# CITY OF ATLANTA FIREFIGHTERS' PENSION FUND

Actuarial Valuation As of July 1, 2012

DETERMINES THE CONTRIBUTION For the 2013/14 Fiscal Year





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March 11, 2013

### Introduction

This report presents the results of the July 1, 2012 actuarial valuation of the City of Atlanta Firefighters' Pension Fund. This valuation is based upon the participant data provided as of July 1, 2012 by the plan administrator and asset information provided as of June 30, 2012 by the plan auditor. Except for a cursory review for reasonableness, 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 July 1, 2012 and to determine the minimum required contribution under Georgia Code Section 47-20-10 for the City's 2013/14 fiscal year. In addition, this report provides a projection of the long-term funding requirements of the plan, accounting disclosures pursuant to Governmental Accounting Standards Board Statement Nos. 25 and 27 (GASB 25/27), 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 V-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 City's 2013/14 fiscal year. The minimum required contribution rate is 46.41% of covered payroll, which represents an increase of 3.81% of payroll from the prior valuation.

Table I-C provides a breakdown of the sources of change in the contribution rate. Significantly, the rate increased by 4.56% of payroll due to investment losses and decreased by 0.65% due to demographic experience. The market value



of assets only earned 1.49% during the 2011/12 plan year, whereas a 7.75% annual investment return is required to maintain a stable contribution rate.

Georgia Code Section 47-20-10 sets forth many of the rules concerning the minimum required contribution for public pension plans within the state. Essentially, the City will meet the minimum funding requirement if the employer contributions are at least equal to the annual required contribution under GASB 25/27. In addition, Georgia Code Section 47-20-13 exempts public plan sponsors from the minimum funding requirements if the plan's actuarial value of assets exceeds 150% of the present value of accumulated retirement system benefits.

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 \$816,332,424. As illustrated in Table I-A, current assets are sufficient to cover \$505,692,000 of this amount, the employer's expected contribution for the 2012/13 plan year will cover \$18,231,690 of this amount, the employer's expected contribution for the 2013/14 plan year will cover \$20,656,154 of this amount, and future employee contributions will cover \$38,889,974 of this amount, leaving \$232,862,606 to be covered by future employer funding. Again, demographic and investment experience that differs from that assumed will either increase or decrease the future employer funding requirement.

#### 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-C provide information needed by both the plan's and the employer's accountants in order to prepare the relevant financial statements that cover the period July 1, 2012 through June 30, 2013. Tables III-A through III-F provide information concerning the assets of the trust fund. Specifically, Table III-A shows the development of the actuarial value of assets, which is based on the market value. Tables IV-A through IV-F provide statistical information concerning the plan's participant population. In particular, Table IV-F 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 V-A through VI-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 July 1, 2012, as well as a summary of the changes that have occurred since the previous valuation report was prepared.

#### Plan Amendment

Since the previous valuation report was prepared, the plan has been amended effective November 1, 2011 to increase the employee contribution rate by 5% of salary for those employees hired during the period 1984 through August 31, 2011. In addition, benefits have been changed for employees hired after August 31, 2011 as follows:

- The benefit formula multiplier has been reduced to 1.00% with a maximum benefit equal to 80% of average monthly earnings;
- (2) The employee contribution rate has been reduced to 8.00% of plan compensation;

- (3) The averaging period has been increased to 10 years for purposes of determining average monthly earnings;
- (4) The normal retirement age has been increased to age 57;
- (5) The earliest retirement age is age 47 for those individuals who have earned less than 30 years of service;
- (6) The early retirement reduction has been increased to 6.00% per year;
- (7) Unused sick leave is excluded from plan compensation;
- (8) The automatic annual cost-of-living adjustment (COLA) has been limited to 1.00% per year; and
- (9) The normal form of payment has been changed to a single life annuity with a survivor pension equal to 75% of an actuarially adjusted pension, where the actuarial adjustment is equal to the ratio on the date of death of the present value of the remaining life annuity payable to the retiree to the present value of a life annuity payable to the beneficiary.

The plan changes described above reduced the minimum required contribution by 0.10% of payroll for the 2013/14 plan year.

#### 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 Georgia Code Section 47-20-10. 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,

Charl J. C.

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

Enrolled Actuary No. 11-04927

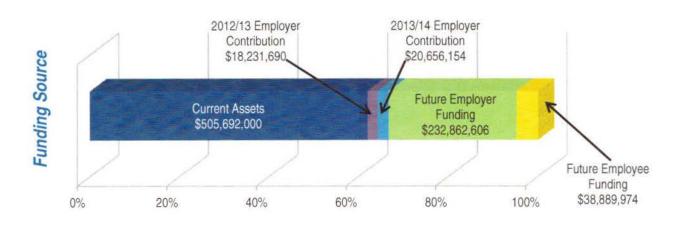
The individual above is a member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.



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## Minimum Required Contribution

### Table I-A



### For the 2013/14 Fiscal Year

\$12,565,292	Entry Age Normal Cost for the 2012/13 Plan Year
\$12,040,362	Unfunded Liability Amortization Payment for the 2012/13 Plan Year
\$213,987	Expense Allowance for the 2012/13 Plan Year
(\$5,114,289)	Expected Employee Contribution for the 2012/13 Plan Year
\$776,421	Adjustment to Reflect Semi-Monthly Employer Contributions
\$20,481,773	
(\$18,231,690)	Expected Employer Contribution for the 2012/13 Plan Year
\$2,250,083	Remaining Contribution Due/(Credit) for the 2012/13 Plan Year
x 0.0775	
\$174,381	One Year's Interest Charge/(Credit) on the Remaining Contribution
\$20,656,154	Preliminary Employer Contribution for the 2013/14 Fiscal Year
÷ \$44,509,290	Expected Payroll for the 2013/14 Fiscal Year

### Minimum Required Contribution Rate

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

#### Additional Disclosures

Present Value of Future Compensation	\$325,530,484
Present Value of Future Employer Contributions	\$271,750,450
Present Value of Future Employee Contributions	\$38,889,974

