

City of Wilton Manors Volunteer Firefighters' Retirement System

Actuarial Valuation Report as of October 1, 2017





June 4, 2018

Board of Trustees
City of Wilton Manors Volunteer Firefighters' Retirement System
Wilton Manors, FL

Dear Board Members:

The results of the October 1, 2017 Annual Actuarial Valuation of the City of Wilton Manors Volunteer Firefighters' Retirement System are presented in this report.

The contribution amount shown on page 1 may be considered as a minimum contribution rate that complies with the Board's funding policy. Users of this report should be aware that contributions made at that rate do not guarantee benefit security. Given the importance of benefit security to any retirement system, we suggest that contributions to the System in excess of those presented in this report be considered.

The contribution rate in this report is determined using the actuarial assumptions and actuarial cost methods disclosed in Section II of this report. This report includes risk metrics in Section I but does not include a more robust assessment of the risks of future experience not meeting the actuarial assumptions. Additional assessment of risks was outside the scope of this assignment. We encourage a review and assessment of investment and other significant risks that may have a material effect on the Plan's financial condition.

This report was prepared at the request of the Board and is intended for use by the Retirement System and those designated or approved by the Board. This report may be provided to parties other than the Pension Plan only in its entirety and only with the permission of the Board. GRS is not responsible for unauthorized use of this report.

The purpose of the valuation is to measure the System's funding progress, to determine the employer contribution rate for the fiscal year ending September 30, 2018, and to determine the actuarial information for Governmental Accounting Standards Board (GASB) Statement No. 67 and No. 68. This report also includes estimated GASB Statement No. 67 information for the fiscal year ending September 30, 2018. This report should not be relied on for any purpose other than the purpose described herein. Determinations of financial results, associated with the benefits described in this report, for purposes other than those identified above may be significantly different.

The findings in this report consider data or other information through September 30, 2017. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

This valuation assumed the continuing ability of the plan sponsor to make the contributions necessary to fund this plan. A determination regarding whether or not the plan sponsor is actually able to do so is outside our scope of expertise and was not performed.

The valuation was based upon information furnished by the Plan Administrator concerning Pension Plan benefits, financial transactions, plan provisions, active and terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by the Plan Administrator.

In addition, this report was prepared using assumptions approved by the Board and prescribed by the Florida Statute as described in the section of this report entitled Actuarial Assumptions and Cost Methods. The prescribed assumptions are the mortality rates in accordance with the Florida House Bill 1309 (codified in Chapter 2015-157)

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

Theora Braccialarghe and Melissa Moskovitz 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 actuarial valuation was 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. In our opinion, the techniques and assumptions used are reasonable, meet the requirements and intent of Part VII, Chapter 112, Florida Statutes, and are based on generally accepted actuarial principles and practices. There is no benefit or expense to be provided by the plan and/or paid from the plan's assets for which liabilities or current costs have not been established or otherwise taken into account in the valuation. All known events or trends which may require a material increase in plan costs or required contribution rates have been taken into account in the valuation.

Gabriel, Roeder, Smith & Company will be pleased to review this valuation and Report with the Board of Trustees and to answer any questions pertaining to the valuation.

Respectfully submitted,

GABRIEL, ROEDER, SMITH & COMPANY

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SECTION I

INTRODUCTION

DISCUSSION

TOTAL REQUIRED CONTRIBUTION

The required City contribution for the plan year ending September 30, 2018, is \$0, as shown below.

	Required Employer Contribution
Total Required Employer Contribution without offset for Credit Balance	\$ 92,659
Credit Balance	\$ 547,262
Expected State Premium Tax Refund	\$ 93,880
Percent Allocated to Share Plan	50%
Percent Allocated to Retirement System	50%
Remaining City Contribution	0

Beginning October 1, 2016, the full amount of state money is available for purposes of funding the Retirement System until the system is at least 100% funded on a market value basis, including the funding standard account. The funding standard account, which was initialized in 2016 with the accumulated excess State money, is used to receive State contributions which are allocated to the Retirement System, and to cover required contributions to the System. Fifty percent of the State money received in 2018 will be allocated to the funding standard account and available for funding the Retirement System. The City is not expected to make any contributions to the System.

EXPERIENCE

There was a small actuarial loss this year, partially due to investment earnings less than assumed. The return on a valuation asset basis was 5.7% as compared to the assumed rate of 6.0%. The investment return on a net market value basis for the plan year ending in 2017 was 11.2%. The return in excess of 6.0% is being spread over five years, while portions of experience from the previous four years are being recognized this year. The remainder of the loss was due to the longevity of the plan members.

CHANGES IN BENEFITS

There were no changes in plan provisions in connection with this valuation.

CHANGES IN ACTUARIAL METHODS AND ASSUMPTIONS

There were no changes in actuarial methods and assumptions in connection with this valuation.

FUNDED RATIO

The funded ratio, one measure of the Plan's financial status, is equal to the actuarial value of assets divided by the actuarial accrued (past service) liability. The funded ratio is 67.0% on a valuation asset basis compared to 65.9% last year.

VARIABILITY OF FUTURE CONTRIBUTION RATES

The Actuarial Cost Method used to determine the contributions is intended to produce contributions which are generally level. Even so, when experience differs from the assumptions, as it often does, the required contribution can vary significantly from year-to-year.

Over time, if the year-to-year gains and losses offset each other, the contribution would be expected to return to the current level, but this does not always happen.

