjustment for unrecognized gain or loss as shown above,  
but restricted to an amount that keeps the actuarial value  
of assets within an 80%-120% corridor of the market value (\$1,181,447)

**Actuarial Value of Assets as of October 1, 2018 \$7,167,545**

<u>Historical Actuarial Value of Assets</u>	
October 1, 2009	\$1,810,225
October 1, 2010	\$2,353,601
October 1, 2011	\$2,663,464
October 1, 2012	\$3,563,115
October 1, 2013	\$4,382,581
October 1, 2014	\$5,077,687
October 1, 2015	\$5,215,219
October 1, 2016	\$5,386,232
October 1, 2017	\$6,218,854
October 1, 2018	\$7,167,545



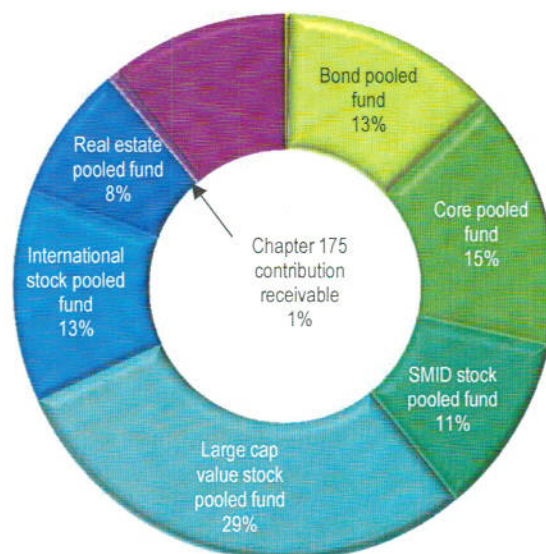


## Market Value of Assets

Table II-B

As of October 1, 2018

<b>Market Value of Assets</b>	<b><u>\$8,818,048</u></b>
Cash	\$39,502
Bond pooled fund	\$1,431,966
Core pooled fund	\$1,698,608
SMID stock pooled fund	\$1,185,075
Large cap value stock pooled fund	\$3,229,329
International stock pooled fund	\$1,402,339
Real estate pooled fund	\$888,806
Employer contribution receivable	\$10,482
Employee contribution receivable	\$529
Chapter 175 contribution receivable	\$88,525
Payable to share plan	(\$1,157,113)

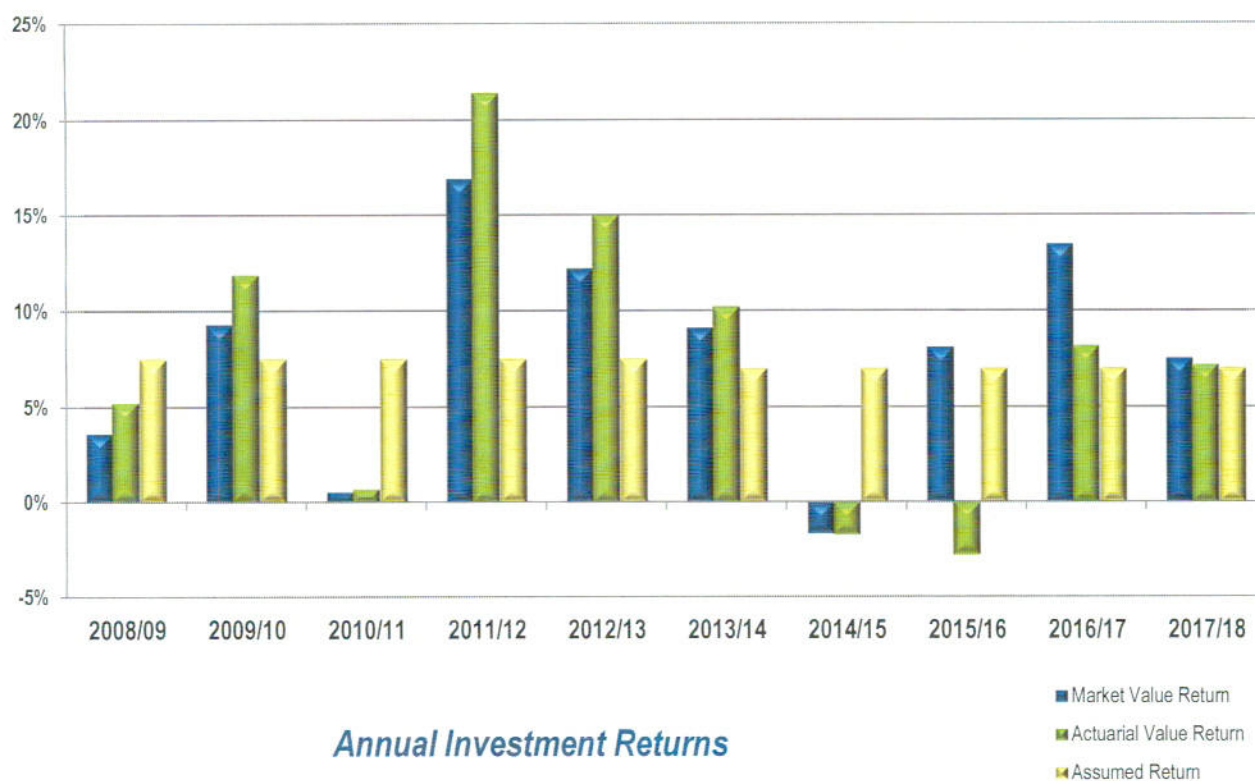
**Historical Market Value of Assets**

October 1, 2009	\$2,295,331
October 1, 2010	\$2,946,774
October 1, 2011	\$3,356,697
October 1, 2012	\$4,358,157
October 1, 2013	\$5,284,991
October 1, 2014	\$5,219,812
October 1, 2015	\$5,526,007
October 1, 2016	\$6,361,922
October 1, 2017	\$7,731,192
October 1, 2018	\$8,818,048



