

**CITY OF SATELLITE BEACH
POLICE OFFICERS' AND FIREFIGHTERS'
RETIREMENT SYSTEM**

**ACTUARIAL VALUATION
AS OF OCTOBER 1, 2020**

**DETERMINES THE CONTRIBUTION
FOR THE 2021/22 FISCAL YEAR**



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February 2, 2021

Introduction

This report presents the results of the October 1, 2020 actuarial valuation of the City of Satellite Beach Police Officers' and Firefighters' Retirement System. 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, 2020 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 minimum required contribution 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 35.19% of covered payroll, which represents a decrease of 2.40% of payroll from the prior valuation.

Table I-C provides a breakdown of the sources of change in the contribution rate. Significantly, the rate decreased by 0.58% of payroll due to investment gains, increased by 1.33% of payroll due to demographic experience, and decreased by 3.15% of payroll due to the assumption changes that are described below. The market value of assets only earned 6.55% during the 2019/20 plan year. However, the actuarial value of assets is based on a four-year



average of the market value returns. On this basis, the actuarial value of assets earned 8.05% during the 2019/20 plan year, whereas a 7.20% 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 City must contribute an amount equal to the annual normal cost of the plan plus an amortization payment towards the unfunded liability, where the amortization period is no longer than 30 years and where both amounts are adjusted as necessary for administrative expenses and to reflect interest on any delayed payment of the contribution beyond the valuation date. On this basis, the City's 2021/22 minimum required contribution will be equal to 35.19% multiplied by the total pensionable earnings for the 2021/22 fiscal 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. With respect to the 2019/20 and 2020/21 plan years, the allowable portion of the Chapter 175/185 contribution is 50% of the distribution. Future years' use of the Chapter 175/185 contribution after the 2021/22 plan year is subject to collective bargaining.

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 \$29,512,270. As illustrated in Table I-A, current assets are sufficient to cover \$21,793,176 of this amount, the employer's 2020/21 expected contribution will cover \$904,698 of this amount, the employer's 2021/22 expected contribution will cover \$887,284 of this amount, and future employee contributions are expected to cover \$1,325,761 of this amount, leaving \$4,601,351 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.

Amortization of the Unfunded Liability

This plan uses the entry age normal cost method to develop an unfunded liability each year. The unfunded liability is then amortized or "paid off" over a period of time. The period over which the unfunded liability is amortized is often referred to as the "funding period" of the plan. Although under Chapter 112 the maximum allowable funding period is 30 years, the unfunded liability should be paid off within a period that does not exceed the expected future working life of the active employees who are covered by the plan. We recommend a 10-year amortization period for amortization components that arise after October 1, 2008. However, it is our understanding that the Board of Trustees has adopted a 30-year amortization period for this purpose and this report reflects the Board's decision. Table I-I shows the various components of the unfunded liability and the respective funding period for each component.

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 individual entry age normal funding method for this plan with level-dollar payments towards the unfunded accrued liability, which is expected to result in a contribution rate that decreases over time as a percentage of payroll. A brief description of the actuarial funding method is provided in Table IV-A.



Contents of the Report

Tables I-D through I-H 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. Specifically, Table II-A shows the development of the actuarial value of assets, which is based on the four-year average return on the market value of assets in order to provide a more stable and predictable contribution rate for the employer. 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, 2020, as well as a summary of the changes that have occurred since the previous valuation report was prepared.

Assumption Changes

Two assumptions have been changed since the prior valuation was completed. First, the interest (or discount) rate has been decreased from 7.20% per annum to 7.10% per annum to reflect lower anticipated investment earnings in the future as adopted by the pension board. Second, 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. These changes decreased the minimum required contribution for the 2021/22 plan year by 3.15% of payroll.

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, except as noted in Table IV-A, item 4. 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.

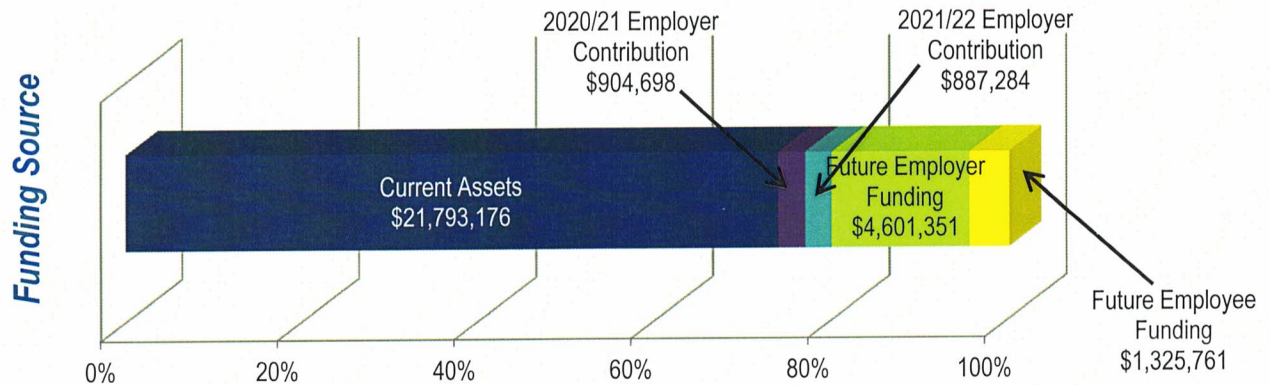
Enrolled Actuary No. 20-04927

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

Entry Age Normal Cost for the 2020/21 Plan Year	\$684,920
Unfunded Liability Amortization Payment for the 2020/21 Plan Year	\$333,441
Expense Allowance for the 2020/21 Plan Year	\$30,084
Expected Employee Contribution for the 2020/21 Plan Year	(\$197,133)
	<hr/>
	\$851,312
Adjustment to Reflect End-of-Quarter Employer Contributions	\$37,126
Expected Employer Contribution for the 2020/21 Plan Year	(\$904,698)
Remaining Contribution Due/(Credit) for the 2020/21 Plan Year	(\$16,260)
	<hr/>
	x 0.071
One Year's Interest Charge/(Credit) on the Remaining Contribution	(\$1,154)
	<hr/>
Preliminary Employer Contribution for the 2021/22 Plan Year	\$887,284
Expected Payroll for the 2021/22 Plan Year	÷ \$2,521,073

Minimum Required Contribution Rate **35.19%**

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

Additional Disclosures

Present Value of Future Compensation	\$16,572,005
Present Value of Future Employer Contributions	\$6,393,333
Present Value of Future Employee Contributions	\$1,325,761

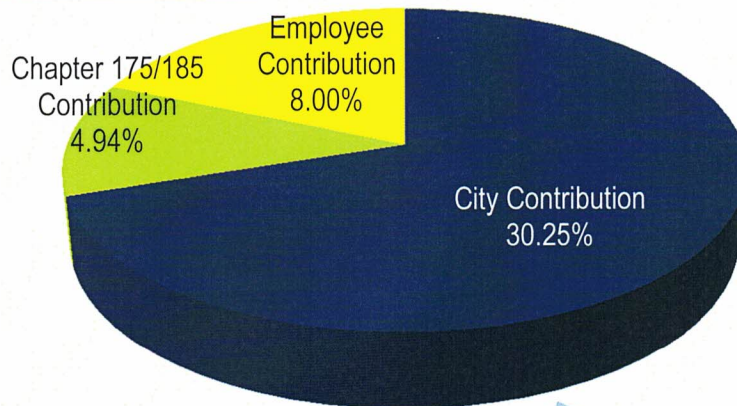


Minimum Required Contribution

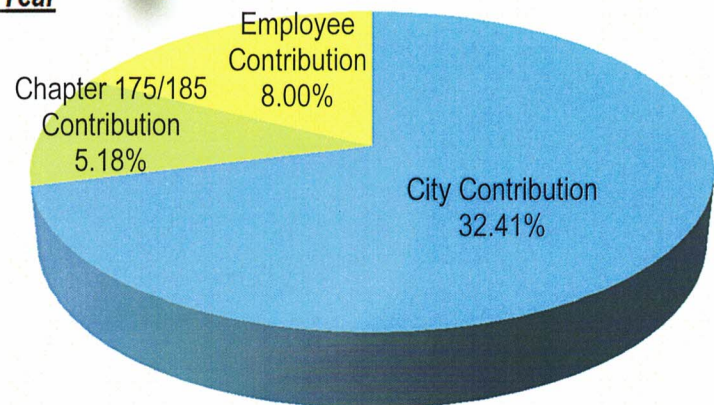
Table I-A
(continued)

The minimum required contribution rate of 35.19% includes both the City contribution and the allowable Chapter 175/185 contribution. In addition, employees are required to contribute 8.00% of pensionable earnings. The actual City contribution rate is expected to be approximately 30.25% based on the allowable Chapter 175/185 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.

