

**CITY OF COOPER CITY POLICE OFFICERS RETIREMENT PLAN**  
ACTUARIAL VALUATION REPORT AS OF OCTOBER 1, 2015

ANNUAL EMPLOYER CONTRIBUTION IS DETERMINED BY THIS VALUATION FOR  
THE FISCAL YEAR ENDING SEPTEMBER 30, 2016



March 7, 2016

Board of Trustees  
City of Cooper City Police Officers  
Retirement Plan  
Cooper City, Florida

**Re: City of Cooper City Police Officers Retirement Plan Actuarial Valuation as of October 1, 2015  
Actuarial Disclosures**

Dear Board Members:

The results of the October 1, 2015 Annual Actuarial Valuation of the City of Cooper City Police Officers Retirement Plan are presented in this report.

This report was prepared at the request of the Board and is intended for use by the Retirement Plan and those designated or approved by the Board. This report may be provided to parties other than the Plan only in its entirety and only with the permission of the Board. GRS is not responsible for unauthorized use of this report.

The purpose of the valuation is to measure the Plan's funding progress, to determine the employer contribution rate for the fiscal year ending September 30, 2016, and to determine the actuarial information for Governmental Accounting Standards Board (GASB) Statement No. 67 for fiscal year ending September 30, 2015. This report also includes estimated GASB Statement No. 67 information for the fiscal year ending September 30, 2016. This report should not be relied on for any purpose other than the purposes described herein. Determinations of financial results associated with the benefits described in this report, for purposes other than those identified above may be significantly different.

The computed contribution rate shown on pages 2 and 7 is best viewed as the minimum contribution rate that complies with the Board's funding policy. Users of this report should be aware that contributions made at that rate do not guarantee benefit security. Until the plan is fully funded, we encourage the plan sponsor to contribute in excess of the computed contribution rate.

We believe that the ideal circumstance is for a plan to be fully funded at relatively low levels of risk. Therefore we encourage a review of investment and other sources of risk as the plan approaches full funding.

The findings in this report are based on data or other information through September 30, 2015. 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. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

This valuation assumed the continuing ability of the plan sponsor to make the contributions necessary to fund this plan. A determination regarding whether or not the plan sponsor is actually able to do so is outside our scope of expertise and was not performed.

Board of Trustees  
March 7, 2016  
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The valuation was based upon information furnished by the Plan Administrator concerning Retirement Plan benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency, but did not otherwise audit the data. We are not responsible for the accuracy or completeness of the information provided by the Plan Administrator.

In addition, this report was prepared using assumptions approved by the Board as described in the section of this report entitled Actuarial Assumptions and Methods.

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge the information contained in this report is accurate and fairly presents the actuarial position of the Retirement Plan as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices, with the Actuarial Standards of Practice issued by the Actuarial Standards Board, and with applicable statutes.

Melissa R. Algayer and Jeffrey Amrose are members of the American Academy of Actuaries and meet the Academy's Qualification Standards to render the actuarial opinions contained herein.

The signing actuaries are independent of the plan sponsor.

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 our knowledge, the results are complete and accurate. In our opinion, the techniques and assumptions used are reasonable, meet the requirements and intent of Part VII, Chapter 112, Florida Statutes, and are based on generally accepted actuarial principles and practices. 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.

Gabriel, Roeder, Smith & Company will be pleased to review this valuation report with the Board of Trustees and to answer any questions pertaining to the valuation.

Respectfully submitted,

GABRIEL, ROEDER, SMITH AND COMPANY

By Melissa R. Algayer  
Melissa R. Algayer MAAA, FCA  
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**SECTION A**  
**DISCUSSION OF VALUATION RESULTS**

## DISCUSSION OF VALUATION RESULTS

### Preliminary Note

Effective February 14, 2004, the responsibility for law enforcement services for the City was transferred to the Broward Sheriff's Office. Plan members who were City employees on the date of transfer became employees of BSO and were required to choose whether to remain in this Plan. Thirty-two officers chose to do so.

BSO will pick up the former 8.13% member contribution rate. This amount is not deducted from each member's pay but is included in pensionable compensation. Members will contribute 0.00% of pay. The City will pay \$110,179, attributable to benefit changes that were adopted in 2004. The City's contribution of \$110,179 will decrease as Chapter 185 revenue increases above the 2004 revenue of \$198,554. In the 2015 fiscal year the Chapter revenue was \$261,740. The required City contribution for the 2015 fiscal year was \$46,993. Excess City contributions totaling \$60,257 were available as of September 30, 2014 to offset the City's future contribution requirements. After reflecting \$46,993 applied to the City's contribution requirement for the 2015 fiscal year, the total excess City contribution as of September 30, 2015 is \$13,264. This amount will be applied to the City's future contribution requirements.

### Comparison of Required Employer Contributions

The following is a comparison of required contributions developed in this year's and last year's valuations:

	<b>For FYE 9/30/2016 Based on 10/1/2015 Valuation</b>	<b>For FYE 9/30/2015 Based on 10/1/2014 Valuation</b>	<b>Increase (Decrease)</b>
Required Employer/State Contribution	\$ 1,617,097	\$ 1,413,375	\$ 203,722
As % of Covered Payroll	260.21 %	235.26 %	24.95 %
Estimated State Contribution	261,740	261,740	0 *
As % of Covered Payroll	42.12 %	43.57 %	(1.45) %
Estimated 8.13% Pick-up Amount	50,525	48,843	1,682
As % of Covered Payroll	8.13 %	8.13 %	0.00 %
Total Required Employer Contribution	1,304,832	1,102,792	202,040
As % of Covered Payroll	209.96 %	183.56 %	26.40 %
Portion of Cost to be paid by the City	46,993 **	46,993 **	0
As % of Covered Payroll	7.56 %	7.82 %	(0.26) %
Remainder of Cost to be paid by BSO	1,257,839 ***	1,055,799 ***	202,040
As % of Covered Payroll	202.40 %	175.74 %	26.66 %

\* We have updated the amount shown in the October 1, 2014 Actuarial Valuation Report to reflect actual State contributions received in August 2015.

\*\* Before using \$13,264 prepaid contribution.

\*\*\* Before using \$392,061 prepaid contribution.

The required dollar amounts shown above are estimates only. The actual contribution for the fiscal year ending September 30, 2015 was based on the percentage of actual payroll for the fiscal year.

**Due to the decreasing payroll of the closed Plan we recommend that the dollar contribution is made instead of the percent of payroll contribution.**

The required contribution has been adjusted for interest on the basis that contributions are made in equal installments at the end of each quarter. The required employer contribution for the fiscal year ending September 30, 2016 has also been computed under the assumption that the amount to be received from the State on behalf of police officers will be the same as the 2015 amount of \$261,740. State revenue up to \$309,272 may be taken as a credit against the required contribution. State revenue in excess of \$309,272 must be used to provide extra benefits. If this year's payment from the State falls below \$261,740 then the City and/or BSO must raise their contribution by the difference.

The actual City, BSO, and State contributions for the fiscal year ending September 30, 2015 were \$46,993 and \$1,072,082, and \$261,740, respectively, for a total of \$1,380,815. The \$46,993 and \$1,072,082 include prepaid City and BSO contributions of \$46,993 and \$1,072,082, respectively. The total required contribution was \$1,380,815 (235.26% times actual covered payroll of \$606,307 minus BSO pickup contributions of \$45,583). Excess City contributions totaling \$13,264 as of September 30, 2015 will be used to offset the City's future contribution requirements. Excess BSO contributions totaling \$392,061 as of September 30, 2015 will be used to offset BSO's future contribution requirements.

### **Revisions in Benefits**

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

### **Revisions in Actuarial Assumptions or Method**

The investment return assumption was lowered from 7.5% to 7.25% since the last valuation. This change increased the required employer contribution by \$165,487.

### **Actuarial Experience**

There was a net actuarial gain of \$65,087 for the year which means that actual experience was more favorable than expected. The gain was primarily due to lower than expected salary increases and was offset by an investment loss due to the recognized return below the assumed rate of 7.5%. The investment return was (0.4%) based on market value of assets and 6.2% based on actuarial value of assets.

### **Funded Ratio**

The funded ratio this year is 80.0% compared to 79.0% last year. The funded ratio before reflecting the change in investment return assumption was 82.0%. The funded ratio is equal to the actuarial value of assets divided by the actuarial accrued (past service) liability.

