



City of East Providence, Rhode Island  
Police and Fire Fighters Retirement System  
**October 31, 2018 Actuarial Valuation**

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At the request of the plan sponsor, this report summarizes the City of East Providence, Rhode Island Police and Fire Fighters Retirement System as of October 31, 2018. The purpose of this report is to communicate the following results of the valuation:

- Funded Status; and
- Determine Actuarial Recommended Contribution for plan year ending October 31, 2020;

This report has been prepared in accordance with the applicable Federal and State laws. Consequently, it may not be appropriate for other purposes. Please contact Nyhart prior to disclosing this report to any other party or relying on its content for any purpose other than that explained above. Failure to do so may result in misrepresentation or misinterpretation of this report.

The results in this report were prepared using information provided to us by other parties. The census information has been provided to us by the employer. Asset information has been provided to us by the trustee. We have reviewed the provided data for reasonableness when compared to prior information provided, but have not audited the data. Where relevant data may be missing, we have made assumptions we believe to be reasonable. We are not aware of any significant issues with and have relied on the data provided. Any errors in the data provided may result in a different result than those provided in this report. A summary of the data used in the valuation is included in this report.

The actuarial assumptions and methods were chosen by the Board. In our opinion, all actuarial assumptions and methods are individually reasonable and in combination represent our best estimate of anticipated experience of the plan. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following:

- plan experience differing from that anticipated by the economic or demographic assumptions;
- changes in economic or demographic assumptions;
- increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period); and
- changes in plan provisions or applicable law.

We did not perform an analysis of the potential range of future measurements due to the limited scope of our engagement. This report has been prepared in accordance with generally accepted actuarial principles and practice.

Neither Nyhart nor any of its employees have any relationship with the plan or its sponsor which could impair or appear to impair the objectivity of this report. To the extent that this report or any attachment concerns tax matters, it is not intended to be used and cannot be used by a taxpayer for the purpose of avoiding penalties that may be imposed by law.

The undersigned are compliant with the continuing education requirements of the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States and are available for any questions.

Nyhart

  
Elizabeth A. Wiley, FSA, EA

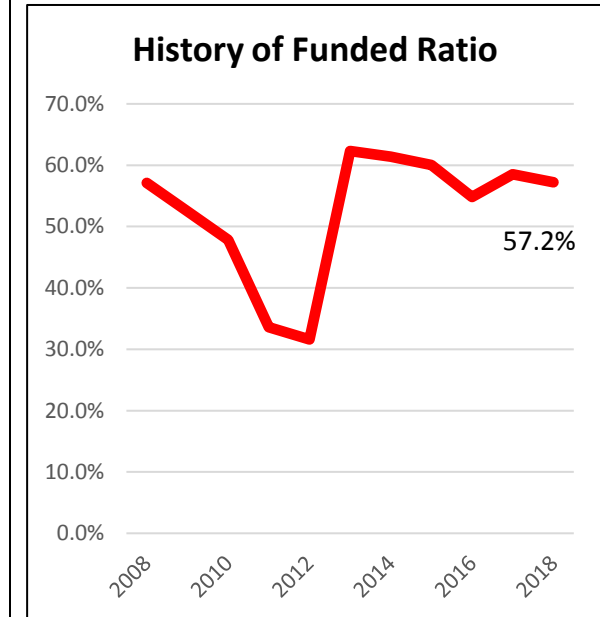
  
Carter M. Angell, FSA, EA, MAAA

June 21, 2019  
Date

**Summary Results**

The actuarial valuation's primary purpose is to produce a scorecard measure displaying the funding progress of the plan toward the ultimate goal of paying benefits at retirement. The accrued liability is based on an entry age level percentage of pay.

