



May 23, 2022

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, 2021 Chapter 112.664 Compliance Report**

Dear Donna:

As requested, we are pleased to enclose twenty (20) copies of the October 1, 2021 Chapter 112.664 Compliance Report for the City Pension Fund for Firefighters and Police Officers in the City of Miami Beach (Fund).

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 Fund's website and must be posted on any website containing budget information relating to the City or actuarial or performance information relating to the Fund:

- 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](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 Fund'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 Fund portfolio
- the Fund's GASB funded ratio as determined in the most recent actuarial valuation – 85.63% on a market value of assets basis as of October 1, 2021

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

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

Sincerest regards,  
Gabriel, Roeder, Smith & Company

A handwritten signature in black ink that reads 'Michelle Jones'. The signature is written in a cursive, flowing style.

Shelly L. Jones, A.S.A., E.A.  
Consultant and Actuary

Enclosures

# 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, 2021 Funding Actuarial Valuation Report and the Fund's Financial Reporting for the Year Ended September 30, 2021





May 23, 2022

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, 2021 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, 2021. 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 7.55% to 7.40%, as adopted by the Board on March 17, 2022, 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, 2021 is 85.63% 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



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## SECTION A

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### 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	September 30, 2021
<b>A. <u>Total Pension Liability (TPL)</u></b>	
Service Cost	\$ 22,635,278
Interest	101,830,772
Benefit Changes	0
Difference Between Actual and Expected Experience	1,590,742
Assumption Changes	19,051,525
Benefit Payments	(77,460,046)
Contribution Refunds	(310,901)
Other	0
<b>Net Change in Total Pension Liability</b>	<b>\$ 67,337,370</b>
<b>Total Pension Liability (TPL) - (beginning of year)</b>	<b>1,315,349,537</b>
<b>Total Pension Liability (TPL) - (end of year)</b>	<b>\$ 1,382,686,907</b>
<b>B. <u>Fund Fiduciary Net Position</u></b>	
Contributions - City	\$ 43,324,910
Contributions - State	120,549
Contributions - Member	16,200,745
Net Investment Income	197,475,559
Benefit Payments	(77,460,046)
Contribution Refunds	(310,901)
Administrative Expenses	(958,325)
Other	0
<b>Net Change in Fund Fiduciary Net Position</b>	<b>\$ 178,392,491</b>
<b>Fund Fiduciary Net Position - (beginning of year)</b>	<b>1,005,632,284</b>
<b>Fund Fiduciary Net Position - (end of year)</b>	<b>\$ 1,184,024,775</b>
<b>C. <u>Net Pension Liability (NPL) - (end of year): (A) - (B)</u></b>	<b>\$ 198,662,132</b>
Valuation Date	October 1, 2020

**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.





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

Measurement Date	<u>September 30, 2021</u>
<b>A. <u>Total Pension Liability (TPL)</u></b>	
Service Cost	\$ 36,633,488
Interest	98,088,874
Benefit Changes	0
Difference Between Actual and Expected Experience	1,490,317
Assumption Changes	27,453,653
Benefit Payments	(77,460,046)
Contribution Refunds	(310,901)
Other	<u>0</u>
<b>Net Change in Total Pension Liability</b>	<b>\$ 85,895,385</b>
<b>Total Pension Liability (TPL) - (beginning of year)</b>	<b><u>1,689,506,258</u></b>
<b>Total Pension Liability (TPL) - (end of year)</b>	<b><u>\$ 1,775,401,643</u></b>
<b>B. <u>Fund Fiduciary Net Position</u></b>	
Contributions - City	\$ 43,324,910
Contributions - State	120,549
Contributions - Member	16,200,745
Net Investment Income	197,475,559
Benefit Payments	(77,460,046)
Contribution Refunds	(310,901)
Administrative Expenses	(958,325)
Other	<u>0</u>
<b>Net Change in Fund Fiduciary Net Position</b>	<b>\$ 178,392,491</b>
<b>Fund Fiduciary Net Position - (beginning of year)</b>	<b><u>1,005,632,284</u></b>
<b>Fund Fiduciary Net Position - (end of year)</b>	<b><u>\$ 1,184,024,775</u></b>
<b>C. <u>Net Pension Liability (NPL) - (end of year): (A) - (B)</u></b>	<b>\$ 591,376,868</b>
Valuation Date	October 1, 2020