### **Variability of Future Contribution Rates**

The Actuarial Value of Assets exceeds the Market Value of Assets by \$1,359,826 as of the valuation date (see Section C). This difference will be gradually recognized in the future in the absence of offsetting gains.

**Relationship to Market Value**

If Market Value had been the basis for the valuation, the required employer/state contribution rate would have been 312.73% and the funded ratio would have been 75.3%. In the absence of other gains and losses, the required employer/state contribution rate should increase to that level over the next several years.

**Recommendation**

Due to the small number of active employees remaining in this Plan, we recommend that the actual contribution made by BSO starting in fiscal year ending September 30, 2016 be based on the dollar required contribution instead of the percentage of pay requirement multiplied by the actual covered payroll. Continued use of the percentage of pay method could lead to underfunding of the Plan. If this is administratively unfeasible, then we recommend that BSO “true-up” the actual contributions to the dollar amount at the end of the fiscal year.

**Conclusion**

The remainder of this Report includes detailed actuarial valuation results, information relating to the pension fund, miscellaneous information and statistics, and a summary of plan provisions.

### STATE CONTRIBUTION RESERVE

Increments in Chapter revenue over that received in 1998 must first be used to fund the cost of compliance with minimum benefits. Once minimums are met, any subsequent additional Chapter revenue must be used to provide extra benefits.

As of the valuation date, there are no remaining minimum benefit improvements that need to be made.

<b>Actuarial Confirmation of the Use of State Chapter Money</b>	
1. Base Amount Previous Plan Year	\$ 309,272
2. Amount Received for Previous Plan Year	261,740
3. Benefit Improvements Made in Previous Plan Year	0
4. Excess Funds for Previous Plan Year; (2) - (1) - (3); not less than zero	0
5. Accumulated Excess at Beginning of Previous Year	0
6. Prior Excess Used in Previous Plan Year	0
7. Accumulated Excess as of Valuation Date (Available for Benefit Improvements); (4) + (5) + (6); not less than zero	0
8. Base Amount This Plan Year; (1) + (3); not to exceed actual State revenue received for previous Plan Year	261,740

The Base Amount in line 8 is the amount the employer may take as a credit against its required contribution. The Base Amount will be updated each year based on actual Chapter revenue up to a maximum of \$309,272, determined as follows:

\* \$309,272 is derived as follows:

\$ 122,143	1998 Ch. 185 revenue
62,937	Min. Benefits in Ord. 2000-1-12
19,436	Min. Benefits in Ord. 2003-09-01
19,148	Min. Benefits in Ord. 2004-08-01
<u>85,608</u>	3 year average final comp. in Ord. 2004-08-01
309,272	

**SECTION B**  
**VALUATION RESULTS**

<b>PARTICIPANT DATA</b>		
	<b>October 1, 2015</b>	<b>October 1, 2014</b>
<b>ACTIVE MEMBERS</b>		
Number	6	6
Covered Annual Payroll	\$ 621,466	\$ 600,779
Average Annual Payroll	\$ 103,578	\$ 100,130
Average Age	45.9	44.9
Average Past Service	20.6	19.6
Average Age at Hire	25.3	25.3
<b>RETIREES &amp; BENEFICIARIES &amp; DROP</b>		
Number	39	39
Annual Benefits	\$ 1,910,249	\$ 1,910,249
Average Annual Benefit	\$ 48,981	\$ 48,981
Average Age	61.2	60.2
<b>DISABILITY RETIREES</b>		
Number	5	5
Annual Benefits	\$ 172,098	\$ 172,098
Average Annual Benefit	\$ 34,420	\$ 34,420
Average Age	55.9	54.9
<b>TERMINATED VESTED MEMBERS</b>		
Number	2	2
Annual Benefits	\$ 53,736	\$ 53,736
Average Annual Benefit	\$ 26,868	\$ 26,868
Average Age	48.9	47.9

<b>ACTUARIALLY DETERMINED EMPLOYER CONTRIBUTION (ADEC)</b>			
A. Valuation Date	October 1, 2015 <i>After Assumption Change</i>	October 1, 2015 <i>Before Assumption Change</i>	October 1, 2014
B. ADEC to Be Paid During Fiscal Year Ending	9/30/2016	9/30/2016	9/30/2015
C. Assumed Dates of Employer Contributions	Quarterly	Quarterly	Quarterly
D. Annual Payment to Amortize Unfunded Actuarial Liability	\$ 0	\$ 0	\$ 0
E. Employer Normal Cost	1,548,780	1,388,317	1,351,749
F. ADEC if Paid on the Valuation Date: D+E	1,548,780	1,388,317	1,351,749
G. ADEC Adjusted for Frequency of Payments	1,617,097	1,451,610	1,413,375
H. ADEC as % of Covered Payroll	260.21 %	233.58 %	235.26 %
I. Rate of Increase in Covered Payroll to Contribution Year	0.00 %	0.00 %	0.00 %
J. Covered Payroll as of Contribution Date	621,466	621,466	600,779
K. Total ADEC for Contribution Year: H x J	1,617,097	1,451,610	1,413,375
L. Estimate of State Revenue in Contribution Year	261,740	261,740	261,740 *
M. Estimated 8.13% Pick-up Amount As % of Covered Payroll	50,525 8.13 %	50,525 8.13 %	48,843 8.13 %
N. Total Required Employer Contribution As % of Covered Payroll	1,304,832 209.96 %	1,139,345 183.33 %	1,102,792 183.56 %
O. Portion of N to be paid by City As % of Covered Payroll	46,993 7.56 %	46,993 7.56 %	46,993 7.82 %
P. Remainder of Cost to be paid by BSO As % of Covered Payroll	1,257,839 202.40 %	1,092,352 175.77 %	1,055,799 175.74 %

\* We have updated the amount shown in the October 1, 2014 Actuarial Valuation Report to reflect the actual state contributions received in August 2015.

Note: The actuarially determined contribution dollar amounts shown are estimates only. The actual contribution made for the fiscal year ending 2015 was based on the listed percentage multiplied by the actual payroll for the fiscal year.

<b>ACTUARIAL VALUE OF BENEFITS AND ASSETS</b>			
A. Valuation Date	October 1, 2015 <i>After Assumption Change</i>	October 1, 2015 <i>Before Assumption Change</i>	October 1, 2014
<b>B. Actuarial Present Value of All Projected Benefits for</b>			
1. Active Members			
a. Service Retirement Benefits	\$ 4,625,988	\$ 4,475,084	\$ 4,125,725
b. Vesting Benefits	161,443	155,579	187,707
c. Disability Benefits	110,238	107,049	120,780
d. Preretirement Death Benefits	19,658	19,098	22,513
e. Return of Member Contributions	<u>-</u>	<u>-</u>	<u>-</u>
f. Total	4,917,327	4,756,810	4,456,725
2. Inactive Members			
a. Service Retirees & Beneficiaries	22,163,817	21,658,416	21,921,782
b. Disability Retirees	1,951,395	1,907,452	1,923,093
c. Terminated Vested Members	<u>628,997</u>	<u>611,954</u>	<u>568,437</u>
d. Total	24,744,209	24,177,822	24,413,312
3. Total for All Members	29,661,536	28,934,632	28,870,037
<b>C. Actuarial Accrued (Past Service) Liability per GASB No. 25</b>			
	29,040,706	28,350,855	28,202,909
<b>D. Actuarial Value of Accumulated Plan Benefits per FASB No. 35</b>			
	28,458,694	27,774,465	27,568,393
<b>E. Plan Assets</b>			
1. Market Value	21,876,394	21,876,394	22,600,743
2. Actuarial Value	23,236,220	23,236,220	22,279,025
<b>F. Actuarial Present Value of Projected Covered Payroll</b>			
	2,703,239	2,689,541	3,075,775
<b>G. Actuarial Present Value of Projected Member Contributions</b>			
	0	0	0

