

Alameda County Employees' Retirement Association

Actuarial Valuation and Review
as of December 31, 2015



This report has been prepared at the request of the Board of Retirement 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 Retirement 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.

Copyright © 2016 by The Segal Group, Inc. All rights reserved.



100 Montgomery Street, Suite 500 San Francisco, CA 94104
T 415.263.8200 www.segalco.com

May 6, 2016

*Board of Retirement
Alameda County Employees' Retirement Association
475 14th Street, Suite 1000
Oakland, CA 94612*

Dear Board Members:

We are pleased to submit this Actuarial Valuation and Review as of December 31, 2015. It summarizes the actuarial data used in the valuation, establishes the funding requirements for fiscal 2016-2017 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 and financial information on which our calculations were based were prepared by ACERA. That assistance is gratefully acknowledged.

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 completed under the supervision of Eva Yum, FSA, MAAA, Enrolled Actuary. 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 this 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 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.

A handwritten signature in black ink that reads "Andy Yeung".

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

A handwritten signature in black ink that reads "Eva Yum".

Eva Yum, FSA, MAAA, EA
Associate Actuary

MAM/hy

SECTION 1

VALUATION SUMMARY

Purpose.....	i
Significant Issues in Valuation Year	ii
Summary of Key Valuation Results.....	v
Summary of Key Valuation Demographic and Financial Data.....	vii

SECTION 2

VALUATION RESULTS

A. Member Data	1
B. Financial Information	4
C. Actuarial Experience	8
D. Employer and Member Contributions	13
E. Funded Ratio	27
F. Volatility Ratios.....	29

SECTION 3

SUPPLEMENTAL INFORMATION

EXHIBIT A Table of Plan Coverage	
i. General Tier 1	30
ii. General Tier 2	31
iii. General Tier 3	32
iv. General Tier 4	33
v. Safety Tier 1	34
vi. Safety Tier 2	35
vii. Safety Tier 2C	36
viii. Safety Tier 2D.....	37
ix. Safety Tier 4	38
EXHIBIT B Members in Active Service and Projected Average Compensation as of 12/31/2015	39
EXHIBIT C Reconciliation of Member Data – 12/31/2014 to 12/31/2015	48
EXHIBIT D Summary Statement of Income and Expenses on an Actuarial Value Basis	49
EXHIBIT E Summary Statement of Assets.....	50
EXHIBIT F Actuarial Balance Sheet	52
EXHIBIT G Summary of Reported Asset Information as of 12/31/2015.....	53
EXHIBIT H Development of Unfunded Actuarial Accrued Liability as of 12/31/2015.....	54
EXHIBIT I Table of Amortization Bases	55
EXHIBIT J Section 415 Limitations	57
EXHIBIT K Definitions of Pension Terms.....	58

SECTION 4

REPORTING INFORMATION

EXHIBIT I Summary of Actuarial Valuation Results.....	60
EXHIBIT II Actuarial Assumptions and Actuarial Cost Method.....	62
EXHIBIT III Summary of Plan Provisions.....	71
Appendix A Member Contribution Rates.....	80
Appendix B Projected Employer Contributions By Each Participating Employer.....	101

SECTION 1: Valuation Summary for the Alameda County Employees' Retirement Association

Purpose

This report has been prepared by Segal Consulting to present a valuation of the Alameda County Employees' Retirement Association as of December 31, 2015. 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 Retirement Association, as administered by the Board of Retirement;
- The characteristics of covered active members, inactive vested members, retired members and beneficiaries as of November 30, 2015, provided by the Retirement Association;
- The assets of the Plan as of December 31, 2015, provided by the Retirement Association;
- Economic assumptions regarding future salary increases and investment earnings; and
- Other actuarial assumptions, regarding employee terminations, retirement, death, etc. that the Board has adopted for the December 31, 2015 valuation.

One of the general goals of an actuarial valuation is to establish contributions that fully fund the Association's liabilities, and that, as a percentage of payroll, remain as level as possible for each generation of active members. Annual actuarial valuations measure the progress toward this goal, as well as test the adequacy of the contribution rates.

In preparing this valuation, we have employed generally accepted actuarial methods and assumptions to evaluate the Association's assets, liabilities and future contribution requirements. Our calculations are based upon member data and financial information provided to us by the Association's staff. This information has not been audited by us, but it has been reviewed and found to be consistent, both internally and with prior year's information.

The contribution requirements are determined as a percentage of payroll. The Association's employer rates provide for both normal cost and a payment or credit to amortize any unfunded or overfunded actuarial accrued liabilities. In this valuation, we have reflected the Board's funding policy to amortize the Association's unfunded actuarial accrued liability using a layered approach. The aggregate employer contribution rate calculated on this basis is 24.89% of payroll. In this valuation, we have applied the 7.60% net investment earnings, 3.25% inflation, and 0.50% across-the-board salary increase assumptions adopted by the Board from the December 1, 2010 – November 30, 2013 experience study. The 7.60% investment return assumption has been developed without taking into consideration the impact of the "excess earnings" sharing mechanism between the SRBR and the Retirement Plan¹. The rates calculated in this report may be adopted by the Board for the fiscal year that extends from July 1, 2016 through June 30, 2017.

¹ For informational purposes only, we have provided on page iii the estimated impact future excess earnings allocations may have on the Retirement Plan.

SECTION 1: Valuation Summary for the Alameda County Employees' Retirement Association

Significant Issues in Valuation Year

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

- Ref: Pg. 28*
- In the December 31, 2014 valuation, the ratio of the valuation value of assets to actuarial accrued liabilities was 74.8%. In this December 31, 2015 valuation, the funded ratio has increased to 77.3%. The funded ratio if measured on a market value of assets basis decreased from 76.4% as of December 31, 2014 to 73.9% as of December 31, 2015. The change in the above ratios was primarily caused by the higher than expected return on the smoothed valuation value of assets but lower than expected return on the market value of assets during 2015.
- Ref: Pg. 8 and Pg. 54*
- The Association's unfunded actuarial accrued liability (UAAL) as of December 31, 2014 was \$1,911.0 million. In this year's valuation, the UAAL has decreased to \$1,791.5 million. The decrease in the UAAL was primarily due to (a) higher than expected return on investments (after smoothing), (b) lower than expected salary increases for active members, (c) lower than expected COLA increases for retirees and beneficiaries, and (d) other actuarial gains, offset somewhat by (e) the loss due to actual contributions less than expected². A reconciliation of the Association's UAAL is provided in Section 3, Exhibit H.
- Ref: Pg. 25 and Pg. 101*
- The aggregate employer rate calculated in this valuation has decreased from 25.69% of payroll to 24.89% of payroll. This change was primarily due to (a) higher than expected return on investments (after smoothing), (b) lower than expected salary increases for active members, (c) lower than expected COLA increases for retirees and beneficiaries, (d) change in membership demographics, and (e) other actuarial gains, offset somewhat by (f) amortizing the prior year's UAAL over a smaller than expected projected total payroll and (g) loss due to actual contributions less than expected². A reconciliation of the Association's aggregate employer rate is provided in Section 2, Subsection D (see Chart 15). A schedule of the projected contributions by each participating employer is provided in Appendix B.

Employer rates for AHS/Court/First 5 are higher than the County's rates to reflect that only the County has received a reimbursement of \$5.3 million for the implicit retiree health benefit subsidy paid by the County for 2015 (note that this is an estimated amount provided by ACERA). The \$5.3 million and the unused credit from prior years' transfers (the balance of prior transfers was about \$48.3 million as of December 31, 2015) have been recognized over separate 20-year periods (i.e., 17 years is the remaining period as of December 31, 2015 for the unused credit for transfers prior to 2013, 18 years is the remaining period as of December 31, 2015 for the unused credit for transfer for 2013, and 19 years is the remaining period as of December 31, 2015 for the unused credit for last year's transfer).

² Including scheduled delay in implementing contribution rates after date of valuation.

SECTION 1: Valuation Summary for the Alameda County Employees' Retirement Association

Ref: Pg. 26 and Pg. 81

- The aggregate member rate calculated in this valuation decreased from 8.79% of payroll to 8.77% of payroll. This change is due to a change in membership demographics. A reconciliation of the Association's aggregate member rate is provided in Section 2, Subsection D (see Chart 16).

The individual member rates have been updated to reflect the valuation as of December 31, 2015. The detailed member rates are provided in Appendix A of this report.

Ref: Pg. 6

- As indicated in Section 2, Subsection B (see Chart 7) of this report, the total unrecognized net investment loss as of December 31, 2015 is \$346.4 million (in the previous valuation, this amount was a \$242.9 million net gain). This net investment loss will be recognized in the determination of the actuarial value of assets for funding purposes in the next few years, and will offset any investment gains that may occur after December 31, 2015. This implies that if the Association earns the assumed net rate of investment return of 7.60% per year on a **market value** basis, it will result in investment losses on the actuarial value of assets in the next few years. So, if the actual market return is equal to the assumed 7.60% rate and all other actuarial assumptions are met, the contribution requirements would generally increase in the next few years.

The net deferred loss of \$346.4 million represents 5.2% of the market value of assets as of December 31, 2015. Unless offset by future investment gains or other favorable experience, the recognition of the \$346.4 million deferred market loss is expected to have a significant impact on the Association's future funded percentage and contribution rate requirements. The recognition of the deferred loss after netting out the Contingency Reserve will result in crediting the valuation reserves with interest at a rate of less than 7.6%. Under a simplified approach, which takes into account the size of the valuation and the SRBR reserves, this potential impact may be illustrated as follows:

- If a proportion of the net deferred loss that is commensurate with the size of the valuation reserves were recognized immediately in the valuation value of assets, the funded percentage would decrease from 77.3% to 73.9%.
 - If a proportion of the net deferred loss that is commensurate with the size of the valuation reserves were recognized immediately in the valuation value of assets, the aggregate employer rate would increase from 24.89% to about 26.9% of payroll.
- As we disclosed in our December 31, 2014 valuation report, the 7.60% investment return assumption that the Board previously approved for determining the liabilities for funding purposes and used for establishing the employer and employee contribution rates in this report has continued to be developed without considering the impact of any future 50/50 excess earnings allocation. This is based on our understanding that Article 5.5 of the Statute, which authorizes the allocation of 50% of excess earnings to the SRBR, does not allow for the use of a different investment return for funding than is used for interest crediting. This would appear in effect to preclude the prefunding of the SRBR through the use of an assumption lower than the market earnings assumption of 7.60%.

SECTION 1: Valuation Summary for the Alameda County Employees' Retirement Association

As required by the Actuarial Standard of Practice (ASOP) No. 4 (“Measuring Pension Obligations and Determining Pension Plan Costs or Contributions”), we performed a stochastic model in 2013 to estimate the impact of the 50% allocation of future excess earnings to the SRBR. The results of our model indicated that the 50/50 allocation of future excess earnings would have about the same impact as an “outflow” (i.e., assets not available to fund the benefits included in this valuation) that would average approximately 0.75% of assets over time. **For informational purposes only**, when we applied the results of our stochastic model to this valuation, we have estimated that such an annual outflow would increase the AAL measured in this valuation using a 7.60% investment return assumption from \$7.88 billion to \$8.60 billion (for a difference of \$0.72 billion) and would increase the employer’s contribution rate by about 5% - 6% of payroll.

- The actuarial valuation report as of December 31, 2015 is based on financial information as of that date. Changes in the value of assets subsequent to that date are not reflected. Declines in asset values will increase the actuarial cost of the plan, while increases will decrease the actuarial cost of the plan.

Impact of Future Experience on Contribution Rates

Future contribution requirements may differ from those determined in the valuation because of:

- 1) difference between actual experience and anticipated experience;
- 2) changes in actuarial assumptions or methods;
- 3) changes in statutory provisions; and
- 4) difference between the contribution rates determined by the valuation and those adopted by the Board.

SECTION 1: Valuation Summary for the Alameda County Employees' Retirement Association

Summary of Key Valuation Results (Dollar amounts in thousands)

	December 31, 2015		December 31, 2014	
	Total Rate	Estimated Annual Amount ⁽¹⁾	Total Rate	Estimated Annual Amount ⁽¹⁾
Employer Contribution Rates:				
<u>County Only</u>				
General Tier 1	20.22%	\$3,331	20.86%	\$3,437
General Tier 2	19.39	81,730	20.11	84,765
General Tier 4	18.54	15,534	19.22	16,103
Safety Tier 1	70.87	936	71.82	949
Safety Tier 2	52.73	66,052	54.00	67,644
Safety Tier 2C	54.05	1,657	55.81	1,712
Safety Tier 2D	50.10	5,552	51.41	5,697
Safety Tier 4	50.89	8,226	52.72	8,521
County Combined	26.96	183,018	27.83	188,828
<u>AHS, Court & First 5 Only</u>				
General Tier 1	20.84	960	21.42	987
General Tier 2	20.01	45,149	20.67	46,637
General Tier 4	19.16	9,856	19.78	10,176
<u>Other Districts</u>				
General Tier 1	26.22	1,220	26.69	1,242
General Tier 2	25.39	79	25.94	81
General Tier 3	26.17	801	29.32	897
General Tier 4 (Housing Authority, Office of Education)	24.54	88	25.05	90
General Tier 4 (LARPD Only)	19.29	155	22.87	184
All Categories Combined	24.89	241,326	25.69	249,122
Average Member Contribution Rates:				
	Total Rate	Estimated Annual Amount ⁽¹⁾	Total Rate ⁽²⁾	Estimated Annual Amount ⁽¹⁾
General Tier 1	9.23%	\$2,375	9.25%	\$2,380
General Tier 2	7.36	47,652	7.37	47,717
General Tier 3	13.15	403	13.14	402
General Tier 4	8.06	10,993	8.09	11,034
Safety Tier 1	10.71	141	10.69	141
Safety Tier 2	15.04	18,840	15.04	18,840
Safety Tier 2C	12.67	389	12.71	390
Safety Tier 2D	16.48	1,826	16.48	1,826
Safety Tier 4	14.65	2,368	15.25	2,465
All Categories Combined	8.77	84,987	8.79	85,195

⁽¹⁾ Based on December 31, 2015 projected annual compensation.

⁽²⁾ Average rates have been recalculated by applying the individual entry age based member rates determined in the December 31, 2014 valuation to the Association membership as of December 31, 2015.

SECTION 1: Valuation Summary for the Alameda County Employees' Retirement Association

Summary of Key Valuation Results - continued (Dollar amounts in thousands)

	December 31, 2015	December 31, 2014
Funded Status:		
Actuarial Accrued Liability (AAL) ⁽³⁾	\$7,875,020	\$7,592,072
Valuation Value of Assets (VVA) ⁽⁴⁾	6,083,536	5,681,097
Market Value of Assets (MVA)	5,819,772 ⁽⁵⁾	5,802,524 ⁽⁶⁾
Funded Percentage on VVA Basis	77.3%	74.8%
Funded Percentage on MVA Basis	73.9%	76.4%
Unfunded Actuarial Accrued Liability (UAAL) on VVA Basis	\$1,791,484	\$1,910,975
Unfunded Actuarial Accrued Liability (UAAL) on MVA Basis	2,055,248	1,789,548
Key Economic Assumptions:		
Interest Rate	7.60%	7.60%
Inflation Rate	3.25%	3.25%
Across-the-Board Salary Increase	0.50%	0.50%

⁽³⁾ Excludes liabilities held for SRBR and other non-valuation reserves.

⁽⁴⁾ Excludes Reserve for Interest Fluctuations (Contingency Reserve) if positive, Supplemental Retirees Benefit Reserve, and 401(h) Reserve.

⁽⁵⁾ Equals Valuation Value of Assets plus a proportion of the deferred market losses after netting out the Contingency Reserve that is commensurate with the size of the valuation reserves. The recognition of the net deferred losses will result in crediting the valuation reserves with interest at a rate of less than 7.6%.

⁽⁶⁾ Equals Valuation Value of Assets plus one-half of the deferred market gains.

SECTION 1: Valuation Summary for the Alameda County Employees' Retirement Association

Summary of Key Valuation Demographic and Financial Data

	December 31, 2015	December 31, 2014	Percentage Change
Active Members:			
Number of members	11,071	11,025	0.4%
Average age	47.3	47.3	N/A
Average service	11.6	11.5	N/A
Projected total compensation	\$969,534,000	\$948,848,000	2.2%
Average projected compensation	\$87,574	\$86,063	1.8%
Retired Member and Beneficiaries:			
Number of members:			
Service retired	6,948	6,807	2.1%
Disability retired	854	836	2.2%
Beneficiaries	1,188	1,170	1.5%
Total	8,990	8,813	2.0%
Average age	71.1	70.9	N/A
Average monthly benefit ⁽¹⁾	\$3,648	\$3,549	2.8%
Vested Terminated Members:			
Number of vested terminated members ⁽²⁾	2,027	1,995	1.6%
Average age	48.8	48.7	N/A
Summary of Financial Data (dollar amounts in thousands):			
Market value of assets	\$6,640,625	\$6,788,013	-2.2%
Return on market value of assets	-0.30%	4.04%	N/A
Actuarial value of assets	\$6,987,026	\$6,545,159	6.8%
Return on actuarial value of assets	8.78%	12.05%	N/A
Valuation value of assets	6,083,536	\$5,681,097	7.1%
Return on valuation value of assets	8.68%	10.61%	N/A

⁽¹⁾ Excludes monthly benefits payable from the SRBR.

⁽²⁾ Includes members who left their contributions on deposit even though they have less than five years of service.

SECTION 2: Valuation Results for the Alameda County Employees' Retirement Association

A. MEMBER DATA

The Actuarial Valuation and Review considers the number and demographic characteristics of covered members, including active members, 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: 2006 – 2015

Year Ended December 31	Active Members	Vested Terminated Members*	Retired Members and Beneficiaries	Ratio of Non-Actives to Actives
2006	10,662	1,722	6,936	0.81
2007	10,912	1,730	7,183	0.82
2008	11,173	1,773	7,246	0.81
2009	10,927	1,816	7,333	0.84
2010	10,879	1,785	7,558	0.86
2011	10,724	1,796	7,906	0.90
2012	10,800	1,835	8,175	0.93
2013	10,877	1,902	8,566	0.96
2014	11,025	1,995	8,813	0.98
2015	11,071	2,027	8,990	1.00

* Includes terminated members due a refund of member contributions

SECTION 2: Valuation Results for the Alameda County Employees' Retirement Association

Active Members

Plan costs are affected by the age, years of service and compensation of active members. In this year's valuation, there were 11,071 active members with an average age of 47.3 years, average years of service of 11.6 and average compensation of \$87,574. The 11,025 active members in the prior valuation had an average age of 47.3 years, average service of 11.5 and average compensation of \$86,063.

Inactive Members

In this year's valuation, there were 2,027 members with a vested right to a deferred or immediate vested benefit or entitled to a return of their member contributions versus 1,995 in the prior valuation.

These graphs show a distribution of active members by age and by years of service. Age and years of service have been projected to December 31, 2015 based on census data collected as of November 30, 2015.

CHART 2
Distribution of Active Members by Age as of December 31, 2015

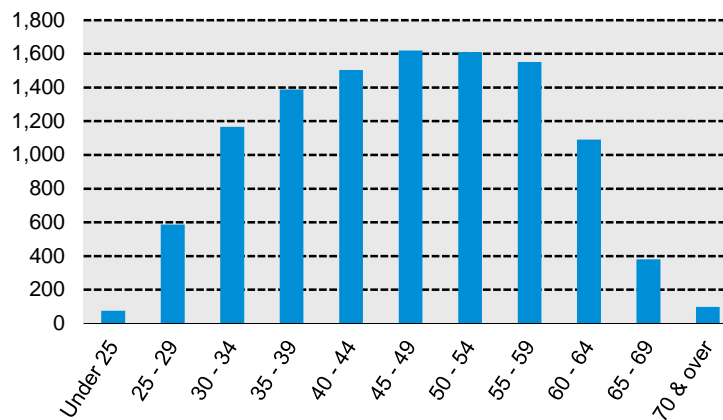
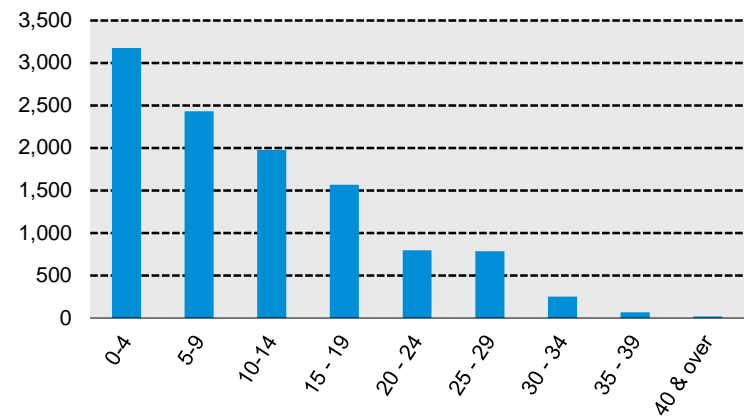


CHART 3
Distribution of Active Members by Years of Service as of December 31, 2015



SECTION 2: Valuation Results for the Alameda County Employees' Retirement Association

Retired Members and Beneficiaries

As of December 31, 2015, 7,802 retired members and 1,188 beneficiaries were receiving total monthly benefits of \$32,796,217. For comparison, in the previous valuation, there were 7,643 retired members and 1,170 beneficiaries receiving monthly benefits of \$31,280,680. These monthly benefits exclude supplemental COLA benefits payable from the Supplemental Retirees Benefit Reserve (SRBR).

These graphs show a distribution of the current retired members based on their monthly amount and age, by type of pension. Age has been projected to December 31, 2015 based on census data collected as of November 30, 2015.

