

**CITY OF SIOUX FALLS EMPLOYEE'S RETIREMENT SYSTEM  
SIXTY-SIXTH ANNUAL ACTUARIAL VALUATION REPORT  
DECEMBER 31, 2016**

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March 13, 2017

The Board of Trustees  
City of Sioux Falls Employee's Retirement System  
Sioux Falls, South Dakota

Ladies and Gentlemen:

The results of the December 31, 2016 actuarial valuation of the City of Sioux Falls Employee's Retirement System are presented in this report. Both this report and the forthcoming Power Point presentation comprise the valuation results. The purpose of the valuation was to measure the System's funding progress, provide actuarial information in connection with applicable Governmental Accounting Standards Board Statements and to determine the employer contribution for the fiscal year beginning January 1, 2018. This report should not be relied upon for any other purpose. This report may be distributed to parties other than the Retirement Board only in its entirety and only with the permission of the Board. Gabriel, Roeder, Smith & Company is not responsible for unauthorized use of this report.

The valuation was based upon the assumptions and methods adopted by the Board, information furnished by the System concerning Retirement System benefits, financial transactions, individual members, terminated members, retirees and beneficiaries. Data was checked for internal and year to year consistency, but was not audited by us. As a result, we are unable to assume responsibility for the accuracy or completeness of the data provided.

Future actuarial measurements may differ significantly from those presented in this report due to such factors as experience differing from that anticipated by actuarial assumptions, changes in plan provisions, actuarial assumptions/methods or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements.

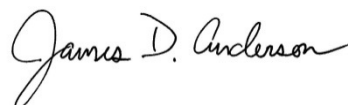
This valuation was based on the assumption that the plan sponsor will continue to be able to make any contributions necessary to fund this plan in the future. A determination regarding whether or not the plan sponsor is actually able to do so is outside our scope of expertise and was not performed.

To the best of our knowledge, this report is complete and accurate and the valuation was made in conformity with generally accepted actuarial principles and practices, and with the Actuarial Standards Board and in compliance with the applicable state statutes. Louise M. Gates and James D. Anderson are independent of the plan sponsor and are members of the American Academy of Actuaries (MAAA) who meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. It is our opinion that the actuarial assumptions used for the valuation produce results which are reasonable.

Respectfully submitted,



Louise M. Gates, ASA, MAAA



James D. Anderson, FSA, EA, MAAA

LMG/JDA

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**SECTION A**  
VALUATION RESULTS

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## **FINANCIAL OBJECTIVE**

The financial objective of the Retirement System is to establish and receive contributions which will accumulate reserves during members' working lifetimes which will be sufficient to pay promised benefits throughout retirement.

## **CONTRIBUTIONS**

The Retirement System is supported by member contributions, City contributions and investment income from Retirement System assets.

Contributions which satisfy the financial objective are determined by an annual actuarial valuation and are sufficient to:

- (1) cover the actuarial present value of benefits assigned to the current year by the actuarial cost methods described in Section C (the normal cost); and
- (2) amortize over a period of future years the actuarial present value of benefits not covered by valuation assets and anticipated future normal costs (unfunded actuarial accrued liability).

Pension contribution requirements for the year beginning January 1, 2018 are shown on page A-2.

**PENSION CONTRIBUTIONS COMPUTED TO MEET THE FINANCIAL  
OBJECTIVE OF THE RETIREMENT SYSTEM  
FOR THE FISCAL YEAR BEGINNING JANUARY 1, 2018**

<u>Contributions for</u>	<u>Contribution Requirements</u>	
	<u>General/Management</u>	<u>Police</u>
Total Normal Cost	\$5,209,977	\$3,460,952
Employee Portion	1,785,462	1,372,849
City Portion	3,424,515	2,088,103
Unfunded Actuarial Accrued Liabilities (UAAL) Contribution	\$3,109,623	\$2,001,519
Total Computed City-State Contribution	\$6,534,138	\$4,089,622

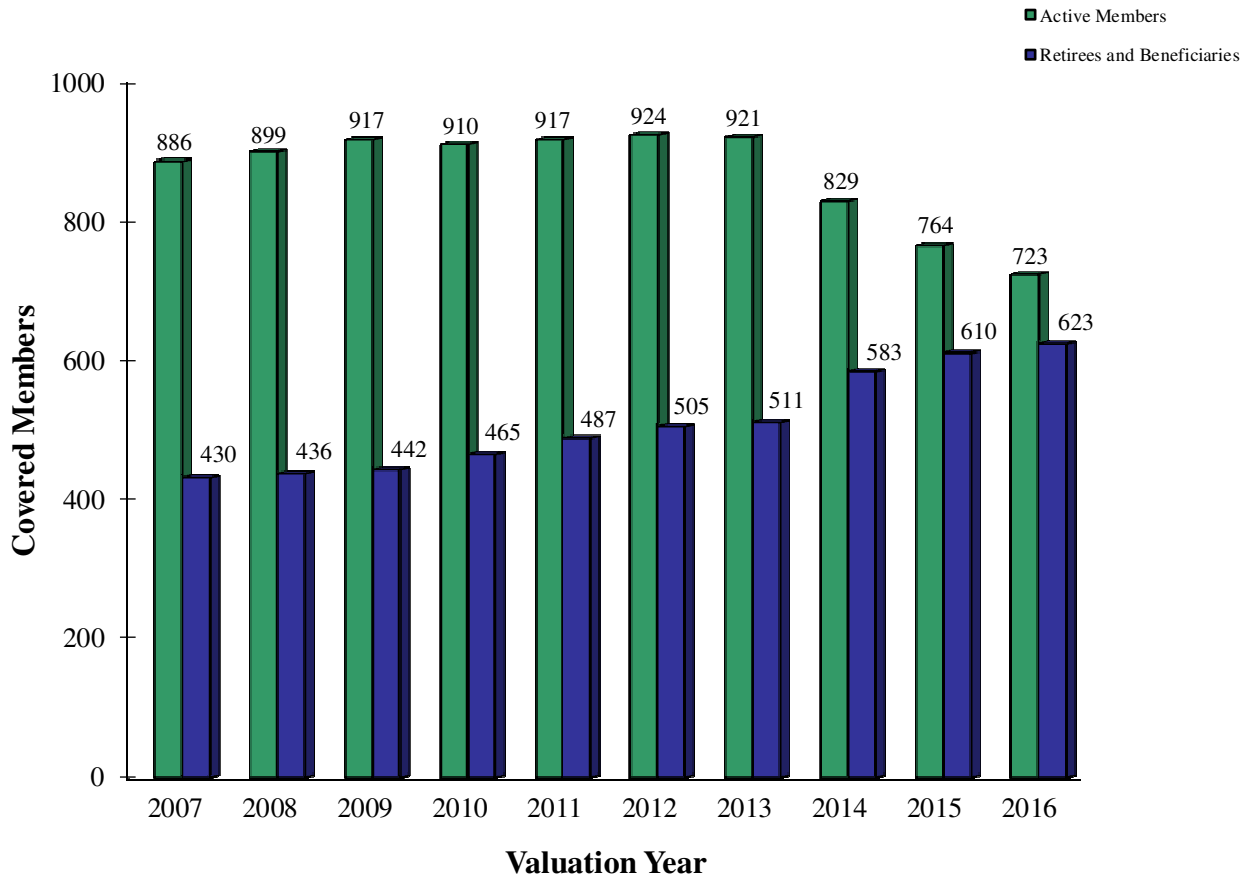
City General, Management and Police employees hired on or after July 1, 2013 will become members of the South Dakota Retirement System (SDRS) instead of joining this Retirement System. Contributions are expressed in terms of dollars in this report instead of as percents of payroll. This is due to the use of the level dollar amortization method (appropriate for systems closed to new hires) to finance the Retirement System's unfunded actuarial accrued liabilities (UAAL).

The Pension Plan's UAAL was amortized as a level dollar amount over a period of 21 years.

The Police employee contribution to the Pension Plan shown above was based on an employee contribution rate of 10.0% and plan member payroll projected to 2018. General and Management members are required to contribute 5.0% of pay during 2018.

