



July 3, 2018

Board of Trustees
c/o Mr. T. Scott Baker
New Port Richey Police Officers' Retirement System
6739 Adams Street
New Port Richey, Florida 34652

**Re: City of New Port Richey Police Officers' Retirement System
Actuarial Impact Statement**

Dear Board Members:

As requested, we are pleased to enclose three (3) copies of an Actuarial Impact Statement as of October 1, 2017 for the proposed Ordinance under the City of New Port Richey Police Officers' Retirement System (System) with the State of Florida.

Background – The System currently provides Normal Retirement eligibility for Members who were vested (completed ten (10) years of Credited Service) as of November 7, 2017 upon the earlier of 1) attainment of age fifty (50) and completion of ten (10) years of Credited Service or 2) completion of twenty-three (23) years of Credited Service.

Proposed Ordinance – Under the proposed Ordinance, Normal Retirement eligibility for Members who were vested (completed ten (10) years of Credited Service) as of November 7, 2017 shall be the earlier of 1) attainment of age fifty (50) and completion of ten (10) years of Credited Service or 2) completion of twenty (20) years of Credited Service.

Results – Based upon the results of our Actuarial Impact Statement, the proposed Ordinance increases the first year annual City contribution by \$23,789 (1.0% of covered payroll - \$2,478,660).

Filing Requirements – We have prepared the Actuarial Impact Statement for filing with the State of Florida. Please note that this Statement must be signed and dated on behalf of the Board of Trustees. Copies of the proposed Ordinance upon passage at first reading along with the signed and dated Actuarial Impact Statement are generally required to be filed with the State at the following address:

Mr. Douglas E. Beckendorf, A.S.A.
Bureau of Local Retirement Services
Division of Retirement
Building 8
Post Office Box 9000
Tallahassee, Florida 32315-9000

Please forward a copy of the Ordinance upon passage to update our files.

Other Considerations – Under Governmental Accounting Standards Board (GASB) Statement Number 68, we understand the cost / income of benefit changes must be recognized immediately in pension expense (accounting not funding). Therefore, the pension expense is expected to increase the first year and then is expected to return to lower levels in fiscal years following initial recognition of the benefit change.

Actuarial Assumptions and Methods, System Provisions, Financial Data, Member Census Data – The actuarial assumptions and methods, financial data and member census data employed for purposes of our Actuarial Impact Statement are the same actuarial assumptions and methods, financial data and member census data utilized for the October 1, 2017 Actuarial Valuation with the following exception:

- Retirement rates for members who were vested (completed ten (10) years of Credited Service) as of November 7, 2017 were updated to 100% upon completion of twenty (20) years of Credited Service

The System provisions employed for purposes of our Actuarial Impact Statement are the same System provisions utilized for the October 1, 2017 Actuarial Valuation with the exception of the proposed Ordinance changes described above.

This Actuarial Impact Statement is intended to describe the estimated future financial effects of the proposed System provision changes on the System, and is not intended as a recommendation in favor of the benefit changes or in opposition of the System provision changes.

If all actuarial assumptions are met and if all future minimum required contributions are paid, System assets will be sufficient to pay all System benefits, future contributions are expected to remain relatively stable as a percent of payroll and the funded status is expected to improve. System minimum required contributions are determined in compliance with the requirements of the Florida Protection of Public Employee Retirement Benefits Act with normal cost determined as a level percent of covered payroll and a level dollar amortization payment using a maximum amortization period of 30 years.

The Unfunded Actuarial Accrued Liability (UAAL) may not be appropriate for assessing the sufficiency of System assets to meet the estimated cost of settling benefit obligations but may be appropriate for assessing the need for or the amount of future contributions. The UAAL would be different if it reflected the market value of assets rather than the smoothed actuarial value of assets.

These calculations are based upon assumptions regarding future events. However, the System's long term costs will be determined by actual future events, which may differ materially from the assumptions made. These calculations are also based upon present System provisions that are referenced in this Actuarial Impact Statement.

