

Retirement Plan for the Firefighters
Of the Southern Manatee Fire & Rescue District

Actuarial Valuation
As of October 1, 2021

Determines the Contribution
For the 2021/22 Fiscal Year



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February 13, 2022

Introduction

This report presents the results of the October 1, 2021 actuarial valuation for the Retirement Plan for the Firefighters of the Southern Manatee Fire & Rescue District. The report is based on the participant data and asset information provided by the pension plan administrator and, except for a cursory review for reasonableness including a comparison to the data provided for the previous valuation, we have not attempted to verify the accuracy of this information.

The primary purpose of this report is to provide a summary of the funded status of the plan as of October 1, 2021 and to determine the minimum required contribution under Chapter 112, Florida Statutes, for the 2021/22 plan year. In addition, this report provides a projection of the long-term funding requirements of the plan, statistical information concerning the assets held in the trust, statistical information concerning the participant population, and a summary of any recent plan changes.

The liabilities and cost presented in this report are based on numerous assumptions concerning the cost of benefits to be provided in the future, long-term investment returns, and the future demographic experience of the current participants. Anyone referring to this report should remember that the cost developed herein is only an *estimate* of the true cost of providing post-employment pension benefits. No one can predict with certainty whether the true cost will be higher or lower than the cost presented in this report. The calculated cost is entirely dependent upon the assumptions that are described in Table IV-A. If any of the assumptions is changed, then the cost shown in this report will change accordingly. Likewise, if any of the assumptions is not completely realized, then the cost shown in this report will change in the future.

Certain assumptions play a bigger role than others in determining the cost of the post-employment pension benefits. In some cases, relatively small changes in a particular assumption can have a dramatic impact on the anticipated cost of benefits. Although a thorough analysis of the impact of such changes is beyond the scope of this report, Table I-B illustrates the impact that alternative long-term investment returns would have on the normal cost rate.

Minimum Required Contribution

Table I-A shows the development of the minimum required contribution for the 2021/22 plan year. The minimum required contribution rate is 24.65% of covered payroll, which represents a decrease of 9.73% of payroll from the prior valuation.

The normal cost rate is 23.80%, which is 9.39% of payroll less than the normal cost rate that was developed in the prior valuation. Table I-C provides a breakdown of the sources of change in the normal cost rate. Significantly, the rate decreased by 17.67% of payroll due to investment gains, increased by 1.47% of payroll due to demographic experience, and increased by another 6.81% of payroll due to the plan amendment that is described below. The actuarial value of assets earned 20.80% during the 2020/21 plan year and the market value of assets earned 19.20% during the 2020/21 plan year, whereas a 7.00% annual investment return was required to maintain a stable contribution rate.



Chapter 112, Florida Statutes, sets forth the rules concerning the minimum required contribution for public pension plans within the state. Essentially, the District must contribute an amount equal to the annual normal cost of the plan plus an adjustment as necessary to reflect interest on any delayed payment of the contribution beyond the valuation date. On this basis, the District's 2021/22 minimum required contribution will be equal to 24.65% multiplied by the total pensionable earnings for the 2021/22 plan year for the active employees who are covered by the plan and reduced by the portion of the Chapter 175/185 contribution that is allowed to be recognized during the 2021/22 plan year.

Based on the current assets, participant data, and actuarial assumptions and methods that are used to value the plan, the present-day value of the total long-term funding requirement is \$69,165,670. As illustrated in Table I-A, current assets are sufficient to cover \$59,604,917 of this amount, the employer's 2021/22 expected contribution will cover \$1,316,276 of this amount, and future employee contributions are expected to cover \$1,225,543 of this amount, leaving \$7,018,934 to be covered by future employer funding beyond the 2021/22 fiscal year. Again, demographic and investment experience that differs from that assumed will either increase or decrease the future employer funding requirement.

Advance Employer Contribution

The District has made contributions to the plan in excess of the minimum amount that was required to be contributed pursuant to Chapter 112. In this report, the excess contributions are referred to as an "advance employer contribution." As of October 1, 2021, the advance employer contribution is \$2,332,858, which reflects the advance employer contribution of \$2,197,915 as of October 1, 2020 plus \$134,943 in actual employer contributions above the minimum funding requirement for the 2020/21 plan year as shown in Table II-F.

The District may apply all or any portion of the advance employer contribution towards the minimum required contribution for the 2021/22 plan year or for any later plan year. The minimum required contribution for that plan year will be reduced dollar-for-dollar by the amount of the advance employer contribution that is applied in this manner.

Alternatively, at any time, the District may apply all or any portion of the advance employer contribution as an *extra* contribution in excess of the minimum required contribution. In this case, the immediate application of the entire balance of the advance employer contribution as of October 1, 2021 would reduce the normal cost rate to 17.14% of payroll and would reduce the minimum required contribution for the 2021/22 plan year to 17.75% of payroll.

Excess Chapter 175/185 Contributions

As of October 1, 2021, the plan has accumulated excess Chapter 175/185 contributions of \$78,562 as shown in Table II-F. This amount is equal to the accumulated excess Chapter 175/185 contribution balance as of October 1, 2020. The total Chapter 175/185 distribution received during the 2020/21 plan year was \$511,702, all of which was allowed to be used to offset the District's minimum required contribution. Table II-G provides a history of the Chapter 175/185 contributions and the portion that is allowed to be recognized.



Plan Amendment

Since the completion of the previous valuation, the plan was amended to increase the monthly retiree health supplement from \$15.00 per year of service to \$30.00 per year of service and to increase the maximum supplement from \$450.00 to \$750.00. The impact of this plan change was to increase the normal cost rate by 6.81% of payroll.

Identification and Assessment of Risk

The liabilities and cost presented in this report are based on numerous assumptions concerning the cost of benefits to be provided in the future, long-term investment returns, and the future demographic experience of the current participants. Anyone referring to this report should remember that the cost developed herein is only an *estimate* of the true cost of providing post-employment pension benefits. No one can predict with certainty whether the true cost will be higher or lower than the cost presented in this report. The calculated cost is entirely dependent upon the assumptions that are described in Table IV-A. If any of the assumptions is changed, then the cost shown in this report will change accordingly. Likewise, there is always a risk that, should these assumptions not be realized, the liabilities of the plan, the contributions required to fund the plan, and the funded status of the plan may be significantly different than the amounts shown in this report.

Although a thorough analysis of the risk of not meeting the assumptions is beyond the scope of this report, this discussion is intended to identify the significant risks faced by the plan. In some cases, a more detailed review of the risks, including numerical analysis, may be appropriate to help the plan sponsor and other interested parties assess the specific impact of not realizing certain assumptions. For example, Table I-B illustrates the impact that alternative long-term investment returns would have on the contribution rate. Note that this report is not intended to provide advice on the management or reduction of the identified risks nor is this report intended to provide investment advice.

The most significant risk faced by most defined benefit pension plans is investment risk, i.e. the risk that long-term investment returns will be less than assumed. Other related risks include a risk that, if the investments of the plan decline dramatically over a short period of time (such as occurred with many pension plans in 2008), the plan's assets may not have sufficient time to recover before benefits become due. Even if the assets of the plan grow in accordance with the assumed investment return over time, if benefit payments are expected to be large in the short-term (for example, if the plan provides an actuarial equivalent lump sum payment option and a large number of participants are expected to become entitled to such a lump sum in the near future), the plan's assets may not be sufficient to support such a high level of benefit payments. We have provided a 10-year projection of the expected benefit payments in Table III-G to help the Trustees in formulating an investment policy that is expected to provide an investment return that meets both the short- and long-term cash flow needs of the pension plan.

Another source of risk is demographic experience. This is the risk that participants will receive salary increases that are different than the amount assumed, that participants will retire, become disabled, or terminate their employment at a rate that is different than assumed, and that participants will live longer than assumed, just to cite a few examples of the demographic risk faced by the plan. Although for most pension plans, the demographic risk is not as significant as the investment risk, particularly in light of the fact that the mortality assumption includes a component for future life



expectancy increases, the demographic risk can nevertheless be a significant contributing factor to liabilities and contribution rates that become higher than anticipated.

A third source of risk is the risk that the plan sponsor (or other contributing entities) will not make, or will not have the ability to make, the contributions that are required to keep the plan funded at a sufficient level. Material changes in the number of covered employees, covered payroll, and, in some cases, hours worked by active participants can also significantly impact the plan's liabilities and the level of contributions received by the plan.

Finally, an actuarial funding method has been used to allocate the gap between projected liabilities and assets to each year in the future. The contribution rate under some funding methods is higher during the early years of the plan and then is lower during the later years of the plan. Other funding methods provide for lower contribution rates initially, with increasing contribution rates over time.

The Trustees have adopted the aggregate funding method for this plan, which is expected to result in a contribution rate that is level as a percentage of payroll over the working life of the plan's active participants. A brief description of the actuarial funding method is provided in Table IV-A.