The market value of assets was about \$6,300 more than the actuarial value of assets as of the valuation date. This difference will be recognized gradually over the next few years in the absence of offsetting losses. If the Market Value had been the basis for the valuation, the total required contribution would have been approximately \$92,000 and the funded ratio would have been 67.4%.

RECOMMENDATIONS

Steps have been taken to improve the funded position of the plan. In connection with the prior valuation, the amortization period was shortened and the investment return assumption was lowered. We recommend reviewing all of the assumptions, with particular attention to the investment return assumption.

CONCLUSION

The remainder of this Report covers detailed actuarial valuation results, financial information, other information and statistics and a summary of plan provisions.

FINANCIAL POSITION OF THE PLAN

The purpose of this Section of the Report is to provide certain measures which indicate the financial position of the program. These measures relate to short term position, long term position and level funding.

The various percentages listed in this Section as of a single valuation date are not overly significant standing alone. What is more significant is the trend of the rates over a period of years. It is also important to keep in mind that each time there are changes in benefits or assumptions, actuarial liabilities are created or diminished. Any newly created liabilities are financed systematically over a period of future years. All actuarially computed values in this analysis are based on the actuarial assumptions utilized in the respective years' actuarial valuations.

SHORT TERM POSITION

The ultimate test of financial position is the program's ability to pay all promised benefits when due. The program's progress in accumulating assets to pay all promised benefits can be measured by comparing the market value of assets with:

1. Accumulated contributions of active members of the program,
2. The actuarial present value (APV) of projected benefits payable to those already receiving benefits and to vested terminations, and
3. The employer-financed portion of the actuarial present value of accrued benefits payable to active participants. This amount is based on benefits earned to date without future credited service or salary increases.

The total of the first two items should generally be fully covered by assets. The portion of the third item covered by assets should increase over time. Increases in benefits will, of course, adversely affect the trend in the years when such increases are first reflected in the actuarial values.

Although different actuarial assumptions might be used in the event of a termination of the program, this test shows how much of the benefits accrued to date might be covered by assets in the event of a plan termination using the valuation assumptions.

Valuation Date	Market Value of Assets*	Actuarial Present Value (APV) of Accrued Benefits	% of APV Covered by Assets
10/1/17	\$ 1,107,866	\$ 1,642,144	67 %
10/1/16	1,014,602	1,640,778	62
10/1/15	935,243	1,466,651	64
10/1/14	1,044,756	1,448,934	72
10/1/13	903,109	1,242,599	73

*Market value reduced by Funding Standard Account balance.

LONG TERM POSITION

Over the longer term, the position of an ongoing plan can be measured by comparing the actuarial value of assets to an amount known as the Actuarial Accrued Liability (AAL) under the Entry Age Actuarial Cost Method. This item has often been called the "past service liability". Its derivation differs from the short-term position derivation in several ways, but mainly due to the fact that future salary increases are included in the AAL. As in the case of the short-term position, the AAL is affected immediately by any revisions in benefits or assumptions. The accumulation of assets to equal the AAL can be considered a long-range funding goal. Largely because of market volatility, very few retirement programs have attained this goal.

Valuation Date	Actuarial Value of Assets	Entry Age Actuarial Accrued Liability (AAL)	% of AAL Covered by Assets
10/1/17	\$ 1,101,597	\$ 1,643,040	67 %
10/1/16	1,081,636	1,641,753	66
10/1/15	1,012,862	1,468,009	69
10/1/14	952,883	1,450,332	66
10/1/13	841,280	1,251,158	67

LEVEL CONTRIBUTION RATES

The actuarial assumptions and cost methods have been chosen with the intent of producing required employer contributions which remain fairly level. If this goal is attained, employer contributions will not have to be raised materially in order to make up for the past. For many employers, this measure of the program's position is the most important of all.

Since this is not a pay-related benefit, total dollar amounts are shown below:

Contribution		
Valuation Date	Total	City
10/1/17	\$ 92,659	\$ 0
10/1/16	91,007	0
10/1/15	78,859	0
10/1/14	80,349	0
10/1/13	79,117	0

A major factor affecting the stability of the amounts just shown is how well the actual plan experience is faring compared to the actuarial assumptions. The value of the difference between what actually occurred and what was assumed to occur is called the actuarial gain or loss. Gains tend to lower the subsequent cost of the program while losses tend to raise the subsequent cost of the program. A summary of the actuarial gains and losses of the Plan is in the next Section.

CONCLUSION

Analysis of all the benchmarks listed above over a period of years will provide an indication of whether the program is becoming financially stronger or weaker.

