



October 23, 2019

Ms. Patti McLauchlin
Administrator, City of Key West
Employees Retirement Plan
City of Key West
1300 White Street
Key West, Florida 33040

Re: Retirement Plan for Employees of the City of Key West

Dear Patti:

As requested, we are pleased to enclose ten (10) copies of the October 1, 2018 Chapter 112.664 Compliance Report for the Retirement Plan for Employees of the City of Key West (Plan).

We will timely upload the required data to the State's online portal.

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

- this compliance report
- most recent financial statement
- most recent actuarial valuation report
- a link to the Division of Retirement Actuarial Summary Fact Sheet
http://www.dms.myflorida.com/workforce_operations/retirement/local_retirement_plans/local_retirement_section/actuarial_summary_fact_sheets
- for the previous five years - a side-by-side comparison of the Plan's assumed rate of return compared to the actual rate of return as well as the percentages of cash, equity, bond and alternative investments in the Plan portfolio
- the Plan's funded ratio as determined in the most recent actuarial valuation – 103.7% on a market value of assets basis as of October 1, 2018 under the Entry Age Normal Actuarial Cost Method

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,

A handwritten signature in black ink that reads "Jennifer Borregard". The signature is written in a cursive, flowing style.

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

Enclosures

Retirement Plan for Employees of the City of Key West

CHAPTER 112.664, F.S. COMPLIANCE REPORT

In Connection with the October 1, 2018 Funding Actuarial Valuation Report and the Plan's Financial Reporting for the Year Ended September 30, 2018





October 23, 2019

General Employees' Retirement Committee
c/o Ms. Patti McLaughlin
Administrator – General Employees' Pension Plan
City of Key West
1300 White Street
Key West, Florida 33040

Re: October 1, 2018 Chapter 112.664 Compliance Report

Dear Committee Members:

Gabriel, Roeder, Smith & Company (GRS) has been engaged by the Retirement Committee (Committee) of the Retirement Plan for Employees of the City of Key West (Plan) to prepare a disclosure report to satisfy the requirements set forth in Chapter 112.664, F.S. and as further required pursuant to Chapter 60T-1.0035, F.A.C.

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

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

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

This report is based upon information furnished by the City and the Committee concerning Plan benefits, Plan provisions and Plan members as used in the corresponding Actuarial Valuation Reports for the Valuation Dates indicated. Financial information was provided by the City and Committee as of September 30, 2018. We reviewed the information provided for internal and year-to-year consistency, but did not audit the data. The Plan is responsible for the accuracy of the data.

Except where specific assumptions are required by Chapter 112.664, F.S, this report was prepared using actuarial assumptions adopted by the Committee as described in Section C. The Committee's assumptions are based upon the results of an Actuarial Experience Study for the five-year period ended September 30, 2017 and represent an estimate of future Plan experience. The mortality assumptions are prescribed by statute.

The investment return assumption of 2% higher than the investment return assumption utilized in the Actuarial Valuation Report does neither represent an estimate of future Plan experience nor observation of the estimates inherent in market data. This assumption is provided as a counterpart to the Chapter 112.664, F.S. requirement to utilize an investment return assumption of 2% lower than the investment return assumption utilized in the Actuarial Valuation Report. The inclusion of the additional 2% higher assumption shows a more complete assessment of the range of potential results as opposed to the *one-sided* range required by statute.

If all actuarial assumptions are met and if all current and future minimum required contributions are paid Plan assets will be sufficient to pay all Plan benefits, future contributions are expected to remain relatively stable as a percent of payroll and the funded status is expected to approach 100%. Plan minimum required contributions are determined in compliance with the requirements of the Florida Protection of Public Employee Retirement Benefits Act with normal cost determined as a level percent of covered payroll and a level percent of pay amortization payment using an initial amortization period of 20 years.

The Plan's funded ratio as of October 1, 2018 is 103.7% defined as the ratio of the market value of Plan assets to the actuarial accrued liability under the Entry Age Normal Actuarial Cost Method.

The Plan's funded ratio and the GASB Net Pension Liability may not be appropriate for assessing the sufficiency of Plan assets to meet the estimated cost of settling benefit obligations but may be appropriate for assessing the need for or the amount of future contributions.

The undersigned are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. The signing actuaries are independent of the Plan sponsor.