Contents of the Report

Tables I-D through I-G provide a detailed breakdown of various liability amounts by type of benefit and by participant group. Tables II-A through II-F provide information concerning the assets of the trust fund. Tables III-A through III-G provide statistical information concerning the plan's participant population. In particular, Table III-G gives a 10-year projection of the cash that is expected to be required from the trust fund in order to pay benefits to the current group of participants. Finally, Tables IV-A through V-B provide a summary of the actuarial assumptions and methods that are used to value the plan's benefits and of the relevant plan provisions as of October 1, 2021, as well as a summary of the changes that have occurred since the previous valuation report was prepared.

Refund of Participant Contributions

It is our understanding that there are 10 participants who are due a refund of their contributions. We have estimated the accumulated amount of their refunds to be \$2,748 as of October 1, 2021. The average amount owed to these individuals is only \$250. If possible, we recommend that the accumulated contributions be distributed to these individuals in order to simplify the administration of the plan and to reduce future administrative costs.

Certification

This actuarial valuation was prepared by me or under my direct supervision and I acknowledge responsibility for the results. To the best of my knowledge, the results are complete and accurate and, in my opinion, the techniques and assumptions used are reasonable and meet the requirements and intent of Chapter 112, Florida Statutes. 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 change in plan costs or required contribution rates have been taken into account in the valuation.

For the firm,

Charles T. Carr

Charles T. Carr
Consulting Actuary
Southern Actuarial Services Company, Inc.

Enrolled Actuary No. 20-04927

The individual above is a member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.



Minimum Required Contribution

Table I-A



For the 2021/22 Plan Year

Present Value of Future Benefits	\$68,480,861
Present Value of Future Administrative Expenses	\$684,809
Actuarial Value of Assets	(\$59,604,917)
Present Value of Future Employee Contributions	(\$1,225,543)
Present Value of Future Normal Costs	\$8,335,210
Present Value of Future Payroll	÷ \$35,015,543
Normal Cost Rate	= 23.8043%
Expected Payroll	x \$5,339,126
Normal Cost	\$1,270,942
Adjustment to Reflect Semi-Monthly Employer Contributions	\$45,334
Preliminary Employer Contribution for the 2021/22 Plan Year	\$1,316,276
Expected Payroll for the 2021/22 Plan Year	÷ \$5,339,126

Minimum Required Contribution Rate **24.65%**

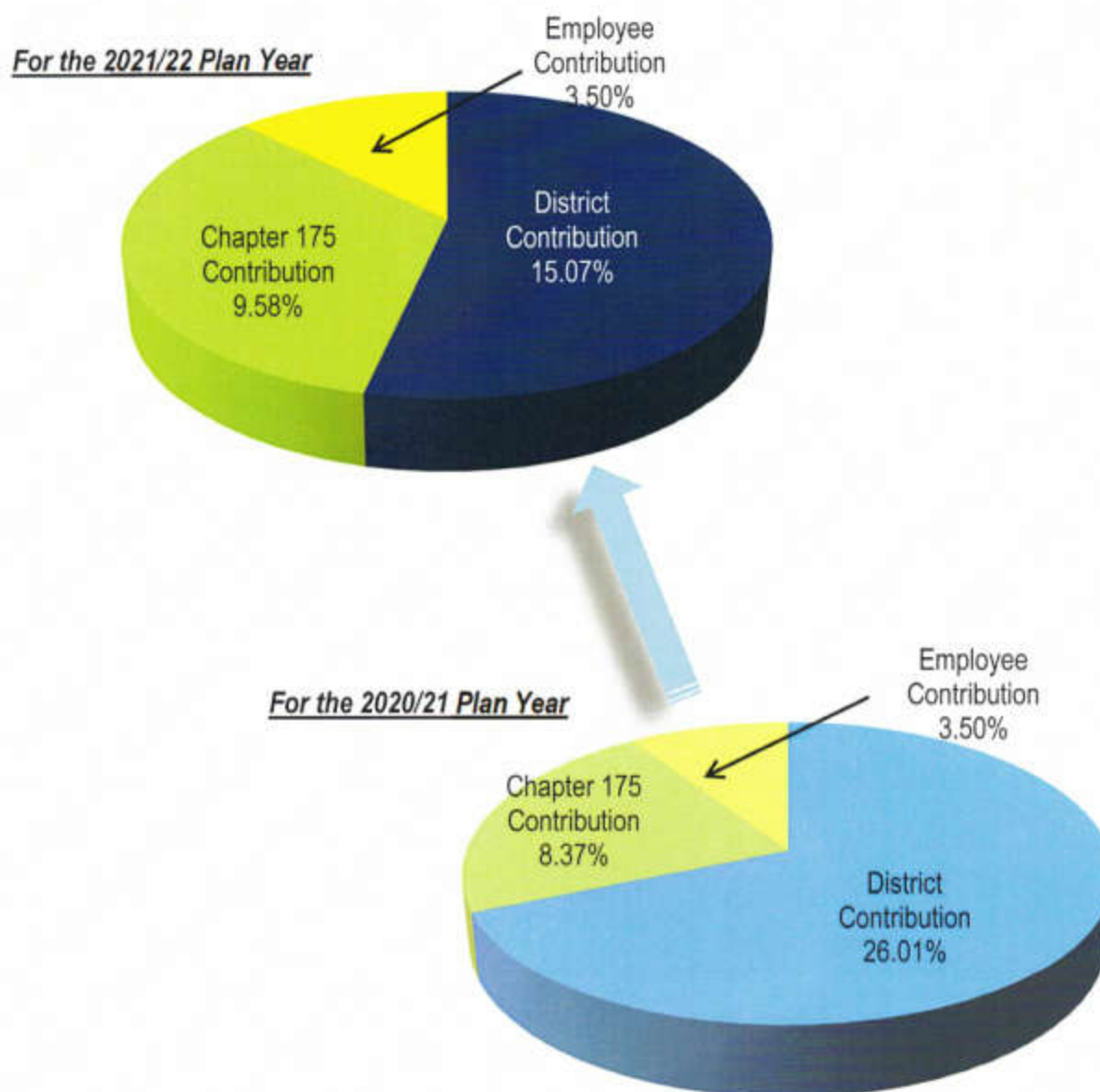
(The actual contribution should be based on the minimum required contribution rate multiplied by the actual payroll for the year.)



Minimum Required Contribution

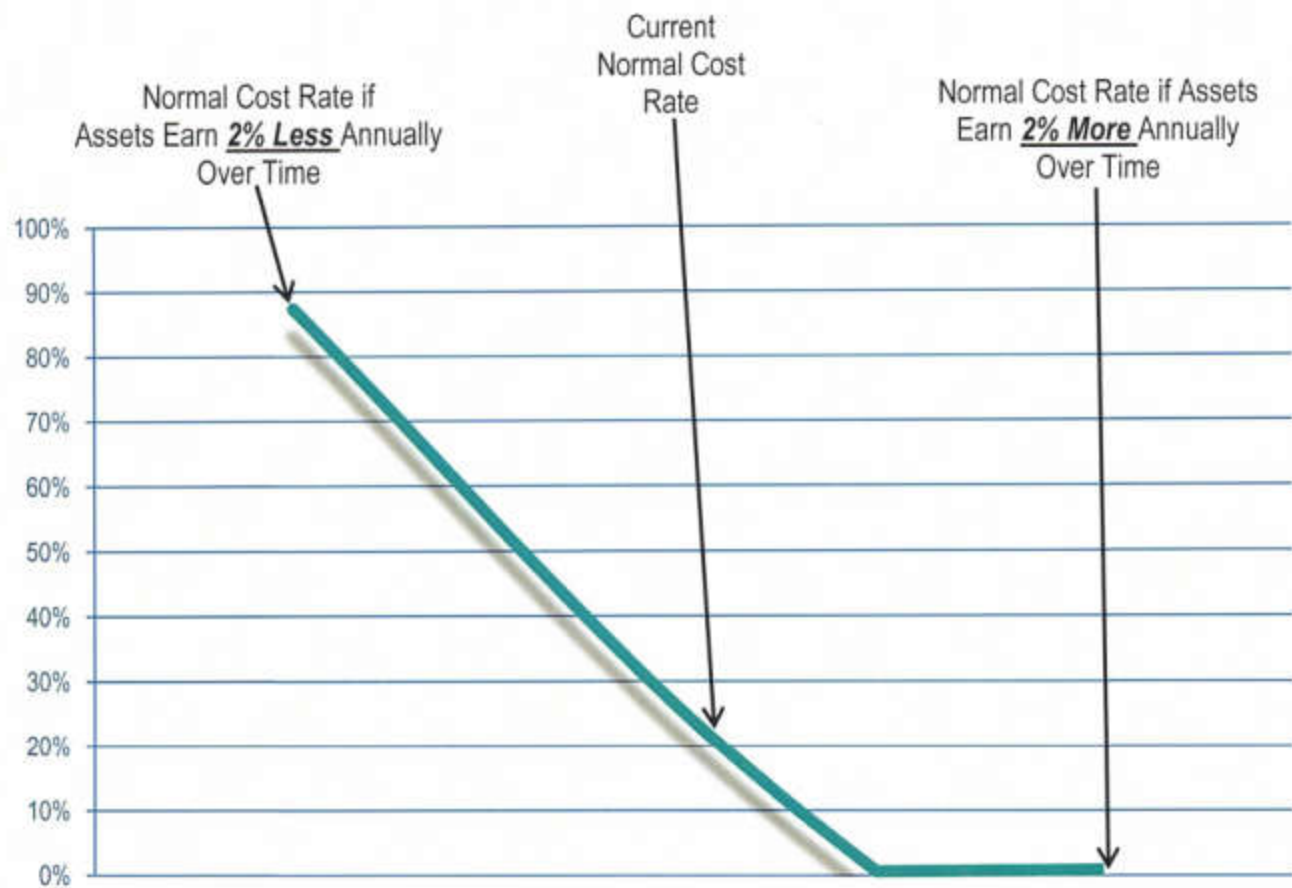
Table I-A
(continued)