CHART 4
Distribution of Retired Members (Excl. Beneficiaries) by Type and by Monthly Amount as of December 31, 2015

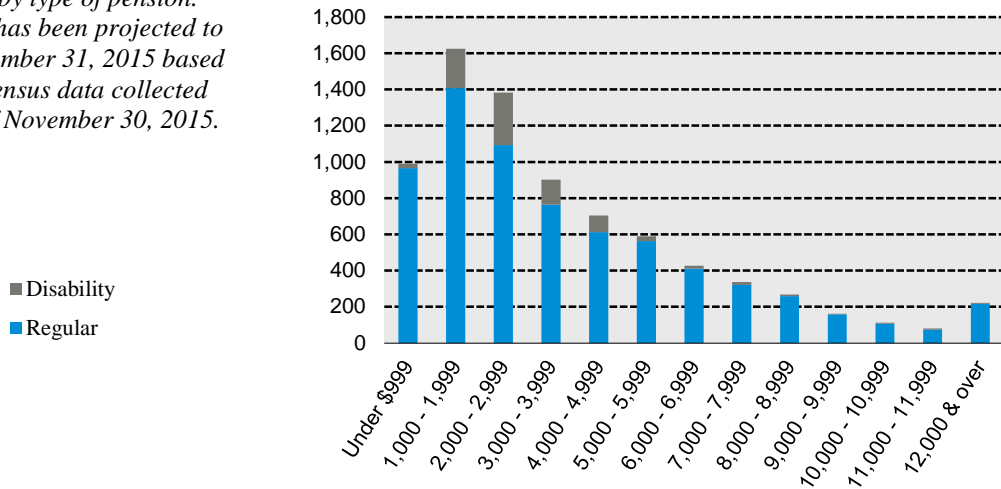
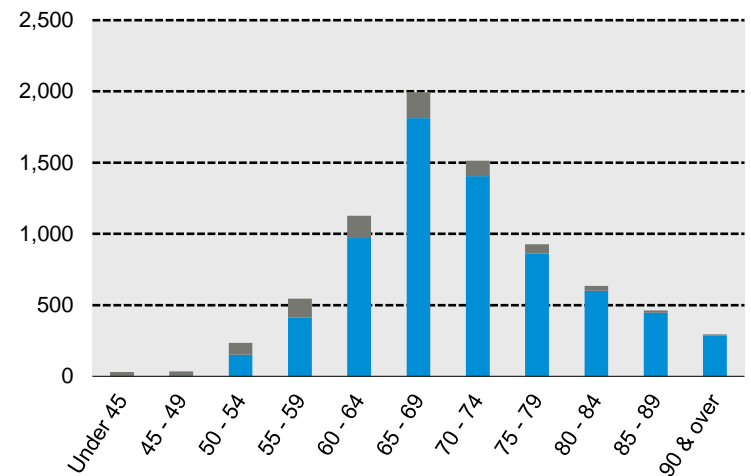


CHART 5
Distribution of Retired Members (Excl. Beneficiaries) by Type and by Age as of December 31, 2015



SECTION 2: Valuation Results for the Alameda County Employees' Retirement Association

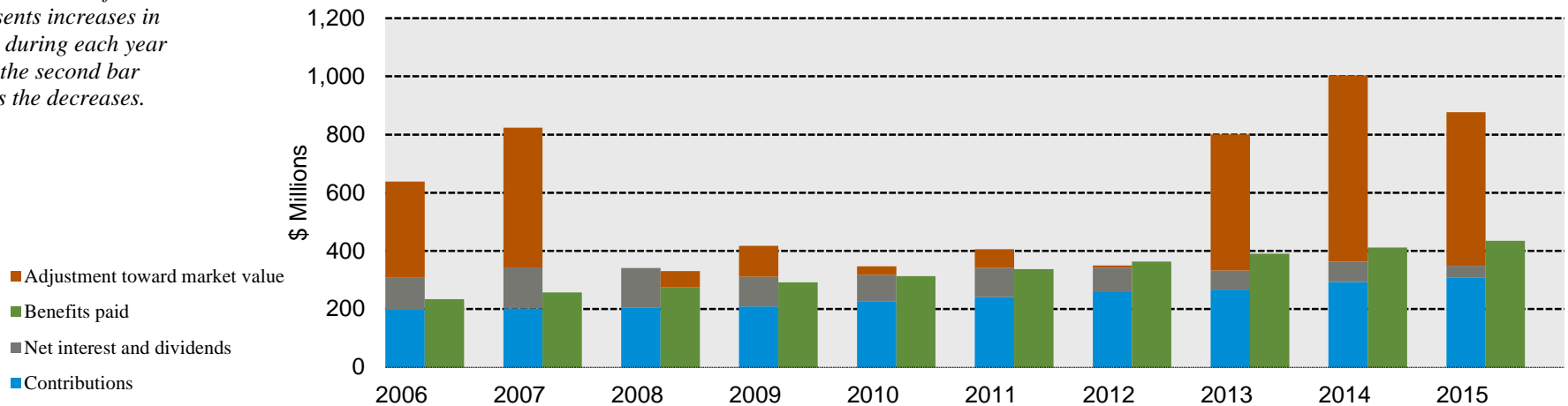
B. FINANCIAL INFORMATION

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. The adjustment toward market value shown in the chart is the “non-cash” earnings on investments implicitly included in the actuarial value of assets. Additional financial information, including a summary of these transactions for the valuation year, is presented in Section 3, Exhibits D and E.

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.

CHART 6
Comparison of Increases and Decreases in the Actuarial Value of Assets for Years Ended December 31, 2006 through 2015



SECTION 2: Valuation Results for the Alameda County Employees' Retirement Association

It is desirable to have level and predictable plan costs from one year to the next. For this reason, the Board of Retirement 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 of assets.

The determination of the Actuarial Value of Assets is provided on the following page.

SECTION 2: Valuation Results for the Alameda County Employees' Retirement Association

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 December 31, 2015

Six Month Period		Total Actual Market Return (net)	Expected Market Return (net)	Investment Gain (Loss)	Deferred Factor	Deferred Return
From	To					
01/01/2011	06/30/2011	\$274,085,462	\$205,402,533	\$68,682,929	0.0	\$0
07/01/2011	12/31/2011	-327,895,627	214,282,574	-542,178,201	0.1	-54,217,820
01/01/2012	06/30/2012	295,998,792	199,451,466	96,547,326	0.2	19,309,465
07/01/2012	12/31/2012	402,683,765	206,354,148	196,329,617	0.3	58,898,885
01/01/2013	06/30/2013	379,463,693	219,754,365	159,709,329	0.4	63,883,731
07/01/2013	12/31/2013	715,724,522	232,095,516	483,629,006	0.5	241,814,503
01/01/2014	06/30/2014	337,783,821	257,878,773	79,905,048	0.6	47,943,029
07/01/2014	12/31/2014	-71,755,579	268,735,880	-340,491,459	0.7	-238,344,021
01/01/2015	06/30/2015	210,088,252	263,436,620	-53,348,368	0.8	-42,678,694
07/01/2015	12/31/2015	-230,048,258	262,185,431	-492,233,689	0.9	-443,010,320
1.	Total Deferred Return*					-\$346,401,242
2.	Net Market Value					\$6,640,624,773
3.	Actuarial Value of Assets (Item 2 – Item 1)					\$6,987,026,015
4.	Actuarial Value as a Percentage of Market Value (Before Corridor; Item 3 / Item 2)					105.2%
5.	Actuarial Value of Assets – Corridor Limits:					
a.	Lower Limit – 60% of Net Market Value					\$3,984,374,864
b.	Upper Limit – 140% of Net Market Value					\$9,296,874,682
6.	Actuarial Value of Assets (within corridor)					\$6,987,026,015
7.	Non-valuation reserves and designations:					
a.	Reserve for Interest Fluctuations (Contingency Reserve), but no less than \$0					\$45,438,595
b.	Supplemental Retirees Benefit Reserve (SRBR)					853,842,371
c.	Other Non-Valuation Reserve (401(h) Reserve)					9,533,985
d.	SRBR Transfer to Employer Advance Reserve**					-5,324,502
e.	Subtotal					\$903,490,449
8.	Valuation Value of Assets (Item 6 – Item 7e)					\$6,083,535,566

Note: Results may not add due to rounding.

* The amounts of deferred return that will be recognized in each subsequent valuation are as follows:

12/31/16: -28,208,458 12/31/17: -12,933,065 12/31/18: -112,870,793 12/31/19: -143,165,557 12/31/20: -49,223,369

** Estimate provided by ACERA.

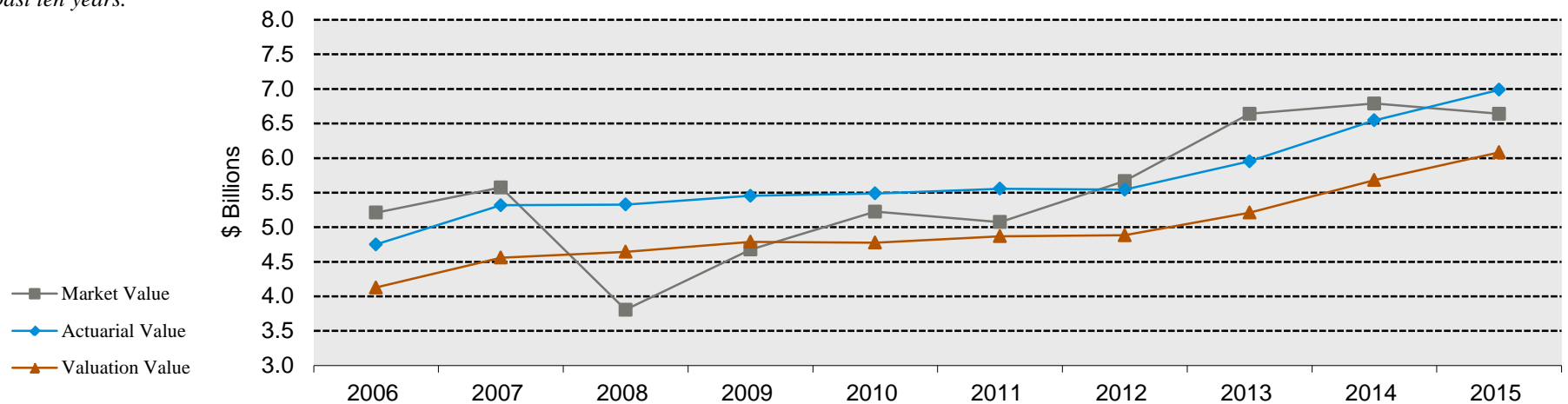
SECTION 2: Valuation Results for the Alameda County Employees' Retirement Association

The market value, actuarial value, and valuation value of assets are representations of ACERA's financial status. As investment gains and losses are gradually taken into account, the actuarial value of assets tracks the market value of assets, but with less volatility. The valuation value of assets is the actuarial value, excluding any non-valuation reserves. The valuation asset value is significant because ACERA'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 market value, actuarial value and valuation value over the past ten years.

CHART 8

Market Value, Actuarial Value and Valuation Value of Assets as of December 31, 2006 – 2015



SECTION 2: Valuation Results for the Alameda County Employees' Retirement Association

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 experience gain was \$112.4 million, a net gain of \$60.8 million from investments and a gain of \$51.6 million from all other sources. The net experience variation from individual sources other than investments was 0.7% of the actuarial accrued liability. 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.

**CHART 9
Actuarial Experience for Year Ended December 31, 2015**

1. Net gain from investments ⁽¹⁾	\$(60,818,000)
2. Net gain from other experience ⁽²⁾	<u>(51,589,000)</u>
3. Net experience gain: (1) + (2)	\$(112,407,000)

⁽¹⁾ Details in Chart 10.

⁽²⁾ See Section 3, Exhibit H.

SECTION 2: Valuation Results for the Alameda County Employees' Retirement Association

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 ACERA's investment policy. For valuation purposes, the assumed rate of return on the valuation value of assets was 7.60% for the December 31, 2014 valuation. The actual rate of return on a valuation value of assets basis for the 2015 plan year was 8.68%.

Since the actual return for the year was more than the assumed return, ACERA experienced an actuarial gain during the year ended December 31, 2015 with regard to its investments.

This chart shows the gain/(loss) due to investment experience.

**CHART 10
Investment Experience for Year Ended December 31, 2015 –
Valuation Value, Actuarial Value and Market Value of Assets**

	Valuation Value	Actuarial Value	Market Value
1. Actual return	\$489,086,474	\$569,295,018	\$(19,960,005)
2. Average value of assets	\$5,635,110,863	\$6,481,445,111	\$6,724,298,892
3. Actual rate of return: (1) ÷ (2)	8.68%	8.78%	-0.30%
4. Assumed rate of return	7.60%	7.60%	7.60%
5. Expected return: (2) x (4)	\$428,268,426	\$492,589,828	\$511,046,716
6. Actuarial gain/(loss): (1) - (5)	<u>\$60,818,048</u>	<u>\$76,705,190</u>	<u>\$(531,006,721)</u>

SECTION 2: Valuation Results for the Alameda County Employees' Retirement Association

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, valuation, and market basis for the last ten years, including five-year and ten-year averages.

CHART 11
Investment Return – Valuation Value, Actuarial Value and Market Value: 2006 – 2015

Year Ended December 31	Valuation Value Investment Return		Actuarial Value Investment Return		Market Value Investment Return	
	Amount	Percent	Amount	Percent	Amount	Percent
2006	\$355,019,495	9.40%	\$440,937,597	10.19%	\$627,526,993	13.64%
2007	454,105,997	11.03%	621,715,716	13.16%	419,578,805	8.10%
2008	118,705,974	2.61%	81,465,408	1.54%	-1,698,059,095	-30.65%
2009	190,184,291	4.12%	208,175,576	3.94%	953,666,087	25.33%
2010	36,890,575	0.77%	122,091,092	2.26%	635,617,239	13.72%
2011	149,447,325	3.15%	164,671,046	3.03%	-53,810,165	-1.04%
2012	76,720,113	1.59%	91,936,980	1.67%	698,682,557	13.91%
2013	410,409,663	8.48%	533,248,385	9.73%	1,095,188,215	19.53%
2014	548,585,891	10.61%	710,015,277	12.05%	266,028,241	4.04%
2015	489,086,474	8.68%	569,295,018	8.78%	-19,960,005	-0.30%
Five-Year Average Return		6.44%		6.98%		6.92%
Ten-Year Average Return		5.98%		6.55%		5.43%

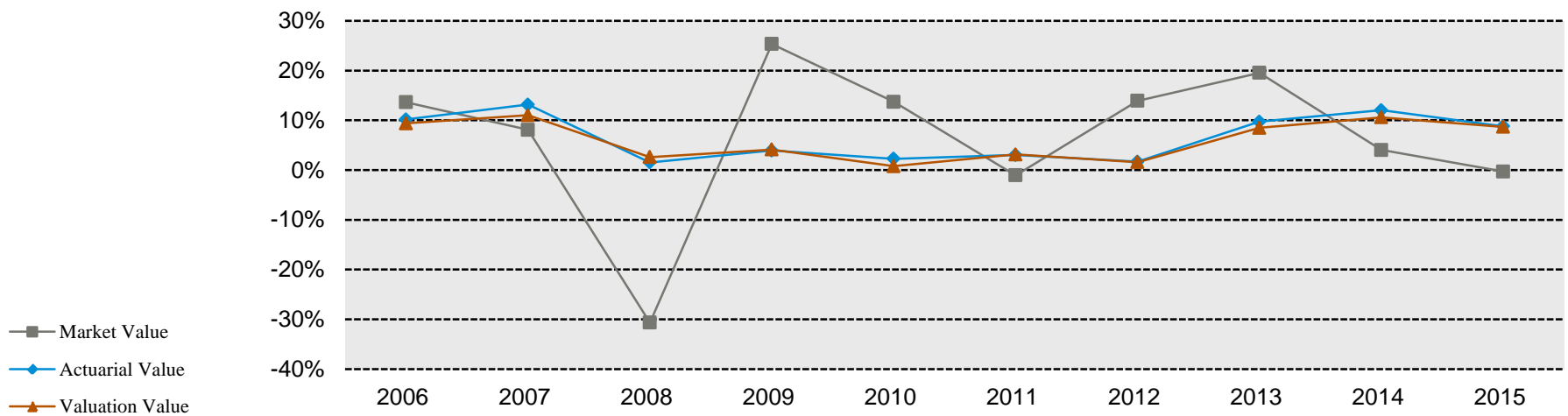
SECTION 2: Valuation Results for the Alameda County Employees' Retirement Association

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 2006 – 2015.

CHART 12

Market, Actuarial and Valuation Value Rates of Return for Years Ended December 31, 2006 - 2015



SECTION 2: Valuation Results for the Alameda County Employees' Retirement Association

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:

- actual 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 December 31, 2015 amounted to \$51.6 million which is 0.7% of the actuarial accrued liability. See Exhibit H for a detailed development of the Unfunded Actuarial Accrued Liability.

SECTION 2: Valuation Results for the Alameda County Employees' Retirement Association

D. EMPLOYER AND MEMBER CONTRIBUTIONS

Employer contributions consist of two components:

Normal Cost

The annual contribution rate that, if paid annually from a member's first year of membership through the year of retirement, would accumulate to the amount necessary to fully fund the member's retirement-related benefits. Accumulation includes annual crediting of interest at the assumed investment earning rate. The contribution rate is expressed as a level percentage of the member's compensation.

Contribution to the Unfunded Actuarial Accrued Liability (UAAL)

The annual contribution rate that, if paid annually over the UAAL amortization period, would accumulate to the amount necessary to fully fund the UAAL. Accumulation includes annual crediting of interest at the assumed investment earning rate. The contribution (or rate credit in the case of a negative UAAL) is calculated to remain as a level percentage of future active member payroll (including payroll for new members as they enter the Association) assuming a constant number of active members. In order to remain as a level percentage of payroll, amortization payments (credits) are scheduled to increase at the annual rate of 3.75% (i.e., 3.25% inflation plus 0.50% across-the-board salary increase).

Prior to January 1, 2012, the total UAAL was amortized on a 30-year decreasing period, with 21 years remaining as of December 31, 2011 (and 17 years remaining as of December 31, 2015). On or after January 1, 2012, any new UAAL resulting from plan amendments are amortized over separate decreasing 15-year periods; early retirement incentive programs (ERIPs) are amortized over separate decreasing 5-year periods; assumption and method changes are amortized over separate decreasing 20-year periods; and experience gains/losses are also amortized over separate decreasing 20-year periods.

The recommended employer contributions are provided on Chart 13.

Member Contributions

Non-Tier 4 Members

Articles 6 and 6.8 of the 1937 Act define the methodology to be used in the calculation of member basic contribution rates for non-Tier 4 General and Safety members, respectively. The basic contribution rate is determined so that the accumulation of a member's basic contributions made in a given year until a certain age will be sufficient

SECTION 2: Valuation Results for the Alameda County Employees' Retirement Association

to fund an annuity at that age that is equal to 1/100 of Final Average Salary for General Tier 1, General Tier 3, and all Safety non-Tier 4 members and 1/120 of Final Average Salary for General Tier 2 members. That age is 60 for General Tier 1 and Tier 2, 55 for General Tier 3, and 50 for all Safety non-Tier 4 members. It is assumed that contributions are made annually at the same rate, starting at entry age. In addition to the basic contributions, members pay one-half of the total normal cost necessary to fund cost-of-living benefits. As instructed by ACERA, we have also included a 3% cost-sharing contribution that we understand will be paid by Safety Tier 1 and Tier 2 members. For Safety Tier 2C members, there are no cost-sharing contributions. For Safety Tier 2D members, the cost-sharing contribution rate is 5% of salary for the first 5 years of vesting service and 3% of salary for each subsequent year of vesting service (even after the member attains 30 years of service).

Accumulation includes semi-annual crediting of interest at the assumed investment earnings rate. Following the procedure established by the Board, basic member rates have been adjusted to anticipate conversion of terminal pay at retirement.

Tier 4 Members

Pursuant to Section 7522.30(a) of the Government Code, Tier 4 members are required to contribute at least 50% of the Normal Cost rate.

When previously calculating member rates, there were certain additional requirements that had to be met such as requiring the employee rates be rounded to the nearest one quarter of one percent and requiring the new employees to pay the contribution rate of “similarly situated employees”, if it is greater. (reference: Section 7522.30(c)). Furthermore, Section 7522.30(d) indicated that “once established, the employee contribution rate described in subdivision (c) shall not be adjusted on account of a change to the normal cost rate unless the normal cost rate increases or decreases by more than 1 percent of payroll above or below the normal cost rate in effect at the time the employee contribution rate is first established or, if later, the normal cost rate in effect at the time of the last adjustment to the employee contribution rate under this section.”

However, as we referenced in our letter dated February 26, 2014, Assembly Bill 1380 (AB 1380) was approved by the Governor on September 6, 2013. In particular, Section 31620.5(a) was added to the Government Code to provide the Board with the discretion

SECTION 2: Valuation Results for the Alameda County Employees' Retirement Association

to not apply the rounding previously required under Section 7522.30(c). We understand that our recommendation in that letter to no longer apply the rounding rule effective with the December 31, 2013 valuation was adopted by the Board, and the results in this valuation reflect that action taken by the Board.

Section 31620.5(b) of AB 1380 also stipulates that the “one percent rule” under Section 7522.30(d) “shall not apply to the contribution rates of members of retirement systems established pursuant to this chapter.”

Therefore, in preparing the Normal Cost rates in this report, we have assumed that exactly 50% of the Normal Cost would be paid by the Tier 4 members.

The member contribution rates for all members are provided in Appendix A.

SECTION 2: Valuation Results for the Alameda County Employees' Retirement Association

CHART 13

Recommended Employer Contribution Rates (Estimated - Dollar Amounts in Thousands)

County Only	December 31, 2015						December 31, 2014	
	BASIC		COLA		TOTAL		BASIC AND COLA COMBINED	
	<u>Rate</u>	<u>Estimated Annual Amount*</u>	<u>Rate</u>	<u>Estimated Annual Amount*</u>	<u>Rate</u>	<u>Estimated Annual Amount*</u>	<u>Rate</u>	<u>Estimated Annual Amount*</u>
General Tier 1 Members								
Normal Cost	7.29%	\$1,201	2.45%	\$403	9.74%	\$1,604	9.73%	\$1,603
UAAL (Before POB Credit)	12.71%	2,094	3.77%	621	16.48%	2,715	16.96%	2,794
Pension Obligation Bond Credit	-3.74%	-616	-1.64%	-270	-5.38%	-886	-5.27%	-868
Implicit Retiree Health Benefit Subsidy	<u>-0.62%</u>	<u>-102</u>	<u>0.00%</u>	<u>0</u>	<u>-0.62%</u>	<u>-102</u>	<u>-0.56%</u>	<u>-92</u>
Total Contribution	15.64%	\$2,577	4.58%	\$754	20.22%	\$3,331	20.86%	\$3,437
General Tier 2 Members								
Normal Cost	7.45%	\$31,402	1.46%	\$6,154	8.91%	\$37,556	8.98%	\$37,851
UAAL (Before POB Credit)	12.71%	53,573	3.77%	15,891	16.48%	69,464	16.96%	71,487
Pension Obligation Bond Credit	-3.74%	-15,764	-1.64%	-6,913	-5.38%	-22,677	-5.27%	-22,213
Implicit Retiree Health Benefit Subsidy	<u>-0.62%</u>	<u>-2,613</u>	<u>0.00%</u>	<u>0</u>	<u>-0.62%</u>	<u>-2,613</u>	<u>-0.56%</u>	<u>-2,360</u>
Total Contribution	15.80%	\$66,598	3.59%	\$15,132	19.39%	\$81,730	20.11%	\$84,765
General Tier 4 Members								
Normal Cost	6.73%	\$5,639	1.33%	\$1,114	8.06%	\$6,753	8.09%	\$6,778
UAAL (Before POB Credit)	12.71%	10,649	3.77%	3,159	16.48%	13,808	16.96%	14,210
Pension Obligation Bond Credit	-3.74%	-3,134	-1.64%	-1,374	-5.38%	-4,508	-5.27%	-4,416
Implicit Retiree Health Benefit Subsidy	<u>-0.62%</u>	<u>-519</u>	<u>0.00%</u>	<u>0</u>	<u>-0.62%</u>	<u>-519</u>	<u>-0.56%</u>	<u>-469</u>
Total Contribution	15.08%	\$12,635	3.46%	\$2,899	18.54%	\$15,534	19.22%	\$16,103

SECTION 2: Valuation Results for the Alameda County Employees' Retirement Association

CHART 13 (continued)

Recommended Employer Contribution Rates (Estimated - Dollar Amounts in Thousands)