<b>CALCULATION OF EMPLOYER NORMAL COST</b>			
A. Valuation Date	October 1, 2015 <i>After Assumption Change</i>	October 1, 2015 <i>Before Assumption Change</i>	October 1, 2014
B. Actuarial Present Value of Projected Benefits	\$ 29,661,536	\$ 28,934,632	\$ 28,870,037
C. Actuarial Value of Assets	23,236,220	23,236,220	22,279,025
D. Unfunded Actuarial Liability	0	0	0
E. Actuarial Present Value of Projected Member Contributions	0	0	0
F. Actuarial Present Value of Projected Employer Normal Costs: B-C-D-E	6,425,316	5,698,412	6,591,012
G. Actuarial Present Value of Projected Covered Payroll	2,703,239	2,689,541	3,075,775
H. Employer Normal Cost Rate: F/G	237.69 %	211.87 %	214.29 %
I. Covered Annual Payroll	621,466	621,466	600,779
J. Employer Normal Cost: H x I	1,477,163	1,316,700	1,287,409
K. Assumed Amount of Administrative Expenses	71,617	71,617	64,340
L. Total Employer Normal Cost: J+K	1,548,780	1,388,317	1,351,749
M. Employer Normal Cost as % of Covered Payroll	249.21 %	223.39 %	225.00 %

### ACTUARIAL GAINS AND LOSSES

When the actual plan experience differs from the actuarial assumptions, an actuarial gain or loss is the result. The net actuarial gain (loss) for the past year is computed as follows:

A. Employer Normal Cost as a Percentage of Covered Payroll	
1. Last Valuation	214.29 %
2. Current Valuation	211.87
3. Difference: 1 - 2	2.42
B. Actuarial Present Value of Projected Covered Payroll	\$2,689,541
C. Net Actuarial Gain (Loss): A3 x B	65,087

Net actuarial gains in previous years are listed on the next page.

<b>Year Ending 9/30</b>	<b>Change in Employer Normal Cost</b>	<b>Net Gain (Loss)</b>
1981	0.32 %	\$ 15,928
1982	(0.01)	(606)
1983	0.15	10,539
1984	0.43	32,762
1985	0.33	27,655
1986	(0.12)	(11,092)
1987	0.16	14,134
1988	(0.91)	(84,378)
1989	1.55	169,981
1990	(0.46)	(53,766)
1991	2.21	327,100
1992	0.11	19,604
1993	0.59	109,133
1994	0.33	62,485
1995	0.31	62,196
1996	(0.21)	(45,383)
1997	1.50	345,105
1998	0.17	45,796
1999	(0.15)	(36,400)
2000	(0.17)	(51,506)
2001	(0.32)	(103,433)
2002	(3.31)	(1,021,680)
2003	(4.81)	(1,575,763)
2004	(3.66)	(644,028)
2005	(7.95)	(1,427,151)
2006	(0.54)	(85,715)
2007	1.13	155,786
2008	(5.01)	(573,359)
2009	(15.71)	(1,570,046)
2010	(14.77)	(1,286,846)
2011	(24.63)	(1,171,812)
2012	(9.37)	(373,251)
2013	20.80	747,902
2014	(45.78)	(1,408,090)
2015	2.42	65,087

The fund earnings and salary increase assumptions have considerable impact on the cost of the Plan so it is important that they are in line with the actual experience. The following table shows the actual fund earnings and salary increase rates compared to the assumed rates for the last few years:

Year Ending	Investment Return		Salary Increases	
	Actual	Assumed	Actual	Assumed
9/30/1987	7.4 %	8.0 %	19.4 %	8.0 %
9/30/1988	6.9	8.0	5.7	8.0
9/30/1989	10.1	8.0	9.9	8.0
9/30/1990	5.5	8.0	13.9	8.0
9/30/1991	15.0	8.0	4.2	8.0
9/30/1992	10.3	8.0	13.1	8.0
9/30/1993	8.7	8.0	3.6	8.0
9/30/1994	5.9	8.0	7.8	8.0
9/30/1995	8.9	8.0	7.2	7.3
9/30/1996	8.4	8.0	7.0	7.3
9/30/1997	10.1	8.0	2.7	7.3
9/30/1998	8.5	8.0	9.1	7.3
9/30/1999	10.7	8.0	5.4	7.3
9/30/2000	7.2	8.0	10.1	7.3
9/30/2001	7.3	8.0	3.7	7.3
9/30/2002	1.3	8.0	5.0	7.3
9/30/2003	2.8	8.0	15.4	7.3
9/30/2004	2.9	8.0	5.7	7.3
9/30/2005	3.2	8.0	13.6	7.3
9/30/2006	5.0	8.0	0.2	7.3
9/30/2007	7.8	8.0	0.0	5.0
9/30/2008	3.8	8.0	6.8	5.0
9/30/2009	(1.2)	8.0	1.7	5.0
9/30/2010	4.4	7.75	4.7	5.0
9/30/2011	3.9	7.50	3.4	5.0
9/30/2012	6.1	7.50	0.9	5.0
9/30/2013	7.2	7.50	0.6	5.0
9/30/2014	7.8	7.50	0.3	5.0
9/30/2015	6.2	7.50	3.8	6.8
Averages	6.6 %	---	6.3 %	---

The actual investment return rates shown above are based on the actuarial value of assets. The actual salary increase rates shown above are the increases received by those active members who were included in the actuarial valuation both at the beginning and the end of each period.

<b>Actual (A) Compared to Expected (E) Decrements Among Active Employees</b>													
<b>Year Ended</b>	<b>Number Added During Year</b>		<b>Normal &amp; DROP Retirement</b>		<b>Disability Retirement</b>		<b>Death</b>		<b>Terminations</b>				<b>Active Members End of Year</b>
	<b>A</b>	<b>E</b>	<b>A</b>	<b>E</b>	<b>A</b>	<b>E</b>	<b>A</b>	<b>E</b>	<b>Vested</b>	<b>Other</b>	<b>Totals</b>		
									<b>A</b>	<b>A</b>	<b>A</b>	<b>E</b>	
9/30/2002	3	6	1	5	1	0	0	0	0	4	4	2	<b>55</b>
9/30/2003	5	5	0	5	1	0	0	0	1	3	4	2	<b>55</b>
9/30/2004	0	0	6	4	0	0	0	0	2	15	17	2	<b>32</b>
9/30/2005	0	0	3	4	0	0	0	0	0	0	0	1	<b>29</b>
9/30/2006	0	0	2	2	0	0	0	0	0	0	0	1	<b>27</b>
9/30/2007	0	0	3	2	0	0	0	0	0	0	0	1	<b>24</b>
9/30/2008	0	0	2	3	0	0	0	0	0	0	0	0	<b>22</b>
9/30/2009	0	0	1	2	1	0	0	0	0	0	0	0	<b>20</b>
9/30/2010	0	0	7	2	1	0	0	0	0	0	0	0	<b>12</b>
9/30/2011	0	0	3	2	0	0	0	0	0	0	0	0	<b>9</b>
9/30/2012	0	0	3	2	0	0	0	0	0	0	0	0	<b>6</b>
9/30/2013	0	0	0	0	0	0	0	0	0	0	0	0	<b>6</b>
9/30/2014	0	0	0	0	0	0	0	0	0	0	0	0	<b>6</b>
9/30/2015	0	0	0	0	0	0	0	0	0	0	0	0	<b>6</b>
9/30/2016				1		0		0				0	
<b>14 Yr Totals *</b>	<b>8</b>	<b>11</b>	<b>31</b>	<b>33</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>22</b>	<b>25</b>	<b>9</b>	

