RETIREMENT PLAN FOR THE EMPLOYEES OF THE TOWN OF DAVIE

ACTUARIAL VALUATION AS OF OCTOBER 1, 2020

DETERMINES THE CONTRIBUTION FOR THE 2021/22 FISCAL YEAR



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November 27, 2020

Introduction

This report presents the results of the October 1, 2020 actuarial valuation for the Retirement Plan for the Employees of the Town of Davie. 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 <u>estimate</u> 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 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 14.73% of covered payroll, which represents a decrease of 2.92% of payroll from the prior valuation.

The normal cost rate as of October 1, 2020 is 15.61%, as compared to a rate of 18.57% determined in the prior valuation. Table I-C provides a breakdown of the sources of change in the normal cost rate. Significantly, the rate increased by 0.65% of payroll due to investment shortfalls, decreased by 2.77% of payroll due to demographic experience, increased by 6.15% of payroll due to the assumption changes that are described below, and decreased by 6.99% of payroll due to the method change that is described below. Although the market value of assets only earned



6.70% during the 2019/20 plan year, the actuarial value of assets is based on a five-year phase-in of the unexpected investment gains and losses. On this basis, the actuarial value of assets earned 7.59% during the 2019/20 plan year, whereas a 7.50% annual investment return was required to maintain a stable contribution rate. (Note that the remaining 15.71% return on the actuarial value of assets was attributable to the change in the method of determining the actuarial value of assets.)

Chapter 112, Florida Statutes, sets forth the rules concerning the minimum required contribution for public pension plans within the state. Essentially, the Town must contribute an amount equal to the annual normal cost of the plan, 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 Town's 2021/22 minimum required contribution will be equal to 14.73% multiplied by the total pensionable earnings for the 2021/22 fiscal year for the active employees who are covered by the plan.

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 \$116,220,644. As illustrated in Table I-A, current assets are sufficient to cover \$87,246,093 of this amount, the employer's 2020/21 expected contribution will cover \$3,543,867 of this amount, the employer's 2021/22 expected contribution will cover \$3,105,988 of this amount, and future employee contributions will cover \$4,415,343 of this amount, leaving \$17,909,353 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.

Employer Contribution Shortfall

For the 2019/20 plan year, the minimum required contribution was \$3,790,389 plus the employer contribution receivable as of October 1, 2019, which was equal to \$202,019. When the actual Town contribution of \$3,869,105 is subtracted from these amounts, there is a \$123,303 employer contribution receivable as of September 30, 2020. Therefore, the first \$123,303 of employer contributions made for the 2020/21 plan year will be applied to the 2019/20 plan year.

Actuarial Assumption Changes

Since the completion of the previous valuation, three actuarial assumptions have been changed. First, the mortality basis was changed from the RP-2000 Combined 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. Second, the interest (or discount) rate was decreased from 7.50% per annum to 7.00% per annum. Finally, the expense loading was reduced from 1.25% of the present value of future benefits to 0.75% of the present value of future benefits. The combined impact of these assumption changes was to increase the normal cost rate by 6.15% of payroll.



Asset Method Change

Since the completion of the previous valuation, the method used to determine the actuarial value of assets has also been changed. Previously, the actuarial value of assets was based on the market value of assets adjusted to reflect a five-year phase-in of the net investment appreciation. Beginning with this valuation, the actuarial value of assets is based on the market value adjusted to reflect a five-year phase-in of the unexpected investment gains and losses. The impact of this method change was to decrease the normal cost rate by 6.99% 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 <u>estimate</u> 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 liablities 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, including a development of the actuarial value of assets which is based on a five-year smoothing of the investment gains and losses. 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.

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 J. Carry og

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

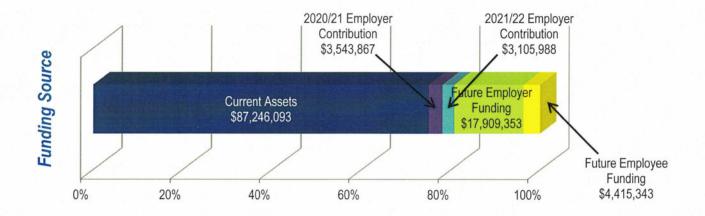
Enrolled Actuary No. 20-04927

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

\$115,355,478	Present Value of Future Benefits
\$865,166	Present Value of Future Administrative Expenses
(\$87,246,093)	Actuarial Value of Assets
(\$4,415,343)	Present Value of Future Employee Contributions
\$24,559,208	Present Value of Future Normal Costs
÷ \$157,311,380	Present Value of Future Payroll
= 15.6118%	Normal Cost Rate
x \$20,078,565	Expected Payroll
\$3,134,634	Normal Cost
\$0	Interest Adjustment Assuming a Beginning-of-Year Employer Contribution
(\$3,543,867)	Expected Employer Contribution for the 2020/21 Plan Year
(\$409,233)	Remaining Contribution Due/(Credit) for the 2020/21 Plan Year
x 0.07	
(\$28,646)	One Year's Interest Charge/(Credit) on the Remaining Contribution
\$3,105,988	Preliminary Employer Contribution for the 2021/22 Plan Year
÷ \$21,082,493	Expected Payroll for the 2021/22 Plan Year