## Investment Return

Table II-C



Plan	Market Value	Actuarial Value	Assumed
Year	Return	Return	Return
2008/09	3.64%	5.24%	7.50%
2009/10	9.30%	11.86%	7.50%
2010/11	0.54%	0.68%	7.50%
2011/12	16.91%	21.38%	7.50%
2012/13	12.20%	15.00%	7.50%
2013/14	9.15%	10.21%	7.00%
2014/15	-1.64%	-1.71%	7.00%
2015/16	8.12%	-2.77%	7.00%
2016/17	13.45%	8.17%	7.00%
2017/18	7.54%	7.19%	7.00%
10yr. Avg.	7.78%	7.29%	7.25%



## Asset Reconciliation

Table II-D

	<u>Market Value</u>	<u>Actuarial Value</u>
As of October 1, 2017	\$7,731,192	\$6,218,854
<i>Increases Due To:</i>		
Employer Contributions	\$419,768	\$419,768
Chapter 175/185 Contributions	\$93,023	\$93,023
Employee Contributions	\$15,181	\$15,181
Service Purchase Contributions	\$0	\$0
Total Contributions	<u>\$527,972</u>	<u>\$527,972</u>
Interest and Dividends	\$0	
Realized Gains (Losses)	\$0	
Unrealized Gains (Losses)	<u>\$601,055</u>	
Total Investment Income	\$601,055	\$464,761
Other Income	\$0	
Total Income	<u>\$1,129,027</u>	<u>\$992,733</u>
<i>Decreases Due To:</i>		
Monthly Benefit Payments	(\$3,498)	(\$3,498)
Refund of Employee Contributions	\$0	\$0
Total Benefit Payments	<u>(\$3,498)</u>	<u>(\$3,498)</u>
Investment Expenses	\$0	
Administrative Expenses	(\$38,673)	(\$38,673)
Advance Employer Contribution		(\$1,871)
Excess Chapter 175/185 Contribution		\$0
Total Expenses	<u>(\$42,171)</u>	<u>(\$44,042)</u>
As of October 1, 2018	<u><u>\$8,818,048</u></u>	<u><u>\$7,167,545</u></u>





## Historical Trust Fund Detail

Table II-E

Income

Plan	Employer	Chapter	Employee	Service		Realized	Unrealized	Other
<u>Year</u>	<u>Contribs.</u>	<u>Contribs.</u>	<u>Contribs.</u>	<u>Purchase</u>	<u>Interest /</u>	<u>Gains /</u>	<u>Gains /</u>	<u>Income</u>
				<u>Contribs.</u>	<u>Dividends</u>	<u>Losses</u>	<u>Losses</u>	
2008/09	\$223,229	\$148,219	\$9,198	\$0	\$0	\$0	\$74,272	\$0
2009/10	\$286,033	\$140,556	\$9,258	\$0	\$0	\$0	\$233,014	\$0
2010/11	\$268,096	\$132,549	\$9,106	\$0	\$0	\$0	\$17,039	\$0
2011/12	\$273,018	\$134,298	\$9,468	\$0	\$0	\$0	\$601,344	\$0
2012/13	\$243,947	\$139,857	\$10,276	\$0	\$0	\$0	\$554,455	\$0
2013/14	\$251,735	\$143,624	\$10,486	\$0	\$0	\$0	\$459,576	\$0
2014/15	\$261,285	\$142,403	\$10,861	\$0	\$0	\$0	-\$88,704	\$0
2015/16	\$265,384	\$124,216	\$12,244	\$0	\$0	\$0	\$463,903	\$0
2016/17	\$393,136	\$104,116	\$14,270	\$0	\$0	\$0	\$887,972	\$0
2017/18	\$419,768	\$93,023	\$15,181	\$0	\$0	\$0	\$601,055	\$0

Expenses

Plan	Monthly	Contrib.	Admin.	Invest.	<u>Other Actuarial Adjustments</u>	
<u>Year</u>	<u>Benefit</u>	<u>Refunds</u>	<u>Expenses</u>	<u>Expenses</u>	<u>Advance</u>	<u>Excess</u>
	<u>Payments</u>				<u>Employer</u>	<u>Chapter</u>
					<u>Contribs.</u>	<u>Contribs.</u>
2008/09	\$0	\$1,647	\$17,153	\$0	-\$392,189	\$115,730
2009/10	\$0	\$0	\$17,418	\$0	\$0	\$108,067
2010/11	\$0	\$1,626	\$15,241	\$0	\$0	\$100,060
2011/12	\$0	\$0	\$16,668	\$0	\$0	\$101,809
2012/13	\$0	\$0	\$21,701	\$0	\$0	\$107,368
2013/14	\$902,410	\$0	\$28,190	\$0	\$142,125	-\$902,410
2014/15	\$0	\$0	\$19,650	\$0	\$168,663	\$0
2015/16	\$0	\$5,142	\$24,690	\$0	\$52,281	\$0
2016/17	\$0	\$0	\$30,224	\$0	\$104,116	\$0
2017/18	\$3,498	\$0	\$38,673	\$0	\$1,871	\$0

Note: Information was not available to separate the investment expenses from the investment income nor was information available to separate the investment income by source.