\* Totals are through current Plan Year only

## RECENT HISTORY OF UAAL AND FUNDED RATIO

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) - Entry Age (b)	Unfunded AAL (UAAL) (b) - (a)	Funded Ratio (a) / (b)	Covered Payroll (c)	UAAL As % of Covered Payroll (b-a)/(c)
10/1/1991	\$ 3,637,082	\$ 3,332,311	\$ (304,771)	109.1 %	\$ 3,956,789	(7.7) %
10/1/1992	4,418,001	4,286,760	(131,241)	103.1	4,548,058	(2.9)
10/1/1993	5,463,381	5,872,846	409,465	93.0	4,880,767	8.4
10/1/1994	6,643,449	7,740,789	1,097,340	85.8	5,541,940	19.8
10/1/1995	8,159,543	9,095,864	936,321	89.7	5,787,179	16.2
10/1/1996	9,766,918	10,154,900	387,982	96.2	6,235,012	6.2
10/1/1997	11,633,049	11,432,645	(200,404)	101.8	6,348,795	(3.2)
10/1/1998	13,486,497	12,937,090	(549,407)	104.2	7,058,737	(7.8)
10/1/1999	6,457,182	6,791,291	334,109	95.1	2,486,322	13.4
10/1/2000	7,338,823	8,907,338	1,568,515	82.4	3,127,412	50.2
10/1/2001	8,441,617	10,468,767	2,027,150	80.6	3,363,326	60.3
10/1/2002	9,078,659	11,836,991	2,758,332	76.7	3,422,312	80.6
10/1/2003	10,007,071	14,193,403	4,186,332	70.5	3,952,716	105.9
10/1/2004	11,086,184	15,789,243	4,703,059	70.2	2,551,936	184.3
10/1/2005	11,880,040	18,013,806	6,133,766	65.9	2,639,110	232.4
10/1/2006	13,153,629	18,973,530	5,819,901	69.3	2,464,216	236.2
10/1/2007	16,398,190	20,432,383	4,034,193	80.3	2,155,286	187.2
10/1/2008	17,308,432	21,611,742	4,303,310	80.1	2,120,809	202.9
10/1/2009	17,390,414	23,327,575	5,937,161	74.5	1,973,855	300.8
10/1/2010	19,514,498	27,092,214	7,577,716	72.0	1,154,305	656.5
10/1/2011	20,422,091	27,958,843	7,536,752	73.0	904,863	832.9
10/1/2012	21,490,874	28,169,408	6,678,534	76.3	592,661	1,126.9
10/1/2013	22,939,578	28,219,837	5,280,259	81.3	601,711	877.5
10/1/2014	22,279,025	28,202,909	5,923,884	79.0	600,779	986.0
10/1/2015	23,236,220	29,040,706	5,804,486	80.0	621,466	934.0

Note: All three groups combined prior to 10/1/99.

## ACTUARIAL ASSUMPTIONS AND COST METHOD

### Valuation Method

**Actuarial Cost Method** - Normal cost and the allocation of benefit values between service rendered before and after the valuation date were determined using the **Aggregate Method**. The excess of the Actuarial Present Value of Projected Benefits of the group included in the valuation, over the sum of the Actuarial Value of Assets and the Actuarial Present Value of Future Member Contributions (if any) is allocated as a level percentage of earnings of the group between the valuation date and the assumed retirement age. This allocation is performed for the group as a whole, not as a sum of individual allocations. The portion of this Actuarial Present Value allocated to a specific year is called the Employer Normal Cost.

Under this method, actuarial gains and losses, plan amendments, and changes in actuarial assumptions and methods reduce or increase future Normal Costs.

**Actuarial Value of Assets** – The Actuarial Value of Assets is calculated by recognizing 20% of the difference between the Market Value of Assets and the expected Actuarial Asset Value. The Actuarial Value of Assets will be further adjusted to the extent necessary to fall within the corridor whose lower limit is 80% of the Market Value of plan assets and whose upper limit is 120% of the Market Value of plan assets. During periods when investment performance exceeds the assumed rate, Actuarial Value of Assets will tend to be less than Market Value. During periods when investment performance is less than assumed rate, Actuarial Value of Assets will tend to be greater than Market Value.

### Valuation Assumptions

*The actuarial assumptions used* in the valuation are shown in this Section.

### Economic Assumptions

*The investment return rate* assumed in the valuation is 7.25% per year, compounded annually (net after investment expenses).

The **Wage Inflation Rate** assumed in this valuation was 3% per year. The Wage Inflation Rate is defined to be the portion of total pay increases for an individual that are due to macroeconomic forces including productivity, price inflation, and labor market conditions. The wage inflation rate does not include pay changes related to individual merit and seniority effects. The assumed **real rate of return** over wage inflation is defined to be the portion of total investment return that is more than the assumed wage inflation rate. Considering other economic assumptions, the 7.25% investment return rate translates to an assumed real rate of return over wage inflation of 4.25%.

*Pay increase assumptions* for individual active members are assumed to be 5.0% per year from valuation date to the assumed retirement age. The salary increase assumption for years 12 and 18 is 10.0%. Part of the assumption is for merit and/or seniority increase, and the other 3% recognizes wage inflation, including price inflation, productivity increases, and other macroeconomic forces.

### Demographic Assumptions

*The mortality table* was the RP-2000 Combined Healthy Participant Mortality Tables for males and females. The provision for future mortality improvements is being made by using Scale AA after 2000.

Sample Attained Ages (in 2015)	Probability of Dying Next Year		Future Life Expectancy (years)	
	Men	Women	Men	Women
50	0.16 %	0.13 %	34.35	35.68
55	0.27	0.24	29.23	30.71
60	0.53	0.47	24.29	25.93
65	1.03	0.90	19.68	21.44
70	1.77	1.55	15.48	17.32
75	3.06	2.49	11.68	13.59
80	5.54	4.13	8.45	10.28

This assumption is used to measure the probabilities of each benefit payment being made after retirement. For active members, the probabilities of dying before retirement were based upon the same mortality table as members dying after retirement. For disabled retirees, the regular mortality tables are set forward 5 years in ages to reflect impaired longevity.

*The rate of retirement* was assumed to be 100% when first eligible for Normal Retirement or DROP entry.

*Rates of separation from active membership* were as shown below:

Age	Annual Rate of	
	Turnover	Disability
20	6.0%	0.14%
25	5.7	0.15
30	5.0	0.18
35	3.8	0.23
40	2.6	0.30
45	1.6	0.51
50	0.8	1.00
55	0.3	1.55
60	---	0.00

### *Changes Since Previous Valuation*

The assumed investment return rate was lowered from 7.50% to 7.25%.

## Miscellaneous and Technical Assumptions

<i>Administrative &amp; Investment Expenses</i>	The investment return assumption is intended to be the return net of investment expenses. Annual administrative expenses are assumed to be equal to the average of the expenses over the previous 2 years. Assumed administrative expenses are added to the Normal Cost.
<i>Benefit Service</i>	Fractional service based on years and completed months is used to determine the amount of benefit payable.
<i>Decrement Operation</i>	Disability and mortality decrements operate during retirement eligibility.
<i>Decrement Timing</i>	Decrements of all types are assumed to occur at the beginning of the year.
<i>Eligibility Testing</i>	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
<i>Forfeitures</i>	For vested separations from service, it is assumed that 0% of members separating will withdraw their contributions and forfeit an employer financed benefit. It was further assumed that the liability at termination is the greater of the vested deferred benefit (if any) or the member's accumulated contributions.
<i>Incidence of Contributions</i>	Employer contributions are assumed to be made at the end of each calendar quarter. Member contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.
<i>Marriage Assumption</i>	100% of males and 100% of females are assumed to be married for purposes of death-in-service benefits. Male spouses are assumed to be three years older than female spouses for active member valuation purposes.
<i>Normal Form of Benefit</i>	Ten year Certain and Life annuity.
<i>Pay Increase Timing</i>	Middle of fiscal year. This is equivalent to assuming that reported pays represent amounts paid to member during the year ended on the valuation date.
<i>Service Credit Accruals</i>	It is assumed that members accrue one year of service credit per year.

## GLOSSARY

<b><i>Actuarial Accrued Liability (AAL)</i></b>	The difference between the Actuarial Present Value of Future Benefits, and the Actuarial Present Value of Future Normal Costs.
<b><i>Actuarial Assumptions</i></b>	Assumptions about future plan experience that affect costs or liabilities, such as: mortality, withdrawal, disablement, and retirement; future increases in salary; future rates of investment earnings; future investment and administrative expenses; characteristics of members not specified in the data, such as marital status; characteristics of future members; future elections made by members; and other items.
<b><i>Actuarial Cost Method</i></b>	A procedure for allocating the Actuarial Present Value of Future Benefits between the Actuarial Present Value of Future Normal Costs and the Actuarial Accrued Liability.
<b><i>Actuarial Equivalent</i></b>	Of equal Actuarial Present Value, determined as of a given date and based on a given set of Actuarial Assumptions.
<b><i>Actuarial Present Value (APV)</i></b>	The amount of funds required to provide a payment or series of payments in the future. It is determined by discounting the future payments with an assumed interest rate and with the assumed probability each payment will be made.
<b><i>Actuarial Present Value of Future Benefits (APVFB)</i></b>	The Actuarial Present Value of amounts which are expected to be paid at various future times to active members, retired members, beneficiaries receiving benefits, and inactive, non-retired members entitled to either a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would provide sufficient assets to pay all projected benefits and expenses when due.
<b><i>Actuarial Valuation</i></b>	The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan. An Actuarial Valuation for a governmental retirement system typically also includes calculations of items needed for compliance with GASB, such as the Funded Ratio and the Actuarially Determined Employer Contribution (ADEC).
<b><i>Actuarial Value of Assets</i></b>	The value of the assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets or a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the Actuarially Determined Employer Contribution (ADEC).