County Only	December 31, 2015						December 31, 2014	
	BASIC		COLA		TOTAL		BASIC AND COLA COMBINED	
	<u>Rate</u>	<u>Estimated Annual Amount*</u>	<u>Rate</u>	<u>Estimated Annual Amount*</u>	<u>Rate</u>	<u>Estimated Annual Amount*</u>	<u>Rate</u>	<u>Estimated Annual Amount*</u>
Safety Tier 1 Members								
Normal Cost	27.48%	\$363	10.15%	\$134	37.63%	\$497	37.35%	\$493
Member Cost Sharing Contributions (Adjusted for Refunds)	-3.00%	-40	0.00%	0	-3.00%	-40	-3.00%	-40
UAAL (Before POB Credit)	33.46%	442	8.55%	113	42.01%	555	43.29%	572
Pension Obligation Bond Credit	-3.15%	-42	-2.00%	-26	-5.15%	-68	-5.26%	-69
Implicit Retiree Health Benefit Subsidy	<u>-0.62%</u>	<u>-8</u>	<u>0.00%</u>	<u>0</u>	<u>-0.62%</u>	<u>-8</u>	<u>-0.56%</u>	<u>-7</u>
Total Contribution	54.17%	\$715	16.70%	\$221	70.87%	\$936	71.82%	\$949
Safety Tier 2 Members								
Normal Cost	16.25%	\$20,356	3.20%	\$4,008	19.45%	\$24,364	19.48%	\$24,402
Member Cost Sharing Contributions (Adjusted for Refunds)	-2.96%	-3,708	0.00%	0	-2.96%	-3,708	-2.95%	-3,695
UAAL (Before POB Credit)	33.46%	41,914	8.55%	10,710	42.01%	52,624	43.29%	54,227
Pension Obligation Bond Credit	-3.15%	-3,946	-2.00%	-2,505	-5.15%	-6,451	-5.26%	-6,589
Implicit Retiree Health Benefit Subsidy	<u>-0.62%</u>	<u>-777</u>	<u>0.00%</u>	<u>0</u>	<u>-0.62%</u>	<u>-777</u>	<u>-0.56%</u>	<u>-701</u>
Total Contribution	42.98%	\$53,839	9.75%	\$12,213	52.73%	\$66,052	54.00%	\$67,644

SECTION 2: Valuation Results for the Alameda County Employees' Retirement Association

CHART 13 (continued)

Recommended Employer Contribution Rates (Estimated - Dollar Amounts in Thousands)

County Only	December 31, 2015						December 31, 2014	
	BASIC		COLA		TOTAL		BASIC AND COLA COMBINED	
	<u>Rate</u>	<u>Estimated Annual Amount*</u>	<u>Rate</u>	<u>Estimated Annual Amount*</u>	<u>Rate</u>	<u>Estimated Annual Amount*</u>	<u>Rate</u>	<u>Estimated Annual Amount*</u>
Safety Tier 2C Members								
Normal Cost	14.77%	\$453	3.04%	\$93	17.81%	\$546	18.34%	\$562
Member Cost Sharing Contributions (Adjusted for Refunds)	0.00%	0	0.00%	0	0.00%	0	0.00%	0
UAAL (Before POB Credit)	33.46%	1,026	8.55%	262	42.01%	1,288	43.29%	1,328
Pension Obligation Bond Credit	-3.15%	-97	-2.00%	-61	-5.15%	-158	-5.26%	-161
Implicit Retiree Health Benefit Subsidy	<u>-0.62%</u>	<u>-19</u>	<u>0.00%</u>	<u>0</u>	<u>-0.62%</u>	<u>-19</u>	<u>-0.56%</u>	<u>-17</u>
Total Contribution	44.46%	\$1,363	9.59%	\$294	54.05%	\$1,657	55.81%	\$1,712
Safety Tier 2D Members								
Normal Cost	15.02%	\$1,665	3.12%	\$345	18.14%	\$2,010	18.40%	\$2,039
Member Cost Sharing Contributions (Adjusted for Refunds)	-4.28%	-474	0.00%	0	-4.28%	-474	-4.46%	-494
UAAL (Before POB Credit)	33.46%	3,708	8.55%	948	42.01%	4,656	43.29%	4,797
Pension Obligation Bond Credit	-3.15%	-349	-2.00%	-222	-5.15%	-571	-5.26%	-583
Implicit Retiree Health Benefit Subsidy	<u>-0.62%</u>	<u>-69</u>	<u>0.00%</u>	<u>0</u>	<u>-0.62%</u>	<u>-69</u>	<u>-0.56%</u>	<u>-62</u>
Total Contribution	40.43%	\$4,481	9.67%	\$1,071	50.10%	\$5,552	51.41%	\$5,697

SECTION 2: Valuation Results for the Alameda County Employees' Retirement Association

CHART 13 (continued)

Recommended Employer Contribution Rates (Estimated - Dollar Amounts in Thousands)

County Only	December 31, 2015						December 31, 2014	
	BASIC		COLA		TOTAL		BASIC AND COLA COMBINED	
	<u>Rate</u>	<u>Estimated Annual Amount*</u>	<u>Rate</u>	<u>Estimated Annual Amount*</u>	<u>Rate</u>	<u>Estimated Annual Amount*</u>	<u>Rate</u>	<u>Estimated Annual Amount*</u>
Safety Tier 4 Members								
Normal Cost	11.87%	\$1,919	2.78%	\$449	14.65%	\$2,368	15.25%	\$2,465
Member Cost Sharing Contributions (Adjusted for Refunds)	0.00%	0	0.00%	0	0.00%	0	0.00%	0
UAAL (Before POB Credit)	33.46%	5,408	8.55%	1,382	42.01%	6,790	43.29%	6,997
Pension Obligation Bond Credit	-3.15%	-509	-2.00%	-323	-5.15%	-832	-5.26%	-850
Implicit Retiree Health Benefit Subsidy	<u>-0.62%</u>	<u>-100</u>	<u>0.00%</u>	<u>0</u>	<u>-0.62%</u>	<u>-100</u>	<u>-0.56%</u>	<u>-91</u>
Total Contribution	41.56%	\$6,718	9.33%	\$1,508	50.89%	\$8,226	52.72%	\$8,521
All County Categories Combined								
Normal Cost	9.28%	\$62,998	1.87%	\$12,700	11.15%	\$75,698	11.23%	\$76,193
Member Cost Sharing Contributions (Adjusted for Refunds)	-0.62%	-4,222	0.00%	0	-0.62%	-4,222	-0.62%	-4,229
UAAL (Before POB Credit)	17.51%	118,814	4.87%	33,086	22.38%	151,900	23.05%	156,412
Pension Obligation Bond Credit	-3.60%	-24,457	-1.73%	-11,694	-5.33%	-36,151	-5.27%	-35,749
Implicit Retiree Health Benefit Subsidy	<u>-0.62%</u>	<u>-4,207</u>	<u>0.00%</u>	<u>0</u>	<u>-0.62%</u>	<u>-4,207</u>	<u>-0.56%</u>	<u>-3,799</u>
Total Contribution	21.95%	\$148,926	5.01%	\$34,092	26.96%	\$183,018	27.83%	\$188,828

SECTION 2: Valuation Results for the Alameda County Employees' Retirement Association

CHART 13 (continued)

Recommended Employer Contribution Rates (Estimated - Dollar Amounts in Thousands)

AHS, Court & First 5 Only	December 31, 2015						December 31, 2014	
	BASIC		COLA		TOTAL		BASIC AND COLA COMBINED	
	<u>Rate</u>	<u>Estimated Annual Amount*</u>	<u>Rate</u>	<u>Estimated Annual Amount*</u>	<u>Rate</u>	<u>Estimated Annual Amount*</u>	<u>Rate</u>	<u>Estimated Annual Amount*</u>
General Tier 1 Members								
Normal Cost	7.29%	\$336	2.45%	\$113	9.74%	\$449	9.73%	\$448
UAAL (Before POB Credit)	12.71%	586	3.77%	173	16.48%	759	16.96%	782
Pension Obligation Bond Credit	<u>-3.74%</u>	<u>-172</u>	<u>-1.64%</u>	<u>-76</u>	<u>-5.38%</u>	<u>-248</u>	<u>-5.27%</u>	<u>-243</u>
Total Contribution	16.26%	\$750	4.58%	\$210	20.84%	\$960	21.42%	\$987
General Tier 2 Members								
Normal Cost	7.45%	\$16,809	1.46%	\$3,295	8.91%	\$20,104	8.98%	\$20,261
UAAL (Before POB Credit)	12.71%	28,677	3.77%	8,507	16.48%	37,184	16.96%	38,267
Pension Obligation Bond Credit	<u>-3.74%</u>	<u>-8,439</u>	<u>-1.64%</u>	<u>-3,700</u>	<u>-5.38%</u>	<u>-12,139</u>	<u>-5.27%</u>	<u>-11,891</u>
Total Contribution	16.42%	\$37,047	3.59%	\$8,102	20.01%	\$45,149	20.67%	\$46,637
General Tier 4 Members								
Normal Cost	6.73%	\$3,462	1.33%	\$684	8.06%	\$4,146	8.09%	\$4,162
UAAL (Before POB Credit)	12.71%	6,539	3.77%	1,939	16.48%	8,478	16.96%	8,725
Pension Obligation Bond Credit	<u>-3.74%</u>	<u>-1,924</u>	<u>-1.64%</u>	<u>-844</u>	<u>-5.38%</u>	<u>-2,768</u>	<u>-5.27%</u>	<u>-2,711</u>
Total Contribution	15.70%	\$8,077	3.46%	\$1,779	19.16%	\$9,856	19.78%	\$10,176

SECTION 2: Valuation Results for the Alameda County Employees' Retirement Association

CHART 13 (continued)
Recommended Employer Contribution Rates (Estimated - Dollar Amounts in Thousands)

Other Districts	December 31, 2015						December 31, 2014	
	BASIC		COLA		TOTAL		BASIC AND COLA COMBINED	
	<u>Rate</u>	<u>Estimated Annual Amount*</u>	<u>Rate</u>	<u>Estimated Annual Amount*</u>	<u>Rate</u>	<u>Estimated Annual Amount*</u>	<u>Rate</u>	<u>Estimated Annual Amount*</u>
General Tier 1 Members								
Normal Cost	7.29%	\$339	2.45%	\$114	9.74%	\$453	9.73%	\$453
UAAL	<u>12.71%</u>	<u>592</u>	<u>3.77%</u>	<u>175</u>	<u>16.48%</u>	<u>767</u>	<u>16.96%</u>	<u>789</u>
Total Contribution	20.00%	\$931	6.22%	\$289	26.22%	\$1,220	26.69%	\$1,242
General Tier 2 Members								
Normal Cost	7.45%	\$23	1.46%	\$5	8.91%	\$28	8.98%	\$28
UAAL	<u>12.71%</u>	<u>40</u>	<u>3.77%</u>	<u>11</u>	<u>16.48%</u>	<u>51</u>	<u>16.96%</u>	<u>53</u>
Total Contribution	20.16%	\$63	5.23%	\$16	25.39%	\$79	25.94%	\$81
General Tier 3 Members								
Normal Cost	11.07%	\$339	3.87%	\$118	14.94%	\$457	14.54%	\$445
UAAL	<u>8.87%</u>	<u>272</u>	<u>2.36%</u>	<u>72</u>	<u>11.23%**</u>	<u>344</u>	<u>14.78%</u>	<u>452</u>
Total Contribution	19.94%	\$611	6.23%	\$190	26.17%	\$801	29.32%	\$897
General Tier 4 Members (Housing Authority, Office of Education)								
Normal Cost	6.73%	\$24	1.33%	\$5	8.06%	\$29	8.09%	\$29
UAAL	<u>12.71%</u>	<u>46</u>	<u>3.77%</u>	<u>13</u>	<u>16.48%</u>	<u>59</u>	<u>16.96%</u>	<u>61</u>
Total Contribution	19.44%	\$70	5.10%	\$18	24.54%	\$88	25.05%	\$90

SECTION 2: Valuation Results for the Alameda County Employees' Retirement Association

CHART 13 (continued)

Recommended Employer Contribution Rates (Estimated - Dollar Amounts in Thousands)

Other Districts	December 31, 2015						December 31, 2014	
	BASIC		COLA		TOTAL		BASIC AND COLA COMBINED	
	<u>Rate</u>	<u>Estimated Annual Amount*</u>	<u>Rate</u>	<u>Estimated Annual Amount*</u>	<u>Rate</u>	<u>Estimated Annual Amount*</u>	<u>Rate</u>	<u>Estimated Annual Amount*</u>
General Tier 4 Members (LARPD Only)								
Normal Cost	6.73%	\$54	1.33%	\$11	8.06%	\$65	8.09%	\$65
UAAL	<u>8.87%</u>	<u>71</u>	<u>2.36%</u>	<u>19</u>	<u>11.23%**</u>	<u>90</u>	<u>14.78%</u>	<u>119</u>
Total Contribution	15.60%	\$125	3.69%	\$30	19.29%	\$155	22.87%	\$184
All Categories Combined								
All Categories Combined								
Normal Cost (Net)	8.27%	\$80,162	1.76%	\$17,045	10.03%	\$97,207	10.09%	\$97,855
UAAL (Net)	<u>12.01%</u>	<u>116,438</u>	<u>2.85%</u>	<u>27,681</u>	<u>14.86%</u>	<u>144,119</u>	<u>15.60%</u>	<u>151,267</u>
Total Contribution	20.28%	\$196,600	4.61%	\$44,726	24.89%	\$241,326	25.69%	\$249,122

* Amounts are in thousands and are based on the December 31, 2015 annual payroll (also in thousands) shown on the following page.

** There is a liability gain from the death of one of LARPD's Tier 3 retirees and the withdrawal of one of LARPD's Tier 3 actives.

SECTION 2: Valuation Results for the Alameda County Employees' Retirement Association

CHART 13 (continued)

Recommended Employer Contribution Rates (Estimated - Dollar Amounts in Thousands)

Payroll Breakdown

	<u>County Only</u>	<u>AHS, Court & First 5</u>	<u>Other Districts</u>	<u>Total</u>
General Tier 1	\$ 16,472	\$ 4,608	\$ 4,655	\$ 25,735
General Tier 2	421,505	225,629	311	647,445
General Tier 3			3,061	3,061
General Tier 4 (non-LARPD)	83,786	51,444	360	135,590
General Tier 4 (LARPD Only)			805	805
Safety Tier 1	1,321			1,321
Safety Tier 2	125,265			125,265
Safety Tier 2C	3,067			3,067
Safety Tier 2D	11,082			11,082
Safety Tier 4	16,163			16,163
Total	\$ 678,661	\$ 281,681	\$ 9,192	\$ 969,534

SECTION 2: Valuation Results for the Alameda County Employees' Retirement Association

CHART 14
Breakdown of Employer Contribution Rate by Types of Benefit (For information purposes only)

A breakdown of the approximate portion of the employer contribution rate by the various types of benefit is as follows:

	General	Safety
Service and non-service connected disability benefits	9%	20%
Service retirement and other benefits	<u>91%</u>	<u>80%</u>
	100%	100%

Note: In developing these percentages, we made the simplifying assumption that the liability for active and inactive members (including members who have already retired) can be approximated by the proportion of the normal cost required to fund disability and non-disability benefits.

SECTION 2: Valuation Results for the Alameda County Employees' Retirement Association

The employer contribution rates as of December 31, 2015 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. They include all changes affecting future costs, adopted benefit changes, actuarial gains and losses and changes in the actuarial assumptions.

Reconciliation of Recommended Employer Contribution

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

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

CHART 15

Reconciliation of Recommended Employer Contribution from December 31, 2014 to December 31, 2015 (Dollars in Thousands)

	Contribution Rate	Estimated Amount*
Recommended Contribution Rate as of December 31, 2014	25.69%	\$249,122
Effect of actuarial experience during 2015		
1. Effect of investment gain	-0.45%	-\$4,343
2. Effect of lower than expected salary increases for actives	-0.26%	-2,562
3. Effect of lower than expected COLA increases for retirees and beneficiaries	-0.11%	-1,057
4. Effect of amortizing prior year's UAAL over a smaller than expected projected total payroll	0.24%	2,327
5. Effect of loss due to actual contributions less than expected**	0.14%	1,357
6. Effect of change in membership demographics	-0.06%	-648
7. Net effect of other experience gain	-0.30%	-2,870
Subtotal	-0.80%	-\$7,796
Recommended Contribution Rate as of December 31, 2015	24.89%	\$241,326

* Based on December 31, 2015 projected compensation.

** Including scheduled delay in implementing contribution rates after date of valuation.

SECTION 2: Valuation Results for the Alameda County Employees' Retirement Association

The member contribution rates as of December 31, 2015 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. They include all changes affecting future costs, adopted benefit changes, actuarial gains and losses and changes in the actuarial assumptions.

Reconciliation of Recommended Member Contribution Rate

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

CHART 16
Reconciliation of Recommended Member Contribution from December 31, 2014 to December 31, 2015
(Dollar Amounts in Thousands)

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

	Contribution Rate	Estimated Amount*
Average Contribution Rate as of December 31, 2014	8.79%	\$85,195
1. Effect of change in membership demographics	-0.02%	-\$208
Average Contribution Rate as of December 31, 2015	8.77%	\$84,987

* Based on December 31, 2015 projected compensation.

SECTION 2: Valuation Results for the Alameda County Employees' Retirement Association

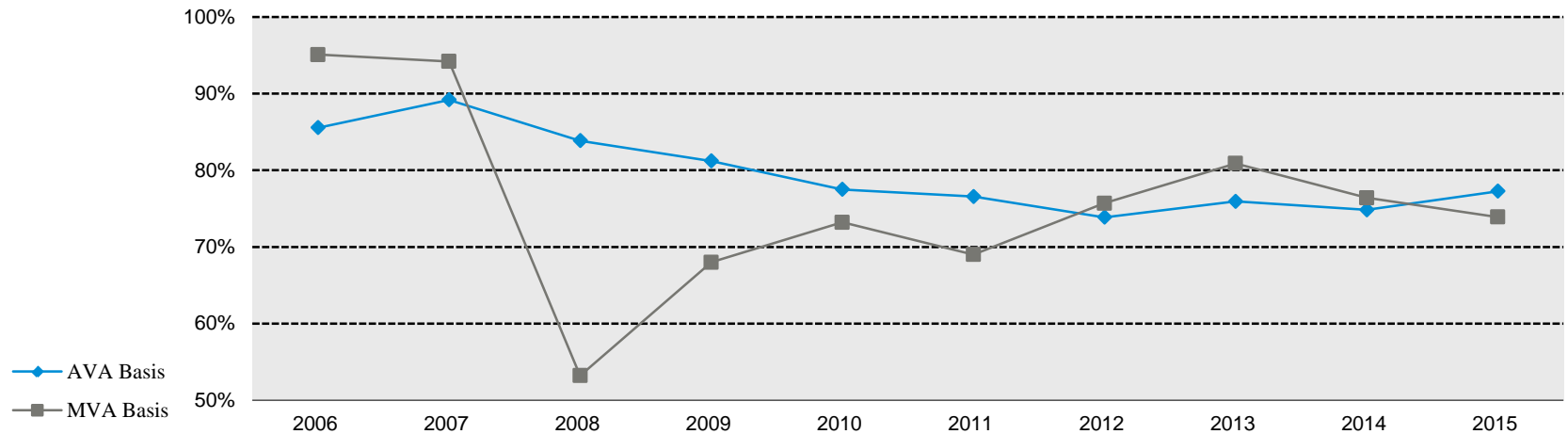
E. FUNDED RATIO

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 as calculated. High ratios indicate a well-funded plan with assets sufficient to cover the plan's actuarial accrued liabilities. Lower ratios may indicate recent changes to benefit structures, funding of the plan below actuarial requirements, poor asset performance, or a variety of other factors. The chart below depicts a history of the funded ratio for this plan. The funded status measures

shown in this valuation are appropriate for assessing the need for or amount of future contributions. However, they are not necessarily appropriate for assessing the sufficiency of Plan assets to cover the estimated cost of settling the Plan's benefit obligations. As the chart below shows, the measures are different depending on whether the valuation or market value of assets is used.

CHART 17

Funded Ratio for Plan Years Ending December 31, 2006 – 2015⁽¹⁾



⁽¹⁾ Prior to the December 31, 2013 valuation, the Funded Ratio on a Market Value basis was calculated using the end-of-year Valuation Value of Assets plus any deferred market gains. Beginning with the December 31, 2013 valuation, the Market Value of Assets for this purpose includes either one-half of any deferred market gains or a proportion of any deferred investment losses after netting out the Contingency Reserve that is commensurate with the size of the valuation reserves. The recognition of the net deferred losses will result in crediting the valuation reserves with interest at a rate of less than 7.6%.

SECTION 2: Valuation Results for the Alameda County Employees' Retirement Association

CHART 18

Schedule of Funding Progress (Dollar Amounts in Thousands)

Actuarial Valuation Date	Valuation Value of Assets⁽¹⁾ (a)	Actuarial Accrued Liability (AAL)⁽²⁾ (b)	Unfunded/ (Overfunded) AAL (UAAL) (b) - (a)	Funded Ratio (%) (a) / (b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll (%) [(b) - (a)] / (c)
12/31/2006	\$4,127,841	\$4,825,157	\$697,316	85.5%	\$762,139	91.5%
12/31/2007	4,560,213	5,112,403	552,190	89.2	793,558	69.6
12/31/2008	4,644,010	5,537,919	893,909	83.9	864,260	103.4
12/31/2009	4,789,000	5,899,331	1,110,331	81.2	882,606	125.8
12/31/2010	4,776,128	6,162,740	1,386,612	77.5	898,342	154.4
12/31/2011	4,868,689	6,359,483	1,490,794	76.6	892,489	167.0
12/31/2012	4,883,872	6,612,929	1,729,057	73.9	906,500	190.7
12/31/2013	5,210,944	6,861,687	1,650,743	75.9	916,803	180.1
12/31/2014	5,681,097	7,592,072	1,910,975	74.8	948,848	201.4
12/31/2015	6,083,536	7,875,020	1,791,484	77.3	969,534	184.8

⁽¹⁾ Excludes assets for SRBR and other non-valuation reserves, and includes the following reimbursement amounts of implicit retiree health benefit subsidy paid by the County (amounts beginning with the 12/31/2010 valuation date are estimates provided by ACERA):

<u>Valuation Date</u>	<u>Reimbursement Amount</u>	<u>For Year</u>
12/31/2006	\$6,303,514	2005 and 2006
12/31/2007	\$3,091,493	2007
12/31/2008	\$4,149,463	2008
12/31/2009	\$5,287,767	2009
12/31/2010	\$4,500,000	2010
12/31/2011	\$4,411,206	2011
12/31/2012	\$7,370,466	2012
12/31/2013	\$6,993,032	2013
12/31/2014	\$5,215,355	2014
12/31/2015	\$5,324,502	2015

⁽²⁾ Excludes liabilities for SRBR and other non-valuation reserves.

SECTION 2: Valuation Results for the Alameda County Employees' Retirement Association

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 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 ACERA, the current AVR is about 6.0. This means that a 1% asset gain/(loss) (relative to the assumed investment return) translates to about 6.0% of one-year's payroll. Since ACERA amortizes actuarial gains and losses over a 20-year period, there would be a 0.4% 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 ACERA, the current LVR is about 8.1. This is about 35% 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 19
Volatility Ratios for Years Ended December 31, 2009 – 2015**

Year Ended December 31	Asset Volatility Ratios ⁽¹⁾				Liability Volatility Ratios			
	General (non-LARPD Tiers 3 & 4)	General (LARPD Tiers 3 & 4)	Safety	Total	General (non-LARPD Tiers 3 & 4)	General (LARPD Tiers 3 & 4)	Safety	Total
2009	4.2	3.0	6.1	4.5	5.9	5.0	10.6	6.7
2010	4.6	3.9	7.0	5.0	6.0	5.6	11.2	6.9
2011	4.5	4.2	7.0	4.9	6.2	6.8	11.9	7.1
2012	5.0	4.9	8.2	5.5	6.3	7.0	12.7	7.3
2013	5.5	5.7	9.1	6.1	6.4	7.4	13.1	7.5
2014	5.5	5.9	9.3	6.1	6.9	7.7	13.9	8.0
2015	5.5	5.7	8.8	6.0	7.0	7.3	13.7	8.1

⁽¹⁾ Prior to the December 31, 2013 valuation, the Asset Volatility Ratio was calculated using the end-of-year Valuation Value of Assets plus any deferred market gains. Beginning with the December 31, 2013 valuation, the adjusted Valuation Value of Assets for this purpose includes either one-half of any deferred market gains or a proportion of any deferred investment losses after netting out the Contingency Reserve that is commensurate with the size of the valuation reserves. The recognition of the net deferred losses will result in crediting the valuation reserves with interest at a rate of less than 7.6%.