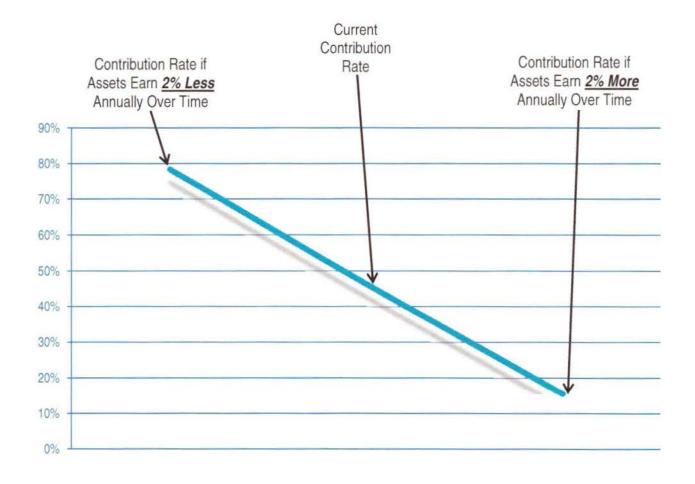


46.41%

# PAGE |-1

### 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	42.60%
Increase (decrease) due to investment gains and losses	4.56%
Increase (decrease) due to demographic experience	-0.65%
Increase (decrease) due to plan amendments	-0.10%
Increase (decrease) due to actuarial assumption changes	0.00%
Increase (decrease) due to actuarial method changes	0.00%
Current minimum required contribution rate	46.41%

### Source of Change in the Unfunded Liability

Previous unfunded liability	\$220,945,169
Increase due to interest	\$17,123,251
Decrease due to amortization payments	(\$11,749,156)
Increase (decrease) due to plan experience	(\$4,249,355)
Increase (decrease) due to plan amendments	\$41,164
Increase (decrease) due to actuarial assumption changes	\$0
Increase (decrease) due to actuarial method changes	\$0
Current unfunded liability	\$222,111,073



# Present Value of Future Benefits

# Table I-D

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
Actively Employed Participants			
Retirement benefits	\$274,718,012	\$274,372,460	\$274,372,460
Termination benefits	\$11,627,128	\$11,588,114	\$11,588,114
Disability benefits	\$12,524,143	\$12,506,919	\$12,506,919
Death benefits	\$875,448	\$887,083	\$887,083
Refund of employee contributions	\$138,486	\$132,617	\$132,617
Sub-total	\$299,883,217	\$299,487,193	\$299,487,193
Deferred Vested Participants			
Retirement benefits	\$19,782	\$19,782	\$19,782
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$19,782	\$19,782	\$19,782
Due a Refund of Contributions	\$0	\$0	\$0
Deferred Beneficiaries	\$574,427	\$574,427	\$574,427
Retired Participants			
Service retirements	\$401,096,811	\$401,096,811	\$401,096,811
Disability retirements	\$72,249,825	\$72,249,825	\$72,249,825
Beneficiaries receiving	\$41,276,734	\$41,276,734	\$41,276,734
DROP participants	\$0	\$0	\$0
Sub-total	\$514,623,370	\$514,623,370	\$514,623,370
Grand Total	\$815,100,796	<u>\$814,704,772</u>	<u>\$814,704,772</u>



# Present Value of Accrued Benefits

# Table I-E

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
Actively Employed Participants			
Retirement benefits	\$151,414,711	\$151,379,968	\$151,379,968
Termination benefits	\$6,091,416	\$6,091,246	\$6,091,246
Disability benefits	\$8,860,196	\$8,853,878	\$8,853,878
Death benefits	\$468,416	\$476,032	\$476,032
Refund of employee contributions	\$74,368	\$74,368	\$74,368
Sub-total	\$166,909,107	\$166,875,492	\$166,875,492
Deferred Vested Participants			
Retirement benefits	\$19,782	\$19,782	\$19,782
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$19,782	\$19,782	\$19,782
Due a Refund of Contributions	\$0	\$0	\$0
Deferred Beneficiaries	\$574,427	\$574,427	\$574,427
Retired Participants			
Service retirements	\$401,096,811	\$401,096,811	\$401,096,811
Disability retirements	\$72,249,825	\$72,249,825	\$72,249,825
Beneficiaries receiving	\$41,276,734	\$41,276,734	\$41,276,734
DROP participants	\$0	\$0	\$0
Sub-total	\$514,623,370	\$514,623,370	\$514,623,370
Grand Total	\$682,126,686	<u>\$682,093,071</u>	<u>\$682,093,071</u>



# Table I-F

# Present Value of Vested Benefits

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
Actively Employed Participants			
Retirement benefits	\$135,520,720	\$135,490,864	\$135,490,864
Termination benefits	\$5,786,698	\$5,786,698	\$5,786,698
Disability benefits	\$8,860,196	\$8,853,878	\$8,853,878
Death benefits	\$467,032	\$474,644	\$474,644
Refund of employee contributions	\$258,948	\$258,948	\$258,948
Sub-total	\$150,893,594	\$150,865,032	\$150,865,032
Deferred Vested Participants			
Retirement benefits	\$19,782	\$19,782	\$19,782
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$19,782	\$19,782	\$19,782
Due a Refund of Contributions	\$0	\$0	\$0
Deferred Beneficiaries	\$574,427	\$574,427	\$574,427
Retired Participants			
Service retirements	\$401,096,811	\$401,096,811	\$401,096,811
Disability retirements	\$72,249,825	\$72,249,825	\$72,249,825
Beneficiaries receiving	\$41,276,734	\$41,276,734	\$41,276,734
DROP participants	\$0	\$0	\$0
Sub-total	\$514,623,370	\$514,623,370	\$514,623,370
Grand Total	<u>\$666,111,173</u>	<u>\$666,082,611</u>	<u>\$666,082,611</u>



