



May 4, 2018

Pension Board
South Miami Pension Plan
c/o Ms. Edemir K. Estrada
Pension Administrator
Gabriel, Roeder, Smith & Company
One East Broward Blvd.
Suite 505
Fort Lauderdale, Florida 33301-1804

**Re: South Miami Pension Plan
October 1, 2017 Actuarial Valuation**

Dear Pension Board Members:

As requested, we are pleased to enclose sixteen (16) copies of the October 1, 2017 Actuarial Valuation Report.

We appreciate the opportunity to perform this important service on behalf of the membership.

Per our letter dated April 3, 2017, the State issued a Memorandum announcing the activation of their new online reporting portal for pension plans. Upon approval of the Actuarial Valuation Report, we will upload the required copy of the Actuarial Valuation Report along with the newly required disclosure information to the State portal.

If you should have any question concerning the above, please do not hesitate to contact us.

Sincerest regards,

A handwritten signature in black ink that reads "L. F. Wilson".

Lawrence F. Wilson, A.S.A.
Senior Consultant and Actuary

Enclosures

cc: Mr. Bradley Cassel (w/ Enclosure)
Mr. Alfredo Riverol (w/ Enclosure)
Ronald Cohen, Esq. (w/ Enclosure)



South Miami Pension Plan

ACTUARIAL VALUATION AS OF OCTOBER 1, 2017

This Valuation Determines the Annual Contribution for the Plan Year October 1, 2018 through September 30, 2019 to be paid in Fiscal Year October 1, 2018 to September 30, 2019

May 4, 2018



South Miami Pension Plan

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May 4, 2018

Pension Board
South Miami Pension Fund
c/o Ms. Edemir K. Estrada
Pension Administrator
Gabriel, Roeder, Smith & Company
One East Broward Blvd.
Suite 505
Fort Lauderdale, Florida 33301-1804

Re: October 1, 2017 Projection Actuarial Valuation

Dear Pension Board Members:

We are pleased to present our October 1, 2017 Actuarial Valuation Report for the South Miami Pension Plan (Plan). The purpose of this report is to indicate appropriate contribution levels, monitor minimum funding requirements, comment on the actuarial stability of the Plan and to satisfy State and accounting requirements. The Pension Board has retained Gabriel, Roeder, Smith & Company (GRS) to prepare an annual Actuarial Valuation.

This report consists of this commentary, detailed Tables I through XVI, the State Required Exhibit on Table XVII and a Glossary on Table XVIII. The Tables contain basic Plan cost figures plus significant details on the benefits, liabilities and experience of the Plan. We suggest you thoroughly review the report at your convenience and contact us with any questions that may arise.

Retirement Plan Costs

Our Projection Actuarial Valuation develops the required minimum Retirement Plan payment under the Florida Protection of Public Employee Retirement Benefits Act and Chapter 185. The minimum payment consists of payment of annual normal costs including expenses and amortization of the components of the unfunded actuarial accrued liability over various periods as prescribed by law (not less than normal cost). The **minimum required payment for fiscal year ending September 30, 2019** is as follows (figures in parentheses are the Plan cost expressed as a percentage of projected covered annual payroll for fiscal year beginning October 1, 2018).

General Employees Tier 1	\$ 188,814	(14.7%)
General Employees Tier 2	73,345	(7.3%)
AMSC Members	145,185	(14.7%)
Police Officers	766,458	(25.8%)
Total	<u>\$ 1,173,802</u>	(18.8%)

Total cost is to be met by Member, City and State contributions. We anticipate the following member contributions and State contributions which result in the following City contribution requirement.

	General Employees Tier 1	General Employees Tier 2	AMSC	Police Officers	Total
Members	\$ 90,195 (7.0%)	\$ 30,094 (3.0%)	\$ 68,934 (7.0%)	\$ 279,651 (9.4%)	\$ 468,873 (7.5%)
State	N/A	N/A	N/A	\$ 37,780 (1.3%)	\$ 37,780 (0.6%)
City *	\$ 98,619 (7.7%)	\$ 43,251 (4.3%)	\$ 76,251 (7.7%)	\$ 449,028 (15.1%)	\$ 667,149 (10.7%)
Total	\$ 188,814 (14.7%)	\$ 73,345 (7.3%)	\$ 145,185 (14.7%)	\$ 766,458 (25.8%)	\$ 1,173,802 (18.8%)

* Plan expenses allocated to City.

If State payments under F.S., Chapter 185 total less than \$60,249, the contribution must be increased by such deficiency – maximum \$37,780.

Changes in Actuarial Assumptions, Methods and Plan Benefits

The Plan provisions are unchanged from the October 1, 2016 Actuarial Valuation and are summarized on Table IX.

The actuarial assumptions and methods remain unchanged from the October 1, 2016 Actuarial Valuation and are outlined on Table X.

Comparison of October 1, 2016 and October 1, 2017 Valuation Results

Table II of our report provides information of a comparative nature. The left columns of the Table indicate the costs as calculated for October 1, 2016. The right columns indicate the costs as calculated for October 1, 2017.

Comparing the left and right columns of Table II shows the effect of Plan experience during the year. For **General Employees Tier 1**, the total number of active participants decreased by approximately 7% while covered payroll decreased by approximately 2%. Total normal cost increased both as a dollar amount and as a percentage of covered payroll. The unfunded actuarial accrued liability decreased both as a dollar amount and as a percentage of covered payroll. Required Member contributions decreased as a dollar amount but remained level as a percentage of covered payroll. The net City minimum funding requirement increased both as a dollar amount and as a percentage of covered payroll.

Comparing the left and right columns of Table II shows the effect of Plan experience during the year. For **General Employees Tier 2**, the total number of active participants increased by approximately 60% while covered payroll increased by approximately 56%. Total normal cost increased as a dollar amount but decreased as a

percentage of covered payroll. The unfunded actuarial accrued liability increased both as a dollar amount and as a percentage of covered payroll. Required Member contributions increased as a dollar amount but remained level as a percentage of covered payroll. The net City minimum funding requirement increased as a dollar amount but decreased as a percentage of covered payroll.

Comparing the left and right columns of Table II shows the effect of Plan experience during the year. For **AMSC Members**, the total number of active participants decreased by approximately 11% while covered payroll decreased by approximately 1%. Total normal cost decreased both as a dollar amount and as a percentage of covered payroll. The unfunded actuarial accrued liability increased both as a dollar amount and as a percentage of covered payroll. Required Member contributions decreased as a dollar amount but remained level as a percentage of covered payroll. The net City minimum funding requirement increased both as a dollar amount and as a percentage of covered payroll.

Comparing the left and right columns of Table II shows the effect of Plan experience during the year. For **Police Officers**, the total number of active participants decreased by approximately 4% while covered payroll decreased by approximately 8%. Total normal cost decreased as a dollar amount but increased as a percentage of covered payroll. The unfunded actuarial accrued liability and the required Member contributions decreased both as a dollar amount and as a percentage of covered payroll. The net City minimum funding requirement decreased as a dollar amount but increased as a percentage of covered payroll.

The ratio of Plan assets (market value) to the value of vested accrued benefits (Vested Benefit Security Ratio) is 122.6%. This is an increase from 119.1% as of October 1, 2016.

Plan Experience

Table VI indicates General Employees (Tier 1) experienced an actuarial gain of \$264,316. Police Officers experienced an actuarial gain of \$395,514. This suggests actual Plan experience was more favorable than expected for each group.

Table XV (salary, termination and investment yield) provides figures on recent Plan experience. Salary experience indicates actual salary increases during fiscal 2017 averaged 4.5% for General / AMSC Employees and 1.6% for Police Officers. Compared to the Plan's salary increase assumption of 4.6% for General / AMSC Employees and 4.5% for Police Officers, salary experience was generally a source of actuarial gain. Three, five and ten-year average annual salary average increases are 4.9%, 3.7% and 3.4%, respectively for General / AMSC Employees. Three, five and ten-year average annual salary average increases are 2.0%, 3.0% and 1.7%, respectively for Police Officers.

Employee turnover this year was 150% of the assumed turnover for both General / AMSC Employees and for Police Officers and was generally a source of actuarial gain. Three, five and ten-year average turnover is 140%, 90% and 110%, respectively for General Employees / AMSC Employees. Three, five and ten-year average turnover is 110%, 110% and 90%, respectively for Police Officers.

Smoothed actuarial value investment return of 9.544% exceeded the Plan investment return assumption of

7.375%. Investment return was a major source of actuarial gain during the previous year. The three, five and ten-year average annual smoothed actuarial value investment returns are 9.186%, 9.297% and 6.0%, respectively. The one, three, five and ten-year average annual market value investment returns are 12.987%, 7.651%, 9.903% and 5.9%, respectively.

Member Census and Financial Data

The Plan Administrator and City submitted the Member census data as of October 1, 2017 used for this valuation. This information contains name, gender, employee contributions, dates of birth, employment, participation and payroll information. Dates of termination and retirement are provided where applicable. The Plan Administrator updated information on inactive participants including retirees, beneficiaries and vested terminees.

We received information on Plan assets as of September 30, 2017 from the Plan Administrator. We do not audit the asset information that is provided to us. The Plan is responsible for the accuracy of the data.

Summary

In our opinion the benefits provided for under the current Plan will be sufficiently funded through the payment of the amount as indicated in this and future Actuarial Valuation reports. We will continue to update you on the future payment requirements for the Plan through our actuarial reports. These reports will also continue to monitor the future experience of the Plan.

The actuarial assumptions used in this Actuarial Valuation are as adopted by the Pension Board of Trustees as updated based upon an Experience Study for the period October 1, 2005 – May 31, 2013. Each assumption represents an estimate of future Plan experience. The mortality assumptions are prescribed under State statute.

If all actuarial assumptions are met and if all future minimum required contributions are paid, Plan assets will be sufficient to pay all Plan benefits, future contributions are expected to remain relatively stable as a percent of payroll and the funded status is expected to improve. Plan minimum required contributions are determined in compliance with the requirements of the Florida Protection of Public Employee Retirement Benefits Act and Police Officers Retirement Chapter 185 with normal cost determined as a level percent of covered payroll and a level percent amortization payment using a maximum amortization period of 30-years.

The Unfunded Actuarial Accrued Liability (UAAL) may not be appropriate for assessing the sufficiency of Plan assets to meet the estimated cost of settling benefit obligations but may be appropriate for assessing the need for or the amount of future contributions. The UAAL would be different if it reflected the market value of assets rather than the actuarial value of assets.

The Unfunded Actuarial Present Value of Vested Accrued Benefits and the corresponding Vested Benefit Security Ratio may be appropriate for assessing the sufficiency of Plan assets to meet the estimated cost of settling benefit obligations but may not be appropriate for assessing the need for or the amount of future contributions.

The GASB Net Pension Liability and Plan Fiduciary Net Position as a Percentage of Total Pension Liability may not

be appropriate for assessing the sufficiency of Plan assets to meet the estimated cost of settling benefit obligations but may be appropriate for assessing the need for or the amount of future contributions.

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 anticipated under 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) and changes in Plan provisions or applicable law. Due to the limited scope of the actuary's assignment, the actuary did not perform an analysis of the potential range of such future measurements. This report should not be relied on for any purpose other than the purpose described in the primary communication. Determinations of the financial results associated with the benefits described in this report in a manner other than the intended purpose may produce significantly different results.

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 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.

This report may be provided to parties other than the Pension Board only in its entirety and only with the permission of an approved representative of the Pension Board.

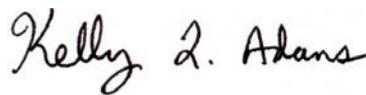
The signing actuaries are independent of the Plan sponsor.

The undersigned are Members of the American Academy of Actuaries and meet the qualification standards of the American Academy of Actuaries to render the actuarial opinions contained in this report. We are available to respond to any questions with regards to matters covered in this report.

Very truly yours,



Lawrence F. Wilson, A.S.A., E.A.
Senior Consultant and Actuary



Kelly L. Adams, A.S.A, E.A.
Consultant and Actuary

Summary of Retirement Plan Costs as of October 1, 2017General Employees Tier 1

	<u>Cost Data</u>	<u>% of Payroll</u>
A. Participant Data Summary		
1. Active employees	25	N/A
2. Terminated vested	3	N/A
3. Receiving benefits	27	N/A
4. Annual payroll of active employees	\$ 1,288,496	100.0%
B. Total Normal Costs		
1. Age retirement benefits	\$ 85,413	6.6%
2. Termination benefits	29,434	2.3%
3. Death benefits	1,285	0.1%
4. Disability benefits	9,395	0.7%
5. Estimated administrative expenses	63,287	4.9%
6. Total annual normal costs	\$ 188,814	14.7%
C. Total Actuarial Accrued Liability		
1. Age retirement benefits active employees	\$ 3,843,862	298.3%
2. Termination benefits active employees	362,580	28.1%
3. Death benefits active employees	26,821	2.1%
4. Disability benefits active employees	220,783	17.1%
5. Retired or terminated vested participants receiving benefits	7,848,463	609.1%
6. Terminated vested participants entitled to future benefits	610,140	47.4%
7. Deceased participants whose beneficiaries are receiving benefits	176,662	13.7%
8. Disabled participants receiving benefits	0	0.0%
9. Miscellaneous liability	108,713	8.4%
10. Total actuarial accrued liability	\$ 13,198,024	1024.3%
D. Market Value of Assets (Table V)	\$ 15,099,831	1171.9%
E. Smoothed Actuarial Value of Assets (Table V)	\$ 14,549,411	1129.2%
F. Unfunded Actuarial Accrued Liability (C. - E.)	\$ (1,351,387)	(104.9%)

Summary of Retirement Plan Costs as of October 1, 2017

General Employees Tier 1

	Cost Data	% of Payroll
G. Preliminary Minimum Required Contribution		
1. Total normal cost	\$ 188,814	14.7%
2. Amortization of unfunded liability	(128,421)	(10.0%)
3. Interest adjustment	2,148	0.2%
4. Total preliminary required contribution	\$ 62,541	4.9%
H. Minimum Required Contribution (F.S., 112.66 (13)) (Greater of G.1. and G.4.)		
	\$ 188,814	14.7%
I. Contribution Sources for Fiscal Year Ending September 30, 2019		
1. City	\$ 98,619	7.7%
2. Member	90,195	7.0%
3. State	N/A	N/A
4. Total minimum funding requirement	\$ 188,814	14.7%
J. Actuarial Present Value of Vested Accrued Benefits		
1. Retired, terminated vested, beneficiaries and disabled receiving benefits	\$ 8,025,125	622.8%
2. Terminated vested participants entitled to future benefits and miscellaneous	718,853	55.8%
3. Active participants entitled to future benefits	3,161,684	245.4%
4. Total actuarial present value of vested accrued benefits	\$ 11,905,662	924.0%
K. Unfunded Actuarial Present Value of Vested Accrued Benefits (J. - D., not less than zero)		
	\$ 0	0.0%
L. Vested Benefit Security Ratio (D. ÷ J.)		
	126.8%	N/A

Summary of Retirement Plan Costs as of October 1, 2017

General Employees Tier 2

	Cost Data	% of Payroll
A. Participant Data Summary		
1. Active employees	24	N/A
2. Terminated vested	0	N/A
3. Receiving benefits	0	N/A
4. Annual payroll of active employees	\$ 1,003,128	100.0%
B. Total Normal Costs		
1. Age retirement benefits	\$ 42,748	4.3%
2. Termination benefits	18,508	1.8%
3. Death benefits	637	0.1%
4. Disability benefits	3,820	0.4%
5. Estimated administrative expenses	1,000	0.1%
6. Total annual normal costs	\$ 66,713	6.7%
C. Total Actuarial Accrued Liability		
1. Age retirement benefits active employees	\$ 153,023	15.3%
2. Termination benefits active employees	46,840	4.7%
3. Death benefits active employees	2,105	0.2%
4. Disability benefits active employees	12,476	1.2%
5. Retired or terminated vested participants receiving benefits	0	0.0%
6. Terminated vested participants entitled to future benefits	0	0.0%
7. Deceased participants whose beneficiaries are receiving benefits	0	0.0%
8. Disabled participants receiving benefits	0	0.0%
9. Miscellaneous liability	1,256	0.1%
10. Total actuarial accrued liability	\$ 215,700	21.5%
D. Market Value of Assets (Table V)	\$ 169,399	16.9%
E. Smoothed Actuarial Value of Assets (Table V)	\$ 166,660	16.6%
F. Unfunded Actuarial Accrued Liability (C. - E.)	\$ 49,040	4.9%