For the 2021/22 Plan Year

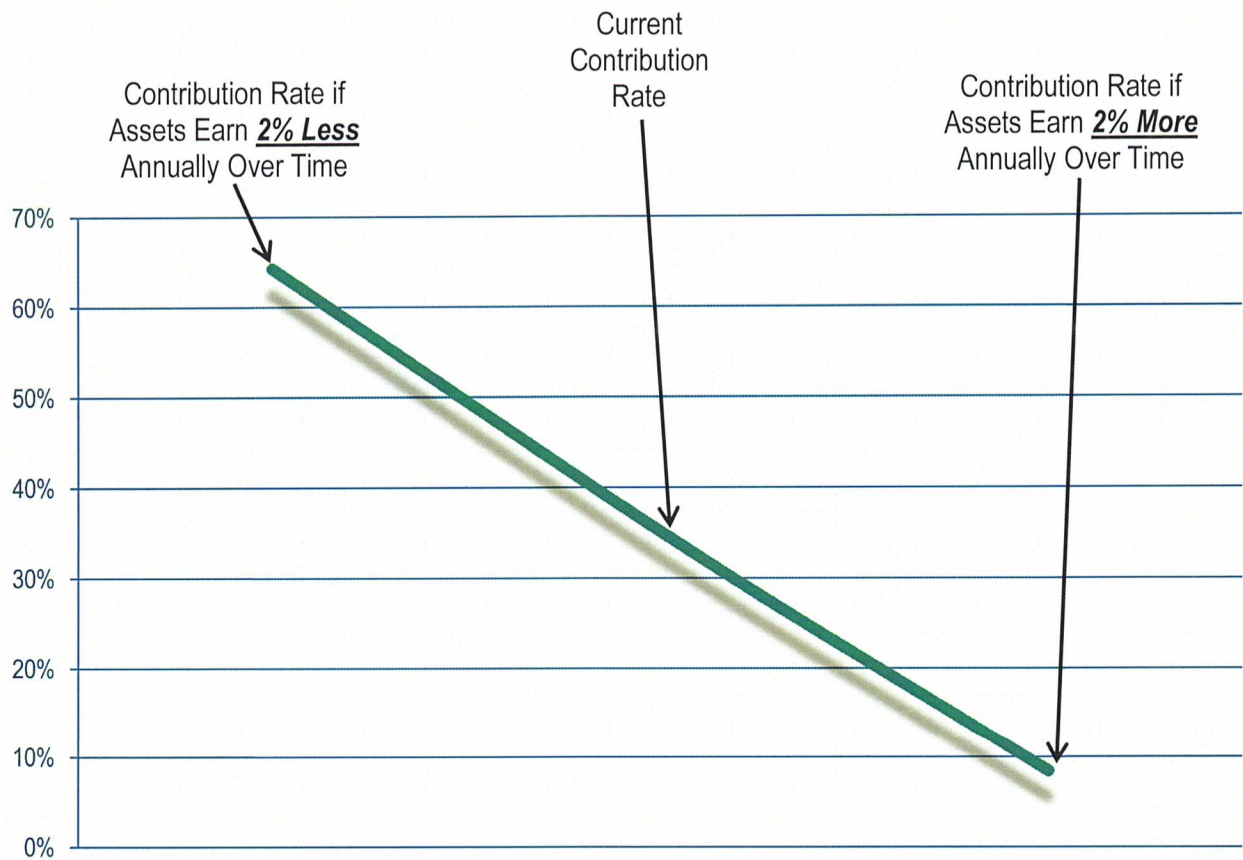


For the 2020/21 Plan Year



Sensitivity Analysis

Table I-B



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



Gain and Loss Analysis

Table I-C

Source of Change in the Contribution Rate

Previous minimum required contribution rate	37.59%
Increase (decrease) due to investment gains and losses	-0.58%
Increase (decrease) due to demographic experience	1.33%
Increase (decrease) due to plan amendments	0.00%
Increase (decrease) due to actuarial assumption changes	-3.15%
Increase (decrease) due to actuarial method changes	0.00%
Current minimum required contribution rate	<u>35.19%</u>

Source of Change in the Unfunded Liability

Previous unfunded liability	\$4,205,953
Increase due to employer normal cost for the prior year	\$571,453
Increase due to interest on normal cost and unfunded liability	\$343,973
Decrease due to employer contributions	(\$998,959)
Decrease due to interest on employer contributions	(\$49,556)
Expected unfunded liability	<u>\$4,072,864</u>
Increase (decrease) due to plan experience	\$29,697
Increase (decrease) due to plan amendments	\$0
Increase (decrease) due to actuarial assumption changes	(\$813,475)
Increase (decrease) due to actuarial method changes	\$0
Current unfunded liability	<u>\$3,289,086</u>



Present Value of Future Benefits

Table I-D

	Old Assumptions <u>w/o Amendment</u>	Old Assumptions <u>w/ Amendment</u>	New Assumptions <u>w/ Amendment</u>
<i><u>Actively Employed Participants</u></i>			
Retirement benefits	\$13,426,462	\$13,426,462	\$13,254,961
Termination benefits	\$473,375	\$473,375	\$473,140
Disability benefits	\$1,119,628	\$1,119,628	\$1,032,565
Death benefits	\$45,858	\$45,858	\$50,889
Refund of employee contributions	\$15,708	\$15,708	\$15,770
Sub-total	\$15,081,031	\$15,081,031	\$14,827,325
<i><u>Deferred Vested Participants</u></i>			
Retirement benefits	\$865,664	\$865,664	\$856,742
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$865,664	\$865,664	\$856,742
<i><u>Due a Refund of Contributions</u></i>	\$19,307	\$19,307	\$19,307
<i><u>Deferred Beneficiaries</u></i>	\$0	\$0	\$0
<i><u>Retired Participants</u></i>			
Service retirements	\$7,496,127	\$7,496,127	\$7,264,356
Disability retirements	\$2,452,188	\$2,452,188	\$2,170,402
Beneficiaries receiving	\$379,271	\$379,271	\$372,534
DROP participants	\$3,845,282	\$3,845,282	\$3,794,454
Sub-total	\$14,172,868	\$14,172,868	\$13,601,746
<i><u>Grand Total</u></i>	<u>\$30,138,870</u>	<u>\$30,138,870</u>	<u>\$29,305,120</u>
Present Value of Future Payroll	\$16,476,336	\$16,476,336	\$16,572,005
Present Value of Future Employee Contribs.	\$1,318,105	\$1,318,105	\$1,325,761
Present Value of Future Employer Contribs.	\$7,233,543	\$7,233,543	\$6,393,333



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	\$7,565,183	\$7,565,183	\$7,429,264
Termination benefits	\$208,905	\$208,905	\$207,634
Disability benefits	\$761,327	\$761,327	\$700,116
Death benefits	\$25,723	\$25,723	\$28,054
Refund of employee contributions	\$7,915	\$7,915	\$7,940
Sub-total	\$8,569,053	\$8,569,053	\$8,373,008
<u>Deferred Vested Participants</u>			
Retirement benefits	\$865,664	\$865,664	\$856,742
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$865,664	\$865,664	\$856,742
<u>Due a Refund of Contributions</u>	\$19,307	\$19,307	\$19,307
<u>Deferred Beneficiaries</u>	\$0	\$0	\$0
<u>Retired Participants</u>			
Service retirements	\$7,496,127	\$7,496,127	\$7,264,356
Disability retirements	\$2,452,188	\$2,452,188	\$2,170,402
Beneficiaries receiving	\$379,271	\$379,271	\$372,534
DROP participants	\$3,845,282	\$3,845,282	\$3,794,454
Sub-total	\$14,172,868	\$14,172,868	\$13,601,746
<u>Grand Total</u>	<u>\$23,626,892</u>	<u>\$23,626,892</u>	<u>\$22,850,803</u>
<u>Funded Percentage</u>	86.63%	86.63%	89.57%

