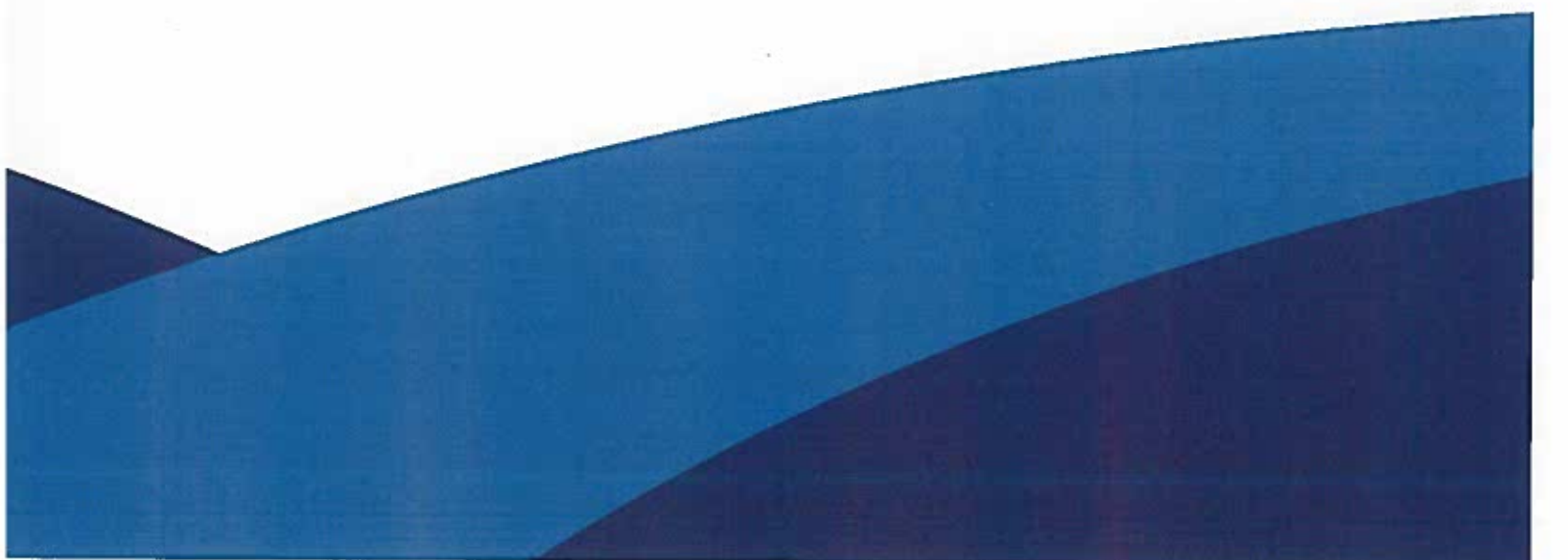


CITY PENSION FUND FOR FIREFIGHTERS AND POLICE OFFICERS IN THE CITY OF MIAMI BEACH

CHAPTER 112.664, F.S. COMPLIANCE REPORT

In Connection with the October 1, 2020 Funding Actuarial Valuation Report and the Fund's Financial Reporting for the Year Ended September 30, 2020





May 17, 2021

Ms. Donna Brito
Executive Director
City Pension Fund for Firefighters and Police Officers
in the City of Miami Beach
1691 Michigan Avenue, Suite 355
Miami Beach, Florida 33139

Re: October 1, 2020 Chapter 112.664 Compliance Report

Dear Donna:

Gabriel, Roeder, Smith & Company (GRS) has been engaged by the Board of Trustees (Board) of the City Pension Fund for Firefighters and Police Officers in the City of Miami Beach (Fund) 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: Fund 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 Fund's funded status); and changes in Fund 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 Fund benefits, Fund provisions and Fund 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, 2020. We reviewed the information provided for internal and year-to-year consistency, but did not audit the data. The Board is responsible for the accuracy of the data.

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 retirement assumption is based on the results of an Experience Study for the period October 1, 2014 – September 30, 2019 and the remaining demographic actuarial assumptions are based on the results of an Experience Study for the period October 1, 2009 – September 30, 2014. The investment return assumption was lowered from 7.65% to 7.55%, as adopted by the Board on May 14, 2020, based upon an Investment Return Assumption Study completed in 2020 along with recommendations from the Investment Consultant. The mortality assumptions are prescribed by statute. The Board's assumptions represent an estimate of future Fund 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 Fund 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 Fund assets will be sufficient to pay all Fund benefits, future contributions are expected to remain relatively stable as a percent of payroll and the funded status is expect to improve. Fund minimum required contributions are determined in compliance with the requirements of the Florida Protection of Public Employee Retirement Benefits Act and for Fire and Police Retirement Chapters 175 and 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 30 years.

The Fund's GASB funded ratio as of October 1, 2020 is 76.45% defined as the ratio of the market value of Fund assets to the total pension liability (GASB roll-forward).

The Fund's GASB funded ratio and the GASB Net Pension Liability may not be appropriate for assessing the sufficiency of Fund 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 Fund sponsor.

This report was prepared using ProVal's valuation model, a software product of Winklevoss Technologies. We are relying on the ProVal model. We performed tests of the ProVal model with this assignment and made a reasonable attempt to understand the developer's intended purpose



of, general operation of, major sensitivities and dependencies within, and key strengths and limitations of the ProVal model. In our professional judgment, the ProVal valuation model has the capability to provide results that are consistent with the purposes of the valuation and has no material limitations or known weaknesses.

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 Fund 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.

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

By *Jennifer Borregard*

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

By *Michelle Jones*

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

Date: May 17, 2021



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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	<u>September 30, 2020</u>
A. <u>Total Pension Liability (TPL)</u>	
Service Cost	\$ 22,110,056
Interest	95,945,797
Benefit Changes	922,043
Difference Between Actual and Expected Experience	(7,950,229)
Assumption Changes	(16,924,385)
Benefit Payments	(69,340,147)
Contribution Refunds	(48,074)
Other	0
Net Change in Total Pension Liability	\$ 24,715,061
Total Pension Liability (TPL) - (beginning of year)	<u>1,290,634,476</u>
Total Pension Liability (TPL) - (end of year)	<u>\$ 1,315,349,537</u>
B. <u>Fund Fiduciary Net Position</u>	
Contributions - City	\$ 42,658,455
Contributions - State	120,549
Contributions - Member	7,133,168
Net Investment Income	85,054,923
Benefit Payments	(69,340,147)
Contribution Refunds	(48,074)
Administrative Expenses	(900,251)
Other	0
Net Change in Fund Fiduciary Net Position	\$ 64,678,623
Fund Fiduciary Net Position - (beginning of year)	<u>940,953,661</u>
Fund Fiduciary Net Position - (end of year)	<u>\$ 1,005,632,284</u>
C. <u>Net Pension Liability (NPL) - (end of year): (A) - (B)</u>	\$ 309,717,253
Valuation Date	October 1, 2019

Certain Key Assumptions

Investment Return Assumption 7.65%

Mortality Table:

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.



