

July 2, 2020

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, 2019 Chapter 112.664 Compliance Report

Dear Board Members:

As requested, we are pleased to enclose twelve (12) copies of the October 1, 2019 Chapter 112.664 Compliance Report for the South Miami Pension Plan (Plan).

As required, we will timely upload the required data to the State's online portal prior to the filing deadline.

Please note we understand the following items must be posted on the Plan's website and must be posted on any website containing budget information relating to the City or actuarial or performance information relating to the Plan:

- this compliance report
- most recent financial statement
- most recent actuarial valuation report
- a link to the Division of Retirement Actuarial Summary Fact Sheet
 http://www.dms.myflorida.com/workforce_operations/retirement/local_retirement_plans/local_retirement_section/actuarial_summary_fact_sheets
- for the previous five years a side-by-side comparison of the Plan's assumed rate of return compared to the actual rate of return as well as the percentages of cash, equity, bond and alternative investments in the Plan portfolio
- the Plan's funded ratio as determined in the most recent actuarial valuation 106.3% on a market value of assets basis as of October 1, 2019

We appreciate the opportunity to work with the Board on this important assignment.

Pension Board July 2, 2020 Page Two

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

Sincerest regards,

Jennifer M. Borregard, E.A. Consultant and Actuary

Jennifee Borregard

Enclosures



South Miami Pension Plan

CHAPTER 112.664, F.S. COMPLIANCE REPORT

In Connection with the October 1, 2019 Funding Actuarial Valuation Report and the Plan's Financial Reporting for the Year Ended September 30, 2019







July 2, 2020

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: October 1, 2019 Chapter 112.664 Compliance Report

Dear Board Members:

Gabriel, Roeder, Smith & Company (GRS) has been engaged by the Pension Board (Board) of the South Miami Pension Plan (Plan) to prepare a disclosure report to satisfy the requirements set forth in Chapter 112.664, F.S. and as further required pursuant to Chapter 60T-1.0035, F.A.C.

This report was prepared at the request of the Board and is intended for use by the Board and those designated or approved by the Board. This report may be provided to parties other than the Board only in its entirety and only with the permission of the Board.

The purpose of the report is to provide the required information specified in Chapter 112.664, F.S. and to supplement this information with additional exhibits. This report should not be relied on for any purpose other than the purpose described above.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: Plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the Plan's funded status); and changes in Plan provisions or applicable law. The scope of this engagement does not include an analysis of the potential range of such measurements.

This report was based upon information furnished by the City and the Board concerning Plan benefits, Plan provisions and Plan members as used in the corresponding Actuarial Valuation Reports for the Valuation Dates indicated. Financial information was provided by the City and Board as of September 30, 2019. We reviewed the information provided for internal and year-to-year consistency, but did not audit the data. The Plan is responsible for the accuracy of the data.

Pension Board July 2, 2020 Page Two

Except where specific assumptions are required by Chapter 112.664, F.S, this report was prepared using actuarial assumptions adopted by the Board as described in Section C. The Board's assumptions are based on the results of an Experience Study covering the period October 1, 2005 – May 31, 2013 along with past and expected future Plan experience. The mortality assumptions are prescribed by statute and were last updated in 2019. The assumptions represent an estimate of future Plan experience.

The investment return assumption of 2% higher than the investment return assumption utilized in the Actuarial Valuation Report does not represent an estimate of future Plan experience nor observation of the estimates inherent in market data. This assumption is provided as a counterpart to the Chapter 112.664, F.S. requirement to utilize an investment return assumption of 2% lower than the investment return assumption utilized in the Actuarial Valuation Report. The inclusion of the additional 2% higher assumption shows a more complete assessment of the range of potential results as opposed to the *one-sided* range required by statute.

If all actuarial assumptions are met and if all current and 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 approach 100%. 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 of pay amortization payment using a maximum amortization period of 25 years.

The Plan's funded ratio as of October 1, 2019 is 106.3% defined as the ratio of the market value of Plan assets to the actuarial accrued liability.

The Plan's funded ratio and the GASB Net 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.

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 herein. The signing actuaries are independent of the Plan sponsor.

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 presents the actuarial position of the Plan as of the valuation date as required by statute. 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.



Pension Board July 2, 2020 Page Three

With respect to the reporting standards for defined benefit retirement plans or systems contained in Section 112.664(1), F.S., the actuarial disclosures required under this section were prepared and completed by us or under our direct supervision and we acknowledge responsibility for the results. To the best of our knowledge, the results are complete and accurate, and in our opinion, meet the requirements of Section 112.664(1), F.S., and Section 60T-1.0035, F.A.C.

