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The City of Omaha
Police & Fire Retirement System

Actuarial Valuation as of
January 1, 2015

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CONSULTING, LLC
The experience and dedication you deserve

August 10, 2015

Board of Trustees
City of Omaha Police and Fire Retirement System
1819 Farnam Street
Omaha, NE 68183

RE: January 1, 2015 Actuarial Valuation

Dear Members of the Board:

In accordance with your request, we have completed an actuarial valuation of the City of Omaha Police and Fire Retirement System as of January 1, 2015 for the plan year ending December 31, 2015. The major findings of the valuation are contained in this report. Based on our recommendation, the Actuarial Committee elected to change the valuation methodology for members who are currently participating in the Deferred Retirement Option Plan (DROP) or assumed to participate in the DROP in the future. Under the revised methodology, the Entry Age Normal Cost calculation spreads the costs of benefits over the member's entire career, ending on the date they are assumed to leave the DROP. Previously, the normal cost calculation spread the costs from entry age to the date the member was assumed to enter the DROP. There have been no changes to the plan provisions, actuarial assumptions, or other actuarial methods since the prior report.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the City's staff. This information includes, but is not limited to, statutory provisions, employee data, and financial information. We found this information to be reasonably consistent and comparable with information provided in prior years. However, the valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete, our calculations may need to be revised.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: experience differing from that anticipated by the 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 or additional cost or contribution requirements based on the System's funded status); and changes in plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements.

Actuarial computations presented in this report are for purposes of determining the actuarial contribution rates for funding the System based on the funding policy. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes. For example, actuarial computations for purposes of fulfilling financial accounting requirements for the System under Governmental Accounting Standard No. 67 are provided in a separate report.

The consultants who worked on this assignment are pension actuaries. CMC's advice is not intended to be a substitute for qualified legal or accounting counsel.

This is to certify that the independent consulting actuaries are members of the American Academy of Actuaries, have experience in performing valuations for public retirement plans, and meet the qualification standards of the American Academy of Actuaries to render the actuarial opinion contained herein. The valuation was prepared in accordance with principles of practice prescribed by the Actuarial Standards Board and the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the retirement plan and on actuarial assumptions that are internally consistent and reasonable based on the actual experience of the System and future expectations. However, the Board of Trustees has the final decision regarding the selection of the assumptions and adopted them as indicated in Appendix B.

We respectfully submit the following report and look forward to discussing it with you.

Sincerely,

Patrice A. Beckham, FSA, EA, FCA, MAAA
Principal and Consulting Actuary

Brent A. Banister, PhD, FSA, EA, FCA, MAAA
Chief Pension Actuary

TABLE OF CONTENTS

EXECUTIVE SUMMARY

This report presents the results of the January 1, 2015 actuarial valuation of the City of Omaha Police and Fire Retirement System. The primary purposes of performing the valuation are:

- to estimate the liabilities for the future benefits expected to be paid by the System;
- to determine the actuarial contribution rate, based on the System's funding policy;
- to measure and disclose various asset and liability measures;
- to monitor any deviation between actual plan experience and experience predicted by the actuarial assumptions so that recommendations for assumption changes can be made when appropriate;
- to analyze and report on any significant trends in contributions, assets and liabilities over the past several years.

The Deferred Retirement Option Plan (DROP) is a relatively new provision, added for Police members in September, 2010 and for Fire members in January, 2013. Initially there was no actual experience upon which to base assumptions regarding the utilization of the DROP so the valuation methodology for members currently in DROP or who might elect to participate in DROP in the future was to fund the member's benefit over a period beginning on the member's entry date into the Plan and ending on the date they were assumed to enter the DROP program. This approach essentially treated the members as if they retired upon entering DROP in spite of the fact that contributions by both the member and the city continue during DROP. The methodology was intended to provide some degree of conservatism in valuing the DROP in the initial years of its existence until there was sufficient experience to develop more explicit assumptions and methods. With the actual data that has unfolded on the use of the DROP over the last few years, we are comfortable with a different, more direct approach to reflecting the impact of the DROP in the valuation process.

Based on our recommendation, the Actuarial Committee elected to change the valuation methodology for members who are currently participating in the DROP or are expected to participate in the DROP in the future. Under the new methodology, the Entry Age Normal Cost calculation spreads the cost of benefits over the member's entire career, ending on the date they are assumed to leave the DROP. As part of the change in methodology, certain actuarial assumptions related to the DROP were developed. These include the percentage of eligible members assumed to elect to participate in the DROP, the DROP period, and the interest rate assumed to be credited to the DROP account. The revised methodology better reflects the fact that both the member and the employer continue to make contributions during the DROP period and its impact on System costs. Because the revised methodology extends the time period over which benefits are funded, the change decreased the actuarial liability by $32 million and the actuarial contribution rate by 2.242% (0.769% decrease in the normal cost rate and 1.473% decrease in the unfunded actuarial liability contribution rate). No other changes in the plan provisions, actuarial assumptions, or actuarial methods are reflected in this valuation.

The actuarial valuation results provide a "snapshot" view of the System's financial condition on January 1, 2015. The unfunded actuarial liability (UAL) in the current valuation is $599 million, a decrease of $24 million from last year's UAL of $623 million. The net change of $24 million was primarily due to the change to the valuation methodology for the DROP program.

The valuation results reflect net favorable experience for the past plan year as is demonstrated by an unfunded actuarial liability that was lower than expected, based on the actuarial assumptions used in the January 1, 2014 actuarial valuation. Favorable experience on the actuarial value of assets resulted in a gain of $3 million, and favorable demographic experience produced an actuarial gain on liabilities of $2 million. Based on the amortization methodology and period, the UAL was expected to increase by $12 million. In addition, the shortfall between the actuarial contribution rate and the actual contributions for 2014 increased the UAL by $2 million.

The System uses an asset smoothing method in the valuation process. As a result, the System's funded status and the actuarial contribution rate are based on the actuarial (smoothed) value of assets – not the pure market value. The investment return on the market value of assets during 2014, net of expenses, was 4.4%, lower than the assumed rate of 8.0%. However, due to deferred favorable investment experience from prior years, the rate of return on the actuarial value of assets for the 2014 plan year was 8.6%. The System's deferred gain (market value of assets greater than actuarial value) decreased from $31 million in last year's valuation to $10 million in the current valuation. Actual returns over the next few years will determine the rate at which the deferred investment gain of $10 million is recognized. With the current deferred gains, a return of 6% on the market value of assets in 2015 would still result in an 8.0% return on the actuarial value of assets.

ASSETS

As of January 1, 2015, the System had total funds of $599.9 million, when measured on a market value basis. This was an increase of $20.4 million from the prior year and represents an approximate rate of return, net of expenses, of 4.4%.

The market value of assets is not used directly in the actuarial calculation of the System's funded status and the actuarial contribution rate. An asset valuation method is used to smooth the effects of market fluctuations. The actuarial value of assets is equal to the expected asset value (based on last year's actuarial value of assets, net cash flows and a rate of return equal to the actuarial assumed rate of 8.0%) plus 1/4 of the difference between the actual market value and the expected asset value. See Exhibit 2 for the detailed development of the actuarial value of assets as of January 1, 2015. The rate of return on the actuarial value of assets was 8.6%.

The components of the change in the market value and actuarial value of assets are shown below:

	Market Value ($M)	Actuarial Value ($M)
Net Assets, January 1, 2014	**$** 579.5	**$** 548.4
• City and Member Contributions	+ 61.5	+ 61.5
• Benefit Payments and Refunds	– 66.6	– 66.6
• Investment Gain/(Loss)	+ 25.5	+ 46.9
Net Assets, January 1, 2015	**$** 599.9	**$** 590.2
Estimated Net Rate of Return	4.4%	8.6%

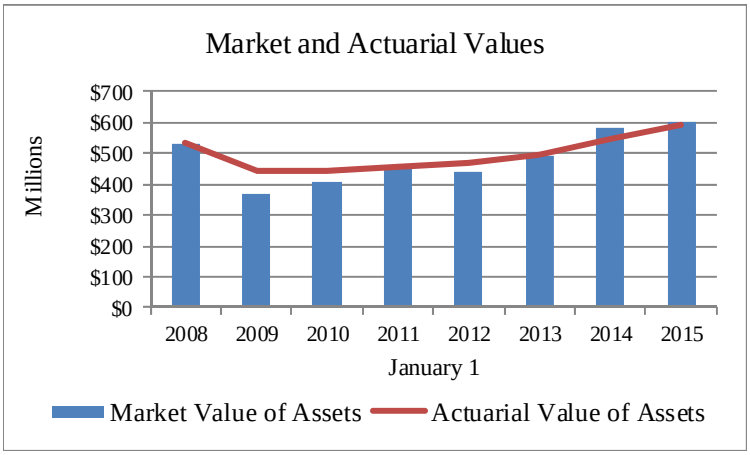
The total investment gain that is not recognized as of January 1, 2015 is $9.7 million, a $21.4 million decrease from the deferred gain of $31.1 million in last year's valuation. The unrecognized gains will be reflected in the determination of the actuarial value of assets for funding purposes in the next few years, to the extent there are not future losses to offset the deferred gains. This means that earning the assumed rate of investment return of 8.0% per year (net of investment expenses) on a market value basis will result in a small actuarial gain on the actuarial value of assets in the next few years.

The unrecognized investment gain is 1.6% of the market value of assets at January 1, 2015. If the deferred gains were recognized immediately in the actuarial value of assets, the unfunded actuarial liability would

decrease by $9.7 million to $577.7 million, the funded percentage would increase from 50% to 51%, the actuarially determined contribution rate would decrease from 50.031% to 49.587%, and the contribution margin would increase from 0.550% to 0.994%.

A comparison of asset values on both a market and actuarial basis for the last six years is shown below:

	January 1 ($M)					
	2015	2014	2013	2012	2011	2010
Actuarial Value of Assets	$590	$548	$496	$467	$456	$440
Market Value of Assets	$600	$579	$490	$440	$453	$405
Actuarial Value/Market Value	98%	95%	101%	106%	101%	109%



An asset smoothing method is used to mitigate the volatility in the market value of assets. By using a smoothing method, the actuarial (or smoothed) value is expected to be both above and below the pure market value at different points in time. The significant investment losses in 2008 resulted in the actuarial value of assets exceeding the market value from 2009 through 2013. In the current valuation, the actuarial value of assets is slightly less than the market value of assets.

LIABILITIES

The first step in determining the contribution level for the System is to calculate the liabilities for all expected future benefit payments. These liabilities represent the present value of future benefits (PVFB) expected to be earned by the current members, assuming that all actuarial assumptions are realized. Thus, the PVFB reflects service and salary increases that are expected to occur in the future before benefit payments commence. The various components of the PVFB can be found in the liabilities portion of the valuation balance sheet (see Exhibit 3).

The other critical measurement of System liabilities in the valuation process is the actuarial liability (AL). This is the portion of the PVFB that will not be paid by the future normal costs (i.e. it is the portion of the PVFB that is allocated to past service).

Based on our recommendation, the Actuarial Committee elected to change the valuation methodology for members who are currently participating in the DROP or are expected to participate in the DROP in the future (see full discussion on page 1). Under the new methodology, the Entry Age Normal Cost calculation spreads the cost of benefits over the member's entire career, ending on the date they are assumed to leave the DROP. As part of the change in methodology, certain actuarial assumptions related to the DROP were developed. These include the percentage of eligible members assumed to elect to participate in the DROP, the DROP period, and the interest rate assumed to be credited to the DROP account. This new methodology better aligns the costs of the benefits with the financing period of the benefits. The actuarial liability decreased by $32 million as a result of the change in methodology.

The following chart compares the Actuarial Liability (AL) and assets for the current and prior valuation.

	As of January 1	
	2015	2014
Actuarial Liability (AL)	$ 1,189,002,221	$ 1,170,967,753
Assets at Actuarial Value	590,191,585	548,360,223
Unfunded Actuarial Liability (Actuarial Value)	$ 598,810,636	$ 622,607,530
Funded Ratio (Actuarial Value)	50%	47%
Assets at Market Value	$ 599,927,168	$ 579,494,652
Unfunded Actuarial Liability (Market Value)	$ 589,075,053	$ 591,473,101
Funded Ratio (Market Value)	50%	49%

EXPERIENCE FOR THE 2014 PLAN YEAR

The difference between the actuarial liability and the actuarial value of assets at the same date is referred to as the unfunded actuarial liability (UAL). Benefit improvements, experience gains/losses, changes in the actuarial assumptions or methods, and actual contributions made will impact the amount of the unfunded actuarial liability.

Actuarial gains (or losses) result from actual experience that is more (or less) favorable than anticipated based on the actuarial assumptions. These "experience" (or actuarial) gains or losses are reflected in the unfunded actuarial liability and are measured as the difference between the expected unfunded actuarial liability and the actual unfunded actuarial liability, taking into account any changes due to assumptions, methods or benefit provision changes. The experience for 2014, in total, was favorable (a lower unfunded actuarial liability than expected). There was an actuarial gain of around $3 million on the actuarial value of assets and an actuarial gain of about $2 million on liabilities.