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

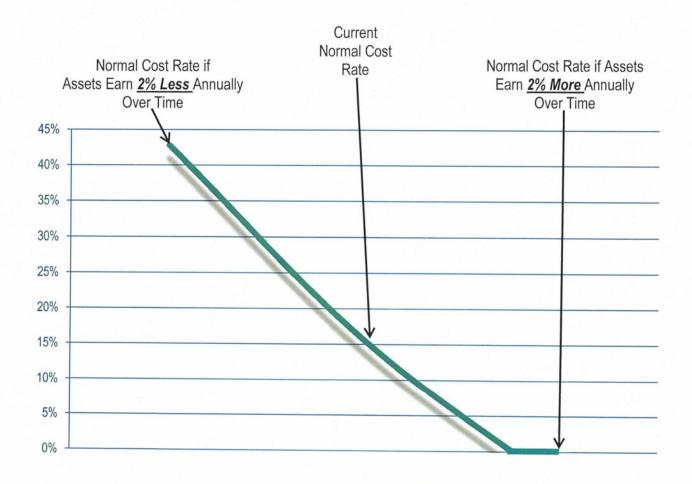
Minimum Required Contribution Rate



14.73%

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	18.57%
Increase (decrease) due to investment gains and losses	0.65%
Increase (decrease) due to demographic experience	-2.77%
Increase (decrease) due to plan amendments	0.00%
Increase (decrease) due to actuarial assumption changes	6.15%
Increase (decrease) due to actuarial method changes	-6.99%
Current normal cost rate	15.61%



Present Value of Future Benefits (PVB)

Table I-D

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
Activaly Employed Porticinante			
Actively Employed Participants Retirement benefits	\$56,362,897	\$56,362,897	\$63,804,362
Termination benefits	\$1,924,012	\$1,924,012	\$2,188,174
Disability benefits	\$1,969,676	\$1,969,676	\$1,783,434
Death benefits	\$1,452,883	\$1,452,883	\$1,763,434
Refund of employee contributions	\$497,032	\$497,032	\$498,667
Sub-total	\$62,206,500	\$62,206,500	\$69,503,320
Deferred Vested Participants			
Retirement benefits	\$5,084,446	\$5,084,446	\$5,429,558
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$5,084,446	\$5,084,446	\$5,429,558
Due a Refund of Contributions	\$57,926	\$57,926	\$57,926
<u>Deferred Beneficiaries</u>	\$251,176	\$251,176	\$275,313
Retired Participants			
Service retirements	\$28,758,824	\$28,758,824	\$30,802,203
Disability retirements	\$581,387	\$581,387	\$571,564
Beneficiaries receiving	\$3,541,534	\$3,541,534	\$3,765,014
DROP participants	\$4,611,247	\$4,611,247	\$4,950,580
Sub-total	\$37,492,992	\$37,492,992	\$40,089,361
Grand Total	\$105,093,040	\$105,093,040	<u>\$115,355,478</u>
Present Value of Future Payroll	\$151,899,847	\$151,899,847	\$157,311,380
Present Value of Future Employee Contribs.	\$4,260,521	\$4,260,521	\$4,415,343
Present Value of Future Employer Contribs.	\$14,374,624	\$14,374,624	\$24,559,208



Present Value of Accrued Benefits (PVAB)

Table I-E

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
Actively Employed Participants			
Retirement benefits	\$24,397,718	\$24,397,718	\$26,853,283
Termination benefits	\$1,009,622	\$1,009,622	\$1,127,334
Disability benefits	\$880,517	\$880,517	\$781,213
Death benefits	\$579,595	\$579,595	\$485,880
Refund of employee contributions	\$238,901	\$238,901	\$238,924
Sub-total	\$27,106,353	\$27,106,353	\$29,486,634
Deferred Vested Participants			
Retirement benefits	\$5,084,446	\$5,084,446	\$5,429,558
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$5,084,446	\$5,084,446	\$5,429,558
Due a Refund of Contributions	\$57,926	\$57,926	\$57,926
<u>Deferred Beneficiaries</u>	\$251,176	\$251,176	\$275,313
Retired Participants			
Service retirements	\$28,758,824	\$28,758,824	\$30,802,203
Disability retirements	\$581,387	\$581,387	\$571,564
Beneficiaries receiving	\$3,541,534	\$3,541,534	\$3,765,014
DROP participants	\$4,611,247	\$4,611,247	\$4,950,580
Sub-total	\$37,492,992	\$37,492,992	\$40,089,361
Grand Total	\$69,992,893	<u>\$69,992,893</u>	\$75,338,792
Funded Percentage	123.88%	123.88%	115.09%

(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 (PVVB)

Table I-F

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
Actively Employed Participants			
Retirement benefits	\$24,397,718	\$24,397,718	\$26,853,283
Termination benefits	\$926,905	\$926,905	\$1,030,195
Disability benefits	\$880,517	\$880,517	\$781,213
Death benefits	\$509,185	\$509,185	\$429,335
Refund of employee contributions	\$351,385	\$351,385	\$349,598
Sub-total	\$27,065,710	\$27,065,710	\$29,443,624
Deferred Vested Participants			
Retirement benefits	\$5,084,446	\$5,084,446	\$5,429,558
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$5,084,446	\$5,084,446	\$5,429,558
Due a Refund of Contributions	\$57,926	\$57,926	\$57,926
<u>Deferred Beneficiaries</u>	\$251,176	\$251,176	\$275,313
Retired Participants			
Service retirements	\$28,758,824	\$28,758,824	\$30,802,203
Disability retirements	\$581,387	\$581,387	\$571,564
Beneficiaries receiving	\$3,541,534	\$3,541,534	\$3,765,014
DROP participants	\$4,611,247	\$4,611,247	\$4,950,580
Sub-total	\$37,492,992	\$37,492,992	\$40,089,361
Grand Total	<u>\$69,952,250</u>	<u>\$69,952,250</u>	\$75,295,782