If you have reason to believe the assumptions used are unreasonable, the System provisions are incorrectly described as referenced, important System provisions relevant to this proposed Actuarial Impact Statement are not described or that conditions have changed since the calculations were made, you should contact the undersigned prior to relying on information in this Actuarial Impact Statement.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System 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 System provisions or applicable law. Due to the limited scope of the actuary's assignment, the actuary did not perform an analysis of the potential range of such future measurements.

This Actuarial Impact Statement should not be relied on for any purpose other than the purpose described in the primary communication. Determinations of the financial results associated with the benefits described in this report in a manner other than the intended purpose may produce significantly different results.

This Actuarial Impact Statement has been prepared by actuaries who have substantial experience valuing public employee retirement plans. To the best of our knowledge the information contained in this report is accurate and fairly presents the actuarial position of the System as of the Actuarial Impact Statement date. All calculations have been made in conformity with generally accepted actuarial principles and practices, with the Actuarial Standards of Practice issued by the Actuarial Standards Board and with applicable statutes.

This Actuarial Impact Statement may be provided to parties other than the Board only in its entirety and only with the permission of an approved representative of the Board.

The signing actuaries are independent of the System sponsor.

If you have reason to believe that the information provided in this Actuarial Impact Statement is inaccurate, or is in any way incomplete, or if you need further information in order to make an informed decision on the subject matter of this report, please contact the undersigned prior to making such decision.

Board of Trustees
July 3, 2018
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The undersigned are Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

If you should have any question concerning the above or if we may be of further assistance with this matter, please do not hesitate to contact us.

Sincerest regards,



Lawrence F. Wilson, E.A., A.S.A.
Senior Consultant and Actuary



Jennifer M. Borregard, E.A.
Consultant and Actuary

Enclosures

cc: H. Lee Dehner, Esq.
Ms. Debbie L. Manns, City Manager



**New Port Richey
Police Officers' Retirement System**

Actuarial Impact Statement as of October 1, 2017

A. Description of Proposed Ordinance

For Members who were vested (completed ten (10) years of Credited Service) as of November 7, 2017:

Normal Retirement eligibility shall be the earlier of 1) attainment of age fifty (50) and completion of ten (10) years of Credited Service or 2) completion of twenty (20) years of Credited Service.

B. An estimate of the cost of implementing this amendment (see attachment)

C. In my opinion, the proposed changes are in compliance with Part VII, Chapter 112, Florida Statutes and Section 14, Article X of the State Constitution.

Chairman, Retirement Committee

Date

Actuarial Impact Statement as of October 1, 2017

	<u>Actuarial</u> <u>Valuation</u>	<u>Proposed</u> <u>Ordinance</u>
A. <u>Participant Data</u>		
1. Active participants	41	41
2. Terminated vested participants	5	5
3. Receiving benefits (including DROPs)	43	43
4. Annual payroll of active participants	\$ 2,478,660	\$ 2,478,660
 B. <u>Assets</u>		
1. Smoothed actuarial value	\$ 25,984,684	\$ 25,984,684
2. Net market value	\$ 26,450,244	\$ 26,450,244
 C. <u>Liabilities</u>		
1. Actuarial present value of future expected benefit payments for active members		
a. Retirement benefits	\$ 10,784,570	\$ 11,157,697
b. Termination benefits	438,838	385,539
c. Death benefits	186,042	166,577
d. Disability benefits	778,157	683,430
e. Total	\$ 12,187,607	\$ 12,393,243
2. Actuarial present value of future expected benefit payments for terminated vested members		
	\$ 1,373,433	\$ 1,373,433
3. Actuarial present value of future expected benefit payments for members currently receiving benefits		
a. Service retired	\$ 14,905,955	\$ 14,905,955
b. DROP participants	1,182,072	1,182,072
c. Disability retired	974,520	974,520
d. Beneficiaries	329,389	329,389
e. Miscellaneous	12,000	12,000
f. Total	\$ 17,403,936	\$ 17,403,936
4. Total actuarial present value of future expected benefit payments	\$ 30,964,976	\$ 31,170,612
5. Actuarial accrued liabilities	\$ 24,786,258	\$ 25,333,845
6. Unfunded actuarial accrued liabilities	\$ (1,198,426)	\$ (650,839)