SECTION 3: Supplemental Information for the Alameda County Employees' Retirement Association

EXHIBIT A

Table of Plan Coverage

i. General Tier 1

Category	Year Ended December 31		Change From Prior Year
	2015	2014	
Active members in valuation			
Number	292	332	-12.0%
Average age	58.9	58.4	N/A
Average service	28.5	28.2	N/A
Projected total compensation	\$25,735,327	\$29,159,913	-11.7%
Projected average compensation	\$88,135	\$87,831	0.3%
Member account balances	\$100,066,133	\$107,321,202	-6.8%
Total active vested members	289	323	-10.5%
Vested terminated members			
Number	83	93	-10.8%
Average age	60.3	59.2	N/A
Retired members			
Number in pay status	3,413	3,506	-2.7%
Average age	75.2	74.8	N/A
Average monthly benefit ⁽¹⁾	\$4,281	\$4,083	4.8%
Disabled members			
Number in pay status	172	187	-8.0%
Average age	71.8	71.6	N/A
Average monthly benefit ⁽¹⁾	\$2,835	\$2,747	3.2%
Beneficiaries			
Number in pay status	752	758	-0.8%
Average age	79.0	79.0	N/A
Average monthly benefit ⁽¹⁾	\$1,944	\$1,868	4.1%

⁽¹⁾ Excludes supplemental benefits paid from SRBR.

Note: Based on the data provided for the December 31, 2015 actuarial valuation, the average age at retirement for the General Tier 1 service retirees and disabled retirees was 59.2 and 52.0, respectively.

SECTION 3: Supplemental Information for the Alameda County Employees' Retirement Association

EXHIBIT A

Table of Plan Coverage

ii. General Tier 2

Category	Year Ended December 31		Change From Prior Year
	2015	2014	
Active members in valuation			
Number	7,389	7,871	-6.1%
Average age	49.8	49.1	N/A
Average service	13.5	12.6	N/A
Projected total compensation	\$647,445,398	\$673,510,928	-3.9%
Projected average compensation	\$87,623	\$85,569	2.4%
Member account balances	\$690,454,888	\$644,974,784	7.1%
Total active vested members	6,406	6,451	-0.7%
Vested terminated members			
Number	1,647	1,649	-0.1%
Average age	49.2	48.9	N/A
Retired members			
Number in pay status	2,440	2,207	10.6%
Average age	68.3	67.9	N/A
Average monthly benefit ⁽¹⁾	\$2,376	\$2,264	4.9%
Disabled members			
Number in pay status	424	410	3.4%
Average age	62.7	62.2	N/A
Average monthly benefit ⁽¹⁾	\$2,315	\$2,273	1.8%
Beneficiaries			
Number in pay status	201	187	7.5%
Average age	64.9	63.8	N/A
Average monthly benefit ⁽¹⁾	\$1,245	\$1,244	0.1%

⁽¹⁾ Excludes supplemental benefits paid from SRBR.

Note: Based on the data provided for the December 31, 2015 actuarial valuation, the average age at retirement for the General Tier 2 service retirees and disabled retirees was 62.1 and 50.5, respectively.

SECTION 3: Supplemental Information for the Alameda County Employees' Retirement Association

EXHIBIT A

Table of Plan Coverage

iii. General Tier 3

Category	Year Ended December 31		Change From Prior Year
	2015	2014	
Active members in valuation			
Number	41	45	-8.9%
Average age	53.4	51.5	N/A
Average service	14.0	13.1	N/A
Projected total compensation	\$3,060,505	\$3,154,168	-3.0%
Projected average compensation	\$74,646	\$70,093	6.5%
Member account balances	\$6,106,138	\$5,714,322	6.9%
Total active vested members	34	36	-5.6%
Vested terminated members			
Number	10	8	25.0%
Average age	47.7	47.6	N/A
Retired members			
Number in pay status	13	14	-7.1%
Average age	64.1	62.9	N/A
Average monthly benefit ⁽¹⁾	\$4,984	\$4,714	5.7%
Disabled members			
Number in pay status	0	0	N/A
Average age	N/A	N/A	N/A
Average monthly benefit ⁽¹⁾	N/A	N/A	N/A
Beneficiaries			
Number in pay status	2	1	100.0%
Average age	56.8	51.8	N/A
Average monthly benefit ⁽¹⁾	\$1,120	\$502	123.1%

⁽¹⁾ Excludes supplemental benefits paid from SRBR.

Note: Based on the data provided for the December 31, 2015 actuarial valuation, the average age at retirement for the General Tier 3 service retirees was 59.3.

SECTION 3: Supplemental Information for the Alameda County Employees' Retirement Association

EXHIBIT A

Table of Plan Coverage

iv. General Tier 4

Category	Year Ended December 31		Change From Prior Year
	2015	2014	
Active members in valuation			
Number	1,912	1,369	39.7%
Average age	39.0	38.6	N/A
Average service	1.5	1.0	N/A
Projected total compensation	\$136,394,884 ⁽¹⁾	\$94,399,512	44.5%
Projected average compensation	\$71,336	\$68,955	3.5%
Member account balances	\$15,365,501	\$6,918,336	122.1%
Total active vested members	25	11	127.3%
Vested terminated members			
Number	129	82	57.3%
Average age	39.9	39.5	N/A
Retired members			
Number in pay status	1	1	0.0%
Average age	64.9	63.9	N/A
Average monthly benefit ⁽²⁾	\$5,816	\$4,634	25.5%
Disabled members			
Number in pay status	0	0	N/A
Average age	N/A	N/A	N/A
Average monthly benefit ⁽²⁾	N/A	N/A	N/A
Beneficiaries			
Number in pay status	0	0	N/A
Average age	N/A	N/A	N/A
Average monthly benefit ⁽²⁾	N/A	N/A	N/A

⁽¹⁾ Projected compensation for 2016 has been limited. It is our understanding that in the determination of pension benefits under the CalPEPRA formulas, the compensation that can be taken into account for 2016 is equal to \$117,020. (For an employer that is not enrolled in Social Security, the maximum amount is 120% of \$117,020, or \$140,424). (reference: Section 7522.10). These amounts should be adjusted for changes to the Consumer Price Index for All Urban Consumers after 2016. (reference: Section 7522.10(d)).

⁽²⁾ Excludes supplemental benefits paid from SRBR.

Note: Based on the data provided for the December 31, 2015 actuarial valuation, the average age at retirement for the General Tier 4 service retirees was 63.4. For all the General Tiers combined, the average age at retirement for the service retirees and disabled retirees was 60.4 and 50.9, respectively.

SECTION 3: Supplemental Information for the Alameda County Employees' Retirement Association

EXHIBIT A

Table of Plan Coverage

v. Safety Tier 1

Category	Year Ended December 31		Change From Prior Year
	2015	2014	
Active members in valuation			
Number	7	10	-30.0%
Average age	59.0	59.7	N/A
Average service	20.5	20.2	N/A
Projected total compensation	\$1,320,827	\$1,636,094	-19.3%
Projected average compensation	\$188,690	\$163,609	15.3%
Member account balances	\$3,940,137	\$4,822,182	-18.3%
Total active vested members	6	9	-33.3%
Vested terminated members			
Number	11	15	-26.7%
Average age	55.7	55.3	N/A
Retired members			
Number in pay status	648	667	-2.8%
Average age	69.9	69.1	N/A
Average monthly benefit ⁽¹⁾	\$7,489	\$7,279	2.9%
Disabled members			
Number in pay status	105	104	1.0%
Average age	67.1	66.5	N/A
Average monthly benefit ⁽¹⁾	\$5,327	\$5,226	1.9%
Beneficiaries			
Number in pay status	176	167	5.4%
Average age	72.9	72.3	N/A
Average monthly benefit ⁽¹⁾	\$3,041	\$2,814	8.1%

⁽¹⁾ Excludes supplemental benefits paid from SRBR.

Note: Based on the data provided for the December 31, 2015 actuarial valuation, the average age at retirement for the Safety Tier 1 service retirees and disabled retirees was 54.9 and 49.0, respectively.

SECTION 3: Supplemental Information for the Alameda County Employees' Retirement Association

EXHIBIT A

Table of Plan Coverage

vi. Safety Tier 2

Category	Year Ended December 31		Change From Prior Year
	2015	2014	
Active members in valuation			
Number	1,103	1,153	-4.3%
Average age	44.6	43.9	N/A
Average service	14.0	13.2	N/A
Projected total compensation	\$125,265,055	\$125,221,118	0.0%
Projected average compensation	\$113,568	\$108,605	4.6%
Member account balances	\$243,325,587	\$218,749,787	11.2%
Total active vested members	1,101	1,139	-3.3%
Vested terminated members			
Number	134	139	-3.6%
Average age	46.1	45.3	N/A
Retired members			
Number in pay status	433	412	5.1%
Average age	61.4	60.9	N/A
Average monthly benefit ⁽¹⁾	\$5,569	\$5,464	1.9%
Disabled members			
Number in pay status	153	135	13.3%
Average age	56.3	56.5	N/A
Average monthly benefit ⁽¹⁾	\$4,268	\$4,138	3.1%
Beneficiaries			
Number in pay status	57	57	0.0%
Average age	55.7	55.2	N/A
Average monthly benefit ⁽¹⁾	\$2,160	\$2,179	-0.9%

⁽¹⁾ Excludes supplemental benefits paid from SRBR.

Note: Based on the data provided for the December 31, 2015 actuarial valuation, the average age at retirement for the Safety Tier 2 service retirees and disabled retirees was 55.8 and 46.8, respectively.

SECTION 3: Supplemental Information for the Alameda County Employees' Retirement Association

EXHIBIT A

Table of Plan Coverage

vii. Safety Tier 2C

Category	Year Ended December 31		Change From Prior Year
	2015	2014	
Active members in valuation			
Number	29	34	-14.7%
Average age	40.1	40.3	N/A
Average service	4.4	4.0	N/A
Projected total compensation	\$3,066,642	\$3,398,028	-9.8%
Projected average compensation	\$105,746	\$99,942	5.8%
Member account balances	\$1,318,832	\$1,192,935	10.6%
Total active vested members	8	6	33.3%
Vested terminated members			
Number	3	3	0.0%
Average age	38.1	37.1	N/A
Retired members			
Number in pay status	0	0	N/A
Average age	N/A	N/A	N/A
Average monthly benefit ⁽¹⁾	N/A	N/A	N/A
Disabled members			
Number in pay status	0	0	N/A
Average age	N/A	N/A	N/A
Average monthly benefit ⁽¹⁾	N/A	N/A	N/A
Beneficiaries			
Number in pay status	0	0	N/A
Average age	N/A	N/A	N/A
Average monthly benefit ⁽¹⁾	N/A	N/A	N/A

⁽¹⁾ Excludes supplemental benefits paid from SRBR.

SECTION 3: Supplemental Information for the Alameda County Employees' Retirement Association

EXHIBIT A

Table of Plan Coverage

viii. Safety Tier 2D

Category	Year Ended December 31		Change From Prior Year
	2015	2014	
Active members in valuation			
Number	114	105	8.6%
Average age	36.9	35.9	N/A
Average service	5.4	4.3	N/A
Projected total compensation	\$11,082,095	\$9,616,618	15.2%
Projected average compensation	\$97,211	\$91,587	6.1%
Member account balances	\$6,382,558	\$4,158,185	53.5%
Total active vested members	36	24	50.0%
Vested terminated members			
Number	7	4	75.0%
Average age	34.8	33.9	N/A
Retired members			
Number in pay status	0	0	N/A
Average age	N/A	N/A	N/A
Average monthly benefit ⁽¹⁾	N/A	N/A	N/A
Disabled members			
Number in pay status	0	0	N/A
Average age	N/A	N/A	N/A
Average monthly benefit ⁽¹⁾	N/A	N/A	N/A
Beneficiaries			
Number in pay status	0	0	N/A
Average age	N/A	N/A	N/A
Average monthly benefit ⁽¹⁾	N/A	N/A	N/A

⁽¹⁾ Excludes supplemental benefits paid from SRBR.

SECTION 3: Supplemental Information for the Alameda County Employees' Retirement Association

EXHIBIT A

Table of Plan Coverage

ix. Safety Tier 4

Category	Year Ended December 31		Change From Prior Year
	2015	2014	
Active members in valuation			
Number	184	106	73.6%
Average age	34.9	35.3	N/A
Average service	1.6	1.1	N/A
Projected total compensation	\$16,162,861 ⁽¹⁾	\$8,751,751	84.7%
Projected average compensation	\$87,842	\$82,564	6.4%
Member account balances	\$3,196,998	\$1,018,022	214.0%
Total active vested members	0	0	N/A
Vested terminated members			
Number	3	2	50.0%
Average age	33.0	28.6	N/A
Retired members			
Number in pay status	0	0	N/A
Average age	N/A	N/A	N/A
Average monthly benefit ⁽²⁾	N/A	N/A	N/A
Disabled members			
Number in pay status	0	0	N/A
Average age	N/A	N/A	N/A
Average monthly benefit ⁽²⁾	N/A	N/A	N/A
Beneficiaries			
Number in pay status	0	0	N/A
Average age	N/A	N/A	N/A
Average monthly benefit ⁽²⁾	N/A	N/A	N/A

⁽¹⁾ *Projected compensation for 2016 has been limited. It is our understanding that in the determination of pension benefits under the CalPEPRA formulas, the compensation that can be taken into account for 2016 is equal to \$117,020. (For an employer that is not enrolled in Social Security, the maximum amount is 120% of \$117,020, or \$140,424). (reference: Section 7522.10). These amounts should be adjusted for changes to the Consumer Price Index for All Urban Consumers after 2016. (reference: Section 7522.10(d)).*

⁽²⁾ *Excludes supplemental benefits paid from SRBR.*

Notes: For all the Safety Tiers combined, the average age at retirement for the service retirees and disabled retirees was 55.3 and 47.7, respectively.

For all the General and Safety Tiers combined, the average age at retirement for the service retirees and disabled retirees was 59.6 and 49.9, respectively.

SECTION 3: Supplemental Information for the Alameda County Employees' Retirement Association

EXHIBIT B

**Members in Active Service and Projected Average Compensation
By Age, Years of Service as of December 31, 2015**

i. General Tier 1

Age	Total	Years of Service								
		0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
25 - 29	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
30 - 34	3	--	3	--	--	--	--	--	--	--
	\$59,602	--	\$59,602	--	--	--	--	--	--	--
35 - 39	4	--	3	1	--	--	--	--	--	--
	67,378	--	61,244	\$85,779	--	--	--	--	--	--
40 - 44	7	--	5	2	--	--	--	--	--	--
	64,441	--	64,314	64,759	--	--	--	--	--	--
45 - 49	8	--	1	6	--	1	--	--	--	--
	71,728	--	107,399	67,800	--	\$59,625	--	--	--	--
50 - 54	29	--	2	4	3	1	2	11	6	--
	70,671	--	59,110	68,052	\$64,642	76,752	\$59,467	\$73,680	\$76,491	--
55 - 59	105	3	1	3	3	9	20	37	26	3
	87,643	\$80,096	52,737	80,344	108,800	60,469	97,180	94,367	82,218	\$75,005
60 - 64	104	--	4	6	2	7	14	36	29	6
	92,855	--	67,803	91,481	76,025	92,960	97,583	101,435	88,158	76,615
65 - 69	24	--	3	3	3	1	2	7	2	3
	109,960	--	121,033	90,408	103,115	107,093	65,490	78,677	127,256	217,353
70 & over	8	--	--	--	--	--	--	1	2	5
	89,263	--	--	--	--	--	--	62,067	53,995	108,809
Total	292	3	22	25	11	19	38	92	65	17
	\$88,135	\$80,096	\$72,580	\$78,218	\$89,247	\$75,706	\$93,675	\$93,114	\$84,857	\$110,636

Note: Age and years of service were projected from November 30, 2015 to December 31, 2015.

SECTION 3: Supplemental Information for the Alameda County Employees' Retirement Association

EXHIBIT B

**Members in Active Service and Projected Average Compensation
By Age, Years of Service as of December 31, 2015**

ii. General Tier 2

Age	Years of Service							
	Total	0-4	5-9	10-14	15-19	20-24	25-29	30 & over
Under 25	4	4	--	--	--	--	--	--
	\$49,889	\$49,889	--	--	--	--	--	--
25 - 29	121	88	33	--	--	--	--	--
	69,630	71,189	\$65,473	--	--	--	--	--
30 - 34	526	202	290	33	1	--	--	--
	78,175	81,890	77,268	\$63,601	\$71,853	--	--	--
35 - 39	827	192	393	192	50	--	--	--
	84,037	88,016	84,481	82,967	69,376	--	--	--
40 - 44	964	120	329	308	182	24	1	--
	88,292	94,195	89,653	87,745	83,932	\$80,016	\$93,308	--
45 - 49	1,178	131	269	311	274	136	56	1
	89,937	99,896	85,392	92,367	88,817	90,557	78,435	\$118,934
50 - 54	1,242	91	234	263	243	183	193	35
	89,095	104,658	87,105	83,789	86,764	92,484	91,230	88,498
55 - 59	1,237	87	214	258	228	178	215	57
	90,722	112,082	85,850	84,004	88,958	90,247	95,358	97,879
60 - 64	875	51	148	166	179	121	162	48
	89,444	101,641	86,119	81,991	84,444	92,429	90,507	120,048
65 - 69	331	17	71	77	65	51	39	11
	86,450	107,177	86,698	77,640	82,278	84,136	95,846	116,568
70 & over	84	7	14	29	13	10	10	1
	87,904	123,836	90,014	83,932	80,884	94,200	70,661	122,753
Total	7,389	990	1,995	1,637	1,235	703	676	153
	\$87,623	\$92,366	\$84,788	\$85,224	\$85,857	\$90,528	\$91,275	\$104,332

Note: Age and years of service were projected from November 30, 2015 to December 31, 2015.

SECTION 3: Supplemental Information for the Alameda County Employees' Retirement Association

EXHIBIT B

**Members in Active Service and Projected Average Compensation
By Age, Years of Service as of December 31, 2015**

iii. General Tier 3

Age	Years of Service							
	Total	0-4	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 25	--	--	--	--	--	--	--	--
25 - 29	--	--	--	--	--	--	--	--
30 - 34	--	--	--	--	--	--	--	--
35 - 39	3	1	--	1	1	--	--	--
40 - 44	\$61,958	\$53,537	--	\$70,527	\$61,810	--	--	--
45 - 49	3	2	--	--	1	--	--	--
50 - 54	59,366	53,880	--	--	70,338	--	--	--
55 - 59	6	1	1	3	1	--	--	--
60 - 64	66,202	60,627	\$86,141	62,149	63,998	--	--	--
65 - 69	11	2	2	4	1	1	1	--
70 & over	73,145	83,814	66,368	66,692	86,618	\$83,644	\$67,199	--
	8	1	1	1	2	1	2	--
	76,805	70,987	102,361	58,869	85,446	53,602	78,862	--
	10	--	3	3	1	--	1	2
	88,029	--	105,305	94,115	70,338	--	83,644	\$64,026
	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
Total	41	7	7	12	7	2	4	2
	\$74,646	\$65,791	\$91,022	\$72,080	\$74,856	\$68,624	\$77,142	\$64,026

Note: Age and years of service were projected from November 30, 2015 to December 31, 2015.

SECTION 3: Supplemental Information for the Alameda County Employees' Retirement Association

EXHIBIT B

**Members in Active Service and Projected Average Compensation
By Age, Years of Service as of December 31, 2015**

iv. General Tier 4

Age	Total	Years of Service						
		0-4	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 25	57	57	--	--	--	--	--	--
	\$53,905	\$53,905	--	--	--	--	--	--
25 - 29	372	372	--	--	--	--	--	--
	63,121	63,121	--	--	--	--	--	--
30 - 34	419	418	1	--	--	--	--	--
	68,984	68,977	\$72,017	--	--	--	--	--
35 - 39	322	321	1	--	--	--	--	--
	70,659	70,712	53,658	--	--	--	--	--
40 - 44	225	223	2	--	--	--	--	--
	77,374	77,425	71,725	--	--	--	--	--
45 - 49	171	168	1	2	--	--	--	--
	77,594	77,071	86,618	\$117,020	--	--	--	--
50 - 54	146	141	5	--	--	--	--	--
	78,746	78,736	79,023	--	--	--	--	--
55 - 59	109	102	5	1	--	1	--	--
	75,066	74,341	85,171	117,020	--	\$56,483	--	--
60 - 64	73	71	2	--	--	--	--	--
	84,461	84,815	71,893	--	--	--	--	--
65 - 69	14	14	--	--	--	--	--	--
	91,859	91,859	--	--	--	--	--	--
70 & over	4	3	1	--	--	--	--	--
	94,076	105,414	60,063	--	--	--	--	--
Total	1,912	1,890	18	3	--	1	--	--
	\$71,336	\$71,221	\$76,698	\$117,020	--	\$56,483	--	--

Note: Age and years of service were projected from November 30, 2015 to December 31, 2015.

SECTION 3: Supplemental Information for the Alameda County Employees' Retirement Association

EXHIBIT B

**Members in Active Service and Projected Average Compensation
By Age, Years of Service as of December 31, 2015**

v. Safety Tier 1

Age	Total	Years of Service						
		0-4	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 25	--	--	--	--	--	--	--	--
25 - 29	--	--	--	--	--	--	--	--
30 - 34	--	--	--	--	--	--	--	--
35 - 39	--	--	--	--	--	--	--	--
40 - 44	--	--	--	--	--	--	--	--
45 - 49	--	--	--	--	--	--	--	--
50 - 54	1 \$192,063	--	--	--	--	--	1 \$192,063	--
55 - 59	3 221,074	1 \$227,228	--	--	--	1 \$118,272	--	1 \$317,723
60 - 64	3 155,181	--	--	2 \$179,598	--	--	1 106,346	--
65 - 69	--	--	--	--	--	--	--	--
70 & over	--	--	--	--	--	--	--	--
Total	7 \$188,690	1 \$227,228	--	2 \$179,598	--	1 \$118,272	2 \$149,205	1 \$317,723

Note: Age and years of service were projected from November 30, 2015 to December 31, 2015.

SECTION 3: Supplemental Information for the Alameda County Employees' Retirement Association

EXHIBIT B

**Members in Active Service and Projected Average Compensation
By Age, Years of Service as of December 31, 2015**

vi. Safety Tier 2

Age	Years of Service							
	Total	0-4	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 25	--	--	--	--	--	--	--	--
25 - 29	8	--	8	--	--	--	--	--
30 - 34	\$111,416	--	\$111,416	--	--	--	--	--
35 - 39	128	--	105	23	--	--	--	--
40 - 44	108,080	--	106,316	\$116,136	--	--	--	--
45 - 49	187	1	87	75	24	--	--	--
50 - 54	114,142	\$96,785	105,457	117,601	\$135,543	--	--	--
55 - 59	274	1	64	83	116	10	--	--
60 - 64	112,633	72,687	102,653	109,702	117,718	\$145,835	--	--
65 - 69	243	--	38	62	95	36	12	--
70 & over	113,886	--	104,261	109,405	112,369	132,349	\$124,130	--
	152	--	25	28	47	13	37	2
	118,039	--	104,001	110,223	117,940	117,291	128,970	\$207,875
	74	--	23	10	21	8	11	1
	113,056	--	124,528	113,326	105,447	109,670	105,499	116,526
	23	--	9	4	4	2	2	2
	111,775	--	124,076	124,749	95,267	114,119	94,476	78,443
	11	--	--	2	4	2	2	1
	109,316	--	--	125,013	100,551	131,593	93,655	99,756
	3	--	--	1	2	--	--	--
	192,594	--	--	174,861	201,461	--	--	--
Total	1,103	2	359	288	313	71	64	6
	\$113,568	\$84,736	\$106,802	\$112,927	\$116,700	\$128,401	\$121,847	\$131,486

Note: Age and years of service were projected from November 30, 2015 to December 31, 2015.

