



**Cavanaugh Macdonald**  
CONSULTING, LLC

*The experience and dedication you deserve*



Retirement Systems  
of Alabama

**Report on the Actuarial Valuation of the  
Employees' Retirement System of Alabama  
Prepared as of September 30, 2016**





# Cavanaugh Macdonald

CONSULTING, LLC

*The experience and dedication you deserve*

June 29, 2017

Board of Control  
Employees' Retirement System of Alabama  
Montgomery, Alabama

Members of the Board:

In this report are submitted the results of the annual actuarial valuation of the assets and liabilities of the Employees' Retirement System of Alabama, prepared as of September 30, 2016 in accordance with Section 36-27-23(p) of the act governing the operation of the System.

The purpose of this report is to provide a summary of the funded status of the System as of September 30, 2016 and to recommend rates of employer contribution. While not verifying the data at the source, the actuary performed tests for consistency and reasonability.

Since the previous valuation, various assumptions and methods have been revised to reflect the results of the experience investigation for the five-year period ending September 30, 2015.

On the basis of the valuation, it is recommended that the employer make contributions to the System for State employees (members other than State policemen) at the rate of 14.51% of payroll for Tier I members and 14.14% for Tier II members. It is also recommended that the employer make contributions to the System for State policemen at the rate of 50.08% of payroll for Tier I members and 43.43% for Tier II members for the fiscal year ending September 30, 2019. The contribution rates for local employers for the fiscal year beginning October 1, 2018 will be submitted in a separate report and will include the impact of all assumption changes and employer-elected changes through September 30, 2016.

The promised benefits of the System are included in the actuarially calculated contribution rates which are developed using the Entry Age Normal cost method. Five-year smoothed market value of assets is used for actuarial valuation purposes. Gains and losses are reflected in the unfunded actuarial accrued liability that is being amortized by regular annual contributions as a level percentage of payroll, on the assumption that payroll will increase by 3.125% annually. The valuation reflects the impact of Act 2017-360, which amended the provisions defining state policemen, to include employees hired after January 1, 2015. The assumptions recommended by the actuary and adopted by the Board are in the aggregate reasonably related to the experience under the System and to reasonable expectations of anticipated experience under the System. The assumptions and methods used for funding purposes meet the parameters outlined in the Board's funding policy.

In this report we provide the following information and supporting schedules in the Actuarial and Statistical Sections of the Comprehensive Annual Financial Report (CAFR):

- Summary of Actuarial Assumptions and Methods
- Actuarial Cost Method
- Summary of Plan Provisions as Interpreted for Valuation Purposes
- Schedule of Funding Progress
- Solvency Test
- Schedule of Active Member Valuation Data

3550 Busbee Pkwy, Suite 250, Kennesaw, GA 30144

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

[www.CavMacConsulting.com](http://www.CavMacConsulting.com)

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



We also provide the following schedules for the CAFR in a separate supplemental report:

- Analysis of Actuarial Gains and Losses
- Schedule of Retirants and Beneficiaries Added and Removed from Rolls
- Retired Members by Type of Benefit as of September 30, 2016
- Ten-Year History of Average Monthly Benefit Payments as of September 30

The necessary GASB Statements No. 67 and 68 disclosure information is provided in separate supplemental reports.

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

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

The actuarial computations presented in this report are for purposes of determining the recommended funding amount for the System. Use of these computations for purposes other than meeting these requirements may not be appropriate.

In our opinion the System is operating on an actuarially sound basis. Assuming that contributions to the System are made by the employer from year to year in the future at the rates recommended on the basis of the successive actuarial valuations, the continued sufficiency of the retirement fund to provide the benefits called for under the System may be safely anticipated.

The Table of Contents, which immediately follows, outlines the material contained in the report.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read 'Edward Macdonald', is written over a light blue horizontal line.

Edward A. Macdonald, ASA, FCA, MAAA  
President

A handwritten signature in blue ink, appearing to read 'Cathy Turcot', is written over a light blue horizontal line.

Cathy Turcot  
Principal and Managing Director

A handwritten signature in blue ink, appearing to read 'Jonathan T. Craven', is written over a light blue horizontal line.

Jonathan T. Craven, ASA, EA, FCA, MAAA  
Consulting Actuary

A handwritten signature in blue ink, appearing to read 'Larry Langer', is written over a light blue horizontal line.

Larry Langer, ASA, EA, FCA, MAAA  
Principal and Consulting Actuary



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**REPORT ON THE ACTUARIAL VALUATION OF  
THE EMPLOYEES' RETIREMENT SYSTEM OF ALABAMA  
PREPARED AS OF SEPTEMBER 30, 2016**

**SECTION I - SUMMARY OF PRINCIPAL RESULTS**

1. For convenience of reference, the principal results of the valuation and a comparison with the preceding year's results for State Employees, Local Employees and State Policemen are summarized below:

**SUMMARY OF PRINCIPAL RESULTS FOR STATE EMPLOYEES**

<b>VALUATION DATE</b>	<b>September 30, 2016</b>	<b>September 30, 2015</b>
Number of active members	29,101	29,235
Annual compensation	\$ 1,265,310,969	\$ 1,251,768,254
Number of retired members and beneficiaries*	23,614	22,983
Annual retirement allowances*	\$ 513,858,040	\$ 491,513,887
Number of DROP participants	0	268
Annual compensation	\$ 0	\$ 18,788,057
Annual allowances	0	9,592,440
Number of deferred vested members	942	N/A
Estimated deferred annual allowances	\$ 11,332,390	N/A
<b>Assets:</b>		
Actuarial value	\$ 4,598,818,390	\$ 4,504,338,159
Market value	4,615,916,406	4,469,805,870
Unfunded actuarial accrued liability	\$ 2,805,769,277	\$ 2,655,330,174
Funded Ratio based on Actuarial Value of Assets	62.1%	62.9%
<b>CONTRIBUTIONS FOR FISCAL YEAR ENDING</b>		
<b><u>Tier I (first hired prior to January 1, 2013)</u></b>		
Employer contribution rate		
Normal	0.78%	1.17%
Accrued liability	13.36	12.40
Death benefit	0.02	0.02
Administration	<u>0.35</u>	<u>0.35</u>
Total	14.51%	13.94%
<b><u>Tier II (first hired on or after January 1, 2013)</u></b>		
Employer contribution rate		
Normal	0.41%	0.52%
Accrued liability	13.36	12.40
Death benefit	0.02	0.02
Administration	<u>0.35</u>	<u>0.35</u>
Total	14.14%	13.29%
Blended Amortization period	29.3 years	29.6 years

\*Includes post-DROP members in suspended status who are also active with a second retirement account.



**SUMMARY OF PRINCIPAL RESULTS FOR STATE POLICEMEN**

<b>VALUATION DATE</b>	<b>September 30, 2016</b>	<b>September 30, 2015</b>
Number of active members	655	701
Annual compensation	\$ 41,213,571	\$ 41,320,289
Number of retired members and beneficiaries*	893	887
Annual retirement allowances*	\$ 41,425,353	\$ 40,571,112
Number of DROP participants	0	7
Annual compensation	\$ 0	\$ 541,154
Annual allowances	0	411,866
Number of deferred vested members	13	N/A
Estimated deferred annual allowances	214,321	N/A
Assets:		
Actuarial value	\$ 318,102,553	\$ 313,373,256
Market value	318,884,908	310,718,614
Unfunded actuarial accrued liability	\$ 272,554,851	\$ 246,421,751
Funded Ratio based on Actuarial Value of Assets	53.9%	56.0%
<b>CONTRIBUTION FOR FISCAL YEAR ENDING</b>	<b>September 30, 2019</b>	<b>September 30, 2018**</b>
<b><u>Tier I (first hired prior to January 1, 2013)</u></b>		
Employer contribution rate		
Normal	10.27%	9.23%
Accrued liability	39.44	34.84
Death benefit	0.02	0.02
Administration	<u>0.35</u>	<u>0.35</u>
Total	50.08%	44.44%
<b><u>Tier II (first hired on or after January 1, 2013)</u></b>		
Employer contribution rate		
Normal	3.62%	4.08%
Accrued liability	39.44	34.84
Death benefit	0.02	0.02
Administration	<u>0.35</u>	<u>0.35</u>
Total	43.43%	39.29%
Blended Amortization Period	29.3 years	29.6 years

\*Includes post-DROP members in suspended status who are also active with a second retirement account.

\*\* The amortization method has been revised since the previous valuation to level percent of payroll to reflect the impact of Act 2017-360.



**SUMMARY OF PRINCIPAL RESULTS FOR LOCAL EMPLOYEES**

<b>VALUATION DATE</b>	<b>September 30, 2016</b>	<b>September 30, 2015</b>
Number of active members	55,058	54,627
Annual compensation	\$ 2,266,366,656	\$ 2,168,066,588
Number of retired members and beneficiaries*	23,242	22,248
Annual retirement allowances*	\$ 450,027,767	\$ 421,104,840
Number of DROP participants	0	121
Annual compensation	\$ 0	\$ 7,532,538
Annual allowances	0	3,788,413
Number of deferred vested members	1,155	N/A
Estimated deferred annual allowances	\$ 13,193,635	N/A
Assets:		
Actuarial value	\$ 6,165,358,692	\$ 5,771,547,001
Market value	6,173,636,004	5,704,731,262
Unfunded actuarial accrued liability	\$ 2,567,404,790	\$ 2,232,709,814
Funded Ratio based on Actuarial Value of Assets	70.6%	72.1%
<b>CONTRIBUTIONS FOR FISCAL YEAR ENDING</b>	<b>September 30, 2019</b>	<b>September 30, 2018</b>
Employer contribution rate		
Normal	Varies	Varies
Accrued liability	Varies	Varies
Death benefit	0.02%	0.02%
Administration	<u>0.35</u>	<u>0.35</u>
Total	Varies	Varies
Amortization period	Varies	Varies

\*Includes post-DROP members in suspended status who are also active with a second retirement account.



### SUMMARY OF PRINCIPAL RESULTS FOR ALL GROUPS

VALUATION DATE	September 30, 2016	September 30, 2015
Number of active members	84,814	84,563
Annual compensation	\$ 3,572,891,196	\$ 3,461,155,131
Number of retired members and beneficiaries*	47,749	46,118
Annual retirement allowances*	\$ 1,005,311,160	\$ 953,189,839
Number of DROP participants	0	396
Annual compensation	\$ 0	\$ 26,861,749
Annual allowances	0	13,792,719
Number of deferred vested members	2,110	N/A
Estimated deferred annual allowances	\$ 24,740,346	N/A
Assets:		
Actuarial value	\$ 11,082,279,635	\$ 10,589,258,416
Market value	11,108,437,318	10,485,255,746
Unfunded actuarial accrued liability	\$ 5,645,728,918	\$ 5,134,461,739
Funded Ratio based on Actuarial Value of Assets	66.2%	67.3%

\*Includes post-DROP members in suspended status who are also active with a second retirement account.

- Comments on the valuation results as of September 30, 2016 are given in Section IV and further discussion of the contribution levels is set out in Section V. The contribution rates for local employers for fiscal year beginning October 1, 2018 will be submitted in a separate report.
- Schedule B of this report shows the development of the actuarial value of assets. Schedule D outlines the full set of actuarial assumptions and methods used in the current valuation. Since the previous valuation, various assumptions and methods have been revised to reflect the results of the experience investigation for the five-year period ending September 30, 2015. These revised assumptions, as summarized in the following table, were adopted by the Board on September 29, 2016.





<b>Summary of Assumption and Method Changes</b>	
<b>Economic Assumptions</b>	
<b>Price Inflation</b>	Changed from 3.00% to 2.875% on September 30, 2016. Change to 2.75% on September 30, 2017.
<b>Real Rate of Investment Return</b>	No change in the current rate of 5.00%
<b>Total Rate of Investment Return</b>	Changed from an ultimate rate of 8.00% to 7.875% on September 30, 2016. Change to 7.75% on September 30, 2017.
<b>Real Rate of Wage Inflation</b>	No change in the current rate of 0.25%.
<b>Wage Inflation</b>	Changed from 3.25% to 3.125% on September 30, 2016. Change to 3.00% on September 30, 2017.
<b>Payroll Growth</b>	Changed from 3.25% to 3.125% on September 30, 2016. Change to 3.00% on September 30, 2017.
<b>Demographic Assumptions</b>	
<b>Withdrawal</b>	Changed assumed rates.
<b>Retirement</b>	Changed assumed rates.
<b>Mortality</b>	Changed assumed rates.
<b>Disability</b>	Changed assumed rates.
<b>Merit/Promotion Scale</b>	Changed assumed rates.
<b>Other Assumptions and Methods and Administrative Changes</b>	
<b>Unused Sick Leave</b>	Changed assumption.
<b>Asset Smoothing</b>	No change in method.
<b>Interest Smoothing Method</b>	Changed to use a static discount rate.
<b>Pre-retirement Death Benefit</b>	Changed assumption.
<b>Administrative Expenses</b>	Changed assumption.
<b>Separation from Service</b>	No change in assumption.
<b>All others</b>	No change to other actuarial methods.

In addition, for this valuation we have received data from the Retirement System in order to estimate benefits for vested inactive members. We have revised our method of determining liabilities for these members to reflect the estimated deferred benefit payments.

4. The Board funding policy is shown in Schedule F.
5. Provisions of the System, as summarized in Schedule H, were taken into account in the current valuation. There have been no changes since the previous valuation.
6. The funded ratio shown in the Summary of Principal Results is the ratio of the actuarial value of assets to the actuarial accrued liability. The funded status would be different based on market value of assets. The funded ratio is an indication of progress in funding the promised benefits. Since the



ratio is less than 100%, there is a need for additional contributions towards payment of the unfunded actuarial accrued liability. In addition, this funded ratio does not have any relationship to measuring sufficiency if the plan had to settle its liabilities.

## **SECTION II – MEMBERSHIP DATA**

1. Data regarding the membership of the System for use as a basis of the valuation were furnished by the Retirement System office. The following table shows the number of active members and their annual compensation as of September 30, 2016 on the basis of which the valuation was prepared.