<b><i>Amortization Method</i></b>	A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the Amortization Payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the stream of payments increases at the rate at which total covered payroll of all active members is assumed to increase.
<b><i>Amortization Payment</i></b>	That portion of the plan contribution or ARC which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.
<b><i>Amortization Period</i></b>	The period used in calculating the Amortization Payment.
<b><i>Actuarially Determined Employer Contribution (ADEC)</i></b>	The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation, determined under GASB. The ADEC consists of the Employer Normal Cost and Amortization Payment.
<b><i>Closed Amortization Period</i></b>	A specific number of years that is reduced by one each year, and declines to zero with the passage of time. For example if the amortization period is initially set at 30 years, it is 29 years at the end of one year, 28 years at the end of two years, etc.
<b><i>Employer Normal Cost</i></b>	The portion of the Normal Cost to be paid by the employer. This is equal to the Normal Cost less expected member contributions.
<b><i>Equivalent Single Amortization Period</i></b>	For plans that do not establish separate amortization bases (separate components of the UAAL), this is the same as the Amortization Period. For plans that do establish separate amortization bases, this is the period over which the UAAL would be amortized if all amortization bases were combined upon the current UAAL payment.
<b><i>Experience Gain/Loss</i></b>	A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two actuarial valuations. To the extent that actual experience differs from that assumed, Unfunded Actuarial Accrued Liabilities emerge which may be larger or smaller than projected. Gains are due to favorable experience, e.g., the assets earn more than projected, salaries do not increase as fast as assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. On the other hand, losses are the result of unfavorable experience, i.e., actual results that produce Unfunded Actuarial Accrued Liabilities which are larger than projected.
<b><i>Funded Ratio</i></b>	The ratio of the Actuarial Value of Assets to the Actuarial Accrued Liability.

<b><i>GASB</i></b>	Governmental Accounting Standards Board.
<b><i>GASB No. 67 and GASB No. 68</i></b>	These are the governmental accounting standards that set the accounting rules for public retirement systems and the employers that sponsor or contribute to them. Statement No. 68 sets the accounting rules for the employers that sponsor or contribute to public retirement systems, while Statement No. 67 sets the rules for the systems themselves.
<b><i>Normal Cost</i></b>	The annual cost assigned, under the Actuarial Cost Method, to the current plan year.
<b><i>Open Amortization Period</i></b>	An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. In other words, if the initial period is set as 30 years, the same 30-year period is used in determining the Amortization Period each year. In theory, if an Open Amortization Period is used to amortize the Unfunded Actuarial Accrued Liability, the UAAL will never completely disappear, but will become smaller each year, either as a dollar amount or in relation to covered payroll.
<b><i>Unfunded Actuarial Accrued Liability</i></b>	The difference between the Actuarial Accrued Liability and Actuarial Value of Assets.
<b><i>Valuation Date</i></b>	The date as of which the Actuarial Present Value of Future Benefits are determined. The benefits expected to be paid in the future are discounted to this date.

**SECTION C**  
**PENSION FUND INFORMATION**

**SUMMARY OF ASSETS AT MARKET VALUE**

Item	September 30	
	2015	2014
A. Cash and Cash Equivalents (Operating Cash)	\$ -	\$ -
B. Receivables:		
1. Member Contributions (by BSO)	\$ 1,876	\$ -
2. Employee loan receivable	-	50,406
3. BSO Contributions	-	-
4. State Contributions	-	-
5. Investment Income and Other Receivables	39,707	41,516
6. Total Receivables	\$ 41,583	\$ 91,922
C. Investments		
1. Short-Term Investments	\$ 438,353	\$ 766,185
2. Domestic Equities	12,980,086	14,210,223
3. International Equities	1,839,638	2,080,631
4. Domestic Fixed Income	6,981,533	7,203,856
5. International Fixed Income	-	-
6. Real Estate	2,900,324	2,572,713
7. Private Equity	-	-
8. Total Investments	\$ 25,139,934	\$ 26,833,608
D. Liabilities		
1. Benefits Payable	\$ -	\$ -
2. Accrued Expenses and Other Payables	(29,208)	(71,851)
3. Total Liabilities	\$ (29,208)	\$ (71,851)
E. Total Market Value of Assets Available for Benefits	\$ 25,152,309	\$ 26,853,679
F. Reserves		
1. State Contribution Reserve	\$ -	\$ -
2. Prepaid City Contributions	(13,264)	(60,257)
3. Prepaid BSO Contributions	(392,061)	(1,464,143)
4. DROP Accounts	(2,870,590)	(2,728,536)
5. Total Reserves	\$ (3,275,915)	\$ (4,252,936)
G. Market Value Net of Reserves	\$ 21,876,394	\$ 22,600,743
H. Allocation of Investments		
1. Short-Term Investments	1.74%	2.86%
2. Domestic Equities	51.63%	52.95%
3. International Equities	7.32%	7.75%
4. Domestic Fixed Income	27.77%	26.85%
5. International Fixed Income	0.00%	0.00%
6. Real Estate	11.54%	9.59%
7. Private Equity	0.00%	0.00%
8. Total Investments	100.00%	100.00%

## RECONCILIATION OF PLAN ASSETS

Item	September 30	
	2015	2014
A. Market Value of Assets at Beginning of Year	\$ 26,853,679	\$ 24,778,428
B. Revenues and Expenditures		
1. Contributions		
a. Employee Contributions (by BSO)	\$ 45,583	\$ 43,899
b. City Contributions	-	68,240
c. State Contributions	261,740	263,432
d. BSO Contributions	-	921,133
e. Buy-Back Contributions	47,315	-
f. Total	<u>\$ 354,638</u>	<u>\$ 1,296,704</u>
2. Investment Income		
a. Interest, Dividends, and Other Income	\$ 486,019	\$ 492,491
b. Realized Gains/(Losses)	832,214	1,351,660
c. Unrealized Gains/(Losses)	(1,278,435)	748,821
d. Investment Expenses	(131,755)	(129,545)
e. Net Investment Income	<u>\$ (91,957)</u>	<u>\$ 2,463,427</u>
3. Benefits and Refunds		
a. DROP Distributions	\$ (287,100)	\$ (51,085)
b. Regular Monthly Benefits	(1,599,160)	(1,568,353)
c. Partial Lump-Sum Benefits Paid	-	-
d. Total	<u>\$ (1,886,260)</u>	<u>\$ (1,619,438)</u>
4. Administrative and Miscellaneous Expenses	\$ (77,791)	\$ (65,442)
5. Transfers	\$ -	\$ -
C. Market Value of Assets at End of Year	\$ 25,152,309	\$ 26,853,679
D. Reserves		
1. State Contribution Reserve	\$ -	\$ -
2. Prepaid City Contributions	(13,264)	(60,257)
3. Prepaid BSO Contributions	(392,061)	(1,464,143)
4. DROP Accounts	(2,870,590)	(2,728,536)
5. Total Reserves	<u>\$ (3,275,915)</u>	<u>\$ (4,252,936)</u>
E. Market Value Net of Reserves	\$ 21,876,394	\$ 22,600,743

<b>RECONCILIATION OF DROP ACCOUNTS</b>	
Value at beginning of year	\$ 2,728,536
Adjustment	185
Payments credited to accounts	432,312 *
Investment Earnings credited	(2,943) *
Disbursements	(287,100)
Expenses	<u>(400)</u>
Value at end of year	2,870,590

\* Reflects change in outstanding loan balance.