## Other Reconciliations

## Table II-F

**Advance Employer Contribution**

Advance Employer Contribution as of October 1, 2017	\$467,185
Additional Employer Contribution	\$512,791
Minimum Required Contribution	(\$510,920)
Net Increase in Advance Employer Contribution	\$1,871
Advance Employer Contribution as of October 1, 2018	<u>\$469,056</u>

**Excess Chapter 175/185 Contribution**

Excess Chapter 175/185 Contribution as of October 1, 2017	\$0
Additional Chapter 175/185 Contribution	\$93,023
Allowable Chapter 175/185 Contribution	(\$93,023)
Net Increase in Excess Chapter 175/185 Contribution	\$0
Excess Chapter 175/185 Contribution as of October 1, 2018	<u>\$0</u>



## Historical Chapter 175/185 Contributions

Table II-G

	Total Accumulated Excess Chapter 175/185 Contribution				\$0
	Chapter 175 Regular Distribution	Chapter 175 Supplemental Distribution	Chapter 185 Distribution	Allowable Amount	
1998 Distribution	\$38,114	\$0	\$0	(\$32,489)	
1999 Distribution	\$24,844	\$0	\$0	(\$24,844)	
2000 Distribution	\$26,322	\$14,175	\$0	(\$26,322)	
2001 Distribution	\$25,916	\$13,831	\$0	(\$25,916)	
2002 Distribution	\$30,737	\$14,366	\$0	(\$30,737)	
2003 Distribution	\$40,249	\$17,127	\$0	(\$32,489)	
2004 Distribution	\$45,059	\$24,172	\$0	(\$32,489)	
2005 Distribution	\$55,245	\$26,024	\$0	(\$32,489)	
2006 Distribution	\$86,206	\$33,151	\$0	(\$32,489)	
2007 Distribution	\$72,786	\$73,420	\$0	(\$32,489)	
2008 Distribution	\$91,088	\$57,131	\$0	(\$32,489)	
2009 Distribution	\$92,039	\$48,517	\$0	(\$32,489)	
2010 Distribution	\$87,205	\$45,344	\$0	(\$32,489)	
2011 Distribution	\$92,566	\$41,732	\$0	(\$32,489)	
2012 Distribution	\$89,595	\$50,262	\$0	(\$32,489)	
2013 Distribution	\$95,156	\$48,468	\$0	(\$143,624)	
2014 Distribution	\$89,778	\$52,625	\$0	(\$142,403)	
2015 Distribution	\$85,098	\$39,118	\$0	(\$124,216)	
2016 Distribution	\$82,680	\$21,436	\$0	(\$104,116)	
2017 Distribution	\$88,525	\$4,498	\$0	(\$93,023)	
Interest Adjustment				\$10,385	
Transfer to Share Plan				(\$902,410)	

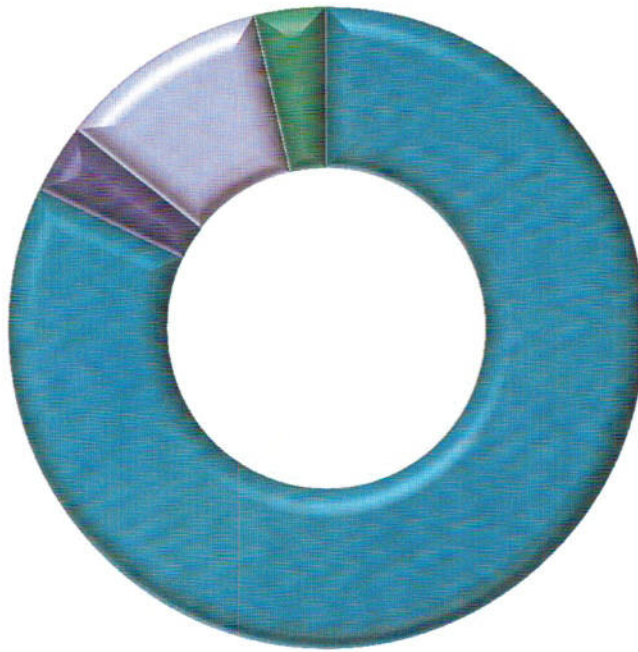




## Summary of Participant Data

Table III-A

As of October 1, 2018

Actively Employed Participants

Active Participants	23
DROP Participants	0

Inactive Participants

Deferred Vested Participants	1
Due a Refund of Contributions	3
Deferred Beneficiaries	0

Participants Receiving a Benefit

Service Retirements	0
Disability Retirements	0
Beneficiaries Receiving	1

**Total Participants 28**Number of Participants Included in Prior Valuations

	Active	DROP	Inactive	Retired	Total
October 1, 2009	17	0	0	0	17
October 1, 2010	17	0	0	0	17
October 1, 2011	15	0	1	0	16
October 1, 2012	15	0	1	0	16
October 1, 2013	18	0	1	0	19
October 1, 2014	18	0	1	0	19
October 1, 2015	17	0	2	0	19
October 1, 2016	21	0	2	0	23
October 1, 2017	23	0	3	0	26
October 1, 2018	23	0	4	1	28



## Data Reconciliation

Table III-B

	<u>Active</u>	<u>DROP</u>	<u>Deferred Vested</u>	<u>Due a Refund</u>	<u>Def. Benef.</u>	<u>Service Retiree</u>	<u>Disabled Retiree</u>	<u>Benef. Rec'v.</u>	<u>Total</u>
<u>October 1, 2017</u>	23	0	1	2	0	0	0	0	26
<u>Change in Status</u>									
Re-employed									
Terminated	(1)			1					
Retired									
<u>Participation Ended</u>									
Transferred Out									
Cashed Out									
Died	(1)								(1)
<u>Participation Began</u>									
Newly Hired	2								2
Transferred In									
New Beneficiary								1	1
<u>Other Adjustment</u>									
<u>October 1, 2018</u>	23	0	1	3	0	0	0	1	28