Actuarial Impact Statement as of October 1, 2017

<u>D. Statement of Accumulated Plan Benefits</u>	<u>Actuarial Valuation</u>	<u>Proposed Ordinance</u>
1. Actuarial present value of accumulated vested benefits		
a. Participants currently receiving benefits	\$ 17,391,936	\$ 17,391,936
b. Other participants	<u>6,572,970</u>	<u>7,279,447</u>
c. Total	\$ 23,964,906	\$ 24,671,383
2. Actuarial present value of accumulated non-vested plan benefits	<u>628,220</u>	<u>628,220</u>
3. Total actuarial present value of accumulated plan benefits	\$ 24,593,126	\$ 25,299,603
 <u>E. Pension Cost</u>		
1. Total normal cost	\$ 735,564	\$ 759,353
2. Payment required to amortize unfunded liability	(96,475)	(52,393)
3. Interest	<u>28,031</u>	<u>30,562</u>
4. Total preliminary required contribution	\$ 667,120	\$ 737,522
5. Total required contribution (Greater of F.1. and F.4.)	\$ 735,564	\$ 759,353
6. Item 5 as a percentage of payroll	29.7%	30.6%
7. Estimated Member contributions	\$ 161,113	\$ 161,113
8. Item 7 as a percentage of payroll	6.5%	6.5%
9. Estimated State contributions	\$ 224,641	\$ 224,641
10. Item 9 as a percentage of payroll	9.1%	9.1%
11. Net amount payable by City	\$ 349,810	\$ 373,599
12. Item 11 as a percentage of payroll	14.1%	15.1%
 <u>F. Disclosure of Following Items:</u>		
1. Actuarial present value of future salaries - attained age	\$ 21,328,850	\$ 19,750,285
2. Actuarial present value of future Member contributions - attained age	\$ 1,386,375	\$ 1,283,769
3. Actuarial present value of future contributions from other sources	N/A	N/A
4. Amount of active Members' accumulated contributions	\$ 644,495	\$ 644,495
5. Actuarial present value of future salaries and future benefits at entry age	N/A	N/A
6. Actuarial present value of future Member contributions at entry age	N/A	N/A



Actuarial Impact Statement as of October 1, 2017

G. Amortization of Unfunded Actuarial Accrued Liability

<u>Date Established</u>		<u>Unfunded Liability</u>	<u>Amortization Payment</u>	<u>Remaining Funding Period</u>
10/01/2017	Combined Bases *	\$ (1,198,426)	\$ (96,475)	30 years
10/01/2017	Proposed Ordinance	<u>547,587</u>	<u>44,082</u>	30 years
	TOTAL	\$ (650,839)	\$ (52,393)	

* Combined per Internal Revenue Code Regulation 1.412(b)-1 - 30-year for resulting combined credit base

This Actuarial Valuation and / or cost determination was prepared and completed by me or under my direct supervision, and I acknowledge responsibility for the results. To the best of my knowledge, the results are complete and accurate, and in my opinion, the techniques and assumptions used are reasonable and meet the requirements and intent of Part VII, Chapter 112, Florida 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 other wise provided for in the valuation. All known events or trends which may require material increase in plan costs or required contribution rates have been taken into account in the valuation.

Enrollment Number: 17-02802

Dated: July 3, 2018



Lawrence F. Wilson, A.S.A.

Outline of Principal Provisions of the Retirement System

A. Effective Date:

May 1, 1977 (last amended February 6, 2018 - Ordinance No. 2018-2132).

B. Eligibility Requirements:

An actively employed Police Officer who fulfills the prescribed participation requirements. A new employee who is hired as the Police Chief may elect not to participate in the System.

C. Frozen Benefit

The benefit structure in effect on November 7, 2017 is frozen at midnight on that date. All Members will be vested in benefits accrued as of November 7, 2017 and payable under the terms and conditions of the benefit structure then in effect.

Additional benefits will accrue in accordance with the new benefit structure as described below.

D. Contributions:

State of Florida: Any monies received or receivable by reason of laws of the State of Florida, for funding and paying for retirement benefits for Police Officers of the City.