Entry Age Normal Accrued Liability

Table I-G

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
Actively Employed Participants			
Retirement benefits	\$36,334,201	\$36,334,201	\$39,926,447
Termination benefits	\$1,339,637	\$1,339,637	\$1,493,261
Disability benefits	\$1,257,048	\$1,257,048	\$1,112,728
Death benefits	\$840,514	\$840,514	\$703,625
Refund of employee contributions	\$202,409	\$202,409	\$204,207
Sub-total	\$39,973,809	\$39,973,809	\$43,440,268
Deferred Vested Participants			
Retirement benefits	\$5,084,446	\$5,084,446	\$5,429,558
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$5,084,446	\$5,084,446	\$5,429,558
Due a Refund of Contributions	\$57,926	\$57,926	\$57,926
<u>Deferred Beneficiaries</u>	\$251,176	\$251,176	\$275,313
Retired Participants			
Service retirements	\$28,758,824	\$28,758,824	\$30,802,203
Disability retirements	\$581,387	\$581,387	\$571,564
Beneficiaries receiving	\$3,541,534	\$3,541,534	\$3,765,014
DROP participants	\$4,611,247	\$4,611,247	\$4,950,580
Sub-total	\$37,492,992	\$37,492,992	\$40,089,361
Grand Total	\$82,860,349	\$82,860,349	\$89,292,426



Actuarial Value of Assets

Table II-A

And the second s	stment Gain (Loss)	Unreco	gnized Gain (Loss)
For the 2016/17 plan year	\$3,549,318	x 20%	\$709,864
For the 2017/18 plan year	\$105,781	x 40%	\$42,312
For the 2018/19 plan year	(\$1,291,503)	x 60%	(\$774,902)
For the 2019/20 plan year	(\$645,852)	x 80%	(\$516,682)
			(\$539,408)

Market Value of Assets as of October 1, 2020 \$87,192,130

Minus DROP account balances (\$485,445)
Minus advance employer contributions \$0

Adjustment for unrecognized gain or loss as shown above, but restricted to an amount that keeps the actuarial value of assets within an 80%-120% corridor of the market value

\$539,408

Actuarial Value of Assets as of October 1, 2020

\$87,246,093

Historical Actuarial Value of Assets October 1, 2011 \$25,770,913 October 1, 2012 \$29,428,849 October 1, 2013 \$34,186,402 October 1, 2014 \$39,139,813 October 1, 2015 \$43,802,617 October 1, 2016 \$49,150,405 October 1, 2017 \$55,087,022 October 1, 2018 \$62,274,992 October 1, 2019 \$69,060,694 October 1, 2020 \$87,246,093

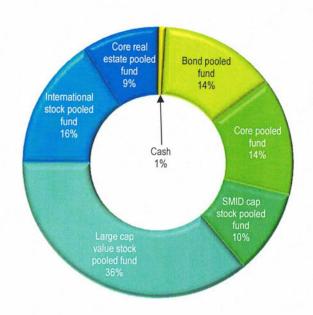


Market Value of Assets

Table II-B

As of October 1, 2020

Market Value of Assets	\$87,192,130
Cash	\$696,551
Bond pooled fund	\$12,102,567
Core pooled fund	\$12,189,636
SMID cap stock pooled fund	\$8,881,020
Large cap value stock pooled fund	\$31,431,847
International stock pooled fund	\$13,843,943
Core real estate pooled fund	\$7,923,263
Employer contribution receivable	\$123,303



Historical Market Value of Assets October 1, 2011 \$26,851,614 October 1, 2012 \$34,322,299 October 1, 2013 \$41,202,814 October 1, 2014 \$47,229,985 October 1, 2015 \$49,091,985 October 1, 2016 \$55,049,778 October 1, 2017 \$64,680,370 October 1, 2018 \$72,691,870 October 1, 2019 \$79,635,741 October 1, 2020 \$87,192,130

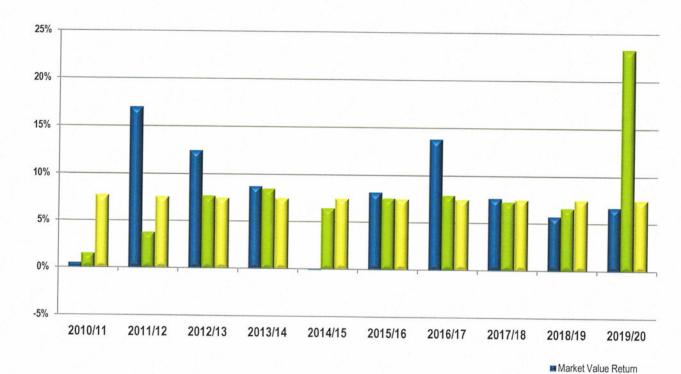


Investment Return

Table II-C

□ Actuarial Value Return

 □ Assumed Return



Annual Investment Returns

	Market	Actuarial		
Plan	Value	Value	Assumed	
Year	Return	Return	Return	
2010/11	0.51%	1.55%	7.75%	
2011/12	16.98%	3.80%	7.60%	
2012/13	12.48%	7.73%	7.50%	
2013/14	8.78%	8.51%	7.50%	
2014/15	-0.06%	6.49%	7.50%	
2015/16	8.20%	7.60%	7.50%	
2016/17	13.84%	7.97%	7.50%	
2017/18	7.66%	7.28%	7.50%	
2018/19	5.75%	6.65%	7.50%	
2019/20	6.70%	23.30%	7.50%	
10yr. Avg.	7.96%	7.96%	7.53%	



