Conduent Human Resource Services Retirement Consulting



Employees' Retirement System of Jersey City

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May 1, 2018

Pension Commission Employees' Retirement System of Jersey City City Hall Jersey City, New Jersey

Members of the Pension Commission:

Section 15 of City Ordinance G-145 governing the operation of the Employees' Retirement System of Jersey City provides for actuarial valuations of the System. The results of the actuarial valuation, prepared as of January 1, 2018, are submitted in this report.

The valuation shows the financial condition of the System as of January 1, 2018 and gives a basis for determining the contributions payable by the City. On the basis of the valuation, it is recommended that the City contribute to the System 3.95% of the salaries of members as well as an accrued liability contribution of \$5,612,738 for 2018 payable as of December 31, 2018. The accrued liability contribution will increase 4% per year.

The valuation reflects the benefit and funding reforms under Chapter 282, P.L. 2013. The legislation amends Section 43:13-22.73 to decrease retirants' Cost-of-Living Adjustments from 100% to 50% of the per centum of change in the Department of Labor's Consumer Price Index. However, in accordance with the Pension Commission's administrative procedure regarding the implementation funding provision under Section 11 of the legislation, effective with the January 1, 2014 valuation, the City shall pay an additional normal cost and an additional unfunded accrued liability contribution amount which are determined to be the difference assuming future pension adjustments in the retirement allowances continue to reflect a Cost-of-Living Adjustment of 100% of the per centum of change in the Department of Labor's Consumer Price Index and the revised 50% per centum of change in the same Consumer Price Index. For 2018, the additional contribution amounts to \$2,029,510.

As required under Section 43:13-22.64 of the New Jersey Statutes, experience studies are performed once in every five-year period. This valuation was prepared on the basis of the demographic assumptions that were determined from the January 1, 2011 – December 31, 2015 Experience Study which were approved by the Pension Commission during the February 15, 2017 Pension Commission meeting. As mandated by the statute, these assumptions will remain in effect for valuation purposes until such time the Pension Commission adopts revised assumptions. The next experience study would be scheduled to review the experience of the System for the period January 1, 2016 to December 31, 2020 and any changes in assumptions would be implemented with the January 1, 2022 valuation of the System.

The December 31, 2017 reporting requirements of the Governmental Accounting Standards Board Statement No. 67 are addressed in a separate report.



The City reported the individual data for members of the System as of the valuation date for use in the preparation of this report. While we did not verify the data at their source, we did perform tests for internal consistency and reasonableness. The amount of assets in the trust fund taken into account in the valuation was based on statements provided to us by the City. The accuracy of the results presented in this report is dependent on the accuracy of the data.

This actuarial valuation was prepared under our direct supervision and we acknowledge responsibility for the results. To the best of our knowledge, the results are complete and accurate and, in our opinion, the techniques and assumptions used are reasonable and meet the funding requirements and intent of Section 43:13-22.59 of the New Jersey Statutes. There is no benefit or expense to be provided by the System and/or paid from the System'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 increase in System costs or required contribution rates have been taken into account in the valuation.

This actuarial valuation is based on an investment return assumption of 8.25% per annum, compounded annually. The valuation interest rate is based on the System's asset allocation and forward-looking expected rates of return by asset category provided by the System's investment consultant. Based on Conduent's capital market outlook model, this assumption is within the 50th percentile of projected annualized 25-year returns. We believe that this rate is consistent with the System's long-term capital market assumption.

Future actuarial measurements may differ significantly from current measurements due to System experience differing from that anticipated by the economic and demographic assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements, and changes in System provisions or applicable law. Any statements regarding funded ratios have no specific relevance to any funded position that might be determined in the event a settlement is contemplated. An analysis of the potential range of future results is beyond the scope of this valuation.

Use of this report for any other purpose or by anyone other than the Pension Commission may not be appropriate and may result in mistaken conclusions because of failure to understand applicable assumptions, methods, or inapplicability of the report for that purpose. Conduent HR Consulting should be asked to review any statement to be made on the basis of the results contained in this report. Conduent HR Consulting will accept no liability for any such statement made without prior review by Conduent HR Consulting.

In our opinion, the actuarial assumptions used are appropriate for purposes of the valuation and are reasonably related to the experience of the System and to reasonable long-term expectations. These assumptions were selected in accordance with applicable Actuarial Standards of Practice published by the Actuarial Standards Board.

We are Members of the American Academy of Actuaries and meet the Qualification Standards of the Academy to render the actuarial opinions contained herein. This report has been prepared in accordance with all applicable Actuarial Standards of Practice, and we are available to answer questions concerning it.

