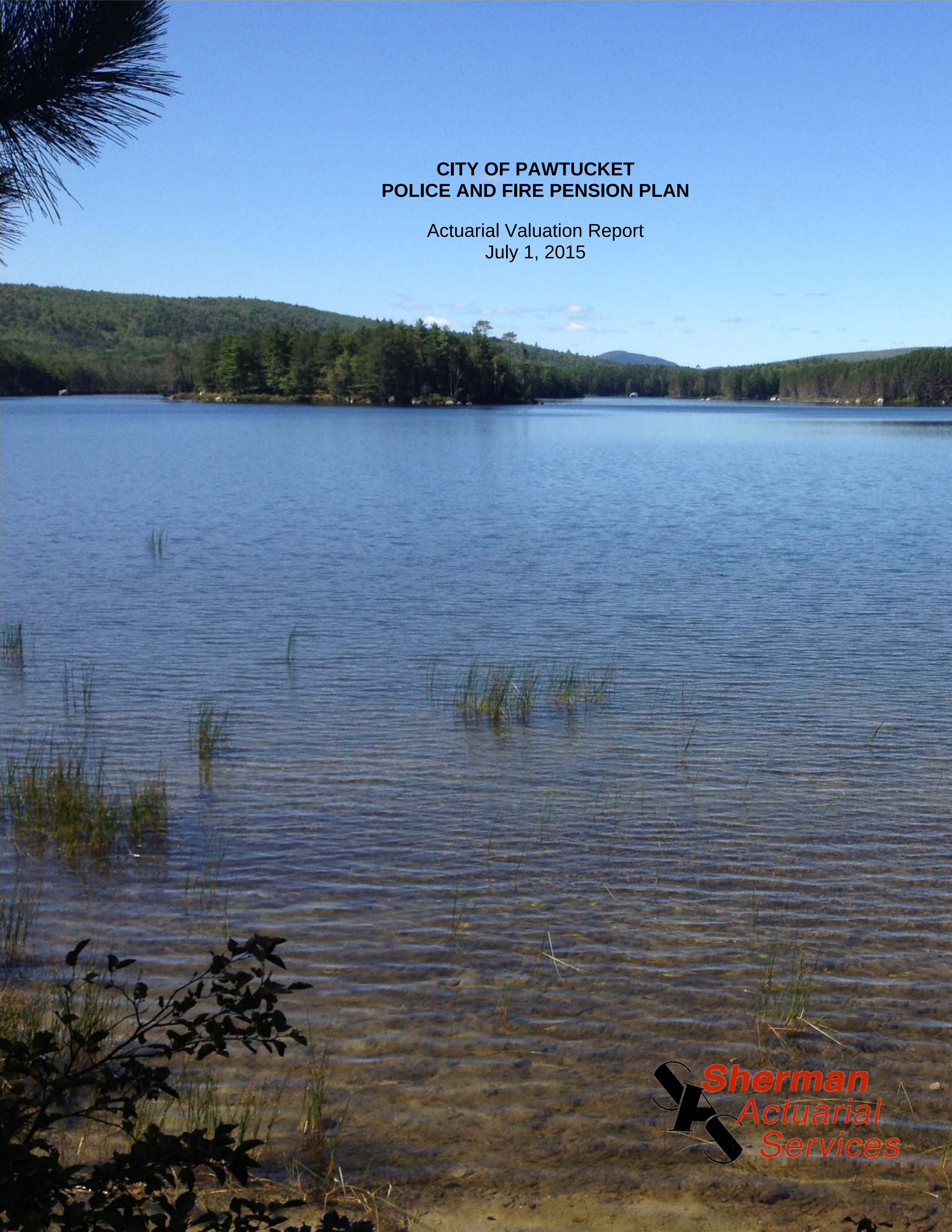
CITY OF PAWTUCKET
POLICE AND FIRE PENSION PLAN

Actuarial Valuation Report
July 1, 2015



Sherman Actuarial Services

TABLE OF CONTENTS

P:\Pawtucket\2015 Pension\[2015 Pawtucket Val v1 new plan new assumptions.xlsm]Output

Report Summary:

Highlights for the "New Plan"	July 1, 2014	July 1, 2015
Contributions		
Funding Schedule FY 2016	$13,630,085	$13,630,085
Funding Schedule FY 2017	14,067,862	13,646,297
Funded Ratios		
GAS No. 25	40.7%	42.2%
Participants		
Actives	285	286
Retirees and Beneficiaries	344	345
Vested	0	0
Inactives	0	0
Disabled	39	41
Total	668	672
Payroll		
Payroll of Active Members	$19,453,527	$19,427,234
Average Payroll	68,258	67,927
Normal Cost		
Employer	2,963,708	2,229,882
Employee	1,427,936	1,535,901
Administrative Expenses	45,000	45,000
Total	4,436,644	3,810,783
Actuarial Accrued Liabilities		
Actives	67,799,400	71,310,321
Retirees, Beneficiaries, Disabilities and Inactives	170,925,716	174,250,864
Total	238,725,116	245,561,185
Actuarial Value of Assets	97,220,726	103,696,681
Unfunded Actuarial Accrued Liabilities	$141,504,390	$141,864,504

Introduction

The purpose of this report is to present the findings of an actuarial valuation as of July 1, 2015, of City of Pawtucket Police and Firefighters Pension Plan. Results are shown for the “New Plan” as well as the “Old Plan”. Firefighters who were hired prior to July 1, 1972 and police officers who were hired prior to July 1, 1973 are part of the “Old” plan.

The Old Plan has been frozen to new participants since July 1, 1973 and all of the “Old” plan participants are now retirees or beneficiaries. The City has been and will continue to fund the obligation of the Old Plan on a Pay-as-you-go basis. Although 6 of the participants receive COLAs, the expectation is that mortality will continue to decrease the City’s costs from year-to-year.

The actuarial valuation is based on:

- Provisions of Collective Bargaining Agreements with the Police and Firefighters unions.
- Employee data provided by the City
- Asset information reported the City
- Actuarial assumptions approved by the City

The report includes results under GASB Statements #25 and #27.

The valuation and forecast do not account for:

- Any subsequent changes in the law
- Any subsequent changes in plan provisions

Actuarial Experience

In performing the actuarial valuation, various assumptions are made regarding such factors as mortality, retirement, disability, and withdrawal rates as well as both payroll, salary increases, and investment returns. A comparison of the current valuation and the prior valuation is made to determine how closely actual experience corresponded to anticipated occurrences. This analysis of the system provides insight into the overall quality of the actuarial assumptions and helps explain any change in the annual appropriation.

During the last year, the total unfunded actuarial accrued liability increased to $141,864,504 from $141,504,390. The increase is the result of net favorable actuarial experience during the preceding years, offset by the changes in actuarial assumptions and changes in plan provisions for the Fire and Retired participants. The sources of actuarial (gains) and losses are as follows:

Assets	444,790
Salaries	(594,836)
New Participants	8,501
Retirements	(355,325)
Terminations	100,864
Active Mortality	(53,307)
Disabilities	1,312,938
Total Actuarial (Gains) and Losses	(1,934,807)
Other	(3,746)
Total Actuarial (Gains) and Losses	(1,074,928)
Change in actuarial assumptions & Plan Provisions	1,435,042
Total change in Unfunded Accrued Liability	360,114

The changes to the plan provisions for Police employees reduced the City’s portion of the Normal Cost by $753,046.

Actuarial Costs and Liabilities:

"New Plan" Normal Costs

The normal cost is the sum of the individual normal costs determined for each member as if the assumptions underlying the cost determinations had been exactly realized. An individual normal cost represents that part of the cost of a member's future benefits which are assigned to the current year as if the costs are to remain level as a percentage of the member's pay. Benefits payable under all circumstances (i.e., retirement, death, disability, and terminations) are included in this calculation. Anticipated employee contributions to be made during the year are subtracted from the total normal cost to determine employer normal cost. The total normal cost is divided by total payroll to determine the normal cost as a percent of pay. The normal cost is shown in Table I.

Table I

	July 1, 2014	July 1, 2015
Superannuation*	$3,137,544	$2,993,584
Termination	153,704	195,269
Death	173,128	152,450
Disability	927,268	424,480
Administrative Expenses	45,000	45,000
Total Normal Cost	4,436,644	3,810,783
% of Pay	22.8%	19.6%
Employee Contributions	1,427,936	1,535,901
% of Pay	7.3%	7.9%
Employer Normal Cost	$3,008,708	$2,274,882
% of Pay	15.5%	11.7%

P:\Pawtucket\2015 Pension\[2015 Pawtucket Val v1 new plan new assumptions.xlsm]Output

"New Plan" Present Value of Actuarial Accrued Liabilities

The actuarial accrued liabilities (AAL) represents today's value of all benefits earned by the actives and inactives. The AAL can be compared to the assets to determine the funded status of the Plan. The value of these earned benefits is shown in Table II below.