Asset Reconciliation		Table II-D
	Market Value	Actuarial Value
As of October 1, 2019	\$79,635,741	\$69,060,694
Increases Due To:		
Employer Contributions	\$3,790,389	\$3,790,389
Employee Contributions	\$544,347	\$544,347
Service Purchase Contributions	\$0	\$0
Total Contributions	\$4,334,736	\$4,334,736
Interest and Dividends	\$0	
Realized Gains (Losses)	\$0	
Unrealized Gains (Losses)	\$5,406,010	
Total Investment Income	\$5,406,010	\$16,311,404
Other Income	\$0	
Total Income	\$9,740,746	\$20,646,140
Decreases Due To:		
Monthly Benefit Payments	(\$2,050,599)	(\$2,050,599)
Refund of Employee Contributions	(\$40,623)	(\$40,623)
DROP Credits	(+ ,)	(\$276,384)
Total Benefit Payments	(\$2,091,222)	(\$2,367,606)
Investment Expenses	\$0	
Administrative Expenses	(\$93,135)	(\$93,135)
Advance Employer Contribution		\$0
Total Expenses	(\$2,184,357)	(\$2,460,741)
As of October 1, 2020	\$87,192,130	\$87,246,093



\$0

\$0

Historical Trust Fund Detail

\$2,872,570

\$2,936,336

2014/15

2015/16

Table II-E

-\$31,288

\$4,102,297

<u>Income</u>							
			Service		Realized	Unrealized	
Plan	Employer	Employee	Purchase	Interest /	Gains I	Gains /	Other
Year	Contribs.	Contribs.	Contribs.	Dividends	Losses	Losses	Income
2010/11	\$3,488,302	\$0	\$25,297	\$0	\$0	\$129,284	\$0
2011/12	\$3,592,027	\$0	\$0	\$0	\$0	\$4,788,443	\$0
2012/13	\$3,582,952	\$5,032	\$50,811	\$0	\$0	\$4,435,541	\$0
2013/14	\$3,388,803	\$204,808	\$0	\$0	\$0	\$3,720,443	\$0

\$363,834

\$417,945

			• -	* -		+ -,,	40
2016/17	\$3,109,997	\$446,412	\$0	\$0	\$0	\$7,747,395	\$0
2017/18	\$4,502,326	\$481,568	\$0	\$0	\$0	\$5,065,294	\$0
2018/19	\$3,944,403	\$495,591	\$313,056	\$0	\$0	\$4,259,241	\$0
2019/20	\$3,790,389	\$544,347	\$0	\$0	\$0	\$5,406,010	\$0

\$0

\$0

\$0

\$0

<u>Expenses</u>					Other Ac	ctuarial Adju	stments
	Monthly					Advance	
Plan	Benefit	Contrib.	Admin.	Invest.	DROP	Employer	
Year	<u>Payments</u>	Refunds	Expenses	Expenses	Credits	Contribs.	
2010/11	\$616,599	\$0	\$83,120	\$0	\$28,905	\$0	
2011/12	\$812,474	\$9,903	\$87,408	\$0	\$52,947	\$0	
2012/13	\$1,111,743	\$0	\$82,078	\$0	-\$52,091	\$105,758	
2013/14	\$1,187,207	\$716	\$98,960	\$0	-\$35,533	\$382,004	
2014/15	\$1,228,602	\$1,682	\$112,832	\$0	\$28,534	-\$189,566	
2015/16	\$1,391,516	\$8,934	\$98,335	\$0	\$65,827	-\$155,031	
2016/17	\$1,570,371	\$8,108	\$94,733	\$0	\$84,622	-\$143,165	
2017/18	\$1,926,988	\$19,192	\$91,508	\$0	-\$120,935	\$0	
2018/19	\$1,913,701	\$62,382	\$92,337	\$0	\$127,516	\$0	
2019/20	\$2,050,599	\$40,623	\$93,135	\$0	\$276,384	\$0	
						7.0	

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, 2019	\$0
Additional Employer Contribution	\$3,790,389
Immediate Application of Advance Employer Contribution	\$0
Minimum Required Contribution	(\$3,790,389)
Net Increase in Advance Employer Contribution	\$0
Advance Employer Contribution as of October 1, 2020	\$0

DROP Account Reconciliation

DROP Balance as of October 1, 2019	\$209,061
DROP Benefit Credits	\$255,487
DROP Investment Credits	\$20,897
DROP Benefits Paid Out	\$0
Net DROP Credit	\$276,384
DROP Balance as of October 1, 2020	\$485 445



507

Summary of Participant Data

Table III-A

As of October 1, 2020

Participant Distribution by Status

Actively Employed Participants Active Participants 283 **DROP** Participants 12 Inactive Participants Deferred Vested Participants 49 Due a Refund of Contributions 47 **Deferred Beneficiaries** 1 Participants Receiving a Benefit Service Retirements 98 **Disability Retirements** 3 Beneficiaries Receiving 14

Total Participants

Numbe	r of Participan	is included	i in Prior Va	luations		
	Active	DROP	Inactive	Retired	Total	
October 1, 2011	239	1	22	40	302	
October 1, 2012	230	2	29	48	309	
October 1, 2013	222	2	28	59	311	
October 1, 2014	237	1	36	64	338	
October 1, 2015	244	2	50	72	36 8	
October 1, 2016	251	4	67	82	404	
October 1, 2017	267	3	79	97	446	
October 1, 2018	273	3	94	103	473	
October 1, 2019	276	6	95	109	486	
October 1, 2020	283	12	97	115	507	