Respectfully submitted,

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SECTION I – SUMMARY OF PRINCIPAL RESULTS

1. For convenience of reference, the principal results of the valuation and a comparison with the preceding valuation results are summarized below:

Valuation Date	1/1/2018		1/1/2016
Number of active members Annual salaries	\$ 780 37,488,883	\$	745 33,421,968
Number of retired members and eligible Survivors ^a Annual retirement allowances	\$ 362 11,998,805	\$	346 10,679,816
Number of former members entitled to vested benefits at age 60 ^b Annual vested benefits	\$ 22 313,792	\$	19 290,232
Assets for valuation purposes	\$ 118,867,748	\$	99,943,507
Unfunded accrued liability	\$ 92,349,942	\$	94,031,846
Funded ratio	56.2%		51.5%
Normal contribution rate	3.95%		4.45%
Accrued liability contribution ^c	\$ 5,612,738	\$	5,714,959
Annual Recommended Contribution	\$ 7,093,549	\$	7,202,237
Chapter 282, P.L. 2013 Additional Contribution	 2,029,510		1,639,096
Total Recommended Contribution	\$ 9,123,059	\$	8,841,332

a. In addition, as of January 1, 2018, there were two minor children receiving temporary pensions of \$17,922. As of January 1, 2016, there were three minor children receiving temporary pensions of \$24,492.

c. The accrued liability contribution amount is to increase 4% per year.

b. In addition, as of January 1, 2018, there were 109 former active members who are valued for their accumulated contributions. As of January 1, 2016, there were 73 former active members who were valued for their accumulated contributions.

- 2. Comments on the valuation results as of January 1, 2018 are given in Section IV and further discussion of the contribution levels is set out in Section V.
- 3. A summary of the main benefit and contribution provisions of the System as interpreted for the valuation is given in Schedule C of this report. There have been no changes in benefit and contribution provisions since the preceding valuation.
- 4. The demographic and economic assumptions used for this valuation have changed from those used in the prior valuation. As required under Section 43:13-22.64 of the New Jersey Statutes, experience studies are performed once in every five-year period. The valuation was prepared based on the revised demographic and economic assumptions that were determined from the January 1, 2011 – December 31, 2015 Experience Study and were approved by the Pension Commission during the February 15, 2017 Pension Commission meeting.

As a result, prior to recognizing the funding provisions of Chapter 282, P.L. 2013, the accrued liability decreased by \$1,017,644, the gross normal cost increased by \$58,292 and the net employer contribution decreased by \$13,113.

As mandated by the statute, these assumptions will remain in effect for valuation purposes until such time the Pension Commission adopts revised assumptions.

There were no other changes to the actuarial assumptions and methods from those used in the prior valuation. The actuarial assumptions and methods used in this valuation for valuing the System are summarized in Schedule B.

5. The valuation liabilities were determined using the Projected Unit Credit Funding Method. Under this method, the City is required to make two contributions to the System, a normal contribution and, if applicable, an accrued liability contribution. The normal contribution is defined under the Projected Unit Credit Funding Method as the present value of the benefits accruing during the current year. The unfunded accrued liability is determined as the difference between the accrued liability and the actuarial value of assets. If there was no unfunded accrued liability for the valuation period immediately preceding the current valuation period, the current year's accrued liability contribution is determined as a level percentage of pay required to liquidate the unfunded accrued liability in annual payments, increasing at 4% per year, over a 30-year period. Thereafter, any increase or decrease in the unfunded accrued liability as a result of actuarial losses or gains for subsequent valuation years will increase or decrease the unfunded accrued liability contribution.

In accordance with the Pension Commission's administrative procedure on the funding provisions of Chapter 282, P.L. 2013, the City shall pay an additional normal cost and an additional unfunded accrued liability contribution amount assuming future Cost-of-Living Adjustments (COLA) in retirement allowances continued to be 100% of the per centum of change in the Department of Labor's Consumer Price Index (CPI).

It should be noted that employer contributions based on the statutory 30-year open increasing amortization method together with the additional Chapter 282 employer contributions may result in upward pressure on actuarially determined contribution requirements in future years. Moreover, absent favorable experience or actual contributions being made greater than the actuarially determined contribution approach may result in the unfunded accrued liability not being amortized.

SECTION II - MEMBERSHIP DATA

- 1. Membership data were furnished by the System administrator.
- 2. Schedule D provides tables summarizing the System's membership data used for the January 1, 2018 valuation. Table 1 shows a reconciliation of the System's membership from January 1, 2016 to

January 1, 2018. Tables 2 and 3 show the number and annual rates of salary of active members that were included in the valuation, while Tables 4, 5, 6 and 7 show the number and annual pensions of retired members, eligible survivors and members entitled to vested benefits included in the valuation.

SECTION III – ASSETS

- 1. The amount of the assets taken into account in this valuation is based on information reported in the financial statement. The financial statement was provided by the System administrator.
- 2. For actuarial purposes, assets are valued at market value, which totaled \$118,867,748 as of January 1, 2018.