Respectfully submitted,

GABRIEL, ROEDER, SMITH AND COMPANY

0

Jennifer M. Borregard, M.A.A.A. Enrolled Actuary No. 20-07624

Consultant & Actuary

Date: July 2, 2020

RA

Shelly L. Jones, M.A.A.A. Enrolled Actuary No. 20-08646

Michelle Jones

Consultant & Actuary



TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>
Α	Chapter 112.664, F.S. Results	
	 Net Pension Liability Using financial reporting assumptions per GASB Statement No. 67 & No. 68 and using assumptions required under Section 112.664(1)(a), F.S. Using assumptions required under Section 112.664(1)(b), F.S. Using assumptions required under Section 112.664(1)(a), F.S. plus 2% 	1 2 3
	 Asset and Benefit Payments Projection Using financial reporting assumptions per GASB Statement No. 67 & No. 68 and using assumptions required under Section 112.664(1)(a), F.S. Using assumptions required under Section 112.664(1)(b), F.S. Using assumptions required under Section 112.664(1)(a), F.S. plus 2% 	4 5 6
	Actuarially Determined Contribution	7
	Unfunded Actuarial Accrued Liabilities Bases and Amortization Payments	8
В	Summary of Plan Provisions	10
С	Actuarial Assumptions and Cost Methods Used for Funding	17
D	Glossary	22



SECTION A

CHAPTER 112.664, F.S. RESULTS

Net Pension Liability

Using Financial Reporting Assumptions per GASB Statements No. 67 and No. 68 and Using Assumptions Required Under 112.664(1)(a), F.S.

Measurement Date		Septe	September 30, 2019			
Α.	Total Pension Liability (TPL)					
	Service Cost	\$	842,564			
	Interest		2,889,649			
	Benefit Changes		0			
	Difference Between Actual and Expected Experience		(1,314,061)			
	Assumption Changes		0			
	Benefit Payments		(1,499,078)			
	Contribution Refunds		(161,892)			
	Other		0			
	Net Change in Total Pension Liability	\$	757,182			
	Total Pension Liability (TPL) - (beginning of year)		40,483,665			
	Total Pension Liability (TPL) - (end of year)	\$	41,240,847			
В.	Plan Fiduciary Net Position					
	Contributions - City	\$	667,149			
	Contributions - State		37,780			
	Contributions - Member		594,753			
	Net Investment Income		868,406			
	Benefit Payments		(1,499,078)			
	Contribution Refunds		(161,892)			
	Administrative Expenses		(129,072)			
	Other		49,243			
	Net Change in Plan Fiduciary Net Position	\$	427,289			
	Plan Fiduciary Net Position - (beginning of year)		43,219,378			
	Plan Fiduciary Net Position - (end of year)	\$	43,646,667			
C.	Net Pension Liability (NPL) - (end of year): (A) - (B)	\$	(2,405,820)			
	Valuation Date		October 1, 2018			

Certain Key Assumptions

Investment Return Assumption 7.375%

Mortality Table:

General 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. 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 particpants, 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.



Net Pension Liability Using Assumptions Required Under 112.664(1)(b), F.S.

	Measurement Date	September 30, 2019	
Α.	Total Pension Liability (TPL)		
	Service Cost	\$	1,359,960
	Interest		2,795,550
	Benefit Changes		0
	Difference Between Actual and Expected Experience		(1,454,143)
	Assumption Changes		0
	Benefit Payments		(1,499,078)
	Contribution Refunds		(161,892)
	Other		0
	Net Change in Total Pension Liability	\$	1,040,397
	Total Pension Liability (TPL) - (beginning of year)		52,934,909
	Total Pension Liability (TPL) - (end of year)	\$	53,975,306
В.	Plan Fiduciary Net Position		
	Contributions - City	\$	667,149
	Contributions - State		37,780
	Contributions - Member		594,753
	Net Investment Income		868,406
	Benefit Payments		(1,499,078)
	Contribution Refunds		(161,892)
	Administrative Expenses		(129,072)
	Other		49,243
	Net Change in Plan Fiduciary Net Position	\$	427,289
	Plan Fiduciary Net Position - (beginning of year)		43,219,378
	Plan Fiduciary Net Position - (end of year)	\$	43,646,667
C.	Net Pension Liability (NPL) - (end of year): (A) - (B)	\$	10,328,639
	Valuation Date		October 1, 2018

Certain Key Assumptions

Investment Return Assumption

Mortality Table:

5.375%

General 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. 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.