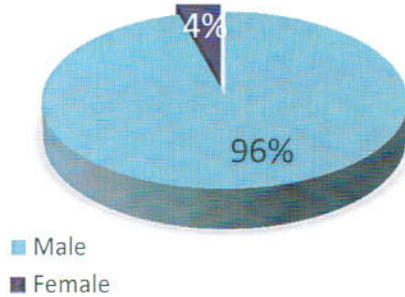


## Active Participant Data

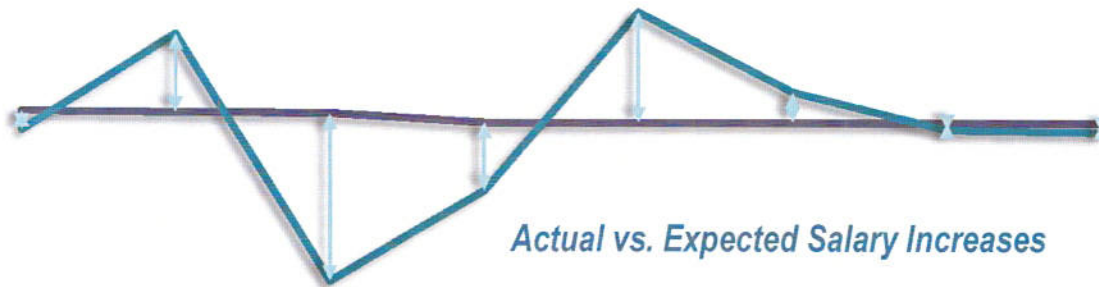
## Table III-C

As of October 1, 2018

## Gender Mix



Average Age	34.6 years
Average Service	8.6 years
Total Annualized Compensation for the Prior Year	\$1,481,391
Total Expected Compensation for the Current Year	\$1,488,212
Average Increase in Compensation for the Prior Year	3.78%
Expected Increase in Compensation for the Current Year	4.50%



## Active Participant Statistics From Prior Valuations

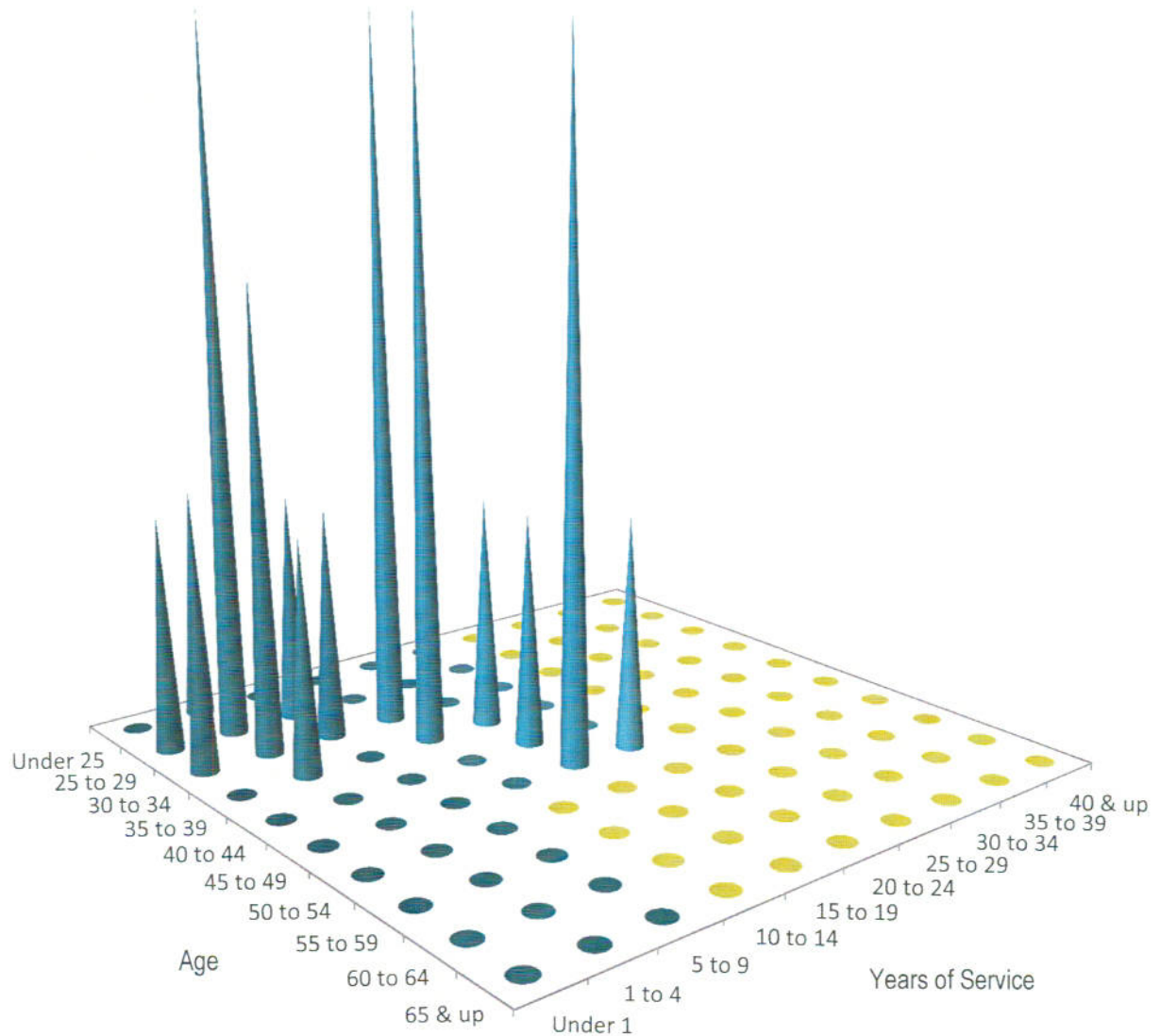
	Average Age	Average Service	Average Salary	Average Expected Salary Increase	Average Actual Salary Increase
October 1, 2009	31.8	5.1	\$54,104	6.08%	5.69%
October 1, 2010	32.8	6.1	\$54,459	5.68%	0.69%
October 1, 2011	32.9	7.0	\$57,508	5.39%	3.97%
October 1, 2012	33.9	8.0	\$63,118	5.26%	11.11%
October 1, 2013	33.7	7.5	\$57,093	5.20%	-7.25%
October 1, 2014	35.0	8.8	\$56,488	4.50%	-0.60%
October 1, 2015	36.1	10.2	\$63,786	4.50%	12.71%
October 1, 2016	33.5	8.2	\$62,328	4.50%	6.77%
October 1, 2017	34.1	8.4	\$64,118	4.50%	3.93%
October 1, 2018	34.6	8.6	\$64,408	4.50%	3.78%