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

With respect to the reporting standards for defined benefit retirement plans 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 Michelle Jones
Shelly L. Jones, A.S.A., M.A.A.A., E.A.
Enrolled Actuary No. 17-08646
Consultant & Actuary

By Jennifer Borregard
Jennifer M. Borregard, M.A.A.A., E.A.
Enrolled Actuary No. 17-07624
Consultant & Actuary

Date: October 23, 2019

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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	September 30, 2018
A. <u>Total Pension Liability (TPL)</u>	
Service Cost	\$ 1,472,641
Interest	3,944,192
Benefit Changes	0
Difference Between Actual and Expected Experience	(180,469)
Assumption Changes	0
Benefit Payments	(3,121,318)
Other	0
Net Change in Total Pension Liability	\$ 2,115,046
Total Pension Liability (TPL) - (beginning of year)	52,861,348
Total Pension Liability (TPL) - (end of year)	\$ 54,976,394
 B. <u>Plan Fiduciary Net Position</u>	
Contributions - City	\$ 991,645
Contributions - Member	790,420
Net Investment Income	5,148,560
Benefit Payments	(3,121,318)
Administrative Expenses	(184,725)
Other	0
Net Change in Plan Fiduciary Net Position	\$ 3,624,582
Plan Fiduciary Net Position - (beginning of year)	53,666,271
Plan Fiduciary Net Position - (end of year)	\$ 57,290,853
 C. <u>Net Pension Liability (NPL) - (end of year): (A) - (B)</u>	
	\$ (2,314,459)
Valuation Date	October 1, 2017

Certain Key Assumptions

Investment Return Assumption 7.50%

Mortality Table:

For healthy male participants during employment, RP 2000 Combined Male Healthy Participant Mortality Table, with 50% White Collar / 50% Blue Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy female participants during employment, RP 2000 Combined Female Healthy Participant Mortality Table, with White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy male participants post employment, RP 2000 Annuitant Male Mortality Table, with 50% White Collar / 50% Blue Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy female participants post employment, RP 2000 Annuitant Female Mortality Table, with White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For disabled male participants, RP 2000 Disabled Male Mortality Table, setback four years, without projected mortality improvements. For disabled female participants, RP 2000 Disabled Female Mortality Table, set forward two years, without projected mortality improvements.

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

Measurement Date	<u>September 30, 2018</u>
A. <u>Total Pension Liability (TPL)</u>	
Service Cost	\$ 2,205,682
Interest	3,657,214
Benefit Changes	0
Difference Between Actual and Expected Experience	(259,976)
Assumption Changes	0
Benefit Payments	(3,121,318)
Other	0
Net Change in Total Pension Liability	<u>\$ 2,481,602</u>
Total Pension Liability (TPL) - (beginning of year)	<u>66,128,675</u>
Total Pension Liability (TPL) - (end of year)	<u><u>\$ 68,610,277</u></u>
 B. <u>Plan Fiduciary Net Position</u>	
Contributions - City	\$ 991,645
Contributions - Member	790,420
Net Investment Income	5,148,560
Benefit Payments	(3,121,318)
Administrative Expenses	(184,725)
Other	0
Net Change in Plan Fiduciary Net Position	<u>\$ 3,624,582</u>
Plan Fiduciary Net Position - (beginning of year)	<u>53,666,271</u>
Plan Fiduciary Net Position - (end of year)	<u><u>\$ 57,290,853</u></u>
 C. <u>Net Pension Liability (NPL) - (end of year): (A) - (B)</u>	
	<u>\$ 11,319,424</u>
 Valuation Date	 October 1, 2017

Certain Key Assumptions

Investment Return Assumption 5.50%

Mortality Table:

For healthy male participants during employment, RP 2000 Combined Male Healthy Participant Mortality Table, with 50% White Collar / 50% Blue Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy female participants during employment, RP 2000 Combined Female Healthy Participant Mortality Table, with White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy male participants post employment, RP 2000 Annuitant Male Mortality Table, with 50% White Collar / 50% Blue Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy female participants post employment, RP 2000 Annuitant Female Mortality Table, with White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For disabled male participants, RP 2000 Disabled Male Mortality Table, setback four years, without projected mortality improvements. For disabled female participants, RP 2000 Disabled Female Mortality Table, set forward two years, without projected mortality improvements.