Summary of Retirement Plan Costs as of October 1, 2017

General Employees Tier 2

	Cost Data	% of Payroll
G. Preliminary Minimum Required Contribution		
1. Total normal cost	\$ 66,713	6.7%
2. Amortization of unfunded liability	4,114	0.4%
3. Interest adjustment	2,518	0.3%
4. Total preliminary required contribution	<u>\$ 73,345</u>	7.3%
H. Minimum Required Contribution (F.S., 112.66 (13)) (Greater of G.1. and G.4.)		
	\$ 73,345	7.3%
I. Contribution Sources for Fiscal Year Ending September 30, 2019		
1. City	\$ 43,251	4.3%
2. Member	30,094	3.0%
3. State	N/A	N/A
4. Total minimum funding requirement	<u>\$ 73,345</u>	7.3%
J. Actuarial Present Value of Vested Accrued Benefits		
1. Retired, terminated vested, beneficiaries and disabled receiving benefits	\$ 0	0.0%
2. Terminated vested participants entitled to future benefits and miscellaneous	1,256	0.1%
3. Active participants entitled to future benefits	<u>80,331</u>	8.0%
4. Total actuarial present value of vested accrued benefits	\$ 81,587	8.1%
K. Unfunded Actuarial Present Value of Vested Accrued Benefits (J. - D., not less than zero)		
	\$ 0	0.0%
L. Vested Benefit Security Ratio (D. ÷ J.)		
	207.6%	N/A

Summary of Retirement Plan Costs as of October 1, 2017

	<u>AMSC</u>	
	<u>Cost Data</u>	<u>% of Payroll</u>
A. Participant Data Summary		
1. Active employees	8	N/A
2. Terminated vested	0	N/A
3. Receiving benefits	1	N/A
4. Annual payroll of active employees	\$ 984,777	100.0%
B. Total Normal Costs		
1. Age retirement benefits	\$ 93,260	9.5%
2. Termination benefits	20,548	2.1%
3. Death benefits	1,416	0.1%
4. Disability benefits	4,852	0.5%
5. Estimated administrative expenses	4,000	0.4%
6. Total annual normal costs	\$ 124,076	12.6%
C. Total Actuarial Accrued Liability		
1. Age retirement benefits active employees	\$ 1,161,534	117.9%
2. Termination benefits active employees	42,780	4.3%
3. Death benefits active employees	5,179	0.5%
4. Disability benefits active employees	21,857	2.2%
5. Retired or terminated vested participants receiving benefits	13,819	1.4%
6. Terminated vested participants entitled to future benefits	0	0.0%
7. Deceased participants whose beneficiaries are receiving benefits	0	0.0%
8. Disabled participants receiving benefits	0	0.0%
9. Miscellaneous liability	0	0.0%
10. Total actuarial accrued liability	\$ 1,245,169	126.4%
D. Market Value of Assets (Table V)	\$ 1,079,990	109.7%
E. Smoothed Actuarial Value of Assets (Table V)	\$ 1,052,987	106.9%
F. Unfunded Actuarial Accrued Liability (C. - E.)	\$ 192,182	19.5%

Summary of Retirement Plan Costs as of October 1, 2017

AMSC

	Cost Data	% of Payroll
G. Preliminary Minimum Required Contribution		
1. Total normal cost	\$ 124,076	12.6%
2. Amortization of unfunded liability	16,123	1.6%
3. Interest adjustment	4,986	0.5%
4. Total preliminary required contribution	<u>\$ 145,185</u>	14.7%
H. Minimum Required Contribution (F.S., 112.66 (13)) (Greater of G.1. and G.4.)		
	\$ 145,185	14.7%
I. Contribution Sources for Fiscal Year Ending September 30, 2019		
1. City	\$ 76,251	7.7%
2. Member	68,934	7.0%
3. State	N/A	N/A
4. Total minimum funding requirement	<u>\$ 145,185</u>	14.7%
J. Actuarial Present Value of Vested Accrued Benefits		
1. Retired, terminated vested, beneficiaries and disabled receiving benefits	\$ 13,819	1.4%
2. Terminated vested participants entitled to future benefits and miscellaneous	0	0.0%
3. Active participants entitled to future benefits	<u>1,020,337</u>	103.6%
4. Total actuarial present value of vested accrued benefits	\$ 1,034,156	105.0%
K. Unfunded Actuarial Present Value of Vested Accrued Benefits (J. - D., not less than zero)		
	\$ 0	0.0%
L. Vested Benefit Security Ratio (D. ÷ J.)		
	104.4%	N/A

Summary of Retirement Plan Costs as of October 1, 2017

Police Officers

	Cost Data	% of Payroll
A. Participant Data Summary		
1. Active employees	44	N/A
2. Terminated vested	5	N/A
3. Receiving benefits	20	N/A
4. Annual payroll of active employees	\$ 2,970,815	100.0%
B. Total Normal Costs		
1. Age retirement benefits	\$ 370,707	12.5%
2. Termination benefits	96,730	3.3%
3. Death benefits	3,150	0.1%
4. Disability benefits	14,239	0.5%
5. Estimated administrative expenses	95,268	3.2%
6. Total annual normal costs	\$ 580,094	19.5%
C. Total Actuarial Accrued Liability		
1. Age retirement benefits active employees	\$ 10,924,020	367.7%
2. Termination benefits active employees	703,553	23.7%
3. Death benefits active employees	34,293	1.2%
4. Disability benefits active employees	219,840	7.4%
5. Retired or terminated vested participants receiving benefits	10,668,504	359.1%
6. Terminated vested participants entitled to future benefits	938,505	31.6%
7. Deceased participants whose beneficiaries are receiving benefits	0	0.0%
8. Disabled participants receiving benefits	0	0.0%
9. Miscellaneous liability	25,861	0.9%
10. Total actuarial accrued liability	\$ 23,514,576	791.5%
D. Market Value of Assets (Table V)	\$ 23,100,141	777.6%
E. Smoothed Actuarial Value of Assets (Table V)	\$ 22,292,682	750.4%
F. Unfunded Actuarial Accrued Liability (C. - E.)	\$ 1,221,894	41.1%

Summary of Retirement Plan Costs as of October 1, 2017

Police Officers

	Cost Data	% of Payroll
G. Preliminary Minimum Required Contribution		
1. Total normal cost	\$ 580,094	19.5%
2. Amortization of unfunded liability	159,394	5.4%
3. Interest adjustment	26,970	0.9%
4. Total preliminary required contribution	\$ 766,458	25.8%
H. Minimum Required Contribution (F.S., 112.66 (13)) (Greater of G.1. and G.4.)	\$ 766,458	25.8%
I. Expected payroll of active employees for Fiscal Year Ending 2019 (A.4. x 1.000)	\$ 2,970,815	100.0%
J. Contribution Sources for Fiscal Year Ending September 30, 2019 (% of projected payroll of active employees for Fiscal Year Ending 2019)		
1. City	\$ 449,028	15.1%
2. Member	279,651	9.4%
3. State	37,780	1.3%
4. Total required contribution	\$ 766,458	25.8%
K. Actuarial Present Value of Vested Accrued Benefits		
1. Retired, terminated vested, beneficiaries and disabled receiving benefits	\$ 10,668,504	359.1%
2. Terminated vested participants entitled to future benefits and miscellaneous	964,366	32.5%
3. Active participants entitled to future benefits	7,526,894	253.4%
4. Total actuarial present value of vested accrued benefits	\$ 19,159,764	644.9%
L. Unfunded Actuarial Present Value of Vested Accrued Benefits (K. - D., not less than zero)	\$ 0	0.0%
M. Vested Benefit Security Ratio (D. ÷ K.)	120.6%	N/A

Summary of Retirement Plan Costs as of October 1, 2017

All Participants

	Cost Data	% of Payroll
A. Participant Data Summary		
1. Active employees	101	N/A
2. Terminated vested	8	N/A
3. Receiving benefits	48	N/A
4. Annual payroll of active employees	\$ 6,247,216	100.0%
B. Total Normal Costs		
1. Age retirement benefits	\$ 592,128	9.5%
2. Termination benefits	165,220	2.6%
3. Death benefits	6,488	0.1%
4. Disability benefits	32,306	0.5%
5. Estimated administrative expenses	163,555	2.6%
6. Total annual normal costs	\$ 959,697	15.4%
C. Total Actuarial Accrued Liability		
1. Age retirement benefits active employees	\$ 16,082,439	257.4%
2. Termination benefits active employees	1,155,753	18.5%
3. Death benefits active employees	68,398	1.1%
4. Disability benefits active employees	474,956	7.6%
5. Retired or terminated vested participants receiving benefits	18,530,786	296.6%
6. Terminated vested participants entitled to future benefits	1,548,645	24.8%
7. Deceased participants whose beneficiaries are receiving benefits	176,662	2.8%
8. Disabled participants receiving benefits	0	0.0%
9. Miscellaneous liability	135,830	2.2%
10. Total actuarial accrued liability	\$ 38,173,469	611.0%
D. Market Value of Assets (Table V)	\$ 39,449,361	631.5%
E. Smoothed Actuarial Value of Assets (Table V)	\$ 38,061,740	609.3%
F. Unfunded Actuarial Accrued Liability (C. - E.)	\$ 111,729	1.8%

Summary of Retirement Plan Costs as of October 1, 2017

All Participants

	Cost Data	% of Payroll
G. Preliminary Minimum Required Contribution		
1. Total normal cost	\$ 959,697	15.4%
2. Amortization of unfunded liability	51,210	0.8%
3. Interest adjustment	36,622	0.6%
4. Total preliminary required contribution	<u>\$ 1,047,529</u>	16.8%
H. Minimum Required Contribution (F.S., 112.66 (13))	\$ 1,173,802	18.8%
I. Expected payroll of active employees for Fiscal Year Ending 2019 ((\$1,288,496 x 1.000 + \$1,003,128 x 1.000 + \$984,777 x 1.000 + \$2,970,815 x 1.000))	\$ 6,247,216	100.0%
J. Contribution Sources for Fiscal Year Ending September 30, 2019 (% of projected payroll of active employees for Fiscal Year Ending 2019)		
1. City	\$ 667,149	10.7%
2. Member	468,873	7.5%
3. State	37,780	0.6%
4. Total required contribution	<u>\$ 1,173,802</u>	18.8%
K. Actuarial Present Value of Vested Accrued Benefits		
1. Retired, terminated vested, beneficiaries and disabled receiving benefits	\$ 18,707,448	299.5%
2. Terminated vested participants entitled to future benefits and miscellaneous	1,684,475	27.0%
3. Active participants entitled to future benefits	<u>11,789,246</u>	188.7%
4. Total actuarial present value of vested accrued benefits	\$ 32,181,169	515.1%
L. Unfunded Actuarial Present Value of Vested Accrued Benefits (K. - D., not less than zero)	\$ 0	0.0%
M. Vested Benefit Security Ratio (D. ÷ K.)	122.6%	N/A

Comparison of Cost Data of October 1, 2016 and October 1, 2017 ValuationsGeneral Employees Tier 1

	<u>October 1, 2016</u>		<u>October 1, 2017</u>	
	<u>Cost Data</u>	<u>% of Annual Compensation</u>	<u>Cost Data</u>	<u>% of Annual Compensation</u>
A. Participants				
1. Active employees	27	N/A	25	N/A
2. Terminated vested	3	N/A	3	N/A
3. Receiving benefits	27	N/A	27	N/A
4. Annual payroll of active employees	\$ 1,310,237	100.0%	\$ 1,288,496	100.0%
B. Total Normal Costs	\$ 177,781	13.6%	\$ 188,814	14.7%
C. Total Actuarial Accrued Liability	\$ 12,821,132	978.5%	\$ 13,198,024	1024.3%
D. Smoothed Actuarial Value of Assets	\$ 13,827,340	1055.3%	\$ 14,549,411	1129.2%
E. Unfunded Actuarial Accrued Liability	\$ (1,006,208)	(76.8%)	\$ (1,351,387)	(104.9%)
F. Member Cost	\$ 91,717	7.0% ¹	\$ 90,195	7.0% ²
G. City Cost (includes expenses)	\$ 86,064	6.6% ¹	\$ 98,619	7.7% ²
H. Actuarial Present Value of Vested Accrued Benefits	\$ 11,639,240	888.3%	\$ 11,905,662	924.0%
I. Vested Benefit Security Ratio	119.4%	N/A	126.8%	N/A

¹ Percent of expected 2017 - 2018 covered payroll (\$1,310,237)

² Percent of expected 2018 - 2019 covered payroll (\$1,288,496)

Comparison of Cost Data of October 1, 2016 and October 1, 2017 Valuations

	<u>General Employees Tier 2</u>					
	<u>October 1, 2016</u>		<u>October 1, 2017</u>			
	<u>Cost Data</u>	<u>% of Annual Compensation</u>	<u>Cost Data</u>	<u>% of Annual Compensation</u>		
A. Participants						
1. Active employees		15		24		
2. Terminated vested		0		0		
3. Receiving benefits		0		0		
4. Annual payroll of active employees	\$	641,117	100.0%	\$	1,003,128	100.0%
B. Total Normal Costs	\$	48,463	7.6%	\$	66,713	6.7%
C. Total Actuarial Accrued Liability	\$	0	0.0%	\$	215,700	21.5%
D. Smoothed Actuarial Value of Assets	\$	0	0.0%	\$	166,660	16.6%
E. Unfunded Actuarial Accrued Liability	\$	0	0.0%	\$	49,040	4.9%
F. Member Cost	\$	19,233	3.0% ¹	\$	30,094	3.0% ²
G. City Cost (includes expenses)	\$	29,759	4.6% ¹	\$	43,251	4.3% ²
H. Actuarial Present Value of Vested Accrued Benefits	\$	0	0.0%	\$	81,587	8.1%
I. Vested Benefit Security Ratio		100.0%	N/A		207.6%	N/A

¹ Percent of expected 2017 - 2018 covered payroll (\$641,117)

² Percent of expected 2018 - 2019 covered payroll (\$1,003,128)

Comparison of Cost Data of October 1, 2016 and October 1, 2017 Valuations

	<u>AMSC</u>			
	<u>October 1, 2016</u>		<u>October 1, 2017</u>	
	<u>Cost Data</u>	<u>% of Annual Compensation</u>	<u>Cost Data</u>	<u>% of Annual Compensation</u>
A. Participants				
1. Active employees	9	N/A	8	N/A
2. Terminated vested	0	N/A	0	N/A
3. Receiving benefits	0	N/A	1	N/A
4. Annual payroll of active employees	\$ 990,852	100.0%	\$ 984,777	100.0%
B. Total Normal Costs	\$ 134,610	13.6%	\$ 124,076	12.6%
C. Total Actuarial Accrued Liability	\$ 619,808	62.6%	\$ 1,245,169	126.4%
D. Smoothed Actuarial Value of Assets	\$ 590,352	59.6%	\$ 1,052,987	106.9%
E. Unfunded Actuarial Accrued Liability	\$ 29,456	3.0%	\$ 192,182	19.5%
F. Member Cost	\$ 69,360	7.0% ¹	\$ 68,934	7.0% ²
G. City Cost (includes expenses)	\$ 75,039	7.6% ¹	\$ 76,251	7.7% ²
H. Actuarial Present Value of Vested Accrued Benefits	\$ 619,808	62.6%	\$ 1,034,156	105.0%
I. Vested Benefit Security Ratio	95.2%	N/A	104.4%	N/A

¹ Percent of expected 2017 - 2018 covered payroll (\$990,852)

² Percent of expected 2018 - 2019 covered payroll (\$984,777)