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

Measurement Date	<u>September 30, 2020</u>
A. <u>Total Pension Liability (TPL)</u>	
Service Cost	\$ 35,812,133
Interest	92,742,959
Benefit Changes	5,637,849
Difference Between Actual and Expected Experience	(11,547,615)
Assumption Changes	(31,020,869)
Benefit Payments	(69,340,147)
Contribution Refunds	(48,074)
Other	0
Net Change in Total Pension Liability	\$ 22,236,236
Total Pension Liability (TPL) - (beginning of year)	1,667,270,022
Total Pension Liability (TPL) - (end of year)	<u>\$ 1,689,506,258</u>
 B. <u>Fund Fiduciary Net Position</u>	
Contributions - City	\$ 42,658,455
Contributions - State	120,549
Contributions - Member	7,133,168
Net Investment Income	85,054,923
Benefit Payments	(69,340,147)
Contribution Refunds	(48,074)
Administrative Expenses	(900,251)
Other	0
Net Change in Fund Fiduciary Net Position	\$ 64,678,623
Fund Fiduciary Net Position - (beginning of year)	940,953,661
Fund Fiduciary Net Position - (end of year)	<u>\$ 1,005,632,284</u>
 C. <u>Net Pension Liability (NPL) - (end of year): (A) - (B)</u>	 \$ 683,873,974
 Valuation Date	 October 1, 2019

Certain Key Assumptions

Investment Return Assumption 5.65%

Mortality Table:

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.



Net Pension Liability

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

Measurement Date	<u>September 30, 2020</u>
A. <u>Total Pension Liability (TPL)</u>	
Service Cost	\$ 14,297,156
Interest	96,250,011
Benefit Changes	(2,001,087)
Difference Between Actual and Expected Experience	(5,739,687)
Assumption Changes	(9,730,564)
Benefit Payments	(69,340,147)
Contribution Refunds	(48,074)
Other	0
Net Change in Total Pension Liability	\$ 23,687,608
Total Pension Liability (TPL) - (beginning of year)	1,040,987,503
Total Pension Liability (TPL) - (end of year)	<u>\$ 1,064,675,111</u>
B. <u>Fund Fiduciary Net Position</u>	
Contributions - City	\$ 42,658,455
Contributions - State	120,549
Contributions - Member	7,133,168
Net Investment Income	85,054,923
Benefit Payments	(69,340,147)
Contribution Refunds	(48,074)
Administrative Expenses	(900,251)
Other	0
Net Change in Fund Fiduciary Net Position	\$ 64,678,623
Fund Fiduciary Net Position - (beginning of year)	940,953,661
Fund Fiduciary Net Position - (end of year)	<u>\$ 1,005,632,284</u>
C. <u>Net Pension Liability (NPL) - (end of year): (A) - (B)</u>	\$ 59,042,827

Valuation Date October 1, 2019

Certain Key Assumptions

Investment Return Assumption 9.65%

Mortality Table:

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.



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.

FYE	Market Value of Assets (BOY)	Expected Investment Return	Projected Benefit Payments	Market Value of Assets (EOY)
2021	\$ 973,158,600	\$ 70,329,990	\$ 77,729,912	\$ 965,758,678
2022	965,758,678	69,682,403	79,927,997	955,513,084
2023	955,513,084	68,815,441	82,238,010	942,090,515
2024	942,090,515	67,698,556	84,796,815	924,992,256
2025	924,992,256	66,317,018	87,037,600	904,271,674
2026	904,271,674	64,652,035	89,524,655	879,399,054
2027	879,399,054	62,676,164	91,947,632	850,127,586
2028	850,127,586	60,375,155	94,198,151	816,304,590
2029	816,304,590	57,725,458	96,573,482	777,456,566
2030	777,456,566	54,691,566	99,067,619	733,080,513
2031	733,080,513	51,253,715	101,230,258	683,103,970
2032	683,103,970	47,402,932	103,147,959	627,358,943
2033	627,358,943	43,120,703	104,964,895	565,514,751
2034	565,514,751	38,389,638	106,493,756	497,410,633
2035	497,410,633	33,193,283	107,841,237	422,762,679
2036	422,762,679	27,513,800	108,918,433	341,358,046
2037	341,358,046	21,336,405	109,693,501	253,000,950
2038	253,000,950	14,634,228	110,465,395	157,169,783
2039	157,169,783	7,380,859	110,913,362	53,637,280
2040	53,637,280	799,263	111,170,999	0
2041	0	0	111,153,766	0
2042	0	0	110,929,218	0
2043	0	0	110,440,124	0
2044	0	0	109,756,050	0
2045	0	0	108,834,761	0
2046	0	0	107,709,830	0
2047	0	0	106,365,565	0
2048	0	0	104,852,694	0
2049	0	0	103,138,721	0
2050	0	0	101,231,235	0

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: 19.42

Certain Key Assumptions

Investment return assumption 7.55%

Mortality Table:

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 Fund assets does not include future contributions from the City, Members or State. For this reason, this projection should not be viewed as representative of the amount of time the Fund can sustain benefit payments. Under the Government Accounting Standards Board standards which include City, Member and State contributions, the Fund 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.

FYE	Market Value of Assets (BOY)	Expected Investment Return	Projected Benefit Payments	Market Value of Assets (EOY)
2021	\$ 973,158,600	\$ 51,692,829	\$ 77,729,912	\$ 947,121,517
2022	947,121,517	50,182,237	79,927,997	917,375,757
2023	917,375,757	48,462,475	82,238,010	883,600,222
2024	883,600,222	46,511,644	84,796,815	845,315,051
2025	845,315,051	44,320,009	87,037,600	802,597,460
2026	802,597,460	41,875,033	89,524,655	754,947,838
2027	754,947,838	39,158,239	91,947,632	702,158,445
2028	702,158,445	36,161,330	94,198,151	644,121,624
2029	644,121,624	32,869,467	96,573,482	580,417,609
2030	580,417,609	29,259,533	99,067,619	510,609,523
2031	510,609,523	25,320,706	101,230,258	434,699,971
2032	434,699,971	21,050,551	103,147,959	352,602,563
2033	352,602,563	16,439,974	104,964,895	264,077,642
2034	264,077,642	11,481,259	106,493,756	169,065,145
2035	169,065,145	6,167,891	107,841,237	67,391,799
2036	67,391,799	1,000,288	108,918,433	0
2037	0	0	109,693,501	0
2038	0	0	110,465,395	0
2039	0	0	110,913,362	0
2040	0	0	111,170,999	0
2041	0	0	111,153,766	0
2042	0	0	110,929,218	0
2043	0	0	110,440,124	0
2044	0	0	109,756,050	0
2045	0	0	108,834,761	0
2046	0	0	107,709,830	0
2047	0	0	106,365,565	0
2048	0	0	104,852,694	0
2049	0	0	103,138,721	0
2050	0	0	101,231,235	0