**TABLE 1**

**THE NUMBER AND ANNUAL COMPENSATION OF  
ACTIVE MEMBERS AS OF SEPTEMBER 30, 2016**

<b>GROUP</b>	<b>NUMBER</b>	<b>COMPENSATION</b>
State Employees		
Tier 1	21,861	\$1,020,888,761
Tier 2	6,763	210,375,485
Post-DROP Members Still in Active Service	<u>477</u>	<u>34,046,723</u>
Subtotal	29,101	\$1,265,310,969
DROP	<u>0</u>	<u>0</u>
Total	29,101	\$1,265,310,969
State Policemen		
Tier 1	644	\$40,579,046
Tier 2	8	373,750
Post-DROP Members Still in Active Service	<u>3</u>	<u>260,775</u>
Subtotal	655	\$41,213,571
DROP	<u>0</u>	<u>0</u>
Total	655	\$41,213,571
Local Employees		
Tier 1	40,065	\$1,828,618,493
Tier 2	14,758	420,374,992
Post-DROP Members Still in Active Service	<u>235</u>	<u>17,373,171</u>
Subtotal	55,058	\$2,266,366,656
DROP	<u>0</u>	<u>0</u>
Total	55,058	\$2,266,366,656
All Groups		
Tier 1	62,570	\$2,890,086,300
Tier 2	21,529	631,124,227
Post-DROP Members Still in Active Service	<u>715</u>	<u>51,680,669</u>
Subtotal	84,814	\$3,572,891,196
DROP	<u>0</u>	<u>0</u>
Total	84,814	\$3,572,891,196

The table reflects the active membership for whom complete valuation data were submitted. The results of the valuation include an estimated liability for an additional 264 vested inactive members where complete data was not available (with liabilities equal to contribution balances multiplied by a factor of 3), contribution balances for an additional 8,546 non-vested inactive members who have contributed in the last 5 years, and 19,707 non-vested inactive members who have not contributed for more than 5 years.



2. The following table shows a six-year history of active member valuation data.

**TABLE 2**  
**SCHEDULE OF ACTIVE MEMBER VALUATION DATA**

<u>Valuation Date</u>	<u>Number</u>	<u>Annual Payroll</u>	<u>Annual Average Pay</u>	<u>% Increase in Average Pay</u>
9/30/2016 <sup>1</sup>	84,814	\$ 3,572,891,196	\$ 42,126	2.92%
9/30/2015 <sup>2</sup>	84,563	3,461,155,131	40,930	2.34
9/30/2014 <sup>3</sup>	84,694	3,387,186,858	39,993	1.61
9/30/2013 <sup>4</sup>	84,305	3,307,511,468	39,359	6.02
9/30/2012 <sup>5</sup>	84,169	3,124,791,422	37,125	-5.88
9/30/2011 <sup>6</sup>	85,633	3,377,717,419	39,444	-1.00

<sup>1</sup>There are no employees currently participating in the DROP program.

<sup>2</sup>In addition, there are 396 members with compensation of \$26,861,749 who are currently participating in the DROP. Employers of the Retirement System contribute on this payroll.

<sup>3</sup>In addition, there are 891 members with compensation of \$57,153,873 who are currently participating in the DROP. Employers of the Retirement System contribute on this payroll.

<sup>4</sup>In addition, there are 1,514 members with compensation of \$93,084,090 who are currently participating in the DROP. Employers of the Retirement System contribute on this payroll.

<sup>5</sup>In addition, there are 2,121 members with compensation of \$127,211,439 who are currently participating in the DROP. Employers of the Retirement System contribute on this payroll.

<sup>6</sup>In addition, there are 2,708 members with compensation of \$162,963,178 who are currently participating in the DROP. Employers of the Retirement System contribute on this payroll.

3. The following table shows the number and annual retirement allowances payable to retired members and their beneficiaries on the roll of the Retirement System as of the valuation date.



**TABLE 3**

**THE NUMBER AND ANNUAL RETIREMENT ALLOWANCES  
OF RETIRED MEMBERS AND BENEFICIARIES OF  
DECEASED MEMBERS ON THE ROLL AS OF SEPTEMBER 30, 2016**

TYPE OF RETIREMENT	GROUP			
	STATE EMPLOYEES <sup>1</sup>	STATE POLICEMEN <sup>2</sup>	LOCAL EMPLOYEES <sup>3</sup>	TOTAL
Service:				
Number <sup>4</sup>	19,817	753	19,175	39,745
Annual Allowances <sup>4</sup>	\$ 465,212,393	\$ 38,105,180	\$ 402,608,870	\$ 905,926,443
Disability:				
Number	2,228	39	1,959	4,226
Annual Allowances	\$ 30,939,743	\$ 1,119,825	\$ 26,096,459	\$ 58,156,027
Beneficiaries:				
Number	1,569	101	2,108	3,778
Annual Allowances	\$ 19,863,910	\$ 2,209,981	\$ 22,224,725	\$ 44,298,616
DROP Participants:				
Number	-	-	-	-
Annual Allowances	\$ -	\$ -	\$ -	\$ -
Total:				
Number	23,614	893	23,242	47,749
Annual Allowances	\$ 516,016,046	\$ 41,434,986	\$ 450,930,054	\$ 1,008,381,086

<sup>1</sup> In addition, there is 1 terminated vested pensioner with annual deferred allowances totaling \$246, and 941 vested inactive members with estimated deferred annual allowances totaling \$11,332,144.

<sup>2</sup> In addition, there are 13 vested inactive members with estimated deferred annual allowances totaling \$214,321.

<sup>3</sup> In addition, there are 35 terminated vested pensioners with annual deferred allowances totaling \$153,313, and 1,120 vested inactive members with estimated deferred annual allowances totaling \$13,040,322.

<sup>4</sup> Includes post-DROP members in suspended status who are also active with a second retirement account.

4. Tables in Schedule I show the distribution by age and service of the number and average annual compensation of active members included in the valuation. In addition, tables in Schedule I show the distribution by age and benefit type of the number, annual benefits, and average annual benefits of retired members included in the valuation.



### **SECTION III - ASSETS**

1. The current retirement law provides for the maintenance of five funds for the purpose of recording the fiscal transactions of the System, namely, the Annuity Savings Fund, the Pension Accumulation Fund, the Deferred Retirement Option Plan Fund, the Pre-Retirement Death Benefit Fund, and the Expense Fund.

(a) Annuity Savings Fund

The Annuity Savings Fund is the fund to which are credited all contributions made by members, except those contributions made by members who are participating in DROP, together with regular interest thereon. When a member retires or when a survivor allowance becomes payable or a member enters DROP, the amount of the member's accumulated contributions are transferred from the Annuity Savings Fund to the Pension Accumulation Fund. On September 30, 2016, the market value of assets credited to this Fund amounted to \$2,707,128,912 which represent the contributions of members to this date.

(b) Pension Accumulation Fund

The Pension Accumulation Fund is the fund to which are credited all contributions made by the employers, except those contributions made to the Pre-Retirement Death Benefit Fund which was created October 1, 1983. When a member retires or when a survivor allowance becomes payable, the pension is paid from this fund. The market value of assets credited to this fund amounted to \$8,232,588,831 on September 30, 2016.

(c) DROP Fund

The DROP Fund is the fund to which are credited deferred retirement benefits on behalf of members who elect to participate in the DROP, together with regular interest thereon. In addition, member contributions while participating in the DROP, together with regular interest therein, are credited to the Fund. At the end of the DROP deferral period, the member receives the amount of the deferred retirement benefits and contributions plus interest in the member's DROP account. The DROP is closed to new participants as of June 1, 2011. On September 30, 2016, the market value of assets credited to this Fund amounted to \$168,719,575.

(d) Pre-Retirement Death Benefit Fund

The Pre-Retirement Death Benefit Fund is the fund to which are credited contributions made by the employer for the special pre-retirement death benefit which became effective October 1, 1983. On September 30, 2016, the market value of assets credited to this fund amounted to \$32,144,959. These assets are not included in the valuation and the liabilities associated with these death benefits are not included in the valuation.



(e) Expense Fund

The Expense Fund is the fund from which the expenses of the administration of the Retirement System are paid. Any amounts credited to the accounts of members withdrawing before retirement and not returnable under the provisions of Code Section 36-27-16(c) are credited to the Expense Fund. Additional contributions required to meet the expenses of the Retirement System made by the employer are also credited to this fund. On September 30, 2016, the market value of assets credited to this fund amounted to \$(11,645,151). These assets are not included in the valuation.

2. As of September 30, 2016 the total market value of assets exclusive of the Pre-Retirement Death Benefit Fund and the Expense Fund amounted to \$11,108,437,318 as shown in the following table.

**TABLE 4**  
**MARKET VALUE OF ASSETS BY FUND**  
**AS OF SEPTEMBER 30, 2016**

FUND	MARKET VALUE OF ASSETS
Annuity Savings Fund	\$ 2,707,128,912
Pension Accumulation Fund	8,232,588,831
DROP Fund	<u>168,719,575</u>
Total Market Value of Assets	\$ 11,108,437,318

3. The five-year market related actuarial value of assets as of September 30, 2016 was \$11,082,279,635. The following table shows the actuarial value of assets used for the current valuation allocated among State employees, State policemen and local employees.

**TABLE 5**  
**COMPARISON OF ACTUARIAL VALUE OF ASSETS**  
**AT SEPTEMBER 30, 2016 AND SEPTEMBER 30, 2015**

GROUP	SEPTEMBER 30, 2016 ACTUARIAL VALUE	SEPTEMBER 30, 2015 ACTUARIAL VALUE
State Employees	\$ 4,598,818,390	\$ 4,504,338,159
State Policemen	318,102,553	313,373,256
Local Employees	<u>6,165,358,692</u>	<u>5,771,547,001</u>
Total Assets	\$ 11,082,279,635	\$ 10,589,258,416

4. Schedule C shows the receipts and disbursements of the System for the year preceding the valuation date and a reconciliation of the fund balances at market value.



#### **SECTION IV - COMMENTS ON VALUATION**

1. Schedule A of this report contains the valuation balance sheets which show the present and prospective assets and liabilities of the System as of September 30, 2016. Separate balance sheets are shown for each employee group as well as in total for all groups.
2. The total valuation balance sheet shows that the System has total prospective liabilities of \$18,805,526,902. Of this amount, \$9,209,857,405 is for the prospective benefits payable on account of present retired members, beneficiaries of deceased members, and DROP participants, \$227,149,883 is for the prospective benefits payable on account of present inactive members and \$9,368,519,614 is for the prospective benefits payable on account of present active members. Against these liabilities the System has total actuarial value of assets of \$11,082,279,635 as of September 30, 2016. The difference of \$7,723,247,267 between the total liabilities and the total present actuarial value of assets represents the present value of contributions to be made in the future. Of this amount, \$1,589,240,351 is the present value of future contributions expected to be made by members to the Annuity Savings Fund, and the balance of \$6,134,006,916 represents the present value of future contributions payable by the employers.
3. The employers' contributions to the System consist of normal contributions and unfunded actuarial accrued liability (UAAL) contributions. The valuation indicates that employer normal contributions at the rate of 0.78% of payroll for Tier I members and 0.41% of payroll for Tier II members are required to provide the benefits of the System for State employees. For State policemen, employer normal contributions at the rate of 10.27% of payroll for Tier I members and 3.62% of payroll for Tier II members are required. For local employees, varying rates of employer normal contributions are required.
4. Prospective employer normal contributions at the above rates have a present value of \$488,277,998. When this amount is subtracted from \$6,134,006,916, which is the present value of the total future contributions to be made by the employers, there remains \$5,645,728,918 as the amount of future UAAL contributions.





5. The funding policy adopted by the Board, as shown in Schedule F, provides that one-fifteenth of the unfunded actuarial accrued liability as of September 30, 2012 (Transitional UAAL) will be amortized as a level percent of payroll over a closed period. The closed period shall be the amortization period for the September 30, 2012 valuation, not to exceed 30 years. The remaining Transitional UAAL each year will be amortized over an open period. The open period shall be the amortization period for the September 30, 2012 valuation, not to exceed 30 years. Each year the new closed transitional base is calculated by dividing the remaining transitional UAAL at the beginning of the year by a declining value from 15 initially to 1 in the year 2026. After 15 years the entire Transitional UAAL will be closed. In each subsequent valuation all benefit changes, assumption and method changes and experience gains and/or losses that have occurred since the previous valuation will determine a New Incremental UAAL. Each New Incremental UAAL will be amortized over a closed 30-year period from the date it is established.
6. The total UAAL rate payable by the State is 13.36% of payroll for State employees and 39.44% of payroll for State Policemen determined in accordance with the Board's funding policy. The UAAL contribution rate has been calculated on the assumption that the aggregate amount of accrued liability contribution will increase by 3.125% each year. Schedule G of this report shows a projection of the open Transitional UAAL and amortization schedules for all closed bases as of September 30, 2016.
7. The following table shows the components of the total UAAL and the derivation of the accrued liability contribution rate in accordance with the funding policy for State employees and State policemen:



**TABLE 6**

**TOTAL UAAL AND UAAL CONTRIBUTION RATE**

**STATE EMPLOYEES**

	<u>UAAL</u>	<u>Amortization Period</u>	<u>Amortization Payment</u>
Open Transitional	\$1,763,586,152	30	\$113,049,923
Closed Transitional 9/30/2012	175,205,436	26	12,063,244
Closed Transitional 9/30/2013	175,797,009	27	11,869,048
Closed Transitional 9/30/2014	176,176,247	28	11,677,974
Closed Transitional 9/30/2015	176,358,615	29	11,489,972
Closed Transitional 9/30/2016	176,358,615	30	11,304,992
New Incremental 9/30/2013	38,361,339	27	2,589,990
New Incremental 9/30/2014	(41,266,566)	28	(2,735,385)
New Incremental 9/30/2015	55,678,484	29	3,627,519
New Incremental 9/30/2016	<u>109,513,946</u>	30	<u>7,020,096</u>
Total	\$2,805,769,277		\$181,957,373
Total Amortization Payment Adjusted for Timing			<u>175,189,976</u>
Total Estimated Payroll*			\$1,311,549,346
UAAL Contribution Rate			13.36%

**STATE POLICE**

	<u>UAAL</u>	<u>Amortization Period</u>	<u>Amortization Payment</u>
Open Transitional	\$151,231,537	30	\$9,694,289
Closed Transitional 9/30/2012	15,042,313	26	1,035,693
Closed Transitional 9/30/2013	15,085,753	27	1,018,524
Closed Transitional 9/30/2014	15,111,083	28	1,001,649
Closed Transitional 9/30/2015	15,123,154	29	985,291
Closed Transitional 9/30/2016	15,123,154	30	969,429
New Incremental 9/30/2013	169,852	27	11,468
New Incremental 9/30/2014	77,321	28	5,125
New Incremental 9/30/2015	17,204,688	29	1,120,906
New Incremental 9/30/2016	<u>28,385,997</u>	30	<u>1,819,608</u>
Total	\$272,554,852		\$17,661,982
Total Amortization Payment Adjusted for Timing			<u>17,005,094</u>
Total Estimated Payroll*			\$43,119,693
UAAL Contribution Rate			39.44%

\* Estimated payroll based on applying the assumed salary scale to current salaries.