<b>Valuation Date For Plan Year Ending</b>	<b>October 31, 2017 October 31, 2019</b>	<b>October 31, 2018 October 31, 2020</b>
<b>Funded Status Measures</b>		
Entry Age Accrued Liability	\$219,314,469	\$231,157,560
Actuarial Value of Assets	<u>128,310,000</u>	<u>\$132,323,097</u>
Unfunded Accrued Liability	\$91,004,469	\$98,834,463
Funded Percentage (AVA)	58.5%	57.2%
Funded percentage (MVA)	59.3%	54.7%
<b>Cost Measures</b>		
Actuarial Recommended Contribution	\$7,470,844	\$8,190,648
Actuarial Recommended Contribution (as a percentage of payroll)	49.6%	51.7%
<b>Asset Performance</b>		
Market Value of Assets (MVA)	\$130,039,860	\$126,545,967
Actuarial Value of Assets (AVA)	\$128,310,000	\$132,323,097
Actuarial Value/Market Value	98.6%	104.6%
<b>Participant Information</b>		
Active Participants	195	197
Terminated Vested Participants	8	14
Retirees, Beneficiaries, and Disabled Participants	<u>270</u>	<u>270</u>
Total	473	481
Valuation Payroll	\$14,517,769	\$15,270,020
Projected Payroll	\$15,062,185	\$15,842,646



### **Changes Since Prior Valuation and Key Notes**

To better reflect anticipated experience, the mortality table for healthy lives has been updated from the RP-2014 Blue Collar mortality table with improvements from 2006 to 2017 based on assumptions developed from the 2017 Social Security Administration Trustees Report to the RP-2014 Blue Collar mortality table with generational improvements from 2006 based on assumptions developed from the 2018 Social Security Administration Trustees Report. This change results in an increase to the Funding Liability and an increase in Normal Cost.

In addition, the mortality table for disabled lives has been updated from the RP-2014 Disabled mortality table with improvements from 2006 to 2017 based on assumptions developed from the 2017 Social Security Administration Trustees Report, to the RP-2014 Disabled mortality table with generational improvements from 2006 based on assumptions developed from the 2018 Social Security Administration Trustee's Report. This change results in an increase to the Funding Liability and an increase in Normal Cost.

The normal retirement benefit for police members has changed from:

2.50% of Average Annual Compensation for each of the first 24 years of credited service, plus 2.0% of Average Annual Compensation for each of the next 4 years of service, plus 1.0% of Average Annual Compensation for each of the next two years of credited service to a maximum of 70% at 30 years of credited service; to

2.50% of Average Annual Compensation for each of the first 24 years of credited service, plus 2.0% of Average Annual Compensation for each of the next 6 years to a maximum of 72% at 30 years of credited service.

This change in plan provisions results in an increase to the Funding Liability and an increase in Normal Cost.

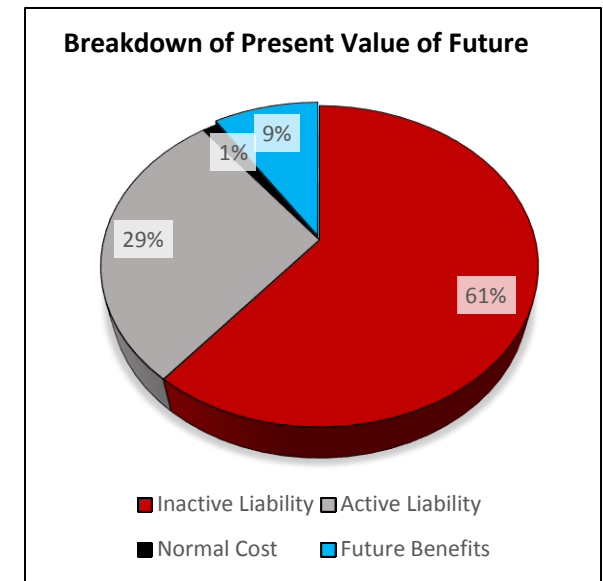
**Present Value of Future Benefits**

The Present Value of Future Benefits represents the future benefits payable to the existing participants.

**October 31, 2018**

**Present Value of Future Benefits**

Active participants	
Retirement	\$85,951,098
Disability	12,624,335
Death	1,174,261
Termination	1,271,657
Refund of contributions	0
Total active	\$101,021,351
Inactive participants	
Retired participants	\$117,227,964
Beneficiaries	8,366,265
Disabled participants	30,451,909
Terminated vested participants	1,009,336
Total inactive	\$157,055,474
Total	\$258,076,825
Present value of future payrolls	\$124,916,148



**Funding Liabilities - Entry Age Normal**

The Funding Liability measures the present value of benefits earned as of the valuation date, using a specified set of actuarial assumptions. It is used to determine the recommended contribution.