The minimum required contribution rate of 24.65% includes both the District contribution and the allowable Chapter 175 contribution. In addition, employees are required to contribute 3.50% of pensionable earnings. The actual District contribution rate is expected to be approximately 15.07% based on the allowable Chapter 175 contribution for the previous year. The chart below shows the expected contribution rate by source for the 2021/22 plan year based on the expected payroll. A comparative chart shows the contribution rate by source for the previous plan year.



Sensitivity Analysis

Table I-B



The line above illustrates the sensitivity of the normal cost rate to changes in the long-term investment return.



Gain and Loss Analysis

Table I-C

Previous normal cost rate	33.19%
Increase (decrease) due to investment gains and losses	-17.67%
Increase (decrease) due to demographic experience	1.47%
Increase (decrease) due to plan amendments	6.81%
Increase (decrease) due to actuarial assumption changes	0.00%
Increase (decrease) due to actuarial method changes	0.00%
Current normal cost rate	<u>23.80%</u>



Present Value of Future Benefits

Table I-D

	<u>Old Assumptions w/o Amendment</u>	<u>Old Assumptions w/ Amendment</u>	<u>New Assumptions w/ Amendment</u>
<u>Actively Employed Participants</u>			
Retirement benefits	\$42,582,634	\$44,579,552	\$44,579,552
Termination benefits	\$1,436,253	\$1,436,253	\$1,436,253
Disability benefits	\$1,537,642	\$1,537,642	\$1,537,642
Death benefits	\$450,129	\$450,129	\$450,129
Refund of employee contributions	\$59,831	\$59,831	\$59,831
Sub-total	\$46,066,489	\$48,063,407	\$48,063,407
<u>Deferred Vested Participants</u>			
Retirement benefits	\$185,450	\$185,450	\$185,450
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$185,450	\$185,450	\$185,450
<u>Due a Refund of Contributions</u>	\$2,748	\$2,748	\$2,748
<u>Deferred Beneficiaries</u>	\$0	\$0	\$0
<u>Retired Participants</u>			
Service retirements	\$8,572,339	\$8,572,339	\$8,572,339
Disability retirements	\$1,517,902	\$1,517,902	\$1,517,902
Beneficiaries receiving	\$881,940	\$881,940	\$881,940
DROP participants	\$8,893,261	\$9,257,075	\$9,257,075
Sub-total	\$19,865,442	\$20,229,256	\$20,229,256
<u>Grand Total</u>	<u>\$66,120,129</u>	<u>\$68,480,861</u>	<u>\$68,480,861</u>
Present Value of Future Payroll	\$35,015,543	\$35,015,543	\$35,015,543
Present Value of Future Employee Contribs.	\$1,225,543	\$1,225,543	\$1,225,543
Present Value of Future Employer Contribs.	\$5,950,870	\$8,335,210	\$8,335,210



Present Value of Accrued Benefits

Table I-E

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
<u>Actively Employed Participants</u>			
Retirement benefits	\$25,824,605	\$27,496,716	\$27,496,716
Termination benefits	\$893,743	\$893,743	\$893,743
Disability benefits	\$1,021,270	\$1,021,270	\$1,021,270
Death benefits	\$313,385	\$313,385	\$313,385
Refund of employee contributions	\$32,853	\$32,853	\$32,853
Sub-total	\$28,085,856	\$29,757,967	\$29,757,967
<u>Deferred Vested Participants</u>			
Retirement benefits	\$185,450	\$185,450	\$185,450
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$185,450	\$185,450	\$185,450
<u>Due a Refund of Contributions</u>	\$2,748	\$2,748	\$2,748
<u>Deferred Beneficiaries</u>	\$0	\$0	\$0
<u>Retired Participants</u>			
Service retirements	\$8,572,339	\$8,572,339	\$8,572,339
Disability retirements	\$1,517,902	\$1,517,902	\$1,517,902
Beneficiaries receiving	\$881,940	\$881,940	\$881,940
DROP participants	\$8,893,261	\$9,257,075	\$9,257,075
Sub-total	\$19,865,442	\$20,229,256	\$20,229,256
<u>Grand Total</u>	<u>\$48,139,496</u>	<u>\$50,175,421</u>	<u>\$50,175,421</u>
<u>Funded Percentage</u>	128.66%	123.44%	123.44%

(Note: Funded percentage is equal to the ratio of the usable portion of the market value of assets divided by the present value of accrued benefits.)



Present Value of Vested Benefits

Table I-F

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
<u>Actively Employed Participants</u>			
Retirement benefits	\$24,055,962	\$25,728,074	\$25,728,074
Termination benefits	\$824,281	\$824,281	\$824,281
Disability benefits	\$1,021,270	\$1,021,270	\$1,021,270
Death benefits	\$313,385	\$313,385	\$313,385
Refund of employee contributions	\$44,158	\$44,158	\$44,158
Sub-total	\$26,259,056	\$27,931,168	\$27,931,168
<u>Deferred Vested Participants</u>			
Retirement benefits	\$185,450	\$185,450	\$185,450
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$185,450	\$185,450	\$185,450
<u>Due a Refund of Contributions</u>	\$2,748	\$2,748	\$2,748
<u>Deferred Beneficiaries</u>	\$0	\$0	\$0
<u>Retired Participants</u>			
Service retirements	\$8,572,339	\$8,572,339	\$8,572,339
Disability retirements	\$1,517,902	\$1,517,902	\$1,517,902
Beneficiaries receiving	\$881,940	\$881,940	\$881,940
DROP participants	\$8,893,261	\$9,257,075	\$9,257,075
Sub-total	\$19,865,442	\$20,229,256	\$20,229,256
<u>Grand Total</u>	<u>\$46,312,696</u>	<u>\$48,348,622</u>	<u>\$48,348,622</u>



Entry Age Normal Accrued Liability

Table I-G

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
<u>Actively Employed Participants</u>			
Retirement benefits	\$34,133,087	\$35,777,927	\$35,777,927
Termination benefits	\$1,059,659	\$1,059,659	\$1,059,659
Disability benefits	\$1,178,959	\$1,178,959	\$1,178,959
Death benefits	\$342,347	\$342,347	\$342,347
Refund of employee contributions	\$36,619	\$36,619	\$36,619
Sub-total	\$36,750,671	\$38,395,511	\$38,395,511
<u>Deferred Vested Participants</u>			
Retirement benefits	\$185,450	\$185,450	\$185,450
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$185,450	\$185,450	\$185,450
<u>Due a Refund of Contributions</u>	\$2,748	\$2,748	\$2,748
<u>Deferred Beneficiaries</u>	\$0	\$0	\$0
<u>Retired Participants</u>			
Service retirements	\$8,572,339	\$8,572,339	\$8,572,339
Disability retirements	\$1,517,902	\$1,517,902	\$1,517,902
Beneficiaries receiving	\$881,940	\$881,940	\$881,940
DROP participants	\$8,893,261	\$9,257,075	\$9,257,075
Sub-total	\$19,865,442	\$20,229,256	\$20,229,256
<u>Grand Total</u>	<u>\$56,804,311</u>	<u>\$58,812,965</u>	<u>\$58,812,965</u>



Actuarial Value of Assets

Table II-A

Market Value of Assets as of October 1, 2021	\$64,108,867
Minus DROP account balances	(\$2,092,530)
Minus advance employer contributions	(\$2,332,858)
Minus excess Chapter 175/185 contributions	(\$78,562)
Actuarial Value of Assets as of October 1, 2021	<u>\$59,604,917</u>

Historical Actuarial Value of Assets

October 1, 2012	\$18,425,606
October 1, 2013	\$21,754,439
October 1, 2014	\$24,788,582
October 1, 2015	\$25,839,564
October 1, 2016	\$29,496,972
October 1, 2017	\$35,412,405
October 1, 2018	\$40,946,547
October 1, 2019	\$44,538,280
October 1, 2020	\$48,748,730
October 1, 2021	\$59,604,917