The employer contribution shown above includes contributions for the stipend benefit which became effective January 1, 2014.

## ACTIVE AND RETIRED PENSION PLAN MEMBERS GENERAL, MANAGEMENT & POLICE COMBINED



The chart above shows current and future pension benefit recipients on each valuation date during the last 10 years.

## COMPUTED CITY PENSION CONTRIBUTIONS COMPARATIVE STATEMENT

Fiscal Year	Valuation Date December 31	% of Payroll Contributions		Weighted Average	Level Dollar Contributions		
		General	Police		General	Police	Total
2004	2002	8.68 %	15.68 %	10.48 %			
2005	2003	9.43	13.96	10.65			
2006	2004 @	9.80	14.84	11.21			
2007	2005	10.38	14.96	11.67			
2008	2006	9.50	13.36	10.43			
2009	2007 **@	9.33	14.58	10.80			
2010	2008	10.93	17.66	12.73			
2011	2009	13.17	20.78	15.15			
2012	2010	12.86	20.72	14.91			
2013	2011 @	12.56	18.94	14.25			
2014	2012 @#				\$7,702,379	\$3,860,628	\$11,563,007
2015	2013 @				7,535,363	3,861,898	11,397,261
2016	2014 @				7,549,458	3,868,415	11,417,873
2017	2015 @				7,237,216	4,373,752	11,610,968
2018	2016				6,534,138	4,089,622	10,623,760

@ After changes in actuarial assumptions or methods.  
 # After changes in benefit provisions.  
 \*\* Reflects full funding credit.



## ACTUARIAL BALANCE SHEET - DECEMBER 31, 2016

### Present Pension Resources and Expected Future Pension Resources

	General	Police	Total
A. Valuation assets	\$241,011,244	\$150,075,537	\$391,086,781
B. Actuarial present value of expected future employer contributions			
1. For normal costs	30,670,247	19,064,112	49,734,359
2. For unfunded actuarial accrued liabilities	34,863,451	22,302,698	57,166,149
3. Total	65,533,698	41,366,810	106,900,508
C. Actuarial present value of expected future member contributions	16,569,887	12,606,350	29,176,237
D. Total actuarial present value of present and expected future resources	\$323,114,829	\$204,048,697	\$527,163,526

### Actuarial Present Value of Expected Future Pension Benefit Payments and Reserves

A. To retirees and beneficiaries	\$151,512,544	\$ 107,249,721	\$258,762,265
B. To vested terminated members	5,733,358	378,493	6,111,851
C. To present active members			
1. Allocated to service rendered prior to valuation date	118,628,793	64,750,021	183,378,814
2. Allocated to service likely to be rendered after valuation date	47,240,134	31,670,462	78,910,596
3. Total	165,868,927	96,420,483	262,289,410
D. Total actuarial present value of expected future benefit payments and reserves	\$323,114,829	\$204,048,697	\$527,163,526

**DERIVATION OF ACTUARIAL GAIN (LOSS)  
YEAR ENDED DECEMBER 31, 2016**

The actuarial gains or losses realized in the operation of the Retirement System's Pension Plan provide an experience test. Gains and losses are expected to cancel each other over a period of years but sizable year-to-year fluctuations are common. Details of the derivation of the actuarial gain (loss) are shown below.

	<u>General</u>	<u>Police</u>
(1) UAAL at start of year	\$42,456,808	\$25,034,270
(2) Normal cost	5,209,283	3,300,430
(3) Contributions	9,409,671	5,245,233
(4) Interest accrual	3,026,746	1,804,640
(5) Expected UAAL before changes	41,283,166	24,894,107
(6) Change from benefit changes	0	0
(7) Change from revised actuarial assumptions	0	0
(8) Expected UAAL after changes	41,283,166	24,894,107
(9) Actual UAAL at end of year	34,863,451	22,302,698
(10) Gain (loss) (8) - (9)	6,419,715	2,591,409
(11) Gain (loss) as percent of AAL at start of year	2.41%	1.58%

## COMMENTS

**Comment A:** Retirement System pension experience was overall favorable during the 2016 plan year. During the year, the return on assets was greater than long term expectations. The market smoothing techniques used in this valuation of the System recognize both past and present investment experience. As a result, the recognized rate of return on pension assets for the year was 9.17%. Details of this asset smoothing method are shown on page B-4. In addition, actual post-retirement cost of living adjustments were lower than assumed which contributed to the favorable experience.

**Comment B:** The Appendix of this report includes the results of the December 31, 2016 actuarial valuation of the retiree health program. The City's policy is to make 100% of the retiree health plan contribution recommended by the actuary. The Appendix of this report includes additional information about this valuation.

**Comment C:** During the 2016 plan year, the return on retiree health plan assets was greater than long term expectations. In addition, claims costs increased by less than actuarial assumptions. This valuation of the retiree health plan reflects a change in the investment return assumption and a change in the health inflation assumptions. The net effect of these changes and plan experience was an increased level of funding surplus from the prior year. The health plan continues to have a funding surplus and as a result of the funding surplus, no City contribution is recommended to the retiree health plan for the 2018 fiscal year.

**Comment D:** The computed contribution dollars shown on page A-2 may be considered a minimum contribution that complies with the Board's funding policy. Users of this report should be aware that contributions made at this level do not guarantee benefit security. Given the importance of benefit security to any retirement system, we suggest that contributions to the System in excess of those presented in this report be considered. The contribution dollars shown in this report were determined using the actuarial assumptions and methods disclosed in Section C of this report.

This report includes risk metrics on page D-1 but does not include a more robust assessment of the risks of future experience not meeting the actuarial assumptions. An additional assessment of risks was outside the scope of this assignment. We encourage a review and assessment of investment and other significant risks that may have a material effect on the plan's financial condition.

## COMMENTS

**Comment E:** The pension plan's funding percent based on the actuarial value of assets is 87% as of the valuation date. If the market value of pension assets were used to determine the funding percent, the result would be 86% as of the valuation date.

Unless otherwise indicated, the pension funding status measurement presented in this report is based upon the actuarial accrued liability and the actuarial value of assets. With regard to the funding status measurement presented in this report, it is important to note the following:

- The measurement is inappropriate for assessing the sufficiency of pension plan assets to cover the estimated cost of settling the plan's benefit obligations
- The measurement is inappropriate for assessing the need for or the amount of future employer contributions
- The measurement will produce different results if the market value of assets is used instead of the actuarial value of assets, unless the actuarial value of assets equals the market value of assets.

**Comment F:** Given the plan's contribution allocation procedure, if all actuarial assumptions are met (including the assumption of the plan earning 7.50% on the actuarial value of assets), then the following outcomes are expected:

1. The employer normal cost is expected to decrease over time due to the closure of the plan to new City firefighters.
2. The unfunded liability is expected to be paid off in approximately 21 years, which is the number of years remaining in the amortization period.
3. The funded status of the plan is expected to reach a 100% funded ratio in approximately 21 years.