Net Pension Liability

Using Assumptions Required Under 112.664(1)(a), F.S. Plus 2% on Investment Return Assumption

	Measurement Date	September 30, 2019	
Α.	Total Pension Liability (TPL)		
	Service Cost	\$	553,817
	Interest		2,880,543
	Benefit Changes		0
	Difference Between Actual and Expected Experience		(1,197,762)
	Assumption Changes		0
	Benefit Payments		(1,499,078)
	Contribution Refunds		(161,892)
	Other		0
	Net Change in Total Pension Liability	\$	575,628
	Total Pension Liability (TPL) - (beginning of year)		32,200,226
	Total Pension Liability (TPL) - (end of year)	\$	32,775,854
В.	Plan Fiduciary Net Position		
	Contributions - City	\$	667,149
	Contributions - State		37,780
	Contributions - Member		594,753
	Net Investment Income		868,406
	Benefit Payments		(1,499,078)
	Contribution Refunds		(161,892)
	Administrative Expenses		(129,072)
	Other		49,243
	Net Change in Plan Fiduciary Net Position	\$	427,289
	Plan Fiduciary Net Position - (beginning of year)		43,219,378
	Plan Fiduciary Net Position - (end of year)	\$	43,646,667
C.	Net Pension Liability (NPL) - (end of year): (A) - (B)	\$	(10,870,813)
	Valuation Date		October 1, 2018

Certain Key Assumptions

Investment Return Assumption

Mortality Table:

General 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. 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.



9.375%

Asset and Benefit Payment Projection Not Reflecting Any Future Contributions

Using Financial Reporting Assumptions per GASB Statements No. 67 and No. 68 and Using Assumptions Required Under 112.664(1)(a), F.S.

	Market Value of Assets	Expected Investment	Projected Benefit	Market Value of Assets
FYE	(BOY)	Return	Payments	(EOY)
2020	\$ 43,646,667	\$ 3,140,017	\$ 1,997,411	\$ 44,789,273
2021	44,789,273	3,219,270	2,124,296	45,884,247
2022	45,884,247	3,293,712	2,284,063	46,893,896
2023	46,893,896	3,362,631	2,424,330	47,832,197
2024	47,832,197	3,427,128	2,543,331	48,715,994
2025	48,715,994	3,488,641	2,636,134	49,568,501
2026	49,568,501	3,545,642	2,784,725	50,329,418
2027	50,329,418	3,599,376	2,845,054	51,083,740
2028	51,083,740	3,653,339	2,887,270	51,849,809
2029	51,849,809	3,706,309	2,976,543	52,579,575
2030	52,579,575	3,756,882	3,058,731	53,277,726
2031	53,277,726	3,804,452	3,157,895	53,924,283
2032	53,924,283	3,849,296	3,229,777	54,543,802
2033	54,543,802	3,893,986	3,255,053	55,182,735
2034	55,182,735	3,939,924	3,285,005	55,837,654
2035	55,837,654	3,986,162	3,337,194	56,486,622
2036	56,486,622	4,034,305	3,330,081	57,190,846
2037	57,190,846	4,085,002	3,361,431	57,914,417
2038	57,914,417	4,138,803	3,350,357	58,702,863
2039	58,702,863	4,197,513	3,336,143	59,564,233
2040	59,564,233	4,262,001	3,311,791	60,514,443
2041	60,514,443	4,333,040	3,287,464	61,560,019
2042	61,560,019	4,411,341	3,257,362	62,713,998
2043	62,713,998	4,498,542	3,204,340	64,008,200
2044	64,008,200	4,595,658	3,162,115	65,441,743
2045	65,441,743	4,703,461	3,109,492	67,035,712
2046	67,035,712	4,823,649	3,042,863	68,816,498
2047	68,816,498	4,957,674	2,974,747	70,799,425
2048	70,799,425	5,107,034	2,895,796	73,010,663
2049	73,010,663	5,273,470	2,810,841	75,473,292
2050	75,473,292	5,458,653	2,720,638	78,211,307

Number of years for which current market value of assets are adequate to sustain the payment of expected retirement benefits reflecting no contributions from the City, Members or State:

99.99

Certain Key Assumptions

Investment return assumption 7.375%

Mortality Table:

General Employees including AMSC Mortality Assumptions: For healthy participants during employment, PUB-2010 Headcount Weighted General Below Median Employee Mortality Table, separate rates for males and females, set back 1 year for males, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For healthy participants post employment, PUB-2010 Headcount Weighted General Below Median Healthy Retiree Mortality Table, separate rates for males and females, set back 1 year for males, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For disabled participants, PUB-2010 Headcount Weighted General Disabled Retiree Mortality Table, separate rates for males and females, both set forward 3 years, without projected mortality improvements. Police Officer Mortality Assumptions: For healthy participants during employment, PUB-2010 Headcount Weighted Safety Employee Female Mortality Table and Safety Below Median Employee Male Mortality Table, both set forward 1 year, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For healthy participants post employment, PUB-2010 Headcount Weighted Safety Healthy Retiree Female Mortality Table and Safety Below Median Healthy Retiree Male Mortality Table, both set forward 1 year, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For disabled participants, 80% PUB-2010 Headcount Weighted General Disabled Retiree Mortality Table / 20% PUB-2010 Headcount Weighted Safety Disabled Retiree Mortality Table, separate rates for males and females, without projected mortality improvements.

Note: As required in Section 112.664(c) of the Florida Statutes, the projection of Plan assets does not include contributions from the City, Members or State. For this reason, this projection should not be viewed as representative of the amount of time the Plan can sustain benefit payments. Under the Government Accounting Standards Board standards which include City, Member and State contributions, the Plan is expected to be able to pay all future benefit payments.