(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 <u>w/o Amendment</u>	Old Assumptions <u>w/ Amendment</u>	New Assumptions <u>w/ Amendment</u>
<u>Actively Employed Participants</u>			
Retirement benefits	\$7,543,993	\$7,543,993	\$7,407,839
Termination benefits	\$188,099	\$188,099	\$186,726
Disability benefits	\$761,327	\$761,327	\$700,116
Death benefits	\$25,101	\$25,101	\$27,350
Refund of employee contributions	\$23,637	\$23,637	\$23,809
Sub-total	\$8,542,157	\$8,542,157	\$8,345,840
<u>Deferred Vested Participants</u>			
Retirement benefits	\$865,664	\$865,664	\$856,742
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$865,664	\$865,664	\$856,742
<u>Due a Refund of Contributions</u>	\$19,307	\$19,307	\$19,307
<u>Deferred Beneficiaries</u>	\$0	\$0	\$0
<u>Retired Participants</u>			
Service retirements	\$7,496,127	\$7,496,127	\$7,264,356
Disability retirements	\$2,452,188	\$2,452,188	\$2,170,402
Beneficiaries receiving	\$379,271	\$379,271	\$372,534
DROP participants	\$3,845,282	\$3,845,282	\$3,794,454
Sub-total	\$14,172,868	\$14,172,868	\$13,601,746
<u>Grand Total</u>	<u>\$23,599,996</u>	<u>\$23,599,996</u>	<u>\$22,823,635</u>



Entry Age Normal Accrued Liability

Table I-G

	Old Assumptions <u>w/o Amendment</u>	Old Assumptions <u>w/ Amendment</u>	New Assumptions <u>w/ Amendment</u>
<u>Actively Employed Participants</u>			
Retirement benefits	\$9,809,507	\$9,809,507	\$9,635,381
Termination benefits	\$273,398	\$273,398	\$271,716
Disability benefits	\$715,480	\$715,480	\$654,750
Death benefits	\$31,752	\$31,752	\$34,839
Refund of employee contributions	\$7,761	\$7,761	\$7,781
Sub-total	\$10,837,898	\$10,837,898	\$10,604,467
<u>Deferred Vested Participants</u>			
Retirement benefits	\$865,664	\$865,664	\$856,742
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$865,664	\$865,664	\$856,742
<u>Due a Refund of Contributions</u>	\$19,307	\$19,307	\$19,307
<u>Deferred Beneficiaries</u>	\$0	\$0	\$0
<u>Retired Participants</u>			
Service retirements	\$7,496,127	\$7,496,127	\$7,264,356
Disability retirements	\$2,452,188	\$2,452,188	\$2,170,402
Beneficiaries receiving	\$379,271	\$379,271	\$372,534
DROP participants	\$3,845,282	\$3,845,282	\$3,794,454
Sub-total	\$14,172,868	\$14,172,868	\$13,601,746
<u>Grand Total</u>	<u>\$25,895,737</u>	<u>\$25,895,737</u>	<u>\$25,082,262</u>
less Actuarial Value of Assets	(\$21,793,176)	(\$21,793,176)	(\$21,793,176)
<u>Unfunded Accrued Liability</u>	<u>\$4,102,561</u>	<u>\$4,102,561</u>	<u>\$3,289,086</u>



Entry Age Normal Cost

Table I-H

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
<u>Actively Employed Participants</u>			
Retirement benefits	\$581,923	\$581,923	\$577,431
Termination benefits	\$31,900	\$31,900	\$32,005
Disability benefits	\$74,036	\$74,036	\$69,003
Death benefits	\$1,991	\$1,991	\$2,257
Refund of employee contributions	\$4,205	\$4,205	\$4,224
Sub-total	\$694,055	\$694,055	\$684,920
<u>Deferred Vested Participants</u>			
Retirement benefits	\$0	\$0	\$0
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$0	\$0	\$0
<u>Due a Refund of Contributions</u>	\$0	\$0	\$0
<u>Deferred Beneficiaries</u>	\$0	\$0	\$0
<u>Retired Participants</u>			
Service retirements	\$0	\$0	\$0
Disability retirements	\$0	\$0	\$0
Beneficiaries receiving	\$0	\$0	\$0
DROP participants	\$0	\$0	\$0
Sub-total	\$0	\$0	\$0
<u>Grand Total</u>	<u>\$694,055</u>	<u>\$694,055</u>	<u>\$684,920</u>



Unfunded Liability Bases

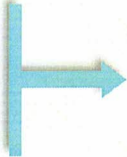
Table I-I

<u>Description</u>	<u>Original Amount</u>	<u>Outstanding Balance</u>	<u>Amortization Payment</u>	<u>Years Rem.</u>
	Total	\$3,289,086	\$333,441	
		↓	↓	
Initial Unfunded Liability	\$2,458,670	\$2,001,043	\$213,840	14
11/2004 Amendment	\$402,499	\$365,242	\$37,478	15
2004/05 Experience Loss	\$224,223	\$203,472	\$20,879	15
10/1/2005 Assumption Change	(\$497,315)	(\$451,282)	(\$46,307)	15
2005/06 Experience Gain	(\$200,230)	(\$182,875)	(\$18,093)	16
2006/07 Experience Gain	(\$208,490)	(\$199,671)	(\$19,113)	17
2007/08 Experience Loss	\$393,490	\$375,246	\$34,864	18
2008/09 Experience Loss	\$335,935	\$281,108	\$25,419	19
10/1/2009 Assumption Change	\$806,677	\$675,021	\$61,038	19
2009/10 Experience Loss	\$310,935	\$275,702	\$24,322	20
2010/11 Experience Loss	\$54,064	\$48,282	\$4,164	21
7/1/2011 Amendment	\$385,205	\$344,003	\$29,671	21
2011/12 Experience Gain	(\$128,845)	(\$114,653)	(\$9,687)	22
2012/13 Experience Gain	(\$534,105)	(\$483,578)	(\$40,094)	23
2013/14 Experience Gain	\$470,403	(\$436,838)	(\$35,596)	24
2014/15 Experience Gain	(\$244,295)	(\$231,578)	(\$18,572)	25
10/1/2015 Assumption Change	\$391,339	\$370,970	\$29,751	25
2015/16 Experience Loss	\$521,014	\$502,159	\$39,685	26
10/1/2016 Assumption Change	\$1,070,143	\$1,031,413	\$81,512	26
2016/17 Experience Gain	(\$147,164)	(\$143,610)	(\$11,197)	27
10/1/2017 Assumption Change	\$249,173	\$243,154	\$18,958	27
2017/18 Experience Gain	(\$300,855)	(\$295,396)	(\$22,746)	28
10/1/2018 Assumption Change	\$262,555	\$257,791	\$19,850	28
2018/19 Experience Gain	(\$639,464)	(\$631,561)	(\$48,075)	29
10/1/2019 Assumption Change	\$272,670	\$269,300	\$20,499	29
2019/20 Experience Loss	\$29,697	\$29,697	\$2,257	30
10/1/2020 Assumption Change	(\$813,475)	(\$813,475)	(\$61,266)	30



Actuarial Value of Assets

Table II-A

<u>Market Value Rate of Return</u>		
For the 2016/17 plan year	13.50%	
For the 2017/18 plan year	7.02%	
For the 2018/19 plan year	5.32%	
For the 2019/20 plan year	6.55%	
		Average return for the preceding four years
		8.05%

Actuarial Value of Assets as of October 1, 2019	\$20,549,416
Plus contributions for the 2019/20 plan year	\$1,193,769
Minus benefit payments and administrative expenses for the 2019/20 plan year	(\$1,631,753)
Minus DROP account credits	\$37,103
Minus advance employer contribution	\$5,999
Minus excess Chapter 175/185 contribution	\$0
Adjustment for interest at the average rate shown above, but restricted to an amount that keeps the actuarial value of assets within an 80%-120% corridor of the market value	\$1,638,642

Actuarial Value of Assets as of October 1, 2020 **\$21,793,176**

<u>Historical Actuarial Value of Assets</u>	
October 1, 2011	\$10,103,821
October 1, 2012	\$10,993,450
October 1, 2013	\$12,361,582
October 1, 2014	\$13,724,189
October 1, 2015	\$15,163,385
October 1, 2016	\$16,318,310
October 1, 2017	\$17,650,201
October 1, 2018	\$19,062,355
October 1, 2019	\$20,549,416
October 1, 2020	\$21,793,176

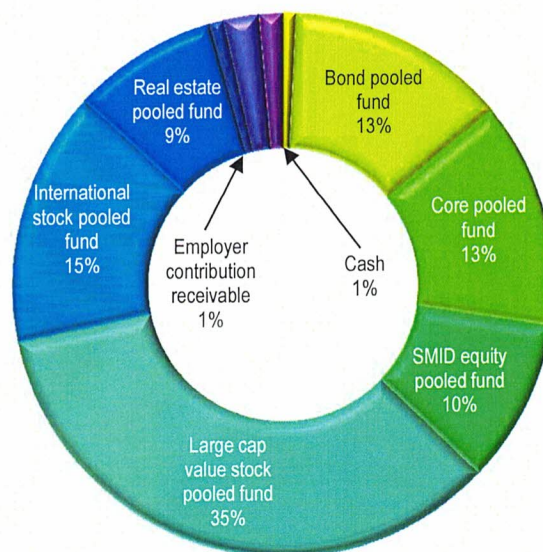


Market Value of Assets

Table II-B

As of October 1, 2020

Market Value of Assets	<u>\$20,894,773</u>
Cash	\$171,963
Bond pooled fund	\$2,987,855
Core pooled fund	\$3,009,351
SMID equity pooled fund	\$2,192,527
Large cap value stock pooled fund	\$7,759,827
International stock pooled fund	\$3,417,762
Real estate pooled fund	\$1,956,078
Employer contribution receivable	\$190,724
Share plan assets	(\$476,183)
Benefits payable	(\$315,131)

