

# City of Los Angeles Fire and Police Pension Plan

Actuarial Valuation and Review Of Retirement and Other Postemployment Benefits (OPEB) as of June 30, 2014



This report has been prepared at the request of the Board of Commissioners to assist in administering the Fund. This valuation report may not otherwise be copied or reproduced in any form without the consent of the Board of Commissioners and may only be provided to other parties in its entirety. The measurements shown in this actuarial valuation may not be applicable for other purposes.

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100 Montgomery Street, Suite 500 San Francisco, CA 94104  
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November 12, 2014

Board of Fire and Police Pension Commissioners  
City of Los Angeles Fire and Police Pension Plan  
360 East Second Street, Suite 400  
Los Angeles, CA 90012

**Re: June 30, 2014 Actuarial Valuations**

Dear Board Members:

Enclosed please find the June 30, 2014 actuarial valuations for the retirement and the health programs.

As requested by LAFPP, we have attached the following supplemental schedules:

- Exhibit A - Summary of significant results for the two programs.
- Exhibit B - History of computed contribution rates for the two programs.

We look forward to discussing the reports and the enclosed schedules with the Board.

Sincerely,

A handwritten signature in black ink, appearing to read "Paul Angelo".

Paul Angelo, FSA, MAAA, FCA, EA  
Senior Vice President and Actuary

A handwritten signature in black ink, appearing to read "Andy Yeung".

Andy Yeung, ASA, MAAA, FCA, EA  
Vice President and Associate Actuary

EK/bqb  
Enclosures

5342842v1/07916.002

## Exhibit A

### City of Los Angeles Fire and Police Pension Plan Summary of Significant Valuation Results

	<u>June 30, 2014</u>	<u>June 30, 2013</u>	<u>Percent Change</u>
<b>I. Total Membership</b>			
A. Current Active Members	13,097	13,224	-0.96%
B. Current Vested Former Members <sup>(1)</sup>	131	133	-1.50%
C. Current Retirees, Beneficiaries, and Dependents	12,502	12,432	0.56%
<b>II. Valuation Salary</b>			
A. Total Annual Payroll	\$1,402,715,039	\$1,367,236,866	2.59%
B. Average Monthly Salary	8,925	8,616	3.59%
<b>III. Benefits to Current Retirees and Beneficiaries<sup>(2)</sup></b>			
A. Total Annual Benefits	\$787,236,799	\$771,307,548	2.07%
B. Average Monthly Benefit Amount	5,247	5,170	1.49%
<b>IV. Total System Assets<sup>(3)</sup></b>			
A. Actuarial Value	\$16,879,354,713	\$15,671,112,222	7.71%
B. Market Value	\$18,291,010,687	15,748,371,630	16.15%
<b>V. Unfunded Actuarial Accrued Liability (UAAL)</b>			
A. Retirement Benefits	\$2,435,749,038	\$2,974,712,451	-18.12%
B. Health Subsidy Benefits	1,582,408,441	1,620,392,962	-2.34%

<sup>(1)</sup> The June 30, 2014 valuation includes 76 terminated members due only a refund of member contributions. The June 30, 2013 valuation included 71 such members.

<sup>(2)</sup> Includes July COLA.

<sup>(3)</sup> Includes all assets for Retirement and Health Subsidy Benefits.

**Exhibit A (continued)**

**City of Los Angeles Fire and Police Pension Plan  
Summary of Significant Valuation Results**

VI. Budget Items	<u>FY 2015-2016</u>		<u>FY 2014-2015</u>		<u>Change</u>	
	Beginning of Year <sup>(1)</sup>	July 15	Beginning of Year	July 15	Beginning of Year	July 15
A. Retirement Benefits						
1. Normal Cost as a Percent of Pay	18.82%	18.88%	19.37%	19.44%	-0.55%	-0.56%
2. Amortization of UAAL	15.45%	15.49%	17.01%	17.06%	-1.56%	-1.57%
3. Allocated amount for administrative expenses	<u>0.91%</u>	<u>0.91%</u>	<u>N/A</u>	<u>N/A</u>	<u>0.91%</u>	<u>0.91%</u>
4. Total Retirement Contribution	35.18%	35.28%	36.38%	36.50%	-1.20%	-1.22%
B. Health Subsidy Contribution						
1. Normal Cost as a Percent of Pay	4.03%	4.04%	4.09%	4.10%	-0.06%	-0.06%
2. Amortization of UAAL	7.01%	7.03%	7.22%	7.24%	-0.21%	-0.21%
3. Allocated amount for administrative expenses	<u>0.06%</u>	<u>0.06%</u>	<u>N/A</u>	<u>N/A</u>	<u>0.06%</u>	<u>0.06%</u>
4. Total Health Contribution	11.10%	11.13%	11.31%	11.34%	-0.21%	-0.21%
C. Total Contribution (A+B)	46.28%	46.41%	47.69%	47.84%	-1.41%	-1.43%

<sup>(1)</sup> Alternative contribution payment date for FY 2015-2016:

	<u>Retirement</u>	<u>Health</u>	<u>Total</u>
End of Pay Periods	36.47%	11.50%	47.97%

**Exhibit A (continued)**

**City of Los Angeles Fire and Police Pension Plan  
Summary of Significant Valuation Results**

<b>VII</b>	<b>Funded Ratio</b>	<b><u>June 30, 2014</u></b>	<b><u>June 30, 2013</u></b>	<b><u>Change</u></b>
	(Based on Valuation Value of Assets)			
	A. Retirement Benefits	86.6%	83.1%	3.5%
	B. Health Subsidy Benefits	43.2%	38.5%	4.7%
	C. Total	80.8%	77.3%	3.5%
<b>VIII</b>	<b>Funded Ratio</b>	<b><u>June 30, 2014</u></b>	<b><u>June 30, 2013</u></b>	<b><u>Change</u></b>
	(Based on Market Value of Assets)			
	A. Retirement Benefits	93.8%	83.5%	10.3%
	B. Health Subsidy Benefits	46.8%	38.7%	8.1%
	C. Total	87.5%	77.7%	9.8%

## Exhibit B

### City of Los Angeles Fire and Police Pension Plan Computed Contribution Rates<sup>(1)</sup> – Historical Comparison

<u>Valuation Date</u>	<u>Retirement</u>	<u>Health</u>	<u>Total</u>	<u>Valuation Payroll (In Thousands)</u>
06/30/2005	20.56%	5.03%	25.59%	\$1,037,445
06/30/2006	22.12%	8.48% <sup>(2)</sup>	30.65%	1,092,815
06/30/2007	19.95% <sup>(3)</sup>	8.20% <sup>(2),(3)</sup>	28.15% <sup>(3)</sup>	1,135,592
06/30/2008	20.58%	8.76%	29.34%	1,206,589
06/30/2009	22.26%	9.00%	31.26%	1,357,249
06/30/2010	28.20% <sup>(4)</sup>	12.27% <sup>(5)</sup>	40.47%	1,356,986
06/30/2011 <sup>(2)</sup>	32.56%	11.34%	43.90%	1,343,963
06/30/2012 <sup>(2)</sup>	35.93%	11.22% <sup>(6)</sup>	47.15%	1,341,914
06/30/2013	37.82%	11.69%	49.51%	1,367,237
06/30/2014	36.47%	11.50%	47.97%	1,402,715

<sup>(1)</sup> Contributions are assumed to be made at the end of the pay period.

<sup>(2)</sup> Before reflecting phase-in policy.

<sup>(3)</sup> Revised to recognize payment of Harbor Port Police June 30, 2007 UAAL during 2007-2008 fiscal year. This reduced the UAAL rate by 0.02% and 0.00% for the retirement plan and health plan, respectively.

<sup>(4)</sup> Before reflecting the 2% additional employee contributions for unfrozen health subsidies.

<sup>(5)</sup> Before reflecting the freeze on the medical subsidy for certain employees retiring on or after July 15, 2011.

<sup>(6)</sup> After reflecting updated Tier 6 contribution rate as provided in Segal's letter dated February 27, 2013.



# City of Los Angeles Fire and Police Pension Plan

Actuarial Valuation and Review as of  
June 30, 2014

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*November 12, 2014*

*Board of Fire and Police Pension Commissioners  
City of Los Angeles Fire and Police Pension Plan  
360 East Second Street, Suite 400  
Los Angeles, CA 90012*

*Dear Board Members:*

*We are pleased to submit this Actuarial Valuation and Review as of June 30, 2014. It summarizes the actuarial data used in the valuation, establishes the funding requirements for fiscal 2015-2016 and analyzes the preceding year's experience.*

*This report was prepared in accordance with generally accepted actuarial principles and practices at the request of the Board to assist in administering the Plan. The census information and financial information on which our calculations were based was prepared by LAFPP. That assistance is gratefully acknowledged. The actuarial calculations were completed under the supervision of Andy Yeung, ASA, MAAA, FCA, Enrolled Actuary.*

*The measurements shown in this actuarial valuation may not be applicable for other purposes. Future actuarial measurements may differ significantly from the current measurements 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); and changes in plan provisions or applicable law.*

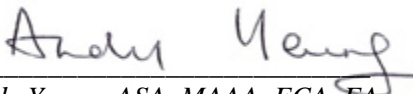
*The actuarial calculations were directed under our supervision. We are Members of the American Academy of Actuaries and we meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of our knowledge, the information supplied in the actuarial valuation is complete and accurate. Further, in our opinion, the assumptions as approved by the Board of Commissioners are reasonably related to the experience of and the expectations for the Plan.*

*We look forward to reviewing this report at your next meeting and to answering any questions.*

*Sincerely,*

*Segal Consulting, a Member of The Segal Group, Inc.*

By:   
*Paul Angelo, FSA, MAAA, FCA, EA  
Senior Vice President and Actuary*

  
*Andy Yeung, ASA, MAAA, FCA, EA  
Vice President and Associate Actuary*

*EK/bqb*



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## Purpose

This report has been prepared by Segal Consulting to present a valuation of the City of Los Angeles Fire and Police Pension Plan as of June 30, 2014. The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits. The contribution requirements presented in this report are based on:

- The benefit provisions of the Pension Plan, as administered by the Board of Commissioners;
- The characteristics of covered active members, inactive vested members, and retired members and beneficiaries as of June 30, 2014, provided by LAFPP;
- The assets of the Plan as of June 30, 2014, provided by LAFPP;
- Economic assumptions regarding future salary increases and investment earnings; and
- Other actuarial assumptions, regarding employee terminations, retirement, death, etc.

## Significant Issues in Valuation Year

The following key findings were the result of this actuarial valuation:

*Reference: Pg. 61*

- The results of the valuation reflect changes in the economic and non-economic actuarial assumptions as recommended by Segal and adopted by the Board for the June 30, 2014 valuation. These changes were documented in our Review of Economic Actuarial Assumptions and our Actuarial Experience Study (of the non-economic assumptions) and are also outlined in Section 4, Exhibit V of this report. These assumption changes together with a change to an explicit loading for administrative expenses in the contribution rates resulted in an increase in the employer contribution rate of 0.26% of payroll (payable at the beginning of the year).

*Reference: Pg. 59 and Pg. 45*

- The ratio of the valuation value of assets to actuarial accrued liabilities increased from 83.1% to 86.6%. On a market value of assets basis, the funded ratio increased from 83.5% to 93.8%. The Unfunded Actuarial Accrued Liability (UAAL) has decreased from \$2.975 billion to \$2.436 billion. The increase in the funded ratio and the reduction in the UAAL are primarily the results of less than expected COLA increases during 2013/2014 for retirees, beneficiaries, and DROP members, a greater than expected return on investment (after smoothing), and other favorable actuarial experience during 2013/2014. A complete reconciliation of the Plan's unfunded actuarial accrued liability is provided in Section 3, Exhibit G.

*Reference: Pg. 20*

- The aggregate beginning-of-year employer rate calculated in this valuation has decreased from 36.38% of payroll to 35.18% of payroll. Using a projected annual payroll of \$1.403 billion as of June 30, 2014, there would be a decrease in contributions from \$510 million to \$493 million. The decrease was primarily due to lower than expected COLA increases

during 2013/2014 for retirees, beneficiaries, and DROP members and a greater than expected return on investments (after smoothing), offset somewhat by some gain layers being fully amortized and a change to an explicit loading for administrative expenses in contributions.

- The employer contribution rates provided in this report have been developed assuming that they will be made by the City at either: (1) the beginning of the fiscal year, (2) on July 15, or (3) throughout the year (i.e., the City will pay contributions at the end of every pay period).
- As indicated in Section 2, Subsection B of this report, the total unrecognized investment gain as of June 30, 2014 is \$1.412 billion for the assets for Retirement and Health Subsidy Benefits. This investment gain will be recognized in the determination of the actuarial value of assets for funding purposes in the next few years. For comparison purposes, the total unrecognized investment gain as of June 30, 2013 was \$77.3 million.
- The results of this valuation reflect a change to combine the \$77.3 million in deferred gains as of June 30, 2013 and recognize those gains in level amounts over a six-year period starting July 1, 2013. This adjustment was approved by the Board.
- The unrecognized investment gains represent about 7.7% of the market value of assets. Unless offset by future investment losses or other unfavorable experience, the recognition of the \$1.412 billion market gains is expected to have an impact on the Plan's future funded ratio and the aggregate employer contributions. This potential impact may be illustrated as follows:
  - If the deferred gains were recognized immediately in the valuation value of assets, the funded percentage would increase from 86.6% to 93.8%.
  - If the deferred gains were recognized immediately in the valuation value of assets, the aggregate beginning-of-year employer contribution rate would decrease from 35.2% of payroll to 28.4% of payroll.
- The Governmental Accounting Standards Board (GASB) approved two new Statements affecting the reporting of pension liabilities for accounting purposes. Statement 67 replaces Statement 25 and is for plan reporting, effective with the fiscal year ending June 30, 2014. Statement 68 replaces Statement 27 and is for employer reporting, effective with the fiscal year ending June 30, 2015. The information needed to comply with Statements 67 and 68 will be provided in separate reports.
- The actuarial valuation report as of June 30, 2014 is based on financial and demographic information as of that date. Changes subsequent to that date are not reflected and will impact the actuarial cost of the Plan.

*Reference: Pg. 5*

## Summary of Key Valuation Results

	2014	2013
<b>Contributions calculated as of June 30:</b>		
Recommended as a percent of pay (note there is a 12-month delay until the rate is effective)		
At the beginning of year	35.18%	36.38% <sup>(1)</sup>
On July 15	35.28%	36.50% <sup>(1)</sup>
At the end of each biweekly pay period	36.47%	37.77% <sup>(1)</sup>
<b>Funding elements for plan year beginning July 1:</b>		
Normal cost	\$396,735,971	\$404,857,626 <sup>(1)</sup>
Valuation value of retirement assets (VVA)	15,678,480,269	14,657,712,639
Market value of retirement assets	16,989,704,585	14,729,975,934
Actuarial accrued liability	18,114,229,307	17,632,425,090
Unfunded actuarial accrued liability on valuation value of retirement assets basis	2,435,749,038	2,974,712,451
Unfunded actuarial accrued liability on market value of retirement assets basis	1,124,524,722	2,902,449,156
Funded ratio on valuation value of retirement assets basis <sup>(2)</sup>	86.6%	83.1%
Funded ratio on market value of retirement assets basis	93.8%	83.5%
<b>Demographic data for plan year beginning July 1:</b>		
Number of retired members and beneficiaries	12,502	12,432
Number of vested former members <sup>(3)</sup>	131	133
Number of active members (includes DROP members)	13,097	13,224
Projected total payroll	\$1,402,715,039	\$1,367,236,866
Projected average payroll	107,102	103,391

<sup>(1)</sup> Revised to reflect payroll as of June 30, 2014.

<sup>(2)</sup> The funded ratios on VVA basis excluding Harbor Port Police are 86.6% and 83.2% for 2014 and 2013, respectively.

<sup>(3)</sup> The June 30, 2014 valuation includes 76 terminated members due only a refund of member contributions. The June 30, 2013 valuation included 71 such members.

## Actuarial Certification

November 12, 2014

This is to certify that Segal Consulting has conducted an actuarial valuation of the City of Los Angeles Fire and Police Pension Plan retirement program as of June 30, 2014, in accordance with generally accepted actuarial principles and practices. Actuarial valuations are performed annually for this retirement program with the last valuation completed on June 30, 2013. The actuarial calculations presented in this report have been made on a basis consistent with our understanding of the historical funding methods used in determination of the liability for retirement benefits.

The actuarial valuation is based on the plan of benefits summarized in Exhibit VI and on participant and financial data provided by LAFPP.

The actuarial computations made are for funding plan benefits. Accordingly, additional determinations will be needed for other purposes, such as satisfying financial accounting requirements under GASB Statements 67 and 68 and judging benefit security at termination.

In addition to all schedules that are shown in the actuarial section of the CAFR, a listing of supporting schedules included in the statistical and financial sections of the Plan's CAFR prepared by Segal Consulting is provided below:

- 1) Schedule of funding progress
- 2) Schedule of employer contributions
- 3) Supplementary Information Required by the GASB (Exhibit IV)

To the best of our knowledge, this report is complete and accurate and in our opinion presents the Plan's current funding information. The undersigned is a Member of the American Academy of Actuaries and meets the qualifications to provide the actuarial opinion herein.

---

Andy Yeung, ASA, MAAA, FCA, EA  
Vice President and Associate Actuary

**A. MEMBER DATA**

The Actuarial Valuation and Review considers the number and demographic characteristics of covered members, including active members, non-vested members (entitled to a refund of member contributions) and vested terminated members, retired members and beneficiaries.

This section presents a summary of significant statistical data on these member groups.

More detailed information for this valuation year and the preceding valuation can be found in Section 3, Exhibits A, B, and C.

*A historical perspective of how the member population has changed over the past ten valuations can be seen in this chart.*

**CHART 1**  
**Member Population: 2005 – 2014**

<b>Year Ended June 30</b>	<b>Active Members<sup>(1)</sup></b>	<b>DROP Members</b>	<b>Vested Terminated Members<sup>(2)</sup></b>	<b>Retired Members and Beneficiaries</b>	<b>Ratio of Non-Actives to Actives</b>
2005	12,656	1,178	0	11,746	0.93
2006	12,903	1,206	59	11,815	0.92
2007	13,218	1,226	85	11,974	0.91
2008	13,495	1,144	81	12,182	0.91
2009	13,802	1,024	61	12,327	0.90
2010	13,654	1,089	58	12,348	0.91
2011	13,432	1,314 <sup>(3)</sup>	59	12,392 <sup>(4)</sup>	0.93
2012	13,396	1,193	62	12,380	0.93
2013	13,224	1,191	133	12,432	0.95
2014	13,097	1,277	131	12,502	0.96

<sup>(1)</sup> Includes DROP members provided in the next column.

<sup>(2)</sup> Includes terminated members due only a refund of contributions (beginning with the June 30, 2013 valuation).

<sup>(3)</sup> Includes 113 members who made an election to participate in the DROP during the period July 1, 2011 to July 14, 2011.

<sup>(4)</sup> Includes 13 new retirees during the period July 1, 2011 to July 14, 2011.

**Active Members (Including DROP Members)**

Plan costs are affected by the age, years of service and payroll of active members. In this year's valuation, there were 13,097 active members with an average age of 42.4, average years of service of 15.4 years and average payroll of \$107,102. The 13,224 active members in the prior valuation had an average age of 41.9, average service of 15.0 years and average payroll of \$103,391.

**Inactive Members**

In this year's valuation, there were a total of 131 members with a vested right to a deferred or immediate vested benefit or a return of member contributions versus 133 in the prior valuation.

*These graphs show a distribution of active members by age and by years of service.*

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**CHART 2**

**Distribution of Active Members (Including DROP Members) by Age as of June 30, 2014**

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**CHART 3**

**Distribution of Active Members (Including DROP Members) by Years of Service as of June 30, 2014**

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**Retired Members and Beneficiaries**

As of June 30, 2014, 10,043 retired members and 2,459 beneficiaries were receiving total monthly benefits of \$65,603,067. For comparison, in the previous valuation, there were 10,040 retired members and 2,392 beneficiaries receiving monthly benefits of \$64,275,629.

Please note that the monthly benefits provided have been adjusted for the COLA granted effective for the month of July.

*These graphs show a distribution of the current retired members based on their monthly amount and age, by type of pension.*

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**CHART 4**  
**Distribution of Retired Members by Type and by Monthly Amount as of June 30, 2014 (Includes July 1 COLA)**

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**CHART 5**  
**Distribution of Retired Members by Type and by Age as of June 30, 2014 (Includes July 1 COLA)**

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**B. FINANCIAL INFORMATION**

Retirement plan funding anticipates that, over the long term, both contributions and net investment earnings (less investment fees and administrative expenses) will be needed to cover benefit payments.

Retirement plan assets change as a result of the net impact of these income and expense components. Additional financial information, including a summary of these transactions for the valuation year, is presented in Section 3, Exhibits D, E and F.

*The chart depicts the components of changes in the actuarial value of assets over the last ten years. Note: The first bar represents increases in assets during each year while the second bar details the decreases.*

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**CHART 6**

**Comparison of Increases and Decreases in the Actuarial Value of Assets for Years Ended June 30, 2005 – 2014**

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It is desirable to have level and predictable plan costs from one year to the next. For this reason, the Board of Commissioners has approved an asset valuation method that gradually adjusts to market value. Under this valuation method, the full value of market fluctuations is not recognized in a single year and, as a result, the asset value and the plan costs are more stable.

The amount of the adjustment to recognize market value is treated as income, which may be positive or negative. Realized and unrealized gains and losses are treated equally and, therefore, the sale of assets has no immediate effect on the actuarial value.

The chart shows the determination of the actuarial value of assets as of the valuation date.

#### CHART 7

#### Determination of Actuarial Value of Assets for Year Ended June 30, 2014

1. Market value of assets (for Retirement and Health Subsidy Benefits)				\$18,291,010,687
2. Calculation of unrecognized return <sup>(1)</sup>	Original Amount	Portion Not Recognized	Amount Not Recognized	
(a) Year ended June 30, 2014	\$1,571,818,656	6/7	\$1,347,273,134	
(b) Combined Net Deferred Gain as of June 30, 2013 <sup>(2)</sup>	77,259,408	5/6	64,382,840	
(c) Total unrecognized return				1,411,655,974
3. Preliminary actuarial value: (1) - (2c)				16,879,354,713
4. Adjustment to be within 40% corridor				0
5. Final actuarial value of assets: (3) + (4)				<u>\$16,879,354,713</u>
6. Actuarial value as a percentage of market value: (5) ÷ (1)				92.3%
7. Market value of retirement assets				\$16,989,704,585
8. Valuation value of retirement assets: (5) ÷ (1) x (7)				\$15,678,480,269
9. Deferred return recognized in each of the next 6 years (for Retirement and Health Subsidy Benefits):				
(a) Amount recognized on June 30, 2015				\$237,422,090
(b) Amount recognized on June 30, 2016				237,422,090
(c) Amount recognized on June 30, 2017				237,422,090
(d) Amount recognized on June 30, 2018				237,422,090
(e) Amount recognized on June 30, 2019				237,422,090
(f) Amount recognized on June 30, 2020				<u>224,545,524</u>
(g) Subtotal (may not total exactly due to rounding)				\$1,411,655,974

<sup>(1)</sup> Total return minus expected return on a market value basis

<sup>(2)</sup> Net deferred unrecognized investment gains as of June 30, 2013 have been combined into a single layer to be recognized over the six-year period effective July 1, 2013

The actuarial value, market value and valuation value of assets are representations of LAFPP's financial status. As investment gains and losses are gradually taken into account, the actuarial value of assets tracks the market value of assets. The portion of the total actuarial value of assets allocated for retirement benefits, based on multiplying the total actuarial value of assets by the ratio of market value of retirement assets to the market value of both retirement and health assets, is shown as the valuation

value of assets. The valuation value of assets is significant because LAFPP's liabilities are compared to these assets to determine what portion, if any, remains unfunded. Amortization of the unfunded actuarial accrued liability is an important element in determining the contribution requirement.

*This chart shows the change in the actuarial value of assets versus the market value over the past ten years.*

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**CHART 8****Market Value of Assets\*, Actuarial Value of Assets\* and Valuation Value of Assets\*\* as of June 30, 2005 – 2014**

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\* *Retirement and Health assets*

\*\* *Retirement only assets*

### C. ACTUARIAL EXPERIENCE

To calculate the required contribution, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year actual experience is measured against the assumptions. If overall experience is more favorable than anticipated (an actuarial gain), the contribution requirement will decrease from the previous year. On the other hand, the contribution requirement will increase if overall actuarial experience is less favorable than expected (an actuarial loss).

Taking account of experience gains or losses in one year without making a change in assumptions reflects the belief that the single year's experience was a short-term

development and that, over the long term, experience will return to the original assumptions. For contribution requirements to remain stable, assumptions should approximate experience.

If assumptions are changed, the contribution requirement is adjusted to take into account a change in experience anticipated for all future years.

The total net gain of \$566,140,896 was due mainly to less than expected COLA increases for retirees, beneficiaries, and DROP members as well as an investment gain of \$174,422,187. A discussion of the major components of the actuarial experience is on the following pages.

*This chart provides a summary of the actuarial experience during the past year.*

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#### CHART 9 Actuarial Experience for Year Ended June 30, 2014

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1. Net gain from investments <sup>(1)</sup>	\$174,422,187
2. Net gain from other experience <sup>(2)</sup>	<u>391,718,709</u>
3. Net experience gain: (1) + (2)	\$566,140,896

---

<sup>(1)</sup> Details in Chart 10.

<sup>(2)</sup> Details in Chart 13. The net gain is attributed to actual liability experience from June 30, 2013 to June 30, 2014, compared to the projected experience as predicted by the actuarial assumptions as of June 30, 2013.

### Investment Rate of Return

A major component of projected asset growth is the assumed rate of return. The assumed return should represent the expected long-term rate of return, based on LAFPP's investment policy. For valuation purposes, the assumed rate of return on the actuarial value of assets was 7.75% for the 2013-2014 plan year (based on the June 30, 2013 valuation). The actual rate of return on the actuarial value of assets basis for the 2013-2014 plan year was 9.29%.

Since the actual return for the year was greater than the assumed return, LAFPP experienced an actuarial gain during the year ended June 30, 2014 with regard to its investments.

*This chart shows the gain due to investment experience.*

**CHART 10**  
**Actuarial Value Investment Experience for Year Ended June 30, 2014**

	<b>All Assets<sup>(1)</sup></b>	<b>Assets for Retirement Only</b>
1. Actual return	\$1,468,399,449	\$1,314,660,536
2. Average value of assets	15,806,319,417	14,712,752,889
3. Actual rate of return: (1) ÷ (2)	9.29%	8.94%
4. Assumed rate of return	7.75%	7.75%
5. Expected return: (2) x (4)	\$1,224,989,755	\$1,140,238,349
6. Actuarial gain: (1) – (5)	<u>\$243,409,694</u>	<u>\$174,422,187</u>

<sup>(1)</sup> Includes all assets for Retirement and Health Subsidy Benefits.

Because actuarial planning is long term, it is useful to see how the assumed investment rate of return has followed actual experience over time. The chart below shows the rate of return on an actuarial basis compared to the market value investment return for all Retirement and Health Subsidy Benefits assets for the last ten years, including five-year and ten-year averages.

**CHART 11**  
**Investment Return<sup>(1)</sup> – Actuarial Value vs. Market Value: 2005 – 2014**

Year Ended June 30	Actuarial Value Investment Return		Market Value Investment Return	
	Amount	Percent	Amount	Percent
2005	\$259,388,778	2.12%	\$1,131,871,641	9.83%
2006	901,268,460	7.44%	1,520,383,435	12.40%
2007	1,590,968,304	12.57%	2,450,077,668	18.25%
2008	1,414,391,128	10.20%	-776,503,003	-5.01%
2009	557,346,783	3.75%	-2,968,762,917	-20.74%
2010	360,741,904	2.40%	1,612,772,227	14.74%
2011	568,411,044	3.78%	2,585,948,784	21.22%
2012	320,400,668	2.10%	93,546,777	0.65%
2013	827,790,619	5.43%	1,952,254,466	13.75%
2014	1,468,399,449	9.29%	2,802,796,015	17.65%
Five-Year Average Return		4.57%		13.38%
Ten-Year Average Return		5.85%		7.49%

<sup>(1)</sup> Includes all assets for Retirement and Health Subsidy Benefits

Subsection B described the actuarial asset valuation method that gradually takes into account fluctuations in the market value rate of return. The effect of this is to stabilize the actuarial rate of return, which contributes to leveling pension plan costs.

*This chart illustrates how this leveling effect has actually worked over the years 2005 - 2014.*

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**CHART 12**

**Market and Actuarial Rates of Return for Years Ended June 30, 2005 - 2014**

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### Other Experience

There are other differences between the expected and the actual experience that appear when the new valuation is compared with the projections from the previous valuation. These include:

- the extent of turnover among the participants,
- retirement experience (earlier or later than expected),
- mortality (more or fewer deaths than expected),

- the number of disability retirements, and
- salary increases different than assumed.

The net gain from this other experience for the year ended June 30, 2014 amounted to \$391,718,709, which is 2.1% of the actuarial accrued liability and within the range of reasonable expectations.

A brief summary of the demographic gain/(loss) experience of the LAFPP for the year ended June 30, 2014 is shown in the chart below.

*The chart shows elements of the experience gain for the most recent year.*

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### CHART 13

#### Experience Due to Changes in Demographics for Year Ended June 30, 2014

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1. Gain due to lower than expected salary increases for continuing actives	\$35,453,042
2. Gain due to lower than expected COLA increases for retirees, beneficiaries, and DROP members	303,912,559
3. Miscellaneous gain	<u>52,353,108</u>
4. Net gain	\$391,718,709

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**D. RECOMMENDED CONTRIBUTION**

The amount of annual contribution required to fund the Plan is comprised of an employer normal cost payment and a payment on the unfunded actuarial accrued liability, separately for each Tier. The total amount is then divided by the projected payroll for active members to determine the contribution rate of 35.18% of payroll if paid at beginning of year.

**CHART 14**  
**Recommended Contribution**

**Tier 1 Members**

1. Total normal cost
2. Expected employee contributions, discounted to beginning of year
3. Employer normal cost: (1) + (2)
4. Actuarial accrued liability
5. Valuation value of assets
6. Unfunded actuarial accrued liability
7. Amortization of unfunded accrued liability
8. Allocated amount for admin expenses, calculated with payroll in 12.
9. Total recommended contribution, payable July 1
10. Total recommended contribution, payable July 15
11. Total recommended contribution, payable biweekly
12. Projected payroll used for developing normal cost rate

June 30, 2014			June 30, 2013		
Amount	% of Payroll		Amount	% of Payroll	
\$0	N/A		\$0	N/A	
0	N/A		0	N/A	
0	N/A		0	N/A	
114,064,299			129,264,317		
-65,249,777			-60,385,842		
179,314,076			189,650,159		
15,435,235	N/A		16,369,906	N/A	
0	N/A		N/A	N/A	
15,435,235	N/A		16,369,906	N/A	
15,481,817	N/A		16,420,898	N/A	
16,003,592	N/A		16,992,404	N/A	
0			N/A		

**Tier 2 Members**

1. Total normal cost
2. Expected employee contributions, discounted to beginning of year
3. Employer normal cost: (1) + (2)
4. Actuarial accrued liability
5. Valuation value of assets
6. Unfunded actuarial accrued liability
7. Amortization of unfunded accrued liability<sup>(1)</sup>
8. Allocated amount for admin expenses, calculated with payroll in 12.
9. Total recommended contribution, payable July 1
10. Total recommended contribution, payable July 15
11. Total recommended contribution, payable biweekly
12. Projected payroll used for developing normal cost rate

June 30, 2014			June 30, 2013		
Amount	% of Payroll		Amount <sup>(2)</sup>	% of Payroll	
\$1,689,850	25.42%		\$1,697,365	25.53%	
-19,614	-0.30%		-15,956	-0.24%	
1,670,236	25.12%		1,681,409	25.29%	
5,466,934,977			5,750,599,959		
5,336,139,517			5,325,896,864		
130,795,460			424,703,095		
29,083,535	2.09%		46,471,998	3.34%	
60,276	0.91%		N/A	N/A	
30,814,047	N/A		48,153,407	N/A	
30,907,041	N/A		48,303,404	N/A	
31,948,684	N/A		49,984,535	N/A	
6,648,510			N/A		

(1) UAAL rate is calculated using the City's total payroll of \$1,391,377,190.