**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.



## Net Pension Liability

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

Measurement Date	September 30, 2021
<b>A. <u>Total Pension Liability (TPL)</u></b>	
Service Cost	\$ 14,666,677
Interest	102,423,765
Benefit Changes	0
Difference Between Actual and Expected Experience	1,751,086
Assumption Changes	14,159,882
Benefit Payments	(77,460,046)
Contribution Refunds	(310,901)
Other	0
<b>Net Change in Total Pension Liability</b>	<b>\$ 55,230,463</b>
<b>Total Pension Liability (TPL) - (beginning of year)</b>	<b>1,064,675,111</b>
<b>Total Pension Liability (TPL) - (end of year)</b>	<b>\$ 1,119,905,574</b>
<b>B. <u>Fund Fiduciary Net Position</u></b>	
Contributions - City	\$ 43,324,910
Contributions - State	120,549
Contributions - Member	16,200,745
Net Investment Income	197,475,559
Benefit Payments	(77,460,046)
Contribution Refunds	(310,901)
Administrative Expenses	(958,325)
Other	0
<b>Net Change in Fund Fiduciary Net Position</b>	<b>\$ 178,392,491</b>
<b>Fund Fiduciary Net Position - (beginning of year)</b>	<b>1,005,632,284</b>
<b>Fund Fiduciary Net Position - (end of year)</b>	<b>\$ 1,184,024,775</b>
<b>C. <u>Net Pension Liability (NPL) - (end of year): (A) - (B)</u></b>	<b>\$ (64,119,201)</b>
 Valuation Date	 October 1, 2020

#### 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.



**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)
2022	\$ 1,146,896,837	\$ 81,637,263	\$ 81,548,897	\$ 1,146,985,203
2023	1,146,985,203	81,590,841	82,884,729	1,145,691,315
2024	1,145,691,315	81,402,546	85,219,077	1,141,874,784
2025	1,141,874,784	81,036,891	87,318,439	1,135,593,236
2026	1,135,593,236	80,476,434	89,730,337	1,126,339,333
2027	1,126,339,333	79,695,964	92,143,693	1,113,891,604
2028	1,113,891,604	78,684,592	94,419,831	1,098,156,365
2029	1,098,156,365	77,427,104	96,767,616	1,078,815,853
2030	1,078,815,853	75,898,862	99,215,368	1,055,499,347
2031	1,055,499,347	74,083,666	101,479,746	1,028,103,267
2032	1,028,103,267	71,975,157	103,527,850	996,550,574
2033	996,550,574	69,563,262	105,469,917	960,643,919
2034	960,643,919	66,840,383	107,129,271	920,355,031
2035	920,355,031	63,798,562	108,653,833	875,499,760
2036	875,499,760	60,432,957	109,822,041	826,110,676
2037	826,110,676	56,744,872	110,661,787	772,193,761
2038	772,193,761	52,720,709	111,527,208	713,387,262
2039	713,387,262	48,348,340	112,049,034	649,686,568
2040	649,686,568	43,623,988	112,313,892	580,996,664
2041	580,996,664	38,540,449	112,326,147	507,210,966
2042	507,210,966	33,088,470	112,120,261	428,179,175
2043	428,179,175	27,259,076	111,642,066	343,796,185
2044	343,796,185	21,041,705	110,961,804	253,876,086
2045	253,876,086	14,423,672	110,052,396	158,247,362
2046	158,247,362	7,391,335	108,937,816	56,700,881
2047	56,700,881	925,676	107,600,937	0
2048	0	0	106,090,152	0
2049	0	0	104,379,042	0
2050	0	0	102,471,379	0
2051	0	0	100,369,017	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: 25.50