Members: 6.5% of Earnings, reduced to equal the City Contribution in any year in which the most recent Actuarial Valuation states that the required City Contribution is less than 6.5% of covered payroll.

City: Remaining amount necessary for payment of the total cost for the year as determined in the most recent Actuarial Valuation. However, in any year in which the results of the most recent Actuarial Valuation requires City Contributions of less than 6.5% of covered payroll, then the City Contribution and Member contribution shall be shared equally.

E. Credited Service:

Total number of years and fractional parts of years of service as a Police Officer with Member contributions to the System, omitting intervening years or fractional parts of years when such Member was not employed by the City as a Police Officer. A Member who terminates employment and leaves his contributions in the Fund and is reemployed within five years will receive credit for service prior to his date of termination. A Member may receive credit for military service and prior police service under certain circumstances.

Outline of Principal Provisions of the Retirement System

F. Average Final Compensation (AFC):

For years of Credited Service earned prior to November 8, 2017:

One-twelfth of W-2 compensation plus any tax deferral elective deductions or salary reductions paid during the highest year of the final three (3) years of Credited Service (not less than the average over the five (5) best years of the last ten (10) years) immediately preceding November 8, 2017. In the final year of service prior to November 8, 2017 a Member may be paid 100% of accrued vacation and 50% of accrued sick leave up to 96 hours.

For years of Credited Service earned on or after November 8, 2017:

One-twelfth of total cash remuneration paid by the City for services rendered paid during the highest three (3) years of the last five (5) years of Credited Service immediately preceding the retirement, termination or death of a Member. Salary excludes overtime in excess of 300 hours per year and accrued unused sick or annual leave.

G. Regular Base Salary (RBS):

The Member's hourly rate times two thousand-eighty (2,080) hours.

H. Normal Retirement:

1. Eligibility:

For Members with ten (10) or more years of Credited Service as of November 7, 2017:

Earlier of (a) attainment of age fifty (50) and completion of ten (10) years of Credited Service or (b) completion of twenty (20) years of Credited Service.

For Members with less than ten (10) years of Credited Service as of November 7, 2017:

Earlier of (a) attainment of age fifty-two (52) and completion of ten (10) years of Credited Service or (b) completion of twenty-three (23) years of Credited Service.

Frozen benefit as of November 7, 2017 may be paid upon attainment of age fifty (50) and completion of ten (10) years of Credited Service.

2. Benefit:

3.5% of AFC times years of Credited Service through November 7, 2017; 3.25% of AFC times years of Credited Service on or after November 8, 2017 (maximum benefit - 75% of AFC; minimum benefit - 2% of AFC times years of Credited Service) payable for ten (10) years certain and life thereafter. An optional form of benefit may be elected by a Member.

In addition to the benefit above, Members will receive an additional supplemental benefit.

Outline of Principal Provisions of the Retirement System

I. Early Retirement:

1. Eligibility:

Attainment of age fifty (50) and completion of ten (10) years of Credited Service.

Frozen benefit as of November 7, 2017 may be paid upon completion of twenty (20) years of Credited Service.

2. Benefit:

The accrued benefit based upon AFC and Credited Service determined as of the Early Retirement Date payable immediately. The portion of the accrued benefit for years of Credited Service on or after November 8, 2017 is actuarially reduced, but not more than 3% reduction for each year early retirement date precedes Normal Retirement Date.

J. Service Connected Disability Benefit:

1. Eligibility:

Service connected injury, disease or disability which permanently incapacitates a Member from performing Police Officers' duties. Eligible for benefits from date of employment.

2. Benefit:

60% of RBS payable monthly for life or prior recovery. In addition, Members will receive an additional supplemental benefit. Minimum disability benefit is the greatest of 42% of AFC, 2% of AFC times years of Credited Service and 3.5% of RBS times years of Credited Service through November 7, 2017 plus 3.25% of RBS times years of Credited Service on or after November 8, 2017, not to exceed 75% of RBS. Upon death, the benefit will be continued in the same manner provided for under Service Incurred Preretirement Death Benefit, but provided further that the benefit, except for the additional supplemental benefit, shall be payable for a minimum of 120 monthly payments.