(2) Amounts are revised to reflect payroll as of June 30, 2014.

**CHART 14**  
**Recommended Contribution (Continued)**

**Tier 3 Members**

1. Total normal cost
2. Expected employee contributions, discounted to beginning of year
3. Employer normal cost: (1) + (2)
4. Actuarial accrued liability
5. Valuation value of assets
6. Unfunded actuarial accrued liability
7. Amortization of unfunded accrued liability<sup>(1)</sup>
8. Allocated amount for admin expenses, calculated with payroll in 12.
9. Total recommended contribution, payable July 1
10. Total recommended contribution, payable July 15
11. Total recommended contribution, payable biweekly
12. Projected payroll used for developing normal cost rate

<b>June 30, 2014</b>		<b>June 30, 2013</b>	
<u>Amount</u>	<u>% of Payroll</u>	<u>Amount<sup>(2)</sup></u>	<u>% of Payroll</u>
\$24,832,799	25.57%	\$25,707,063	26.47%
<u>-8,707,801</u>	<u>-8.97%</u>	<u>-8,721,172</u>	<u>-8.98%</u>
16,124,998	16.60%	16,985,891	17.49%
941,455,784		885,747,303	
778,005,144		697,379,467	
163,450,640		188,367,836	
25,667,507	1.84%	19,340,143	1.39%
880,485	0.91%	N/A	N/A
42,672,990	N/A	36,326,034	N/A
42,801,773	N/A	36,439,189	N/A
44,244,298	N/A	37,707,403	N/A
97,117,729		N/A	

**Tier 4 Members**

1. Total normal cost
2. Expected employee contributions, discounted to beginning of year
3. Employer normal cost: (1) + (2)
4. Actuarial accrued liability
5. Valuation value of assets
6. Unfunded actuarial accrued liability
7. Amortization of unfunded accrued liability<sup>(1)</sup>
8. Allocated amount for admin expenses, calculated with payroll in 12.
9. Total recommended contribution, payable July 1
10. Total recommended contribution, payable July 15
11. Total recommended contribution, payable biweekly
12. Projected payroll used for developing normal cost rate

<b>June 30, 2014</b>		<b>June 30, 2013</b>	
<u>Amount</u>	<u>% of Payroll</u>	<u>Amount<sup>(2)</sup></u>	<u>% of Payroll</u>
\$10,134,011	25.31%	\$9,931,972	24.81%
<u>-3,190,997</u>	<u>-7.97%</u>	<u>-3,234,596</u>	<u>-8.08%</u>
6,943,014	17.34%	6,697,376	16.73%
486,428,955		457,533,164	
363,378,216		331,958,922	
123,050,739		125,574,242	
13,480,767	0.97%	10,713,604	0.77%
362,938	0.91%	N/A	N/A
20,786,719	N/A	17,410,980	N/A
20,849,451	N/A	17,465,215	N/A
21,552,129	N/A	18,073,067	N/A
40,032,133		N/A	

(1) UAAL rate is calculated using the City's total payroll of \$1,391,377,190.

(2) Amounts are revised to reflect payroll as of June 30, 2014.

**CHART 14**  
**Recommended Contribution (Continued)**

**Tier 5 Members (without Harbor Port Police)**

1. Total normal cost
2. Expected employee contributions, discounted to beginning of year
3. Employer normal cost: (1) + (2)
4. Actuarial accrued liability
5. Valuation value of assets
6. Unfunded actuarial accrued liability
7. Amortization of unfunded accrued liability
8. Allocated amount for admin expenses, calculated with payroll in 12.
9. Total recommended contribution, payable July 1
10. Total recommended contribution, payable July 15
11. Total recommended contribution, payable biweekly
12. Projected payroll used for developing normal cost rate

June 30, 2014		June 30, 2013	
Amount	% of Payroll	Amount <sup>(1)</sup>	% of Payroll
\$343,833,459	28.68%	\$351,124,990	29.30%
<u>-114,384,290</u>	<u>-9.54%</u>	<u>-114,684,852</u>	<u>-9.57%</u>
229,449,169	19.14%	236,440,138	19.73%
<i>(Tiers 5 and 6 are combined. See table on the next page.)</i>		<i>(Tiers 5 and 6 are combined. See table on the next page.)</i>	
126,885,623	10.59%	138,892,104	11.59%
10,864,700	0.91%	N/A	N/A
367,199,492	30.64%	375,332,242	31.32%
368,307,665	30.73%	376,501,398	31.42%
380,720,537	31.77%	389,604,992	32.51%
1,198,378,807		N/A	

**Tier 6 Members (without Harbor Port Police)**

1. Total normal cost
2. Expected employee contributions, discounted to beginning of year
3. Employer normal cost: (1) + (2)
4. Actuarial accrued liability
5. Valuation value of assets
6. Unfunded actuarial accrued liability
7. Amortization of unfunded accrued liability
8. Allocated amount for admin expenses, calculated with payroll in 12.
9. Total recommended contribution, payable July 1
10. Total recommended contribution, payable July 15
11. Total recommended contribution, payable biweekly
12. Projected payroll used for developing normal cost rate

June 30, 2014		June 30, 2013	
Amount	% of Payroll	Amount <sup>(1)</sup>	% of Payroll
\$12,873,788	26.16%	\$12,949,443	26.32%
<u>-5,219,797</u>	<u>-10.61%</u>	<u>-5,215,201</u>	<u>-10.60%</u>
7,653,991	15.55%	7,734,242	15.72%
<i>(Tiers 5 and 6 are combined. See table on the next page.)</i>		<i>(Tiers 5 and 6 are combined. See table on the next page.)</i>	
5,209,350	10.59%	5,702,281	11.59%
446,055	0.91%	N/A	N/A
13,309,396	27.05%	13,436,523	27.31%
13,349,562	27.13%	13,478,378	27.40%
13,799,475	28.05%	13,947,473	28.35%
49,200,011		N/A	

(1) Amounts are revised to reflect payroll as of June 30, 2014.

**CHART 14**  
**Recommended Contribution (Continued)**

**Combined Tiers 5 and 6 UAAL Contribution Rate Calculations for the City**

4. Actuarial accrued liability
5. Valuation value of assets
6. Unfunded actuarial accrued liability
7. Amortization of unfunded accrued liability
- Projected payroll used for developing combined UAAL rate

June 30, 2014				June 30, 2013	
Tier 5	Tier 6	Combined Tiers 5 and 6		Combined Tiers 5 and 6	
		Amount	% of Payroll	Amount <sup>(1)</sup>	% of Payroll
\$11,047,022,657	\$12,901,427	\$11,059,924,084		\$10,367,138,459	
		9,229,523,594		8,332,485,531	
		1,830,400,490		2,034,652,928	
		132,094,973	10.59%	144,594,385	11.59%
1,198,378,807	49,200,011	1,247,578,818		N/A	

**All Tiers Combined (without Harbor Port Police)**

1. Total normal cost
2. Expected employee contributions, discounted to beginning of year
3. Employer normal cost: (1) + (2)
4. Actuarial accrued liability
5. Valuation value of assets
6. Unfunded actuarial accrued liability
7. Amortization of unfunded accrued liability
8. Allocated amount for admin expenses, calculated with payroll in 12.
9. Total recommended contribution, payable July 1
10. Total recommended contribution, payable July 15
11. Total recommended contribution, payable biweekly
12. Projected payroll used for developing normal cost rate

June 30, 2014		June 30, 2013	
Amount	% of Payroll	Amount <sup>(1)</sup>	% of Payroll
\$393,363,907	28.26%	\$401,410,833	28.85%
<u>-131,522,499</u>	<u>-9.45%</u>	<u>-131,871,777</u>	<u>-9.48%</u>
261,841,408	18.81%	269,539,056	19.37%
18,068,808,099		17,590,283,202	
15,641,796,694		14,627,334,942	
2,427,011,405		2,962,948,260	
215,762,017	15.51%	237,490,036	17.07%
12,614,454	0.91%	N/A	N/A
490,217,879	35.23%	507,029,092	36.44%
491,697,309	35.34%	508,608,482	36.55%
508,268,715	36.53%	526,309,874	37.83%
1,391,377,190		N/A	

(1) Amounts are revised to reflect payroll as of June 30, 2014.

**CHART 14**  
**Recommended Contribution (Continued)**

**Harbor Port Police Tier 5**

1. Total normal cost
2. Expected employee contributions, discounted to beginning of year
3. Employer normal cost: (1) + (2)
4. Actuarial accrued liability
5. Valuation value of assets
6. Unfunded actuarial accrued liability
7. Amortization of unfunded accrued liability
8. Allocated amount for admin expenses, calculated with payroll in 12.
9. Total recommended contribution, payable July 1
10. Total recommended contribution, payable July 15
11. Total recommended contribution, payable biweekly
12. Projected payroll used for developing normal cost rate

<b>June 30, 2014</b>		<b>June 30, 2013</b>	
<u>Amount</u>	<u>% of Payroll</u>	<u>Amount<sup>(1)</sup></u>	<u>% of Payroll</u>
\$3,311,219	29.81%	\$3,383,878	30.47%
<u>-1,143,976</u>	<u>-10.30%</u>	<u>-1,140,546</u>	<u>-10.27%</u>
2,167,243	19.51%	2,243,332	20.20%
<i>(Tiers 5 and 6 are combined. See table on the next page.)</i>		<i>(Tiers 5 and 6 are combined. See table on the next page.)</i>	
886,208	7.98%	1,045,037	9.41%
100,685	0.91%	N/A	N/A
3,154,136	28.40%	3,288,369	29.61%
3,163,654	28.49%	3,298,612	29.70%
3,270,277	29.45%	3,413,416	30.73%
11,105,605		N/A	

**Harbor Port Police Tier 6**

1. Total normal cost
2. Expected employee contributions, discounted to beginning of year
3. Employer normal cost: (1) + (2)
4. Actuarial accrued liability
5. Valuation value of assets
6. Unfunded actuarial accrued liability
7. Amortization of unfunded accrued liability
8. Allocated amount for admin expenses, calculated with payroll in 12.
9. Total recommended contribution, payable July 1
10. Total recommended contribution, payable July 15
11. Total recommended contribution, payable biweekly
12. Projected payroll used for developing normal cost rate

<b>June 30, 2014</b>		<b>June 30, 2013</b>	
<u>Amount</u>	<u>% of Payroll</u>	<u>Amount<sup>(1)</sup></u>	<u>% of Payroll</u>
\$60,845	26.20%	\$62,915	27.09%
<u>-24,640</u>	<u>-10.61%</u>	<u>-24,618</u>	<u>-10.60%</u>
36,205	15.59%	38,297	16.49%
<i>(Tiers 5 and 6 are combined. See table on the next page.)</i>		<i>(Tiers 5 and 6 are combined. See table on the next page.)</i>	
18,533	7.98%	21,854	9.41%
2,106	0.91%	N/A	N/A
56,844	24.48%	60,151	25.90%
57,016	24.55%	60,338	25.98%
58,937	25.38%	62,438	26.88%
232,244		N/A	

(1) Amounts are revised to reflect payroll as of June 30, 2014.

**CHART 14**  
**Recommended Contribution (Continued)**

**Combined Tiers 5 and 6 UAAL Contribution Rate Calculations for the Harbor Port Police**

4. Actuarial accrued liability
5. Valuation value of assets
6. Unfunded actuarial accrued liability
7. Amortization of unfunded accrued liability
- Projected payroll used for developing combined UAAL rate

June 30, 2014				June 30, 2013	
Tier 5	Tier 6	Combined Tiers 5 and 6		Combined Tiers 5 and 6	
		Amount	% of Payroll	Amount <sup>(1)</sup>	% of Payroll
\$45,406,707	\$14,501	\$45,421,208		\$42,141,888	
		36,683,575		30,377,697	
		8,737,633		11,764,191	
		904,741	7.98%	1,066,891	9.41%
11,105,605	232,244	11,337,849		N/A	

**Harbor Port Police Combined (Tiers 5 and 6)**

1. Total normal cost
2. Expected employee contributions, discounted to beginning of year
3. Employer normal cost: (1) + (2)
4. Actuarial accrued liability
5. Valuation value of assets
6. Unfunded actuarial accrued liability
7. Amortization of unfunded accrued liability
8. Allocated amount for admin expenses, calculated with payroll in 12.
9. Total recommended contribution, payable July 1
10. Total recommended contribution, payable July 15
11. Total recommended contribution, payable biweekly
12. Projected payroll used for developing normal cost rate

June 30, 2014		June 30, 2013	
Amount	% of Payroll	Amount <sup>(1)</sup>	% of Payroll
\$3,372,064	29.74%	\$3,446,793	30.40%
-1,168,616	-10.31%	-1,165,164	-10.28%
2,203,448	19.43%	2,281,629	20.12%
45,421,208		42,141,888	
36,683,575		30,377,697	
8,737,633		11,764,191	
904,741	7.98%	1,066,891	9.41%
102,791	0.91%	N/A	N/A
3,210,980	28.32%	3,348,520	29.53%
3,220,670	28.41%	3,358,950	29.63%
3,329,214	29.36%	3,475,854	30.66%
11,337,849		N/A	

(1) Amounts are revised to reflect payroll as of June 30, 2014.

**CHART 14**  
**Recommended Contribution (Continued)**

	June 30, 2014		June 30, 2013	
	Amount	% of Payroll	Amount <sup>(1)</sup>	% of Payroll
<b>All Tiers Combined</b>				
1. Total normal cost	\$396,735,971	28.28%	\$404,857,626	28.85%
2. Expected employee contributions, discounted to beginning of year	<u>-132,691,115</u>	<u>-9.46%</u>	<u>-133,036,941</u>	<u>-9.48%</u>
3. Employer normal cost: (1) + (2)	264,044,856	18.82%	271,820,685	19.37%
4. Actuarial accrued liability	18,114,229,307		17,632,425,090	
5. Valuation value of assets	15,678,480,269		14,657,712,639	
6. Unfunded actuarial accrued liability	2,435,749,038		2,974,712,451	
7. Amortization of unfunded accrued liability	216,666,758	15.45%	238,556,927	17.01%
8. Allocated amount for admin expenses, calculated with payroll in 12.	12,717,245	0.91%	N/A	N/A
9. Total recommended contribution, payable July 1	493,428,859	35.18%	510,377,612	36.38%
10. Total recommended contribution, payable July 15	494,917,979	35.28%	511,967,432	36.50%
11. Total recommended contribution, payable biweekly	511,597,929	36.47%	529,785,728	37.77%
12. Projected payroll used for developing normal cost rate	1,402,715,039		N/A	

(1) Amounts are revised to reflect payroll as of June 30, 2014.



If paid by the City at the beginning of the year, the calculated normal cost is 18.82% payroll, and the explicit contribution rate for administrative expense is 0.91% of payroll. The remaining contribution of 15.45% of payroll will amortize the unfunded actuarial accrued liability over an equivalent single amortization period of about 13.8 years.

The contribution rates as of June 30, 2014 are based on all of the data described in the previous sections, the actuarial assumptions described in Section 4, and the Plan provisions adopted at the time of preparation of the actuarial valuation.

### Reconciliation of Recommended Contribution

The chart below details the changes in the recommended contribution from the prior valuation to the current year's valuation.

*The chart reconciles the contribution from the prior valuation to the amount determined in this valuation.*

#### CHART 15

#### Reconciliation of Recommended Contribution Rate from June 30, 2013 to June 30, 2014

<b>Recommended Contribution as of June 30, 2013 (Assuming Payment at the Beginning of the Year)</b>	<b>36.38%*</b>
Effect of contributions less than recommended, due to the one-year delay between valuation and rate implementation	0.35%
Effect of investment gain	-0.83%
Effect of difference in actual versus expected salary increase	-0.17%
Effect of amortizing prior year's UAAL over a smaller than expected projected total payroll	0.19%
Effect of lower than expected COLA increases for retirees, beneficiaries, and DROP members	-1.45%
Effect of gain layers being fully amortized	0.67%
Effect of other actuarial gains	-0.22%
Effect of change in assumptions	-0.65%
Effect of explicit loading for administrative expenses in contribution rates	<u>0.91%</u>
Total change	<u>-1.20%</u>
<b>Recommended Contribution as of June 30, 2014 (Assuming Payment at the Beginning of the Year)</b>	<b>35.18%</b>

\* Revised using payroll as of June 30, 2014.

### **E. FUNDED RATIO**

A critical piece of information regarding the Plan's financial status is the funded ratio. This ratio compares the actuarial value of assets to the actuarial accrued liabilities of the plan. High ratios indicate a well-funded plan with assets sufficient to pay most benefits. Lower ratios may indicate recent changes to benefit structures, funding of the plan below actuarial requirements, poor asset performance, or a variety of other changes.

The Chart below depicts a history of the funded ratio for the Plan.

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**CHART 16**

**Funded Ratio**

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## F. VOLATILITY RATIOS

Retirement plans are subject to volatility in the level of required contributions. This volatility tends to increase as retirement plans become more mature.

The Asset Volatility Ratio (AVR), which is equal to the market value of retirement assets divided by total payroll, provides an indication of the potential contribution volatility for any given level of investment volatility. A higher AVR indicates that the plan is subject to a greater level of contribution volatility. This is a current measure since it is based on the current level of assets.

For LAFPP, the current AVR is about 12.1. This means that a 1% asset gain/(loss) (relative to the assumed investment return) translates to about 12.1% of one-year's payroll. Since LAFPP amortizes actuarial gains and losses over a period of 20 years, there would be a 0.8% of payroll decrease/(increase) in the required contribution for each 1% asset gain/(loss).

The Liability Volatility Ratio (LVR), which is equal to the Actuarial Accrued Liability divided by payroll, provides an indication of the longer-term potential for contribution volatility for any given level of investment volatility. This is because, over an extended period of time, the plan's assets should track the plan's liabilities. For example, if a plan is 50% funded on a market value basis, the liability volatility ratio would be double the asset volatility ratio and the plan sponsor should expect contribution volatility to increase over time as the plan becomes better funded.

The LVR also indicates how volatile contributions will be in response to changes in the Actuarial Accrued Liability due to actual experience or to changes in actuarial assumptions.

For LAFPP, the current LVR is about 12.9. This is about 7% higher than the AVR. Therefore, we would expect that contribution volatility will increase over the long-term.

*This chart shows how the asset and liability volatility ratios have varied over time.*

### CHART 17

#### Volatility Ratios for Years Ended June 30, 2009 – 2014

Year Ended June 30	Asset Volatility Ratio	Liability Volatility Ratio
2009	7.6	10.9
2010	8.5	11.4
2011	10.1	12.4
2012	9.9	12.7
2013	10.8	12.9
2014	12.1	12.9

**EXHIBIT A****Table of Plan Coverage****Total**

<b>Category</b>	<b>Year Ended June 30</b>		<b>Change From Prior Year</b>
	<b>2014</b>	<b>2013</b>	
<b>Active members in valuation:</b>			
Number	13,097	13,224	-1.0%
Average age	42.4	41.9	N/A
Average service	15.4	15.0	N/A
Projected total payroll	\$1,402,715,039	\$1,367,236,866	2.6%
Projected average payroll	\$107,102	\$103,391	3.6%
Account balances	\$1,732,229,015	\$1,643,447,305	5.4%
Total active vested members	4,385	4,416	-0.7%
<b>Vested terminated members:</b>			
Number*	131	133	-1.5%
Average age**	46.3	46.2	N/A
Average monthly benefit at age 50**	\$2,094	\$2,130	-1.7%
<b>Retired members:</b>			
Number in pay status	7,955	7,904	0.6%
Average age at retirement	51.6	51.6	N/A
Average age	69.6	69.4	N/A
Average monthly benefit (includes July COLA)	\$5,745	\$5,662	1.5%
<b>Disabled members:</b>			
Number in pay status	2,088	2,136	-2.2%
Average age at retirement	44.0	44.0	N/A
Average age	69.0	68.5	N/A
Average monthly benefit (includes July COLA)	\$4,622	\$4,594	0.6%
<b>Beneficiaries:</b>			
Number in pay status	2,459	2,392	2.8%
Average age	76.3	77.0	N/A
Average monthly benefit (includes July COLA)	\$4,167	\$4,059	2.7%

\* Includes terminated members due only a refund of member contributions.

\*\* Excludes terminated members due only a refund of member contributions.

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**EXHIBIT A****Table of Plan Coverage****i. Tier 1**

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<b>Category</b>	<b>Year Ended June 30</b>		<b>Change From Prior Year</b>
	<b>2014</b>	<b>2013</b>	
<b>Active members in valuation:</b>			
Number	0	0	N/A
Average age	N/A	N/A	N/A
Average service	N/A	N/A	N/A
Projected total payroll	N/A	N/A	N/A
Projected average payroll	N/A	N/A	N/A
Account balances	N/A	N/A	N/A
Total active vested members	N/A	N/A	N/A
<b>Vested terminated members:</b>			
Number	0	0	N/A
Average age	N/A	N/A	N/A
Average monthly benefit at age 50	N/A	N/A	N/A
<b>Retired members:</b>			
Number in pay status	90	104	-13.5%
Average age at retirement	46.2	46.4	N/A
Average age	86.0	85.5	N/A
Average monthly benefit (includes July COLA)	\$2,325	\$2,331	-0.3%
<b>Disabled members:</b>			
Number in pay status	85	98	-13.3%
Average age at retirement	36.5	36.8	N/A
Average age	81.7	82.0	N/A
Average monthly benefit (includes July COLA)	\$3,098	\$2,993	3.5%
<b>Beneficiaries:</b>			
Number in pay status	323	353	-8.5%
Average age	84.9	84.8	N/A
Average monthly benefit (includes July COLA)	\$2,597	\$2,578	0.7%

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**EXHIBIT A****Table of Plan Coverage****ii. Tier 2**

<b>Category</b>	<b>Year Ended June 30</b>		<b>Change From Prior Year</b>
	<b>2014</b>	<b>2013</b>	
<b>Active members in valuation:</b>			
Number	47	58	-19.0%
Average age	57.9	56.8	N/A
Average service	34.8	33.7	N/A
Projected total payroll	\$6,648,510	\$7,756,871	-14.3%
Projected average payroll	\$141,458	\$133,739	5.8%
Account balances	\$11,779,651	\$14,075,264	-16.3%
Total active vested members	47	58	-19.0%
<b>Vested terminated members:</b>			
Number	0	0	N/A
Average age	N/A	N/A	N/A
Average monthly benefit at age 50	N/A	N/A	N/A
<b>Retired members:</b>			
Number in pay status	4,703	4,886	-3.7%
Average age at retirement	50.3	50.4	N/A
Average age	73.9	73.3	N/A
Average monthly benefit (includes July COLA)	\$4,995	\$4,971	0.5%
<b>Disabled members:</b>			
Number in pay status	1,589	1,635	-2.8%
Average age at retirement	45.2	45.2	N/A
Average age	72.4	71.6	N/A
Average monthly benefit (includes July COLA)	\$4,873	\$4,851	0.5%
<b>Beneficiaries:</b>			
Number in pay status	1,875	1,836	2.1%
Average age	78.3	78.0	N/A
Average monthly benefit (includes July COLA)	\$4,284	\$4,243	1.0%

**EXHIBIT A****Table of Plan Coverage****iii. Tier 3**

<b>Category</b>	<b>Year Ended June 30</b>		<b>Change From Prior Year</b>
	<b>2014</b>	<b>2013</b>	
<b>Active members in valuation:</b>			
Number	870	895	-2.8%
Average age	48.0	47.1	N/A
Average service	20.2	19.2	N/A
Projected total payroll	\$97,117,729	\$96,071,797	1.1%
Projected average payroll	\$111,630	\$107,343	4.0%
Account balances	\$138,134,124	\$130,445,439	5.9%
Total active vested members	868	892	-2.7%
<b>Vested terminated members:</b>			
Number*	53	56	-5.4%
Average age**	46.0	45.9	N/A
Average monthly benefit at age 50**	\$1,842	\$1,832	0.5%
<b>Retired members:</b>			
Number in pay status	193	171	12.9%
Average age at retirement	52.8	52.5	N/A
Average age	60.2	60.0	N/A
Average monthly benefit (includes July COLA)	\$2,823	\$2,726	3.6%
<b>Disabled members:</b>			
Number in pay status	250	247	1.2%
Average age at retirement	39.7	39.7	N/A
Average age	55.1	54.3	N/A
Average monthly benefit (includes July COLA)	\$3,496	\$3,471	0.7%
<b>Beneficiaries:</b>			
Number in pay status	89	76	17.1%
Average age	50.7	53.5	N/A
Average monthly benefit (includes July COLA)	\$4,066	\$3,828	6.2%

\* Includes terminated members due only a refund of member contributions.

\*\* Excludes terminated members due only a refund of member contributions.

**EXHIBIT A****Table of Plan Coverage****iv. Tier 4**

<b>Category</b>	<b>Year Ended June 30</b>		<b>Change From Prior Year</b>
	<b>2014</b>	<b>2013</b>	
<b>Active members in valuation:</b>			
Number	350	363	-3.6%
Average age	45.0	44.3	N/A
Average service	20.3	19.6	N/A
Projected total payroll	\$40,032,133	\$39,933,959	0.2%
Projected average payroll	\$114,378	\$110,011	4.0%
Account balances	\$57,902,656	\$56,473,797	2.5%
Total active vested members	157	166	-5.4%
<b>Vested terminated members:</b>			
Number	0	0	N/A
Average age	N/A	N/A	N/A
Average monthly benefit at age 50	N/A	N/A	N/A
<b>Retired members:</b>			
Number in pay status	179	171	4.7%
Average age at retirement	46.1	45.9	N/A
Average age	53.6	52.6	N/A
Average monthly benefit (includes July COLA)	\$4,597	\$4,484	2.5%
<b>Disabled members:</b>			
Number in pay status	44	42	4.8%
Average age at retirement	42.1	42.0	N/A
Average age	52.5	51.8	N/A
Average monthly benefit (includes July COLA)	\$4,509	\$4,527	-0.4%
<b>Beneficiaries:</b>			
Number in pay status	4	3	33.3%
Average age	36.4	50.6	N/A
Average monthly benefit (includes July COLA)	\$8,518	\$7,830	8.8%



**EXHIBIT A****Table of Plan Coverage  
v. Tier 5 (without Harbor Port Police)**

Category	Year Ended June 30		Change From Prior Year
	2014	2013	
<b>Active members in valuation:</b>			
Number	10,923	11,240	-2.8%
Average age	42.9	42.2	N/A
Average service	15.9	15.2	N/A
Projected total payroll	\$1,198,378,807	\$1,181,501,190	1.4%
Projected average payroll	\$109,712	\$105,116	4.4%
Account balances	\$1,511,270,941	\$1,433,703,589	5.4%
Total active vested members	3,308	3,294	0.4%
<b>Vested terminated members:</b>			
Number*	52	64	-18.8%
Average age**	48.4	48.5	N/A
Average monthly benefit at age 50**	\$3,819	\$4,144	-7.8%
<b>Retired members:</b>			
Number in pay status	2,780	2,564	8.4%
Average age at retirement	54.3	54.4	N/A
Average age	63.4	62.9	N/A
Average monthly benefit (includes July COLA)	\$7,401	\$7,385	0.2%
<b>Disabled members:</b>			
Number in pay status	118	112	5.4%
Average age at retirement	43.6	43.6	N/A
Average age	50.2	49.4	N/A
Average monthly benefit (includes July COLA)	\$4,760	\$4,752	0.2%
<b>Beneficiaries:</b>			
Number in pay status	168	124	35.5%
Average age	52.6	54.7	N/A
Average monthly benefit (includes July COLA)	\$5,839	\$5,604	4.2%

\* Includes terminated members due only a refund of member contributions.

\*\* Excludes terminated members due only a refund of member contributions.

**EXHIBIT A****Table of Plan Coverage****vi. Tier 6 (without Harbor Port Police)**

<b>Category</b>	<b>Year Ended June 30</b>		<b>Change From Prior Year</b>
	<b>2014</b>	<b>2013</b>	
<b>Active members in valuation:</b>			
Number	798	560	42.5%
Average age	27.7	27.4	N/A
Average service	1.1	0.7	N/A
Projected total payroll	\$49,200,011	\$30,876,846	59.3%
Projected average payroll	\$61,654	\$55,137	11.8%
Account balances	\$5,614,899	\$2,386,378	135.3%
Total active vested members	0	0	N/A
<b>Vested terminated members:</b>			
Number*	25	12	108.3%
Average age**	N/A	N/A	N/A
Average monthly benefit at age 50**	N/A	N/A	N/A
<b>Retired members:</b>			
Number in pay status	0	0	N/A
Average age at retirement	N/A	N/A	N/A
Average age	N/A	N/A	N/A
Average monthly benefit (includes July COLA)	N/A	N/A	N/A
<b>Disabled members:</b>			
Number in pay status	0	0	N/A
Average age at retirement	N/A	N/A	N/A
Average age	N/A	N/A	N/A
Average monthly benefit (includes July COLA)	N/A	N/A	N/A
<b>Beneficiaries:</b>			
Number in pay status	0	0	N/A
Average age	N/A	N/A	N/A
Average monthly benefit (includes July COLA)	N/A	N/A	N/A

\* Includes terminated members due only a refund of member contributions.

\*\* Excludes terminated members due only a refund of member contributions.

**EXHIBIT A****Table of Plan Coverage****vii. Harbor Port Police (Tier 5)**

<b>Category</b>	<b>Year Ended June 30</b>		<b>Change From Prior Year</b>
	<b>2014</b>	<b>2013</b>	
<b>Active members in valuation:</b>			
Number	105	106	-0.9%
Average age	38.5	37.9	N/A
Average service	8.9	8.3	N/A
Projected total payroll	\$11,105,605	\$10,965,241	1.3%
Projected average payroll	\$105,768	\$103,446	2.2%
Account balances	\$7,494,811	\$6,345,443	18.1%
Total active vested members	5	6	-16.7%
<b>Vested terminated members:</b>			
Number*	1	1	0.0%
Average age**	N/A	N/A	N/A
Average monthly benefit at age 50**	N/A	N/A	N/A
<b>Retired members:</b>			
Number in pay status	10	8	25.0%
Average age at retirement	55.1	55.1	N/A
Average age	59.4	58.5	N/A
Average monthly benefit (includes July COLA)	\$5,940	\$6,477	-8.3%
<b>Disabled members:</b>			
Number in pay status	2	2	0.0%
Average age at retirement	40.1	40.1	N/A
Average age	49.1	48.1	N/A
Average monthly benefit (includes July COLA)	\$4,910	\$4,885	0.5%
<b>Beneficiaries:</b>			
Number in pay status	0	0	N/A
Average age	N/A	N/A	N/A
Average monthly benefit (includes July COLA)	N/A	N/A	N/A

\* Includes terminated members due only a refund of member contributions.

\*\* Excludes terminated members due only a refund of member contributions.