RECENT HISTORY OF PLAN CHANGES

1. Effective October 1, 2007 the normal cost for administrative expenses is the average of the past two years rather than the actual amount paid the preceding year.
2. Effective October 1, 2008, the valuation asset method was changed to one which smooths the excess/(shortfall) of actual investment earnings as compared to expected earnings over five years. Additionally, the method of determining the normal cost for administrative expenses was changed from a two year average of actual expenses to a four year average of actual expenses.
3. Effective October 1, 2014, the mortality rates were changed from the RP-2000 Combined Healthy Participant Mortality Tables for males and females, projected to 2005 to the fully generational RP-2000 Combined Healthy Participant Mortality Table for males and females, with a five-year age set-forward for impaired mortality, using projection scale AA to project mortality improvement to all future years from the year 2000. Additionally, the assumed rate of investment return on plan assets was changed from an 8.0% gross investment return to a 7.0% assumption net of investment expenses. Finally, the remaining amortization period has been shortened to 20 years, with the amortization period for new bases decreasing by one year per year.
4. Effective May 24, 2016, a Share Plan was adopted to be funded by State premium tax revenue, contingent on the funded status of the System, and a funding standard account was established.
5. Effective October 1, 2016, the mortality rates were changed from the RP-2000 Combined Healthy Participant Mortality Tables for males and females, using scale AA to project mortality improvement to all years after 2000, to the mortality rates used by the Florida Retirement System (FRS) for Special Risk Class members in the July 1, 2016 actuarial valuation. Additionally, the assumed rate of investment return on plan assets was changed from 7.0% net investment expenses to 6.0% net investment expenses, and the maximum remaining amortization period for all bases was shortened to 15 years.
6. Effective October 1, 2016, the City and membership consented to use available premium tax revenue to improve the funding status of the Retirement System and to create a defined contribution share plan for the allocation of future premium tax revenue once the Retirement System is at least 100% funded on a market value basis including the funding standard account.
7. Effective October 1, 2016, in connection with the mutual consent agreement regarding insurance premium tax revenue, a Funding Standard Account (FSA) was established using the accumulated excess State money. The FSA will also receive future state money allocated to funding the Retirement System.
8. Effective October 1, 2016, the assumed rate of investment earnings was reduced from 7.0% net of investment expenses to 6.0% net of investment expenses and the remaining amortization period was shortened for all bases to a maximum of 15 years.

SECTION II

VALUATION RESULTS

COMPARATIVE SUMMARY OF VALUATION RESULTS AS OF OCTOBER 1		
	2017	2016
Covered Group		
A. Active Participants	1	1
Retirees, Disabilities, Beneficiaries and Vested Terminations	9	9
Long Range Cost		
B. Actuarial Present Value of Projected Benefits	\$ 1,646,588	\$ 1,645,263
C. Actuarial Present Value of Future Normal Costs	3,548	3,510
D. Actuarial Accrued Liability (AAL): B-C	1,643,040	1,641,753
E. Valuation Assets	1,101,597	1,081,636
F. Unfunded Actuarial Accrued Liability (UAAL): D - E	541,443	560,117
Current Cost		
G. Payment Required to Amortize UAAL	\$ 52,500	\$ 52,202
H. Total Normal Cost (for current year)	35,570	34,298
I. Plan Year to which Contributions Apply	2017/18	2016/17
J. Interest	4,589	4,507
K. Total Required Contributions, with Interest	92,659	91,007
L. Funding Standard Account Credit Balance	547,262	513,555
M. Expected State Premium Tax Refund	93,880	113,066
1. Percent to Share Plan	50%	0%
2. Percent to Retirement System	50%	100%
N. Required City Contribution	0	0

DERIVATION OF NORMAL COST AS OF OCTOBER 1		
	2017	2016
A. Entry Age Normal Cost for		
Service Retirement	\$ 3,004	\$ 2,968
Vesting Benefits	313	312
Preretirement Death	97	97
Disability Benefits	134	133
Return of Contributions	0	0
Total	<u>3,548</u>	<u>3,510</u>
B. Normal Cost for Administrative Expense	32,022	30,788
C. Expected Member Contributions	0	0
D. Employer Normal Cost for Plan Year Beginning October 1: (A)+(B)-(C)	35,570	34,298

PRESENT VALUE OF PROJECTED BENEFITS AS OF OCTOBER 1		
	2017	2016
A. Present Value of Future Salaries	\$ N/A	\$ N/A
B. Present Value of Projected Benefits		
1. Active Members		
Service Retirement Benefits	242,171	235,438
Vesting Benefits	0	0
Preretirement Death	0	0
Disability Benefits	0	0
Return of Contributions	0	0
Total	<u>242,171</u>	<u>235,438</u>
2. Inactive Members		
Service Retirees	1,268,515	1,179,242
Disability Retirees	0	0
Beneficiaries	0	0
Terminated Vested	135,902	230,583
Total	<u>1,404,417</u>	<u>1,409,825</u>
3. Grand Total	1,646,588	1,645,263

LIQUIDATION OF THE UNFUNDED ACTUARIAL ACCRUED LIABILITY

The Unfunded Actuarial Accrued Liability (UAAL) is being amortized as a level dollar amount over the number of years remaining in the amortization period. Details relating to the UAAL are as follows:

UAAL AS OF OCTOBER 1, 2017					
Original			Current		
Date & Source	Amort. Years	Amount	Years Remaining	Amount	Payment
10/1/98 UFAAL	30	\$ 20,672	11	\$ (8,026)	\$ (960)
2001 Amendment	30	136,484	14	56,276	5,712
10/1/01 Change Method	30	(32,181)	14	(13,271)	(1,347)
10/1/03 Loss	30	25,189	14	15,311	1,554
10/1/03 Amendment	30	303,320	14	184,365	18,712
10/1/04 Gain	30	(22,267)	14	(14,591)	(1,481)
10/1/05 Gain	30	(5,030)	14	(3,504)	(356)
10/1/05 Assumption Change	30	21,786	14	15,174	1,540
10/1/06 Loss	30	5,458	14	3,878	394
10/1/06 Member Status Change (Required by the State)	15	39,702	4	11,608	3,160
10/1/07 Gain	30	(25,431)	14	(18,651)	(1,893)
10/1/08 Loss	30	129,503	14	96,856	9,830
10/1/08 Method Change	15	(108,520)	6	(47,182)	(9,052)
10/1/09 Loss	30	41,341	14	31,445	3,192
10/1/10 Loss	30	48,460	14	38,992	3,958
10/1/11 Loss	30	38,103	14	31,589	3,206
10/1/12 Loss	30	12,304	14	10,419	1,057
10/1/13 Gain	30	(40,786)	14	(35,009)	(3,553)
10/1/14 Gain	30	(72,876)	14	(64,088)	(6,505)
10/1/14 Assumption Change	30	172,401	14	151,609	15,388
10/1/15 Gain	19	(26,414)	14	(24,078)	(2,444)
10/1/16 Gain	18	(56,587)	14	(53,850)	(5,466)
10/1/16 Assumption Change	18	178,876	14	170,228	17,277
10/1/17 Loss	15	5,943	15	5,943	577
				541,443	52,500