**Certain Key Assumptions**

Investment return assumption 7.40%

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)
2022	\$ 1,146,896,837	\$ 59,566,289	\$ 81,548,897	\$ 1,124,914,229
2023	1,124,914,229	58,340,469	82,884,729	1,100,369,969
2024	1,100,369,969	56,947,348	85,219,077	1,072,098,240
2025	1,072,098,240	55,359,761	87,318,439	1,040,139,562
2026	1,040,139,562	53,564,012	89,730,337	1,003,973,237
2027	1,003,973,237	51,541,007	92,143,693	963,370,551
2028	963,370,551	49,282,419	94,419,831	918,233,139
2029	918,233,139	46,776,878	96,767,616	868,242,401
2030	868,242,401	44,006,357	99,215,368	813,033,390
2031	813,033,390	40,959,369	101,479,746	752,513,013
2032	752,513,013	37,631,843	103,527,850	686,617,006
2033	686,617,006	34,017,110	105,469,917	615,164,199
2034	615,164,199	30,110,512	107,129,271	538,145,440
2035	538,145,440	25,907,264	108,653,833	455,398,871
2036	455,398,871	21,405,054	109,822,041	366,981,884
2037	366,981,884	16,606,171	110,661,787	272,926,268
2038	272,926,268	11,502,058	111,527,208	172,901,118
2039	172,901,118	6,085,559	112,049,034	66,937,643
2040	66,937,643	924,156	112,313,892	0
2041	0	0	112,326,147	0
2042	0	0	112,120,261	0
2043	0	0	111,642,066	0
2044	0	0	110,961,804	0
2045	0	0	110,052,396	0
2046	0	0	108,937,816	0
2047	0	0	107,600,937	0
2048	0	0	106,090,152	0
2049	0	0	104,379,042	0
2050	0	0	102,471,379	0
2051	0	0	100,369,017	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: 18.58

**Certain Key Assumptions**

Investment return assumption 5.40%

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)
2022	\$ 1,146,896,837	\$ 103,713,089	\$ 81,548,897	\$ 1,169,061,029
2023	1,169,061,029	105,729,440	82,884,729	1,191,905,740
2024	1,191,905,740	107,759,617	85,219,077	1,214,446,280
2025	1,214,446,280	109,773,002	87,318,439	1,236,900,843
2026	1,236,900,843	111,762,610	89,730,337	1,258,933,116
2027	1,258,933,116	113,712,450	92,143,693	1,280,501,873
2028	1,280,501,873	115,625,611	94,419,831	1,301,707,653
2029	1,301,707,653	117,501,053	96,767,616	1,322,441,090
2030	1,322,441,090	119,327,075	99,215,368	1,342,552,797
2031	1,342,552,797	121,103,864	101,479,746	1,362,176,915
2032	1,362,176,915	122,845,679	103,527,850	1,381,494,744
2033	1,381,494,744	124,564,029	105,469,917	1,400,588,856
2034	1,400,588,856	126,275,546	107,129,271	1,419,735,131
2035	1,419,735,131	127,998,735	108,653,833	1,439,080,033
2036	1,439,080,033	129,758,491	109,822,041	1,459,016,483
2037	1,459,016,483	131,590,347	110,661,787	1,479,945,043
2038	1,479,945,043	133,514,172	111,527,208	1,501,932,007
2039	1,501,932,007	135,554,742	112,049,034	1,525,437,715
2040	1,525,437,715	137,750,978	112,313,892	1,550,874,801
2041	1,550,874,801	140,141,448	112,326,147	1,578,690,102
2042	1,578,690,102	142,766,426	112,120,261	1,609,336,267
2043	1,609,336,267	145,671,179	111,642,066	1,643,365,380
2044	1,643,365,380	148,904,077	110,961,804	1,681,307,653
2045	1,681,307,653	152,516,320	110,052,396	1,723,771,577
2046	1,723,771,577	156,563,900	108,937,816	1,771,397,661
2047	1,771,397,661	161,107,887	107,600,937	1,824,904,611
2048	1,824,904,611	166,213,409	106,090,152	1,885,027,868
2049	1,885,027,868	171,950,924	104,379,042	1,952,599,750
2050	1,952,599,750	178,398,479	102,471,379	2,028,526,850
2051	2,028,526,850	185,641,203	100,369,017	2,113,799,036