8. The Pre-Retirement Death Benefit Program was established October 1, 1983 under Act No. 83-616. The liabilities and assets associated with the pre-retirement death benefit are not included in the annual actuarial valuation of the System; however, the sufficiency of the Fund to provide the promised benefits is reviewed annually. The contribution requirements are determined every five years during our experience investigation. For all employers, an additional contribution of 0.02% of payroll will be required to meet the cost of the pre-retirement death benefit program this year.
9. For all employers, an additional contribution of 0.35% is required to cover the expenses of administering the System.
10. In our opinion, the current experience, assumptions and methods adopted by the Board support the funding policy and generally accepted and emerging practice. Assuming that required contributions continue to be made each year, the funding of the System will continue to remain on track.



**SECTION V - CONTRIBUTIONS PAYABLE BY EMPLOYERS**

1. The retirement act provides that the Board of Control shall certify to the chief fiscal officer of each employer the rates of contribution required to be paid by the employer.
2. On the basis of the actuarial valuation prepared as of September 30, 2016 it is recommended that the State make contributions at the following rates for the fiscal year beginning October 1, 2018:

**TABLE 7  
RECOMMENDED CONTRIBUTION RATES**

CONTRIBUTION	PERCENTAGE OF MEMBERS' COMPENSATION FOR FISCAL YEAR ENDING SEPTEMBER 20, 2019			
	STATE EMPLOYEES		STATE POLICEMEN	
	<u>Tier I</u>	<u>Tier II</u>	<u>Tier I</u>	<u>Tier II</u>
Employer Normal Cost	0.78%*	0.41%*	10.27%**	3.62%**
Accrued liability	13.36	13.36	39.44	39.44
Death benefit	0.02	0.02	0.02	0.02
Administration	<u>0.35</u>	<u>0.35</u>	<u>0.35</u>	<u>0.35</u>
Total	14.51%	14.14%	50.08%	43.43%

\*The total Normal Cost rate is 8.41% for Tier I and 6.54% for Tier II. Tier I members contribute 7.50% (8.50% for FLC members) and Tier II members contribute 6.00% (7.00% for FLC members).

\*\*The total Normal Cost rate is 20.27% for Tier I and 13.62% for Tier II. All members as of September 30, 2016, contribute 10.00%.

3. Contribution rates for Local Employers will be submitted in a separate report. The rates for the fiscal year beginning October 1, 2018 were determined as of September 30, 2016, and reflect any elections made pursuant to Act 2011-676 as of April 1, 2016.



## **SECTION VI – ANALYSIS OF FINANCIAL EXPERIENCE**

The calculation of the System's liabilities and actuarial value of assets requires the use of several assumptions concerning the future experience of the System and its members. In each annual actuarial valuation, the experience of the System is compared with what was expected based on the actuarial assumptions. The differences between the actual and expected experience are called actuarial gains or losses depending on whether the difference increases or decreases the UAAL. For State employees, the UAAL increased \$150,439,103; for State policemen, the UAAL increased \$26,133,100. The most significant item contributing to the increase in the UAAL was the changes in assumptions from the experience study. This increase was offset by gains due to salary increases less than anticipated and by investment earnings in excess of expected. Other sources of gains and losses were relatively small and there appear to be no trends developing that would be of concern to the System.

The following tables show the reconciliation of the UAAL of the System and a breakdown by source of the actuarial gains and losses for State employees and State policemen. These sources include the expected return on assets, salary increases, retirement, withdrawal, disability and mortality.

Since the benefits, assumptions and accrued liability rates vary by location for the Local employees, we do not develop an analysis of financial experience for this group.



**RECONCILIATION OF THE UNFUNDED ACTUARIAL ACCRUED LIABILITY  
FOR THE YEAR ENDING SEPTEMBER 30, 2016**  
(Dollar amounts in thousands)

	STATE EMPLOYEES	STATE POLICEMEN
(1) UAAL at beginning of year	\$ 2,655,330	\$ 246,422
(2) Total normal cost beginning of the year	98,799	7,671
(3) Actual contributions	279,818	22,898
(4) Interest accrual: [ [(1) + (2)] - ½ [ (3)] ] x .0813	212,536	19,727
(5) Expected UAAL before changes: (1) + (2) - (3) + (4)	2,686,847	250,922
(6) Increase from benefit changes	0	0
(7) Changes from revised actuarial assumptions and methods	163,646	22,425
(8) Expected UAAL after changes: (5) + (6) + (7)	2,850,493	273,347
(9) Actual UAAL at end of year	2,805,769	272,555
(10) (Gain)/Loss: (9) - (8)	\$ (44,724)	\$ (792)

**DEVELOPMENT OF (GAIN)/LOSS  
FROM INVESTMENT RETURN  
FOR THE YEAR ENDING SEPTEMBER 30, 2016**  
(Dollar amounts in thousands)

	STATE EMPLOYEES	STATE POLICEMEN
(1) Actuarial Value of Assets (BOY)	\$ 4,504,338	\$ 313,373
(2) Adjustment for unit transfer	(14,160)	\$ -
(3) Net Cash Flow	(282,858)	(22,341)
(4) Expected Return: [ (1) + (2) + ½ [ (3)] ] x .0813	353,553	24,569
(5) Expected Actuarial Value of Assets: [ (1) + (2) + (3) + (4) ]	4,560,873	315,601
(6) Actual Actuarial Value of Assets (EOY)	4,598,818	318,103
(7) (Gain)/Loss: (5) - (6)	\$ (37,945)	\$ (2,502)



**(GAINS)/ LOSSES BY SOURCE**  
**FOR THE YEAR ENDING September 30, 2016**  
(Dollar amounts in thousands)

Source	<u>STATE EMPLOYEES</u>		<u>STATE POLICEMEN</u>	
	Total	% of Actuarial Accrued Liability	Total	% of Actuarial Accrued Liability
<b>Age and Service Retirements.</b> Generally, earlier retirements cause losses and later retirements cause gains.	\$ (3,193)	(0.04%)	\$ (789)	(0.14%)
<b>Withdrawal.</b> More withdrawals than expected usually cause gains and less withdrawals than expected cause losses.	2,272	0.03%	(911)	(0.16%)
<b>Disability Retirements.</b> More disabilities than expected generally cause losses and less disabilities than expected cause gains.	2,824	0.04%	105	0.02%
<b>Death-In-Service Benefits.</b> If survivor claims are less than assumed, there is a gain. If claims are more than assumed, there is a loss.	1,750	0.02%	90	0.01%
<b>Salary Increases.</b> If salaries increase more than expected, there is a loss. If salaries increase less than expected, there is a gain.	(22,761)	(0.31%)	1,920	0.34%
<b>New Members/Rehires.</b> Any past service causes losses.	5,217	0.07%	0	0.00%
<b>Retiree Mortality.</b> More deaths than expected cause gains, less than expected cause losses.	8,838	0.12%	64	0.01%
<b>Investment Return.</b> Investment income greater than expected causes gains while investment income less than expected cause losses.	(37,945)	(0.52%)	(2,502)	(0.44%)
<b>Other.</b> Miscellaneous gains and losses resulting from data corrections, timing of financial transactions, unit transfers, changes in valuation software, etc.	(1,727)	(0.02%)	1,231	0.22%
<b>Total (Gain)/Loss</b>	\$ (44,724)	(0.61%)	\$ (792)	(0.14%)



**SECTION VII - ACCOUNTING INFORMATION**

The information required under Governmental Accounting Standards Board (GASB) Statements No. 67 and 68 is issued in separate reports. The following information is provided for informational purposes only.

1. The following is a distribution of the number of employees by type of membership.

**NUMBER OF ACTIVE AND RETIRED MEMBERS  
AS OF SEPTEMBER 30, 2016**

GROUP	NUMBER			
	State Employees	State Police	Local Employees	Total
Retirees and beneficiaries currently receiving benefits	23,614	893	23,242	47,749
DROP participants	0	0	0	0
Terminated employees entitled to benefits but not yet receiving benefits	3,094	17	7,809	10,920
Non-vested inactive members who have not contributed for more than 5 years	19,707	0	0	19,707
Active Members	<u>29,101</u>	<u>655</u>	<u>55,058</u>	<u>84,814</u>
Total	75,516	1,565	86,109	163,190





2. The schedule of funding progress is shown below.

**SCHEDULE OF FUNDING PROGRESS**

(Dollar amounts in thousands)

Actuarial Valuation Date	Actuarial Value of Plan Assets (a)	Actuarial Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / c)
<b><u>TOTAL ALL GROUPS</u></b>						
9/30/2011 <sup>1</sup>	\$9,456,158	\$14,366,796	\$4,910,638	65.8%	\$3,540,681	138.7%
9/30/2012 <sup>2</sup>	9,116,551	13,884,995	4,768,444	65.7	3,252,003	146.6
9/30/2013	9,546,459	14,536,600	4,990,141	65.7	3,400,596	146.7
9/30/2014	10,134,581	15,138,294	5,003,713	66.9	3,444,341	145.3
9/30/2015	10,589,258	15,723,720	5,134,462	67.3	3,488,017	147.2
9/30/2016 <sup>1</sup>	11,082,280	16,728,009	5,645,729	66.2	3,572,891	158.0
<b><u>STATE EMPLOYEES</u></b>						
9/30/2011 <sup>1</sup>	\$4,428,511	\$6,899,083	\$2,470,572	64.2%	\$1,411,725	175.0%
9/30/2012 <sup>2</sup>	4,152,167	6,636,154	2,483,987	62.6	1,267,133	196.0
9/30/2013	4,248,068	6,808,165	2,560,097	62.4	1,258,862	203.4
9/30/2014	4,388,746	6,949,245	2,560,499	63.2	1,246,901	205.3
9/30/2015	4,504,338	7,159,668	2,655,330	62.9	1,270,556	209.0
9/30/2016 <sup>1</sup>	4,598,818	7,404,587	2,805,769	62.1	1,265,311	221.7
<b><u>STATE POLICEMEN</u></b>						
9/30/2011 <sup>1</sup>	\$317,968	\$543,695	\$225,727	58.5%	\$52,987	426.0%
9/30/2012 <sup>2</sup>	293,604	517,355	223,751	56.8	45,963	486.8
9/30/2013	298,624	526,095	227,471	56.8	42,908	530.1
9/30/2014	309,000	540,142	231,142	57.2	42,047	549.7
9/30/2015	313,373	559,795	246,422	56.0	41,861	588.7
9/30/2016 <sup>1</sup>	318,103	590,658	272,555	53.9	41,214	661.3
<b><u>LOCAL EMPLOYEES</u></b>						
9/30/2011 <sup>1</sup>	\$4,709,678	\$6,924,017	\$2,214,339	68.0%	\$2,075,968	106.7%
9/30/2012 <sup>2</sup>	4,670,780	6,731,485	2,060,705	69.4	1,938,906	106.3
9/30/2013	4,999,767	7,202,340	2,202,573	69.4	2,098,825	104.9
9/30/2014	5,436,835	7,648,907	2,212,072	71.1	2,155,393	102.6
9/30/2015	5,771,547	8,004,257	2,232,710	72.1	2,175,599	102.6
9/30/2016 <sup>1</sup>	6,165,359	8,732,764	2,567,405	70.6	2,266,367	113.3

<sup>1</sup> Reflects changes in actuarial assumptions and methods.

<sup>2</sup> Reflects changes in actuarial methods.



3. The information presented in the required supplementary schedules was determined as part of the actuarial valuation at September 30, 2016. Additional information as of the latest actuarial valuation follows.

	<b><u>State Employees</u></b>	<b><u>State Policemen</u></b>	<b><u>Local Employees</u></b>
Valuation date	9/30/2016	9/30/2016	9/30/2016
Actuarial cost method	Entry age	Entry age	Entry age
Amortization method	Level percent Closed	Level percent Closed	Level percent Closed
Single equivalent remaining amortization period	29.3 years	29.3 years	Within 30 years - Varies by employer
Asset valuation method	Five-year market related value	Five-year market related value	Five-year market related value
Actuarial assumptions:			
Investment rate of return*	7.875%	7.875%	7.875%
Projected salary increases*	3.375 – 5.125%	4.625%	3.375 – 5.125%
Cost-of-living adjustment	None	None	None
*Includes price inflation at	2.875%	2.875%	2.875%



**SCHEDULE A**

**VALUATION BALANCE SHEET  
SHOWING THE PRESENT AND PROSPECTIVE ASSETS AND LIABILITIES OF  
THE EMPLOYEES' RETIREMENT SYSTEM OF ALABAMA**

**STATE EMPLOYEES**

	<b>SEPTEMBER 30, 2016</b>
<b><u>ASSETS</u></b>	
Actuarial Value of Assets	\$ 4,598,818,390
Present value of future members' contributions to the Annuity Savings Fund	\$ 631,609,782
Present value of future employer contributions to the Pension Accumulation Fund	
Normal contributions	\$ 66,303,048
Unfunded accrued liability contributions	<u>2,805,769,277</u>
Total prospective employer contributions	\$ 2,872,072,325
Total Assets	<u>\$ 8,102,500,497</u>
<b><u>LIABILITIES</u></b>	
Present value of benefits payable on account of retired members and beneficiaries of deceased members now drawing retirement allowances	
Service Retirements	\$ 4,127,785,811
Disability Retirements	260,555,112
Beneficiaries of Deceased Members	147,897,526
DROP Participant Accounts	<u>115,011,164</u>
Total	\$ 4,651,249,613
Inactive Members	\$ 81,175,369
Inactive T-section accounts	\$ 12,471,451
Present value of prospective benefits payable on account of present active members:	
Service retirement allowances	\$ 2,950,881,961
Disability retirement allowances	161,517,105
Death Benefits	20,013,542
Termination Benefits	<u>225,191,456</u>
Total	\$ 3,357,604,064
Total Liabilities	<u>\$ 8,102,500,497</u>



**SCHEDULE A** (Continued)

**VALUATION BALANCE SHEET  
SHOWING THE PRESENT AND PROSPECTIVE ASSETS AND LIABILITIES OF  
THE EMPLOYEES' RETIREMENT SYSTEM OF ALABAMA**

**STATE POLICEMEN**

	<b>SEPTEMBER 30, 2016</b>
<b><u>ASSETS</u></b>	
Actuarial Value of Assets	\$ 318,102,553
Present value of future members' contributions to the Annuity Savings Fund	\$ 29,189,060
Present value of future employer contributions to the Pension Accumulation Fund	
Normal contributions	\$ 30,888,470
Unfunded accrued liability contributions	<u>272,554,851</u>
Total prospective employer contributions	\$ 303,443,321
Total Assets	<u>\$ 650,734,934</u>
<b><u>LIABILITIES</u></b>	
Present value of benefits payable on account of retired members and beneficiaries of deceased members now drawing retirement allowances	
Service Retirements	\$ 355,586,787
Disability Retirements	8,920,279
Beneficiaries of Deceased Members	15,889,594
DROP Participant Accounts	<u>1,292,958</u>
Total	\$ 381,689,618
Inactive Members	\$ 1,238,328
Present value of prospective benefits payable on account of present active members:	
Service retirement allowances	\$ 259,182,916
Disability retirement allowances	4,621,332
Death Benefits	770,126
Termination Benefits	<u>3,232,614</u>
Total	\$ 267,806,988
Total Liabilities	<u>\$ 650,734,934</u>