	October 31, 2018
<b>Funding Liabilities</b>	
Active participants	
Retirement	\$68,028,017
Disability	5,560,468
Death	648,467
Termination	(134,866)
Refund of contributions	0
Total Active	\$74,102,086
Inactive participants	
Retired participants	\$117,227,964
Beneficiaries	8,366,265
Disabled participants	30,451,909
Terminated vested participants	1,009,336
Total Inactive	\$157,055,474
Total	\$231,157,560
Normal Cost	\$3,434,977



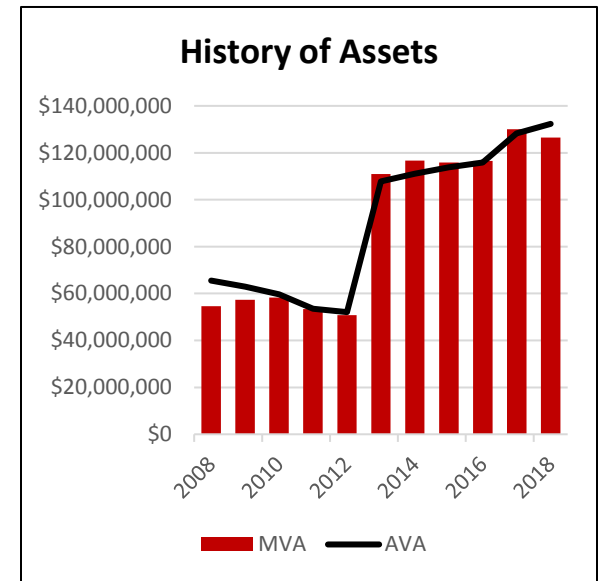
**Asset Information**

The amount of assets backing the pension promise is the most significant driver of volatility and future costs within a pension plan. The investment performance of the assets directly offsets the ultimate cost.

**October 31, 2018**

**Market Value Reconciliation**

Market value of assets, beginning of prior year	\$130,039,860
Contributions	
Employer contributions	\$7,610,501
Member contributions	1,371,089
Non-employer contributing entity	0
Total	\$8,981,590
Investment income	\$258,476
Benefit payments	(\$12,246,488)
Investment expenses	(\$394,607)
Administrative expenses	(\$92,864)
Market value of asset, beginning of current year	\$126,545,967
Return on Market Value	(0.18%)
 <b>Actuarial value of assets</b>	
Value at beginning of current year	\$132,323,097



**Asset Information (continued) - 20% Phase in**

Plan Assets are used to develop funded percentages and contribution requirements.

	<b>October 31, 2018</b>
1. Expected market value of assets	
(a) Market value of assets, beginning of prior year	\$130,039,860
(b) Contributions	8,981,590
(c) Benefit payments	(12,246,488)
(d) Expected return	9,632,770
(e) Expected market value of assets, beginning of current year	\$136,407,732
2. Market value of assets, beginning of current year	\$126,545,967
3. Actual return on market value	(\$228,995)
4. Amount subject to phase in [(3)-(1d)]	(\$9,861,765)
5. Phase in of asset gain/(loss)	
(a) Current year (80% x (\$9,861,765))	(\$7,889,412)
(b) First prior year (60% x \$8,648,574)	5,189,144
(c) Second prior year (40% x (\$4,220,777))	(1,688,311)
(d) Third prior year (20% x (\$6,942,755))	(1,388,551)
(e) Total phase-in	(\$5,777,130)
6. Preliminary actuarial value of assets, beginning of current year [(2) - (5e)]	\$132,323,097
7. 80% Market value of assets	\$101,236,774
8. 120% Market value of assets	\$151,855,160
9. Adjusted to actuarial value of assets due to 20% corridor	\$0
10. Final actuarial value of assets [(6) - (9)]	\$132,323,097
12. Return on actuarial value of assets	5.8%

**Reconciliation of Gain/Loss**

**October 31, 2018**

**Liability (gain)/loss**

Actuarial liability, beginning of prior year	\$219,314,469
Normal cost	\$3,213,366
Benefit payments	(\$12,246,488)
Expected interest	\$16,238,647
Plan Change	308,964
Change in assumptions	\$6,004,176
Expected actuarial liability, beginning of current year	\$232,833,134
Actual actuarial liability	\$231,157,560
Liability (gain)/loss	(\$1,675,574)