Table I-G

### Entry Age Normal Accrued Liability

#### **Old Assumptions Old Assumptions** New Assumptions w/o Amendment w/ Amendment w/ Amendment Actively Employed Participants **Retirement benefits** \$195,294,865 \$195,340,813 \$195,340,813 Termination benefits \$7,935,529 \$7,933,031 \$7.933.031 **Disability benefits** \$8,637,219 \$8.634,276 \$8.634.276 \$588,754 \$591,064 Death benefits \$591,064 Refund of employee contributions \$87,963 \$86,310 \$86,310 Sub-total \$212,544,330 \$212,585,494 \$212,585,494 Deferred Vested Participants \$19,782 Retirement benefits \$19,782 \$19,782 Termination benefits \$0 \$0 \$0 **Disability benefits** \$0 \$0 \$0 Death benefits \$0 \$0 \$0 \$0 Refund of employee contributions \$0 \$0 Sub-total \$19,782 \$19,782 \$19,782 \$0 Due a Refund of Contributions \$0 \$0 **Deferred Beneficiaries** \$574,427 \$574,427 \$574,427 **Retired Participants** Service retirements \$401,096,811 \$401,096,811 \$401,096,811 **Disability** retirements \$72,249,825 \$72,249,825 \$72,249,825 Beneficiaries receiving \$41,276,734 \$41,276,734 \$41,276,734 **DROP** participants \$0 \$0 \$0 Sub-total \$514,623,370 \$514,623,370 \$514,623,370 Grand Total \$727,761,909 \$727.803.073 \$727.803.073 less Actuarial Value of Assets (\$505,692,000) (\$505,692,000) (\$505,692,000) Unfunded Accrued Liability \$222,111,073 \$222,069,909 \$222,111,073



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# Entry Age Normal Cost

# Table I-H

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
Actively Employed Participants			
Retirement benefits	\$11,029,511	\$10,998,775	\$10,998,775
Termination benefits	\$671,760	\$667,214	\$667,214
Disability benefits	\$823,367	\$820,154	\$820,154
Death benefits	\$50,257	\$51,520	\$51,520
Refund of employee contributions	\$29,400	\$27,629	\$27,629
Sub-total	\$12,604,295	\$12,565,292	\$12,565,292
Deferred Vested Participants			
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
Due a Refund of Contributions	\$0	\$0	\$0
Deferred Beneficiaries	\$0	\$0	\$0
Retired Participants			
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
Grand Total	<u>\$12,604,295</u>	<u>\$12,565,292</u>	<u>\$12,565,292</u>



# **Accounting Results**

Table II-A

# GASB 25/27 Results

### Development of the Net Pension Obligation (Asset)

\$0	Net Pension Obligation (Asset) as of July 1, 2011	
\$21,092,000	Annual Pension Cost for the 2011/12 Plan Year	
(\$21,092,000)	Employer Contributions for the 2011/12 Plan Year	
\$0	Net Increase (Decrease) in NPO	
\$0	Net Pension Obligation (Asset) as of July 1, 2012	

	For the 2013/14 Plan Year
Development of the Annual Required Contribution (ARC)	
Employer Normal Cost	\$7,451,003
Amortization of the UAAL	\$12,040,362
Expense Allowance	\$213,987
Amortization of the Net Pension Obligation (Asset)	\$0
Interest Adjustment	\$950,802
Annual Required Contribution (ARC)	\$20,656,154
Development of the Annual Pension Cost (APC)	
Annual Required Contribution (ARC)	\$20,656,154
Interest on the Net Pension Obligation (Asset)	\$0
Adjustment to the ARC	\$0
Annual Pension Cost (APC)	\$20,656,154



# Accounting Results

# GASB 25/27 Disclosures

# Table II-B

	Annual		Annual	
Year Ended	Required	%	Pension	%
June 30	Contribution	Contrib.	Cost	Contrib
2007	\$27,502,000	100%	\$27,502,000	100%
2008	\$26,373,000	100%	\$26,373,000	100%
2009	\$28,752,000	100%	\$28,752,000	100%
2010	\$25,865,000	100%	\$25,865,000	100%
2011	\$24,912,000	100%	\$24,912,000	100%
2012	\$21,092,000	100%	\$21,092,000	100%

### Schedule of Employer Contributions

### Schedule of Funding Progress

	(1)	(2)	(3)	(4)	(5)	(6)
		Actuarial				UAAL
Actuarial	Actuarial	Accrued	Unfunded			as % of
Valuation	Value of	Liability	AAL	Funded	Covered	Covered
Date	Assets	(AAL)	(UAAL)	Ratio	Payroll	Payroll
			(2) - (1)	(1) ÷ (2)		(3) ÷ (5)
January 1, 2008	\$340,075,000	\$652,816,000	\$312,741,000	52.09%	\$45,561,000	686.42%
January 1, 2009	\$408,090,000	\$708,347,000	\$300,257,000	57.61%	\$43,275,000	693.83%
January 1, 2010	\$422,791,314	\$699,174,482	\$276,383,168	60.47%	\$43,910,390	629.43%
January 1, 2011	\$481,640,221	\$732,356,772	\$250,716,551	65.77%	\$42,963,376	583.56%
July 1, 2011	\$509,590,000	\$730,535,169	\$220,945,169	69.76%	\$39,482,064	559.61%
July 1, 2012	\$505,692,000	\$727,803,073	\$222,111,073	69.48%	\$42,797,394	518.98%

### Additional Information

Valuation Date July 1, 2012 Actuarial Cost Method Entry age normal Amortization Method Level percentage, closed Remaining Amortization Period 29 years Asset Valuation Method Market value Discount Rate 7.75% Salary Increase Rate 4.00%



# PAGE II-2

# Accounting Results

Table II-C

## SFAS 35 Disclosures

### Actuarial Present Value of Accrued Benefits

	As of July 1, 2011	As of July 1, 2012
Vested Benefits		
Participants currently receiving benefits	\$516,835,180	\$514,623,370
Other participants	\$153,144,135	\$151,459,241
Sub-total	\$669,979,315	\$666,082,611
Non-Vested Benefits	\$16,216,757	\$16,010,460
Total Benefits	\$686,196,072	\$682,093,071
<u>Funded Percentage</u> (based on the market value of assets)	74.26%	74.14%

