



Cavanaugh Macdonald
CONSULTING, LLC

The experience and dedication you deserve



Pensacola General Pension and Retirement Fund

Actuarial Valuation Report as of September 30, 2016





TABLE OF CONTENTS

Discussion	1
Comments	3
<u>Liabilities</u>	
Table I Summary of Valuation Results	4
Table IIa Unfunded Actuarial Accrued Liability for Pension Benefits.....	6
Table IIb Unfunded Actuarial Accrued Liability for Retiree Healthcare Benefits	7
Table IIIa Supplemental Disclosures (Pension Benefits)	8
Table IIIb Supplemental Disclosures (Retiree Healthcare Benefits).....	11
Table IVa Present Value of Accrued Benefits (Pension Benefits)	14
Table IVb Present Value of Accrued Benefits (Retiree Healthcare Benefits).....	16
Table Va Information Req. by Florida Statute Chapter 112.....	18
Table Vb Projected Unfunded Actuarial Accrued Liability	22
<u>Assets</u>	
Table VIa Asset Reconciliation	23
Table VIb Derivation of Actuarial Value of Assets.....	25
Table VIc Allocation of Actuarial Value of Assets	26
<u>Accounting Information for GASB 67</u>	
Table VIIa Net Pension Liability	27
Table VIIb Assumptions for Total Pension Liability	28
Table VIIc Asset Allocation.....	29
Table VIId Sensitivity Analysis & Roll-Forward	30
Table VIIe Assumptions for Actuarially Determined Contributions.....	31
Table VIIf Schedule of Changes in Net Pension Liability	32
Table VIIg Schedule of Net Pension Liability	33
Table VIIh Schedule of Employer Contributions.....	34
<u>Data</u>	
Table VIIIa Active Data Table	35
Table VIIIb Retiree Data Table	36
Table VIIIc Data Reconciliation.....	37
Table IX Historical Data	38
<u>Assumptions</u>	
Table X Actuarial Assumptions.....	40
<u>Plan Provisions</u>	
Table XI Plan Provisions.....	45



Cavanaugh Macdonald

CONSULTING, LLC

The experience and dedication you deserve

January 27, 2017

The City of Pensacola and
The Board of Trustees
Pensacola General Pension and Retirement Fund
Pensacola, FL

Dear Board of Trustees:

This report presents the results of the September 30, 2016 actuarial valuation of the Pensacola General Pension and Retirement Fund. This valuation is used to determine the contributions for the City's fiscal year beginning October 1, 2017. The first valuation presented by Cavanaugh Macdonald Consulting, LLC was as of September 30, 2005. All previous years' results presented in the report were reported by the previous actuarial firm.

The City contribution requirements for the fiscal years beginning October 1, 2017 and October 1, 2018 are summarized below. The contribution amounts assume bi-weekly payments.

Required City contribution for plan year beginning October 1, 2017 and October 1, 2018	
Pension Benefits	\$6,502,878
Retiree Healthcare Benefits	<u>(54,486)</u>
Total	\$6,448,392

The assumptions used in the valuation are outlined in Table X. Provisions of the Fund are set forth in Table XI. Information required to be disclosed by the State of Florida under Chapter 112 is presented in Table Va. The projected unfunded actuarial accrued liability (UAAL) is shown in Table Vb. Tables VIa, VIb and VIc provide information about the Fund's assets. Tables VIIa through VIIh provide accounting information required under Governmental Accounting Standards Board (GASB) Statement No. 67, while Tables VIIIa through VIIIc provide information about the membership data. Finally, Table IX provides detailed historical data.

3550 Busbee Pkwy, Suite 250, Kennesaw, GA 30144

Phone (678) 388-1700 • Fax (678) 388-1730

www.CavMacConsulting.com

Offices in Englewood, CO • Kennesaw, GA • Bellevue, NE



The actuarial computations presented in this report are to be used for the following purposes:

- 1) Determining the contributions necessary to fund the Plan. These calculations have been made on a basis consistent with our understanding of the Plan's funding requirements and goals.
- 2) Providing the information required to be disclosed by the State of Florida under Chapter 112.
- 3) Providing accounting information required under Governmental Accounting Standards Board (GASB) Statement No. 67.

Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. The interest rate used for determining liabilities is based on the expected return on assets. Therefore, liability amounts in this report cannot be used to assess a settlement of the obligation.

Certification

This actuarial valuation and/or cost determination was prepared and completed by me or under my direct supervision and I acknowledge responsibility for the results. To the best of my knowledge, the results are complete and accurate and, in my opinion, the techniques and assumptions used are reasonable and meet the requirements and intent of Part VII, Chapter 112, Florida Statutes. There is no benefit or expense to be provided by the plan and/or paid from the plan's assets for which liabilities or current costs have not been established or otherwise taken into account in the valuation. All known events or trends which may require a material increase in plan costs or required contribution rates have been taken into account in the valuation.

This is to certify that the independent consulting actuary is a Member of the American Academy of Actuaries, meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein and has experience in performing valuations for public retirement systems, that the valuation was prepared in accordance with principles of practice prescribed by the Actuarial Standards Board, and that the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the Plan and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the Plan.

Future actuarial results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Since the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not presented herein.

Sincerely yours,

A handwritten signature in blue ink that reads 'Todd B. Green' followed by a horizontal line.

Todd B. Green, ASA, FCA, MAAA
Principal and Consulting Actuary

A handwritten signature in blue ink that reads 'Jose I. Fernandez'.

Jose I. Fernandez, ASA, FCA, MAAA, EA
Principal & Consulting Actuary
Enrollment Number 14-4461

TBG/JIF:jnw



Comments

1. **Changes in Benefit Provisions, Actuarial Assumptions and Methods**

Since the previous valuation, the following assumption changes have been made:

- The assumed rate of return was lowered from 7.80% to 7.60% since the previous valuation. The assumed rate of return will be lowered by 0.2% to in 5 biennial steps for each valuation beginning September 30, 2014.
- The mortality assumption was updated to comply with Florida Statute 112.63(1)(f).

The assumption changes are reflected in the valuation and increased the Unfunded Actuarial Accrued Liability (UAAL) by \$8.1 million.

2. **Health Insurance Premium Assistance program**

The valuation of the Health Insurance Premium Assistance Program is shown separately from that of the pension benefits being provided from the Fund. The results that follow are labeled to indicate whether they apply to pension benefits, retiree healthcare benefits or both.

**Summary of Valuation Results****Table I**

	<u>As of</u> <u>September 30, 2016</u>	<u>As of</u> <u>September 30, 2014</u>
1. Number of Members		
a. Active Members:	136	159
b. Deferred Vested Members:	60	68
c. DROP Members:	27	37
d. Retired Members:		
i. Non-disabled	426	421
ii. Disabled	37	41
iii. Beneficiaries	148	148
iv. Subtotal	<u>611</u>	<u>610</u>
e. Total Members:	834	874
2. Total Annual Compensation	\$ 6,347,558	\$ 6,901,570
3. Total Projected Payroll	\$ 6,347,558	\$ 6,901,570
4. Total Retired Member Benefits	\$ 13,240,153	\$ 13,201,852
5. Annual Cost (Pension and Retiree Healthcare combined)		
a. Present Value of Future Benefits	\$ 183,540,758	\$ 181,912,711
b. Present Value of Future Normal Cost	(4,978,150)	(5,786,847)
<i>City Portion</i>	2,800,381	3,067,427
<i>Member Portion</i>	2,177,769	2,719,420
c. Actuarial Accrued Liability (AAL)	178,562,608	176,125,864
d. Actuarial Value of Assets	<u>(137,831,800)</u>	<u>(126,847,720)</u>
e. Unfunded Accrued Liability	\$ 40,730,808	\$ 49,278,144
6. Actuarially Determined Contribution (Payable Bi-Weekly)		
a. Normal Cost	\$ 868,174	\$ 891,407
b. Payment to Amortize Unfunded Liability	5,595,199	6,166,347
c. Administrative Expenses	102,605	103,765
d. Interest Adjustment	<u>253,017</u>	<u>283,055</u>
e. Total	\$ 6,818,995	\$ 7,444,574
f. Expected Member Contributions	\$ 370,603	\$ 379,586
g. Estimated City Contributions	<u>6,448,392</u>	<u>7,064,988</u>
h. Total	\$ 6,818,995	\$ 7,444,574