The change in the unfunded actuarial liability between January 1, 2014 and January 1, 2015 is shown below (in millions):

Unfunded Actuarial Liability, January 1, 2014	$623
• Expected change in UAL	12
• Contribution shortfall in 2014	2
• Investment experience	(3)
• Demographic experience	(2)
• Other experience	(1)
• Change in Valuation Methodology for DROP	(32)
Unfunded Actuarial Liability, January 1, 2015	$599

CONTRIBUTION LEVELS

The annual contribution to the System is composed of two parts:

(1) The normal cost (which is the allocation of costs attributed to the current year of service) and,
(2) The amortization payment on the Unfunded Actuarial Liability (UAL).

As discussed earlier, this valuation reflects a change to the valuation methodology for members who are participating in or assumed to participate in the DROP. This change decreased the actuarial contribution rate by 2.242% (0.769% decrease in the normal cost rate and 1.473% decrease in the unfunded actuarial liability contribution rate).

The normal cost rate is independent of the System's funded status and represents the cost, as a percent of payroll, of the benefits provided by the System which is allocated to the current year of service. The UAL payment is intended to fund the UAL over the amortization period set in the funding policy. The UAL is amortized over a closed 30-year period that began on January 1, 2014 of which 29 years remain in the current valuation.

		January 1, 2015	January 1, 2014	% Chg
1.	Normal Cost Rate	22.191%	23.103%	(3.9)
2.	UAL Contribution Rate	27.840%	29.035%	(4.1)
3.	Total Contribution Rate (1) + (2)	50.031%	52.138%	(4.0)
4.	Less Employee Contribution Rate	(16.195%)	(16.179%)	0.1
5.	Less City Contribution Per Ordinance	(33.339%)	(33.345%)	(0.0)
6.	Less City Prior Service Payment	(1.047%)	(1.070%)	(2.1)
7.	Contribution Shortfall/(Margin)	(0.550%)	1.544%	(135.6)

The total normal cost for the System is 22.191% of pay, or about $27 million this year. When offset by the expected employee contributions, the employer portion of the normal cost is 5.996% of pay, or about $7 million. The normal cost represents the long-term cost of the benefit structure in the System, given the current actuarial assumptions and plan membership. As new members who are covered by a different benefit structure enter the System in future years, the normal cost rate is expected to decline.

The System's total actuarial contribution rate (payable as a percent of member payroll) decreased by 2.107% of total pay, from 52.138% in the January 1, 2014 valuation to 50.031% in the January 1, 2015 valuation. As a result, there is a contribution margin of 0.550% in the current valuation. The primary components of the change in the total actuarial contribution rate are shown in the following table:

	Rate
Total Actuarial Contribution Rate, January 1, 2014	52.138 %
• Actuarial (Gain) / Loss - Investment Experience	(0.148)
• Actuarial (Gain) / Loss - Demographic Experience	(0.104)
• Other Experience	0.439
• Contributions Less Than Actuarial Rate	0.091
• Change in Normal Cost Rate	(0.143)
• Change in Valuation Methodology for DROP	(2.242)
Total Actuarial Contribution Rate, January 1, 2015	50.031 %

As the table above shows, the actuarial contribution rate decreased from 52.138% to 50.031%. The most significant factor for the decrease in the actuarial contribution rate was the change in the valuation methodology for DROP participation. The UAL as of January 1, 2015 is $599 million and the resulting UAL payment is 27.840% of pay. As a result, the total contribution rate for 2015 is 50.031% of pay (22.191% + 27.840%). The scheduled contributions for the year are 50.581%, resulting in a contribution margin of 0.550%.

COMMENTS

On January 1, 2015, the actuarial value of assets was $590 million and the market value of assets was $600 million. The $31 million in deferred investment gains that existed in the prior valuation decreased by $21 million to $10 million in current valuation. The deferred recognition of favorable investment experience in prior years resulted in a gain on actuarial assets, despite a return on market value of assets of 4.4%. There was a small liability gain during 2014, primarily due to actual salary increase that were smaller than expected based on the actuarial assumptions. The funded ratio of the system remains low, but increased from 47% as of January 1, 2014 to 50% as of January 1, 2015, based on the actuarial value of assets.

The Deferred Retirement Option Plan (DROP) is a relatively new provision. Initially there was no actual experience upon which to base assumptions regarding the utilization of the DROP so the valuation methodology for members currently in DROP or who might elect to participate in DROP in the future was to fund the member's benefit over a period beginning on the member's entry date into the Plan and ending on the date they were assumed to enter the DROP program. This approach essentially treated the members as if they retired upon entering DROP in spite of the fact that contributions by the member and the city continue during DROP. Based on our recommendation, the Actuarial Committee elected to change the valuation methodology for members who are currently participating in the DROP or are expected to participate in the DROP in the future. Under the new methodology, the Entry Age Normal Cost calculation spreads the cost of benefits over the member's entire career, ending on the date they are assumed to leave the DROP. The revised methodology better reflects the fact that both the member and the employer continue to make contributions during the DROP period and its impact on System costs. Because the revised methodology extends the time period over which benefits are funded, the change decreased the actuarial liability by $32 million and the actuarial contribution rate by 2.242% (0.769% decrease in the normal cost rate and 1.473% decrease in the unfunded actuarial liability contribution rate).

For the first time in many years, the scheduled contribution rates for the members and City exceed the actuarial contribution rate. However, the difference is only 0.550% of pay (about $1 million). Given the

volatility inherent in investment returns from year to year and the related impact it has on the actuarial contribution rate, the contribution margin this year could revert to a contribution shortfall in future years. Given that fact and the current funded status of the System, we firmly believe that no action should be taken to reduce contributions to the system at this time.

The contribution margin of 0.550% is based on the actuarial valuation performed on January 1, 2015 which is a snapshot measurement on that date which assumes no future change in either the normal cost rate or the UAL contribution rate. While the System's financial health is expected to improve in future years due to a decrease in the normal cost over time, it is impossible to anticipate the long-term funding progress without performing an open group projection of future valuation results. Such a model was prepared based on the 2014 valuation so the System has decided not to prepare an updated model using the current valuation. We continue to believe the addition of a projection model to the regular valuation services is a valuable tool in assessing and analyzing the long-term funding of the System. We encourage the Board to consider preparing such a projection model every year based on the current valuation results.

As mentioned earlier in this report, the System uses an asset smoothing method in the actuarial valuation. While this is a very common practice for public retirement systems, it is important to be aware of the potential impact of the unrecognized investment experience. The key valuation results from the 2015 valuation, using both the actuarial and market value of assets, are shown in the following table to provide full disclosure of the impact of asset smoothing on the funding of the System. Because the actuarial and market value of assets are only slightly different, so are the actuarial contribution rates.

	$ Millions	
	Using Actuarial Value of Assets	**Using Market Value of Assets**
Actuarial Liability	$1,189.0	$1,189.0
Asset Value	590.2	599.9
Unfunded Actuarial Liability	598.8	589.1
Funded Ratio	49.6%	50.5%
Normal Cost Rate	22.191%	22.191%
UAL Contribution Rate	27.840%	27.396%
Actuarial Contribution Rate	50.031%	49.587%
Employee Contribution Rate	(16.195%)	(16.195%)
City Contribution Rate	(34.386%)	(34.386%)
Contribution Shortfall/(Excess)	(0.550%)	(0.994%)

THE CITY OF OMAHA POLICE AND FIRE RETIREMENT SYSTEM

PRINCIPAL VALUATION RESULTS

		January 1, 2015	January 1, 2014	% Chg
MEMBERSHIP				
1.	Active Membership			
	- Number of Active Members	1,370	1,391	(1.5)
	- Number of DROP Participants	51	34	50.0
	- Total Employees	1,421	1,425	(0.3)
	- Projected Payroll for Upcoming Fiscal Year	$126,843,763	$124,051,668	2.3
	- Average Projected Payroll	$89,264	$87,054	2.5
	- Average Active Attained Age	40.4	40.0	1.0
	- Average Active Entry Age	28.5	28.4	0.4
2.	Inactive Membership			
	- Number of Retirees / Beneficiaries	1,278	1,250	2.2
	- Number of Disabilities	222	232	(4.3)
	- Number of Deferred Vesteds	10	13	(23.1)
	- Average Annual Benefit	$44,209	$43,324	2.0
ASSETS AND LIABILITIES				
1.	Net Assets			
	- Market Value	$599,927,168	$579,494,652	3.5
	- Actuarial Value	$590,191,585	$548,360,223	7.6
2.	Projected Liabilities			
	- Retired Members and Beneficiaries	$674,225,250	$653,485,685	3.2
	- Disabled Members	80,612,025	81,770,787	(1.4)
	- DROP Participants	53,772,291	32,528,976	65.3
	- Other Inactive Members	2,950,879	6,969,352	(57.7)
	- Active Members, Non-DROP	667,687,486	660,720,852	1.1
	- Total Liability	$1,479,247,931	$1,435,475,652	3.0
3.	Actuarial Liability	$1,189,002,221	$1,170,967,753	1.5
4.	Unfunded Actuarial Liability	$598,810,636	$622,607,530	(3.8)
5.	Funded Ratios			
	Actuarial Value Assets / Actuarial Liability	49.64%	46.83%	6.0
	Market Value Assets / Actuarial Liability	50.46%	49.49%	2.0
CONTRIBUTIONS				
1.	Normal Cost Rate	22.191%	23.103%	(3.9)
2.	UAL Rate	27.840%	29.035%	(4.1)
3.	Total Contribution Rate (1) + (2)	50.031%	52.138%	(4.0)
4.	Less Employee Contribution Rate	(16.195%)	(16.179%)	0.1
5.	Less City Contribution Per Ordinance	(33.339%)	(33.345%)	(0.0)
6.	Less City Prior Service Payment	(1.047%)	(1.070%)	(2.1)
7.	Contribution Shortfall/(Excess)	(0.550%)	1.544%	(135.6)

EXHIBIT 1
SUMMARY OF FUND ACTIVITY

(Market Value Basis)

For Year Ended December 31, 2014

Assets at January 1, 2014	$	579,494,652
Receipts:		
City Contributions		41,851,986
Employee Contributions		19,623,633
Investment Earnings, Net of Expenses		25,665,183
Total Receipts		87,140,802
Disbursements:		
Benefits Payments		65,384,258
Refund of Contributions		1,174,594
Administrative Expenses		149,434
Total Disbursements		66,708,286
Assets as of December 31, 2014	$	599,927,168
Annualized Net Yield		4.4%

EXHIBIT 2

DETERMINATION OF ACTUARIAL VALUE OF ASSETS

The actuarial value of assets is used to minimize the impact of annual fluctuations in the market value of investments on the contribution rate. The current asset valuation method is called the "Expected +25% Method."

The "expected value" of assets is determined by applying the investment return assumption to last year's actuarial value of assets and the net difference of receipts and disbursements for the year. The actual market value is compared to the expected value and 25% of the difference (positive or negative) is added to the expected value to arrive at the actuarial value of assets for the current year.

1.	Actuarial Value of Assets as of January 1, 2014	$	548,360,223
2.	Actual Receipts / Disbursements		
	a. Total Contributions		61,475,619
	b. Benefit Payments/Other		(66,558,852)
	c. Net Change		(5,083,233)
3.	Expected Actuarial Value of Assets as of January 1, 2015 [(1) * 1.08] + [(2c) * $1.08^{½}$]		586,946,390
4.	Market Value of Assets as of January 1, 2015		599,927,168
5.	Excess of Market Value over Expected Actuarial Value as of January 1, 2015		12,980,778
6.	Preliminary Actuarial Value of Assets as of January 1, 2015 [(3) + 25% of (5)]		590,191,585
7.	Calculation of 20% Corridor		
	a. 80% of (4)		479,941,734
	b. 120% of (4)		719,912,602
8.	Final Actuarial Value of Assets as of January 1, 2015 (6), but not < (7a), nor > (7b)	$	590,191,585
9.	Rate of Return on Actuarial Value of Assets		8.6%

EXHIBIT 2 (continued)

A historical comparison of the market and actuarial value of assets is shown below:

Date	Market Value of Assets (MVA)	Actuarial Value of Assets (AVA)	AVA / MVA
1/1/2008	$529,923,390	$530,493,413	100.1%
1/1/2009	365,923,877	439,108,652	120.0%
1/1/2010	405,390,038	440,478,409	108.7%
1/1/2011	452,640,303	456,158,774	100.8%
1/1/2012	440,429,392	467,375,458	106.1%
1/1/2013	489,800,140	495,847,234	101.2%
1/1/2014	579,494,652	548,360,223	94.6%
1/1/2015	599,927,168	590,191,585	98.4%

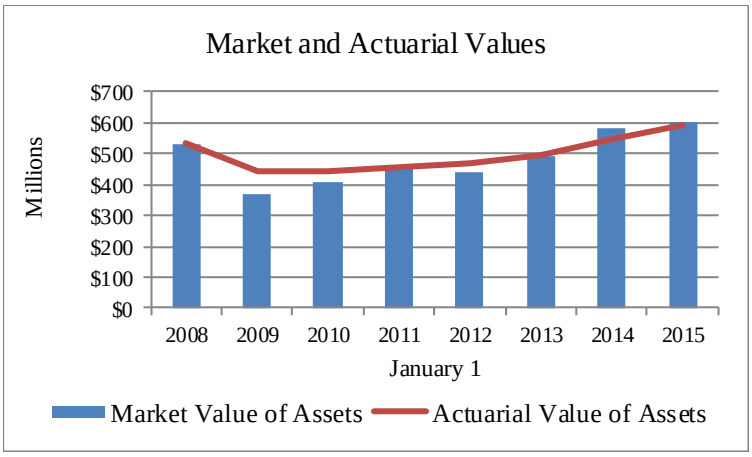


EXHIBIT 3

ACTUARIAL BALANCE SHEET

An actuarial statement of the status of the plan in balance sheet form as of January 1, 2015 is as follows:

Assets

Current assets (actuarial value)		$ 590,191,585
Present value of future normal costs		290,245,710
Present value of future contributions to fund unfunded actuarial liability		598,810,636
Total Assets		$ 1,479,247,931

Liabilities

Present value of future retirement benefits for:

Active employees	$ 652,177,706	
Retired employees, contingent annuitants and spouses receiving benefits	674,225,250	
DROP Participants	53,772,291	
Deferred vested employees	2,884,219	
Inactive employees due refunds	66,660	
Inactive employees – disabled	80,612,025	
Total		$ 1,463,738,151
Present value of future death benefits payable upon death of active members		10,590,099
Present value of future benefits payable upon termination of active members		4,919,681
Total Liabilities		$ 1,479,247,931

EXHIBIT 4

UNFUNDED ACTUARIAL LIABILITY

As of January 1, 2015

The actuarial liability is the portion of the present value of future benefits which will not be paid by future normal costs. The actuarial value of assets is subtracted from the actuarial liability to determine the unfunded actuarial liability.