Benefits may be reduced for Workers' Compensation benefits, Social Security disability benefits and disability benefits from another employer for the same disability. In no event shall the benefit be reduced below the greater of 42% of AFC and 2% of AFC times years of Credited Service.

K. Non-Service Connected Disability Benefit:

1. Eligibility:

Non-service connected injury, disease or disability which permanently incapacitates a Member from performing Police Officers' duties after completing one year of Credited Service.



Outline of Principal Provisions of the Retirement System

K. Non-Service Connected Disability Benefit (cont'd):

2. Benefit:

Members prior to October 20, 1994 (including those who received Credited Service for periods prior to October 20, 1994), 30% of RBS payable monthly for life or prior recovery plus an additional monthly supplemental benefit. Minimum disability benefit after ten (10) years of Credited Service is the greatest of 25% of AFC, 2% AFC times years of Credited Service, and 3.5% of RBS times years of Credited Service through November 7, 2017 plus 3.25% of RBS times years of Credited Service on or after November 8, 2017, not to exceed 75% of RBS.

Members eligible on or after October 20, 1994 receive a benefit equal to 5% of RBS times years of Credited Service not to exceed 30% of RBS payable monthly for life or prior recovery plus an additional monthly supplemental benefit. Minimum disability benefit for a Member after ten (10) years of Credited Service is the greatest of 25% of AFC, 2% of AFC times years of Credited Service and 3.5% of RBS times years of Credited Service through November 7, 2017 plus 3.25% of RBS times years of Credited Service on or after November 8, 2017, not to exceed 75% of RBS. The benefit, except for the supplemental benefit, shall be payable for a minimum of 120 payments or prior recovery.

Benefits may be reduced for Workers' Compensation benefits, Social Security disability benefits and disability benefits from another employer for the same disability. In no event shall the benefit after ten (10) years of Credited Service be reduced below 25% of AFC or 2% of AFC times years of Credited Service.

L. Service Incurred Preretirement Death Benefit:

1. Eligibility:

Eligible for benefits from date of employment.

2. Benefit:

60% of RBS in effect on date of death plus an additional monthly supplemental benefit payable to the spouse until death. If no spouse, or upon death of the spouse, 15% of RBS payable to each unmarried child until age 18 (or to age 22, if enrolled in school); total maximum for all such children is 60% of RBS. Eligible children shall also share equally in the applicable additional monthly supplemental benefit. If no surviving spouse or eligible children, the designated beneficiary will receive 100% of the Member's accumulated contributions.

M. Non-Service Incurred Preretirement Death Benefit:

1. Eligibility:

Five (5) years of Credited Service.



Outline of Principal Provisions of the Retirement System

M. Non-Service Incurred Preretirement Death Benefit (cont'd):

2. Benefit:

30% of RBS in effect on date of death plus an additional monthly supplemental benefit payable to the spouse until remarriage or death. If no spouse, or upon remarriage or death, 7.5% of RBS payable to each unmarried child until age 18 (or to age 22, if enrolled in school); total maximum for all such children of 30% of RBS. Eligible children shall also share equally in the applicable additional monthly supplemental benefit. If no surviving spouse or eligible children, the designated beneficiary will receive 100% of the Member's accumulated contributions.

With less than five (5) years of Credited Service, refund of 100% of the Member's accumulated contributions.

N. Minimum Preretirement Death Benefit:

If the Member was vested, but not eligible for Early or Normal Retirement, the beneficiary is entitled to the benefits otherwise payable at Early or Normal Retirement, and shall receive the benefit payable monthly for ten (10) years certain.

O. Termination Benefits:

A Member who has completed less than ten (10) years of Credited Service will receive a refund of his accumulated contributions. A Member who has completed ten (10) years of Credited Service who does not withdraw his accumulated contributions will receive his accrued benefit based upon his AFC and years of Credited Service as of his date of termination payable at his Normal Retirement Date. Upon death prior to Normal Retirement Date, his beneficiary will be entitled to benefits as provided under Non-service Incurred Preretirement Death Benefits.

A Member of the plan with a frozen accrued benefit as of November 7, 2017 who does not withdraw his accumulated contributions is 100% vested in the frozen accrued benefit payable under the provisions of the prior System.