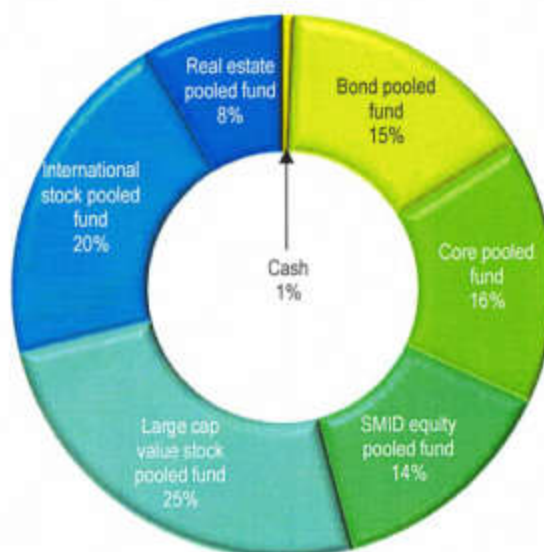


Market Value of Assets

Table II-B

As of October 1, 2021

Market Value of Assets	<u>\$64,108,867</u>
Cash	\$448,762
Bond pooled fund	\$9,936,874
Core pooled fund	\$10,129,201
SMID equity pooled fund	\$8,911,133
Large cap value stock pooled fund	\$16,219,543
International stock pooled fund	\$13,078,209
Real estate pooled fund	\$5,385,145

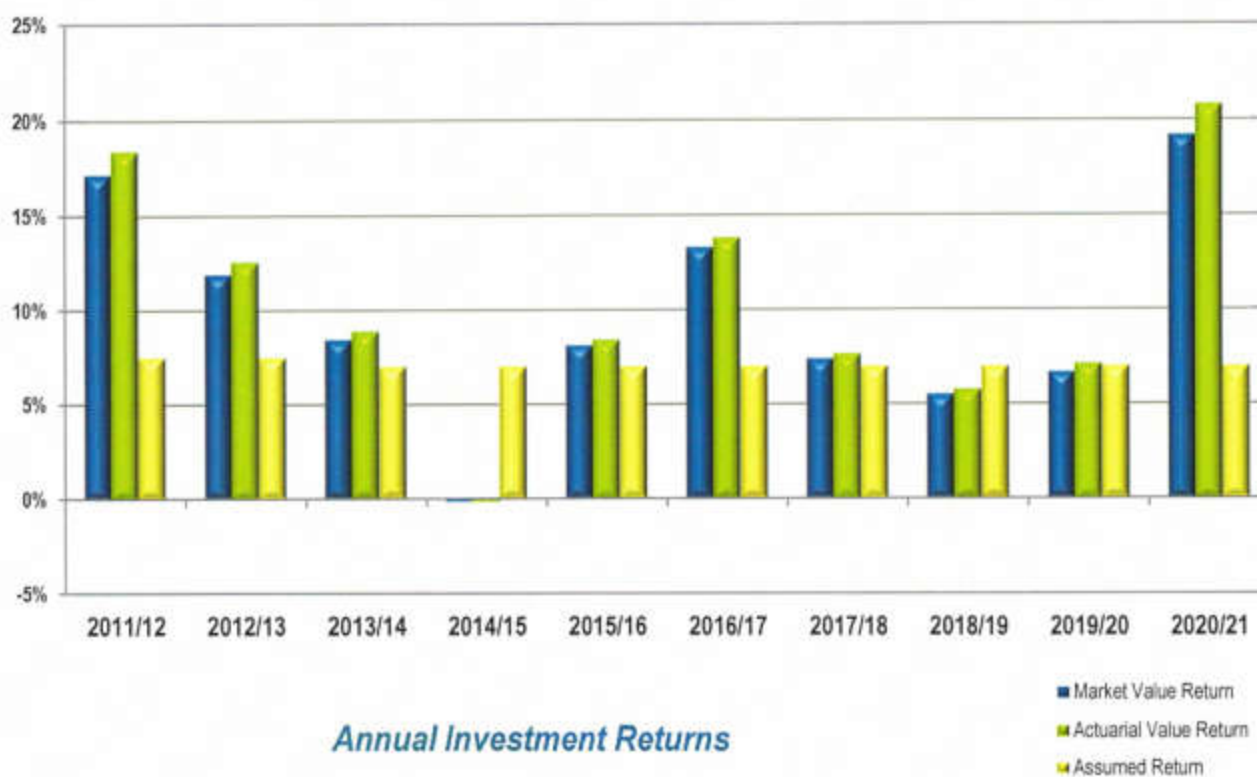
**Historical Market Value of Assets**

October 1, 2012	\$19,409,374
October 1, 2013	\$22,836,219
October 1, 2014	\$26,085,813
October 1, 2015	\$26,747,732
October 1, 2016	\$30,527,026
October 1, 2017	\$36,627,689
October 1, 2018	\$42,564,666
October 1, 2019	\$46,829,732
October 1, 2020	\$52,435,551
October 1, 2021	\$64,108,867



Investment Return

Table II-C

*Annual Investment Returns*

Plan Year	Market Value Return	Actuarial Value Return	Assumed Return
2011/12	17.18%	18.41%	7.50%
2012/13	11.92%	12.58%	7.50%
2013/14	8.45%	8.90%	7.00%
2014/15	-0.11%	-0.11%	7.00%
2015/16	8.14%	8.43%	7.00%
2016/17	13.33%	13.83%	7.00%
2017/18	7.41%	7.69%	7.00%
2018/19	5.53%	5.79%	7.00%
2019/20	6.70%	7.15%	7.00%
2020/21	19.20%	20.80%	7.00%
10yr. Avg.	9.64%	10.19%	7.10%



Asset Reconciliation

Table II-D

	<u>Market Value</u>	<u>Actuarial Value</u>
As of October 1, 2020	\$52,435,551	\$48,748,730
<i>Increases Due To:</i>		
Employer Contributions	\$1,723,980	\$1,723,980
Chapter 175/185 Contributions	\$511,702	\$511,702
Employee Contributions	\$213,863	\$213,863
Service Purchase Contributions	\$59,102	\$59,102
Total Contributions	<u>\$2,508,647</u>	<u>\$2,508,647</u>
Interest and Dividends	\$0	
Realized Gains (Losses)	\$0	
Unrealized Gains (Losses)	\$10,207,720	
Total Investment Income	<u>\$10,207,720</u>	\$10,207,720
Other Income	\$0	
Total Income	<u>\$12,716,367</u>	<u>\$12,716,367</u>
<i>Decreases Due To:</i>		
Monthly Benefit Payments	(\$961,014)	(\$961,014)
Refund of Employee Contributions	\$0	\$0
DROP Credits		(\$682,186)
Total Benefit Payments	<u>(\$961,014)</u>	<u>(\$1,643,200)</u>
Investment Expenses	\$0	
Administrative Expenses	(\$82,037)	(\$82,037)
Advance Employer Contribution		(\$134,943)
Excess Chapter 175/185 Contribution		\$0
Total Expenses	<u>(\$1,043,051)</u>	<u>(\$1,860,180)</u>
As of October 1, 2021	<u><u>\$64,108,867</u></u>	<u><u>\$59,604,917</u></u>



Historical Trust Fund Detail

Table II-E

Income

Plan	Employer	Chapter	Employee	Service	Interest /	Realized	Unrealized	Other
<u>Year</u>	<u>Contribs.</u>	<u>Contribs.</u>	<u>Contribs.</u>	<u>Purchase</u>	<u>Dividends</u>	<u>Gains /</u>	<u>Gains /</u>	<u>Income</u>
				<u>Contribs.</u>		<u>Losses</u>	<u>Losses</u>	
2011/12	\$907,375	\$429,639	\$139,372	\$0	\$0	\$0	\$2,767,695	\$0
2012/13	\$1,598,463	\$408,775	\$136,039	\$0	\$0	\$0	\$2,376,983	\$0
2013/14	\$1,267,372	\$448,192	\$143,926	\$0	\$0	\$0	\$1,982,480	\$0
2014/15	\$1,397,570	\$483,833	\$152,860	\$0	\$0	\$0	-\$28,475	\$0
2015/16	\$1,709,287	\$414,319	\$162,048	\$0	\$0	\$0	\$2,239,144	\$0
2016/17	\$2,133,651	\$403,971	\$170,272	\$0	\$0	\$0	\$4,197,202	\$0
2017/18	\$3,527,797	\$410,300	\$191,645	\$0	\$0	\$0	\$2,828,414	\$0
2018/19	\$2,612,470	\$449,109	\$200,695	\$0	\$0	\$0	\$2,404,265	\$0
2019/20	\$2,644,180	\$467,878	\$203,131	\$0	\$0	\$0	\$3,218,022	\$0
2020/21	\$1,723,980	\$511,702	\$213,863	\$59,102	\$0	\$0	\$10,207,720	\$0