# Active Age-Service Distribution

Table III-D



- ▲ Eligible to retire
- ▲ May be eligible to retire
- ▲ Not eligible to retire



Active Age-Service-Salary Table

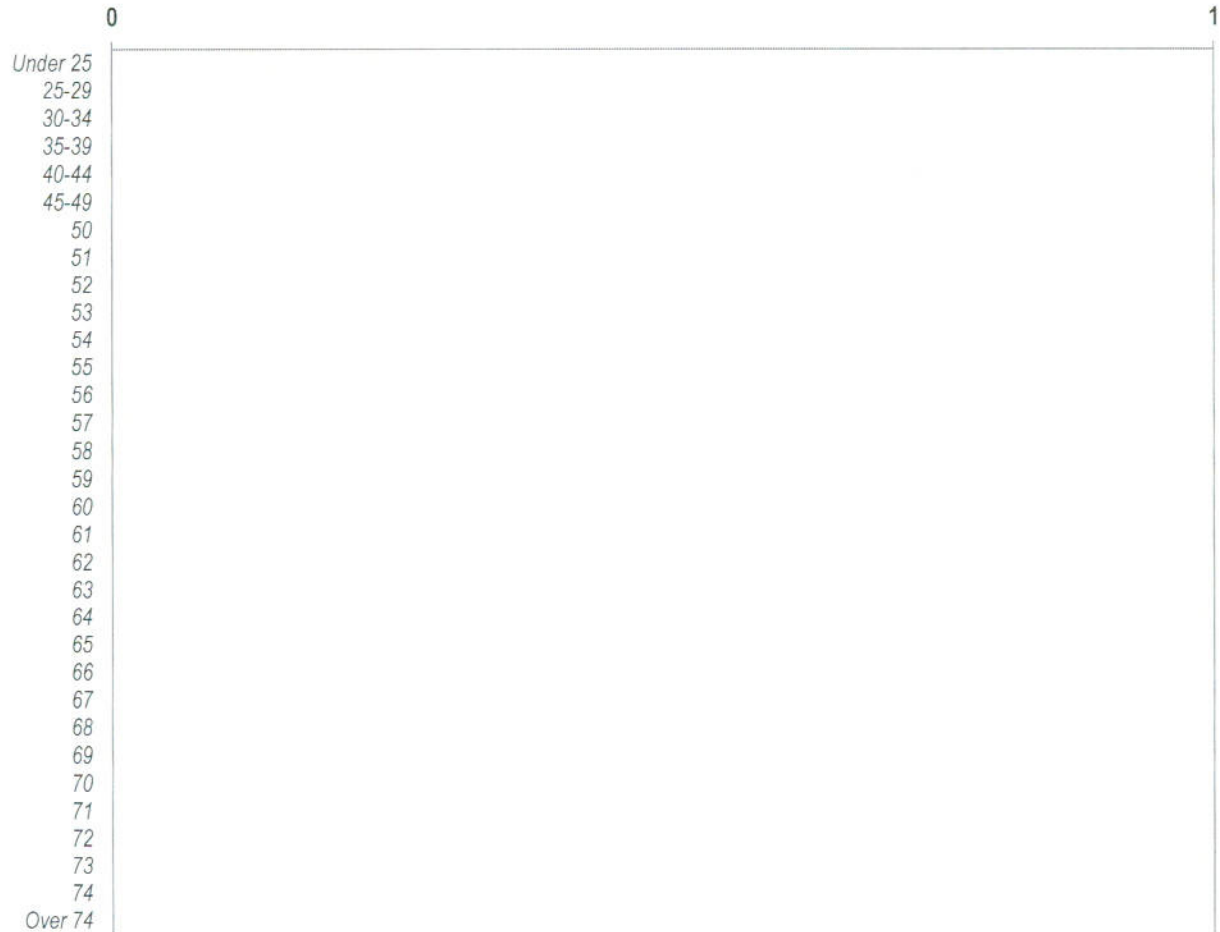
Table III-E

Attained Age	Completed Years of Service										Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	
<b>Under 25</b>	0	1	0	0	0	0	0	0	0	0	1
Avg. Pay	0	53,549	0	0	0	0	0	0	0	0	53,549
<b>25 to 29</b>	1	3	1	0	0	0	0	0	0	0	5
Avg. Pay	42,594	49,347	62,815	0	0	0	0	0	0	0	50,690
<b>30 to 34</b>	1	2	1	3	0	0	0	0	0	0	7
Avg. Pay	43,636	49,720	67,257	76,315	0	0	0	0	0	0	62,754
<b>35 to 39</b>	0	1	0	3	1	0	0	0	0	0	5
Avg. Pay	0	56,676	0	72,027	93,481	0	0	0	0	0	73,247
<b>40 to 44</b>	0	0	0	0	1	0	0	0	0	0	1
Avg. Pay	0	0	0	0	62,129	0	0	0	0	0	62,129
<b>45 to 49</b>	0	0	0	0	3	1	0	0	0	0	4