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: 15.58

Certain Key Assumptions

Investment return assumption 5.55%

Mortality Table:

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 Fund assets does not include future contributions from the City, Members or State. For this reason, this projection should not be viewed as representative of the amount of time the Fund can sustain benefit payments. Under the Government Accounting Standards Board standards which include City, Member and State contributions, the Fund 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

FYE	Market Value of Assets (BOY)	Expected Investment Return	Projected Benefit Payments	Market Value of Assets (EOY)
2021	\$ 973,158,600	\$ 88,971,766	\$ 77,729,912	\$ 984,400,454
2022	984,400,454	89,933,242	79,927,997	994,405,699
2023	994,405,699	90,770,913	82,238,010	1,002,938,602
2024	1,002,938,602	91,455,285	84,796,815	1,009,597,072
2025	1,009,597,072	91,976,870	87,037,600	1,014,536,342
2026	1,014,536,342	92,321,709	89,524,655	1,017,333,396
2027	1,017,333,396	92,465,236	91,947,632	1,017,851,000
2028	1,017,851,000	92,399,872	94,198,151	1,016,052,721
2029	1,016,052,721	92,106,974	96,573,482	1,011,586,213
2030	1,011,586,213	91,553,200	99,067,619	1,004,071,794
2031	1,004,071,794	90,725,261	101,230,258	993,566,797
2032	993,566,797	89,624,215	103,147,959	980,043,053
2033	980,043,053	88,240,018	104,964,895	963,318,176
2034	963,318,176	86,564,807	106,493,756	943,389,227
2035	943,389,227	84,592,860	107,841,237	920,140,850
2036	920,140,850	82,317,694	108,918,433	893,540,111
2037	893,540,111	79,737,788	109,693,501	863,584,398
2038	863,584,398	76,837,645	110,465,395	829,956,648
2039	829,956,648	73,603,344	110,913,362	792,646,630
2040	792,646,630	70,027,096	111,170,999	751,502,727
2041	751,502,727	66,098,732	111,153,766	706,447,693
2042	706,447,693	61,807,430	110,929,218	657,325,905
2043	657,325,905	57,141,248	110,440,124	604,027,029
2044	604,027,029	52,086,098	109,756,050	546,357,077
2045	546,357,077	46,625,611	108,834,761	484,147,927
2046	484,147,927	40,742,019	107,709,830	417,180,116
2047	417,180,116	34,415,161	106,365,565	345,229,712
2048	345,229,712	27,621,067	104,852,694	267,998,085
2049	267,998,085	20,332,874	103,138,721	185,192,238
2050	185,192,238	12,522,213	101,231,235	96,483,216
2051	96,483,216	4,157,571	99,132,176	1,508,611
2052	1,508,611	0	96,845,207	0

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: 31.00

Certain Key Assumptions

Investment return assumption 9.55%

Mortality Table:

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 Fund assets does not include future contributions from the City, Members or State. For this reason, this projection should not be viewed as representative of the amount of time the Fund can sustain benefit payments. Under the Government Accounting Standards Board standards which include City, Member and State contributions, the Fund is expected to be able to pay all future benefit payments.



ACTUARIALLY DETERMINED CONTRIBUTION

	Valuation Assumptions and 112.664(1)(a), F.S. Assumptions	112.664(1)(b), F.S. Assumptions	112.664(1)(a), F.S. Assumptions Plus 2% on Investment Return Assumption
A. Valuation Date	October 1, 2020	October 1, 2020	October 1, 2020
B. Actuarial Determined Contribution to Be Paid During Fiscal Year Ending	September 30, 2022	September 30, 2022	September 30, 2022
C. Annual Payroll of Active Employees	\$ 67,165,967	\$ 67,165,967	\$ 67,165,967
D. Total Minimum Funding Requirement			
1. Total Normal Cost	\$ 23,535,529	\$ 37,533,739	\$ 15,566,928
2. Annual Payment to Amortize Unfunded Actuarial Liability	27,039,872	39,851,743	10,249,515
3. Interest Adjustment	246,294	184,481	305,850
4. Expected Service Buyback	201,152	201,152	201,152
5. Total Minimum Funding Requirement	\$ 51,022,847	\$ 77,771,115	\$ 26,323,445
E. Expected Payroll of Active Employees for Following Plan Year (\$ / % of annual pay)	\$ 69,180,946 103.00%	\$ 69,180,946 103.00%	\$ 69,180,946 103.00%
F. Expected Contribution Sources (\$ / % of expected pay)			
1. City	\$ 45,416,048 65.65%	\$ 72,966,764 105.47%	\$ 19,975,664 28.87%
2. Member	7,016,935 10.14%	7,016,935 10.14%	7,016,935 10.14%
3. State (Share Plan)	120,549 0.17%	120,549 0.17%	120,549 0.17%
4. Total	\$ 52,553,532 75.97%	\$ 80,104,248 115.79%	\$ 27,113,148 39.19%