Expenses

Plan	Monthly	Contrib.	Admin.	Invest.	<u>Other Actuarial Adjustments</u>		
<u>Year</u>	<u>Benefit</u>	<u>Refunds</u>	<u>Expenses</u>	<u>Expenses</u>	<u>DROP</u>	<u>Advance</u>	<u>Excess</u>
	<u>Payments</u>				<u>Credits</u>	<u>Employer</u>	<u>Chapter</u>
						<u>Contribs.</u>	<u>Contribs.</u>
2011/12	\$362,065	\$1,262	\$48,203	\$0	\$341,936	-\$527,783	\$0
2012/13	\$1,041,946	\$1,101	\$50,368	\$0	-\$287,641	\$385,653	\$0
2013/14	\$526,686	\$6,682	\$59,008	\$0	\$249,206	-\$42,976	\$9,221
2014/15	\$1,279,900	\$201	\$63,768	\$0	-\$426,533	-\$7,392	\$44,862
2015/16	\$680,847	\$0	\$64,657	\$0	\$285,006	-\$163,120	\$0
2016/17	\$739,639	\$0	\$64,794	\$0	\$315,041	-\$129,811	\$0
2017/18	\$955,125	\$720	\$65,334	\$0	\$112,998	\$289,837	\$0
2018/19	\$1,297,023	\$21,863	\$82,587	\$0	-\$179,459	\$852,792	\$0
2019/20	\$851,857	\$0	\$75,535	\$0	\$519,489	\$875,880	\$0
2020/21	\$961,014	\$0	\$82,037	\$0	\$682,186	\$134,943	\$0

Note: Information was not available to separate the investment expenses from the investment income nor was information available to separate the investment income by source.



Other Reconciliations

Table II-F

Advance Employer Contribution

Advance Employer Contribution as of October 1, 2020	\$2,197,915
Additional Employer Contribution	\$2,235,682
Minimum Required Contribution	(\$2,100,739)
Net Increase in Advance Employer Contribution	\$134,943
Advance Employer Contribution as of October 1, 2021	<u>\$2,332,858</u>

Excess Chapter 175/185 Contribution

Excess Chapter 175/185 Contribution as of October 1, 2020	\$78,562
Additional Chapter 175/185 Contribution	\$511,702
Allowable Chapter 175/185 Contribution	(\$511,702)
Net Increase in Excess Chapter 175/185 Contribution	\$0
Excess Chapter 175/185 Contribution as of October 1, 2021	<u>\$78,562</u>

DROP Account Reconciliation

DROP Balance as of October 1, 2020	\$1,410,344
DROP Benefit Credits	\$612,072
DROP Investment Credits	\$110,255
DROP Benefits Paid Out	(\$40,141)
Net DROP Credit	\$682,186
DROP Balance as of October 1, 2021	<u>\$2,092,530</u>



Historical Chapter 175/185 Contributions

Table II-G

Total Accumulated Excess Chapter 175/185 Contribution **\$78,562**

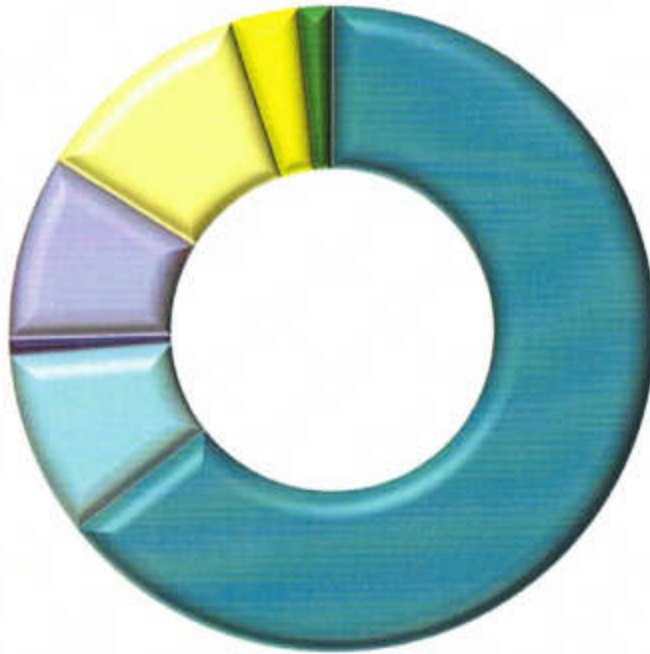
	Chapter 175 Regular Distribution	Chapter 175 Supplemental Distribution	Chapter 185 Distribution	Allowable Amount
1998 Distribution	\$38,443	\$0	\$0	(\$38,443)
1999 Distribution	\$49,368	\$0	\$0	(\$49,368)
2000 Distribution	\$76,102	\$0	\$0	(\$76,102)
2001 Distribution	\$99,756	\$0	\$0	(\$99,756)
2002 Distribution	\$132,354	\$0	\$0	(\$132,354)
2003 Distribution	\$158,638	\$0	\$0	(\$158,638)
2004 Distribution	\$196,521	\$0	\$0	(\$196,521)
2005 Distribution	\$239,425	\$0	\$0	(\$239,425)
2006 Distribution	\$273,425	\$4,264	\$0	(\$277,689)
2007 Distribution	\$297,089	\$135,382	\$0	(\$432,471)
2008 Distribution	\$329,717	\$133,733	\$0	(\$438,971)
2009 Distribution	\$324,870	\$100,595	\$0	(\$425,465)
2010 Distribution	\$324,070	\$74,392	\$0	(\$398,462)
2011 Distribution	\$333,648	\$95,991	\$0	(\$429,639)
2012 Distribution	\$304,728	\$104,047	\$0	(\$408,775)
2013 Distribution	\$315,742	\$132,450	\$0	(\$438,971)
2014 Distribution	\$348,350	\$135,483	\$0	(\$438,971)
2015 Distribution	\$356,502	\$57,817	\$0	(\$414,319)
2016 Distribution	\$380,171	\$23,800	\$0	(\$403,971)
2017 Distribution	\$407,121	\$3,179	\$0	(\$410,300)
2018 Distribution	\$449,109	\$0	\$0	(\$449,109)
2019 Distribution	\$467,878	\$0	\$0	(\$467,878)
2020 Distribution	\$511,702	\$0	\$0	(\$511,702)



Summary of Participant Data

Table III-A

As of October 1, 2021

Actively Employed Participants

Active Participants	76
DROP Participants	11

Inactive Participants

Deferred Vested Participants	1
Due a Refund of Contributions	11
Deferred Beneficiaries	0

Participants Receiving a Benefit

Service Retirements	13
Disability Retirements	4
Beneficiaries Receiving	2

Total Participants 118Number of Participants Included in Prior Valuations

	Active	DROP	Inactive	Retired	Total
October 1, 2012	77	4	24	11	116
October 1, 2013	74	3	25	12	114
October 1, 2014	72	4	15	12	103
October 1, 2015	73	4	13	14	104
October 1, 2016	71	6	13	14	104
October 1, 2017	73	5	13	15	106
October 1, 2018	83	4	10	16	113
October 1, 2019	79	6	11	17	113
October 1, 2020	77	10	11	18	116
October 1, 2021	76	11	12	19	118



Data Reconciliation

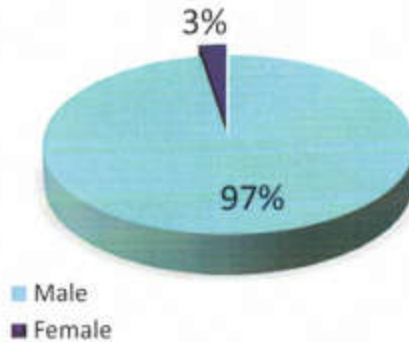
Table III-B

	<u>Active</u>	<u>DROP</u>	<u>Deferred Vested</u>	<u>Due a Refund</u>	<u>Def. Benef.</u>	<u>Service Retiree</u>	<u>Disabled Retiree</u>	<u>Benef. Rec'v.</u>	<u>Total</u>
<u>October 1, 2020</u>	77	10	1	10	0	12	4	2	116
<u>Change in Status</u>									
Re-employed									
Terminated	(1)			1					
Retired		(1)				1			
<u>Participation Ended</u>									
Transferred Out	(2)	2							
Cashed Out									
Died									
<u>Participation Began</u>									
Newly Hired	2								2
Transferred In									
New Beneficiary									
<u>Other Adjustment</u>									
<u>October 1, 2021</u>	76	11	1	11	0	13	4	2	118



Active Participant Data

Table III-C

Gender Mix**As of October 1, 2021**

Average Age	42.0 years
Average Service	14.7 years
Total Annualized Compensation for the Prior Year	\$6,013,039
Total Expected Compensation for the Current Year	\$5,339,126
Average Increase in Compensation for the Prior Year	9.90%
Expected Increase in Compensation for the Current Year	4.50%
Accumulated Contributions for Active Employees	\$2,137,973