SECTION 3: Supplemental Information for the Alameda County Employees' Retirement Association

EXHIBIT B

**Members in Active Service and Projected Average Compensation
By Age, Years of Service as of December 31, 2015**

vii. Safety Tier 2C

Age	Years of Service							
	Total	0-4	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 25	--	--	--	--	--	--	--	--
25 - 29	4	3	1	--	--	--	--	--
	\$96,344	\$92,273	\$108,557	--	--	--	--	--
30 - 34	7	4	2	1	--	--	--	--
	89,911	91,975	94,621	\$72,238	--	--	--	--
35 - 39	6	4	2	--	--	--	--	--
	102,618	108,121	91,614	--	--	--	--	--
40 - 44	3	3	--	--	--	--	--	--
	98,834	98,834	--	--	--	--	--	--
45 - 49	3	1	2	--	--	--	--	--
	104,438	113,118	100,098	--	--	--	--	--
50 - 54	2	2	--	--	--	--	--	--
	137,589	137,589	--	--	--	--	--	--
55 - 59	3	3	--	--	--	--	--	--
	138,044	138,044	--	--	--	--	--	--
60 - 64	1	1	--	--	--	--	--	--
	137,054	137,054	--	--	--	--	--	--
65 - 69	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
70 & over	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
Total	29	21	7	1	--	--	--	--
	\$105,746	\$110,152	\$97,317	\$72,238	--	--	--	--

Note: Age and years of service were projected from November 30, 2015 to December 31, 2015.

SECTION 3: Supplemental Information for the Alameda County Employees' Retirement Association

EXHIBIT B

**Members in Active Service and Projected Average Compensation
By Age, Years of Service as of December 31, 2015**

viii. Safety Tier 2D

Age	Total	Years of Service						
		0-4	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 25	1	1	--	--	--	--	--	--
	\$99,818	\$99,818	--	--	--	--	--	--
25 - 29	23	20	3	--	--	--	--	--
	97,468	96,927	\$101,071	--	--	--	--	--
30 - 34	33	23	9	1	--	--	--	--
	96,310	98,445	92,117	\$84,925	--	--	--	--
35 - 39	20	14	2	3	1	--	--	--
	93,848	95,863	104,702	77,352	\$93,417	--	--	--
40 - 44	21	12	4	4	1	--	--	--
	97,156	104,997	93,416	81,108	82,216	--	--	--
45 - 49	5	2	3	--	--	--	--	--
	89,393	89,770	89,141	--	--	--	--	--
50 - 54	5	3	1	--	--	1	--	--
	117,567	117,199	134,422	--	--	\$101,817	--	--
55 - 59	6	3	1	1	1	--	--	--
	101,713	113,417	108,986	73,761	87,278	--	--	--
60 - 64	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
65 - 69	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
70 & over	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
Total	114	78	23	9	3	1	--	--
	\$97,211	\$99,693	\$96,790	\$79,464	\$87,637	\$101,817	--	--

Note: Age and years of service were projected from November 30, 2015 to December 31, 2015.

SECTION 3: Supplemental Information for the Alameda County Employees' Retirement Association

EXHIBIT B

**Members in Active Service and Projected Average Compensation
By Age, Years of Service as of December 31, 2015**

ix. Safety Tier 4

Age	Total	Years of Service						
		0-4	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 25	14	14	--	--	--	--	--	--
	\$80,536	\$80,536	--	--	--	--	--	--
25 - 29	58	58	--	--	--	--	--	--
	79,246	79,246	--	--	--	--	--	--
30 - 34	50	50	--	--	--	--	--	--
	79,354	79,354	--	--	--	--	--	--
35 - 39	19	19	--	--	--	--	--	--
	83,026	83,026	--	--	--	--	--	--
40 - 44	7	7	--	--	--	--	--	--
	95,372	95,372	--	--	--	--	--	--
45 - 49	6	6	--	--	--	--	--	--
	101,868	101,868	--	--	--	--	--	--
50 - 54	23	23	--	--	--	--	--	--
	123,651	123,651	--	--	--	--	--	--
55 - 59	6	6	--	--	--	--	--	--
	116,644	116,644	--	--	--	--	--	--
60 - 64	1	1	--	--	--	--	--	--
	71,284	71,284	--	--	--	--	--	--
65 - 69	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
70 & over	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
Total	184	184	--	--	--	--	--	--
	\$87,842	\$87,842	--	--	--	--	--	--

Note: Age and years of service were projected from November 30, 2015 to December 31, 2015.

SECTION 3: Supplemental Information for the Alameda County Employees' Retirement Association

EXHIBIT C

Reconciliation of Member Data – December 31, 2014 to December 31, 2015

	Active Members	Vested Terminated Members	Pensioners	Disableds	Beneficiaries	Total
Number as of December 31, 2014	11,025	1,995	6,807	836	1,170	21,833
New members	790	0	0	0	79	869
Terminations – with vested rights	-223	223	0	0	0	0
Contributions refunds	-220	-104	0	0	0	-324
Retirements	-295	-61	356	0	0	0
New disabilities	-21	-10	-11	42	0	0
Return to work	27	-27	0	0	0	0
Died with or without beneficiary	-12	-7	-205	-23	-59	-306
Data adjustments	0	18*	1	-1	-2**	16
Number as of December 31, 2015	11,071	2,027	6,948	854	1,188	22,088

* Out of the net 18 data adjustments, 15 were for members who were hired and terminated employment after November 30, 2014 (i.e., the census data collection date for last year's valuation).

** Net count (includes 2 non-members from terminated vested status last year, less 4 suspended beneficiary records since last year).

SECTION 3: Supplemental Information for the Alameda County Employees' Retirement Association

EXHIBIT D

Summary Statement of Income and Expenses on an Actuarial Value Basis

	Year Ended December 31,	
	2015	2014
Contribution income:		
Employer contributions	\$224,607,104	\$213,254,775
Employee contributions	<u>82,948,934</u>	<u>79,714,187</u>
Contribution income	\$307,556,038	\$292,968,962
Investment income:		
Interest, dividends and other income	\$110,609,986	\$132,932,577
Adjustment toward market value	527,627,773	639,140,739
Less investment and administrative fees	<u>-68,942,741</u>	<u>-62,058,039</u>
Net investment income	<u>\$569,295,018</u>	<u>\$710,015,277</u>
Total income available for benefits	\$876,851,056	\$1,002,984,239
Less benefit payments:		
Service retirement	-\$388,197,727	-\$366,984,137
Death payments	-2,553,356	-2,403,288
Supplemental cost of living	-1,555,924	-1,849,140
Members refunds	-8,991,409	-7,452,927
Health insurance subsidies	<u>-33,685,850</u>	<u>-32,590,183</u>
Benefit payments	-\$434,984,266	-\$411,279,675
Change in reserve for future benefits	\$441,866,790	\$591,704,564

Note: Results may not total properly due to rounding.

SECTION 3: Supplemental Information for the Alameda County Employees' Retirement Association

EXHIBIT E

Summary Statement of Assets

ASSETS	Year Ended December 31,	
	2015	2014
Cash	\$539,879	\$400,037
Securities Lending Collateral	404,498,078	404,621,066
Accounts Receivable:		
Contributions	\$10,841,676	\$19,437,641
Investment Receivables	15,709,597	17,369,906
Investments Sold	7,145,379	5,142,576
Foreign Exchange Contracts	3,612,362	2,392,650
Others	<u>374,945</u>	<u>314,856</u>
Total Accounts Receivable	\$37,683,960	\$44,657,629
Prepaid Expenses	706,049	660,117
Investments:		
Short-Term Investments	\$161,194,246	\$130,527,799
Equities	3,951,872,573	4,270,160,118
Fixed Income Investments	1,005,396,098	1,044,088,459
Real Estate	483,925,245	443,475,497
Capital Assets	2,334,536	3,369,866
Private Equity and Alternative Investments	<u>1,030,301,739</u>	<u>887,254,522</u>
Total Investments at Market Value	<u>\$6,635,024,436</u>	<u>\$6,778,876,262</u>
Total Assets	\$7,078,452,402	\$7,229,215,111

Note: Results may not total properly due to rounding.

SECTION 3: Supplemental Information for the Alameda County Employees' Retirement Association

EXHIBIT E (Continued)

Summary Statement of Assets

LIABILITIES	Year Ended December 31,	
	2015	2014
Less Accounts Payable:		
Securities Lending & Investments Purchased	-\$421,953,600	-\$426,050,220
Investment-Related Payables	-9,299,121	-9,310,532
Futures Contracts & Equity Swaps	-1,103,974	-1,407,552
Foreign Exchange Contracts	-1,429,367	-361,037
Accrued Administration Expense	-1,546,720	-1,548,238
Members Benefits & Refunds, and Retirement Payroll Deductions Payable	<u>-2,494,847</u>	<u>-2,524,526</u>
Total Accounts Payable	-\$437,827,629	-\$441,202,105
NET ASSETS		
Net Assets at Market Value	<u>\$6,640,624,773</u>	<u>\$6,788,013,006</u>
Net Assets at Actuarial Value	<u>\$6,987,026,015</u>	<u>\$6,545,159,225</u>
Net Assets at Valuation Value	<u>\$6,083,535,566</u>	<u>\$5,681,097,135</u>

Note: Results may not total properly due to rounding.

SECTION 3: Supplemental Information for the Alameda County Employees' Retirement Association

EXHIBIT F

Actuarial Balance Sheet

An overview of the Plan's funding is given by an Actuarial Balance Sheet. In this approach, we first determine the amount and timing of all future payments that will be made by the Plan for current participants. We then discount these payments at the valuation interest rate to the date of the valuation, thereby determining their present value. We refer to this present value as the "liability" of the Plan.

Second, we determine how this liability will be met. These actuarial "assets" include the net amount of assets already accumulated by the Plan, the present value of future member contributions, the present value of future employer normal cost contributions, and the present value of future employer amortization payments.

Actuarial Balance Sheet (Dollar Amounts in Thousands)

Assets	<u>Basic</u>	<u>COLA</u>	<u>Total</u>
1. Total valuation assets	\$4,105,668	\$1,977,868	\$6,083,536
2. Present value of future contributions by members	568,753	129,492	698,245
3. Present value of future employer contributions for:			
a. entry age normal cost	579,537	120,561	700,098
b. unfunded actuarial accrued liability	1,443,814	347,670	1,791,484
4. Total current and future assets	\$6,697,772	\$2,575,591	\$9,273,363
Liabilities			
5. Present value of benefits already granted	\$3,021,957	\$1,753,216	\$4,775,173
6. Present value of benefits to be granted to present non-retired members	3,675,815	822,375	4,498,190
7. Total liabilities	\$6,697,772	\$2,575,591	\$9,273,363

SECTION 3: Supplemental Information for the Alameda County Employees' Retirement Association

EXHIBIT G

Summary of Reported Asset Information as of December 31, 2015

	Reserves
Used in Development of Valuation Value of Assets	
Members deposit-basic	\$1,078,519,656
Members cost-of-living	240,443,194
Employer advance (before transfer from SRBR to employer advance)	683,509,941
Pension reserve-current	1,473,620,400
Pension reserve-prior	4,196,584
Annuity reserve	856,587,673
Cost-of-living reserve	1,737,425,424
Survivor death benefit	3,908,191
SRBR transfer to employer advance	5,324,502*
Reserve for interest fluctuations (contingency reserve), if negative	0
Subtotal	<u>\$6,083,535,566</u>
Not Used in Development of Valuation Value of Assets	
401(h) account	\$9,533,985
Supplemental retirees benefit reserve (before transfer from SRBR to employer advance)	853,842,371
Reserve for interest fluctuations (contingency reserve), if positive	45,438,595
Market stabilization reserve	-346,401,242
SRBR transfer to employer advance	-5,324,502*
Subtotal	<u>\$557,089,207</u>
Total	\$6,640,624,773

* Estimate provided by ACERA.

Note: Results may not total properly due to rounding.

SECTION 3: Supplemental Information for the Alameda County Employees' Retirement Association

EXHIBIT H

Development of Unfunded Actuarial Accrued Liability as of December 31, 2015

	(Dollar Amounts in Thousands)
1. Unfunded actuarial accrued liability at beginning of year	\$1,910,975
2. Total Normal Cost at middle of year	179,023
3. Expected employer and member contributions	-325,765
4. Interest (whole year on (1) plus half year on (2) + (3))	<u>139,658</u>
5. Expected unfunded actuarial accrued liability at end of year	\$1,903,891
6. Actuarial (gain)/loss due to all changes*:	
a. Gain from investments	-\$60,818
b. Gain from lower than expected salary increases for actives	-35,962
c. Gain from lower than expected COLA increases for retirees and beneficiaries	-14,695
d. Loss due to actual contributions less than expected** (with interest to end of year)	18,901
e. Other experience gains	<u>-19,833</u>
f. Subtotal	-\$112,407
7. Actual unfunded actuarial accrued liability at end of year (5) + (6f)	\$1,791,484

* The "net gain from other experience" of \$(51,589) from Chart 9 is equal to the sum of items 6b through 6e.

** Including scheduled delay in implementing contribution rates after date of valuation.

SECTION 3: Supplemental Information for the Alameda County Employees' Retirement Association

EXHIBIT I

Table of Amortization Bases (Dollar Amounts in Thousands)

Type	Date Established	Initial Years	Initial Amount	Outstanding Balance	Years Remaining	Annual Payment*
General (All, Excluding LARPD Tier 3 and Tier 4)						
Combined Bases	12/31/2011	21	\$885,036	\$891,311	17	\$71,864
Experience Loss	12/31/2012	20	165,501	165,644	17	13,355
Experience Gain	12/31/2013	20	-75,003	-75,207	18	-5,821
Experience Gain	12/31/2014	20	-156,281	-156,531	19	-11,665
Change in Assumptions	12/31/2014	20	350,827	351,388	19	26,186
Experience Gain	12/31/2015	20	-98,619	<u>-98,619</u>	20	<u>-7,095</u>
Total				\$1,077,986		\$86,824
General (LARPD Tier 3 and Tier 4 Only)**						
Combined Bases	12/31/2011	21	\$7,060	\$7,110	17	\$573
Experience Loss	12/31/2012	20	370	370	17	30
Experience Gain	12/31/2013	20	-534	-535	18	-41
Experience Gain	12/31/2014	20	-1,562	-1,565	19	-117
Change in Assumptions	12/31/2014	20	1,303	1,305	19	97
Experience Gain***	12/31/2015	20	-1,506	<u>-1,506</u>	20	<u>-108</u>
Total				\$5,179		\$434
General (All General Members Combined)						
Combined Bases	12/31/2011	21	\$892,096	\$898,421	17	\$72,437
Experience Loss	12/31/2012	20	165,871	166,014	17	13,385
Experience Gain	12/31/2013	20	-75,537	-75,742	18	-5,862
Experience Gain	12/31/2014	20	-157,843	-158,096	19	-11,782
Change in Assumptions	12/31/2014	20	352,130	352,693	19	26,283
Experience Gain	12/31/2015	20	-100,125	<u>-100,125</u>	20	<u>-7,203</u>
Total				\$1,083,165		\$87,258
Safety						
Combined Bases	12/31/2011	21	\$598,698	\$602,943	17	\$48,613
Experience Loss	12/31/2012	20	63,130	63,185	17	5,094
Experience Gain	12/31/2013	20	-9,350	-9,376	18	-726
Experience Gain	12/31/2014	20	-43,238	-43,307	19	-3,227
Change in Assumptions	12/31/2014	20	107,552	107,724	19	8,028
Experience Gain	12/31/2015	20	-12,850	<u>-12,850</u>	20	<u>-924</u>
Total				\$708,319		\$56,858

SECTION 3: Supplemental Information for the Alameda County Employees' Retirement Association

EXHIBIT I

Table of Amortization Bases (Continued)

Type	Date Established	Initial Years	Initial Amount	Outstanding Balance	Years Remaining	Annual Payment*
Total						
Combined Bases	12/31/2011	21	\$1,490,794	\$1,501,364	17	\$121,050
Experience Loss	12/31/2012	20	229,001	229,199	17	18,479
Experience Gain	12/31/2013	20	-84,887	-85,118	18	-6,588
Experience Gain	12/31/2014	20	-201,081	-201,403	19	-15,009
Change in Assumptions	12/31/2014	20	459,682	460,417	19	34,311
Experience Gain	12/31/2015	20	-112,975	<u>-112,975</u>	20	<u>-8,127</u>
Total				\$1,791,484		\$144,116

Note: The equivalent single amortization period is 17 years.

* *Level percentage of payroll.*

** *When LARPD General Tier 3 was established in 2008, they were classified as a stand-alone group since they were the only employer with the higher 2.5% at 55 benefit (i.e., Section 31676.18), and the cost to upgrade the past service under that formula was only to be paid by LARPD. (reference: Segal's letter dated October 7, 2008). The initial UAAL rate for that group was based on an allocation of assets needed to maintain the total employer rate from the December 31, 2007 valuation before any benefit improvements for General Tier 3. The UAAL rate for LARPD General Tier 3 was then increased to reflect the benefit improvement. When LARPD General Tier 4 was later established in 2013, that tier was combined with LARPD General Tier 3 for purpose of determining their UAAL, in order to continue with the open-group level percentage of payroll approach for paying off the UAAL amount for General Tier 3 (that is now closed to new entrants because of CalPEPRA).*

*** *There is a liability gain from the death of one of LARPD's Tier 3 retirees and the withdrawal of one of LARPD's Tier 3 actives.*

SECTION 3: Supplemental Information for the Alameda County Employees' Retirement Association

EXHIBIT J

Section 415 Limitations

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 2015 and 2016. Normal Retirement Age (NRA) for these purposes is age 62, except for "qualified public safety employees" whose NRA is 50. These are the limits in simplified terms. They must generally be adjusted based on each participant's circumstances, for such things as age at retirement, form of benefits chosen and after tax contributions.

Non-Tier 4 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.

Non-Tier 4 contributions rates determined in this valuation have not been reduced for the Section 415 limitations. Actual limitations will result in gains as they occur.

SECTION 3: Supplemental Information for the Alameda County Employees' Retirement Association

EXHIBIT K Definitions of Pension Terms

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 net, in this case, of investment and administrative expenses.
- (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 level cost 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 (Overfunded) Actuarial Accrued Liability:

The extent to which the actuarial accrued liability of the Plan exceeds (or is exceeded by) the assets of the Plan. There are many approaches to paying off the unfunded or overfunded actuarial accrued liability, from meeting the interest accrual only to amortizing it over a specific period of time.

SECTION 3: Supplemental Information for the Alameda County Employees' Retirement Association

**Amortization of the Unfunded
(Overfunded) Actuarial
Accrued Liability:**

Payments made over a period of years equal in value to the Plan's unfunded or overfunded actuarial accrued liability.

Investment Return:

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.

SECTION 4: Reporting Information for the Alameda County Employees' Retirement Association

EXHIBIT I

Summary of Actuarial Valuation Results

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

1. Retired members as of the valuation date (including 1,188 beneficiaries in pay status)	8,990
2. Members inactive during year ended December 31, 2015 with vested rights	2,027
3. Members active during the year ended December 31, 2015	11,071

The actuarial factors as of the valuation date are as follows (amounts in 000s):

1. Normal cost	\$182,194
2. Present value of future benefits	9,273,363
3. Present value of future normal costs	1,398,343
4. Actuarial accrued liability*	7,875,020
Retired members and beneficiaries	\$4,775,173
Inactive members with vested rights	191,520
Active members	2,908,327
5. Valuation value of assets** (\$6,640,625 at market value as reported by Retirement Association)	6,083,536
6. Unfunded actuarial accrued liability	\$1,791,484

* Excludes liabilities held for SRBR and other non-valuation reserves.

** Excludes Reserve for Interest Fluctuations (Contingency Reserve) if positive, Supplemental Retirees Benefit Reserve, and 401(h) Reserve.

SECTION 4: Reporting Information for the Alameda County Employees' Retirement Association

EXHIBIT I (continued)
Summary of Actuarial Valuation Results

The determination of the recommended average employer contribution is as follows
(amounts in 000s):

	Dollar Amount	% of Payroll
1. Total normal cost	\$182,194	18.80%
2. Expected employee contributions	<u>-84,987</u>	<u>-8.77%</u>
3. Employer normal cost: (1) + (2)	\$97,207	10.03%
4. Amortization of unfunded actuarial accrued liability	<u>\$144,119</u>	<u>14.86%</u>
5. Total recommended average employer contribution: (3) + (4)	\$241,326	24.89%
6. Projected compensation	\$969,534	

SECTION 4: Reporting Information for the Alameda County Employees' Retirement Association

EXHIBIT II
Actuarial Assumptions and Actuarial Cost Method

Rationale for Assumptions:

The information and analysis used in selecting each assumption that has a significant effect on this actuarial valuation is shown in the December 1, 2010 through November 30, 2013 Actuarial Experience Study report dated September 9, 2014. In addition, the Board adopted a 7.60% investment return assumption for this valuation. Unless otherwise noted, all actuarial assumptions and methods shown below apply to all tiers. These assumptions were adopted by the Board.

Demographic Assumptions:

Post-Retirement Mortality Rates

Healthy:

For General members and all beneficiaries: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020, set back one year for males and females.

For Safety members: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020, with no setback for males and set back two years for females.

Disabled:

For General members: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020, set forward seven years for males and set forward four years for females.

For Safety members: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020, set forward six years for males and set forward three years for females.

The above mortality tables contain a margin of about 10% for General and Safety members and beneficiaries combined, based on actual to expected deaths, as a provision appropriate to reasonably reflect future mortality improvement, based on a review of mortality experience as of the measurement date.

SECTION 4: Reporting Information for the Alameda County Employees' Retirement Association

Post-Retirement Mortality Rates (continued)

Employee Contribution Rates: For General members: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020, set back one year for males and females, weighted 30% male and 70% female.

For Safety members: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020, with no setback for males and set back two years for females, weighted 75% male and 25% female.

Optional Forms of Benefit:

*Service Retirement and
All Beneficiaries*

General members: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020, set back one year for males and females, weighted 30% male and 70% female.

General beneficiaries: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020, set back one year for males and females, weighted 70% male and 30% female.

Safety members: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020, with no setback for males and set back two years for females, weighted 75% male and 25% female.

Safety beneficiaries: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020, set back one year for males and females, weighted 25% male and 75% female.

Disability Retirement

General members: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020, set forward seven years for males and set forward four years for females, weighted 30% male and 70% female.

Safety members: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020, set forward six years for males and set forward three years for females, weighted 75% male and 25% female.

SECTION 4: Reporting Information for the Alameda County Employees' Retirement Association

Termination Rates Before Retirement:

Age	Rate (%)			
	Mortality			
	General		Safety	
	Male	Female	Male	Female
25	0.04	0.02	0.04	0.02
30	0.04	0.02	0.04	0.02
35	0.07	0.04	0.07	0.04
40	0.10	0.06	0.10	0.06
45	0.13	0.10	0.14	0.09
50	0.19	0.15	0.20	0.14
55	0.30	0.22	0.34	0.21
60	0.53	0.37	0.59	0.33
65	0.90	0.68	1.00	0.60

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

SECTION 4: Reporting Information for the Alameda County Employees' Retirement Association

Termination Rates Before Retirement (continued):

Age	Rate (%)	
	Disability	
	General⁽¹⁾	Safety⁽²⁾
20	0.00	0.00
25	0.01	0.03
30	0.03	0.23
35	0.08	0.41
40	0.13	0.48
45	0.21	0.65
50	0.31	1.35
55	0.38	1.90
60	0.43	2.15

⁽¹⁾ 60% of General disabilities are assumed to be service connected disabilities. The other 40% are assumed to be non-service connected disabilities.