Unfunded Actuarial Accrued Liabilities Bases and Amortization Payments

Amortization Base	Current Unfunded Liabilities	Amortization Payment			Remaining Funding Period
		Valuation and 112.664(1)(a), F.S. Assumptions	112.664(1)(b), F.S. Assumptions	112.664(1)(a), F.S. Assumptions Plus 2%	
10/01/2001 Initial Unfunded Liability	\$ 10,359,131	\$ 1,158,102	\$ 1,061,055	\$ 1,257,721	11 years
10/01/2002 Method Update	12,086,874	1,263,458	1,148,158	1,382,309	12 years
10/01/2003 Fund Amendment	1,066,507	104,953	94,608	115,659	13 years
10/01/2003 Actuarial (Gain) / Loss	32,110,179	3,159,897	2,848,451	3,482,224	13 years
10/01/2004 Actuarial (Gain) / Loss	35,131,295	3,273,546	2,927,483	3,633,081	14 years
10/01/2005 Method Update	(31,695,531)	(2,810,422)	(2,493,632)	(3,140,760)	15 years
10/01/2005 Assumption Update	6,375,249	565,289	501,570	631,733	15 years
10/01/2005 Actuarial (Gain) / Loss	23,674,552	2,099,207	1,862,585	2,345,949	15 years
10/01/2006 Method Update	(4,835,871)	(409,794)	(360,791)	(461,073)	16 years
10/01/2006 Actuarial (Gain) / Loss	20,933,513	1,773,916	1,561,793	1,995,893	16 years
10/01/2007 Actuarial (Gain) / Loss	24,716,872	2,009,258	1,755,498	2,275,704	17 years
10/01/2008 Assumption Update	5,954,012	465,846	403,948	531,048	18 years
10/01/2008 Actuarial (Gain) / Loss	32,862,829	2,571,211	2,229,569	2,931,091	18 years
10/01/2009 Assumption Update	23,608,282	1,783,055	1,534,655	2,045,521	19 years
10/01/2009 Actuarial (Gain) / Loss	67,945,531	5,131,701	4,416,795	5,887,087	19 years
10/01/2010 Assumption Update	4,610,484	337,019	287,943	389,025	20 years
10/01/2010 Actuarial (Gain) / Loss	17,422,848	1,273,581	1,088,126	1,470,110	20 years
10/01/2011 Fund Amendment	(3,152,361)	(223,549)	(189,616)	(259,608)	21 years
10/01/2011 Assumption Update	17,408,975	1,234,552	1,047,159	1,433,688	21 years
10/01/2011 Actuarial (Gain) / Loss	30,967,320	2,196,037	1,862,700	2,550,263	21 years
10/01/2012 Assumption Update	7,997,471	551,364	464,340	644,086	22 years
10/01/2012 Actuarial (Gain) / Loss	26,926,475	1,856,373	1,563,373	2,168,556	22 years
10/01/2012 Fund Amendment	(20,579,817)	(1,418,820)	(1,194,881)	(1,657,420)	22 years
10/01/2013 Actuarial (Gain) / Loss	1,604,906	107,775	90,127	126,626	23 years
10/01/2013 Method Update	(66,579,650)	(4,471,062)	(3,738,914)	(5,253,091)	23 years
10/01/2014 Actuarial (Gain) / Loss	(6,177,383)	(404,776)	(336,147)	(478,252)	24 years
10/01/2014 Assumption Update	5,971,257	391,269	324,931	462,294	24 years
10/01/2015 Actuarial (Gain) / Loss	9,036,021	578,653	477,262	687,448	25 years
10/01/2015 Assumption Update	2,558,599	163,849	135,139	194,655	25 years
10/01/2015 Fund Amendment	(8,706,330)	(557,540)	(459,849)	(662,366)	25 years
10/01/2016 Actuarial (Gain) / Loss	(11,737,942)	(735,692)	(602,699)	(878,694)	26 years
10/01/2016 Assumption Update	36,402,918	2,281,603	1,869,152	2,725,097	26 years
10/01/2017 Actuarial (Gain) / Loss	8,250,640	506,796	412,427	608,468	27 years
10/01/2017 Assumption Update	7,166,916	440,229	358,254	528,546	27 years
10/01/2018 Actuarial (Gain) / Loss	6,718,200	404,924	327,369	488,633	28 years
10/01/2018 Assumption Update	7,450,897	449,086	363,072	541,924	28 years
10/01/2019 Actuarial (Gain) / Loss	(1,311,703)	(77,665)	(62,385)	(94,185)	29 years
10/01/2019 Fund Amendment and Assumption Update	(16,143,109)	(955,816)	(767,768)	(1,159,131)	29 years
10/01/2020 Actuarial (Gain) / Loss	(2,349,718)	(136,812)	(109,198)	(166,715)	30 years
10/01/2020 Assumption Update	19,051,525	1,109,271	885,374	1,351,726	30 years
10/01/2020 Assumption Change - 112.664(1)(b), F.S. Assumptions	349,984,740	N/A	16,264,707	N/A	30 years
10/01/2020 Assumption Change - 112.664(1)(a), F.S. Assumptions Plus 2%	(287,879,409)	N/A	N/A	(20,425,355)	30 years



SECTION B



SUMMARY OF FUND PROVISIONS

**Outline of Principal Provisions of the Retirement Fund
(as of October 1, 2020)**

A. Relevant Provisions:

The Fund was created under Chapter 23414, Laws of Florida, Special Act of 1945, as most recently amended by Ordinance No. 2020-4362 adopted October 14, 2020 and reflecting the most recent Collectively Bargained Agreements executed May 8, 2019 and July 31, 2019 for Firefighters and Police Officers, respectively.

B. Eligibility Requirements:

Any full-time employee of the City who is certified as a Firefighter or Police Officer as a condition of employment.

C. Membership Tiers:

Tier 1 - Members hired prior to July 14, 2010

Tier 2 - Members hired on or after July 14, 2010 but prior to September 30, 2013

Tier 3 - Members hired on or after September 30, 2013 but prior to June 8, 2016 for the Fire Department and July 20, 2016 for the Police Department

Tier 4 - Members hired on or after June 8, 2016 but prior to May 8, 2019 for the Fire Department and hired on or after July 20, 2016 but prior to July 31, 2019 for the Police Department

Tier 5 - Members hired on or after May 8, 2019 for the Fire Department and July 31, 2019 for the Police Department

D. Credited Service:

All periods of employment as an Employee for which contributions have been made to the Fund together with all service in the uniformed services of the United States required to be included.

E. Pre-Employment Service:

Members with at least 5 years of credited service (10 years for Tier 5 members) may purchase pre-employment military service. Pre-employment military service must be purchased within 24 months following the date the member completes 5 years of credited service (10 years for Tier 5 members) under the pension fund. A member may purchase up to two years of pre-employment military service at the accrual rate of 3% per year.

Members are also able to purchase an increase in benefit multiplier or pre-employment public safety service during the window period of July 1, 2021 to September 30, 2021. A member may purchase up to two years of additional pension service at the accrual rate of 3% per year.

However, the total of all combinations of pre-employment benefits purchased cannot exceed two years or a 6% additional benefit.

The price for each year purchased shall be of 10.0% (10.5% for members hired on or after September 30, 2013) of the member's Salary during the 12 calendar months immediately preceding the date of such purchase.