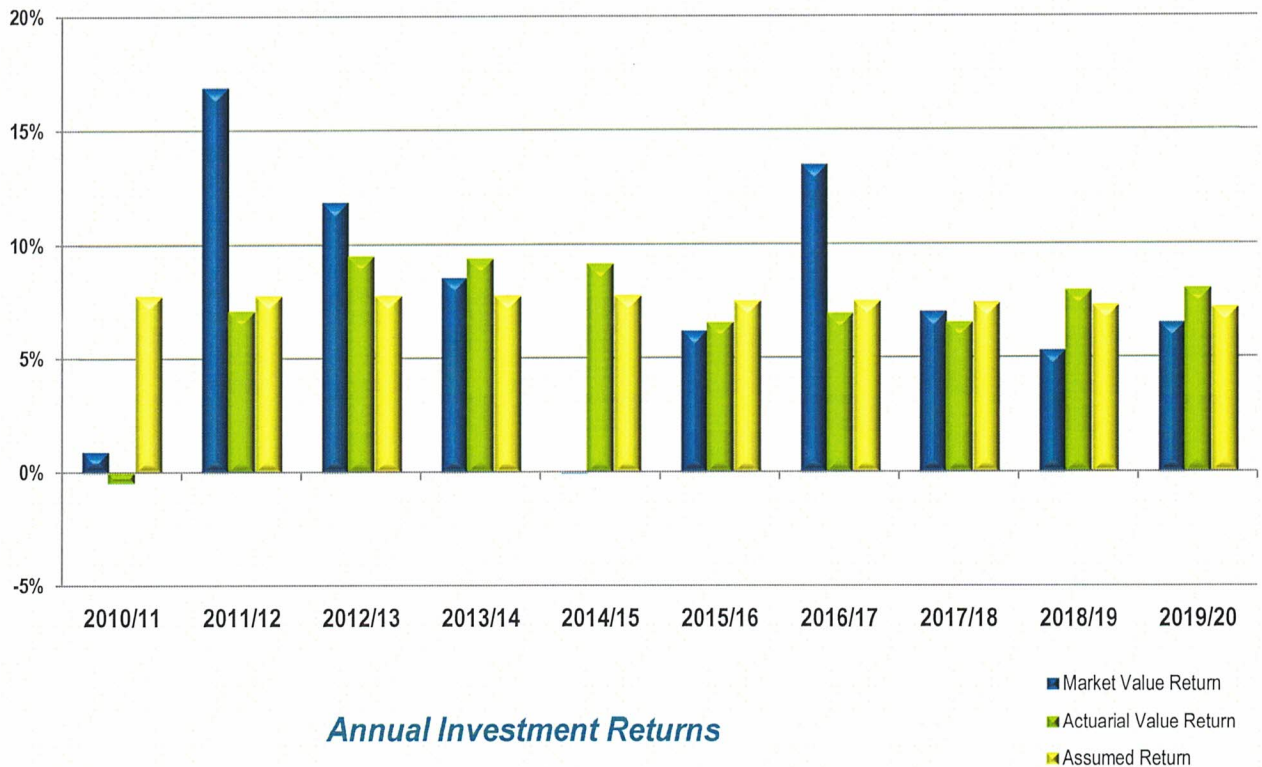
**Historical Market Value of Assets**

October 1, 2011	\$9,107,800
October 1, 2012	\$11,154,771
October 1, 2013	\$12,666,934
October 1, 2014	\$13,423,754
October 1, 2015	\$13,640,167
October 1, 2016	\$14,703,110
October 1, 2017	\$17,272,112
October 1, 2018	\$18,845,669
October 1, 2019	\$20,034,323
October 1, 2020	\$20,894,773



Investment Return

Table II-C



Plan Year	Market Value Return	Actuarial Value Return	Assumed Return
2010/11	0.92%	-0.44%	7.75%
2011/12	16.89%	7.08%	7.75%
2012/13	11.88%	9.50%	7.75%
2013/14	8.57%	9.41%	7.75%
2014/15	-0.04%	9.15%	7.75%
2015/16	6.21%	6.56%	7.50%
2016/17	13.50%	6.95%	7.50%
2017/18	7.02%	6.56%	7.40%
2018/19	5.32%	7.97%	7.30%
2019/20	6.55%	8.05%	7.20%
10yr. Avg.	7.57%	7.04%	7.56%



Asset Reconciliation

Table II-D

	<u>Market Value</u>	<u>Actuarial Value</u>
As of October 1, 2019	\$20,034,323	\$20,549,416
<i>Increases Due To:</i>		
Employer Contributions	\$868,399	\$868,399
Chapter 175/185 Contributions	\$124,561	\$124,561
Employee Contributions	\$196,216	\$196,216
Service Purchase Contributions	\$4,593	\$4,593
Total Contributions	<u>\$1,193,769</u>	<u>\$1,193,769</u>
Interest and Dividends	\$0	
Realized Gains (Losses)	\$0	
Unrealized Gains (Losses)	\$1,298,434	
Total Investment Income	<u>\$1,298,434</u>	\$1,638,642
Other Income	\$0	
Total Income	<u>\$2,492,203</u>	<u>\$2,832,411</u>
<i>Decreases Due To:</i>		
Monthly Benefit Payments	(\$1,579,307)	(\$1,579,307)
Refund of Employee Contributions	\$0	\$0
DROP Benefit Payments / Credits		\$37,103
Total Benefit Payments	<u>(\$1,579,307)</u>	<u>(\$1,542,204)</u>
Investment Expenses	\$0	
Administrative Expenses	(\$52,446)	(\$52,446)
Advance Employer Contribution		\$5,999
Excess Chapter 175/185 Contribution		\$0
Total Expenses	<u>(\$1,631,753)</u>	<u>(\$1,588,651)</u>
As of October 1, 2020	<u>\$20,894,773</u>	<u>\$21,793,176</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>Contribs.</u>	<u>Dividends</u>	<u>Gains /</u> <u>Losses</u>	<u>Gains /</u> <u>Losses</u>	<u>Income</u>
2010/11	\$654,482	\$163,393	\$160,499	\$4,593	\$0	\$0	\$82,578	\$353
2011/12	\$707,925	\$173,205	\$157,080	\$4,593	\$0	\$0	\$1,577,562	\$0
2012/13	\$560,152	\$219,955	\$156,539	\$4,593	\$0	\$0	\$1,335,905	\$0
2013/14	\$312,623	\$226,179	\$165,766	\$4,593	\$0	\$0	\$1,071,547	\$0
2014/15	\$511,600	\$243,714	\$169,730	\$4,593	\$0	\$0	-\$5,385	\$0
2015/16	\$486,422	\$246,530	\$184,625	\$4,593	\$0	\$0	\$1,141,505	-\$288,492
2016/17	\$870,225	\$215,523	\$195,465	\$4,593	\$0	\$0	\$2,022,209	\$0
2017/18	\$718,269	\$220,026	\$193,860	\$4,593	\$0	\$0	\$1,225,382	\$0
2018/19	\$677,791	\$228,466	\$187,949	\$4,593	\$0	\$0	\$1,007,781	\$0
2019/20	\$868,399	\$124,561	\$196,216	\$4,593	\$0	\$0	\$1,298,434	\$0