Avg. Pay	0	0	0	0	72,407	89,526	0	0	0	0	76,687
<b>50 to 54</b>	0	0	0	0	0	0	0	0	0	0	0
Avg. Pay	0	0	0	0	0	0	0	0	0	0	0
<b>55 to 59</b>	0	0	0	0	0	0	0	0	0	0	0
Avg. Pay	0	0	0	0	0	0	0	0	0	0	0
<b>60 to 64</b>	0	0	0	0	0	0	0	0	0	0	0
Avg. Pay	0	0	0	0	0	0	0	0	0	0	0
<b>65 &amp; up</b>	0	0	0	0	0	0	0	0	0	0	0
Avg. Pay	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	2	7	2	6	5	1	0	0	0	0	23
Avg. Pay	43,115	51,101	65,036	74,171	74,566	89,526	0	0	0	0	64,408



## Inactive Participant Data

Table III-F

***Age at Retirement****Average Monthly Benefit*

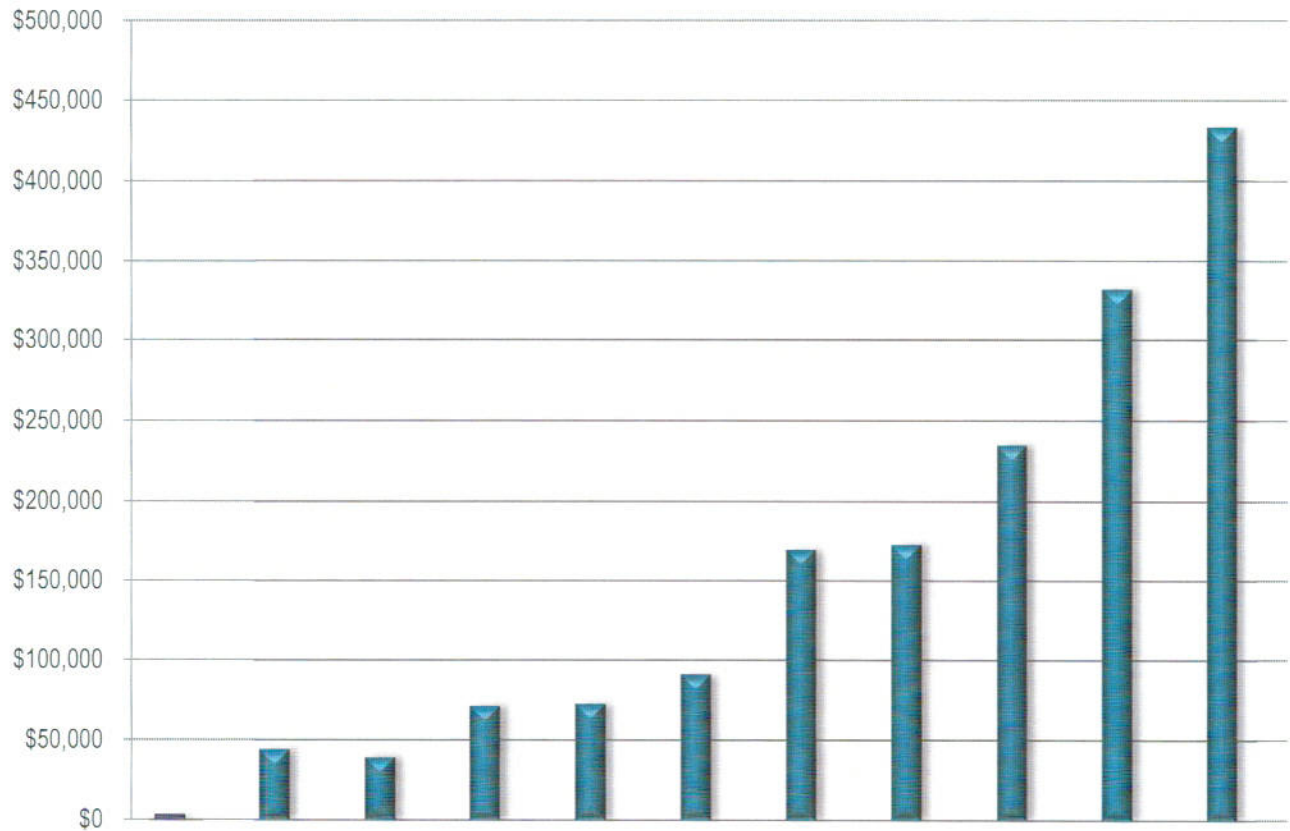
Service Retirements	<i>Not applicable</i>
Disability Retirements	<i>Not applicable</i>
Beneficiaries Receiving	\$1,165.93
DROP Participants	<i>Not applicable</i>
Deferred Vested Participants	\$1,398.11
Deferred Beneficiaries	<i>Not applicable</i>