**Outline of Principal Provisions of the Retirement Fund
(as of October 1, 2020)**

F. Pensionable Pay:

Pensionable pay is defined as base pay, any premiums that longevity is calculated on, longevity pay, pensionable overtime and any other pay negotiated as pensionable. Effective July 14, 2010, off-duty pay is pensionable for any member who is eligible for overtime and receives off-duty compensation through the City. Effective September 30, 2013, pensionable overtime is limited to 300 hours per calendar year.

1. Overtime and Off-Duty pay included in pension computation for Police Officers:

- Pensionable overtime pay not exceeding 300 hours per calendar year and off duty is limited in each year to an amount that is equal to 11% of highest annualized pay rate for the same salary rank that the member is in at time of retirement.
- The 11% limitation shall not apply to any member who holds the rank of sergeant or lieutenant on September 30, 2013, or any Police Officer promoted to the rank of sergeant prior to the date the 2013 Certified Police Sergeant Promotional Register expired in 2015. For these members, the inclusion of overtime and / or off duty in the member's salary shall be limited in each year to an amount which is equal to 70% of the difference between the member's annualized pay rate at retirement and the highest annualized pay rate for the next higher salary rank.
- For any members who self-demote they will become subject to the eleven percent (11%) limitation on overtime and off-duty compensation.

2. Overtime and Off-Duty pay included in pension computation for Firefighters:

- Pensionable overtime pay not exceeding 300 hours per calendar year and off duty is limited in each year to an amount that is equal to 11% of highest annualized pay rate for the same salary rank that the member is in at time of retirement.

G. Final Average Monthly Earnings (FAME):

Tier 1 and eligible to retire prior to September 30, 2015 - the greater of the average of the 2 highest paid years or the 2 last paid years prior to date of retirement after taking into consideration the overtime limit.

Tier 1 and eligible to retire on or after September 30, 2015 - the greater of the average of the 3 highest paid years or the 3 last paid years prior to date of retirement after taking into consideration the overtime limit.

Tier 2 - the greater of the average of the 3 highest paid years or the 3 last paid years prior to date of retirement after taking into consideration the overtime limit.

Tier 3 - the greater of the average of the 5 highest paid years or the 5 last paid years prior to date of retirement after taking into consideration the overtime limit.



**Outline of Principal Provisions of the Retirement Fund
(as of October 1, 2020)**

Tier 4 and Tier 5 - the average of the 5 highest paid years prior to date of retirement taking into consideration the overtime limit.

H. Normal Retirement:

1. Eligibility:

Tier 1 and eligible to retire prior to September 30, 2013 - the earlier of attainment of age 50 or Rule of 70

Tier 1 and eligible to retire on or after September 30, 2013 - the earlier of attainment of age 50 or Rule of 70 (must attain age 47) or reach the 85% maximum pension benefit regardless of age

Tier 2 and Tier 3 - the earlier of attainment of age 50 with 5 years of creditables service or Rule of 70 (must attain age 48) or reach the 85% maximum pension benefit regardless of age

Tier 4 and Tier 5 - the earlier of attainment of age 52 with 5 years of creditables service or Rule of 70 (must attain age 48) or reach the 85% maximum pension benefit regardless of age

2. Benefit:

Tier 1 and eligible to retire prior to September 30, 2013:

3% x FAME x Credited Service up to 15 years plus 4% x Credited Service after 15 years
Benefit shall not exceed 90% of FAME.

Tier 1 and eligible to retire on or after September 30, 2013 but prior to September 30, 2015:

3% x FAME x Credited Service up to 20 years plus 4% x Credited Service after 20 years
Benefit shall not exceed 85% of FAME (exception if exceeded 85% as of September 30, 2013).

Tier 1 and eligible to retire on or after September 30, 2015, Tier 2, Tier 3, Tier 4 and Tier 5:

3% x FAME x Credited Service up to 20 years plus 4% x Credited Service after 20 years
Benefit shall not exceed 85% of FAME.

A member's benefit multiplier for credited service earned before October 1, 2013 shall not be reduced.

I. Deferred Retirement:

1. Eligibility:

Any first day of the month past Normal Retirement Date.

2. Benefit:

Benefit calculated as for Normal Retirement based upon service and pay to Deferred Retirement Date.



**Outline of Principal Provisions of the Retirement Fund
(as of October 1, 2020)**

J. Disability Retirement:

1. Eligibility:

Totally and permanently disabled meaning incapacity to perform regular duty as Firefighter or Police Officer (and completion of at least 5 years of Credited Service for non-service incurred disability).

Effective July 1, 2019, a Firefighter who becomes totally and permanently unable to perform useful and efficient service as a Firefighter due to a diagnosis of cancer or circumstances that arise out of the treatment of such cancer will be presumed to be disabled in-line of duty subject to the limitations in Chapter 112.1816, Florida Statutes.

2. Benefit:

Accrued benefit (minimum of 85% of current salary at time of disability for service incurred disability).

K. Pre-Retirement Death Benefit:

1. Service Incurred:

Greater of accrued benefit or 85% of members salary payable as a monthly benefit to the spouse until death or remarriage, to a Domestic Partner until death, marriage or entry into another Domestic Partnership, to unmarried children in equal shares until age 18 (until age 22 if a full-time student or until recovery from handicap if handicapped), or to dependent parents in equal shares.

2. Non-Service Incurred:

For members with at least 5 years of service, accrued benefit is payable for the first 12 months after death and 75% of the accrued benefit is payable thereafter (with a minimum benefit of 25% of average monthly salary); Benefits are payable to the spouse until death or remarriage, to a Domestic Partner until death, marriage or entry into another Domestic Partnership, to unmarried children in equal shares until age 18 (until age 22 if a full-time student or until recovery from handicap or until marriage if handicapped), or to dependent parents in equal shares. However, if the member has been married or in a domestic partnership for less than 10 years, benefits are payable to the spouse or domestic partner only for the life expectancy of the deceased member at time of death.

L. Vested Benefit:

1. Eligibility:

Any age prior to 50 with at least 5 years (10 years for Tier 5 members) of service for members who terminate employment on or after September 30, 2013.

2. Benefit:

Return of employee contributions or accrued benefit upon attainment of age 50. If a member terminates employment with less than 10 years of service and passes away prior to the normal retirement date, the return of employee contributions is the only benefit.



**Outline of Principal Provisions of the Retirement Fund
(as of October 1, 2020)**

M. Employee Contributions:

10.0% of pensionable wages (on a pre-tax basis) for members hired prior to September 30, 2013 and 10.5% of pensionable wages (on a pre-tax basis) for members hired on or after September 30, 2013; If contributions are refunded to the member or to his or her beneficiaries, then interest is credited at the rate of 3% per annum.