Table II

	July 1, 2014	July 1, 2015
Actives		
Superannuations	$65,743,967	$69,749,203
Termination	(12,263)	(14,805)
Death	925,909	990,334
Disability	1,141,787	585,589
Subtotal	67,799,400	71,310,321
Retirees and Inactives		
Retirees and Beneficiaries	149,106,624	150,606,258
Vested	0	0
Terminated (Refund)	0	0
Disabled	21,819,092	23,644,606
Subtotal	170,925,716	174,250,864
Total	$238,725,116	$245,561,185

P:\Pawtucket\2015 Pension\[2015 Pawtucket Val v1 new plan new assumptions.xlsm]Output

"New Plan" Present Value of Future Benefits

The present value of future benefits represents today's value of all benefits earned by the inactive participants as well as all benefits earned and expected to be earned in the coming years by the active participants. The difference betwee the present value of future benefits and the present value of actuarial accrued liabilities is the value of benefits to be earned in the coming years. The value of the total expected benefits is shown in Table III.

Table III

	July 1, 2014	July 1, 2015
Actives		
Superannuation	$96,705,405	$97,200,753
Termination	$1,400,916	1,778,760
Death	$2,586,569	2,379,717
Disability	$10,053,703	4,429,476
Subtotal	110,746,593	105,788,706
Retirees and Inactives		
Retirees and Beneficiaries	149,106,624	150,606,258
Vested	0	0
Terminated (Refund)	0	0
Disabled	21,819,092	23,644,606
Subtotal	170,925,716	174,250,864
Total	$281,672,309	$280,039,570

P:\Pawtucket\2015 Pension\[2015 Pawtucket Val v1 new plan new assumptions.xlsm]Output

Funded Status and Appropriations:

"New Plan" Market Value of Plan Assets

The trust fund composition on a market value basis is shown in Table IV.

Table IV

	July 1, 2014	July 1, 2015
Cash equivalents	$3,721,656	$4,448,355
Short term investments	0	0
Fixed income securities	23,653,667	26,654,450
Equities	69,521,856	73,770,409
International	0	0
Real Estate	0	0
Venture Capital	0	0
Other	0	0
Accounts receivable	326,357	439,718
Accounts payable	(2,810)	(1,616,251)
Accrued income	0	0
Total Market Value	$97,220,726	$103,696,681
Total Actuarial Value	$97,220,726	$103,696,681

"New Plan" Unfunded Actuarial Accrued Liabilities

Under the Entry Age Normal Actuarial Cost Method, the Actuarial Accrued Liability represents what the accumulated assets would have been as of the valuation date if:

- current plan provisions and assumptions had always been in effect,
- experience conformed exactly to assumptions, and
- the normal cost had been contributed each year since inception.

The actuarial value of the Fund's assets as of the end of the prior year are subtracted from the Actuarial Accrued Liability (AAL) to determine the Unfunded Actuarial Accrued Liability (UAAL) as of the valuation date. Over time, annual pension contributions will accumulate Plan assets equal to the AAL, and the UAAL will be eliminated. Thereafter, annual contributions equal to the normal cost will keep the Plan's assets and liabilities in balance. The UAAL is developed in Table VI.

Table VI

	July 1, 2014	July 1, 2015
Actuarial Accrued Liability	$238,725,116	$245,561,185
Actuarial Assets	97,220,726	103,696,681
Unfunded Actuarial Accrued Liability	$141,504,390	$141,864,504
Funded Status	40.7%	42.2%

P:\Pawtucket\2015 Pension\[2015 Pawtucket Val v1 new plan new assumptions.xlsm]Output

"New Plan" Appropriations

The pension appropriation for the upcoming fiscal years have been calculated in accordance with the desire of the City of Pawtucket. The pension appropriation is the sum of the:

- Employer normal cost,
- Increasing amortization of the unfunded actuarial accrued liability by June 30, 2035
  $ 141,864,504 over 20 years with 2.57% increasing payments
- Interest adjustment for payments contributed quarterly over fiscal year.

The pension appropriation is shown in Table VII.

Table VII

	July 1, 2014	July 1, 2015
Normal cost	$3,008,708	$2,274,882
Amortization payment of the unfunded liability	9,832,196	10,684,006
Total cost	$12,840,904	$12,958,888
% of Pay	66.0%	66.7%
Fiscal 2016 appropriation	$13,630,085	$13,630,085
Fiscal 2017 appropriation	$14,067,862	$13,646,297

Appropriation Forecast

The following exhibit forecasts employer and employee contributions over the next 32 years under the adopted funding schedule.