**LIQUIDATION OF THE UNFUNDED ACTUARIAL ACCRUED LIABILITY
(continued)**

Amortization Schedule Illustration	
Year Ended	Projected UAAL
2017	\$ 541,443
2018	518,278
2019	493,723
2020	467,695
2021	440,105
2026	263,584
2031	577
2032	0

SHARE PLAN ALLOCATION

The City and membership agreed to use the accumulated excess premium tax revenue as of May 2016 to supplement funding of the Retirement System and to create a share plan for the allocation of future premium tax revenue when certain goals are reached. The accumulated excess premium tax revenue was used to initialize the funding standard account for the System.

When the total market value of the fund, including the funding standard account credit balance, is at least 100% of the actuarial present value of benefits, 50% of the premium tax revenue received for the next year will be allocated to the System and 50% will be allocated to the share plan.

When the market value on this basis is at least 110% of the actuarial present value of benefits, 100% of the premium tax revenue received for the next year will be allocated to the share plan.

This year, the system is 100.5% funded on this basis, so 50% of the premium tax revenue received in 2018 will be allocated to the Retirement System and 50% will be allocated to the Share Plan.

Determination of Share Plan Allocation	
	2017
1. Actuarial Present Value of Benefits	\$ 1,646,588
2. Assets	1,107,866
Funding Standard Account Credit Balance	547,262
Total	<u>1,655,128</u>
3. Funded Ratio	100.5%
4. Allocation of State Money to be Received Next Year	
a. Allocation to Share Plan	50%
b. Allocation to Retirement System	50%

FUNDING STANDARD ACCOUNT

Valuation Date Plan Year Ended	10/1/17 9/30/18	10/1/16 9/30/17	10/1/15 9/30/16
Interest Rate:	6.00%	6.00%	7.00%
Charges			
a. Prior Year Funding Deficiency	\$ 0	\$ 0	\$ 0
b. Normal Cost	35,570	34,298	34,687
c. Amortization Charges, less Amortization Credits	52,500	52,202	39,658
d. Interest on a,b,c	<u>5,284</u>	<u>5,190</u>	<u>5,204</u>
e. Total Charges	93,354	91,690	79,549
Credits			
f. Prior Year Credit Balance	547,262	513,555	0
g. Accumulated Excess State Money		0	468,126
h. State Contributions		93,880	113,066
i. Interest on f,g,h		<u>31,517</u>	<u>11,912</u>
j. Total Credits		638,952	593,104
Balance			
k. Credit Balance		547,262	513,555
l. Funding Deficiency		0	0

RECENT HISTORY OF VALUATION RESULTS					
Valuation Date	Number of		Actuarial Value of Assets	Unfunded Actuarial Accrued Liability	Employer Normal Cost
	Active Members	Inactive Members			
10/1/17	1	9	\$ 1,101,597	\$ 541,443	\$ 35,570
10/1/16	1	9	1,081,636	560,117	34,298
10/1/15	1	9	1,012,862	455,147	34,687
10/1/14	1	9	952,883	497,449	33,257
10/1/13	2	8	841,280	409,878	38,572
10/1/12	2	8	744,775	457,828	39,498
10/1/11	2	8	699,202	455,255	37,357
10/1/10	2	8	679,750	429,224	36,481
10/1/09	2	8	666,307	401,405	30,826
10/1/08	2	8	646,453	379,293	26,393

ACTUARIAL GAINS AND LOSSES

The assumptions used to anticipate mortality, employment turnover, investment income, expenses, salary increases, and other factors have been based on long-range trends and expectations. Actual experience can vary from these expectations. The variance is measured by the gain and loss for the period involved. If significant long-term experience reveals consistent deviation from what has been expected and that deviation is expected to continue, the assumptions should be modified. The net actuarial gains (losses) for this and previous years are as follows:

A. Derivation of Actuarial Gain / (Loss)	
1. Unfunded Actuarial Accrued Liability (UAAL) Previous Valuation	\$ 560,117
2. Normal Cost (NC) Previous Valuation	34,298
3. Contributions Previous Year	93,880
4. Interest on:	
a. UAAL and NC	35,669
b. Contributions	704
c. Net Total: (a) - (b)	<u>34,965</u>
5. Expected UAAL Current Year Before Changes: (1) + (2) - (3) + (4)	535,500
6. Change Due to Plan Amendments	0
7. Change Due to Assumptions and Methods	0
8. Expected UAAL Current Year After Changes: (5)+(6)+(7)	535,500
9. Actual UAAL Current Year	<u>541,443</u>
10. Actuarial Gain/(Loss): (8) - (9)	<u>(5,943)</u>
B. Approximate Portion of Gain/(Loss) Due to Investments	(2,538)
C. Approximate Portion of Gain/(Loss) Due to Liabilities: (A)-(B)	\$ (3,405)