Comparison of Cost Data of October 1, 2016 and October 1, 2017 Valuations

	<u>Police Officers</u>			
	<u>October 1, 2016</u>		<u>October 1, 2017</u>	
	<u>Cost Data</u>	<u>% of Annual Compensation</u>	<u>Cost Data</u>	<u>% of Annual Compensation</u>
A. Participants				
1. Active employees	46	N/A	44	N/A
2. Terminated vested	5	N/A	5	N/A
3. Receiving benefits	16	N/A	20	N/A
4. Annual payroll of active employees	\$ 3,214,004	100.0%	\$ 2,970,815	100.0%
B. Total Normal Costs	\$ 615,321	19.1%	\$ 580,094	19.5%
C. Total Actuarial Accrued Liability	\$ 22,167,333	689.7%	\$ 23,514,576	791.5%
D. Smoothed Actuarial Value of Assets	\$ 20,464,123	636.7%	\$ 22,292,682	750.4%
E. Unfunded Actuarial Accrued Liability	\$ 1,703,210	53.0%	\$ 1,221,894	41.1%
F. Member Cost	\$ 335,162	10.4% ¹	\$ 279,651	9.4% ²
G. City Cost (includes expenses)	\$ 461,990	14.3% ¹	\$ 449,028	15.1% ²
H. Actuarial Present Value of Vested Accrued Benefits	\$ 17,166,904	534.1%	\$ 19,159,764	644.9%
I. Vested Benefit Security Ratio	119.7%	N/A	120.6%	N/A

¹ Percent of expected 2017-2018 covered payroll (\$3,236,502)

² Percent of expected 2018-2019 covered payroll (\$2,970,815)

Comparison of Cost Data of October 1, 2016 and October 1, 2017 Valuations

<u>All Participants</u>					
		<u>October 1, 2016</u>		<u>October 1, 2017</u>	
		<u>Cost</u>	<u>% of Annual</u>	<u>Cost</u>	<u>% of Annual</u>
		<u>Data</u>	<u>Compensation</u>	<u>Data</u>	<u>Compensation</u>
A.	Participants				
	1. Active employees	97	N/A	101	N/A
	2. Terminated vested	8	N/A	8	N/A
	3. Receiving benefits	43	N/A	48	N/A
	4. Annual payroll of active employees	\$ 6,156,210	100.0%	\$ 6,247,216	100.0%
B.	Total Normal Costs	\$ 976,175	15.9%	\$ 959,697	15.4%
C.	Total Actuarial Accrued Liability	\$ 35,608,273	578.4%	\$ 38,173,469	611.0%
D.	Smoothed Actuarial Value of Assets	\$ 34,881,815	566.6%	\$ 38,061,740	609.3%
E.	Unfunded Actuarial Accrued Liability	\$ 726,458	11.8%	\$ 111,729	1.8%
F.	Member Cost	\$ 515,472	8.3% ¹	\$ 468,873	7.5% ²
G.	City Cost (includes expenses)	\$ 652,852	10.6% ¹	\$ 667,149	10.7% ²
H.	Actuarial Present Value of Vested Accrued Benefits	\$ 29,425,952	478.0%	\$ 32,181,169	515.1%
I.	Vested Benefit Security Ratio	119.1%	N/A	122.6%	N/A

¹ Percent of expected 2017-2018 covered payroll (\$6,178,708)

² Percent of expected 2018-2019 covered payroll (\$6,247,216)

**Characteristics of Participants in
Actuarial Valuation as of October 1, 2017**

	General				Total
	Tier 1	Tier 2	AMSC	Police	
A. <u>Active Plan Participants Summary</u>					
1. Active participants fully vested	20	4	7	20	51
2. Active participants partially vested	0	0	0	0	0
3. Active participants non-vested	5	20	1	24	50
4. Total active participants	25	24	8	44	101
5. Annual rate of pay of active participants	\$ 1,288,496	\$ 1,003,128	\$ 984,777	\$ 2,970,815	\$ 6,247,216
B. <u>Retired and Terminated Vested Participant Summary</u>					
1. Retired or terminated vested participants receiving benefits	26	0	1	20	47
2. Terminated vested participants entitled to future benefits	3	0	0	5	8
3. Deceased participants whose beneficiaries are receiving benefits	1	0	0	0	1
4. Disabled participants receiving benefits	0	0	0	0	0
C. <u>Projected Annual Retirement Benefits</u>					
1. Retired or terminated vested receiving benefits	\$ 654,162	\$ 0	\$ 1,398	\$ 816,814	\$ 1,472,374
2. Terminated vested entitled to future benefits	\$ 79,725	\$ 0	\$ 0	\$ 117,007	\$ 196,732
3. Beneficiaries of deceased participants	\$ 14,428	\$ 0	\$ 0	\$ 0	\$ 14,428
4. Disabled participants	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

Statement of Assets as of October 1, 2017

	General		AMSC	Police	Total
	Tier 1	Tier 2			
<u>Market Value of Assets</u>					
A. <u>General Investments</u>					
1. Cash and Cash Equivalents	\$ 202,585	\$ 2,253	\$ 14,459	\$ 309,276	\$ 528,573
2. U.S. Government Securities	1,484,412	16,510	105,949	2,266,177	3,873,048
3. Common Stocks	2,114,219	23,515	150,901	3,227,670	5,516,305
4. Corporate Obligations	2,601,530	28,935	185,682	3,971,623	6,787,770
5. International Equity	195,679	2,176	13,966	298,731	510,552
6. Mutual Funds					
Equity	6,011,781	66,864	429,086	9,177,878	15,685,609
International Equity	2,468,197	27,452	176,166	3,768,068	6,439,883
7. Prepaid Insurance	693	8	49	1,059	1,809
8. Total General Investments	\$ 15,079,096	\$ 167,713	\$ 1,076,258	\$ 23,020,482	\$ 39,343,549
B. <u>Receivables</u>					
1. City Contributions	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
2. Employee Contributions	4,963	1,511	2,605	17,792	26,871
3. Share Plan Contributions	0	0	0	37,780 *	37,780 *
4. Interest and Dividends	40,369	449	2,881	61,630	105,329
5. Pending Trades	3,859	43	275	5,894	10,071
6. Total Receivables	\$ 49,191	\$ 2,003	\$ 5,761	\$ 123,096	\$ 180,051
C. <u>Payables</u>					
1. Accounts Payable	\$ 18,317	\$ 204	\$ 1,307	\$ 27,963	\$ 47,791
2. Pending Trades	10,138	113	723	15,474	26,448
3. Total Payables	28,455	317	2,030	43,437	74,239
D. <u>Total Assets (A. + B. - C.)</u>	\$ 15,099,831	\$ 169,399	\$ 1,079,990	\$ 23,100,141	\$ 39,449,361

* State Monies received fiscal year ended September 30, 2017.

Reconciliation of Plan Assets

	General		AMSC	Police	Total
	Tier 1	Tier 2			
A. <u>Market Value of Assets</u> as of October 1, 2016	\$ 13,901,817	\$ 0	\$ 590,352	\$ 20,556,965	\$ 35,049,134
B. <u>Receipts During Year</u>					
1. Contributions					
a. Members	\$ 95,014	\$ 105,733	\$ 354,785	\$ 354,595	\$ 910,127
b. City	95,543	54,230	37,250	456,910	643,933
c. State	0	0	0	37,780	37,780
d. Total	\$ 190,557	\$ 159,963	\$ 392,035	\$ 849,285	\$ 1,591,840
2. Investment income					
a. Interest, dividends and other	\$ 304,859	\$ 1,781	\$ 17,558	\$ 458,915	\$ 783,113
b. Investment expenses	(48,847)	(285)	(2,813)	(73,532)	(125,477)
c. Net interest and dividends	\$ 256,012	\$ 1,496	\$ 14,745	\$ 385,383	\$ 657,636
3. Realized and unrealized gain / (loss)					
a. Realized gain / (loss)	\$ 311,822	\$ 1,821	\$ 17,959	\$ 469,396	\$ 800,998
b. Unrealized gain / (loss)	1,200,599	7,013	69,148	1,807,299	3,084,059
c. Net realized and unrealized gain/(loss)	\$ 1,512,421	\$ 8,834	\$ 87,107	\$ 2,276,695	\$ 3,885,057
4. Total receipts during period	\$ 1,958,990	\$ 170,293	\$ 493,887	\$ 3,511,363	\$ 6,134,533
C. <u>Disbursements During Year</u>					
1. Benefit payments	\$ 673,614	\$ 0	\$ 582	\$ 698,415	\$ 1,372,611
2. Contribution refunds	23,691	522	0	173,927	198,140
3. Administrative expenses	63,671	372	3,667	95,845	163,555
4. Total disbursements during period	\$ 760,976	\$ 894	\$ 4,249	\$ 968,187	\$ 1,734,306
D. <u>Market Value of Assets</u> as of October 1, 2017	\$ 15,099,831	\$ 169,399	\$ 1,079,990	\$ 23,100,141	\$ 39,449,361
E. <u>Estimated expenses to be paid by the City</u> as of October 1, 2017					
1. Administrative	\$ 63,287	\$ 1,000	\$ 4,000	\$ 95,268	\$ 163,555
2. Investment	\$ 48,847	\$ 285	\$ 2,813	\$ 73,532	\$ 125,477

All Participants

Development of Smoothed Actuarial Value of Assets as of September 30

	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>
A. Preliminary smoothed actuarial value from prior year	\$ 32,072,548	\$ 34,881,815	\$ 38,061,740			
B. Market value beginning of year	\$ 32,087,589	\$ 35,049,134	\$ 39,449,361			
C. Market value end of year	\$ 35,049,134	\$ 39,449,361				
D. Non-investment net cash flow	\$ (347,292)	\$ (142,466)				
E. Investment return						
1. Total market value return: C. - B. - D.	\$ 3,308,837	\$ 4,542,693				
2. Amount for immediate recognition (7.375%)	2,353,654	2,579,620				
3. Amount for phased-in recognition: E.1. - E.2.	955,183	1,963,073				
F. Phased-in recognition of investment return						
1. Current year: 20% of E.3.	\$ 191,037	\$ 392,615				
2. First prior year	(471,622)	191,037	392,615			
3. Second prior year	187,293	(471,622)	191,037	392,615		
4. Third prior year	443,449	187,293	(471,622)	191,037	392,615	
5. Fourth prior year	452,748	443,448	187,297	(471,621)	191,035	392,613
6. Total phased-in recognition of investment return	\$ 802,905	\$ 742,771	\$ 299,327	\$ 112,031	\$ 583,650	\$ 392,613
G. Smoothed actuarial value end of year						
1. Preliminary actuarial value end of year:						
A. + D. + E.2. + F.6.	\$ 34,881,815	\$ 38,061,740				
2. Upper corridor limit: 120% of C.	42,058,961	47,339,233				
3. Lower corridor limit: 80% of C.	28,039,307	31,559,489				
4. Smoothed actuarial value end of year:						
G.1., not more than G.2., nor less than G.3.	\$ 34,881,815	\$ 38,061,740				
H. Difference between market value and actuarial value	\$ 167,319	\$ 1,387,621				
I. Smoothed actuarial value rate of return	9.896%	9.544%				
J. Market value rate of return	10.368%	12.987%				

Allocation of Smoothed Actuarial Value of Assets for Budgeting Purposes

	General		AMSC	Police	Total
	Tier 1	Tier 2			
A. <u>Smoothed Value as of October 1, 2016</u>	\$ 13,827,340	\$ 0	\$ 590,352	\$ 20,464,123	\$ 34,881,815
B. <u>Receipts During Period</u>					
1. Member Contributions	\$ 95,014	\$ 105,733	\$ 354,785	\$ 354,595	\$ 910,127
2. City Contributions	95,543	54,230	37,250	456,910	643,933
3. State Contributions	0	0	0	37,780	37,780
4. Net Investment Return	<u>1,292,490</u>	<u>7,591</u>	<u>74,849</u>	<u>1,947,461</u>	<u>3,322,391</u>
5. Total Receipts During Period	\$ 1,483,047	\$ 167,554	\$ 466,884	\$ 2,796,746	\$ 4,914,231
C. <u>Disbursements During Period</u>					
1. Benefit Payments	\$ 673,614	\$ 0	\$ 582	\$ 698,415	\$ 1,372,611
2. Contribution Refunds	23,691	522	0	173,927	198,140
3. Administrative Expenses	<u>63,671</u>	<u>372</u>	<u>3,667</u>	<u>95,845</u>	<u>163,555</u>
4. Total Disbursements During Period	\$ 760,976	\$ 894	\$ 4,249	\$ 968,187	\$ 1,734,306
D. <u>Smoothed Value as of September 30, 2017</u>	\$ 14,549,411	\$ 166,660	\$ 1,052,987	\$ 22,292,682	\$ 38,061,740

Actuarial Gain / (Loss) for
Plan Year Ended September 30, 2017

(General Employees Tier 1)

A. Derivation of Actuarial Gain / (Loss)

1. City normal cost previous actuarial valuation	\$	86,064
2. Unfunded actuarial accrued liability previous actuarial valuation		(1,006,208)
3. City contributions previous year		95,543
4. Interest on:		
(a) Normal cost	\$	6,347
(b) Unfunded actuarial accrued liability		(74,208)
(c) Contributions		3,523
(d) Net total: (a) + (b) - (c)		(71,384)
5. Expected unfunded actuarial accrued liability current year (1. + 2. - 3. + 4.)	\$	(1,087,071)
6. Actual unfunded actuarial accrued liability current year		(1,351,387)
7. Actuarial gain / (loss): (5. - 6.)	\$	264,316

B. Approximate Portion of Gain / (Loss)

Due to Investments

1. Smoothed actuarial value of assets previous year	\$	13,827,340
2. Contributions during year		190,557
3. Benefits and admin expenses during year		760,976
4. Expected appreciation for period		998,732
5. Expected smoothed actuarial value of assets current year (1. + 2. - 3. + 4.)	\$	14,255,653
6. Actual smoothed actuarial value of assets current year		14,549,411
7. Approximate gain / (loss) due to investments: (6. - 5.)	\$	293,758

C. Approximate Portion of Gain / (Loss)

Due to Liabilities: A. - B.

\$ (29,442)

Actuarial Gain / (Loss) for
Plan Year Ended September 30, 2017

(Police Officers)

A. Derivation of Actuarial Gain / (Loss)

1. City / State normal cost previous actuarial valuation		\$		280,159
2. Unfunded actuarial accrued liability previous actuarial valuation				1,703,210
3. Contributions previous year				
(a) City	\$	456,910		
(b) State		37,780		
(c) Total			\$	494,690
4. Interest on:				
(a) Normal cost	\$	20,662		
(b) Unfunded actuarial accrued liability		125,612		
(c) Contributions		17,545		
(d) Net total: (a) + (b) - (c)			\$	128,729
5. Expected unfunded actuarial accrued liability current year (1. + 2. - 3. + 4.)			\$	1,617,408
6. Actual unfunded actuarial accrued liability current year				1,221,894
7. Actuarial gain / (loss): (5. - 6.)			\$	395,514

B. Approximate Portion of Gain / (Loss)

Due to Investments

1. Smoothed actuarial value of assets previous year		\$		20,464,123
2. Contributions during year				849,285
3. Benefits and admin expenses during year				968,187
4. Expected appreciation for period				1,504,148
5. Expected smoothed actuarial value of assets current year (1. + 2. - 3. + 4.)			\$	21,849,369
6. Actual smoothed actuarial value of assets current year				22,292,682
7. Approximate gain / (loss) due to investments: (6. - 5.)			\$	443,313

C. Approximate Portion of Gain / (Loss)

Due to Liabilities: A. - B.