Note that the forecast is based upon an "open group" method. This method assumes that sufficient employees will be hired each year to keep the number constant. The total payroll of the system is expected to increase 4% per year. Payments are assumed to be made quarterly.

The employer total cost is expected to increase during the next 20 years until the unfunded liabilities are completely paid off, at which time only the normal cost will remain. The total cost represents about 67% of payroll, decreasing to 54% by the time the unfunded liabilities are fully paid off, leaving only a normal cost of 10.9%, thereafter.

P:\Pawtucket\2015 Pension\[2015 Pawtucket Val v1 new plan new assumptions.xlsm]Approp. Results

"New Plan" Appropriation Forecast

Fiscal Year Ending	Payroll	Employee Contribution	Employer Normal Cost with Interest	Amortization Payments with Interest	Employer Total Cost with Interest	Employer Total Cost % of Payroll	Funded Ratio %**
2016	$19,427,234	$1,535,901	$2,336,944	$11,293,141	$13,630,085	70.2	42.2
2017	$20,204,323	$1,612,074	$2,415,283	$11,231,014	$13,646,297	67.5	44.6
2018	$21,012,496	$1,691,883	$2,496,150	$11,519,651	$14,015,801	66.7	46.9
2019	$21,852,996	$1,775,498	$2,579,622	$11,815,706	$14,395,328	65.9	49.3
2020	$22,727,116	$1,863,095	$2,665,777	$12,119,370	$14,785,147	65.1	51.7
2021	$23,636,201	$1,954,858	$2,754,698	$12,430,838	$15,185,536	64.2	54.1
2022	$24,581,649	$2,050,982	$2,846,467	$12,750,310	$15,596,777	63.4	56.6
2023	$25,564,915	$2,151,668	$2,941,171	$13,077,993	$16,019,164	62.7	59.1
2024	$26,587,511	$2,257,128	$3,038,896	$13,414,098	$16,452,994	61.9	61.7
2025	$27,651,012	$2,367,581	$3,139,733	$13,758,840	$16,898,573	61.1	64.4
2026	$28,757,052	$2,483,259	$3,243,775	$14,112,442	$17,356,217	60.4	67.2
2027	$29,907,334	$2,604,404	$3,351,117	$14,475,132	$17,826,249	59.6	70.0
2028	$31,103,628	$2,731,267	$3,461,856	$14,847,143	$18,308,999	58.9	72.9
2029	$32,347,773	$2,864,111	$3,576,093	$15,228,714	$18,804,807	58.1	76.0
2030	$33,641,684	$3,003,214	$3,693,929	$15,620,092	$19,314,021	57.4	79.1
2031	$34,987,351	$3,148,862	$3,815,471	$16,021,529	$19,837,000	56.7	82.3
2032	$36,386,845	$3,274,816	$3,968,089	$16,433,282	$20,401,371	56.1	85.6
2033	$37,842,319	$3,405,809	$4,126,813	$16,855,617	$20,982,430	55.4	89.0
2034	$39,356,011	$3,542,041	$4,291,885	$17,288,807	$21,580,692	54.8	92.5
2035	$40,930,252	$3,683,723	$4,463,561	$17,733,129	$22,196,690	54.2	96.2
2036	$42,567,462	$3,831,072	$4,642,103	$0	$4,642,103	10.9	100.0
2037	$44,270,161	$3,984,314	$4,827,787	$0	$4,827,787	10.9	100.0
2038	$46,040,967	$4,143,687	$5,020,899	$0	$5,020,899	10.9	100.0
2039	$47,882,606	$4,309,435	$5,221,735	$0	$5,221,735	10.9	100.0
2040	$49,797,910	$4,481,812	$5,430,604	$0	$5,430,604	10.9	100.0
2041	$51,789,826	$4,661,084	$5,647,828	$0	$5,647,828	10.9	100.0
2042	$53,861,419	$4,847,528	$5,873,742	$0	$5,873,742	10.9	100.0
2043	$56,015,876	$5,041,429	$6,108,691	$0	$6,108,691	10.9	100.0
2044	$58,256,511	$5,243,086	$6,353,039	$0	$6,353,039	10.9	100.0
2045	$60,586,772	$5,452,809	$6,607,160	$0	$6,607,160	10.9	100.0
2046	$63,010,242	$5,670,922	$6,871,447	$0	$6,871,447	10.9	100.0
2047	$65,530,652	$5,897,759	$7,146,305	$0	$7,146,305	10.9	100.0