### Statement of Change in Actuarial Present Value of Accrued Benefits

Interest Benefits accumulated Benefits paid Plan amendments Changes in actuarial methods and assumptions	(\$19,916,582) (\$37,333,000) (\$33,615)
Benefits accumulated	(\$19,916,582)
	West state in the second state of
Interest	
Increase (Decrease) Due To:	\$53,180,196
Actuarial Present Value as of July 1, 2011	\$686,196,072



### Actuarial Value of Assets

Table III-A

Market Value of Assets as of July 1, 2012 \$505,692,000

Minus advance employer contributions

Actuarial Value of Assets as of July 1, 2012

\$505,692,000

\$0

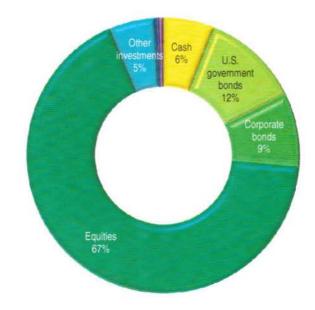
January 1, 2004	N/A
January 1, 2005	N/A
January 1, 2006	N/A
January 1, 2007	N/A
January 1, 2008	\$340,075,000
January 1, 2009	\$408,090,000
January 1, 2010	\$422,791,314
January 1, 2011	\$481,640,221
July 1, 2011	\$509,590,000
July 1, 2012	\$505,692,000



# Assets

# Table III-B

# Market Value of Assets



### As of July 1, 2012

Market Value of Assets	\$505,692,000
Cash	\$30,990,000
U.S. government bonds	\$59,313,000
Corporate bonds	\$43,904,000
Equities	\$343,509,000
Other investments	\$27,560,000
Interest receivable	\$1,369,000
Other receivables	\$57,000
Employer contribution receivable	\$1,186,000
Employee contribution receivable	\$240,000
Due to brokers	(\$2,317,000)
Other accounts payable	(\$119,000)

Historical Madeat	Value of Accesto
Historical Market January 1, 2004	Value of Assets N/A
January 1, 2005	N/A
January 1, 2006	N/A
January 1, 2007	N/A
January 1, 2008	\$411,686,841
	\$339,458,639
January 1, 2009	\$339,458,639 \$421,599,215
January 1, 2009 January 1, 2010	\$421,599,215
January 1, 2009	

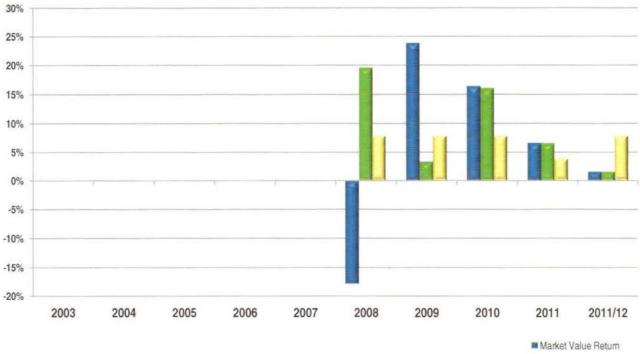


# PAGE III-2

# Assets

### Investment Return

Table III-C



Annual Investment Returns

Market V	alue Hetum
Actuarial	Value Return

Assumed Return

Plan	Market Value	Actuarial Value	Assumed	
Year	Return	Return	Return	
2003	N/A	N/A	N/A	
2004	N/A	N/A	N/A	
2005	N/A	N/A	N/A	
2006	N/A	N/A	N/A	
2007	N/A	N/A	N/A	
2008	-17.86%	19.54%	7.75%	
2009	23.77%	3.28%	7.75%	
2010	16.33%	16.00%	7.75%	
2011	6.52%	6.52%	3.80%	
2011/12	1.49%	1.49%	7.75%	



# Assets

Table III-D		Asset Reconciliation
Actuarial Value	Market Value	
\$509,590,000	\$509,590,000	As of July 1, 2011
		Increases Due To:
\$21,092,000	\$21,092,000	Employer Contributions
\$4,891,000	\$4,891,000	Employee Contributions
\$25,983,000	\$25,983,000	Total Contributions
	\$10,283,000	Interest and Dividends
\$7,512,000	(\$324,000) \$9,959,000	Gains (Losses) Total Investment Income
	\$75,000	Other Income
\$33,495,000	\$36,017,000	Total Income
		Decreases Due To:
(\$37,333,000)	(\$37,333,000)	Benefit Payments
(\$37,333,000)	(\$37,333,000)	Total Benefit Payments
(\$60,000)	(\$2,522,000) (\$60,000)	Investment Expenses Administrative Expenses
\$0		Advance Employer Contribution
(\$37,393,000)	(\$39,915,000)	Total Expenses
\$505,692,000	\$505,692,000	As of July 1, 2012



# PAGE III-4

# Historical Trust Fund Detail

### Table III-E

### Income

Plan	Employer	Employee	Interest /	Gains /	Other
Year	Contribs.	Contribs.	Dividends	Losses	Income
20	03 N/A	N/A	N/A	N/A	N/A
20	04 N/A	N/A	N/A	N/A	N/A
20	05 N/A	N/A	N/A	N/A	N/A
20	06 N/A	N/A	N/A	N/A	N/A
20	07 N/A	N/A	N/A	N/A	N/A
20	08 \$28,752,000	\$2,920,034	\$11,864,299	-\$82,726,401	\$476,858
20	09 \$22,826,650	\$3,566,186	\$11,622,333	\$70,709,177	\$469,298
20	10 \$23,803,695	\$3,496,705	\$10,227,517	\$60,161,207	\$152,680
20	11 \$12,456,000	\$1,785,000	\$4,531,000	\$27,924,279	\$0
2011/	12 \$21,092,000	\$4,891,000	\$10,283,000	-\$324,000	\$75,000

#### Expenses

#### Other Actuarial Adjustments

					Advance
Plan		Benefit	Admin.	Invest.	Employer
Year		Payments	Expenses	Expenses	Contribs.
	2003	N/A	N/A	N/A	N/A
	2004	N/A	N/A	N/A	N/A
	2005	N/A	N/A	N/A	N/A
	2006	N/A	N/A	N/A	N/A
	2007	N/A	N/A	N/A	N/A
	2008	\$29,504,175	\$735,779	\$3,275,038	\$0
	2009	\$24,722,331	\$379,592	\$1,951,145	\$0
	2010	\$35,226,102	\$230,473	\$2,344,223	\$0
	2011	\$17,573,000	\$24,500	\$1,149,000	\$0
2	2011/12	\$37,333,000	\$60,000	\$2,522,000	\$0

Note: Amounts shown for the 2011 short plan year are estimated.