Year Ending	Actuarial Gain (Loss)
9/30/17	\$ (5,943)
9/30/16	56,587
9/30/15	26,414
9/30/14	72,876
9/30/13	40,786
9/30/12	(12,304)
9/30/11	(38,103)
9/30/10	(48,460)
9/30/09	(41,341)
9/30/08	(129,503)

The investment return assumption has considerable impact on the cost of the Plan so it is important that it is in line with actual experience. The following table shows the fund earnings on actuarial value of assets compared to the assumed rates for the last few years:

Year Ended	Investment Rate of Return		Salary Increases
	Actual	Assumed	
9/30/17	5.7 %	6.0 %	N/A
9/30/16	7.0	7.0	N/A
9/30/15	6.6	7.0	N/A
9/30/14	10.6	8.0	N/A
9/30/13	8.7	8.0	N/A
9/30/12	3.7	8.0	N/A
9/30/11	1.9	8.0	N/A
9/30/10	2.6	8.0	N/A
9/30/09	2.6	8.0	N/A
9/30/08	(13.4)	8.0	N/A

SCHEDULE OF FUNDING PROGRESS						
Actuarial Valuation Date	Actuarial Value of Assets: (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b)-(a)	Funded Ratio (a)/(b)	Covered Payroll (c)	UAAL As % of Covered Payroll [(b)-(a)]/(c)
10/1/17	\$ 1,101,597	\$ 1,643,040	\$ 541,443	67.0 %	N/A	N/A
10/1/16	1,081,636	1,641,753	560,117	65.9	N/A	N/A
10/1/15	1,012,862	1,468,009	455,147	69.0	N/A	N/A
10/1/14	952,883	1,450,332	497,449	65.7	N/A	N/A
10/1/13	841,280	1,251,158	409,878	67.2	N/A	N/A
10/1/12	744,775	1,202,603	457,828	61.9	N/A	N/A
10/1/11	699,202	1,154,457	455,255	60.6	N/A	N/A
10/1/10	679,750	1,108,974	429,224	61.3	N/A	N/A
10/1/09	666,307	1,067,712	401,405	62.4	N/A	N/A
10/1/08	646,453	1,025,746	379,293	63.0	N/A	N/A

FASB NO. 35 INFORMATION AS OF OCTOBER 1

	2017	2016
A. Actuarial Present Value of Accumulated Plan Benefits		
1. Vested Benefits		
a. Members Currently Receiving Benefits	\$ 1,268,515	\$ 1,179,242
b. Terminated Vested Members	135,902	230,583
c. Other Members	237,727	230,953
d. Total	<u>1,642,144</u>	<u>1,640,778</u>
2. Non-Vested Benefits	0	0
3. Total: (1) + (2)	1,642,144	1,640,778
4. Accumulated Contributions of Active Members	N/A	N/A
B. Statement of Change in Accumulated Plan Benefits		
1. Total Value at Beginning of Year	1,640,778	1,466,651
2. Increase (decrease) during year attributable to:		
a. Plan Amendment	0	0
b. Change in actuarial assumptions & methods	0	161,311
c. Benefits paid and contribution refunds	(93,206)	(79,458)
d. Other, including latest member data, benefits accumulated and decrease in discount period	94,572	92,274
e. Net Increase	<u>1,366</u>	<u>174,127</u>
3. Total Value at End of Year	1,642,144	1,640,778
C. Assumed Rate of Return	6.00%	6.00%
D. Market Value of Assets less Credit Balance	1,107,866	1,014,602
E. Funded Ratio	67.5%	61.8%

**SCHEDULE OF CHANGES IN THE EMPLOYER'S
NET PENSION LIABILITY AND RELATED RATIOS
GASB Statement No. 67**

Fiscal year ending September 30,	2018*	2017	2016
Total pension liability			
Service Cost	\$ 3,548	\$ 2,785	\$ 2,784
Interest	96,005	136,401	132,943
Benefit Changes	-	-	-
Difference between actual & expected experience	(5,234)	(547,430)	(7,955)
Assumption Changes	-	157,023	-
Benefit Payments	(102,893)	(93,206)	(79,458)
Refunds	-	-	-
Net Change in Total Pension Liability	(8,574)	(344,427)	48,314
Total Pension Liability - Beginning	1,647,977	1,992,404	1,944,090
Total Pension Liability - Ending (a)	\$ 1,639,403	\$ 1,647,977	\$ 1,992,404
Plan Fiduciary Net Position			
Contributions - Employer	\$ -	\$ -	\$ -
Contributions - Non-Employer Contributing Entity	93,880	93,880	113,066
Contributions - Member	-	-	-
Net Investment Income	95,260	163,275	114,245
Benefit Payments	(102,893)	(93,206)	(79,458)
Refunds	-	-	-
Administrative Expense	(32,022)	(36,978)	(23,065)
Other	-	1	(1)
Net Change in Plan Fiduciary Net Position	54,225	126,972	124,787
Plan Fiduciary Net Position - Beginning	1,655,128	1,528,156	1,403,369
Plan Fiduciary Net Position - Ending (b)	\$ 1,709,353	\$ 1,655,128	\$ 1,528,156
Net Pension Liability - Ending (a) - (b)	(69,950)	(7,151)	464,248
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	104.27 %	100.43 %	76.70 %
Covered Payroll**	N/A	N/A	N/A
Net Pension Liability as a Percentage of Covered Payroll	N/A	N/A	N/A

* These figures are estimates only. Actual figures will be provided after the end of the fiscal year.