** Beginning of Fiscal Year

EXHIBITS

P:\Pawtucket\2015 Pension\Report\[ACT1.XLS]Actives

Exhibit 1 - Age/Service Distribution with Average Salary as of July 1, 2015

Attained Age	Service <5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
< 20	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
20-24	18	0	0	0	0	0	0	0	0	18
	42,631	0	0	0	0	0	0	0	0	42,631
25-29	21	10	0	0	0	0	0	0	0	31
	52,996	65,463	0	0	0	0	0	0	0	57,018
30-34	14	25	9	0	0	0	0	0	0	48
	52,421	65,036	67,022	0	0	0	0	0	0	61,729
35-39	5	13	11	0	0	0	0	0	0	29
	58,488	65,772	68,389	0	0	0	0	0	0	65,509
40-44	4	8	23	24	4	0	0	0	0	63
	61,663	65,555	65,261	72,116	72,938	0	0	0	0	68,169
45-49	2	4	7	7	12	4	0	0	0	36
	60,378	65,705	65,927	72,610	76,147	78,411	0	0	0	71,687
50-54	0	1	4	7	8	9	4	0	0	33
	0	65,885	66,463	71,427	76,392	72,645	81,854	0	0	73,457
55-59	0	0	0	1	2	9	6	0	0	18
	0	0	0	65,152	67,028	79,117	77,582	0	0	76,486
60-64	0	0	0	1	0	2	5	1	1	10
	0	0	0	65,152	0	70,915	73,651	77,824	91,180	74,424
65-69	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
70+	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
Total Employees	64	61	54	40	26	24	15	1	1	286
Average Salary	51,156	65,388	66,367	71,734	75,027	75,889	77,411	77,824	91,180	65,797

P:\Pawtucket\2015 Pension\Report\[RET1.XLS]Retirees

Exhibit 2 - Retiree Distribution as of July 1, 2015

	Number of Retirees			Total Monthly Payments		
Attained Age	Female	Male	Total	Female	Male	Total
< 20	0	0	0	0	0	0
20-24	0	0	0	0	0	0
25-29	0	0	0	0	0	0
30-34	0	1	1	0	4,040	4,040
35-39	1	0	1	1,777	0	1,777
40-44	0	2	2	0	4,678	4,678
45-49	4	18	22	3,721	64,380	68,101
50-54	3	30	33	6,744	110,726	117,470
55-59	4	37	41	6,537	137,336	143,873
60-64	14	42	56	23,536	136,975	160,511
65-69	8	54	62	11,282	173,454	184,736
70-74	10	43	53	15,074	129,611	144,685
75-79	14	26	40	15,460	56,985	72,445
80-84	11	18	29	12,957	38,520	51,476
85-89	12	12	24	8,867	24,226	33,093
90-94	9	5	14	5,689	8,694	14,383
95+	2	1	3	1,717	598	2,316
Total	92	289	381	113,360	890,223	1,003,583
Average (Age/Payment)	73.55	66.38	68.12	1,232	3,080	2,634
Frequency Percent	24.1	75.9	100	11.3	88.7	100

P:\Pawtucket\2015 Pension\Report\[DIS1.XLS]Disabled

Exhibit 3 - Disabled Retiree Distribution as of July 1, 2015

	Number of Retirees			Total Monthly Payments		
Attained Age	Female	Male	Total	Female	Male	Total
< 20	0	0	0	0	0	0
20-24	0	0	0	0	0	0
25-29	0	0	0	0	0	0
30-34	0	0	0	0	0	0
35-39	1	2	3	4,078	8,277	12,355
40-44	0	4	4	0	13,878	13,878
45-49	0	6	6	0	20,540	20,540
50-54	1	7	8	2,715	23,170	25,885
55-59	0	6	6	0	20,475	20,475
60-64	0	10	10	0	30,448	30,448
65-69	0	3	3	0	10,345	10,345
70-74	0	1	1	0	4,209	4,209
75-79	0	0	0	0	0	0
80-84	0	0	0	0	0	0
85-89	0	0	0	0	0	0
90-94	0	0	0	0	0	0
95-99	0	0	0	0	0	0
Total	2	39	41	6,792	131,343	138,135
Average (Age/Payment)	43.45	55	54.44	3,396	3,368	3,369
Frequency Percent	4.9	95.1	100	4.9	95.1	100

EXHIBIT 4 - "NEW PLAN" CASHFLOW FORECAST

The following is a 30 year forecast of benefit payments, Contribution Income and Investment Returns.