**CONTRIBUTION SUMMARY  
FOR THE FISCAL YEAR BEGINNING JANUARY 1, 2018**

<b>Contributions for</b>	<b>General/Management Computed Employer Contributions</b>		
	<b>Pension</b>	<b>Health</b>	<b>Total</b>
Total Computed City Contribution	\$6,534,138	\$0	\$6,534,138

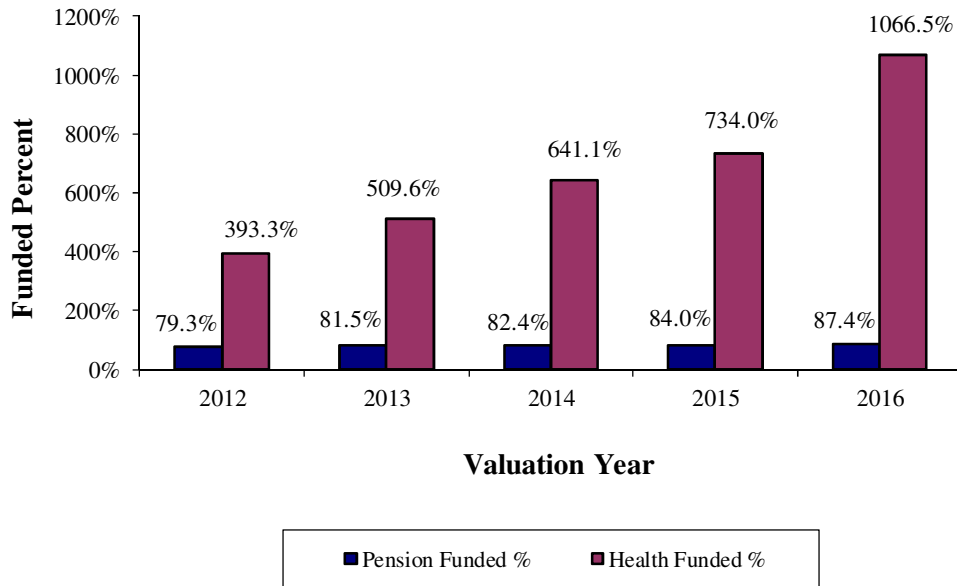
The pension contribution was based on a 21 year amortization of the UAAL. The retiree Health plan surplus resulted in a \$0 contribution for the 2018 fiscal year.

<b>Contributions for</b>	<b>Police Computed Employer Contributions</b>		
	<b>Pension</b>	<b>Health</b>	<b>Total</b>
Total Computed City Contribution	\$4,089,622	\$0	\$4,089,622

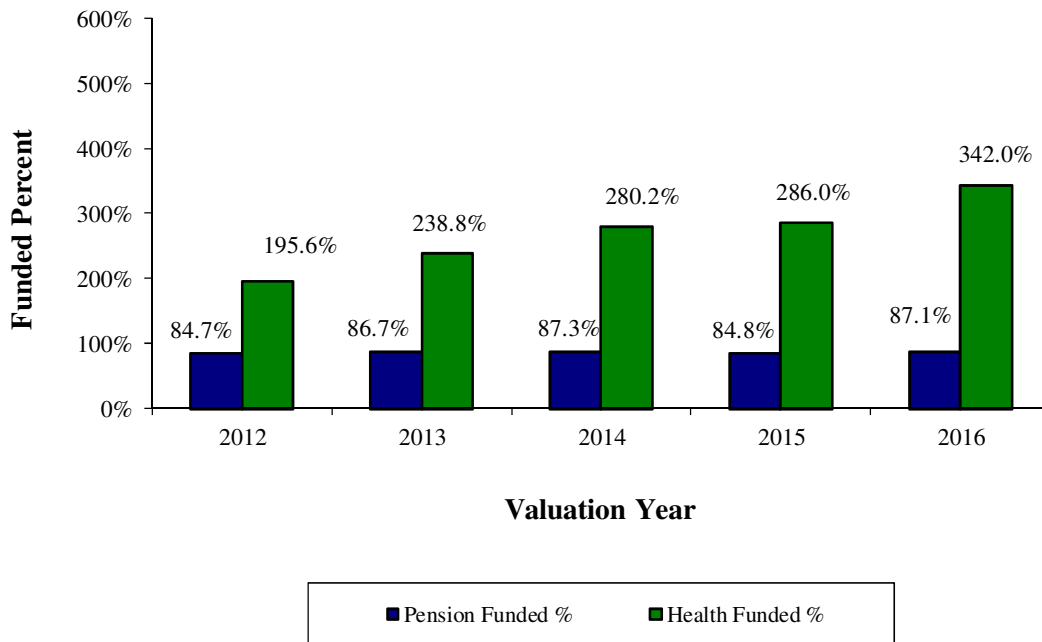
The pension contribution was based on a 21 year amortization of the UAAL. The retiree Health plan surplus resulted in a \$0 contribution for the 2018 fiscal year.

# PENSION AND RETIREE HEALTH FUNDED RATIO HISTORY

## General/Management



## Police



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**SECTION B**  
**SUMMARY OF BENEFIT PROVISIONS AND**  
**VALUATION DATA**

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**BENEFIT PROVISIONS EVALUATED  
AND/OR CONSIDERED  
(DECEMBER 31, 2016)**

**Retirement System Eligibility:**

New City employees (General, Management and Police) hired on or before June 30, 2013 will become members of this Retirement System. Individuals hired or rehired after June 30, 2013 will become members of the South Dakota Retirement System.

**Regular Unreduced Retirement:**

*Eligibility* - General members: age 55 with 30 or more years of service, or age 60 with 5 years of service.

Police: age 50 with 25 years of service, or age 60 with 15 years of service.

*Mandatory Retirement Age* - Police: age 60 (age 65 with employer consent).

*Annual Amount* - General members: 1.8% of final average pay times years of service.

Police: final average pay times the sum of a) 2.5% times the first 25 years of service, plus b) 1.5% times service in excess of 25 years.

*Type of Final Average Pay* - Highest 3 consecutive years out of last 10. Some lump sums are included.

**Early Reduced Retirement:**

*Eligibility* - 20 or more years of service.

*Annual Amount* - Same as regular retirement except that the benefit is actuarially reduced.

**Deferred Retirement (vested benefit):**

*Eligibility* - General Members: 5 years of service. Benefit commences at deferred retirement age.

Police: 15 years of service. Benefit commences at deferred retirement age.

*Annual Amount* - Computed as a regular retirement benefit based on service and final average pay at termination.

**Duty Disability Retirement:**

*Eligibility* - No age or service requirement.

*Annual Amount* - Computed as a regular retirement benefit. If disabled before eligible for regular retirement, additional service is credited for the period between disability and the time member would have been eligible for regular retirement if he had not been disabled. Minimum benefit is 12.5% of final average pay for general members and 20% of final average pay for police. Worker's Compensation payments are offset.



**BENEFIT PROVISIONS EVALUATED  
AND/OR CONSIDERED  
(DECEMBER 31, 2016)**

**Non-Duty Disability Retirement:**

*Eligibility* - 10 years of service.

*Annual Amount* - Computed as a regular retirement benefit based on service and final average pay at time of disability. Worker's Compensation payments are offset.

**Duty Death Before Retirement:**

*Eligibility* - No age or service requirement. Worker's Compensation must be payable.

*Annual Amount* - Refund of accumulated contributions. Spouse receives pension of 1/3 of final average pay until death. Unmarried children under age 18 or an eligible handicapped child each receive an equal share of 1/6 of final average pay (if no spouse each child receives 1/4 to a maximum of 1/2). If no spouse or eligible children, dependent parents each receive 1/6 of final average pay (each parent's pension limited to \$600 annually). Worker's Compensation payments are offset.

**Non-Duty Death Before Retirement:**

*Eligibility* - 10 years of service.

*Annual Amount* - Spouse (or some other dependent if an Option B election was in force) receives a benefit computed as regular retirement benefit but actuarially reduced in accordance with a 100% joint and survivor election. Minimum benefit is \$360 annually. If no Option B election is in force, each unmarried child under age 18 or an eligible handicapped child receives \$2,400 annually. If no Option B election is in force and there is no eligible spouse, member contributions are refunded.

**Post-Retirement Cost-of-Living Adjustments:** Annual increase equal to 100% of the June CPI change each year (with a cap of 3%) applied to the member's current pension benefit. The first increase will be granted after 36 months of retirement.

**Employee Contributions:**

Division	On or Before December 31, 2013	As of January 6, 2014	As of January 5, 2015
General/Management	3% of Compensation	4% of Compensation	5% of Compensation
Police	8% of Compensation	9% of Compensation	10% of Compensation

**BENEFIT PROVISIONS EVALUATED  
AND/OR CONSIDERED  
(DECEMBER 31, 2016)**

**Stipend Benefit:**

*Eligibility* – Members who retire from City employment (regular, early reduced or disability retirement) after December 31, 2013 are eligible to receive a monthly stipend benefit payable from the Retirement System until age 65 (or Medicare eligibility) in lieu of retiree health plan benefits.