Net Pension Liability

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

Measurement Date	September 30, 2018
A. <u>Total Pension Liability (TPL)</u>	
Service Cost	\$ 1,037,005
Interest	4,075,882
Benefit Changes	0
Difference Between Actual and Expected Experience	(154,827)
Assumption Changes	0
Benefit Payments	(3,121,318)
Other	0
Net Change in Total Pension Liability	\$ 1,836,742
Total Pension Liability (TPL) - (beginning of year)	43,570,844
Total Pension Liability (TPL) - (end of year)	\$ 45,407,586
 B. <u>Plan Fiduciary Net Position</u>	
Contributions - City	\$ 991,645
Contributions - Member	790,420
Net Investment Income	5,148,560
Benefit Payments	(3,121,318)
Administrative Expenses	(184,725)
Other	0
Net Change in Plan Fiduciary Net Position	\$ 3,624,582
Plan Fiduciary Net Position - (beginning of year)	53,666,271
Plan Fiduciary Net Position - (end of year)	\$ 57,290,853
 C. <u>Net Pension Liability (NPL) - (end of year): (A) - (B)</u>	
	\$ (11,883,267)
 Valuation Date	 October 1, 2017

Certain Key Assumptions

Investment Return Assumption 9.50%

Mortality Table:

For healthy male participants during employment, RP 2000 Combined Male Healthy Participant Mortality Table, with 50% White Collar / 50% Blue Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy female participants during employment, RP 2000 Combined Female Healthy Participant Mortality Table, with White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy male participants post employment, RP 2000 Annuitant Male Mortality Table, with 50% White Collar / 50% Blue Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy female participants post employment, RP 2000 Annuitant Female Mortality Table, with White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For disabled male participants, RP 2000 Disabled Male Mortality Table, setback four years, without projected mortality improvements. For disabled female participants, RP 2000 Disabled Female Mortality Table, set forward two years, without projected mortality improvements.

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)
2019	\$ 56,482,434	\$ 4,084,674	\$ 3,088,533	\$ 57,478,575
2020	57,478,575	4,150,009	3,310,982	58,317,602
2021	58,317,602	4,206,585	3,459,582	59,064,605
2022	59,064,605	4,256,118	3,612,902	59,707,821
2023	59,707,821	4,299,513	3,726,273	60,281,061
2024	60,281,061	4,338,285	3,824,844	60,794,502
2025	60,794,502	4,373,505	3,900,802	61,267,205
2026	61,267,205	4,406,076	3,967,088	61,706,193
2027	61,706,193	4,436,644	4,020,602	62,122,235
2028	62,122,235	4,465,925	4,063,559	62,524,601
2029	62,524,601	4,494,910	4,088,401	62,931,110
2030	62,931,110	4,524,428	4,107,606	63,347,932
2031	63,347,932	4,555,543	4,106,067	63,797,408
2032	63,797,408	4,590,290	4,074,463	64,313,235
2033	64,313,235	4,630,018	4,041,918	64,901,335
2034	64,901,335	4,675,509	3,999,890	65,576,954
2035	65,576,954	4,728,501	3,933,294	66,372,161
2036	66,372,161	4,790,897	3,854,289	67,308,769
2037	67,308,769	4,863,977	3,771,536	68,401,210
2038	68,401,210	4,948,901	3,682,907	69,667,204
2039	69,667,204	5,046,978	3,588,691	71,125,491
2040	71,125,491	5,159,812	3,483,650	72,801,653
2041	72,801,653	5,289,044	3,374,462	74,716,235
2042	74,716,235	5,435,706	3,273,617	76,878,324
2043	76,878,324	5,601,320	3,159,904	79,319,740
2044	79,319,740	5,787,748	3,046,084	82,061,404
2045	82,061,404	5,996,168	2,941,696	85,115,876
2046	85,115,876	6,227,987	2,834,930	88,508,933
2047	88,508,933	6,485,213	2,723,598	92,270,548
2048	92,270,548	6,770,172	2,605,374	96,435,346
2049	96,435,346	7,085,220	2,485,853	101,034,713
2050	101,034,713	7,432,409	2,372,196	106,094,926
2051	106,094,926	7,814,304	2,249,196	111,660,034
2052	111,660,034	8,233,590	2,131,794	117,761,830

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 or Members:

All Future Years

Certain Key Assumptions

Investment return assumption

7.45%

Mortality Table:

For healthy male participants during employment, RP 2000 Combined Male Healthy Participant Mortality Table, with 50% White Collar / 50% Blue Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy female participants during employment, RP 2000 Combined Female Healthy Participant Mortality Table, with White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy male participants post employment, RP 2000 Annuitant Male Mortality Table, with 50% White Collar / 50% Blue Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy female participants post employment, RP 2000 Annuitant Female Mortality Table, with White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For disabled male participants, RP 2000 Disabled Male Mortality Table, setback four years, without projected mortality improvements. For disabled female participants, RP 2000 Disabled Female Mortality Table, set forward two years, without projected mortality improvements.

Note: As required in Section 112.664(1)(c) of the Florida Statutes, the projection of Plan assets does not include future contributions from the City or Members. For this reason, this projection should not be viewed as representative of the amount of time the Plan can sustain benefit payments. Under the Government Accounting Standards Board standards which include City and Member contributions, the Plan is expected to be able to pay all future benefit payments.

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

FYE	Market Value of Assets (BOY)	Expected Investment Return	Projected Benefit Payments	Market Value of Assets (EOY)
2019	\$ 56,482,434	\$ 2,987,856	\$ 3,088,533	\$ 56,381,757
2020	56,381,757	2,975,855	3,310,982	56,046,630
2021	56,046,630	2,953,240	3,459,582	55,540,288
2022	55,540,288	2,921,154	3,612,902	54,848,540
2023	54,848,540	2,880,135	3,726,273	54,002,402
2024	54,002,402	2,831,134	3,824,844	53,008,691
2025	53,008,691	2,774,752	3,900,802	51,882,641
2026	51,882,641	2,711,442	3,967,088	50,626,995
2027	50,626,995	2,641,442	4,020,602	49,247,835
2028	49,247,835	2,565,020	4,063,559	47,749,296
2029	47,749,296	2,482,622	4,088,401	46,143,517
2030	46,143,517	2,394,545	4,107,606	44,430,456
2031	44,430,456	2,301,228	4,106,067	42,625,617
2032	42,625,617	2,203,790	4,074,463	40,754,944
2033	40,754,944	2,102,791	4,041,918	38,815,817
2034	38,815,817	1,998,339	3,999,890	36,814,266
2035	36,814,266	1,891,205	3,933,294	34,772,176
2036	34,772,176	1,782,224	3,854,289	32,700,112
2037	32,700,112	1,671,720	3,771,536	30,600,295
2038	30,600,295	1,559,875	3,682,907	28,477,264
2039	28,477,264	1,446,929	3,588,691	26,335,501
2040	26,335,501	1,333,278	3,483,650	24,185,129
2041	24,185,129	1,219,280	3,374,462	22,029,948
2042	22,029,948	1,104,776	3,273,617	19,861,106
2043	19,861,106	989,904	3,159,904	17,691,106
2044	17,691,106	874,971	3,046,084	15,519,993
2045	15,519,993	759,702	2,941,696	13,338,000
2046	13,338,000	643,910	2,834,930	11,146,980
2047	11,146,980	527,759	2,723,598	8,951,141
2048	8,951,141	411,548	2,605,374	6,757,315
2049	6,757,315	295,484	2,485,853	4,566,946
2050	4,566,946	179,437	2,372,196	2,374,187
2051	2,374,187	63,533	2,249,196	188,524
2052	188,524	48	2,131,794	-

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 or Members: 33.08

Certain Key Assumptions

Investment return assumption 5.45%

Mortality Table:

For healthy male participants during employment, RP 2000 Combined Male Healthy Participant Mortality Table, with 50% White Collar / 50% Blue Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy female participants during employment, RP 2000 Combined Female Healthy Participant Mortality Table, with White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy male participants post employment, RP 2000 Annuitant Male Mortality Table, with 50% White Collar / 50% Blue Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy female participants post employment, RP 2000 Annuitant Female Mortality Table, with White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For disabled male participants, RP 2000 Disabled Male Mortality Table, setback four years, without projected mortality improvements. For disabled female participants, RP 2000 Disabled Female Mortality Table, set forward two years, without projected mortality improvements.