N. Payment of Retirement Benefit:

Benefit is payable to the member for his or her life. Upon death of member, except those retiring prior to November 5, 2003, the standard benefit is a 75% joint and survivor annuity with a specified beneficiary as provided under the plan. The specified beneficiary will receive a survivor annuity equal to 100% of the total benefit for one year following the death of the member and thereafter 75% of the total benefit until death or remarriage. However, upon death, if the member has been married or in a domestic partnership for less than 10 years, the survivor annuity is payable only for the life expectancy of the deceased member at time of death.

In lieu of the standard benefit, the members may elect the actuarial equivalent of the 10 year certain and life annuity, with a designated beneficiary, any of the following optional forms of payment:

- 75% joint and contingent survivor annuity with a designated beneficiary
- 66 ⅔% joint and contingent survivor annuity with a designated beneficiary
- 50% joint and contingent survivor annuity with a designated beneficiary
- 25% joint and contingent survivor annuity with a designated beneficiary
- 10 year certain and life annuity with a designated beneficiary
- Life of member only

Members who retired prior to November 5, 2003 were subject to different normal and optional forms of payment.

O. Deferred Retirement Option Program (DROP):

Police Officers and Firefighters are eligible to participate in a Deferred Retirement Option Program (DROP) upon meeting eligibility for a normal service retirement.

Operations of the DROP:

1. Member contributions to the Pension Plan will cease upon entering the DROP.
2. The member's monthly retirement benefit, based on final average earnings and service, will be calculated as of the date prior to them entering the DROP.
3. The member will cease to accrue additional pension benefits (with the exception of the COLA under the pension plan).
4. The member will no longer be eligible for Disability or Pre-Retirement Service Connected Death benefits from the Pension Plan.
5. The member's monthly pension will be deposited into the selected investment vehicles.
6. Members who enter the DROP on or after June 8, 2016 for Fire Department members and July 20, 2016 for Police Department members may participate in DROP for a period not to exceed ninety-six (96) months.



**Outline of Principal Provisions of the Retirement Fund
(as of October 1, 2020)**

Notwithstanding the above, participation may not continue beyond the date when the member's combined years of creditable service and time in the DROP equals 456 months for members who enter the DROP on or after September 1, 2012.

Members who enter the DROP on or before September 30, 2015 may extend their DROP participation period by 12 months for a total maximum DROP participation period not to exceed seventy-two (72) months.

Members who enter the DROP on or after October 1, 2015 but prior to June 8, 2016 for Fire Department members and July 20, 2016 for Police Department members may extend their DROP participation period by up to 36 months for a total maximum DROP participation period not to exceed ninety-six (96) months.

7. The member will not have access or be able to borrow against any of the funds accumulated in their DROP account.
8. The member may sever employment with the City at any time during the DROP period. Such separation will terminate their participation in the DROP.
9. No payment will be made from the DROP account until the member severs employment with the City.
10. Following severance of employment, the funds in the DROP will be paid under the *DROP Account Payment Options* the member selected. The member will also start receiving their monthly pension which was previously being deposited in the DROP.
11. A 2.5% COLA (1.5% per year for participants hired on or after July 14, 2010) is paid annually on the anniversary date of the member's retirement.

Members hired before June 8, 2016 for Fire Department members and July 20, 2016 for Police Department members who elect to extend or enter the DROP and participate for more than 5 years will have no COLA adjustment applied for years six (6), seven (7), and eight (8) while participating in the DROP. Members hired on or after June 8, 2016 for Fire Department members and July 20, 2016 for Police Department members will receive a zero percent (0%) COLA for the first (1st), second (2nd), third (3rd) and fourth (4th) annual adjustment dates while participating in the DROP.

P. Cost-of-Living Adjustment:

Effective October 1, 2010, after 1 year of retirement, benefits are increased by 2.5% per year (1.5% per year for participants hired on or after July 14, 2010), compounded annually, on the anniversary date of each member's retirement.

For members retired prior to October 1, 2010, benefit increases occur on the first of October each year.

Members whose grandfathered Base Plan benefit is greater than the benefit otherwise provided by this plan will receive the applicable cost-of-living adjustment on that basis (2% a year beginning the October three years after retirement) until such time as the benefit from this plan with 2.5% cost-of-living exceeds that comparable grandfathered Base Plan benefit.



**Outline of Principal Provisions of the Retirement Fund
(as of October 1, 2020)**

Q. Changes Since Previous Actuarial Valuation

None.

SECTION C

ACTUARIAL ASSUMPTIONS AND COST METHODS USED FOR FUNDING

**Actuarial Assumptions and Actuarial Cost Methods Used in the Valuation
(as of October 1, 2020)**

A. Mortality

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.

Sample Ages (2020)	Pre-retirement Future Life Expectancy (Years)		Post-retirement Future Life Expectancy (Years)	
	Male	Female	Male	Female
	45	40.69	44.66	37.20
50	35.54	39.46	32.36	36.20
55	30.45	34.32	27.59	31.17
60	25.51	29.26	23.01	26.39
62	23.58	27.25	21.28	24.55

Sample Ages (2040)	Pre-retirement Future Life Expectancy (Years)		Post-retirement Future Life Expectancy (Years)	
	Male	Female	Male	Female
	45	42.39	46.19	39.23
50	37.21	40.98	34.33	38.07
55	32.09	35.81	29.48	33.00
60	27.08	30.70	24.79	28.13
62	25.11	28.67	23.00	26.25

B. Investment Return

7.55%, compounded annually, net of investment expenses includes inflation at 3.00%. Reductions in the investment return assumption are being phased in. The October 1, 2021 Actuarial Valuation will have an assumed rate of 7.50%.



**Actuarial Assumptions and Actuarial Cost Methods Used in the Valuation
(as of October 1, 2020)**

C. Expenses

Prior year's actual administrative expenses.

D. Employee Withdrawal Rates

Representative values of the assumed annual rates of withdrawal among members in active service are as follows:

<u>Age</u>	<u>Withdrawal Rate</u>	<u>Age</u>	<u>Withdrawal Rate</u>
20	2.00%	35	1.25%
25	1.75%	40	1.00%
30	1.50%	45	0.75%

E. Disability Rates

Representative values of the assumed annual rates of disability among members in active service are as follows:

<u>Age</u>	<u>Disability Rates</u>	<u>Age</u>	<u>Disability Rate</u>
20	0.07%	45	0.58%
25	0.11%	50	0.99%
30	0.16%	55	1.42%
35	0.22%	60	2.00%
40	0.32%	64	2.69%

For Firefighters, 30% of disabilities are assumed to be non-service incurred - 70% service incurred.

For Police Officers, 35% of disabilities are assumed to be non-service incurred - 65% service incurred.