**Asset (gain)/loss**

Actuarial value of assets, beginning of prior year	\$128,310,000
Contributions	\$8,981,590
Benefit payments	(\$12,246,488)
Expected investment return	\$9,250,348
Change in method	\$0
Expected actuarial value of assets, beginning of current year	\$134,295,450
Actual actuarial value of assets, beginning of current year	\$132,323,097
Asset (gain)/loss	\$1,972,353

**Total (gain)/loss**

\$296,779

**Development of Actuarial Recommended Contribution for Plan year Ending October 31, 2020**

The actuarial recommended contribution is the annual amount necessary to fund the plan according to funding policies and/or applicable laws.

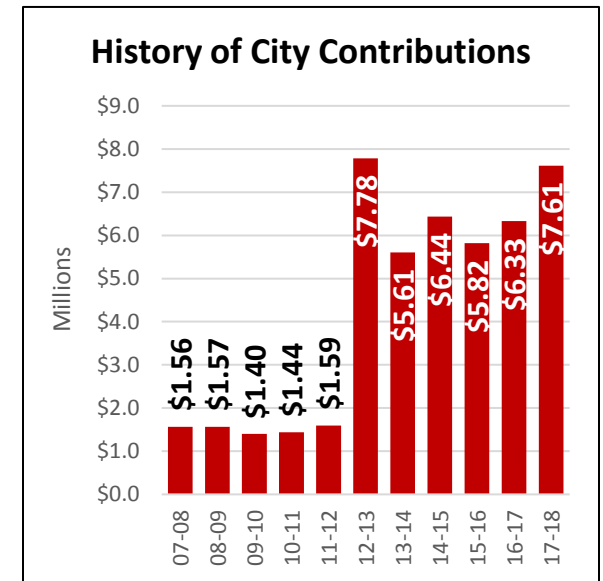
**October 31, 2018**

**Funded Position**

1. Entry age accrued liability	\$231,157,560
2. Actuarial value of assets	\$132,323,097
3. Unfunded actuarial accrued liability (UAAL)	\$98,834,463

**Employer Contributions**

1. Normal Cost	
(a) Total normal cost	\$3,434,977
(b) Expected participant contributions	(\$1,395,184)
(c) Net normal cost	\$2,039,793
2. Amortization of UAAL	\$5,853,706
3. Calculated contribution at valuation date	\$7,893,499
4. Valuation payroll	\$15,270,020
5. Calculated contribution as a percentage of payroll (3) / (4)	51.7%
6. Projected Payroll	\$15,842,646
7. Actuarial recommended contribution (5) x (6)	\$8,190,648



**Demographic Information**

The foundation of a reliable actuarial report is the participant information provided by the plan sponsor. Monitoring trends in demographic information is crucial for long-term pension planning.

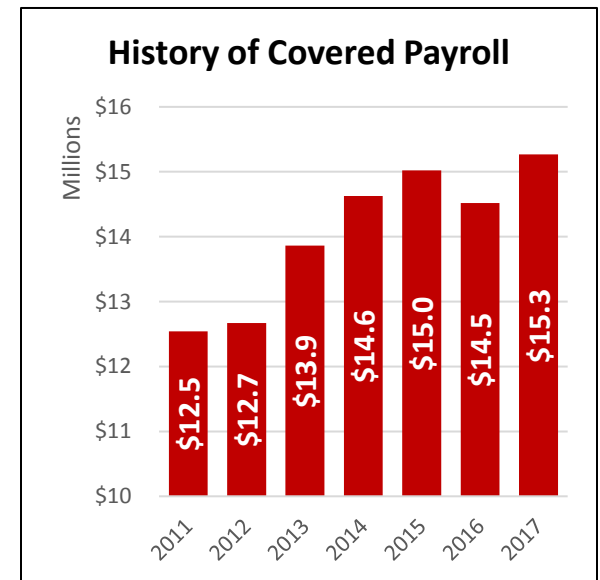
**October 31, 2018**

**Participant Counts**

Active Participants	197
Retired Participants	172
Beneficiaries	50
Disabled Participants	48
Terminated Vested Participants	14
<b>Total Participants</b>	<b>481</b>