Summary of Valuation Results

Table I

	<u>As of</u> <u>September 30, 2016</u>	<u>As of</u> <u>September 30, 2014</u>
6. Actuarially Determined Contribution (Payable as a Lump Sum on October 1st)		
a. Normal Cost	\$ 868,174	\$ 891,407
b. Payment to Amortize Unfunded Liability	5,595,199	6,166,347
c. Administrative Expenses	<u>102,605</u>	<u>103,765</u>
e. Total	\$ 6,565,978	\$ 7,161,519
f. Expected Member Contributions	\$ 370,603	\$ 379,586
g. Estimated City Contributions	<u>6,195,375</u>	<u>6,781,933</u>
h. Total	\$ 6,565,978	\$ 7,161,519



Unfunded Actuarial Accrued Liability (UAAL) for Pension Benefits

Table IIa

1. Actual Unfunded Accrued Liability as of 9/30/2014	\$ 49,369,045
2. Expected Change in Unfunded Liability During the 2014/2015 & 2015/2016 Plan Years:	
a. Due to Normal Cost	1,609,138
b. Due to Contributions	14,114,552
c. Due to Interest	7,079,144
d. Total Expected Change = (a. - b. + c.)	<u>(5,426,270)</u>
3. Expected Unfunded Accrued Liability as of 9/30/2016	\$ 43,942,775
4. Change in Unfunded Liability During the 2014/2015 & 2015/2016 Plan Years Due to:	
a. Method changes	\$ 0
b. Assumption changes	8,020,546
c. Plan amendments	<u>0</u>
d. Total change	\$ <u>8,020,546</u>
5. Actual Unfunded Accrued Liability as of 9/30/2016	\$ 41,223,288
6. Actuarial Gain/(Loss) as of 9/30/2016	\$ 10,740,033



Unfunded Actuarial Accrued Liability (UAAL) for Retiree Healthcare Benefits Table IIB

1. Actual Unfunded Accrued Liability as of 9/30/2014	\$	(90,901)
2. Expected Change in Unfunded Liability During the 2014/2015 & 2015/2016 Plan Years:		
a. Due to Normal Cost		30,057
b. Due to Contributions		67,630
c. Due to Interest		(18,855)
d. Total Expected Change = (a. - b. + c.)		<hr/> <u>(56,428)</u>
3. Expected Unfunded Accrued Liability as of 9/30/2016	\$	(147,329)
4. Change in Unfunded Liability During the 2014/2015 & 2015/2016 Plan Years Due to:		
a. Method changes	\$	0
b. Assumption changes		68,402
c. Plan amendments		0
d. Total change	\$	<hr/> <u>68,402</u>
5. Actual Unfunded Accrued Liability as of 9/30/2016	\$	(492,480)
6. Actuarial Gain/(Loss) as of 9/30/2016	\$	413,553



Supplemental Disclosures (Pension)

Table IIIa

	For the Plan Years 2017/2018 & 2018/2019	For the Plan Years 2015/2016 & 2016/2017
A. Number of Plan Participants as of September 30		
a. Retirees and beneficiaries receiving benefits	611	610
b. DROP members	27	37
c. Terminated plan participants entitled to but not yet receiving benefits	60	68
d. Active plan participants	<u>136</u>	<u>159</u>
e. Total	834	874
B. Development of Actuarially Determined Employer Contribution (ADEC) Payable on a bi-weekly basis		
a. Employer normal cost:		
i. Total normal cost (with Interest and Expenses)	\$ 1,210,630	\$ 1,262,528
ii. Expected employee contribution	<u>370,603</u>	<u>379,586</u>
iii. Employer normal cost	\$ 840,027	\$ 882,942
b. Amortization of UAAL:		
i. PV of future benefits	\$ 181,743,895	\$ 179,910,089
ii. PV of future employer normal costs	(2,722,184)	(2,976,647)
iii. PV of future employee contributions	<u>(2,177,769)</u>	<u>(2,719,420)</u>
iv. Actuarial accrued liability (AAL)	176,843,942	174,214,022
v. Actuarial value of assets	<u>(135,620,654)</u>	<u>(124,844,977)</u>
vi. Unfunded AAL (UAAL)	41,223,288	49,369,045
vii. Amortization of UAAL	\$ 5,662,851	\$ 6,177,724
c. ADEC (Item B.a.iii. plus item B.b.vii.)	\$ 6,502,878	\$ 7,060,666

**Supplemental Disclosures (Pension)****Table IIIa****C. Schedule of Funding Progress (\$ in thousands)**

Actuarial Valuation Date		(1) Actuarial Value of Assets	(2) Actuarial Accrued Liability (AAL)	(3) Unfunded AAL (UAAL) (2) – (1)	(4) Funded Ratio (1) ÷ (2)	(5) Covered Payroll	(6) UAAL as % of Covered Payroll (3) ÷ (5)
9/30/05		\$103,504	\$153,413	\$49,909	67.5%	\$16,904	295.2%
9/30/06		105,548	152,863	47,315	69.0	17,598	268.9
9/30/07	(a)	112,045	159,180	47,135	70.4	14,807	318.3
9/30/08	(a)	114,133	163,922	49,789	69.6	13,546	367.6
9/30/09		115,693	166,687	50,994	69.4	12,091	421.8
9/30/10	(b)	117,344	171,605	54,261	68.4	11,280	481.0
9/30/12	(a)	113,488	170,093	56,605	66.7	7,835	722.5
9/30/14	(b)	124,845	174,214	49,369	71.7	6,902	715.3
9/30/16	(b)	135,621	176,844	41,223	76.7	6,348	649.4

(a) Change in benefit provisions

(b) Change in actuarial assumptions



D. Additional Information

Valuation date	September 30, 2016
Actuarial cost method	Entry Age Normal
Amortization method	Closed level dollar
Remaining amortization period	11 years
Asset valuation method	5-year smoothed market
Actuarial assumptions:	
Investment rate of return*	7.60%
Projected salary increases*	4.50% - 9.50%
Cost-of-living adjustments	1.50% per year for retirements before October 1, 2012; 1.00% for retirements on or after October 1, 2012
*Includes inflation at:	3.00%

**Supplemental Disclosures (Retiree Healthcare)****Table IIIb**

	For the Plan Years 2017/2018 & <u>2018/2019</u>	For the Plan Years 2015/2016 & <u>2016/2017</u>
A. Number of Plan Participants as of September 30		
a. Retirees and beneficiaries receiving benefits	611	610
b. DROP members	27	37
c. Terminated plan participants entitled to but not yet receiving benefits	60	68
d. Active plan participants	<u>136</u>	<u>159</u>
e. Total	834	874
B. Development of Actuarially Determined Employer Contribution (ADEC) Payable on a bi-weekly basis		
a. Employer normal cost:		
i. Total normal cost (with Interest and Expenses)	\$ 13,166	\$ 15,699
ii. Expected employee contribution	<u>0</u>	<u>0</u>
iii. Employer normal cost	\$ 13,166	\$ 15,699
b. Amortization of UAAL:		
i. PV of future benefits	\$ 1,796,863	\$ 2,002,622
ii. PV of future employer normal costs	(78,197)	(90,780)
iii. PV of future employee contributions	<u>0</u>	<u>0</u>
iv. Actuarial accrued liability (AAL)	1,718,666	1,911,842
v. Actuarial value of assets	<u>(2,211,146)</u>	<u>(2,002,743)</u>
vi. Unfunded AAL (UAAL)	(492,480)	(90,901)
vii. Amortization of UAAL	\$ (67,652)	\$ (11,377)
c. ADEC (Item B.a.iii. plus item B.b.vii.)	\$ (54,486)	\$ 4,322