The City makes scheduled payments of $1,327,600 annually through the year 2028 in addition to the payroll related contributions. The present value of these contributions was applied to the Unfunded Actuarial Liability (UAL) to determine the amount of the UAL to be funded as a percent of payroll (contribution rates).

1.	Present Value of Future Benefits	$ 1,479,247,931
2.	Present Value of Future Normal Costs	290,245,710
3.	Actuarial Liability (1) – (2)	1,189,002,221
4.	Actuarial Value of Assets	590,191,585
5.	Unfunded Actuarial Liability (3) – (4)	598,810,636
6.	Present Value of Prior Service Payments	11,374,429
7.	Adjusted Unfunded Actuarial Liability (Payable from Payroll Related Contributions) (5) – (6)	$ 587,436,207

EXHIBIT 5

CALCULATION OF ACTUARIAL GAIN / (LOSS)
For Plan Year Ending December 31, 2014

Liabilities		
1. Actuarial liability less prior service payments as of January 1, 2014	$	1,159,158,391
2. Normal cost for 2014		27,285,957
3. Interest at 8.00% on (1) and (2) to December 31, 2014		94,915,548
4. Benefit payments during 2014		66,558,852
5. Interest on benefit payments		2,611,136
6. Change in valuation methodology for DROP		(32,291,346)
7. Expected actuarial liability as of December 31, 2014 (1) + (2) + (3) - (4) - (5) + (6)	$	1,179,898,562
8. Actuarial liability less prior service payments as of December 31, 2014	$	1,177,627,792
Assets		
9. Actuarial value of assets as of January 1, 2014	$	548,360,223
10. Contributions during 2014		61,475,619
11. Benefit payments during 2014		66,558,852
12. Interest on items (9), (10) and (11)		43,669,400
13. Expected actuarial value of assets as of December 31, 2014 (9) + (10) - (11) + (12)	$	586,946,390
14. Actual actuarial value of assets as of December 31, 2014	$	590,191,585
(Gain) / Loss		
15. Expected unfunded actuarial liability (7) – (13)	$	592,952,172
16. Actual unfunded actuarial liability (8) – (14)	$	587,436,207
17. Actuarial Gain / (Loss) (15) – (16)	$	5,515,965
18. Actuarial Gain / (Loss) on Actuarial Assets (14) – (13)	$	3,245,195
19. Actuarial Gain / (Loss) on Actuarial Liability (7) – (8)	$	2,270,770

EXHIBIT 6

ANALYSIS OF EXPERIENCE

The purpose of conducting an actuarial valuation of a retirement plan is to estimate the costs and liabilities for the benefits expected to be paid from the plan, to determine the annual level of contribution for the current plan year that should be made to support these benefits and, finally, to analyze the plan's experience. The costs and liabilities of this retirement plan depend not only upon the benefit formula and plan provisions but also upon factors such as the investment return on the Fund, mortality rates among active and retired members, withdrawal and retirement rates among active members, rates at which salaries increase and the rate at which the cost of living increases.

The actuarial assumptions employed as to these and other contingencies in the current valuation are set forth in Appendix B of this report.

Since the overall results of the valuation will reflect the choice of assumptions made, periodic studies of the various components of the plan's experience are conducted in which the experience for each component is analyzed in relation to the assumption used for that component (called an experience study). This summary is not intended to be an actual "experience study" but rather an analysis of sources of gain and loss in the past plan year.

Gain/(Loss) By Source

The System experienced a net actuarial gain on liabilities of $2.3 million during the plan year ended December 31, 2014, and an actuarial gain on assets of $3.2 million. The total actuarial gain was $5.5 million. The major components of this net actuarial experience loss are shown below:

Liability Sources		**Gain/(Loss)**
Salary Increases	$	4,910,000
Mortality		(2,818,000)
Terminations		(112,000)
Retirements		(63,000)
Disability		1,359,000
New Entrants/Rehires		(270,000)
Miscellaneous		(735,000)
Total Liability Gain/(Loss)	$	2,271,000
Asset Gain/(Loss)	$	3,245,000
Net Actuarial Gain/(Loss)	$	5,516,000

EXHIBIT 7

DEVELOPMENT OF 2015 ACTUARIAL CONTRIBUTION RATE

The actuarial cost method used to determine the required level of annual contributions to support the expected benefits is the Entry Age Normal Cost Method. Under this method, the total cost is comprised of the normal cost rate and the unfunded actuarial liability (UAL) payment. The System is financed by contributions from the employees and the City.

1.	(a)	Normal Cost	$	26,946,719
	(b)	Expected Payroll in 2015 for Current Actives	$	121,431,947
	(c)	Normal Cost Rate (a) / (b)		22.191%
2.		Unfunded Actuarial Liability Payable from Payroll Related Contributions	$	587,436,207
3.		Amortization Factor Level Percent of Payroll over 29 Years*		17.96264
4.		Unfunded Actuarial Liability (UAL) Payment [(2) / (3)] x $1.08^{½}$	$	33,986,185
5.		Prior Service Payment		1,327,600
6.		Total Projected Payroll for the Year, Including DROP Members	$	126,843,763
7.		UAL and Prior Service Payments as Percent of Pay [(4) + (5)] / (6)		27.840%
8.		Total Contribution Rate (1c) + (7)		50.031%
9.		Employee Contribution Rate		16.195%
10.		City Ordinance Contribution Rate		33.339%
11.		City Prior Service Contribution Rate		1.047%
12.		Contribution Shortfall/(Margin) (8) – (9) – (10) – (11)		(0.550%)

* Assumes all actuarial assumptions are met in the future, including a 4% annual increase in covered payroll.

SECTION II

OTHER INFORMATION

The actuarial liability is a measure intended to help the reader assess (i) a retirement system's funded status on an ongoing concern basis and (ii) progress being made toward accumulating the assets needed to pay benefits as due. Allocation of the actuarial present value of projected benefits between past and future service was based on service using the Entry Age Normal actuarial cost method. Assumptions, including projected pay increases, were the same as used to determine the System's level percent of payroll annual required contribution between entry age and assumed exit age. Entry age was established by subtracting credited service from current age on the valuation date. The actuarial assumptions used in determining the actuarial liability as of January 1, 2015 can be found in Appendix B.

In the past, Governmental Accounting Standards Board (GASB) Statements No. 25, *Financial Reporting for Defined Benefit Pension Plans*, and Statement No. 27, *Accounting for Pensions by State and Local Governmental Employers*, applied to the preparation of financial reports of pension plans for state and local governments. GASB 67, which was effective for the plan year ended December 31, 2014, replaced GASB 25 and GASB 68 will replace GASB 27 for fiscal year end 2015.

GASB 67 separates accounting from funding by creating disclosure and reporting requirements that may or may not be consistent with the basis used for funding the System. A separate report that contains all of the information and exhibits of an actuarial nature that are necessary for the System's financial reporting under GASB 67 and the City's financial reporting under GASB 68 are prepared annually.

EXHIBIT 8

SCHEDULE OF EMPLOYER CONTRIBUTIONS

Fiscal Year Ending	Annual Required Contribution* (a)	Total Employer Contribution* (b)	Percentage of ARC Contributed (b) / (a)
12/31/1999	$ 10,943,105	$ 13,010,651	118.89%
12/31/2000	11,439,320	13,613,563	119.01%
12/31/2001	11,738,696	13,977,312	119.07%
12/31/2002	15,392,189	15,322,201	99.55%
12/31/2003	23,329,940	17,280,573	74.07%
12/31/2004	22,487,399	16,715,500	74.33%
12/31/2005	26,255,804	17,762,209	67.65%
12/31/2006	31,102,053	20,171,610	64.86%
12/31/2007	34,842,280	20,699,211	59.41%
12/31/2008	38,073,021	21,700,806	57.00%
12/31/2009	50,507,561	22,701,608	44.95%
12/31/2010	55,488,062	24,183,493	43.58%
12/31/2011	49,945,979	30,775,568	61.62%
12/31/2012	54,310,693	35,302,037	65.00%
12/31/2013	52,895,180	43,838,750	82.88%
12/31/2014	43,524,890	41,851,986	96.16%

*Information prior to 2011 was provided by the prior actuary and has not been reviewed or verified by Cavanaugh Macdonald Consulting.

EXHIBIT 9

DEVELOPMENT OF THE NET PENSION OBLIGATION
in accordance with GASB Statement No. 67

Fiscal Year End:	12/31/2008	12/31/2009	12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014
Assumptions and Methods							
Interest Rate	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%
Payroll Growth	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
Amortization Period (years)	30	30	30	22	21	20	30
Cost Method	EA Normal	EA Normal	EA Normal	EA Normal	EA Normal	EA Normal	EA Normal
Annual Pension Cost							
Annual Required Contribution (ARC)	$38,073,021	$50,507,561	$55,488,062	$49,945,979	$54,310,693	$52,895,180	$43,524,890
Interest on NPO	3,639,524	4,917,174	7,098,244	9,539,950	11,185,515	12,814,721	13,633,595
Adjustment to ARC	(4,041,120)	(5,459,749)	(7,881,485)	(8,137,044)	(9,833,151)	(11,635,221)	(9,679,301)
Annual Pension Cost	$37,671,425	$49,964,986	$54,704,821	$51,348,885	$55,663,357	$54,074,680	$47,479,184
Contribution for the Year	$21,700,806	$22,701,608	$24,183,493	$30,775,568	$35,302,037	$43,838,750	$41,851,986
Net Pension Obligation (NPO)							
NPO at beginning of year	$45,494,051	$61,464,670	$88,728,048	$119,249,376	$139,822,693	$160,184,013	$170,419,943
Annual Pension Cost for Year	37,671,425	49,964,986	54,704,821	51,348,885	55,663,357	54,074,680	47,479,184
Contributions for year	(21,700,806)	(22,701,608)	(24,183,493)	(30,775,568)	(35,302,037)	(43,838,750)	(41,851,986)
NPO at end of year	$61,464,670	$88,728,048	$119,249,376	$139,822,693	$160,184,013	$170,419,943	$176,047,141

Note: All information prior to 2011 in this exhibit was provided by the prior actuary and has not been reviewed or verified by Cavanaugh Macdonald Consulting, LLC.

EXHIBIT 10

SCHEDULE OF FUNDING PROGRESS

Actuarial Valuation Date[1]	Actuarial Value of Assets (a)	Actuarial Liability (AL) (b)	Unfunded AL (UAL)[2] (b-a)	Funded Ratio (a / b)	Covered Payroll (P / R)[3] (c)	UAL as a Percentage of Covered P / R [(b-a) / c]
12/31/2008	$365,900,000	$ 947,600,000	$581,700,000	38.6%	$ 99,500,000	584.6%
12/31/2009	405,400,000	1,026,200,000	620,800,000	39.5%	103,900,000	597.5%
12/31/2010	452,600,000	1,093,300,000	640,700,000	41.4%	111,200,000	576.2%
1/1/2011	456,158,774	1,028,866,353	572,707,579	44.3%	105,025,610	545.3%
1/1/2012	467,375,458	1,077,607,299	610,231,841	43.4%	110,027,537	554.6%
1/1/2013	495,847,234	1,108,874,778	613,027,544	44.7%	116,056,740	528.2%
1/1/2014	548,360,223	1,170,967,753	622,607,530	46.8%	124,051,668	501.9%
1/1/2015	590,191,585	1,189,002,221	598,810,636	49.6%	126,843,763	472.1%

1. Results prior to 2011 were provided by the prior actuary and were reported at the end of the year rather than the valuation date. All information prior to 2011 in this exhibit was provided by the prior actuary and has not been reviewed or verified by Cavanaugh Macdonald Consulting, LLC

2. As of 1/1/2011, the Unfunded AL is not reduced by the Present Value of Prior Service Payments. For the calculation of the Unfunded AL used for funding purposes, please refer to Exhibit 4 of this report.

3. As of 1/1/2014, covered payroll includes DROP participants' pay.

APPENDIX A

SUMMARY OF PLAN PROVISIONS

Average Final Monthly Compensation:
Section 22 - 63

Police: Pensionable pay excludes certain overtime pay. For those hired before January 1, 2010, an adjustment is made to include a career average of overtime pay. For those who were age 45 and had at least twenty years of service as of January 1, 2010, highest average monthly compensation is calculated using the highest consecutive twenty-six (26) pay periods out of the last five years of service as a member of the system for which service credit had been earned. All others use the highest seventy-eight (78) pay periods with the final 130 pay periods of service.