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**EXHIBIT A****Table of Plan Coverage****viii. Harbor Port Police (Tier 6)**

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<b>Category</b>	<b>Year Ended June 30</b>		<b>Change From Prior Year</b>
	<b>2014</b>	<b>2013</b>	
<b>Active members in valuation:</b>			
Number	4	2	100.0%
Average age	28.7	30.9	N/A
Average service	0.3	0.2	N/A
Projected total payroll	\$232,244	\$130,962	77.3%
Projected average payroll	\$58,061	\$65,481	-11.3%
Account balances	\$31,933	\$17,396	83.6%
Total active vested members	0	0	N/A
<b>Vested terminated members:</b>			
Number	0	0	N/A
Average age	N/A	N/A	N/A
Average monthly benefit at age 50	N/A	N/A	N/A
<b>Retired members:</b>			
Number in pay status	0	0	N/A
Average age at retirement	N/A	N/A	N/A
Average age	N/A	N/A	N/A
Average monthly benefit (includes July COLA)	N/A	N/A	N/A
<b>Disabled members:</b>			
Number in pay status	0	0	N/A
Average age at retirement	N/A	N/A	N/A
Average age	N/A	N/A	N/A
Average monthly benefit (includes July COLA)	N/A	N/A	N/A
<b>Beneficiaries:</b>			
Number in pay status	0	0	N/A
Average age	N/A	N/A	N/A
Average monthly benefit (includes July COLA)	N/A	N/A	N/A

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**EXHIBIT B****Members in Active Service and Projected Average Payroll as of June 30, 2014****By Age and Years of Service****Total**

Age	Years of Service									
	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	243	243	--	--	--	--	--	--	--	--
	\$57,140	\$57,140	--	--	--	--	--	--	--	--
25 - 29	1,142	671	471	--	--	--	--	--	--	--
	81,606	70,862	\$96,913	--	--	--	--	--	--	--
30 - 34	1,852	332	1,312	208	--	--	--	--	--	--
	95,731	77,572	98,958	\$104,359	--	--	--	--	--	--
35 - 39	2,005	99	751	935	220	--	--	--	--	--
	102,722	79,829	98,933	106,343	\$110,568	--	--	--	--	--
40 - 44	2,477	40	274	701	1,329	133	--	--	--	--
	109,590	78,399	98,142	106,891	113,225	\$120,455	--	--	--	--
45 - 49	2,337	14	99	241	833	785	365	--	--	--
	115,536	78,818	97,358	107,210	112,556	120,069	\$124,423	--	--	--
50 - 54	1,947	5	21	57	273	476	845	269	1	--
	120,775	81,489	103,882	106,738	111,021	118,268	124,060	\$129,734	\$142,858	--
55 - 59	881	--	2	8	83	108	291	329	60	--
	124,406	--	100,901	110,394	109,614	117,258	122,080	128,854	147,268	--
60 - 64	190	--	--	1	17	7	60	66	36	3
	123,822	--	--	118,459	109,334	121,914	118,116	123,942	139,840	\$131,398
65 - 69	18	--	--	--	3	2	7	2	3	1
	119,577	--	--	--	110,346	125,003	119,908	102,926	137,043	115,007
70 & over	5	1	--	--	2	--	1	--	--	1
	98,720	49,869	--	--	111,173	--	102,925	--	--	118,459
Total	13,097	1,405	2,930	2,151	2,760	1,511	1,569	666	100	5
	\$107,102	\$71,023	\$98,529	\$106,458	\$112,456	\$119,350	\$123,518	\$128,645	\$144,243	\$125,532

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**EXHIBIT B****Members in Active Service and Projected Average Payroll as of June 30, 2014****By Age and Years of Service****i. Tier 1**

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Age	Years of Service									
	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	--	--	--	--	--	--	--	--	--	--
25 - 29	--	--	--	--	--	--	--	--	--	--
30 - 34	--	--	--	--	--	--	--	--	--	--
35 - 39	--	--	--	--	--	--	--	--	--	--
40 - 44	--	--	--	--	--	--	--	--	--	--
45 - 49	--	--	--	--	--	--	--	--	--	--
50 - 54	--	--	--	--	--	--	--	--	--	--
55 - 59	--	--	--	--	--	--	--	--	--	--
60 - 64	--	--	--	--	--	--	--	--	--	--
65 - 69	--	--	--	--	--	--	--	--	--	--
70 & over	--	--	--	--	--	--	--	--	--	--
Total	--	--	--	--	--	--	--	--	--	--

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**EXHIBIT B****Members in Active Service and Projected Average Payroll as of June 30, 2014****By Age and Years of Service****ii. Tier 2**

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Age	Years of Service									
	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
25 - 29	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
30 - 34	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
35 - 39	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
40 - 44	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
45 - 49	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
50 - 54	7	--	--	--	--	--	--	7	--	--
	\$124,342	--	--	--	--	--	--	\$124,342	--	--
55 - 59	31	--	--	--	--	--	--	25	6	--
	151,675	--	--	--	--	--	--	150,348	\$157,204	--
60 - 64	7	--	--	--	--	--	--	3	4	--
	116,856	--	--	--	--	--	--	108,506	123,120	--
65 - 69	1	--	--	--	--	--	--	--	1	--
	139,733	--	--	--	--	--	--	--	139,733	--
70 & over	1	--	--	--	--	--	--	--	--	1
	118,459	--	--	--	--	--	--	--	--	\$118,459
Total	47	--	--	--	--	--	--	35	11	1
	\$141,458	--	--	--	--	--	--	\$141,561	\$143,221	\$118,459

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**EXHIBIT B****Members in Active Service and Projected Average Payroll as of June 30, 2014****By Age and Years of Service****iii. Tier 3**

Age	Years of Service									
	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
25 - 29	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
30 - 34	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
35 - 39	22	--	--	1	21	--	--	--	--	--
	\$108,972	--	--	\$103,152	\$109,250	--	--	--	--	--
40 - 44	270	--	--	2	245	23	--	--	--	--
	110,212	--	--	97,616	109,875	\$114,893	--	--	--	--
45 - 49	309	--	--	2	163	113	31	--	--	--
	112,321	--	--	98,010	109,272	116,158	\$115,286	--	--	--
50 - 54	174	1	1	1	52	64	52	3	--	--
	113,189	\$91,023	\$93,409	95,968	111,890	113,339	114,759	\$125,044	--	--
55 - 59	68	--	--	--	34	19	13	2	--	--
	110,649	--	--	--	107,765	112,209	116,640	105,919	--	--
60 - 64	19	--	--	--	8	5	6	--	--	--
	112,135	--	--	--	105,480	119,960	114,488	--	--	--
65 - 69	5	--	--	--	3	1	1	--	--	--
	116,209	--	--	--	110,346	147,080	102,925	--	--	--
70 & over	3	--	--	--	2	--	1	--	--	--
	108,424	--	--	--	111,173	--	102,925	--	--	--
Total	870	1	1	6	528	225	104	5	--	--
	\$111,630	\$91,023	\$93,409	\$98,395	\$109,668	\$115,115	\$114,908	\$117,394	--	--



**EXHIBIT B****Members in Active Service and Projected Average Payroll as of June 30, 2014****By Age and Years of Service****iv. Tier 4**

Age	Years of Service									
	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
25 - 29	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
30 - 34	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
35 - 39	103	--	--	80	23	--	--	--	--	--
	\$105,164	--	--	\$104,745	\$106,620	--	--	--	--	--
40 - 44	71	--	--	32	35	4	--	--	--	--
	107,785	--	--	104,256	109,055	\$124,917	--	--	--	--
45 - 49	87	--	--	10	6	27	44	--	--	--
	122,100	--	--	108,715	107,525	122,512	\$126,877	--	--	--
50 - 54	77	--	--	3	4	1	48	21	--	--
	120,620	--	--	107,819	105,382	123,790	120,186	\$126,193	--	--
55 - 59	11	--	--	--	--	--	1	10	--	--
	137,136	--	--	--	--	--	118,459	139,004	--	--
60 - 64	1	--	--	--	--	--	--	1	--	--
	128,519	--	--	--	--	--	--	128,519	--	--
65 - 69	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
70 & over	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
<b>Total</b>	<b>350</b>	<b>--</b>	<b>--</b>	<b>125</b>	<b>68</b>	<b>32</b>	<b>93</b>	<b>32</b>	<b>--</b>	<b>--</b>
	<b>\$114,378</b>	<b>--</b>	<b>--</b>	<b>\$105,011</b>	<b>\$107,880</b>	<b>\$122,853</b>	<b>\$123,333</b>	<b>\$130,269</b>	<b>--</b>	<b>--</b>

**EXHIBIT B**

**Members in Active Service and Projected Average Payroll as of June 30, 2014**

**By Age and Years of Service**

**v. Tier 5 (without Harbor Port Police)**

Age	Years of Service									
	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	5	5	--	--	--	--	--	--	--	--
	\$65,631	\$65,631	--	--	--	--	--	--	--	--
25 - 29	747	283	464	--	--	--	--	--	--	--
	91,097	81,514	\$96,941	--	--	--	--	--	--	--
30 - 34	1,694	211	1,277	206	--	--	--	--	--	--
	97,909	85,660	98,929	\$104,129	--	--	--	--	--	--
35 - 39	1,821	63	728	854	176	--	--	--	--	--
	103,317	87,748	99,020	106,496	\$111,241	--	--	--	--	--
40 - 44	2,106	31	261	660	1,048	106	--	--	--	--
	109,845	83,671	98,020	107,059	114,140	\$121,493	--	--	--	--
45 - 49	1,927	10	96	227	660	644	290	--	--	--
	115,857	80,217	97,356	107,199	113,384	120,626	\$125,027	--	--	--
50 - 54	1,680	3	17	51	216	411	743	238	1	--
	121,508	86,515	95,844	105,995	110,967	119,023	124,907	\$130,264	\$142,858	--
55 - 59	768	--	2	8	48	88	276	292	54	--
	124,218	--	100,901	110,394	110,420	118,160	122,068	126,823	146,164	--
60 - 64	163	--	--	1	9	2	54	62	32	3
	125,454	--	--	118,459	112,761	126,799	118,520	124,615	141,930	\$131,398
65 - 69	12	--	--	--	--	1	6	2	2	1
	119,301	--	--	--	--	102,925	122,739	102,926	135,697	115,007
70 & over	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
Total	10,923	606	2,845	2,007	2,157	1,252	1,369	594	89	4
	\$109,712	\$83,588	\$98,475	\$106,527	\$113,266	\$119,996	\$124,099	\$127,891	\$144,369	\$127,301

**EXHIBIT B**

**Members in Active Service and Projected Average Payroll as of June 30, 2014**

**By Age and Years of Service**

**vi. Tier 6 (without Harbor Port Police)**

Age	Years of Service									
	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	237	237	--	--	--	--	--	--	--	--
	\$56,996	\$56,996	--	--	--	--	--	--	--	--
25 - 29	386	386	--	--	--	--	--	--	--	--
	63,167	63,167	--	--	--	--	--	--	--	--
30 - 34	122	121	1	--	--	--	--	--	--	--
	63,689	63,470	\$90,186	--	--	--	--	--	--	--
35 - 39	35	34	1	--	--	--	--	--	--	--
	66,235	65,265	99,236	--	--	--	--	--	--	--
40 - 44	11	9	1	1	--	--	--	--	--	--
	67,436	60,241	99,236	\$100,391	--	--	--	--	--	--
45 - 49	5	4	1	--	--	--	--	--	--	--
	74,507	75,323	71,242	--	--	--	--	--	--	--
50 - 54	1	1	--	--	--	--	--	--	--	--
	56,877	56,877	--	--	--	--	--	--	--	--
55 - 59	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
60 - 64	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
65 - 69	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
70 & over	1	1	--	--	--	--	--	--	--	--
	49,869	49,869	--	--	--	--	--	--	--	--
Total	798	793	4	1	--	--	--	--	--	--
	\$61,654	\$61,462	\$89,975	\$100,391	--	--	--	--	--	--

**EXHIBIT B**

**Members in Active Service and Projected Average Payroll as of June 30, 2014**

**By Age and Years of Service**

**vii. Harbor Port Police (Tier 5)**

Age	Years of Service									
	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
25 - 29	7	--	7	--	--	--	--	--	--	--
	\$95,031	--	\$95,031	--	--	--	--	--	--	--
30 - 34	36	--	34	2	--	--	--	--	--	--
	101,840	--	100,299	\$128,034	--	--	--	--	--	--
35 - 39	23	1	22	--	--	--	--	--	--	--
	94,924	\$69,658	96,072	--	--	--	--	--	--	--
40 - 44	19	--	12	6	1	--	--	--	--	--
	103,663	--	100,704	106,620	\$121,421	--	--	--	--	--
45 - 49	9	--	2	2	4	1	--	--	--	--
	116,395	--	110,532	110,122	117,220	\$137,369	--	--	--	--
50 - 54	8	--	3	2	1	--	2	--	--	--
	138,276	--	152,926	129,441	100,108	--	\$144,219	--	--	--
55 - 59	3	--	--	--	1	1	1	--	--	--
	155,855	--	--	--	133,796	133,796	199,973	--	--	--
60 - 64	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
65 - 69	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
70 & over	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
<b>Total</b>	<b>105</b>	<b>1</b>	<b>80</b>	<b>12</b>	<b>7</b>	<b>2</b>	<b>3</b>	<b>--</b>	<b>--</b>	<b>--</b>
	<b>\$105,768</b>	<b>\$69,658</b>	<b>\$100,966</b>	<b>\$114,576</b>	<b>\$117,743</b>	<b>\$135,583</b>	<b>\$162,803</b>	<b>--</b>	<b>--</b>	<b>--</b>

**EXHIBIT B**

**Members in Active Service and Projected Average Payroll as of June 30, 2014**

**By Age and Years of Service**

**viii. Harbor Port Police (Tier 6)**

Age	Years of Service									
	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	1	1	--	--	--	--	--	--	--	--
	\$48,660	\$48,660	--	--	--	--	--	--	--	--
25 - 29	2	2	--	--	--	--	--	--	--	--
	48,660	48,660	--	--	--	--	--	--	--	--
30 - 34	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
35 - 39	1	1	--	--	--	--	--	--	--	--
	86,265	86,265	--	--	--	--	--	--	--	--
40 - 44	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
45 - 49	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
50 - 54	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
55 - 59	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
60 - 64	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
65 - 69	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
70 & over	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
Total	4	4	--	--	--	--	--	--	--	--
	\$58,061	\$58,061	--	--	--	--	--	--	--	--

**EXHIBIT C**  
**Reconciliation of Member Data**

	<b>Active Members *</b>	<b>Vested Former Members**</b>	<b>Disableds</b>	<b>Retired Members</b>	<b>Beneficiaries</b>	<b>Total</b>
Number as of June 30, 2013	13,224	133	2,136	7,904	2,392	25,789
New members	289	N/A	N/A	N/A	201	490
Terminations – with vested rights	-61	61	0	0	0	0
Refund of member contributions	-69	-52	0	0	0	-121
Retirements	-261	-10	N/A	271	N/A	0
New disabilities	-10	0	11	-1	N/A	0
Died with or without beneficiary	-17	0	-61	-220	-131	-429
Rehired	3	-3	0	0	N/A	0
Certain period expired	N/A	N/A	0	0	-3	-3
Data adjustments	<u>-1</u>	<u>2</u>	<u>2</u>	<u>1</u>	<u>0</u>	<u>4</u>
Number as of June 30, 2014	13,097	131	2,088	7,955	2,459	25,730

\* *Includes DROP members.*

\*\* *Includes 71 and 76 terminated members due only a refund of member contributions as of June 30, 2013 and June 30, 2014, respectively.*

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**EXHIBIT D****Summary Statement of Income and Expenses on an Actuarial Value Basis for All Retirement and Health Subsidy Benefits Assets**

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	<b>Year Ended June 30, 2014</b>	<b>Year Ended June 30, 2013</b>
<b>Contribution income:</b>		
Employer contributions	\$578,805,107	\$508,387,283
Employee contributions	<u>124,394,889</u>	<u>121,777,655</u>
Contribution income	\$703,199,996	\$630,164,938
<b>Investment income:</b>		
Interest, dividends and other income	\$1,325,729,463	\$910,081,993
Recognition of capital appreciation	227,580,333	-13,657,580
Less investment and administrative fees	<u>-84,910,347</u>	<u>-68,633,794</u>
Net investment income	<u>1,468,399,449</u>	<u>827,790,619</u>
<b>Total income available for benefits</b>	<b>\$2,171,599,445</b>	<b>\$1,457,955,557</b>
<b>Less benefit payments</b>	<b>-\$963,356,954</b>	<b>-\$966,118,502</b>
<b>Change in reserve for future benefits</b>	<b>\$1,208,242,491</b>	<b>\$491,837,055</b>

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**EXHIBIT E****Summary Statement of Assets for Retirement and Health Subsidy Benefits**

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	<b>Year Ended June 30, 2014</b>	<b>Year Ended June 30, 2013</b>
<b>Cash equivalents</b>	\$1,449,555	\$6,698,082
<b>Accounts receivable:</b>		
Accrued interest and dividends	\$58,230,583	\$50,434,963
Contributions	6,109,845	5,490,442
Due from brokers	<u>265,172,222</u>	<u>387,602,407</u>
Total accounts receivable	329,512,650	443,527,812
<b>Investments:</b>		
Equities	\$12,691,081,303	\$9,730,129,629
Fixed income investments	4,311,621,954	5,027,650,664
Real estate	<u>1,419,813,952</u>	<u>1,231,595,540</u>
Total investments at market value	<u>18,422,517,209</u>	<u>15,989,375,833</u>
<b>Total assets</b>	<b>\$18,753,479,414</b>	<b>\$16,439,601,727</b>
<b>Less accounts payable:</b>		
Accounts payable and benefits in process	-\$28,597,595	-\$33,329,259
Due to brokers	-265,350,594	-465,475,707
Mortgage payable	<u>-168,520,538</u>	<u>-192,425,131</u>
Total accounts payable	-\$462,468,727	-\$691,230,097
<b>Net assets at market value</b>	<b><u>\$18,291,010,687</u></b>	<b><u>\$15,748,371,630*</u></b>
<b>Net assets at actuarial value</b>	<b><u>\$16,879,354,713</u></b>	<b><u>\$15,671,112,222</u></b>
<b>Net assets at valuation value (retirement benefits)</b>	<b><u>\$15,678,480,269</u></b>	<b><u>\$14,657,712,639</u></b>

\* Based on unaudited market value of assets. Subsequent to the June 30, 2013 valuation, the market value of assets was changed to \$15,757,024,051.



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**EXHIBIT F****Development of the Fund Through June 30, 2014 for All Retirement and Health Subsidy Benefits Assets**

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<b>Year Ended June 30</b>	<b>Employer Contributions</b>	<b>Employee Contributions</b>	<b>Net Investment Return<sup>(1)</sup></b>	<b>Benefit Payments</b>	<b>Actuarial Value of Assets at End of Year</b>
2007	\$286,167,278 <sup>(2)</sup>	\$91,263,474	\$1,590,968,304	\$800,819,286	\$13,902,764,838
2008	333,672,743	98,074,219	1,414,391,128	827,959,245	14,920,943,683
2009	326,876,839	103,685,447	557,346,783	842,565,358	15,066,287,394
2010	357,165,140	106,411,630	360,741,904	853,749,429	15,036,856,639
2011	388,773,459	105,471,264	568,411,044	878,952,809	15,220,559,597
2012	444,565,284	120,099,124	320,400,668	926,349,506	15,179,275,167
2013	508,387,283	121,777,655	827,790,619	966,118,502	15,671,112,222
2014	578,805,107	124,394,889	1,468,399,449	963,356,954	16,879,354,713

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<sup>(1)</sup> *Net of investment fees and administrative expenses*

<sup>(2)</sup> *Includes \$6,220,076 (discounted to \$6,058,515) of Harbor Port Police assets transferred in October, 2007.*

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**EXHIBIT G****Development of Unfunded Actuarial Accrued Liability for Year Ended June 30, 2014**

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1. Unfunded actuarial accrued liability at beginning of year	\$2,974,712,451
2. Total normal cost at beginning of year	395,002,367
3. Actual employer and member contributions	-565,093,149
4. Interest	<u>223,601,569</u>
5. Expected unfunded actuarial accrued liability <sup>(1)</sup> : (1) + (2) + (3) + (4)	3,028,223,238
6 Actuarial (gain)/loss due to all changes:	
(a) Investment gain	-\$174,422,187
(b) Salary increases less than expected	-35,453,042
(c) COLA increases less than expected for retirees, beneficiaries and DROP members	-303,912,559
(d) Other experience gain <sup>(2)</sup>	-52,353,108
(e) Assumption changes	<u>-26,333,304</u>
(f) Total changes	-\$592,474,200
7. Unfunded actuarial accrued liability at end of year: (5) + (6f)	<u>\$2,435,749,038</u>

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<sup>(1)</sup> Includes a contribution loss of about \$73 million due to one-year delay in implementation of the contribution rates determined in the June 30, 2013 valuation.

<sup>(2)</sup> Includes a gain of about \$10 million from more than expected deaths among retirees.

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**EXHIBIT H****Table of Amortization Bases**

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**Tier 1**

Type	Date Established	Outstanding Balance	Years Remaining	Annual Payment <sup>(1)</sup>
Unfunded Actuarial Accrued Liability	06/30/2014	<u>\$179,314,076</u>	23	<u>\$15,435,235</u>
Total		\$179,314,076		\$15,435,235

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**Tier 2**

Type	Date Established	Outstanding Balance	Years Remaining	Annual Payment <sup>(2)</sup>
Unfunded Actuarial Accrued Liability	06/30/2014	-\$701,955,133	23	-\$42,883,491
Experience Loss	06/30/2009	47,423,434	10	5,479,238
Experience Loss	06/30/2010	194,086,526	11	20,706,271
Assumption Change	06/30/2010	1,544,956	23	94,384
Experience Loss	06/30/2011	192,733,308	12	19,142,885
Assumption Change	06/30/2011	360,480,091	23	22,022,269
Experience Loss	06/30/2012	240,241,978	18	17,425,296
Experience Loss	06/30/2013	74,323,849	19	5,183,665
Experience Gain	06/30/2014	-212,930,921	20	-14,318,277
Assumption Change	06/30/2014	<u>-65,152,628</u>	25	<u>-3,768,705</u>
Total		\$130,795,460		\$29,083,535

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<sup>(1)</sup> Level dollar amortization.

<sup>(2)</sup> Level percentage of payroll amortization.

**EXHIBIT H****Table of Amortization Bases (Continued)****Tier 3**

Type	Date Established	Outstanding Balance	Years Remaining	Annual Payment <sup>(1)</sup>
Assumption Change	06/30/1989	-\$9,661,597	5	-\$2,062,308
Plan Amendment	06/30/1990	189,199	6	34,199
Assumption Change	06/30/1990	-4,250,177	6	-768,245
Assumption Change	06/30/1992	1,950,771	8	273,012
Assumption Change	06/30/1995	-18,833,470	11	-2,009,263
Plan Amendment	06/30/1996	2,723,813	12	270,538
Asset Method Change	06/30/1996	-17,607,520	12	-1,748,835
Plan Amendment	06/30/1998	5,635,554	14	494,752
Assumption Change	06/30/1998	9,478,382	14	832,119
Experience Gain	06/30/2000	-8,250,078	1	-8,250,078
Plan Amendment	06/30/2000	1,019,614	16	80,739
Experience Gain	06/30/2001	-12,322,378	2	-6,263,147
Assumption Change	06/30/2001	-31,938,689	17	-2,416,431
Experience Loss	06/30/2002	46,647,325	3	16,066,527
Experience Loss	06/30/2003	79,087,961	4	20,764,225
Experience Loss	06/30/2004	6,110,042	5	1,304,214
Assumption Change	06/30/2004	-10,027,960	20	-674,318
Experience Loss	06/30/2005	14,619,806	6	2,642,619
Assumption Change	06/30/2005	31,862,974	21	2,070,761
Experience Loss	06/30/2006	12,136,216	7	1,910,555
Assumption Change	06/30/2006	33,730,235	22	2,123,253
Experience Gain	06/30/2007	-20,790,857	14	-1,825,255
Assumption Change	06/30/2007	-5,708,260	23	-348,726
Experience Gain	06/30/2008	-16,680,597	11	-1,779,582

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**EXHIBIT H****Table of Amortization Bases (Continued)**

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**Tier 3 (continued)**

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Type	Date Established	Outstanding Balance	Years Remaining	Annual Payment <sup>(1)</sup>
Assumption Change	06/30/2008	8,992,962	24	534,152
Experience Loss	06/30/2009	9,014,038	10	1,041,469
Experience Loss	06/30/2010	1,975,026	11	210,707
Assumption Change	06/30/2010	28,145,836	26	1,587,923
Plan Amendment <sup>(2)</sup>	06/30/2011	-19,187	27	-1,057
Experience Loss	06/30/2011	1,039,513	12	103,248
Assumption Change	06/30/2011	27,214,114	27	1,499,578
Experience Loss	06/30/2012	11,065,580	18	802,612
Experience Loss	06/30/2013	6,042,333	19	421,418
Experience Gain	06/30/2014	-15,610,972	20	-1,049,741
Assumption Change	06/30/2014	<u>-3,528,915</u>	25	<u>-204,127</u>
Total		\$163,450,640		\$25,667,507

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<sup>(1)</sup> Level percentage of payroll amortization.

<sup>(2)</sup> Gain due to new retirees from non-DROP status and new DROP members during 7/1/2011 – 7/14/2011.

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**EXHIBIT H****Table of Amortization Bases (Continued)**

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**Tier 4**

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Type	Date Established	Outstanding Balance	Years Remaining	Annual Payment <sup>(1)</sup>
Assumption Change	06/30/1989	-\$3,786,793	5	-\$808,306
Plan Amendment	06/30/1990	74,156	6	13,404
Assumption Change	06/30/1990	-1,665,825	6	-301,108
Assumption Change	06/30/1992	764,590	8	107,005
Assumption Change	06/30/1995	-7,381,639	11	-787,516
Plan Amendment	06/30/1996	1,067,580	12	106,035
Asset Method Change	06/30/1996	-6,901,140	12	-685,443
Plan Amendment	06/30/1998	2,208,816	14	193,915
Assumption Change	06/30/1998	3,714,985	14	326,143
Experience Gain	06/30/2000	-3,233,557	1	-3,233,557
Plan Amendment	06/30/2000	397,304	16	31,461
Experience Gain	06/30/2001	-2,849,150	2	-1,448,149
Assumption Change	06/30/2001	-5,345,721	17	-404,449
Experience Loss	06/30/2002	7,859,574	3	2,707,037
Experience Loss	06/30/2003	31,123,024	4	8,171,225
Experience Loss	06/30/2004	6,135,985	5	1,309,751
Assumption Change	06/30/2004	-6,018,780	20	-404,725
Experience Loss	06/30/2005	8,961,946	6	1,619,926
Assumption Change	06/30/2005	16,406,629	21	1,066,260
Experience Loss	06/30/2006	4,487,074	7	706,382
Assumption Change	06/30/2006	16,740,595	22	1,053,788
Experience Gain	06/30/2007	-8,865,026	14	-778,272
Assumption Change	06/30/2007	-3,424,061	23	-209,181
Experience Gain	06/30/2008	-4,039,199	11	-430,925

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**EXHIBIT H****Table of Amortization Bases (Continued)**

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**Tier 4 (continued)**

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Type	Date Established	Outstanding Balance	Years Remaining	Annual Payment <sup>(1)</sup>
Assumption Change	06/30/2008	11,863,870	24	704,675
Experience Loss	06/30/2009	10,581,578	10	1,222,581
Experience Loss	06/30/2010	4,415,146	11	471,033
Assumption Change	06/30/2010	14,018,111	26	790,869
Plan Amendment <sup>(2)</sup>	06/30/2011	1,577,023	27	86,899
Experience Loss	06/30/2011	5,568,306	12	553,062
Assumption Change	06/30/2011	13,561,124	27	747,258
Experience Loss	06/30/2012	9,447,777	18	685,269
Experience Loss	06/30/2013	6,659,119	19	464,436
Experience Gain	06/30/2014	-11,060,872	20	-743,775
Assumption Change	06/30/2014	<u>9,988,189</u>	25	<u>577,759</u>
Total		\$123,050,739		\$13,480,767

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<sup>(1)</sup> Level percentage of payroll amortization.

<sup>(2)</sup> Loss due to new retirees from non-DROP status and new DROP members during 7/1/2011 – 7/14/2011.

**EXHIBIT H****Table of Amortization Bases (Continued)****Tiers 5 and 6 (without Harbor Port Police)**

Type	Date Established	Outstanding Balance	Years Remaining	Annual Payment <sup>(1)</sup>
Original Base	06/30/2002	-\$175,882,413	18	-\$12,757,150
Experience Gain	06/30/2003	-163,961,605	4	-43,047,459
Experience Loss	06/30/2004	64,399,150	5	13,746,264
Assumption Change	06/30/2004	-279,149,834	20	-18,771,085
Experience Loss	06/30/2005	163,652,740	6	29,581,227
Assumption Change	06/30/2005	492,212,399	21	31,988,667
Experience Loss	06/30/2006	47,379,685	7	7,458,789
Assumption Change	06/30/2006	334,987,917	22	21,086,841
Experience Gain	06/30/2007	-199,599,675	14	-17,523,104
Assumption Change	06/30/2007	-80,909,895	23	-4,942,907
Experience Gain	06/30/2008	-72,436,689	11	-7,727,964
Assumption Change	06/30/2008	349,969,643	24	20,787,046
Experience Loss	06/30/2009	317,018,052	10	36,627,824
Experience Loss	06/30/2010	191,187,217	11	20,396,956
Assumption Change	06/30/2010	300,618,113	26	16,960,174
Plan Amendment <sup>(2)</sup>	06/30/2011	6,054,000	27	333,593
Experience Loss	06/30/2011	118,821,124	12	11,801,692
Assumption Change	06/30/2011	260,100,716	27	14,332,314
Experience Loss	06/30/2012	250,482,242	18	18,168,045
Experience Loss	06/30/2013	115,978,456	19	8,088,836
Experience Gain	06/30/2014	-246,417,577	20	-16,570,045
Assumption Change	06/30/2014	<u>35,896,722</u>	25	<u>2,076,419</u>
Total		\$1,830,400,490		\$132,094,973

<sup>(1)</sup> Level percentage of payroll amortization.

<sup>(2)</sup> Loss due to new retirees from non-DROP status and new DROP members during 7/1/2011 – 7/14/2011.



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**EXHIBIT H****Table of Amortization Bases (Continued)**

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**Harbor Port Police (Tiers 5 and 6)**

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Type	Date Established	Outstanding Balance	Years Remaining	Annual Payment <sup>(1)</sup>
Experience Gain	06/30/2008	-\$154,206	11	-\$16,452
Assumption Change	06/30/2008	141,516	24	8,406
Experience Loss	06/30/2009	5,846,183	10	675,460
Experience Loss	06/30/2010	1,604,988	11	171,229
Assumption Change	06/30/2010	1,129,872	26	63,745
Plan Amendment <sup>(2)</sup>	06/30/2011	43,816	27	2,414
Experience Gain	06/30/2011	-424,718	12	-42,184
Assumption Change	06/30/2011	781,521	27	43,064
Experience Loss	06/30/2012	1,321,681	18	95,865
Experience Loss	06/30/2013	1,259,768	19	87,862
Experience Gain	06/30/2014	-2,336,763	20	-157,133
Assumption Change	06/30/2014	<u>-476,026</u>	25	<u>-27,535</u>
Total		\$8,737,633		\$904,741

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<sup>(1)</sup> *Level percentage of payroll amortization.*

<sup>(2)</sup> *Loss due to new retirees from non-DROP status and new DROP members during 7/1/2011 – 7/14/2011.*

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**EXHIBIT I****Section 415 Limitations**

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Section 415 of the Internal Revenue Code (IRC) specifies the maximum benefits that may be paid to an individual from a defined benefit plan and the maximum amounts that may be allocated each year to an individual's account in a defined contribution plan.

A qualified pension plan may not pay benefits in excess of the Section 415 limits. The ultimate penalty for non-compliance is disqualification: active participants could be taxed on their vested benefits and the IRS may seek to tax the income earned on the plan's assets.

In particular, Section 415(b) of the IRC limits the maximum annual benefit payable at the Normal Retirement Age to a dollar limit of \$160,000 indexed for inflation. That limit is \$210,000 for 2014 and 2015. Normal Retirement Age for these purposes is age 62. These are the limits in simplified terms. They must be adjusted based on each participant's circumstances, for such things as age at retirement, form of benefits chosen and after tax contributions.

Benefits in excess of the limits may be paid through a qualified governmental excess plan that meets the requirements of Section 415(m).

Legal Counsel's review and interpretation of the law and regulations should be sought on any questions in this regard.