Expenses

Plan	Monthly				<u>Other Actuarial Adjustments</u>		
<u>Year</u>	<u>Benefit</u> <u>Payments</u>	<u>Contrib.</u> <u>Refunds</u>	<u>Admin.</u> <u>Expenses</u>	<u>Invest.</u> <u>Expenses</u>	<u>DROP</u> <u>Credits</u>	<u>Advance</u> <u>Employer</u> <u>Contribs.</u>	<u>Excess</u> <u>Chapter</u> <u>Contribs.</u>
2010/11	\$492,323	\$1,875	\$29,946	\$0	-\$194,612	\$165,647	\$0
2011/12	\$540,329	\$0	\$33,065	\$0	\$127,131	\$171,252	\$2,431
2012/13	\$572,045	\$15,203	\$33,749	\$0	-\$48,144	\$9,673	\$49,181
2013/14	\$952,875	\$34,912	\$36,101	\$0	-\$271,135	-\$289,696	\$55,405
2014/15	\$670,595	\$0	\$37,244	\$0	\$36,221	-\$63,180	\$72,940
2015/16	\$671,112	\$4,247	\$36,881	\$0	\$55,431	\$0	-\$288,492
2016/17	\$699,053	\$0	\$39,960	\$0	\$66,461	\$288,845	\$0
2017/18	\$730,975	\$15,563	\$42,035	\$0	\$97,772	\$4,853	\$0
2018/19	\$811,555	\$53,304	\$53,067	\$0	\$208,084	\$2,928	\$0
2019/20	\$1,579,307	\$0	\$52,446	\$0	-\$37,103	-\$5,999	\$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

DROP Account Reconciliation

DROP Balance as of October 1, 2019	\$463,969
DROP Benefit Credits	\$233,862
DROP Investment Credits	\$44,166
DROP Benefits Paid Out	(\$315,131)
Net DROP Credit	(\$37,103)
DROP Balance as of October 1, 2020	<u>\$426,866</u>

Advance Employer Contribution

Advance Employer Contribution as of October 1, 2019	\$296,626
Additional Employer Contribution	\$992,960
Minimum Required Contribution	(\$998,959)
Net Increase in Advance Employer Contribution	(\$5,999)
Advance Employer Contribution as of October 1, 2020	<u>\$290,627</u>

Excess Chapter 175/185 Contribution

Excess Chapter 175/185 Contribution as of October 1, 2019	\$0
Additional Chapter 175/185 Contribution	\$249,122
Allowable Chapter 175/185 Contribution	(\$124,561)
Transfer to Share Plan	(\$124,561)
Net Increase in Excess Chapter 175/185 Contribution	\$0
Excess Chapter 175/185 Contribution as of October 1, 2020	<u>\$0</u>



Historical Chapter 175/185 Contributions

Table II-G

Total Accumulated Excess Chapter 175/185 Contribution \$0

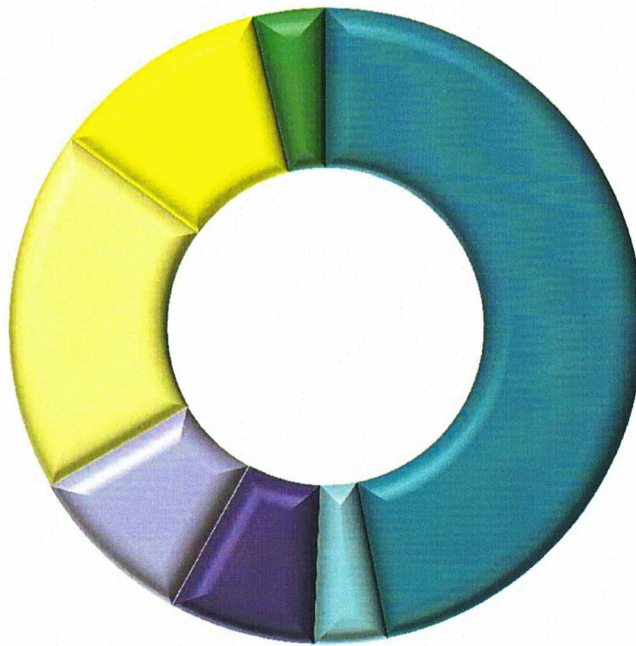
	Chapter 175 Regular <u>Distribution</u>	Chapter 175 Supplemental <u>Distribution</u>	Chapter 185 <u>Distribution</u>	Allowable <u>Amount</u>
1998 Distribution	\$28,094	\$0	\$60,060	(\$97,181)
1999 Distribution	\$33,941	\$15,339	\$56,457	(\$93,578)
2000 Distribution	\$31,740	\$19,366	\$58,257	(\$95,378)
2001 Distribution	\$37,929	\$16,678	\$67,811	(\$98,013)
2002 Distribution	\$41,006	\$21,026	\$71,249	(\$98,013)
2003 Distribution	\$43,820	\$22,849	\$82,900	(\$98,013)
2004 Distribution	\$49,580	\$26,317	\$84,223	(\$104,387)
2005 Distribution	\$57,269	\$28,635	\$85,357	(\$354,853)
2006 Distribution	\$67,822	\$31,885	\$85,124	(\$170,774)
2007 Distribution	\$83,675	\$57,762	\$84,791	(\$170,774)
2008 Distribution	\$68,416	\$65,678	\$75,217	(\$170,774)
2009 Distribution	\$68,791	\$21,629	\$75,609	(\$166,029)
2010 Distribution	\$63,479	\$22,142	\$77,772	(\$163,393)
2011 Distribution	\$65,192	\$27,640	\$80,373	(\$170,774)
2012 Distribution	\$101,389	\$35,399	\$83,167	(\$170,774)
2013 Distribution	\$114,037	\$22,671	\$89,471	(\$170,774)
2014 Distribution	\$113,359	\$35,056	\$95,299	(\$170,774)
2015 Distribution	\$123,692	\$24,066	\$98,772	(\$246,530)
2016 Distribution	\$108,870	\$13,246	\$93,407	(\$215,523)
2017 Distribution	\$119,601	\$0	\$100,425	(\$220,026)
2018 Distribution	\$122,772	\$609	\$105,085	(\$228,466)
2019 Distribution	\$141,674	\$0	\$107,448	(\$124,561)
Transfer to Share Plan				(\$413,053)



Summary of Participant Data

Table III-A

As of October 1, 2020



Participant Distribution by Status

Actively Employed Participants

Active Participants	38
DROP Participants	3

Inactive Participants

Deferred Vested Participants	6
Due a Refund of Contributions	7
Deferred Beneficiaries	0

Participants Receiving a Benefit

Service Retirements	15
Disability Retirements	9
Beneficiaries Receiving	3

Total Participants 81

Number of Participants Included in Prior Valuations

	Active	DROP	Inactive	Retired	Total
October 1, 2011	37	2	4	17	60
October 1, 2012	36	2	3	19	60
October 1, 2013	34	1	6	20	61
October 1, 2014	34	0	7	21	62
October 1, 2015	36	1	8	22	67
October 1, 2016	37	1	9	22	69
October 1, 2017	36	1	10	23	70
October 1, 2018	36	2	10	24	72
October 1, 2019	39	3	10	24	76
October 1, 2020	38	3	13	27	81



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, 2019</u>	39	3	5	5	0	13	8	3	76
<u>Change in Status</u>									
Re-employed									
Terminated	(4)		2	2					
Retired	(1)	(1)	(1)			2	1		
<u>Participation Ended</u>									
Transferred Out	(1)	1							
Cashed Out									
Died									
<u>Participation Began</u>									
Newly Hired	5								5
Transferred In									
New Beneficiary									
<u>Other Adjustment</u>									
<u>October 1, 2020</u>	38	3	6	7	0	15	9	3	81

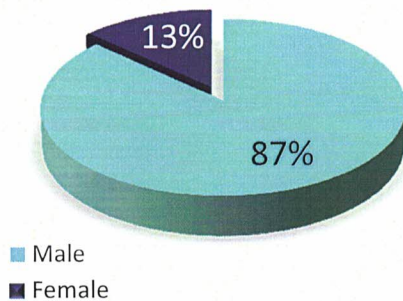


Active Participant Data

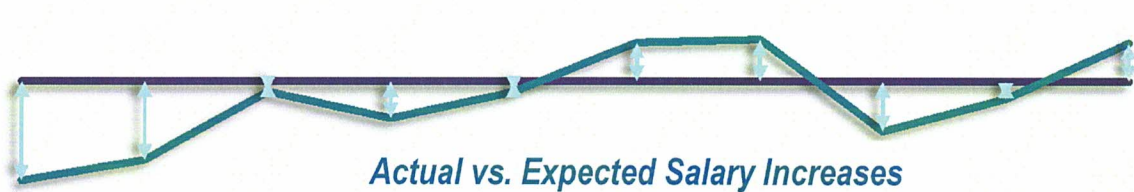
Table III-C

As of October 1, 2020

Gender Mix



Average Age	40.2 years
Average Service	9.3 years
Total Annualized Compensation for the Prior Year	\$2,372,574
Total Expected Compensation for the Current Year	\$2,406,752
Average Increase in Compensation for the Prior Year	7.60%
Expected Increase in Compensation for the Current Year	4.75%
Accumulated Contributions for Active Employees	\$2,469,852