Fiscal Year Ending	Benefit Payments	Employee Contributions	Employer Contributions	Investment Returns 7.5%	Net change in plan assets
2016	$13,689,753	$1,535,901	$13,630,085	$8,144,788	$9,621,021
2017	14,207,655	1,612,074	13,646,297	9,231,081	10,281,797
2018	14,974,007	1,691,883	14,015,801	10,024,066	10,757,743
2019	15,730,011	1,775,498	14,395,328	10,853,437	11,294,251
2020	16,382,733	1,863,095	14,785,147	11,723,758	11,989,267
2021	17,072,484	1,954,858	15,185,536	12,646,940	12,714,849
2022	17,742,153	2,050,982	15,596,777	13,625,301	13,530,907
2023	18,432,434	2,151,668	16,019,164	14,665,652	14,404,051
2024	19,075,077	2,257,128	16,452,994	15,772,302	15,407,347
2025	19,765,829	2,367,581	16,898,573	16,955,040	16,455,365
2026	20,418,096	2,483,259	17,356,217	18,217,246	17,638,627
2027	21,177,974	2,604,404	17,826,249	19,569,095	18,821,775
2028	22,025,092	2,731,267	18,308,999	21,010,608	20,025,782
2029	22,906,096	2,864,111	18,804,807	22,543,381	21,306,203
2030	23,822,340	3,003,214	19,314,021	24,173,179	22,668,074
2031	24,775,234	3,148,862	19,837,000	25,906,142	24,116,771
2032	25,766,243	3,274,816	20,401,371	27,748,097	25,658,041
2033	26,796,893	3,405,809	20,982,430	29,706,685	27,298,031
2034	27,868,768	3,542,041	21,580,692	31,789,347	29,043,311
2035	28,983,519	3,683,723	22,196,690	34,004,013	30,900,907
2036	30,142,860	3,831,072	4,642,103	35,469,277	13,799,592
2037	31,348,574	3,984,314	4,827,787	36,520,125	13,983,652
2038	32,602,517	4,143,687	5,020,899	37,585,412	14,147,481
2039	33,906,618	4,309,435	5,221,735	38,663,648	14,288,200
2040	35,262,883	4,481,812	5,430,604	39,753,124	14,402,658
2041	36,673,398	4,661,084	5,647,828	40,851,899	14,487,413
2042	38,140,334	4,847,528	5,873,742	41,957,773	14,538,710
2043	39,665,947	5,041,429	6,108,691	43,068,269	14,552,442
2044	41,252,585	5,243,086	6,353,039	44,180,597	14,524,137
2045	42,484,076	5,452,809	6,607,160	45,291,639	14,867,532

EXHIBIT 5 – SUMMARY OF PLAN PROVISIONS:

This summary is prepared in accordance with Collective Bargaining Agreements as of July 1, 2015, and does not take into account any subsequent changes.

1. Administration

The City of Pawtucket administers the plan.

2. Participation

Participation is mandatory for employees of the City of Pawtucket who are covered under a collective bargaining agreement between the City of Pawtucket and the Pawtucket Fire Fighters Independent Union and the City of Pawtucket and the Pawtucket Lodge No. 4, Fraternal Order of Police.

3. Salary

Salary is defined as gross regular compensation, including longevity.

4. Member Contributions

Employees hired after May 1, 2013 contribute 9%. Members contribute 8.5%, increasing to 9% commencing July 1, 2016.

5. Creditable Service

In general, creditable service is awarded during the period in which a member contributes to the pension plan.

6. Service Retirement

a. Eligibility:

Completion of 20 years of service

b. Benefit Amount:

Police: 50% of final average compensation plus an additional 2% of final average compensation for each year of service over 20 years, not to exceed 10 years. Final average compensation is defined as the highest 3 year average salary rate over the last 10 years.

Fire: 50% of final average compensation plus an additional 2% of final average compensation for each year of service over 20 years, not to exceed 10 years. Final average compensation is defined as the latest 3 year average salary rate.