⁽²⁾ 100% of Safety disabilities are assumed to be service connected disabilities.

SECTION 4: Reporting Information for the Alameda County Employees' Retirement Association

Termination Rates Before Retirement (continued):

Years of Service	Rate (%)	
	Termination (< 5 Years of Service)⁽¹⁾	
	General	Safety
0	10.00	5.00
1	9.00	4.00
2	7.00	3.00
3	6.00	2.00
4	5.00	1.00

Age	Termination (5+ Years of Service)⁽²⁾	
	General	Safety
20	5.00	2.00
25	5.00	2.00
30	5.00	1.70
35	4.40	1.20
40	3.40	1.00
45	2.70	1.00
50	2.50	1.00
55	2.50	1.00
60	2.50	0.40

⁽¹⁾ 60% of all terminated members will choose a refund of contributions and 40% will choose a deferred vested benefit.

⁽²⁾ 40% of all terminated members will choose a refund of contributions and 60% will choose a deferred vested benefit. No termination is assumed after a member is eligible for retirement.

SECTION 4: Reporting Information for the Alameda County Employees' Retirement Association

Retirement Rates:

Age	Rate (%)							
	General Tier 1	General Tier 2	General Tier 3	General Tier 4	Safety Tier 1 ⁽¹⁾	Safety Tier 2, 2D ⁽¹⁾	Safety Tier 2C ⁽¹⁾	Safety Tier 4
50	4.00	2.00	6.00	0.00	35.00	15.00	4.00	4.00
51	4.00	2.00	3.00	0.00	30.00	15.00	2.00	2.00
52	4.00	2.00	5.00	4.00	25.00	15.00	2.00	2.00
53	4.00	2.00	6.00	1.50	35.00	15.00	3.00	3.00
54	4.00	2.00	6.00	1.50	45.00	15.00	6.00	6.00
55	7.00	2.00	12.00	2.50	45.00	15.00	10.00	10.00
56	9.00	3.00	13.00	2.50	45.00	20.00	12.00	12.00
57	12.00	4.00	13.00	3.50	45.00	25.00	20.00	20.00
58	12.00	4.00	14.00	4.50	45.00	25.00	10.00	10.00
59	16.00	5.00	16.00	4.50	45.00	25.00	15.00	15.00
60	24.00	6.00	21.00	4.50	100.00	30.00	60.00	60.00
61	24.00	9.00	20.00	7.50	100.00	30.00	60.00	60.00
62	40.00	18.00	30.00	19.00	100.00	30.00	60.00	60.00
63	35.00	18.00	25.00	15.00	100.00	30.00	60.00	60.00
64	35.00	20.00	25.00	17.00	100.00	100.00	100.00	100.00
65	35.00	25.00	30.00	21.00	100.00	100.00	100.00	100.00
66	35.00	25.00	25.00	20.00	100.00	100.00	100.00	100.00
67	30.00	25.00	25.00	20.00	100.00	100.00	100.00	100.00
68	25.00	30.00	25.00	30.00	100.00	100.00	100.00	100.00
69	35.00	35.00	50.00	35.00	100.00	100.00	100.00	100.00
70	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

⁽¹⁾ Retirement rate is 100% after a member accrues a benefit of 100% of final average earnings.

SECTION 4: Reporting Information for the Alameda County Employees' Retirement Association

Retirement Age and Benefit for Deferred Vested Members:

For deferred vested members, retirement age assumptions are as follows:

General Age:	60
Safety Age:	56

For future deferred vested members who terminate with less than five years of service and are not vested, we assume that they will retire at age 70 for both General and Safety if they decide to leave their contributions on deposit.

We assume that 30% of future General and 60% of future Safety deferred vested members will continue to work for a reciprocal employer. For reciprocals, we assume 4.15% and 4.45% compensation increases per annum for General and Safety, respectively.

Future Benefit Accruals:

1.0 year of service per year of employment plus 0.005 year of additional service to anticipate conversion of unused sick leave for each year of employment.

Unknown Data for Members:

Same as those exhibited by members with similar known characteristics. If not specified, members are assumed to be male.

Inclusion of Deferred Vested Members:

All deferred vested members are included in the valuation.

Percent Married:

70% of male members; 50% of female members.

Age of Spouse:

Female (or male) spouses are 3 years younger (or older) than their spouses.

Economic Assumptions:

Net Investment Return:

7.60%, net of administration and investment expenses

Employee Contribution Crediting Rate:

7.60%, compounded semi-annually.

SECTION 4: Reporting Information for the Alameda County Employees' Retirement Association

Consumer Price Index: Increase of 3.25% per year, retiree COLA increases due to CPI subject to a 3% maximum change per year for General Tier 1, General Tier 3, and Safety Tier 1, and 2% maximum change per year for General Tier 2, General Tier 4, Safety Tier 2, Safety Tier 2C, Safety Tier 2D, and Safety Tier 4.

Salary Increases:

Annual Rate of Compensation Increase (%)		
Inflation: 3.25%; an additional 0.50% “across the board” salary increases (other than inflation); plus the following Merit and Promotional increases based on service.		
Service	General	Safety
0-1	3.70%	6.70%
1-2	3.70	6.70
2-3	3.20	5.90
3-4	2.10	3.80
4-5	1.70	3.30
5-6	1.40	2.50
6-7	1.30	1.40
7-8	1.10	0.90
8-9	0.70	0.80
9-10	0.60	0.80
10-11	0.50	0.70
11+	0.40	0.70

Actuarial Value of Assets: The Actuarial Value of Assets is determined by phasing in any difference between actual and expected market return over 10 six-month interest crediting periods.

Valuation Value of Assets: The Actuarial Value of Assets reduced by the value of the non-valuation reserves.

Actuarial Cost Method: Entry Age Actuarial Cost Method. Entry Age is the age at the member’s hire date. Actuarial Accrued Liability is calculated on an individual basis and is based on costs allocated as a level percentage of compensation. The Normal Cost is also calculated on an individual basis where the Entry Age Normal Cost is calculated as the sum of the individual Normal Costs.

SECTION 4: Reporting Information for the Alameda County Employees' Retirement Association

Actuarial Cost Method: (continued) Prior to January 1, 2012, the total UAAL was amortized on a 30-year decreasing period, with 21 years remaining as of December 31, 2011 (and 17 years remaining as of December 31, 2015). On or after January 1, 2012, any new UAAL resulting from plan amendments are amortized over separate decreasing 15-year periods; early retirement incentive programs (ERIPs) are amortized over separate decreasing 5-year periods; assumption and method changes are amortized over separate decreasing 20-year periods; and experience gains/losses are also amortized over separate decreasing 20-year periods.

Terminal Pay Assumptions: Additional pay elements are expected to be received during a member's final average earnings period. The percentages, added to the final year salary, used in this valuation are:

	<u>Service Retirement</u>	<u>Disability Retirement</u>
General Tier 1	8.0%	6.5%
General Tier 2	3.0%	1.4%
General Tier 3	8.0%	6.5%
General Tier 4	N/A	N/A
Safety Tier 1	8.5%	6.4%
Safety Tier 2	4.0%	2.1%
Safety Tier 2C	4.0%	2.1%
Safety Tier 2D	4.0%	2.1%
Safety Tier 4	N/A	N/A

Changes in Actuarial Assumptions: None

SECTION 4: Reporting Information for the Alameda County Employees' Retirement Association

EXHIBIT III
Summary of Plan Provisions

This exhibit summarizes the major provisions of ACERA included in the valuation. It is not intended to be, nor should it be interpreted as, a complete statement of all plan provisions.

Membership Eligibility:

	Membership with ACERA usually begins with the second pay period following appointment to a full time County or member District position ⁽¹⁾ . ACERA members who change from full time to part time will continue to participate at ACERA.
<i>General and Safety Tier 1</i>	All General and Safety members hired on or before June 30, 1983 ⁽²⁾ .
<i>General and Safety Tier 2</i>	All General and Safety members hired after June 30, 1983 ⁽³⁾ , and not in any of the other Tiers listed below.
<i>General Tier 3</i>	Only General LARPD members hired before October 1, 2008 who elected the 2.5% at 55 formula and all General LARPD members hired after that date.
<i>General and Safety Tier 4</i>	All General and Safety members with membership dates on or after January 1, 2013.
<i>Safety Tier 2C</i>	All Safety members in the Sheriff's Department (excluding Probation Officers) hired on or after October 17, 2010 who elected the 2% at 50 formula.
<i>Safety Tier 2D</i>	All Safety members in the Sheriff's Department (excluding Probation Officers) hired on or after October 17, 2010 who elected the 3% at 55 formula.

⁽¹⁾ For Housing Authority and LARPD, membership with ACERA begins on the first day of hire.

⁽²⁾ For Housing Authority General members, the hire date is on or before September 30, 2011 (instead of June 30, 1983). For LARPD General members, the hire date is on or before September 30, 2008 (instead of June 30, 1983).

⁽³⁾ For Housing Authority General members, the hire date is after September 30, 2011 (instead of June 30, 1983).

SECTION 4: Reporting Information for the Alameda County Employees' Retirement Association

Final Compensation for Benefit Determination:

General Tier 1, General Tier 3 and Safety Tier 1

Highest consecutive twelve months of compensation earnable (§31462.1) (FAS1).

General Tier 2, General Tier 4, Safety Tier 2, Safety Tier 2C, Safety Tier 2D, and Safety Tier 4

For non-Tier 4 members, highest consecutive thirty-six months of compensation earnable (§31462), and for Tier 4 members, highest consecutive thirty-six months of pensionable compensation (§7522.10(c), §7522.32 and §7522.34).

Service:

Years of service (Yrs).

Service Retirement Eligibility:

General

Non-Tier 4

Age 50 with 5 years of service and a total of 10 years of qualifying membership, or age 70 regardless of service, or after 30 years, regardless of age (§31672).

Tier 4

Age 52 with 5 years of service (§7522.20(a)) or age 70 regardless of service (§31672.3).

Safety

Non-Tier 4

Age 50 with 5 years of service and a total of 10 years of qualifying membership, or age 70 regardless of service, or after 20 years, regardless of age (§31663.25).

Tier 4

Age 50 with 5 years of service (§7522.25(d)) or age 70 regardless of service (§31672.3).

SECTION 4: Reporting Information for the Alameda County Employees' Retirement Association

Benefit Formula:

	Retirement Age	Benefit Formula
<i>General Tier 1 (§31676.12)</i>	50	$(1.34\% \times \text{FAS1} - 1/3 \times 1.34\% \times \$350 \times 12) \times \text{Yrs}$
	55	$(1.77\% \times \text{FAS1} - 1/3 \times 1.77\% \times \$350 \times 12) \times \text{Yrs}$
	60	$(2.34\% \times \text{FAS1} - 1/3 \times 2.34\% \times \$350 \times 12) \times \text{Yrs}$
	62 or later	$(2.62\% \times \text{FAS1} - 1/3 \times 2.62\% \times \$350 \times 12) \times \text{Yrs}$

	Retirement Age	Benefit Formula
<i>General Tier 2 (§31676.1)</i>	50	$(1.18\% \times \text{FAS3} - 1/3 \times 1.18\% \times \$350 \times 12) \times \text{Yrs}$
	55	$(1.49\% \times \text{FAS3} - 1/3 \times 1.49\% \times \$350 \times 12) \times \text{Yrs}$
	60	$(1.92\% \times \text{FAS3} - 1/3 \times 1.92\% \times \$350 \times 12) \times \text{Yrs}$
	62	$(2.09\% \times \text{FAS3} - 1/3 \times 2.09\% \times \$350 \times 12) \times \text{Yrs}$
	65	$(2.43\% \times \text{FAS3} - 1/3 \times 2.43\% \times \$350 \times 12) \times \text{Yrs}$

	Retirement Age	Benefit Formula
<i>General Tier 3 (§31676.18)</i>	50	$2.00\% \times \text{FAS1} \times \text{Yrs}$
	55 or later	$2.50\% \times \text{FAS1} \times \text{Yrs}$

	Retirement Age	Benefit Formula
<i>General Tier 4 (§7522.20(a))</i>	52	$1.00\% \times \text{FAS3} \times \text{Yrs}$
	55	$1.30\% \times \text{FAS3} \times \text{Yrs}$
	60	$1.80\% \times \text{FAS3} \times \text{Yrs}$
	62	$2.00\% \times \text{FAS3} \times \text{Yrs}$
	65	$2.30\% \times \text{FAS3} \times \text{Yrs}$
	67 or later	$2.50\% \times \text{FAS3} \times \text{Yrs}$

SECTION 4: Reporting Information for the Alameda County Employees' Retirement Association

Benefit Formula: (continued)

	Retirement Age	Benefit Formula
<i>Safety Tier 1 (Non-Integrated)</i> (§31664.1)	50	3.00% x FAS1 x Yrs
	55 or later	3.00% x FAS1 x Yrs
<i>Safety Tier 2 (Non-Integrated)</i> (§31664.1)	50	3.00% x FAS3 x Yrs
	55 or later	3.00% x FAS3 x Yrs
<i>Safety Tier 2C (Non-Integrated)</i> (§31664)	50	2.00% x FAS3 x Yrs
	55 or later	2.62% x FAS3 x Yrs
<i>Safety Tier 2D (Non-Integrated)</i> (§31664.2)	50	2.29% x FAS3 x Yrs
	55 or later	3.00% x FAS3 x Yrs
<i>Safety Tier 4 (Non-Integrated)</i> (§7522.25(d))	50	2.00% x FAS3 x Yrs
	55	2.50% x FAS3 x Yrs
	57 or later	2.70% x FAS3 x Yrs

Maximum Benefit:

<i>Non-Tier 4</i>	100% of Highest Average Compensation (§31676.1, §31676.12, §31676.18, §31664, §31664.1, and §31664.2).
<i>Tier 4</i>	None

SECTION 4: Reporting Information for the Alameda County Employees' Retirement Association

Ordinary Disability:

General Tier 1, Tier 2, Tier 3, and Tier 4

<i>Eligibility</i>	Five years of service (§31720).
<i>Benefit Formula</i>	1.8% per year of service for General Tier 1 and Tier 3 and 1.5% per year of service for General Tier 2 and Tier 4. If the benefit does not exceed one-third of Final Compensation, the service is projected to 62 for General Tier 1 and Tier 3, and to age 65 for General Tier 2 and Tier 4, but the total benefit cannot be more than one-third of Final Compensation (§31727.1 and §31727).

Safety Tier 1, Tier 2, Tier 2C, Tier 2D, and Tier 4

<i>Eligibility</i>	Five years of service (§31720).
<i>Benefit Formula</i>	1.8% per year of service. If the benefit does not exceed one-third of Final Compensation, the service is projected to 55, but the total benefit cannot be more than one-third of Final Compensation (§31727.2).

Line-of-Duty Disability:

All Members

<i>Eligibility</i>	No age or service requirements (§31720).
<i>Benefit Formula</i>	50% of the Final Compensation or 100% of Service Retirement benefit, if greater (§31727.4).

SECTION 4: Reporting Information for the Alameda County Employees' Retirement Association

Pre-Retirement Death:

All Members

Eligibility

None.

Basic lump sum benefit

Refund of employee contributions with interest, plus one month's compensation for each year of service, to a maximum of six month's compensation (§31781).

Death in line of duty

50% of Final Compensation or 100% of Service Retirement benefit, if greater, payable to spouse or minor children (§31787).

OR

Vested Members

Eligibility

Five years of service.

Basic benefit

60% of the greater of Service or Ordinary Disability Retirement benefit payable to surviving eligible spouse (§31765.1, §31781.1), in lieu of the basic lump sum benefit above.

Death in line of duty

50% of Final compensation or 100% of Service Retirement benefit, if greater, payable to spouse or minor children (§31787).

SECTION 4: Reporting Information for the Alameda County Employees' Retirement Association

Death After Retirement:

All Members

Service or

Ordinary Disability Retirement

60% of member's unmodified allowance continued to eligible spouse (§31760.1) and lump sum death burial benefit⁽¹⁾ payable to member's beneficiary (§31789.3). An eligible spouse is a surviving spouse who was married to the member at least one year prior to the date of retirement (§31760.1).

Line-of-Duty Disability

100% of member's allowance continued to eligible spouse (§31786).

Withdrawal Benefits:

Less than Five Years of Service

Refund of accumulated employee contributions with interest, or earned benefit at age 70 (§31628). Effective January 1, 2003, a member may also elect to leave contributions on deposit in the retirement fund (§31629.5).

Five or More Years of Service

If contributions left on deposit, entitled to earned benefits commencing at any time after eligible to retire (§31700).

Post-retirement

Cost-of-Living Benefits:

*General Tier 1, General Tier 3
and Safety Tier 1*

Future changes based on Consumer Price Index to a maximum of 3% per year; excess "banked" (§31870.1).

*General Tier 2, General Tier 4
Safety Tier 2, Safety Tier 2C,
Safety Tier 2D, and Safety Tier 4*

Future changes based on Consumer Price Index to a maximum of 2% per year; excess "banked" (§31870).

⁽¹⁾ Based on action taken by the Board in February 2014, we are continuing to exclude the death burial benefit from the pension valuation.

SECTION 4: Reporting Information for the Alameda County Employees' Retirement Association

County Contributions:	Prior to January 1, 2012, the total UAAL was amortized on a 30-year decreasing period, with 21 years remaining as of December 31, 2011. On or after January 1, 2012, plan amendments are amortized over separate decreasing 15-year periods; early retirement incentive programs (ERIPs) are amortized over separate decreasing 5-year periods; assumption and method changes are amortized over separate decreasing 20-year periods; and experience gains/losses are also amortized over separate decreasing 20-year periods.
Supplemental Benefit:	Non-vested supplemental COLA and medical benefits are also paid from the Supplemental Retirees Benefit Reserve to eligible retirees and survivors. These benefits have been excluded from this valuation.
Member Contributions:	Please refer to Appendix A for specific rates.
<i>General Tier 1</i>	
<i>Basic</i>	Provide for an average annuity at age 60 equal to 1/100 of FAS1 (§31621.2).
<i>Cost-of-Living</i>	Provide for one-half of future Cost-of-Living costs.
<i>General Tier 2</i>	
<i>Basic</i>	Provide for an average annuity at age 60 equal to 1/120 of FAS3 (§31621).
<i>Cost-of-Living</i>	Provide for one-half of future Cost-of-Living costs.
<i>General Tier 3</i>	
<i>Basic</i>	Provide for an average annuity at age 55 equal to 1/100 of FAS1 (§31621.8).
<i>Cost-of-Living</i>	Provide for one-half of future Cost-of-Living costs.
<i>General Tier 4</i>	50% of the total Normal Cost rate.

SECTION 4: Reporting Information for the Alameda County Employees' Retirement Association

Member Contributions: (continued)

Safety Non-Tier 4

Basic

Provide for an average annuity at age 50 equal to 1/100 of FAS1 (FAS3 for Tier 2, Tier 2C, and Tier 2D) (§31639.25). As instructed by ACERA, we have also included a 3% cost sharing contribution that we understand will be paid by Safety Tier 1 and Tier 2 members. For Safety Tier 2C members, there are no cost-sharing contributions. For Safety Tier 2D members, the cost-sharing contribution rate is 5% of salary for the first 5 years of employment and 3% of salary for each subsequent year of employment (even after the member attains 30 years of service).

Cost-of-Living

Provide for one-half of future Cost-of-Living costs.

Safety Tier 4

50% of the total Normal Cost rate.

Other Information:

Non-Tier 4 Safety members with 30 or more years of service are exempt from paying member contributions (however, Tier 2D Safety members are required to continue paying the 3% cost-sharing contribution after 30 years of service). This exemption also applies for General members hired on or before March 7, 1973.

NOTE: *The summary of major plan provisions is designed to outline principal plan benefits as interpreted for purposes of the actuarial valuation. If the Association should find the plan summary not in accordance with the actual provisions, the Association should alert the actuary so they can both be sure the proper provisions are valued.*

SECTION 4: Reporting Information for the Alameda County Employees' Retirement Association

**Appendix A
Member Contribution Rates**

Comparison of Total Member Rate⁽¹⁾ from December 31, 2015 (New) and December 31, 2014 (Current) Valuations

General Tier 1				General Tier 2			
Entry Age	Current	New	Change	Entry Age	Current	New	Change
25	8.78%	8.77%	-0.01%	25	5.99%	5.98%	-0.01%
35	10.65%	10.64%	-0.01%	35	7.27%	7.27%	0.00%
45	12.90%	12.88%	-0.02%	45	8.79%	8.78%	-0.01%
General Tier 3				General Tier 4			
Entry Age	Current	New	Change	Entry Age ⁽²⁾	Current	New	Change
25	10.26%	10.27%	0.01%	Any	8.09%	8.06%	-0.03%
35	12.41%	12.42%	0.01%				
45	15.06%	15.07%	0.01%				
Safety Tier 1				Safety Tier 2			
Entry Age	Current	New	Change	Entry Age	Current	New	Change
25	16.76%	16.82%	0.06%	25	14.13%	14.13%	0.00%
30	18.03%	18.09%	0.06%	30	15.15%	15.15%	0.00%
35	19.44%	19.51%	0.07%	35	16.29%	16.29%	0.00%
Safety Tier 2C				Safety Tier 2D (with less than 5 years of vesting service)			
Entry Age	Current	New	Change	Entry Age	Current	New	Change
25	10.60%	10.56%	-0.04%	25	15.90%	15.89%	-0.01%
30	11.57%	11.53%	-0.04%	30	16.90%	16.89%	-0.01%
35	12.65%	12.61%	-0.04%	35	18.01%	18.00%	-0.01%
Safety Tier 2D (with 5 or more years of vesting service)				Safety Tier 4			
Entry Age	Current	New	Change	Entry Age ⁽²⁾	Current	New	Change
25	13.90%	13.89%	-0.01%	Any	15.25%	14.65%	-0.60%
30	14.90%	14.89%	-0.01%				
35	16.01%	16.00%	-0.01%				

⁽¹⁾ For the non-CalPEPRA tiers, contributions for the first \$161 of biweekly payroll are based on 2/3 of the above rates for integrated members.

⁽²⁾ Tier 4 member rates are independent of entry age.