**SCHEDULE A** (Continued)

**VALUATION BALANCE SHEET  
SHOWING THE PRESENT AND PROSPECTIVE ASSETS AND LIABILITIES OF  
THE EMPLOYEES' RETIREMENT SYSTEM OF ALABAMA**

**LOCAL EMPLOYEES**

	<b>SEPTEMBER 30, 2016</b>
<b><u>ASSETS</u></b>	
Actuarial Value of Assets	\$ 6,165,358,692
Present value of future members' contributions to the Annuity Savings Fund	\$ 928,441,509
Present value of future employer contributions to the Pension Accumulation Fund	
Normal contributions	\$ 391,086,480
Unfunded accrued liability contributions	<u>2,567,404,790</u>
Total prospective employer contributions	\$ 2,958,491,270
Total Assets	<u>\$ 10,052,291,471</u>
<b><u>LIABILITIES</u></b>	
Present value of benefits payable on account of retired members and beneficiaries of deceased members now drawing retirement allowances	
Service Retirements	\$ 3,720,585,706
Disability Retirements	226,007,547
Beneficiaries of Deceased Members	177,909,468
DROP Participant Accounts	<u>52,415,453</u>
Total	\$ 4,176,918,174
Inactive Members	\$ 132,264,735
Present value of prospective benefits payable on account of present active members:	
Service retirement allowances	\$ 5,064,331,354
Disability retirement allowances	251,245,643
Death Benefits	31,959,267
Termination Benefits	<u>395,572,298</u>
Total	\$ 5,743,108,562
Total Liabilities	<u>\$ 10,052,291,471</u>



**SCHEDULE A** (Continued)

**VALUATION BALANCE SHEET  
SHOWING THE PRESENT AND PROSPECTIVE ASSETS AND LIABILITIES OF  
THE EMPLOYEES' RETIREMENT SYSTEM OF ALABAMA**

**TOTAL - ALL GROUPS**

	<b>SEPTEMBER 30, 2016</b>
<b><u>ASSETS</u></b>	
Actuarial Value of Assets	\$ 11,082,279,635
Present value of future members' contributions to the Annuity Savings Fund	\$ 1,589,240,351
Present value of future employer contributions to the Pension Accumulation Fund	
Normal contributions	\$ 488,277,998
Unfunded accrued liability contributions	<u>5,645,728,918</u>
Total prospective employer contributions	\$ 6,134,006,916
Total Assets	<u>\$ 18,805,526,902</u>
<b><u>LIABILITIES</u></b>	
Present value of benefits payable on account of retired members, beneficiaries of deceased members now drawing retirement allowances, and DROP participants	
Service Retirements	\$ 8,203,958,304
Disability Retirements	495,482,938
Beneficiaries of Deceased Members	341,696,588
DROP Participant Accounts	<u>168,719,575</u>
Total	\$ 9,209,857,405
Inactive Members	\$ 214,678,432
Inactive T-section accounts	\$ 12,471,451
Present value of prospective benefits payable on account of present active members:	
Service retirement allowances	\$ 8,274,396,231
Disability retirement allowances	417,384,080
Death Benefits	52,742,935
Termination Benefits	<u>623,996,368</u>
Total	\$ 9,368,519,614
Total Liabilities	<u>\$ 18,805,526,902</u>



**SCHEDULE A** (continued)

**SOLVENCY TEST**  
(\$1000's)

Valuation Date	Aggregate Accrued Liabilities For			Reported Assets	Portion of Accrued Liabilities Covered by Reported Asset		
	(1) Active Member Contributions	(2) Retirants and Beneficiaries	(3) Active Members (Employer Financed Portion)		(1)	(2)	(3)
9/30/2016 <sup>1</sup>	\$2,707,129	\$9,209,857	\$4,811,023	\$11,082,280	100%	91%	0%
9/30/2015	2,591,066	8,666,490	4,466,164	10,589,258	100	92	0
9/30/2014	2,484,050	8,366,277	4,287,967	10,134,581	100	91	0
9/30/2013	2,363,600	8,085,291	4,087,709	9,546,459	100	89	0
9/30/2012 <sup>2</sup>	2,218,478	7,781,431	3,885,086	9,116,551	100	89	0
9/30/2011 <sup>1</sup>	2,112,356	7,722,942	4,531,498	9,456,158	100	95	0

<sup>1</sup> Reflects changes in actuarial assumptions and methods.

<sup>2</sup> Reflects changes in actuarial methods.



**SCHEDULE B**

**DEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS  
AS OF SEPTEMBER 30, 2016**

**STATE EMPLOYEES**

(1)	Actuarial Value of Assets on September 30, 2015	
	a. Actuarial Value on September 30, 2015	\$ 4,504,338,159
	b. Adjustment	<u>(14,160,490)</u>
	c. Adjusted Actuarial Value on September 30, 2015	\$ 4,490,177,669
(2)	Market Value of Assets on September 30, 2016	\$ 4,615,916,406
(3)	Market Value of Assets on September 30, 2015	
	a. Market Value on September 30, 2015	\$ 4,469,805,870
	b. Adjustment	<u>(14,016,906)</u>
	c. Adjusted Market Value on September 30, 2015	\$ 4,455,788,964
(4)	Cash Flow	
	a. Contributions	\$ 279,818,420
	b. Benefit Payments and DROP Disbursements	(544,179,398)
	c. Refunds to Members	(15,218,655)
	d. Transfers to Expense Fund - Interest Forfeitures	(2,869,238)
	e. Transfers to/from Police/Locals	(408,800)
	f. Investment Expenses	<u>(5,654,877)</u>
	g. Net	\$ (288,512,548)
(5)	Investment Income	
	a. Market total: (2) – (3)c – (4)g	\$ 448,639,990
	b. Assumed Rate	8.00%
	c. Amount for Immediate Recognition [(3)c x (5)b] + [(4)a +(4)b +(4)c + (4)d + (4)e] * (5)b * 0.5) - (4)f	\$ 350,803,687
	d. Amount for Phased-in Recognition (5)a – (5)c	\$ 97,836,303
(6)	Phased-In Recognition of Investment Income	
	a. Current Year: 0.20*(5)d	\$ 19,567,261
	b. First Prior Year	(62,123,682)
	c. Second Prior Year	35,810,925
	d. Third Prior Year	53,095,078
	e. Fourth Prior Year	
	f. Total Recognized Investment Gain	<u>\$ 46,349,582</u>
(7)	Actuarial Value of Assets on September 30, 2016: (1)c + (4)g + (5)c + (6)f	\$ 4,598,818,390





**SCHEDULE B** (Continued)

**DEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS  
AS OF SEPTEMBER 30, 2016**

**STATE POLICEMEN**

(1)	Actuarial Value of Assets on September 30, 2015	
a.	Actuarial Value on September 30, 2015	\$ 313,373,256
b.	Adjustment	
c.	Adjusted Actuarial Value on September 30, 2015	\$ 313,373,256
(2)	Market Value of Assets on September 30, 2016	\$ 318,884,908
(3)	Market Value of Assets on September 30, 2015	
a.	Market Value on September 30, 2015	\$ 310,718,614
b.	Adjustment	
c.	Adjusted Market Value on September 30, 2015	\$ 310,718,614
(4)	Cash Flow	
a.	Contributions	\$ 22,898,063
b.	Benefit Payments and DROP Disbursements	(44,096,230)
c.	Refunds to Members	(673,378)
d.	Transfers to/from State/Local	(469,915)
e.	Net	\$ (22,341,460)
(5)	Investment Income	
a.	Market total: (2) – (3)c – (4)e	\$ 30,507,754
b.	Assumed Rate	8.00%
c.	Amount of Immediate Recognition [(3)c x (5)b] + [(4)e * (5)b * 0.5]	\$ 23,963,831
d.	Amount for Phased-in Recognition (5)a – (5)c	\$ 6,543,923
(6)	Phased-In Recognition of Investment Income	
a.	Current Year: 0.20*(5)d	\$ 1,308,785
b.	First Prior Year	(4,336,923)
c.	Second Prior Year	2,426,923
d.	Third Prior Year	3,708,141
e.	Fourth Prior Year	0
f.	Total Recognized Investment Gain	\$ 3,106,926
(7)	Actuarial Value of Assets on September 30, 2016: (1)c + (4)e + (5)c + (6)f	\$ 318,102,553



**SCHEDULE B** (Continued)

**DEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS  
AS OF SEPTEMBER 30, 2016**

**LOCAL EMPLOYEES**

(1)	Actuarial Value of Assets on September 30, 2015	
a.	Actuarial Value on September 30, 2015	\$ 5,771,547,001
b.	Adjustment	<u>14,160,490</u>
c.	Adjusted Actuarial Value on September 30, 2015	\$ 5,785,707,491
(2)	Market Value of Assets on September 30, 2016	\$ 6,173,636,004
(3)	Market Value of Assets on September 30, 2015	
a.	Market Value on September 30, 2015	\$ 5,704,731,262
b.	Adjustment	<u>14,016,906</u>
c.	Adjusted Market Value on September 30, 2015	\$ 5,718,748,168
(4)	Cash Flow	
a.	Contributions	\$ 357,034,851
b.	Benefit Payments and DROP Disbursements	(450,502,505)
c.	Refunds to Members	(28,767,652)
d.	Transfers to/from State/Police	<u>878,715</u>
e.	Net	\$ (121,356,591)
(5)	Investment Income	
a.	Market total: (2) – (3)c – (4)e	\$ 576,244,427
b.	Assumed Rate	8.00%
c.	Amount of Immediate Recognition [(3)c x (5)b] + [(4)e * (5)b * 0.5]	\$ 452,645,590
d.	Adjustment for Employer Lump Sums	\$ (5,576)
e.	Adjusted Amount for Immediate Recognition (5)c + (5)d	\$ 452,640,014
f.	Amount for Phased-In Recognition (5)a – (5)e	\$ 123,604,413
(6)	Phased-In Recognition of Investment Income	
a.	Current Year: 0.20*(5)f	\$ 24,720,882
b.	First Prior Year	(77,600,198)
c.	Second Prior Year	41,423,892
d.	Third Prior Year	59,823,202
e.	Fourth Prior Year	
f.	Total Recognized Investment Gain	<u>\$ 48,367,778</u>
(7)	Actuarial Value of Assets on September 30, 2016: (1)c + (4)e + (5)e + (6)f	\$ 6,165,358,692



**SCHEDULE B** (Continued)

**SEPTEMBER 30, 2016  
DEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS**

**TOTAL - ALL GROUPS**

(1)	Actuarial Value of Assets on September 30, 2015	\$ 10,589,258,416
(2)	Market Value of Assets on September 30, 2016	\$ 11,108,437,318
(3)	Market Value of Assets on September 30, 2015	\$ 10,485,255,746
(4)	Cash Flow	
	a. Contributions	\$ 659,751,334
	b. Benefit Payments and DROP Disbursements	(1,038,778,133)
	c. Refunds to Members	(44,659,685)
	d. Transfer to Expense Fund – Interest Forfeitures	(2,869,238)
	e. Investment Expenses	(5,654,877)
	f. Net	\$ (432,210,599)
(5)	Investment Income	
	a. Market total: (2) – (3) – (4)f	\$ 1,055,392,171
	b. Assumed Rate	8.00%
	c. Amount for Immediate Recognition [(3) x (5)b] + [(4)a + (4)b + (4)c + (4)d] * (5)b * 0.5 - (4)e	\$ 827,413,108
	d. Adjusted for Employer Lump Sums	\$ (5,576)
	e. Adjusted Amount for Immediate Recognition (5)c + (5)d	\$ 827,407,532
	f. Amount for Phased-In Recognition (5)a – (5)e	\$ 227,984,639
(6)	Phased-In Recognition of Investment Income	
	a. Current Year: 0.20*(5)f	\$ 45,596,928
	b. First Prior Year	(144,060,803)
	c. Second Prior Year	79,661,740
	d. Third Prior Year	116,626,421
	e. Fourth Prior Year	0
	f. Total Recognized Investment Gain	\$ 97,824,286
(7)	Actuarial Value of Assets on September 30, 2016: (1) + (4)f + (5)e + (6)f	\$ 11,082,279,635



**SCHEDULE B** (Continued)

**SEPTEMBER 30, 2016**  
**DEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS**

<u>Date</u>	<u>Investment Gain/(Loss)</u>	<u>Amount Recognized</u>	<u>Remaining Balance as of 9/30/2016</u>
9/30/2013	\$ 583,135,205	\$ 116,626,421	\$ 116,628,901
9/30/2014	398,308,701	79,661,740	159,323,480
9/30/2015	(720,304,016)	(144,060,803)	(432,182,410)
9/30/2016	227,984,639	45,596,928	182,387,711

Actuarial value of assets was set equal to market value on September 30, 2012.



**SCHEDULE C**

**SUMMARY OF RECEIPTS AND DISBURSEMENTS  
FOR THE YEAR ENDING SEPTEMBER 30, 2016**

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Receipts for the Period

Contributions:		
Members	\$ 238,017,020	
Employers	<u>421,734,314</u>	
Total		\$ 659,751,334
Investment Income*		<u>1,055,914,678</u>
TOTAL		\$ 1,715,666,012

Disbursements for the Period

Benefit Payments		\$ (961,593,666)
Refunds to Members		(44,659,685)
DROP Distributions		(77,184,467)
Miscellaneous:		
Transfers to Plant Fund	\$ 0	
Transfers to Expense Fund-Interest Forfeitures	(2,869,238)	
Transfers to Expense Fund-Investment Expenses	(2,883,555)	
Transfers to Pre-retirement Death Benefit Fund	<u>(3,293,829)</u>	
TOTAL		<u>(9,046,622)</u>
TOTAL		\$(1,092,484,440)

Excess of Receipts Over Disbursements \$ 623,181,572

Reconciliation of Asset Balances

Market Value of Assets as of September 30, 2015	\$ 10,485,255,746
Excess of Receipts Over Disbursements	<u>623,181,572</u>
Market Value of Assets as of September 30, 2016	<u>\$ 11,108,437,318</u>

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\*Net of \$2,771,322 in investment expenses.



## SCHEDULE D

### OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS

The assumptions and methods used in the valuation were selected based on the actuarial experience study prepared as of September 30, 2015, submitted to and adopted by the Board on September 29, 2016.