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**EXHIBIT J****Definitions of Pension Terms**

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The following list defines certain technical terms for the convenience of the reader:

**Assumptions or Actuarial****Assumptions:**

The estimates on which the cost of the Plan is calculated including:

- (a) Investment return — the rate of investment yield that the Plan will earn over the long-term future;
- (b) Mortality rates — the death rates of employees and pensioners; life expectancy is based on these rates;
- (c) Retirement rates — the rate or probability of retirement at a given age; and
- (d) Turnover rates — the rates at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement.

**Normal Cost:**

The amount of contributions required to fund the cost of benefits allocated to the current year of service.

**Actuarial Accrued Liability****For Actives:**

The equivalent of the accumulated normal costs allocated to the years before the valuation date.

**Actuarial Accrued Liability****For Pensioners:**

The single sum value of lifetime benefits to existing pensioners. This sum takes account of life expectancies appropriate to the ages of the pensioners and the interest that the sum is expected to earn before it is entirely paid out in benefits.

**Unfunded Actuarial Accrued****Liability:**

The extent to which the actuarial accrued liability of the Plan exceeds the assets of the Plan. There is a wide range of approaches to paying off the unfunded actuarial accrued liability, from meeting the interest accrual only to amortizing it over a specific period of time.

**Amortization of the Unfunded**

**Actuarial Accrued Liability:** Payments made over a period of years equal in value to the Plan's unfunded actuarial accrued liability.

**Investment Return:**

The rate of earnings of the Plan from its investments, including interest, dividends and market gain and loss adjustments, computed as a percentage of the average value of the fund. For actuarial purposes, the investment return often reflects a smoothing of the market gains and losses to avoid significant swings in the value of assets from one year to the next.

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**EXHIBIT I****Summary of Actuarial Valuation Results**

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The valuation was made with respect to the following data supplied to us:

1. Retired members as of the valuation date (including 2,459 beneficiaries in pay status)		12,502
2. Members inactive during year ended June 30, 2014 with vested rights <sup>(1)</sup>		131
3. Members active during the year ended June 30, 2014		13,097
Fully vested	4,385	
Not vested	8,712	

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The actuarial factors as of the valuation date are as follows:

**Assets**

1. Valuation value of retirement assets (\$18,291,010,687 at market value <sup>(2)</sup> as reported by LAFPP and \$16,879,354,713 at actuarial value <sup>(2)</sup> )		\$15,678,480,269
2. Present value of future normal costs		
Employee	\$1,366,635,351	
Employer	<u>2,760,973,038</u>	
Total		\$4,127,608,389
3. Unfunded actuarial accrued liability		<u>2,435,749,038</u>
4. Present value of current and future assets		\$22,241,837,696

**Liabilities**

5. Present value of future benefits		
Retired members and beneficiaries	\$9,932,576,305	
Inactive members with vested rights	23,465,196	
Active members	<u>12,285,796,195</u>	
Total		\$22,241,837,696

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<sup>(1)</sup> Includes 76 terminated members due only a refund of member contributions.

<sup>(2)</sup> Includes all assets for Retirement and Health Subsidy Benefits.

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**EXHIBIT I (continued)**  
**Summary of Actuarial Valuation Results**

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The determination of the recommended contribution is as follows:

1. Total normal cost	\$396,735,971
2. Expected employee contributions	<u>-132,691,115</u>
3. Employer normal cost: (1) + (2)	\$264,044,856
4. Payment on unfunded actuarial accrued liability	216,666,758
5. Payment for administrative expenses	12,717,245
6. Total recommended contribution: (3) + (4) + (5), payable beginning of year	<u>\$493,428,859</u>
7. Total recommended contribution: adjusted for July 15 payment	<u>\$494,917,979</u>
8. Total recommended contribution: adjusted for biweekly payment	<u>\$511,597,929</u>
9. Projected payroll	\$1,402,715,039
10. Item 6 as a percentage of projected payroll: (6) ÷ (9)	35.18%
11. Item 7 as a percentage of projected payroll: (7) ÷ (9)	35.28%
12. Item 8 as a percentage of projected payroll: (8) ÷ (9)	36.47%

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**EXHIBIT II**  
**Schedule of Employer Contributions**

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**Retirement Benefits**

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<b>Plan Year Ended June 30</b>	<b>Annual Required Contributions</b>	<b>Actual Contributions</b>	<b>Percentage Contributed</b>
2009	\$238,697,929	\$238,697,929	100.00%
2010	250,516,858	250,516,858	100.00%
2011	277,092,251	277,092,251	100.00%
2012	321,593,433	321,593,433	100.00%
2013	375,448,092	375,448,092	100.00%
2014	440,698,260	440,698,260	100.00%

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**EXHIBIT III**  
**Schedule of Funding Progress**

**Retirement Benefits (Dollar Amounts in Thousands)**

<b>Actuarial Valuation Date</b>	<b>Valuation Value of Assets (a)</b>	<b>Actuarial Accrued Liability (AAL) (b)</b>	<b>Unfunded/ (Overfunded) AAL (UAAL) (b) - (a)</b>	<b>Funded Ratio (a) / (b)</b>	<b>Covered Payroll (c)</b>	<b>UAAL as a Percentage of Covered Payroll [(b) - (a)] / (c)</b>
06/30/2008	\$14,153,296	\$14,279,116	\$125,820	99.1%	\$1,206,589	10.4%
06/30/2009	14,256,611	14,817,146	560,535	96.2%	1,357,249	41.3%
06/30/2010	14,219,581	15,520,625	1,301,044	91.6%	1,356,986	95.9%
06/30/2011	14,337,669	16,616,476	2,278,807	86.3%	1,343,963	169.6%
06/30/2012	14,251,913	17,030,833	2,778,920	83.7%	1,341,914	207.1%
06/30/2013	14,657,713	17,632,425	2,974,712	83.1%	1,367,237	217.6%
06/30/2014	15,678,480	18,114,229	2,435,749	86.6%	1,402,715	173.6%



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**EXHIBIT IV****Supplementary Information Required by GASB**

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<b>Valuation date</b>	June 30, 2014
<b>Actuarial cost method</b>	Entry Age Cost Method
<b>Amortization method</b>	For Tier 1, level dollar amortization is used ending on June 30, 2037. For Tiers 2, 3 and 4, level percent of payroll amortization with multiple layers is used as a percent of TOTAL valuation payroll from the respective employer (i.e., City or Harbor Port Police). For Tiers 5 and 6, level percent of payroll with multiple layers is used as a percent of combined payroll for these tiers from the respective employer (i.e., City or Harbor Port Police).  Actuarial gains/losses are amortized over 20 years. Assumption changes are amortized over 25 years. Plan changes are amortized over 15 years.
<b>Asset valuation method</b>	Market value of assets less unrecognized returns in each of the last seven years. Unrecognized return is equal to the difference between the actual market return and the expected return on the market value, and is recognized over a seven-year period. Deferred gains and losses as of June 30, 2013 have been combined and will be recognized over a period of six years from July 1, 2013. The actuarial value of assets is further adjusted, if necessary, to be within 40% of the market value of assets.
<b>Actuarial assumptions:</b>	
Investment rate of return	7.50%
Inflation rate	3.25%
Real across-the-board salary increase	0.75%
Projected salary increases*	Ranges from 4.75% to 11.50% based on service.
Cost of living adjustments	3.25% of Tiers 1 and 2 retirement income and 3.00% of Tiers 3, 4, 5, and 6 retirement income.
<b>Plan membership:</b>	
Retired members and beneficiaries receiving benefits	12,502
Terminated members entitled to, but not yet receiving benefits	131
Active members	<u>13,097</u>
Total	<u>25,730</u>

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\* See Exhibit V for these increases.

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**EXHIBIT V**  
**Actuarial Assumptions and Actuarial Cost Method**

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The following assumptions were adopted by the Board based on the Actuarial Experience Study as of June 30, 2013 and the Economics Assumptions Study as of June 30, 2014.

**Mortality Rates**

*Healthy:* RP-2000 Combined Healthy Mortality Table (separate for males and females), projected to 2022 with scale BB set back one year for members.

RP-2000 Combined Healthy Mortality Table (separate for males and females), projected to 2022 with scale BB set forward one year for beneficiaries.

*Disabled:* RP-2000 Combined Healthy Mortality Table (separate for males and females), projected to 2022 with scale BB set forward one year.

The tables shown above were determined to contain sufficient provision appropriate to reasonably reflect future mortality, based on a review of mortality experience as of the measurement date.

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**Termination Rates Before Retirement:***Pre-Retirement Mortality:*

<b>Age</b>	<b>Rate (%)</b>	
	<b>Mortality</b>	
	<b>Male</b>	<b>Female</b>
20	0.03	0.02
25	0.04	0.02
30	0.04	0.02
35	0.07	0.04
40	0.10	0.06
45	0.13	0.10
50	0.19	0.15
55	0.30	0.22
60	0.52	0.36

*All pre-retirement deaths are assumed to be service connected.*

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**Termination Rates Before Retirement (continued):**

<b>Age</b>	<b>Rate (%)</b>	
	<b>Disability*</b>	
	<b>Fire</b>	<b>Police</b>
20	0.02	0.02
25	0.02	0.03
30	0.03	0.05
35	0.06	0.08
40	0.15	0.22
45	0.23	0.36
50	0.28	0.46
55	1.02	0.80
60	3.00	1.18

\* 90% of disabilities are assumed to be service connected. Disability rates are not applied to members eligible to enter the DROP.

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**Termination Rates Before Retirement (continued):**

Rate (%)		
Termination (< 5 Years of Service)		
Years of Service	Fire	Police
0 - 1	8.00	8.00
1 - 2	2.50	3.00
2 - 3	1.50	2.50
3 - 4	0.75	2.50
4 - 5	0.50	1.75

Rate (%)		
Termination (5+ Years of Service) *		
Age	Fire	Police
20	1.00	2.00
25	1.00	2.00
30	0.85	1.70
35	0.54	1.20
40	0.37	0.85
45	0.17	0.66
50	0.02	0.24
55	0.00	0.00
60	0.00	0.00

\* No termination is assumed after a member is eligible for retirement. Members who are not eligible to receive a deferred vested retirement benefit are assumed to receive refund of contributions.

**Retirement Rates:**

Age	Rate(%)					
	Fire			Police		
	Tiers 2&4	Tiers 3&5	Tier 6	Tiers 2&4	Tiers 3&5	Tier 6
41	1.00	0.00	0.00	10.00	0.00	0.00
42	1.00	0.00	0.00	10.00	0.00	0.00
43	1.00	0.00	0.00	10.00	0.00	0.00
44	1.00	0.00	0.00	10.00	0.00	0.00
45	1.00	0.00	0.00	10.00	0.00	0.00
46	1.00	0.00	0.00	7.00	0.00	0.00
47	1.00	0.00	0.00	7.00	0.00	0.00
48	2.00	0.00	0.00	7.00	0.00	0.00
49	2.00	0.00	0.00	7.00	0.00	0.00
50	3.00	3.00	3.00	12.00	7.00	8.00
51	4.00	3.00	3.00	12.00	6.00	10.00
52	5.00	3.00	4.00	12.00	6.00	10.00
53	10.00	3.00	5.00	15.00	6.00	15.00
54	15.00	7.00	5.00	20.00	10.00	15.00
55	20.00	12.00	10.00	20.00	18.00	18.00
56	20.00	14.00	12.00	25.00	18.00	18.00
57	20.00	16.00	15.00	25.00	20.00	20.00
58	20.00	20.00	18.00	25.00	22.00	22.00
59	20.00	25.00	20.00	25.00	25.00	25.00
60	20.00	25.00	25.00	25.00	25.00	25.00
61	20.00	30.00	30.00	25.00	25.00	25.00
62	25.00	35.00	30.00	25.00	25.00	25.00
63	25.00	40.00	35.00	30.00	25.00	25.00
64	30.00	40.00	40.00	40.00	30.00	30.00
65	100.00	100.00	100.00	100.00	100.00	100.00

**DROP Program:** DROP participants are considered active members until they leave the DROP and begin receiving retirement benefits. Members are assumed to remain in the DROP for 5 years. Of all members expected to retire with a service retirement benefit, we project a 95% probability that members have elected the DROP before retirement if they will have also satisfied the requirements for participating in the DROP for 5 years.

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<b>Retirement Age and Benefit for Inactive Vested Participants:</b>	For deferred vested members, retirement assumption is age 50.
<b>Unknown Data for Members:</b>	Same as those exhibited by members with similar known characteristics. If not specified, members are assumed to be male.
<b>Exclusion of Inactive Vested:</b>	All inactive participants are included in the valuation.
<b>Definition of Active Members:</b>	First day of biweekly payroll following employment for new department employees or immediately following transfer from other city department.
<b>Percent Married/Domestic Partner:</b>	80% of male members, 60% of female members
<b>Age of Spouse:</b>	Wives are 3 years younger than their husbands.

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<b>Future Benefit Accruals:</b>	1.0 year of service per year.
<b>Consumer Price Index:</b>	Increase of 3.25% per year; benefit increases due to CPI subject to a 3.0% maximum for Tiers 3 through 6.
<b>Member Contribution and Matching Account Crediting Rate:</b>	5.00%
<b>Net Investment Return:</b>	7.50%, net of investment expenses
<b>Administrative Expenses:</b>	Out of the total 1.00% of payroll in administrative expense, 0.94% of payroll payable bi-weekly is allocated to the Retirement Plan. This is equal to 0.91% of payroll payable at beginning of the year.

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**Salary Increases:**

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**Annual Rate of Compensation Increase**

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Inflation: 3.25% per year; plus 0.75% “across the board” salary increases; plus the following Merit and Longevity increases based on years of service.

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<b>Years of Service</b>	<b>Additional Salary Increase</b>
0	7.50%
1	6.50
2	5.00
3	4.75
4	3.75
5	3.00
6	2.25
7	2.00
8	1.75
9	1.75
10	1.25
11 or more	0.75

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**Service Connected Disability Benefits:**

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<b>Years of Service</b>	<b>Benefit</b>
Less than 20	55% of Final Average Salary
20 – 30	65% of Final Average Salary
More than 30	75% of Final Average Salary

**Nonservice Connected Disability Benefits:**

40% of Final Average Salary



<b>Actuarial Value of Assets:</b>	The market value of assets less unrecognized returns. Unrecognized return is equal to the difference between the actual and expected returns on a market value basis, and is recognized over a seven-year period. Deferred gains and losses as of June 30, 2013 have been combined and will be recognized in equal amounts over a period of six years from that date. The actuarial value of assets is further adjusted, if necessary, to be within 40% of the market value of assets.
<b>Actuarial Cost Method:</b>	Entry Age Normal Actuarial Cost Method. Entry Age is the current age minus Service Credit. Actuarial Accrued Liability is calculated on an individual basis and is based on costs allocated as a level percentage of compensation, with Normal Cost determined as if the current benefit accrual rate had always been in effect (“replacement life”).
<b>Funding Policy:</b>	The City of Los Angeles Fire & Police Pension Plan makes contributions equal to the Normal Cost adjusted by amount to amortize any Surplus or Unfunded Actuarial Accrued Liability. Both the Normal Cost and the Actuarial Accrued Liability are determined under the Entry Age Normal cost method. Any changes in Surplus or Unfunded Actuarial Accrued Liability due to actuarial gains or losses are amortized over separate twenty year periods as a level percentage of payroll. Any changes in Surplus or Unfunded Actuarial Accrued Liability from plan amendments are amortized over separate fifteen year periods as a level percentage of payroll. Any changes in Surplus or Unfunded Actuarial Accrued Liability from plan assumption changes are amortized over separate twenty-five year periods as a level percentage of payroll. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are allocated by service. For Tier 1, the Unfunded Actuarial Accrued Liability is amortized using level dollar amortization ending on June 30, 2037. For Tiers 2, 3 and 4, the Unfunded Actuarial Accrued Liability is amortized using level percent of payroll as a percent of total valuation payroll from the respective employer (i.e., the City or Harbor Port Police). For Tiers 5 and 6, the Unfunded Actuarial Accrued Liability is amortized using level percent of payroll as a percent of combined payroll for these tiers from the respective employer (i.e., City or Harbor Port Police).

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**Changes in Actuarial Assumptions** The Board adopted an adjustment to the asset smoothing method that combined the net deferred investment gains from the June 30, 2013 valuation into a single layer to be recognized in equal amounts over a period of six years from that date. Based on the June 30, 2013 Actuarial Experience Study, the following assumptions have been changed. Previously, these assumptions were as follows:

**Mortality Rates**

- Healthy:* RP-2000 Combined Healthy Mortality Table (separate for males and females) set back four years for members.  
 RP-2000 Combined Healthy Mortality Table (separate for males and females) set back two years for beneficiaries.
- Disabled:* RP-2000 Combined Healthy Mortality Table (separate for males and females) set back two years.

**Termination Rates Before Retirement:**

*Pre-Retirement Mortality:*

	Rate (%)	
	Mortality	
Age	Male	Female
20	0.03	0.02
25	0.04	0.02
30	0.04	0.02
35	0.05	0.03
40	0.08	0.05
45	0.11	0.08
50	0.16	0.12
55	0.24	0.19
60	0.42	0.31

*All pre-retirement deaths are assumed to be service connected.*

**Changes in Actuarial Assumptions (continued):**

**Termination Rates Before Retirement (continued):**

<b>Age</b>	<b>Rate (%)</b>	
	<b>Disability*</b>	
	<b>Fire</b>	<b>Police</b>
20	0.02	0.02
25	0.02	0.03
30	0.03	0.05
35	0.06	0.11
40	0.15	0.29
45	0.26	0.46
50	0.42	0.56
55	1.40	1.08
60	4.40	1.46

\* 90% of disabilities are assumed to be service connected.

**Changes in Actuarial Assumptions (continued):**

**Termination Rates Before Retirement (continued):**

Rate (%)		
Withdrawal (< 5 Years of Service)		
Service	Fire	Police
0 - 1	8.00	8.00
1 - 2	3.00	4.00
2 - 3	2.00	3.00
3 - 4	1.00	3.00
4 - 5	1.00	2.50

Rate (%)		
Vested Termination (5+ Years of Service) *		
Age	Fire	Police
20	1.50	2.50
25	1.50	2.50
30	1.20	2.20
35	0.70	1.70
40	0.41	1.20
45	0.20	0.82
50	0.04	0.28
55	0.00	0.00
60	0.00	0.00

\* No vested termination is assumed after a member is eligible for retirement.

**Changes in Actuarial Assumptions (continued):**

**Retirement Rates:**

Age	Rate(%)					
	Fire			Police		
	Tiers 2&4	Tiers 3&5	Tier 6	Tiers 2&4	Tiers 3&5	Tier 6
41	1.00%	0.00%	0.00%	8.00%	0.00%	0.00%
42	1.00	0.00	0.00	8.00	0.00	0.00
43	1.00	0.00	0.00	10.00	0.00	0.00
44	1.00	0.00	0.00	10.00	0.00	0.00
45	1.00	0.00	0.00	10.00	0.00	0.00
46	1.00	0.00	0.00	8.00	0.00	0.00
47	1.00	0.00	0.00	8.00	0.00	0.00
48	2.00	0.00	0.00	8.00	0.00	0.00
49	2.00	0.00	0.00	8.00	0.00	0.00
50	3.00	5.00	3.00	8.00	10.00	8.00
51	3.00	5.00	3.00	10.00	10.00	10.00
52	4.00	5.00	4.00	10.00	10.00	10.00
53	5.00	5.00	5.00	15.00	10.00	15.00
54	5.00	8.00	5.00	15.00	13.00	15.00
55	10.00	10.00	10.00	20.00	16.00	18.00
56	15.00	12.00	12.00	20.00	18.00	18.00
57	15.00	15.00	15.00	20.00	22.00	22.00
58	15.00	18.00	18.00	25.00	25.00	25.00
59	15.00	20.00	20.00	25.00	30.00	30.00
60	20.00	25.00	25.00	25.00	30.00	30.00
61	20.00	30.00	30.00	25.00	30.00	30.00
62	20.00	30.00	30.00	25.00	30.00	30.00
63	25.00	35.00	35.00	30.00	30.00	30.00
64	30.00	40.00	40.00	40.00	30.00	30.00
65	100.00	100.00	100.00	100.00	100.00	100.00

**Changes in Actuarial Assumptions (continued):**

**Percent Married/Domestic Partner:** 86%

**Consumer Price Index:** Increase of 3.50% per year; benefit increases due to CPI subject to a 3.0% maximum for Tiers 3 through 6.

**Net Investment Return:** 7.75%, net of investment and administrative expenses

**Salary Increases:**

---

Annual Rate of Compensation Increase

---

Inflation: 3.50% per year; plus 0.75% “across the board” salary increases; plus the following Merit and Longevity increases based on years of service.

<b>Years of Service</b>	<b>Additional Salary Increase</b>
0	8.00%
1	7.00%
2	4.50%
3	4.00%
4	3.50%
5	3.20%
6	2.75%
7	2.50%
8	2.25%
9	2.25%
10	2.00%
11 or more	1.00%

---

**EXHIBIT VI**  
**Summary of Plan Provisions**

---

This exhibit summarizes the major provisions of the City of Los Angeles Fire & Police Pension Plan included in the valuation. It is not intended to be, nor should it be interpreted as, a complete statement of all plan provisions. For Tiers 1 through 4 and Tier 6, the section codes are from the Los Angeles Charter. For Tier 5 and the DROP program, the section codes are from the Los Angeles Administrative Code.

---

**Plan Year:** July 1 through June 30  
**Census Date:** June 30

---

**Service Retirement Benefit:**

Tier 1 (§ 1304)

*Age & Service Requirement* 20 years of service

*Amount*

Years of Service

Benefit

20

40% of Normal Pension Base

20 to 25

Additional 2% for each year over 20 and under 25

25

50% of Normal Pension Base

25 to 35

Additional 1 2/3% for each year over 25 and under 35

35+

66 2/3% of Normal Pension Base

Tier 2 (§ 1408)

<i>Age &amp; Service Requirement</i>	20 years of service	
<i>Amount</i>	<u>Years of Service</u>	<u>Benefit</u>
	Less than 25	2% of Normal Pension Base per year of service
	25+	55% plus 3% per year over 25 to a maximum of 70% of Normal Pension Base

Tier 3 (§ 1504)

<i>Age &amp; Service Requirement</i>	Age 50 and 10 years of service	
<i>Amount</i>	<u>Years of Service</u>	<u>Benefit</u>
	Less than 20	2% of Final Average Salary per year of service
	20+	For each additional year over 20, 3% of Final Average Salary per year over 20 to a maximum of 70% Final Average Salary

Tier 4 (§ 1604)

<i>Age &amp; Service Requirement</i>	20 years of service	
<i>Amount</i>	<u>Years of Service</u>	<u>Benefit</u>
	20	40% of Final Average Salary
	20+	For each additional year over 20, 3% of Final Average Salary per year over 20 to a maximum of 70% Final Average Salary

Tier 5 (§ 4.2004)

<i>Age &amp; Service Requirement</i>	Age 50 and 20 years of service	
<i>Amount</i>	<u>Years of Service</u>	<u>Benefit</u>
	20	50% of Final Average Salary
	20+	For each additional year over 20, 3% of Final Average Salary per year over 20, except 30 <sup>th</sup> year where 4% is provided, to a maximum of 90% Final Average Salary



Tier 6 (§ 1704)

<i>Age &amp; Service Requirement</i>	Age 50 and 20 years of service	
<i>Amount</i>	<u>Years of Service</u>	<u>Benefit</u>
	20	40% of Final Average Salary
	21 to 25	Additional 3% of Final Average Salary for years 21 through 25
	26 to 30	Additional 4% of Final Average Salary for years 26 through 30
	31+	Additional 5% of Final Average Salary per year over 30, to a maximum of 90% of Final Average Salary

---

**Deferred Retirement Option Plan (DROP) (§4.2100 - 4.2109):**

<i>Eligibility</i>	Tier 2:	25 years of service
	Tier 3:	Age 50 and 25 years of service
	Tier 4:	25 years of service
	Tier 5:	Age 50 and 25 years of service
	Tier 6:	Age 50 and 25 years of service
<i>Benefits under DROP</i>	DROP benefits (calculated using age, service, and salary at the commencement date of participation in DROP) will be credited to a DROP account with interest at 5% annually. Members are required to make normal member contributions. DROP benefits receive annual COLA while in DROP (limited to 3% for all Tiers). Members may participate in DROP for up to five years.	

---

**Normal Pension Base:**

Tier 1, 2 (§ 1302, § 1406)	Final monthly salary rate
----------------------------	---------------------------

---

**Final Average Salary:**

Tier 3, 4, 5 (§ 1502, § 1602, § 4.2002)	Highest monthly average salary actually received during any 12 consecutive months of service
Tier 6 (§ 1702)	Highest monthly average salary actually received during any 24 consecutive months of service

---

**Cost of Living Adjustment (COLA):**

Tier 1, 2 (§ 1328, § 1422)	Commencing July 1 based on changes to Los Angeles area consumer price index.
Tier 3, 4 (§ 1516, § 1616)	Commencing July 1 based on changes to Los Angeles area consumer price index to a maximum of 3% per year. COLA is prorated in the first year of retirement.
Tier 5, 6 (§ 4.2016, § 1716)	Commencing July 1 based on changes to Los Angeles area consumer price index to a maximum of 3% per year, excess banked. COLA is prorated in the first year of retirement.

---

**Death After Retirement:**

Tier 1 (§ 1314, § 1316)	
<i>Service Retirement</i>	Pension equal to the same percentage of the Member's Normal Pension Base to a maximum of 50%.
<i>Service Connected Disability</i>	50% of Member's Normal Pension Base.
<i>Nonservice Connected Disability</i>	40% of highest monthly salary as of Member's retirement for basic rank of Police Officer III or Firefighter III, and the highest length of service pay.
Tier 2 (§ 1414)	
<i>Service Retirement</i>	Pension equal to the same percentage of the Member's Normal Pension Base to a maximum of 55%.
<i>Service Connected Disability</i>	50% of the Member's Normal Pension Base, or 55% of the Member's Normal Pension Base if Member had at least 25 years of service at the date of death.
<i>Nonservice Connected Disability</i>	40% of highest monthly salary as of Member's retirement for basic rank of Police Officer III or Firefighter III, and the highest length of service pay (nonservice connected pension base).

Tier 3, 4 (§ 1508, § 1608)

*Service Retirement*

Pension equal to 60% of the pension received by the deceased Member.

*Service Connected Disability*

If death occurs within three years of the Member's effective date of pension, then the eligible spouse or designated beneficiary shall receive 75% of the Final Average Salary.

Otherwise, a pension equal to 60% of the pension received by the deceased Member immediately preceding the date of death.

*Nonservice Connected Disability*

Pension equal to 60% of the pension received by the deceased Member.

Tier 5 (§ 4.2008, § 4.2008.5)

If former Tier 2 member, see Tier 2. Otherwise, see Tier 3.

Tier 6 (§ 1708)

*Service Retirement*

Pension equal to 70% of the pension received by the deceased Member.

*Service Connected Disability*

If death occurs within three years of the Member's effective date of pension, then the eligible spouse or designated beneficiary shall receive 80% of the Final Average Salary.

Otherwise, a pension equal to 80% of the pension received by the deceased Member immediately preceding the date of death.

*Nonservice Connected Disability*

Pension equal to 70% of the pension received by the deceased Member.

---

**Death Before Retirement:**

Tier 1 (§ 1314, § 1316)

*Eligible for Service Retirement*

*Service Requirement*

20 years of service.

*Amount*

100% of Member's accrued service retirement Member would have received, not to exceed 50% of Normal Pension Base.

*Service Connected*

*Service Requirement*

None.

*Amount*

50% of Member's Normal Pension Base.

*Nonservice Connected*

*Service Requirement*

5 years of service.

*Amount*

40% of highest monthly salary as of Member's retirement for basic rank of Police Officer III or Firefighter III, and the highest length of service pay.

Tier 2 (§ 1414)

*Eligible for Service Retirement*

*Service Requirement*

20 years of service.

*Amount*

100% of Member's accrued service retirement Member would have received, not to exceed 55% of Normal Pension Base.

*Service Connected*

*Service Requirement*

None.

*Amount*

50% of the Member's Normal Pension Base, or 55% of the Member's Normal Pension Base if Member had at least 25 years of service at the date of death.

*Nonservice Connected*

*Service Requirement*

5 years of service.

*Amount*

40% of highest monthly salary as of Member's retirement for basic rank of Police Officer III or Firefighter III, and the highest length of service pay (nonservice connected pension base).

Tier 3, 4 (§ 1508, § 1608)

*Eligible for Service Retirement*

*Service Requirement*

10 years of service for Tier 3. 20 years of service for Tier 4.

*Amount*

80% of service retirement Member would have received, not to exceed 40% of the Member's Final Average Salary.

*Service Connected*

*Service Requirement*

None.

*Amount*

75% of the Member's Final Average Salary.

*Nonservice Connected*

*Service Requirement*

5 years of service.

*Amount*

30% of the Member's Final Average Salary.

*Basic Death Benefit*

If Member has at least one year of service, in addition to return of contributions, beneficiary receives the Member's one-year average monthly salary times years of completed service (not to exceed 6 years).

Tier 5 (§ 4.2008, § 4.2008.5)

*Eligible for Service Retirement*

*Service Requirement*

20 years of service.

*Amount*

For former Tier 2, 100% of Member's accrued service retirement Member would have received, not to exceed 55% of Normal Pension Base. For members who are not former Tier 2, 40% of the Member's Final Average Salary.

*Service Connected*

*Service Requirement*

None.

*Amount*

75% of the Member's Final Average Salary payable to an eligible spouse or designated beneficiary.

*Nonservice Connected*

*Service Requirement*

5 years of service.

*Amount*

For former Tier 2, 40% of highest monthly salary as of Member's retirement for basic rank of Police Officer III or Firefighter III, and the highest length of service pay. For members who are not former Tier 2, 30% of the Member's Final Average Salary.

*Basic Death Benefit*

If Member has at least one year of service, in addition to return of contributions, beneficiary receives the Member's one-year average monthly salary times years of completed service (not to exceed 6 years).

Tier 6 (§ 1708)

*Service Connected*

*Service Requirement*

None.

*Amount*

80% of the Member's Final Average Salary.

*Nonservice Connected*

*Service Requirement*

5 years of service.

*Amount*

50% of the Member's Final Average Salary.

*Basic Death Benefit*

If Member has at least one year of service, in addition to return of contributions, beneficiary receives the Member's two-year average monthly salary times years of completed service (not to exceed 6 years).

---

**Disability:**

Tier 1 (§ 1310, § 1312)

*Service Connected*

*Service Requirement*

None.

*Amount*

50% to 90% of Normal Pension Base depending on severity of disability, with a minimum of Member's service pension percentage rate.

*Nonservice Connected*

*Service Requirement*

5 years of service.

*Amount*

40% of highest monthly salary as of Member's retirement for basic rank of Police Officer III or Firefighter III, and the highest length of service pay.

Tier 2 (§ 1412)

*Service Connected*

*Service Requirement*

None.

*Amount*

50% to 90% of Normal Pension Base depending on severity of disability, with a minimum of Member's service pension percentage rate.

*Nonservice Connected*

*Service Requirement*

5 years of service.

*Amount*

40% of highest monthly salary as of Member's retirement for basic rank of Police Officer III or Firefighter III, and the highest length of service pay.

Tier 3, 4, 5, 6 (§ 1506, § 1606, § 4.2006, § 1706)

*Service Connected*

*Service Requirement*

None.

*Amount*

30% to 90% of Final Average Salary depending on severity of disability with a minimum of 2% of Final Average Salary per year of service.

*Nonservice Connected*

*Service Requirement*

5 years of service.

*Amount*

30% to 50% of Final Average Salary depending on severity of disability.

---

**Deferred Withdrawal Retirement Benefit (Vested):**

Tier 3 (§ 1504)

*Age & Service Requirement*

Age 50 with 10 years of service.

*Amount*

See Tier 3 Service Retirement.