## Projected Benefit Payments

Table III-G

Actual

For the period October 1, 2017 through September 30, 2018

\$3,498

Projected

For the period October 1, 2018 through September 30, 2019

\$44,545

For the period October 1, 2019 through September 30, 2020

\$39,779

For the period October 1, 2020 through September 30, 2021

\$71,842

For the period October 1, 2021 through September 30, 2022

\$73,141

For the period October 1, 2022 through September 30, 2023

\$91,231

For the period October 1, 2023 through September 30, 2024

\$170,090

For the period October 1, 2024 through September 30, 2025

\$173,304

For the period October 1, 2025 through September 30, 2026

\$235,363

For the period October 1, 2026 through September 30, 2027

\$332,153

For the period October 1, 2027 through September 30, 2028

\$433,296



## Summary of Actuarial Methods and Assumptions

## Table IV-A

*NOTE: The following assumptions and methods have been selected and approved by the Board of Trustees based in part on the advice of the plan's enrolled actuary in accordance with the authority granted to the Board under the pension ordinances and State law.*

**1. Actuarial Cost Method**

Aggregate cost method. Under this actuarial cost method, a funding cost is developed for the plan as a level percentage of payroll. The level funding percentage is calculated as the excess of the total future benefit liability over accumulated assets and future employee contributions, with this excess spread over the expected future payroll for current active participants. The normal cost is equal to the level funding percentage multiplied by the expected payroll for the year immediately following the valuation date. The actuarial accrued liability is equal to the accumulated assets. Therefore, under the aggregate cost method, no unfunded accrued liability is developed.

**2. Asset Method**

The actuarial value of assets is equal to the market value of assets, adjusted to reflect a five-year phase-in of the net investment earnings.

**3. Interest (or Discount) Rate**

7.00% per annum

**4. Salary Increases**

Plan compensation is assumed to increase at the rate of 4.50% per annum, unless actual plan compensation is known for a prior plan year.

**5. Decrements**

- Pre-retirement mortality: None is assumed.
- Post-retirement mortality: Sex-distinct rates set forth in the RP-2000 Blue Collar Mortality Table, with full generational improvements in mortality using Scale BB
- Disability: None is assumed.
- Termination: None is assumed.
- Retirement: Retirement is assumed to occur at the most valuable retirement age.



## Summary of Actuarial Methods and Assumptions

## Table IV-A

(continued)

**6. Form of Payment**

Future retirees have been assumed to select the 10-year certain and life annuity.

**7. Expenses**

The total projected benefit liability has been loaded by 3.50% to account for anticipated administrative expenses. In addition, the interest rate set forth in item 3. above is assumed to be net of investment expenses and commissions.





## Changes in Actuarial Methods and Assumptions

## Table IV-B

No assumptions or methods were changed since the completion of the previous valuation.

*The following additional assumption and method changes were made during the past 10 years:*

- (1) Effective October 1, 2016, the mortality basis was changed from a 2015 projection of the RP-2000 Mortality Table for annuitants to a full generational projection using Scale BB of the RP-2000 Blue Collar Mortality Table as required by State law.*
- (2) Effective October 1, 2016, the actuarial value of assets was changed from the unadjusted market value to the market value adjusted to reflect a five-year phase-in of the net investment earnings.*
- (3) Effective October 1, 2013, the interest (or discount) rate was decreased from 7.50% per annum to 7.00% per annum.*
- (4) Effective October 1, 2013, the assumed increase in future salaries was changed from a range of rates based on service (8.00% for employees with less than one year of service, 7.00% for employees with at least one but less than two years of service, 6.00% for employees with at least two but less than three years of service, 5.50% for employees with at least three but less than four years of service, and 5.20% for all other employees) to a flat 4.50% per year.*
- (5) Effective October 1, 2013, the mortality basis was changed from the 1994 Group Annuity Reserving Table, projected to 2002 by Scale AA, to the RP-2000 Mortality Table for annuitants, projected to 2015 by Scale AA, as published by the Internal Revenue Service (IRS) for purposes of Internal Revenue Code (IRC) section 430.*
- (6) Effective October 1, 2009, the administrative expense assumption was changed from a flat \$3,300 per year to a 3.50% loading of the total projected benefit liability.*



## Summary of Plan Provisions

Table V-A

### 1. Benefit Formula

3.00% of Average Monthly Earnings multiplied by Credited Service

### 2. Service Retirement

Normal retirement: Age 55 with at least 10 years of credited service; or

Any age with at least 25 years of credited service

Early retirement: Age 50 with at least 10 years of credited service

*(Note: In the case of early retirement, the participant's benefit is reduced by 3% for each year by which the participant's early retirement age precedes his normal retirement age.)*

### 3. Disability Retirement

Service-based disability: Participant must be disabled during the course of his employment with the City.

Non-service disability: Participant must have earned at least 10 years of credited service.

The disability benefit is a monthly 10-year certain and life annuity equal to the monthly accrued benefit, but not less than 42% of average monthly earnings in the case of a service-based disability and offset as necessary to preclude the total of the participant's worker's compensation, disability benefit, and other City-financed disability or salary continuation benefit from exceeding his average monthly earnings. The disability benefit is not reduced to an amount less than the greater of 42% of average monthly earnings or 2.75% of average monthly earnings for each year of credited service. The participant may convert his disability benefit into any of the optional forms of payment that are otherwise available under the plan.

*(A participant is disabled if he is found to have a mental or physical condition resulting from bodily injury, disease, or a mental disorder that renders him incapable of employment as a firefighter.)*

### 4. Deferred Vested Retirement

A vested participant who terminates employment before becoming eligible for retirement receives a deferred vested retirement benefit payable at the participant's early or normal retirement age. If the benefit is payable prior to normal retirement age, then the benefit is reduced by 3% for each year by which the participant's early retirement age precedes his normal retirement age.