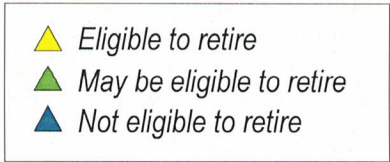
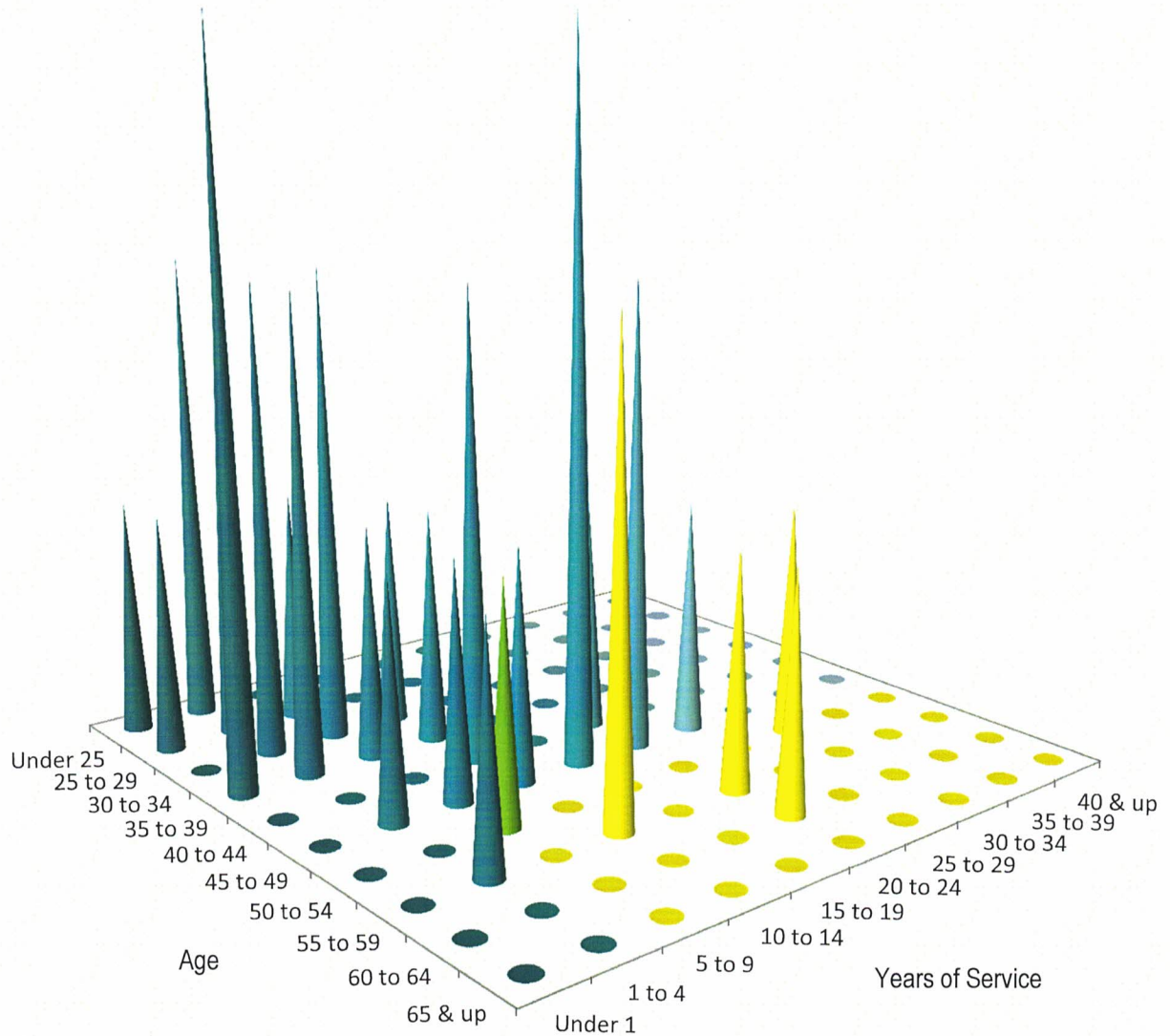
Active Participant Statistics From Prior Valuations

	Average Age	Average Service	Average Salary	Average Expected Salary Increase	Average Actual Salary Increase
October 1, 2011	39.2	8.7	\$54,458	4.75%	-2.72%
October 1, 2012	39.6	9.8	\$54,107	4.75%	-1.15%
October 1, 2013	41.0	10.8	\$57,116	4.75%	3.97%
October 1, 2014	41.2	11.5	\$58,428	4.75%	1.97%
October 1, 2015	40.1	11.0	\$57,527	4.75%	3.98%
October 1, 2016	41.1	11.6	\$62,975	4.75%	7.66%
October 1, 2017	41.3	11.9	\$66,181	4.75%	7.89%
October 1, 2018	41.1	10.9	\$62,799	4.75%	1.03%
October 1, 2019	40.5	10.2	\$62,277	4.75%	3.48%
October 1, 2020	40.2	9.3	\$62,436	4.75%	7.60%