Data Reconciliation

Table III-B

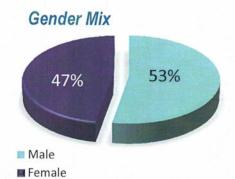
	Active	DROP	Deferred <u>Vested</u>	Due a Refund	Def. Benef.	Service Retiree	Disabled Retiree	Benef. Rec'v.	<u>Total</u>
October 1, 2019	276	6	48	46	1	95	2	12	486
Change in Status Re-employed Terminated Retired	(13) (6)	(1)	2	11		6	1		
Participation Ended Transferred Out Cashed Out Died	(7)	7	(1)	(10)		(3)			(10) (4)
<u>Participation Began</u> Newly Hired Transferred In New Beneficiary	33							2	33
Other Adjustment									
October 1, 2020	283	12	49	47	1	98	3	14	507



Active Participant Data

Table III-C

As of October 1, 2020



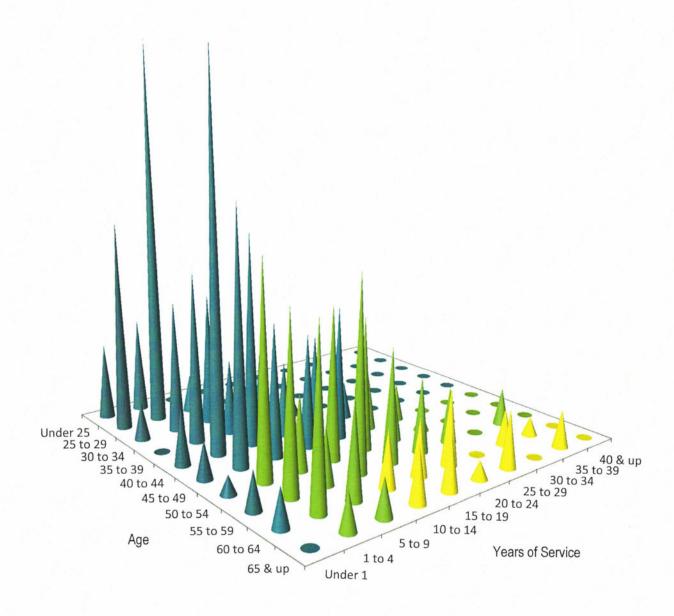
Average Age	46.2 years
Average Service	8.7 years
Total Annualized Compensation for the Prior Year	\$19,146,454
Total Expected Compensation for the Current Year	\$20,078,565
Average Increase in Compensation for the Prior Year	7.95%
Expected Increase in Compensation for the Current Year	5.00%
Accumulated Contributions for Active Employees	\$2,622,857

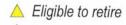


Actual vs. Expected Salary Increases

				Average Expected	Average Actual	
	Average	Average	Average	Salary	Salary	
	Age	Service	Salary	Increase	Increase	
October 1, 2011	46.8	9.3	\$55,503	6.19%	1.93%	
October 1, 2012	47.1	9.4	\$55,056	4.00%	4.08%	
October 1, 2013	48.1	10.0	\$55,891	4.00%	2.30%	
October 1, 2014	47.5	9.8	\$56,613	4.00%	8.03%	
October 1, 2015	48.1	9.9	\$58,486	4.00%	5.36%	
October 1, 2016	48.2	9.7	\$63,019	4.00%	9.57%	
October 1, 2017	47.3	9.2	\$63,134	5.00%	3.63%	
October 1, 2018	46.8	9.0	\$63,868	5.00%	7.03%	
October 1, 2019	46.9	9.1	\$65,274	5.00%	4.07%	
October 1, 2020	46.2	8.7	\$67,655	5.00%	7.95%	