Asset and Benefit Payment Projection Not Reflecting Any Future Contributions Using Assumptions Required Under 112.664(1)(b), F.S.

	Market Value of Assets	Expected Investment	Projected Benefit	Market Value of Assets
FYE	(BOY)	Return	Payments	(EOY)
2020	\$ 43,646,667	\$ 2,288,320	\$ 1,997,411	\$ 43,937,576
2021	43,937,576	2,300,291	2,124,296	44,113,571
2022	44,113,571	2,305,137	2,284,063	44,134,645
2023	44,134,645	2,302,218	2,424,330	44,012,533
2024	44,012,533	2,292,218	2,543,331	43,761,420
2025	43,761,420	2,276,040	2,636,134	43,401,326
2026	43,401,326	2,252,394	2,784,725	42,868,995
2027	42,868,995	2,222,038	2,845,054	42,245,979
2028	42,245,979	2,187,332	2,887,270	41,546,041
2029	41,546,041	2,147,132	2,976,543	40,716,630
2030	40,716,630	2,100,177	3,058,731	39,758,076
2031	39,758,076	2,045,791	3,157,895	38,645,972
2032	38,645,972	1,983,939	3,229,777	37,400,134
2033	37,400,134	1,916,246	3,255,053	36,061,327
2034	36,061,327	1,843,420	3,285,005	34,619,742
2035	34,619,742	1,764,427	3,337,194	33,046,975
2036	33,046,975	1,680,096	3,330,081	31,396,990
2037	31,396,990	1,590,504	3,361,431	29,626,063
2038	29,626,063	1,495,637	3,350,357	27,771,343
2039	27,771,343	1,396,356	3,336,143	25,831,556
2040	25,831,556	1,292,796	3,311,791	23,812,561
2041	23,812,561	1,184,978	3,287,464	21,710,075
2042	21,710,075	1,072,838	3,257,362	19,525,551
2043	19,525,551	956,952	3,204,340	17,278,163
2044	17,278,163	837,374	3,162,115	14,953,422
2045	14,953,422	713,939	3,109,492	12,557,869
2046	12,557,869	587,102	3,042,863	10,102,108
2047	10,102,108	457,073	2,974,747	7,584,434
2048	7,584,434	324,028	2,895,796	5,012,666
2049	5,012,666	188,249	2,810,841	2,390,074
2050	2,390,074	51,341	2,720,638	-

Number of years for which current market value of assets are adequate to sustain the payment of expected retirement benefits reflecting no contributions from the City, Members or State:

30.83

Certain Key Assumptions

Investment return assumption

5.375%

Mortality Table:

General Employees including AMSC Mortality Assumptions: For healthy participants during employment, PUB-2010 Headcount Weighted General Below Median Employee Mortality Table, separate rates for males and females, set back 1 year for males, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For healthy participants post employment, PUB-2010 Headcount Weighted General Below Median Healthy Retiree Mortality Table, separate rates for males and females, set back 1 year for males, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For disabled participants, PUB-2010 Headcount Weighted General Disabled Retiree Mortality Table, separate rates for males and females, both set forward 3 years, without projected mortality improvements. Police Officer Mortality Assumptions: For healthy participants during employment, PUB-2010 Headcount Weighted Safety Employee Female Mortality Table and Safety Below Median Employee Male Mortality Table, both set forward 1 year, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For healthy participants post employment, PUB-2010 Headcount Weighted Safety Healthy Retiree Female Mortality Table and Safety Below Median Healthy Retiree Male Mortality Table, both set forward 1 year, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For disabled participants, 80% PUB-2010 Headcount Weighted General Disabled Retiree Mortality Table / 20% PUB-2010 Headcount Weighted Safety Disabled Retiree Mortality Table, separate rates for males and females, without projected mortality improvements.

Note: As required in Section 112.664(c) of the Florida Statutes, the projection of Plan assets does not include contributions from the City, Members or State. For this reason, this projection should not be viewed as representative of the amount of time the Plan can sustain benefit payments. Under the Government Accounting Standards Board standards which include City, Member and State contributions, the Plan is expected to be able to pay all future benefit payments.