Active Age-Service Distribution

Table III-D



Active Age-Service-Salary Table

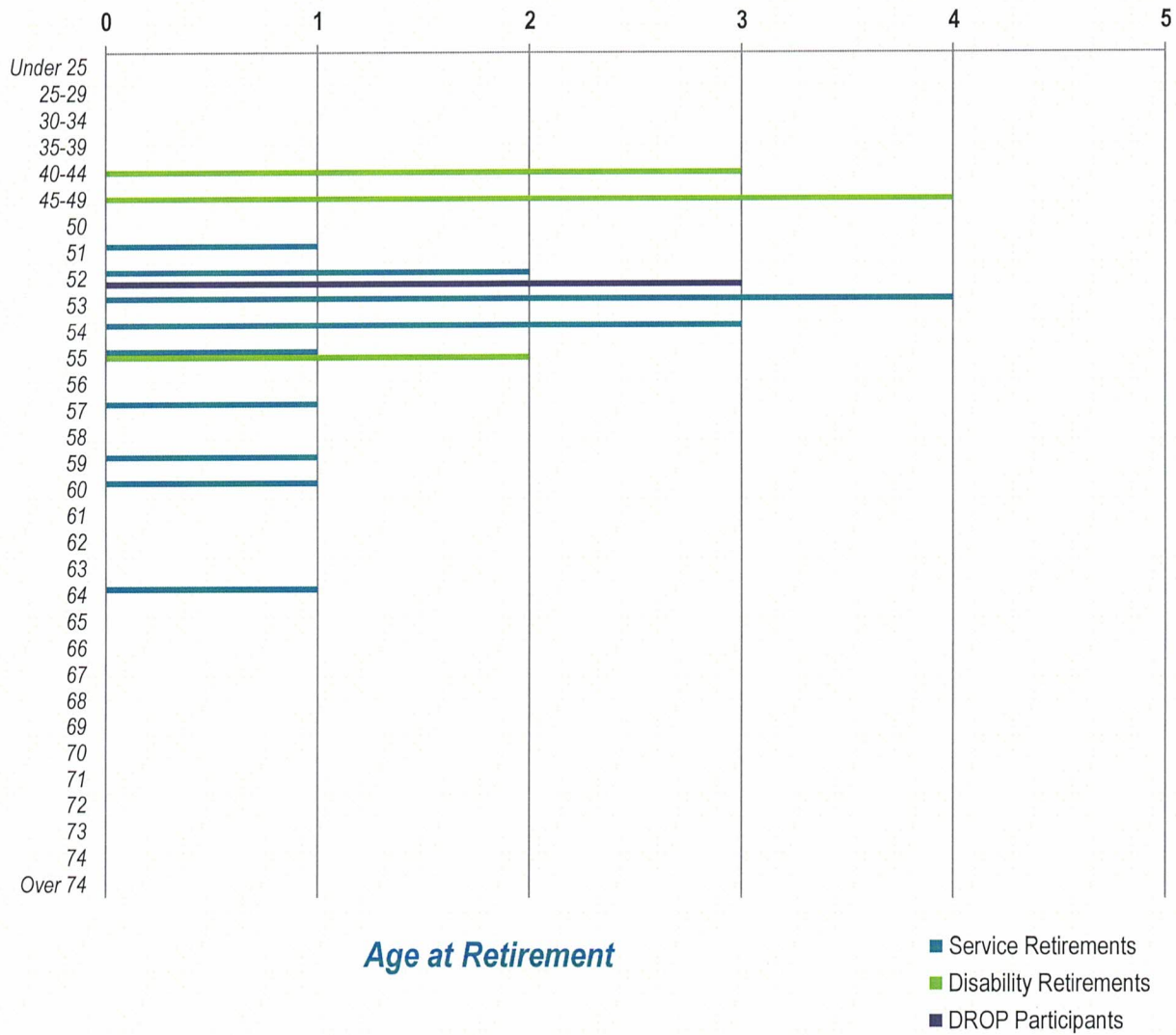
Table III-E

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	2	0	0	0	0	0	0	0	0	3
Avg.Pay	46,129	48,456	0	0	0	0	0	0	0	0	47,680
25 to 29	1	2	1	0	0	0	0	0	0	0	4
Avg.Pay	50,071	48,942	59,316	0	0	0	0	0	0	0	51,818
30 to 34	0	2	2	1	0	0	0	0	0	0	5
Avg.Pay	0	47,113	53,839	50,756	0	0	0	0	0	0	50,532
35 to 39	3	2	1	1	0	0	0	0	0	0	7
Avg.Pay	46,319	49,464	65,038	60,008	0	0	0	0	0	0	51,847
40 to 44	0	0	0	2	0	1	0	0	0	0	3
Avg.Pay	0	0	0	68,159	0	105,763	0	0	0	0	80,693
45 to 49	0	1	1	1	3	2	1	0	0	0	9
Avg.Pay	0	44,518	51,375	64,257	71,217	91,931	89,584	0	0	0	71,916
50 to 54	0	0	1	0	0	0	0	1	0	0	2
Avg.Pay	0	0	49,647	0	0	0	0	116,339	0	0	82,993
55 to 59	0	1	0	2	0	1	0	0	0	0	4
Avg.Pay	0	57,180	0	58,774	0	88,808	0	0	0	0	65,884
60 to 64	0	0	0	0	0	1	0	0	0	0	1
Avg.Pay	0	0	0	0	0	87,825	0	0	0	0	87,825
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	5	10	6	7	3	5	1	1	0	0	38
Avg.Pay	47,031	48,965	55,509	61,269	71,217	93,252	89,584	116,339	0	0	62,436



Inactive Participant Data

Table III-F

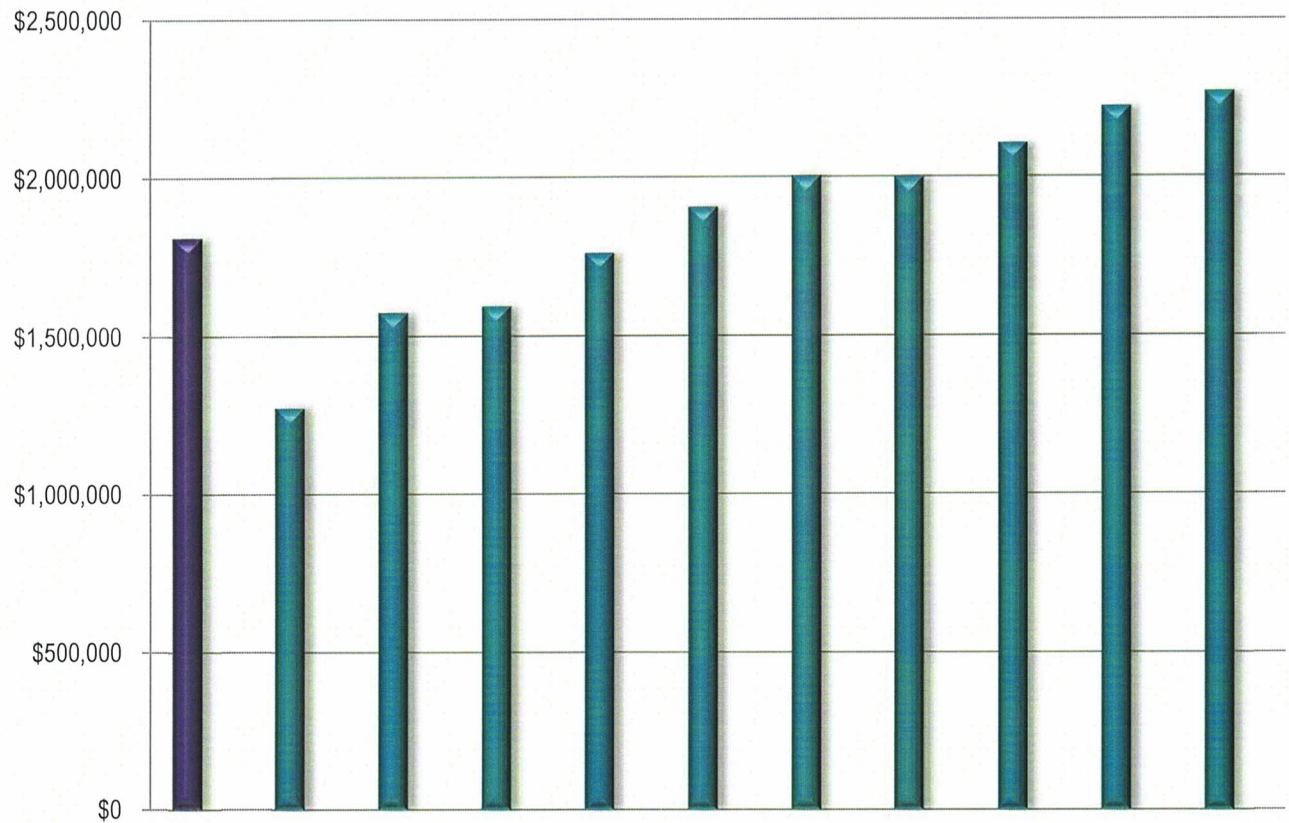
Average Monthly Benefit

Service Retirements	\$3,624.61
Disability Retirements	\$2,161.13
Beneficiaries Receiving	\$1,903.45
DROP Participants	\$8,145.05
Deferred Vested Participants	\$1,489.36
Deferred Beneficiaries	Not applicable



Projected Benefit Payments

Table III-G

Actual

For the period October 1, 2019 through September 30, 2020

\$1,813,169

Projected

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

\$1,275,699

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

\$1,576,457

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

\$1,596,165

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

\$1,764,279

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

\$1,907,688

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

\$2,005,195

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

\$2,001,052

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

\$2,108,890

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

\$2,224,334

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

\$2,270,865



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**

Individual entry age normal cost method. Under this actuarial cost method, a level funding cost is developed with respect to each benefit for each participant. The level funding cost for each benefit applies to the period beginning when the participant's service commences and ends when the participant is assumed to cease active participation due to each respective decrement. The actuarial accrued liability is equal to the accumulated level funding cost to the valuation date for all participants. The normal cost is equal to the level funding cost for the year immediately following the valuation date for all active participants.

2. **Amortization Method**

The unfunded actuarial accrued liability is amortized as a level dollar amount over a period of up to 30 years.

3. **Asset Method**

The actuarial value of assets is equal to the prior year's actuarial value of assets adjusted for contributions, benefit payments, and expenses and further adjusted by the average return on the market value of assets for the preceding four years; the actuarial value of assets is restricted to 80% to 120% of the market value.

4. **Interest (or Discount) Rate**

7.10% per annum

(EXCEPTION: The actuary has recommended an assumed interest rate of 7.00% per annum based on the investment consultant's best estimate of the long-term expected rate of return for the plan's 60%/40% mix of stocks and fixed income investments. The Board of Trustees has elected to use a 7.10% interest rate assumption for this valuation, but has established a target rate of 7.00%. It is anticipated that the 7.00% interest rate assumption will first be utilized for the October 1, 2021 actuarial valuation of the plan.)

5. **Salary Increases**

Plan compensation is assumed to increase at the rate of 4.75% per annum, unless actual plan compensation is known for a prior plan year. In addition, average monthly earnings have been adjusted for each active participant to reflect the anticipated payment of the number of hours of accrued sick leave and annual leave that were accumulated as of June 30, 2011.



Summary of Actuarial Methods and Assumptions

Table IV-A

(continued)

6. 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
- Disability: Sex-distinct rates set forth in the Wyatt 1985 Disability Study (Class 4); All disabilities are assumed to be service-related.
- Termination: Sex-distinct rates set forth in the Scale 155 Table
- Retirement: Retirement is assumed to occur upon the attainment of age 52 with at least five years of service, except that those participants who have attained their normal retirement age as of the valuation date are assumed to retire one year after the valuation date. Alternatively, participants who have attained age 50 with at least 10 years of service are assumed to retire at the rate of 2.50% per annum.

7. Form of Payment

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

8. Beneficiary Age and Gender

Where beneficiary information is unavailable, beneficiaries have been assumed to be of the opposite gender of the participant, with males assumed to be three years older than females.