** The Plan is not pay based, as the members are volunteer firefighters.

SCHEDULE OF THE EMPLOYER'S NET PENSION LIABILITY
GASB Statement No. 67

FY Ending September 30	Total Pension Liability	Plan Net Position	Net Pension Liability	Plan Net Position as a % of Total Pension Liability	Covered Payroll**	Net Pension Liability as a % of Covered Payroll
2018*	\$ 1,639,403	\$ 1,709,353	\$ (69,950)	104.27%	N/A	N/A
2017	1,647,977	1,655,128	(7,151)	100.43%	N/A	N/A
2016	1,992,404	1,528,156	464,248	76.70%	N/A	N/A
2015	1,944,090	1,403,369	540,721	72.19%	N/A	N/A
2014	1,688,531	1,454,962	233,569	86.17%	N/A	N/A

SCHEDULE OF CONTRIBUTIONS
GASB Statement No. 67

FY Ending September 30,	Actuarially Determined Contribution	Actual Contribution	Contribution Deficiency (Excess)	Covered Payroll**	Actual Contribution as a % of Covered Payroll
2018*	\$ 92,659	\$ 93,880	\$ (1,221)	NA	NA
2017	91,007	93,880	(2,873)	NA	NA
2016	78,859	85,547	(6,688)	NA	NA
2015	80,349	85,547	(5,198)	NA	NA
2014	79,117	85,547	(6,430)	NA	NA

* These figures are estimates only until actual figures are provided after the end of each fiscal year.

** The Plan is not pay based, as the members are volunteer firefighters.

NOTES TO SCHEDULE OF CONTRIBUTIONS GASB Statement No. 67

Valuation Date: October 1, 2017

Notes Actuarially determined contribution rates are calculated as of the beginning of the fiscal year in which contributions are reported.

Methods and Assumptions Used to Determine Contribution Rates:

Actuarial Cost Method	Entry Age Normal
Amortization Method	Level Dollar, Closed
Remaining Amortization Period	15 years
Asset Valuation Method	5-year smoothed market
Salary Increases	N/A
Investment Rate of Return	6.00%
Retirement Age	100% retirement one half year after reaching age 55 or age 50 with 20 years of service
Mortality	RP-2000 mortality tables with blue collar adjustments and generational projections using scale BB as used by the Florida Retirement System for the Special Risk Class members in the July 1, 2016 actuarial valuation.

Other Information: See Discussion of Valuation Results on Page 1

SINGLE DISCOUNT RATE GASB Statement No. 67

A single discount rate of 6.00% was used to measure the total pension liability. This single discount rate was based on the expected rate of return on pension plan investments of 6.00%. The projection of cash flows used to determine this single discount rate assumed that employer contributions will be made at the actuarially determined contribution rates. Based on these assumptions, the pension plan’s fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Regarding the sensitivity of the net pension liability to changes in the single discount rate, the following presents the plan’s net pension liability, calculated using a single discount rate of 6.00%, as well as what the plan’s net pension liability would be if it were calculated using a single discount rate that is 1-percentage-point lower or 1-percentage-point higher:

Sensitivity of the Net Pension Liability to the Single Discount Rate Assumption*

1% Decrease	Current Single Discount Rate Assumption	1% Increase
5.00%	6.00%	7.00%
\$123,015	(\$69,950)	(\$230,086)

*These figures are estimates only. Actual figures will be provided after the end of the fiscal year.

ACTUARIAL ASSUMPTIONS AND COST METHODS

Assumptions

The active group is too small to provide statistically significant experience on which to base certain demographic assumptions. The retirement age assumption tracks the eligibility requirements for normal retirement. Mortality is based on a commonly used fully generational mortality table and projection scale.

A. Mortality

RP-2000 Mortality Table for annuitants with future improvements in mortality projected to all future years using Scale BB. For females, the base mortality rates include a 100% white collar adjustment. For males, the base mortality rates include a 90% blue collar adjustment and a 10% white collar adjustment.

For disabled retirees, the mortality table is 60% of the RP-2000 Mortality Table for Disabled Annuitants, with ages set-back 4 years for males and set-forward 2 years for females, and 40% of the RP-2000 Healthy Annuitant Mortality Table with a white collar adjustment and no age set-back, both with no provision being made for future mortality improvements.

These are the same rates currently in use for Special Risk Class members of the Florida Retirement System (FRS), as mandated by Florida House Bill 1309 (codified in Chapter 2015-157). Sample rates for non-disabled retired lives are shown below:

Sample Ages in 2017	% Mortality During the Year		Future Life Expectancy (years)	
	Men	Women	Men	Women
50	0.54%	0.23%	33.90	38.31
55	0.67%	0.32%	29.26	33.29
60	0.90%	0.47%	24.68	28.39
65	1.31%	0.74%	20.28	23.65
70	2.01%	1.24%	16.15	19.19
75	3.26%	2.09%	12.43	15.11
80	5.37%	3.51%	9.23	11.49
Ref:	1422 x 1.00	1420 x 1.00	896	897

B. Interest to be Earned by Fund

6% per direction from the Board of Trustees. The 6% rate is net of investment expenses, compounded annually.

C. Allowances for Expenses

The average of actual administrative expenses incurred during the prior four plan years.