A non-vested participant who terminates employment receives his accumulated contributions.





## Summary of Plan Provisions

## Table V-A

(continued)

### 5. Vesting

An employee becomes 100% vested upon the attainment of 10 years of credited service.

### 6. Pre-Retirement Death Benefit

If a vested, married participant dies prior to retirement, the participant's spouse receives a 10-year certain annuity commencing at the participant's normal or early retirement age and reduced for payment prior to the participant's normal retirement age at the rate of 3% per year, if applicable. Alternatively, the spouse may commence receipt of the 10-year certain annuity immediately, subject to an actuarial adjustment for earlier payment. The Trustees may elect to pay the pre-retirement death benefit as a single lump sum distribution if the value of the benefit is less than or equal to \$1,000.

If a vested, unmarried participant dies prior to retirement, the participant's beneficiary receives a 10-year certain annuity commencing immediately. If the participant was eligible for early retirement at the time of his death, the annuity is reduced for payment prior to the participant's normal retirement age at the rate of 3% per year, if applicable. Alternatively, the annuity is reduced actuarially for payment prior to the participant's normal retirement age. The Trustees may elect to pay the pre-retirement death benefit as a single lump sum distribution if the value of the benefit is less than or equal to \$1,000.

If a vested participant dies in the line of duty prior to retirement, the participant's beneficiary may elect to receive an immediate monthly life annuity equal to 50% of the deceased participant's plan compensation at the time of his death in lieu of the benefits described above.

If a non-vested participant dies prior to retirement, the participant's beneficiary receives the participant's accumulated contributions.

### 7. Form of Payment

Actuarially increased single life annuity (*optional*);

10-year certain and life annuity (*normal form of payment*);

Actuarially reduced 50% joint and contingent annuity (*optional*);

Actuarially reduced 66⅔% joint and contingent annuity (*optional*);

Actuarially reduced 75% joint and contingent annuity (*optional*);





## Summary of Plan Provisions

## Table V-A

(continued)

Actuarially reduced 100% joint and contingent annuity (*optional*); or

Actuarially equivalent single lump sum distribution (*automatic if the single sum value of the participant's benefit is less than or equal to \$1,000*)

*(Note: All forms of payment guarantee at least the return of the participant's accumulated contributions. Furthermore, a participant may change his joint annuitant up to two times after retirement subject to an actuarially equivalent adjustment.)*

### 8. Automatic Cost-of-Living Adjustment

Participants receive an automatic annual 2% cost-of-living adjustment beginning on the October 1 immediately following retirement. The cost-of-living adjustment is pro-rated for participants who have been retired for less than one year.

### 9. Average Monthly Earnings

Average monthly earnings during the highest five years of compensation out of the 10 years immediately preceding the determination date or career average earnings, if greater. Earnings include W-2 compensation, but exclude payments for accrued annual or sick leave and lump sum payments other than bonuses and exclude overtime in excess of 300 hours per plan year after the date that the first collective bargaining agreement is effective after July 1, 2011. Earnings cannot exceed the maximum amount allowed under Internal Revenue Code (IRC) section 401(a)(17).

### 10. Credited Service

The elapsed time from the participant's date of hire until his date of termination, retirement, or death.

### 11. Employee Contribution

Employees must contribute 1.00% of basic salary. Employee contributions are accumulated without interest.

### 12. City Contribution

The City is required to make periodic contributions at least on a quarterly basis as determined under Chapter 112, Florida Statutes.



## Summary of Plan Provisions

## Table V-A

(continued)

### 13. Participant Requirement

All firefighters of the City of Safety Harbor automatically become participants in the plan on their date of hire; a new employee who is hired as a fire chief may irrevocably opt out of participation in the plan.

### 14. Actuarial Equivalence

Based on 7.00% interest per annum and the mortality table promulgated by the Internal Revenue Service (IRS) for purposes of determining minimum lump sum distributions pursuant to Internal Revenue Code (IRC) section 417(e)(3).

### 15. Plan Effective Date

The plan was originally effective on January 1, 1996.

### 16. Deferred Retirement Option Plan (DROP)

A participant who reaches his Normal Retirement Age is eligible to participate in the DROP for a period of up to 60 months. Interest is credited on the DROP accounts at the rate of 1.30% per annum.



## Summary of Plan Amendments

## Table V-B

Since the completion of the previous valuation, Resolution No. 2018-04 was adopted to be effective March 5, 2018. This resolution allows a new employee who is hired as a fire chief to irrevocably opt out of participation in the plan.

*The following additional plan amendments were adopted during the past 10 years and were reflected in prior valuation reports:*

- (1) *During the 2013/14 plan year, the employee contribution rate was increased from 1.00% of covered compensation to 13.87% of covered compensation and was then immediately reduced back to 1.00%. (Resolution 2014-03)*
- (2) *During the 2013/14 plan year, a Deferred Retirement Option Plan (DROP) was added whereby any member who is otherwise eligible to retire with a normal retirement benefit may choose to continue his employment with the City for a period up to 60 months but have his retirement benefit deposited into a DROP account along with interest at the rate of 1.30% per annum. (Resolution 2014-03)*
- (3) *During the 2013/14 plan year, a share plan was added whereby \$902,410 of accumulated excess Chapter 175 distributions served as an initial deposit and, going forward, Chapter 175 distributions in excess of \$171,110 per year will be deposited into the share plan. (Resolution 2014-03)*
- (4) *During the 2013/14 plan year, payments for overtime in excess of 300 hours per plan year are excluded from plan compensation for service earned after the date that the first collective bargaining agreement is effective after  
July 1, 2011. (Resolution 2014-03)*