Tier 5, Tier 6 (§ 4.2004, § 1704)

*Age & Service Requirement*

Age 50 and 20 years of service.

*Amount*

Member is entitled to receive a service pension using Tier 3 retirement formula.

---

<b>Member Normal Contributions:</b>	Members are exempt from making contributions if their continuous service exceeds 30 years for Tiers 1 through 4, and 33 years for Tier 5 and Tier 6. Members not in Tier 6 may pay a 2% contribution on their base salary retroactive to August 15, 2011 for a period of 25 years or until retired from the Plan to avoid a freeze on their retiree health subsidy.
Tier 1 (§ 1324)	Normal contribution rate of 6%.
Tier 2 (§ 1420)	Normal contribution rate of 6% plus half of the cost of the cost of living benefit to a maximum of 1%.
Tier 3 (§ 1514)	Normal contribution rate of 8%.
Tier 4 (§ 1614)	Normal contribution rate of 8%.
Tier 5 (§ 4.2014)	Normal contribution rate of 9% with the City of Los Angeles paying 1% provided that the LAFPP is at least 100% actuarially funded for pension benefits.
Tier 6 (§ 1714)	Normal contribution rate of 9%, plus 2% additional contributions to support funding of retiree health benefits. The additional 2% contributions shall not be required for members with more than 25 years of service.

---

**Changes in Plan Provisions:** There have been no changes in plan provisions since the last valuation

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## **City of Los Angeles Fire and Police Pension Plan**

**Actuarial Valuation and Review of Other  
Postemployment Benefits (OPEB) as of  
June 30, 2014 In accordance with GASB Statements  
No. 43 and No. 45**



This report has been prepared at the request of the Board of Commissioners to assist in administering the Fund. This valuation report may not otherwise be copied or reproduced in any form without the consent of the Board of Commissioners and may only be provided to other parties in its entirety. The measurements shown in this actuarial valuation may not be applicable for other purposes.

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*November 12, 2014*

*Board of Fire and Police Pension Commissioners  
City of Los Angeles Fire and Police Pension Plan  
360 East Second Street, Suite 400  
Los Angeles, CA 90012-4203*

*Dear Board Members:*

*We are pleased to submit this Actuarial Valuation and Review of Other Postemployment Benefits (OPEB) as of June 30, 2014 under Governmental Accounting Standards Board Statements No. 43 and No. 45. The report summarizes the actuarial data used in the valuation, discloses the Net OPEB obligation (NOO) as of June 30, 2014, establishes the Annual Required Contribution (ARC) for the coming year, and analyzes the preceding year's experience. The census information and financial information on which our calculations were based was prepared by LAFPP. That assistance is gratefully acknowledged. The actuarial calculations were completed under the supervision of Thomas Bergman, ASA, MAAA and Andy Yeung, ASA, MAAA, FCA.*

*This actuarial valuation has been completed in accordance with generally accepted actuarial principles and practices. To the best of our knowledge, the information supplied in this actuarial valuation is complete and accurate. Further, in our opinion, the assumptions used in this valuation and described in Exhibit II are reasonably related to the experience of and the expectations for the Plan. The actuarial projections are based on these assumptions and the plan of benefits as summarized in Exhibit III.*

*Sincerely,*

*Segal Consulting, a Member of The Segal Group, Inc.*

*By:*

*\_\_\_\_\_  
Paul Angelo, FSA, MAAA, FCA, EA  
Senior Vice President and Actuary*

*\_\_\_\_\_  
Andy Yeung, ASA, MAAA, FCA, EA  
Vice President and Associate Actuary*

*TXB/hy*

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## **PURPOSE**

This report presents the results of our actuarial valuation of retiree health benefits offered by the City of Los Angeles Fire and Police Pension Plan as of June 30, 2014. The results are in accordance with the Governmental Accounting Standards, which prescribe an accrual methodology for accumulating the value of other postemployment benefits (OPEB) over participants' active working lifetimes.

## **HIGHLIGHTS OF THE VALUATION**

- In preparing the June 30, 2014 valuation, we have continued to assume that certain members who have not agreed to make an additional 2% member contribution would be subject to a freeze in the level of medical subsidy. Even though LAFPP has received a Court Order to no longer freeze the subsidy, that Court Order is currently being appealed by the City. LAFPP has directed Segal to continue to assume the freeze is in effect in the valuation until such legal action is completed. As further directed by LAFPP, we have provided the results without the subsidy freeze in a separate letter.
- The recommended contribution rate has decreased from 11.30% of payroll (\$154.5 million) to 11.13% of payroll (\$156.1 million), assuming contributions are made by the City on July 15. A reconciliation of the employer's rate, if made at the beginning of the year, is provided in Section 3, Exhibit I.
- The employer contribution rates provided in this report have been developed assuming that they will be made by the City either (1) throughout the year (i.e. the City

will pay contributions at the end of every pay period), (2) on July 15 or (3) the beginning of the year.

- The funded ratio has increased from 38.5% to 43.2% in this valuation. On a market value of asset basis, the funded ratio has increased from 38.7% to 46.8%. The unfunded actuarial accrued liability (UAAL) has decreased from \$1.620 billion to \$1.582 billion. A reconciliation of the change in the UAAL is provided in Section 2, Chart 2.
- The discount rate for this valuation is 7.50%, and is based on the assumption that in the long term the City is paying a contribution that equals the ARC and 100% of benefits will be paid from the trust. The discount rate was lowered from the 7.75% used in the prior valuation as a result of the June 30, 2014 economic assumptions study.
- The funding method used to develop the (ARC) is the Entry Age method, with the Normal Cost developed as a level percent of payroll. The contribution to amortize the UAAL is developed as a level percent of payroll.
- Contributions will generally increase with payroll growth. Other factors such as gains or losses, or changes in trend assumptions will also change the ARC for future years.
- The results of this valuation reflect a change to combine the \$77.3 million in deferred gains as of June 30, 2013 and recognize those gains in level amounts over a six-year period starting July 1, 2013. This adjustment was approved by the Board.

- As indicated in Section 3, Exhibit H of this report, the total unrecognized investment gain as of June 30, 2014 is \$1.412 billion for the assets for Retirement and Health Subsidy Benefits. For comparison purposes, the total unrecognized investment gain as of June 30, 2013 was \$77.3 million.
- The deferred gain of \$1.412 billion represents 7.7% of the market value of assets as of June 30, 2014. Unless offset by future investment losses, or other unfavorable experience, the recognition of the \$1,412 million market gain is expected to have an impact on the Health Plan's future funded percentage and contribution rate requirements. This potential impact may be illustrated as follows:
  - If the deferred gain were recognized immediately in the valuation value of assets, the funded percentage would increase from 43.2% to 46.8%.
  - If the deferred gain were recognized immediately in the valuation value of assets, the aggregate employer rate (payable throughout the fiscal year) would decrease from 11.50% to 10.98% of payroll.
- The actuarial valuation report as of June 30, 2014 is based on financial and demographic information as of that date. Changes subsequent to that date are not reflected and will impact the actuarial cost of the Plan.
- The assumptions adopted by the Board based on the Actuarial Experience Study as of June 30, 2013 and the Economics Assumptions Study as of June 30, 2014 are reflected for the first time in this valuation.

The key valuation results for the current and prior years are shown.

## SUMMARY OF VALUATION RESULTS

	June 30, 2014	June 30, 2013
Actuarial Accrued Liability (AAL)	\$2,783,282,885	\$2,633,792,545
Actuarial Value of Assets	1,200,874,444	1,013,399,583
Unfunded Actuarial Accrued Liability	\$1,582,408,441	\$1,620,392,962
Funded Ratio on Actuarial Value of Assets	43.15%	38.48%
Market Value of Assets	\$1,301,306,102	\$1,018,395,096
Funded Ratio on Market Value of Assets	46.75%	38.67%
<b>Annual Required Contribution (ARC) for coming year</b>		
Normal cost (beginning of year)	\$56,552,213	\$55,452,797*
Amortization of the unfunded actuarial accrued liability	98,278,461	98,573,613*
Allocated amount for administrative expenses	<u>811,738</u>	<u>N/A</u>
Total Annual Required Contribution at beginning of year	\$155,642,412	\$154,026,410*
ARC as a percentage of pay at beginning of year	11.10%	11.27%*
Total Annual Required Contribution (payable throughout the year)	161,373,487	\$159,883,569*
ARC as a percentage of pay (payable throughout the year)	11.50%	11.69%*
Total Annual Required Contribution (payable July 15)	\$156,112,126	\$154,506,201*
ARC as a percentage of pay (payable July 15)	11.13%	11.30%*
Projected total payroll	\$1,402,715,039	\$1,367,236,866
<hr/>		
<b>Total Participants (including retirees/beneficiaries not receiving subsidy)</b>	25,674	25,177
<b>Total Participants (excluding retirees/beneficiaries not receiving subsidy)</b>	23,562	23,553
<hr/>		
<b>Annual OPEB Cost (AOC) for Coming Year</b>		
Annual Required Contributions (payable end of fiscal year)	\$167,315,593	\$165,963,457
Interest on Net OPEB Obligations	10,099,735	9,980,446
ARC Adjustments	<u>-8,720,981</u>	<u>-8,441,233</u>
Total Annual OPEB Cost	\$168,694,347	\$167,502,670
AOC as percentage of pay	12.03%	12.25%

\* Before reflecting payroll for the June 30, 2014 valuation.

November 12, 2014

### ACTUARIAL CERTIFICATION

This is to certify that Segal Consulting has conducted an actuarial valuation of certain benefit obligations of the City of Los Angeles Fire and Police Pension Plan's other postemployment benefit program as of June 30, 2014, in accordance with generally accepted actuarial principles and practices. The actuarial calculations presented in this report have been made on a basis consistent with our understanding of GASB Statements 43 and 45 for the determination of the liability for postemployment benefits other than pensions.

The actuarial valuation is based on the plan of benefits verified by LAFPP and reliance on participant, premium, claims and expense data provided by LAFPP. Segal Consulting has not audited the data provided. The accuracy and comprehensiveness of the data is the responsibility of those supplying the data. Segal Consulting, however, has reviewed the data for reasonableness and consistency.

The actuarial computations made are for purposes of fulfilling plan accounting and funding requirements. Determinations for purposes other than meeting financial accounting and funding requirements may be significantly different from the results reported here. Accordingly, additional determinations may be needed for other purposes, such as judging benefit security at termination of the plan, or determining short-term cash flow requirements.

To the best of our knowledge, this report is complete and accurate and in our opinion presents the information necessary to comply with GASB Statements 43 and 45 with respect to the benefit obligations addressed. The signing actuaries are members of the Society of Actuaries, the American Academy of Actuaries, and other professional actuarial organizations and collectively meet their "General Qualification Standards for Statements of Actuarial Opinions" to render the actuarial opinion contained herein.

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Thomas Bergman, ASA, MAAA, EA  
Assistant Actuary

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Andy Yeung, FCA, ASA, MAAA, EA  
Vice President and Associate Actuary

The actuarial present value of total projected benefits uses the actuarial assumptions disclosed in Section 4 to calculate the value today of all benefits expected to be paid to current actives and retired plan members. The actuarial balance sheet shows the expected breakdown of how these benefits will be financed.

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## CHART 1

### Actuarial Present Value of Total Projected Benefits (APB) and Actuarial Balance Sheet

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	Actuarial Present Value of Total Projected Benefits (APB)	
	June 30, 2014	June 30, 2013
<b>Participant Category</b>		
Current retirees, beneficiaries, and dependents	\$1,598,044,159	\$1,534,402,716
Current active members	1,771,524,262	1,650,607,074
Terminated members entitled but not yet eligible	<u>8,804,946</u>	<u>6,856,137</u>
Total	\$3,378,373,367	\$3,191,865,927
	<b>June 30, 2014</b>	<b>June 30, 2013</b>
<b>Actuarial Balance Sheet</b>		
The actuarial balance sheet as of the valuation date is as follows:		
<b>Assets</b>		
1. Actuarial value of assets	\$1,200,874,444	\$1,013,399,583
2. Present value of future normal costs	595,090,482	558,073,382
3. Unfunded actuarial accrued liability	<u>1,582,408,441</u>	<u>1,620,392,962</u>
4. Present value of current and future assets	\$3,378,373,367	\$3,191,865,927
<b>Liabilities</b>		
5. Actuarial Present Value of total Projected Benefits	\$3,378,373,367	\$3,191,865,927

---



The actuarial accrued liability shows that portion of the APB (Chart 1) allocated to periods prior to the valuation date by the actuarial cost method. The chart below shows the portion of the liability for active and inactive members,

and reconciles the unfunded actuarial accrued liability from last year to this year.

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## CHART 2

### Actuarial Accrued Liability (AAL) and Unfunded AAL (UAAL)

	June 30, 2014	June 30, 2013
<b>Participant Category</b>		
Current retirees, beneficiaries, and dependents	\$1,598,044,159	\$1,534,402,716
Current active members	1,176,433,780	1,092,533,692
Terminated members entitled but not yet eligible	<u>8,804,946</u>	<u>6,856,137</u>
Total actuarial accrued liability	\$2,783,282,885	\$2,633,792,545
Actuarial value of assets	<u>1,200,874,444</u>	<u>1,013,399,583</u>
Unfunded actuarial accrued liability	\$1,582,408,441	\$1,620,392,962
<b>Development of Unfunded Actuarial Accrued Liability for the Year Ended June 30, 2014</b>		
1. Unfunded actuarial accrued liability at beginning of year		\$1,620,392,962
2. Normal cost from prior valuation		\$55,452,797
3. Employer contributions		138,106,847
4. Interest on prior year UAAL, normal cost and contributions		119,636,868
5. Expected unfunded actuarial accrued liability (1 + 2 – 3 + 4)		1,657,375,780
6. Change due to investment gain		-68,987,507
7. Change due to assumption changes from triennial experience study		61,387,654
8. Change due to health and starting cost assumption changes		-78,004,355
9. Change due to miscellaneous demographic losses <sup>(1)</sup>		<u>10,636,869</u>
10. Unfunded actuarial accrued liability at end of year		\$1,582,408,441

<sup>(1)</sup> Excludes a loss of \$17.6 million from contributions less than recommended from one-year delay between valuation and rate implementation.

The unfunded actuarial accrued liability may be amortized over periods of up to 30 years. Amortization payments may be calculated as level dollar amounts or as amounts designed to remain level as a percent of a growing payroll base. The City of Los Angeles Fire and Police Pension Plan has elected to amortize the unfunded actuarial accrued liability using the following rules:

On September 6, 2012, the Board adopted the following amortization policy for bases established after June 30, 2011:

Type of Base	Amortization Period (Closed)
Actuarial Gains or Losses*	20
Assumption or Method Changes	25
Plan Amendments	15
ERIPs	5
Actuarial Surplus	30

\* *Retiree health assumption changes in this valuation are treated as gains and losses and amortized over 20 years.*

### CHART 3

#### Table of Amortization Bases

##### Tier 1

Type	Date Established	Outstanding Balance	Years Remaining	Annual Payment <sup>(1)</sup>
Combined Base	06/30/2006	25,087,593	22	2,198,067
Experience Gain	06/30/2012	-3,682,448	18	-352,929
Experience Loss	06/30/2013	555,920	19	51,926
Experience Gain	06/30/2014	-116,336	20	-10,615
Assumption change	06/30/2014	<u>-170,349</u>	25	<u>-14,216</u>
Total		21,674,380		1,872,233

##### Tier 2

Type	Date Established	Outstanding Balance	Years Remaining	Annual Payment <sup>(2)</sup>
Combined Base	06/30/2006	929,310,750	22	58,498,314
Experience Gain	06/30/2012	-79,568,332	18	-5,771,272
Experience Loss	06/30/2013	11,800,460	19	823,015
Experience Gain	06/30/2014	-19,495,604	20	-1,310,958
Assumption change	06/30/2014	<u>9,333,499</u>	25	<u>539,889</u>
Total		851,380,773		52,778,988

<sup>(1)</sup> *Level dollar amortization.*

<sup>(2)</sup> *Level percentage of payroll amortization.*

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**CHART 3 - Table of Amortization Bases (Continued)**

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**Tier 3**

Type	Date Established	Outstanding Balance	Years Remaining	Annual Payment <sup>(1)</sup>
Combined Base	06/30/2006	70,950,462	22	4,466,194
Experience Gain	06/30/2012	-4,461,282	18	-323,587
Experience Loss	06/30/2013	13,137,450	19	916,263
Experience Gain	06/30/2014	-7,497,023	20	-504,128
Assumption Change	06/30/2014	<u>2,693,968</u>	25	<u>155,831</u>
Total		74,823,575		4,710,573

<sup>(1)</sup> Level percentage of payroll amortization.

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**Tier 4**

Type	Date Established	Outstanding Balance	Years Remaining	Annual Payment <sup>(1)</sup>
Combined Base	06/30/2006	51,407,374	22	3,235,994
Experience Gain	06/30/2012	-3,265,146	18	-236,828
Experience Loss	06/30/2013	1,631,140	19	113,763
Experience Gain	06/30/2014	-6,372,636	20	-428,520
Assumption Change	06/30/2014	<u>4,070,034</u>	25	<u>235,428</u>
Total		47,470,766		2,919,837

<sup>(1)</sup> Level percentage of payroll amortization.

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**CHART 3 - Table of Amortization Bases (Continued)**

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**Tiers 5 and 6 (without Harbor Port Police)**

Type	Date Established	Outstanding Balance	Years Remaining	Annual Payment <sup>(1)</sup>
Combined Base	06/30/2006	661,745,934	22	41,655,626
Experience Gain	06/30/2012	-36,794,938	18	-2,668,820
Experience Gain	06/30/2013	-196,936	19	-13,735
Experience Gain	06/30/2014	-85,025,359	20	-5,717,425
Assumption change	06/30/2014	45,164,286	25	<u>2,612,495</u>
Total		\$584,892,987		\$35,868,141

<sup>(1)</sup> Level percentage of payroll amortization.

**Harbor Port Police (Tiers 5 and 6)**

Type	Date Established	Outstanding Balance	Years Remaining	Annual Payment <sup>(1)</sup>
Initial Base	06/30/2007	2,659,923	22	167,437
Experience Gain	06/30/2012	-485,392	18	-35,207
Experience Gain	06/30/2013	-72,183	19	-5,034
Experience Gain	06/30/2014	-232,604	20	-15,641
Assumption change	06/30/2014	<u>296,216</u>	25	<u>17,134</u>
Total		2,165,960		128,689

<sup>(1)</sup> Level percentage of payroll amortization.

The Annual Required Contribution (ARC) is the amount calculated to determine the annual cost of the OPEB plan for accounting purposes on an accrual basis. The calculation consists of adding the Normal Cost of the plan to an amortization payment. Both are determined as of the start of the accounting period and adjusted as if the annual cost were to be contributed throughout the fiscal year or on July 15<sup>th</sup>.

The amortization payments are based on amortization of the Unfunded Actuarial Accrued Liability on a level percent of pay basis, except that Tier 1 is based on a level dollar basis.

**CHART 4**  
**Determination of Annual Required Contribution (ARC)**

Cost Element	Determined as of June 30			
	2014		2013	
	Amount	Percentage of Compensation	Amount	Percentage of Compensation
1. Normal cost	\$56,552,213	4.03%	\$55,452,797	4.06%
2. Amortization of the unfunded actuarial accrued liability	98,278,460	7.01%	98,573,613	7.21%
3. Allocated amount for administrative expenses	<u>811,738</u>	<u>0.06%</u>	<u>N/A</u>	<u>N/A</u>
4. Total Annual Required Contribution at beginning of year	\$155,642,412	11.10%	\$154,026,410	11.27%
5. Adjustment for timing (payable throughout the year)	<u>5,731,075</u>	<u>0.40%</u>	<u>5,857,159</u>	<u>0.42%</u>
6. Total Annual Required Contribution (payable throughout the year)	\$161,373,487	11.50%	\$159,883,569	11.69%
7. Adjustment for timing (payable July 15)	<u>469,714</u>	<u>0.03%</u>	<u>479,791</u>	<u>0.03%</u>
8. Total Annual Required Contribution (payable July 15)	\$156,112,126	11.13%	\$154,506,201	11.30%
9. Projected Total Payroll	\$1,402,715,039		\$1,367,236,866	

The Annual OPEB Cost (AOC) adjusts the ARC for timing differences between the ARC and contributions in relation to the ARC. The AOC is the cost of OPEB actually booked as an expense for the Fiscal Year under GASB 45.

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**CHART 4 (continued)**  
**Determination of Annual OPEB Cost (AOC)**

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Cost Element	Determined as of June 30	
	2014	2013
	Amount	Amount
1. Annual Required Contribution (payable at end of fiscal year)	\$167,315,593	\$165,963,457
2. Interest on Beginning of Year Net OPEB Obligation (NOO)	10,099,735	9,980,446
3. ARC adjustment	<u>-8,720,981</u>	<u>-8,441,233</u>
4. Annual OPEB Cost	<u>\$168,694,347</u>	<u>\$167,502,670</u>
5. AOC as percentage of pay	12.03%	12.25%
6. Projected Total Payroll	\$1,402,715,039	\$1,367,236,866

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For GASB 43 (plan reporting) purposes, the schedule of employer contributions compares actual contributions to the ARC. For GASB 45 (employer reporting) purposes, the

schedule of employer contributions compares actual contributions to the AOC.

**CHART 5**

**Required Supplementary Information – Schedule of Employer Contributions**

**GASB 43**

<b>Fiscal Year Ended June 30</b>	<b>Annual Required Contributions</b>	<b>Actual Contributions</b>	<b>Percentage Contributed</b>
2009	\$98,444,833 <sup>(1)</sup>	\$88,178,910 <sup>(1)</sup>	89.57%
2010	106,648,282 <sup>(1)</sup>	106,648,282 <sup>(1)</sup>	100.00
2011	111,681,208 <sup>(1)</sup>	111,681,208 <sup>(1)</sup>	100.00
2012	122,971,851 <sup>(1)</sup>	122,971,851 <sup>(1)</sup>	100.00
2013	132,939,191 <sup>(1)</sup>	132,939,191 <sup>(1)</sup>	100.00
2014	138,106,847 <sup>(1)</sup>	138,106,847 <sup>(1)</sup>	100.00

**Required Supplementary Information – Schedule of Employer Contributions**

**GASB 45**

<b>Fiscal Year Ended June 30</b>	<b>Annual OPEB Cost</b>	<b>Actual Contributions<sup>(2)</sup></b>	<b>Percentage Contributed</b>
2009	\$106,452,937	\$94,916,833	89.16%
2010	127,604,379	114,816,430	89.98
2011	173,645,281	119,975,864	69.09
2012	159,777,456	132,105,073	82.68
2013	144,568,706 <sup>(3)</sup>	142,812,695	98.79
2014	149,887,239 <sup>(3)</sup>	148,348,025	98.97

<sup>(1)</sup> Payable as of July 15.

<sup>(2)</sup> Shown with interest to end of year.

<sup>(3)</sup> Based on calculated expense as percent of pay and actual payroll.

Note that the ARC shown for 2009 was greater than the actual contributions as that amount have to be adjusted to reflect the limit on the maximum amortization period as required by GASB 43/45.

This schedule of funding progress presents multi-year trend information about whether the actuarial value of plan assets is increasing or decreasing over time relative to the actuarial accrued liability for benefits.

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**CHART 6**

**Required Supplementary Information – Schedule of Funding Progress**

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(Amounts in \$1,000s)						
Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b) - (a)	Funded Ratio (a) / (b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll [(b) - (a) / (c)]
06/30/2009	\$809,677	\$2,038,659	\$1,228,982	39.72%	\$1,357,249	90.55%
06/30/2010	817,276	2,537,825	1,720,549	32.20%	1,356,986	126.79%
06/30/2011	882,890	2,557,607	1,674,716	34.52%	1,343,963	124.61%
06/30/2012	927,362	2,499,289	1,571,927	37.11%	1,341,914	117.14%
06/30/2013	1,013,400	2,633,793	1,620,393	38.48%	1,367,237	118.52%
06/30/2014	1,200,874	2,783,283	1,582,409	43.15%	1,402,715	112.81%

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The Net OPEB obligation measures the accumulated differences between the annual OPEB cost and the actual contributions in relation to the ARC.

## CHART 7

### Required Supplementary Information – Net OPEB Obligation (NOO)

Fiscal Year Beginning	Annual Required Contribution (a)	Interest on Existing NOO (b)	ARC Adjustment (c)	Annual OPEB Cost (a) + (b) + (c) (d)	Actual Contribution Amount <sup>(2)</sup> (e)	Net Increase in NOO (d) - (e) (f)	NOO as of End of Fiscal Year (g)
07/01/2007	\$105,876,005 <sup>(1)(2)</sup>	\$0	\$0	\$105,876,005	\$84,517,914	\$21,358,091	\$21,358,091
07/01/2008	105,967,196 <sup>(2)(3)</sup>	1,708,647	-1,222,906	106,452,937	94,916,833	11,536,103	32,894,194
07/01/2009	126,897,238 <sup>(2)</sup>	2,631,536	-1,924,395	127,604,379	114,816,430	12,787,949	45,682,143
07/01/2010	172,841,037 <sup>(2)</sup>	3,654,571	-2,850,327	173,645,281	119,975,864	53,669,417	99,351,560
07/01/2011	158,264,914 <sup>(2)</sup>	7,700,361	-6,187,819	159,777,456	132,105,073	27,672,383	127,023,943
07/01/2012	142,812,695 <sup>(2)(4)</sup>	9,844,356	-8,088,345	144,568,706	142,812,695	1,756,011	128,779,954
07/01/2013	148,348,025 <sup>(2)(4)</sup>	9,980,446	-8,441,233	149,887,239	148,348,025	1,539,214	130,319,167

<sup>(1)</sup> Based on the beginning of year contribution rate of 8.15% of compensation calculated in the June 30, 2006 valuation before the phase-in. The ARC dollar amount has been approximated by applying the ratio of the contribution before the phase-in to the contribution after the phase-in as determined in the June 30, 2006 valuation to the actual contributions made during 2007/2008.

<sup>(2)</sup> With interest to end of year.

<sup>(3)</sup> Based on the beginning of year contribution rate of 7.89% of compensation calculated in the June 30, 2007 valuation before the phase-in. The ARC dollar amount has been approximated by applying the ratio of the contribution before the phase-in to the contribution after the phase-in made during 2008/2009 as determined in the June 30, 2007 valuation to the actual contributions.

<sup>(4)</sup> Based on calculated expense as percent of pay and actual payroll.

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**EXHIBIT A****Summary of Participant Data – Includes Only Retirees and Beneficiaries Receiving Health Subsidy**

---

	<b>June 30, 2014</b>	<b>June 30, 2013</b>
<b>Retired members:</b>		
Number of non-disabled retirees	7,277	7,194
Number of disabled retirees	<u>1,410</u>	<u>1,426</u>
Total Number of retirees	8,687	8,620
Average age of retirees	70.6	70.5
Number of spouses/domestic partners of retirees receiving subsidy	5,963	5,920
Average age of spouses/domestic partners of retirees receiving subsidy	66.5	66.2
<b>Beneficiaries:</b>		
Number	1,703	1,643
Average age	79.3	79.1
<b>Active members in valuation:</b>		
Number	13,097	13,224
Average age	42.4	41.9
Average years of service	15.4	15.0
<b>Vested terminated members<sup>(1)</sup>:</b>		
Number	75	66
Average age	45.7	46.1

---

<sup>(1)</sup> Excludes terminated members not eligible for retiree health benefit due to service or due only a refund of member contributions.

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**EXHIBIT A (Continued)****Summary of Participant Data – Includes All Retirees and Beneficiaries**

---

	<b>June 30, 2014</b>	<b>June 30, 2013</b>
<b>Retired members:</b>		
Number of non-disabled retirees	7,955	7,904
Number of disabled retirees	<u>2,088</u>	<u>1,745</u>
Total Number of retirees	10,043	9,649
Average age of retirees	69.5	69.4
Number of spouses/domestic partners of retirees receiving subsidy	5,963	5,920
Average age of spouses/domestic partners of retirees receiving subsidy	66.5	66.2
<b>Beneficiaries:</b>		
Number	2,459	2,238
Average age	76.3	77.8
<b>Active members in valuation:</b>		
Number	13,097	13,224
Average age	42.4	41.9
Average years of service	15.4	15.0
<b>Vested terminated members<sup>(1)</sup>:</b>		
Number	75	66
Average age	45.7	46.1

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<sup>(1)</sup> Excludes terminated members not eligible for retiree health benefit due to service or due only a refund of member contributions.

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**EXHIBIT B****Reconciliation of Participant Data with Pension Valuation**

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	<b>June 30, 2014</b>	<b>June 30, 2013</b>
<b>Retired members:</b>		
Pension valuation	7,955	7,904
Retirees with no subsidy due to service or decision not to enroll	-232	-234
Deferred retirees eligible for future health benefits	<u>-446</u>	<u>-476</u>
Health valuation	7,277	7,194
<b>Disabled members:</b>		
Pension valuation	2,088	2,136
Disableds with no subsidy due to service or decision not to enroll	-469	-473
Deferred disableds eligible for future health benefits	<u>-209</u>	<u>-237</u>
Health valuation	1,410	1,426
<b>Beneficiaries:</b>		
Pension valuation	2,459	2,392
Surviving spouses with no subsidy due to service or decision not to enroll	-565	-586
Deferred surviving spouses eligible for future health benefits	<u>-191</u>	<u>-163</u>
Health valuation	1,703	1,643
<b>Active members:</b>		
Pension valuation	13,097	13,224
Health valuation	13,097	13,224
<b>Vested terminated members:</b>		
Pension valuation*	131	133
Inactive vested with insufficient service or due only a refund of member contributions	<u>-56</u>	<u>-67</u>
Health valuation	75	66

\* Includes terminated members due only a refund of member contributions.

**EXHIBIT C**

**Allocation of ARC by Tier**

		<b>June 30, 2014</b>		<b>June 30, 2013</b>	
		<u>Amount</u>	<u>% of Payroll</u>	<u>Amount</u>	<u>% of Payroll</u>
<b>Tier 1 Members</b>					
1	Employer normal cost	\$0	N/A	\$0	N/A
2	Actuarial accrued liability	16,757,284		17,998,049	
3	Valuation value of assets	-4,917,096		-4,315,396	
4	Unfunded actuarial accrued liability	21,674,380		22,313,445	
5	Amortization of unfunded accrued liability	\$1,872,233	N/A	\$1,931,946	N/A
6	Allocated amount for admin expenses, calculated with payroll in 10	0			
7	Total recommended contribution, July 1	\$1,872,233	N/A	\$1,931,946	N/A
8	Total recommended contribution, July 15	1,877,883	N/A	1,937,964	N/A
9	Total recommended contribution, biweekly	1,941,172	N/A	2,005,412	N/A
10	Projected payroll used for developing normal cost rate	0		N/A	

		<b>June 30, 2014</b>		<b>June 30, 2013</b>	
		<u>Amount</u>	<u>% of Payroll</u>	<u>Amount<sup>(2)</sup></u>	<u>% of Payroll</u>
<b>Tier 2 Members</b>					
1	Employer normal cost	\$218,518	3.29%	\$228,306	3.43%
2	Actuarial accrued liability	905,038,146		916,213,818	
3	Valuation value of assets	53,657,373		65,308,514	
4	Unfunded actuarial accrued liability	851,380,773		850,905,304	
5	Amortization of unfunded accrued liability <sup>(1)</sup>	52,778,988	3.79%	52,663,241	3.78%
6	Allocated amount for admin expenses, calculated with payroll in 10	3,847	0.06%	N/A	
7	Total recommended contribution, July 1	53,001,353	N/A	52,891,547	N/A
8	Total recommended contribution, July 15	53,161,307	N/A	53,056,304	N/A
9	Total recommended contribution, biweekly	54,952,973	N/A	54,902,853	N/A
10	Projected payroll used for developing normal cost rate	6,648,510		N/A	

<sup>(1)</sup> UAAL rate is calculated using the City's total payroll of \$1,391,377,190.