7. Accidental Disability

a. Eligibility:

Participants are eligible for an accidental disability benefit, regardless of service or age, if they become permanently and totally incapacitated for further duty as a result of personal injury sustained while in the performance of duties.

b. Benefit Amount:

The accidental disability amount is 66 2/3% of compensation at date of disability plus an additional 10% of compensation for each dependent child (until the child attains age 21), not to exceed 80% of compensation, payable to normal retirement date. If the date of disability is after 20 years of service, the disability benefit is payable until the member would have completed 25 years of employment. A normal retirement benefit is payable after the disability benefit is no longer payable.

8. Termination Vested

a. Eligibility:

Ten years of service

b. Benefit Amount:

Annual annuity payable at what would have been the 20^{th} anniversary of employment.

9. Termination Non-Vested

c. Eligibility:

None

d. Benefit Amount:

Refund of employee contributions, plus interest (noncompounded).

10. Survivor Benefits

a. Eligibility:

None

b. Benefit Amount:

50% of compensation at date of death plus an additional 10% of compensation for each dependent child (until the child attains age 21), not to exceed 70% of compensation, payable for the lifetime of the surviving spouse or until the spouse remarries

12. Cost-of-Living Increases

Fire

Effective Date	Increase	Compounded
April 1, 1984	3.00%	Every 3 Years
July 1, 1986	1.50%	Annually
July 1, 1994	1.75%	Annually
July 1, 1995	2.00%	Annually
July 1, 1999	3.00%	Annually
July 1, 2004	3.00%	Annually

Police

Effective Date	Increase	Compounded
July 1, 1988	1.00%	Annually
July 1, 1989	1.50%	Annually
July 1, 1994	1.75%	Annually

July 1, 1996	2.00%	Annually
July 1, 1998	3.00%	Annually
July 1, 2004	3.00%	Annually

The cost-of-living adjustment is made on the service retirement benefit and the continuation of the service retirement benefit during the 10-year certain period. It is not applicable to a disability benefit or to a survivor benefit except as noted above.

Under the new plan provisions for active Members the COLA begin at the earlier of age 55 and 10 years following retirement. For the period FYE14 through FYE16, no COLAs will be made to the benefits for current retirees.

13. <u>Postretirement Death Benefits</u>

Benefit payable for the remainder of the 10-year certain period. Then a benefit of 67½% of the participant's pension benefit is payable to the surviving spouse. In addition, a $15,000 funeral allowance is payable for Firefighters who die in the line of duty.

EXHIBIT 6 – ACTUARIAL METHODS AND ASSUMPTIONS:

The actuarial cost method, factors, and assumptions used in determining cost estimates are presented below.

1. Member Data

The member data used in the determination of cost estimates consist of pertinent information with respect to the active, inactive, retired, and disabled members of the employer as supplied by the employer to the actuary.

2. Valuation Date

July 1, 2015.

3. Actuarial Cost Method

The costs of the Plan have been determined in accordance with the individual entry age normal actuarial cost method.

4. Rate of Investment Return

It is assumed that the assets of the fund will accumulate at a compound annual rate of 7.5% per annum, net of investment expenses.

5. Salary Scale

It is assumed that salaries including longevity will increase according to the following rates:

Years of Service	Salary Increase
0-1	8.50%
2-4	3.25%
5	11.00%
6-9	3.50%
10	4.25%
11-14	3.75%
15	4.50%
16-19	3.75%
20	4.75%
21-24	3.25%
25+	2.00%

6. Cost-of-Living Increases

Cost-of-living increases have been assumed to be 3.0% per year.

7. Value of Investments

Assets held by the fund are valued at market value. The actuarial value of assets is equal to the market value.

8. Annual Rate of Withdrawal Prior to Retirement

According to the following table.

Service	Rate
0	0.06000
1	0.03168
2	0.02886
3	0.02616
4	0.02364
5	0.02124
6	0.01896
7	0.01686
8	0.01494
9	0.01314
10	0.01146
11	0.00996
12	0.00858
13	0.00738
14	0.00630
15	0.00540
16	0.00462
17	0.00402
18	0.00354
19+	0.00000

9. Annual Rate of Mortality

It is assumed that both pre-retirement and post retirement mortality are represented by the RP-2000 combined mortality table adjusted to Blue Collar (male tables) with 1 year setback, and Scale AA improvement through 2011. Disabled mortality is assumed to follow The RP-2000 combined mortality table adjusted to blue Collar (male tables) set forward 1 year for males and 2 years for females, and Scale AA improvement through 2011.