# Table IV-A

# Summary of Participant Data

### As of July 1, 2012

Actively Employed Participants	
Active Participants	849
DROP Participants	0
Inactive Participants	
Deferred Vested Participants	1
Due a Refund of Contributions	0
Deferred Beneficiaries	2
Participants Receiving a Benefit	
Service Retirements	634
Disability Retirements	141
<ul> <li>Beneficiaries Receiving</li> </ul>	217
Total Participants	1,844

Participant Distribution by Status

	Active	DROP	Inactive	Retired	Total
January 1, 2004	830	0	0	748	1,578
January 1, 2005	901	0	0	749	1,650
January 1, 2006	861	0	0	814	1,675
January 1, 2007	997	0	0	863	1,860
January 1, 2008	991	0	0	918	1,909
January 1, 2009	896	0	0	1,002	1,898
January 1, 2010	864	0	0	924	1,788
January 1, 2011	830	0	3	966	1,799
July 1, 2011	884	0	3	1,001	1,888
July 1, 2012	849	0	3	992	1,844

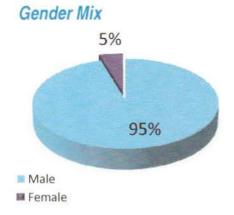


Data

# Active Participant Data

Table IV-B

### As of July 1, 2012



Average Age	39.8 years
Average Service	11.9 years
Total Annualized Compensation for the Prior Year	\$44,332,011
Total Expected Compensation for the Current Year	\$42,797,394
Average Increase in Compensation for the Prior Year	N/A
Expected Increase in Compensation for the Current Year	4.00%
Accumulated Contributions for Active Employees	\$37,357,719

Actual vs. Expected Salary Increases



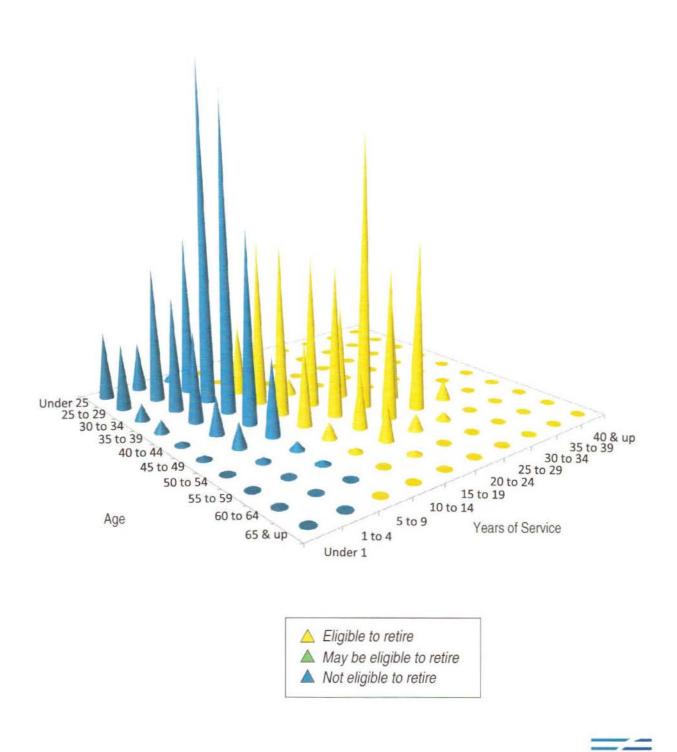
	Average	Average	Average	Average Expected Salary	Average Actual Salary
	Age	Service	Salary	Increase	Increase
January 1, 2004	42.2	14.9	\$46,634	N/A	N/A
January 1, 2005	41.6	15.1	\$46,708	N/A	N/A
January 1, 2006	41.4	14.7	\$53,415	4.50%	6.50%
January 1, 2007	39.9	13.1	\$55,881	4.00%	8.42%
January 1, 2008	40.2	13.2	\$52,130	4.00%	1.60%
January 1, 2009	40.4	13.4	\$51,624	4.00%	1.81%
January 1, 2010	40.8	12.8	\$50,638	4.00%	7.92%
January 1, 2011	40.5	12.2	\$52,793	4.00%	7.42%
July 1, 2011	39.2	11.1	\$43,527	1.98%	N/A
July 1, 2012	39.8	11.9	\$52,217	4.00%	N/A