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: All future years

**Certain Key Assumptions**

Investment return assumption 9.40%

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, 2021	October 1, 2021	October 1, 2021
B. Actuarial Determined Contribution to Be Paid During Fiscal Year Ending	September 30, 2023	September 30, 2023	September 30, 2023
C. Annual Payroll of Active Employees	\$ 66,867,702	\$ 66,867,702	\$ 66,867,702
D. Total Minimum Funding Requirement			
1. Total Normal Cost	\$ 23,207,535	\$ 37,126,014	\$ 15,333,026
2. Annual Payment to Amortize Unfunded Actuarial Liability	27,181,012	42,213,799	11,898,604
3. Interest Adjustment	241,223	179,368	300,817
4. Expected Service Buyback	<u>199,801</u>	<u>199,801</u>	<u>199,801</u>
5. Total Minimum Funding Requirement	\$ 50,829,571	\$ 79,718,982	\$ 27,732,248
E. Expected Payroll of Active Employees for Following Plan Year (\$ / % of annual pay)	\$ 68,873,733 103.00%	\$ 68,873,733 103.00%	\$ 68,873,733 103.00%
F. Expected Contribution Sources (\$ / % of expected pay)			
1. City	\$ 45,231,904 65.67%	\$ 74,987,997 108.88%	\$ 21,441,661 31.13%
2. Member	7,002,005 10.17%	7,002,005 10.17%	7,002,005 10.17%
3. State (Share Plan)	<u>120,549 0.18%</u>	<u>120,549 0.18%</u>	<u>120,549 0.18%</u>
4. Total	\$ 52,354,458 76.02%	\$ 82,110,551 119.22%	\$ 28,564,215 41.47%