10. Service Retirement

Based on an analysis of experience and anticipated changes in behavior, the assumed annual retirement rates are illustrated as follows for Police:

Service	Rate	Service	Rate
20	0.20	30	0.25
21	0.20	31	0.20
22	0.20	32	0.20
23	0.05	33	0.35
24	0.05	34	0.35
25	0.05	35	0.50
26	0.05	36	0.50
27	0.05	37	0.50
28	0.05	38	0.50
29	0.05	39+	1.00

Based on an analysis of experience and anticipated changes in behavior, the assumed annual retirement rates are illustrated as follows for Firefighters:

Service	Rate	Service	Rate
20	0.10	28	0.10
21	0.15	29	0.10
22	0.15	30	0.25
23	0.15	31	0.20
24	0.10	32	0.20
25	0.10	33	0.35
26	0.10	34	0.35
27	0.10	35+	0.60

At 65 the rate is 100%, regardless of the number of years of service.

11. Annual Rate of Disability Prior to Retirement

Based on an analysis of experience, the assumed annual rates of disability may best be illustrated by the following rates at the following ages:

Attained Age	Rate
25	.0020
30	.0020
35	.0020
40	.0020
45	.0050
50	.0063
55	.0060
60	.0043

12. Family Composition

It is assumed that 90% of male members and 75% of female members will be survived by a spouse and that females (males) are three years younger (older) than members.

13. Administrative Expenses

The normal cost is increased by an amount equal to the anticipated administrative expenses for the upcoming fiscal year. The amount for fiscal year 2016 is $45,000 and is anticipated to increase at 4% per year.

EXHIBIT 7 – GLOSSARY OF TERMS:

This glossary summarizes the technical terms contained in this report.

1. Actuarial Accrued Liability

That portion of the Actuarial Present Value of projected plan benefits that is not provided for by future employer Normal Costs or employee contributions.

2. Actuarial Assumptions

Assumptions as to the occurrence of future events affecting the Retirement System such as:

- Rates of investment returns
- Increases in a member's salary
- Inflation
- The probability of mortality, turnover, disablement
- Retirement at each age and other relevant items

3. Actuarial Cost Method

A procedure for allocating the Actuarial Present Value of projected pension plan benefits between Normal Cost and Actuarial Accrued Liability.

4. Actuarial Present Value

The single sum amount required at the valuation date that is required to provide for anticipated future events based upon the terms of the plan and the Actuarial Assumptions.

5. Forecast

A projection of future benefit payments or contribution requirements based upon the terms of the plan, the current asset amounts, the Actuarial Assumptions, and additional assumptions as to the replacement of terminating employees with new employees.

6. Normal Cost

That portion of the Actuarial Present Value of future benefits that is assigned to the current year.

7. Unfunded Actuarial Accrued Liability

That portion of the Actuarial Accrued Liability that is not provided for by current actuarial value of assets.

8. Actuarial Valuation Method

The method used to divide the cost of future benefits among the Actuarial Accrued Liability, the current year's Normal Costs, and future years' Normal Costs. The resulting current funding requirement is then determined as the current year's Normal Cost plus the payment necessary to amortize the Unfunded Actuarial Liability.

9. Vested Liability

That portion of the Actuarial Present Value of Accrued Benefits that a member would be entitled to if the member terminated employment with the employer as of the valuation date.

CERTIFICATION:

This report fairly represents the actuarial position of the City of Pawtucket Police and Firefighters Pension Plan contributing as of July 1, 2015, in accordance with generally accepted actuarial principles applied consistently with the preceding valuation. In our opinion, the actuarial assumptions used to compute actuarial accrued liability and normal cost are reasonably related to plan experience and to reasonable expectations, and represents our best estimate of anticipated plan experience.

The report was prepared under the supervision of Daniel Sherman, an Associate of the Society of Actuaries and a Member of the American Academy of Actuaries, who takes responsibility for the overall appropriateness of the analysis, assumptions and results. Daniel Sherman is deemed to meet the General Qualification Standard and the basic education and experience requirement in the pension area. Based on over thirty years of performing valuations of similar complexity, Mr. Sherman is qualified by experience.. Daniel Sherman has met the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Sherman Actuarial Services, LLC

Daniel W. Sherman

____

Daniel W. Sherman, ASA, MAAA

November, 2015

"OLD PLAN"

	July 1, 2014	July 1, 2015
Pensioners:		
Number	13	13
Average Age	89.15	90.15
Average Monthly benefit	$1,612	$1,624
Beneficiaries:		
Number	26	25
Average Age	85.47	86.12
Average Monthly benefit	$777	$796
Actuarial Accrued Liability	$2,769,443	$2,599,239