# Active Age-Service Distribution

Table IV-C



# Data

Table IV-D

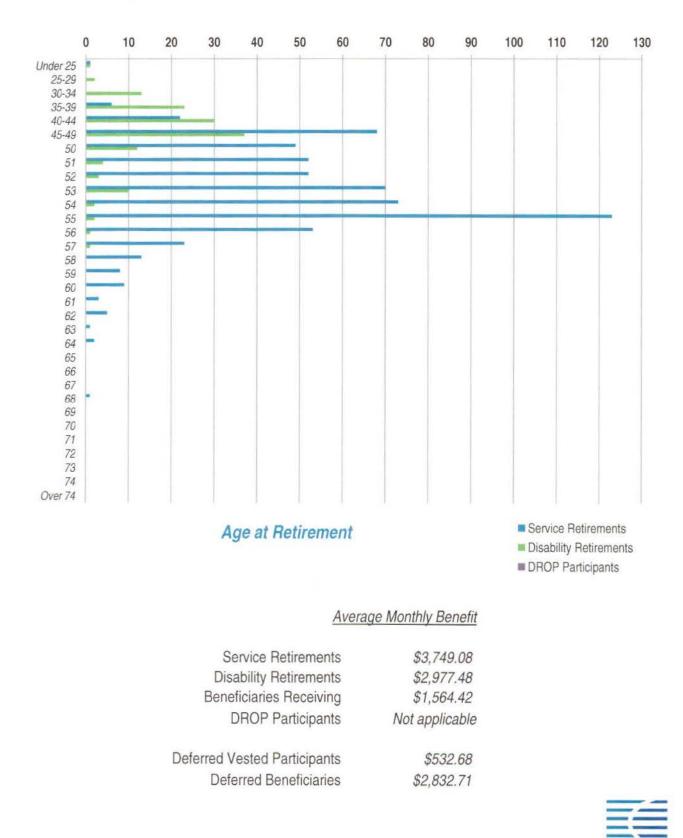
### Active Age-Service-Salary Table

#### Attained **Completed Years of Service** 20 to 24 Age Under 1 5 to 9 10 to 14 15 to 19 25 to 29 30 to 34 35 to 39 40 & up Total 1 to 4 Under 25 Avg.Pay 16,731 34,884 38,582 25,168 25 to 29 Avg.Pay 38,354 35,644 16,764 41,028 30 to 34 43,532 45,347 Avg.Pay 14,056 36,796 41,458 35 to 39 Avg.Pay 17,263 39,842 45,461 51,815 56,008 46,069 40 to 44 Avg.Pay 14,241 40,352 46,328 50,304 71,400 75,592 57,015 45 to 49 Avg.Pay 9.637 45,159 43,907 60,539 64,790 77,126 66,914 66,006 50 to 54 64,536 Avg.Pay 178,616 47,150 53,410 65,593 63,983 71,950 65,184 55 to 59 Avg.Pay 43,887 48,658 57,732 65,914 74,464 60,136 60 to 64 Avg.Pay 60,162 60,162 65 & up Avg.Pay Total Avg.Pay 16,298 39,663 44,215 51,809 66,202 72,837 65,684 71,950 52,217



### Inactive Participant Data

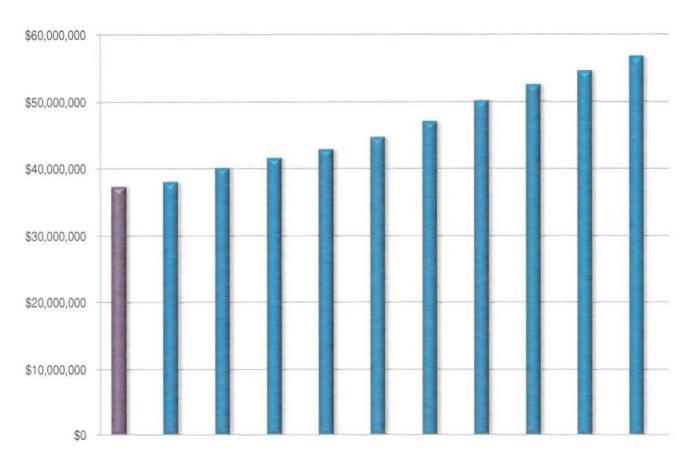
### Table IV-E



Data

### **Projected Benefit Payments**

Table IV-F



#### Actual

For the period July 1, 2011 through June 30, 2012

\$37,333,000

### Projected

For the period July 1, 2012 through June 30, 2013 For the period July 1, 2013 through June 30, 2014 For the period July 1, 2014 through June 30, 2015 For the period July 1, 2015 through June 30, 2016 For the period July 1, 2016 through June 30, 2017 For the period July 1, 2017 through June 30, 2018 For the period July 1, 2018 through June 30, 2019 For the period July 1, 2019 through June 30, 2020 For the period July 1, 2020 through June 30, 2021 For the period July 1, 2021 through June 30, 2022

\$38,037,964 \$40,117,284 \$41,587,539 \$42,840,931 \$44,681,400 \$47,062,376 \$50,242,672 \$50,242,672 \$52,603,846 \$54,658,939 \$56,817,678



### Summary of Actuarial Methods and Assumptions

Table V-A

#### 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 ending 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 valuation date for all active participants.

#### 2. Asset Method

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

#### 3. Interest (or Discount) Rate

7.75% per annum

#### 4. Salary Increases

Plan compensation is assumed to increase at the rate of 4.00% per annum, unless actual plan compensation is known for a prior plan year.

#### 5. Decrements

- Pre-retirement mortality: Sex-distinct rates set forth in the RP-2000 Mortality Table for non-annuitants, projected to 2007 by Scale AA, as published by the IRS for purposes of IRC section 430; deaths prior to retirement are assumed not to be serviceconnected; future generational improvements in mortality have not been reflected.
- Post-retirement mortality: Sex-distinct rates set forth in the RP-2000 Mortality Table for annuitants, projected to 2007 by Scale AA, as published by the IRS for purposes of IRC section 430; future generational improvements in mortality have not been reflected.
- Disability: Sex-distinct rates set forth in the Wyatt 1985 Disability Study (Class 4); 67% of disabilities are assumed to be service-connected.



# Summary of Actuarial Methods and Assumptions

## Table V-A

(continued)

• Termination: Withdrawal rates were derived from a study of actual plan experience covering the period 1982 through 1986. A sample of the withdrawal rates is set forth in the following table:

Age	<u>Rate</u> 5.454%	Age	Rate	Age	Rate	Age	<u>Rate</u> 1.210% 0.000%
20	5.454%	30	3.615%	40	1.804%	50	1.210%
	4.218%		2.866%	45	1.313%	55	0.000%

Retirement: Retirement is assumed to occur at normal retirement age.

### 6. Unused Vacation

All participants are assumed to have accumulated 30 days of unused vacation upon termination of employment, retirement, or death.

### 7. Payroll Increase and Amortization Period

Total payroll has been assumed to grow at the rate of 4.00% per year for purposes of amortizing the unfunded actuarial accrued liability as a level percentage of payroll; the amortization period is established by City ordinance as a closed 30-year period beginning July 1, 2011.