Asset and Benefit Payment Projection Not Reflecting Any Future Contributions

Using Assumptions Required Under 112.664(1)(a), F.S. Plus 2% on Investment Return Assumption

	Market Value of Assets	Expected Investment	Projected Benefit	Market Value of Assets
FYE	(BOY)	Return	Payments	(EOY)
2020	\$ 43,646,667	\$ 3,991,832	\$ 1,997,411	\$ 45,641,088
2021	45,641,088	4,172,454	2,124,296	47,689,246
2022	47,689,246	4,356,467	2,284,063	49,761,650
2023	49,761,650	4,543,729	2,424,330	51,881,049
2024	51,881,049	4,736,463	2,543,331	54,074,181
2025	54,074,181	4,937,421	2,636,134	56,375,468
2026	56,375,468	5,145,724	2,784,725	58,736,467
2027	58,736,467	5,364,046	2,845,054	61,255,459
2028	61,255,459	5,598,087	2,887,270	63,966,276
2029	63,966,276	5,847,755	2,976,543	66,837,488
2030	66,837,488	6,112,815	3,058,731	69,891,572
2031	69,891,572	6,394,168	3,157,895	73,127,845
2032	73,127,845	6,693,969	3,229,777	76,592,037
2033	76,592,037	7,017,471	3,255,053	80,354,455
2034	80,354,455	7,368,697	3,285,005	84,438,147
2035	84,438,147	7,748,929	3,337,194	88,849,882
2036	88,849,882	8,162,886	3,330,081	93,682,687
2037	93,682,687	8,614,391	3,361,431	98,935,647
2038	98,935,647	9,107,411	3,350,357	104,692,701
2039	104,692,701	9,647,846	3,336,143	111,004,404
2040	111,004,404	10,240,788	3,311,791	117,933,401
2041	117,933,401	10,891,600	3,287,464	125,537,537
2042	125,537,537	11,605,996	3,257,362	133,886,171
2043	133,886,171	12,391,336	3,204,340	143,073,167
2044	143,073,167	13,254,731	3,162,115	153,165,783
2045	153,165,783	14,203,550	3,109,492	164,259,841
2046	164,259,841	15,246,955	3,042,863	176,463,933
2047	176,463,933	16,394,500	2,974,747	189,883,686
2048	189,883,686	17,656,556	2,895,796	204,644,446
2049	204,644,446	19,044,633	2,810,841	220,878,238
2050	220,878,238	20,571,069	2,720,638	238,728,669

Number of years for which current market value of assets are adequate to sustain the payment of expected retirement benefits reflecting no contributions from the City, Members or State:

99.99

Certain Key Assumptions

9.375% Investment return assumption Mortality Table:

General Employees including AMSC Mortality Assumptions: For healthy participants during employment, PUB-2010 Headcount Weighted General Below Median Employee Mortality Table, separate rates for males and females, set back 1 year for males, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For healthy participants post employment, PUB-2010 Headcount Weighted General Below Median Healthy Retiree Mortality Table, separate rates for males and females, set back 1 year for males, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For disabled participants, PUB-2010 Headcount Weighted General Disabled Retiree Mortality Table, separate rates for males and females, both set forward 3 years, without projected mortality improvements. Police Officer Mortality Assumptions: For healthy participants during employment, PUB-2010 Headcount Weighted Safety Employee Female Mortality Table and Safety Below Median Employee Male Mortality Table, both set forward 1 year, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For healthy participants post employment, PUB-2010 Headcount Weighted Safety Healthy Retiree Female Mortality Table and Safety Below Median Healthy Retiree Male Mortality Table, both set forward 1 year, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For disabled participants, 80% PUB-2010 Headcount Weighted General Disabled Retiree Mortality Table / 20% PUB-2010 Headcount Weighted Safety Disabled Retiree Mortality Table, separate rates for males and females, without projected mortality improvements.

Note: As required in Section 112.664(c) of the Florida Statutes, the projection of Plan assets does not include contributions from the City, Members or State. For this reason, this projection should not be viewed as representative of the amount of time the Plan can sustain benefit payments. Under the Government Accounting Standards Board standards which include City, Member and State contributions, the Plan is expected to be able to pay all future benefit payments.



ACTUARIALLY DETERMINED CONTRIBUTION 112.664(1)(a), F.S. Assumptions Valuation and 112.664(1)(a), F.S. Plus 2% on Investment Return Assumptions 112.664(1)(b), F.S. Assumptions Assumption A. Valuation Date October 1, 2019 October 1, 2019 October 1, 2019 B. Actuarial Determined Contribution to Be Paid During Fiscal Year Ending September 30, 2021 September 30, 2021 September 30, 2021 \$ \$ \$ C. Annual Payroll of Active Employees 6,857,483 6,857,483 6,857,483 D. Total Minimum Funding Requirement 1. Total Normal Cost \$ 981,187 \$ 1,530,098 \$ 671,734 2. Annual Payment to Amortize Unfunded **Actuarial Liability** (272,289)683,778 (1,152,992)3. Interest Adjustment 26,621 58,978 (19,779)\$ \$ \$ 4. Total Minimum Funding Requirement 735,519 2,272,854 (501,037)E. Minimum Required Contribution (F.S. 112.66 (13)) \$ 1,075,854 \$ 2,272,854 \$ 700,300 F. Expected Payroll of Active Employees for Following Plan Year (\$ / % of pay) \$ \$ \$ 6,857,483 100.00% 6,857,483 100.00% 6,857,483 100.00% G. Expected Contribution Sources (\$ / % of pay) \$ 552,499 \$ 2.58% 1. City 8.06% 1,610,449 23.48% 176,945 2. Member 444,127 6.48% 583,177 8.50% 444,127 6.48% 3. State 79,228 1.16% 79,228 1.16% 79,228 1.16% 1,075,854 15.69% 2,272,854 33.14% \$ 700,300 10.21% 4. Total