\$ (47,799)

Amortization of Unfunded Actuarial Accrued Liability**A. Unfunded Actuarial Accrued Liability**

<u>Date</u>	<u>General Employees</u>		<u>General Employees</u>	
	<u>Tier 1</u>		<u>Tier 2</u>	
	<u>Unfunded Liability</u>	<u>Amortization Payment</u>	<u>Unfunded Liability</u>	<u>Amortization Payment</u>
October 1, 2017	\$ (1,351,387)	\$ (128,421)	\$ 49,040	\$ 4,114
October 1, 2018	\$ (1,313,160)	\$ (128,421)	\$ 48,239	\$ 4,114
October 1, 2019	\$ (1,272,114)	\$ (128,421)	\$ 47,379	\$ 4,114
October 1, 2020	\$ (1,228,040)	\$ (128,421)	\$ 46,456	\$ 4,114
October 1, 2021	\$ (1,180,716)	\$ (128,421)	\$ 45,465	\$ 4,114
...				
October 1, 2047	\$ 0	\$ 0	\$ 0	\$ 0
<u>Date</u>	<u>AMSC</u>		<u>Police Officers</u>	
	<u>Unfunded Liability</u>	<u>Amortization Payment</u>	<u>Unfunded Liability</u>	<u>Amortization Payment</u>
October 1, 2017	\$ 192,182	\$ 16,123	\$ 1,221,894	\$ 159,394
October 1, 2018	\$ 189,043	\$ 16,123	\$ 1,140,859	\$ 159,394
October 1, 2019	\$ 185,673	\$ 16,123	\$ 1,053,848	\$ 159,394
October 1, 2020	\$ 182,054	\$ 16,123	\$ 960,420	\$ 159,394
October 1, 2021	\$ 178,168	\$ 16,123	\$ 860,102	\$ 159,394
...				
October 1, 2047	\$ 0	\$ 0	\$ 0	\$ 0

B. Covered Payroll History

<u>Date</u>	<u>Police Officers</u>	
	<u>Covered Payroll</u>	<u>Annual Increase</u>
October 1, 2017	\$ 2,970,815	(7.6%)
October 1, 2016	\$ 3,214,004	(0.5%)
October 1, 2015	\$ 3,229,332	3.3%
October 1, 2014	\$ 3,127,368	12.1%
October 1, 2013	\$ 2,789,742	(2.4%)
October 1, 2012	\$ 2,857,846	(6.3%)
October 1, 2011	\$ 3,050,052	(0.6%)
October 1, 2010	\$ 3,067,558	(3.6%)
October 1, 2009	\$ 3,183,318	11.4%
October 1, 2008	\$ 2,857,555	(9.9%)
October 1, 2007	\$ 3,172,573	N/A
10-Year Average Annual Increase		(0.7%)

Accounting Disclosure Exhibit

	<u>10/01/2016</u>	<u>10/01/2017</u>
I. <u>Number of Plan Members</u>		
a. Retirees and beneficiaries receiving benefits	43	48
b. Terminated Plan members entitled to deferred benefits	8	8
c. Active Plan members	97	101
d. Total	<u>148</u>	<u>157</u>
II. <u>Financial Accounting Standards Board Allocation</u>		
<u>As of October 1, 2017</u>		
A. <u>Statement of Accumulated Plan Benefits</u>		
1. Actuarial present value of accumulated vested Plan benefits		
a. Participants currently receiving benefits	\$ 15,913,791	\$ 18,707,448
b. Other participants	13,512,161	13,473,721
c. Total	<u>\$ 29,425,952</u>	<u>\$ 32,181,169</u>
2. Actuarial present value of accumulated non-vested Plan benefits		
	<u>\$ 1,897,862</u>	<u>\$ 1,646,167</u>
3. Total actuarial present value of accumulated Plan benefits		
	\$ 31,323,814	\$ 33,827,336
B. <u>Statement of Change in Accumulated Plan Benefits</u>		
1. Actuarial present value of accumulated Plan benefits as of October 1, 2016		
		\$ 31,323,814
2. Increase / (decrease) during year attributable to:		
a. Change in actuarial assumptions and / or Plan amendments		\$ 0
b. Benefits paid		(1,570,751)
c. Other, including benefits accumulated, increase for interest due to decrease in the discount period		<u>4,074,273</u>
d. Net increase		<u>\$ 2,503,522</u>
3. Actuarial present value of accumulated plan benefits as of October 1, 2017		
		\$ 33,827,336
C. <u>Significant Matters Affecting Calculations</u>		
1. Assumed rate of return used in determining actuarial present value		7.375%
2. Change in Plan provisions		None.
3. Change in actuarial assumptions		None.

Accounting Disclosure Exhibit

III. Net Pension Liability and Related Ratios (GASB No. 67 & No. 68)

Measurement Date	9/30/2014 ¹	9/30/2015 ¹	9/30/2016	9/30/2017	Projected 9/30/2018 ²
A. Total Pension Liability (TPL)					
Service Cost	\$ 669,181	\$ 686,435	\$ 697,537	\$ 846,884	\$ 796,141
Interest	2,299,340	2,381,731	2,460,415	2,630,646	2,806,451
Benefit Changes	0	0	0	(20,122)	0
Difference Between Actual and Expected Experience	(598,374)	(502,259)	(656,677)	(112,807)	658,417
Assumption Changes	0	0	0	566,118	0
Benefit Payments, including Refunds of Member Contributions	(1,315,113)	(1,417,586)	(1,293,782)	(1,570,751)	(1,832,063)
Net Change in Total Pension Liability	\$ 1,055,034	\$ 1,148,321	\$ 1,207,493	\$ 2,339,968	\$ 2,428,946
Total Pension Liability (TPL) - (beginning of year)	31,764,236	32,819,270	33,967,591	35,175,084	37,515,052
Total Pension Liability (TPL) - (end of year)	\$ 32,819,270	\$ 33,967,591	\$ 35,175,084	\$ 37,515,052	\$ 39,943,998
B. Plan Fiduciary Net Position					
Contributions - City and State	\$ 878,217	\$ 834,251	\$ 570,154	\$ 681,713	\$ 690,632
Contributions - Member	593,396	562,835	490,452	910,127	498,187
Net Investment Income	3,054,164	16,750	3,306,002	4,542,693	2,879,640
Benefit Payments, including Refunds of Member Contributions	(1,315,113)	(1,417,586)	(1,293,782)	(1,570,751)	(1,832,063)
Administrative Expenses	(100,780)	(135,093)	(129,291)	(163,555)	(163,555)
Other	6,784	4,454	2,835	0	0
Net Change in Plan Fiduciary Net Position	\$ 3,116,668	\$ (134,389)	\$ 2,946,370	\$ 4,400,227	\$ 2,072,841
Plan Fiduciary Net Position - (beginning of year)	29,120,485	32,237,153	32,102,764	35,049,134	39,449,361
Plan Fiduciary Net Position - (end of year)	\$ 32,237,153	\$ 32,102,764	\$ 35,049,134	\$ 39,449,361	\$ 41,522,202
C. Net Pension Liability (NPL) - (end of year): (A) - (B)	\$ 582,117	\$ 1,864,827	\$ 125,950	\$ (1,934,309)	\$ (1,578,204)
D. Plan Fiduciary Net Position as a Percentage of TPL: (B) / (A)	98.23 %	94.51 %	99.64 %	105.16 %	103.95 %
E. Covered Employee Payroll³	\$ 4,902,128	\$ 4,086,300	\$ 4,861,991	\$ 6,368,739	\$ 6,247,216
F. NPL as a Percentage of Covered Employee Payroll: (C) / (E)	11.87 %	45.64 %	2.59 %	(30.37)%	(25.26)%
G. Notes to Schedule:					
Valuation Date	10/01/2013	10/01/2014	10/01/2015	10/01/2016	10/01/2017
Reporting Date (GASB No. 68)	9/30/2015	9/30/2016	9/30/2017	9/30/2018	9/30/2019

Update procedures used to roll forward TPL to the measurement dates.

See Notes to Schedule of Contributions for a history of benefit and assumption changes. No benefit or assumption changes for measurement period ending September 30, 2018.

¹ As Reported in Plan's financial statements

² Projected - actual amounts will be available after fiscal year end

³ Reported payroll on which contributions to the Plan are based as provided under GASB No. 82

Accounting Disclosure Exhibit

IV. Schedule of Employer Contributions (GASB No. 67 & No. 68)

<u>Fiscal Year End 9/30</u>	<u>Actuarially Determined Contribution</u>	<u>Actual Contribution</u>	<u>Contribution Deficiency (Excess)</u>	<u>Covered Payroll^{1,2}</u>	<u>Actual Contribution as a % of Covered Payroll</u>
2008	\$ 769,186	\$ 769,186	\$ 0	\$ 6,365,269	12.08%
2009	843,731	843,731	0	6,204,089	13.60%
2010	1,257,246	1,257,246	0	7,619,762	16.50%
2011	1,266,587	1,273,320	(6,733)	6,830,908	18.64%
2012	1,021,975	1,021,975	0	5,423,152	18.84%
2013	860,190	860,190	0	4,861,701	17.69%
2014	878,217	878,217	0	4,902,128	17.92%
2015	834,251	834,251	0	4,086,300	20.42%
2016	570,154	570,154	0	4,861,991	11.73%
2017	680,568	681,713	(1,145)	6,368,739	10.70%
2018 ³	690,632	690,632	0	6,247,216	11.06%

¹ Projected prior to fiscal year ended September 30, 2014

² Reported payroll on which contributions to the Plan are based as provided under GASB No. 82

³ Projected - actual amounts will be available after fiscal year end

Accounting Disclosure Exhibit

V. Notes to Schedule of Contributions (GASB No. 67 & No. 68)

Valuation Date: Actuarially determined contributions are calculated as of October 1st - two year(s) prior the fiscal year end in which contributions are reported.

Methods and Assumptions Used to Determine Contribution Rates:

Actuarial Cost Method	Entry Age Normal
Amortization Method	Level Percentage of Payroll, Closed
Amortization Period	25 years for General Employees and AMSC; 30 years for Police Officers
Asset Valuation Method	5-year smoothed
Inflation	2.75%
Salary Increases	3.75% - 5.25%
Investment Rate of Return	7.375%
Payroll Growth Assumption	4.0% per year, but limited to average annual increase over most recent ten years (0.7%) for Police Officers. None for General Employees including AMSC.

Retirement Age Experience-based table of rates specific to the type of eligibility condition

Mortality General including AMSC members - healthy male participants during employment, RP 2000 Combined Male Healthy Participant Mortality Table, with 50% White Collar / 50% Blue Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy female participants during employment, RP 2000 Combined Female Healthy Participant Mortality Table, with White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB.

Police Members - healthy participants during employment, RP 2000 Combined Healthy Participant Mortality Table with separate rates for males and females, with 10% White Collar / 90% Blue Collar Adjustment for Police members and fully generational mortality improvements projected to each future decrement date with Scale BB.

General including AMSC members - healthy male participants post employment, RP 2000 Annuitant Male Mortality Table, with 50% White Collar / 50% Blue Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy female participants post employment, RP 2000 Annuitant Female Mortality Table, with White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB.

Police Members - healthy participants post employment, RP 2000 Annuitant Mortality Table with separate rates for males and females, with 10% White Collar / 90% Blue Collar Adjustment for Police members and fully generational mortality improvements projected to each future decrement date with Scale BB.

General including AMSC members - disabled male participants, RP 2000 Disabled Male Mortality Table, setback four years, without projected mortality improvements. For disabled female participants, RP 2000 Disabled Female Mortality Table, set forward two years, without projected mortality improvements.

Police members - disabled male participants, 60% RP 2000 Disabled Male Mortality Table setback four years / 40% RP 2000 Annuitant Male Mortality Table, with White Collar Adjustment and no setback, without projected mortality improvements. For disabled female participants, 60% RP 2000 Disabled Female Mortality Table set forward two years / 40% RP 2000 Annuitant Female Mortality Table, with White Collar Adjustment, without projected mortality improvements.

Cost-of-Living Increases 3.0% / 0.0%

Other Information:

Benefit Changes

2015: Re-opened Plan to General Employees effective October 1, 2016 with a new class of benefits (Tier 2); created new class of benefits for employees who hold management positions effective October 1, 2016 (AMSC); added a 10% cap on employee contributions for Tier 1 General Employees; added a 12% cap on employee contributions for Police Lieutenants and Captains; Final Average Compensation updated to the average of the best five years for Police Lieutenants and Captains; caps overtime hours at 300 hours per fiscal year for Police Lieutenants and Captains.

Accounting Disclosure Exhibit

V. Notes to Schedule of Contributions (GASB No. 67 & No. 68) (cont'd)

Benefit Changes (cont'd)

2011: Eligibility requirements updated to include only General Employees hired before October 1, 2011; Final Average Compensation updated to the average of the final 60 consecutive months of basic compensation for General Employees; Normal Retirement eligibility updated to age 60 and completion of 10 years of Credited Service for benefits accrued after September 30, 2011 for General Employees; benefit multiplier decreased to 2.25% for benefits accrued after September 30, 2011 for General Employees; cost-of-living increases eliminated for benefits accrued after September 30, 2011 for General Employees; Final Average Compensation for members covered under the Police Officers and Sergeants collective bargaining agreement updated to the average of the best five (5) years of basic compensation. 2010: Interest on refunds of accumulated member contributions eliminated for General Employees. 2009: Effective October 1, 2009 and for one fiscal year thereafter, participant contributions for non-bargaining unit employees, members of the AFSME bargaining unit and members of the Police Lieutenant and Captains bargaining unit reduced by two percent (2%).

Assumption Changes

2016: Mortality assumptions updated to the mortality assumptions used in the Florida Retirement System July 1, 2016 Actuarial Valuation. 2012: Investment return updated from 7.000% to 7.375%; withdrawal, salary increase and retirement rates updated. 2011: Payroll growth assumption eliminated for General Employees; General Employees who retire prior to age 60 but after attainment of 10 years of service (55 & 10) assumed to receive an actuarially reduced benefit payable immediately upon retirement. 2010: Investment return updated from 7.5% to 7.0%. 2009: Investment return updated from 8.0% to 7.5%; mortality, withdrawal, salary increase and retirement rates updated.

VI. Discount Rate (GASB No. 67 & No. 68)

A discount rate of 7.375% was used to measure the TPL. This discount rate was based on the expected rate of return on Plan investments of 7.375%. The projection of cash flows used to determine this discount rate assumed member contributions will be made at the current member contribution rate and employer contributions will be made at rates equal to the difference between actuarially determined current contribution rates and the member contribution rate. Based on these assumptions, the Plan's fiduciary net position was projected to be available to make all projected future expected benefit payments of current Plan members. Therefore, the long-term expected rate of return on Plan investments was applied to all periods of projected benefit payments to determine the TPL.

VII. Sensitivity of the NPL to the Discount Rate Assumption (GASB No. 67 & No. 68)

Measurement date: September 30, 2017

	1% Decrease	Current Discount Rate	1% Increase
Discount Rate	6.375%	7.375%	8.375%
NPL	\$ 3,156,524	\$ (1,934,309)	\$ (6,308,390)

Measurement date: September 30, 2018 *

	1% Decrease	Current Discount Rate	1% Increase
Discount Rate	6.375%	7.375%	8.375%
NPL	\$ 3,962,051	\$ (1,578,204)	\$ (6,092,303)

* Projected - actual amounts will be available after fiscal year end

Accounting Disclosure Exhibit

VIII. Pension Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions - Reporting Date (GASB No. 68)

Pension Expense for Fiscal Year Ending September 30, 2018 \$ (411,261)

Summary of Outstanding Deferred Inflows and Outflows of Resources as of September 30, 2018

	<u>Deferred Outflows of Resources</u>	<u>Deferred Inflows of Resources</u>
Differences between actual and expected experience on liabilities	\$ 0	\$ 900,053
Changes of assumptions or other inputs	461,281	0
Net difference between projected and actual earnings on pension Plan investments	<u>0</u>	<u>1,391,245</u>
Total	<u>\$ 461,281</u>	<u>\$ 2,291,298</u>

Projected Deferred Outflows for City Contributions to Be Recognized in Pension Expense for Fiscal Year Ending September 30, 2019 \$ 652,852

Summary of Deferred Outflows and Inflows of Resources that will be Recognized in Pension Expense in Future Years.