<sup>(2)</sup> Amounts are revised to reflect payroll as of June 30, 2014.

**Tier 3 Members**

1	Employer normal cost
2	Actuarial accrued liability
3	Valuation value of assets
4	Unfunded actuarial accrued liability
5	Amortization of unfunded accrued liability <sup>(1)</sup>
6	Allocated amount for admin expenses, calculated with payroll in 10
7	Total recommended contribution, payable July 1
8	Total recommended contribution, payable July 15
9	Total recommended contribution, payable biweekly
10	Projected payroll used for developing normal cost rate

<b>June 30, 2014</b>		<b>June 30, 2013</b>	
<u>Amount</u>	<u>% of Payroll</u>	<u>Amount<sup>(2)</sup></u>	<u>% of Payroll</u>
\$4,007,779	4.13%	\$4,183,016	4.31%
157,623,229		144,822,800	
82,799,654		66,074,178	
74,823,575		78,748,622	
4,710,573	0.34%	4,975,194	0.36%
56,201	0.06%	N/A	
8,774,553	N/A	9,158,210	N/A
8,801,034	N/A	9,186,738	N/A
9,097,650	N/A	9,506,469	N/A
97,117,729		N/A	

**Tier 4 Members**

1	Employer normal cost
2	Actuarial accrued liability
3	Valuation value of assets
4	Unfunded actuarial accrued liability
5	Amortization of unfunded accrued liability <sup>(1)</sup>
6	Allocated amount for admin expenses, calculated with payroll in 10
7	Total recommended contribution, payable July 1
7	Total recommended contribution, payable July 15
9	Total recommended contribution, payable biweekly
10	Projected payroll used for developing normal cost rate

<b>June 30, 2014</b>		<b>June 30, 2013</b>	
<u>Amount</u>	<u>% of Payroll</u>	<u>Amount<sup>(2)</sup></u>	<u>% of Payroll</u>
\$1,566,440	3.91%	\$1,523,687	3.81%
85,119,288		78,606,030	
37,648,522		29,428,783	
47,470,766		49,177,247	
2,919,837	0.21%	3,061,396	0.22%
23,166	0.06%	N/A	
4,509,443	N/A	4,585,083	N/A
4,523,052	N/A	4,599,365	N/A
4,675,490	N/A	4,759,440	N/A
40,032,133		N/A	

<sup>(1)</sup> UAAL rate is calculated using the City's total payroll of \$1,391,377,190.

<sup>(2)</sup> Amounts are revised to reflect payroll as of June 30, 2014.

**Tier 5 Members (without Harbor Port Police)**

1	Employer normal cost
2	Actuarial accrued liability
3	Valuation value of assets
4	Unfunded actuarial accrued liability
5	Amortization of unfunded accrued liability
6	Allocated amount for admin expenses, calculated with payroll in 10
7	Total recommended contribution, payable July 1
8	Total recommended contribution, payable July 15
9	Total recommended contribution, payable biweekly
10	Projected payroll used for developing normal cost rate

June 30, 2014		June 30, 2013	
<u>Amount</u>	<u>% of Payroll</u>	<u>Amount<sup>(1)</sup></u>	<u>% of Payroll</u>
\$46,611,848	3.89%	\$47,506,738	3.96%
<i>(Tiers 5 and 6 are combined. See table on the next page)</i>		<i>(Tiers 5 and 6 are combined. See table on the next page)</i>	
34,453,631	2.88%	36,925,778	3.08%
693,491	0.06%	N/A	
81,758,970	6.82%	84,432,516	7.05%
82,005,711	6.84%	84,695,522	7.07%
84,769,505	7.07%	87,643,229	7.31%
1,198,378,807		N/A	

**Tier 6 Members (without Harbor Port Police)**

1	Employer normal cost
2	Actuarial accrued liability
3	Valuation value of assets
4	Unfunded actuarial accrued liability
5	Amortization of unfunded accrued liability
6	Allocated amount for admin expenses, calculated with payroll in 10
7	Total recommended contribution, payable July 1
8	Total recommended contribution, payable July 15
9	Total recommended contribution, payable biweekly
10	Projected payroll used for developing normal cost rate

June 30, 2014		June 30, 2013	
<u>Amount</u>	<u>% of Payroll</u>	<u>Amount<sup>(1)</sup></u>	<u>% of Payroll<sup>(2)</sup></u>
\$3,563,796	7.24%	\$3,425,128	6.96%
<i>(Tiers 5 and 6 are combined. See table on the next page)</i>		<i>(Tiers 5 and 6 are combined. See table on the next page)</i>	
1,414,510	2.88%	1,516,005	3.08%
28,472	0.06%	N/A	
5,006,778	10.18%	4,941,133	10.04%
5,021,888	10.21%	4,956,525	10.07%
5,191,138	10.55%	5,129,030	10.42%
49,200,011		N/A	

<sup>(1)</sup> Amounts are revised to reflect payroll as of June 30, 2014.

**Combined Tiers 5 and 6 UAAL Contribution Rate Calculations for the City**

- 2 Actuarial accrued liability
- 3 Valuation value of assets
- 4 Unfunded actuarial accrued liability
- 5 Amortization of unfunded accrued liability
- Projected payroll used for developing combined UAAL rate

June 30, 2014				June 30, 2013	
Tier 5	Tier 6	Combined Tiers 5 and 6		Combined Tiers 5 and 6	
		Amount	% of Payroll	Amount	% of Payroll
		\$1,608,713,890	\$2,420,184	\$1,611,134,074	\$1,469,864,762
				1,026,241,087	852,689,472
				584,892,987	617,175,290
				35,868,141	38,441,783
			2.88%		3.08%
		1,198,378,807	49,200,011	1,247,578,818	N/A

**All Tiers Combined (without Harbor Port Police)**

- 1 Employer normal cost
- 2 Actuarial accrued liability
- 3 Valuation value of assets
- 4 Unfunded actuarial accrued liability
- 5 Amortization of unfunded accrued liability
- 6 Allocated amount for admin expenses, calculated with payroll in 10
- 7 Total recommended contribution, payable July 1
- 8 Total recommended contribution, payable July 15
- 9 Total recommended contribution, payable biweekly
- 10 Projected payroll used for developing normal cost rate

June 30, 2014		June 30, 2013	
Amount	% of Payroll	Amount <sup>(1)</sup>	% of Payroll
\$55,968,381	4.02%	\$56,866,875	4.09%
2,775,672,021		2,627,505,459	
1,195,429,540		1,009,185,551	
1,580,242,481		1,618,319,908	
98,149,772	7.05%	101,073,560	7.26%
805,177	0.06%	N/A	
154,923,330	11.13%	157,940,435	11.35%
155,390,875	11.17%	158,432,418	11.39%
160,627,928	11.54%	163,946,433	11.78%
1,391,377,190		N/A	

<sup>(1)</sup> Amounts are revised to reflect payroll as of June 30, 2014.



### Harbor Port Police Tier 5

1	Employer normal cost
2	Actuarial accrued liability
3	Valuation value of assets
4	Unfunded actuarial accrued liability
5	Amortization of unfunded accrued liability
6	Allocated amount for admin expenses, calculated with payroll in 10
7	Total recommended contribution, payable July 1
8	Total recommended contribution, payable July 15
9	Total recommended contribution, payable biweekly
10	Projected payroll used for developing normal cost rate

June 30, 2014		June 30, 2013	
<u>Amount</u>	<u>% of Payroll</u>	<u>Amount<sup>(1)</sup></u>	<u>% of Payroll</u>
\$565,664	5.09%	\$540,022	4.86%
<i>(Tiers 5 and 6 are combined. See table on the next page)</i>		<i>(Tiers 5 and 6 are combined. See table on the next page)</i>	
126,053	1.14%	122,022	1.10%
6,427	0.06%	N/A	
698,144	6.29%	662,044	5.96%
700,251	6.31%	664,106	5.98%
723,851	6.52%	687,219	6.19%
11,105,605		N/A	

### Harbor Port Police Tier 6

1	Employer normal cost
2	Actuarial accrued liability
3	Valuation value of assets
4	Unfunded actuarial accrued liability
5	Amortization of unfunded accrued liability
6	Allocated amount for admin expenses, calculated with payroll in 10
7	Total recommended contribution, payable July 1
8	Total recommended contribution, payable July 15
9	Total recommended contribution, payable biweekly
10	Projected payroll used for developing normal cost rate

June 30, 2014		June 30, 2013	
<u>Amount</u>	<u>% of Payroll</u>	<u>Amount<sup>(1)</sup></u>	<u>% of Payroll</u>
\$18,168	7.82%	\$14,393	6.20%
<i>(Tiers 5 and 6 are combined. See table on the next page)</i>		<i>(Tiers 5 and 6 are combined. See table on the next page)</i>	
2,636	1.14%	2,552	1.10%
134	0.06%	N/A	
20,938	9.02%	16,945	7.30%
21,001	9.04%	16,998	7.32%
21,709	9.35%	17,589	7.57%
232,244		N/A	

<sup>(1)</sup> Amounts are revised to reflect payroll as of June 30, 2014.

**Combined Tiers 5 and 6 UAAL Contribution Rate Calculations for Harbor Port Police**

- 2 Actuarial accrued liability
- 3 Valuation value of assets
- 4 Unfunded actuarial accrued liability
- 5 Amortization of unfunded accrued liability
- Projected payroll used for developing combined UAAL rate

June 30, 2014				June 30, 2013	
Tier 5	Tier 6	Combined Tiers 5 and 6		Combined Tiers 5 and 6	
		Amount	% of Payroll	Amount	% of Payroll
		\$7,618,622	-\$7,758	\$7,610,864	\$6,287,086
				5,444,904	4,214,032
				2,165,960	2,073,054
			1.14%	128,689	124,574
		11,105,605	232,244	11,337,849	N/A

**Harbor Port Police Combined (Tiers 5 and 6)**

- 1 Employer normal cost
- 2 Actuarial accrued liability
- 3 Valuation value of assets
- 4 Unfunded actuarial accrued liability
- 5 Amortization of unfunded accrued liability
- 6 Allocated amount for admin expenses, calculated with payroll in 10
- 7 Total recommended contribution, payable July 1
- 8 Total recommended contribution, payable July 15
- 9 Total recommended contribution, payable biweekly
- 10 Projected payroll used for developing normal cost rate

June 30, 2014		June 30, 2013	
Amount	% of Payroll	Amount <sup>(1)</sup>	% of Payroll
\$583,832	5.15%	\$554,415	4.89%
7,610,864		6,287,086	
5,444,904		4,214,032	
2,165,960		2,073,054	
128,689	1.14%	124,574	1.10%
6,561	0.06%	N/A	
719,082	6.35%	678,989	5.99%
721,252	6.36%	681,104	6.01%
745,560	6.58%	704,808	6.22%
11,337,849		N/A	

<sup>(1)</sup> Amounts are revised to reflect payroll as of June 30, 2014.

**All Tiers Combined**

1	Employer normal cost
2	Actuarial accrued liability
3	Valuation value of assets
4	Unfunded actuarial accrued liability
5	Amortization of unfunded accrued liability
6	Allocated amount for admin expenses, calculated with payroll in 10
7	Total recommended contribution, payable July 1
8	Total recommended contribution, payable July 15
9	Total recommended contribution, payable biweekly
10	Projected payroll used for developing normal cost rate

<b>June 30, 2014</b>		<b>June 30, 2013</b>	
<u>Amount</u>	<u>% of Payroll</u>	<u>Amount<sup>(1)</sup></u>	<u>% of Payroll<sup>(2)</sup></u>
\$56,552,213	4.03%	\$57,421,290	4.09%
2,783,282,885		2,633,792,545	
1,200,874,444		1,013,399,583	
1,582,408,441		1,620,392,962	
98,278,461	7.01%	101,198,134	7.21%
811,738	0.06%	N/A	
155,642,412	11.10%	158,619,424	11.31%
156,112,127	11.13%	159,113,522	11.34%
161,373,488	11.50%	164,651,241	11.74%
1,402,715,039		N/A	

<sup>(1)</sup> Amounts are revised to reflect payroll as of June 30, 2014.

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**EXHIBIT D****Cash Flow Projections**

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The ARC generally exceeds the current pay-as-you-go (“paygo”) cost of an OPEB plan. Over time the paygo cost will tend to grow and may even eventually exceed the ARC in a well-funded plan. The following table projects the paygo cost as the projected net fund payment over the next ten years.

Year Ending June 30	Projected Number of Retirees*			Projected Benefit Payments		
	Current	Future	Total	Current	Future	Total
2015	16,353	212	16,565	\$108,067,935	\$1,679,263	\$109,747,198
2016	15,927	769	16,696	112,539,175	6,647,223	119,186,398
2017	15,490	1,591	17,081	116,550,004	14,706,116	131,256,120
2018	15,043	2,150	17,193	120,482,362	20,849,452	141,331,814
2019	14,588	2,919	17,507	123,624,301	29,634,290	153,258,591
2020	14,124	3,787	17,911	126,420,458	40,311,043	166,731,501
2021	13,652	4,306	17,958	128,800,005	47,864,054	176,664,059
2022	13,179	4,887	18,066	130,863,922	56,398,500	187,262,422
2023	12,694	5,497	18,191	132,460,065	65,596,301	198,056,366
2024	12,205	6,106	18,311	133,800,194	75,018,961	208,819,155

\* Includes spouses of retirees. Does not include retirees and spouses who have yet to commence retiree health benefits.

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**EXHIBIT E****Summary Statement of Income and Expenses on an Actuarial Value Basis for All Retirement and Health Subsidy Benefits Assets**

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	<b>Year Ended June 30, 2014</b>	<b>Year Ended June 30, 2013</b>
<b>Contribution income:</b>		
Employer contributions	\$578,805,107	\$508,387,283
Employee contributions	<u>124,394,889</u>	<u>121,777,655</u>
Net contribution income	\$703,199,996	\$630,164,938
<b>Investment income:</b>		
Interest, dividends and other income	\$1,325,729,463	\$910,081,993
Recognition of capital appreciation	227,580,333	-13,657,580
Less investment and administrative fees	<u>-84,910,347</u>	<u>-68,633,794</u>
Net investment income	<u>1,468,399,449</u>	<u>827,790,619</u>
<b>Total income available for benefits</b>	<b>\$2,171,599,445</b>	<b>\$1,457,955,557</b>
<b>Less benefit payments</b>	<b>-\$963,356,954</b>	<b>-\$966,118,502</b>
<b>Change in reserve for future benefits</b>	<b>\$1,208,242,491</b>	<b>\$491,837,055</b>

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**EXHIBIT F****Summary Statement of Assets for Retirement and Health Subsidy Benefits**

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	<b>Year Ended June 30, 2014</b>	<b>Year Ended June 30, 2013</b>
<b>Cash equivalents</b>	\$1,449,555	\$6,698,082
<b>Accounts receivable:</b>		
Accrued interest and dividends	\$58,230,583	\$50,434,963
Contributions	6,109,845	5,490,442
Due from brokers	<u>265,172,222</u>	<u>387,602,407</u>
Total accounts receivable	329,512,650	443,527,812
<b>Investments:</b>		
Equities	\$12,691,081,303	\$9,730,129,629
Fixed income investments	4,311,621,954	5,027,650,664
Real estate	<u>1,419,813,952</u>	<u>1,231,595,540</u>
Total investments at market value	<u>18,422,517,209</u>	<u>15,989,375,833</u>
<b>Total assets</b>	<b>\$18,753,479,414</b>	<b>\$16,439,601,727</b>
<b>Less accounts payable:</b>		
Accounts payable and benefits in process	-\$28,597,595	-\$33,329,259
Due to brokers	-265,350,594	-465,475,707
Mortgage payable	<u>-168,520,538</u>	<u>-192,425,131</u>
Total accounts payable	<u>-\$462,468,727</u>	<u>-\$691,230,097</u>
<b>Net assets at market value</b>	<b><u>\$18,291,010,687</u></b>	<b><u>\$15,748,371,630*</u></b>
<b>Net assets at actuarial value</b>	<b><u>\$16,879,354,713</u></b>	<b><u>\$15,671,112,222</u></b>
<b>Net assets at valuation value (health benefits)</b>	<b><u>\$15,678,480,269</u></b>	<b><u>\$1,013,399,583</u></b>

\* Based on unaudited market value of assets. Subsequent to the June 30, 2013 valuation, the market value of assets was changed to \$15,757,024,051.

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**EXHIBIT G****Development of the Fund Through June 30, 2014 for All Retirement and Health Subsidy Benefits Assets**

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<b>Year Ended June 30</b>	<b>Employer Contributions</b>	<b>Employee Contributions</b>	<b>Net Investment Return<sup>(1)</sup></b>	<b>Benefit Payments</b>	<b>Actuarial Value of Assets at End of Year</b>
2007	\$286,167,278 <sup>(2)</sup>	\$91,263,474	\$1,590,968,304	\$800,819,286	\$13,902,764,838
2008	333,672,743	98,074,219	1,414,391,128	827,959,245	14,920,943,683
2009	326,876,839	103,685,447	557,346,783	842,565,358	15,066,287,394
2010	357,165,140	106,411,630	360,741,904	853,749,429	15,036,856,639
2011	388,773,459	105,471,264	568,411,044	878,952,809	15,220,559,597
2012	444,565,284	120,099,124	320,400,668	926,349,506	15,179,275,167
2013	508,387,283	121,777,655	827,790,619	966,118,502	15,671,112,222
2014	578,805,107	124,394,889	1,468,399,449	963,356,954	16,879,354,713

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<sup>(1)</sup> Net of investment fees and administrative expenses.

<sup>(2)</sup> Includes \$6,220,076 (discounted to \$6,058,515) of Harbor Port Police assets transferred in October, 2007.

It is desirable to have level and predictable plan costs from one year to the next. For this reason, the Board of Commissioners has approved an asset valuation method that gradually adjusts to market value. Under this valuation method, the full value of market fluctuations is not recognized in a single year and, as a result, the asset value and the plan costs are more stable.

The amount of the adjustment to recognize market value is treated as income, which may be positive or negative. Realized and unrealized gains and losses are treated equally and, therefore, the sale of assets has no immediate effect on the actuarial value.

As adopted by the Board, any investment gains/losses established after July 1, 2008 will be recognized over a seven-year period and the actuarial value of assets will be further adjusted, if necessary, to be within 40% of the market value.

*The chart shows the determination of the actuarial value of assets as of the valuation date.*

## EXHIBIT H

### Determination of Actuarial Value of Assets for All Retirement and Health Subsidy Benefits

1. Market value of assets (for Retirement and Health Subsidy Benefits)				\$18,291,010,687
2. Calculation of unrecognized return <sup>(1)</sup>	<u>Original</u>	<u>Portion Not</u>	<u>Amount Not</u>	
	<u>Amount</u>	<u>Recognized</u>	<u>Recognized</u>	
(a) Year ended June 30, 2014	\$1,571,818,656	6/7	\$1,347,273,134	
(b) Combined base for year ended June 30, 2013 <sup>(2)</sup>	77,259,408	5/6	64,382,840	
(c) Total unrecognized return				1,411,695,974
3. Preliminary actuarial value: (1) - (2c)				16,879,354,713
4. Adjustment to be within 40% corridor				0
5. Final actuarial value of assets: (3) + (4)				<u>\$16,879,354,713</u>
6. Actuarial value as a percentage of market value: (5) ÷ (1)				92.3%
7. Market value of health assets				\$1,301,306,102
8. Valuation value of health assets: (5) ÷ (1) x (7)				\$1,200,874,444
9. Deferred return recognized in each of the next 6 years (for Retirement and Health Subsidy Benefits):				
(a) Amount recognized on June 30, 2015				\$237,422,090
(b) Amount recognized on June 30, 2016				237,422,090
(c) Amount recognized on June 30, 2017				237,422,090
(d) Amount recognized on June 30, 2018				237,422,090
(e) Amount recognized on June 30, 2019				237,422,090
(f) Amount recognized on June 30, 2020				<u>224,545,524</u>
(g) Subtotal (may not total exactly due to rounding)				\$1,411,655,974

<sup>(1)</sup> Total return minus expected return on a market value basis.

<sup>(2)</sup> Net deferred unrecognized investment gains as of June 30, 2013 have been combined into a single layer to be recognized over the six-year period effective July 1, 2013.



The chart below details the changes in the ARC from the prior valuation to the current year's valuation.

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**EXHIBIT I**

**Reconciliation of Recommended Contribution from June 30, 2013 to June 30, 2014**

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<b>Recommended Contribution as of June 30, 2013</b>	11.27% <sup>(1)</sup>
Effect of amortizing prior year's UAAL over a smaller than expected projected total payroll	0.07%
Effect of contributions less than recommended, due to the one-year delay between valuation and rate implementation	0.08%
Effect of combined investment and demographic experience	-0.28%
Effect of assumption changes from triennial experience study	0.40%
Effect of new trend, per capita costs and other health assumptions	-0.52%
Effect of allocating administrative expenses	0.06%
Effect of miscellaneous factors including change in active normal cost	0.02%
<b>Recommended Contribution as of June 30, 2014</b>	<b>11.10%<sup>(1)</sup></b>

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<sup>(1)</sup> *Based on contributions at beginning of year.*

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**EXHIBIT I****Summary of Required Supplementary Information**

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<b>Valuation date</b>	June 30, 2014												
<b>Actuarial cost method</b>	Entry age normal, level percent of pay												
<b>Amortization method</b>	Closed amortization periods. On September 6, 2012, the Board adopted the following amortization policy:												
	<table><thead><tr><th>Type of Base</th><th>Amortization Period (Closed)</th></tr></thead><tbody><tr><td>Actuarial Gains or Losses<sup>(1)</sup></td><td>20</td></tr><tr><td>Assumption or Method Changes</td><td>25</td></tr><tr><td>Plan Amendments</td><td>15</td></tr><tr><td>ERIPs</td><td>5</td></tr><tr><td>Actuarial Surplus</td><td>30</td></tr></tbody></table>	Type of Base	Amortization Period (Closed)	Actuarial Gains or Losses <sup>(1)</sup>	20	Assumption or Method Changes	25	Plan Amendments	15	ERIPs	5	Actuarial Surplus	30
Type of Base	Amortization Period (Closed)												
Actuarial Gains or Losses <sup>(1)</sup>	20												
Assumption or Method Changes	25												
Plan Amendments	15												
ERIPs	5												
Actuarial Surplus	30												
<b>Remaining amortization periods</b>	As of June 30, 2014: 22 years for bases established prior to June 30, 2012 18 years for bases established on June 30, 2012 19 years for bases established on June 30, 2013												
<b>Asset valuation method</b>	Market value of assets less unrecognized returns in each of the last seven years. Unrecognized return is equal to the difference between the actual market return and the expected return on the market value, and is recognized over a seven-year period. Deferred gains and losses as of June 30, 2013 have been combined and will be recognized over a period of six years from July 1, 2013. The actuarial value of assets is further adjusted, if necessary, to be within 40% of the market value of assets.												
<b>Actuarial assumptions:</b>													
Investment rate of return	7.50%												
Inflation rate	3.25%												
Across-the-board pay increase	0.75%												
Projected payroll increases	4.00%												
Health care cost trend rate (to calculate following year's premium)													
• Medical	7.0% in 2014-2015, then decreasing by 0.25% for each year for eight years until it reaches an ultimate rate of 5%.												
• Dental	5.00%												
• Medicare Part B Premium	5.00%												

---

<sup>(1)</sup> Retiree health assumption changes are treated as gains and losses and amortized over 20 years.

**Actuarial assumptions (continued):**

- Medical Subsidy Trend
    - For all non-Medicare retirees, increase at lesser of 7% or medical trend.
    - For Medicare retirees with single party premium, increase with medical trend.
    - For Medicare retirees with 2-party premium less than or equal to the maximum subsidy as of July 1, 2014 (e.g. Fire Kaiser), increase with medical trend.
    - For Medicare retirees with 2-party premium greater than the maximum subsidy as of July 1, 2014 (e.g. Police Blue Cross PPO), increase with lesser of 7% or medical trend.
- 

**Plan membership – Excluding retirees and beneficiaries not receiving subsidy:**

	June 30, 2014	June 30, 2013
Current retirees and beneficiaries	10,390	10,263
Current active participants	13,097	13,224
Terminated participants entitled but not yet eligible	<u>75</u>	<u>66</u>
Total	23,562	23,553

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**EXHIBIT II****Actuarial Assumptions and Actuarial Cost Method**

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The following assumptions were adopted by the Board based on the Actuarial Experience Study as of June 30, 2013 and the Economics Assumptions Study as of June 30, 2014.

**Mortality Rates**

*Healthy:* RP-2000 Combined Healthy Mortality Table (separate for males and females), projected to 2022 with Scale BB set back one year for members.

RP-2000 Combined Healthy Mortality Table (separate for males and females), projected to 2022 with Scale BB set forward one year for beneficiaries.

*Disabled:* RP-2000 Combined Healthy Mortality Table (separate for males and females), projected to 2022 with Scale BB set forward one year.

The tables shown above were determined to contain sufficient provision appropriate to reasonably reflect future mortality, based on a review of mortality experience as of the measurement date.

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**Termination Rates Before Retirement:***Pre-Retirement Mortality:*

<b>Age</b>	<b>Rate (%)</b>	
	<b>Mortality</b>	
	<b>Male</b>	<b>Female</b>
20	0.03	0.02
25	0.04	0.02
30	0.04	0.02
35	0.07	0.04
40	0.10	0.06
45	0.13	0.10
50	0.19	0.15
55	0.30	0.22
60	0.52	0.36

*All pre-retirement deaths are assumed to be service connected.*

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**Termination Rates Before Retirement (continued):**

<b>Age</b>	<b>Rate (%)</b>	
	<b>Disability*</b>	
	<b>Fire</b>	<b>Police</b>
20	0.02	0.02
25	0.02	0.03
30	0.03	0.05
35	0.06	0.08
40	0.15	0.22
45	0.23	0.36
50	0.28	0.46
55	1.02	0.08
60	3.00	1.18

\* 90% of disabilities are assumed to be service connected.  
Disability rates are not applied to members eligible for DROP.

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**Termination Rates Before Retirement (continued):**

<b>Years of Service</b>	<b>Rate (%)</b>	
	<b>Termination (&lt; 5 Years of Service)</b>	
	<b>Fire</b>	<b>Police</b>
0 - 1	8.00%	8.00%
1 - 2	2.50	3.00
2 - 3	1.50	2.50
3 - 4	0.75	2.50
4 - 5	0.50	1.75

<b>Age</b>	<b>Rate (%)</b>	
	<b>Termination (5+ Years of Service) *</b>	
	<b>Fire</b>	<b>Police</b>
20	1.00%	2.00%
25	1.00	2.00
30	0.85	1.70
35	0.54	1.20
40	0.37	0.85
45	0.17	0.66
50	0.02	0.24
55	0.00	0.00
60	0.00	0.00

\* *No termination is assumed after a member is eligible for retirement. Members who are not eligible to receive a deferred vested retirement benefit are assumed to receive refund of contributions.*

**Retirement Rates:**

Age	Rate(%)					
	Fire			Police		
	Tiers 2&4	Tiers 3&5	Tier 6	Tiers 2&4	Tiers 3&5	Tier 6
41	1.00%	0.00%	0.00%	10.00%	0.00%	0.00%
42	1.00	0.00	0.00	10.00	0.00	0.00
43	1.00	0.00	0.00	10.00	0.00	0.00
44	1.00	0.00	0.00	10.00	0.00	0.00
45	1.00	0.00	0.00	10.00	0.00	0.00
46	1.00	0.00	0.00	7.00	0.00	0.00
47	1.00	0.00	0.00	7.00	0.00	0.00
48	2.00	0.00	0.00	7.00	0.00	0.00
49	2.00	0.00	0.00	7.00	0.00	0.00
50	3.00	3.00	3.00	12.00	7.00	8.00
51	4.00	3.00	3.00	12.00	6.00	10.00
52	5.00	3.00	4.00	12.00	6.00	10.00
53	10.00	3.00	5.00	15.00	6.00	15.00
54	15.00	7.00	5.00	20.00	10.00	15.00
55	20.00	12.00	10.00	20.00	18.00	18.00
56	20.00	14.00	12.00	25.00	18.00	18.00
57	20.00	16.00	15.00	25.00	20.00	20.00
58	20.00	20.00	18.00	25.00	22.00	22.00
59	20.00	25.00	20.00	25.00	25.00	25.00
60	20.00	25.00	25.00	25.00	25.00	25.00
61	20.00	30.00	30.00	25.00	25.00	25.00
62	25.00	35.00	30.00	25.00	25.00	25.00
63	25.00	40.00	35.00	30.00	25.00	25.00
64	30.00	40.00	40.00	40.00	30.00	30.00
65	100.00	100.00	100.00	100.00	100.00	100.00

**DROP Program:** DROP participants are considered active members until they leave DROP and begin receiving retirement benefits. Members are assumed to remain in the DROP for 5 years. Of all members expected to retire with a service retirement benefit, we project a 95% probability that members have elected DROP before retirement if they will have also satisfied the requirements for participating in the DROP for 5 years.



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**Salary Increases:**

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**Annual Rate of Compensation Increase**

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Inflation: 3.25% per year; plus 0.75% “across the board” salary increases; plus the following Merit and Longevity increases based on age.

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<b>Years of Service</b>	<b>Additional Salary Increase</b>
0	7.50%
1	6.50
2	5.00
3	4.75
4	3.75
5	3.00
6	2.25
7	2.00
8	1.75
9	1.75
10	1.25
11+	0.75

<b>Measurement Date:</b>	June 30, 2014
<b>Unknown Data for Members:</b>	Same as those exhibited by members with similar known characteristics. If not specified, members are assumed to be male.
<b>Definition of Active Members:</b>	First day of biweekly payroll following employment for new department employees or immediately following transfer from other city department.
<b>Actuarial Value of Assets:</b>	Market value of assets less unrecognized returns in each of the last seven years. Unrecognized return is equal to the difference between the actual market return and the expected return on the market value, and is recognized over a seven-year period. Deferred gains and losses as of June 30, 2013 have been combined and will be recognized over a period of six years from July 1, 2013. The actuarial value of assets is further adjusted, if necessary, to be within 40% of the market value of assets.
<b>Actuarial Cost Method:</b>	Entry Age Actuarial Cost Method. Entry Age is the current age minus Vesting Credit. Actuarial Accrued Liability is calculated on an individual basis and is based on costs allocated as a level percentage of compensation. Normal Cost and amortization of unfunded are computed as a percent of pay and applied to actual payroll.
<b>Funding Policy:</b>	The City of Los Angeles Fire & Police Pension Plan makes contributions equal to the Normal Cost adjusted by amounts to amortize any Surplus or Unfunded Actuarial Accrued Liability (UAAL). Both the Normal Cost and the Actuarial Accrued Liability are determined under the Entry Age cost method. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis.

On September 6, 2012, the Board adopted the following amortization policy:

Type of Base	Amortization Period (Closed)
Actuarial Gains or Losses <sup>(1)</sup>	20
Assumption or Method Changes	25
Plan Amendments	15
ERIPs	5
Actuarial Surplus	30

<sup>(1)</sup> *Retiree health assumption changes are treated as gains and losses and amortized over 20 years.*

**Data:** Detailed census data and financial data for postemployment benefits were provided by the City of Los Angeles Fire and Police Pension Plan.

**Future Benefit Accruals:** 1.0 year of service per year.

**Net Investment Return:** 7.50%, net of investment expenses.

**Administrative Expenses** Out of the total 1.00% of payroll in administrative expense, 0.06% of payroll payable bi-weekly is allocated to the Retiree Health Plan. This is equal to 0.06% of payroll payable at beginning of the year.

**Spouse Age Difference** Husbands are assumed to be 3 years older than wives.

**Participation**

<b>Service Range (Years)</b>	<b>Assumption for Future Retirees Under 65</b>	<b>Assumption for Future Retirees Over 65</b>
10-14	45%	80%
15-19	60	85
20-24	70	90
25 and over	95	95

**Medicare Coverage** 100% of future retirees are assumed to elect Medicare Parts A & B.

**Dental Coverage** 80% of future retirees are assumed to elect dental coverage.

**Spousal Coverage** Of future retirees receiving a medical subsidy 80% are assumed to elect coverage for married and surviving spouses or domestic partners. For those retired on valuation date, spousal coverage is based on census data.