**Active Participant Demographics**

Average Age	41.1
Average Service	13.76
Average Compensation	\$77,513
<b>Covered Payroll</b>	<b>\$15,270,020</b>



**Demographic Information (continued)**

**October 31, 2018**

**Retiree Statistics**

Average Age	67.1
Average Monthly Benefit	\$4,261

**Beneficiary Statistics**

Average Age	78.5
Average Monthly Benefit	\$1,813

**Disabled Participants Statistics**

Average Age	67.4
Average Monthly Benefit	\$4,461

**Terminated Vested Participants with Deferred Retirement Benefit Statistics**

Average Age	41.8
Average Monthly Benefit	\$1,989

**Terminated Vested Participants Due a Return of Contributions Statistics**

Average Age	29.0
Total Employee Contributions	\$111,371
Average Employee Contributions	\$11,137

**Participant Reconciliation**

	<b>Active</b>	<b>Terminated Vested</b>	<b>Disabled</b>	<b>Retired</b>	<b>Beneficiaries</b>	<b>Totals</b>
<b>Prior Year</b>	195	8	45	175	50	473
<b>Active</b>						
To Terminated Vested	(5)	5	0	0	0	0
To Retired	(7)	0	0	7	0	0
To Cash-Out	0	0	0	0	0	0
To Non-Participating	0	0	0	0	0	0
<b>Terminated Vested</b>						
To Active	0	0	0	0	0	0
To Retired	0	0	0	0	0	0
To Death	0	0	0	0	0	0
To Lump Sum Cash-Out	0	(1)	0	0	0	(1)
<b>Disabled</b>						
To Survivor	0	0	0	0	0	0
To Death	0	0	(2)	0	0	(2)
To Retired	0	0	(1)	1	0	0
<b>Retired</b>						
To Survivor	0	0	0	0	0	0
To Disabled	0	0	6	(6)	0	0
To Death	0	0	0	(5)	0	(5)
<b>Survivor</b>						
To Death	0	0	0	0	(3)	(3)
<b>Alternate Payees of QDRO's</b>	0	0	0	0	0	0
<b>Status Corrections</b>	0	0	0	0	0	0
<b>Additions</b>	14	2	0	0	3	19
<b>Departures</b>	0	0	0	0	0	0
<b>Current Year</b>	197	14	48	172	50	481

**Active Participant Schedule**

Active participant information grouped based on age and service.

Age Group	Years of Service										Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & Up	
Under 25		4									4
25 to 29	3	34									37
30 to 34	1	12	7	4							24
35 to 39	1	8	3	10	2						24
40 to 44		3	1	5	10	6					25
45 to 49	1	1		6	10	18	4				40
50 to 54					5	11	7	1			24
55 to 59			1	1		2	6	9			19
60 to 64											0
65 to 69											0
70 & up											0
<b>Total</b>	<b>6</b>	<b>62</b>	<b>12</b>	<b>26</b>	<b>27</b>	<b>37</b>	<b>17</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>197</b>



**Name of plan**

City of East Providence, Rhode Island Police and Fire Fighters Retirement System

**Effective Date**

November 1, 1961

**Eligibility for Participation**

Immediately upon becoming an employee of the police or fire department, and being sworn in as a police officer or fire fighter

**Benefits**

**Normal Retirement**

Eligibility

Police hired on or after 11/1/2014	Earlier of (i) age 50 and 25 years of service or (ii) age 60 and 10 years of service
Fire Fighters hired on or after 1/1/2014	Earlier of (i) age 55 and 25 years of service or (ii) age 60 and 10 years of service
Others	Earlier of (i) 20 years of service or (ii) age 60 and 10 years of service