SECTION IV - COMMENTS ON VALUATION

Schedule A of this report contains the valuation balance sheet, which shows the present and prospective assets and liabilities of the System as of January 1, 2018. The following comments on the valuation are pertinent:

- 1. The System has a total accrued liability of \$211,217,690 of which \$125,139,820 is for the accrued benefits payable attributable to present retired members, members entitled to receive deferred pensions and eligible survivors and \$86,077,870 is for the accrued benefits payable attributable to present active members.
- The System has present assets of \$118,867,748. When this amount is subtracted from \$211,217,690, the total accrued liability of the System, the balance of \$92,349,942 is the unfunded accrued liability of the System.
- 3. The System is supported by the joint contributions of the members and the City. The expected member contributions for 2018 are \$2,465,190. When this amount is brought forward half a year with interest and subtracted from \$4,046,486, the gross normal cost of the System brought forward one year with interest, the balance of \$1,481,622 is the net normal cost payable as of December 31, 2018 by the City. This amount divided by the total annual compensation of active members of \$37,488,883 determines a net normal cost of 3.95% of salaries.
- 4. As mentioned above, the current valuation indicates that a normal contribution payable by the City at a rate of 3.95% of annual salaries would be required to cover the City's cost of benefit increases in the year following the valuation. This rate multiplied by the annual compensation of \$37,488,883 produces a net normal cost to be paid by the City of \$1,480,811. The accrued liability contribution is determined by amortizing the unfunded accrued liability of \$92,349,942 over 30 years with an 8.25% interest rate and increasing payments of 4% per year. The accrued liability contribution is \$5,612,738. Therefore, the total annual contribution payable by the City as of December 31, 2018, prior to Chapter 282, P.L. 2013, is \$7,093,549.
- 5. In accordance with the Pension Commission's administrative procedure on the funding provisions of Chapter 282, P.L. 2013, the System has a total accrued liability of \$236,715,104 and a gross normal cost of \$4,179,291 assuming continuation of the 100% COLA adjustment for future retirement allowances. The accrued liability contribution is determined by amortizing the unfunded accrued liability of \$117,847,356 over 30 years with an 8.25% interest rate and increasing payments of 4% per year. Under Chapter 282, P.L. 2013, an additional net normal cost of \$479,858 (1.28% of salaries) and accrued liability contribution of \$1,549,652 (4.13% of salaries) are also payable as of December 31, 2018 by the City. Therefore, the total annual contribution payable by the City as of December 31, 2018 is \$9,123,059.

SECTION V - CONTRIBUTIONS REQUIRED TO SUPPORT THE SYSTEM

- The actuarial valuation of the System indicates that a normal contribution rate of 3.95% to cover the City's cost of benefit increases in the year following the valuation and an accrued liability contribution of \$5,612,738 due to the existing unfunded accrued liability is recommended. In accordance with the Pension Commission's administrative procedure on the funding provisions under Chapter 282, P.L. 2013, an additional normal contribution rate of 1.28% and accrued liability contribution of \$1,549,652 are also payable by the City.
- 2. The following table summarizes the contribution recommended for payment by the City based on the salaries of members as of January 1, 2018 of \$37,488,883 and estimated salaries as of January 1, 2019 of \$38,988,438 to fund the System on a sound actuarial basis and comply with legislation.

	Annual I	Percentage of S	Salaries	Annual Amount		
	Actual Cost Reflecting 50% CPI for COLA	Additional Amount to Reflect 100% CPI for COLA	Total	Actual Cost Reflecting 50% CPI for COLA	Additional Amount to Reflect 100% CPI for COLA	Total
				ember 31, 2018		
			for 2018 C	alendar Year		
Normal Contribution	3.95%	1.28%	5.23%	\$1,480,811	\$ 479,858	\$1,960,669
Accrued Liability						
Contribution	14.97%	4.13%	19.10%	\$5,612,738	\$1,549,652	\$7,162,390
Total						
Contribution	18.92%	5.41%	24.33%	\$7,093,549	\$2,029,510	\$9,123,059
	Payable December 31, 2019 for 2019 Calendar Year					
Normal		[
Contribution	3.95%	1.28%	5.23%	\$1,540,043	\$ 499,053	\$2,039,096
Accrued Liability Contribution	14.97%	4.13%	19.10%	\$5,837,248	\$1,611,638	\$7,448,886
Total Contribution	18.92%	5.41%	24.33%	\$7,377,291	\$2,110,691	\$9,487,982

ANNUAL CONTRIBUTION RECOMMENDED FOR PAYMENT BY THE CITY

3. As stated above, the foregoing table shows the annual contribution payable by the City on the basis of the salaries of members as of January 1, 2018 and the estimated salaries as of January 1, 2019. However, it is recommended that the actual normal contribution to be made be determined by applying the normal contribution rate of 5.23% to the actual salaries that will be paid during the period for which the contributions are to be made.

SECTION VI – EXPERIENCE

Records are being maintained whereby the actual experience of active members, retired members and eligible survivors are compared with that expected on the basis of the tables adopted by the Pension Commission. In this way, deviations in the experience from that anticipated will be noted and any adjustments believed necessary brought to the attention of the Pension Commission.