Unfunded Actuarial Accrued Liabilities Bases and Amortization Payments

(General Employees Tier 1)

		Amortization Payment							
			V	aluation and			13	12.664(1)(a), F.S.	
	Curr	ent Unfunded	112.	664(1)(a), F.S.	112.6	664(1)(b), F.S.		Assumptions	Remaining
Amortization Base		Liabilities	Α	ssumptions	As	sumptions		Plus 2%	Funding Period
10/01/2015 Combined Bases *	\$	(1,248,022)	Ś	(130,654)	Ś	(117,015)	Ś	(144,706)	15 years
10/01/2016 Actuarial Loss / (Gain)	•	(442,662)		(38,437)		(33,014)	•	(44,081)	22 years
10/01/2016 Assumption Change		456,772		39,662		34,066		45,486	22 years
10/01/2017 Actuarial Loss / (Gain)		(300,774)		(25,651)		(21,915)		(29,542)	23 years
10/01/2018 Actuarial Loss / (Gain)		(1,381,131)		(115,865)		(98,481)		(133,978)	24 years
10/01/2018 Plan Amendment - Ord. #35-19-2348		709,035		59,482		50,557		68,781	24 years
10/01/2019 Actuarial Loss / (Gain)		(789,167)		(65,213)		(55,152)		(75,699)	25 years
10/01/2019 Assumption Change		(235,478)		(19,459)		(16,457)		(22,588)	25 years
10/01/2019 Assumption Change - 112.664(1)(b), F.S. Assumptions		3,634,459		N/A		253,998		N/A	25 years
10/01/2019 Assumption Change - 112.664(1)(a), F.S. Assumptions Plus 2%		(2,515,367)		N/A		N/A		(241,282)	25 years
(Ger	neral E	mployees Tier	<u>2)</u>						
10/01/2017 Initial Base	\$	75,697	\$	6,573	\$	5,646	\$	7,538	22 years
10/01/2018 Actuarial Loss / (Gain)		24,338		2,042		1,735		2,361	24 years
10/01/2018 Plan Amendment - Ord. #35-19-2348		90,969		7,632		6,487		8,825	24 years
10/01/2019 Actuarial Loss / (Gain)		(136,723)		(11,298)		(9,555)		(13,115)	25 years
10/01/2019 Assumption Change		(11,531)		(953)		(806)		(1,106)	25 years
10/01/2019 Assumption Change - 112.664(1)(b), F.S. Assumptions		310,792		N/A		21,720		N/A	25 years
10/01/2019 Assumption Change - 112.664(1)(a), F.S. Assumptions Plus 2%		(185,436)		N/A		N/A		(17,788)	25 years
	(AMSC)							
10/01/2017 Combined Bases *	\$	204,332	\$	17,742	\$	15,239	\$	20,348	22 years
10/01/2018 Actuarial Loss / (Gain)		529,894		44,454		37,784		51,403	24 years
10/01/2018 Plan Amendment - Ord. #23-19-2336		240,427		20,170		17,144		23,323	24 years
10/01/2018 Plan Amendment - Ord. #35-19-2348		524,363		43,990		37,389		50,866	24 years
10/01/2019 Actuarial Loss / (Gain)		(506,381)		(41,845)		(35,389)		(48,574)	25 years
10/01/2019 Assumption Change		(65,723)		(5,431)		(4,593)		(6,304)	25 years
10/01/2018 Assumption Change - 112.664(1)(b), F.S. Assumptions		1,078,631		N/A		75,381		N/A	25 years
10/01/2018 Assumption Change - 112.664(1)(a), F.S. Assumptions Plus 2%		(707,065)		N/A		N/A		(67,824)	25 years

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



Unfunded Actuarial Accrued Liabilities Bases and Amortization Payments

(Police Officers)

		•		Amortization Payment						
				١	/aluation and			1	12.664(1)(a), F.S.	
		Cı	ırrent Unfunded	112	2.664(1)(a), F.S.	112.	664(1)(b), F.S.		Assumptions	Remaining
	Amortization Base		Liabilities		Assumptions	A	ssumptions		Plus 2%	Funding Period
10/01/2018	Combined Bases *	\$	(417,139)	\$	(37,746)	\$	(32,783)	\$	(42,902)	20 years
10/01/2018	Plan Amendment - Ord. #38-19-2351		295,838		24,818		21,095		28,698	24 years
10/01/2019	Actuarial Loss / (Gain)		236,756		19,564		16,546		22,710	25 years
10/01/2019	Assumption Change		(797,068)		(65,866)		(55,704)		(76,457)	25 years
10/01/2019	Assumption Change - 112.664(1)(b), F.S. Assumptions		8,154,055		N/A		569,855		N/A	25 years
10/01/2019	Assumption Change - 112.664(1)(a), F.S. Assumptions Plus 2%		(5,393,757)		N/A		N/A		(517,385)	25 years

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



SECTION B

SUMMARY OF PLAN PROVISIONS

A. Effective Date:

October 1, 1965. Most recently amended by Ordinance 38-19-2351 adopted December 3, 2019.