D. **Employee Withdrawal Rates**

Samples Rates are shown below:

<u>Age</u>	<u>Males</u>	<u>Females</u>
20	7.5%	12.5%
25	5.0	7.5
30	3.5	5.0
35	2.5	3.5
40	1.5	2.5
45	1.0	1.5
50	0.5	1.0
55 & up	0.0	0.0

E. **Disability Rates**

Sample Rates are shown below:

<u>Age</u>	<u>Males</u>	<u>Females</u>
20	0.17%	0.34%
25	0.17	0.34
30	0.17	0.34
35	0.18	0.36
40	0.20	0.40
45	0.23	0.46
50	0.29	0.58
55	0.39	0.78
60 & up	0.00	0.00

F. **Salary Increase Factors**

N/A – Flat benefit, not salary related.

G. **Retirement Age**

Participants are assumed to retire one half year after the valuation date at which they are first eligible for normal retirement. Participants who are beyond normal retirement date are assumed to retire one half year after the valuation date.

H. **Valuation of Assets**

The assets are valued using an IRS approved smoothed market value. It recognizes the difference between actual and expected investment income at the rate of 20% per year. The actuarial value of assets is calculated as market value minus unrecognized excesses (shortages) of actual investment income as compared to expected. Actual contributions and expenses are used to determine the expected return. The actuarial value of assets is further adjusted to the extent necessary to fall within the corridor of 80% to 120% of the fair market value of plan assets.

I. **Cost Method**

Entry Age Normal Actuarial Cost Method.

J. **Changes From Previous Valuation**

None.

K. **Rationale for Assumptions**

The size of the covered group is not large enough to provide statistically significant mortality experience. The mortality table is based on the assumptions used by FRS as required by Florida House Bill 1309 (codified in Chapter 2015-157). Over 85% of the present value of benefits is for inactive lives, and the only two assumptions used to value inactive lives are mortality and investment return. The other assumptions are reasonable for members of public pension plans in Florida.

GLOSSARY OF TERMS

<i>Actuarial Accrued Liability (AAL)</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 (APV)</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 (APVFB)</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, such as the Funded Ratio and the Actuarially Determined Employer Contribution (ADEC).
<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 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.
<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>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 the normal cost rate from last year and the normal cost rate from this year.
<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 systems and the employers that sponsor or contribute to them. Statement No. 68 sets the accounting rules for the employers that sponsor or contribute to public retirement systems, while Statement No. 67 sets the rules for the systems themselves.
<i>Normal Cost</i>	The annual cost assigned, under the Actuarial Cost Method, to the current plan year.
<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.

SECTION III

PENSION FUND INFORMATION

**STATEMENT OF ASSETS AT MARKET VALUE
AS OF SEPTEMBER 30**

	2017	2016
Cash & Cash Equivalents	\$ 54,117	\$ 97,666
Investments		
Equity Securities	941,111	0
Corporate Bonds	75,350	121,292
Government Securities	431,919	341,324
Fixed Income Mutual Funds	<u>58,751</u>	<u>0</u>
Total Investments	1,507,131	1,315,821
Other Income	0	1
Total Cash & Investments	1,561,248	1,413,487
Receivables		
Contributions Receivable	93,880	113,066
Accrued Interest & Dividends	0	1,604
Liabilities	0	0
Total Pension Funds Assets	1,655,128	1,528,157

**INCOME AND DISBURSEMENTS
FOR THE YEAR ENDED SEPTEMBER 30**

	2017	2016
A. Market Value as of Beginning of Year	\$ 1,528,157	\$ 1,403,369
B. Receipts During Period		
1. Contributions		
a. Employee	N/A	N/A
b. State	93,880	113,066
c. Total	<u>93,880</u>	<u>113,066</u>
2. Investment Earnings Allocation		
a. Interest & Dividends	35,670	25,421
b. Realized Gain/(Loss)	7,966	103,854
c. Unrealized Gain/(Loss)	<u>119,639</u>	<u>(15,030)</u>
d. Total	163,275	114,245
3. Total Receipts During Period	257,155	227,311
C. Disbursements During Period		
1. Benefits	93,206	79,458
2. Administrative Expenses	36,978	23,065
3. Total Disbursements During Period	130,184	102,523
D. Market Value as of End of Year	1,655,128	1,528,157

Actuarial Value of Assets as of September 30,		
	2017	2016
A. Market Value of Assets at Beginning of Year	\$1,528,157	\$1,403,369
B. Contributions	93,880	113,066
C. 1. Benefit Payments	93,206	79,458
2. Administrative Expenses	36,978	23,065
3. Total Disbursements	130,184	102,523
D. Expected Investment Income	90,600	98,605
E. Expected Assets End of Year: A+B-C+D	1,582,453	1,512,517
F. Actual Market Value at End of Year	1,655,128	1,528,157
G. Excess/(Shortfall) of Actual over Expected Assets: F-E		
1. From This Year	72,675	15,640
2. From One Year Ago	15,640	(181,085)
3. From Two Years Ago	(181,085)	55,893
4. From Three Years Ago	55,893	33,741
H. Decreasing Fractions of Excess/(Shortfall)		
1. 80% From This Year	58,140	12,512
2. 60% From One Year Ago	9,384	(108,651)
3. 40% From Two Years Ago	(72,434)	22,357
4. 20% From Three Years Ago	11,179	6,748
5. Total	6,269	(67,034)
I. Preliminary Actuarial Value of Assets as of EOY: F-H5	1,648,859	1,595,191
J. Funding Standard Account Balance	547,262	513,555
K. Actuarial Value of Assets: I-J	1,101,597	1,081,636
L. Market Value Corridor Adjustment		
1. 80% of Market Value	1,324,102	1,222,526
2. 120% of Market Value	1,986,154	1,833,788
3. Valuation Assets within Corridor	1,648,859	1,595,191

INVESTMENT RATE OF RETURN

The investment rate of return has been calculated on the following bases:

- Basis 1: Market Value Basis** - interest, dividends, realized gains (losses) and unrealized appreciation (depreciation), divided by the weighted average of the market value of the fund during the year. This figure is normally called the Total Rate of Return.
- Basis 2: Valuation Asset Basis** - investment earnings recognized in the Actuarial Value of Assets divided by the weighted average of the Actuarial Value of Assets during the year.