<u>Year Ending 30-Sep</u>	<u>Amount</u>
2019	\$ (542,477)
2020	(306,713)
2021	(668,565)
2022	(345,840)
2023	33,578
Thereafter	0

Accounting Disclosure Exhibit

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

IX. Components of Pension Expense (GASB No. 68)

Measurement Date	<u>9/30/2014</u>	<u>9/30/2015</u>	<u>9/30/2016</u>	<u>9/30/2017</u>	<u>Projected 9/30/2018 *</u>
Service Cost	\$ 669,181	\$ 686,435	\$ 697,537	\$ 846,884	\$ 796,141
Interest on Total Pension Liability	2,299,340	2,381,731	2,460,415	2,630,646	2,806,451
Current-Period Benefit Changes	0	0	0	(20,122)	0
Contributions - Member	(593,396)	(562,835)	(490,452)	(910,127)	(498,187)
Projected Earnings on Plan Investments	(2,149,941)	(2,371,917)	(2,354,317)	(2,579,620)	(2,879,640)
Administrative Expenses	100,780	135,093	129,291	163,555	163,555
Other Changes in Plan Fiduciary Net Position	(6,784)	(4,454)	(2,835)	0	0
Recognition of Beginning Deferred Outflows / (Inflows) due to Liabilities	(106,853)	(198,173)	(322,074)	(238,127)	(113,897)
Recognition of Beginning Deferred Outflows / (Inflows) due to Assets	(193,020)	278,602	88,265	(304,350)	(304,350)
Total Pension Expense	<u>\$ 19,307</u>	<u>\$ 344,482</u>	<u>\$ 205,830</u>	<u>\$ (411,261)</u>	<u>\$ (29,927)</u>

* Projected - actual amounts will be available after measurement date

Accounting Disclosure Exhibit

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

X. Recognition of Deferred Outflows and (Inflows) due to Liabilities - Measurement Date (GASB No. 68)

Recognition of Deferred Outflows due to Differences Between Actual and Expected Experience on Liabilities

Established	Initial Balance	Initial Recognition Period	Remaining Recognition Period as of 9/30/2017	Recognition Amount for 2016 / 2017	Balance as of 9/30/2017
2013 / 2014	\$ 0	5.6	1.6	\$ 0	\$ 0
2014 / 2015	0	5.5	2.5	0	0
2015 / 2016	0	5.3	3.3	0	0
2016 / 2017	0	5.4	4.4	0	0
TOTAL				\$ 0	\$ 0

Recognition of Deferred (Inflows) due to Differences Between Actual and Expected Experience on Liabilities

Established	Initial Balance	Initial Recognition Period	Remaining Recognition Period as of 9/30/2017	Recognition Amount for 2016 / 2017	Balance as of 9/30/2017
2013 / 2014	\$ (598,374)	5.6	1.6	\$ (106,853)	\$ (170,962)
2014 / 2015	(502,259)	5.5	2.5	(91,320)	(228,299)
2015 / 2016	(656,677)	5.3	3.3	(123,901)	(408,875)
2016 / 2017	(112,807)	5.4	4.4	(20,890)	(91,917)
TOTAL				\$ (342,964)	\$ (900,053)

Recognition of Deferred Outflows due to Changes of Assumptions or Other Inputs

Established	Initial Balance	Initial Recognition Period	Remaining Recognition Period as of 9/30/2017	Recognition Amount for 2016 / 2017	Balance as of 9/30/2017
2013 / 2014	\$ 0	5.6	1.6	\$ 0	\$ 0
2014 / 2015	0	5.5	2.5	0	0
2015 / 2016	0	5.3	3.3	0	0
2016 / 2017	566,118	5.4	4.4	104,837	461,281
TOTAL				\$ 104,837	\$ 461,281

Accounting Disclosure Exhibit

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

X. Recognition of Deferred Outflows and (Inflows) due to Liabilities - Measurement Date (GASB No. 68) (cont'd)

Recognition of Deferred (Inflows) due to Changes of Assumptions or Other Inputs

Established	Initial Balance	Initial Recognition Period	Remaining Recognition Period as of 9/30/2017	Recognition Amount for 2016 / 2017	Balance as of 9/30/2017
2013 / 2014	\$ 0	5.6	1.6	\$ 0	\$ 0
2014 / 2015	0	5.5	2.5	0	0
2015 / 2016	0	5.3	3.3	0	0
2016 / 2017	0	5.4	4.4	0	0
TOTAL				\$ 0	\$ 0

XI. Recognition of Deferred Outflows and (Inflows) due to Assets - Measurement Date (GASB No. 68)

Recognition of Deferred Outflows / (Inflows) due to Difference Between Projected and Actual Earnings on Pension Plan Investments

Established	Initial Balance	Initial Recognition Period	Remaining Recognition Period as of 9/30/2017	Recognition Amount for 2016 / 2017	Balance as of 9/30/2017
2013 / 2014	\$ (965,099)	5	1	\$ (193,020)	\$ (193,019)
2014 / 2015	2,358,109	5	2	471,622	943,243
2015 / 2016	(951,685)	5	3	(190,337)	(571,011)
2016 / 2017	(1,963,073)	5	4	(392,615)	(1,570,458)
TOTAL				\$ (304,350)	\$ (1,391,245)

Outline of Principal Provisions of the Retirement Plan

A. Effective Date:

October 1, 1965. Most recently amended by Ordinance 1-17-2271 adopted January 17, 2017.

B. Eligibility Requirements:

1. General Employees

Tier 1:

Regular full-time employee hired before October 1, 2011 is eligible to enter the Plan following the completion of six months of Credited Service and attainment of age 20.

Tier 2:

Regular full-time employee hired on or after October 1, 2011 and not participating in the Plan as of October 1, 2016 who elects to join or fails to make any election within ninety (90) days from effective date of Ordinance is eligible to enter the Plan as a Tier 2 employee as of the effective date of Ordinance.

Regular full-time employee hired on or after October 1, 2016 who elects to join or fails to make any election within ninety (90) days from date of hire is eligible to enter the Plan as a Tier 2 employee as of their date of hire.

2. Police Officers

Regular full-time Police Officer is eligible to enter the Plan as of date of employment.

3. Administration Management Service Class (AMSC)

Employees of the City with the following positions who do not elect to participate in a defined contribution Plan of the City:

- City Manager
- City Attorney
- City Clerk
- Assistant / Deputy City Manager
- Finance Director / Chief Financial Officer
- Chief of Police
- Planning and Zoning Director
- Building Director
- Director of Public Works
- Chief Administrative Officer (currently Finance Office Manager)
- Chief Procurement Officer (currently Purchasing Manager)
- Parks and Recreation Director

Outline of Principal Provisions of the Retirement Plan

C. Credited Service:

1. General Employees and AMSC

Continuous employment. Credited service shall exclude continuous employment prior to Plan participation as follows: (1) If employed prior to October 1, 1973, credited service shall exclude the first two years of continuous employment and any additional year of continuous employment prior to attainment of age 25. (2) If employed on or after October 1, 1973, credited service shall exclude the first six (6) months of continuous employment and continuous employment prior to age 20.

Credited service for Tier 2 employees and AMSC will be continuous employment from the date of hire for all purposes except for benefit accruals which will be from the later of October 1, 2016 or date of hire.

2. Police Officers

Continuous employment. For Police Officers who did not participate when first eligible for the Plan, Credited Service shall exclude continuous employment prior to Plan participation as follows: (1) If employed prior to October 1, 1973, Credited Service shall exclude the first two years of continuous employment and any additional year of continuous employment prior to attainment of age 25. (2) If employed on or after October 1, 1973, Credited Service shall exclude the first six (6) months of continuous employment and continuous employment prior to age 20.

D. Final Monthly Compensation (FMC):

Final Average Compensation is 1/36th of the final 36 consecutive months of compensation. For Police Officers, not less than 1/5th of the highest five (5) years out of the last (10) ten years of compensation. Compensation shall mean regular wages and salaries, excluding bonuses, vacation, sick leave and other additional compensation.

Effective October 1, 2011, Final Average Compensation for General Employees is 1/60th of the final 60 consecutive months of basic compensation, provided it is not less than the Final Average Compensation as of September 30, 2011 based on the definition above. Basic compensation shall mean base wages and salaries, excluding commissions, overtime pay, bonuses and any other forms of additional compensation earned outside of base wages.

Effective October 1, 2011, Final Average Compensation for members covered under the Police Officers and Sergeants collective bargaining agreement is the best five (5) years of basic compensation, provided it is not less than the Final Average Compensation as of September 30, 2011 based on the definition above. Basic compensation shall mean base wages and salaries, including up to 300 hours of overtime in a fiscal year and excluding payments for accrued unused sick or annual leave, extra duty or special detail work, shift differential, assignment pay, bonuses and any other forms of additional compensation earned outside of base wages.

Outline of Principal Provisions of the Retirement Plan

D. Final Monthly Compensation (FMC) (cont'd):

Effective October 1, 2016, Final Average Compensation for members covered under the Miami-Dade County Police Benevolent Association Upper-Collective Bargaining Union (Lieutenants & Captains) collective bargaining agreement is the best five (5) years of basic compensation, provided it is not less than the Final Average Compensation as of September 30, 2016 based on the definition above. Basic compensation shall mean base wages and salaries, including up to 300 hours of overtime in a fiscal year and excluding payments for accrued unused sick or annual leave, extra duty or special detail work, shift differential, assignment pay, bonuses and any other forms of additional compensation earned outside of base wages.

Final Average Compensation for Tier 2 General Employees and AMSC shall be the average of the highest eight (8) years of credit service.

E. Normal Retirement:

1. Eligibility:

a. General Employees: Attainment of age 55 and completion of ten (10) years of Credited Service for benefits accrued as of September 30, 2011.

Attainment of age 60 and completion of ten (10) years of Credited Service for benefits accrued after September 30, 2011, including increases in the accrued benefit as of September 30, 2011 due to increases in the Final Average Compensation.

Attainment of age 65 and completion of ten (10) years of Credited Service or completion of thirty-three (33) years of Credited Service regardless of age for Tier 2 General Employees.

b. Police Officers: Attainment of age 60 and completion of ten (10) years of Credited Service or completion of twenty-five (25) years of Credited Service regardless of age.

c. AMSC: Attainment of age 65 and completion of three (3) years of Credited Service or completion of thirty-three (33) years of Credited Service regardless of age.

2. Benefit:

The monthly Plan benefit is the product of:

- a. FMC,
- b. Credited Service during the appropriate period and
- c. The appropriate benefit percentage

The appropriate benefit percentages are:

<u>a. General Employees</u>	<u>For Credited Service</u>	<u>Percentage</u>
	Through September 30, 1999	2.50%
	October 1, 1999 through September 30, 2011	2.75%
	October 1, 2011 and thereafter	2.25%

Outline of Principal Provisions of the Retirement Plan

E. Normal Retirement (cont'd):

2. Benefit:

<u>b. Police Officers</u>	<u>For Credited Service</u>	<u>Percentage</u>
	Through September 30, 1995	2.00%
	October 1, 1995 through September 30, 1996	2.25%
	October 1, 1996 through September 30, 1997	2.50%
	October 1, 1997 through September 30, 2001	2.75%
	October 1, 2001 through September 30, 2002	2.80%
	October 1, 2002 through September 30, 2003	2.90%
	October 1, 2003 and thereafter	3.00%
<u>c. General Employees (Tier 2)</u>	<u>For Credited Service</u>	<u>Percentage</u>
	October 1, 2016 and thereafter	1.60%
<u>d. AMSC</u>	<u>For Credited Service</u>	<u>Percentage</u>
	October 1, 2016 and thereafter	3.00%

F. Supplemental Benefit:

A cost-of-living supplemental benefit based upon the consumer price index is provided upon retirement. The annual increase is limited to 3%.

For General Employees the cost-of-living supplemental benefit is only provided on the accrued benefit as of September 30, 2011 and does not apply to increases in this accrued benefit due to increases in the Final Average Compensation.

No cost-of-living supplemental benefit is provided for Tier 2 General Employees.

No cost-of-living supplemental benefit is provided for AMSC for benefit accruals on or after October 1, 2011.

G. Early Retirement:

1. Eligibility:

- a. Police Officers: Attainment of age 50 and completion of 15 years of Credited Service.
- b. AMSC: Attainment of age 55 and completion of 10 years of Credited Service.

2. Benefit:

- a. Police Officers: Accrued benefit based upon FMC and Credited Service as of Early Retirement Date, reduced 3% for each year that the benefit commencement date precedes Normal Retirement.

Outline of Principal Provisions of the Retirement Plan

G. Early Retirement (cont'd):

2. Benefit:

- b. AMSC: Accrued benefit based upon FMC and Credited Service as of Early Retirement Date, reduced 1/15 for each of the first five years and 1/30 for the next five years that the benefit commencement date precedes Normal Retirement.

H. Delayed Retirement:

1. Eligibility: Retirement subsequent to Normal Retirement Date.
2. Benefit: Accrued benefit based upon FMC and Credited Service as of Delayed Retirement Date.

I. Disability Retirement:

1. Eligibility: Totally and permanently disabled for a six month period while actively employed.
2. Benefit: Accrued benefit based upon FMC and Credited Service as of date of disability, actuarially reduced as for Early Retirement for early commencement.

J. Pre-Retirement Death Benefit:

The beneficiary shall receive the member's accumulated Employee Contributions.

K. Benefit Upon Termination of Service:

1. Benefit payable at Normal Retirement equal to the greater of:
- a. Accrued benefit based upon FMC and Credited Service as of date of termination times the vesting percentage shown below, or
- b. Benefit which can be supported by the accumulated Member Contributions with interest to Normal Retirement Date.

No supplemental benefit shall be payable to vested terminees.

Outline of Principal Provisions of the Retirement Plan

K. **Benefit Upon Termination of Service (cont'd):**

2. Vesting Schedule:

All employees except AMSC:

<u>Years of Credited Service</u>	<u>Vesting Percentage</u>
Less than 10	0%
10 or more years	100%

AMSC:

<u>Years of Credited Service</u>	<u>Vesting Percentage</u>
Less than 3	0%
3 or more years	100%

3. Refund Option:

A terminated member may elect to receive a refund of Accumulated Contributions without interest in lieu of receiving any other Plan benefits.

L. **Member Contributions:**

Members contribute 7.0% (3.0% for Tier 2 General Employees and 7.5% for Police Officers) of member's basic annual compensation.

Should the City contribution for General Employees be actuarially determined to exceed 7.0%, not including expenses, both the City and the General Employees (other than Tier 2 General Employees and AMSC) will share equally in the amount in excess of 7.0%. General Employees (other than Tier 2 General Employees and AMSC) Contributions are capped at 10% of basic annual compensation as of October 1, 2016.

Should the City contribution for Police Officers be actuarially determined to exceed 7.5%, not including expenses, both the City and the Police Officers will share equally in the amount in excess of 7.5% but not more than 12.0% for Police Lieutenants and Police Captains.

M. **Normal Form of Retirement Income:**

The normal form of payment shall be a life annuity with a guarantee of a refund of accumulated Employee Contributions.

N. **Changes Since Previous Actuarial Valuation:**

None.

Actuarial Assumptions and Methods
Used in the Valuation

A. MortalityGeneral Employees including AMSC Mortality Assumptions:

For healthy male participants during employment, RP 2000 Combined Male Healthy Participant Mortality Table, with 50% White Collar / 50% Blue Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy female participants during employment, RP 2000 Combined Female Healthy Participant Mortality Table, with White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB.

For healthy male participants post employment, RP 2000 Annuitant Male Mortality Table, with 50% White Collar / 50% Blue Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy female participants post employment, RP 2000 Annuitant Female Mortality Table, with White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB.

For disabled male participants, RP 2000 Disabled Male Mortality Table, setback four years, without projected mortality improvements. For disabled female participants, RP 2000 Disabled Female Mortality Table, set forward two years, without projected mortality improvements.

Sample Ages (2017)	Pre-retirement Future Life Expectancy (Years)		Post-retirement Future Life Expectancy (Years)	
	Male	Female	Male	Female
	55	30.42	33.47	29.99
60	25.49	28.45	25.32	28.35
62	23.58	26.49	23.48	26.43

Sample Ages (2037)	Pre-retirement Future Life Expectancy (Years)		Post-retirement Future Life Expectancy (Years)	
	Male	Female	Male	Female
	55	32.57	35.32	32.16
60	27.67	30.29	27.52	30.21
62	25.76	28.32	25.68	28.26

**Actuarial Assumptions and Methods
Used in the Valuation**

A. Mortality (cont'd)

Police Officer Mortality Assumptions:

For healthy participants during employment, RP-2000 Combined Healthy Participant Mortality Tables, separate rates for males and females, with 90% Blue Collar Adjustment / 10% White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB.

For healthy participants post employment, RP-2000 Annuitant Mortality Tables, separate rates for males and females, with 90% Blue Collar Adjustment / 10% White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB.