P. Deferred Retirement Option Plan (DROP):

1. Eligibility: Eligible for normal retirement.
2. The maximum period of participation in the DROP is sixty (60) months.
3. For Members entering the DROP prior to November 8, 2017, the Member's account in the DROP program shall be credited with interest based upon a fixed return of 6.5%. For Members entering the DROP on or after November 8, 2017, the Member's account in the DROP program shall be credited with interest based upon a fixed return of 1.5%. In lieu of the fixed return, a Member may elect for their account in the DROP program to be credited with interest based upon the actual net return of the Fund, but not less than 0%.



Outline of Principal Provisions of the Retirement System

P. Deferred Retirement Option Plan (DROP) (cont'd):

4. For Members entering the DROP prior to November 8, 2017, the Member may elect to change the interest crediting option twice during his DROP participation. For Members entering the DROP on or after November 8, 2017, the Member's interest crediting election upon DROP entry is irrevocable.
5. No payment may be made from DROP until the employee actually separates from service with the City.

Q. Supplemental Benefit

Members prior to October 20, 1994 (including those who received Credited Service for periods prior to October 20, 1994) - an additional monthly supplemental benefit of \$400 is payable.

Members eligible on or after October 20, 1994 - the additional monthly supplemental benefit is \$200.

For Members who retire on or after October 1, 2004 - the additional monthly supplemental benefit is increased to \$500. This increase in the supplemental benefit shall be funded from the annual state monies received by the System in excess of \$248,077. The maximum additional state monies that can be used in each year for this benefit enhancement is \$37,082. To the extent that actual state monies received in any year are less than \$285,159, the prospective supplemental benefit on the following January 1st shall be reduced to a level that the annual state monies can fully fund. This adjusted supplemental benefit cannot be reduced below the current monthly supplemental benefit of \$400 for Members hired prior to October 20, 1994 and \$200 for Members hired on or after October 20, 1994. Any reductions in supplemental benefits will not affect the supplemental benefits prior to that date.

The additional supplemental benefit is payable for the life of the Member, except that if the Member elects a joint and survivor option and the surviving spouse of the Member or the Member's child is the joint pensioner, the entire additional supplemental benefit shall be paid for the life of the surviving spouse or until the child reaches the age of 18 (or 22, if enrolled in school).

R. Changes From Previous Valuation

Normal Retirement Eligibility was:

For Members with ten (10) or more years of Credited Service as of November 7, 2017:

Earlier of (a) attainment of age fifty (50) and completion of ten (10) years of Credited Service or (b) completion of twenty-three (23) years of Credited Service.

For Members with less than ten (10) years of Credited Service as of November 7, 2017:

Earlier of (a) attainment of age fifty-two (52) and completion of ten (10) years of Credited Service or (b) completion of twenty-three (23) years of Credited Service.

Frozen benefit as of November 7, 2017 may be paid upon attainment of age fifty (50) and completion of ten (10) years of Credited Service.



Actuarial Assumptions and Actuarial Cost Methods
Used in the Valuation

A. Mortality

For healthy participants during employment, RP 2000 Combined Healthy Participant Mortality Tables, separate rates for males and females, with 90% Blue Collar Adjustment / 10% White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB.

For healthy participants post employment, RP 2000 Annuitant Mortality Tables, separate rates for males and females, with 90% Blue Collar Adjustment / 10% White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB.

For disabled male participants, 60% RP 2000 Disabled Male Mortality Table setback four years / 40% RP 2000 Annuitant Male Mortality Table with White Collar Adjustment with no setback, without projected mortality improvements. For disabled female participants, 60% RP 2000 Disabled Female Mortality Table set forward two years / 40% RP 2000 Annuitant Female Mortality Table with White Collar Adjustment with no setback, without projected mortality improvements.