Note: As required in Section 112.664(1)(c) of the Florida Statutes, the projection of Plan assets does not include future contributions from the City or Members. For this reason, this projection should not be viewed as representative of the amount of time the Plan can sustain benefit payments. Under the Government Accounting Standards Board standards which include City and Member contributions, the Plan is expected to be able to pay all future benefit payments.

**Asset and Benefit Payment Projection
Not Reflecting Any Future Contributions**

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

FYE	Market Value of Assets (BOY)	Expected Investment Return	Projected Benefit Payments	Market Value of Assets (EOY)
2019	\$ 56,482,434	\$ 5,181,676	\$ 3,088,533	\$ 58,575,577
2020	58,575,577	5,368,249	3,310,982	60,632,844
2021	60,632,844	5,555,159	3,459,582	62,728,421
2022	62,728,421	5,745,451	3,612,902	64,860,971
2023	64,860,971	5,941,254	3,726,273	67,075,952
2024	67,075,952	6,145,594	3,824,844	69,396,702
2025	69,396,702	6,361,070	3,900,802	71,856,970
2026	71,856,970	6,590,219	3,967,088	74,480,101
2027	74,480,101	6,835,404	4,020,602	77,294,903
2028	77,294,903	7,099,234	4,063,559	80,330,578
2029	80,330,578	7,384,851	4,088,401	83,627,028
2030	83,627,028	7,695,396	4,107,606	87,214,819
2031	87,214,819	8,034,520	4,106,067	91,143,272
2032	91,143,272	8,407,354	4,074,463	95,476,163
2033	95,476,163	8,818,456	4,041,918	100,252,701
2034	100,252,701	9,271,960	3,999,890	105,524,771
2035	105,524,771	9,773,532	3,933,294	111,365,009
2036	111,365,009	10,329,423	3,854,289	117,840,144
2037	117,840,144	10,945,501	3,771,536	125,014,109
2038	125,014,109	11,627,915	3,682,907	132,959,116
2039	132,959,116	12,383,474	3,588,691	141,753,900
2040	141,753,900	13,219,884	3,483,650	151,490,133
2041	151,490,133	14,145,470	3,374,462	162,261,141
2042	162,261,141	15,168,421	3,273,617	174,155,945
2043	174,155,945	16,298,220	3,159,904	187,294,262
2044	187,294,262	17,545,537	3,046,084	201,793,715
2045	201,793,715	18,921,005	2,941,696	217,773,024
2046	217,773,024	20,436,439	2,834,930	235,374,533
2047	235,374,533	22,105,402	2,723,598	254,756,337
2048	254,756,337	23,942,951	2,605,374	276,093,914
2049	276,093,914	25,965,385	2,485,853	299,573,447
2050	299,573,447	28,189,939	2,372,196	325,391,189
2051	325,391,189	30,635,925	2,249,196	353,777,918
2052	353,777,918	33,324,397	2,131,794	384,970,521

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 or Members:

All Future Years

Certain Key Assumptions

Investment return assumption

9.45%

Mortality Table:

For healthy male participants during employment, RP 2000 Combined Male Healthy Participant Mortality Table, with 50% White Collar / 50% Blue Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy female participants during employment, RP 2000 Combined Female Healthy Participant Mortality Table, with White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy male participants post employment, RP 2000 Annuitant Male Mortality Table, with 50% White Collar / 50% Blue Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy female participants post employment, RP 2000 Annuitant Female Mortality Table, with White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For disabled male participants, RP 2000 Disabled Male Mortality Table, setback four years, without projected mortality improvements. For disabled female participants, RP 2000 Disabled Female Mortality Table, set forward two years, without projected mortality improvements.