Benefit

Fire Fighters retired after 11/1/1991	2.50% of Average Annual Compensation for each of the first 24 years of credited service, plus 2.0% of Average Annual Compensation for each of the next 4 years, plus 1.0% of Average Annual Compensation for each additional year of credited service to a maximum of 70% at 30 years of credited service
Fire Fighters hired on or after 1/1/2014	2.50% of Average Annual Compensation for each of the first 20 years of credited service, plus 4.0% of Average Annual Compensation for each of the next 5 years to a maximum of 70% at 25 years of credited service
Police	2.50% of Average Annual Compensation for each of the first 24 years of credited service, plus 2.0% of Average Annual Compensation for each of the next 6 years to a maximum of 72% at 30 years of credited service
Police and Fire Fighters retiring after 11/1/2008	Members will receive an additional 1.0% of Average Annual Compensation

**Death – Service Related**

Eligibility

Death resulting from an act of duty

Benefit

With surviving spouse, 50% of compensation at time of death, plus 10% of compensation for each child under age 18 to a maximum of 70% of compensation

Without surviving spouse, 15% of compensation at time of death for each child under the age of 18 with a maximum of 60% of compensation

**Death – Non Service Related**

Eligibility

3 years of service

Benefit

30% of compensation increased by 1% for each year of service in excess of 3 years, to a maximum of 50% of compensation, and beginning at the surviving spouse's age 55, plus 10% of compensation for each child under age 18 to a maximum of 60% of compensation, with benefits to spouse and children under age 18 beginning immediately.

**Death – R. I. State Mandated Death Benefit**

Plan benefit above, or 67.50% of final pension payment, if provides a higher benefit

**Disability – Service Related**

Eligibility

Active participant

Benefit

$66\frac{2}{3}$ % of compensation at time of disability plus 10% of salary for each child under age 18 to a maximum of 80% of compensation

**Disability – Non Service Related**

Eligibility

10 years of service

Benefit

1.75% of compensation at time of disability for each year of service to date of disability, with minimum benefit of 25% of compensation, and maximum benefit of 50% of compensation. If credited service at date of disability is twenty years or more, at age 55, participant is entitled to a service retirement annuity

**Annual Compensation**

Base salary, 14 days of holiday pay, plus longevity payment based on schedules below:

<u>Police Hired after 10/31/2014</u>	<u>Fire Hired on or after January 1, 2015</u>	<u>Others</u>
7% of base salary after 10 years of service	6% of base salary after 10 years of service	6% of base salary after 5 years of service
8% of base salary after 15 years of service	7% of base salary after 15 years of service	7% of base salary after 10 years of service
9% of base salary after 20 years of service	8% of base salary after 20 years of service	8% of base salary after 15 years of service
	9% of base salary after 25 years of service	9% of base salary after 20 years of service

**Average Annual Compensation**

Members retired on or after 11/1/1985	Final year of Annual Compensation
Police hired on or after 11/1/2014 and Fire Fighters hired on or after 1/1/2014	Average of their final 3 years' Annual Compensation

**Credited Service**

Completed years and months from date of hire. For any month, 15 days or more is considered a full month of service.

**Employee Contributions**

9% of Compensation

Fire Fighters contributions increase annually as follows	11/1/2018	9.25%
	11/1/2019	9.50%
	11/1/2020	9.75%
	11/1/2021	10.00%
Police contributions increase annually as follows	11/1/2020	9.25%
	11/1/2021	9.50%

**Cost of living adjustments**

Police retired between 11/1/1982 and 10/31/1983*	3.0% non-compounded increase starting on 11/1/1984
Police retired between 11/1/1983 and 10/31/1984*	3.0% non-compounded increase
Police retired between 11/1/1984 and 10/31/1991*	3.0% compounded increase at or after age 51
Police retired after 11/1/1991*	3.0% compounded increase
Police hired on or after 11/1/2014*	2.25% non-compounded increase
Fire Fighters retired between 11/1/1985 and 10/31/1989	3.0% compounded increase at or after age 51
Fire Fighters retired after 11/1/1989	3.0% compounded increase
Fire Fighters hired on or after 1/1/2014	2.25% non-compounded increase

\*After 10/1/1995, annual 3% COLA extended to disabled policemen prior to age 51.

**Vesting**

10 years of service. Employees who terminate prior to 10 years of service receive a return of employee contributions without interest.

**Normal form of payment**

The normal form of benefit is a monthly benefit payable for the participant's lifetime; optional non-spouse joint and survivor annuity available on actuarial equivalent basis

**Plan Provisions Not Included**

We are not aware of any plan provisions not included in the valuation

**Adjustments Made for Subsequent Events**

We are not aware of any event following the measurement date and prior to the date of this report that would materially impact the results of this report.