**Implicit Subsidy** No implicit subsidy exists since retiree medical premiums are underwritten separately from active premiums, except for one small group (Fire Blue and Fire California Care) that has some active/retiree experience blending.

**Per Capita Cost Development – Not Subject to Retiree Medical Freeze:**

Future retirees under age 65 are assumed, upon retirement, to elect carriers in the percentages and corresponding premiums and subsidies as noted in the table below. Current retirees and current eligible survivors under age 65 are assumed to continue to cover themselves (and their spouse or domestic partner) – but all children are assumed to age out at the valuation date.

2014 – 2015 Fiscal Year		Single Party			Married/With Domestic Partner			Eligible Survivor		
Carrier	Assumed Election Percent	Monthly Premium	Maximum Subsidy	Subsidy	Monthly Premium	Maximum Subsidy	Subsidy	Monthly Premium	Maximum Subsidy	Subsidy
<u>Fire</u>										
Fire Medical	75	\$1,083.93	\$1,344.38	<b>\$1,083.93</b>	\$1,406.66	\$1,344.38	<b>\$1,344.38</b>	\$547.22	\$729.83	<b>\$547.22</b>
Fire Kaiser	15	\$585.25	\$1,344.38	<b>\$585.25</b>	\$1,160.48	\$1,344.38	<b>\$1,160.48</b>	\$585.25	\$729.83	<b>\$585.25</b>
Fire Blue Cross	5	\$1,256.43	\$1,344.38	<b>\$1,256.43</b>	\$1,558.35	\$1,344.38	<b>\$1,344.38</b>	\$1,059.54	\$729.83	<b>\$729.83</b>
Fire California Care	5	\$1,256.43	\$1,344.38	<b>\$1,256.43</b>	\$1,256.43	\$1,344.38	<b>\$1,256.43</b>	\$759.34	\$729.83	<b>\$729.83</b>
<u>Police</u>										
Blue Cross PPO	65	\$906.71	\$1,344.38	<b>\$906.71</b>	\$1,610.63	\$1,344.38	<b>\$1,344.38</b>	\$906.71	\$729.83	<b>\$729.83</b>
California Care	15	\$642.53	\$1,344.38	<b>\$642.53</b>	\$1,221.11	\$1,344.38	<b>\$1,221.11</b>	\$642.53	\$729.83	<b>\$642.53</b>
Police Kaiser	20	\$580.36	\$1,344.38	<b>\$580.36</b>	\$1,149.96	\$1,344.38	<b>\$1,149.96</b>	\$580.36	\$729.83	<b>\$580.36</b>

*\*\* Members who are subject to the retiree medical subsidy freeze have monthly health insurance subsidy maximums fixed at the level in effect on July 1, 2011, as shown on page 43.*

For the valuation of current retirees, subsidies valued are based on actual subsidies provided in the data reported for the Health Plan.

**Per Capita Cost Development – Not Subject to Retiree Medical Freeze:**

Future retirees and current retirees under age 65 are assumed, upon reaching age 65, to elect carriers in the percentages and corresponding premiums and subsidies as noted in the table below. Current retirees and current eligible survivors over age 65 are assumed to continue to cover themselves (and their spouse or domestic partner) – but all children are assumed to age out at the valuation date.

2014 – 2015 Fiscal Year		Single Party			Married/With Domestic Partner			Eligible Survivor		
Carrier	Assumed Election Percent	Monthly Premium	Maximum Subsidy	Subsidy	Monthly Premium	Maximum Subsidy	Subsidy	Monthly Premium	Maximum Subsidy	Subsidy
<u>Fire</u>										
Fire Medical	90	\$540.80	\$493.74	<b>\$493.74</b>	\$834.90	\$787.84	<b>\$787.84</b>	\$468.37	\$493.74	<b>\$468.37</b>
Fire Kaiser	10	\$390.88	\$493.74	<b>\$390.88</b>	\$771.76	\$771.76	<b>\$771.76</b>	\$390.88	\$493.74	<b>\$390.88</b>
Fire Blue Cross	0	\$729.00	\$493.74	<b>\$493.74</b>	\$1,518.62	\$1,283.36	<b>\$1,283.36</b>	\$729.00	\$493.74	<b>\$493.74</b>
Fire California Care	0	\$493.74	\$493.74	<b>\$493.74</b>	\$1,256.43	\$1,256.43	<b>\$1,256.43</b>	\$493.74	\$493.74	<b>\$493.74</b>
<u>Police</u>										
Blue Cross PPO	75	\$533.71	\$493.74	<b>\$493.74</b>	\$927.18	\$887.21	<b>\$887.21</b>	\$533.71	\$493.74	<b>\$493.74</b>
California Care	10	\$437.53	\$493.74	<b>\$437.53</b>	\$909.06	\$909.06	<b>\$909.06</b>	\$437.53	\$493.74	<b>\$437.53</b>
Police Kaiser	15	\$235.84	\$493.74	<b>\$235.84</b>	\$466.66	\$466.66	<b>\$466.66</b>	\$235.84	\$493.74	<b>\$235.84</b>

*\*\* Members who are subject to the retiree medical subsidy freeze have monthly health insurance subsidy maximums fixed at the level in effect on July 1, 2011, as shown on page 43.*

For the valuation of current retirees, subsidies valued are based on actual subsidies provided in the data reported for the Health Plan.

**Per Capita Cost Development – Subject to Retiree Medical Subsidy Freeze:**

	<b>Single Party</b>	<b>Married/With Domestic Partner</b>	<b>Eligible Survivor</b>
Under 65 – All Plans	\$1,097.41	\$1,097.41	\$595.60
Over 65			
Fire Medical	\$480.41	\$774.51	\$468.37*
Fire Kaiser	\$390.88*	\$771.76	\$390.88*
Fire Blue Cross	\$480.41	\$1,084.08	\$480.41
Fire California Care	\$480.41	\$1,084.08	\$480.41
Police Blue Cross PPO	\$480.41	\$859.11	\$480.41
Police Blue Cross HMO	\$437.53*	\$909.06	\$437.53*
Police Kaiser	\$235.84*	\$466.66	\$235.84*

*\*Future single-party subsidy levels limited to \$480.41.*

**Health Care Premium Cost Trend Rates:**

Trends to be applied in following fiscal years, to all health plans.

Trend is to be applied to premium for shown fiscal year to calculate next fiscal year's projected premium.

First Fiscal Year (July 1, 2014 through June 30, 2015).

The fiscal year trend rates are the following:

Fiscal Year	Trend (applied to calculate following year premium)	
	Non-Medicare	Medicare
2014-2015	7.00%	7.00%
2015-2016	6.75%	6.75%
2016-2017	6.50%	6.50%
2017-2018	6.25%	6.25%
2018-2019	6.00%	6.00%
2019-2020	5.75%	5.75%
2020-2021	5.50%	5.50%
2021-2022	5.25%	5.25%
2022 and later	5.00%	5.00%

Dental Premium Trend 5.00% for all years  
 Medicare Part B Premium Trend 5.00% for all years

**Health Care Reform:**

As stated in our June 30, 2011 retiree health report, based on direction provided to Segal, the impact of the excise tax that will be imposed in 2018 by the Affordable Care Act (ACA) and related statutes on certain health plans was not included in calculating the contribution rates for the employer. We understand that a proposed statement currently under review by the Governmental Accounting Standards Board (GASB) for financial reporting purposes is expected to require the inclusion of the excise tax in the liability. The current exposure draft of the statement would be effective for fiscal years beginning after December 15, 2015.

For the June 30, 2014 valuation, we have continued to exclude the projected excise tax from the valuation results (i.e., the projected excise tax has not been used to set the contribution rates for the employer).

**Expected annual rate of increase in the Board's health subsidy amount:**

For employees not subject to freeze, we assume that the Board's health subsidy amount will increase at the same rate as medical trend.



**Plan Design:** Development of plan liabilities was based on the substantive plan of benefits in effect as described in Exhibit III.

**Changes in Assumptions:** Future health care trend rates were updated.  
Premiums and maximum subsidies were updated.

**Asset Valuation Method:** The Board adopted an adjustment to the asset smoothing method that combined the net deferred investment gains from the June 30, 2013 valuation into a single layer to be recognized in equal amounts over a period of six years from July 1, 2013.

Based on the June 30, 2013 Actuarial Experience Study, the following assumptions have been changed. Previously, these assumptions were as follows:

**Mortality Rates**

*Healthy:* RP-2000 Combined Healthy Mortality Table (separate for males and females) set back four years for members.

RP-2000 Combined Healthy Mortality Table (separate for males and females) set back two years for beneficiaries.

*Disabled:* RP-2000 Combined Healthy Mortality Table (separate for males and females) set back two years.

**Changes in Actuarial Assumptions (continued):**

**Termination Rates Before Retirement:**

*Pre-Retirement Mortality:*

<b>Age</b>	<b>Rate (%)</b>	
	<b>Mortality</b>	
	<b>Male</b>	<b>Female</b>
20	0.03	0.02
25	0.04	0.02
30	0.04	0.02
35	0.05	0.03
40	0.08	0.05
45	0.11	0.08
50	0.16	0.12
55	0.24	0.19
60	0.42	0.31

*All pre-retirement deaths are assumed to be service connected.*

**Changes in Actuarial Assumptions (continued):**

**Termination Rates Before Retirement (continued):**

	Rate (%)	
	Disability	
Age	Fire	Police
20	0.02	0.02
25	0.02	0.03
30	0.03	0.05
35	0.06	0.11
40	0.15	0.29
45	0.26	0.46
50	0.42	0.56
55	1.40	1.08
60	4.40	1.46

\* 90% of disabilities are assumed to be service connected.

**Changes in Actuarial Assumptions (continued):**

**Termination Rates Before Retirement (continued):**

Rate (%)		
Withdrawal (< 5 Years of Service)		
Service	Fire	Police
0 - 1	8.00	8.00
1 - 2	3.00	4.00
2 - 3	2.00	3.00
3 - 4	1.00	3.00
4 - 5	1.00	2.50

Rate (%)		
Vested Termination (5+ Years of Service) *		
Age	Fire	Police
20	1.50	2.50
25	1.50	2.50
30	1.20	2.20
35	0.70	1.70
40	0.41	1.20
45	0.20	0.82
50	0.04	0.28
55	0.00	0.00
60	0.00	0.00

\* No vested termination is assumed after a member is eligible for retirement.

**Changes in Actuarial Assumptions (continued):**

**Retirement Rates:**

Age	Rate(%)					
	Fire			Police		
	Tiers 2&4	Tiers 3&5	Tier 6	Tiers 2&4	Tiers 3&5	Tier 6
41	1.00%	0.00%	0.00%	8.00%	0.00%	0.00%
42	1.00	0.00	0.00	8.00	0.00	0.00
43	1.00	0.00	0.00	10.00	0.00	0.00
44	1.00	0.00	0.00	10.00	0.00	0.00
45	1.00	0.00	0.00	10.00	0.00	0.00
46	1.00	0.00	0.00	8.00	0.00	0.00
47	1.00	0.00	0.00	8.00	0.00	0.00
48	2.00	0.00	0.00	8.00	0.00	0.00
49	2.00	0.00	0.00	8.00	0.00	0.00
50	3.00	5.00	3.00	8.00	10.00	8.00
51	3.00	5.00	3.00	10.00	10.00	10.00
52	4.00	5.00	4.00	10.00	10.00	10.00
53	5.00	5.00	5.00	15.00	10.00	15.00
54	5.00	8.00	5.00	15.00	13.00	15.00
55	10.00	10.00	10.00	20.00	16.00	18.00
56	15.00	12.00	12.00	20.00	18.00	18.00
57	15.00	15.00	15.00	20.00	22.00	22.00
58	15.00	18.00	18.00	25.00	25.00	25.00
59	15.00	20.00	20.00	25.00	30.00	30.00
60	20.00	25.00	25.00	25.00	30.00	30.00
61	20.00	30.00	30.00	25.00	30.00	30.00
62	20.00	30.00	30.00	25.00	30.00	30.00
63	25.00	35.00	35.00	30.00	30.00	30.00
64	30.00	40.00	40.00	40.00	30.00	30.00
65	100.00	100.00	100.00	100.00	100.00	100.00

**DROP Program:** DROP participants are considered active members until they leave DROP and begin receiving retirement benefits. Members are assumed to remain in the DROP for 5 years. Of all members expected to retire with a service retirement benefit, we project a 95% probability that members have elected DROP before retirement if they will have also satisfied the requirements for participating in the DROP for 5 years.

**Changes in Actuarial Assumptions (continued):**

**Net Investment Return:** 7.75%, net of investment and administrative expenses

**Salary Increases:**

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Annual Rate of Compensation Increase

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Inflation: 3.50% per year; plus 0.75% “across the board” salary increases; plus the following Merit and Longevity increases based on years of service.

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Years of Service	Additional Salary Increase
0	8.00%
1	7.00%
2	4.50%
3	4.00%
4	3.50%
5	3.20%
6	2.75%
7	2.50%
8	2.25%
9	2.25%
10	2.00%
11 or more	1.00%

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**EXHIBIT III****Summary of Plan**

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This exhibit summarizes the major benefit provisions as included in the valuation. To the best of our knowledge, the summary represents the substantive plans as of the measurement date. It is not intended to be, nor should it be interpreted as, a complete statement of all benefit provisions.

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**SUBSIDY FOR MEMBERS NOT ELIGIBLE FOR MEDICARE A & B**

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Eligibility	Retired Members who retired with 10 or more years of service. Benefits commence no earlier than age 55. Members who retired prior to July 1, 1998 are subject to an eligibility requirement of age 60 with 10 or more years of service. Subsidy is paid only to Members on service or disability retirements.  Surviving spouses and surviving domestic partners are eligible for health benefits upon the Member's date of death if the Member had attained age 55 prior to death. Otherwise, health benefits for survivors shall commence on the date that the Member would have reached age 55.  Basic subsidy is paid until age 65, or after age 65 if Member is not covered by Medicare Parts A and B.
Amount of Subsidy	4% per year of service, to a maximum of 100%, times Maximum Subsidy, subject to a maximum of the actual premium paid to City approved health carrier.
Maximum Subsidy	As of July 1, 2014, maximum is \$1,344.38 per month. For surviving spouse or domestic partner, the maximum subsidy is \$729.83 per month.
Increase in Subsidy	For employees not subject to freeze, the Board's health subsidy amount may increase at lesser of 7% or medical trend as shown in Exhibit II - Healthcare Premium Cost Trend Rates.
Dependent Portion	Difference between basic subsidy maximum amount and single-party premium.

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**EXHIBIT III****Summary of Plan (continued)**

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**SUBSIDY FOR MEMBERS ELIGIBLE FOR MEDICARE A & B**

Eligibility Retired Members over age 65 with 10 or more years of service who participate in Medicare Parts A & B.

Amount of Subsidy to Participant: For retirees, health subsidy is provided subject to the following vesting schedule:

<u>Completed Years of Service</u>	<u>Vested Percentage</u>
10-14	75%
15-19	90%
20+	100%

Surviving spouses or surviving domestic partners are eligible for benefits upon the death of the Member.

Maximum Subsidy As of July 1, 2014, the single coverage maximum subsidy for retirees and surviving spouse or domestic partner is \$493.74. The multi-person coverage maximum subsidy is \$1,283.36 and depends on the carrier elected.

The Board's health subsidy amount may:

- For Medicare retirees with single party premium, increase with medical trend as shown in Exhibit II - Healthcare Premium Cost Trend Rates.
- For Medicare retirees with 2-party premium less than or equal to the maximum subsidy as of July 1, 2014 (e.g, Fire Medical), increase with medical trend as shown shown in Exhibit II - Healthcare Premium Cost Trend Rates, and
- For Medicare retirees with 2-party premium greater than the maximum subsidy as of July 1, 2014 (e.g., Police Blue Cross), increase with lesser of 7% or medical trend as shown in Exhibit II - Healthcare Premium Cost Trend Rates.



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**EXHIBIT III****Summary of Plan (continued)**

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- Dependent Portion:** Calculation based on Board of Fire and Police Pension Commissioners Resolution No. 9320: equal to the amount payable on behalf of the dependents of a retired member in the same plan, with the same years of service, who qualifies for an under 65 or Part B/D only subsidy, whichever is greater, providing such subsidy does not exceed the civilian retiree dependent subsidy.
- Subsidy Freeze:** The retiree health benefits program was changed to freeze the medical subsidy for nonretired members not enrolled in the DROP as of July 14, 2011 who did not begin to contribute an additional 2% of employee contributions to the Pension Plan.
- The frozen subsidy is different for Medicare and non-Medicare retirees.
  - The freeze applies to the medical subsidy limits in effect for the 2011/2012 plan year.
  - The freeze does not apply to the dental subsidy or the Medicare Part B premium reimbursement.

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**EXHIBIT III****Summary of Plan (continued)**

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**Medicare Part B -Related Subsidy**

<b>Medicare Part B Premium Reimbursement</b>	For retired Members enrolled in Medicare A & B who are receiving a subsidy, the Plan provides payment of Part B premiums (\$104.90 for calendar years 2014 and 2015, for all eligible retirees and beneficiaries).
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**Dental Subsidy**

Eligibility	Retired Members who retired with 10 or more years of service. Benefits commence no earlier than age 55. Subsidy is paid only to Members on service or disability retirements. Surviving spouses/domestic partners are not eligible for benefits upon the death of the Member.
Amount of Subsidy	4% per year of service, to a maximum of 100%, times Maximum Subsidy, subject to a maximum of the single-party premium paid to City approved dental carrier.
Maximum Subsidy	Lesser of monthly amount paid to active Fire and Police Members and retired CERS Members. Effective July 1, 2014, maximum is \$42.80 per month.

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**Retiree Contributions:** To the extent the subsidies are less than the medical or dental premiums, the retiree contributes the cost difference.

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**EXHIBIT IV****Definitions of Terms**

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The following list defines certain technical terms for the convenience of the reader:

**Assumptions or Actuarial Assumptions:**

The estimates on which the cost of the Plan is calculated including:

- (a) Investment return — the rate of investment yield that the Plan will earn over the long-term future;
- (b) Mortality rates — the death rates of employees and pensioners; life expectancy is based on these rates;
- (c) Retirement rates — the rate or probability of retirement at a given age;
- (d) Turnover rates — the rates at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement.

**Actuarial Present Value of Total Projected Benefits (APB):**

Present value of all future benefit payments for current retirees and active employees taking into account assumptions about demographics, turnover, mortality, disability, retirement, health care trends, and other actuarial assumptions.

**Normal Cost:**

The amount of contributions required to fund the benefit allocated to the current year of service.

**Actuarial Accrued Liability For Actives:**

The equivalent of the accumulated normal costs allocated to the years before the valuation date.

**Actuarial Accrued Liability For Retirees:**

The single sum value of lifetime benefits to existing retirees. This sum takes account of life expectancies appropriate to the ages of the retirees and of the interest which the sum is expected to earn before it is entirely paid out in benefits.

<b>Actuarial Value of Assets (AVA):</b>	The value of assets used by the actuary in the valuation. These may be at market value or some other method used to smooth variations in market value from one valuation to the next.
<b>Funded Ratio:</b>	The ratio AVA/AAL.
<b>Unfunded Actuarial Accrued Liability (UAAL):</b>	The extent to which the actuarial accrued liability of the Plan exceeds the assets of the Plan. There is a wide range of approaches to paying off the unfunded actuarial accrued liability, from meeting the interest accrual only to amortizing it over a specific period of time.
<b>Amortization of the Unfunded Actuarial Accrued Liability:</b>	Payments made over a period of years equal in value to the Plan's unfunded actuarial accrued liability.
<b>Investment Return (discount rate):</b>	The rate of earnings of the Plan from its investments, including interest, dividends and capital gain and loss adjustments, computed as a percentage of the average value of the fund. For actuarial purposes, the investment return often reflects a smoothing of the capital gains and losses to avoid significant swings in the value of assets from one year to the next. If the plan is funded on a pay-as-you-go basis, the discount rate is tied to the expected rate of return on day-to-day employer funds.
<b>Covered Payroll:</b>	Annual reported salaries for all active participants on the valuation date.
<b>ARC as a Percentage of Covered Payroll:</b>	The ratio of the annual required contribution to covered payroll.
<b>Health Care Cost Trend Rates:</b>	The annual rate of increase in net claims costs per individual benefiting from the Plan.
<b>Annual Required Contribution (ARC):</b>	The ARC is equal to the sum of the normal cost and the amortization of the unfunded actuarial accrued liability.

**Net OPEB Obligation (NOO):**

The NOO is the cumulative difference between the annual OPEB cost and actual contributions made. If the plan is not pre-funded, the actual contribution would be equal to the annual benefit payments less retiree contributions.

**Annual OPEB Cost (AOC):**

Annual OPEB cost is the measure required by GASB 45 of a sole or agent employer's "cost" of participating in an OPEB plan. When an employer has no net OPEB obligation, annual OPEB cost is equal to the ARC. When a net OPEB obligation has a liability (positive) balance, annual OPEB cost is equal to (a) the ARC, plus (b) one year's interest on the beginning balance of the net OPEB obligation, less (c) an adjustment to the ARC to offset, approximately, the amount included in the ARC for amortization of the past contribution deficiencies. When a net OPEB obligation has an asset (negative) balance, the interest adjustment should be deducted from and the ARC adjustment should be added to the ARC, to determine annual OPEB cost.

**ARC Adjustment:**

The ARC adjustment is an amortization payment based on the prior year NOO. The purpose of the interest and ARC adjustments is to avoid "double-counting" annual OPEB cost and liabilities. Without the adjustments, annual OPEB cost and the net OPEB obligation (liability) would be overstated by the portion of the amortization amount previously recognized in annual OPEB cost. With the adjustments, annual OPEB cost should be approximately equal to the ARC that would have been charged if all prior ARCs had been paid in full, plus one year's interest on the net OPEB obligation.

**Employer Contributions:**

For the purposes of GASB 43/45, an employer has contributed to an OPEB plan if the employer has (a) provided benefits directly to retired plan members or their beneficiaries, (b) paid insurance premiums to insure the payment of benefits, or (c) irrevocably transferred assets to a qualifying trust, or equivalent arrangement, in which plan assets are dedicated to providing benefits to retirees and their beneficiaries in accordance with the terms of the plan and are legally protected from creditors of the employer(s) or plan administrator.

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## EXHIBIT V

### Accounting Requirements

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The Governmental Accounting Standards Board (GASB) issued Statement Number 43 – *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*, and Statement Number 45 – *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions*. Under these statements, all state and local government entities that provide other post employment benefits (OPEB) are required to report the cost of these benefits on their financial statements. The accounting standards supplement cash accounting, under which the expense for postemployment benefits is equal to benefit and administrative costs paid on behalf of retirees and their dependents (*i.e.*, a pay-as-you-go basis).

The statements cover postemployment benefits of health, prescription drug, dental, vision and life insurance coverage for retirees; long-term care coverage, life insurance and death benefits that are *not* offered as part of a pension plan; and long-term disability insurance for employees. The benefits valued in this report are limited to those described in Exhibit III of Section 4, which are based on those provided under the terms of the substantive plan in effect at the time of the valuation and on the pattern of sharing costs between the employer and plan members. The projection of benefits is not limited by legal or contractual limits on funding the plan unless those limits clearly translate into benefit limits on the substantive plan being valued.

The new standards introduce an accrual-basis accounting requirement, thereby recognizing the employer cost of postemployment benefits over an employee’s career. The standards also introduce a consistent accounting requirement for both pension and non-pension benefits.

The total cost of providing postemployment benefits is projected, taking into account assumptions about demographics, turnover, mortality, disability, retirement, health care trends, and other actuarial assumptions. These assumptions are summarized in Exhibit II of Section 4. This amount is then discounted to determine the actuarial present value of the total projected benefits (APB). The actuarial accrued liability (AAL) is the portion of the present value of the total projected benefits allocated to years of employment prior to the measurement date. The unfunded actuarial accrued liability (UAAL) is the difference between the AAL and actuarial value of assets in the Plan.

Once the UAAL is determined, the Annual Required Contribution (ARC) is determined as the normal cost (the APB allocated to the current year of service) and the amortization of the UAAL. This ARC is compared to actual contributions made and any difference is reported as the Net OPEB Obligation (NOO). In addition, Required Supplementary Information (RSI) must be reported, including historical information about the UAAL and the progress in funding the Plan. Exhibit IV of Section 4

contain a definition of terms as well as more information about GASB 43/45 concepts.

The calculation of an accounting obligation does not, in and of itself, imply that there is any legal liability to provide the benefits valued, nor is there any implication that the Employer is required to implement a funding policy to satisfy the projected expense.

Actuarial calculations reflect a long-term perspective, and the methods and assumptions use techniques designed to reduce short term volatility in accrued liabilities and the actuarial value of assets, if any.

Actuarial valuations involve estimates of the value of reported amounts and assumptions about the probability of events far into the future, and the actuarially determined amounts are subject to continual revision as actual results are compared to past expectations and new estimates are made about the future.

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# **City of Los Angeles Fire and Police Pension Plan**

**Governmental Accounting Standards (GAS) 67  
Actuarial Valuation as of June 30, 2014**

This report has been prepared at the request of the Board of Commissioners to assist in administering the Fund. This valuation report may not otherwise be copied or reproduced in any form without the consent of the Board of Commissioners and may only be provided to other parties in its entirety. The measurements shown in this actuarial valuation may not be applicable for other purposes.

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*November 12, 2014*

*Board of Fire and Police Pension Commissioners  
City of Los Angeles Fire and Police Pension Plan  
360 East Second Street, Suite 400  
Los Angeles, CA 90012*

*Dear Board Members:*

*We are pleased to submit this Governmental Accounting Standards (GAS) 67 Actuarial Valuation as of June 30, 2014. It contains various information that will need to be disclosed in order to comply with GAS 67.*

*This report was prepared in accordance with generally accepted actuarial principles and practices at the request of the Board to assist in administering the Plan. The census and financial information on which our calculations were based was prepared by LAFPP and accepted by Segal without additional audit. That assistance is gratefully acknowledged. The actuarial calculations were completed under the supervision of Andy Yeung, ASA, MAAA, FCA, Enrolled Actuary.*

*The measurements shown in this actuarial valuation may not be applicable for other purposes. Future actuarial measurements may differ significantly from the current measurements 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; and changes in plan provisions or applicable law.*

*We are members of the American Academy of Actuaries and we meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of our knowledge, the information supplied in the actuarial valuation is complete and accurate. Further, in our opinion, the assumptions as approved by the Board are reasonably related to the experience of and expectations for the Plan.*

*We look forward to reviewing this report with you and to answering any questions.*

*Sincerely,*

*Segal Consulting, a Member of The Segal Group, Inc.*

*By:*

*\_\_\_\_\_  
Paul Angelo, FSA, MAAA, FCA, EA  
Senior Vice President and Actuary*

*\_\_\_\_\_  
Andy Yeung, ASA, MAAA, FCA, EA  
Vice President and Associate Actuary*

*EK/hy*

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## **Purpose**

This report has been prepared by Segal Consulting to present certain disclosure information required by Governmental Accounting Standards (GAS) 67 as of June 30, 2014. This valuation is based on:

- The benefit provisions of the Pension Plan, as administered by the Board of Commissioners;
- The characteristics of covered active members, inactive vested members, and retired members and beneficiaries as of June 30, 2013, provided by LAFPP;
- The assets of the Plan as of June 30, 2014, provided by LAFPP;
- Economic assumptions regarding future salary increases and investment earnings; and
- Other actuarial assumptions, regarding employee terminations, retirement, death, etc.

## **Significant Issues in Valuation Year**

The following key findings were the result of this actuarial valuation:

- The Governmental Accounting Standards Board (GASB) approved two new Statements affecting the reporting of pension liabilities for accounting purposes. Statement 67 replaces Statement 25 and is for plan reporting. Statement 68 replaces Statement 27 and is for employer reporting. Statement 67 is effective with the fiscal year ending June 30, 2014 for Plan reporting and Statement 68 is effective with the fiscal year ending June 30, 2015 for employer reporting. The information contained in this valuation is intended to be used (along with other information) in order to comply with Statement 67.
- It is important to note that the new GASB rules only redefine pension liability and expense for financial reporting purposes, and do not apply to contribution amounts for pension funding purposes. Employers and plans can still develop and adopt funding policies under current practices.
- When measuring pension liability, GASB uses the same actuarial cost method (Entry Age method) and the same type of discount rate (expected return on assets) as LAFPP uses for funding. Note that, unrelated to the investment return assumption, the new GASB rules use a version of the Entry Age method where the Total Pension Liability (TPL) must be fully accrued by the time a member either enters the DROP or is expected to elect the DROP. This is in contrast to the version of the Entry Age method used for funding, where the Actuarial Accrued Liability (AAL) is not fully

accrued until members retire from employment after participation in the DROP. Under GASB, actives who are expected to enroll in the DROP in the future would report an annual Service Cost that is higher than the Normal Cost used for funding, while members already in the DROP would report no Service Cost even though their Normal Cost continues to accrue.

As the service retirement rates we use in the funding valuation have been developed based on the later date of exit from the DROP, we have adjusted those rates in this valuation so that they are based on the earlier date of first participation in the DROP. Those rates are provided in Appendix A.

- The Net Pension Liability (NPL) is equal to the difference between the TPL and the Plan's Fiduciary Net Position. The Plan's Fiduciary Net Position is equal to the market value of assets and therefore, the NPL measure is very similar to an Unfunded Actuarial Accrued Liability (UAAL) calculated on a market value basis. The NPL decreased from \$3.584 billion as of June 30, 2013 to \$1.872 billion as of June 30, 2014, primarily as a result of favorable investment results during 2013/2014 and the change in actuarial assumptions as of June 30, 2014. The \$1.872 billion was measured using the new actuarial assumptions (see additional discussion below) and the NPL would have been higher by about \$69 million if measured using the old assumptions. Changes in these values during the last two fiscal years ending June 30, 2013 and June 30, 2014 can be found in Exhibit 3.
- The NPLs measured as of June 30, 2014 and 2013 have been determined by rolling forward the results of the actuarial valuations as of June 30, 2013 and June 30, 2012, respectively.
- The discount rate originally used to determine the TPL and NPL as of June 30, 2014 and 2013 was 7.75%, following the same assumptions used by the Plan in the pension funding valuations as of June 30, 2013 and June 30, 2012. However, as the Board of Commissioners has approved a new discount rate of 7.50% (together with other new actuarial assumptions) for use in the next pension funding valuation as of June 30, 2014, we have estimated the impact of this assumption change by (1) revaluing the actuarial valuation TPL as of June 30, 2013 (before the roll forward) and (2) using this revalued TPL in rolling forward the results from June 30, 2013 to June 30, 2014. The detailed calculations of the discount rate of 7.50% used in calculation of the TPL and NPL as of June 30, 2014 can be found in Exhibit 5 of Section 2. Various other information that is required to be disclosed can be found throughout Exhibits 1 through 4 in Section 2.

## Summary of Key Valuation Results

	2014	2013
<b>Disclosure elements for fiscal year ending June 30:</b>		
Service cost <sup>(1)</sup>	\$368,017,648	\$361,192,260
Total pension liability	18,861,992,028	18,264,528,081
Plan fiduciary net position	16,989,704,585	14,680,373,040
Net pension liability	1,872,287,443	3,584,155,041
Plan fiduciary net position as a percentage of the total pension liability	90.07%	80.38%
<b>Schedule of contributions for fiscal year ending June 30:</b>		
Actuarially determined contributions	\$440,698,260	\$375,448,092
Actual contributions	440,698,260	375,448,092
Contribution deficiency (excess)	0	0
<b>Demographic data for plan year ending June 30:</b>		
Number of retired members and beneficiaries	12,502	12,432
Number of vested terminated members <sup>(2)</sup>	131	133
Number of DROP members	1,277	1,191
Number of active members	11,820	12,033
<b>Key assumptions as of June 30:</b>		
Investment rate of return	7.50%	7.75%
Inflation rate	3.25%	3.50%
Projected salary increases <sup>(3)</sup>	Ranges from 4.75% to 11.50% based on years of service	Ranges from 5.25% to 12.25% based on years of service

<sup>(1)</sup> Please note that service cost is always based on the previous year's assumptions, meaning both values are based on these assumptions shown as of June 30, 2013.