INVESTMENT RATE OF RETURN: 7.875% per annum, compounded annually, including price inflation at 2.875%. In subsequent valuations, the assumed investment rate of return will be 7.75%, including price inflation at 2.75%.

SALARY INCREASES: Representative values of the assumed annual rates of future salary increases are as follows:

#### STATE AND LOCAL EMPLOYEES

Service	Annual Rate	
	2016 Valuation*	2017 Valuation and later**
0	5.125 %	5.000 %
1-5	4.125	4.000
6-10	3.875	3.750
11-15	3.625	3.500
16 & Over	3.375	3.250

\*Includes wage inflation at 3.125% per annum.

\*\*Includes wage inflation at 3.000% per annum.

#### STATE POLICEMEN

2016 Valuation: 4.625% per year for all years of service, including wage inflation at 3.125% per annum

2017 Valuation and later: 4.500% per year for all years of service, including wage inflation at 3.000% per annum.



**SEPARATIONS FROM ACTIVE SERVICE- STATE AND LOCAL EMPLOYEES**

TERMINATION: Representative values of the assumed annual rates of withdrawal are shown in the following tables:

**REGULAR MEMBERS**

Annual Rate of Withdrawal\*  
Years of Service

Age	0-4		5-9		10-20		20+	
	Male	Female	Male	Female	Male	Female	Male	Female
20	24.00%	33.00%	9.00%	12.00%	5.00%	6.50%	1.50%	1.50%
25	19.50	23.00	8.50	11.00	5.00	6.50	1.50	1.50
30	17.50	20.00	7.00	8.25	4.00	5.25	1.50	1.50
35	16.00	18.00	6.50	7.50	3.25	5.25	1.50	1.50
40	15.50	17.00	5.50	7.25	3.00	3.50	1.50	1.50
45	13.50	15.50	5.00	6.50	2.75	3.50	1.50	1.50
50	13.00	14.50	5.00	6.25	2.50	3.50	1.50	1.50
55	11.50	14.00	5.00	5.50	2.50	3.50	1.50	1.50
60	11.50	15.00	5.50	6.00	2.50	3.50	1.50	1.50
65	15.50	16.00	7.50	8.50	2.75	3.50	1.50	1.50
69	15.50	16.00	7.50	8.50	2.75	3.50	1.50	1.50

*There are no withdrawal decrements after eligibility for service retirement.*

**CERTIFIED FIREFIGHTERS, POLICE OFFICERS, OR CORRECTIONAL OFFICERS (FLC MEMBERS)**

Annual Rate of Withdrawal\*  
Years of Service

Age	0-4	5-9	10-20	20+
20	17.00%	6.50%	3.25%	1.25%
25	14.50	6.50	3.25	1.25
30	13.50	6.00	3.25	1.25
35	13.50	5.50	3.25	1.25
40	13.00	5.00	2.50	1.25
45	12.50	4.50	2.25	1.25
50	11.00	4.50	2.25	1.25
55	10.00	4.50	2.00	1.25
60	12.00	5.50	2.00	1.25
65	17.00	6.00	2.00	1.25
69	17.00	6.00	2.00	1.25

*There are no withdrawal decrements after eligibility for service retirement.*

\* For local employers with fewer than 25 employees the rates are multiplied by 50%.



SERVICE RETIREMENT: The assumed annual rates of service retirement are as follows:

**REGULAR MEMBERS**

Age	Annual Rate <sup>1</sup>			
	TIER I <sup>2</sup>		TIER II	
	<u>1<sup>ST</sup> Eligible</u>	<u>Subsequent</u>	<u>1<sup>ST</sup> Eligible</u>	<u>Subsequent</u>
50 & Under	18.00%	11.50%		
51 to 56	20.00	11.50		
57	25.00	11.50		
58 to 59	25.00	15.00		
60	13.00	17.00		
61	13.00	13.00		
62	25.00	25.00	50.00%	
63	25.00	20.00	25.00	20.00%
64	25.00	20.00	25.00	20.00
65	35.00	25.00	35.00	25.00
66	35.00	30.00	35.00	30.00
67	35.00	25.00	35.00	25.00
68	35.00	21.00	35.00	21.00
69 to 74	35.00	21.00	35.00	20.00
75 & Above	100.00	100.00	100.00	100.00

<sup>1</sup>For local employers with fewer than 25 employees we assume that all members retire upon first eligibility for a service retirement benefit.

<sup>2</sup>25% are assumed to retire at age 60 with 25 years of service and 17% are assumed to retire at age 60 with 26 or more years of service.

**FLC MEMBERS**

Age	Annual Rate <sup>1</sup>			
	TIER I <sup>2</sup>		TIER II	
	<u>1<sup>ST</sup> Eligible</u>	<u>Subsequent</u>	<u>1<sup>ST</sup> Eligible</u>	<u>Subsequent</u>
50 & Under	40.00%	25.00%		
51 to 55	40.00	20.00		
56	40.00	20.00	15.00%	15.00%
57 to 59	40.00	17.00	15.00	15.00
60	15.00	15.00	15.00	15.00
61	40.00	18.00	15.00	15.00
62	40.00	28.00	40.00	28.00
63	40.00	28.00	40.00	28.00
64	40.00	21.00	40.00	21.00
65	40.00	25.00	40.00	25.00
66	40.00	40.00	40.00	40.00
67 to 74	40.00	30.00	40.00	30.00
75 & Above	100.00	100.00	100.00	100.00

<sup>1</sup>For local employers with fewer than 25 employees we assume that all members retire upon first eligibility for a service retirement benefit.

<sup>2</sup>40% are assumed to retire at age 60 with 25 years of service and 20% are assumed to retire at age 60 with 26 or more years of service.





DEATH AND DISABILITY: Representative values of the assumed annual rates of death and disability are as follows:

**STATE EMPLOYEES**

Age	Death		Annual Rate of Disability				
			Tier I			Tier II	
	Male	Female	Service < 25		Service >=25	Male	Female
			Male	Female			
20	0.023%	0.009%	0.060%	0.052%		0.060%	0.052%
25	0.025	0.010	0.090	0.074		0.090	0.074
30	0.029	0.012	0.117	0.100		0.117	0.100
35	0.051	0.022	0.151	0.187		0.151	0.187
40	0.071	0.033	0.405	0.372		0.405	0.372
45	0.099	0.053	0.630	0.559	0.250%	0.630	0.559
50	0.141	0.079	1.155	0.898	0.250	1.155	0.898
55	0.200	0.114	1.530	1.400	0.250	1.530	1.400
60	0.297	0.161	0.500	1.000	0.250	2.000	1.000
65	0.416	0.229	0.500	1.000	0.250	0.500	1.000
69	0.492	0.286					

**LOCAL EMPLOYEES**

Age	Death		Annual Rate of Disability				
			Tier I			Tier II	
	Male	Female	Service < 25		Service >=25	Male	Female
			Male	Female			
20	0.023%	0.009%	0.040%	0.040%		0.040%	0.040%
25	0.025	0.010	0.060	0.057		0.060	0.057
30	0.029	0.012	0.078	0.077		0.078	0.077
35	0.051	0.022	0.101	0.144		0.101	0.144
40	0.071	0.033	0.270	0.286		0.270	0.286
45	0.099	0.053	0.500	0.430	0.250%	0.500	0.430
50	0.141	0.079	0.900	0.691	0.250	0.900	0.691
55	0.200	0.114	1.400	1.000	0.250	1.400	1.000
60	0.297	0.161	0.500	0.250	0.250	2.000	1.000
65	0.416	0.229	0.500	0.250	0.250	0.500	0.250
69	0.492	0.286					



**STATE POLICEMEN**

Annual Rate of								
<u>Death</u>			<u>Disability</u>	<u>Withdrawal Service</u>		<u>Retirement</u>		
<u>Age</u>	<u>Male</u>	<u>Female</u>		<u>0-4</u>	<u>5+</u>	<u>10-19</u>	<u>20-24</u>	<u>25+</u>
20	0.023%	0.009%	0.080%	2.00%	2.00%			
25	0.025	0.010	0.100	2.00	2.00			
30	0.029	0.012	0.140	2.00	2.00			
35	0.051	0.022	0.220	2.00	1.00			
40	0.071	0.033	0.340	2.00	1.00			40.00%
45	0.099	0.053	0.460	5.00	1.00			40.00
50	0.141	0.079	0.600					40.00
55	0.200	0.114				5.00%	35.00%	35.00
60	0.297	0.161				25.00	25.00	25.00
62	0.346	0.183				25.00	25.00	25.00
65	0.416	0.229				100.00	100.00	100.00

DEATH AFTER RETIREMENT: The rates of mortality for the period after service retirement are according to the sex distinct RP-2000 Blue Collar Mortality Table Projected with Scale BB to 2020 with an adjustment of 125% at all ages for males and 120% for females at ages on and after age 78. The rates of mortality for the period after disability retirement are according to the sex distinct RP-2000 Disabled Retiree Mortality Table Projected with Scale BB to 2020 with an adjustment of 130% at all ages for females. Representative values of assumed mortality are as follows:

<u>Age</u>	<u>Service Retirement</u>		<u>Disability Retirement</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
55	0.4939%	0.2528%	3.3375%	1.9456%
60	0.8983	0.4048	3.6532	2.3221
65	1.5257	0.8167	3.9411	2.8618
70	2.4722	1.4637	4.6257	3.8430
75	3.9850	2.4262	6.0659	5.3334
80	6.5180	4.6142	8.0841	7.3840
85	10.6322	7.8329	10.4664	10.2321
90	18.2107	13.1471	14.7009	14.5932

DEATH IN ACTIVE SERVICE BENEFIT: For those eligible for service retirement who die in active service, it is assumed that 75% of beneficiaries will elect the lump sum death benefit and 25% will elect the Option 3 allowance.

BENEFITS PAYABLE UPON SEPARATION FROM SERVICE: For active members who separate from service prior to eligibility for a service retirement allowance, the liability is assumed to be the greater of the value of the refund of contributions and the value of the deferred annuity.

UNUSED SICK LEAVE: 2.25% load on service retirement liabilities for active members (No load for Tier II members).



**PERCENT MARRIED:** 100% of employees are assumed to be married, with the wife 3 years younger than the husband.

**ACTUARIAL METHOD:** Individual entry age normal cost method. Actuarial gains and losses are reflected in the unfunded actuarial accrued liability.

**ASSET METHOD:** Actuarial value, as developed in Schedule B. The actuarial value of assets recognizes a portion of the difference between the market value of assets and the expected value of assets, based on the assumed valuation rate of return. The amount recognized each year is 20% of the difference between market value and expected market value. In order to reduce short-term volatility in valuation results and because the market value and actuarial value of assets were close in value, the actuarial value of assets was set equal to the market value on September 30, 2012. 5-year smoothing commenced again beginning September 30, 2013.

**LIABILITY FOR CURRENT INACTIVE MEMBERS:** Member Contribution Balance is multiplied by a factor of 3.0 for vested local employees with incomplete data and by a factor of 1.0 for all non-vested inactive members.

**LIABILITY FOR POST-DROP ACTIVE MEMBERS:** Members are assumed to retire immediately and receive their accrued benefit.

**COLA:** No future ad hoc cost of living adjustments (COLAs) are assumed.

**FUTURE SERVICE CREDIT:** One year of creditable service per year of employment.



## **SCHEDULE E**

### **ACTUARIAL COST METHOD**

1. The valuation is prepared on the projected benefit basis, which is used to determine the present value of each member's expected benefit payable at retirement or death. The calculations are based on the member's age, years of service, sex, compensation, expected future salary increases, and an assumed future interest earnings rate (currently 7.875%). The calculations consider the probability of a member's death or termination of employment prior to becoming eligible for a benefit and the probability of the member terminating with a service, disability, or survivor's benefit. The present value of the expected benefits payable to active members is added to the present value of the expected future payments to retired members and beneficiaries to obtain the present value of all expected benefits payable to the present group of members and beneficiaries.
2. The employer contributions required to support the benefits of the System are determined following a level funding approach, and consist of a normal contribution and an accrued liability contribution.
3. The normal contribution is determined using the "individual entry age normal" method. Under this method, a calculation is made to determine the uniform and constant percentage rate of employer contribution which, if applied to the compensation of each new member during the entire period of his anticipated covered service, would be required in addition to the contributions of the member to meet the cost of all benefits payable on his behalf.
4. The unfunded accrued liability is determined by subtracting the current assets and the present value of prospective employer normal contributions and member contributions from the present value of expected benefits to be paid from the System. The accrued liability contribution amortizes the balance of the unfunded accrued liability over a period of years from the valuation date.



## SCHEDULE F

### **FUNDING POLICY OF THE ERS BOARD OF CONTROL**

The purpose of the funding policy is to state the overall funding objectives for the Employees' Retirement System of Alabama (System), the benchmarks that will be used to measure progress in achieving those goals, and the methods and assumptions that will be employed to develop the benchmarks.

The Board's funding policy applies to all plans administered by the Board of Control. The funding policy reflects the Board's long-term strategy for stability in funding of the plans.

#### **I. Funding Objectives**

The goal in requiring employer and member contributions to the System is to accumulate sufficient assets during a member's employment to fully finance the benefits the member is expected to receive throughout retirement. In meeting this objective, the System will strive to meet the following funding objectives:

- To maintain an increasing funded ratio (ratio of system actuarial value of assets to actuarial accrued liabilities) that reflects a trend of improved actuarial condition. The long-term objective is to attain a funded ratio which is consistent with the fiscal health and long-term stability of the System.
- To maintain adequate asset levels to finance the benefits promised to members and monitor the future demands for liquidity.
- To develop a pattern of contribution rates expressed as a percentage of member payroll or as a dollar amount for employers with no active members as measured by valuations prepared in accordance with applicable State laws and the principles of practice prescribed by the Actuarial Standards Board. In no event will the employer contribution rate be negative.
- To provide intergenerational equity for taxpayers with respect to System costs.

#### **II. Benchmarks**

To track progress in achieving the previously outlined funding objectives, the following benchmarks will be measured annually as of the valuation date. The valuation date is the date that the annual actuarial valuation of the System's assets and liabilities is prepared. This date is currently September 30<sup>th</sup> each year with due recognition that a single year's results may not be indicative of long-term trends:

- **Funded ratio** – The funded ratio, defined as the actuarial value of assets divided by the actuarial accrued liability, should increase over time, before adjustments for changes in benefits, actuarial methods, and/or actuarial assumptions. An open amortization period is one for which the amortization period is recalculated on a yearly basis and the ending date of the amortization



period is a variable with each recalculation. A closed amortization period is one which is calculated over a fixed period and at the end of that period, the amount is fully amortized.