Fire: For members who were age 45 and had at least 25 years of service or age 50 with at least 20 years of service as of January 1, 2013, highest average monthly compensation during any consecutive twenty-six (26) pay periods out of the last five years of service as a member of the system for which service credit had been earned. All others use the highest seventy-eight (78) pay periods with the final 130 pay periods of service.

Career Overtime Average (COTA):

All Members: Each hour an employee earns for overtime is computed back to their date of hire or 1991 (whichever is later) and divided by the number of years the employee worked after December 31, 1990. This amount shall be included in the member's pension calculation. COTA is excluded for all Police members hired on or after January 1, 2010 and Fire members hired on or after January 1, 2013.

Member Contributions:
Section 22 – 73(a)
Section 22 - 68

Rates effective January 1, 2014
Police: 15.35% of total monthly salary for police.
Fire: 17.15% of total monthly salary for fire.

City of Omaha Contributions:
Section 22 – 73(b)

Rates effective January 1, 2013
Police: 33.67% of each member's pensionable earnings
Fire: 32.965% of each member's pensionable earnings

In addition, the City shall make contributions of $1,327,600 annually through the year 2028.

Service Retirement Eligibility
Section 22 - 75

Police: After age 55 and 10 years of service or age 45 and 20 years of service. Members hired after January 1, 2010 must be 50 rather than 45. If retiring with less than 30 years of service a 7% reduction is applied for each year prior to age 55.

Fire: Age 55 and 10 years of service or age 50 and 20 years of service. Members hired before 1/1/2013 can also retire at age 45 if they have at least 25 years of service.

APPENDIX A

SUMMARY OF PLAN PROVISIONS
(continued)

Service Retirement Pension
Section 22 - 76

For Police with at least 20 years of service as of latest contract effective date **and Fire members with at least 15 years of service** as of latest contract effective date, the following schedule applies.

Years of Service	Minimum Age	Percentage of Average Final Monthly Compensation
10 but less than 15	55	20%
15 but less than 20	55	30%
20 but less than 25	45**	55%*
25 years	45	75%

*55% at 20 years of service, plus 2% for each additional six months of service after 20 years and before 25 years.

** The minimum retirement age with less than 25 years is 50 for Fire.

For Police who did not have 20 years of service and Fire who did not have 15 years of service as of the latest contract effective date, the following schedule applies:

Years of Service	Minimum Age	Percentage of Average Final Monthly Compensation
10 but less than 15	55	20%
15 but less than 20	55	30%
20 but less than 25	45***	50%*
25 but less than 30	45	70%**
30 years	45	75%

*50% at 20 years of service, plus 2% for each additional six months of service after 20 years and before 25 years.

**70% at 25 years of service, plus 1% for each additional six months of service after 25 years and before 27 years, with an additional 0.5% 29 and 30 years, for a maximum of 75%.

*** The minimum retirement age with less than 25 years is 50 for Fire.

APPENDIX A

SUMMARY OF PLAN PROVISIONS
(continued)

For police hired after January 1, 2010, the following schedule applies:

Years of Service	Minimum Age	Percentage of Average Final Monthly Compensation
10 but less than 15	55	20%
15 but less than 20	55	30%
20 but less than 25	50	50%*
25 but less than 30	50	65%**
30 years	50	75%

*50% at 20 years of service, plus 1.5% for each additional six months of service after 20 years and before 25 years. Early retirement reduction applies if less than 30 years of service.

**65% at 25 years of service, plus 1% for each additional six months of service after 25 years and before 30 years. Early retirement reduction applies if less than 30 years of service.

For Fire hired after January 1, 2013, the following schedule applies:

Years of Service	Minimum Age	Percentage of Average Final Monthly Compensation
10 but less than 15	55	20%
15 but less than 20	55	30%
20 but less than 25	50	45%
25 but less than 30	50	55%*
30 years	50	65%

*55% at 25 years of service, plus 2% for each additional year of service after 25 years and before 30 years. Early retirement reduction applies if under age 55, unless the member has 30 years of service.

Cost of Living Adjustment (COLA): The monthly pension shall be increased by the lesser of 3% or $50 ($65 for Fire retirements after June 30, 2007). The increase will be made annually, beginning in the 13th month of retirement.

APPENDIX A

SUMMARY OF PLAN PROVISIONS
(continued)

Deferred Retirement Option Program (DROP):

Police: A DROP program was instituted with the last contract. After three years, this will be reviewed to determine if it is cost neutral before continuing it. Members may participate in the DROP for three to five years once they reach retirement eligibility with a minimum of 25 years of service (certain current members have a service threshold of 22.5 years). Members continue to make contributions to the system during the DROP period. During the DROP period, the member is credited with the benefits that would have been paid if the member had retired at the start of the DROP period, along with interest at the end of the year. At the end of the DROP period, the member ends employment, receives the DROP account balance, and begins to receive payments as though retirement had occurred at the beginning of the DROP period.

Fire: A DROP program was instituted with the last contract. After three years, this will be reviewed to determine if it is cost neutral before continuing it. Members may participate in the DROP for three to five years once they reach retirement eligibility. Current members who, as of January 1, 2013, are age 50 or older with at least 20 years of service or age 45 with at least 25 years of service are eligible to participate in DROP. All other members will be required to have 25 years of service for eligibility. Members continue to make contributions to the system during the DROP period. During the DROP period, the member is credited with the benefits that would have been paid if the member had retired at the start of the DROP period, along with interest at the end of the year. At the end of the DROP period, the member ends employment, receives the DROP account balance, and begins to receive payments as though retirement had occurred at the beginning of the DROP period.

APPENDIX A

SUMMARY OF PLAN PROVISIONS
(continued)

Disability Retirement

1. In Line of Duty
Section 22 - 78

A member shall become entitled to the following benefits while permanently disabled.

Years of Service	Percentage of Average Final Monthly Compensation
Less than 20	50%*
20 or more	Same as Service Retirement Pension, without any reduction for early commencement

* 55% for Fire members who were age 45 and had at least 25 years of service or age 50 with at least 20 years of service as of latest contract effective date.

2. Not in Line of Duty
Section 22 - 79

A member shall become entitled to the following benefits while permanently disabled.

Years of Service	Percentage of Average Final Monthly Compensation
Up to 10 years	10%
10 but less than 15	20%
15 but less than 20	30%
20 or more	Greater of 45% or the Service Retirement Pension without any reduction for early commencement

Note: Not payable while full salary continues

Spouse's pension:

1. Death of Active member in Line of Duty:

A monthly pension equal to 49% (52% Fire members who were age 45 and had at least 25 years of service or age 50 with at least 20 years of service as of most recent contract date) of the member's average final monthly compensation is paid to the surviving spouse if death occurs while the active member has less than 25 years of service. A monthly pension equal to 69% (72% Fire members who were age 45 and had at least 25 years of service or age 50 with at least 20 years of service as of most recent contract date) of the member's average final monthly compensation is paid to the surviving spouse if death occurs after the active member has 25 years or more of service.

APPENDIX A

SUMMARY OF PLAN PROVISIONS
(continued)

2. Death of Active member Not in Line of Duty:

The following monthly pension is paid to the surviving spouse.

Years of Service at Death	Percentage of Average Final Monthly Compensation*
0-3	0.0%
3-10	35.0%
11	36.4%
12	37.8%
13	39.2%
14	40.6%
15	42.0%
16	43.4%
17	44.8%
18	46.2%
19	47.6%
20-25	49.0%
25+	69.0%

* add 3% to each number for Fire members who were age 45 and had at least 25 years of service or age 50 with at least 20 years of service as of most recent contract date

Note: Benefit terminates upon remarriage of spouse.

3. Death of Member Eligible for Retirement or Death of Retired Member:
Section 22 - 82

Police: 75% of the pension the member was receiving or was eligible to receive at the time of death. 50% of the pension the member was receiving or was eligible to receive for Police members hired after January 1, 2010. Upon spouse's remarriage, all benefits cease.

Fire: 75% of the pension the member was receiving at the time of death for Fire members who began receiving benefits before July 1, 2007. 90% of the pension the member was receiving or was eligible to receive at the time of death for Fire members who were hired before January 1, 2013 and were not receiving benefits before July 1, 2007. 50% of the pension the member was receiving or was eligible to receive for Fire members hired after January 1, 2013. Upon spouse's remarriage, all benefits cease.

APPENDIX A

SUMMARY OF PLAN PROVISIONS
(continued)

Children's Pension
Section 22 - 82

Upon the death of an active or retired member, the following benefit will be paid to the surviving children until age 18.

Number of Dependent Children	Percentage of Average Final Monthly Compensation
1	15%
2	30%
3	45%
4 or more	50%

Lump Sum Death Benefits

1. Active Member without Eligible Dependents:
Section 22 – 84(a)

Accumulated member's contributions, or $500 if greater.

2. Retired Member without Eligible Dependents:
Section 22 – 84(b)

Accumulated member's contributions, less previous pension payments made, or $500 if greater.

3. Active Member with Eligible Dependents:
Section 22 – 84(c)

An amount payable immediately, equal to one year's salary computed on the basis of the maximum monthly rate for patrolmen and firefighters, plus the decreased member's accumulated contributions less pension payments to his dependents, payable to the dependent who last ceases to receive pension benefits.

4. Retired Member with Eligible Dependents:
Section 22 – 84(c)

$1,000 ($5,000 for Fire retirements after June 30, 2005) payable immediately, plus the excess over $1,000 ($5,000 for Fire retirements after June 30, 2005) if any, of the deceased member's accumulated contributions less pension payments to the member and his dependents, payable to the dependent who last ceases to receive pension benefits.

APPENDIX A

SUMMARY OF PLAN PROVISIONS
(continued)

Vesting:

Section 22 - 86

Upon severance of employment by a member with less than 10 years of service and prior to obtaining eligibility under Section 22 – 75, a refund of such member's accumulated contributions.

Section 22 - 86

Upon severance of employment by a member before age 45 with more than 10 years of service and prior to obtaining eligibility under Section 22 – 75, the member may elect, in lieu of receiving a refund of contributions, to receive a monthly pension, according to the table below, commencing at age 55. Such deferred pension shall be based on service credited to the date of severance.

Years of Service	Minimum Age	Percentage of Average Final Monthly Compensation
10 but less than 15	55	20%
15 but less than 20	55	30%
20 but less than 25	50	55%
25 or more	45	75%

For Police members and Fire members with less than 15 years of service as of the latest effective contract date, the schedules shown under service retirement apply as appropriate.

APPENDIX B

ACTUARIAL METHODS AND ASSUMPTIONS

Actuarial Cost Method

Valuations of the plan use the *"entry age-normal"* cost method. Under this actuarial method, the value of future costs attributable to future employment of participants is determined. This is called present value of future normal costs. The following steps indicate how this is determined for benefits expected to be paid upon normal retirement or the end of the Deferred Retirement Option Plan (DROP).

1. The expected pension benefit payable at the end of the employee's period in covered employment (later of normal retirement or the end of the DROP, is applicable) is determined for each participant.

2. A normal cost, as a level percent of pay, is determined for each participant assuming that such level percent is paid from the employee's entry age into employment to the end of his covered employment. This normal cost is determined so that its accumulated value at the end of covered employment is sufficient to provide the expected pension benefits.

3. The sum of the normal costs for all participants for one year determines the total normal cost of the plan for one year.

4. The value of future payments of normal cost in future years is determined for each participant based on his years of service to the end of covered employment.

5. The sum of the value of future payments of normal cost for all participants determines the present value of future normal costs.

The value of future costs attributable to past employment of participants, which is called the actuarial liability, is equal to the present value of benefits less the present value of future normal costs. The unfunded actuarial liability is equal to the excess of the actuarial liability over assets.

As experience develops with the plan, actuarial gains and actuarial losses result. These actuarial gains and losses indicate the extent to which actual experience is deviating from that expected on the basis of the actuarial assumptions. In each year, as they occur, actuarial gains and losses are recognized in the unfunded actuarial liability as of the valuation date.

Actuarial Value of Assets

The actuarial value of assets is equal to the expected asset value (based on last year's actuarial value of assets, net cash flows and a rate of return equal to the actuarial assumed rate of 8.0%) plus 1/4 of the difference between the actual market value and the expected asset value. The actuarial value of assets cannot exceed 120% or fall below 80% of the market value of assets.

Unfunded Actuarial Liability Amortization Method

The unfunded actuarial liability is amortized, as a level percentage of payroll, over a closed 30-year period that began on January 1, 2014.