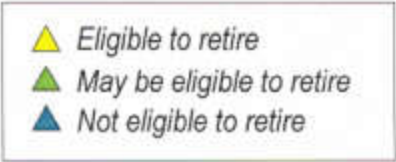
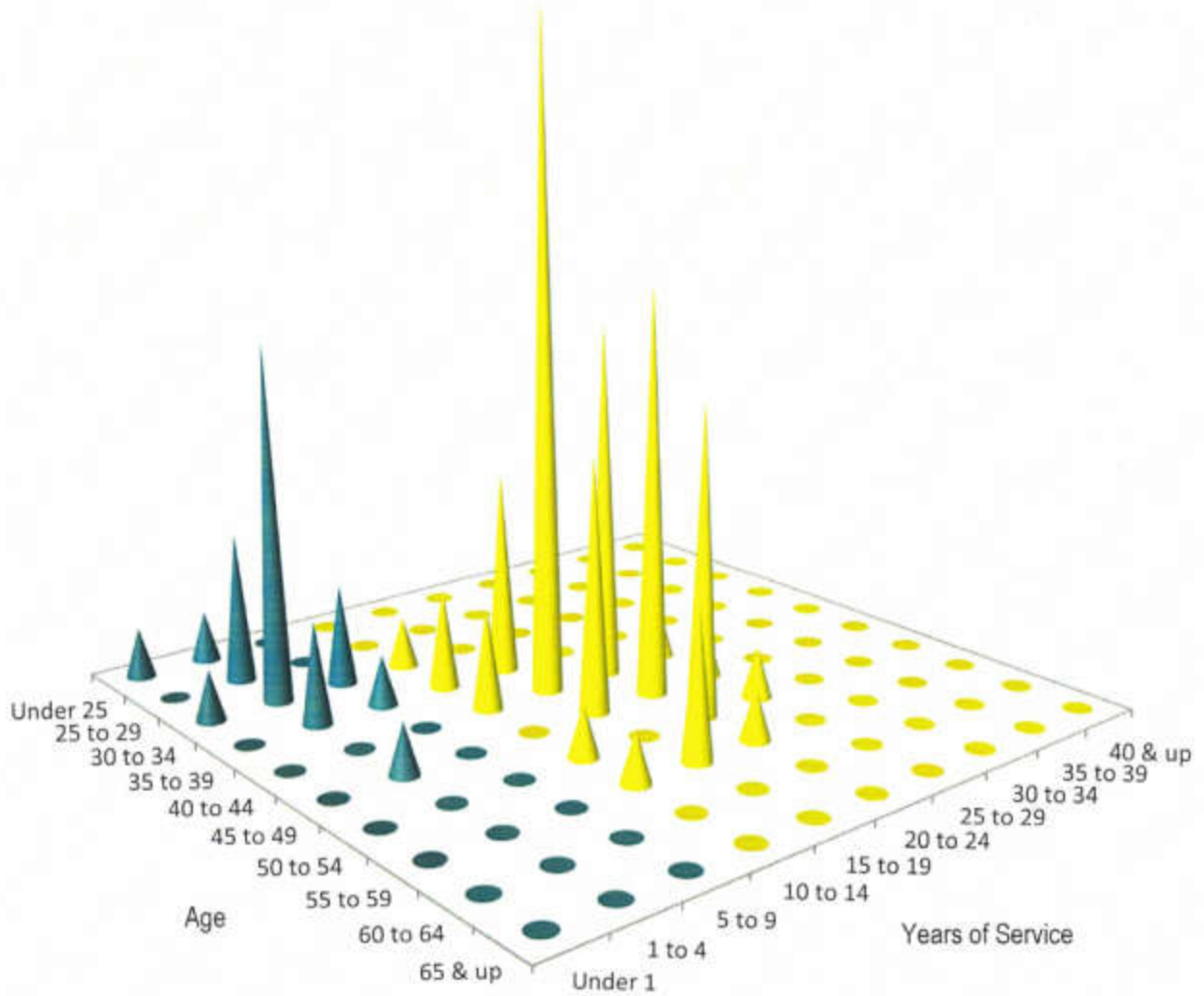
**Actual vs. Expected Salary Increases****Active Participant Statistics From Prior Valuations**

	Average Age	Average Service	Average Salary	Average Expected Salary Increase	Average Actual Salary Increase
October 1, 2012	37.9	10.5	\$50,965	5.27%	3.14%
October 1, 2013	39.3	11.7	\$52,471	5.12%	1.23%
October 1, 2014	40.2	12.7	\$56,296	4.50%	4.32%
October 1, 2015	40.6	13.0	\$58,976	4.50%	6.91%
October 1, 2016	41.3	13.8	\$63,870	4.50%	6.83%
October 1, 2017	42.0	14.4	\$67,478	4.50%	6.97%
October 1, 2018	41.1	13.5	\$67,560	4.50%	5.02%
October 1, 2019	41.6	14.1	\$70,247	4.50%	4.10%
October 1, 2020	41.7	14.0	\$72,546	4.50%	6.16%
October 1, 2021	42.0	14.7	\$79,119	4.50%	9.90%