*Annual Amount* - \$40 per month times years of service at retirement. Benefit is payable to the member only until he/she becomes eligible for Medicare or dies (if earlier). No benefit is payable to a surviving spouse or child of a deceased Retirement System Member. This benefit increases by 3% each year beginning in January 2015.

**Retiree Health Plan Benefit:**

*Eligibility* – Eligible Retirement System members (and their eligible spouses) who retire from the City employment on or before December 31, 2013 are eligible to join the City sponsored Retiree Health Plan at retirement.

*Annual Amount* – Medical, prescription drug and dental benefits are provided to eligible retirees and spouses until attainment of age 65 (or Medicare eligibility). The benefit recipient pays for 50% of the monthly premium amount.

## DERIVATION OF VALUATION ASSETS

	<u>Pension</u>	<u>Health</u>	<u>Sub-Total</u>	<u>Unallocated Income</u>	<u>Grand Total</u>
A. Funding Value, 12/31/15	\$363,204,298	\$24,517,729	\$387,722,027	\$0	\$387,722,027
B. Market Value, Beginning of Year			385,164,315	0	385,164,315
C. Non-Investment Net Cash Flow	(5,178,762)	(535,892)			
D. Net Investment Income (Market total)	29,989,429				
E. Market Value, End of Year			411,353,309	0	411,353,309
F. Phase-in Factor	20%				
G. Expected Income**	27,046,119	1,914,219			
H. Market Value Gain (Loss): [(D) – (G)]	2,943,310				
I. Method Change					
J. Recognition of Gain/(Loss)					
J1. Year One	588,662				
J2. Year Two	(5,141,803)				
J3. Year Three	163,279				
J4. Year Four	7,114,683				
J5. Year Five	3,290,305				
J6. Total (J1...J5)	<u>6,015,126</u>				
K. Funding Value, 12/31/16 [(A) + (C) + (G) + (J6)]	391,086,781	25,896,056	416,982,837	0	416,982,837
L. Net Funding Value Rate of Return	9.17%	7.89%			
M. Net Market Value Rate of Return	8.38%	7.89%			

\*\* Actual investment income shown for health assets

**MARKET VALUE OF ASSETS REPORTED FOR VALUATION  
COMPARATIVE STATEMENT**

Year Ended Dec. 31	Assets Beginning of Year	Revenues			Expenses			Assets Year-End#
		Employee Contrib.	Employer Contrib. #	Investment Income	Retirement Benefits	Contrib. Refunds	Misc. Expenses*	
2002	\$ 154,551,919	\$1,442,154	\$3,896,795	\$ (14,929,083)	\$6,600,911	\$ 182,350	\$ 664,456	\$ 137,514,068
2003	137,514,068	1,593,939	4,373,347	36,238,185	6,915,649	132,505	703,505	171,967,880
2004	171,967,880	1,718,969	5,261,202	24,644,820	7,403,924	188,094	758,667	195,242,186
2005	195,242,186	1,829,649	5,769,159	17,035,074	8,014,168	182,999	1,055,818	210,623,083
2006	210,623,083	1,907,951	5,975,325	33,030,851	8,662,750	189,338	1,253,516	241,431,606
2007	241,431,606	2,001,290	7,896,489	19,937,351	9,262,791	199,779	1,416,037	260,388,129
2008	260,388,129	2,065,615	7,710,786	(71,138,091)	10,005,006	275,474	1,429,420	187,316,539
2009	187,316,539	2,272,170	8,433,917	46,453,891	10,471,659	90,776	1,292,212	232,621,870
2010	232,621,871	2,241,213	9,554,056	32,715,573	11,150,501	197,614	938,610	264,845,988
2011	264,845,988	2,252,998	10,599,328	5,091,133	12,037,530	115,034	1,102,784	269,534,099
2012	269,534,099	2,335,451	11,346,909	39,210,054	12,972,156	300,274	1,130,962	308,023,121
2013	308,023,121	2,428,547	11,778,953	61,515,708	13,508,748	264,954	1,037,143	368,935,484
2014	368,935,484	2,966,452	10,670,106	25,331,700	16,145,874	237,783	930,500	390,589,585
2015	390,589,585	3,331,128	11,417,873	(922,260)	18,173,306	267,342	811,363	385,164,315
2016	385,164,315	3,237,031	11,417,873	32,146,551	19,652,211	181,455	778,795	411,353,309

\* Includes retiree health benefits

# Pension and retiree health

Note: Employer contributions in 2013 include contributions to the unallocated income reserve

Employer contributions in 2014 exclude amounts transferred from the unallocated income reserve

**ADDITIONS TO AND REMOVALS FROM RETIRED/SURVIVOR MEMBERSHIP  
COMPARATIVE STATEMENT**

<b>Year Ended Dec. 31</b>	<b>No.</b>	<b>Additions Annual Benefits*</b>	<b>No.</b>	<b>Removals Annual Benefits</b>	<b>No.</b>	<b>End of Year Annual Benefits</b>	<b>Average Annual Benefits</b>	<b>Present Value of Benefits</b>	<b>Expected Removals</b>
2002	21	\$ 397,601	15	\$ 140,349	374	\$ 6,700,920	\$ 17,917	\$ 82,787,796	11.2
2003	37	566,899	28	280,190	383	6,987,629	18,244	85,924,411	11.2
2004	24	749,117	11	159,821	396	7,576,925	19,134	90,336,864	11.3
2005	33	1,007,507	20	246,108	409	8,338,324	20,387	100,153,352	12.4
2006	25	802,970	17	281,824	417	8,859,470	21,246	105,705,500	12.5
2007	25	920,591	12	100,174	430	9,679,887	22,511	116,479,480	12.7
2008	21	707,365	15	251,647	436	10,135,605	23,247	124,265,687	13.0
2009	16	715,776	10	155,652	442	10,695,729	24,198	130,284,387	13.5
2010	39	1,183,836	16	258,781	465	11,620,784	24,991	140,993,607	14.3
2011	37	1,069,943	15	295,874	487	12,394,854	25,451	150,800,949	15.1
2012	26	978,426	8	141,390	505	13,231,890	26,202	168,103,297	15.6
2013	21	670,763	15	335,453	511	13,567,200	26,550	174,649,168	13.8
2014	83	3,078,647	11	224,445	583	16,421,402	28,167	221,871,914	13.3
2015	54	1,943,715	27	527,439	610	17,837,678	29,242	246,953,829	14.6
2016	33	1,093,273	20	372,359	623	18,558,592	29,789	258,762,265	14.2

\* Includes post-retirement cost-of-living adjustments

**RETIREES AND BENEFICIARIES AS OF  
DECEMBER 31, 2016  
TABULATED BY TYPE OF BENEFITS BEING PAID**

<u>Type of Benefits Being Paid</u>	<u>Annual Benefits</u>			
	<u>No.</u>	<u>Pension</u>	<u>No.</u>	<u>Stipend</u>
Age and Service Retirement Benefits	529	\$ 16,635,665	115	\$ 1,648,076
Disability Retirement Benefits*	21	467,288	0	0
Survivor Retirement Benefits	<u>73</u>	<u>1,455,639</u>	<u>0</u>	<u>0</u>
Total Retirement Benefits Being Paid	623	\$18,558,592	115	\$1,648,076

\* *Includes survivors of disabled retirees*

**RETIREES AND BENEFICIARIES BY AGE  
AS OF DECEMBER 31, 2016**

<u>Age</u>	<u>No.</u>	<u>Annual Benefits</u>	<u>No.</u>	<u>Annual Stipend</u>
45 - 49	3	\$ 83,278	2	\$ 24,316
50 - 54	31	1,504,451	27	369,374
55 - 59	55	2,075,104	32	506,949
60 - 64	139	4,390,074	53	735,937
65 - 69	139	4,003,637	1	11,500
70 - 74	99	2,896,439	0	0
75 - 79	74	1,964,236	0	0
80 - 84	43	845,474	0	0
85 - 89	31	684,491	0	0
90 & Over	9	111,408	0	0
<b>Totals</b>	<b>623</b>	<b>\$18,558,592</b>	<b>115</b>	<b>\$1,648,076</b>

**VESTED FORMER MEMBERS  
AS OF DECEMBER 31, 2016  
TABULATED BY AGE**

<b>Age</b>	<b>No.</b>	<b>Monthly Benefits</b>
Under 40	13	\$ 113,820
40 - 44	11	111,694
45 - 49	10	114,011
50 - 54	13	199,928
55 - 59	23	254,403
<b>Totals</b>	<b>70</b>	<b>\$ 793,856</b>

Estimated monthly pension benefits are shown in the chart above.