APPENDIX B

ACTUARIAL METHODS AND ASSUMPTIONS (continued)

Interest:	8.00% per year, (net of investment expenses)
Salary Increases:	Merit increases based on service plus a general wage increase
Service Retirement Age:	Graduated rates based on service
Mortality:	
Active Members	RP-2000 Employee Table with generational improvements, set forward one year
Service Pensioners and Beneficiaries	RP-2000 Healthy Annuitant Table with generational improvements, set forward one year
Disabled	RP-2000 Healthy Annuitant Table with generational improvements, set forward five years
Disability:	Graduated Rates by age. See table on next page
Percent of Disabilities in Line of Duty:	85%
Medical Expenses for Disabilities in Line of Duty:	5% load on liability for current and future disabled members.
Percent Married at Death or Retirement:	75%
Spouse Age Difference:	Husbands assumed to be 3 years older than wives
Turnover:	Graduated rates by age. See table on next page
COTA Adjustment:	Members are assumed to retire with their current COTA
Increase in Total Annual Payroll:	4.0%
Assumed Annual Rate of Inflation:	3.25%
Decrement Timing:	Middle of year

APPENDIX B

ACTUARIAL METHODS AND ASSUMPTIONS (continued)

SAMPLE RATES

Age on 1/1/2010	Annual Mortality Rates		Current Age	Annual Disability Rates	Annual Turnover Rates
	Males	Females			
20	.03%	.02%	20	.21%	1.41%
30	.05	.03	30	.24	1.69
40	.10	.07	40	.42	.63
50	.19	.15	50	.76	.00
60	.46	.41	60	1.16	.00

Salary Progression - Police

Years of Service	Inflation	Productivity	Merit & Longevity	Total Increase
1	3.25%	0.75%	9.0%	13.0%
5	3.25%	0.75%	2.2	6.2
10	3.25%	0.75%	2.0	6.0
15	3.25%	0.75%	1.0	5.0
20	3.25%	0.75%	0.5	4.5
25	3.25%	0.75%	0.0	4.0

Salary Progression – Fire

Years of Service	Inflation	Productivity	Merit & Longevity	Total Increase
1	3.25%	0.75%	5.0%	9.0%
5	3.25%	0.75%	4.5	8.5
10	3.25%	0.75%	1.0	5.0
15	3.25%	0.75%	1.0	5.0
20	3.25%	0.75%	0.0	4.0

APPENDIX B

ACTUARIAL METHODS AND ASSUMPTIONS (continued)

Retirement Rates

Assumed retirement rates for Police members hired before January 1, 2010 and Fire members hired before January 1, 2013 are as follows:

Years of Service	Distribution	Annual Rate
Less than 25	0.0%	0.0%
25	100.0	100.0

If a member was hired after age 37, then it is assumed that member would retire at the later of age 62 or 10 years of service.

Assumed retirement rates for Police members hired after January 1, 2010 and Fire members hired after January 1, 2013 are as follows:

Years of Service	Distribution	Annual Rate
Less than 30	0.0%	0.0%
30	100.0	100.0

If a member was hired after age 30, then it is assumed that member would retire at the later of age 60 or 10 years of service.

DROP Participation Rate: 70% of retirement-eligible members are assumed to enter DROP

DROP Period: 5 years, but not beyond age 60

Interest Credited to DROP Accounts: 4% annually

MEMBERSHIP DATA FOR VALUATION

The summary of employee characteristics presented below covers the employee group as of January 1, 2015. The schedules at the end of the report show the distribution of the various employee groups by present age along with other pertinent data.

Total number of employees in valuation:

(a) Active employees	1,370
(b) DROP Participants	51
(c) Deferred vested employees	10
(d) Disabled employees	222
(e) Retired employees, spouses and children receiving benefits	1,278
(f) Total employees in valuation	2,931

Average age of employees in valuation:

(a) Active employees	
Attained Age	40.4
Hire Age	28.5
(b) DROP Participants	52.6
(c) Deferred vested employees	47.4
(d) Disabled employees	67.2
(e) Retired employees	64.6
(f) Spouses and children receiving benefits	67.3

Active employees eligible for vested benefits as of January 1, 2015:

(a) Employees eligible for deferred vested benefits	701
(b) Employees eligible for early or normal retirement benefits	140
(c) Employees eligible for refund of contributions only	529
(d) Total	1,370

MEMBERSHIP DATA RECONCILIATION

January 1, 2014 to January 1, 2015

The number of members included in the valuation, as summarized in the table below, is in accordance with the data submitted by the City for eligible employees as of the valuation date.

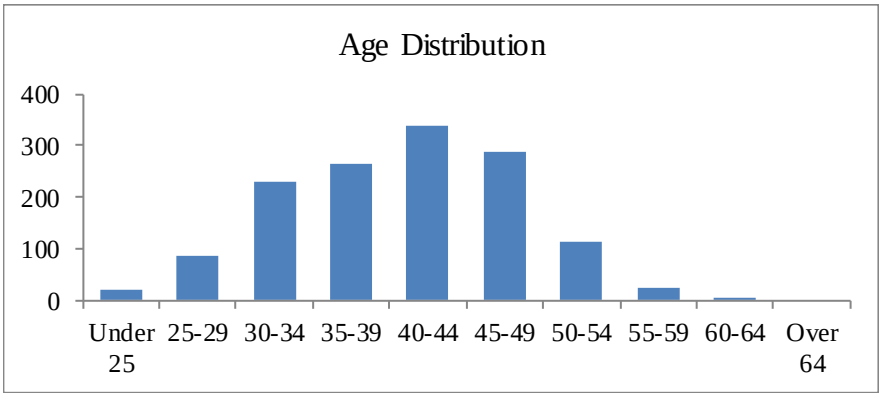
	Active Members	Deferred Vested	Disabled	DROP Participants	Retirees	Beneficiaries	Total
Members as of 1/1/2014	1,391	13	232	34	961	289	2,920
New Members	36	0	0	0	0	0	36
Terminations							
Rehired	0	0	0	0	0	0	0
Refunded: Paid	(9)	0	0	0	0	0	(9)
Refunded: Due	(1)	0	0	0	0	0	(1)
Deferred Vested	(2)	2	0	0	0	0	0
Disabled	(3)	0	3	0	0	0	0
Retirements	(19)	(5)	0	(2)	26	0	0
Alternate Payees (QDRO)	0	0	0	0	0	2	2
Participating in DROP	(19)	0	0	19	0	0	0
Benefit Payments Ended	0	0	0	0	0	(8)	(8)
Data Corrections	0	0	1	0	(1)	0	0
Deaths							
With Beneficiary	(3)	0	(10)	0	(9)	33	11
Without Beneficiary	(1)	0	(4)	0	(4)	(11)	(20)
Total Members 1/1/2015	1,370	10	222	51	973	305	2,931

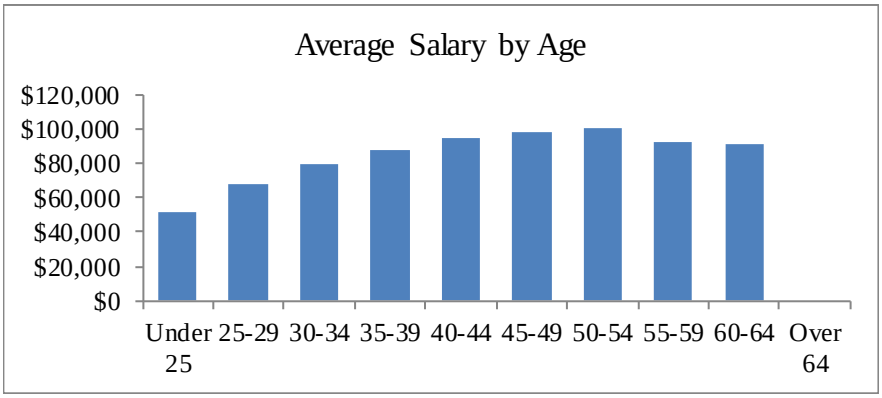
SCHEDULE I

ACTIVE MEMBERS AS OF JANUARY 1, 2015

Total

	Count of Members			Valuation Salaries of Members		
Age	Males	Females	Total	Males	Females	Total
Under 25	19	1	20	$ 966,109	$ 64,479	$ 1,030,588
25-29	75	12	87	5,156,981	695,514	5,852,495
30-34	207	23	230	16,558,846	1,773,937	18,332,783
35-39	229	35	264	20,068,237	2,880,855	22,949,092
40-44	296	44	340	27,927,201	4,098,640	32,025,841
45-49	252	34	286	24,629,418	3,336,463	27,965,881
50-54	95	20	115	9,508,634	2,005,463	11,514,097
55-59	23	2	25	2,121,003	193,687	2,314,690
60-64	3	0	3	273,150	0	273,150
Over 64	0	0	0	0	0	0
Total	1,199	171	1,370	$107,209,579	$15,049,038	$122,258,617



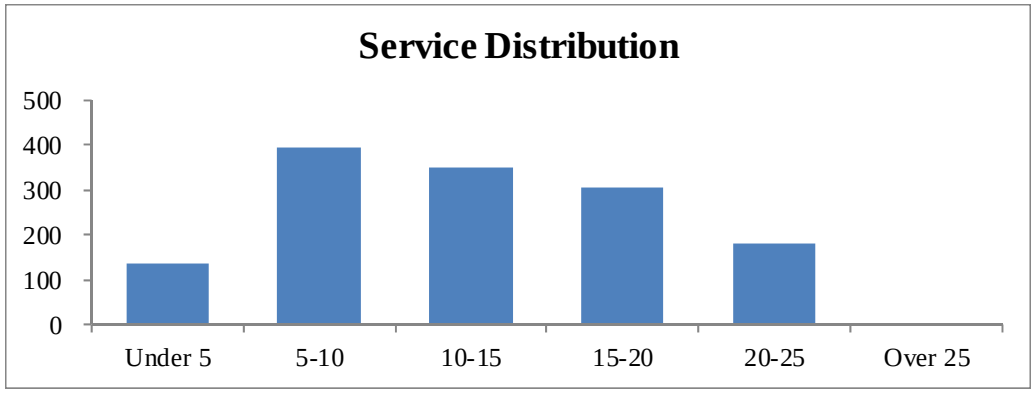


SCHEDULE I (continued)

ACTIVE MEMBERS AS OF JANUARY 1, 2015

Total

	Service									
Age	Under 5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	Over 40	Total
Under 25	20	0	0	0	0	0	0	0	0	20
25-29	47	40	0	0	0	0	0	0	0	87
30-34	41	163	26	0	0	0	0	0	0	230
35-39	20	104	116	24	0	0	0	0	0	264
40-44	5	60	134	114	27	0	0	0	0	340
45-49	2	17	59	110	97	1	0	0	0	286
50-54	0	7	13	46	47	2	0	0	0	115
55-59	0	3	3	13	6	0	0	0	0	25
60-64	0	0	0	0	3	0	0	0	0	3
Over 64	0	0	0	0	0	0	0	0	0	0
Total	135	394	351	307	180	3	0	0	0	1,370

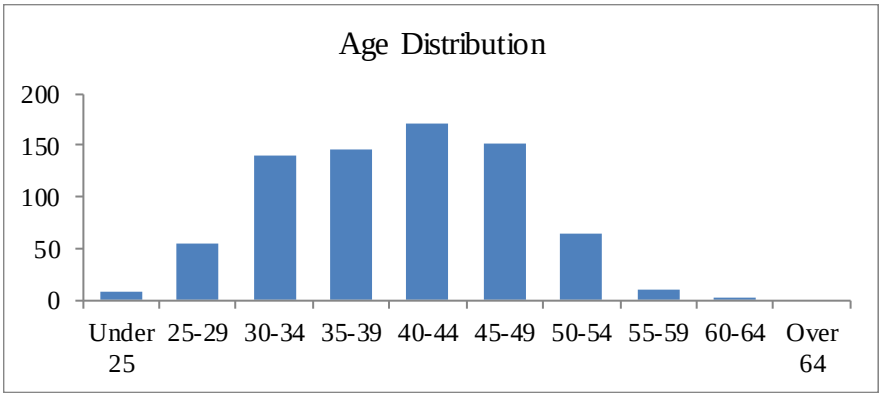


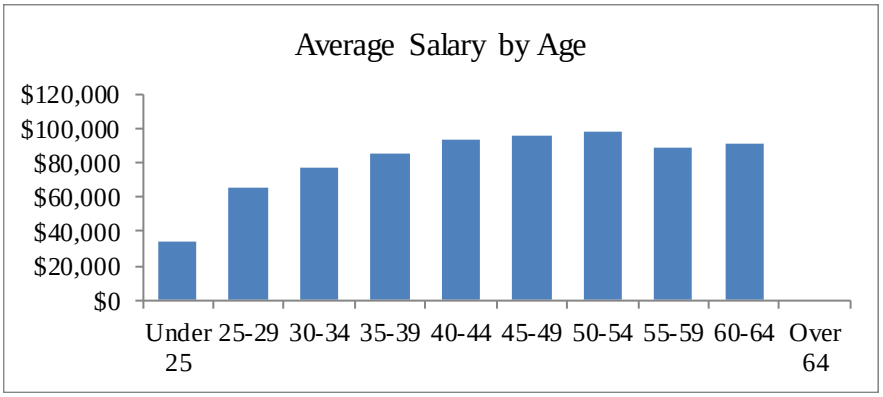
SCHEDULE I (continued)

ACTIVE MEMBERS AS OF JANUARY 1, 2015

All Police Members

	Count of Members			Valuation Salaries of Members		
Age	Males	Females	Total	Males	Females	Total
Under 25	8	0	8	$ 273,099	$ 0	$ 273,099
25-29	43	11	54	2,904,245	629,639	3,533,884
30-34	122	18	140	9,448,422	1,358,376	10,806,798
35-39	117	29	146	10,000,179	2,351,744	12,351,923
40-44	135	36	171	12,691,319	3,281,126	15,972,445
45-49	122	29	151	11,594,251	2,852,668	14,446,919
50-54	47	17	64	4,551,658	1,691,337	6,242,995
55-59	9	2	11	782,132	193,687	975,819
60-64	3	0	3	273,150	0	273,150
Over 64	0	0	0	0	0	0
Total	606	142	748	$52,518,455	$12,358,577	$64,877,032