**Actuarial Assumptions and Actuarial Cost Methods Used in the Valuation
(as of October 1, 2020)**

F. Salary Increase Factors

Representative values of the assumed annual rates of future salary increase are as follows:

<u>Age</u>	<u>Merit Salary Increase</u>	<u>Age</u>	<u>Merit Salary Increase</u>
20	3.7%	45	2.7%
25	7.7%	50	2.7%
30	6.7%	55	2.7%
35	3.7%	60	1.7%
40	2.7%	64	0.7%

In addition to the average assumed salary increase rates shown above the expected cost of living increases are as follows:

<u>FYE</u>	<u>COLA Salary Increase</u>	<u>Weighted Average Increase *</u>
2021	1.00%	4.68%
2022 and thereafter	2.18%	6.08%

The cost of living increases shown above are based on a 1% increase each April through 2021 contained in the collective bargaining agreement and long term expected increases of 2.18% annually each July.

* The weighted average increase shown is based on aging of the current active census demographics.

G. Payroll Growth Assumption

The aggregate compensation used to compute the accrued liability contribution rate is assumed to increase at a rate of 3.5% per year - not greater than historical 10-year average (3.0% as of October 1, 2020).

**Actuarial Assumptions and Actuarial Cost Methods Used in the Valuation
(as of October 1, 2020)**

H. Retirement

All members are assumed to retire at age 50 with 26.25 years of service, but not later than age 65. Retirement is assumed to occur in accordance with the following rates:

Service	Rate of Retirement	
	Meeting Rule of 70	Not Meeting Rule of 70
Less than 20	30%	8%
20	45%	8%
21	45%	8%
22	50%	8%
23	50%	20%
24	70%	60%
25	70%	60%
More than 25	100%	100%

I. DROP Assumption

80% of all active participants will participate in the DROP.

Leave DROP	Enter DROP on or before September 30, 2015	Enter the DROP on or after October 1, 2015
Prior to 5 years	0%	0%
After 5 years	5%	5%
After 6 years	N/A	5%
After 7 years	N/A	10%
After 8 years	N/A	100%

The recent extension of the DROP may alter the retirement experience of the Fund.

DROP assumptions will need to be monitored in light of future DROP experience.

J. Overtime and Off-Duty Pay Limitation

No members excluded from the eleven percent (11%) limitation on overtime and off-duty compensation are assumed to self-demote.

**Actuarial Assumptions and Actuarial Cost Methods Used in the Valuation
(as of October 1, 2020)**

K. Loadings for Contingencies

Pre-Employment Service: A City contribution of 0.275% of annual pensionable payroll is added to provide for the purchase (or *buyback*) of pre-employment military service and any probationary service by the membership.

Transfers into Fund from other City pension systems: A City contribution of 0.025% of annual pensionable payroll is added to provide for the transfer of service under another City pension system. This load does not apply to Tier 5 members.

L. Marital Assumptions

1. 77% of members are assumed married or entitled to benefits for dependents, including registered domestic partners.
2. Male spouses are assumed to be three years older than female spouses.

M. Smoothed Asset Valuation Method

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 fund assets and whose upper limit is 120% of the fair market value of fund assets.

N. Actuarial Cost Methods

Normal Retirement, Termination, Disability, and Death Benefits: 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 age at hire to his assumed retirement age to fund his estimated benefits, assuming the Fund had always been in effect. The normal cost for the Fund is the sum of such amounts for all 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 Fund 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 Fund.

Vested Normal Retirement, Termination, Disability, and Death Benefits: Unit Credit Cost Method

Under this method, the actuarial present value of vested accrued benefits is an amount calculated to be the sum of the present values of each individual's vested accrued or earned benefit under the Fund as of the valuation date. Each individual's calculation is based on pay and service as of the valuation date.

The DROP accounts balance is included in the assets and liabilities as of the valuation date.



**Actuarial Assumptions and Actuarial Cost Methods Used in the Valuation
(as of October 1, 2020)**

O. Changes Since Previous Actuarial Valuation

1. Investment Return:

The interest rate used to calculate all liabilities was reduced from 7.65% to 7.55%.

2. Retirement

All members were assumed to retire at age 50 with 26.25 years of service, but not later than age 65. Retirement was assumed to occur in accordance with the following rates:

Service	Rate of Retirement	
	Meeting Rule of 70	Not Meeting Rule of 70
Less than 20	20%	4%
20	25%	5%
21	30%	10%
22	35%	10%
23	40%	20%
24	50%	60%
25	70%	60%
26	100%	100%
More than 26	100%	100%

Assumption Change History
(as of October 1, 2020)

A. Effective October 1, 2002:

The actuarial cost method was changed from frozen initial liability to entry age.

The amortization of the unfunded accrued liability was changed from level dollar to level percentage of pay, with aggregate payroll assumed to increase at 3.50% per year.

B. Effective October 1, 2005:

The *fresh start* method was applied to the actuarial value of assets to begin a new five-year phase-in of realized and unrealized gains and losses.

The retirement rates were increased to reflect retirement experience for participants meeting the age 50 and *Rule of 70* eligibility criteria.

The loadings for contingencies and pre-employment service were increased from 5.00% to 7.00% and from 4.50% to 5.50% respectively.

C. Effective October 1, 2006:

The actuarial valuation system used by Buck Consultants was upgraded effective October 1, 2006. The gain resulting from this upgrade was amortized over 30 years.

D. Effective October 1, 2008:

The interest rate used to calculate all liabilities was reduced to 8.40% from 8.50%.

The salary scale used to project future pay increases was reduced by 50 basis points at each age to reflect the current and projected economic climate.

The loadings for contingencies were increased by 100 basis points (50 basis points for salary rates and 50 basis points for buybacks).

The retirement assumption was updated to reflect an increase in the level of retirements starting at age 45.

E. Effective October 1, 2009:

The interest rate used to calculate all liabilities was reduced from 8.40% to 8.30%.

The mortality rates were changed from the 1983 Group Annuity Mortality Table to the RP-2000 Combined Mortality Table with a blue collar adjustment for healthy lives and the RP-2000 Disabled Mortality Table for disabled participants.

A load of 20% was added to the projected base payroll to estimate the projected pensionable payroll used to determine the expected member contributions.