C. Schedule of Funding Progress

Actuarial Valuation Date	(1) Actuarial Value of Assets	(2) Actuarial Accrued Liability (AAL)	(3) Unfunded AAL (UAAL) (2) – (1)	(4) Funded Ratio (1) ÷ (2)	(5) Covered Payroll	(6) UAAL as % of Covered Payroll (3) ÷ (5)
9/30/05	\$930,563	\$4,499,586	\$3,569,023	20.7%	\$16,904,096	21.1%
9/30/06	1,113,914	4,553,791	3,439,877	24.5	17,597,916	19.5
9/30/07	1,327,015	4,504,338	3,177,323	29.5	14,806,933	21.5
9/30/08	1,546,435	2,389,391	842,956	64.7	13,546,116	6.2
9/30/09	1,850,821	2,365,471	514,650	78.2	12,090,613	4.3
9/30/10	1,854,119	2,409,662	555,543	76.9	11,280,207	4.9
9/30/12	1,766,345	2,212,028	445,683	79.9	7,834,617	5.7
9/30/14	2,002,743	1,911,842	(90,901)	104.8	6,901,570	(1.4)
9/30/16	2,211,146	1,718,666	(492,480)	128.7	6,347,558	(7.8)



D. Additional Information

Valuation date	September 30, 2016
Actuarial cost method	Entry Age Normal
Amortization method	Closed level dollar
Remaining amortization period	11 years
Asset valuation method	5-year smoothed market
Actuarial assumptions:	
Investment rate of return*	7.60%
Projected salary increases*	4.50% - 9.50%
Cost-of-living adjustments	N/A
*Includes inflation at:	3.00%



Present Value of Accrued Benefits (Pension - SB 1128)

Table IVa

Shown below is the development of the Total Present value of Accrued Benefit for the Plan. The calculations were performed in accordance with Chapter 2011-216 Laws of Florida (SB 1128) which requires the calculation of the present value of accrued benefits be calculated using the Florida Retirement System’s assumed rate of return of 7.60% in order to promote comparability of actuarial data between local plans.

1. Actuarial Present Value of Accrued Benefits

	<u>As of September 30, 2014</u>	<u>As of September 30, 2016</u>
a. Vested Accrued Benefits:		
i. Inactive members and beneficiaries	\$153,648,499	\$153,727,645
ii. Active members	\$21,360,888	\$23,116,297
b. Total Benefits	<u>\$175,009,387</u>	<u>\$176,843,942</u>
c. Market Value of Assets	\$136,755,930	\$132,701,587
d. Percentage Funded	78.1%	75.0%

2. Statement of Changes in Total Actuarial Present Value of All Accrued Benefits

a. Actuarial Present Value as of September 30, 2014 (7.75% Interest):	\$175,009,387
b. Increase (Decrease) During 2014/2015 & 2015/2016 Plan Years Attributable to:	
i. Interest	\$26,053,305
ii. Benefits accumulated/experience	(\$5,349,959)
iii. Benefits paid	(\$26,889,337)
iv. Plan amendments	\$0
v. Changes in actuarial assumptions or methods	\$8,020,546
vi. Net increase (decrease)	<u>\$1,834,555</u>
c. Actuarial Present Value as of September 30, 2016 (7.6% Interest):	<u>\$176,843,942</u>

3. Items Affecting Calculation of Actuarial Present Value of Accrued Benefits

- a. Plan provisions reflected in the accrued benefits (see Table X)
- b. Actuarial assumptions and methods used to determine present values (see Table IX)

**Present Value of Accrued Benefits (Pension - Plan Assumptions)****Table IVa**

Shown below is the development of the Total Present value of Accrued Benefit for the Plan. The calculations were performed using the Plan's discount rate of 7.60%.

1. Actuarial Present Value of Accrued Benefits

	<u>As of September 30, 2014</u>	<u>As of September 30, 2016</u>
a. Vested Accrued Benefits:		
i. Inactive members and beneficiaries	\$153,000,429	\$153,727,645
ii. Active members	\$21,213,594	\$23,116,297
b. Total Benefits	<u>\$174,214,023</u>	<u>\$176,843,942</u>
c. Market Value of Assets	\$136,755,930	\$132,701,587
d. Percentage Funded	78.5%	75.0%

2. Statement of Changes in Total Actuarial Present Value of All Accrued Benefits

a. Actuarial Present Value as of September 30, 2014 (7.8% Interest):	\$174,214,023
b. Increase (Decrease) During 2014/2015 & 2015/2016 Plan Years Attributable to:	
i. Interest	\$26,099,039
ii. Benefits accumulated/experience	(\$4,600,329)
iii. Benefits paid	(\$26,889,337)
iv. Plan amendments	\$0
v. Changes in actuarial assumptions or methods	\$8,020,546
vi. Net increase (decrease)	<u>\$2,629,919</u>
c. Actuarial Present Value as of September 30, 2016 (7.6% Interest):	<u>\$176,843,942</u>

3. Items Affecting Calculation of Actuarial Present Value of Accrued Benefits

- a. Plan provisions reflected in the accrued benefits (see Table X)
- b. Actuarial assumptions and methods used to determine present values (see Table IX)



Present Value of Accrued Benefits (Retiree Healthcare – SB 1128)

Table IVb

Shown below is the development of the Total Present value of Accrued Benefit for the Plan. The calculations were performed in accordance with Chapter 2011-216 Laws of Florida (SB 1128) which requires the calculation of the present value of accrued benefits be calculated using the Florida Retirement System’s assumed rate of return of 7.75% in order to promote comparability of actuarial data between local plans.

1. Actuarial Present Value of Accrued Benefits

	As of September 30, 2014	As of September 30, 2016
a. Vested Accrued Benefits:		
i. Inactive members and beneficiaries	\$1,685,338	\$1,477,357
ii. Active members	\$234,657	\$241,309
b. Total Benefits	\$1,919,995	\$1,718,666
c. Market Value of Assets	\$2,193,817	\$2,163,554
d. Percentage Funded	114.3%	125.9%

2. Statement of Changes in Total Actuarial Present Value of All Accrued Benefits

a. Actuarial Present Value as of September 30, 2014 (7.75% Interest):	\$1,919,995
b. Increase (Decrease) During 2014/2015 & 2015/2016 Plan Years Attributable to:	
i. Interest	\$287,431
ii. Benefits accumulated/experience	(\$282,482)
iii. Benefits paid	(\$274,680)
iv. Plan amendments	\$0
v. Changes in actuarial assumptions or methods	\$68,402
vi. Net increase (decrease)	(\$201,329)
c. Actuarial Present Value as of September 30, 2016 (7.6% Interest):	\$1,718,666

3. Items Affecting Calculation of Actuarial Present Value of Accrued Benefits

- a. Plan provisions reflected in the accrued benefits (see Table X)
- b. Actuarial assumptions and methods used to determine present values (see Table IX)



Present Value of Accrued Benefits (Retiree Healthcare - Plan Assumptions) Table IVb

Shown below is the development of the Total Present value of Accrued Benefit for the Plan. The calculations were performed using the Plan's discount rate of 7.80%.