• **Unfunded Actuarial Accrued Liability (UAAL)**

- **Transitional UAAL** - The UAAL established as of the initial valuation date for which this funding policy is adopted shall be known as the Transitional UAAL (applicable only to employers participating in the System as of the adoption date of the funding policy).
- **New Incremental UAAL** - Each subsequent valuation will produce a New Incremental UAAL consisting of all benefit changes, assumption and method changes and experience gains and/or losses that have occurred since the previous valuation.

• **UAAL Amortization Period and Contribution Rates for All Employers**

- For those employers with a funded percentage less than 100% in the valuation prior to the adoption of the funding policy: In each valuation 1/15<sup>th</sup> of the Transitional UAAL will be amortized over a closed period. The closed period shall be the amortization period for the valuation preceding the adoption of the funding policy not to exceed 30 years. The remaining Transitional UAAL each year will be amortized over an open period. The open period shall be the amortization period for the valuation preceding the adoption of the funding policy not to exceed 30 years. After 15 years the entire Transitional UAAL will be closed.
- For those employers with a funded percentage 100% or greater in the valuation prior to the adoption of the funding policy: In each valuation 1/15<sup>th</sup> of the Transitional UAAL will be amortized over a 30 year closed period. The remaining Transitional UAAL each year will be amortized over a 30 year open period. After 15 years the entire Transitional UAAL will be closed.
- Each New Incremental UAAL shall be amortized over a closed 30 year period.
- Employer Normal Contribution Rate – the contribution rate determined as of the valuation date each year based on the provisions of Alabama Code Section 36-27-24.
- In each valuation subsequent to the adoption of this funding policy the required employer contribution rate will be determined by the summation of the employer Normal Contribution Rate, a contribution rate for administrative expenses, a contribution rate for the pre-retirement death benefit fund, the individual amortization rate for each of the New Incremental UAAL bases, the individual amortization rate for each of the 15 closed periods for the Transitional UAAL and the amortization of any remaining open portion of the Transitional UAAL. If the resulting contribution rate will not support the cash flow and



projected benefit payment needs of a particular unit or employer then the RSA staff may approve a more aggressive funding policy for these units or employers.

**•UAAL Amortization Period for Employers joining the System after the Implementation of this Funding Policy**

- For Employers joining the System after the implementation of this Funding Policy, the employer contribution rate shall be computed as the sum of the employer Normal Contribution rate, a contribution rate for administrative expenses, a contribution rate for the pre-retirement death benefit fund and the initial UAAL contribution rate. The initial UAAL contribution rate shall be determined by amortizing the initial UAAL over a closed period equal to the expected future working lifetime of the active membership. This initial amortization period shall not be less than 10 years nor greater than 30 years.
- In subsequent years the UAAL and employer contribution rate shall be determined in accordance with the rules of the Funding Policy described in the previous section.

- Special Consideration**--If the resulting contribution rate will not support the cash flow and projected benefit payment needs of a particular unit or employer then the RSA staff may approve a more aggressive funding policy for these units or employers.

**III.Methods and Assumptions**

The actuarial funding method used to develop the benchmarks will be the Entry Age Normal (EAN) actuarial cost method. The actuarial methods and assumptions used will be those last adopted by the Board based upon the advice and recommendation of the actuary. The actuary shall conduct an investigation into the system's experience at least every five years and utilize the results of the investigation to form the basis for those recommendations.

**IV.Funding Policy Progress**

The Board will periodically have projections of funded status performed to assess the current and expected future progress towards the overall funding goals of the System.



**SCHEDULE G**

**PROJECTION OF TRANSITIONAL UAAL  
AND AMORTIZATION OF BASES  
PROJECTION OF THE OPEN TRANSITIONAL UAAL**

**STATE EMPLOYEES**

<b>Valuation Date</b>	<b>Transitional UAAL Beginning of Year (1)</b>	<b>Years (2)</b>	<b>Transitional Closed (3)=(1)/(2)</b>	<b>Transitional Remaining Open (4)=(1)-(3)</b>	<b>7.875% Interest (5)=(4) x .07875*</b>	<b>Amortization Payment (6)</b>	<b>Transitional Open UAAL End of Year (7)=(4)+(5)-(6)</b>
9/30/2012	\$2,483,987,366	15	\$165,599,158	\$2,318,388,208	\$185,471,057	\$148,697,195	\$2,355,162,070
9/30/2013	2,355,162,070	14	168,225,862	2,186,936,208	174,954,897	140,266,104	2,221,625,001
9/30/2014	2,221,625,001	13	170,894,231	2,050,730,770	164,058,462	131,530,135	2,083,259,097
9/30/2015	2,083,259,097	12	173,604,925	1,909,654,172	152,772,334	122,481,739	1,939,944,767
9/30/2016	1,939,944,767	11	176,358,615	1,763,586,152	138,882,409	113,049,923	1,789,418,638
9/30/2017	1,789,418,638	10	178,941,864	1,610,476,774	126,825,046	104,645,064	1,632,656,756
9/30/2018	1,632,656,756	9	181,406,306	1,451,250,450	114,285,973	94,298,905	1,471,237,518
9/30/2019	1,471,237,518	8	183,904,690	1,287,332,828	101,377,460	83,647,916	1,305,062,372
9/30/2020	1,305,062,372	7	186,437,482	1,118,624,890	88,091,710	72,685,664	1,134,030,936
9/30/2021	1,134,030,936	6	189,005,156	945,025,780	74,420,780	61,405,594	958,040,966
9/30/2022	958,040,966	5	191,608,193	766,432,773	60,356,581	49,801,033	776,988,321
9/30/2023	776,988,321	4	194,247,080	582,741,241	45,890,873	37,865,181	590,766,932
9/30/2024	590,766,932	3	196,922,311	393,844,622	31,015,264	25,591,115	399,268,771
9/30/2025	399,268,771	2	199,634,385	199,634,385	15,721,208	12,971,782	202,383,813
9/30/2026	202,383,813	1	202,383,813	0	0	0	0

\*8.00% prior to September 30, 2016

**STATE POLICEMEN**

<b>Valuation Date</b>	<b>Transitional UAAL Beginning of Year (1)</b>	<b>Years (2)</b>	<b>Transitional Closed (3)=(1)/(2)</b>	<b>Transitional Remaining Open (4)=(1)-(3)</b>	<b>7.875% Interest (5)=(4) x .07875*</b>	<b>Amortization Payment (6)</b>	<b>Transitional Open UAAL End of Year (7)=(4)+(5)-(6)</b>
9/30/2012	\$223,751,421	15	\$14,916,761	\$208,834,660	\$16,706,773	\$13,394,275	\$212,147,158
9/30/2013	212,147,158	14	15,153,368	196,993,790	15,759,503	12,634,823	200,118,470
9/30/2014	200,118,470	13	15,393,728	184,724,742	14,777,979	16,408,625	183,094,096
9/30/2015	183,094,096	12	15,257,841	167,836,255	13,426,900	14,908,464	166,354,691
9/30/2016	166,354,691	11	15,123,154	151,231,537	11,909,484	9,694,289	153,446,732
9/30/2017	153,446,732	10	15,344,673	138,102,059	10,875,537	8,852,659	140,124,936
9/30/2018	140,124,936	9	15,569,437	124,555,499	9,808,746	7,984,294	126,379,951
9/30/2019	126,379,951	8	15,797,494	110,582,457	8,708,369	7,088,590	112,202,237
9/30/2020	112,202,237	7	16,028,891	96,173,346	7,573,651	6,164,932	97,582,065
9/30/2021	97,582,065	6	16,263,677	81,318,387	6,403,823	5,212,695	82,509,515
9/30/2022	82,509,515	5	16,501,903	66,007,612	5,198,099	4,231,240	66,974,471
9/30/2023	66,974,471	4	16,743,618	50,230,853	3,955,680	3,219,913	50,966,620
9/30/2024	50,966,620	3	16,988,873	33,977,747	2,675,748	2,178,052	34,475,443
9/30/2025	34,475,443	2	17,237,722	17,237,722	1,357,471	1,104,978	17,490,215
9/30/2026	17,490,215	1	17,490,215	0	0	0	0

\*8.00% prior to September 30, 2016





**SCHEDULE G** (Continued)

**AMORTIZATION SCHEDULE FOR BASES CLOSED  
ON SEPTEMBER 30, 2012\***

**STATE EMPLOYEES**

<u>Valuation Date</u>	<u>Balance of Transitional Closed 9/30/2012</u>	<u>Annual Amortization Payment</u>
9/30/2012	\$165,599,158	\$10,621,228
9/30/2013	168,225,862	10,966,418
9/30/2014	170,717,514	11,322,827
9/30/2015	173,052,088	11,690,819
9/30/2016	175,205,436	12,063,244
9/30/2017	176,939,620	12,587,087
9/30/2018	178,286,528	12,964,700
9/30/2019	179,361,892	13,353,641
9/30/2020	180,133,000	13,754,250
9/30/2021	180,564,224	14,166,878
9/30/2022	180,616,779	14,591,884
9/30/2023	180,248,466	15,029,641
9/30/2024	179,413,392	15,480,530
9/30/2025	178,061,667	15,944,946
9/30/2026	176,139,077	16,423,294
9/30/2027	173,586,735	16,915,993
9/30/2028	170,340,697	17,423,473
9/30/2029	166,331,554	17,946,177
9/30/2030	161,483,987	18,484,562
9/30/2031	155,716,289	19,039,099
9/30/2032	148,939,848	19,610,272
9/30/2033	141,058,589	20,198,581
9/30/2034	131,968,372	20,804,538
9/30/2035	121,556,343	21,428,674
9/30/2036	109,700,231	22,071,534
9/30/2037	96,267,590	22,733,681
9/30/2038	81,114,982	23,415,691
9/30/2039	64,087,096	24,118,162
9/30/2040	45,015,793	24,841,707
9/30/2041	23,719,080	25,586,958
9/30/2042	0	0

**STATE POLICE**

<u>Valuation Date</u>	<u>Balance of Transitional Closed 9/30/2012</u>	<u>Annual Amortization Payment</u>
9/30/2012	\$14,916,761	\$956,734
9/30/2013	15,153,368	987,828
9/30/2014	15,377,809	1,391,521
9/30/2015	15,216,513	1,391,521
9/30/2016	15,042,313	1,035,693
9/30/2017	15,191,202	1,068,059
9/30/2018	15,319,450	1,101,436
9/30/2019	15,424,421	1,135,855
9/30/2020	15,503,239	1,171,351
9/30/2021	15,552,768	1,207,956
9/30/2022	15,569,592	1,245,704
9/30/2023	15,549,993	1,284,632
9/30/2024	15,489,923	1,324,777
9/30/2025	15,384,977	1,366,176
9/30/2026	15,230,368	1,408,869
9/30/2027	15,020,890	1,452,897
9/30/2028	14,750,888	1,498,300
9/30/2029	14,414,220	1,545,121
9/30/2030	14,004,219	1,593,407
9/30/2031	13,513,644	1,643,200
9/30/2032	12,934,643	1,694,550
9/30/2033	12,258,696	1,747,505
9/30/2034	11,476,563	1,802,115
9/30/2035	10,578,227	1,858,431
9/30/2036	9,552,831	1,916,506
9/30/2037	8,388,610	1,976,397
9/30/2038	7,072,816	2,038,160
9/30/2039	5,591,640	2,101,852
9/30/2040	3,930,130	2,167,535
9/30/2041	2,072,093	2,235,270
9/30/2042	0	0

\*Amortization method is level dollar for 9/30/2014 and 9/30/2015. Amortization method is level percent of payroll for other years. Reflects change in interest rate and payroll growth assumption beginning with September 30, 2016 valuation.



**SCHEDULE G** (Continued)

**AMORTIZATION SCHEDULE FOR BASES CLOSED  
ON SEPTEMBER 30, 2013\***

**STATE EMPLOYEES**

<b>Valuation Date</b>	<b>Balance of Transitional Closed 9/30/2013</b>	<b>Annual Amortization Payment</b>	<b>Balance of New Incremental UAAL 9/30/2013</b>	<b>Annual Amortization Payment</b>
9/30/2013	\$168,225,862	\$10,789,700	\$36,709,210	\$2,354,462
9/30/2014	170,894,231	11,140,366	37,291,485	2,430,982
9/30/2015	173,425,404	11,502,427	37,843,822	2,509,989
9/30/2016	175,797,009	11,869,048	38,361,339	2,589,990
9/30/2017	177,771,975	12,389,181	38,792,304	2,703,491
9/30/2018	179,382,337	12,760,857	39,143,707	2,784,595
9/30/2019	180,747,839	13,143,683	39,441,679	2,868,133
9/30/2020	181,838,048	13,537,993	39,679,578	2,954,177
9/30/2021	182,619,802	13,944,133	39,850,168	3,042,803
9/30/2022	183,056,978	14,362,457	39,945,565	3,134,087
9/30/2023	183,110,258	14,793,330	39,957,192	3,228,109
9/30/2024	182,736,861	15,237,130	39,875,712	3,324,953
9/30/2025	181,890,259	15,694,244	39,690,971	3,424,701
9/30/2026	180,519,873	16,165,072	39,391,934	3,527,442
9/30/2027	178,570,741	16,650,024	38,966,607	3,633,266
9/30/2028	175,983,162	17,149,525	38,401,961	3,742,264
9/30/2029	172,692,311	17,664,010	37,683,851	3,854,531
9/30/2030	168,627,821	18,193,931	36,796,924	3,970,167
9/30/2031	163,713,331	18,739,748	35,724,514	4,089,272
9/30/2032	157,866,008	19,301,941	34,448,548	4,211,951
9/30/2033	150,996,015	19,880,999	32,949,420	4,338,309
9/30/2034	143,005,952	20,477,429	31,205,878	4,468,458
9/30/2035	133,790,242	21,091,752	29,194,883	4,602,512
9/30/2036	123,234,471	21,724,505	26,891,468	4,740,588
9/30/2037	111,214,681	22,376,240	24,268,583	4,882,805
9/30/2038	97,596,597	23,047,527	21,296,929	5,029,289
9/30/2039	82,234,802	23,738,953	17,944,773	5,180,168
9/30/2040	64,971,840	24,451,121	14,177,756	5,335,573
9/30/2041	45,637,251	25,184,655	9,958,681	5,495,641
9/30/2042	24,046,530	25,940,194	5,247,286	5,660,510
9/30/2043	0	0	0	0

\*Reflects change in interest rate and payroll growth assumption beginning with September 30, 2016 valuation