Sample Ages (2017)	Pre-retirement Future Life Expectancy (Years)		Post-retirement Future Life Expectancy (Years)	
	Men	Women	Men	Women
	55	29.73	32.50	29.21
60	24.84	27.46	24.64	27.31
62	22.97	25.50	22.85	25.39

Sample Ages (2037)	Pre-retirement Future Life Expectancy (Years)		Post-retirement Future Life Expectancy (Years)	
	Men	Women	Men	Women
	55	31.96	34.44	31.46
60	27.11	29.40	26.92	29.27
62	25.23	27.41	25.12	27.33

B. Interest to be Earned by Fund

7.75%, compounded annually, net of investment expense - includes inflation at 2.75%.

C. Allowances for Expenses or Contingencies

Average of two previous years' actual administrative expense.



Actuarial Assumptions and Actuarial Cost Methods
Used in the Valuation

D. Employee Withdrawal Rates

Withdrawal rates for males and for females were used in accordance with the following illustrative example:

<u>Service</u>	<u>Withdrawal Rates</u>
0 - 3	6.5%
3 - 10	4.5%
10 & Over	0.5%

E. Disability Rates

Disability rates for males and for females were used in accordance with the following illustrative example:

<u>Age</u>	<u>Disability Rates</u> <u>Per 100 Members</u>	<u>Age</u>	<u>Disability Rates</u> <u>Per 100 Members</u>
20	0.14	45	0.51
25	0.15	50	1.00
30	0.18	55	1.55
35	0.23	60 & Over	0.00
40	0.30		

F. Salary Increase Factors

Current salary was assumed to increase at a rate based on the table below per year until retirement - includes wage inflation of 3.75%.

<u>Years of Service / Age</u>	<u>Increase</u>
<u>Under 5 Yrs:</u>	
Under Age 30	8.0%
Age 30 & Up	6.0%
<u>5 or more Yrs:</u>	
All Ages	5.5%

Extra-ordinary pay, such as for overtime, in the final averaging period is assumed to add 5% to the average final compensation.

Actuarial Assumptions and Actuarial Cost Methods
Used in the Valuation

G. Assumed Retirement Age

Rates of retirement were used in accordance with the following table:

<u>Years of Service</u>	<u>Retirement Rates</u>
	<u>Ages \geq 50</u>
10 - 14	20%
15 - 22	50%

For Members with ten (10) or more years of Credited Service as of November 7, 2017, 100% of Members are assumed to retire upon completion of 20 years of Credited Service.

For Members with less than ten (10) years of Credited Service as of November 7, 2017, 100% of Members are assumed to retire upon completion of 23 years of Credited Service.

However, all active Members on the valuation date are assumed to remain employed for a minimum of one year.

H. Disability Benefits

No offset was assumed for potential Workers' Compensation benefits, Social Security disability benefits or other disability benefits attributable to employment with another employer for the same disability.

I. Form of Payment

For purposes of the supplemental benefit, the joint and survivor form is assumed to be elected.

J. Valuation of Assets

The actuarial value of assets is determined by smoothing earnings in excess of or less than the assumed return over five years.

K. Cost Method

Normal Retirement, Termination, Disability, and Death Benefits: Entry-Age-Normal Cost Method.

Under this method the normal cost for each active employee is the amount which is calculated to be a level percentage of pay that would be required annually from his entry age to his assumed retirement age to fund his estimated benefits, assuming the System had always been in effect. The normal cost for the System is the sum of such amounts for all employees. The actuarial accrued liability as of any valuation date for each active employee or inactive employee who is eligible to receive benefits under the System is the excess of the actuarial present value of estimated future benefits over the actuarial present value of current and future normal costs. The unfunded actuarial accrued liability as of any valuation date is the excess of the actuarial accrued liability over the actuarial value of assets of the System.

Actuarial Assumptions and Actuarial Cost Methods
Used in the Valuation

L. Marital Assumption

Females are assumed to be three (3) years younger than their male spouses. Eighty percent (80%) of active members are assumed to be married at benefit commencement.

M. Changes From Previous Valuation

Assumed Retirement Age was:

Rates of retirement were used in accordance with the following table:

<u>Years of Service</u>	<u>Retirement Rates</u>
	<u>Ages \geq 50</u>
10 - 14	20%
15 - 22	50%

100% of Members are assumed to retire upon completion of 23 years of Credited Service.

However, all active Members on the valuation date are assumed to remain employed for a minimum of one year.