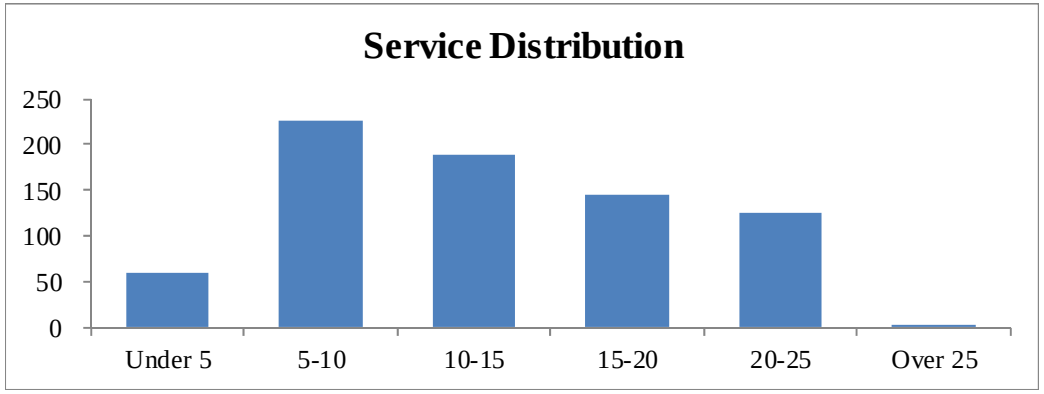


SCHEDULE I (continued)

ACTIVE MEMBERS AS OF JANUARY 1, 2015

All Police Members

	Service									
Age	Under 5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	Over 40	Total
Under 25	8	0	0	0	0	0	0	0	0	8
25-29	22	32	0	0	0	0	0	0	0	54
30-34	17	97	26	0	0	0	0	0	0	140
35-39	11	55	69	11	0	0	0	0	0	146
40-44	0	28	62	61	20	0	0	0	0	171
45-49	1	10	24	51	65	0	0	0	0	151
50-54	0	3	7	19	33	2	0	0	0	64
55-59	0	2	2	2	5	0	0	0	0	11
60-64	0	0	0	0	3	0	0	0	0	3
Over 64	0	0	0	0	0	0	0	0	0	0
Total	59	227	190	144	126	2	0	0	0	748

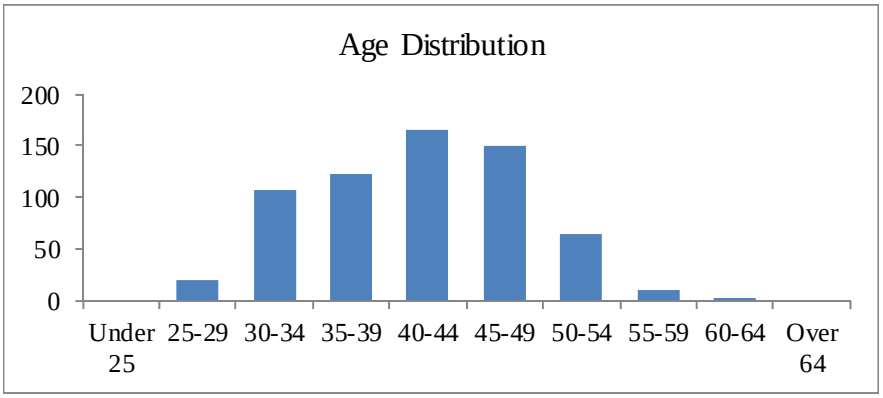


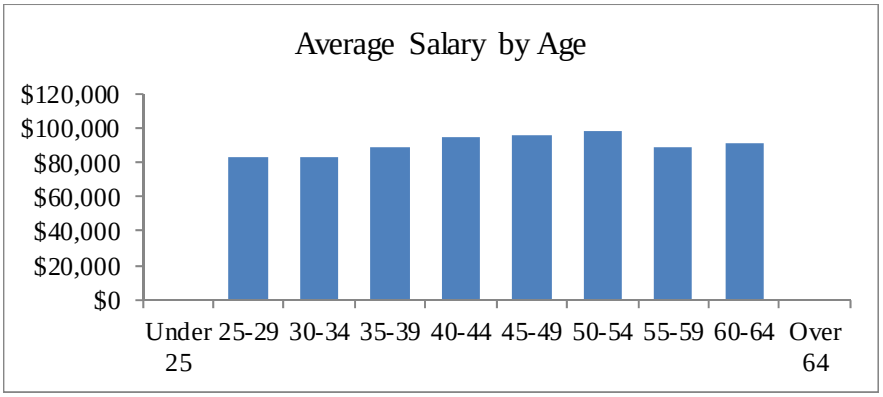
SCHEDULE I (continued)

ACTIVE MEMBERS AS OF JANUARY 1, 2015

Police Members Hired Before January 1, 2010

	Count of Members			Valuation Salaries of Members		
Age	Males	Females	Total	Males	Females	Total
Under 25	0	0	0	$ 0	$ 0	$ 0
25-29	18	2	20	1,492,482	172,622	1,665,104
30-34	93	14	107	7,774,592	1,117,376	8,891,968
35-39	96	27	123	8,698,705	2,247,242	10,945,947
40-44	130	36	166	12,339,418	3,281,126	15,620,544
45-49	120	29	149	11,461,808	2,852,668	14,314,476
50-54	47	17	64	4,551,658	1,691,337	6,242,995
55-59	9	2	11	782,132	193,687	975,819
60-64	3	0	3	273,150	0	273,150
Over 64	0	0	0	0	0	0
Total	516	127	643	$47,373,945	$11,556,058	$58,930,003



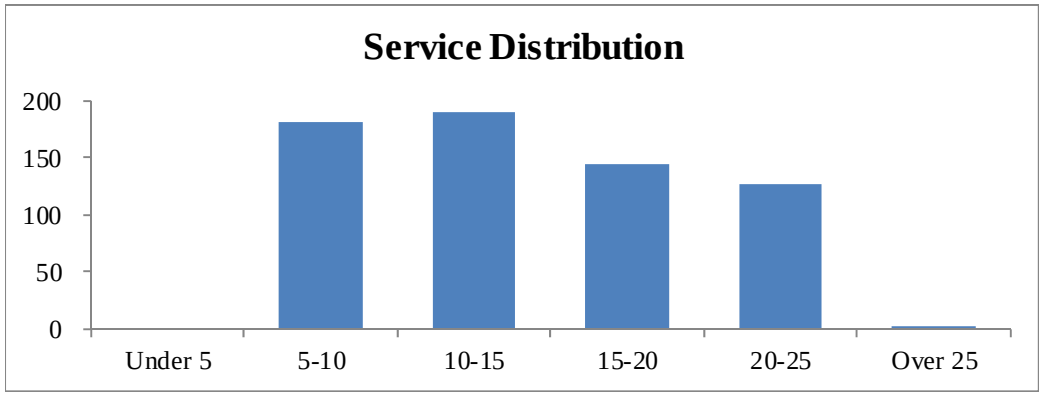


SCHEDULE I (continued)

ACTIVE MEMBERS AS OF JANUARY 1, 2015

Police Members Hired Before January 1, 2010

	Service									
Age	Under 5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	Over 40	Total
Under 25	0	0	0	0	0	0	0	0	0	0
25-29	0	20	0	0	0	0	0	0	0	20
30-34	0	81	26	0	0	0	0	0	0	107
35-39	0	43	69	11	0	0	0	0	0	123
40-44	0	23	62	61	20	0	0	0	0	166
45-49	0	9	24	51	65	0	0	0	0	149
50-54	0	3	7	19	33	2	0	0	0	64
55-59	0	2	2	2	5	0	0	0	0	11
60-64	0	0	0	0	3	0	0	0	0	3
Over 64	0	0	0	0	0	0	0	0	0	0
Total	0	181	190	144	126	2	0	0	0	643

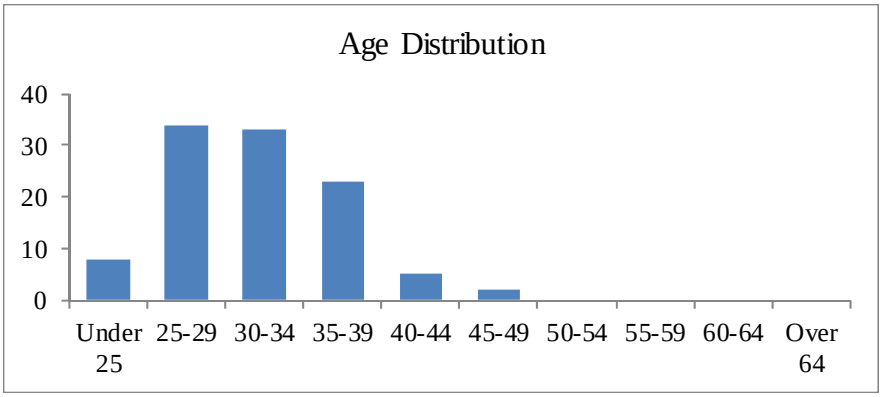


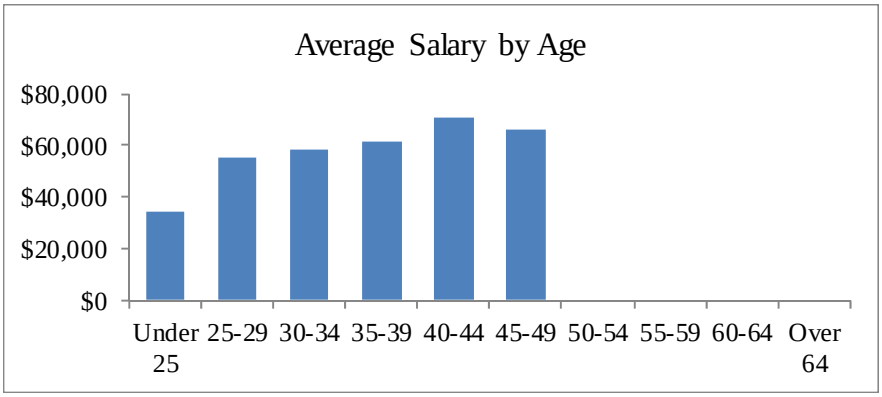
SCHEDULE I (continued)

ACTIVE MEMBERS AS OF JANUARY 1, 2015

Police Members Hired On or After January 1, 2010

	Count of Members			Valuation Salaries of Members		
Age	Males	Females	Total	Males	Females	Total
Under 25	8	0	8	$ 273,099	$ 0	$ 273,099
25-29	25	9	34	1,411,763	457,017	1,868,780
30-34	29	4	33	1,673,830	241,000	1,914,830
35-39	21	2	23	1,301,474	104,502	1,405,976
40-44	5	0	5	351,901	0	351,901
45-49	2	0	2	132,443	0	132,443
50-54	0	0	0	0	0	0
55-59	0	0	0	0	0	0
60-64	0	0	0	0	0	0
Over 64	0	0	0	0	0	0
Total	90	15	105	$5,144,510	$802,519	$5,947,029



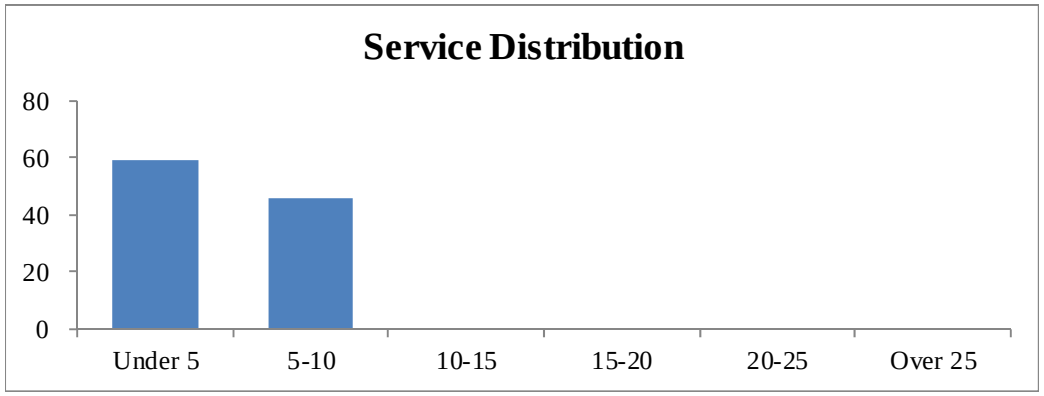


SCHEDULE I (continued)

ACTIVE MEMBERS AS OF JANUARY 1, 2015

Police Members Hired On or After January 1, 2010

	Service									
Age	Under 5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	Over 40	Total
Under 25	8	0	0	0	0	0	0	0	0	8
25-29	22	12	0	0	0	0	0	0	0	34
30-34	17	16	0	0	0	0	0	0	0	33
35-39	11	12	0	0	0	0	0	0	0	23
40-44	0	5	0	0	0	0	0	0	0	5
45-49	1	1	0	0	0	0	0	0	0	2
50-54	0	0	0	0	0	0	0	0	0	0
55-59	0	0	0	0	0	0	0	0	0	0
60-64	0	0	0	0	0	0	0	0	0	0
Over 64	0	0	0	0	0	0	0	0	0	0
Total	59	46	0	0	0	0	0	0	0	105