SECTION 4: Reporting Information for the Alameda County Employees' Retirement Association

Breakdown of member rate between basic and COLA calculated in the December 31, 2015 and December 31, 2014 valuations:

	December 31, 2015 Actuarial Valuation								December 31, 2014 Actuarial Valuation ⁽¹⁾							
	BASIC		COLA		COST SHARING CONTRIBUTIONS		TOTAL		BASIC		COLA		COST SHARING CONTRIBUTIONS		TOTAL	
	Rate	Estimated Annual Amount*	Rate	Estimated Annual Amount*	Rate	Estimated Annual Amount*	Rate	Estimated Annual Amount*	Rate	Estimated Annual Amount*	Rate	Estimated Annual Amount*	Rate	Estimated Annual Amount*	Rate	Estimated Annual Amount*
General Tier 1 Members	6.76%	\$1,740	2.47%	\$635			9.23%	\$2,375	6.76%	\$1,740	2.49%	\$640			9.25%	\$2,380
General Tier 2 Members	6.03%	39,041	1.33%	8,611			7.36%	47,652	6.03%	39,041	1.34%	8,676			7.37%	47,717
General Tier 3 Members	9.60%	294	3.55%	109			13.15%	403	9.60%	294	3.54%	108			13.14%	402
General Tier 4 Members	6.73%	9,179	1.33%	1,814			8.06%	10,993	6.76%	9,220	1.33%	1,814			8.09%	11,034
Safety Tier 1 Members	5.00%	66	2.71%	35	3.00%	\$40	10.71%	141	5.00%	66	2.69%	35	3.00%	\$40	10.69%	141
Safety Tier 2 Members	8.88%	11,124	3.16%	3,958	3.00%	3,758	15.04%	18,840	8.88%	11,124	3.16%	3,958	3.00%	3,758	15.04%	18,840
Safety Tier 2C Members	9.85%	302	2.82%	87	0.00%	0	12.67%	389	9.85%	302	2.86%	88	0.00%	0	12.71%	390
Safety Tier 2D Members	9.10%	1,008	2.98%	330	4.40% ⁽²⁾	488	16.48%	1,826	9.10%	1,008	2.98%	330	4.40% ⁽²⁾	488	16.48%	1,826
Safety Tier 4 Members	11.87%	1,919	2.78%	449	0.00%	0	14.65%	2,368	12.38%	2,001	2.87%	464	0.00%	0	15.25%	2,465
All Member Categories Combined	6.67%	\$64,673	1.66%	\$16,028	0.44%	\$4,286	8.77%	\$84,987	6.68%	\$64,796	1.67%	\$16,113	0.44%	\$4,286	8.79%	\$85,195

⁽¹⁾ These rates have been re-calculated by applying the individual entry age based member rates determined in December 31, 2014 valuation to the Association membership as of December 31, 2015.

⁽²⁾ Determined based on proportion of members contributing 5.00% (with less than 5 years of vesting service) and 3.00% (with 5 or more years of vesting service).

SECTION 4: Reporting Information for the Alameda County Employees' Retirement Association

* Amounts are in thousands and are based on December 31, 2015 annual payroll (also in thousands):

	<u>County Only</u>	<u>AHS, Court & First 5</u>	<u>Other Districts</u>	<u>Total</u>
General Tier 1	\$16,472	\$4,608	\$4,655	\$25,735
General Tier 2	421,505	225,629	311	647,445
General Tier 3			3,061	3,061
General Tier 4	83,786	51,444	1,165	136,395
Safety Tier 1	1,321			1,321
Safety Tier 2	125,265			125,265
Safety Tier 2C	3,067			3,067
Safety Tier 2D	11,082			11,082
Safety Tier 4	16,163			16,163
Total	\$678,661	\$281,681	\$9,192	\$969,534

SECTION 4: Reporting Information for the Alameda County Employees' Retirement Association

**Appendix A
Member Contribution Rates (Continued)**

General Tier 1 Members' Contribution Rates Based on the December 31, 2015 Actuarial Valuation (as a % of payroll)

<u>Entry Age</u>	<u>Basic Only</u>		<u>COLA Only</u>		<u>Total</u>	
	<u>First \$161</u>	<u>Over \$161*</u>	<u>First \$161</u>	<u>Over \$161*</u>	<u>First \$161</u>	<u>Over \$161*</u>
15	3.58%	5.37%	1.31%	1.96%	4.89%	7.33%
16	3.58%	5.37%	1.31%	1.96%	4.89%	7.33%
17	3.65%	5.48%	1.33%	2.00%	4.98%	7.48%
18	3.73%	5.59%	1.36%	2.04%	5.09%	7.63%
19	3.80%	5.70%	1.39%	2.08%	5.19%	7.78%
20	3.88%	5.82%	1.42%	2.13%	5.30%	7.95%
21	3.96%	5.93%	1.45%	2.17%	5.41%	8.10%
22	4.04%	6.05%	1.47%	2.21%	5.51%	8.26%
23	4.12%	6.17%	1.51%	2.26%	5.63%	8.43%
24	4.20%	6.30%	1.53%	2.30%	5.73%	8.60%
25	4.28%	6.42%	1.57%	2.35%	5.85%	8.77%
26	4.37%	6.55%	1.59%	2.39%	5.96%	8.94%
27	4.45%	6.68%	1.63%	2.44%	6.08%	9.12%
28	4.54%	6.81%	1.66%	2.49%	6.20%	9.30%
29	4.63%	6.94%	1.69%	2.54%	6.32%	9.48%
30	4.72%	7.08%	1.73%	2.59%	6.45%	9.67%
31	4.81%	7.22%	1.76%	2.64%	6.57%	9.86%
32	4.90%	7.36%	1.79%	2.69%	6.69%	10.05%
33	5.00%	7.50%	1.83%	2.74%	6.83%	10.24%
34	5.10%	7.64%	1.86%	2.79%	6.96%	10.43%
35	5.19%	7.79%	1.90%	2.85%	7.09%	10.64%
36	5.29%	7.94%	1.93%	2.90%	7.22%	10.84%
37	5.40%	8.09%	1.97%	2.96%	7.37%	11.05%
38	5.50%	8.25%	2.01%	3.01%	7.51%	11.26%
39	5.60%	8.41%	2.05%	3.07%	7.65%	11.48%

SECTION 4: Reporting Information for the Alameda County Employees' Retirement Association

**Appendix A
Member Contribution Rates (Continued)**

General Tier 1 Members' Contribution Rates Based on the December 31, 2015 Actuarial Valuation (as a % of payroll) - continued

<u>Entry Age</u>	<u>Basic Only</u>		<u>COLA Only</u>		<u>Total</u>	
	<u>First \$161</u>	<u>Over \$161*</u>	<u>First \$161</u>	<u>Over \$161*</u>	<u>First \$161</u>	<u>Over \$161*</u>
40	5.71%	8.57%	2.09%	3.13%	7.80%	11.70%
41	5.82%	8.73%	2.13%	3.19%	7.95%	11.92%
42	5.93%	8.90%	2.17%	3.25%	8.10%	12.15%
43	6.05%	9.07%	2.21%	3.32%	8.26%	12.39%
44	6.16%	9.25%	2.25%	3.38%	8.41%	12.63%
45	6.28%	9.43%	2.30%	3.45%	8.58%	12.88%
46	6.41%	9.61%	2.34%	3.51%	8.75%	13.12%
47	6.54%	9.80%	2.39%	3.58%	8.93%	13.38%
48	6.67%	10.00%	2.43%	3.65%	9.10%	13.65%
49	6.80%	10.20%	2.49%	3.73%	9.29%	13.93%
50	6.93%	10.39%	2.53%	3.80%	9.46%	14.19%
51	7.05%	10.58%	2.58%	3.87%	9.63%	14.45%
52	7.16%	10.75%	2.62%	3.93%	9.78%	14.68%
53	7.26%	10.90%	2.65%	3.98%	9.91%	14.88%
54	7.36%	11.04%	2.69%	4.04%	10.05%	15.08%
55	7.44%	11.17%	2.72%	4.08%	10.16%	15.25%
56	7.50%	11.26%	2.74%	4.11%	10.24%	15.37%
57	7.49%	11.23%	2.73%	4.10%	10.22%	15.33%
58	7.40%	11.09%	2.70%	4.05%	10.10%	15.14%
59 & Over	7.13%	10.69%	2.61%	3.91%	9.74%	14.60%

* Use these rates for Non-Integrated Members

Interest:	7.60% per annum
COLA:	3.00%
Mortality:	RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020, set back one year for males and females, weighted 30% male and 70% female.
Salary Increase:	Inflation (3.25%) + Across-the-Board Increase (0.50%) + Merit (See Exhibit II)
COLA Loading Factor:	36.55%
Terminal Pay:	8.0%

SECTION 4: Reporting Information for the Alameda County Employees' Retirement Association

Appendix A

Member Contribution Rates (Continued)

General Tier 2 Members' Contribution Rates Based on the December 31, 2015 Actuarial Valuation (as a % of payroll)

<u>Entry Age</u>	<u>Basic Only</u>		<u>COLA Only</u>		<u>Total</u>	
	<u>First \$161</u>	<u>Over \$161*</u>	<u>First \$161</u>	<u>Over \$161*</u>	<u>First \$161</u>	<u>Over \$161*</u>
15	2.73%	4.10%	0.61%	0.91%	3.34%	5.01%
16	2.73%	4.10%	0.61%	0.91%	3.34%	5.01%
17	2.79%	4.18%	0.61%	0.92%	3.40%	5.10%
18	2.84%	4.27%	0.63%	0.94%	3.47%	5.21%
19	2.90%	4.35%	0.64%	0.96%	3.54%	5.31%
20	2.96%	4.44%	0.65%	0.98%	3.61%	5.42%
21	3.02%	4.53%	0.67%	1.00%	3.69%	5.53%
22	3.08%	4.62%	0.68%	1.02%	3.76%	5.64%
23	3.14%	4.71%	0.69%	1.04%	3.83%	5.75%
24	3.20%	4.81%	0.71%	1.06%	3.91%	5.87%
25	3.27%	4.90%	0.72%	1.08%	3.99%	5.98%
26	3.33%	5.00%	0.74%	1.11%	4.07%	6.11%
27	3.40%	5.10%	0.75%	1.13%	4.15%	6.23%
28	3.47%	5.20%	0.77%	1.15%	4.24%	6.35%
29	3.53%	5.30%	0.78%	1.17%	4.31%	6.47%
30	3.60%	5.40%	0.80%	1.20%	4.40%	6.60%
31	3.67%	5.51%	0.81%	1.22%	4.48%	6.73%
32	3.74%	5.61%	0.83%	1.24%	4.57%	6.85%
33	3.82%	5.72%	0.85%	1.27%	4.67%	6.99%
34	3.89%	5.83%	0.86%	1.29%	4.75%	7.12%
35	3.96%	5.95%	0.88%	1.32%	4.84%	7.27%
36	4.04%	6.06%	0.89%	1.34%	4.93%	7.40%
37	4.12%	6.18%	0.91%	1.37%	5.03%	7.55%
38	4.20%	6.30%	0.93%	1.39%	5.13%	7.69%
39	4.28%	6.42%	0.95%	1.42%	5.23%	7.84%

SECTION 4: Reporting Information for the Alameda County Employees' Retirement Association

Appendix A

Member Contribution Rates (Continued)

General Tier 2 Members' Contribution Rates Based on the December 31, 2015 Actuarial Valuation (as a % of payroll) - continued

<u>Entry Age</u>	<u>Basic Only</u>		<u>COLA Only</u>		<u>Total</u>	
	<u>First \$161</u>	<u>Over \$161*</u>	<u>First \$161</u>	<u>Over \$161*</u>	<u>First \$161</u>	<u>Over \$161*</u>
40	4.36%	6.54%	0.97%	1.45%	5.33%	7.99%
41	4.44%	6.66%	0.98%	1.47%	5.42%	8.13%
42	4.53%	6.79%	1.00%	1.50%	5.53%	8.29%
43	4.61%	6.92%	1.02%	1.53%	5.63%	8.45%
44	4.70%	7.06%	1.04%	1.56%	5.74%	8.62%
45	4.80%	7.19%	1.06%	1.59%	5.86%	8.78%
46	4.89%	7.33%	1.08%	1.62%	5.97%	8.95%
47	4.98%	7.48%	1.10%	1.65%	6.08%	9.13%
48	5.08%	7.62%	1.13%	1.69%	6.21%	9.31%
49	5.17%	7.76%	1.15%	1.72%	6.32%	9.48%
50	5.26%	7.89%	1.17%	1.75%	6.43%	9.64%
51	5.34%	8.01%	1.18%	1.77%	6.52%	9.78%
52	5.41%	8.12%	1.20%	1.80%	6.61%	9.92%
53	5.48%	8.22%	1.21%	1.82%	6.69%	10.04%
54	5.54%	8.30%	1.23%	1.84%	6.77%	10.14%
55	5.57%	8.35%	1.23%	1.85%	6.80%	10.20%
56	5.56%	8.34%	1.23%	1.85%	6.79%	10.19%
57	5.53%	8.29%	1.22%	1.83%	6.75%	10.12%
58	5.73%	8.59%	1.27%	1.90%	7.00%	10.49%
59 & Over	5.94%	8.91%	1.31%	1.97%	7.25%	10.88%

* Use these rates for Non-Integrated Members

Interest: 7.60% per annum
 COLA: 2.00%
 Mortality: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020, set back one year for males and females, weighted 30% male and 70% female.
 Salary Increase: Inflation (3.25%) + Across-the-Board Increase (0.50%) + Merit (See Exhibit II)
 COLA Loading Factor: 22.21%
 Terminal Pay: 3.0%

SECTION 4: Reporting Information for the Alameda County Employees' Retirement Association

Appendix A

Member Contribution Rates (Continued)

General Tier 3 Members' Contribution Rates Based on the December 31, 2015 Actuarial Valuation (as a % of payroll)

<u>Entry Age</u>	<u>Basic Only</u>		<u>COLA Only</u>		<u>Total</u>	
	<u>First \$161</u>	<u>Over \$161*</u>	<u>First \$161</u>	<u>Over \$161*</u>	<u>First \$161</u>	<u>Over \$161*</u>
15	4.19%	6.29%	1.55%	2.32%	5.74%	8.61%
16	4.19%	6.29%	1.55%	2.32%	5.74%	8.61%
17	4.27%	6.41%	1.58%	2.37%	5.85%	8.78%
18	4.36%	6.54%	1.61%	2.42%	5.97%	8.96%
19	4.45%	6.67%	1.65%	2.47%	6.10%	9.14%
20	4.53%	6.80%	1.67%	2.51%	6.20%	9.31%
21	4.62%	6.94%	1.71%	2.56%	6.33%	9.50%
22	4.72%	7.07%	1.74%	2.61%	6.46%	9.68%
23	4.81%	7.21%	1.78%	2.67%	6.59%	9.88%
24	4.90%	7.35%	1.81%	2.72%	6.71%	10.07%
25	5.00%	7.50%	1.85%	2.77%	6.85%	10.27%
26	5.10%	7.64%	1.88%	2.82%	6.98%	10.46%
27	5.19%	7.79%	1.92%	2.88%	7.11%	10.67%
28	5.29%	7.94%	1.96%	2.94%	7.25%	10.88%
29	5.40%	8.10%	1.99%	2.99%	7.39%	11.09%
30	5.50%	8.25%	2.03%	3.05%	7.53%	11.30%
31	5.61%	8.41%	2.07%	3.11%	7.68%	11.52%
32	5.71%	8.57%	2.11%	3.17%	7.82%	11.74%
33	5.82%	8.74%	2.15%	3.23%	7.97%	11.97%
34	5.94%	8.90%	2.19%	3.29%	8.13%	12.19%
35	6.05%	9.07%	2.23%	3.35%	8.28%	12.42%
36	6.17%	9.25%	2.28%	3.42%	8.45%	12.67%
37	6.28%	9.43%	2.32%	3.48%	8.60%	12.91%
38	6.41%	9.61%	2.37%	3.55%	8.78%	13.16%
39	6.53%	9.79%	2.41%	3.62%	8.94%	13.41%

SECTION 4: Reporting Information for the Alameda County Employees' Retirement Association

Appendix A

Member Contribution Rates (Continued)

General Tier 3 Members' Contribution Rates Based on the December 31, 2015 Actuarial Valuation (as a % of payroll) – continued⁵

<u>Entry Age</u>	<u>Basic Only</u>		<u>COLA Only</u>		<u>Total</u>	
	<u>First \$161</u>	<u>Over \$161*</u>	<u>First \$161</u>	<u>Over \$161*</u>	<u>First \$161</u>	<u>Over \$161*</u>
40	6.66%	9.98%	2.46%	3.69%	9.12%	13.67%
41	6.79%	10.18%	2.51%	3.76%	9.30%	13.94%
42	6.92%	10.38%	2.56%	3.84%	9.48%	14.22%
43	7.06%	10.59%	2.61%	3.91%	9.67%	14.50%
44	7.20%	10.80%	2.66%	3.99%	9.86%	14.79%
45	7.34%	11.00%	2.71%	4.07%	10.05%	15.07%
46	7.47%	11.21%	2.76%	4.14%	10.23%	15.35%
47	7.59%	11.38%	2.81%	4.21%	10.40%	15.59%
48	7.69%	11.54%	2.84%	4.26%	10.53%	15.80%
49	7.80%	11.70%	2.88%	4.32%	10.68%	16.02%
50	7.88%	11.83%	2.91%	4.37%	10.79%	16.20%
51	7.95%	11.92%	2.94%	4.41%	10.89%	16.33%
52	7.93%	11.89%	2.93%	4.40%	10.86%	16.29%
53	7.83%	11.75%	2.89%	4.34%	10.72%	16.09%
54 & over	7.55%	11.32%	2.79%	4.18%	10.34%	15.50%

* Use these rates for Non-Integrated Members

Interest:	7.60% per annum
COLA:	3.00%
Mortality:	RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020, set back one year for males and females, weighted 30% male and 70% female.
Salary Increase:	Inflation (3.25%) + Across-the-Board Increase (0.50%) + Merit (See Exhibit II)
COLA Loading Factor:	36.96%
Terminal Pay:	8.0%

SECTION 4: Reporting Information for the Alameda County Employees' Retirement Association

**Appendix A
Member Contribution Rates (Continued)**

General Tier 4 Members' Contribution Rates Based on the December 31, 2015 Actuarial Valuation (as a % of eligible payroll)*

	<u>Basic Only</u> <u>Eligible Pay</u>	<u>COLA Only</u> <u>Eligible Pay</u>	<u>Total</u> <u>Eligible Pay</u>
All General Tier 4 Members	6.73%	1.33%	8.06%

Interest:	7.60% per annum
COLA:	2.00%
Mortality:	RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020, set back one year for males and females, weighted 30% male and 70% female.
Salary Increase:	Inflation (3.25%) + Across-the-Board Increase (0.50%) + Merit (See Exhibit II)
COLA Loading Factor:	19.76%
Terminal Pay:	0.0%

* It is our understanding that in the determination of pension benefits under the CalPEPRA formulas, the compensation that can be taken into account for 2016 is equal to \$117,020. (For an employer that is not enrolled in Social Security, the maximum amount is 120% of \$117,020, or \$140,424). (reference: Section 7522.10). These amounts should be adjusted for changes to the Consumer Price Index for All Urban Consumers after 2016. (reference: Section 7522.10(d))

SECTION 4: Reporting Information for the Alameda County Employees' Retirement Association

Appendix A

Member Contribution Rates (Continued)

Safety Tier 1 Members' Contribution Rates Based on the December 31, 2015 Actuarial Valuation (as a % of payroll)

<u>Entry Age</u>	<u>Basic Only</u>		<u>Cost Sharing Contributions</u>		<u>COLA Only</u>		<u>Total</u>	
	<u>First \$161</u>	<u>Over \$161*</u>	<u>First \$161</u>	<u>Over \$161*</u>	<u>First \$161</u>	<u>Over \$161*</u>	<u>First \$161</u>	<u>Over \$161*</u>
15	5.09%	7.64%	3.00%	3.00%	2.77%	4.15%	10.86%	14.79%
16	5.09%	7.64%	3.00%	3.00%	2.77%	4.15%	10.86%	14.79%
17	5.18%	7.77%	3.00%	3.00%	2.82%	4.23%	11.00%	15.00%
18	5.27%	7.91%	3.00%	3.00%	2.87%	4.30%	11.14%	15.21%
19	5.37%	8.05%	3.00%	3.00%	2.92%	4.38%	11.29%	15.43%
20	5.46%	8.20%	3.00%	3.00%	2.97%	4.46%	11.43%	15.66%
21	5.56%	8.34%	3.00%	3.00%	3.03%	4.54%	11.59%	15.88%
22	5.66%	8.49%	3.00%	3.00%	3.08%	4.62%	11.74%	16.11%
23	5.76%	8.64%	3.00%	3.00%	3.13%	4.70%	11.89%	16.34%
24	5.86%	8.79%	3.00%	3.00%	3.19%	4.78%	12.05%	16.57%
25	5.97%	8.95%	3.00%	3.00%	3.25%	4.87%	12.22%	16.82%
26	6.07%	9.11%	3.00%	3.00%	3.30%	4.95%	12.37%	17.06%
27	6.18%	9.27%	3.00%	3.00%	3.36%	5.04%	12.54%	17.31%
28	6.29%	9.43%	3.00%	3.00%	3.42%	5.13%	12.71%	17.56%
29	6.40%	9.60%	3.00%	3.00%	3.48%	5.22%	12.88%	17.82%
30	6.51%	9.77%	3.00%	3.00%	3.55%	5.32%	13.06%	18.09%
31	6.63%	9.95%	3.00%	3.00%	3.61%	5.41%	13.24%	18.36%
32	6.75%	10.13%	3.00%	3.00%	3.67%	5.51%	13.42%	18.64%
33	6.87%	10.31%	3.00%	3.00%	3.74%	5.61%	13.61%	18.92%
34	7.00%	10.50%	3.00%	3.00%	3.81%	5.71%	13.81%	19.21%
35	7.13%	10.69%	3.00%	3.00%	3.88%	5.82%	14.01%	19.51%
36	7.26%	10.89%	3.00%	3.00%	3.95%	5.93%	14.21%	19.82%
37	7.40%	11.10%	3.00%	3.00%	4.03%	6.04%	14.43%	20.14%
38	7.55%	11.32%	3.00%	3.00%	4.11%	6.16%	14.66%	20.48%
39	7.70%	11.55%	3.00%	3.00%	4.19%	6.28%	14.89%	20.83%

SECTION 4: Reporting Information for the Alameda County Employees' Retirement Association

**Appendix A
Member Contribution Rates (Continued)**

Safety Tier 1 Members' Contribution Rates Based on the December 31, 2015 Actuarial Valuation (as a % of payroll) - continued

Entry Age	Basic Only		Cost Sharing Contributions		COLA Only		Total	
	First \$161	Over \$161*	First \$161	Over \$161*	First \$161	Over \$161*	First \$161	Over \$161*
40	7.86%	11.79%	3.00%	3.00%	4.27%	6.41%	15.13%	21.20%
41	8.02%	12.04%	3.00%	3.00%	4.37%	6.55%	15.39%	21.59%
42	8.20%	12.30%	3.00%	3.00%	4.46%	6.69%	15.66%	21.99%
43	8.36%	12.54%	3.00%	3.00%	4.55%	6.82%	15.91%	22.36%
44	8.45%	12.68%	3.00%	3.00%	4.59%	6.89%	16.04%	22.57%
45	8.50%	12.75%	3.00%	3.00%	4.62%	6.93%	16.12%	22.68%
46	8.52%	12.78%	3.00%	3.00%	4.63%	6.95%	16.15%	22.73%
47	8.40%	12.60%	3.00%	3.00%	4.57%	6.85%	15.97%	22.45%
48	8.18%	12.27%	3.00%	3.00%	4.45%	6.67%	15.63%	21.94%
49 & Over	7.76%	11.64%	3.00%	3.00%	4.22%	6.33%	14.98%	20.97%

* Use these rates for Non-Integrated Members

Interest:	7.60% per annum
COLA:	3.00%
Mortality:	RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020, with no setback for males and set back two years for females, weighted 75% male and 25% female.
Salary Increase:	Inflation (3.25%) + Across-the-Board Increase (0.50%) + Merit (See Exhibit II)
COLA Loading Factor:	54.39%
Terminal Pay:	8.5%

SECTION 4: Reporting Information for the Alameda County Employees' Retirement Association

Appendix A

Member Contribution Rates (Continued)

Safety Tier 2 Members' Contribution Rates Based on the December 31, 2015 Actuarial Valuation (as a % of payroll)