May be eligible to retire

Not eligible to retire



Active Age-Service-Salary Table

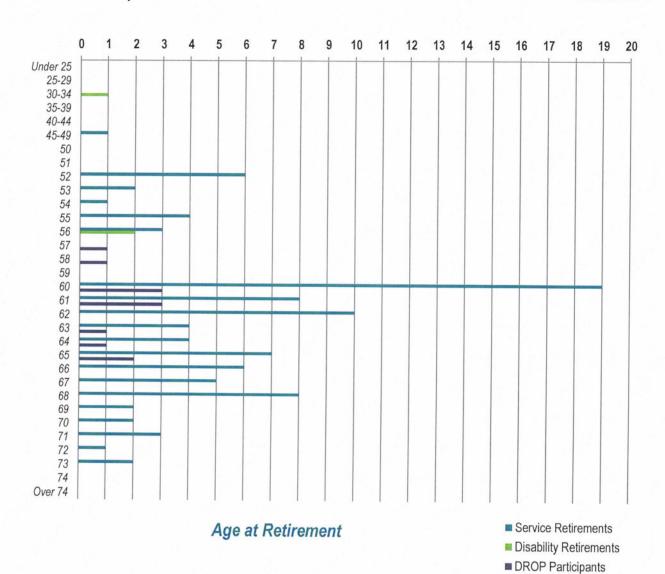
Table III-E

Attained	12.			72 1	Comple	ted Years o	of Service				
Age	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	Total
Under 25	4	5	0	0	0	0	0	0	0	0	9
Avg.Pay	40,510	43,389	0	0	0	0	0	0	0	0	42,109
25 to 29	11	20	2	0	0	0	0	0	0	0	33
Avg.Pay	39,084	47,804	54,408	0	0	0	0	0	0	0	45,298
30 to 34	2	7	7	2	0	0	0	0	0	0	18
Avg.Pay	38,284	64,976	67,242	60,756	0	0	0	0	0	0	62,423
35 to 39	0	9	4	5	1	0	0	0	0	0	19
Avg.Pay	0	74,647	70,555	65,039	53,449	0	0	0	0	0	70,141
40 to 44	3	20	11	4	5	2	0	0	0	0	45
Avg.Pay	65,697	59,801	77,240	68,592	82,633	73,254	0	0	0	0	68,373
45 to 49	2	13	7	6	7	3	2	0	0	0	40
Avg.Pay	36,918	62,485	80,415	95,819	88,176	68,578	75,310	0	0	0	74,939
50 to 54	1	11	4	8	7	3	1	0	0	0	35
Avg.Pay	33,093	60,862	71,324	68,903	67,047	91,346	92,572	0	0	0	67,858
55 to 59	2	9	3	10	6	4	3	0	2	0	39
Avg.Pay	63,055	86,053	64,549	79,783	64,646	80,374	70,215	0	67,598	0	75,571
60 to 64	2	9	5	3	3	4	0	2	1	0	29
Avg.Pay	36,177	61,179	115,397	67,007	73,981	100,123	0	78,249	81,749	0	77,988
65 & up	0	2	2	3	3	1	3	0	2	0	16
Avg.Pay	0	67,697	73,053	66,463	61,331	115,893	69,169	0	84,896	0	72,380
Total	27	105	45	41	32	17	9	2	5	0	283
Avg.Pay	43,371	61,314	77,251	74,279	73,343	86,127	73,482	78,249	77,347	0	67,655



Inactive Participant Data

Table III-F



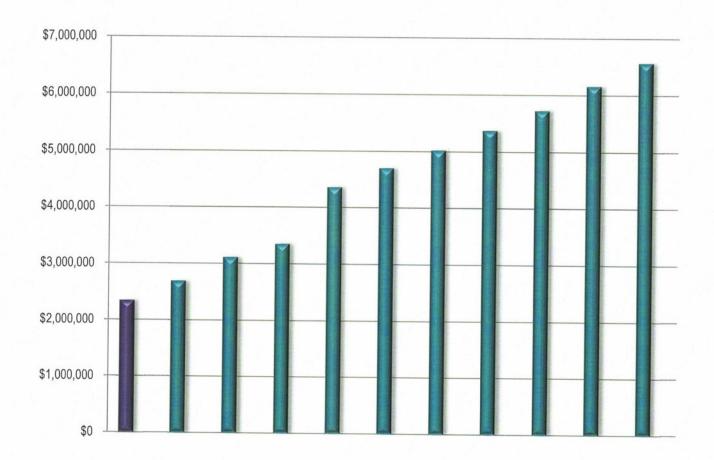
Average Monthly Benefit

Service Retirements	\$1,690.86
Disability Retirements	\$888.34
Beneficiaries Receiving	\$1,365.13
DROP Participants	\$2,178.85
Deferred Vested Participants	\$1,076.59
Deferred Beneficiaries	\$1,858.39



Projected Benefit Payments

Table III-G



<u>Actual</u>						
For the period	October 1,	2019	through	September	30,	2020

00	210	700
2/	.34b	.709

Projected

For the period October 1, 2020 through September 30, 2021	
For the period October 1, 2021 through September 30, 2022	
For the period October 1, 2022 through September 30, 2023	
For the period October 1, 2023 through September 30, 2024	
For the period October 1, 2024 through September 30, 2025	
For the period October 1, 2025 through September 30, 2026	
For the period October 1, 2026 through September 30, 2027	
For the period October 1, 2027 through September 30, 2028	
For the period October 1, 2028 through September 30, 2029	
For the period October 1, 2029 through September 30, 2030	

\$2,696,256 \$3,117,393 \$3,358,069 \$4,364,659 \$4,708,615 \$5,028,099 \$5,379,800 \$5,727,888 \$6,158,590 \$6,567,852



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, adjusted to reflect a five-year phase-in of the unexpected investment gains and losses.

3. Interest (or Discount) Rate

7.00% per annum

4. Salary Increases

Plan compensation is generally assumed to increase at the rate of 5.00% per annum, unless actual plan compensation is known for a prior plan year.

Average final compensation is increased by 4.50% with respect to general employees who terminate their employment prior to October 1, 2023, by 3.00% with respect to such employees who terminate their employment during the period October 1, 2023 through September 30, 2028, and by 1.50% with respect to such employees who terminate their employment during the period October 1, 2028 through September 30, 2033.

Average final compensation is increased by 15.00% with respect to management employees who terminate their employment prior to October 1, 2021, by 10.00% with respect to such employees who terminate their employment during the period October 1, 2021 through September 30, 2026, and by 5.00% with respect to such employees who terminate their employment during the period October 1, 2026 through September 30, 2031.



Summary of Actuarial Methods and Assumptions

Table IV-A

(continued)

5. Decrements

Pre-retirement mortality:

Sex-distinct rates set forth in the PUB-2010 Headcount-Weighted Below Median Employee Mortality Table for general employees, with full generational improvements in mortality using Scale MP-2018 and with male ages set back one year

• Post-retirement mortality:

Sex-distinct rates set forth in the PUB-2010 Headcount-Weighted Below Median Healthy Retiree Mortality Table for general employees, with full generational improvements in mortality using Scale BB and with male ages set back one year

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.