SECTION VII – ACTUARIAL PRESENT VALUE OF ACCRUED BENEFITS

Presented below is a comparison of the actuarial present value of accrued benefits with the market value of the assets as of the valuation date. The relevant amounts as of January 1, 2018 are:

Actuarial present value of accrued benefits:

Vested benefits	
Members and survivors currently receiving payments	\$ 122,332,000
Other members	 71,255,000
	\$ 193,587,000
Non-vested benefits	 9,204,000
Total	\$ 202,791,000
Assets at market value	\$ 118,868,000

The actuarial present value of vested and non-vested accrued benefits is based on an assumed interest rate of 8.25%. As of January 1, 2016 the interest rate was 8.25%.

The statement of changes in the present value of accrued benefits is as follows:

Actuarial present value benefits as of January 1, 2016	\$ 190,355,000	
Increase (decrease) during the year attributable to:		
Change in actuarial assumptions Benefits accumulated Interest for 24 months Benefits paid	\$ (1,213,000) 5,417,000 31,583,000 (23,351,000)	
Net Increase	\$ 12,436,000	
Actual present value of accrued benefits as of January 1, 2018	\$ 202,791,000	

SCHEDULE A

VALUATION BALANCE SHEET SHOWING THE ASSETS AND LIABILITIES OF THE EMPLOYEES' RETIREMENT SYSTEM OF JERSEY CITY PREPARED AS OF JANUARY 1, 2018

ASSETS Present assets of the System	\$ 118,867,748		
Unfunded accrued liability (surplus)			 92,349,942
Total Assets			\$ 211,217,690
LIABILITI	ES		
Present value of prospective benefits payable on account of present retired members, members entitled to receive deferred pensions and eligible survivors Present value of accrued benefits payable on account of present active members:			\$ 125,139,820
Service retirement benefits Disability retirement benefits Benefits on death in service and after retirement Return of members' contributions upon withdrawal before retirement	\$	75,991,991 1,568,440 6,095,818 2,421,621	
Total on account of active members		\$ 86,077,870	
Total Accrued Liabilities			\$ 211,217,690

SCHEDULE B

OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS

VALUATION INTEREST RATE: 8.25% per annum, compounded annually. The valuation interest rate is based on the System's asset allocation and forward-looking expected rates of return by asset category provided by the System's investment consultant.

SEPARATIONS FROM SERVICE: Representative values of the assumed annual rates of separation are as follows:

Age	Prior to Eligibility For Benefit ^a			igibility enefit ^b	After Eligibility for Service Retirement
	Male	<u>Female</u>	Male	<u>Female</u>	
20 25 30 35 40 45 50 55 60 62 65 69	8.75% 8.29 6.91 4.61 4.15 3.69 2.76 2.76	6.82% 6.46 5.39 3.59 3.23 2.87 2.16 2.16	7.16% 4.98 4.59 4.19 3.77 4.28	5.63% 3.96 3.66 3.36 3.13 3.61	0.53% 1.07 8.88 18.00 14.00 26.00 17.00

a. Prior to 3 years of service, higher rates of termination are used.

b. The differences between the rates of termination after eligibility for a benefit and those prior to eligibility of a refund of contributions are the rates assumed for members electing a deferred benefit instead.

Age		nary ith ^a	Accidental Death	Ordinary Disability	Accidental Disability
	Male	<u>Female</u>			
20 25 30 35 40 45 50 55 60 62 65 69	.03% .04 .04 .06 .10 .13 .19 .26 .40 .49 .65 .86	.02% .02 .02 .04 .06 .09 .14 .21 .25 .33 .47	.001% .001 .001 .001 .001 .001 .001 .001	.010% .010 .020 .030 .080 .090 .150 .350	.001% .001 .002 .007 .007 .007 .007 .008 .009 .009 .010

a. Based on the RP2000 Employee Preretirement Mortality Table for male and female active participants set back 2 years for males and 7 years for females. In addition, the tables provide for future improvements in mortality from the base year of 2013 using a generational approach based on Conduent Modified MP2015. Rates shown above are unadjusted for Conduent Modified MP2015.

SERVICE RETIREMENT: Assumed to occur between the age first eligible and age 70.

SALARY INCREASES: Representative values of the assumed annual rates of future salary increases are as follows:

Age	Annual Rate of Salary Increase
20	4.91%
25	5.00
30	4.86
35	4.50
40	4.23
45	3.85
50	3.57
55	3.09
60	2.74
62	2.57
65	2.30
69	1.86

COST-OF-LIVING INCREASES: The COLA increase is 50% of the cumulative increase in the CPI. The CPI assumption is 2.00% per year effective January 1, 2016 and phased-in over a period of ten years to 3.00% per year effective January 1, 2026 and thereafter (i.e. increasing by 0.1% per year from January 1, 2016 through January 1, 2026).