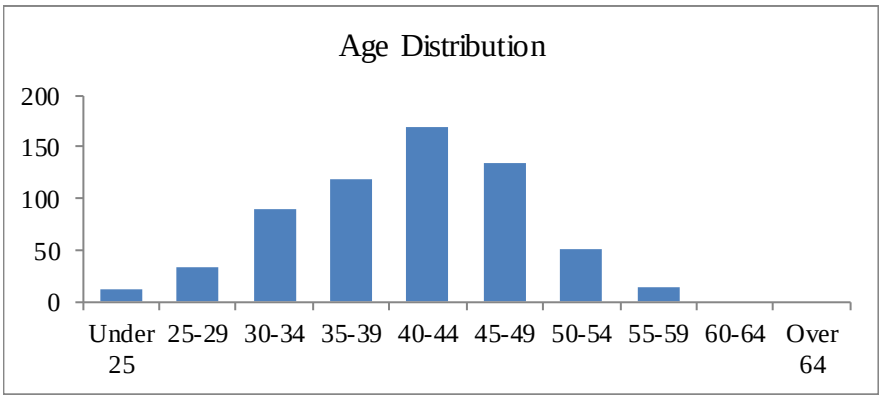


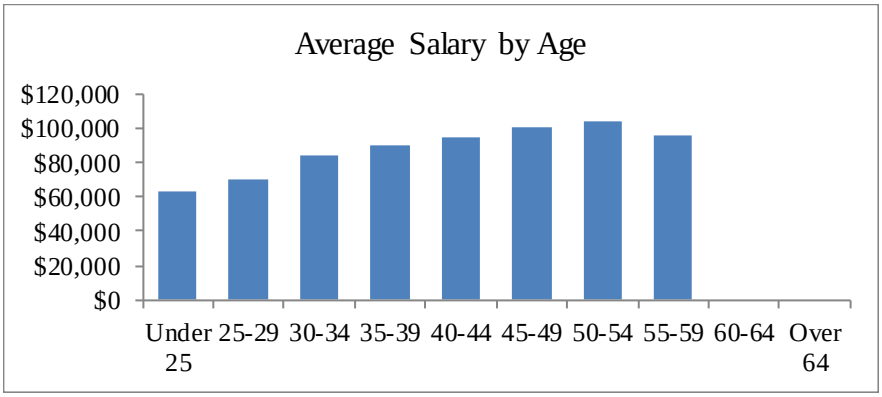
SCHEDULE I (continued)

ACTIVE MEMBERS AS OF JANUARY 1, 2015

All Fire Members

	Count of Members			Valuation Salaries of Members		
Age	Males	Females	Total	Males	Females	Total
Under 25	11	1	12	$ 693,010	$ 64,479	$ 757,489
25-29	32	1	33	2,252,736	65,875	2,318,611
30-34	85	5	90	7,110,424	415,561	7,525,985
35-39	112	6	118	10,068,058	529,111	10,597,169
40-44	161	8	169	15,235,882	817,514	16,053,396
45-49	130	5	135	13,035,167	483,795	13,518,962
50-54	48	3	51	4,956,976	314,126	5,271,102
55-59	14	0	14	1,338,871	0	1,338,871
60-64	0	0	0	0	0	0
Over 64	0	0	0	0	0	0
Total	593	29	622	$54,691,124	$2,690,461	$57,381,585



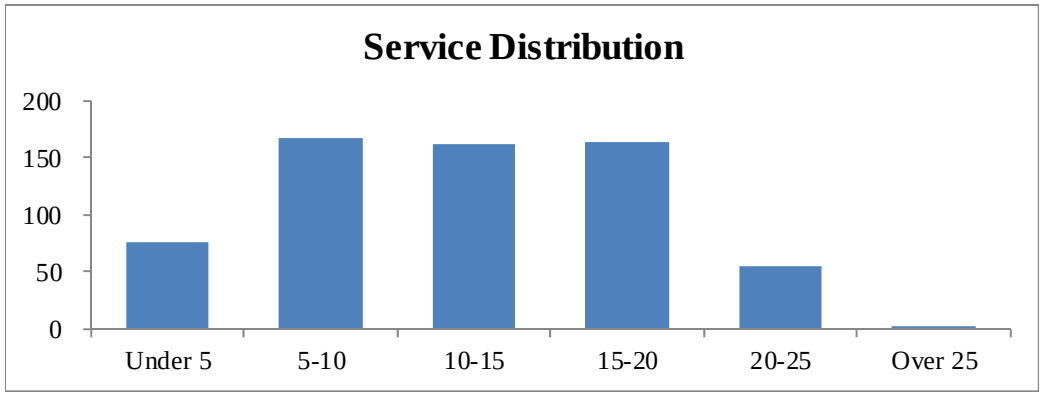


SCHEDULE I (continued)

ACTIVE MEMBERS AS OF JANUARY 1, 2015

All Fire Members

	Service									
Age	Under 5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	Over 40	Total
Under 25	12	0	0	0	0	0	0	0	0	12
25-29	25	8	0	0	0	0	0	0	0	33
30-34	24	66	0	0	0	0	0	0	0	90
35-39	9	49	47	13	0	0	0	0	0	118
40-44	5	32	72	53	7	0	0	0	0	169
45-49	1	7	35	59	32	1	0	0	0	135
50-54	0	4	6	27	14	0	0	0	0	51
55-59	0	1	1	11	1	0	0	0	0	14
60-64	0	0	0	0	0	0	0	0	0	0
Over 64	0	0	0	0	0	0	0	0	0	0
Total	76	167	161	163	54	1	0	0	0	622

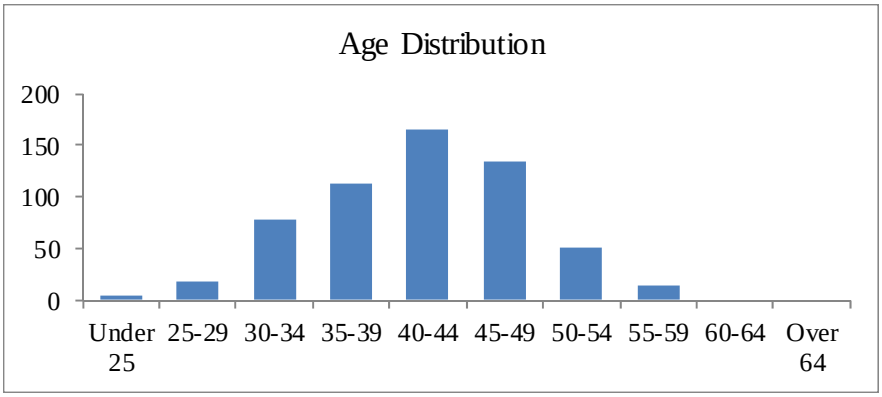


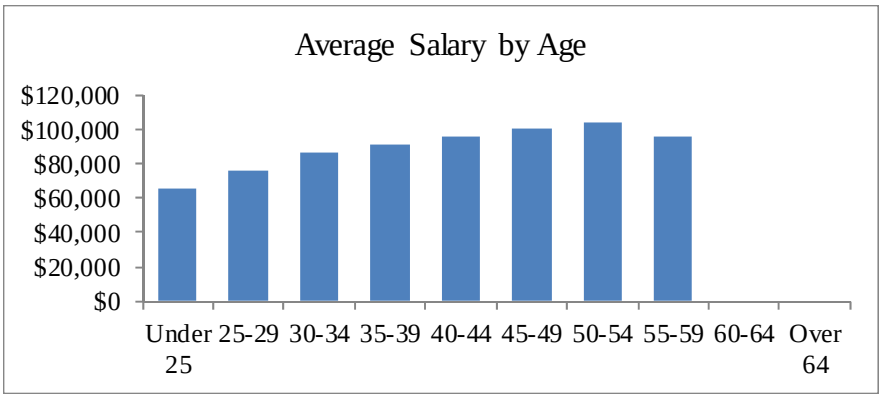
SCHEDULE I (continued)

ACTIVE MEMBERS AS OF JANUARY 1, 2015

Fire Members Hired Before January 1, 2013

	Count of Members			Valuation Salaries of Members		
Age	Males	Females	Total	Males	Females	Total
Under 25	4	1	5	$ 261,749	$ 64,479	$ 326,228
25-29	17	1	18	1,309,714	65,875	1,375,589
30-34	75	3	78	6,478,100	287,108	6,765,208
35-39	106	6	112	9,697,741	529,111	10,226,852
40-44	158	8	166	15,051,616	817,514	15,869,130
45-49	129	5	134	12,973,535	483,795	13,457,330
50-54	48	3	51	4,956,976	314,126	5,271,102
55-59	14	0	14	1,338,871	0	1,338,871
60-64	0	0	0	0	0	0
Over 64	0	0	0	0	0	0
Total	551	27	578	$52,068,302	$2,562,008	$54,630,310



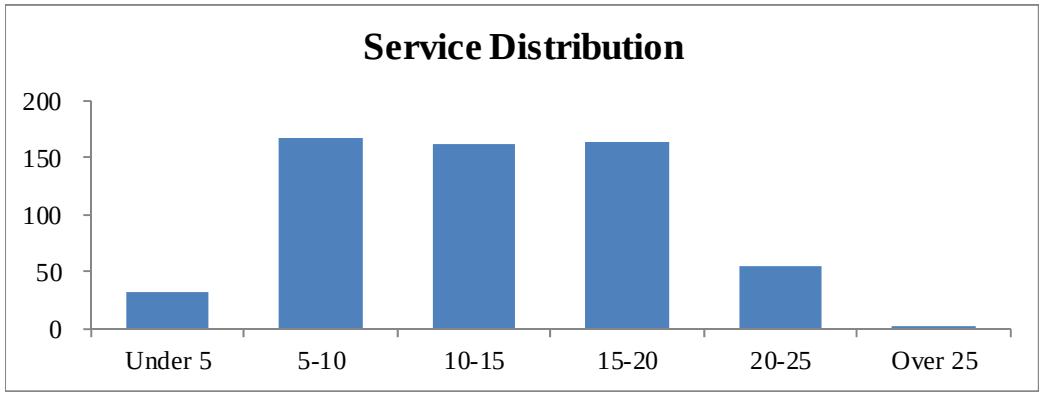


SCHEDULE I (continued)

ACTIVE MEMBERS AS OF JANUARY 1, 2015

Fire Members Hired Before January 1, 2013

	Service									
Age	Under 5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	Over 40	Total
Under 25	5	0	0	0	0	0	0	0	0	5
25-29	10	8	0	0	0	0	0	0	0	18
30-34	12	66	0	0	0	0	0	0	0	78
35-39	3	49	47	13	0	0	0	0	0	112
40-44	2	32	72	53	7	0	0	0	0	166
45-49	0	7	35	59	32	1	0	0	0	134
50-54	0	4	6	27	14	0	0	0	0	51
55-59	0	1	1	11	1	0	0	0	0	14
60-64	0	0	0	0	0	0	0	0	0	0
Over 64	0	0	0	0	0	0	0	0	0	0
Total	32	167	161	163	54	1	0	0	0	578

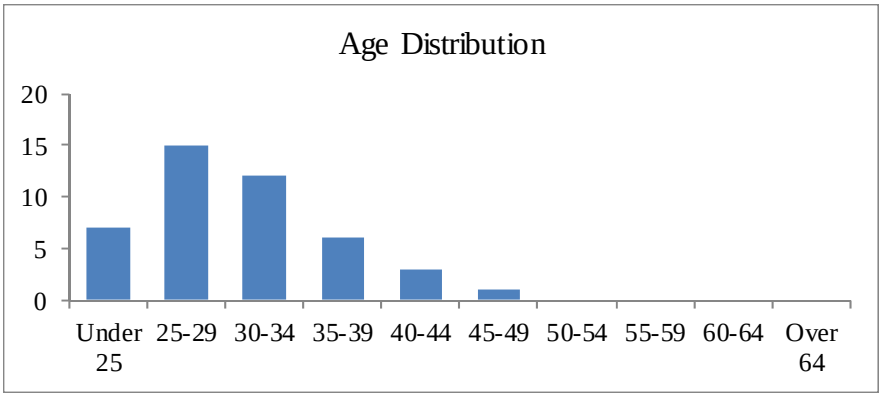


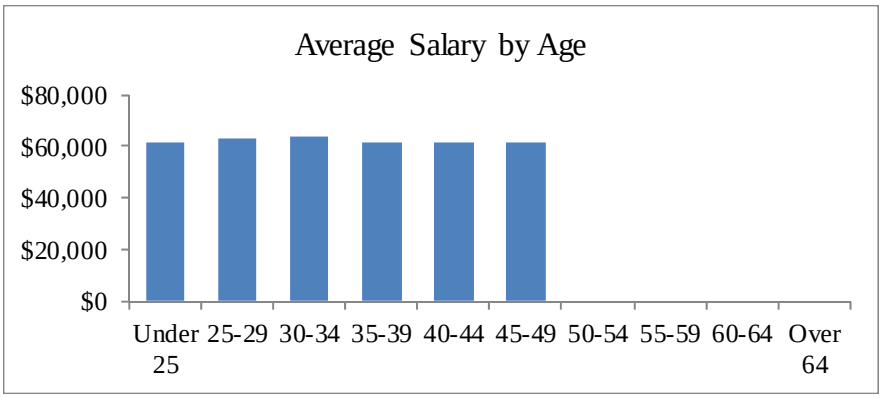
SCHEDULE I (continued)