Termination:

The rate of withdrawal for a participant with less than two years of service was assumed to be 18.00% per year. The rate of withdrawal for a participant with at least two years of service, but less than four years of service, was assumed to be 14.00% per year. The rate of withdrawal for a participant with at least four years of service, but less than six years of service, was assumed to be 9.00% per year. With respect to participants with at least six years of service, the termination rates are gender-based, ranging from 14.50% for males and 17.10% 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 with a normal retirement benefit prior to age 60, retirement is assumed to occur at the rate of 70% upon the attainment of normal retirement age, 10% per year at each of the next five years, and 100% six years after normal retirement age. For all other participants, retirement is assumed to occur at the rate of 70% upon the attainment of normal retirement age, 10% per year at each of the next two years, and 100% three years after normal retirement age.

No decrements are assumed during the first year immediately following the valuation date.



Summary of Actuarial Methods and Assumptions

Table IV-A

(continued)

6. Form of Payment

Future retirees have been assumed to select the single life annuity.

7. Expenses

The total projected benefit liability has been loaded by 0.75% 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

Since the completion of the previous valuation, three assumptions have been changed, as follows:

- (1) The mortality basis was changed from the RP-2000 Combined 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) The interest (or discount) rate was decreased from 7.50% per annum to 7.00% per annum.
- (3) The expense loading was reduced from 1.25% of the present value of future benefits to 0.75% of the present value of future benefits.

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

- (1) 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.
- (2) Effective October 1, 2016, the assumed increase in future annual salaries was changed from 4.00% per year to 5.00% per year.
- (3) Effective October 1, 2014, the mortality basis was changed from a 2007 projection of the RP-2000 Mortality Table to a 2015 projection.
- (4) Effective October 1, 2013, in connection with the elimination from pensionable earnings of overtime earned after September 30, 2012 in excess of 300 hours per year and payments for unused sick and annual leave accrued after that date, the loading that was previously applied to average final compensation to account for such extra compensation will gradually be phased out over a 20-year period.
- (5) Effective October 1, 2012, the assumed interest (or discount) rate was reduced from 7.60% per annum to 7.50% per annum.
- (6) Effective October 1, 2011, the assumed interest (or discount) rate was reduced from 7.75% per annum to 7.60% per annum.
- (7) Effective October 1, 2011, the assumed increase in plan compensation was reduced to 4.00% per year.



Changes in Actuarial Methods and Assumptions

Table IV-B

(continued)

- (8) Effective October 1, 2011, a loading was added to average final compensation to account for the payment of unused sick and annual leave upon termination of employment. With respect to general employees, this loading is equal to 6.00% of average final compensation. With respect to management employees, the loading is equal to 20.00% of average final compensation for employment terminations prior to October 1, 2016, 15.00% of average final compensation for employment terminations during the period October 1, 2016 through September 30, 2021, 10.00% of average final compensation for employment terminations during the period October 1, 2026 through September 30, 2031.
- (9) Effective October 1, 2011, no decrements were assumed during the first year immediately following the valuation date.



Table V-A

1. Monthly Accrued Benefit

Employees Hired On and After October 1, 2013:

1.80% of Average Final Compensation multiplied by Credited Service

General Employees Hired Prior to October 1, 2013:

2.00% of Average Final Compensation multiplied by Credited Service

Management Employees Hired Prior to October 1, 2013:

3.00% of Average Final Compensation multiplied by Credited Service

(Note: The benefit payable from the qualified pension plan is limited to the allowable amount pursuant to Internal Revenue Code (IRC) section 415.)

2. Normal Retirement Age and Benefit

Age

Employees Hired On and After October 1, 2013:

Age 65 with at least 10 years of Vested Service; or

Age 60 with at least 30 years of Vested Service

General Employees Hired Prior to October 1, 2013:

Age 60 with at least six years of Vested Service; or

Age 56 with at least 30 years of Vested Service

Management Employees Hired Prior to October 1, 2013:

Age 52 with at least three years of Vested Service; or

Age 48 with at least 20 years of Vested Service

Amount

Monthly Accrued Benefit

Form of Payment

Single life annuity (normal form of payment):

Actuarially reduced 10-year certain and life annuity (optional);

Actuarially reduced 50% joint and contingent annuity (optional);

Actuarially reduced 662/3% joint and contingent annuity (optional);

Actuarially reduced 75% joint and contingent annuity (optional);

Actuarially reduced 100% joint and contingent annuity (optional);

Any other actuarially equivalent form of payment approved by the Board; or

Actuarially equivalent lump sum distribution (automatic if the single sum value of the participant's benefit is less than or equal to \$5,000 or the monthly annuity is less than \$100)

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



Table V-A

(continued)

3. Disability Eligibility and Benefit

Eligibility

Employees Hired On or After October 1, 2013: General Employees Hired Prior to October 1, 2013: Management Employees Hired Prior to October 1, 2013:

10 years of Vested Service Six years of Vested Service Three years of Vested Service

Condition

The participant must become totally and permanently disabled as determined by the Board of Trustees.