For disabled male participants, 60% RP 2000 Disabled Male Mortality Table setback four years / 40% RP 2000 Annuitant Male Mortality Table, with White Collar Adjustment and no setback, without projected mortality improvements. For disabled female participants, 60% RP 2000 Disabled Female Mortality Table set forward two years / 40% RP 2000 Annuitant Female Mortality Table, with White Collar Adjustment, without projected mortality improvements.

Sample Ages (2017)	Pre-retirement Future Life Expectancy (Years)		Post-retirement Future Life Expectancy (Years)	
	Male	Female	Male	Female
	55	29.73	32.50	29.21
60	24.84	27.46	24.64	27.31
62	22.97	25.50	22.85	25.39

Sample Ages (2037)	Pre-retirement Future Life Expectancy (Years)		Post-retirement Future Life Expectancy (Years)	
	Male	Female	Male	Female
	55	31.96	34.44	31.46
60	27.11	29.40	26.92	29.27
62	25.23	27.41	25.12	27.33

**Actuarial Assumptions and Methods
Used in the Valuation**

B. Investment Return to be Earned by Fund

7.375% (net of investment expenses), compounded annually - includes inflation at 2.75%.

C. Allowances for Expenses or Contingencies

Actual expenses paid in previous year.

D. Employee Withdrawal Rates

Withdrawal rates for males and for females were used in accordance with the following illustrative example based upon number of years of service:

<u>Service</u>	<u>Withdrawal Rates</u>	
	<u>Per 100 Employees</u>	
	<u>Police</u>	<u>General / AMSC</u>
1 - 2	12.00	20.00
3 - 6	8.00	9.25
7 - 10	8.00	5.00
11 & Over	3.50	5.00

E. Disability Rates

1985 Disability Study, Class 1 with separate rates for females was used.

F. Marital Assumptions

100% of active members are assumed to be married. Where applicable, females are assumed to be three years younger than their male spouses.

G. Salary Increase Factors

Current salary is assumed to increase in accordance with the following table based upon number of years of service - includes wage inflation of 3.25%.

<u>Service</u>	<u>Police</u>	<u>General / AMSC</u>
0 - 9	5.25%	5.25%
10 - 14	3.75%	4.75%
15 - 19	3.75%	4.25%
20 & over	3.75%	3.75%

**Actuarial Assumptions and Methods
Used in the Valuation**

H. Increase in Covered Payroll

4.0% per year, limited to average annual increase over most recent ten years (-0.7%) but not less than 0.0% for Police Officers. No increase in covered payroll is assumed for General Employees including AMSC.

I. Retirement Rates

Rates of Early Retirement for Police Officers were used in accordance with the following table.

Years Preceding	
<u>Normal Retirement</u>	<u>Police</u>
1 - 6	5%
7 - 10	10%

Rates of Normal Retirement were used in accordance with the following tables.

<u>Age</u>	<u>Police</u>	<u>General & AMSC*</u>
55 - 59	N/A	10%
60 - 61	25%	10%
62 - 64	40%	25%
65 - 66	100%	25%
67 & above	100%	100%

<u>Service</u>	<u>Police</u>
25 years	100%

* Includes Early Retirement for AMSC Employees. Rates are 25% for Tier 2 and AMSC members for each year upon meeting 33 years of service until 100% at age 67.

General Employees who retire prior to age sixty (60) but after attainment of ten (10) years of Credited Service (55 & 10) are assumed to receive an actuarially reduced benefit payable immediately upon retirement.

J. Cost of Living Increases

Future cost of living increases for General Employees (other than Tier 2 General Employees) and Police Officers are assumed to be 3.0% per annum.

K. Valuation of Assets

The method used for determining the actuarial value of assets phases in the deviation between the expected and actual return on assets at the rate of 20% per year. 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 fair market value of Plan assets and whose upper limit is 120% of the fair market value of Plan assets.

**Actuarial Assumptions and Methods
Used in the Valuation**

L. Cost Methods

Normal Retirement, Termination, Disability and Pre-Retirement Death Benefit:
Entry-Age-Actuarial Cost Method

Under this method the normal cost for each active employee is the amount which is calculated to be a level percentage of pay that would be required annually from his date of hire to his retirement age to fund his estimated benefits, assuming the Plan had always been in effect. The normal cost for the Plan is the sum of the individual normal costs for all active employees. The actuarial accrued liability as of any valuation date for each active employee or inactive employee who is eligible to receive benefits under the Plan is the excess of the actuarial present value of estimated future benefits over the actuarial present value of current and future normal costs. The unfunded actuarial accrued liability as of any valuation date is the excess of the actuarial accrued liability over the actuarial value of assets of the Plan.

M. Changes Since Previous Actuarial Valuation

None.

**Distribution by Attained Age Groups
and Service Groups as of October 1, 2017**

General Employees (including AMSC)

Attained Age Group	-----COMPLETED YEARS OF SERVICE-----							Total
	<u>0 - 4</u>	<u>5 - 9</u>	<u>10 - 14</u>	<u>15 - 19</u>	<u>20 - 24</u>	<u>25 - 29</u>	<u>30 & Over</u>	
Under 25	1	-	-	-	-	-	-	1
25 - 29	-	3	-	-	-	-	-	3
30 - 34	3	1	1	-	-	-	-	5
35 - 39	3	-	1	1	-	-	-	5
40 - 44	2	1	1	2	-	-	-	6
45 - 49	8	1	-	2	-	-	-	11
50 - 54	4	2	-	3	2	-	-	11
55 - 59	1	2	-	3	1	-	-	7
60 - 64	1	-	1	2	-	-	-	4
65 & Over	1	-	1	2	-	-	-	4
TOTAL	24	10	5	15	3	0	0	57

	<u>October 1, 2016</u>	<u>October 1, 2017</u>
Average Attained Age	47.58 years	47.98 years
Average Hire Age	35.96 years	36.55 years
Average Pay	\$ 57,690	\$ 57,481
Percent Female	39.2%	35.1%

**Table XI
(Cont'd)**

**Distribution by Attained Age Groups
and Service Groups as of October 1, 2017**

Police Officers

<u>Attained Age Group</u>	-----COMPLETED YEARS OF SERVICE-----							<u>Total</u>
	<u>0 - 4</u>	<u>5 - 9</u>	<u>10 - 14</u>	<u>15 - 19</u>	<u>20 - 24</u>	<u>25 - 29</u>	<u>30 & Over</u>	
Under 25	2	-	-	-	-	-	-	2
25 - 29	10	-	-	-	-	-	-	10
30 - 34	3	5	1	-	-	-	-	9
35 - 39	-	-	5	-	-	-	-	5
40 - 44	-	-	-	1	-	-	-	1
45 - 49	-	-	2	1	1	1	-	5
50 - 54	-	-	2	2	-	1	-	5
55 - 59	1	2	-	1	1	-	-	5
60 - 64	-	1	1	-	-	-	-	2
65 & Over	-	-	-	-	-	-	-	0
TOTAL	16	8	11	5	2	2	0	44

	<u>October 1, 2016</u>	<u>October 1, 2017</u>
Average Attained Age	39.88 years	39.65 years
Average Hire Age	28.78 years	29.11 years
Average Pay	\$ 69,870	\$ 67,519
Percent Female	19.6%	15.9%

**Statistics for Participants Entitled to Deferred Benefits
and Participants Receiving Benefits**

A. Entitled to Deferred Benefits

<u>Current Age Group</u>	<u>Count</u>	<u>Total Annual Benefit</u>	<u>Average Annual Benefit</u>
Less than 40	-	\$ -	\$ -
40 - 44	-	-	-
45 - 49	6	158,456	26,409
50 - 54	1	13,173	13,173
55 - 59	2	25,103	12,552
60 - 64	-	-	-
65 & Over	-	-	-
TOTAL	9 *	\$ 196,732	\$ 21,859

B. Receiving Benefits

<u>Current Age Group</u>	<u>Count</u>	<u>Total Annual Benefit</u>	<u>Average Annual Benefit</u>
Less than 50	-	\$ -	\$ -
50 - 54	5	225,984	45,197
55 - 59	5	126,909	25,382
60 - 64	6	248,192	41,365
65 - 69	11	307,976	27,998
70 - 74	11	354,492	32,227
75 & Over	10	223,249	22,325
TOTAL	48	\$ 1,486,802	\$ 30,975

* Includes 1 member who is both currently receiving benefits and is due deferred benefits

Reconciliation of Employee Data**General Employees (including AMSC)****A. Active Participants**

1. Active participants previous year	51
2. Retired during period	(1)
3. Died during period	0
4. Disabled during period	0
5. Terminated during period	(5)
6. New active participants	12
7. Re-instated during period	0
8. Transfer to Police	0
9. Transfer to 401(k) Plan	0
10. Adjustments	0
11. Active participants current year	<u>57</u>

B. Participants Receiving Benefits

1. Participants receiving benefits previous year	27
2. New retired participants	1
3. New terminated vested receiving benefits	0
4. New disabled receiving benefits	0
5. New beneficiaries receiving benefits	1
6. Died or ceased payment during period	(1)
7. Adjustments	0
8. Retired or terminated vested receiving benefits current year	<u>28</u>

C. Terminated Vested Participants Entitled to Future Benefits

1. Terminated vested entitled previous year	3
2. Died during period	0
3. Commenced receiving benefits during period	0
4. New terminated vested	0
5. Terminated vested paid lump sum	0
6. Terminated vested entitled current year	<u>3*</u>

* Plus 1 member who is both currently receiving benefits and is due deferred benefits

Reconciliation of Employee Data

Police Officers

A. Active Participants

1. Active participants previous year	46
2. Retired during period	(3)
3. Died during period	0
4. Disabled during period	0
5. Terminated during period	(4)
6. New active participants	5
7. Re-instated during period	0
8. Transfer from General	0
9. Active participants current year	<u>44</u>

B. Participants Receiving Benefits

1. Participants receiving benefits previous year	16
2. New retired participants	3
3. New terminated vested receiving benefits	1
4. New disabled receiving benefits	0
5. New beneficiaries receiving benefits	0
6. Died or ceased payment during period	0
7. Adjustments	0
8. Retired or terminated vested receiving benefits current year	<u>20</u>

C. Terminated Vested Participants Entitled to Future Benefits

1. Terminated vested entitled previous year	5
2. Died during period	0
3. Commenced receiving benefits during period	(1)
4. New terminated vested	1
5. Terminated vested paid lump sum	0
6. Terminated vested entitled current year	<u>5</u>

Projected Retirement Benefits

<u>Fiscal Year</u>	<u>Projected Total Annual Payout</u>
2018	\$ 1,832,063
2019	\$ 1,909,387
2020	\$ 2,068,542
2021	\$ 2,168,193
2022	\$ 2,280,549
2023	\$ 2,425,842
2024	\$ 2,634,026
2025	\$ 2,746,451
2026	\$ 2,947,754
2027	\$ 3,046,758

The above projected payout of Plan benefits during the next ten years is based on assumptions involving all decrements. The actual payouts may differ from the above estimates depending upon the death, salary and retirement experience of the Plan. However, since the projected payment is recomputed each valuation date, there is an automatic correction to the extent that actual experience varies from expected experience.

Recent Compensation, Termination and Investment Return Experience

Valuation Date	General (incl. AMSC)		Police		General (incl. AMSC)		Police		Investment Return ¹		
	Compensation % Increase / (Decrease)		Termination Ratio of Actual to Expected		Actuarial Value	Market Value	Assumed Rate of Return				
	Actual	Assumed	Actual	Assumed							
10/01/2017	4.5%	4.6%	1.6%	4.5%	1.5	1.5	9.544%	12.987%	7.375%		
10/01/2016	8.0%	4.7%	2.4%	4.4%	1.5	1.0	9.826%	10.368%	7.375%		
10/01/2015	2.3%	4.8%	2.0%	4.5%	1.2	1.0	8.195%	0.042%	7.375%		
10/01/2014	0.9%	4.8%	9.9%	4.6%	0.5	0.7	10.249%	10.590%	7.375%		
10/01/2013	3.0%	4.8%	(0.6%)	4.7%	0.4	1.6	8.682%	16.219%	7.375%		
10/01/2012	(0.2%)	6.3%	(3.3%)	5.3%	3.0	0.3	2.1%	17.6%	7.0%		
10/01/2011	0.3%	6.7%	0.5%	5.3%	1.3	1.2	1.3%	(5.3%)	7.0%		
10/01/2010	1.5%	6.6%	(2.8%)	5.2%	1.4	0.3	3.2%	9.7%	7.5%		
10/01/2009	7.3%	5.8%	3.0%	5.2%	0.4	0.8	3.1%	4.5%	8.0%		
10/01/2008	6.6%	5.6%	5.2%	5.4%	1.6	1.6	4.7%	(13.3%)	8.0%		
Last 3 Years	4.9%	4.7%	2.0%	4.5%	1.4	1.1	9.186%	7.651%	7.375%		
Last 5 Years	3.7%	4.8%	3.0%	4.5%	0.9	1.1	9.297%	9.903%	7.375%		
Last 10 Years	3.4%	5.5%	1.7%	4.9%	1.1	0.9	6.0%	5.9%	7.4%		

¹ Computed as $2I/(A+B-I)$, where A is beginning value, B is ending value and I is investment return.

**Table XV
(Cont'd)**

Summary of Transaction Information

<u>Valuation Date</u>	<u>Benefits Paid</u>	<u>Administrative Expenses</u>	<u>Contributions</u>	<u>Investment Return</u>	<u>Transfers</u>	<u>Market Value</u>
10/01/2017	\$ 1,570,751	\$ 289,032	\$ 1,591,840	\$ 4,668,170	\$ 0	\$ 39,449,361
10/01/2016	1,293,782	226,969	1,060,606	3,406,515	0	35,049,134
10/01/2015	1,417,586	226,363	1,381,911	112,474	0	32,087,589
10/01/2014	1,315,113	181,451	1,455,588	3,165,221	0	32,244,727
10/01/2013	1,351,678	264,362	1,505,547	4,066,152	0	29,092,870
10/01/2012	1,579,698	273,772	1,798,773	3,725,813	0	25,113,160
10/01/2011	1,125,796	189,999	2,141,352	(1,186,307)	0	21,407,509
10/01/2010	888,202	235,003	2,104,969	1,875,107	0	21,768,259
10/01/2009	764,708	206,941	1,652,824	804,982	0	18,911,388
10/01/2008	762,030	184,756	1,595,179	(2,633,551)	0	17,425,231
10/01/2007	681,660	84,321	1,511,306	2,291,062	0	19,410,389
10/01/2006	505,945	146,005	1,161,211	940,523	0	16,374,002
10/01/2005	574,338	136,535	1,409,957	1,302,776	0	14,924,218
10/01/2004	527,266	137,028	1,262,722	751,494	65,275	12,922,358
10/01/2003	356,561	115,729	1,216,406	1,344,365	0	11,436,952
10/01/2002	309,307	114,307	1,103,263	(1,059,445)	0	9,348,471
10/01/2001	333,639	88,128	675,983	(534,923)	0	9,728,267
10/01/2000	232,192	80,274	499,210	963,114	0	10,008,974
10/01/1999	254,771	75,413	369,032	997,855	0	9,304,813
10/01/1998	271,956	83,115	279,699	815,050	61,811	8,268,110
10/01/1997	233,331	56,437	219,754	1,552,534	0	7,590,243
10/01/1996	224,942	56,774	215,634	829,680	0	6,107,723
10/01/1995	160,057	48,995	164,183	975,873	0	5,344,125
10/01/1994	136,098	44,335	144,729	113,415	0	4,413,121