### 8. Expenses

Administrative expenses are assumed to be 0.50% of future payroll. In addition, the interest rate set forth in item 3. above is assumed to be net of investment expenses and commissions.

### 9. Cost-of-Living Adjustment

We have assumed that all eligible retirees will receive an automatic cost-of-living adjustment equal to 3.00% per annum.

### 10. Surviving Beneficiaries

Those active participants who are making the additional 1% employee contribution to provide a survivor benefit to their eligible beneficiaries are assumed to have only one surviving beneficiary of the opposite gender of the employee. Males are assumed to be three years older than females for this purpose.



# Changes in Actuarial Methods and Assumptions

Table V-B

No methods or assumptions have been changed from those used to complete the previous valuation.



### Table VI-A

### 1. Monthly Accrued Benefit

For participants who are hired after August 31, 2011:

1% of Average Monthly Earnings multiplied by up to 80 years of Creditable Service For participants who are hired during the period July 1, 2010 through August 31, 2011:

2% of Average Monthly Earnings multiplied by up to 50 years of Creditable Service

For all other participants who are covered by the '05 Amendment:

3% of Average Monthly Earnings multiplied by up to 26.667 years of Creditable Service For all other participants who are not covered by the '05 Amendment:

2% of Average Monthly Earnings multiplied by Creditable Service earned through February 28, 2001 plus 3% of Average Monthly Earnings multiplied by Creditable Service earned thereafter

### 2. Normal Retirement Age and Benefit

Age

Any age with at least 30 years of Creditable Service (only for participants who are covered by the '05 Amendment); or

Age 55 with at least 10 years of Creditable Service (only for participants who are hired prior to July 1, 2010); or

Age 55 with at least 15 years of Creditable Service (only for participants who are hired prior to September 1, 2011); or

Age 57 with at least 15 years of Creditable Service; or

Age 65 with at least 5 years of Creditable Service

### Amount

Monthly Accrued Benefit

### Form of Payment

Life annuity (for those participants without an eligible beneficiary); or

75% joint and contingent annuity (for those participants with an eligible beneficiary; benefits continue in equal shares to the participant's dependent children upon the death of the participant's spouse or domestic partner or, for participants not covered by the '86 Amendment, upon the remarriage of the participant's spouse or domestic partner; survivor benefits are actuarially adjusted with respect to participants who are hired after August 31, 2011)

Note: All annuity forms of payment include an automatic cost-of-living adjustment effective each January 1 based on the increase in the Consumer Price Index as of the preceding November 1 and limited to 3% (*limited to 1% with respect to participants who are hired after August 31, 2011*). All annuity forms of payment also provide a minimum payout equal to the employee's accumulated contributions, with interest credited after 1985 at the rate of 5% per year (or less than 5% with respect to any year during which the trust fund earns less than 5% on its investments).



Table VI-A

(continued)

### 3. Early Retirement Age and Benefit

Age

Any age with at least 10 years of Creditable Service Service (15 years of Creditable Service for participants who are hired after June 30, 2010; minimum age of 47 for participants who are hired after August 31, 2011)

#### Amount

Monthly Accrued Benefit (payable at Normal Retirement Age); or

- Monthly Accrued Benefit reduced by ½% for each of the first 60 months and by ¼% for each additional month by which the participant's Early Retirement Age precedes Normal Retirement Age (payable at Early Retirement Age and applicable only to those participants who are hired prior to September 1, 2011); or
- Monthly Accrued Benefit reduced by ½% for each month by which the participant's Early Retirement Age precedes Normal Retirement Age (payable at Early Retirement Age and applicable only to those participants who are hired after August 31, 2011); or
- Monthly Accrued Benefit reduced by ¼% for each month by which the participant's Early Retirement Age precedes age 55 (payable at Early Retirement Age and only applicable if the participant was hired prior to April 1, 1978 and has earned at least 25 years of Creditable Service)
- Form of Payment
   Same as for Normal Retirement

#### 4. Delayed Retirement Age and Benefit

- Age
  - After Normal Retirement Age
- Amount Monthly Accrued Benefit
- Form of Payment
   Same as for Normal Retirement



Table VI-A

(continued)

### 5. Disability Retirement Eligibility and Benefit

### Eligibility

All active participants are eligible if the disability is service-connected; At least five years of Creditable Service is required otherwise.

### Condition

The participant must become "totally and permanently disabled" and must remain so disabled until Normal Retirement Age. "Totally and permanently disabled" means the participant is in a continuous state of incapacity due to illness or injury, is prevented from performing his regular assigned or comparable duties during the first 12 months of his disability, and is thereafter prevented from engaging in any occupation for which he is or becomes reasonably qualified by education, training, or experience. With respect to participants who are not covered by the '86 Amendment, the participant must only be prevented from performing his regular assigned or comparable duties during the entire period of his disability.

### Amount

For participants who incur a catastrophic injury in the line of duty:

100% of the top salary for the grade and position occupied by the participant at the time of disability

### For participants who are covered by the '86 Amendment:

- Greater of 50% of Average Monthly Earnings at the time of disability or Monthly Accrued Benefit, offset by worker's compensation payments such that the combination of payments does not exceed 75% of the participant's salary at the time of disability (payable until the earlier of recovery from disability or Normal Retirement Age); and
- Monthly Accrued Benefit based on Average Monthly Earnings at the time of disability and Creditable Service including the period during which the participant was disabled, but excluding any cost-of-living adjustments that were previously applied to the participant's disability payments (payable at Normal Retirement Age)

For all other participants with a service-connected disability:

Greater of 70% of the top salary for the grade and position occupied by the participant at the time of disability or Monthly Accrued Benefit, offset by worker's compensation payments such that the combination of payments does not exceed 100% of the participant's salary at the time of disability

For all other participants:

Monthly Accrued Benefit, offset by worker's compensation payments such that the combination of payments does not exceed 100% of the participant's salary at the time of disability

### Form of Payment

Same as for Normal Retirement



Table VI-A

(continued)