Amount Payable

Same as for Normal Retirement

Delayed Retirement Age and Benefit

Age

After Normal Retirement Age

Amount

Monthly Accrued Benefit

Form of Payment

Same as for Normal Retirement

Deferred Vested Benefit

Age

Employees Hired On and After October 1, 2013:

Any age with at least 10 years of Vested Service

General Employees Hired Prior to October 1, 2013:

Any age with at least six years of Vested Service

Management Employees Hired During the Period October 2, 2003 through September 30, 2013:

Any age with at least three years of Vested Service

Management Employees Hired Prior to October 2, 2003:

Any age with no service requirement

Amount

Monthly Accrued Benefit (payable at Normal Retirement Age)

Form of Payment

Same as for Normal Retirement



Table V-A

(continued)

6. Pre-Retirement Death Benefit

In the case of the death of a vested participant prior to retirement, his beneficiary will receive the participant's Monthly Accrued Benefit commencing at the participant's Normal Retirement Age or an actuarially equivalent benefit commencing prior to Normal Retirement Age. If the beneficiary is neither a spouse nor a dependent child, then the pre-retirement death benefit will also be adjusted actuarially to account for any difference between the ages of the participant and beneficiary.

7. Average Final Compensation

Employees Hired On and After October 1, 2013:

Average of the highest six years of Compensation

General Employees Hired Prior to October 1, 2013:

Average of the highest five years of Compensation

Management Employees Hired Prior to October 1, 2013: Average of the highest three years of Compensation

Compensation

Total cash remuneration for services rendered; with respect to bargaining employees, overtime in excess of 300 hours per year earned after September 30, 2012 and payments for unused sick and annual leave accrued after that date are excluded from compensation; with respect to non-bargaining employees, overtime in excess of 300 hours per year earned after June 30, 2011 and payments for unused sick and annual leave accrued after that date are excluded from compensation; annual compensation in excess of \$200,000 (as indexed) is excluded in accordance with Internal Revenue Code (IRC) §401(a)(17).

9. Credited Service

The elapsed time from the participant's date of hire until his date of termination, retirement, or death. In the case of employees who were hired prior to October 1, 2003, the participant must pay the full actuarial cost of his service earned prior to October 1, 2003 in order to receive a retirement benefit for such service. In addition, participants may purchase up to five years of service credit for previous full-time employment with the federal government, including military service, or with any state, county, or city government other than the Town of Davie, provided that no retirement benefit is provided for such service under another retirement plan.

10. Vested Service

The elapsed time from the participant's date of hire until his date of termination, retirement, or death.



Table V-A

(continued)

11. Participation Requirement

All full-time general and management employees of the Town of Davie, Florida automatically become a participant in the plan on their date of hire.

12. Accumulated Contributions

The Employee Contributions accumulated with interest at the rate of 6.00% per annum; if a non-vested participant terminates his employment, he receives his Accumulated Contributions in lieu of any other benefits payable from the plan; vested participants may optionally elect to receive their Accumulated Contributions in lieu of any other benefits payable from the plan.

13. Participant Contribution

3.00% of earnings with respect to participants hired on or after October 1, 2013; 1.00% of earnings with respect to all other participants for the period after the collective bargaining agreement ratification date up to the first payroll after October 1, 2013, increasing to 1.50% of earnings for the period through September 30, 2014, and increasing to 2.50% of earnings thereafter.

14. Definition of Actuarially Equivalent

Interest Rate

8.00% per annum

Mortality Table

1994 Group Annuity Reserving Table, projected to 2002 by Scale AA

15. Automatic Cost-of-Living Adjustment (COLA)

All benefits include an automatic 3% annual cost-of-living adjustment which is effective for payments made at least five years after initial retirement.

16. Plan Effective Date

October 1, 2003

17. Deferred Retirement Option Plan (DROP)

A participant who reaches his Normal Retirement Age is eligible to participate in the DROP for a period of up to 60 months. DROP accounts are credited with interest at the rate of 6.50% per annum.



Summary of Plan Amendments

Table V-B

No significant plan changes were adopted 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) With respect to employees hired after September 30, 2013, average final compensation is based on a six-year average instead of a three- or five-year average. (Ordinance 2013-18)
- (2) With respect to employees hired after September 30, 2013, normal retirement age is the earlier of age 65 with at least 10 years of service or age 60 with at least 30 years of service. (Ordinance 2013-18)
- (3) With respect to employees hired after September 30, 2013, the benefit formula multiplier was reduced from 2.00% or 3.00% to 1.80%. (Ordinance 2013-18)
- (4) With respect to employees hired after September 30, 2013, the vesting requirement, as well as the preretirement death benefit and disability requirements, is increased to 10 years of service. (Ordinance 2013-18)
- (5) With respect to employees hired after September 30, 2013, a mandatory employee contribution was added to the plan equal to 3.00% of pensionable earnings. (Ordinance 2013-18)
- (6) With respect to employees hired prior to October 1, 2013, a mandatory employee contribution was added to the plan equal to 1.00% of pensionable earnings for the period after the collective bargaining agreement ratification date up to the first payroll after October 1, 2013, increasing to 1.50% of pensionable earnings for the period through September 30, 2014, and increasing to 2.50% of pensionable earnings thereafter. (Ordinance 2013-18)
- (7) Overtime earned after September 30, 2012 in excess of 300 hours per year and payments for unused sick and annual leave accrued after that date are excluded from pensionable earnings. (Ordinance 2013-18)
- (8) The plan was been amended with respect to non-bargaining employees to exclude from plan compensation overtime in excess of 300 hours per year earned after June 30, 2011 and payments for unused annual and sick leave that accrues after that date.
- (9) The plan was amended to allow the Town's police or fire chief to join this plan in the event that the chief has been promoted from a position that is covered by the Town's police or firefighter plan. If such an election is made, then a transfer of assets will be made from the police or firefighter plan into this plan, where the amount of the transfer is equal to the actuarially equivalent value of the pension benefit previously accrued under the police or firefighter plan.