Note: As required in Section 112.664(1)(c) of the Florida Statutes, the projection of Plan assets does not include future contributions from the City or Members. For this reason, this projection should not be viewed as representative of the amount of time the Plan can sustain benefit payments. Under the Government Accounting Standards Board standards which include City and Member contributions, the Plan 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, 2018	October 1, 2018	October 1, 2018
B. Actuarial Determined Contribution to Be Paid During Fiscal Year Ending	September 30, 2020	September 30, 2020	September 30, 2020
C. Annual payroll of Active Employees	\$ 12,760,505	\$ 12,760,505	\$ 12,760,505
D. Total Minimum Funding Requirement			
1. Total Normal Cost	\$ 1,837,523	\$ 2,678,998	\$ 1,332,156
2. Amortization of Unfunded Actuarial Accrued Liability	(17,219)	948,592	(924,096)
3. Interest Adjustment	65,371	96,230	18,411
4. Total Minimum Funding Requirement (1. + 2. + 3., not less than 1.)	\$ 1,885,675	\$ 3,723,820	\$ 1,332,156
E. Expected Payroll of Active Employees for Following Plan Year (\$ / % of pay) (C x 1.015)	\$ 12,951,913 101.50%	\$ 12,951,913 101.50%	\$ 12,951,913 101.50%
F. Expected Contribution Sources (\$ / % of pay)			
1. City	\$ 1,139,768 8.80%	\$ 3,004,844 23.20%	\$ 569,884 4.40%
2. Member	777,115 6.00%	777,115 6.00%	777,115 6.00%
3. Total	\$ 1,916,883 14.80%	\$ 3,781,959 29.20%	\$ 1,346,999 10.40%

Unfunded Actuarial Accrued Liabilities Bases and Amortization Payments

<u>Amortization Base</u>	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%	
10/01/2016 Method Change - Initial Unfunded	\$ (139,471)	\$ (12,042)	\$ (10,511)	\$ (13,641)	18 years
10/01/2016 Assumption Change	(12,676)	(1,094)	(955)	(1,240)	18 years
10/01/2017 Actuarial Loss / (Gain)	119,151	9,979	8,652	11,367	19 years
10/01/2018 Actuarial Loss / (Gain)	(1,784,644)	(145,336)	(125,188)	(166,471)	20 years
10/01/2018 Assumption Change	1,611,968	131,274	113,075	150,364	20 years
10/01/2018 Assumption Change - 112.664(1)(b), F.S. Assumptions	13,735,621	N/A	963,519	N/A	20 years
10/01/2018 Assumption Change - 112.664(1)(a), F.S. Assumptions Plus 2%	(9,696,353)	N/A	N/A	(904,475)	20 years

SECTION B

SUMMARY OF PLAN PROVISIONS

Outline of Principal Provisions of the Retirement Plan
(as of October 1, 2018)

A. Effective Date:

January 1, 1973, as amended through Ordinance 09-04.

B. Eligibility Requirements:

Full-time employee, other than police officers and firefighters.

C. Credited Service:

Service in completed calendar months from date of employment to the earlier of date of retirement or termination.

D. Earnable Compensation:

Base salary paid including overtime pay *pick-up* contributions, but excluding bonuses, expense allowances, unused accumulated leave time, etc.

E. Final Monthly Compensation (FMC) :

Average monthly rate of earnable compensation during the best thirty-six (36) consecutive months out of the last one hundred twenty (120) months preceding date of retirement (or termination).

F. Employee Contributions:

6% of basic annual compensation.

G. Normal Retirement:

(1) Eligibility: The earlier of attainment of age 60 and completion of 10 years of credited service or completion of 20 years of credited service, irrespective of age. Employees participating in the plan prior to March 1, 1993 may retire fully vested at age 60 with 5 years of credited service. Employees hired on or after March 1, 1993 may retire at age 60 with 5 years of credited service but less than 10 years of credited service with reduced benefits.

(2) Benefit: 2.5% times FMC times credited service. 1.25% times FMC times credited service for employees hired on or after March 1, 1993 with less than 10 years of credited service.

Outline of Principal Provisions of the Retirement Plan
(as of October 1, 2018)

H. Early Retirement:

- (1) Eligibility: Attainment of age 55 and completion of 10 years credited service.
- (2) Benefit: Benefit accrued to date of retirement, reduced by 1/15th for each year prior to normal retirement to reflect commencement of benefit at an earlier age.

I. Deferred Retirement:

- (1) Eligibility: Continued employment beyond normal retirement date.
- (2) Benefit: Benefit accrued at deferred retirement date based on credited service and FMC at deferred retirement date.

J. Disability Retirement:

- (1) Eligibility: Total and permanent qualifying disability. If non-service incurred, requires completion of ten (10) years of credited service.
- (2) Benefit: Benefit (payable for ten (10) years certain and life thereafter or prior recovery)

Incurred in Line-of-Duty: Greatest of (a), (b) or (c), where

- (a) is 42% of FMC as of date of disability,
- (b) is the benefit supported by the present value of accrued benefit as of date of disability deferred to normal retirement date and
- (c) is the benefit supported by eighteen (18) times FMC.
Benefit under (c) shall not exceed 60% of anticipated retirement benefit.