Summary of Actuarial Methods and Assumptions

Table IV-A

(continued)

9. Expenses

Administrative expenses are assumed to be 1.25% of future payroll. In addition, the interest rate set forth in item 4. above is assumed to be net of investment expenses and commissions.



Changes in Actuarial Methods and Assumptions

Table IV-B

Since the completion of the previous valuation, the interest (or discount) rate was changed from 7.20% per annum to 7.10% per annum and 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.

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

- (1) Effective October 1, 2019, the interest (or discount) rate was decreased from 7.30% per annum to 7.20% per annum.*
- (2) Effective October 1, 2018, the interest (or discount) rate was decreased from 7.40% per annum to 7.30% per annum.*
- (3) Effective October 1, 2017, the interest (or discount) rate was decreased from 7.50% per annum to 7.40% per annum.*
- (4) Effective October 1, 2016, the mortality basis was changed from a 2007 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.*
- (5) Effective October 1, 2015, the interest (or discount) rate was decreased from 7.75% per annum to 7.50% per annum.*
- (6) Effective October 1, 2012, the assumed payroll growth for purposes of amortizing the unfunded liability was eliminated.*
- (7) Effective October 1, 2011, the assumed payroll growth for purposes of amortizing the unfunded liability was decreased from 1.75% per year to 1.50% per year.*
- (8) Effective October 1, 2010, the assumed payroll growth for purposes of amortizing the unfunded liability was decreased from 5.00% per year to 1.75% per year.*



Summary of Plan Provisions

Table V-A

1. Benefit Formula

3% of Average Monthly Earnings multiplied by Credited Service (§46-58(b)(1))

2. Service Retirement

Normal retirement: Age 52 with at least five years of participation (§46-58(a)(1))

Early retirement: Age 50 with at least 10 years of credited service (§46-58(a)(2))

(Note: In the case of early retirement, the participant's benefit is reduced by 3% for each year by which the participant's early retirement age precedes his normal retirement age.) (§46-58(b)(2))

3. Disability Retirement

Service-based disability: Participant must be disabled during the course of his employment with the City. (§46-58(c)(1))

Non-service disability: Participant must have earned at least 10 years of credited service. (§46-58(c)(1))

The disability benefit is a monthly 10-year certain and life annuity equal to the larger of the monthly accrued benefit or either 42% of average monthly earnings (for service-based disability) or 25% of average monthly earnings (for non-service disability), but offset as necessary to preclude the total of the participant's worker's compensation, disability benefit, and other City-financed disability or salary continuation benefit (excluding social security benefits) from exceeding his average monthly earnings. A partial month's payment is made to cover the period between the date of the Board's approval and the end of the month. (§46-58(c)(4),(5),&(6))

(A participant is disabled if he is found to be mentally or physically incapacitated so as to be wholly unable to properly perform his duties as a police officer or firefighter and is likely to remain so disabled continuously and permanently. However, a participant will not be eligible for a disability benefit if his disability is caused by excessive and habitual use of drugs, intoxicants, or narcotics; by injury or disease sustained while serving in the armed forces; by injury or disease sustained while willfully and illegally participating in fights, riots, or civil insurrections, or while committing a crime; by injury or disease sustained after termination of employment; or by a self-inflicted injury.) (§§46-58(c)(1)&(2))



Summary of Plan Provisions

Table V-A

(continued)

4. Deferred Vested Retirement

A vested participant who terminates employment before becoming eligible for retirement receives a deferred vested retirement benefit payable at the participant's early or normal retirement age. If the benefit is payable prior to normal retirement age, then the benefit is actuarially reduced to account for the earlier commencement of the benefit. (§46-58(e)(1))

A non-vested participant who terminates employment receives his accumulated contributions. (§46-58(e)(2))

5. Vesting

A participant becomes 100% vested upon the attainment of five years of credited service. For this purpose, service includes service earned under the City of Satellite Beach General Employees' Retirement System. (§46-58(e)(1))

6. Pre-Retirement Death Benefit

If a vested participant dies prior to retirement, the participant's beneficiary receives a 10-year certain annuity equal to the participant's monthly accrued benefit payable beginning at the participant's early or normal retirement age. At the beneficiary's election and upon approval by the Board of Trustees, an actuarially equivalent benefit is payable at any time following the participant's death. In any event, the pre-retirement death benefit guarantees at least the return of the participant's accumulated contributions. (§46-58(d))

If a non-vested participant dies prior to retirement, the participant's beneficiary receives the participant's accumulated contributions. (§46-58(d)(1))

7. 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 with a relative as the joint annuitant (*optional*);

Actuarially reduced 66⅔% joint and contingent annuity with a relative as the joint annuitant (*optional*);

Actuarially reduced 75% joint and contingent annuity with a relative as the joint annuitant (*optional*);



Summary of Plan Provisions

Table V-A

(continued)

Actuarially reduced 100% joint and contingent annuity with a relative as the joint annuitant (*optional*); or

Any other actuarially equivalent form of payment approved by the Board of Trustees (*optional*)

(Note: All forms of payment guarantee at least the return of the participant's accumulated contributions.)

(§46-58(b)(1), §46-59, & §46-60(a)(2))

8. Average Monthly Earnings

Average monthly earnings during the highest three years out of the 10 years immediately preceding the determination. Earnings include base pay, commissions, bonuses, maintenance pay, overtime pay, payments for accrued sick leave, and vacation pay, although payment for accrued sick and annual leave are limited to the number of hours accumulated as of June 30, 2011 multiplied by the pay rate that is in effect at the time of employment termination. Earnings cannot exceed the maximum amount allowed under IRC section 401(a)(17). (§46-56)

9. Credited Service

The service, expressed in years and completed months, from the participant's date of hire until his date of termination, retirement, or death, excluding periods during which the participant does not make the required employee contribution. Participants may also purchase up to five years of credited service for benefit accrual purposes only for previous full-time employment as a police officer or full-time or volunteer employment as a firefighter with any federal, state, county, or city government, including military service, by paying into the plan the full actuarial cost thereof, provided that no other retirement benefit is paid for such service. Payment for purchased service must be made within a period of time equal to the length of service being purchased. (§46-56 & §46-67)

10. Employee Contribution

Employees must contribute 8.00% of earnings and such contributions are accumulated with interest at the rate of 5.50% per annum. (§46-56 & §46-60(a)(1))

11. City Contribution

The City is required to make quarterly contributions as determined in the most recent actuarial valuation of the retirement system. (§46-60(b))



Summary of Plan Provisions**Table V-A**

(continued)

12. Deferred Retirement Option Plan (DROP)

A DROP is available to those participants who have attained their normal retirement age, whereby the participant's monthly retirement benefit is accumulated on his behalf in a DROP account while he continues in active employment with the City. Individuals may participate in the DROP for a period of 12 to 60 months and neither earn additional benefits nor make the required employee contribution during the period of their DROP participation. DROP participants are considered to be retired for all other purposes under the plan and are not eligible for disability or pre-retirement death benefits. DROP accounts earn interest equal to the investment return realized by the market value of assets or the investment return realized by a stable return investment vehicle (as elected by the participant from time to time). (§46-66)

13. Participant Requirement

All full-time firefighters and sworn police officers of the City of Satellite Beach, Florida, excluding civilian members of the fire and police departments and temporary and contract employees, are mandated to participate in the plan. (§46-57(a))

14. Actuarial Equivalence

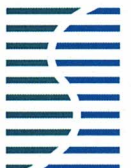
Based on 8.00% interest per annum and the 1984 Uninsured Pensioner Mortality Table (§46-56)

15. Retiree Increases

Retirement benefits in payment status on October 1, 1997 were increased by 1.00%. (§46-58(b)(3))

16. Plan Effective Date

The plan was originally effective on May 22, 1973.



Summary of Plan Amendments

Table V-B

There were no significant plan amendments since the completion of the previous valuation.

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

- (1) *Effective June 6, 2018, a share plan was adopted. (Ordinance No. 1161)*
- (2) *Effective July 20, 2016, a share plan was created to receive excess Chapter 175/185 contributions. (Ordinance No. 1120)*
- (3) *Effective January 15, 2014, the 0.1875% daily administrative charge on the DROP accounts was eliminated retroactively for the period December 6, 2004 through July 3, 2013. (Ordinance No. 1083)*
- (4) *Effective July 3, 2013, the 0.1875% daily administrative charge on the DROP accounts was eliminated. (Ordinance No. 1071)*
- (5) *Effective during the 2010/11 fiscal year, the definition of plan compensation was amended to limit payments for accrued sick and annual leave to the number of hours accumulated as of June 30, 2011 multiplied by the pay rate in effect at the time of employment termination.*