**SCHEDULE G** (Continued)

**AMORTIZATION SCHEDULE FOR BASES CLOSED  
ON SEPTEMBER 30, 2013\***

**STATE POLICE**

<b>Valuation Date</b>	<b>Balance of Transitional Closed 9/30/2013</b>	<b>Annual Amortization Payment</b>	<b>Balance of New Incremental UAAL 9/30/2013</b>	<b>Annual Amortization Payment</b>
9/30/2013	\$15,153,368	\$971,909	\$170,613	\$10,943
9/30/2014	15,393,728	1,379,563	173,319	15,533
9/30/2015	15,245,663	1,379,563	171,652	15,533
9/30/2016	15,085,753	1,018,524	169,852	11,468
9/30/2017	15,255,231	1,063,159	171,760	11,970
9/30/2018	15,393,422	1,095,053	173,316	12,329
9/30/2019	15,510,601	1,127,905	174,635	12,699
9/30/2020	15,604,155	1,161,742	175,688	13,080
9/30/2021	15,671,240	1,196,595	176,444	13,473
9/30/2022	15,708,756	1,232,492	176,866	13,877
9/30/2023	15,713,328	1,269,467	176,918	14,293
9/30/2024	15,681,285	1,307,551	176,557	14,722
9/30/2025	15,608,636	1,346,778	175,739	15,163
9/30/2026	15,491,038	1,387,181	174,415	15,618
9/30/2027	15,323,776	1,428,796	172,532	16,087
9/30/2028	15,101,727	1,471,660	170,032	16,570
9/30/2029	14,819,328	1,515,810	166,852	17,067
9/30/2030	14,470,540	1,561,284	162,925	17,579
9/30/2031	14,048,810	1,608,123	158,177	18,106
9/30/2032	13,547,031	1,656,367	152,527	18,649
9/30/2033	12,957,493	1,706,058	145,889	19,209
9/30/2034	12,271,838	1,757,239	138,170	19,785
9/30/2035	11,481,006	1,809,957	129,266	20,378
9/30/2036	10,575,178	1,864,255	119,067	20,990
9/30/2037	9,543,718	1,920,183	107,454	21,619
9/30/2038	8,375,103	1,977,788	94,296	22,268
9/30/2039	7,056,854	2,037,122	79,454	22,936
9/30/2040	5,575,460	2,098,236	62,775	23,624
9/30/2041	3,916,291	2,161,183	44,094	24,333
9/30/2042	2,063,516	2,226,018	23,233	25,063
9/30/2043	0	0	0	0

\*Amortization method is level dollar for 9/30/2014 and 9/30/2015. Amortization method is level percent of payroll for other years. Reflects change in interest rate and payroll growth assumption beginning with September 30, 2016 valuation.



**SCHEDULE G** (Continued)

**AMORTIZATION SCHEDULE FOR BASES CLOSED  
ON SEPTEMBER 30, 2014\***

**STATE EMPLOYEES**

<b>Valuation Date</b>	<b>Balance of Transitional Closed 9/30/2014</b>	<b>Annual Amortization Payment</b>	<b>Balance of New Incremental UAAL 9/30/2014</b>	<b>Annual Amortization Payment</b>
9/30/2014	\$170,894,231	\$10,960,845	(\$40,029,335)	(\$2,567,409)
9/30/2015	173,604,925	11,317,072	(40,664,273)	(2,650,849)
9/30/2016	176,176,247	11,677,974	(41,266,566)	(2,735,385)
9/30/2017	178,372,152	12,194,285	(41,780,923)	(2,856,323)
9/30/2018	180,224,674	12,560,114	(42,214,847)	(2,942,013)
9/30/2019	181,857,253	12,936,917	(42,597,254)	(3,030,273)
9/30/2020	183,241,595	13,325,024	(42,921,514)	(3,121,181)
9/30/2021	184,346,847	13,724,775	(43,180,403)	(3,214,817)
9/30/2022	185,139,386	14,136,518	(43,366,042)	(3,311,261)
9/30/2023	185,582,595	14,560,614	(43,469,857)	(3,410,599)
9/30/2024	185,636,610	14,997,432	(43,482,509)	(3,512,917)
9/30/2025	185,258,061	15,447,355	(43,393,840)	(3,618,304)
9/30/2026	184,399,778	15,910,776	(43,192,801)	(3,726,854)
9/30/2027	183,010,485	16,388,099	(42,867,380)	(3,838,659)
9/30/2028	181,034,462	16,879,742	(42,404,527)	(3,953,819)
9/30/2029	178,411,183	17,386,135	(41,790,064)	(4,072,434)
9/30/2030	175,074,929	17,907,719	(41,008,598)	(4,194,607)
9/30/2031	170,954,361	18,444,950	(40,043,418)	(4,320,445)
9/30/2032	165,972,067	18,998,299	(38,876,392)	(4,450,058)
9/30/2033	160,044,068	19,568,248	(37,487,850)	(4,583,560)
9/30/2034	153,079,290	20,155,295	(35,856,458)	(4,721,066)
9/30/2035	144,978,989	20,759,954	(33,959,089)	(4,862,699)
9/30/2036	135,636,131	21,382,753	(31,770,668)	(5,008,579)
9/30/2037	124,934,723	22,024,235	(29,264,029)	(5,158,837)
9/30/2038	112,749,098	22,684,962	(26,409,734)	(5,313,602)
9/30/2039	98,943,127	23,365,511	(23,175,899)	(5,473,010)
9/30/2040	83,369,387	24,066,476	(19,527,991)	(5,637,200)
9/30/2041	65,868,250	24,788,471	(15,428,620)	(5,806,316)
9/30/2042	46,266,904	25,532,125	(10,837,308)	(5,980,506)
9/30/2043	24,378,298	26,298,089	(5,710,240)	(6,159,921)
9/30/2044	0	0	0	0

\*Reflects change in interest rate and payroll growth assumption beginning with September 30, 2016 valuation



**SCHEDULE G** (Continued)

**AMORTIZATION SCHEDULE FOR BASES CLOSED  
ON SEPTEMBER 30, 2014\***

**STATE POLICE**

<b>Valuation Date</b>	<b>Balance of Transitional Closed 9/30/2014</b>	<b>Annual Amortization Payment</b>	<b>Balance of New Incremental UAAL 9/30/2014</b>	<b>Annual Amortization Payment</b>
9/30/2014	\$15,393,728	\$1,367,385	\$78,767	\$6,997
9/30/2015	15,257,841	1,367,385	78,072	6,997
9/30/2016	15,111,083	1,001,649	77,321	5,125
9/30/2017	15,299,432	1,045,935	78,284	5,352
9/30/2018	15,458,327	1,077,313	79,098	5,512
9/30/2019	15,598,358	1,109,632	79,814	5,678
9/30/2020	15,717,096	1,142,921	80,422	5,848
9/30/2021	15,811,896	1,177,209	80,907	6,024
9/30/2022	15,879,874	1,212,525	81,255	6,204
9/30/2023	15,917,890	1,248,901	81,449	6,390
9/30/2024	15,922,523	1,286,368	81,473	6,582
9/30/2025	15,890,053	1,324,959	81,307	6,780
9/30/2026	15,816,436	1,364,708	80,930	6,983
9/30/2027	15,697,273	1,405,649	80,320	7,192
9/30/2028	15,527,785	1,447,818	79,453	7,408
9/30/2029	15,302,779	1,491,253	78,302	7,630
9/30/2030	15,016,620	1,535,990	76,837	7,859
9/30/2031	14,663,189	1,582,070	75,029	8,095
9/30/2032	14,235,845	1,629,532	72,842	8,338
9/30/2033	13,727,385	1,678,418	70,241	8,588
9/30/2034	13,129,999	1,728,771	67,184	8,846
9/30/2035	12,435,215	1,780,634	63,629	9,111
9/30/2036	11,633,855	1,834,053	59,528	9,385
9/30/2037	10,715,968	1,889,074	54,832	9,666
9/30/2038	9,670,776	1,945,747	49,484	9,956
9/30/2039	8,486,603	2,004,119	43,424	10,255
9/30/2040	7,150,804	2,064,243	36,589	10,562
9/30/2041	5,649,687	2,126,170	28,908	10,879
9/30/2042	3,968,430	2,189,955	20,306	11,206
9/30/2043	2,090,988	2,255,654	10,699	11,542
9/30/2044	0	0	0	0

*\*Amortization method is level dollar for 9/30/2014 and 9/30/2015. Amortization method is level percent of payroll for other years. Reflects change in interest rate and payroll growth assumption beginning with September 30, 2016 valuation.*



**SCHEDULE G** (Continued)

**AMORTIZATION SCHEDULE FOR BASES CLOSED  
ON SEPTEMBER 30, 2015\***

**STATE EMPLOYEES**

<b>Valuation Date</b>	<b>Balance of Transitional Closed 9/30/2015</b>	<b>Annual Amortization Payment</b>	<b>Balance of New Incremental UAAL 9/30/2015</b>	<b>Annual Amortization Payment</b>
9/30/2015	\$173,604,925	\$11,134,704	\$54,809,112	\$3,515,357
9/30/2016	176,358,615	11,489,972	55,678,484	3,627,519
9/30/2017	178,756,885	12,002,355	56,435,646	3,789,284
9/30/2018	180,831,634	12,362,426	57,090,669	3,902,963
9/30/2019	182,709,699	12,733,298	57,683,596	4,020,052
9/30/2020	184,364,790	13,115,297	58,206,128	4,140,653
9/30/2021	185,768,220	13,508,756	58,649,207	4,264,873
9/30/2022	186,888,712	13,914,019	59,002,959	4,392,819
9/30/2023	187,692,179	14,331,440	59,256,623	4,524,604
9/30/2024	188,141,498	14,761,383	59,398,478	4,660,342
9/30/2025	188,196,258	15,204,224	59,415,767	4,800,152
9/30/2026	187,812,489	15,660,351	59,294,606	4,944,157
9/30/2027	186,942,372	16,130,162	59,019,900	5,092,481
9/30/2028	185,533,921	16,614,066	58,575,236	5,245,256
9/30/2029	183,530,652	17,112,488	57,942,779	5,402,613
9/30/2030	180,871,203	17,625,863	57,103,160	5,564,692
9/30/2031	177,488,947	18,154,639	56,035,342	5,731,632
9/30/2032	173,311,562	18,699,278	54,716,493	5,903,581
9/30/2033	168,260,570	19,260,257	53,121,836	6,080,689
9/30/2034	162,250,833	19,838,064	51,224,492	6,263,110
9/30/2035	155,190,022	20,433,206	48,995,311	6,451,003
9/30/2036	146,978,030	21,046,202	46,402,688	6,644,533
9/30/2037	137,506,348	21,677,588	43,412,367	6,843,869
9/30/2038	126,657,385	22,327,916	39,987,222	7,049,185
9/30/2039	114,303,738	22,997,754	36,087,031	7,260,661
9/30/2040	100,307,403	23,687,686	31,668,223	7,478,480
9/30/2041	84,518,925	24,398,317	26,683,616	7,702,835
9/30/2042	66,776,474	25,130,266	21,082,116	7,933,920
9/30/2043	46,904,855	25,884,174	14,808,412	8,171,937
9/30/2044	24,714,438	26,660,700	7,802,638	8,417,095
9/30/2045	0	0	0	0

\*Reflects change in interest rate and payroll growth assumption beginning with September 30, 2016 valuation



**SCHEDULE G** (Continued)

**AMORTIZATION SCHEDULE FOR BASES CLOSED  
ON SEPTEMBER 30, 2015\***

**STATE POLICE**

<b>Valuation Date</b>	<b>Balance of Transitional Closed 9/30/2015</b>	<b>Annual Amortization Payment</b>	<b>Balance of New Incremental UAAL 9/30/2015</b>	<b>Annual Amortization Payment</b>
9/30/2015	\$15,257,841	\$1,355,315	\$17,357,914	\$1,541,859
9/30/2016	15,123,154	985,291	17,204,688	1,120,906
9/30/2017	15,328,811	1,029,229	17,438,652	1,170,891
9/30/2018	15,506,725	1,060,106	17,641,054	1,206,018
9/30/2019	15,667,774	1,091,909	17,824,269	1,242,199
9/30/2020	15,809,702	1,124,667	17,985,732	1,279,465
9/30/2021	15,930,049	1,158,407	18,122,643	1,317,849
9/30/2022	16,026,133	1,193,159	18,231,953	1,357,384
9/30/2023	16,095,033	1,228,954	18,310,335	1,398,105
9/30/2024	16,133,563	1,265,822	18,354,169	1,440,049
9/30/2025	16,138,259	1,303,797	18,359,511	1,483,250
9/30/2026	16,105,350	1,342,911	18,322,072	1,527,748
9/30/2027	16,030,735	1,383,198	18,237,188	1,573,580
9/30/2028	15,909,957	1,424,694	18,099,786	1,620,787
9/30/2029	15,738,172	1,467,435	17,904,357	1,669,411
9/30/2030	15,510,118	1,511,458	17,644,914	1,719,493
9/30/2031	15,220,082	1,556,802	17,314,958	1,771,078
9/30/2032	14,861,862	1,603,506	16,907,432	1,824,211
9/30/2033	14,428,728	1,651,611	16,414,682	1,878,937
9/30/2034	13,913,379	1,701,159	15,828,402	1,935,305
9/30/2035	13,307,898	1,752,194	15,139,583	1,993,364
9/30/2036	12,603,701	1,804,760	14,338,461	2,053,165
9/30/2037	11,791,483	1,858,903	13,414,450	2,114,760
9/30/2038	10,861,160	1,914,670	12,356,078	2,178,203
9/30/2039	9,801,806	1,972,110	11,150,916	2,243,549
9/30/2040	8,601,589	2,031,273	9,785,502	2,310,855
9/30/2041	7,247,691	2,092,211	8,245,255	2,380,181
9/30/2042	5,726,235	2,154,978	6,514,388	2,451,586
9/30/2043	4,022,198	2,219,627	4,575,809	2,525,134
9/30/2044	2,119,319	2,286,216	2,411,020	2,600,888
9/30/2045	0	0	0	0

\*Amortization method is level dollar for 9/30/2015. Amortization method is level percent of payroll for other years. Reflects change in interest rate and payroll growth assumption beginning with September 30, 2016 valuation.