Unfunded Actuarial Accrued Liabilities Bases and Amortization Payments

Amortization Base	Amortization Payment					Remaining Funding Period
	Current Unfunded Liabilities	Valuation and		112.664(1)(a), F.S.		
		112.664(1)(a), F.S. Assumptions	112.664(1)(b), F.S. Assumptions	Assumptions Plus 2%		
10/01/2001 Initial Unfunded Liability	\$ 9,900,915	\$ 1,186,580	\$ 1,095,823	\$ 1,279,368	10 years	
10/01/2002 Method Update	11,646,263	1,293,708	1,184,839	1,405,505	11 years	
10/01/2003 Fund Amendment	1,034,623	107,399	97,555	117,552	12 years	
10/01/2003 Actuarial (Gain) / Loss	31,150,231	3,233,556	2,937,153	3,539,225	12 years	
10/01/2004 Actuarial (Gain) / Loss	34,277,723	3,347,838	3,016,319	3,691,120	13 years	
10/01/2005 Method Update	(31,078,567)	(2,872,512)	(2,567,346)	(3,189,749)	14 years	
10/01/2005 Assumption Update	6,251,153	577,778	516,397	641,587	14 years	
10/01/2005 Actuarial (Gain) / Loss	23,213,719	2,145,584	1,917,645	2,382,540	14 years	
10/01/2006 Method Update	(4,762,088)	(418,606)	(371,177)	(468,098)	15 years	
10/01/2006 Actuarial (Gain) / Loss	20,614,120	1,812,063	1,606,752	2,026,301	15 years	
10/01/2007 Actuarial (Gain) / Loss	24,431,070	2,051,309	1,804,690	2,309,583	16 years	
10/01/2008 Assumption Update	5,904,616	475,333	414,962	538,777	17 years	
10/01/2008 Actuarial (Gain) / Loss	32,590,192	2,623,574	2,290,359	2,973,748	17 years	
10/01/2009 Assumption Update	23,481,046	1,818,383	1,575,350	2,074,633	18 years	
10/01/2009 Actuarial (Gain) / Loss	67,579,340	5,233,374	4,533,918	5,970,872	18 years	
10/01/2010 Assumption Update	4,597,626	343,514	295,366	394,441	19 years	
10/01/2010 Actuarial (Gain) / Loss	17,374,261	1,298,125	1,116,176	1,490,579	19 years	
10/01/2011 Fund Amendment	(3,150,942)	(227,738)	(194,365)	(263,145)	20 years	
10/01/2011 Assumption Update	17,401,141	1,257,690	1,073,386	1,453,225	20 years	
10/01/2011 Actuarial (Gain) / Loss	30,953,386	2,237,196	1,909,354	2,585,016	20 years	
10/01/2012 Assumption Update	8,010,766	561,412	475,634	652,680	21 years	
10/01/2012 Actuarial (Gain) / Loss	26,971,239	1,890,203	1,601,399	2,197,490	21 years	
10/01/2012 Fund Amendment	(20,614,030)	(1,444,676)	(1,223,944)	(1,679,534)	21 years	
10/01/2013 Actuarial (Gain) / Loss	1,610,649	109,684	92,254	128,281	22 years	
10/01/2013 Method Update	(66,817,883)	(4,550,267)	(3,827,176)	(5,321,743)	22 years	
10/01/2014 Actuarial (Gain) / Loss	(6,210,258)	(411,745)	(343,844)	(484,377)	23 years	
10/01/2014 Assumption Update	6,003,036	398,006	332,371	468,215	23 years	
10/01/2015 Actuarial (Gain) / Loss	9,098,500	588,333	487,855	696,079	24 years	
10/01/2015 Assumption Update	2,576,290	166,590	138,139	197,099	24 years	
10/01/2015 Fund Amendment	(8,766,530)	(566,867)	(470,055)	(670,682)	24 years	
10/01/2016 Actuarial (Gain) / Loss	(11,836,227)	(747,647)	(615,658)	(889,514)	25 years	
10/01/2016 Assumption Update	36,707,730	2,318,680	1,909,343	2,758,651	25 years	
10/01/2017 Actuarial (Gain) / Loss	8,330,782	514,795	421,011	615,819	26 years	
10/01/2017 Assumption Update	7,236,531	447,176	365,711	534,931	26 years	
10/01/2018 Actuarial (Gain) / Loss	6,791,748	411,129	333,960	494,428	27 years	
10/01/2018 Assumption Update	7,532,466	455,967	370,383	548,351	27 years	
10/01/2019 Actuarial (Gain) / Loss	(1,327,557)	(78,820)	(63,599)	(95,282)	28 years	
10/01/2019 Fund Amendment and Assumption Update	(16,338,230)	(970,033)	(782,711)	(1,172,631)	28 years	
10/01/2020 Actuarial (Gain) / Loss	(2,380,595)	(138,787)	(111,250)	(168,623)	29 years	
10/01/2020 Assumption Update	19,301,880	1,125,282	902,016	1,367,194	29 years	
10/01/2021 Actuarial (Gain) / Loss	(31,185,902)	(1,787,137)	(1,423,277)	(2,182,058)	30 years	
10/01/2021 Assumption Update	23,829,746	1,365,586	1,087,553	1,667,352	30 years	
10/01/2021 Assumption Change - 112.664(1)(b), F.S. Assumptions	401,076,766	N/A	18,304,528	N/A	30 years	
10/01/2021 Assumption Change - 112.664(1)(a), F.S. Assumptions Plus 2%	(267,497,067)	N/A	N/A	(18,716,602)	30 years	



## **SECTION B**

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### **SUMMARY OF FUND PROVISIONS**



**Outline of Principal Provisions of the Retirement Fund  
(as of October 1, 2021)**

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.

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, 2021)**

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 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.

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

**Outline of Principal Provisions of the Retirement Fund  
(as of October 1, 2021)**

H. Normal Retirement:

1. Eligibility:

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:

All Tiers and eligible to retire on or after 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.

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.

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).



**Outline of Principal Provisions of the Retirement Fund  
(as of October 1, 2021)**

**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.

**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.

**Outline of Principal Provisions of the Retirement Fund  
(as of October 1, 2021)**

**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, 2021)**

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 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, 2021)**

Q. Changes Since Previous Actuarial Valuation

None.