Year Ended	Investment Rate of Return	
	Basis 1	Basis 2
9/30/2017	11.2 %	5.7 %
9/30/2016	8.4	7.0
9/30/2015	(5.6)	6.6
9/30/2014	12.7	10.6
9/30/2013	11.4	8.7
9/30/2012	20.5	3.7
9/30/2011	(0.4)	1.9
9/30/2010	9.1	2.6
9/30/2009	0.9	2.6
9/30/2008	(13.4)	(13.4)
Average Compounded Rate of Return for:		
Last 3 Years	4.4 %	6.4 %
Last 5 Years	7.4 %	7.7 %
Last 10 Years	5.0 %	3.4 %

SECTION IV

MEMBER STATISTICS

STATISTICAL DATA			
	10/1/17	10/1/16	10/1/15
Active Participants			
Number	1	1	1
Averages			
Current Age	53.0	52.0	51.0
Age at Employment	26.2	26.2	26.2
Past Service	26.8	25.8	24.8
Service at Age 50	23.8	23.8	23.8
Members Receiving Benefits			
Number	7	6	5
Total Annual Pensions	\$ 93,863	\$ 85,972	\$ 76,201
Average Monthly Benefit	1,117	1,194	1,270
Average Current Age	59.1	58.6	58.2
Terminated Members with Vested Benefits			
Number	2	3	4
Total Annual Pensions	\$ 14,784	\$ 22,512	\$ 33,264
Average Monthly Benefit	616	625	693
Average Current Age	48.7	50.1	50.4

RECONCILIATION OF MEMBERSHIP DATA	
Year Ended	9/30/17
A. Active Members	
1 Number Included in Last Valuation	1
2 Additions from Vested Terminated Members	0
3 Non-Vested Employment Terminations	0
4 Vested Employment Terminations	0
5 Service Retirements	0
6 Disability Retirements	0
7 Deaths	<u>0</u>
8 Number Included in This Valuation	1
B. Terminated Vested Members	
1 Number Included in Last Valuation	3
2 Payments Commenced	(1)
3 Deaths	<u>0</u>
4 Number Included in This Valuation	2
C. Service Retirees, Disability Retirees and Beneficiaries	
1 Number Included in Last Valuation	6
2 Additions from Active Members	0
3 Additions from Terminated Vested Members	1
4 Deaths Resulting in No Further Payments	0
5 End of Certain Period - No Further Payments	<u>0</u>
6 Number Included in This Valuation	7

SECTION V

SUMMARY OF RETIREMENT PLAN PROVISIONS

WILTON MANORS FIREFIGHTERS RETIREMENT SYSTEM SUMMARY OF RETIREMENT PLAN PROVISIONS

A. Effective Date:

April 9, 1996.

B. Eligibility Requirements:

All active members of the Wilton Manors Volunteer Fire Department shall become participants on date of membership.

C. Credited Service:

Service in completed calendar months from date first served as an active member to the earlier of the participant's termination of service or actual retirement date.

D. Pensionable Compensation:

None. The plan benefits are not compensation related.

E. Normal Retirement:

Eligibility:

Earlier of (i) or (ii), where:

(i) is attainment of age 55, and

(ii) is attainment of age 50 and completion of 20 years of creditable service.

Monthly Benefit:

\$56 multiplied by years of creditable service.

F. Deferred Retirement:

Eligibility

Retirement after normal retirement date and approval by the Board.

Monthly Benefit:

The benefit is calculated in the same manner as normal retirement except it is based on years of creditable service at deferred retirement date.

G. Service-Connected Disability Benefit:

Eligibility: Unable to perform regular and continuous duties as a volunteer firefighter as a result of a service-connected injury, disease, or disability.

Benefit: Benefit in an amount equal to the normal retirement benefit which would have been paid at the participant's normal retirement date. The benefit is payable monthly for life, with 120 payments guaranteed (payable for life only as of the last valuation).

H. Pre-Retirement Death Benefit:

Eligibility: Death while an active volunteer firefighter.

Benefit: The participant's beneficiary shall be entitled to receive the participant's normal retirement benefit as if the member had retired on the date of death.

I. Vested Benefit Upon Termination:

Eligibility: At least 10 years of creditable service at date of termination. However, upon reaching normal retirement age, a participant will be 100% vested, regardless of service.

Benefit: The monthly benefit payable at normal retirement date equal to the benefit accrued to the date of termination.

J. Employee Contributions:

None.

K. Normal Form of Retirement Income:

The normal form of payment shall be a 10 year certain and life annuity. Optional forms are available.

L. Share Plan

When the Retirement System is at least 100% funded on a market value basis, 50% of the next year's premium tax revenue will be allocated to the Share Plan. When the System becomes 110% funded on the same market value basis, 100% of the next year's premium tax revenue will be allocated to the Share Plan.