1. Actuarial Present Value of Accrued Benefits

	<u>As of September 30, 2014</u>	<u>As of September 30, 2016</u>
a. Vested Accrued Benefits:		
i. Inactive members and beneficiaries	\$1,678,480	\$1,477,357
ii. Active members	\$233,361	\$241,309
b. Total Benefits	\$1,911,841	\$1,718,666
c. Market Value of Assets	\$2,193,817	\$2,163,554
d. Percentage Funded	114.7%	125.9%

2. Statement of Changes in Total Actuarial Present Value of All Accrued Benefits

a. Actuarial Present Value as of September 30, 2014 (7.8% Interest):	\$1,911,841
b. Increase (Decrease) During 2014/2015 & 2015/2016 Plan Years Attributable to:	
i. Interest	\$288,036
ii. Benefits accumulated/experience	(\$274,933)
iii. Benefits paid	(\$274,680)
iv. Plan amendments	\$0
v. Changes in actuarial assumptions or methods	\$68,402
vi. Net increase (decrease)	(\$193,175)
c. Actuarial Present Value as of September 30, 2016 (7.6% Interest):	\$1,718,666

3. Items Affecting Calculation of Actuarial Present Value of Accrued Benefits

- a. Plan provisions reflected in the accrued benefits (see Table X)
- b. Actuarial assumptions and methods used to determine present values (see Table IX)



	<u>September 30, 2016</u> After Assumption Change	<u>September 30, 2016</u> Prior to Assumption Change	<u>September 30, 2014</u>
Participant Data			
1. Active Members			
a. Number	136	136	159
b. Valuation payroll	\$ 6,347,558	\$ 6,347,558	\$ 6,901,570
c. Estimated payroll for next fiscal year	\$ 6,347,558	\$ 6,347,558	\$ 6,901,570
2. Retired Members			
a. Number on service retirement	426	426	421
b. Annual benefits	\$ 10,259,523	\$ 10,259,523	\$ 10,035,673
c. Number in DROP	27	27	37
d. Annual benefits	\$ 633,388	\$ 633,388	\$ 895,539
e. Number on disability retirement	37	37	41
f. Annual benefits	\$ 357,718	\$ 357,718	\$ 379,892
g. Number of beneficiaries of deceased members	148	148	148
h. Annual benefits	\$ 1,989,524	\$ 1,989,524	\$ 1,890,748
i. Number of deferred vested members	60	60	68
j. Annual benefits	\$ 749,710	\$ 749,710	\$ 928,083
Assets			
3. a. Assets for valuation purposes	\$ 137,831,800	\$ 137,831,800	\$ 126,847,720
b. Market value of assets	\$ 134,865,141	\$ 134,865,141	\$ 138,949,747



	<u>September 30, 2016</u> After Assumption Change	<u>September 30, 2016</u> Prior to Assumption Change	<u>September 30, 2014</u>
Liabilities			
4. Present value of prospective benefits payable in respect of:			
a. Retired members and beneficiaries:			
i. Present retirees on service retirement drawing allowances	\$ 116,777,722	\$ 112,495,013	\$ 112,781,584
ii. Present beneficiaries drawing allowances	17,837,591	16,042,145	15,861,912
iii. Present retirees on disability retirement now drawing allowances	<u>3,615,362</u>	<u>3,711,153</u>	<u>3,981,183</u>
iv. Subtotal	\$ 138,230,675	\$ 132,248,311	\$ 132,624,679
b. DROP members	\$ 11,103,634	\$ 10,829,338	\$ 14,788,934
c. Former active members eligible for deferred benefits	\$ 5,870,693	\$ 5,562,880	\$ 7,265,296
d. Present active members:			
i. Service retirement benefits	\$ 26,082,216	\$ 24,471,639	\$ 24,683,578
ii. Deferred vested benefits	1,725,289	1,604,802	2,027,864
iii. Disability benefits	125,153	149,436	202,874
iv. Death benefits	403,098	283,145	319,486
v. Return of contributions	<u>0</u>	<u>0</u>	<u>0</u>
vi. Subtotal	<u>\$ 28,335,756</u>	<u>\$ 26,509,022</u>	<u>\$ 27,233,802</u>
e. Total present value of all prospective benefits payable	\$ 183,540,758	\$ 175,149,551	\$ 181,912,711
5. Present Value of Accrued Benefits under GASB 25 & 43	\$ 178,562,608	\$ 170,473,660	\$ 176,125,864
6. Unfunded Actuarial Accrued Liabilities	\$ 40,730,808	\$ 32,641,860	\$ 49,278,144



	<u>September 30, 2016</u> After Assumption Change	<u>September 30, 2016</u> Prior to Assumption Change	<u>September 30, 2014</u>
Contributions			
7. Normal Contribution Rate:			
a. From City (including interest)	12.66%	12.31%	13.02%
b. From Members	5.50%	5.50%	5.50%
8. Required City Contributions as % of Payroll (including interest):			
a. Normal	12.66%	12.31%	13.02%
b. Unfunded Actuarial Accrued Liabilities	<u>83.04%</u>	<u>71.34%</u>	<u>89.35%</u>
c. Total	95.70%	83.65%	102.37%
9. Required City Contributions (including interest) Payable on a bi-weekly basis:			
a. Normal	\$ 853,193	\$ 781,435	\$ 898,641
b. Unfunded Actuarial Accrued Liabilities	<u>5,595,199</u>	<u>4,528,087</u>	<u>6,166,347</u>
c. Total	\$ 6,448,392	\$ 5,309,522	\$ 7,064,988
10. Percentage of Compensation to be Contributed by Members	5.50%	5.50%	5.50%



	<u>September 30, 2016</u> After Assumption Change	<u>September 30, 2016</u> Prior to Assumption Change	<u>September 30, 2014</u>
11. Present Value of Active Members:			
a. Future salaries	\$ 39,595,796	\$ 40,832,270	\$ 49,444,000
b. Future contributions	\$ 2,177,769	\$ 2,245,775	\$ 2,719,420
12. Prior Fiscal Year's Contribution (cash basis):			
a. Required City (Payable in a Lump Sum)	\$ 6,781,933	\$ 6,781,933	\$ 7,210,281
b. Actual City	6,788,559	6,788,559	7,212,182
c. Required member	379,586	379,586	430,904
d. Actual member	360,693	360,693	388,789
13. Accumulated Member Contributions	\$ 4,557,641	\$ 4,557,641	\$ 4,429,923

The information presented in Table Va is for both pension benefits and retiree healthcare benefits combined.



Pension Benefits

Balance as of October 1	UAAL Beginning of Year	Amortization Payment	UAAL End of Year
2016	\$41,223,288	\$5,662,851	\$38,693,406
2017	38,693,406	5,662,851	35,971,254
2018	35,971,254	5,662,851	33,042,218
2019	33,042,218	5,662,851	29,890,575
2020	29,890,575	5,662,851	26,499,407
2021	26,499,407	5,662,851	22,850,511
2022	22,850,511	5,662,851	18,924,298
2023	18,924,298	5,662,851	14,699,694
2024	14,699,694	5,662,851	10,154,019
2025	10,154,019	5,662,851	5,262,873
2026	5,262,873	5,662,851	0

Retiree Healthcare Benefits

Balance as of October 1	UAAL Beginning of Year	Amortization Payment	UAAL End of Year
2016	(492,480)	(67,652)	(462,256)
2017	(462,256)	(67,652)	(429,736)
2018	(429,736)	(67,652)	(394,744)
2019	(394,744)	(67,652)	(357,092)
2020	(357,092)	(67,652)	(316,579)
2021	(316,579)	(67,652)	(272,987)
2022	(272,987)	(67,652)	(226,082)
2023	(226,082)	(67,652)	(175,612)
2024	(175,612)	(67,652)	(121,306)
2025	(121,306)	(67,652)	(62,874)
2026	(62,874)	(67,652)	0