ACTIVE MEMBERS AS OF JANUARY 1, 2015

Fire Members Hired On or After January 1, 2013

	Count of Members			Valuation Salaries of Members		
Age	Males	Females	Total	Males	Females	Total
Under 25	7	0	7	$ 431,261	$ 0	$ 431,261
25-29	15	0	15	943,022	0	943,022
30-34	10	2	12	632,324	128,453	760,777
35-39	6	0	6	370,317	0	370,317
40-44	3	0	3	184,266	0	184,266
45-49	1	0	1	61,632	0	61,632
50-54	0	0	0	0	0	0
55-59	0	0	0	0	0	0
60-64	0	0	0	0	0	0
Over 64	0	0	0	0	0	0
Total	42	2	44	$2,622,822	$128,453	$2,751,275



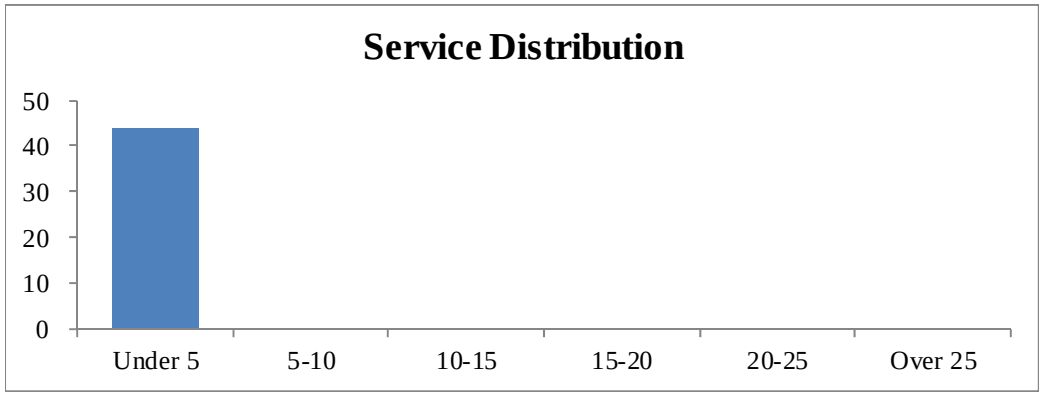


SCHEDULE I (continued)

ACTIVE MEMBERS AS OF JANUARY 1, 2015

Fire Members Hired On or After January 1, 2013

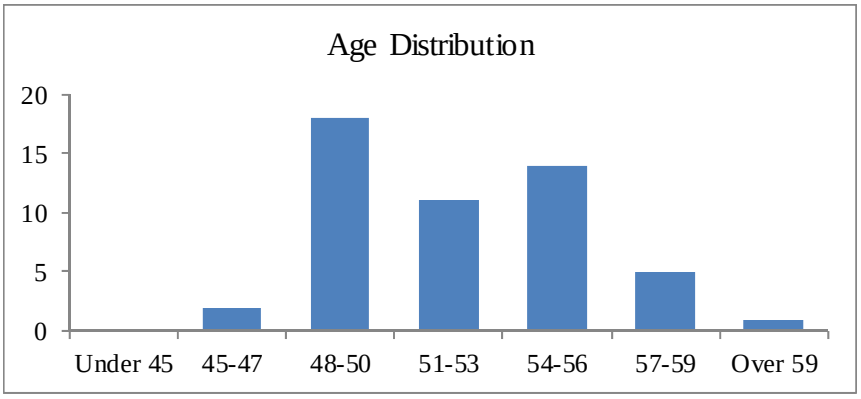
	Service									
Age	Under 5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	Over 40	Total
Under 25	7	0	0	0	0	0	0	0	0	7
25-29	15	0	0	0	0	0	0	0	0	15
30-34	12	0	0	0	0	0	0	0	0	12
35-39	6	0	0	0	0	0	0	0	0	6
40-44	3	0	0	0	0	0	0	0	0	3
45-49	1	0	0	0	0	0	0	0	0	1
50-54	0	0	0	0	0	0	0	0	0	0
55-59	0	0	0	0	0	0	0	0	0	0
60-64	0	0	0	0	0	0	0	0	0	0
Over 64	0	0	0	0	0	0	0	0	0	0
Total	44	0	0	0	0	0	0	0	0	44

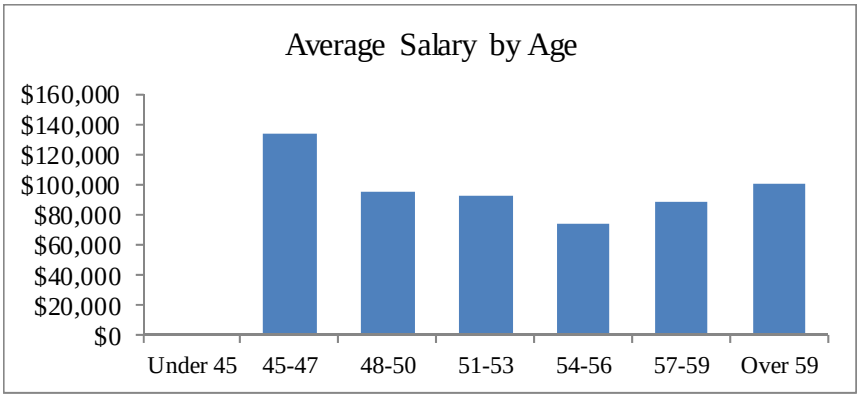


SCHEDULE II

DROP PARTICIPANTS AS OF JANUARY 1, 2015

	Count of Members			Valuation Salaries of Members		
Age	Males	Females	Total	Males	Females	Total
Under 45	0	0	0	$ 0	$ 0	$ 0
45-47	2	0	2	268,064	0	268,064
48-50	17	1	18	1,557,778	154,780	1,712,558
51-53	10	1	11	940,679	77,593	1,018,272
54-56	14	0	14	1,043,911	0	1,043,911
57-59	4	1	5	363,858	78,073	441,931
Over 59	1	0	1	100,410	0	100,410
Total	48	3	51	$4,274,700	$310,446	$4,585,146

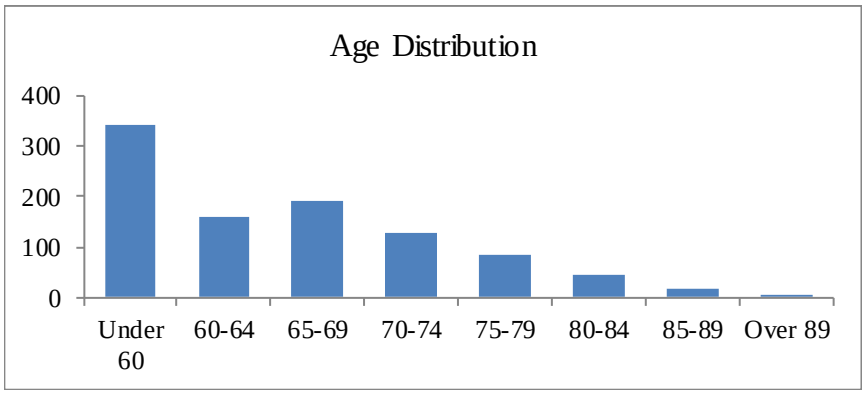


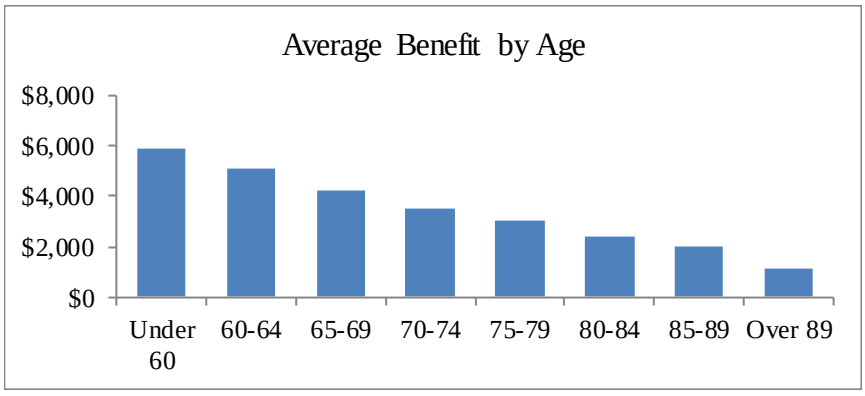


SCHEDULE III

RETIRED MEMBERS AS OF JANUARY 1, 2015

	Count of Retirees			Current Monthly Benefits		
Age	Males	Females	Total	Males	Females	Total
Under 60	300	42	342	$1,799,718	$211,674	$2,011,392
60-64	153	7	160	774,749	35,843	810,592
65-69	187	5	192	789,343	17,678	807,021
70-74	125	1	126	441,303	4,465	445,768
75-79	84	0	84	252,705	0	252,705
80-84	46	0	46	109,592	0	109,592
85-89	17	0	17	33,724	0	33,724
Over 89	6	0	6	6,852	0	6,852
Total	918	55	973	$4,207,986	$269,660	$4,477,646

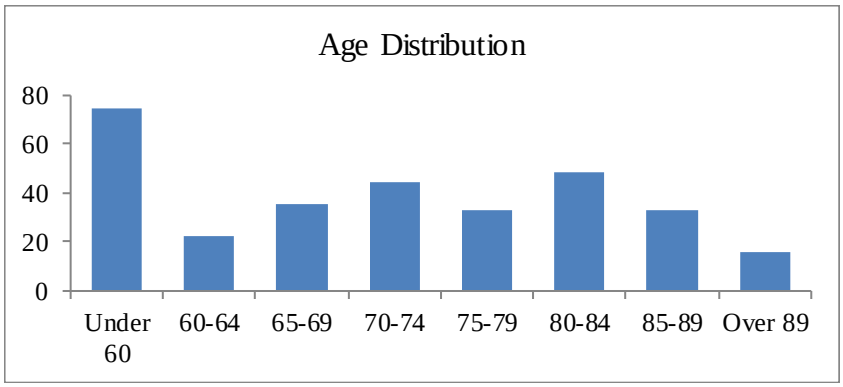


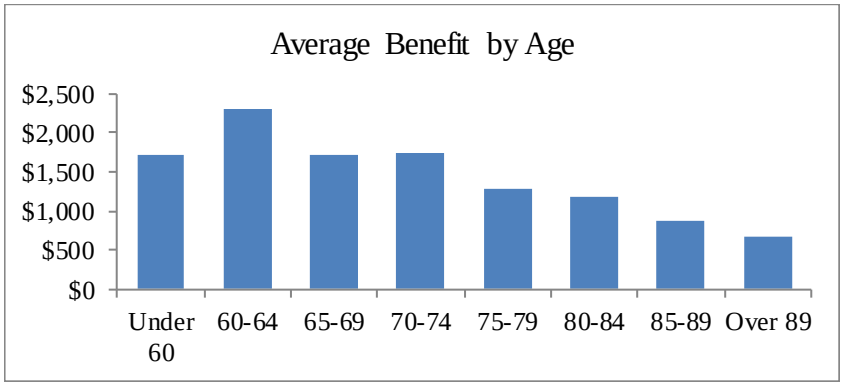


SCHEDULE IV

BENEFICIARIES RECEIVING BENEFITS AS OF JANUARY 1, 2015

	Count of Beneficiaries			Current Monthly Benefits		
Age	Males	Females	Total	Males	Females	Total
Under 60	12	62	74	$13,520	$ 113,323	$ 126,843
60-64	0	22	22	0	50,559	50,559
65-69	0	35	35	0	60,102	60,102
70-74	0	44	44	0	76,929	76,929
75-79	0	33	33	0	42,499	42,499
80-84	0	48	48	0	56,498	56,498
85-89	0	33	33	0	28,971	28,971
Over 89	0	16	16	0	10,884	10,884
Total	12	293	305	$13,520	$439,765	$453,285





SCHEDULE V

DEFERRED VESTED MEMBERS AS OF JANUARY 1, 2015

	Count of Members			Expected Monthly Benefit		
Age	Males	Females	Total	Males	Females	Total
Under 25	0	0	0	$ 0	$ 0	$ 0
25-29	0	0	0	0	0	0
30-34	0	1	1	0	1,349	1,349
35-39	1	0	1	2,091	0	2,091
40-44	0	0	0	0	0	0
45-49	1	1	2	1,268	4,430	5,698
50-54	6	0	6	13,088	0	13,088
55-59	0	0	0	0	0	0
Over 59	0	0	0	0	0	0
Total	8	2	10	$16,447	$5,779	$22,226

SCHEDULE VI

DISABLED MEMBERS AS OF JANUARY 1, 2015

	Count of Members			Current Monthly Benefits		
Age	Males	Females	Total	Males	Females	Total
Under 30	0	0	0	$ 0	$ 0	$ 0
30-34	0	0	0	0	0	0
35-39	1	0	1	2,772	0	2,772
40-44	5	3	8	17,630	8,466	26,096
45-49	8	2	10	25,210	5,452	30,662
50-54	15	5	20	50,399	13,826	64,225
55-59	11	6	17	34,462	16,347	50,809
60-64	11	1	12	39,611	1,285	40,896
65-69	49	0	49	154,997	0	154,997
70-74	49	0	49	124,426	0	124,426
75-79	25	0	25	63,382	0	63,382
80-84	23	0	23	40,740	0	40,740
85-89	7	0	7	9,496	0	9,496
Over 89	1	0	1	1,251	0	1,251
Total	205	17	222	$564,376	$45,376	$609,752