Active Age-Service Distribution

Table III-D



Active Age-Service-Salary Table

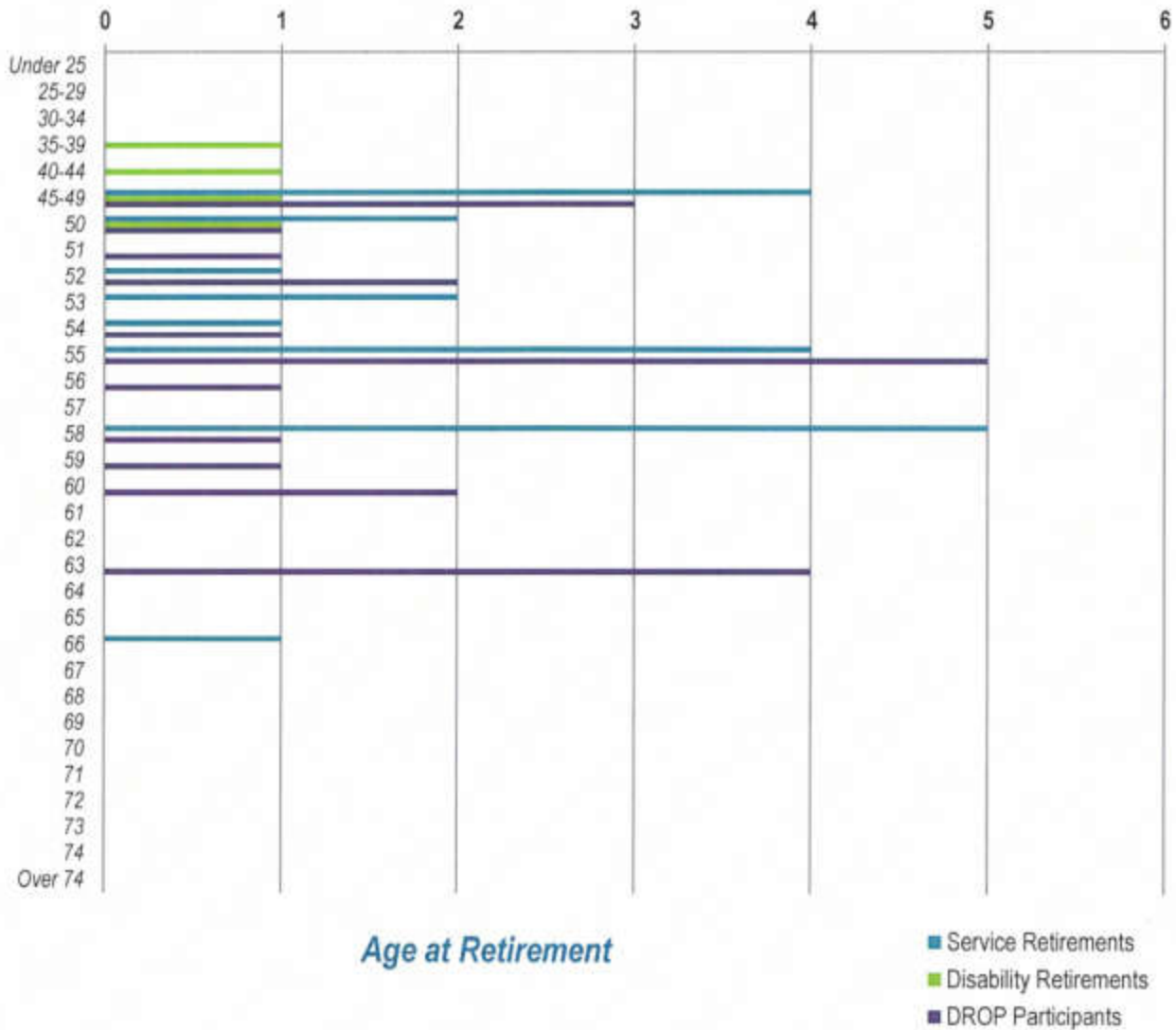
Table III-E

Attained Age	Completed Years of Service										Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	
Under 25	1	1	0	0	0	0	0	0	0	0	2
Avg.Pay	42,214	69,444	0	0	0	0	0	0	0	0	55,829
25 to 29	0	3	0	0	0	0	0	0	0	0	3
Avg.Pay	0	66,897	0	0	0	0	0	0	0	0	66,897
30 to 34	1	7	2	1	0	0	0	0	0	0	11
Avg.Pay	43,345	64,045	73,340	74,868	0	0	0	0	0	0	64,837
35 to 39	0	2	1	2	4	0	0	0	0	0	9
Avg.Pay	0	72,088	76,611	80,398	83,471	0	0	0	0	0	79,496
40 to 44	0	0	0	2	13	7	1	0	0	0	23
Avg.Pay	0	0	0	74,573	81,299	87,356	80,030	0	0	0	82,502
45 to 49	0	1	0	0	5	8	1	0	0	0	15
Avg.Pay	0	56,811	0	0	80,838	81,878	93,097	0	0	0	80,608
50 to 54	0	0	0	1	0	6	1	0	0	0	8
Avg.Pay	0	0	0	78,447	0	88,494	146,649	0	0	0	94,508
55 to 59	0	0	0	1	3	1	0	0	0	0	5
Avg.Pay	0	0	0	76,795	79,840	92,973	0	0	0	0	81,857
60 to 64	0	0	0	0	0	0	0	0	0	0	0
Avg.Pay	0	0	0	0	0	0	0	0	0	0	0
65 & up	0	0	0	0	0	0	0	0	0	0	0
Avg.Pay	0	0	0	0	0	0	0	0	0	0	0
Total	2	14	3	7	25	22	3	0	0	0	76
Avg.Pay	42,780	65,674	74,430	77,150	81,379	85,930	106,592	0	0	0	79,119



Inactive Participant Data

Table III-F

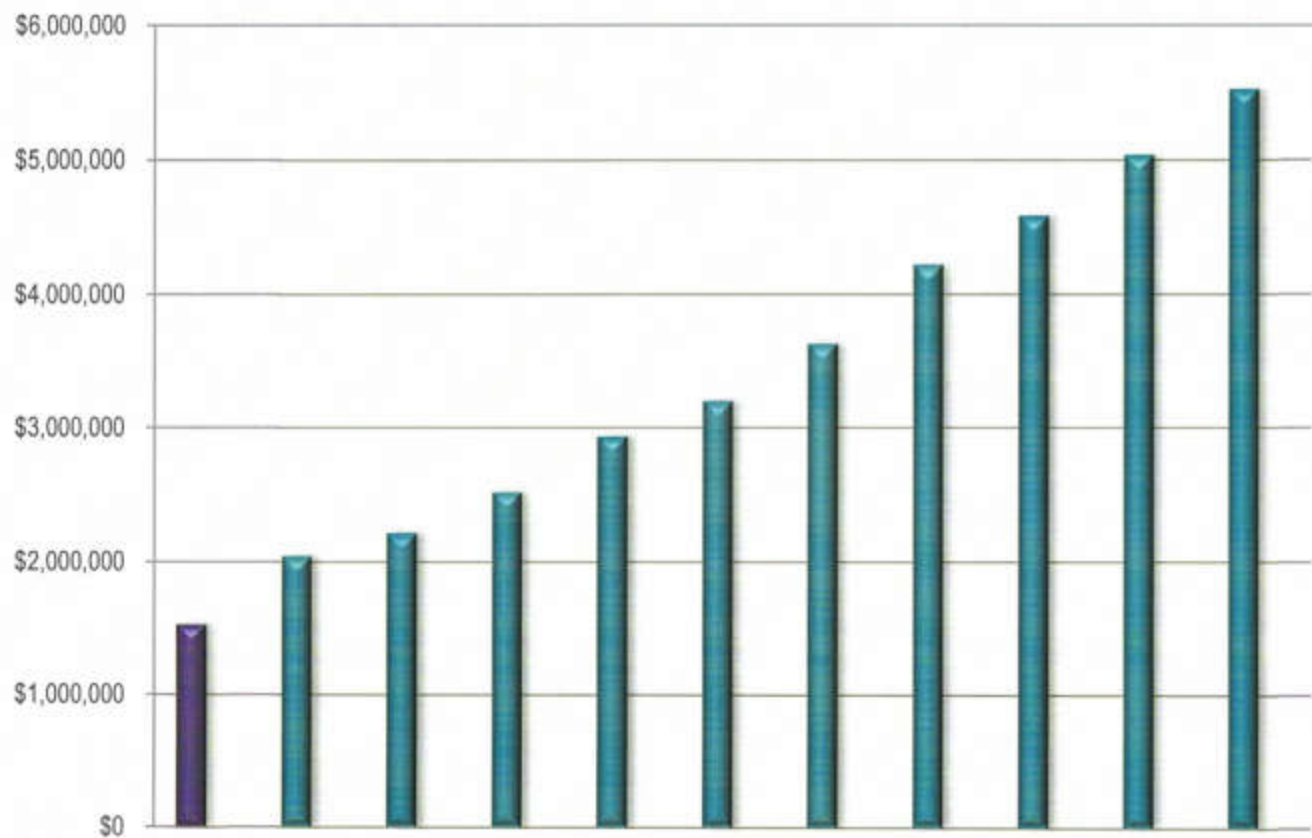
Average Monthly Benefit

Service Retirements	\$4,550.70
Disability Retirements	\$2,893.89
Beneficiaries Receiving	\$2,937.75
DROP Participants	\$5,606.15
Deferred Vested Participants	\$2,354.66
Deferred Beneficiaries	Not applicable



Projected Benefit Payments

Table III-G

Actual

For the period October 1, 2020 through September 30, 2021

\$1,532,945

Projected

For the period October 1, 2021 through September 30, 2022

\$2,049,012

For the period October 1, 2022 through September 30, 2023

\$2,217,784

For the period October 1, 2023 through September 30, 2024

\$2,525,268

For the period October 1, 2024 through September 30, 2025

\$2,938,956

For the period October 1, 2025 through September 30, 2026

\$3,202,636

For the period October 1, 2026 through September 30, 2027

\$3,630,806

For the period October 1, 2027 through September 30, 2028

\$4,226,735

For the period October 1, 2028 through September 30, 2029

\$4,589,027

For the period October 1, 2029 through September 30, 2030

\$5,036,119

For the period October 1, 2030 through September 30, 2031

\$5,524,698



Summary of Actuarial Methods and Assumptions

Table IV-A

NOTE: The following assumptions and methods have been selected and approved by the Board of Trustees based in part on the advice of the plan's enrolled actuary in accordance with the authority granted to the Board under the pension ordinances and State law.

1. Actuarial Cost Method

Aggregate cost method. Under this actuarial cost method, a funding cost is developed for the plan as a level percentage of payroll. The level funding percentage is calculated as the excess of the total future benefit liability over accumulated assets and future employee contributions, with this excess spread over the expected future payroll for current active participants. The normal cost is equal to the level funding percentage multiplied by the expected payroll for the year immediately following the valuation date. The actuarial accrued liability is equal to the accumulated assets. Therefore, under the aggregate cost method, no unfunded accrued liability is developed.

2. Asset Method

The actuarial value of assets is equal to the market value of assets.

3. Interest (or Discount) Rate

7.00% per annum

4. Salary Increases

Plan compensation is assumed to increase at the rate of 4.50% per annum, unless actual plan compensation is known for a prior plan year.

5. Decrements

- Pre-retirement mortality: Sex-distinct rates set forth in the PUB-2010 Headcount-Weighted Employee Mortality Table for public safety employees (Below Median table for males), with full generational improvements in mortality using Scale MP-2018 and with ages set forward one year
- Post-retirement mortality: For non-disabled retirees, sex-distinct rates set forth in the PUB-2010 Headcount-Weighted Healthy Retiree Mortality Table for public safety employees (Below Median table for males), with full generational improvements in mortality using Scale MP-2018 and with ages set forward one year; for disabled retirees, sex-distinct rates set forth in the PUB-2010 Headcount-Weighted Disabled Retiree Mortality Table (80% general employee rates plus 20% public safety employee rates), with full generational improvements in mortality using Scale MP-2018



Summary of Actuarial Methods and Assumptions

Table IV-A

(continued)

- **Disability:** Age- and gender-based rates of disability were assumed, ranging from 0.067% for males and 0.040% for females at age 25, 0.119% for males and 0.118% for females at age 35, 0.462% for males and 0.435% for females at age 45, and 1.000% for males and 0.840% for females at age 55; all disabilities are assumed to be service-related.
- **Termination:** With respect to participants with less than 10 years of service, the termination rates are both gender- and service-based, ranging from 15.00% for males and 10.01% for females with less than two years of service to 4.30% for males and 4.75% for females with between eight and 10 years of service; with respect to participants with at least 10 years of service, the termination rates are both gender- and age-based, ranging from 4.28% for males and 5.41% for females at age 25 to 0.00% for both genders at age 55.
- **Retirement:** For those participants who have met the age and service requirements to retire, retirement is assumed to occur at the rate of 10% per year during each of the three years prior to normal retirement age; alternatively, 40% of participants who reach their normal retirement age are assumed to retire immediately, with 20% assumed to retire during each of the next two years after the attainment of normal retirement age and 100% assumed to retire three years after the attainment of normal retirement age. No early retirements are assumed to occur prior to age 50.