Employer Contribution Information

<u>Valuation Date</u>	<u>Contribution Fiscal Year End</u>	<u>Minimum Required Employer Contributions</u>	<u>Actual City Contributions</u>	<u>Actual State Contributions</u>	<u>Actual Employer Contributions</u>
10/01/2017	09/30/2019	\$ 704,929	N/A	N/A	N/A
10/01/2016	09/30/2018	\$ 690,632	N/A	N/A	N/A
10/01/2015	09/30/2017	\$ 680,568	\$ 643,933	\$ 37,780	\$ 681,713
10/01/2014	09/30/2016	\$ 570,154	\$ 532,374	\$ 37,780	\$ 570,154
10/01/2013	09/30/2015	\$ 834,251	\$ 796,471	\$ 37,780	\$ 834,251
10/01/2012	09/30/2014	\$ 878,218	\$ 840,438	\$ 37,780	\$ 878,218
10/01/2011	09/30/2013	\$ 860,190	\$ 822,410	\$ 37,780	\$ 860,190
10/01/2010	09/30/2012	\$ 1,021,975	\$ 984,195	\$ 37,780	\$ 1,021,975
10/01/2010	09/30/2011	\$ 1,266,587	\$ 1,235,540	\$ 37,780	\$ 1,273,320
10/01/2009	09/30/2010	\$ 1,257,246	\$ 1,257,246	\$ 0	\$ 1,257,246
10/01/2008	09/30/2009	\$ 843,731	\$ 843,731	\$ 0	\$ 843,731
10/01/2007	09/30/2008	\$ 769,186	\$ 769,186	\$ 0	\$ 769,186
10/01/2006	09/30/2007	\$ 794,068	\$ 756,288	\$ 37,780	\$ 794,068
10/01/2005	09/30/2006	\$ 632,035	\$ 632,397	\$ 0	\$ 632,397
10/01/2004	09/30/2005	\$ 917,230	\$ 879,812	\$ 37,418	\$ 917,230
10/01/2003	09/30/2004	\$ 757,439	\$ 744,941	\$ 12,498	\$ 757,439
10/01/2002	09/30/2003	\$ 752,389	\$ 739,891	\$ 13,378	\$ 753,269
10/01/2001	09/30/2002	\$ 621,909	\$ 620,377	\$ 12,498	\$ 632,875

Actuarial Valuation as of October 1, 2017**State Required Exhibit****(General Employees Tier 1)**

	<u>10/01/2016</u>	<u>10/01/2017</u>
A. <u>Participant Data</u>		
1. Active participants	27	25
2. Retired participants and beneficiaries receiving benefits	27	27
3. Disabled participants receiving benefits	0	0
4. Terminated vested participants	3	3
5. Annual payroll of active participants	\$ 1,310,237	\$ 1,288,496
6. Expected payroll of active employees for the following year	\$ 1,310,237	\$ 1,288,496
7. Annual benefits payable to those currently receiving benefits	\$ 657,912	\$ 668,590
B. <u>Assets</u>		
1. Market Value of Assets	\$ 13,901,817	\$ 15,099,831
2. Smoothed Actuarial Value of Assets	\$ 13,827,340	\$ 14,549,411
C. <u>Liabilities</u>		
1. Actuarial present value of future expected benefit payments for active members		
a. Retirement benefits	\$ 3,962,670	\$ 4,331,935
b. Vesting benefits	609,995	560,975
c. Death benefits	33,803	34,670
d. Disability benefits	260,336	270,779
e. Refunds	29,988	15,925
f. Total	<u>\$ 4,896,792</u>	<u>\$ 5,214,284</u>
2. Actuarial present value of future expected benefit payments for terminated vested members	\$ 566,082	\$ 610,140
3. Actuarial present value of future expected benefit payments for members currently receiving benefits		
a. Service retired	\$ 8,107,307	\$ 7,848,463
b. Disability retired	0	0
c. Beneficiaries	0	176,662
d. Miscellaneous	83,178	108,713
e. Total	<u>\$ 8,190,485</u>	<u>\$ 8,133,838</u>

Actuarial Valuation as of October 1, 2017

State Required Exhibit

(General Employees Tier 1)

	<u>10/01/2016</u>	<u>10/01/2017</u>
4. Total actuarial present value of future expected benefit payments	\$ 13,653,359	\$ 13,958,262
5. Actuarial accrued liabilities	\$ 12,821,132	\$ 13,198,024
6. Unfunded actuarial accrued liabilities	\$ (1,006,208)	\$ (1,351,387)
 D. <u>Statement of Accumulated Plan Benefits</u>		
1. Actuarial present value of accumulated vested benefits		
a. Participants currently receiving benefits	\$ 8,107,307	\$ 8,025,125
b. Other participants	3,531,933	3,880,537
c. Total	<u>\$ 11,639,240</u>	<u>\$ 11,905,662</u>
2. Actuarial present value of accumulated non-vested Plan benefits	<u>245,672</u>	<u>293,304</u>
3. Total actuarial present value of accumulated Plan benefits	\$ 11,884,912	\$ 12,198,966
 E. <u>Statement of Change in Accumulated Plan Benefits</u>		
1. Actuarial present value of accumulated Plan benefits as of October 1, 2016		\$ 11,884,912
2. Increase (decrease) during period attributable to:		
a. Change in actuarial assumptions and / or Plan amendments		\$ 0
b. Benefits paid		(697,305)
c. Other, including benefits accumulated and increase for interest due to decrease in the discount period		1,011,359
d. Net increase		<u>\$ 314,054</u>
3. Actuarial present value of accumulated Plan benefits as of October 1, 2017		\$ 12,198,966

Actuarial Valuation as of October 1, 2017

State Required Exhibit

(General Employees Tier 1)

	<u>10/01/2016</u>	<u>10/01/2017</u>
F. Pension Cost		
1. Total normal cost (including administrative expenses)	\$ 177,781	\$ 188,814
2. Payment required to amortize unfunded liability	(95,839)	(128,421)
3. Interest adjustment	2,914	2,148
4. Total preliminary required contribution	\$ 84,856	\$ 62,541
5. Total required contribution	\$ 177,781	\$ 188,814
6. Item 5 as a percentage of payroll	13.6%	14.7%
7. Estimated member contributions	\$ 91,717	\$ 90,195
8. Item 7 as a percentage of payroll	7.0% ¹	7.0% ²
9. Estimated State contributions	\$ 0	\$ 0
10. Item 9 as a percentage of payroll	0.0%	0.0%
11. Net amount payable by City	\$ 86,064	\$ 98,619
12. Item 11 as a percentage of payroll	6.6% ¹	7.7% ²
G. Past Contributions		
1. Total contribution required (prior year's valuation)	\$ 190,557	\$ 177,781
2. Actual contributions made:		
a. Members	\$ 95,014	N/A
b. State	N/A	N/A
c. City	95,543	N/A
d. Total	\$ 190,557	N/A
H. Net Actuarial Gain / (Loss)		
	\$ 360,433	\$ 264,316
I. Disclosure of Following Items:		
1. Actuarial present value of future salaries - attained age	\$ 10,076,385	\$ 9,140,160
2. Actuarial present value of future employee contributions - attained age	\$ 705,347	\$ 639,811
3. Actuarial present value of future contributions from other sources	N/A	N/A
4. Amount of active members' accumulated contributions	\$ 1,358,123	\$ 1,403,491
5. Actuarial present value of future salaries and future benefits at entry age	N/A	N/A
6. Actuarial present value of future employee contributions at entry age	N/A	N/A

¹ Percent of expected 2017-2018 covered payroll (\$1,310,237)

² Percent of expected 2018-2019 covered payroll (\$1,288,496)

Actuarial Valuation as of October 1, 2017

State Required Exhibit

(General Employees Tier 2)

	<u>10/01/2017</u>
A. <u>Participant Data</u>	
1. Active participants	24
2. Retired participants and beneficiaries receiving benefits	0
3. Disabled participants receiving benefits	0
4. Terminated vested participants	0
5. Annual payroll of active participants	\$ 1,003,128
6. Expected payroll of active employees for the following year	\$ 1,003,128
7. Annual benefits payable to those currently receiving benefits	\$ 0
B. <u>Assets</u>	
1. Market Value of Assets	\$ 169,399
2. Smoothed Actuarial Value of Assets	\$ 166,660
C. <u>Liabilities</u>	
1. Actuarial present value of future expected benefit payments for active members	
a. Retirement benefits	\$ 500,739
b. Vesting benefits	193,027
c. Death benefits	7,281
d. Disability benefits	45,208
e. Refunds	22,889
f. Total	<u>\$ 769,144</u>
2. Actuarial present value of future expected benefit payments for terminated vested members	\$ 0
3. Actuarial present value of future expected benefit payments for members currently receiving benefits	
a. Service retired	\$ 0
b. Disability retired	0
c. Beneficiaries	0
d. Miscellaneous	1,256
e. Total	<u>\$ 1,256</u>

Actuarial Valuation as of October 1, 2017

State Required Exhibit

(General Employees Tier 2)

10/01/2017

4. Total actuarial present value of future expected benefit payments	\$	770,400
5. Actuarial accrued liabilities	\$	215,700
6. Unfunded actuarial accrued liabilities	\$	49,040
<u>D. Statement of Accumulated Plan Benefits</u>		
1. Actuarial present value of accumulated vested benefits		
a. Participants currently receiving benefits	\$	0
b. Other participants		81,587
c. Total	\$	81,587
2. Actuarial present value of accumulated non-vested Plan benefits		21,396
3. Total actuarial present value of accumulated Plan benefits	\$	102,983
<u>E. Statement of Change in Accumulated Plan Benefits</u>		
1. Actuarial present value of accumulated Plan benefits as of October 1, 2016	\$	0
2. Increase (decrease) during period attributable to:		
a. Change in actuarial assumptions and / or Plan amendments	\$	0
b. Benefits paid		(522)
c. Other, including benefits accumulated and increase for interest due to decrease in the discount period		103,505
d. Net increase	\$	102,983
3. Actuarial present value of accumulated Plan benefits as of October 1, 2017	\$	102,983

Actuarial Valuation as of October 1, 2017

State Required Exhibit

(General Employees Tier 2)

	<u>10/01/2017</u>
F. <u>Pension Cost</u>	
1. Total normal cost (including administrative expenses)	\$ 66,713
2. Payment required to amortize unfunded liability	4,114
3. Interest adjustment	2,518
4. Total preliminary required contribution	\$ 73,345
5. Total required contribution	\$ 73,345
6. Item 5 as a percentage of payroll	7.3%
7. Estimated member contributions	\$ 30,094
8. Item 7 as a percentage of payroll	3.0% ¹
9. Estimated State contributions	\$ 0
10. Item 9 as a percentage of payroll	0.0%
11. Net amount payable by City	\$ 43,251
12. Item 11 as a percentage of payroll	4.3% ¹
G. <u>Past Contributions</u>	
1. Total contribution required (prior year's valuation)	\$ 48,992
2. Actual contributions made:	
a. Members	N/A
b. State	N/A
c. City	N/A
d. Total	N/A
H. <u>Net Actuarial Gain / (Loss)</u>	N/A
I. <u>Disclosure of Following Items:</u>	
1. Actuarial present value of future salaries - attained age	\$ 8,951,163
2. Actuarial present value of future employee contributions - attained age	\$ 268,535
3. Actuarial present value of future contributions from other sources	N/A
4. Amount of active members' accumulated contributions	\$ 103,881
5. Actuarial present value of future salaries and future benefits at entry age	N/A
6. Actuarial present value of future employee contributions at entry age	N/A

¹ Percent of expected 2018-2019 covered payroll (\$1,003,128)

Actuarial Valuation as of October 1, 2017

State Required Exhibit

(AMSC)

10/01/2017

A. Participant Data

1. Active participants		8
2. Retired participants and beneficiaries receiving benefits		1
3. Disabled participants receiving benefits		0
4. Terminated vested participants		0
5. Annual payroll of active participants	\$	984,777
6. Expected payroll of active employees for the following year	\$	984,777
7. Annual benefits payable to those currently receiving benefits	\$	1,398

B. Assets

1. Market Value of Assets	\$	1,079,990
2. Smoothed Actuarial Value of Assets	\$	1,052,987

C. Liabilities

1. Actuarial present value of future expected benefit payments for active members		
a. Retirement benefits	\$	1,590,311
b. Vesting benefits		157,418
c. Death benefits		11,062
d. Disability benefits		47,918
e. Refunds		3,747
f. Total	\$	1,810,456
2. Actuarial present value of future expected benefit payments for terminated vested members	\$	0
3. Actuarial present value of future expected benefit payments for members currently receiving benefits		
a. Service retired	\$	13,819
b. Disability retired		0
c. Beneficiaries		0
d. Miscellaneous		0
e. Total	\$	13,819

Actuarial Valuation as of October 1, 2017

State Required Exhibit

(AMSC)

10/01/2017

4. Total actuarial present value of future expected benefit payments	\$	1,824,275
5. Actuarial accrued liabilities	\$	1,245,169
6. Unfunded actuarial accrued liabilities	\$	192,182
<u>D. Statement of Accumulated Plan Benefits</u>		
1. Actuarial present value of accumulated vested benefits		
a. Participants currently receiving benefits	\$	13,819
b. Other participants		1,020,337
c. Total	\$	1,034,156
2. Actuarial present value of accumulated non-vested Plan benefits		8,806
3. Total actuarial present value of accumulated Plan benefits	\$	1,042,962
<u>E. Statement of Change in Accumulated Plan Benefits</u>		
1. Actuarial present value of accumulated Plan benefits as of October 1, 2016	\$	619,808
2. Increase (decrease) during period attributable to:		
a. Change in actuarial assumptions and / or Plan amendments	\$	0
b. Benefits paid		(582)
c. Other, including benefits accumulated and increase for interest due to decrease in the discount period		423,736
d. Net increase	\$	423,154
3. Actuarial present value of accumulated Plan benefits as of October 1, 2017	\$	1,042,962

Actuarial Valuation as of October 1, 2017

State Required Exhibit

(AMSC)

	<u>10/01/2017</u>
F. <u>Pension Cost</u>	
1. Total normal cost (including administrative expenses)	\$ 124,076
2. Payment required to amortize unfunded liability	16,123
3. Interest adjustment	4,986
4. Total preliminary required contribution	\$ 145,185
5. Total required contribution	\$ 145,185
6. Item 5 as a percentage of payroll	14.7%
7. Estimated member contributions	\$ 68,934
8. Item 7 as a percentage of payroll	7.0% ¹
9. Estimated State contributions	\$ 0
10. Item 9 as a percentage of payroll	0.0%
11. Net amount payable by City	\$ 76,251
12. Item 11 as a percentage of payroll	7.7% ¹
G. <u>Past Contributions</u>	
1. Total contribution required (prior year's valuation)	\$ 144,399
2. Actual contributions made:	
a. Members	N/A
b. State	N/A
c. City	N/A
d. Total	N/A
H. <u>Net Actuarial Gain / (Loss)</u>	N/A
I. <u>Disclosure of Following Items:</u>	
1. Actuarial present value of future salaries - attained age	\$ 4,738,905
2. Actuarial present value of future employee contributions - attained age	\$ 331,723
3. Actuarial present value of future contributions from other sources	N/A
4. Amount of active members' accumulated contributions	\$ 539,939
5. Actuarial present value of future salaries and future benefits at entry age	N/A
6. Actuarial present value of future employee contributions at entry age	N/A

¹ Percent of expected 2018-2019 covered payroll (\$984,777)

Actuarial Valuation as of October 1, 2017

State Required Exhibit

(Police Officers)

	<u>10/01/2016</u>	<u>10/01/2017</u>
A. <u>Participant Data</u>		
1. Active participants	46	44
2. Retired participants and beneficiaries receiving benefits	16	20
3. Disabled participants receiving benefits	0	0
4. Terminated vested participants	5	5
5. Annual payroll of active participants	\$ 3,214,004	\$ 2,970,815
6. Expected payroll of active employees for the following year	\$ 3,236,502	\$ 2,970,815
7. Annual benefits payable to those currently receiving benefits	\$ 628,125	\$ 816,814
B. <u>Assets</u>		
1. Market Value of Assets	\$ 20,556,965	\$ 23,100,141
2. Smoothed Actuarial Value of Assets	\$ 20,464,123	\$ 22,292,682
C. <u>Liabilities</u>		
1. Actuarial present value of future expected benefit payments for active members		
a. Retirement benefits	\$ 15,200,990	\$ 13,738,516
b. Vesting benefits	1,271,245	1,244,105
c. Death benefits	58,067	53,561
d. Disability benefits	344,812	311,517
e. Refunds	262,802	231,334
f. Total	<u>\$ 17,137,916</u>	<u>\$ 15,579,033</u>
2. Actuarial present value of future expected benefit payments for terminated vested members	\$ 965,228	\$ 938,505
3. Actuarial present value of future expected benefit payments for members currently receiving benefits		
a. Service retired	\$ 7,806,484	\$ 10,668,504
b. Disability retired	0	0
c. Beneficiaries	0	0
d. Miscellaneous	159,505	25,861
e. Total	<u>\$ 7,965,989</u>	<u>\$ 10,694,365</u>