### 6. Deferred Vested Benefit

Age

Any age with at least five years of Creditable Service

Amount

Monthly Accrued Benefit multiplied by the participant's Vested Percentage and payable at age 60

Form of Payment
 Same as for Normal Retirement

### 7. Pre-Retirement Death Benefit

For participants who die in the line of duty and who are covered by the '86 Amendment:

- 100% of the participant's base salary at the time of his death, offset by worker's compensation or other payments received for line of duty injuries prior to the participant's death (payable for the first two years after the participant's death); and
- 75% of the Monthly Accrued Benefit (payable thereafter)

For all other participants who die in the line of duty:

- 100% of the participant's base salary at the time of his death, offset by worker's compensation or other payments received for line of duty injuries prior to the participant's death (payable for the first two years after the participant's death); and
- 75% of the greater of: (a) the Monthly Accrued Benefit, or (b) 70% of the top salary for the grade and position occupied by the participant at his death (payable thereafter)

For all other participants:

75% of the Monthly Accrued Benefit



Table VI-A

(continued)

### 8. Vested Percentage

Retirement benefits with respect to those participants who are hired prior to July 1, 2010 become vested in accordance with the following schedule:

Years of Creditable Service	Vested Percentage
Less than five	0%
At least five, but less than six	25%
At least six, but less than seven	30%
At least seven, but less than eight	35%
At least eight, but less than nine	40%
At least nine, but less than 10	45%
At least 10	100%

Retirement benefits with respect to those participants who are hired after June 30, 2010 become vested in accordance with the following schedule:

Years of Creditable Service	Vested Percentage	
Less than five	0%	
At least five, but less than six	25%	
At least six, but less than seven	30%	
At least seven, but less than eight	35%	
At least eight, but less than nine	40%	
At least nine, but less than 10	45%	
At least 10, but less than 11	50%	
At least 11, but less than 12	55%	
At least 12, but less than 13	60%	
At least 13, but less than 14	65%	
At least 14, but less than 15	70%	
At least 15	100%	



Table VI-A

(continued)

#### 9. Average Monthly Earnings

The participant's Average Monthly Earnings is equal to: (a) the average of the participant's Base Salary for the highest 36 consecutive months during his period of Creditable Service; plus (b) the difference between the highest and lowest daily rate of pay during such 36-month period multiplied by the days of unused sick leave and divided by 36; plus (c) a credit based on accumulated unused vacation. (The averaging period is 120 months with respect to participants who are hired after August 31, 2011 and average monthly earnings does not include unused sick leave for these participants.)

#### 10. Base Salary

The employee's basic salary excluding overtime pay and other special compensation; pursuant to IRC section 401(a)(17), total annual plan compensation is limited to \$200,000 as indexed.

#### 11. Employee Contribution

All participating employees must make the required pre-tax contribution to the plan. The required contribution for participants who were hired prior to 1984 is 8% of basic salary for those participants who have an eligible beneficiary and 7% of basic salary for those participants who do not have an eligible beneficiary. The required contribution for participants who were hired during the period 1984 through August 31, 2011 is 13% of basic salary (8% prior to November 1, 2011) for those participants who have an eligible beneficiary and 12% of basic salary (7% prior to November 1, 2011) for those participants who do not have an eligible beneficiary. The required contribution for participants who are hired after August 31, 2011 is 8% of basic salary. An eligible beneficiary is the participant's legal spouse, registered domestic partner, or unmarried child under the age of 18. The participant must have been married or registered to his legal spouse or domestic partner for at least one year prior to his death in order for such individual to be an eligible beneficiary. (During the period March, 1994 through June, 2009, the required contribution was 1% lower for all participants; prior to March, 1994, the contribution was made on an after-tax basis.)



Table VI-A

(continued)

### 12. Creditable Service

Creditable Service includes "base creditable service" (plus an "unused sick leave service credit" for those participants who were hired prior to September 1, 2011) plus military service as required by federal law. Base creditable service is granted for all periods of full-time employment as a firefighter with the City of Atlanta provided that the employee has made the required contribution for such period of service. With respect to eligible participants, an unused sick leave service credit is granted by dividing the participant's days of unused sick leave by the number of work days set forth in the following chart:

Years of Base Creditable Service	Work Days
Less than five	239
At least five, but less than 10	236
At least 10, but less than 15	233
At least 15, but less than 20	230
At least 20	226

Creditable Service also includes other service with the City of Atlanta if the relevant contributions are transferred into this plan and may include prior service with the State of Georgia, Fulton County, Dekalb County, or as a teacher in a public school system or private college or university within the State of Georgia if the required contribution is made to the plan.

#### 13. Participation Requirement

All full-time firefighters employed by the City of Atlanta are eligible to participate in the plan.

#### 14. Plan Effective Date

April 1, 1978



### Summary of Plan Amendments

### Table VI-B

Since the previous valuation was completed, the plan was amended effective November 1, 2011 to increase the employee contribution rate for participants hired during the period 1984 through August 31, 2011 by 5.00% of plan compensation. In addition, the following plan changes were adopted with respect to participants who are hired after August 31, 2011:

- The benefit formula multiplier has been reduced to 1.00% with a maximum benefit equal to 80% of average monthly earnings;
- (2) The employee contribution rate has been reduced to 8.00% of plan compensation;
- (3) The averaging period has been increased to 10 years for purposes of determining average monthly earnings;
- (4) The normal retirement age has been increased to age 57;
- (5) The earliest retirement age is age 47 for those individuals who have earned less than 30 years of service;
- (6) The early retirement reduction has been increased to 6.00% per year;
- (7) Unused sick leave is excluded from plan compensation;
- (8) The automatic annual cost-of-living adjustment (COLA) has been limited to 1.00% per year; and
- (9) The normal form of payment has been changed to a single life annuity with a survivor pension equal to 75% of an actuarially adjusted pension, where the actuarial adjustment is equal to the ratio on the date of death of the present value of the remaining life annuity payable to the retiree to the present value of a life annuity payable to the beneficiary.