**Asset Reconciliation****Table VIa****Revenues and Expenditures**

	<u>As of</u> <u>September 30, 2016</u>	<u>As of</u> <u>September 30, 2014</u>
Revenues:		
a. Member contributions	\$ 360,693	\$ 388,789
b. City contributions	6,788,559	6,658,185
c. City contributions – Other	0	
d. Investment Income and Realized Gains	3,381,144	3,972,575
e. Increase in unrealized appreciation	8,639,194	11,832,103
f. Other revenue	<u>3,314</u>	<u>9,513</u>
g. Total revenues	\$ 19,172,904	\$ 22,861,165
Expenditures:		
a. Refunds of member contributions	\$ 82,082	\$ 82,048
b. Benefits payments	12,362,685	11,937,368
c. Payment from DROP accounts	1,406,115	1,727,186
d. Health care subsidy payments	133,280	149,688
e. Administrative expenses	6,245	5,808
f. Investment expenses	667,564	679,168
g. Realized losses	0	0
h. Decrease in unrealized appreciation	0	0
i. Other expenditures	<u>96,360</u>	<u>97,957</u>
j. Total expenditures	\$ 14,754,331	\$ 14,679,223
Net Income:		
Total revenues minus total expenditures	<u>\$ 4,418,573</u>	<u>\$ 8,181,942</u>



Summary of Assets for Pension and Retiree Healthcare Benefits Combined

	<u>September 30, 2016</u>	<u>September 30, 2014</u>
	Market	Market
Cash	\$ 89,687	\$ 63,844
Debt Securities		
Short-term	2,092,626	1,945,266
Bonds	9,353,733	11,422,141
Equity Securities		
Common Stock	123,172,653	125,637,321
Other		
Accounts receivable	6,928	18,121
Accounts payable	(139,257)	(146,899)
Accrued Interest	288,771	9,953
Total Assets	\$ 134,865,141	\$ 138,949,747



Derivation of Actuarial Value of Assets

Table VIb

Valuation Date September 30:	2015	2016	2017	2018	2019	2020
A. Actuarial Value Beginning of Year	\$127,401,717	\$132,232,390				
B. Market Value End of Year	\$130,446,568	\$134,865,141				
C. Market Value Beginning of Year	\$138,949,747	\$130,446,568				
D. Cash Flow						
D1. Contributions	\$7,032,931	\$7,149,252				
D2. Other Revenue	0	0				
D3. Benefit Payments	(13,179,855)	(13,984,162)				
D4. Administrative Expenses	(126,054)	(102,605)				
D5. Investment Expenses	<u>(689,673)</u>	<u>(667,564)</u>				
D6. Net	\$(6,962,651)	\$(7,605,079)				
E. Investment Income						
E1. Market Total: B – C – D6	\$(1,540,528)	\$12,023,652				
E2. Assumed Rate	7.80%	7.80%				
E3. Amount for Immediate Recognition	11,283,107	10,571,833				
E4. Amount for Phased-In Recognition	\$(12,823,635)	\$1,451,819				
F. Phased-In Recognition of Investment Income						
F1. Current Year: 0.20*E4	\$(2,564,727)	\$290,364				
F2. First Prior Year	990,344	(2,564,727)	\$290,364	0	0	0
F3. Second Prior Year	1,585,387	990,344	(2,564,727)	\$290,364	0	0
F4. Third Prior Year	2,331,288	1,585,387	990,344	(2,564,727)	\$290,364	0
F5. Fourth Prior Year	<u>(1,832,075)</u>	<u>2,331,288</u>	<u>1,585,387</u>	<u>990,344</u>	<u>(2,564,727)</u>	<u>\$290,364</u>
F6. Total Recognized Investment Gain	\$510,217	\$2,632,656	\$301,368	\$(1,284,019)	\$(2,274,363)	\$290,364
G. Preliminary Actuarial Value End of Year:	\$132,232,390	\$137,831,800				
H. Adjustment for Prepaid Contribution:	\$0	\$0				
I. Final Actuarial Value End of Year: G + H	\$132,232,390	\$137,831,800				
J. Difference Between Market & Actuarial Values:	\$(1,785,822)	\$(2,966,659)	\$(3,268,027)	\$(1,984,008)	\$290,364	\$0

The actuarial value of assets recognizes assumed investment income (line E3) fully each year. Differences between actual and assumed investment income (line E4) are phased in over a closed 5 year period. During periods when investment performance exceeds the assumed rate, the actuarial value will tend to be less than market value. During periods when investment performance is less than assumed, the actuarial value will tend to be greater than the market value.

**Allocation of Actuarial Value of Assets****Table VIc****I. Market Rate of Return for Combined Assets for the 2014/2015 Plan Year**

a. Market Value Beginning of Year (Table VIb, Item C)	\$138,949,747
b. Market Value End of Year (Table VIb, Item B)	130,446,568
c. Cash Flow net of Investment Expenses (Table VIb, Items D1 through D4)	(6,272,978)
d. Investment Income net of Investment Expenses (b. – a. – c.)	(2,230,201)
e. Market Rate of Return (2 x d. / (a. + b. – d.))	(1.64%)

II. Market Value of Retiree Healthcare Assets for the 2014/2015 Plan Year

a. Market Value Beginning of Year	\$2,193,817
b. Actuarially Determined Employer Contribution	71,761
c. Benefit Payments	(141,400)
d. Interest at Market Rate of Return (I.e.)	(14,506)
e. Market Value End of Year (a. + b. + c. + d.)	\$2,109,672

III. Market Rate of Return for Combined Assets for the 2015/2016 Plan Year

a. Market Value Beginning of Year (Table VIb, Item C)	\$130,446,568
b. Market Value End of Year (Table VIb, Item B)	134,865,141
c. Cash Flow net of Investment Expenses (Table VIb, Items D1 through D4)	(6,937,515)
d. Investment Income net of Investment Expenses (b. – a. – c.)	11,356,088
e. Market Rate of Return (2 x d. / (a. + b. – d.))	8.94%

IV. Market Value of Retiree Healthcare Assets for the 2015/2016 Plan Year

a. Market Value Beginning of Year	\$2,109,672
b. Actuarially Determined Employer Contribution	4,322
c. Benefit Payments	(133,280)
d. Interest at Market Rate of Return (I.e.)	182,840
e. Market Value End of Year (a. + b. + c. + d.)	\$2,163,554

V. Allocate Actuarial Value of Assets by Market Value

	Market Value of Assets	Actuarial Value of Assets
Pension Benefits	\$132,701,587	\$135,620,654
Retiree Healthcare Benefits	2,163,554	2,211,146
Total	\$134,865,141	\$137,831,800



Net Pension Liability

Table VIIa

The material presented herein will follow the order presented in GASB 67. Paragraph numbers are provided for ease of reference.

Paragraphs 31(a) (1)-(4): The information is provided in the following table. As stated above, the NPL is equal to the TPL minus the FNP. That result as of September 30, 2016 is presented in the table below.

	Fiscal Year Ending September 30, 2016
Total Pension Liability	\$ 178,562,608
Fiduciary Net Position	<u>134,865,141</u>
Net Pension Liability	\$ 43,697,467
Ratio of Fiduciary Net Position to Total Pension Liability	75.53%



Assumptions for Total Pension Liability

Table VIIb

Paragraph 31(b): This paragraph requires information regarding the actuarial assumptions used to measure the TPL. The actuarial assumptions utilized in developing the TPL are outlined in Schedule B. The total pension liability was determined by an actuarial valuation as of September 30, 2016, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	3.0 percent
Salary increases	4.50 – 9.50 percent, average, including inflation
Investment rate of return	7.60 percent, net of pension plan investment expense, including inflation
Mortality	Pre-Retirement Healthy Mortality <i>Female:</i> RP2000 Generational, 100% Combined Healthy White Collar, Scale BB <i>Male:</i> RP2000 Generational, 50% Combined Healthy White Collar / 50% Combined Healthy Blue Collar, Scale BB Post-Retirement Healthy Mortality <i>Female:</i> RP2000 Generational, 100% Annuitant White Collar, Scale BB <i>Male:</i> RP2000 Generational, 50% Annuitant White Collar / 50% Annuitant Blue Collar, Scale BB Post-Retirement Disabled Mortality <i>Female:</i> RP2000, 100% Disabled Female set forward two years, no projection scale <i>Male:</i> RP2000, 100% Disabled Male setback four years, no projection scale



The actuarial assumptions used in the September 30, 2016 valuation were based on the results of the last actuarial experience study, dated January 7, 2011.