Except where otherwise indicated, the following assumptions were selected by the plan sponsor with the concurrence of the actuary. Prescribed assumptions are based on the requirements of the relevant law, the Internal Revenue Code, and applicable regulation. The actuary was not able to evaluate the prescribed assumptions for reasonableness for the purpose of the measurement.

<b>Valuation Date</b>	October 31, 2018
<b>Participant and Asset Information Collected as of</b>	October 31, 2018
<b>Cost Method (CO)</b>	Entry Age Normal Cost Method. The Actuarial Recommended Contribution is determined as a percentage of payroll.
<b>Amortization Method (CO)</b>	30-year closed level % of pay amortization of the excess of the entry age actuarial accrued liability over the actuarial value of plan assets. Beginning with the October 31, 2017 Valuation and recommended contribution for plan year ending October 31, 2019, gains and losses, changes in provisions, and changes in assumptions are amortized as a closed level percent of pay over 20 years. For this purpose, pay is assumed to grow at 3.75% annually.
<b>Asset Valuation Method</b>	The actuarial value of assets is equal to the fair market value of assets on the valuation date adjusted for a 5-year phase in of gains and losses on fair market value of assets.
<b>Interest Rates (CO)</b>	7.50%  This assumption has been set by the plan sponsor in conjunction with their asset advisors. Detailed evaluation of this assumption was outside the scope of our engagement.
<b>Annual Pay Increases (FE)</b>	4.0% compounded annually  The annual pay increase is based on a study of actual experience for the plan during 1991-2014. See the experience study report dated 06/01/2015 prepared by Fallon Pension Actuaries, Inc. No change was recommended with the most recent experience study dated October 31, 2018 prepared by Nyhart.
<b>Expense and/or Contingency Loading (FE)</b>	None

**Mortality Rates (FE)**

Healthy Lives	RP-2014 Blue Collar Mortality Table with generational improvements from 2006 based on assumptions from the 2018 Social Security Administration Trustee's Report
Disabled Lives	RP-2014 Disabled Mortality Table with generational improvements from 2006 based on assumptions from the 2018 Social Security Administration Trustee's Report

As the plan is not large enough to have credible experience, mortality rates are set to reflect general population trends.

**Retirement Rates (FE)**

The following annual rates of retirement are reflected for participants after age 40; at age 62 and over, the annual rate of retirement is 100%.

Years of Service	Rate
20	12%
21-23	14%
24-26	16%
27-29	18%
30+	20%

The assumed retirement rates are based on a study of actual experience for the plan during 1991-2014. See the experience study report dated 06/01/2015 prepared by Fallon Pension Actuaries, Inc.

**Disability Rates (FE)**

Age	Rate
25	0.50%
35	0.75%
45	1.80%
55	3.00%

50% of disability is assumed to be service-related.

The assumed disability rates are based on a study of actual experience for the plan during 1991-2014. See the experience study report dated 06/01/2015 prepared by Fallon Pension Actuaries, Inc. No change was recommended in the most recent experience study dated 7/31/2018 prepared by Nyhart.

**Withdrawal Rates (FE)**

<u>Years of Service</u>	<u>Rate</u>
1	4.00%
5	3.14%
10	2.07%
15	1.00%
20+	0.00%

The assumed withdrawal rates are based on a study of actual experience for the plan during 1991-2014. See the experience study report dated 06/01/2015 prepared by Fallon Pension Actuaries, Inc. No change was recommended in the most recent experience study dated 7/31/2018 prepared by Nyhart.

**Marital Status and Ages (FE)**

85% of participants assumed to be married with female spouses 3 years younger than husbands.

**Cost of Living Adjustments**

In accordance with benefit provisions of the plan, annual COLAs are assumed for the appropriate categories of members

**Service-Related Death (CO)**

50% of pre-retirement deaths are assumed to be service-related

**Benefit Payment Timing (FE)**

Payments occur at the end of the month

FE indicates an assumption representing an estimate of future experience

MD indicates an assumption representing observations of estimates inherent in market data

CO indicates an assumption representing a combination of an estimate of future experience and observations of market data

The actuarial report also shows the necessary items required for plan reporting and any state requirements.