**ACTIVE MEMBERS  
AS OF DECEMBER 31, 2016  
TABULATED BY VALUATION DIVISION**

<b>Valuation Groups</b>	<b>No.</b>	<b>Annual Payroll</b>	<b>Age</b>	<b>Average Service</b>	<b>Pay</b>
General/Management Members	552	\$35,704,476	47.1 yrs.	14.5 yrs.	\$64,682
Police Members	<u>171</u>	<u>13,050,338</u>	41.5	14.0	76,318
<b>Total Active Members</b>	<b>723</b>	<b>\$48,754,814</b>	<b>45.8</b>	<b>14.4</b>	<b>\$67,434</b>

## ACTIVE MEMBERS INCLUDED IN VALUATION COMPARATIVE SCHEDULE

Valuation Date	Active Members			Valuation Payroll	Average			
	General	Police	Totals		Age	Service	Pay	% Incr.
2002	626	182	808	\$33,718,220	43.0	11.8	\$41,730	3.7 %
2003	636	203	839	36,244,556	42.8	11.7	43,200	3.5
2004	642	212	854	38,539,387	43.1	11.7	45,128	4.5
2005	654	218	872	40,492,380	43.0	11.6	46,436	2.9
2006	664	214	878	42,456,531	43.4	11.9	48,356	4.1
2007	669	217	886	44,646,848	43.5	11.9	50,391	4.2
2008	676	223	899	46,433,304	43.8	12.2	51,650	2.5
2009	698	219	917	51,510,466	44.1	12.5	56,173	8.8
2010	687	223	910	49,893,917	44.1	12.6	54,828	(2.4)
2011	690	227	917	50,604,786	44.1	12.5	55,185	0.7
2012	696	228	924	52,015,637	44.2	12.7	56,294	2.0
2013	694	227	921	54,261,035	44.6	13.2	58,915	4.7
2014	630	199	829	51,346,952	44.6	13.1	61,938	5.1
2015	582	182	764	49,317,710	45.0	13.7	64,552	4.2
2016	552	171	723	48,754,814	45.8	14.4	67,434	4.5

## ADDITIONS TO AND REMOVALS FROM ACTIVE MEMBERSHIP ACTUAL AND EXPECTED NUMBERS

Year Ended Dec. 31	Number Added During Year		Retirement		Disability Retirement		Died-In- Service		Other Terminations		Active Members End of Year
	A	E	A	E	A	E	A	E	A	E	
	2007	57	49	22	16.7	0	1.1	1	1.3	26	
2008	54	41	11	18.5	1	1.2	0	1.3	29	29.9	899
2009	48	30	12	24.8	0	1.2	0	1.4	18	29.4	917
2010	51	58	30	27.6	0	1.2	0	1.5	28	29.3	910
2011	64	57	27	25.1	0	1.2	0	1.6	30	29.0	917
2012	60	53	19	26.7	1	1.1	0	1.6	33	30.2	924
2013	39	0	12	27.1	2	1.3	0	1.2	28	29.8	921
2014	0	0	72	33.0	0	1.4	0	1.2	20	28.2	829
2015	0	0	41	22.2	0	1.3	0	1.0	24	23.7	764
2016	0	0	26	19.2	0	1.4	0	1.0	15	19.9	723
5-Year Totals	99	53	170	128.2	3	6.5	0	6.0	120	131.8	

A represents actual number.

E represents expected number based on assumptions outlined in Section C.

**GENERAL/MANAGEMENT ACTIVE MEMBERS - DECEMBER 31, 2016  
BY AGE AND YEARS OF SERVICE**

Age	Years of Service on Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
25-29	11	6						17	\$ 839,880
30-34	14	34	6					54	2,881,676
35-39	16	26	33	7				82	5,077,529
40-44	6	32	13	20	4			75	4,967,943
45-49	5	12	17	25	9	3		71	4,950,306
50-54	4	14	21	15	12	18	10	94	6,533,262
55-59	1	14	17	26	8	20	14	100	6,573,201
60		5	3	3	4	5	2	22	1,342,848
61		2	1	1	3	3	2	12	920,933
62			2		2	1	1	6	426,551
63		1		1	2	1	2	7	515,971
64					1		1	2	112,174
65		2						2	74,621
66		1	1	2				4	248,750
67				1	1	1		3	197,251
69					1			1	41,580
<b>Totals</b>	<b>57</b>	<b>149</b>	<b>114</b>	<b>101</b>	<b>47</b>	<b>52</b>	<b>32</b>	<b>552</b>	<b>\$35,704,476</b>

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 47.1 years  
Service: 14.5 years  
Annual Pay: \$64,682

**POLICE ACTIVE MEMBERS - DECEMBER 31, 2016**  
**BY AGE AND YEARS OF SERVICE**

Age	Years of Service on Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
25-29	6	4						10	\$ 622,586
30-34	3	17	3					23	1,595,021
35-39	2	10	22	3				37	2,776,302
40-44		4	19	13	2			38	2,963,932
45-49			8	14	18	2		42	3,453,476
50-54			3	4	4	1	1	13	1,025,710
55-59			3		5			8	613,311
<b>Totals</b>	<b>11</b>	<b>35</b>	<b>58</b>	<b>34</b>	<b>29</b>	<b>3</b>	<b>1</b>	<b>171</b>	<b>\$13,050,338</b>

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 41.5 years  
Service: 14.0 years  
Annual Pay: \$76,318

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## **SECTION C**

### **ACTUARIAL METHODS, ASSUMPTIONS AND DEFINITIONS OF TECHNICAL TERMS**

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# ACTUARIAL METHODS USED FOR THE VALUATION

## **Actuarial Cost Method**

The normal cost and the allocation of actuarial present values between service rendered before and after the valuation date were determined using an individual entry-age actuarial cost method having the following characteristics:

- (i) the annual normal costs for each individual active member, payable from the member's actual date of employment to projected date of retirement, are sufficient to accumulate the actuarial present value of the member's benefit at the time of retirement;
- (ii) each annual normal cost is a constant percentage of the member's year-by-year projected covered pay.

## **Amortization of Unfunded Actuarial Accrued Liabilities**

The Pension Plan unfunded actuarial accrued liability (UAAL) was determined using the funding value of assets and actuarial accrued liability calculated as of the valuation date. The UAAL amortization payment (one component of the contribution requirement), was developed using a level dollar amortization method that fully amortizes the UAAL over a 21 year period. This UAAL payment reflects payments expected to be made between the valuation date and the date contributions determined by this report are scheduled to begin.

The Retiree Health Plan UAAL (or surplus) was amortized over a 16 and 11-year period (for General/Management and Police respectively) using a level dollar amortization method.

## **Asset Valuation Method**

The funding value of assets used in the pension plan valuation recognizes assumed investment income fully each year. Differences between actual and assumed investment income are phased in over a 5-year period. During periods when investment performance exceeds the assumed rate, the funding value of assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, the funding value of assets will tend to be greater than market value. This is the result of phasing in differences between actual investment income (market value basis) and expected investment income (funding value basis).

The Retiree Health Plan valuation uses a Market Value of Assets to develop the UAAL.

## ACTUARIAL ASSUMPTIONS USED FOR THE VALUATION

**Investment Return** (net of expenses).

For the pension plan valuation an investment return assumption of 7.50% per year, compounded annually was used. This rate consists of a net real rate of return of 3.25% a year plus a long-term rate of wage inflation of 4.25% a year. An investment return assumption of 2.25% was used for the retiree health plan valuation.