<b>DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS</b>		
	<b>Year Ending 9/30/2015</b>	<b>Year Ending 9/30/2014</b>
A. Beginning of Year Assets		
1. Market Value	\$ 26,853,679	\$ 24,778,428
2. Actuarial Value	26,531,961	24,980,711
B. End of Year Market Value of Assets	25,152,309	26,853,679
C. Net of Contributions Less Disbursements	(1,609,413)	(388,176)
D. Actual Net Investment Earnings	(91,957)	2,463,427
E. Expected Investment Earnings	1,929,544	1,858,997
F. Expected Actuarial Value End of Year	26,852,092	26,451,532
G. Market Value End of Year Less Expected Actuarial Value: B - F	(1,699,783)	402,147
H. 20% of Difference	(339,957)	80,429
I. End of Year Assets		
1. Actuarial Value: F + H	26,512,135	26,531,961
2. Final Actuarial Value Within 80% to 120% of Market Value	26,512,135	26,531,961
J. LESS: Prepaid City Contributions	13,264	60,257
K. LESS: Prepaid City Contributions	392,061	1,464,143
L. LESS: DROP Accounts	2,870,590	2,728,536
M. Final Actuarial Value	23,236,220	22,279,025
N. Recognized Investment Return	1,589,587	1,939,426
O. Gain(Loss) Due to Investments	(339,957)	80,429
P. Recognized Rate of Return	6.18 %	7.82 %

### INVESTMENT RATE OF RETURN

The approximate annual rates of investment return have been calculated on two bases and are shown below:

Year Ending September 30th	Investment Rate of Return	
	Market Value	Actuarial Value
1981	11.6 %	11.6 %
1982	12.7	12.7
1983	10.6	10.6
1984	10.0	10.0
1985	10.3	10.3
1986	6.1	6.9
1987	7.7	7.4
1988	6.4	6.9
1989	12.2	10.1
1990	3.6	5.5
1991	21.2	15.0
1992	11.9	10.3
1993	8.0	8.7
1994	(1.7)	5.9
1995	19.2	8.9
1996	10.3	8.4
1997	20.1	10.1
1998	8.4	8.5
1999	10.1	10.7
2000	6.6	7.2
2001	(3.7)	7.3
2002	(7.2)	1.3
2003	13.9	2.8
2004	8.6	2.9
2005	6.9	3.2
2006	6.6	5.0
2007	11.0	7.8
2008	(12.9)	3.8
2009	(1.9)	(1.2)
2010	8.2	4.4
2011	1.9	3.9
2012	16.1	6.1
2013	12.2	7.2
2014	10.0	7.8
2015	(0.4)	6.2
<b>Average Returns:</b>		
<b>Last 5 Years</b>	7.8 %	6.2 %
<b>Last 10 Years</b>	4.8 %	5.1 %
<b>All Years</b>	7.6 %	7.2 %

**SECTION D**  
**FINANCIAL ACCOUNTING INFORMATION**

<b>FASB NO. 35 INFORMATION</b>		
<b>A. Valuation Date</b>	October 1, 2015	October 1, 2014
<b>B. Actuarial Present Value of Accumulated Plan Benefits</b>		
1. Vested Benefits		
a. Members Currently Receiving Payments	\$ 24,115,212	\$ 23,844,875
b. Terminated Vested Members	628,997	568,437
c. Other Members	<u>3,714,485</u>	<u>3,155,081</u>
d. Total	28,458,694	27,568,393
2. Non-Vested Benefits	0	0
3. Total Actuarial Present Value of Accumulated Plan Benefits: 1d + 2	28,458,694	27,568,393
4. Accumulated Contributions of Active Members	1,075,798	970,611
<b>C. Changes in the Actuarial Present Value of Accumulated Plan Benefits</b>		
1. Total Value at Beginning of Year	27,568,393	27,415,793
2. Increase (Decrease) During the Period Attributable to:		
a. Plan Amendment	0	0
b. Change in Actuarial Assumptions	684,229	0
c. Latest Member Data, Benefits Accumulated and Decrease in the Discount Period	2,237,544	2,185,426
d. Benefits Paid (Net Basis)	<u>(2,031,472)</u>	<u>(2,032,826)</u>
e. Net Increase	890,301	152,600
3. Total Value at End of Period	28,458,694	27,568,393
<b>D. Market Value of Assets</b>	21,876,394	22,600,743
<b>E. Actuarial Assumptions - See page entitled Actuarial Assumptions and Methods</b>		

**SCHEDULE OF CHANGES IN THE EMPLOYER'S  
NET PENSION LIABILITY AND RELATED RATIOS  
GASB Statement No. 67**

Fiscal year ending September 30,	<b>2016*</b>	<b>2015</b>	<b>2014</b>
<b>Total pension liability</b>			
Service Cost	\$134,806	\$130,185	\$130,185
Interest	2,286,618	2,267,290	2,218,607
Benefit Changes	-	-	-
Difference between actual & expected experience	(228,987)	(120,237)	53,154
Assumption Changes	672,552	-	-
Benefit Payments	(2,162,035)	(1,886,260)	(1,619,438)
Refunds	-	-	-
Other	-	-	-
<b>Net Change in Total Pension Liability</b>	<b>702,954</b>	<b>390,978</b>	<b>782,508</b>
<b>Total Pension Liability - Beginning</b>	<b>31,434,456</b>	<b>31,043,478</b>	<b>30,260,970</b>
<b>Total Pension Liability - Ending (a)</b>	<b>\$32,137,410</b>	<b>\$31,434,456</b>	<b>\$31,043,478</b>
<b>Plan Fiduciary Net Position</b>			
Contributions - Employer (City)	\$ 33,729	\$ -	\$ 68,240
Contributions - Employer (From State)	261,740	261,740	263,432
Contributions - Non-Employer Contributing Entity (BSO)	865,778	-	921,133
Contributions - Member	50,525	92,898	43,899
Net Investment Income	1,786,499	(91,957)	2,463,427
Benefit Payments	(2,162,035)	(1,886,260)	(1,619,438)
Refunds	-	-	-
Administrative Expense	(71,617)	(77,791)	(65,442)
Other	-	-	-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>764,619</b>	<b>(1,701,370)</b>	<b>2,075,251</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>25,152,309</b>	<b>26,853,679</b>	<b>24,778,428</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$25,916,928</b>	<b>\$25,152,309</b>	<b>\$26,853,679</b>
<b>Net Pension Liability - Ending (a) - (b)</b>	<b>6,220,482</b>	<b>6,282,147</b>	<b>4,189,799</b>
<b>Plan Fiduciary Net Position as a Percentage of Total Pension Liability</b>	<b>80.64 %</b>	<b>80.02 %</b>	<b>86.50 %</b>
<b>Covered Employee Payroll**</b>	<b>\$621,466</b>	<b>\$606,307</b>	<b>\$583,916</b>
<b>Net Pension Liability as a Percentage of Covered Employee Payroll</b>	<b>1,000.94 %</b>	<b>1,036.13 %</b>	<b>717.53 %</b>

\* These figures are estimates only. Actual figures will be provided after the end of the fiscal year.

\*\* Estimated based on valuation payroll.

**SCHEDULE OF THE EMPLOYER'S NET PENSION LIABILITY**  
**GASB Statement No. 67**

FY Ending September 30,	Total Pension Liability	Plan Net Position	Net Pension Liability	Plan Net Position as a % of Total Pension Liability	Covered Employee Payroll*	Net Pension Liability as a % of Covered Employee Payroll
2014	\$ 31,043,478	\$ 26,853,679	\$ 4,189,799	86.50%	\$ 583,916	717.53%
2015	\$ 31,434,456	\$ 25,152,309	\$ 6,282,147	80.02%	\$ 606,307	1036.13%
2016**	\$ 32,137,410	\$ 25,916,928	\$ 6,220,482	80.64%	\$ 621,466	1000.94%

\* Estimated based on valuation payroll.

\*\* **These figures are estimates only. Actual figures will be provided after the end of the fiscal year.**

**SCHEDULE OF CONTRIBUTIONS**  
**GASB Statement No. 67**

FY Ending September 30,	Actuarially Determined Contribution*	Actual Contribution*	Contribution Deficiency (Excess)	Covered Employee Payroll**	Actual Contribution as a % of Covered Employee Payroll
2014	\$ 1,048,841	\$ 1,252,805	\$ (203,964)	\$ 583,916	214.55%
2015	\$ 1,380,815	\$ 261,740 ***	\$ 1,119,075 ***	\$ 606,307	43.17%
2016****	\$ 1,566,572	\$ 1,161,247	\$ 405,325	\$ 621,466	186.86%

\* Excludes BSO pick-up contributions.

\*\* Estimated based on valuation payroll.

\*\*\* Prepaid contributions of \$1,119,075 (resulting from previous years' excess contributions) were applied to fully meet the Actuarially Determined Employer Contribution.