SPOUSES: 85% of active members assumed to be married.

DEATHS AFTER RETIREMENT:

SERVICE: The RP-2000 Combined Healthy Male and Female Mortality Tables (set back 1 year for males and females) for service retirement and beneficiaries of former members and a one year static projection based on mortality improvement scale AA. In addition, the tables for service retirement provide for future improvements in mortality from the base year of 2013 using a generational approach based on the Conduent Modified 2015 projection scale.

BENEFICIARIES: The RP-2000 Combined Healthy Male and Female Mortality Tables (set back 1 year for males and females) for service retirement and beneficiaries of former members and a one year static projection based on mortality improvement scale AA. In addition, the tables for beneficiaries of former members provide for future improvements in mortality from the base year of 2013 using a generational approach based on the Conduent Modified 2015 projection scale.

DISABILITY: The RP-2000 Disabled Mortality Tables (set back 3 years for males and set forward 1 year for females) are used to value disabled retirees. In addition, the tables for disability retirement provide for future improvements in mortality from the base year of 2013 using a generational approach based on the Conduent Modified 2015 projection scale.

Representative values of the assumed annual rates of mortality unadjusted for the Conduent Modified 2015 projection scale are as follows:

Age	Service Retirements & Beneficiaries		Age	Disal Retire	
	Male	<u>Female</u>		Male	<u>Female</u>
55	.31%	.24%	35	2.26%	.75%
60	.59	.44	40	2.26	.75
65	1.11	.86	45	2.26	.82
70	1.95	1.48	50	2.51	1.25
75	3.34	2.53	55	3.16	1.76
80	5.73	4.12	60	3.80	2.29
85	9.91	6.90	65	4.50	2.96

LOADING OR CONTINGENCY RESERVES: None.

VALUATION METHOD: Projected Unit Credit.

ASSET VALUATION METHOD: Market value.

PRESENT VALUE OF ACCRUED VESTED AND NONVESTED BENEFITS: The calculation of the present value of accrued vested and non-vested benefits has been made on the basis of the same assumptions as used in the valuation except that no salary increases are assumed.

MISCELLANEOUS: The valuation was prepared on an on-going System basis. The valuation was based on members of the System as of the valuation date and did not take future members into account. No provision has been made for contingent liabilities with respect to non-vested terminated members who may be reemployed. The valuation assumptions anticipate a modest rate of future inflation. In accordance with Chapter 282, P.L. 2013 and the Pension Commission's administrative procedure, the City shall pay an additional normal cost and an additional unfunded accrued liability contribution amount assuming the cost of the adjustment in future retirement allowances assuming 100% (instead of 50%) of the per centum of change in the Department of Labor's Consumer Price Index.

SUMMARY OF CHANGES FROM THE JANUARY 1, 2016 VALUATION:

The valuation was prepared on the basis of the revised demographic and economic assumptions that were determined from the January 1, 2011 – December 31, 2015 Experience Study and were approved by the Pension Commission during the February 15, 2017 Pension Commission meeting.

As mandated by the statute, these assumptions will remain in effect for valuation purposes until such time the Pension Commission adopts revised assumptions.

SCHEDULE C

SUMMARY OF MAIN SYSTEM PROVISIONS AS INTERPRETED FOR VALUATION PURPOSES

The Employees' Retirement System of Jersey City, which became effective February 22, 1965, was established under City Ordinance G-145 in accordance with the provisions of Chapter 275 of the Laws of New Jersey 1964. It supersedes any pension system existing in the City pursuant to Article 2, Chapter 13, Title 43 of the Revised Statutes. Legislation signed on August 19, 1996 revised the retirement and survivorship benefits payable to retirants and beneficiaries. Chapter 167, P.L. 2003 increased retirement allowances by 100% of the calculated increase in the CPI instead of the previous 60%. Chapter 247, P.L. 2005 decreased the early retirement factor from 2/12 of 1% to 1/12 of 1% per month for retirees prior to age 60. Chapter 128, P.L. 2003 allowed 39 employees to retire with enhanced benefits. Chapter 282, P.L. 2013, which was approved January 17, 2014, decreased the percentage of adjustment in the retirement allowances, pensions and survivorship benefits to 50% of the calculated increase in the CPI instead of the previous 100%.

1 – DEFINITION

"Final Salary" means the average annual salary received by a member for the three years immediately preceding his death or retirement or it means the average annual salary earned by a member for any 3 fiscal years of membership providing the largest possible benefit to the member or his beneficiary; provided, however, that as to any member employed by the City prior to January 12, 1965, salary received by such member at the time of his death or retirement. Chapter 282, P.L. 2013 changed the definition of final salary for members hired on or after January 17, 2014 to be the average annual compensation for any five fiscal years of membership providing the largest possible benefit.