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 September 20, 2016 is eligible to enter the Plan as a Tier 2 employee as of October 1, 2016.

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.

Any regular full-time employee who previously entered into the Defined Contribution (DC) Plan may opt-out of the DC Plan and elect to join the Plan as a Tier 2 member or as their respective classification at the time they elect to join the Plan during an annual open enrollment period.

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 Chief Administrative Officer (currently Finance Office Manager)
City Attorney Chief Procurement Officer (currently Purchasing Manager)

City Clerk Parks and Recreation Director

Assistant / Deputy City Manager Assistant Director of Parks and Recreation
Finance Director / Chief Financial Officer Community Redevelopment Agency Director

Chief of Police Personnel Manager
Planning and Zoning Director Project Manager

Building Director Special Assistant to the Manager Director of Public Works Superintendent of Maintenance



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 date of Plan entry election date 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.



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 Bargainning 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. <u>General Employees:</u>	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 55 and completion of ten (10) years of Credited Service or completion of twenty-five (25) years of Credited Service regardless of age.
c. <u>AMSC:</u>	Attainment of age 60 and completion of five (5) 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:

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



E. Normal Retirement (cont'd):

2. Benefit:

b. Police Officers	For Credited Service	Percentage
	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%
c. General Employees (Tier 2)	For Credited Service	Percentage
	October 1, 2016 and thereafter	1.60%
d. AMSC	For Credited Service	Percentage
	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%.

No cost-of-living supplemental benefit is provided for Tier 2 General Employees and AMSC members who retired or entered the DROP prior to October 1, 2019. No cost-of-living supplemental benefit is provided on the portion of the benefit accrued after September 30, 2011 for Tier 1 General Employees who retired or entered the DROP prior to October 1, 2019.

G. Early Retirement:

a. <u>Police Officers:</u> Attainment of age 50 and completion of 10 years of Credited Service.
 b. <u>AMSC:</u> Attainment of age 55 and completion of 10 years of Credited Service.

2. Benefit:

a. <u>Police Officers:</u>

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.

b. <u>AMSC:</u> 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. <u>Eligibility:</u> 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. <u>Benefit:</u> Accrued benefit based upon FMC and Credited Service as of date of disability, actuarially reduced as for Early Retirement for early commencement.

J. <u>Pre-Retirement Death Benefit:</u>

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:
 - 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.

2. Vesting Schedule:

All employees except AMSC:

Years of Credited Service	Vesting Percentage	
Less than 10 10 or more years	0% 100%	

AMSC:

Years of Credited Service	Vesting Percentage
Less than 5	0%
5 or more years	100%

AMSC members who have completed three (3) years of continuous Credited Service as of as of June 18, 2019 are 100% vested.



K. <u>Benefit Upon Termination of Service (cont'd):</u>

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. <u>Member Contributions:</u>

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%.

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. <u>Deferred Retirement Option Plan (DROP):</u>

- 1. Eligibility: Attainment of normal retirement date.
- 2. The maximum period of participation in the DROP is sixty (60) months.
- 3. A member's account in the DROP shall be credited monthly with interest in an amount equal to 50% of the net (gross return minus investment expense) yearly interest earned by the Plan for the preceding fiscal year, up to a maximum of 5% and a minimum of 0%.
- 4. No payment may be made from the DROP until the member actually separates from service with the City. The DROP account balance may be distributed in a lump sum, periodic payments, an annuity or a combination thereof.

O. Changes Since Previous Actuarial Valuation (included in Actuarial Impact Statement):

1. Eligibility Requirements were:

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.



O. Changes Since Previous Actuarial Valuation (included in Actuarial Impact Statement) (cont'd):

1. Eligibility Requirements were (cont'd):

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 Planning and Zoning Director

City Attorney Building Director

City Clerk Director of Public Works

Assistant / Deputy City Manager Chief Administrative Officer (currently Finance Office Manager)
Finance Director / Chief Financial Officer Chief Procurement Officer (currently Purchasing Manager)

Chief of Police Parks and Recreation Director

2. Police Officers Normal Retirement Eligibility was:

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.

3. AMSC Normal Retirement Eligibility was:

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.

4. Supplemental Benefit was:

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.

5. Police Officers Early Retirement Eligibility was:

Attainment of age 50 and completion of 15 years of Credited Service.