\*\*\*\* **These figures are estimates only. Actual figures will be provided after the end of the fiscal year.**

**NOTES TO SCHEDULE OF CONTRIBUTIONS**  
**GASB Statement No. 67**

**Valuation Date:** October 1, 2014 (October 1, 2015 for fiscal year ending September 30, 2016 estimates)

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

**Methods and Assumptions Used to Determine Contribution Rates:**

Actuarial Cost Method	Aggregate
Amortization Method	N/A
Remaining Amortization Period	N/A
Asset Valuation Method	5-year smoothed market
Inflation	3.0%
Salary Increases	5.0% to 10.0% depending on service, including inflation
Investment Rate of Return	7.50%, Effective as of October 1, 2015 the investment return assumption was lowered to 7.25%.
Retirement Age	100% when first eligible for Normal Retirement or DROP entry
Mortality	RP-2000 Combined Healthy Participant Mortality Table for males and females with mortality improvement projected to all future years after 2000 using Scale AA

**Other Information:**

Notes See Discussion of Valuation Results on Page 1

**SENSITIVITY OF THE NET PENSION LIABILITY  
TO THE SINGLE DISCOUNT RATE ASSUMPTION  
GASB Statement No. 67**

A single discount rate of 7.25% was used to measure the total pension liability. This single discount rate was based on the expected rate of return on pension plan investments of 7.25%. The projection of cash flows used to determine this single discount rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between the total actuarially determined contribution rates and the member rate. Based on these assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments (7.25%) was applied to all periods of projected benefit payments to determine the total pension liability.

Regarding the sensitivity of the net pension liability to changes in the single discount rate, the following presents the plan's net pension liability, calculated using a single discount rate of 7.25%, as well as what the plan's net pension liability would be if it were calculated using a single discount rate that is 1-percentage-point lower or 1-percentage-point higher:

**Sensitivity of the Net Pension Liability to the Single Discount Rate Assumption**

FY Ending	<b>1% Decrease</b>	<b>Current Single Discount Rate Assumption</b>	<b>1% Increase</b>
September 30,	<b>6.25%</b>	<b>7.25%</b>	<b>8.25%</b>
2016*	\$9,229,542	\$6,220,482	\$3,693,965

\* These figures are estimates only. Actual figures will be provided after the end of the fiscal year.

**SECTION E**  
**MISCELLANEOUS INFORMATION**

<b>RECONCILIATION OF MEMBERSHIP DATA</b>		
	<b>From 10/1/14 To 10/1/15</b>	<b>From 10/1/13 To 10/1/14</b>
<b>A. Active Members</b>		
1. Number Included in Last Valuation	6	6
2. New Members Included in Current Valuation	0	0
3. Non-Vested Employment Terminations	0	0
4. Vested Employment Terminations	0	0
5. Service Retirements	0	0
6. Disability Retirements	0	0
7. DROP Retirements	0	0
8. Deaths	0	0
9. Rehired Members/Transfers	0	0
10. Other - Left for BSO Plan	<u>0</u>	<u>0</u>
11. Number Included in This Valuation	6	6
<b>B. Terminated Vested Members</b>		
1. Number Included in Last Valuation	2	2
2. Additions from Active Members	0	0
3. Lump Sum Payments/Refunds	0	0
4. Payments Commenced	0	0
5. Deaths	0	0
6. Other	<u>0</u>	<u>0</u>
7. Number Included in This Valuation	2	2
<b>C. DROP Participation</b>		
1. Number Included in Last Valuation	6	6
2. Additions from Active Members	0	0
3. Payments commenced	(1)	0
4. Deaths	0	0
5. Other	<u>0</u>	<u>0</u>
6. Number Included in This Valuation	5	6
<b>D. Service Retirees, Disability Retirees and Beneficiaries</b>		
1. Number Included in Last Valuation	38	38
2. Additions from Active Members	0	0
3. Additions from Terminated Vested Members	0	0
4. Additions from DROP	1	0
5. Deaths Resulting in No Further Payments	0	0
6. Deaths Resulting in New Survivor Benefits	0	0
7. End of Certain Period - No Further Payments	0	0
8. Other	<u>0</u>	<u>0</u>
9. Number Included in This Valuation	39	38

**Cooper City Police Officers**  
**Active members**

Age Group	Years of Service						Totals
	0-4	5-9	10-14	15-19	20-24	25-29	
25-29							
Total Pay							
Avg Pay							
30-34							
Total Pay							
Avg Pay							
35-39							
Total Pay							
Avg Pay							
40-44				2			2
Total Pay				217,568			217,568
Avg Pay				108,784			108,784
45-49				1	2		3
Total Pay				94,149	202,641		296,790
Avg Pay				94,149	101,321		98,930
50-54					1		1
Total Pay					91,950		91,950
Avg Pay					91,950		91,950
55-59							
Total Pay							
Avg Pay							
60-64							
Total Pay							
Avg Pay							
65-99							
Total Pay							
Avg Pay							
<b>Total No.</b>				<b>3</b>	<b>3</b>		<b>6</b>
<b>Total Pay</b>				<b>311,717</b>	<b>294,591</b>		<b>606,308</b>
<b>Avg Pay</b>				<b>103,906</b>	<b>98,197</b>		<b>101,051</b>

**Cooper City Police Officers  
Inactive Participant Data**

<b>Age</b>	<b>Terminated Vested</b>		<b>Disabled</b>		<b>Retired</b>	
	<b>No.</b>	<b>Annual Benefits</b>	<b>No.</b>	<b>Annual Benefits</b>	<b>No.</b>	<b>Annual Benefits</b>
Under 45	0	0	1	\$23,431	0	\$0
45-49	2	\$53,736	0	0	2	166,191
50-54	0	0	2	85,640	10	733,201
55-59	0	0	0	0	7	269,083
60-64	0	0	1	43,874	9	441,955
65-69	0	0	1	19,153	5	157,786
70-74	0	0	0	0	3	81,387
75-79	0	0	0	0	0	0
80-84	0	0	0	0	3	60,646
85-89	0	0	0	0	0	0
90 & Up	0	0	0	0	0	0
<b>Total</b>	<b>2</b>	<b>\$53,736</b>	<b>5</b>	<b>\$172,098</b>	<b>39</b>	<b>\$1,910,249</b>

**SECTION F**  
**SUMMARY OF PLAN PROVISIONS**

## SUMMARY OF PLAN PROVISIONS

### A. Ordinances

Plan established under the Code of Ordinances for the City of Cooper City, Florida, Chapter 2, Article VI, Division 2 and was most recently amended under Ordinance No. 10-1-2 passed and adopted on January 26, 2010. The Plan is also governed by certain provisions of Chapter 185, Florida Statutes, Part VII, Chapter 112, Florida Statutes and the Internal Revenue Code.

### B. Effective Date

October 1, 1979

### C. Plan Year

October 1 through September 30

### D. Type of Plan

Qualified, governmental defined benefit retirement plan; for GASB purposes it is a single employer plan.

### E. Eligibility Requirements

Only officers who, on February 14, 2004, elected to remain in the Plan rather than become members of the Florida Retirement System are currently members of the Plan. Previously, all full-time police officers were eligible for membership on the first day of employment.

### F. Credited Service

Service is measured as the total length of service with the City or BSO as a police officer. Vacation time and other paid leaves of absence are included. Unpaid leaves of absences are not included. No service is credited for any periods of employment for which the member received a refund of employee contributions.

### G. Compensation

Total cash remuneration including overtime up to 300 hours per year.

### H. Average Monthly Earnings (AME)

The average of Compensation over the highest 3 years of Credited Service.

### I. Normal Retirement

Eligibility: A member may retire on the first day of the month coincident with or next following the earlier of:

- (1) age 50 and 10 years of Credited Service, or
- (2) 25 years of Credited Service regardless of age.

Benefit:	3.0% of AME multiplied by Credited Service.
Normal Form of Benefit:	10 Years Certain and Life thereafter; other options are also available.
Supplemental Benefit:	Only for members employed by the City on September 5, 2002, or hired between September 5, 2002 and March 31, 2004, and who retire with a Normal Retirement Benefit and separate from service on or after February 14, 2004.  \$9.44 multiplied by years of Credited Service with a maximum monthly payment of \$236.00. Supplemental Benefit is payable from the Normal Retirement date until the earlier of eligibility for Medicare Benefits or age 65.
COLA:	There is a cost of living adjustment in the form of a 13 <sup>th</sup> check, but only if there are cumulative actuarial gains. See Section X, 13 <sup>th</sup> Check.