- ✓ Schedule of Amortizations
- ✓ Schedule of Amortizations by Division
- ✓ Allocation of Assets by Division
- ✓ Actuarial Recommended Contribution by Division



**Schedule of Amortizations**

**Total Plan**

		<b>October 31, 2018</b>	
		Total	\$5,853,706
<u>Date Established</u>	<u>Remaining Period Years</u>	<u>Outstanding Balance</u>	<u>Annual Payment</u>
10/31/2015	27	\$79,648,093	\$4,506,024
10/31/2017	19	\$12,585,680	\$894,797
10/31/2018	20	\$6,600,690	\$452,885

**Schedule of Amortizations by Division**

**Police**

		<b>October 31, 2018</b>	
		Total	\$1,026,827
	Total	\$16,395,597	\$1,026,827
<u>Date Established</u>	Remaining Period <u>Years</u>	Outstanding <u>Balance</u>	Annual <u>Payment</u>
10/31/2015	27	\$8,921,689	\$504,737
10/31/2017	19	\$3,739,696	\$265,879
10/31/2018	20	\$3,734,212	\$256,211

**Fire**

		<b>October 31, 2018</b>	
		Total	\$4,826,879
	Total	\$82,438,866	\$4,826,879
<u>Date Established</u>	Remaining Period <u>Years</u>	Outstanding <u>Balance</u>	Annual <u>Payment</u>
10/31/2015	27	\$70,726,404	\$4,001,287
10/31/2017	19	\$8,845,984	\$628,918
10/31/2018	20	\$2,866,478	\$196,674

**Allocation of Assets by Division**

Assets are allocated between Police and Fire divisions by allocating actual employer contributions by the proportionate share of the year's anticipated employer contributions, allocating actual employee contributions by division, accounting for actual benefit payments by division, and allocating Police 60% of the year's expenses.

	<u><b>Police</b></u>	<u><b>Fire</b></u>	<u><b>Total</b></u>
Market value of assets, prior year	\$91,536,548	\$38,503,312	\$130,039,860
City contributions	\$1,847,756	\$5,762,745	\$7,610,501
Employee contributions	642,445	728,644	1,371,089
Total contributions	<u>\$2,490,201</u>	<u>\$6,491,389</u>	<u>\$8,981,590</u>
Benefit payments	(\$5,454,819)	(\$6,791,669)	(\$12,246,488)
Expenses	(\$292,483)	(\$194,988)	(\$487,471)
Investment income	\$181,324	\$77,152	\$258,476
Market value of assets, end of year	\$88,460,771	\$38,085,196	\$126,545,967

**Development of Actuarial Recommended Contribution for Plan Year Ending October 31, 2020 by Division**

	Police	Fire	Total
<b>Funded Position</b>			
1. Entry age accrued liability	\$108,894,817	\$122,262,743	\$231,157,560
2. Actuarial value of assets	\$92,499,220	\$39,823,877	\$132,323,097
3. Unfunded actuarial accrued liability (UAAL)	\$16,395,597	\$82,438,866	\$98,834,463
<b>Employer Contributions</b>			
1. Normal Cost			
(a) Total normal cost	\$1,641,310	\$1,793,667	\$3,434,977
(b) Expected participant contributions	(\$622,531)	(\$772,653)	(\$1,395,184)
(c) Net normal cost	\$1,018,779	\$1,021,014	\$2,039,793
2. Amortization of UAAL	\$1,026,827	\$4,826,879	\$5,853,706
3. Calculated contribution at valuation date	\$2,045,606	\$5,847,893	\$7,893,499
4. Valuation payroll	\$6,917,016	\$8,353,004	\$15,270,020
5. Calculated contribution as a percentage of payroll	29.6%	70.0%	51.7%
6. Projected Payroll	\$7,176,404	\$8,666,242	\$15,842,646
7. Preliminary actuarial recommended contribution, (5)x(6)	\$2,124,216	\$6,066,369	\$8,190,648
8. Adjustment due to rounding	29	34	-
9. Actuarial recommended contribution, (7) + (8)	\$2,124,245	\$6,066,403	\$8,190,648