This assumption is used to equate the value of payments due at different points in time and was first used for the December 31, 2015 valuation.

**Pay Projections:** These assumptions are used to project current pays to those upon which benefits will be based.

<b>Sample Ages</b>	<b>Annual Rate of Pay Increase for Sample Ages</b>		
	<b>Base (Economic)</b>	<b>Management</b>	
		<b>Merit and Longevity</b>	<b>Totals</b>
20	4.25 %	2.00 %	6.25 %
25	4.25	2.00	6.25
30	4.25	1.00	5.25
35	4.25	1.00	5.25
40	4.25	0.50	4.75
45	4.25	0.50	4.75
50	4.25	0.20	4.45
55	4.25	0.20	4.45
60	4.25	0.10	4.35
65	4.25	0.00	4.25

## ACTUARIAL ASSUMPTIONS USED FOR THE VALUATION

Years of Service	Annual Rate of Pay Increase for Indicated Years of Service				
	Base (Economic)	General		Police	
		Merit and Longevity	Total	Merit and Longevity	Total
1	4.25 %	3.50 %	7.75 %	5.00 %	9.25 %
2	4.25	3.50	7.75	5.00	9.25
3	4.25	3.50	7.75	4.70	8.95
4	4.25	3.00	7.25	4.50	8.75
5	4.25	2.50	6.75	2.20	6.45
6	4.25	2.00	6.25	2.20	6.45
7	4.25	2.00	6.25	2.10	6.35
8	4.25	2.00	6.25	2.10	6.35
9	4.25	2.00	6.25	2.00	6.25
10	4.25	2.00	6.25	2.00	6.25
11	4.25	2.00	6.25	2.00	6.25
12	4.25	2.00	6.25	2.00	6.25
13	4.25	2.00	6.25	1.00	5.25
14	4.25	1.00	5.25	0.00	4.25
15	4.25	0.00	4.25	0.00	4.25

The base economic assumptions were first used in the December 31, 2007 valuation. The merit and longevity assumptions were first used for the December 31, 2012 valuation.

The assumed rate of price inflation used in the pension plan valuation is 2.75% per year.



## ACTUARIAL ASSUMPTIONS USED FOR THE VALUATION

**Mortality Table:** The RP2000 Mortality Combined Healthy Table projected to 2020 using Projection Scale BB was used for both men and women. Sample values follow:

<b>Sample Ages</b>	<b>Future Life</b>	
	<b>Expectancy (Years)</b>	
	<b>General/Police</b>	
	<b>Men</b>	<b>Women</b>
55	28.37	30.90
60	23.94	26.34
65	19.74	21.98
70	15.83	17.93
75	12.26	14.25
80	9.13	10.95

## ACTUARIAL ASSUMPTIONS USED FOR THE VALUATION

**Rates of separation from active membership:** The rates do not apply to members eligible to retire and do not include separation on account of death or disability. This assumption measures the probabilities of members remaining in employment.

Sample Ages	Years of Service	Percent Separating within Next Year	
		General/Management	Police
ALL	0	11.00 %	7.00 %
	1	10.00	5.00
	2	8.00	3.50
	3	8.00	3.50
	4	7.00	3.00
25	5 & Over	5.00	3.50
30		5.00	3.00
35		4.50	2.50
40		3.50	2.00
45		2.50	1.00
50		1.50	1.00
55		1.00	0.50
60		0.50	0.50

The years of service rates were first used for the December 31, 2012 valuation. The age based rates were first used for the December 31, 2004 valuation.

**Rates of Disability:** These assumptions represent the probabilities of active members becoming disabled.

Sample Ages	Percent Becoming Disabled within Next Year
20	0.08 %
25	0.08
30	0.08
35	0.08
40	0.20
45	0.27
50	0.49
55	0.89

## ACTUARIAL ASSUMPTIONS USED FOR THE VALUATION

**Rates of Retirement:** These rates are used to measure the probabilities of an eligible member retiring under the Regular and Early Reduced retirement provisions during the next year.

Retirement Ages	Regular Retirement Rates		Early Retirement Rates		
	General/ Management	Police	Years of Service	General/ Management	Police
50		35%	20	2%	2%
51		35	21	2	2
52		35	22	2	2
53		30	23	2	2
54		25	24	2	2
55	20%	20	25	2	2
56	20	20	26	2	2
57	20	20	27	2	2
58	20	20	28	2	2
59	20	20	29	2	2
60	30	100	30	2	2
61	20	100	31		2
62	30	100	32		2
63	20	100	33		2
64	20	100	34		2
65	20	100	35		2
66	20	100			
67	20	100			
68	20	100			
69	20	100			
70	100	100			

General and Management members were assumed to be eligible for regular retirement after attaining age 55 with 30 years of service, or age 60 with 5 years of service. These members were assumed to be eligible for early reduced retirement after completing 20 years of service.

A Police member was assumed eligible for retirement after attaining age 50 with 25 years of service, or, after attaining age 60 with 15 or more years of service. Police members were assumed to be eligible for early reduced retirement after completing 20 years of service.

The early retirement rates were first used for the December 31, 2004 valuation. The regular retirement rates were first used for the December 31, 2012 valuation.

## MISCELLANEOUS AND TECHNICAL ASSUMPTIONS

<b>Marriage Assumption:</b>	80% of participants are assumed to be married for purposes of death-in-service benefits. In each case the male was assumed to be 3 years older than the female.
<b>Pay Increase Timing:</b>	Beginning of year.
<b>Decrement Timing:</b>	Decrements of all types are assumed to occur mid-year.
<b>Eligibility Testing:</b>	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
<b>Benefit Service:</b>	Exact fractional service is used to determine the amount of benefit payable.
<b>Other:</b>	Disability and turnover decrements do not operate during retirement eligibility.
<b>Miscellaneous Loading Factors:</b>	The calculated retirement benefits were increased by 9% for General/Management and 11% for Police to account for the inclusion of unused sick leave and vacation time in the calculation of Final Average Compensation and by 1% to account for the impact of subsidized optional forms of payment.
<b>Death/Disability:</b>	Fifty percent of disabilities and deaths for Police were assumed to be duty related. Fifty percent were assumed to be unrelated to duty. Twenty-five percent of disabilities for General/Management were assumed to be duty related. Seventy-five percent were assumed to be unrelated to duty. The recovery rate from disability was assumed to be 0 (i.e., no disabled individual was assumed to recover and return to work).
<b>Forfeiture Assumption:</b>	General and Management members who terminate close to retirement were assumed to elect a deferred retirement while those terminating with less service were assumed to elect a refund of their contributions in lieu of deferred retirement benefits. All vested terminated Police members were assumed to elect a deferred retirement benefit.

## DEFINITIONS OF TECHNICAL TERMS

***Accrued Service*** - Service credited under the system which was rendered before the date of the actuarial valuation.

***Actuarial Accrued Liability*** - The difference between the actuarial present value of system benefits and the actuarial present value of future normal costs. Also referred to as “past service liability.”

***Actuarial Assumptions*** - Estimates of future experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

***Actuarial Cost Method*** - A mathematical budgeting procedure for allocating the dollar amount of the “actuarial present value of future benefit” between future normal costs and actuarial accrued liability. Sometimes referred to as the “actuarial funding method.”

***Actuarial Equivalent*** - One series of payments is said to be actuarially equivalent to another series of payments if the two series have the same actuarial present value.

***Actuarial Gain (Loss)*** - The difference between actual unfunded actuarial accrued liabilities and anticipated unfunded actuarial accrued liabilities -- during the period between two valuation dates. It is a measurement of the difference between actual and expected experience.

## DEFINITIONS OF TECHNICAL TERMS

***Actuarial Present Value*** - The amount of funds currently required to provide a payment or series of payments in the future. It is determined by discounting future payments at predetermined rates of interest, and by probabilities of payment.

***Amortization*** - Paying off an interest-discounted amount with periodic payments of interest and (generally) principal -- as opposed to paying it off with a lump sum payment.