2 – MEMBERSHIP IN SYSTEM

Employees who were members of the former pension systems on the effective date automatically became members of the System. After the effective date membership is a condition of employment for those who become employees prior to the attainment of age 40. Those employees who became such prior to February 22, 1965, who were not members of a former pension system and who had become employees prior to the attainment of age 40, were allowed to join the System within 6 months after the effective date and were permitted to purchase credit for prior service. Provision was made in the ordinance for a possible transfer to the System of certain members of the State Retirement Systems within this same 6 month period. Under the provisions of Chapter 158, P.L. 1966, employees who were not covered under a former pension system and who were employed on or before February 22, 1965 and after attainment of age 40 but prior to the attainment of age 50 were allowed to become members within 6 months after the effective date of the amendment and were permitted to purchase credit for prior service. Members of the police and fire departments and employees of the board of education are not included as employees eligible to become members. All pensions and benefits on account of pensioners and beneficiaries of the former pension systems are continued under the System.

Effective October 7, 1984 temporary employees with one year's continuous service are required to become members of the System. Under the provisions of Chapter 282, P.L. 2013, effective January 17, 2014, persons employed by Jersey City under age 40 will continue membership in the State administered Public Employees' Retirement System (PERS) if they were PERS members at the time they were employed by Jersey City.

3 – BENEFITS

Retirement for Age and Service With 20 (25 years for members hired on or after January 17, 2014) or More Years of Creditable Service	
Conditions for Retirement	Any member who has 20 years of creditable service in the employ of the City and has attained age 60 (25 years of creditable service and age 65 for members hired on or after January 17, 2014) may retire for age and service upon his application.
Amount of Pension	The pension payable upon retirement is equal to 55% of his final salary plus 1% of such salary for each year of creditable service in excess of 20 years (25 years for members hired on or after January 17, 2014). The minimum annual pension is \$3,600.
Retirement for Age and Service With Less Than 20 Years of Creditable Service	
Conditions for Retirement	Any member who has attained age 60 but with less than 20 years of creditable service in the employ of the City may retire under this provision.
Amount of Pension	The pension payable is equal to 2% of his final salary for each year of creditable service. The annual pension, however, is never less than \$3,600.
Early Service Retirement	
Conditions for Retirement	If a member resigns prior to age 60 (age 65 for members hired on or after January 17, 2014) after having completed 25 years (30 years for members hired on or after January 17, 2014) of creditable service, he may elect to receive a pension.
Amount of Pension	The pension payable is equal 55% of his final salary plus 1% of such salary for each year of service in excess of 20 years (in excess of 25 years for members hired on or after January 17, 2014), reduced by 1/12 of 1% for each month he is less than age 60 (3/12 of 1% for each month he is less than age 65 for members hired on or after January 17, 2014), but not less than \$3,600 per annum.
Termination of Service	
Conditions for Pension	If a member has completed 10 years of creditable service and is separated from service either voluntarily or involuntarily prior to age 60 (age 65 for members hired on or after January 17, 2014), he may elect to receive a deferred pension commencing at age 60 (age 65 for members hired on or after January 17, 2014).
Amount of Pension	A deferred pension in an amount equal to the proportional relation which his years of service credited in the System bear to the years of service which he would have had had he continued in service to age 60 (age 65 for members hired on or after

	January 17, 2014), multiplied by one-half of his final salary at the time he elected the deferred pension. The minimum annual pension is \$3,600.
Retirement for Ordinary Disability	
Conditions for Retirement	Any member who has 5 or more years of creditable service and who has become permanently disabled for the further performance of his duty may be retired on a disability pension.
Amount of Pension	The pension is equal to one-half of his final salary plus 1% for each year of creditable service in excess of 20 years, never less than \$3,600 per annum.
Retirement for Accidental Disability	
Conditions for Retirement	Any member who has become permanently and totally disabled, mentally or physically, for the further performance of his duty as a result of a traumatic event occurring during and as a result of the performance of his regular or assigned duties may be retired on a disability pension. The application to accomplish such retirement must be filed within five years of the original traumatic event.
Amount of Pension	The pension is equal to two-thirds of his final salary, never less than \$3,600 per annum.
Benefits Upon Death in Service	
Conditions for Benefit	Upon the death of a member in service who has paid to the System the full amount of his contributions, a death benefit is payable to the surviving widow, widower, minor children or dependent parents of the member, as the case may be, provided that:
	(a) The member dies as a result of injuries or illness received or incurred in the performance of his duties, or
	(b) The member has served in the employ of the City for a period of five years and dies from causes other than injuries or illness received or incurred in the performance of his duties.
	In order to be eligible for the benefit, a widow or widower must have been married to the member at least 5 years prior to his death or retirement.
Amount of Pension	The death benefit payable to the surviving widow or widower is a pension of 50% of the member's final salary. If there is no surviving widow or widower or the widow or widower dies or remarries, a pension of 20% of such final salary shall be paid to one surviving child, 35% to two surviving children in equal shares and 50% to three or more children in equal shares. If there is no surviving widow, widower or child, a pension of 25% of such final