Not Incurred in Line-of-Duty: Greater of (a) or (b), where

- (a) is the benefit supported by the present value of accrued benefit as of date of disability deferred to normal retirement date and
- (b) is the benefit supported by eighteen (18) times FMC.

Outline of Principal Provisions of the Retirement Plan
(as of October 1, 2018)

K. Death Benefit:

Benefit to beneficiary (payable for ten (10) years certain and life thereafter) which can be supported by the greater of A or B, where A is the single-sum value of the accrued benefit at date of death deferred to normal retirement date and B is the lesser of (i) and (ii), where (i) is 18 times FMC at date of death and (ii) is 100 times the anticipated monthly normal retirement benefit.

L. Vested Benefit Upon Termination:

(1) Eligibility:

Vesting schedule with no vesting until completion of 5 years of credited service (50%) increasing by 10% per year until 100% vesting upon completion of 10 years of credited service.

(2) Benefit at payable at Normal Retirement Date:

Benefit equal to accrued benefit based upon credited service and FMC at date of termination times vested percentage.

M. Cash Termination Benefit:

(1) Accumulated employee contributions without interest for non-vested employees.

(2) Accumulated employee contributions without interest in lieu of deferred vested benefit for vested employees.

N. Normal Form of Retirement Income:

Monthly life annuity with guaranteed return of employee contributions.

Outline of Principal Provisions of the Retirement Plan
(as of October 1, 2018)

O. Deferred Retirement Option Plan (DROP):

- (1) Eligibility: Upon meeting the eligibility for normal or early retirement.
- (2) Participation in the DROP must be exercised within the first thirty (30) years of employment; provided, however, that participation in the DROP, when combined with participation in the retirement plan as an active member may not exceed thirty (30) years. The maximum period of participation in the DROP is five (5) years.
- (3) An employee's account in the DROP program shall be credited with interest based upon the actual earnings of the retirement fund.
- (4) No payment may be made from the DROP until the employee actually separates from service with the City.

P. Cost of Living Adjustment (COLA):

Effective January 1, 2006, members receiving benefits received a 2.0% *ad hoc* COLA.

Q. Changes From Previous 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, 2018)

A. Mortality

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

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

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

Sample Ages (2018)	Pre-retirement Future Life Expectancy (Years)		Post-retirement Future Life Expectancy (Years)	
	Male	Female	Male	Female
	55	30.53	33.57	30.10
60	25.60	28.54	25.44	28.44
62	23.70	26.58	23.60	26.52

Sample Ages (2038)	Pre-retirement Future Life Expectancy (Years)		Post-retirement Future Life Expectancy (Years)	
	Male	Female	Male	Female
	55	32.67	35.41	32.26
60	27.78	30.38	27.63	30.30
62	25.87	28.40	25.78	28.35

Actuarial Assumptions and Actuarial Cost Methods Used in the Valuation
(as of October 1, 2018)

B. Investment Return

7.45%, net of investment expenses, compounded annually - includes inflation of 2.5%.

C. Allowances for Expenses or Contingencies

Previous year's actual administrative expenses added to normal cost.

D. Employee Withdrawal Rates

Withdrawal rates for males and for females were used in accordance with the following illustrative example:

<u>Service</u>	<u>Withdrawal Rates</u>
0-1	25.0%
1-2	22.0%
2-3	16.0%
3-4	14.0%
4-5	10.0%
5-6	10.0%
6-7	9.0%
7-8	8.0%
8-10	6.0%
10+	2.0%

E. Disability Rates

Class (01) Inter-Company disability rates were used with separate rates for males and females.
50% of all disablements are assumed to be service related.

F. Marital Assumptions

100% of all active participants are assumed to be married.

Females are assumed to be three years younger than their male spouses.

G. Salary Increase Factors

Current salary was assumed to increase at a rate based on the table below per year until retirement - includes assumed wage inflation of 3.25%.

<u>Age</u>	<u>Salary Increase</u>
< 30	6.00%
30 - 59	5.00%
60 +	4.00%

Actuarial Assumptions and Actuarial Cost Methods Used in the Valuation
(as of October 1, 2018)

H. Assumed Retirement Age

Rates of early retirement were used in accordance with the following table.