Entry Age	Basic Only		Cost Sharing Contributions		COLA Only		Total	
	First \$161	Over \$161*	First \$161	Over \$161*	First \$161	Over \$161*	First \$161	Over \$161*
15	4.67%	7.01%	3.00%	3.00%	1.67%	2.50%	9.34%	12.51%
16	4.67%	7.01%	3.00%	3.00%	1.67%	2.50%	9.34%	12.51%
17	4.75%	7.13%	3.00%	3.00%	1.69%	2.54%	9.44%	12.67%
18	4.84%	7.26%	3.00%	3.00%	1.73%	2.59%	9.57%	12.85%
19	4.93%	7.39%	3.00%	3.00%	1.75%	2.63%	9.68%	13.02%
20	5.01%	7.52%	3.00%	3.00%	1.79%	2.68%	9.80%	13.20%
21	5.10%	7.65%	3.00%	3.00%	1.82%	2.73%	9.92%	13.38%
22	5.19%	7.79%	3.00%	3.00%	1.85%	2.77%	10.04%	13.56%
23	5.28%	7.93%	3.00%	3.00%	1.88%	2.82%	10.16%	13.75%
24	5.38%	8.07%	3.00%	3.00%	1.91%	2.87%	10.29%	13.94%
25	5.47%	8.21%	3.00%	3.00%	1.95%	2.92%	10.42%	14.13%
26	5.57%	8.35%	3.00%	3.00%	1.99%	2.98%	10.56%	14.33%
27	5.67%	8.50%	3.00%	3.00%	2.02%	3.03%	10.69%	14.53%
28	5.77%	8.65%	3.00%	3.00%	2.05%	3.08%	10.82%	14.73%
29	5.87%	8.80%	3.00%	3.00%	2.09%	3.14%	10.96%	14.94%
30	5.97%	8.96%	3.00%	3.00%	2.13%	3.19%	11.10%	15.15%
31	6.08%	9.12%	3.00%	3.00%	2.17%	3.25%	11.25%	15.37%
32	6.19%	9.28%	3.00%	3.00%	2.21%	3.31%	11.40%	15.59%
33	6.30%	9.45%	3.00%	3.00%	2.25%	3.37%	11.55%	15.82%
34	6.41%	9.62%	3.00%	3.00%	2.29%	3.43%	11.70%	16.05%
35	6.53%	9.80%	3.00%	3.00%	2.33%	3.49%	11.86%	16.29%
36	6.65%	9.98%	3.00%	3.00%	2.37%	3.56%	12.02%	16.54%
37	6.78%	10.17%	3.00%	3.00%	2.41%	3.62%	12.19%	16.79%
38	6.91%	10.36%	3.00%	3.00%	2.46%	3.69%	12.37%	17.05%
39	7.04%	10.56%	3.00%	3.00%	2.51%	3.76%	12.55%	17.32%

SECTION 4: Reporting Information for the Alameda County Employees' Retirement Association

**Appendix A
Member Contribution Rates (Continued)**

Safety Tier 2 Members' Contribution Rates Based on the December 31, 2015 Actuarial Valuation (as a % of payroll) - continued

Entry Age	Basic Only		Cost Sharing Contributions		COLA Only		Total	
	First \$161	Over \$161*	First \$161	Over \$161*	First \$161	Over \$161*	First \$161	Over \$161*
40	7.18%	10.77%	3.00%	3.00%	2.56%	3.84%	12.74%	17.61%
41	7.31%	10.97%	3.00%	3.00%	2.61%	3.91%	12.92%	17.88%
42	7.42%	11.13%	3.00%	3.00%	2.65%	3.97%	13.07%	18.10%
43	7.49%	11.24%	3.00%	3.00%	2.67%	4.00%	13.16%	18.24%
44	7.52%	11.28%	3.00%	3.00%	2.68%	4.02%	13.20%	18.30%
45	7.49%	11.24%	3.00%	3.00%	2.67%	4.00%	13.16%	18.24%
46	7.39%	11.09%	3.00%	3.00%	2.63%	3.95%	13.02%	18.04%
47	7.24%	10.86%	3.00%	3.00%	2.58%	3.87%	12.82%	17.73%
48	7.49%	11.24%	3.00%	3.00%	2.67%	4.00%	13.16%	18.24%
49 & Over	7.76%	11.64%	3.00%	3.00%	2.77%	4.15%	13.53%	18.79%

*Use these rates for Non-Integrated Members

Interest:	7.60% per annum
COLA:	2.00%
Mortality:	RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020, with no setback for males and set back two years for females, weighted 75% male and 25% female.
Salary Increase:	Inflation (3.25%) + Across-the-Board Increase (0.50%) + Merit (See Exhibit II)
COLA Loading Factor:	35.62%
Terminal Pay:	4.0%

SECTION 4: Reporting Information for the Alameda County Employees' Retirement Association

Appendix A

Member Contribution Rates (Continued)

Safety Tier 2C Members' Contribution Rates Based on the December 31, 2015 Actuarial Valuation (as a % of payroll)

<u>Entry Age</u>	<u>Basic Only</u>		<u>COLA Only</u>		<u>Total</u>	
	<u>First \$161</u>	<u>Over \$161*</u>	<u>First \$161</u>	<u>Over \$161*</u>	<u>First \$161</u>	<u>Over \$161*</u>
15	4.67%	7.01%	1.34%	2.01%	6.01%	9.02%
16	4.67%	7.01%	1.34%	2.01%	6.01%	9.02%
17	4.75%	7.13%	1.37%	2.05%	6.12%	9.18%
18	4.84%	7.26%	1.39%	2.08%	6.23%	9.34%
19	4.93%	7.39%	1.41%	2.12%	6.34%	9.51%
20	5.01%	7.52%	1.44%	2.16%	6.45%	9.68%
21	5.10%	7.65%	1.47%	2.20%	6.57%	9.85%
22	5.19%	7.79%	1.49%	2.23%	6.68%	10.02%
23	5.28%	7.93%	1.51%	2.27%	6.79%	10.20%
24	5.38%	8.07%	1.54%	2.31%	6.92%	10.38%
25	5.47%	8.21%	1.57%	2.35%	7.04%	10.56%
26	5.57%	8.35%	1.60%	2.40%	7.17%	10.75%
27	5.67%	8.50%	1.63%	2.44%	7.30%	10.94%
28	5.77%	8.65%	1.65%	2.48%	7.42%	11.13%
29	5.87%	8.80%	1.69%	2.53%	7.56%	11.33%
30	5.97%	8.96%	1.71%	2.57%	7.68%	11.53%
31	6.08%	9.12%	1.75%	2.62%	7.83%	11.74%
32	6.19%	9.28%	1.77%	2.66%	7.96%	11.94%
33	6.30%	9.45%	1.81%	2.71%	8.11%	12.16%
34	6.41%	9.62%	1.84%	2.76%	8.25%	12.38%
35	6.53%	9.80%	1.87%	2.81%	8.40%	12.61%
36	6.65%	9.98%	1.91%	2.86%	8.56%	12.84%
37	6.78%	10.17%	1.95%	2.92%	8.73%	13.09%
38	6.91%	10.36%	1.98%	2.97%	8.89%	13.33%
39	7.04%	10.56%	2.02%	3.03%	9.06%	13.59%

SECTION 4: Reporting Information for the Alameda County Employees' Retirement Association

**Appendix A
Member Contribution Rates (Continued)**

Safety Tier 2C Members' Contribution Rates Based on the December 31, 2015 Actuarial Valuation (as a % of payroll) - continued

<u>Entry Age</u>	<u>Basic Only</u>		<u>COLA Only</u>		<u>Total</u>	
	<u>First \$161</u>	<u>Over \$161*</u>	<u>First \$161</u>	<u>Over \$161*</u>	<u>First \$161</u>	<u>Over \$161*</u>
40	7.18%	10.77%	2.06%	3.09%	9.24%	13.86%
41	7.31%	10.97%	2.10%	3.15%	9.41%	14.12%
42	7.42%	11.13%	2.13%	3.19%	9.55%	14.32%
43	7.49%	11.24%	2.15%	3.22%	9.64%	14.46%
44	7.52%	11.28%	2.16%	3.24%	9.68%	14.52%
45	7.49%	11.24%	2.15%	3.22%	9.64%	14.46%
46	7.39%	11.09%	2.12%	3.18%	9.51%	14.27%
47	7.24%	10.86%	2.07%	3.11%	9.31%	13.97%
48	7.49%	11.24%	2.15%	3.22%	9.64%	14.46%
49 & Over	7.76%	11.64%	2.23%	3.34%	9.99%	14.98%

* Use these rates for Non-Integrated Members

Interest:	7.60% per annum
COLA:	2.00%
Mortality:	RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020, with no setback for males and set back two years for females, weighted 75% male and 25% female.
Salary Increase:	Inflation (3.25%) + Across-the-Board Increase (0.50%) + Merit (See Exhibit II)
COLA Loading Factor:	28.69%
Terminal Pay:	4.0%

SECTION 4: Reporting Information for the Alameda County Employees' Retirement Association

Appendix A

Member Contribution Rates (Continued)

Safety Tier 2D Members' Contribution Rates for Members with Less than 5 Years of Vesting Service Based on the December 31, 2015 Actuarial Valuation

(as a % of payroll)

Entry Age	Basic Only		Cost Sharing Contributions**		COLA Only		Total	
	First \$161	Over \$161*	First \$161	Over \$161*	First \$161	Over \$161*	First \$161	Over \$161*
15	4.67%	7.01%	5.00%	5.00%	1.53%	2.29%	11.20%	14.30%
16	4.67%	7.01%	5.00%	5.00%	1.53%	2.29%	11.20%	14.30%
17	4.75%	7.13%	5.00%	5.00%	1.55%	2.33%	11.30%	14.46%
18	4.84%	7.26%	5.00%	5.00%	1.58%	2.37%	11.42%	14.63%
19	4.93%	7.39%	5.00%	5.00%	1.61%	2.42%	11.54%	14.81%
20	5.01%	7.52%	5.00%	5.00%	1.64%	2.46%	11.65%	14.98%
21	5.10%	7.65%	5.00%	5.00%	1.67%	2.50%	11.77%	15.15%
22	5.19%	7.79%	5.00%	5.00%	1.70%	2.55%	11.89%	15.34%
23	5.28%	7.93%	5.00%	5.00%	1.73%	2.59%	12.01%	15.52%
24	5.38%	8.07%	5.00%	5.00%	1.76%	2.64%	12.14%	15.71%
25	5.47%	8.21%	5.00%	5.00%	1.79%	2.68%	12.26%	15.89%
26	5.57%	8.35%	5.00%	5.00%	1.82%	2.73%	12.39%	16.08%
27	5.67%	8.50%	5.00%	5.00%	1.85%	2.78%	12.52%	16.28%
28	5.77%	8.65%	5.00%	5.00%	1.89%	2.83%	12.66%	16.48%
29	5.87%	8.80%	5.00%	5.00%	1.92%	2.88%	12.79%	16.68%
30	5.97%	8.96%	5.00%	5.00%	1.95%	2.93%	12.92%	16.89%
31	6.08%	9.12%	5.00%	5.00%	1.99%	2.98%	13.07%	17.10%
32	6.19%	9.28%	5.00%	5.00%	2.02%	3.03%	13.21%	17.31%
33	6.30%	9.45%	5.00%	5.00%	2.06%	3.09%	13.36%	17.54%
34	6.41%	9.62%	5.00%	5.00%	2.10%	3.15%	13.51%	17.77%
35	6.53%	9.80%	5.00%	5.00%	2.13%	3.20%	13.66%	18.00%
36	6.65%	9.98%	5.00%	5.00%	2.17%	3.26%	13.82%	18.24%
37	6.78%	10.17%	5.00%	5.00%	2.21%	3.32%	13.99%	18.49%
38	6.91%	10.36%	5.00%	5.00%	2.26%	3.39%	14.17%	18.75%
39	7.04%	10.56%	5.00%	5.00%	2.30%	3.45%	14.34%	19.01%

SECTION 4: Reporting Information for the Alameda County Employees' Retirement Association

Appendix A

Member Contribution Rates (Continued)

Safety Tier 2D Members' Contribution Rates for Members with Less than 5 Years of Vesting Service Based on the December 31, 2015 Actuarial Valuation - continued

(as a % of payroll)

Entry Age	Basic Only		Cost Sharing Contributions**		COLA Only		Total	
	First \$161	Over \$161*	First \$161	Over \$161*	First \$161	Over \$161*	First \$161	Over \$161*
40	7.18%	10.77%	5.00%	5.00%	2.35%	3.52%	14.53%	19.29%
41	7.31%	10.97%	5.00%	5.00%	2.39%	3.59%	14.70%	19.56%
42	7.42%	11.13%	5.00%	5.00%	2.43%	3.64%	14.85%	19.77%
43	7.49%	11.24%	5.00%	5.00%	2.45%	3.67%	14.94%	19.91%
44	7.52%	11.28%	5.00%	5.00%	2.46%	3.69%	14.98%	19.97%
45	7.49%	11.24%	5.00%	5.00%	2.45%	3.67%	14.94%	19.91%
46	7.39%	11.09%	5.00%	5.00%	2.42%	3.63%	14.81%	19.72%
47	7.24%	10.86%	5.00%	5.00%	2.37%	3.55%	14.61%	19.41%
48	7.49%	11.24%	5.00%	5.00%	2.45%	3.67%	14.94%	19.91%
49 & Over	7.76%	11.64%	5.00%	5.00%	2.54%	3.81%	15.30%	20.45%

* Use these rates for Non-Integrated Members

** The 5.00% cost sharing contribution is reduced to 3.00% for members with at least 5 years of vesting service.

Interest: 7.60% per annum

COLA: 2.00%

Mortality: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020, with no setback for males and set back two years for females, weighted 75% male and 25% female.

Salary Increase: Inflation (3.25%) + Across-the-Board Increase (0.50%) + Merit (See Exhibit II)

COLA Loading Factor: 32.69%

Terminal Pay: 4.0%

SECTION 4: Reporting Information for the Alameda County Employees' Retirement Association

**Appendix A
Member Contribution Rates (Continued)**

**Safety Tier 2D Members' Contribution Rates for Members with 5 or More Years of Vesting Service Based on the December 31, 2015 Actuarial Valuation
(as a % of payroll)**

Entry Age	Basic Only		Cost Sharing Contributions		COLA Only		Total	
	First \$161	Over \$161*	First \$161	Over \$161*	First \$161	Over \$161*	First \$161	Over \$161*
15	4.67%	7.01%	3.00%	3.00%	1.53%	2.29%	9.20%	12.30%
16	4.67%	7.01%	3.00%	3.00%	1.53%	2.29%	9.20%	12.30%
17	4.75%	7.13%	3.00%	3.00%	1.55%	2.33%	9.30%	12.46%
18	4.84%	7.26%	3.00%	3.00%	1.58%	2.37%	9.42%	12.63%
19	4.93%	7.39%	3.00%	3.00%	1.61%	2.42%	9.54%	12.81%
20	5.01%	7.52%	3.00%	3.00%	1.64%	2.46%	9.65%	12.98%
21	5.10%	7.65%	3.00%	3.00%	1.67%	2.50%	9.77%	13.15%
22	5.19%	7.79%	3.00%	3.00%	1.70%	2.55%	9.89%	13.34%
23	5.28%	7.93%	3.00%	3.00%	1.73%	2.59%	10.01%	13.52%
24	5.38%	8.07%	3.00%	3.00%	1.76%	2.64%	10.14%	13.71%
25	5.47%	8.21%	3.00%	3.00%	1.79%	2.68%	10.26%	13.89%
26	5.57%	8.35%	3.00%	3.00%	1.82%	2.73%	10.39%	14.08%
27	5.67%	8.50%	3.00%	3.00%	1.85%	2.78%	10.52%	14.28%
28	5.77%	8.65%	3.00%	3.00%	1.89%	2.83%	10.66%	14.48%
29	5.87%	8.80%	3.00%	3.00%	1.92%	2.88%	10.79%	14.68%
30	5.97%	8.96%	3.00%	3.00%	1.95%	2.93%	10.92%	14.89%
31	6.08%	9.12%	3.00%	3.00%	1.99%	2.98%	11.07%	15.10%
32	6.19%	9.28%	3.00%	3.00%	2.02%	3.03%	11.21%	15.31%
33	6.30%	9.45%	3.00%	3.00%	2.06%	3.09%	11.36%	15.54%
34	6.41%	9.62%	3.00%	3.00%	2.10%	3.15%	11.51%	15.77%
35	6.53%	9.80%	3.00%	3.00%	2.13%	3.20%	11.66%	16.00%
36	6.65%	9.98%	3.00%	3.00%	2.17%	3.26%	11.82%	16.24%
37	6.78%	10.17%	3.00%	3.00%	2.21%	3.32%	11.99%	16.49%
38	6.91%	10.36%	3.00%	3.00%	2.26%	3.39%	12.17%	16.75%
39	7.04%	10.56%	3.00%	3.00%	2.30%	3.45%	12.34%	17.01%

SECTION 4: Reporting Information for the Alameda County Employees' Retirement Association

Appendix A

Member Contribution Rates (Continued)

Safety Tier 2D Members' Contribution Rates for Members with 5 or More Years of Vesting Service Based on the December 31, 2015 Actuarial Valuation – continued

(as a % of payroll)

Entry Age	Basic Only		Cost Sharing Contributions		COLA Only		Total	
	First \$161	Over \$161*	First \$161	Over \$161*	First \$161	Over \$161*	First \$161	Over \$161*
40	7.18%	10.77%	3.00%	3.00%	2.35%	3.52%	12.53%	17.29%
41	7.31%	10.97%	3.00%	3.00%	2.39%	3.59%	12.70%	17.56%
42	7.42%	11.13%	3.00%	3.00%	2.43%	3.64%	12.85%	17.77%
43	7.49%	11.24%	3.00%	3.00%	2.45%	3.67%	12.94%	17.91%
44	7.52%	11.28%	3.00%	3.00%	2.46%	3.69%	12.98%	17.97%
45	7.49%	11.24%	3.00%	3.00%	2.45%	3.67%	12.94%	17.91%
46	7.39%	11.09%	3.00%	3.00%	2.42%	3.63%	12.81%	17.72%
47	7.24%	10.86%	3.00%	3.00%	2.37%	3.55%	12.61%	17.41%
48	7.49%	11.24%	3.00%	3.00%	2.45%	3.67%	12.94%	17.91%
49 & Over	7.76%	11.64%	3.00%	3.00%	2.54%	3.81%	13.30%	18.45%

* Use these rates for Non-Integrated Members

Interest:	7.60% per annum
COLA:	2.00%
Mortality:	RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020, with no setback for males and set back two years for females, weighted 75% male and 25% female.
Salary Increase:	Inflation (3.25%) + Across-the-Board Increase (0.50%) + Merit (See Exhibit II)
COLA Loading Factor:	32.69%
Terminal Pay:	4.0%

SECTION 4: Reporting Information for the Alameda County Employees' Retirement Association

**Appendix A
Member Contribution Rates (Continued)**

Safety Tier 4 Members' Contribution Rates Based on the December 31, 2015 Actuarial Valuation (as a % of eligible payroll)*

	Basic Only	COLA Only	Total
	<u>Eligible Pay</u>	<u>Eligible Pay</u>	<u>Eligible Pay</u>
All Safety Tier 4 Members	11.87%	2.78%	14.65%

Interest:	7.60% per annum
COLA:	2.00%
Mortality:	RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020, with no setback for males and set back two years for females, weighted 75% male and 25% female.
Salary Increase:	Inflation (3.25%) + Across-the-Board Increase (0.50%) + Merit (See Exhibit II)
COLA Loading Factor:	23.42%
Terminal Pay:	0.0%

* It is our understanding that in the determination of pension benefits under the CalPEPRA formulas, the compensation that can be taken into account for 2016 is equal to \$117,020. (For an employer that is not enrolled in Social Security, the maximum amount is 120% of \$117,020, or \$140,424). (reference: Section 7522.10). These amounts should be adjusted for changes to the Consumer Price Index for All Urban Consumers after 2016. (reference: Section 7522.10(d))

SECTION 4: Reporting Information for the Alameda County Employees' Retirement Association

Appendix B

Projected Employer Contributions By Each Participating Employer

Estimated Employer Contribution Requirement for Each Participating Employer in ACERA (\$000s)
 Calculated Based on Projected Employer Compensation Used in the December 31, 2015 Actuarial Valuation

Dollar Contribution⁽¹⁾ - Based on December 31, 2015 Valuation

<u>Employer Name (Code)</u>	<u>General</u>				<u>Safety</u>					<u>Total</u>
	<u>Tier 1</u>	<u>Tier 2</u>	<u>Tier 3</u>	<u>Tier 4</u>	<u>Tier 1</u>	<u>Tier 2</u>	<u>Tier 2C</u>	<u>Tier 2D</u>	<u>Tier 4</u>	
Alameda County (101)	\$3,331	\$81,730		\$15,534	\$936	\$66,052	\$1,657	\$5,552	\$8,226	\$183,018
Health System (106)	500	36,537		8,226						45,263
Superior Court (632)	460	7,883		1,490						9,833
First 5 (714)		729		140						869
Housing Authority (103)	978	79		88						1,145
LARPD (104)	222		\$801	155						1,178
Office of Education (105)	20									20
Total	\$5,511	\$126,958	\$801	\$25,633	\$936	\$66,052	\$1,657	\$5,552	\$8,226	\$241,326

Dollar Contribution⁽¹⁾ - Based on December 31, 2014 Valuation

<u>Employer Name (Code)</u>	<u>General</u>				<u>Safety</u>					<u>Total</u>
	<u>Tier 1</u>	<u>Tier 2</u>	<u>Tier 3</u>	<u>Tier 4</u>	<u>Tier 1</u>	<u>Tier 2</u>	<u>Tier 2C</u>	<u>Tier 2D</u>	<u>Tier 4</u>	
Alameda County (101)	\$3,437	\$84,765		\$16,103	\$949	\$67,644	\$1,712	\$5,697	\$8,521	\$188,828
Health System (106)	514	37,741		8,493						46,748
Superior Court (632)	473	8,143		1,538						10,154
First 5 (714)		753		145						898
Housing Authority (103)	996	81		90						1,167
LARPD (104)	226		\$897	184						1,307
Office of Education (105)	20									20
Total	\$5,666	\$131,483	\$897	\$26,553	\$949	\$67,644	\$1,712	\$5,697	\$8,521	\$249,122

SECTION 4: Reporting Information for the Alameda County Employees' Retirement Association

⁽¹⁾ Contribution calculated using projected compensation provided below for the December 31, 2015 valuation:

December 31, 2015 Projected Total Compensation (\$000s)

<u>Employer Name (Code)</u>	<u>General</u>				<u>Safety</u>					<u>Total</u>
	<u>Tier 1</u>	<u>Tier 2</u>	<u>Tier 3</u>	<u>Tier 4</u>	<u>Tier 1</u>	<u>Tier 2</u>	<u>Tier 2C</u>	<u>Tier 2D</u>	<u>Tier 4</u>	
Alameda County (101)	\$16,472	\$421,505		\$83,786	\$1,321	\$125,265	\$3,067	\$11,082	\$16,163	\$678,661
Health System (106)	2,399	182,592		42,937						227,928
Superior Court (632)	2,209	39,393		7,776						49,378
First 5 (714)		3,644		731						4,375
Housing Authority (103)	3,733	311		360						4,404
LARPD (104)	847		\$3,061	805						4,713
Office of Education (105)	75									75
Total	\$25,735	\$647,445	\$3,061	\$136,395	\$1,321	\$125,265	\$3,067	\$11,082	\$16,163	\$969,534

5419183v5/05579.001