## SECTION C

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### **ACTUARIAL ASSUMPTIONS AND COST METHODS USED FOR FUNDING**



**Actuarial Assumptions and Actuarial Cost Methods Used in the Valuation  
(as of October 1, 2021)**

**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 (2021)	Pre-retirement Future Life Expectancy (Years)		Post-retirement Future Life Expectancy (Years)	
	Male	Female	Male	Female
	45	40.77	44.73	37.29
50	35.62	39.54	32.46	36.29
55	30.53	34.39	27.68	31.26
60	25.58	29.33	23.10	26.47
62	23.66	27.32	21.36	24.63

Sample Ages (2041)	Pre-retirement Future Life Expectancy (Years)		Post-retirement Future Life Expectancy (Years)	
	Male	Female	Male	Female
	45	42.48	46.27	39.34
50	37.29	41.05	34.43	38.17
55	32.17	35.88	29.58	33.09
60	27.15	30.77	24.88	28.22
62	25.19	28.74	23.09	26.33

**B. Investment Return**

7.40%, compounded annually, net of investment expenses includes inflation at 3.00%.



**Actuarial Assumptions and Actuarial Cost Methods Used in the Valuation  
(as of October 1, 2021)**

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, 2021)**

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>
2022 and thereafter	2.18%	5.96%

The cost of living increases shown above are based long term expected increases of 2.18% annually.

\* 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, 2021).

**Actuarial Assumptions and Actuarial Cost Methods Used in the Valuation  
(as of October 1, 2021)**

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 the DROP on or after October 1, 2015
Prior to 5 years	0%
After 5 years	5%
After 6 years	5%
After 7 years	10%
After 8 years	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, 2021)**

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, 2021)**

O. Disclosure of Assumptions

The retirement assumption was updated based on the most recent experience study performed for the five years ending September 30, 2019. The salary increases and withdrawal assumptions were updated based on the experience study performed for the five years ending September 30, 2014. The investment return assumption was lowered from 7.55% to 7.40%, as adopted by the Board on March 17, 2022, based upon an Investment Return Assumption Study completed in 2020 along with recommendations from the Investment Consultant. The mortality rates are based upon the July 1, 2021 FRS Actuarial Valuation, as required under F.S., Chapter 2015 -157.

P. Changes Since Previous Actuarial Valuation

1. Investment Return:

The interest rate used to calculate all liabilities was reduced from 7.55% to 7.40%.

**Assumption Change History**  
**(as of October 1, 2021)**

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, 2021)**

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, 2021)**

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, 2021)**

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.

Q. Effective October 1, 2021:

The interest rate used to calculate all liabilities was reduced from 7.55% to 7.40%.



## **SECTION D**

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### **GLOSSARY**

## GLOSSARY

<b><i>Actuarial Accrued Liability</i></b>	The difference between the Actuarial Present Value of Future Benefits, and the Actuarial Present Value of Future Normal Costs.
<b><i>Actuarial Assumptions</i></b>	Assumptions about future 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.
<b><i>Actuarial Cost Method</i></b>	A procedure for allocating the Actuarial Present Value of Future Benefits between the Actuarial Present Value of Future Normal Costs and the Actuarial Accrued Liability.
<b><i>Actuarial Equivalent</i></b>	Of equal Actuarial Present Value, determined as of a given date and based on a given set of Actuarial Assumptions.
<b><i>Actuarial Present Value</i></b>	The amount of funds required to provide a payment or series of payments in the future. It is determined by discounting the future payments with an assumed interest rate and with the assumed probability each payment will be made.
<b><i>Actuarial Present Value of Future Benefits</i></b>	The Actuarial Present Value of amounts which are expected to be paid at various future times to active members, retired members, beneficiaries receiving benefits and inactive, non-retired members entitled to either a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would provide sufficient assets to pay all projected benefits and expenses when due.
<b><i>Actuarial Valuation</i></b>	The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a fund. An Actuarial Valuation for a governmental retirement system typically also includes calculations of items needed for compliance with GASB No. 67.
<b><i>Actuarial Value of Assets</i></b>	The value of the assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of 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.

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

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