Paragraph 31.b.(1)

- (a) **Discount rate:** The discount rate used to measure the total pension liability was 7.60%.
- (b) **Projected cash flows:** The projection of cash flows used to determine the discount rate assumed the City would contribute the actuarial determined contribution.
- (c) **Long term rate of return:** The long-term expected rate of return on pension plan investments was determined using a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.
- (d) **Municipal bond rate:** the discount rate determination does not use a municipal bond rate
- (e) **Periods of projected benefit payments:** projected future benefit payments for all current plan members were projected through 2111.
- (f) **Assumed Asset Allocation:** The target asset allocation and best estimates of arithmetic rates of return for each major asset class are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Rate of Return
Domestic Equity	40%	11.1%
Bonds	25	7.6
International Equity	15	6.4
Private Real Estate	8	7.9
Convertibles	7	9.5
MLP's	5	16.9
Total	100%	



(g) **Sensitivity analysis:** this paragraph requires disclosure of the sensitivity of the net pension liability to changes in the discount rate. The following presents the net pension liability of the System, calculated using the discount rate of percent, as well as what the System’s net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower or 1-percentage-point higher than the current rate:

	1% Decrease 6.60%	Current Discount Rate 7.60%	1% Increase 8.60%
System’s net pension liability	\$61,796,083	\$43,697,467	\$28,369,974

Paragraph 31(c): September 30, 2016 is the actuarial valuation date upon which the TPL is based. No roll-forward procedures were used to determine the TPL.



Assumptions for Actuarially Determined Contributions

Table VIIe

Paragraph 34: In addition the following should be noted regarding the RSI:

Changes of benefit terms: None.

Changes of assumption: Since the previous valuation, the following assumption changes have been made:

- The assumed rate of return will be lowered by 0.2% to in 5 biennial steps for each valuation beginning September 30, 2014. The assumed rate of return was lowered from 7.80% to 7.60% since the previous valuation.
- The mortality assumption was updated to comply with Florida Statute 112.63(1)(f).

Method and assumptions used in calculations of actuarially determined contributions. The actuarially determined contribution rates are determined on an annual basis. The following actuarial methods and assumptions were used to determine contribution rates reported in that schedule:

Actuarial cost method	Entry age
Amortization method	Level dollar, closed
Remaining amortization period	13 years
Asset valuation method	5-year smoothed market
Inflation	3.00 percent
Salary increase	4.50-9.50 percent, including inflation
Investment rate of return	7.80 percent, net of pension plan investment expense, including inflation



**SCHEDULE OF CHANGES IN THE NET PENSION LIABILITY
GASB 67 Paragraph 32(a)**

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Total pension liability										
Service Cost	\$ 960,937	\$ 875,872	\$ 875,872							
Interest	13,265,393	13,080,194	13,039,418							
Benefit changes		1,929,586								
Difference between expected and actual experience	(6,829,727)									
Changes of assumptions	8,088,948									
Benefit payments	(13,902,080)	(13,007,151)	(13,664,554)							
Refunds of contributions	(82,082)	(31,304)	(82,048)							
Net change in total pension liability	\$ 1,501,389	\$ 2,847,197	\$ 168,688							
Total pension liability - beginning	\$ 177,061,219	\$ 174,214,022	\$ 174,045,334							
Total pension liability - ending (a)	\$ 178,562,608	\$ 177,061,219	\$ 174,214,022							
Plan net position										
Contributions - employer	\$ 6,788,559	\$ 6,586,144	\$ 6,586,424							
Contributions - member	360,693	375,026	388,789							
Net investment income	11,356,088	(2,230,201)	14,895,032							
Benefit payments	(13,902,080)	(13,007,151)	(13,664,554)							
Administrative expense	(102,605)	(126,054)	(103,765)							
Refunds of contributions	(82,082)	(31,304)	(82,048)							
Other	-	2,149,812	-							
Net change in plan net position	\$ 4,418,573	\$ (6,283,728)	\$ 8,019,878							
Plan net position - beginning	\$ 130,446,568	\$ 136,730,296	\$ 128,710,418							
Plan net position - ending (b)	\$ 134,865,141	\$ 130,446,568	\$ 136,730,296							
Net pension liability - ending (a) - (b)	\$ 43,697,467	\$ 46,614,651	\$ 37,483,726							



SCHEDULE OF THE NET PENSION LIABILITY
GASB 67 Paragraph 32(b)

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Total pension liability	\$178,562,608	\$177,061,219	\$174,214,022							
Plan net position	<u>134,865,141</u>	<u>130,446,568</u>	<u>136,730,296</u>							
Net pension liability	\$ 43,697,467	\$ 46,614,651	\$ 37,483,726							
Ratio of plan net position to total pension liability	75.53%	73.67%	78.48%							
Covered-employee payroll	\$ 6,347,558	\$ 6,901,570	\$ 6,757,461							
Net pension liability as a percentage of covered-employee payroll	688.41%	675.42%	554.70%							



SCHEDULE OF EMPLOYER CONTRIBUTIONS
GASB 67 Paragraph 32(c)

Table with 11 columns (years 2016-2007) and 6 rows (Actuarially determined employer contribution, Actual employer contributions, Annual contribution deficiency (excess), Covered-employee payroll, Actual contributions as a percentage of covered-employee payroll).



Active Data Table

Table VIIIa

**Tabulated by Attained Age and Years of Service
as of September 30, 2016**

Attained Age	Years of Service to Valuation Date							Totals	
	0-5	6-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
Under 20									
20-24									
25-29									
30-34			4					4	\$138,980
35-39			12	2				14	592,099
40-44			11	10	1			22	895,820
45-49			5	9	5	2		21	974,004
50-54			2	7	4	9	5	27	1,502,552
55-59			10	13	11	2		36	1,589,326
60			1	2	2			5	253,550
61			1			1		2	115,753
62				2				2	102,214
63			1					1	30,974
64			1					1	108,112
65						1		1	44,173
66									
67									
68									
69									
70 & Over									
Totals	0	0	48	45	23	15	5	136	\$6,347,558

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

Age: 49.77 years
 Service: 17.79 years
 Annual Pay: \$46,673



Retiree Data Table

Table VIIIb

**Retiree and Beneficiary Information September 30, 2016
Tabulated by Attained Ages**

Attained Age	Service Retirement		Disability Retirement		Survivors and Beneficiaries		Totals	
	No.	Annual Benefits*	No.	Annual Benefits*	No.	Annual Benefits*	No.	Annual Benefits*
Under 20								
20-24								
25-29								
30-34								
35-39			1	\$6,876			1	\$6,876
40-44			1	5,940			1	5,940
45-49			1	12,091	3	37,151	4	49,242
50-54	1	\$24,945	1	16,076	2	18,365	4	59,386
55-59	10	303,767	2	22,043	3	62,065	15	387,874
60-64	87	2,334,321	5	68,500	8	95,011	100	2,497,831
65-69	100	2,405,584	5	45,267	15	320,107	120	2,770,958
70-74	94	2,418,096	4	33,989	24	427,463	122	2,879,548
75-79	46	1,010,899	5	61,470	24	237,438	75	1,309,807
80-84	45	896,695	9	57,627	41	477,553	95	1,431,875
85-89	38	694,854	3	20,447	19	208,886	60	924,188
90-94	5	70,906			8	77,238	13	148,144
95								
96					1	6,743	1	6,743
97								
98								
99								
100 & Over								
Totals	426	\$10,160,067	37	\$350,326	148	\$1,968,020	611	\$12,478,412

* Excluding amounts for the health subsidy

There were 60 vested members with annual deferred benefits of \$738,286 included in the valuation excluding amounts for the health subsidy.