***Normal Cost*** - The portion of the actuarial present value of future benefits that is assigned to the current year by the actuarial cost method. Sometimes referred to as “current service cost.”

***Unfunded Actuarial Accrued Liabilities*** - The difference between actuarial accrued liabilities and valuation assets. Sometimes referred to as “unfunded past service liability” or “unfunded supplemental present value.”

Most retirement systems have unfunded actuarial accrued liabilities. They arise each time new benefits are added and each time an actuarial loss occurs. The existence of unfunded actuarial accrued liabilities is not in itself bad, any more than a mortgage on a house is bad. Unfunded actuarial accrued liabilities do not represent a debt that is payable today. What is important is the ability to amortize the unfunded actuarial accrued liabilities and the trend in their amount (after due allowance for devaluation of the dollar).

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**SECTION D**  
**ADDITIONAL DISCLOSURES**

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## SUPPLEMENTARY INFORMATION

### Schedule of Pension Funding Progress (Police & General Combined)

Actuarial Valuation Date	Actuarial Value of Assets *	Actuarial Accrued Liability (AAL)	Unfunded AAL (UAAL)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a
						% of Covered Payroll (b-a)/c)
(a)	(b)	(b-a)	(a/b)	(c)	(b-a)/c)	
2007	\$ 238,029,788	\$ 246,147,797	\$ 8,118,009	96.7 %	\$44,646,848	18.2 %
2008	241,784,990	261,167,456	19,382,466	92.6	46,433,304	41.7
2009	248,954,926	283,777,829	34,822,903	87.7	51,510,466	67.6
2010	258,975,306	289,515,368	30,540,062	89.5	49,893,917	61.2
2011	263,827,136	301,723,872	37,896,736	87.4	50,604,786	74.9
2012	282,267,554	347,118,061	64,850,507	81.3	52,015,637	124.7
2013	311,444,880	373,386,564	61,941,684	83.4	54,261,035	114.2
2014	339,286,725	402,856,926	63,570,201	84.2	51,346,952	123.8
2015	363,204,298	430,695,376	67,491,078	84.3	49,317,710	136.8
2016	391,086,781	448,252,930	57,166,149	87.2	48,754,814	117.3

\* Includes assets (if any) held in the Unallocated Income Reserve

### Schedule of Employer Pension Contributions

Valuation Year Ended Dec. 31	Fiscal Year Ended Dec. 31	Contribution Rates as %			Computed Dollar Contributions	Actual Contributions	Percent Contributed
		of Valuation Payroll					
		General	Police	Wt. Avg.			
2007#^	2009	9.33 %	14.58 %	10.80 %	\$5,238,815	\$5,459,718	104 %
2008	2010	10.93	17.66	12.73	6,470,984	6,591,255	102
2009	2011	13.17	20.78	15.15	8,533,571	7,730,986	91
2010	2012	12.86	20.72	14.91	8,149,433	7,928,104	97
2011	2013	12.56	18.94	14.25	7,897,193	7,917,354	100
2012^	2014				11,563,007	11,563,007	100
2013^	2015				11,397,261	11,417,873	100
2014^	2016				11,417,873	11,417,873	100
2015^	2017				11,610,968		
2016	2018				10,623,760		

# Reflects amortization credit

^ New methods or assumptions adopted

Computed dollar contributions before the 2012 valuation year are based on contribution rates and projected valuation payroll. Actual contributions were provided by the City. Deviations between actual and computed contributions may be attributable to differences between projected and actual payroll.



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## **APPENDIX**

### **RETIREE HEALTH VALUATION RESULTS**

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## RETIREE HEALTH PREMIUM RATES

### Background

Health care premiums are an important part of a retiree health valuation. Eligible City retirees (and their spouses) may elect to receive benefits from health plans offered by Sanford and Avera. All benefits provided by the City sponsored retiree health program (plan) are self-insured. This means that the City pays claims and takes the risk associated with the health care program. The City buys stop loss insurance to help manage this risk. Dental insurance benefits are also self-insured.

Retiree health benefit recipients pay for a portion of their benefits based on premium rates established by the City (illustrative premiums). These premiums were used in the actuarial valuation of the retiree health program. A summary of these premiums is shown in this section of the report.

Retirees who participate in the retiree health program pay 50% of the reported illustrative premiums. The City pays the remaining portion of the retiree health care cost. Since the retirees are responsible for a significant portion of the costs, there may be anti-selection in this plan (healthy retirees may decline coverage which increases the average cost for the remaining retirees). Health insurance coverage terminates upon attainment of age 65. At this time, each retiree must make his or her own arrangements for health care coverage.

The current actuarial standard covering the valuation of retiree medical liability includes the development of facsimile premiums based on the actual claims experience and the use of age grading. The combination of these two techniques produces “premiums” at each age during the retiree’s lifetime based on the group’s actual, historical claims experience.

We believe that using illustrative premium rates alone to determine retiree medical liability would likely understate the value of retiree health benefits and will fail to comply with both current actuarial standards of practice and governmental accounting standards. A summary of the facsimile health care “premium” rates used in the December 31, 2016 valuation of the retiree health program are shown on Appendix page 3. The actuarial assumptions and methods used in the retiree health program valuation are shown in this section and section C of this report.

## **PREMIUM RATE DEVELOPMENT METHOD MONTHLY PER PERSON HEALTH CARE RATES**

Initial premiums were developed for pre-65 retirees only. These premiums were developed using retiree claims experience from the following periods; January 2014 – December 2014, January 2015 – December 2015, and January 2016 – December 2016 in conjunction with exposure data for the retired members of the health care program. These claims were projected on a paid claim basis, adjusted for plan design changes, large claims and loaded for administrative expenses.

Age graded and sex distinct premiums are utilized by this valuation. The premium developed by the preceding process is appropriate for the unique age and sex distribution currently existing. Over the future years covered by this valuation, the age and sex distribution will most likely change. Therefore, our process “distributes” the average premium over all age/sex combinations and assigns a unique premium to each combination. This process more accurately reflects health care costs in the retired population over the projection period. The tables in this section of the report show the combined medical and prescription drug one-person monthly premiums at selected ages effective January 1, 2016 to December 31, 2016.

James E. Pranschke is a Member of the American Academy of Actuaries (MAAA) and meets the Qualification Standards of the American Academy of Actuaries to certify the per capita retiree health care rates shown in this report.

  
James E. Pranschke, FSA, MAAA

## PREMIUM RATE DEVELOPMENT METHOD MONTHLY PER PERSON HEALTH CARE RATES

### Facsimile Health Care Premiums Used in the 2016 Valuation

Age	Monthly Pre-65 Rates at Sample Ages	
	Male	Female
50	\$ 865.39	\$ 1,066.07
55	1,138.75	1,243.35
60	1,470.76	1,448.20

The rates above reflect the total medical and prescription drug retiree cost without considering any applicable retiree contributions.

### Monthly Dental Premiums Used in the 2016 Valuation

Coverage for	Monthly Rate
1-person	\$44.24
2-person	84.50

The dental premium rates used in the valuation were not “age graded” since dental claims do not vary significantly by age.

The chart below shows the retiree paid premiums (50% of the total illustrative premiums) reported to the actuary in connection with this valuation of the program.

### Illustrative Monthly Premiums Used in the 2016 Valuation

Coverage for	Monthly Rate
Health Care Premiums (Retiree Only - General)	\$512.33
Health Care Premiums (Retiree Only - Police)	512.33
Health Care Premiums (Retiree & Spouse - General)	\$1,086.49
Health Care Premiums (Retiree & Spouse - Police)	\$1,086.49
Dental (Retiree only)	22.12
Dental (Retiree & Spouse)	42.25

## HEALTH COST TREND ASSUMPTION

### Background

Retiree health care valuations require an assumption about how the health costs that the plan is absorbing will change over the years. This assumption includes more than just “health inflation.” It includes the impact of:

- The introduction of new procedures and medications and how they are priced.
- The utilization of services and products by covered retirees and their dependents and how that utilization changes over the years.