#### **J. Early Retirement**

Not Applicable

#### **K. Delayed Retirement**

Same as Normal Retirement taking into account compensation earned and service credited until the date of actual retirement.

#### **L. Service Connected Disability**

Eligibility:	Any member who becomes totally and permanently disabled and unable to render useful and efficient service as a police officer resulting from an act occurring in the performance of service for the City is eligible for a disability benefit.
Benefit:	60% of AME, but no less than the accrued Normal Retirement Benefit taking into account compensation earned and service credited until the date of disability.
Normal Form of Benefit:	Paid until death or recovery from disability.
Supplemental Benefit:	Only for members employed by the City on September 5, 2002, or hired between September 5, 2002 and March 31, 2004, and who retire on Disability Benefits after their Normal Retirement date and separate from service on or after February 14, 2004.  \$9.44 multiplied by years of Credited Service with a maximum monthly payment of \$236.00. Supplemental Benefit is payable from the Normal Retirement date until the earlier of eligibility for Medicare Benefits or age 65.
COLA:	There is a cost of living adjustment in the form of a 13 <sup>th</sup> check, but only if there are cumulative actuarial gains. See Section X, 13 <sup>th</sup> Check.

### **M. Non-Service Connected Disability**

**Eligibility:** Any member with 10 years of Credited Service who becomes totally and permanently disabled and unable to render useful and efficient service as a police officer is eligible for a disability benefit.

**Benefit:** 25% of AME, but no less than the accrued Normal Retirement Benefit taking into account compensation earned and service credited until the date of disability.

**Normal Form of Benefit:** Paid until death or recovery from disability.

**Supplemental Benefit:** Only for members employed by the City on September 5, 2002, or hired between September 5, 2002 and March 31, 2004, and who retire on Disability Benefits after their Normal Retirement date and separate from service on or after February 14, 2004.

\$9.44 multiplied by years of Credited Service with a maximum monthly payment of \$236.00. Supplemental Benefit is payable from the Normal Retirement date until the earlier of eligibility for Medicare Benefits or age 65.

**COLA:** There is a cost of living adjustment in the form of a 13<sup>th</sup> check, but only if there are cumulative actuarial gains. See Section X, 13<sup>th</sup> Check.

### **N. Death in the Line of Duty**

**Eligibility:** Members are eligible for survivor benefits after the completion of 10 years of Credited Service

**Benefit:** Beneficiary will receive the member's accrued Normal Retirement Benefit as of the date of death. Benefit is payable as though the member retired on the date of death and elected the 100% Joint and Survivor option.

**Normal Form of Benefit:** Payable for the life of the beneficiary.

**Supplemental Benefit:** Not applicable to Pre-Retirement Death Benefits.

**COLA:** There is a cost of living adjustment in the form of a 13<sup>th</sup> check, but only if there are cumulative actuarial gains. See Section X, 13<sup>th</sup> Check.

The beneficiary of a plan member with less than 10 years of Credited Service at the time of death will receive a refund of the member's accumulated contributions with interest.

### **O. Other Pre-Retirement Death**

**Eligibility:** Members are eligible for survivor benefits after the completion of 10 years of Credited Service

**Benefit:** Beneficiary will receive the member's accrued Normal Retirement Benefit as of the date of death. Benefit is payable as though the member retired on the date of death

and elected the 100% Joint and Survivor option.

Normal Form  
of Benefit: Payable for the life of the beneficiary.

Supplemental  
Benefit: Not applicable to Pre-Retirement Death Benefits.

COLA: There is a cost of living adjustment in the form of a 13<sup>th</sup> check, but only if there are cumulative actuarial gains. See Section X, 13<sup>th</sup> Check.

The beneficiary of a plan member with less than 10 years of Credited Service at the time of death will receive a refund of the member's accumulated contributions with interest.

#### **P. Post Retirement Death**

Benefit determined by the form of benefit elected upon retirement.

#### **Q. Optional Forms**

In lieu of electing the Normal Form of benefit, the optional forms of benefits available to all retirees are a Single Life Annuity or the 50%, 66 2/3%, 75% and 100% Joint and Survivor with Pop-Up options.

#### **R. Vested Termination**

Eligibility: A member has earned a non-forfeitable right to Plan benefits after the completion of 10 years of Credited Service (see vesting table below).

<b>YEARS OF CREDITED SERVICE</b>	<b>% OF NORMAL RETIREMENT BENEFITS</b>
Less Than 10	0%
10 or more	100%

Benefit: The benefit is the member's vested accrued Normal Retirement Benefit as of the date of termination. Benefit begins at age 50.

Normal Form  
of Benefit: 10 Years Certain and Life thereafter; other options are also available.

Supplemental  
Benefit: Not applicable to Vested Terminations.

COLA: There is a cost of living adjustment after benefits begin in the form of a 13<sup>th</sup> check, but only if there are cumulative actuarial gains. See Section X, 13<sup>th</sup> Check.

Members terminating employment with less than 10 years of Credited Service will receive a refund of their own accumulated contributions with interest.

**S. Refunds**

Eligibility: All members terminating employment with less than 10 years of Credited Service are eligible. Optionally, vested members (those with 10 or more years of Credited Service) may elect a refund in lieu of the vested benefits otherwise due.

Benefit: Refund of the member's contributions with interest. The current rate of interest is 6%.

**T. Member Contributions**

8.13% of Compensation (paid by BSO).

**U. Employer Contributions**

Chapter 185 Premium Tax Refunds and any additional amount needed to fund the plan properly according to State laws.

**V. Premium Tax Revenues/Supplemental Retirement Benefit**

If there are additional premium tax revenues remaining in any year after all obligations and the payment of the 13<sup>th</sup> check (see Section X) have been satisfied, such additional premium tax monies received in that year shall be used to fund a Supplemental Retirement Benefit to be paid pro rata to all members who made an irrevocable written election to remain in the plan prior to the merger of services with BSO and who enter normal or disability retirement from the plan. A Supplemental Benefit credit, if any, for eligible members who have not retired and commenced receipt of normal or disability benefits shall be held in trust by the plan until the eligible member has entered normal or disability retirement.

**W. 13<sup>th</sup> Check**

Under certain conditions, the Plan will pay a Thirteenth Check to members who entered Normal Retirement or the DROP, separated from service on or after February 14, 2004, and who have been retired for at least 12 full months. The Thirteenth Check will only be payable in a year in which there is a net actuarial gain as indicated by the most recent actuarial valuation report. The Thirteenth Check will be paid from such actuarial gains. The amount payable to eligible members shall not exceed the regular monthly retirement benefit. In the event that the cumulative net actuarial gain is insufficient to pay each eligible member a full monthly benefit, the Board shall distribute the available funds on a pro-rata basis. Pursuant to State law, a Thirteenth Check will not be paid if the cumulative amount paid out exceeds the cumulative amount of net actuarial gains since the Thirteenth Check provision became effective.

**X. Deferred Retirement Option Plan**

Eligibility: A member may enter the DROP on the first day of the month coincident with or next following the earlier of:

- (1) age 50 and 10 years of Credited Service, or
- (2) 25 years of Credited Service regardless of age.

Members who meet eligibility must submit a written election to participate in the DROP.

**Benefit:** The member's Credited Service and AME are frozen upon entry into the DROP. The monthly retirement benefit as described under Normal Retirement is calculated based upon the frozen Credited Service and AME.

**Maximum  
DROP Period:** No limit

**Interest  
Credited:** The member's DROP account is credited or debited with the actual net interest rate realized by the Plan and is also debited for an administrative charge.

**Normal Form  
of Benefit:** Lump Sum; other options are also available.

**Supplemental  
Benefit:** Only for members of the DROP employed by the City on September 5, 2002, or hired between September 5, 2002 and March 31, 2004, and separate from service on or after February 14, 2004.

\$9.44 multiplied by years of Credited Service with a maximum monthly payment of \$236.00. Supplemental Benefit is payable from the Normal Retirement date until the earlier of eligibility for Medicare Benefits or age 65.

**COLA:** There is a cost of living adjustment in the form of a 13<sup>th</sup> check, but only if there are cumulative actuarial gains. See Section X, 13<sup>th</sup> Check.

#### **Y. Other Ancillary Benefits**

There are no ancillary retirement type benefits not required by statutes but which might be deemed a City of Cooper City Police Officers' Retirement Plan liability if continued beyond the availability of funding by the current funding source.

#### **Z. Changes from Previous Valuation**

There have been no changes since the last valuation.