In addition, there were 27 members who enrolled in the DROP. The accumulated benefits credited to the DROP are \$2,906,406.



Data Reconciliation

Table VIIIc

	<u>Active</u>	<u>Deferred Vested</u>	<u>Retired</u>	<u>DROP</u>	<u>Total</u>
1. Number of participants as of September 30, 2014	159	68	610	37	874
2. Change in status during the plan year:					
a. Actives who became inactive	(2)	2			
b. Members who retired	(4)		4		
c. Actives who enrolled in DROP	(11)			11	
d. Vesteds who became active					
e. Vesteds who retired		(10)	10		
f. Retirees who became active					
g. Transfer in					
3. No longer participating due to:					
a. Death	(1)		(50)		(51)
b. Refund of contributions	(5)				(5)
c. Receipt of lump sum payment					
d. Expiration of certain period					
e. No longer in DROP			21	(21)	
f. Data change from last year					
g. Transfer out					
4. New participant due to:					
a. Initial participation					
b. Death of another participant			15		15
c. Data change from last year			1		1
5. Number of participants as of September 30, 2016	136	60	611	27	834



Historical Data

Table IX

Actuarial estimates regarding the inflation rate and real investment return rate were utilized in the valuation. These estimates are used, in combination with the other estimates, to (i) determine the present value of amounts expected to be paid in the future and (ii) establish rates of contribution which are expected to remain relatively level as a percent of total employee payroll.

Inflation

- Effective September, 30 2010, 3.00% per annum, compounded annually. This is the rate at which growth in the supply of money and credit is estimated to exceed growth in the supply of goods and services. It may be thought of as the rate of decline in the purchasing power of the dollar. There are a number of indices for measuring the inflation rate. The recent inflation rate as measured by the Consumer Price Index has been:

Year Ended:	9/30/2016	9/30/2015	9/30/2014	9/30/2013	9/30/2012	Average for Period
Actual	1.5%	0.0%	1.7%	1.2%	2.0%	1.3%
Assumed	3.0	3.0	3.0	3.0	3.0	3.0

Real Investment Return

- Effective October 1, 2016, 4.60% per annum. This is the rate of return estimated to be produced by investing a pool of assets in an inflation-free environment. Recent real rates of investment return on the actuarial value of assets have been:

Year Ended:	9/30/2016	9/30/2015	9/30/2014	9/30/2013	9/30/2012	Average for Period
Total Rate	9.7%	8.9%	11.4%	9.1%	2.1%	8.2%
Less Inflation Rate	1.5	0.0	1.7	1.2	2.0	1.3
Actual Real Rate	8.2	8.9	9.7	7.9	0.1	6.9
Projected Real Rate	4.8	4.8	5.0	5.0	5.0	4.9

- The total investment return rate was computed by dividing the investment earnings recognized in the actuarial value of assets, before the release of any reserve, by a weighted average of the value of assets during the year. The investment earnings are assumed to be net of any investment expenses.



Historical Data

Table IX

➤ A schedule of recent salary change experience, as measured by average reported pay, follows:

Year Ended:	9/30/2016	9/30/2015	9/30/2014	9/30/2013	9/30/2012	Average for Period
% of Change: Actual Average*	3.9%	2.5%	5.0%	5.8%	(3.7)%	2.7%
Estimated	6.2	6.2	6.3	6.3	6.4	6.3
% Change in Total Payroll	(1.6)	(6.5)	(0.9)	(11.1)	(24.3)	(8.9)

*Excluding terminations and new members.

Prior Contribution Rates for Pension and Retiree Healthcare Combined

Valuation Date	Applicable Fiscal Year	Normal Cost	Expenses	Unfunded Actuarial Accrued Liability	Total City Contributions
9-30-96	1996-97	1.42%	1.04%	4.76%	7.22%
9-30-97	1997-98	(3.64)	1.04	15.17	12.57
9-30-98	1998-99	(3.96)	0.93	13.44	10.41
9-30-99	1999-00	(2.43)	1.05	13.89	12.51
9-30-00	2000-02	(2.88)	1.05	16.97	15.14
9-30-01	2002-03	4.38	1.05	15.75	21.18
9-30-02	2003-04	12.33	1.05	15.20	28.58
9-30-03	2004-05	11.31	1.05	22.50	34.86
9-30-04	2005-06	11.13	1.05	25.10	37.28
9-30-05	2006-07	12.91	1.05	21.86	35.82
9-30-06	2007-08	12.84	1.05	20.50	34.39
9-30-07	2008-09	13.92	1.05	34.61	49.58
9-30-08	2009-10	13.26	1.05	38.92	53.23
9-30-09	2010-11	13.65	0.80	45.45	59.90
9-30-10	2011-12	10.36	0.61	53.27	64.24
9-30-12	2013-14	9.61	1.26	85.07	95.99
9-30-14	2015-16	11.53	1.50	89.35	102.37
9-30-16	2017-18	12.17	1.62	83.04	95.70



1. Actuarial Cost Method

➤ **To Determine the Funded Status and the Actuarially Determined Employer Contribution**

Entry Age Normal Cost Method on an individual basis.

➤ **To Determine the Present Value of Accrued Benefits**

Unit Credit

2. Decrements

➤ **Pre-Retirement Healthy Mortality**

Female: RP2000 Generational, 100% Combined Healthy White Collar, Scale BB

Male: RP2000 Generational, 50% Combined Healthy White Collar / 50% Combined Healthy Blue Collar, Scale BB

Representative percentages of deaths assumed to be non-service (ordinary) or service (accidental) related are listed below.

Age	Ordinary		Accidental	
	Male	Female	Male	Female
20	90.91%	88.24%	9.09%	11.76%
25	90.24	90.91	9.76	9.09
30	90.57	90.00	9.43	10.00
35	89.47	90.48	10.53	9.52
40	89.81	89.66	10.19	10.34
45	90.05	89.89	9.95	10.11
50	90.06	90.28	9.94	9.72
55	89.94	90.09	10.06	9.91
60	90.01	90.03	9.99	9.97
64	90.02	89.98	9.98	10.02

➤ **Post-Retirement Healthy Mortality**

Female: RP2000 Generational, 100% Annuitant White Collar, Scale BB

Male: RP2000 Generational, 50% Annuitant White Collar / 50% Annuitant Blue Collar, Scale BB

➤ **Post-Retirement Disabled Mortality**

Female: RP2000, 100% Disabled Female set forward two years, no projection scale

Male: RP2000, 100% Disabled Male setback four years, no projection scale



➤ **Disability**

Representative values of the assumed annual rates of disability among members in active service are as follows:

Age	Ordinary Disability Rate	Accidental Disability Rate
20	0.0135%	0.0065%
25	0.0133	0.0067
30	0.0202	0.0098
35	0.0267	0.0133
40	0.0333	0.0167
45	0.0666	0.0334
50	0.1135	0.0565
55	0.1935	0.0965
60	0.3000	0.1500
64	0.3934	0.1966

➤ **Withdrawal from Active Status**

Representative values of the assumed annual rates of withdrawal among members in active service are as follows:

Age	Rate
20	15.00%
25	13.00
30	11.00
35	9.00
40	7.00
45	5.00
50	4.00
54	4.00



➤ **Retirement**

Values of the assumed annual rates of retirement among members in active service are as follows:

Age	Rate
Under 45	5.00%
45	5.00
46	5.00
47	5.00
48	7.00
49	10.00
50	12.00
51	15.00
52	15.00
53	15.00
54	15.00
55	20.00
56	20.00
57	20.00
58	20.00
59	20.00
60	25.00
61	30.00
62	40.00
63	40.00
64	50.00
65 & Over	100.00

An additional 20% are assumed to retire when first eligible for an unreduced retirement benefit. In addition, 100% are assumed to retire upon the attainment of age 60 and the completion of 30 years of service.