Retiree health valuations use a health cost trend assumption that changes over the years. The near term rates reflect the fact that currently employers are seeing sharp increases in the cost of health goods and services. However, they do not anticipate that health costs will increase at these rates indefinitely. To do so would be to ignore the real world implications of this sort of projection. For example, if health costs represent 20% of disposable income initially and grow at 12% per year for the next 10 years while disposable income increases at 4% would imply that after 10 years health would absorb 40% of our disposable income. Over a 20-year period, these rates of increase would imply that at the end of the 20-year period, health costs would absorb almost 80% of our disposable income.

The valuations attempt to deal with the future by recognizing that it is more reasonable to assume that current trends will have to change in the future before we reach the absurd situation of having little or no money to spend on things that are not related to health (including food, shelter, clothes, etc.). Health costs are assumed to increase at rates greater than general inflation for a temporary “cooling off” period. At the end of the cooling off period, health costs are assumed to increase in line with general inflation. As years elapse, there are fewer remaining years in the cooling off period. A summary of the rates of medical inflation used in this valuation of the program are shown on the next page. Retirees pay the premium rates shown at the bottom of the prior page. These premiums were assumed to increase with medical inflation. The assumed rate of increase is shown on the following page.

# HEALTH COST TREND AND RELATED ASSUMPTIONS

## Rates of Inflation for Retiree Health Benefits

Future Health Cost Increases	
Year Beginning December 31,	Medical & Rx
2017	8.00%
2018	7.50
2019	7.00
2020	6.50
2021	6.00
2022	5.50
2023	5.00
2024	4.75
2025	4.50
2026 & After	4.25

## Cumulative Aging Factors at Select Ages

Age	Male	Female
45	0.475	0.655
50	0.618	0.762
55	0.813	0.888
59	1.000	1.000
60	1.051	1.035

**COMPUTED RETIREE HEALTH CONTRIBUTION  
FOR GENERAL AND MANAGEMENT MEMBERS  
FOR THE FISCAL YEAR BEGINNING JANUARY 1, 2018**

Total Actuarial Accrued Liability	\$ 1,718,652
Asset Value	<u>18,329,496</u>
Unfunded Actuarial Accrued Liability	(16,610,844)
First Year \$ Contribution	\$ 0

Eligible General/Management members of the Retirement System who retired on or before December 31, 2013 may join the Retiree Health Plan. Retirement System members who retire after December 31, 2013 are not eligible to participate in the Retiree Health Plan. As a result, the Plan was closed on, January 1, 2014.

As of the valuation date, the Retiree Health Plan has a surplus. Since Plan assets exceed liabilities as of the valuation date, no City contributions are recommended for fiscal year 2018.

**COMPUTED RETIREE HEALTH CONTRIBUTION  
FOR POLICE MEMBERS  
FOR THE FISCAL YEAR BEGINNING JANUARY 1, 2018**

Total Actuarial Accrued Liability	\$ 2,212,309
Asset Value	<u>7,566,560</u>
Unfunded Actuarial Accrued Liability	(5,354,251)
First Year \$ Contribution	\$ 0

Eligible Police members of the Retirement System who retired on or before December 31, 2013 may join the Retiree Health Plan. Retirement System members who retire after December 31, 2013 are not eligible to participate in the Retiree Health Plan. As a result, the Plan was closed on, January 1, 2014.

As of the valuation date, the Retiree Health Plan has a surplus. Since Plan assets exceed liabilities as of the valuation date, no City contributions are recommended for fiscal year 2018.



**SCHEDULE OF HEALTH FUNDING PROGRESS FOR  
THE RETIREE HEALTH PLAN (POLICE & GENERAL)**

<b>Actuarial Valuation Date Dec. 31</b>	<b>Actuarial Value of Assets (a)</b>	<b>Actuarial Accrued Liability (AAL) (b)</b>	<b>Unfunded AAL (UAAL) (b-a)</b>	<b>Funded Ratio (a/b)</b>	<b>Covered Payroll (c)</b>	<b>UAAL as a % of Covered Payroll ((b-a)/c)</b>
2007	\$ 8,379,519	\$ 31,758,969	\$ 23,379,450	26.4 %	\$ 44,646,848	52.4 %
2008	10,718,920	32,930,510	22,211,590	32.6	46,433,304	47.8
2009	13,473,646	36,173,536	22,699,890	37.2	51,510,466	44.1
2010	16,515,972	40,712,275	24,196,303	40.6	49,893,917	48.5
2011	19,324,446	9,624,374	(9,700,072)	200.8	50,604,786	-
2012	22,807,459	7,582,125	(15,225,334)	300.8	52,015,637	-
2013	25,969,701	6,842,037	(19,127,664)	379.6	54,261,035	-
2014	26,129,460	5,649,835	(20,479,625)	462.5	51,346,952	-
2015	24,517,729	4,888,036	(19,629,693)	501.6	49,317,710	-
2016	25,896,056	3,930,961	(21,965,095)	658.8	48,754,814	-

**SCHEDULE OF EMPLOYER HEALTH CONTRIBUTIONS  
(POLICE & GENERAL)**

<b>Year Ended Dec. 31 Valuation Year</b>	<b>Fiscal Year</b>	<b>Contribution Rate as a % of Valuation Payroll</b>		<b>Required Contribution (ARC)</b>	<b>Actual Contributions</b>	<b>Percentage Contributed</b>
		<b>General</b>	<b>Police</b>			
2007 <sup>^</sup>	2009	5.18%	7.36%	\$ 2,808,976	\$ 2,974,199	105.9 %
2008	2010	5.03%	7.45%	2,881,839	2,962,801	102.8
2009	2011	4.89%	7.66%	3,160,024	2,868,342	90.8
2010	2012	5.53%	8.95%	3,510,380	3,418,805	97.4
2011 <sup>^</sup>	2013	0.00%	0.00%	0	0	100.0
2012 <sup>^</sup>	2014	0.00%	0.00%	0	0	100.0
2013 <sup>^</sup>	2015	0.00%	0.00%	0	0	100.0
2014 <sup>^</sup>	2016			0	0	100.0
2015 <sup>^</sup>	2017			0		
2016 <sup>^</sup>	2018			0		

<sup>^</sup> New methods/assumptions or plan provisions adopted.

Computed dollar contributions before the 2014 valuation year are based on contribution rates and projected valuation payroll. Actual contributions were based on the financial statements provided by the City. Deviations between actual and computed contributions may be attributable to differences between projected and actual payroll. This information is presented in draft form for review by the City's auditor. Please let us know if there are any items that the auditor changes so that we can maintain consistency with the City's financial statements.

## REQUIRED SUPPLEMENTARY INFORMATION FOR THE RETIREE HEALTH PLAN

The following assumptions and methods were used in the December 31, 2016 actuarial valuation for the Retiree Health Plan:

Valuation Date	December 31, 2016
Actuarial Cost Method	Entry-Age
Amortization Method	Level dollar, closed
Remaining Amortization Period	16 years for General 11 years for Police
Asset Valuation Method	Market value of assets
Premium Rate Development Method	Please refer to Appendix

### Actuarial Assumptions

Annual Rate of Return (Discount Rate)	2.25% per year
Rates of Inflation for Medical Benefits	8.0% grading down to 4.25% in the year beginning December 31, 2026

Membership of the Retiree Health Plan is shown below at December 31, 2016, the date of the latest actuarial valuation.

Retirees receiving medical benefits	62
Active plan members	<u>  0</u>
Total number of current and former City employees who are members of the Retiree Health Plan	62

March 13, 2017

Ms. Angie Uthe  
City of Sioux Falls Employee's  
Retirement System  
City Hall - 224 West 9th Street  
Sioux Falls, South Dakota 57104-6407

Dear Angie:

Enclosed are four copies of the report of the Sixty-Sixth annual actuarial valuation of the City of Sioux Falls Employee's Retirement System, in addition to a PDF that was also emailed.

Sincerely,



Louise M. Gates, ASA, MAAA

LMG:mrh  
Enclosures