<sup>(2)</sup> Includes terminated members due only a refund of member contributions.

<sup>(3)</sup> Includes inflation at 3.25% (3.50% for the June 30, 2013 valuation) plus real across the board salary increases of 0.75% plus merit and promotional increases.

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**EXHIBIT 1****General Information – “Financial Statements”, Note Disclosures and Required Supplementary Information for a Single-Employer Pension Plan**

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**Plan Description**

*Plan administration.* The City of Los Angeles Fire and Police Plan (LAFPP) was established by the City of Los Angeles in 1899. LAFPP is a single employer public employee retirement system whose main function is to provide retirement benefits to the safety members employed by the City of Los Angeles.

The Fire and Police Pension Plan is administered by a Board of Commissioners composed of five commissioners who are appointed by the Mayor, two commissioners elected by Police Members of the Plan and two commissioners elected by Fire Members of the Plan. Under provisions of the City Charter, the City Administrative Code and the State Constitution, the Board has the responsibility to administer the Plan.

*Plan membership.* At June 30, 2014, pension plan membership consisted of the following:

Retired members or beneficiaries currently receiving benefits	12,502
Vested terminated members entitled to, but not yet receiving benefits	131
DROP members	1,277
Active members	<u>11,820</u>
Total	25,730

*Benefits provided.* LAFPP provides service retirement, disability, death and survivor benefits to eligible sworn members of the Los Angeles Fire, Police and Harbor Departments. Sworn employees become members upon graduation from the Police Academy or Fire Drill Tower.

There are currently six tiers applicable to members of the LAFPP. Tier 1 includes members hired on or before January 28, 1967. Tier 2 includes members hired from January 29, 1967 through December 7, 1980, and those Tier 1 members who transferred to Tier 2 during the enrollment period of January 29, 1967 to January 29, 1968. Tier 3 includes members hired from December 8, 1980 through June 30, 1997 and those Tier 4 members hired during the period of July 1, 1997 through December 31, 1997 who elected to transfer to Tier 3 by the enrollment deadline of June 30, 1998. Tier 4 includes members hired from July 1, 1997 through December 31, 2001 and those Tier 3 members who elected to transfer to Tier 4 by the enrollment deadline of June 30, 1998. Tier 5 includes members hired from January 1, 2002 through June 30, 2011 and those active members of

Tiers 2, 3, or 4 who elected to transfer to Tier 5 during the enrollment period of January 2, 2002 through December 31, 2002. Tier 6 was established for all firefighters and police officers hired on or after July 1, 2011.

Tier 1, Tier 2, and Tier 4 members are eligible to retire once they attain 20 years of service. Tier 3 members are eligible to retire once they reach age 50 and have attained 10 or more years of service. Tier 5 and Tier 6 members are eligible to retire once they reach age 50 and have attained 20 or more years of service.

The Service Retirement benefit the member will receive is based upon age at retirement, final average compensation, years of retirement service credit and tier.

The Tier 1 Service Retirement benefit is calculated pursuant to the provisions of Section 1304 of the Los Angeles Charter. The monthly allowance for a member with between 20 to 25 years of service who retires from active status is equal to 40% of the average monthly rate of salary assigned to the ranks or positions held by the member during the three years immediately preceding the date of his retirement plus 2% of the average rate of salary for each year of service in excess of 20 years. The monthly allowance for a member with between 25 to 34 years of service who retires from active status is equal to 50% of the average monthly rate of salary assigned to the ranks or positions held by the member during the three years immediately preceding the date of his retirement plus 1 2/3% of the average rate of salary for each year of service in excess of 25 years. The monthly allowance for a member with 35 or more years of service who retires from active status is equal to 66 2/3% of the average monthly rate of salary assigned to the ranks or positions held by the member during the three years immediately preceding the date of his retirement.

The Tier 2 Service Retirement benefit is calculated pursuant to the provisions of Section 1408 of the Los Angeles Charter. The monthly allowance for a member with less than 25 years of service who retires from active status is equal to 2% of Normal Pension Base per year of service. The monthly allowance for a member with 25 or more years of service who retires from active status is equal to 55% of Normal Pension Base plus 3% per year over 25 of Normal Pension Base, with a maximum of 70% of Normal Pension Base.

The Tier 3 Service Retirement benefit is calculated pursuant to the provisions of Section 1504 of the Los Angeles Charter. The monthly allowance for a member with less than 20 years of service who retires from active status is equal to 2% of Final Average Salary per year of service. The monthly allowance for a member with 20 or more years of service who retires from active status is equal to 40% of Final Average Salary plus 3% per year over 20 of Final Average Salary, with a maximum of 70% of Final Average Salary.

The Tier 4 Service Retirement benefit is calculated pursuant to the provisions of Section 1604 of the Los Angeles Charter. The monthly allowance for a member who retires from active status is equal to 40% of Final Average Salary plus 3% per year of service over 20, with a maximum of 70% of Final Average Salary.

The Tier 5 Service Retirement benefit is calculated pursuant to the provisions of Section 4.2004 of the Los Angeles Administrative Code. The monthly allowance for a member who retires from active status is equal to 50% of Final Average Salary plus 3% per year of service over 20, except for the 30th year, where 4% is provided, with a maximum of 90% of Final Average Salary.

The Tier 6 Service Retirement benefit is calculated pursuant to the provisions of Section 1704 of the Los Angeles Charter. The monthly allowance for a member who retires from active status is equal to 40% of Final Average Salary, plus 3% of Final Average Salary per year of service from 21 through 25, 4% of Final Average Salary per year of service from 26 through 30, and 5% of Final Average Salary per year of service over 30, with a maximum of 90% of Final Average Salary.

Under Tier 1, pension benefits are calculated based on the average monthly rate of salary assigned to the ranks or positions held by the member during the three years immediately preceding the date of his retirement. Under Tier 2, pension benefits are calculated based on the Normal Pension Base, the final monthly salary rate. Under Tiers 3 – 6, pension benefits are calculated based on the Final Average Salary. Under Tiers 3 – 5, the Final Average Salary is the highest monthly average salary actually received during any 12 consecutive months of service. Under Tier 6 the Final Average Salary is the highest monthly average salary actually received during any 24 consecutive months of service.

LAFPP provides annual cost-of-living adjustments (COLAs) to retirees . The cost-of-living adjustments are made each July 1 and vary by Tier. Under Tier 1 and Tier 2, the COLA is based on the percentage change in the average of the Consumer Price Index for the Los Angeles-Riverside-Orange County Area--All Items For All Urban Consumers. Under Tier 3 and Tier 4, the COLA is the same as under Tier 1 and Tier 2 but is capped at 3%, with a prorated COLA in the first year of retirement. Under Tier 5 and Tier 6, the COLA is the same as under Tier 3 and Tier 4, with the excess of the COLA over 3% banked for future use when the COLA is under 3%.

The City of Los Angeles contributes to the retirement plan based upon actuarially determined contribution rates adopted by the Board of Commissioners based upon recommendations received from LAFPP's actuary after the completion of the annual actuarial valuation. The average employer contribution rate for fiscal year 2013 – 2014 (based on the June 30, 2012 valuation) was 33.69% of compensation if paid on July 15, 2013.

All members are required to make contributions to LAFPP regardless of tier in which they are included. However, members are exempt from making contributions when their continuous service exceeds 30 years for Tiers 1 through 4, and 33 years for Tier 5 and Tier 6. The average member contribution rate for fiscal year 2013 – 2014 (based on the June 30, 2012 valuation) was 9.51% of compensation paid biweekly.



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**EXHIBIT 2****Net Pension Liability**

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The components of the net pension liability of LAFPP are as follows:

	<b>June 30, 2014</b>	<b>June 30, 2013</b>
Total pension liability	\$18,861,992,028	\$18,264,528,081
Plan fiduciary net position	<u>16,989,704,585</u>	<u>14,680,373,040</u>
Plan's net pension liability	\$1,872,287,443	\$3,584,155,041
Plan fiduciary net position as a percentage of the total pension liability	90.07%	80.38%

---

The net pension liability was measured as of June 30, 2014 and June 30, 2013 and determined based upon plan assets as of each measurement date and upon rolling forward to each measurement date the total pension liability from the actuarial valuations as of June 30, 2013 and 2012, respectively.

*Actuarial assumptions.* The total pension liability as of June 30, 2014 was remeasured as of June 30, 2014 to reflect the following actuarial assumptions that the Board of Commissioners has approved for use in the pension funding valuation as of June 30, 2014:

Inflation	3.25%
Salary increases	Ranges from 4.75% to 11.50% based on years of service, including inflation
Investment rate of return	7.50%, including inflation but net of Pension Plan investment expense
Other assumptions	See analysis of actuarial experience during the period July 1, 2010 through June 30, 2013 and Appendix A for the service retirement rates after they have been adjusted to be based on the earlier date of first participation in the DROP.

The long-term expected rate of return on Pension Plan investments was determined using a building-block method in which expected future real rates of return (expected returns, net of inflation) are developed for each major asset class. These returns 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 and deducting expected investment expenses. The

target allocation and projected arithmetic real rates of return for each measurement class, after deducting inflation, but before reduction for investment expenses, used in the derivation of the long-term expected investment rate of return assumption are summarized in the following table:

<b>Asset Class</b>	<b>Target Allocation</b>	<b>Long-Term Expected Real Rate of Return</b>
Large Cap U.S. Equity	23.00%	6.03%
Small Cap U.S. Equity	6.00%	6.71%
Developed International Equity	16.00%	6.71%
Emerging Markets Equity	5.00%	8.02%
U.S. Core Fixed Income	14.00%	0.52%
High Yield Bonds	3.00%	2.81%
Real Estate	10.00%	4.73%
TIPS	5.00%	0.43%
Commodities	5.00%	4.67%
Cash	1.00%	-0.19%
Unconstrained Fixed Income	2.00%	2.50%
Private Equity	<u>10.00%</u>	<u>9.25%</u>
<b>Total Portfolio</b>	<b>100.00%</b>	<b>5.12%</b>

*Discount rate:* The discount rates used to measure the total pension liability were 7.50% and 7.75% as of June 30, 2014 and June 30, 2013, respectively. The projection of cash flows used to determine the discount rate assumed plan member contributions will be made at the current contribution rates for each tier and that employer contributions will be made at rates equal to the actuarially determined contribution rates for each tier. For this purpose, only employer contributions that are intended to fund benefits for current plan members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs for future plan members and their beneficiaries, as well as projected contributions from future plan members, are not included. Based on those assumptions, the Pension Plan's fiduciary net position was projected to be available to make all projected future benefit payments for current plan members. Therefore, the long-term expected rate of return on Pension Plan investments was applied to all periods of projected benefit payments to determine the total pension liability as of both June 30, 2014 and June 30, 2013.

*Sensitivity of the net pension liability to changes in the discount rate.* The following presents the net pension liability of LAFPP as of June 30, 2014, calculated using the discount rate of 7.50%, as well as what LAFPP's net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.50%) or 1-percentage-point higher (8.50%) than the current rate:

	<b>1% Decrease (6.50%)</b>	<b>Current Discount Rate (7.50%)</b>	<b>1% Increase (8.50%)</b>
LAFPP's net pension liability as of June 30, 2014	\$4,386,029,023	\$1,872,287,443	(\$192,812,153)

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**EXHIBIT 3****Schedule of Changes in LAFPP Net Pension Liability – Last Two Fiscal Years**

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	<b>2014</b>	<b>2013</b>
<b>Total pension liability</b>		
Service cost	\$368,017,648	\$361,192,260
Interest	1,392,552,174	1,344,600,162
Change of benefit terms	0	0
Differences between expected and actual experience	-234,637,547	-431,388,856
Changes of assumptions	-69,482,273	0
Benefit payments, including refunds of employee contributions	-858,986,055	-859,503,176
<b>Net change in total pension liability</b>	<b>\$597,463,947</b>	<b>\$414,900,390</b>
<b>Total pension liability – beginning</b>	<b><u>18,264,528,081</u></b>	<b><u>17,849,627,691</u></b>
<b>Total pension liability – ending (a)</b>	<b><u>\$18,861,992,028</u></b>	<b><u>\$18,264,528,081</u></b>
<b>Plan fiduciary net position</b>		
Contributions – employer	\$440,698,260	\$375,448,092
Contributions – employee	124,394,889	121,777,654
Net investment income	2,617,089,650	1,707,776,453
Benefit payments, including refunds of employee contributions	-858,986,055	-859,503,176
Administrative expense	-13,865,199	-12,200,359
Other	0	0
<b>Net change in plan fiduciary net position</b>	<b>\$2,309,331,545</b>	<b>\$1,333,298,664</b>
<b>Plan fiduciary net position – beginning</b>	<b><u>14,680,373,040</u></b>	<b><u>13,347,074,376</u></b>
<b>Plan fiduciary net position – ending (b)</b>	<b><u>\$16,989,704,585</u></b>	<b><u>\$14,680,373,040</u></b>
<b>Plan’s net pension liability – ending (a) – (b)</b>	<b><u>\$1,872,287,443</u></b>	<b><u>\$3,584,155,041</u></b>
<b>Plan fiduciary net position as a percentage of the total pension liability</b>	<b>90.07%</b>	<b>80.38%</b>
<b>Covered employee payroll</b>	<b>\$1,308,148,504</b>	<b>\$1,277,031,317</b>
<b>Plan net pension liability as percentage of covered employee payroll</b>	<b>143.12%</b>	<b>280.66%</b>

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**EXHIBIT 4****Schedule of LAFPP's Contributions – Last Ten Fiscal Years**

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<b>Year Ended June 30</b>	<b>Actuarially Determined Contributions</b>	<b>Contributions in Relation to the Actuarially Determined Contributions</b>	<b>Contribution Deficiency (Excess)</b>	<b>Covered-Employee Payroll</b>	<b>Contributions as a Percentage of Covered Employee Payroll<sup>(3)</sup></b>
2005	\$135,853,688	\$135,853,688	\$0	N/A <sup>(2)</sup>	N/A <sup>(2)</sup>
2006	143,945,802	143,945,802	0	N/A <sup>(2)</sup>	N/A <sup>(2)</sup>
2007	224,946,082	224,946,082	0	\$1,130,296,904	19.90%
2008 <sup>(1)</sup>	261,635,491	261,635,491	0	1,188,972,417	22.01%
2009	238,697,929	238,697,929	0	1,253,658,885	19.04%
2010	250,516,858	250,516,858	0	1,266,311,709	19.78%
2011	277,092,251	277,092,251	0	1,289,856,708	21.48%
2012	321,593,433	321,593,433	0	1,213,395,874	26.50%
2013	375,448,092	375,448,092	0	1,277,031,317	29.40%
2014	440,698,260	440,698,260	0	1,308,148,504	33.69%

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<sup>(1)</sup> *Figures include amounts transferred and contributed during the fiscal year that were related to the transfer of certain Harbor Port Police members from the Los Angeles City Employees' Retirement System.*

<sup>(2)</sup> *Not available*

<sup>(3)</sup> *Contribution rate as a percentage of payroll reflects discount applied when the employer prepays its contributions. This rate has been "backed" into by dividing the actual contributions by the budgeted covered-employee payroll.*

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## Notes to Exhibit 4

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### Methods and used assumptions to establish “actuarially determined contribution” rates:

<b>Valuation date</b>	Actuarially determined contribution rates are calculated as of June 30, two years prior to the end of the fiscal year in which contributions are reported
<b>Actuarial cost method</b>	Entry Age Actuarial Cost Method
<b>Amortization method</b>	For Tier 1, level dollar amortization is used with last period ending on June 30, 2037. For Tiers 2, 3 and 4, level percent of payroll amortization with multiple layers is used as a percent of total valuation payroll from the respective employer (i.e., City or Harbor Port Police). For Tiers 5 and 6, level percent of payroll with multiple layers is used as a percent of combined payroll for these tiers from the respective employer (i.e., City or Harbor Port Police).
<b>Remaining amortization period</b>	Actuarial gains/losses are amortized over 20 years. Assumption changes are amortized over 25 years. Plan changes are amortized over 15 years.
<b>Asset valuation method</b>	Market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual market return and the expected return on the market value, and is recognized over a seven-year period. Unrecognized return established before July 1, 2008 was recognized over a five-year period. The actuarial value of assets is further adjusted, if necessary, to be within 40% of the market value of assets.

	<b>Before Reflection of Assumptions Approved for Pension Funding Valuation as of June 30, 2014</b>	<b>After Reflection of Assumptions Approved for Pension Funding Valuation as of June 30, 2014</b>
<b>Actuarial assumptions:</b>		
Investment rate of return	7.75%	7.50%
Inflation rate	3.50%	3.25%
Real across-the-board salary increase	0.75%	0.75%
Projected salary increases*	Ranges from 5.25% to 12.25% based on years of service	Ranges from 4.75% to 11.50% based on years of service
Cost of living adjustments	3.50% of Tiers 1 and 2 retirement income and 3.00% of Tiers 3, 4, 5, and 6 retirement income.	3.25% of Tiers 1 and 2 retirement income and 3.00% of Tiers 3, 4, 5, and 6 retirement income.
Other assumptions	Same as those used in the June 30, 2013 funding actuarial valuation	See analysis of actuarial experience during the period July 1, 2010 through June 30, 2013

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\* Includes inflation at 3.25% (3.50% for the June 30, 2013 valuation) plus across the board salary increases of 0.75% plus merit and promotional increases.

**EXHIBIT 5**

**Projection of Pension Plan's Fiduciary Net Position for Use in Calculation of Discount Rate  
as of June 30, 2014 (\$ in millions)**

<b>Year Beginning July 1</b>	<b>Projected Beginning Plan Fiduciary Net Position (a)</b>	<b>Projected Total Contributions (b)</b>	<b>Projected Benefit Payments (c)</b>	<b>Projected Administrative Expenses (d)</b>	<b>Projected Investment Earnings (e)</b>	<b>Projected Ending Plan Fiduciary Net Position (f) = (a) + (b) - (c) - (d) + (e)</b>
2013	\$14,680	\$565	\$859	\$14	\$2,617	\$16,990
2014	16,990	628	899	15	1,284	17,987
2015	17,987	628	1,007	16	1,355	18,948
2016	18,948	619	1,154	17	1,420	19,816
2017	19,816	586	1,096	17	1,485	20,774
2018	20,774	588	1,191	18	1,553	21,706
2019	21,706	564	1,169	19	1,622	22,705
2020	22,705	514	1,240	20	1,690	23,649
2021	23,649	504	1,312	21	1,757	24,577
2022	24,577	503	1,379	21	1,824	25,505
2038	32,646	191	2,601	28	2,356	32,563
2039	32,563	210	2,682	28	2,348	32,410
2040	32,410	173	2,746	28	2,331	32,140
2041	32,140	109	2,793	28	2,304	31,732
2042	31,732	93	2,828	28	2,271	31,239
2087	1,204	1	80	1	87	1,211
2088	1,211	1	61	1	88	1,239
2089	1,239	1	46	1	91	1,283
2090	1,283	1	35	1	95	1,344
2091	1,344	1	26	1	100	1,418
2115	7,203	6	0 *	6	540	7,743
2116	7,743					
2116	Discounted Value:	5 **				

\* Less than \$1 million, when rounded.

\*\* \$7,743 million when discounted with interest at the rate of 7.50% per annum has a value of \$5 million as of June 30, 2013.

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## EXHIBIT 5

### Projection of Pension Plan's Fiduciary Net Position for Use in Calculation of Discount Rate as of June 30, 2014 (\$ in millions) - continued

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Notes:

- (1) Amounts may not total exactly due to rounding.
  - (2) Amounts shown in the year beginning July 1, 2013 row are actual amounts, based on the information provided by LAFPP.
  - (3) Years 2023-2037, 2043-2086, and 2092-2114 have been omitted from this table.
  - (4) Column (a): Except for the "discounted value" shown for 2116, none of the projected beginning plan fiduciary net position amounts shown have been adjusted for the time value of money.
  - (5) Column (b): Projected total contributions include employee and employer normal cost rates applied to closed group projected payroll (based on covered active members as of June 30, 2013), plus employer contributions to the unfunded actuarial accrued liability. Contributions are assumed to occur beginning of the year.
  - (6) Column (c): Projected benefit payments have been determined in accordance with paragraph 39 of GAS 67, and are based on the closed group of active, inactive vested, retired members, and beneficiaries as of June 30, 2013. The projected benefit payments reflect the cost of living increase assumptions to be used in the June 30, 2014 valuation report. The projected benefit payments are assumed to occur beginning of the month, on average.
  - (7) Column (d): Projected administrative expenses are calculated as approximately 0.09% of the projected beginning plan fiduciary net position amount. The 0.09% portion was based on the average of the actual administrative expenses from 2008 to 2013. Administrative expenses are assumed to occur halfway through the year, on average.
  - (8) Column (e): Projected investment earnings are based on the assumed investment rate of return of 7.50% per annum except for 2013/2014.
  - (9) As illustrated in this Exhibit, the Plan's fiduciary net position was projected to be available to make all projected future benefit payments for current Plan members. In other words, there is no projected "cross-over date" when projected benefits are not covered by projected assets. Therefore, the long-term expected rate of return on Plan investments of 7.50% per annum was applied to all periods of projected benefit payments to determine the total pension liability as of June 30, 2014 shown earlier in this report, pursuant to paragraph 44 of GAS No. 67.
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**Appendix A****Retirement Rates After Adjustment for DROP Participation**

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As the service retirement rates we use in the funding valuation have been developed based on the later date of exit from the DROP, we have adjusted those rates in this GASB valuation so that they are based on the earlier date of first participation in the DROP. Retirement rates to be used in our June 30, 2014 funding valuation are shown on the next page. Please note that those rates are applicable in the GASB valuation for actives not eligible to enter the DROP. A sample of those rates used in the GASB valuation for an active eligible to enter the DROP at age 55 are as follows:

**Retirement Rates for funding valuation**  
 (Also applicable to actives not eligible to enter the DROP in  
 GASB valuation)

Age	Fire			Police		
	Tiers 2&4	Tiers 3&5	Tier 6	Tiers 2&4	Tiers 3&5	Tier 6
41	1.00%	0.00%	0.00%	10.00%	0.00%	0.00%
42	1.00	0.00	0.00	10.00	0.00	0.00
43	1.00	0.00	0.00	10.00	0.00	0.00
44	1.00	0.00	0.00	10.00	0.00	0.00
45	1.00	0.00	0.00	10.00	0.00	0.00
46	1.00	0.00	0.00	7.00	0.00	0.00
47	1.00	0.00	0.00	7.00	0.00	0.00
48	2.00	0.00	0.00	7.00	0.00	0.00
49	2.00	0.00	0.00	7.00	0.00	0.00
50	3.00	3.00	3.00	12.00	7.00	8.00
51	4.00	3.00	3.00	12.00	6.00	10.00
52	5.00	3.00	4.00	12.00	6.00	10.00
53	10.00	3.00	5.00	15.00	6.00	15.00
54	15.00	7.00	5.00	20.00	10.00	15.00
55	20.00	12.00	10.00	20.00	18.00	18.00
56	20.00	14.00	12.00	25.00	18.00	18.00
57	20.00	16.00	15.00	25.00	20.00	20.00
58	20.00	20.00	18.00	25.00	22.00	22.00
59	20.00	25.00	20.00	25.00	25.00	25.00
60	20.00	25.00	25.00	25.00	25.00	25.00
61	20.00	30.00	30.00	25.00	25.00	25.00
62	25.00	35.00	30.00	25.00	25.00	25.00
63	25.00	40.00	35.00	30.00	25.00	25.00
64	30.00	40.00	40.00	40.00	30.00	30.00
65	100.00	100.00	100.00	100.00	100.00	100.00

**Sample Retirement Rates for GASB valuation**  
 (For actives eligible to enter the DROP at 55)

Age	Fire			Police		
	Tiers 2&4	Tiers 3&5	Tier 6	Tiers 2&4	Tiers 3&5	Tier 6
41	1.00%	0.00%	0.00%	10.00%	0.00%	0.00%
42	1.00	0.00	0.00	10.00	0.00	0.00
43	1.00	0.00	0.00	10.00	0.00	0.00
44	1.00	0.00	0.00	10.00	0.00	0.00
45	1.00	0.00	0.00	10.00	0.00	0.00
46	1.00	0.00	0.00	7.00	0.00	0.00
47	1.00	0.00	0.00	7.00	0.00	0.00
48	2.00	0.00	0.00	7.00	0.00	0.00
49	2.00	0.00	0.00	7.00	0.00	0.00
50	3.00	3.00	3.00	12.00	7.00	8.00
51	4.00	3.00	3.00	12.00	6.00	10.00
52	5.00	3.00	4.00	12.00	6.00	10.00
53	10.00	3.00	5.00	15.00	6.00	15.00
54	15.00	7.00	5.00	20.00	10.00	15.00
55	26.23	21.06	20.49	26.01	25.47	25.47
56	27.70	26.20	25.81	32.42	27.00	27.00
57	31.92	32.30	30.46	34.77	30.84	30.84
58	34.71	41.79	38.90	40.44	35.38	35.38
59	41.79	51.69	48.62	52.03	45.33	45.33
60	90.43	88.44	88.89	89.56	90.23	90.23
61	1.00	1.50	1.50	1.25	1.25	1.25
62	1.25	1.75	1.50	1.25	1.25	1.25
63	1.25	2.00	1.75	1.50	1.25	1.25
64	1.50	2.00	2.00	2.00	1.50	1.50
65	100.00	100.00	100.00	100.00	100.00	100.00

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**Andy Yeung, ASA, MAAA, FCA, EA**  
Vice President & Associate Actuary  
ayeung@segalco.com

VIA E-MAIL and USPS

March 20, 2015

Mr. Raymond P. Ciranna  
General Manager  
Los Angeles Department of Fire and Police Pensions  
360 E 2nd Street, 6th Floor  
Los Angeles, CA 90012

**Re: City of Los Angeles Fire and Police Pension Plan (LAFPP)  
Governmental Accounting Standards (GAS) 67 with the Actuarial Valuation  
as of June 30, 2014 Addendum**

Dear Ray:

In our Governmental Accounting Standards (GAS) Statement 67 report dated November 12, 2014, we provide the Net Pension Liability (NPL) and other elements that are required for completing the Plan's financial reporting requirements under Statement 67. In this letter, we have provided as an Addendum to that report two additional schedules that the American Institute of Certified Public Accountants (AICPA) recommends be prepared by Segal for use in allocating the NPL and pension expense by members associated with the Harbor Port Police (an enterprise fund) and the other members associated with the City's Fire and Police Departments before we issue the full companion report for the employer's financial reporting for LAFPP under GAS Statement 68.


These two schedules have been developed based on the assumptions, methods and results shown in our earlier report dated November 12, 2014. Exhibit A shows the method used for allocating the NPL along with the NPL amounts allocated amongst the two member categories in LAFPP. Exhibit B is a summary that shows the allocated NPL, deferred outflows and inflows of resources and pension expense by the two member categories. In Exhibit B, we have included the beginning of year NPL. The beginning of year NPL was allocated using the same method described in Exhibit A to allocate the end of year NPL. Further information regarding GAS 68 including additional information that the City will need to disclose for the two member categories will be provided in a separate report that is anticipated to be completed later this year.

Mr. Raymond P. Ciranna  
March 20, 2015  
Page 2

The undersigned is a member of the American Academy of Actuaries and I meet the Qualification Standard of the American Academy of Actuaries to render the actuarial opinion herein.

Please give us a call if you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Andy Yeung". The signature is written in black ink and is positioned to the right of the word "Sincerely,".

Andy Yeung

EK/bqb  
Enclosures

**AICPA Schedules for City of Los Angeles Fire and Police Pension Plan  
Addendum to GAS Statement 67 Actuarial Valuation**

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**EXHIBIT A**

**Schedule of Employer Allocations as of June 30, 2014**

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<b>Allocation of June 30, 2014 Estimated Net Pension Liability</b>	
<b>Member Category</b>	<b>Total NPL</b>
Fire and Police	\$1,861,824,464
Harbor Port Police	<u>10,462,979</u>
Total for the City	\$1,872,287,443

**Notes:**

The Net Pension Liability (NPL) for each member category is the Total Pension Liability (TPL) minus the Plan Net Position (plan assets). The Total Pension Liability for each member category is obtained from internal valuation results and is calculated separately for each of the members associated with the Fire and Police Departments and the Harbor Port Police. The Plan Net Position for each membership category was estimated by adjusting the valuation value of assets for each membership category by the ratio of the total LAFPP Plan Net Position to total LAFPP valuation value of assets.

**AICPA Schedules for City of Los Angeles Fire and Police Pension Plan  
Addendum to GAS Statement 67 Actuarial Valuation**

**EXHIBIT B**

**Schedule of Pension Amounts by Employer as of June 30, 2014**

<b>Deferred Outflows of Resources</b>	<b>Fire and Police</b>	<b>Harbor Port Police</b>	<b>Total for City</b>
Differences Between Expected and Actual Experience		\$0	\$0
Net Difference Between Projected and Actual			
Investment Earnings on Pension Plan Investments	0	0	0
Changes of Assumptions	0	0	0
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<b>Total Deferred Outflows of Resources</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Deferred Inflows of Resources</b>			
Differences Between Expected and Actual Experience	\$193,441,991	\$175,006	\$193,616,997
Net Difference Between Projected and Actual			
Investment Earnings on Pension Plan Investments	1,166,243,596	2,740,341	1,168,983,937
Changes of Assumptions	56,938,891	396,131	57,335,022
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<b>Total Deferred Inflows of Resources</b>	<b>\$1,416,624,478</b>	<b>\$3,311,478</b>	<b>\$1,419,935,956</b>
<b>Net Pension Liability as of June 30, 2013</b>	<b>\$3,569,834,904</b>	<b>\$14,320,137</b>	<b>\$3,584,155,041</b>
<b>Net Pension Liability as of June 30, 2014</b>	<b>\$1,861,824,464</b>	<b>\$10,462,979</b>	<b>\$1,872,287,443</b>
<b>Pension Expense</b>			
Proportionate Share of Plan Pension Expense	\$146,035,124	\$2,731,494	\$148,766,618
Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<b>Total Employer Pension Expense</b>	<b>\$146,035,124</b>	<b>\$2,731,494</b>	<b>\$148,766,618</b>

**AICPA Schedules for City of Los Angeles Fire and Police Pension Plan  
Addendum to GAS Statement 67 Actuarial Valuation**

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**EXHIBIT B**

**Schedule of Pension Amounts by Employer as of June 30, 2014 – continued**

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**Notes:**

Amounts shown in this exhibit were allocated by Fire and Police and Harbor Port Police member categories based on the internal calculations as described in Exhibit A.

In determining the pension expense:

- Any differences between projected and actual investment earnings on pension plan investments are recognized over a period of five years beginning with the year in which they occur.
- Differences between expected and actual experience and changes of assumptions are recognized over the average of the expected remaining service lives of all employees that are provided with pensions through LAFPP determined as of June 30, 2013 (the beginning of the measurement period ending June 30, 2014) and is 5.72 years.

The average of the expected remaining service lives of all employees was determined by:

- Calculating each active employee's expected remaining service life as the present value of \$1 per year of future service at zero percent interest.
- Setting the remaining service life to zero for each nonactive or retired members.
- Dividing the sum of the above amounts by the total number of active employee, nonactive and retired members.

There is no change in the pension expense brought about by "Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions". This is because calculations are done separately to track TPL and Plan Net Position for each of the Fire and Police Departments and Harbor Port Police.

We did not attempt to determine the beginning balances for deferred inflows or resources and deferred outflows of resources as of the beginning of the period for the 2014 plan year. Per paragraph 137 of GAS 68, these balances are assumed to be zero.