	salary shall be paid to one surviving dependent parent or 40% to two surviving dependent parents in equal shares.
	If there are no eligible survivors, an amount equal to the member's contributions to the System, without interest, is payable to his estate.
Benefits upon Death after Retirement	
Conditions for Benefit	Upon the death of a member after his retirement, a death benefit is payable to the surviving widow, widower, minor children or dependent parents of the member, as the case may be. In order to be eligible for the benefit, a widow or widower must have been married to the member at least 5 years prior to his retirement.
Amount of Pension	The death benefit payable to eligible survivors is a pension equal to 50% of the member's pension at retirement, not less than \$3,600 per annum.
Form of Benefits	All benefits under the System are payable for life, except that benefits to widows and widowers and dependent parents are discontinued upon their remarriage and the benefits to minor children are discontinued upon their marriage or attainment of age 18.
	If after the payment of all pension and survivorship benefits payable by the System to a decedent member after retirement and his eligible survivors, the total amount paid is less than the amount of the decedent's contributions during membership in the System, the amount of the difference, without interest, shall be payable to the decedent's estate.
Refund of Contributions upon Termination of Service	A member who separates from service without receiving other benefits from the System is entitled to a refund of his contri- butions to the System, without interest, at the expiration of 90 days plus the period of tendency of any legal proceedings.
Cost-of-Living Adjustment	A retirant or beneficiary who has been in receipt of a pension or survivorship benefit for at least two years will receive a percentage adjustment of his initial pension or survivorship benefit at the beginning of each year starting with the year 1990, or the beginning of his 25th month in receipt of a pension or survivorship benefit, if later, equal to 50% (previously 100%) of the per centum of change in the Department of Labor's Consumer Price Index from the annual average index in 1988 or year his benefits began, if later, to the date of adjustment.

4 – CONTRIBUTIONS

By Members

Each member on the effective date of the System contributes during the entire period of his service the percentage of his salary applicable to his age at the time of his appointment, as follows:

AGE AT APPOINTMENT	% RATE OF CONTRIBUTION
Not Exceeding 35 years	6%
Between 35 and 36 years	6½
Between 36 and 37 years	7
Between 37 and 38 years	7½
Between 38 and 39 years	8
39 and over	8/2

Each employee who becomes a member after the effective date of the System contributes during the entire period of his service the percentage of his salary applicable to his age at the time of becoming a member. These percentages at quinquennial ages are as follows:

AGE AT BECOMING	% RATE OF
A MEMBER	CONTRIBUTION
20	6.20%
25	6.60
30	7.25
35	8.15
40	9.50
45	9.70
50 and over	10.15

The contributions of the City consist of a normal contribution which is the present value of benefits to be accrued in the year following the valuation converted to a percentage of the annual salaries of all active members and, until the unfunded accrued liability is liquidated, an additional amount known as the accrued liability contribution which is an amount, increasing 4% per year, that will pay off the unfunded accrued liability over a period of 30 years. In accordance with Chapter 282, P.L. 2013 and the Pension Commission's administrative procedure, effective with the January 1, 2014 valuation, the City shall pay an additional normal cost and an additional unfunded accrued liability contribution amount assuming the cost of the future adjustments in retirement allowances is 100% (instead of 50%) of the per centum of change in the Department of Labor's Consumer Price Index.

Summary of Changes From the January 1, 2016 Valuation

None.

SCHEDULE D

TABLES OF MEMBERSHIP DATA

RECONCILIATION OF DATA FROM JANUARY 1, 2016 TO JANUARY 1, 2018

	Ac Contrib.	tives Noncontrib.	Deferred Vested	Re Service	etirees Disabled	Beneficiaries	Dependents	Total
Members as of January 1, 2016	745	73	19	266	15	65	3	1,186
	745	15	19	200	15	05	5	1,100
Status Change: To Contributing	2	(2)						
To Noncontributing	(19)	(2) 19						
Withdrawal								
 Non-Vested & Vested Refund Deferred Vested 	(33) (7)	(6)	(1) 7					(40)
Service Retirement				35				
Service Retirement	(35)			30				
Disabled	(3)				3			
Deferred Vesteds Now Payable			(3)	3				
Death				(15)	(1)	(13)		(29)
Beneficiaries						4		4
End of Payments							(1)	(1)
New Actives	130	23						153
Rehires								
Data Corrections/pickups		2						2
Members as of January 1, 2018	780	109	22	289	17	56	2	1,275