Actuarial Valuation as of October 1, 2017

State Required Exhibit

(Police Officers)

	<u>10/01/2016</u>	<u>10/01/2017</u>
4. Total actuarial present value of future expected benefit payments	\$ 26,069,133	\$ 27,211,903
5. Actuarial accrued liabilities	\$ 22,167,333	\$ 23,514,576
6. Unfunded actuarial accrued liabilities	\$ 1,703,210	\$ 1,221,894
D. <u>Statement of Accumulated Plan Benefits</u>		
1. Actuarial present value of accumulated vested benefits		
a. Participants currently receiving benefits	\$ 7,806,484	\$ 10,668,504
b. Other participants	9,360,420	8,491,260
c. Total	<u>\$ 17,166,904</u>	<u>\$ 19,159,764</u>
2. Actuarial present value of accumulated non-vested Plan benefits	<u>1,652,190</u>	<u>1,322,661</u>
3. Total actuarial present value of accumulated Plan benefits	\$ 18,819,094	\$ 20,482,425
E. <u>Statement of Change in Accumulated Plan Benefits</u>		
1. Actuarial present value of accumulated Plan benefits as of October 1, 2016		\$ 18,819,094
2. Increase (decrease) during period attributable to:		
a. Change in actuarial assumptions and / or Plan amendments		\$ 0
b. Benefits paid		(872,342)
c. Other, including benefits accumulated and increase for interest due to decrease in the discount period		<u>2,535,673</u>
d. Net increase		\$ 1,663,331
3. Actuarial present value of accumulated Plan benefits as of October 1, 2017		\$ 20,482,425

Actuarial Valuation as of October 1, 2017

State Required Exhibit

(Police Officers)

	<u>10/01/2016</u>	<u>10/01/2017</u>
F. Pension Cost		
1. Total normal cost (including administrative expenses)	\$ 615,321	\$ 580,094
2. Payment required to amortize unfunded liability	184,685	159,394
3. Interest adjustment	29,122	26,970
4. Total preliminary required contribution	\$ 829,128	\$ 766,458
5. Total required contribution (Greater of F.1. and F.4.)	\$ 829,128	\$ 766,458
6. Item 5 as a percentage of payroll	25.8%	25.8%
7. Estimated member contributions	\$ 335,162	\$ 279,651
8. Item 7 as a percentage of payroll	10.4% ¹	9.4% ²
9. Estimated State contributions	\$ 37,780	\$ 37,780
10. Item 9 as a percentage of payroll	1.2% ¹	1.3% ²
11. Net amount payable by City	\$ 461,990	\$ 449,028
12. Item 11 as a percentage of payroll	14.3% ¹	15.1% ²
G. Past Contributions		
1. Total contribution required (prior year's valuation)	\$ 848,140	\$ 834,932
2. Actual contributions made:		
a. Members	\$ 354,595	N/A
b. State	37,780	N/A
c. City	456,910	N/A
d. Total	\$ 849,285	N/A
H. Net Actuarial Gain / (Loss)	\$ 572,686	\$ 395,514
I. Disclosure of Following Items:		
1. Actuarial present value of future salaries - attained age	\$ 21,926,116	\$ 20,678,494
2. Actuarial present value of future employee contributions - attained age	\$ 1,644,459	\$ 1,550,887
3. Actuarial present value of future contributions from other sources	N/A	N/A
4. Amount of active members' accumulated contributions	\$ 3,649,482	\$ 3,334,667
5. Actuarial present value of future salaries and future benefits at entry age	N/A	N/A
6. Actuarial present value of future employee contributions at entry age	N/A	N/A

¹ Percent of expected 2017-2018 covered payroll (\$3,236,502)

² Percent of expected 2018-2019 covered payroll (\$2,970,815)

Actuarial Valuation as of October 1, 2017

State Required Exhibit

(All Participants)

	<u>10/01/2016</u>	<u>10/01/2017</u>
A. <u>Participant Data</u>		
1. Active participants	97	101
2. Retired participants and beneficiaries receiving benefits	43	48
3. Disabled participants receiving benefits	0	0
4. Terminated vested participants	8	8
5. Annual payroll of active participants	\$ 6,156,210	\$ 6,247,216
6. Expected payroll of active employees for the following year	\$ 6,178,708	\$ 6,247,216
7. Annual benefits payable to those currently receiving benefits	\$ 1,286,037	\$ 1,486,802
B. <u>Assets</u>		
1. Market Value of Assets	\$ 35,049,134	\$ 39,449,361
2. Smoothed Actuarial Value of Assets	\$ 34,881,815	\$ 38,061,740
C. <u>Liabilities</u>		
1. Actuarial present value of future expected benefit payments for active members		
a. Retirement benefits	\$ 20,595,908	\$ 20,161,501
b. Vesting benefits	2,050,210	2,155,525
c. Death benefits	99,109	106,574
d. Disability benefits	652,516	675,422
e. Refunds	292,790	273,895
f. Total	<u>\$ 23,690,533</u>	<u>\$ 23,372,917</u>
2. Actuarial present value of future expected benefit payments for terminated vested members		
	\$ 1,531,310	\$ 1,548,645
3. Actuarial present value of future expected benefit payments for members currently receiving benefits		
a. Service retired	\$ 15,913,791	\$ 18,530,786
b. Disability retired	0	0
c. Beneficiaries	0	176,662
d. Miscellaneous	242,683	135,830
e. Total	<u>\$ 16,156,474</u>	<u>\$ 18,843,278</u>

Actuarial Valuation as of October 1, 2017

State Required Exhibit

(All Participants)

	<u>10/01/2016</u>	<u>10/01/2017</u>
4. Total actuarial present value of future expected benefit payments	\$ 41,378,317	\$ 43,764,840
5. Actuarial accrued liabilities	\$ 35,608,273	\$ 38,173,469
6. Unfunded actuarial accrued liabilities	\$ 726,458	\$ 111,729
D. <u>Statement of Accumulated Plan Benefits</u>		
1. Actuarial present value of accumulated vested benefits		
a. Participants currently receiving benefits	\$ 15,913,791	\$ 18,707,448
b. Other participants	13,512,161	13,473,721
c. Total	<u>\$ 29,425,952</u>	<u>\$ 32,181,169</u>
2. Actuarial present value of accumulated non-vested Plan benefits	<u>1,897,862</u>	<u>1,646,167</u>
3. Total actuarial present value of accumulated Plan benefits	\$ 31,323,814	\$ 33,827,336
E. <u>Statement of Change in Accumulated Plan Benefits</u>		
1. Actuarial present value of accumulated Plan benefits as of October 1, 2016		\$ 31,323,814
2. Increase (decrease) during period attributable to:		
a. Change in actuarial assumptions and / or Plan amendments		\$ 0
b. Benefits paid		(1,570,751)
c. Other, including benefits accumulated and increase for interest due to decrease in the discount period		<u>4,074,273</u>
d. Net increase		\$ 2,503,522
3. Actuarial present value of accumulated Plan benefits as of October 1, 2017		\$ 33,827,336

Actuarial Valuation as of October 1, 2017

State Required Exhibit

(All Participants)

	<u>10/01/2016</u>	<u>10/01/2017</u>
F. Pension Cost		
1. Total normal cost (including expenses)	\$ 976,175	\$ 959,697
2. Payment required to amortize unfunded liability	91,280	51,210
3. Interest adjustment	39,920	36,622
4. Total preliminary required contribution	\$ 1,107,375	\$ 1,047,529
5. Total required contribution	\$ 1,200,300	\$ 1,173,802
6. Item 5 as a percentage of payroll	19.5%	18.8%
7. Estimated member contributions	\$ 515,472	\$ 468,873
8. Item 7 as a percentage of payroll	8.3% ¹	7.5% ²
9. Estimated State contributions	\$ 37,780	\$ 37,780
10. Item 9 as a percentage of payroll	0.6% ¹	0.6% ²
11. Net amount payable by City	\$ 652,852	\$ 667,149
12. Item 11 as a percentage of payroll	10.6% ¹	10.7% ²
G. Past Contributions		
1. Total contribution required (prior year's valuation)	\$ 1,590,695	\$ 1,206,104
2. Actual contributions made:		
a. Members	\$ 910,127	N/A
b. State	37,780	N/A
c. City	643,933	N/A
d. Total	\$ 1,591,840	N/A
H. Net Actuarial Gain / (Loss)		
	\$ 933,119	\$ 659,830
I. Disclosure of Following Items:		
1. Actuarial present value of future salaries - attained age	\$ 42,133,573	\$ 43,508,722
2. Actuarial present value of future employee contributions - attained age	\$ 2,831,954	\$ 2,790,956
3. Actuarial present value of future contributions from other sources	N/A	N/A
4. Amount of active members' accumulated contributions	\$ 5,194,017	\$ 5,381,978
5. Actuarial present value of future salaries and future benefits at entry age	N/A	N/A
6. Actuarial present value of future employee contributions at entry age	N/A	N/A

¹ Percent of expected 2017-2018 covered payroll (\$6,178,708)

² Percent of expected 2018-2019 covered payroll (\$6,247,216)

**Table XVII
(Cont'd)**

State Required Exhibit

	<u>Unfunded Actuarial Accrued Liabilities</u>	<u>Current Unfunded Liabilities</u>	<u>Amortization Payment</u>	<u>Remaining Funding Period</u>
<u>General Employees Tier 1</u>				
10/01/2015	Combined Bases *	\$ (1,099,473)	\$ (107,619)	18 years
10/01/2016	Actuarial Loss / (Gain)	(389,083)	(32,641)	24 years
10/01/2016	Assumption Change	401,485	33,681	24 years
10/01/2017	Actuarial Loss / (Gain)	<u>(264,316)</u>	<u>(21,842)</u>	25 years
	TOTAL	\$ (1,351,387)	\$ (128,421)	
<u>General Employees Tier 2</u>				
10/01/2017	Initial Base	\$ 49,040	\$ 4,114	24 years
	TOTAL	\$ 49,040	\$ 4,114	
<u>AMSC</u>				
10/01/2017	Combined Bases *	\$ 192,182	\$ 16,123	24 years
	TOTAL	\$ 192,182	\$ 16,123	
<u>Police Officers</u>				
10/01/2013	Combined Bases *	\$ (32,809)	\$ (5,744)	7 years
10/01/1995	Actuarial Loss / (Gain)	(95,361)	(15,090)	8 years
10/01/1995	Plan Amendment	136,893	21,662	8 years
10/01/1996	Actuarial Loss / (Gain)	(58,770)	(8,535)	9 years
10/01/1997	Actuarial Loss / (Gain)	(119,276)	(16,091)	10 years
10/01/1998	Actuarial Loss / (Gain)	(201,281)	(25,468)	11 years
10/01/1999	Actuarial Loss / (Gain)	(67,540)	(8,078)	12 years
10/01/1999	Plan Amendment	88,984	10,643	12 years
10/01/2001	Actuarial Loss / (Gain)	788,769	85,896	14 years
10/01/2001	Method Change	(396,701)	(43,200)	14 years
10/01/2001	Plan Amendment	620,672	67,590	14 years
10/01/2002	Actuarial Loss / (Gain)	613,697	64,247	15 years
10/01/2002	Plan Amendment	153,258	16,044	15 years
10/01/2003	Actuarial Loss / (Gain)	460,707	46,555	16 years
10/01/2003	Plan Amendment	194,742	19,679	16 years
10/01/2004	Actuarial Loss / (Gain)	114,601	11,217	17 years
10/01/2004	Plan Amendment	178,564	17,478	17 years
10/01/2005	Actuarial Loss / (Gain)	(364,410)	(34,657)	18 years
10/01/2006	Actuarial Loss / (Gain)	756,611	70,106	19 years
10/01/2006	Assumption Change	321,438	29,784	19 years
10/01/2007	Actuarial Loss / (Gain)	(311,766)	(28,211)	20 years
10/01/2008	Actuarial Loss / (Gain)	147,485	13,061	21 years
10/01/2009	Actuarial Loss / (Gain)	326,044	28,311	22 years
10/01/2009	Assumption Change / Plan Amendment	468,319	40,665	22 years
10/01/2010	Actuarial Loss / (Gain)	119,397	10,183	23 years
10/01/2010	Assumption Change / Plan Amendment	1,156,621	98,641	23 years

State Required Exhibit

	<u>Unfunded Actuarial Accrued Liabilities</u>	<u>Current Unfunded Liabilities</u>	<u>Amortization Payment</u>	<u>Remaining Funding Period</u>
		<u>Police Officers</u>		
10/01/2011	Actuarial Loss / (Gain)	(774,014)	(64,933)	24 years
10/01/2011	Assumption Change / Plan Amendment	(226,053)	(18,964)	24 years
10/01/2012	Actuarial Loss / (Gain)	180,496	14,915	25 years
10/01/2012	Assumption Change	(864,611)	(71,447)	25 years
10/01/2013	Actuarial Loss / (Gain)	(494,112)	(40,269)	26 years
10/01/2014	Actuarial Loss / (Gain)	(471,970)	(37,978)	27 years
10/01/2015	Actuarial Loss / (Gain)	(308,543)	(24,538)	28 years
10/01/2015	Plan Amendment	(18,627)	(1,481)	28 years
10/01/2016	Actuarial Loss / (Gain)	(567,212)	(44,626)	29 years
10/01/2016	Assumption Change	163,166	12,837	29 years
10/01/2017	Actuarial Loss / (Gain)	(395,514)	(30,810)	30 years
	TOTAL	\$ 1,221,894	\$ 159,394	

* Combined per Internal Revenue Code Regulation 1.412(b)-1

This actuarial valuation and/or cost determination was prepared and completed by me or under my direct supervision, and I acknowledge responsibility for the results. To the best of my knowledge, the results are complete and accurate, and in my opinion, the techniques and assumptions used are reasonable and meet the requirements and intent of Part VII, Chapter 112, Florida Statutes. Based upon our understanding of the Plan, 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 other wise provided for in the valuation. All known events or trends which may require material increase in Plan costs or required contribution rates have been taken into account in the valuation.

L. F. Wilson

Lawrence F. Wilson, A.S.A.

Enrollment Number: 17-02802

Dated: May 4, 2018

Glossary

Actuarial Accrued Liability. The difference between the Actuarial Present Value of Future Benefits, and the Actuarial Present Value of Future Normal Costs.

Actuarial Assumptions. 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.

Actuarial Cost Method. Actuarial Cost Method 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.

Actuarial Equivalent. Of equal Actuarial Present Value, determined as of a given date and based on a given set of Actuarial Assumptions.

Actuarial Present Value of Future Benefits. 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.

Actuarial Valuation. 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 No. 67.

Actuarial Value of Assets. 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 required contribution.

Amortization Method. 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.

Glossary

Amortization Payment. That portion of the plan contribution which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.

Amortization Period. The period used in calculating the Amortization Payment.

Annual Required Contribution. The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation. The annual required contribution consists of the Employer Normal Cost and Amortization Payment plus interest adjustment.

Closed Amortization Period. 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.

Employer Normal Cost. The portion of the Normal Cost to be paid by the employer. This is equal to the Normal Cost less expected member contributions.

Equivalent Single Amortization Period. 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.

Experience Gain/Loss. 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. Losses are the result of unfavorable experience, i.e., actual results that produce Unfunded Actuarial Accrued Liabilities which are larger than projected.

Funded Ratio. The ratio of the Actuarial Value of Assets to the Actuarial Accrued Liability.

GASB. Governmental Accounting Standards Board.

Glossary

GASB No. 67 and GASB No. 68. These are the governmental accounting standards that set the accounting rules for public retirement plans and the employers that sponsor or contribute to them. Statement No. 67 sets the accounting rules for the plans themselves, while Statement No. 68 sets the accounting rules for the employers that sponsor or contribute to public retirement plans.

Normal Cost. The annual cost assigned, under the Actuarial Cost Method, to the current plan year.

Open Amortization Period. 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.

Unfunded Actuarial Accrued Liability. The difference between the Actuarial Accrued Liability and Actuarial Value of Assets.

Valuation Date. 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.