<u>Age</u>	<u>Retirement Rate</u>
55	15%
56 - 59	10%

Rates of normal retirement were used in accordance with the following table.

<u>Age</u>	<u>Retirement Rate</u>
55 or younger	20%
56 - 64	30%
65 - 74	35%
75 - 79	50%
80 & older	100%

However, all active members on the valuation date are assumed to have a minimum of one year of future service.

I. Payroll Growth Assumption

Payroll is assumed to increase at a rate equal to the historical 10-year average (1.5% as of October 1, 2018) - not less than 0.0%.

J. Valuation of Assets

The method used for determining the smoothed actuarial value of assets phases in the deviation between the expected and actual return on assets at the rate of 20% per year. The smoothed actuarial value of assets will be further adjusted to the extent necessary to fall within the corridor whose lower limit is 80% of the fair market value of plan assets and whose upper limit is 120% of the fair market value of plan assets.

K. Actuarial Cost Methods

Normal Retirement, Termination, Death and Disability Benefits: Entry Age Normal

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 Plan had always been in effect. The normal cost for the Plan 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 Plan is the excess of the actuarial present value of estimated future benefits over the actuarial present value of current and future normal costs. The unfunded actuarial accrued liability as of any valuation date is the excess of the actuarial accrued liability over the smoothed actuarial value of assets of the Plan.

Actuarial Assumptions and Actuarial Cost Methods Used in the Valuation
(as of October 1, 2018)

L. Changes from Previous Valuation

1. Investment Return was:

7.5%, net of investment expenses, compounded annually - includes inflation of 2.75%.

2. Employee Withdrawal Rates were:

<u>Service</u>	<u>Withdrawal Rates</u>
0-1	22.0%
1-2	22.0%
2-3	16.0%
3-4	16.0%
4-5	10.0%
5-6	10.0%
6-7	9.0%
7-8	9.0%
8-9	8.0%
9-10	8.0%
10+	4.0%

3. Salary Increase Factors were:

<u>Service</u>	<u>Salary Increase</u>
0-1	6.00%
1-2	6.00%
2-3	5.00%
3-4	5.00%
4-5	5.00%
5-6	4.75%
6-7	4.75%
7-8	4.50%
8-9	4.25%
9-10	4.00%
10+	3.75%

Actuarial Assumptions and Actuarial Cost Methods Used in the Valuation
(as of October 1, 2018)

L. Changes from Previous Valuation

4. Assumed Retirement Age was:

Rates of early retirement were used in accordance with the following table.

<u>Age</u>	<u>Retirement Rate</u>
55	15%
56 - 59	5%

Rates of normal retirement were used in accordance with the following table.

<u>Age</u>	<u>Retirement Rate</u>
Less than 55	15%
55 - 59	40%
60 - 61	25%
62 - 64	35%
65 - 74	50%
75 & older	100%

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 plan experience that affect costs or liabilities, such as: mortality, withdrawal, disablement, and retirement; future increases in salary; future rates of investment earnings; future investment and administrative expenses; characteristics of members not specified in the data, such as marital status; characteristics of future members; future elections made by members and other items.
<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 plan. 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 plan assets or a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the actuarially required contribution.

<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 plan 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 plan 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 plans that do not establish separate amortization bases (separate components of the UAAL), this is the same as the Amortization Period. For plans that do establish separate amortization bases, this is the period over which the UAAL would be amortized if all amortization bases were combined upon the current UAAL payment.
<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.

<i>GASB</i>	Governmental Accounting Standards Board.
<i>GASB No. 67 and GASB No. 68</i>	These are the governmental accounting standards that set the accounting rules for public retirement plans and the employers that sponsor or contribute to them. Statement No. 67 sets the accounting rules for the plans themselves, while Statement No. 68 sets the accounting rules for the employers that sponsor or contribute to public retirement plans.
<i>Normal Cost</i>	The annual cost assigned, under the Actuarial Cost Method, to the current plan year.
<i>Open Amortization Period</i>	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.
<i>Unfunded Actuarial Accrued Liability</i>	The difference between the Actuarial Accrued Liability and Actuarial Value of Assets.
<i>Valuation Date</i>	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.