6. AMSC Vesting Schedule was:

Years of Credited Service	Vesting Percentage
Less than 3 3 or more years	0% 100%

7. Police Officers Contributions were:

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.



SECTION C

ACTUARIAL ASSUMPTIONS AND COST METHODS USED FOR FUNDING

A. Mortality

General Employees including AMSC Mortality Assumptions:

For healthy participants during employment, PUB-2010 Headcount Weighted General Below Median Employee Mortality Table, separate rates for males and females, set back 1 year for males, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018.

For healthy participants post employment, PUB-2010 Headcount Weighted General Below Median Healthy Retiree Mortality Table, separate rates for males and females, set back 1 year for males, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018.

For disabled participants, PUB-2010 Headcount Weighted General Disabled Retiree Mortality Table, separate rates for males and females, both set forward 3 years, without projected mortality improvements.

Sample Ages	Pre-retirement Future Life Expectancy (Years)		Post-retirement Future Life Expectancy (Years)	
(2019)	Male	Female	Male	Female
55	32.50	34.95	28.53	32.29
60	27.66	29.93	24.46	27.77
62	25.78	27.96	22.85	25.95
	Pre-ret	irement	Post-re	tirement
Sample	Futu	re Life	Futu	re Life
Ages	Expectan	ıcy (Years)	Expectan	cy (Years)
(2039)	Male	Female	Male	Female
55	34.14	36.43	30.54	34.06
60	29.22	31.36	26.31	29.42
		29.36	24.63	27.55

Police Officer Mortality Assumptions:

For healthy participants during employment, PUB-2010 Headcount Weighted Safety Employee Female Mortality Table and Safety Below Median Employee Male Mortality Table, both set forward 1 year, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018.

For healthy participants post employment, PUB-2010 Headcount Weighted Safety Healthy Retiree Female Mortality Table and Safety Below Median Healthy Retiree Male Mortality Table, both set forward 1 year, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018.

For disabled participants, 80% PUB-2010 Headcount Weighted General Disabled Retiree Mortality Table / 20% PUB-2010 Headcount Weighted Safety Disabled Retiree Mortality Table, separate rates for males and females, without projected mortality improvements.



A. Mortality (cont'd)

Police Officer Mortality Assumptions (cont'd):

	Pre-retirement		Post-retirement	
Sample	Future Life		Future Life	
Ages	Expectan	cy (Years)	Expectancy (Years)	
(2019)	Male	Female	Male	Female
55	30.37	34.25	27.50	31.08
60	25.43	29.19	22.93	26.31
62	23.51	27.18	21.21	24.48
	Pre-ret	irement	Post-ret	tirement
Sample		irement re Life		tirement re Life
Sample Ages	Futu		Futui	
-	Futu	re Life	Futui	re Life
Ages	Futu Expectan	re Life cy (Years)	Futui Expectan	re Life cy (Years)
Ages (2039)	Futu Expectan Male	re Life cy (Years) Female	Futui Expectan Male	re Life cy (Years) Female

B. <u>Investment Return to be Earned by Fund</u>

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. <u>Employee Withdrawal Rates</u>

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

	Withdrawal Rates			
	Per 100	Per 100 Employees		
<u>Service</u>	Police	General / AMSC		
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. <u>Disability Rates</u>

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



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

H. Increase in Covered Payroll

4.0% per year, limited to average annual increase over most recent ten years (-0.3%) 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	
Normal Retirement	<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>	General *	AMSC **
55 - 59	25%	10%	10%
60 - 61	25%	10%	25%
62 - 64	40%	25%	35%
65 - 66	100%	25%	35%
67 & above	100%	100%	100%

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

^{*} Rates are 25% for Tier 2 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.



^{**} Includes Early Retirement. Rates are 25% below the age of 62 and 35% between the ages of 62 and 66 upon meeting 33 years of service until 100% at age 67.

J. Cost of Living Increases

Future cost of living increases for General Employees (including Tier 1 and Tier 2 General Employees), AMSC and Police Officers are assumed to be 3.0% per annum.

K. Valuation of Assets

The method used for determining the smoothed value of assets phases in the deviation between the expected and actual return on assets at the rate of 20% per year. The smoothed 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.

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 smoothed value of assets of the Plan.

M. Changes Since Previous Actuarial Valuation

1. Mortality was:

General 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.



M. Changes Since Previous Actuarial Valuation (cont'd)

1. Mortality was (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.

2. Police Officers and AMSC Retirement Rates were (changes included in Actuarial Impact Statement):

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

<u>Age</u>	<u>Police</u>	AMSC *
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.

3. <u>Cost of Living Increases were (changes included in Actuarial Impact Statement):</u>

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.



SECTION D

GLOSSARY

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

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

The amount of funds required to provide a payment or series of payments in the future. It is determined by discounting the future payments with an assumed interest rate and with the assumed probability each payment will be made.

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.

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.

GASB No. 67 and

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 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.

Liability