6. Form of Payment

Future retirees have been assumed to select the 10-year certain and life annuity.

7. Expenses

The total projected benefit liability has been loaded by 1.00% to account for anticipated administrative expenses. In addition, the interest rate set forth in item 3. above is assumed to be net of investment expenses and commissions.



Changes in Actuarial Methods and Assumptions

Table IV-B

There were no assumption or method changes since the completion of the previous valuation.

The following additional assumption and method changes were made during the past 10 years:

- (1) Effective October 1, 2020, the mortality basis was changed from the RP-2000 Blue Collar Mortality Table with generational improvements in mortality using Scale BB to selected PUB-2010 Mortality Tables with generational improvements in mortality using Scale MP-2018.
- (2) Effective October 1, 2018, the mortality basis was changed from the RP-2000 Combined Mortality Table to the RP-2000 Blue Collar Mortality Table, both with full generational improvements using Scale BB.
- (3) Effective October 1, 2016, the mortality basis was changed from a 2015 projection of the RP-2000 Mortality Table for annuitants to a full generational projection using Scale BB of the RP-2000 Combined Mortality Table as required by State law.
- (4) Effective October 1, 2013, the interest (or discount) rate was decreased from 7.50% per annum to 7.00% per annum.
- (5) Effective October 1, 2013, the assumed increase in future salaries was changed from a range of rates based on service (8.00% for employees with less than one year of service, 7.00% for employees with at least one but less than two years of service, 6.00% for employees with at least two but less than three years of service, 5.50% for employees with at least three but less than four years of service, and 5.20% for all other employees) to a flat 4.50% per year.
- (6) Effective October 1, 2013, the mortality basis was changed from the RP-2000 Mortality Table, projected to 2007 by Scale AA, to the RP-2000 Mortality Table, projected to 2015 by Scale AA, both as published by the Internal Revenue Service (IRS) for purposes of Internal Revenue Code (IRC) section 430.



Summary of Plan Provisions

Table V-A

1. Monthly Accrued Benefit

3.50% of Average Final Compensation multiplied by Credited Service

2. Normal Retirement Age and Benefit

- **Age**

Age 55 with at least 10 years of Credited Service; or
Any age with at least 25 years of Credited Service

- **Amount**

Monthly Accrued Benefit

- **Form of Payment**

Actuarially increased single life annuity (optional);
10-year certain and life annuity (normal form of payment);
Actuarially reduced 50% joint and contingent annuity (optional);
Actuarially reduced 66 $\frac{2}{3}$ % joint and contingent annuity (optional);
Actuarially reduced 75% joint and contingent annuity (optional);
Actuarially reduced 100% joint and contingent annuity (optional); or
Any other actuarially equivalent form of payment approved by the Board other than a single lump sum payment

(Note: A participant may change his/her joint annuitant up to two times after retirement.)

3. Early Retirement Age and Benefit

- **Age**

Age 50 with at least 10 years of Credited Service

- **Amount**

Monthly Accrued Benefit (payable at Normal Retirement Age); or
Monthly Accrued Benefit reduced by 3% for each year by which the participant's Early Retirement Date precedes his/her Normal Retirement Date (payable at Early Retirement Age)

- **Form of Payment**

Same as for Normal Retirement



Summary of Plan Provisions

Table V-A

(continued)

4. Service Incurred Disability Eligibility and Benefit

- **Eligibility**

The participant is eligible if his/her disability was incurred during the course of his/her employment with the District.

- **Condition**

The Board must find that the participant has a physical or mental condition resulting from bodily injury, disease, or a mental disorder which renders him/her incapable of employment as a firefighter.

- **Amount Payable**

A monthly 10-year certain and life annuity equal to the larger of (a) or (b), as follows, but offset as necessary to preclude the total of the participant's worker's compensation, disability benefit, and other District-provided disability compensation from exceeding his/her Average Final Compensation:

- (a) Monthly Accrued Benefit; or
- (b) 42% of Average Final Compensation

5. Non-Service Incurred Disability Eligibility and Benefit

- **Eligibility**

The participant must have earned at least 10 years of Credited Service if his/her disability was incurred other than during the course of his/her employment with the District.

- **Condition**

Same as for a Service Incurred Disability Benefit

- **Amount Payable**

A monthly 10-year certain and life annuity equal to the larger of (a) or (b), as follows, but offset as necessary to preclude the total of the participant's worker's compensation, disability benefit, and other District-provided disability compensation from exceeding his/her Average Final Compensation:

- (a) Monthly Accrued Benefit; or
- (b) 25% of Average Final Compensation

6. Delayed Retirement Age and Benefit

- **Age**

After Normal Retirement Age

- **Amount**

Monthly Accrued Benefit

- **Form of Payment**

Same as for Normal Retirement



Summary of Plan Provisions

Table V-A

(continued)

7. Deferred Vested Benefit

- **Age**
Any age with at least 10 years of Credited Service
- **Amount**
Monthly Accrued Benefit (payable at Normal Retirement Age); or
Monthly Accrued Benefit reduced by 3% for each year by which the participant's Early Retirement Date precedes his/her Normal Retirement Date (payable at Early Retirement Age)
- **Form of Payment**
Same as for Normal Retirement

8. Pre-Retirement Death Benefit

In the case of the death of a participant in the line of duty prior to retirement, his/her beneficiary will receive the greater of the participant's Monthly Accrued Benefit or 50% of the participant's salary payable for life. In the case of the death of a vested participant other than in the line of duty prior to retirement, his/her beneficiary will receive the participant's Monthly Accrued Benefit payable for 10 years beginning on the participant's early or normal retirement date. In the case of the death of a non-vested participant prior to retirement, his/her beneficiary will receive the participant's Accumulated Contributions in lieu of any other benefits payable from the plan.

9. Average Final Compensation

Average of the highest three years of Compensation out of the last 10 years of employment (or career average, if higher).

10. Compensation

Fixed monthly compensation or, in the case of voluntary firefighters, actual compensation for services rendered; annual compensation in excess of \$200,000 (as indexed) is excluded in accordance with IRC §401(a)(17).

11. Credited Service

The elapsed time from the participant's date of hire until his/her date of termination, retirement, or death, provided that the participant made all required contributions. In the case of a full-time firefighter, prior service earned before January 12, 2014 as a volunteer firefighter is counted for vesting and eligibility purposes only. In addition, Credited Service includes prior service with the Oneco-Tallevast and Samoset Fire Districts.



Summary of Plan Provisions

Table V-A

(continued)

12. Participation Requirement

All firefighters of the Southern Manatee Fire & Rescue District automatically become a participant in the plan on their date of hire.

13. Accumulated Contributions

The Employee Contributions accumulated with no interest; if the participant terminates his/her employment with less than 10 years of Credited Service, he/she receives his/her Accumulated Contributions in lieu of any other benefits payable from the plan.

14. Participant Contribution

3.50% of earnings

15. Definition of Actuarially Equivalent

- **Interest Rate**

7.00% per annum

- **Mortality Table**

Unisex mortality table promulgated by the Internal Revenue Service (IRS) for purposes of determining the amount of lump sum distributions pursuant to Internal Revenue Service (IRC) section 417(e)(3)

16. Plan Effective Date

March 11, 1997

17. Deferred Retirement Option Plan (DROP)

A participant who reaches his/her Normal Retirement Age is eligible to participate in the DROP for a period of up to 96 months. Interest is credited on the DROP accounts at the rate of 6.50% per annum.

18. Retiree Health Supplement

Participants who retire from active service with a normal or disability retirement benefit receive a monthly post-retirement health supplement equal to \$30 for each year of service, with a minimum monthly benefit of \$50 and a maximum monthly benefit of \$750. In addition, this monthly supplement is paid to the participant's eligible spouse during the period that a retirement benefit is payable to the spouse, provided that the participant was either receiving a normal or disability retirement benefit or was eligible for normal retirement at his/her death.



Summary of Plan Amendments

Table V-B

Since the completion of the previous valuation, Resolution 2021-04 was adopted. This resolution increased the monthly retiree health supplement from \$15.00 for each year of service (maximum of \$450.00) to \$30.00 for each year of service (maximum of \$750.00).

The following additional plan amendments were adopted during the past 10 years and were reflected in prior valuation reports:

- (1) During the 2010/11 plan year, the plan was amended to eliminate the optional lump sum distribution.*