THE NUMBER AND ANNUAL RATES OF SALARIES OF MEMBERS DISTRIBUTED BY FIFTH-YEAR AGE AS OF JANUARY 1, 2018

	N	IEN		WOMEN			
AGE	NUMBER		AMOUNT	NUMB	ER	AMOUNT	
Under 23	4	\$	141,205	4	\$	94,840	
23 - 27	31		1,102,141	43		1,652,894	
28 - 32	35		1,487,060	46		1,568,474	
33 - 37	45		2,137,596	76		2,995,956	
38 - 42	50		2,536,880	74		3,041,321	
43 - 47	25		1,317,571	48		2,194,073	
48 - 52	42		2,622,261	45		2,291,378	
53 - 57	43		2,547,365	52		2,573,548	
58 - 62	30		2,049,950	39		2,044,707	
63 - 67	13		990,153	21		1,341,323	
Over 67	7		338,453	7		419,734	
TOTAL	325	\$	17,270,635	455	\$	20,218,248	

THE NUMBER AND ANNUAL RATES OF SALARIES OF MEMBERS DISTRIBUTED BY FIFTH-YEAR SERVICE AS OF JANUARY 1, 2018

	Μ	EN		WOMEN		
SERVICE	NUMBER		AMOUNT	NUMBE	R	AMOUNT
Under 3	61	\$	2,603,233	89	\$	2,940,065
3 - 7	62		2,606,881	71		2,798,521
8 - 12	24		1,195,843	57		2,089,669
13 - 17	55		3,034,245	87		3,844,192
18 - 22	33		1,830,932	52		2,591,279
23 - 27	22		1,363,559	23		1,112,659
28 - 32	42		2,952,270	40		2,446,796
33 - 37	12		919,433	21		1,324,513
38 - 42	10		551,104	12		775,016
Over 42	4		213,135	3		295,538
TOTAL	325	\$	17,270,635	455	\$	20,218,248

THE NUMBER AND ANNUAL PENSIONS OF RETIRED MEMBERS DISTRIBUTED
BY FIFTH-YEAR AGE AS OF JANUARY 1, 2018

	SERVICE RETIREMENTS						
	N	IEN		WOMEN			
AGE	NUMBER		AMOUNT	NUMBE	R	AMOUNT	
Under 53	4	\$	124,454	5	\$	222,552	
54 - 57	5		243,157	7		301,699	
58 - 62	21		960,147	24		779,190	
64 - 67	27		1,097,192	22		847,713	
68 - 72	46		2,027,777	38		1,253,138	
73 - 77	17		669,284	24		686,129	
78 - 82	6		214,815	13		380,160	
83 - 87	10		368,992	5		150,059	
88 - 92	2		33,573	7		177,632	
Over 92	2		41,914	4		137,841	
TOTAL	140	\$	5,781,305	149	\$	4,936,113	

THE NUMBER AND ANNUAL PENSIONS OF RETIRED MEMBERS DISTRIBUTED BY FIFTH-YEAR AGE AS OF JANUARY 1, 2018

			DISABILITY RI	ETIREMENTS	
	Μ	EN		WOME	N
AGE	NUMBER		AMOUNT	NUMBER	AMOUNT
Under 43	2	\$	40,982		
43 - 47		·	,	1 5	\$7,887
48 - 52				1	45,339
53 - 57				2	32,544
58 - 62				4	126,150
63 - 67	2		48,065	5	125,807
68 - 72					
73 - 77					
78 - 82					
83 - 87					
88 - 92					
Over 92					
TOTAL	4	\$	89,047	13 5	\$ 337,727

THE NUMBER AND ANNUAL PENSIONS OF SURVIVORS OF DECEASED ACTIVE AND RETIRED MEMBERS DISTRIBUTED BY FIFTH-YEAR AGE AS OF JANUARY 1, 2018

	ME	EN		WOI	MEN	
AGE	NUMBER	/	AMOUNT	NUMBER	4	AMOUNT
Under 53						
53 - 57				1	\$	25,887
58 - 62	1	\$	22,946	1		20,600
63 - 67	1		12,921	7		131,185
68 - 72	3		61,153	2		39,549
73 - 77				5		76,677
78 - 82				7		130,083
83 - 87	2		42,658	14		167,995
88 - 92	1		32,624	5		45,196
Over 92				6		45,139
TOTAL	8	\$	172,302	48	\$	682,311

In addition, there are 2 minor children receiving temporary pensions of \$17,922.

THE NUMBER AND ANNUAL DEFERRED PENSIONS OF MEMBERS ENTITLED TO VESTED BENEFITS DISTRIBUTED BY FIFTH-YEAR AGE AS OF JANUARY 1, 2018

	N	IEN		V	OMEN	
AGE	NUMBER		AMOUNT	NUMBER		AMOUNT
Under 33						
33- 37				1	\$	9,552
38 - 42						
43 - 47	2	\$	21,768	2		43,658
48 - 52	2		27,430	1		26,316
53 - 57	4		58,316	2		14,093
Over 57	2		45,636	6		67,023
TOTAL	10	\$	153,150	12	\$	160,642

In addition, there were 109 former active members whose status is not known. 38 members are currently vested and 71 are non-vested, and all are valued for their accumulated contributions.