3. Interest Rates

➤ **Used for Calculating All Liabilities**

Effective October 1, 2016 the interest rate is assumed to be 7.60% net of investment expenses per annum, comprised of an inflation rate of 3.00% and a real rate of return of 4.6%.

➤ **Used for Calculating Present Value of Accrued Benefits Pursuant to Ch. 112.63 (1)(f)**

The interest rate is assumed to be 7.60% (Florida Retirement System’s assumed rate of return)

4. Salary Increases

The following representative salary increases are assumed, which includes an inflation rate of 3.00%.

Age	Rate	Age	Rate	Age	Rate	Age	Rate
20	9.50%	30	7.50%	40	6.50%	50	6.50%
25	9.50%	35	6.50%	45	6.50%	55	5.50%

5. Marriage Assumptions

- 80% of members are assumed married or entitled to dependent benefits.
- Male spouses are assumed to be three years older than female spouses.

6. Expenses

Administrative expenses for the year following the valuation date are assumed to be equal to the actual amount for the previous fiscal year.

7. Cost-of-Living Adjustments

For retirements before October 1, 2012, benefits are assumed to increase 1.50% annually after retirement. For retirements on or after October 1, 2012, cost-of-living adjustments are assumed to be 1.00%. No COLA is assumed for participants who enter the DROP on or after October 1, 2012 while currently participating in the DROP.



8. Assets

Actuarial value, as developed in Tables VIb and VIc. The actuarial value of assets is a market-related method that each year recognizes 20% of the unexpected investment return.

9. Participation in the Health Insurance Premium Assistance program

50%



1. Participation

Participation, which was closed to new members on October 1, 1979, was reopened to new members effective October 6, 1997. Effective June 17, 2007, participation is closed to new members.

2. Credited Service

All service from date of hire. For benefit calculations only, fractional service greater than one-half is rounded up to a whole year. Members entering the Fund for the first time on or after October 6, 1997 who had service with the City had the option of purchasing credit for any or all prior service.

3. Average Final Compensation

For retirements before October 1, 2012, the average annual compensation, excluding unused leave and overtime in excess of 300 hours per fiscal year, during the highest 2 years of his or her last 5 years of contributing service prior to retirement, termination or death.

For retirements on or after October 1, 2012, the average annual compensation, excluding unused leave and overtime in excess of 200 hours per fiscal year, during the last 5 years of contributing service prior to retirement, termination or death. Overtime pay will be based on non-overtime rates for over 40 hours per week.

4. Normal Retirement Benefit

➤ **Eligibility**

Age 55 and 20 years of credited service

➤ **Benefit Amount**

An annual benefit equal to the greatest of:

- (a) 2.1% of Average Final Compensation times years of service (maximum 63%) for service accrued before October 1, 2012. For service accrued on or after October 1, 2012, 1.75% of Average Final Compensation times years of service (maximum 52.5%).



(b) 75% of the first \$2,400 of Average Final Compensation, plus 50% of the next \$1,200 of Average Final Compensation, plus 40% of any additional amount.

(c) \$300 per year of service (maximum \$6,000).

5. Early Retirement Benefit

➤ **Eligibility**

25 years of credited service, regardless of age.

➤ **Benefit Amount**

Computed as a normal retirement benefit, with a benefit reduction of the lesser of 3% for each year of age below age 55, or 3% for each year of credited service below 30 years. Such benefit shall not be less than \$300 per year of service (service not to exceed 20 years).

6. Postponed Retirement

➤ **Eligibility**

Retirement after first eligible for normal retirement benefit.

➤ **Benefit Amount**

Computed as a normal retirement benefit plus, under formula (b) only, 1% of the normal retirement benefit for each year of service credited after normal retirement date, but before age 70.

7. Disability Benefit – Service-Connected

➤ **Eligibility**

Total and permanent disability or partial disability incurred in the line of duty.



➤ **Benefit Amount**

Accrued retirement benefit at date of disability, with a benefit reduction for formulas (a) and (b) of 2% for each year by which service at date of disability is less than 20 years. For partial disability, the benefit is further reduced by a certain percentage determined by the Board. Such benefit shall not be less than \$300 per year of service (service not to exceed 20 years).

8. Disability Benefit – Not Service-Connected

➤ **Eligibility**

Total and permanent disability or partial disability, and 6 years of credited service.

➤ **Benefit Amount**

Accrued retirement benefit at date of disability, with a benefit reduction for formulas (a) and (b) of 5% for each of the first 5 years, and 3% for each of the next 5 years by which service at date of disability is less than 20 years. For partial disability, the benefit is further reduced by a certain percentage determined by the Board. Such benefit shall not be less than \$300 per year of service (service not to exceed 20 years).

9. Death Benefit – Service-Connected

➤ **Eligibility**

None.

➤ **Benefit Amount**

Computed as 80% of service-connected disability benefit, payable to the widow until death. If there is no surviving spouse, any dependent child(ren) under the age of 18 shall receive a benefit in the amount that a surviving spouse would have been entitled to. The total of all children's benefits shall not exceed the amount payable to the widow.



10. Death Benefit – Not Service-Connected

➤ **Eligibility**

6 years of credited service.

➤ **Benefit Amount**

Same as service-connected death benefit, except widow's benefit is computed as a non-service connected disability benefit.

11. Vested Termination

➤ **Eligibility**

6 years of credited service.

➤ **Benefit Amount**

The accrued retirement benefit, payable at age 60. If the member terminated with at least 20 years of credited service, the benefit is payable at age 55.

12. Non-Vested Termination

A member terminating for any cause, other than line of duty disability, with less than 6 years of credited service is entitled to a refund of all accumulated contributions.

13. Cost-of-Living Adjustments

For retirements before October 1, 2012, the cost of living adjustment (COLA) is based on the Consumer Price Index (CPI-U) from April 1 of the preceding year to March 31 of the year in which the increase is to be given, subject to a maximum increase of 1.50% per year.

For retirements on or after October 1, 2012, the COLA is also based on the Consumer Price Index (CPI-U), subject to a maximum increase of 1.00% per year.

For participants who enter the DROP on or after October 1, 2012, no COLA is granted while participating in the DROP.



14. Deferred Retirement Option Plan (DROP)

An active member eligible for normal retirement may continue employment with the City but elect to freeze the accrual of additional benefits as of the effective date of such election (as if the member had retired on such date). The member's normal retirement benefit payments will be credited to a DROP account. Member and City contributions to the Fund cease for the participant. A DROP participant's continued employment cannot normally exceed 60 months.

The DROP account will earn interest at 4% per annum for participants who entered the DROP prior to October 1, 2012 and 1.3% per year for participants who entered the DROP on or after to October 1, 2012. Cost-of-living adjustments are also credited to the benefits in the DROP account for participants who entered the DROP prior to October 1, 2012. Participants who entered the DROP on or after October 1, 2012 are not eligible for COLA payments while participating in the DROP.

Upon resignation, the participant then receives a distribution from the DROP account as well as regular monthly retirement benefits.

15. Retiree Health Insurance Premium Assistance

The Fund shall provide premium assistance for each covered retiree participating in the City group health insurance plan in the amount of \$56 per month (not indexed for inflation).

16. Normal Form of Benefit

For participants who retired prior to October 1, 2012, the normal form of benefit is a benefit payable for life. Upon death 80% of the benefit is continued for the lifetime of the beneficiary. For participants who retire on or after October 1, 2012, the normal form of benefit is a single life annuity. Upon death all benefit payments stop.



17. Annual Contributions

➤ **Member**

All members contribute 5.5% of compensation to the Fund.

➤ **City**

The City contributes an actuarially determined amount which, together with member contributions, equals the sum of the normal cost and payments for the amortization of the unfunded actuarial accrued liability over a period not exceeding 40 years (currently 11 years).