**Assumption Change History
(as of October 1, 2020)**

E. Effective October 1, 2009 (cont'd):

An experience study was performed on the fund over the 5 year period October 1, 2003 through October 1, 2008 and the following assumptions were changed to more accurately reflect fund experience:

- **Retirement Rates:** The retirement assumption was changed to reflect the results of the experience study.
- **Withdrawal Rates:** The withdrawal assumption was changed to reflect the results of the experience study.
- **Salary Increase Rates:** The salary increase assumption was changed to an average increase of 3.83% for fund year 2009 to reflect the freeze on COLA for the fund year and to an average increase of 6.00% for all subsequent fund years.
- **Load for Overtime and Other Pays:** The load for overtime and other pays was changed from 7.50% to 16.00% to reflect the results of the experience study.

F. Effective October 1, 2010:

The interest rate used to calculate all liabilities was reduced from 8.30% to 8.20%.

The freeze on the cost of living increase component of the salary scale was extended to March 31, 2012.

G. Effective October 1, 2011:

The interest rate used to calculate all liabilities was reduced from 8.20% to 8.10%.

The mortality tables for healthy pre and post retirement participants was projected 15 and 7 years respectively from the valuation date to reflect mortality improvements.

The contingency compensation load for overtime and other pays was increased from 16% to 18% to account for the expected increase in pensionable pay due to the inclusion of off duty pay in the computation of pensionable pay.

H. Effective October 1, 2012:

The interest rate used to calculate all liabilities was reduced from 8.10% to 8.00%.

The expected salary increases for FYE 2014 and 2015 were reduced by 2.17% to reflect a freeze in the cost of living increases and increased by 3.00% to reflect a 3.00% cost of living increase in FYE 2016.

**Assumption Change History
(as of October 1, 2020)**

H. Effective October 1, 2012 (cont'd):

The contingency compensation load for overtime and other pays was decreased from 18% to 16% to account for the expected decrease in pensionable pay due to the cap on overtime hours in the computation of pensionable pay.

The contingency pre-employment service load was decreased from 6.000% to 0.275% to account for the elimination of certain buybacks.

The expected salary increases were adjusted to account for the extension of ranges for Firefighter I, Police Officer, Sergeant of Police and Police Lieutenant effective April 1, 2015.

I. Effective October 1, 2013:

The asset valuation method was updated to phase in the deviation between the expected and actual return on assets at the rate of 20% per year - 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.

The load for projected pensionable payroll was decreased from 20% to 16% to account for the expected decrease in pensionable pay due to the cap on overtime hours in the computation of pensionable pay.

J. Effective October 1, 2014:

The interest rate used to calculate all liabilities was reduced from 8.00% to 7.95%.

Payroll growth assumption is limited to 10-year average.

K. Effective October 1, 2015:

The interest rate used to calculate all liabilities was decreased from 7.95% to 7.90%.

An experience study was performed on the fund over the 5 year period October 1, 2009 through September 30, 2014 and the following assumptions were changed to more accurately reflect fund experience:

- **Withdrawal Rates:** The withdrawal assumption was updated to reflect the results of the experience study.
- **Disability Incidence:** The disability incidence assumption was changed to 65% service incurred / 35% non-service incurred.
- **The load for compensation and projected pensionable payroll** was replaced with actual pensionable pay.
- **Retirement Rates:** The retirement assumption was updated to reflect the results of the experience study.

Updated DROP assumptions to reflect updated DROP provisions.

A City contribution of 0.025% of annual pensionable payroll is added to provide for the transfer of service under another City pension system.

The salary increase assumptions were updated to better reflect anticipated merit and COLA increases.

**Assumption Change History
(as of October 1, 2020)**

L. Effective October 1, 2016:

The interest rate used to calculate all liabilities was reduced from 7.90% to 7.85%.

The mortality assumption was updated to use the mortality assumption used by the Florida Retirement System (FRS) as required under F.S., Chapter 2015-157 based upon the July 1, 2016 FRS Actuarial Valuation.

M. Effective October 1, 2017:

The interest rate used to calculate all liabilities was reduced from 7.85% to 7.80%.

N. Effective October 1, 2018:

The interest rate used to calculate all liabilities was reduced from 7.80% to 7.75%.

O. Effective October 1, 2019:

The interest rate used to calculate all liabilities was reduced from 7.75% to 7.65%.

The mortality assumption was updated to use the mortality assumption used by the Florida Retirement System (FRS) as required under F.S., Chapter 2015-157 based upon the July 1, 2019 FRS Actuarial Valuation.

For Firefighters, the percentage of service incurred disability was updated from 65% to 70%.

Salary COLAs were adjusted based on the most recent Collectively Bargained Agreement.

A City contribution of 0.025% of annual pensionable payroll to provide for the transfer of service under another City pension system is changed to be no longer applicable to Tier 5 members.

P. Effective October 1, 2020:

The interest rate used to calculate all liabilities was reduced from 7.65% to 7.55%.

The retirement assumption was updated to reflect the results of an experience study performed on the fund over the 5 year period October 1, 2014 through September 30, 2019.



SECTION D

GLOSSARY

GLOSSARY

<i>Actuarial Accrued Liability</i>	The difference between the Actuarial Present Value of Future Benefits, and the Actuarial Present Value of Future Normal Costs.
<i>Actuarial Assumptions</i>	Assumptions about future fund 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.
<i>Actuarial Cost Method</i>	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.
<i>Actuarial Equivalent</i>	Of equal Actuarial Present Value, determined as of a given date and based on a given set of Actuarial Assumptions.
<i>Actuarial Present Value</i>	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.
<i>Actuarial Present Value of Future Benefits</i>	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.
<i>Actuarial Valuation</i>	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 fund. An Actuarial Valuation for a governmental retirement system typically also includes calculations of items needed for compliance with GASB No. 67.
<i>Actuarial Value of Assets</i>	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 fund 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.

<i>Amortization Method</i>	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.
<i>Amortization Payment</i>	That portion of the fund contribution which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.
<i>Amortization Period</i>	The period used in calculating the Amortization Payment.
<i>Annual Required Contribution</i>	The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered fund compensation. The annual required contribution consists of the Employer Normal Cost and Amortization Payment plus interest adjustment.
<i>Closed Amortization Period</i>	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.
<i>Employer Normal Cost</i>	The portion of the Normal Cost to be paid by the employer. This is equal to the Normal Cost less expected member contributions.
<i>Equivalent Single Amortization Period</i>	For funds that do not establish separate amortization bases (separate components of the UAAL), this is the same as the Amortization Period. For funds 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.
<i>Experience Gain/Loss</i>	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.
<i>Funded Ratio</i>	The ratio of the Actuarial Value of Assets to the Actuarial Accrued Liability.

GASB

Governmental Accounting Standards Board.

***GASB No. 67 and
GASB No. 68***

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

Normal Cost

The annual cost assigned, under the Actuarial Cost Method, to the current fund 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.