**SCHEDULE G** (Continued)

**AMORTIZATION SCHEDULE FOR BASES CLOSED  
ON SEPTEMBER 30, 2016**

**STATE EMPLOYEES**

<b>Valuation Date</b>	<b>Balance of Transitional Closed 9/30/2016</b>	<b>Annual Amortization Payment</b>	<b>Balance of New Incremental UAAL 9/30/2016</b>	<b>Annual Amortization Payment</b>
9/30/2016	\$176,358,615	\$11,304,992	\$109,513,946	\$7,020,096
9/30/2017	178,941,864	11,813,349	111,118,075	7,335,771
9/30/2018	181,220,187	12,167,750	112,532,852	7,555,845
9/30/2019	183,323,526	12,532,782	113,838,969	7,782,520
9/30/2020	185,227,472	12,908,766	115,021,268	8,015,996
9/30/2021	186,905,369	13,296,029	116,063,197	8,256,475
9/30/2022	188,328,138	13,694,909	116,946,699	8,504,170
9/30/2023	189,464,070	14,105,757	117,652,081	8,759,295
9/30/2024	190,278,609	14,528,929	118,157,888	9,022,074
9/30/2025	190,734,120	14,964,797	118,440,747	9,292,736
9/30/2026	190,789,635	15,413,741	118,475,220	9,571,518
9/30/2027	190,400,578	15,876,153	118,233,626	9,858,663
9/30/2028	189,518,470	16,352,438	117,685,861	10,154,423
9/30/2029	188,090,612	16,843,011	116,799,199	10,459,056
9/30/2030	186,059,737	17,348,302	115,538,080	10,772,828
9/30/2031	183,363,639	17,868,751	113,863,876	11,096,012
9/30/2032	179,934,774	18,404,813	111,734,644	11,428,893
9/30/2033	175,699,825	18,956,957	109,104,855	11,771,759
9/30/2034	170,579,229	19,525,666	105,925,103	12,124,912
9/30/2035	164,486,677	20,111,436	102,141,793	12,488,660
9/30/2036	157,328,567	20,714,779	97,696,799	12,863,319
9/30/2037	149,003,413	21,336,223	92,527,103	13,249,219
9/30/2038	139,401,209	21,976,309	86,564,393	13,646,696
9/30/2039	128,402,745	22,635,599	79,734,643	14,056,097
9/30/2040	115,878,862	23,314,666	71,957,649	14,477,779
9/30/2041	101,689,656	24,014,107	63,146,535	14,912,113
9/30/2042	85,683,610	24,734,530	53,207,212	15,359,476
9/30/2043	67,696,664	25,476,565	42,037,804	15,820,260
9/30/2044	47,551,211	26,240,862	29,528,021	16,294,868
9/30/2045	25,055,007	27,028,089	15,558,484	16,783,715
9/30/2046	0	0	0	0





**SCHEDULE G** (Continued)

**AMORTIZATION SCHEDULE FOR BASES CLOSED  
ON SEPTEMBER 30, 2016**

**STATE POLICE**

<b>Valuation Date</b>	<b>Balance of Transitional Closed 9/30/2016</b>	<b>Annual Amortization Payment</b>	<b>Balance of New Incremental UAAL 9/30/2016</b>	<b>Annual Amortization Payment</b>
9/30/2016	\$15,123,154	\$969,429	\$28,385,997	\$1,819,608
9/30/2017	15,344,673	1,013,022	28,801,787	1,901,431
9/30/2018	15,540,045	1,043,412	29,168,497	1,958,474
9/30/2019	15,720,411	1,074,715	29,507,042	2,017,228
9/30/2020	15,883,678	1,106,956	29,813,494	2,077,745
9/30/2021	16,027,562	1,140,165	30,083,562	2,140,077
9/30/2022	16,149,568	1,174,370	30,312,565	2,204,279
9/30/2023	16,246,976	1,209,601	30,495,400	2,270,408
9/30/2024	16,316,825	1,245,889	30,626,505	2,338,520
9/30/2025	16,355,886	1,283,266	30,699,823	2,408,676
9/30/2026	16,360,647	1,321,763	30,708,758	2,480,936
9/30/2027	16,327,284	1,361,416	30,646,137	2,555,364
9/30/2028	16,251,641	1,402,259	30,504,156	2,632,025
9/30/2029	16,129,199	1,444,327	30,274,334	2,710,986
9/30/2030	15,955,047	1,487,656	29,947,452	2,792,315
9/30/2031	15,723,851	1,532,286	29,513,498	2,876,085
9/30/2032	15,429,818	1,578,255	28,961,602	2,962,367
9/30/2033	15,066,661	1,625,602	28,279,961	3,051,238
9/30/2034	14,627,558	1,674,370	27,455,770	3,142,775
9/30/2035	14,105,108	1,724,602	26,475,136	3,237,059
9/30/2036	13,491,284	1,776,340	25,322,994	3,334,170
9/30/2037	12,777,383	1,829,630	23,983,010	3,434,195
9/30/2038	11,953,972	1,884,519	22,437,477	3,537,221
9/30/2039	11,010,828	1,941,054	20,667,207	3,643,338
9/30/2040	9,936,877	1,999,286	18,651,411	3,752,638
9/30/2041	8,720,120	2,059,264	16,367,572	3,865,217
9/30/2042	7,347,565	2,121,042	13,791,301	3,981,174
9/30/2043	5,805,143	2,184,674	10,896,192	4,100,609
9/30/2044	4,077,625	2,250,214	7,653,658	4,223,627
9/30/2045	2,148,524	2,317,720	4,032,756	4,350,336
9/30/2046	0	0	0	0



## **SCHEDULE H**

### **SUMMARY OF MAIN SYSTEM PROVISIONS AS INTERPRETED FOR VALUATION PURPOSES**

The Employees' Retirement System of Alabama was established on October 1, 1945. The valuation took into account amendments to the System effective through the valuation date. There is a new tier (Tier II) of benefits for all members initially joining the System on and after January 1, 2013. Act 2013-67 provides that State policemen hired on or after January 1, 2015 will no longer be eligible for benefits under the code section covering State policemen, but instead will be covered under the provisions pertaining to State employees who are law enforcement officers. The following summary describes the main benefit and contribution provisions of the System as interpreted for the valuation.

#### **1 – DEFINITIONS**

Average Final Compensation – the average compensation of a member for:

- Tier 1 - the 3 highest years in the last 10 years of creditable service
- Tier 2 - the 5 highest years in the last 10 years of creditable service

Membership Service – all service rendered while a member of the Retirement System and for which contributions are made.

Creditable Service – the sum of membership service, prior service, and any other previous service established as creditable in accordance with the provisions of the retirement law.

Annuity – payments for life derived from accumulated contributions of a member.

Pension – payments for life derived from the accumulated contributions of an employer.

Retirement Allowance – the sum of the annuity and pension payments.

#### **2 - BENEFITS**

##### **MEMBERS CLASSIFIED OTHER THAN STATE POLICEMEN**

Service Retirement Allowance

Condition for Allowance



Tier I A retirement allowance is payable upon the request of any member who has completed 25 years of creditable service, (except for employees of local employers who did not elect 25-year retirement), or who has attained age 60 and completed at least 10 years of creditable service.

Tier II A retirement allowance is payable upon the request of any member who has attained age 62 and completed at least 10 years of creditable service (age 56 with 10 years of creditable service for a full-time certified firefighter, police officer or correctional officer).

#### Amount of Allowance

Tier I Upon service retirement a member receives a retirement allowance equal to 2.0125% of the member's average final compensation multiplied by the number of years of his creditable service. At retirement, a member receives one additional year of creditable service in determining the retirement allowance for each five years of service as a full-time certified firefighter, police officer or correctional officer.

Tier II Upon service retirement a member receives a retirement allowance equal to 1.65% of the member's average final compensation multiplied by the number of years of creditable service. The benefit is capped at 80% of the member's average final compensation.

#### Disability Retirement Allowance

Condition for Allowance A disability retirement allowance may be granted to a member who has 10 or more years of creditable service and becomes permanently incapacitated for duty before reaching eligibility for service retirement.

#### Amount of Allowance

Tier I Upon retirement for disability, a member receives a retirement allowance equal to 2.0125% of the member's average final compensation multiplied by the number of years of his creditable service. At retirement, a member receives one additional year of creditable service in determining the retirement allowance for each five years of service as a full-time certified firefighter, police officer or correctional officer.

Tier II Upon disability retirement a member receives a retirement allowance equal to 1.65% of the member's average final compensation multiplied by the number of years of creditable service. The benefit is capped at 80% of the member's average final compensation.



Benefits Payable on  
Separation from Service

Any member who withdraws from service is entitled to receive a return of member contributions with allowable interest. A member who has completed 10 years of creditable service may, after separation from service, continue in the membership of the System and file for service retirement after reaching age 60 (age 62 for Tier II members).

Benefits Payable upon  
Death in Active Service

In the event of the death of a member eligible for service retirement, the designated beneficiary may elect: (1) to exercise option 3 as defined below under “Special Privileges at Retirement – All Employees” or (2) to receive a return of member contributions and total interest earned plus a death benefit payable from the pre-retirement death benefit fund equal to the salary on which the member made retirement contributions for the previous fiscal year (October 1 – September 30).\*

In the event of the death of a member with more than one year of service who is not eligible for retirement, the designated beneficiary shall receive a return of member contributions and total interest earned. Also, the designated beneficiary shall receive an additional death benefit payable from the pre-retirement death benefit fund equal to the salary on which their retirement contributions were made for the previous fiscal year (October 1 – September 30).\*

In the event of a job-related death of a member at any age with less than 1 year of service, the designated beneficiary shall receive the return of member contributions and total earned interest plus a death benefit payable from the pre-retirement death benefit fund equal to the annual earnable compensation of the member at the time death occurs.\*

In the event of a non job-related death of a member with less than 1 year of service, the beneficiary shall receive the return of member contributions and total interest earned plus a matching death benefit which is limited to a maximum of \$5,000.

\* However, if the death occurred more than 180 calendar days after the member’s last day in pay status, or if the deceased had applied for a refund of contributions or terminated employment, the lump sum will be the same as if the member had less than one year of service and the death was not job-related.



## Deferred Retirement Option Plan (DROP)

A member may elect to participate in the Deferred Retirement Option Plan (DROP) upon completion of at least 25 years of service (at least 30 years for employers that did not elect 25 year retirement) of creditable service (excluding sick leave) and attainment of at least 55 years of age. Under the DROP, the member may defer receipt of a retirement allowance and continue employment for a period not to exceed five years, nor to be less than three years. At the end of this period, the member may withdraw from active service and receive the retirement benefit based on his or her years of service credit at the time of enrollment in the DROP, and also receive a payment for the deferred retirement benefits, employee contributions while participating in the DROP, and interest earned on DROP deposits.

The effect of Act 2011-27 is that no new participants will be allowed to enter DROP with an effective participation date after June 1, 2011.

## Member Contributions

### Tier I

Prior to October 1, 2011, regular members contributed 5.0% of salary. Full-time certified police officers, firefighters and correctional officers contributed 6.0% of salary. DROP participants continue to contribute during the DROP period, but receive a refund of these contributions and regular interest upon retirement.

Beginning October 1, 2011, the contribution rates were increased to 7.25% for regular members and 8.25% for full-time certified police officers, firefighters and correctional officers, for all State employees and for local employees whose employers elect to do so.

Beginning October 1, 2012, the contribution rates were increased to 7.50% for regular members and 8.50% for full-time certified police officers, firefighters and correctional officers, for all State employees and for local employees whose employers elect to do so.

### Tier II

Regular members contribute 6% of salary and full-time certified firefighters, police officers and correctional officers contribute 7% of salary.

### Both

If positive investment performance results in a decrease in the total contribution rate paid by employers and employees participating in the System, the Retirement System of Alabama shall first reduce the employee contribution rate.



“Regular Interest” is 4% which is the rate adopted by the Board and applied to the balance in each member’s account every year; however, if a member receives a refund of contributions, the interest rate applied to the refund is lower than the 4% regular rate (Based on Section 36-27-16.3(c)(1)).

#### MEMBERS CLASSIFIED AS STATE POLICEMEN

#### Service Retirement Allowance

##### Condition for Allowance

- |         |   |
|---------|---|
| Tier I  | A retirement allowance is payable upon the request of any member who has completed 25 years of creditable service or who has attained age 52 and completed at least 10 years of creditable service. |
| Tier II | A retirement allowance is payable upon the request of any member who has attained age 56 and completed at least 10 years of creditable service.   |

##### Amount of Allowance

- |         |   |
|---------|---|
| Tier I  | <p>Upon service retirement a member receives a retirement allowance equal to 2.875% of the member's average final compensation multiplied by the number of years of his creditable service.</p> <p>A member who has attained 20 or more years of creditable service and retires prior to age 60 is eligible to receive a “bonus service credit” up to 4 years as follows:</p> <ul style="list-style-type: none"><li>- Age 56 or older – bonus service of 4 years reduced by 1 month for each month over the age of 56.</li><li>- Age 52 to 56 – bonus service of 4 years.</li><li>- Age 52 or less (disability retirement only) – bonus service of 4 years.</li><li>- Age 52 or less with 25 or more years of service – bonus service of 4 years.</li></ul> |
| Tier II | Upon service retirement a member receives a retirement allowance equal to 2.375% of the member's average final compensation multiplied by the number of years of his creditable service. The benefit is capped at 80% of the member’s average final compensation.   |



## Disability Retirement Allowance

### Condition for Allowance

A disability retirement allowance may be granted to a member who has 10 or more years of creditable service or who becomes disabled as a result of his employment in line of duty without regard to his years of creditable service, and who becomes permanently incapacitated, mentally or physically, for the further performance of duty before reaching the minimum age for service retirement.

### Amount of Allowance

#### Tier I

Upon retirement for disability, a member receives a retirement allowance equal to 2.875% of the member's average final compensation multiplied by the number of years of his creditable service.

#### Tier II

Upon retirement for disability, a member receives a retirement allowance equal to 2.375% of the member's average final compensation multiplied by the number of years of his creditable service. The benefit is capped at 80% of the member's average final compensation.

### Benefits Payable on Separation from Service

Any member who withdraws from service is entitled to receive a return of member contributions with allowable interest. A member who has completed 10 years of creditable service may, after separation from service, continue in the membership of the System and file for service retirement after reaching age 52 (age 56 for Tier II members).

### Benefits Payable upon Death in Active Service

In the event of the death of a member who is eligible for service retirement, the designated beneficiary may elect: (1) to exercise option 3 as defined below under "Special Privileges at Retirement – All Employees" or (2) to receive a return of member contributions and total interest earned plus a death benefit payable from the pre-retirement death benefit fund equal to the salary on which the member made retirement contributions for the previous fiscal year (October 1 – September 30).\*

In the event of the death of a member with more than one year of service who is not eligible for retirement, the designated beneficiary shall receive a return of member contributions and total interest earned. Also, the designated beneficiary shall receive an additional death benefit payable from the pre-retirement death benefit fund equal to the salary



on which their retirement contributions were made for the previous fiscal year (October 1 – September 30).\*

In the event of a job-related death of a member at any age with less than 1 year of service, the designated beneficiary shall receive the return of member contributions and total earned interest plus a death benefit payable from the pre-retirement death benefit fund equal to the annual earnable compensation of the member at the time death occurs.\*

In the event of a non job-related death of a member with less than 1 year of service, the beneficiary shall receive the return of member contributions and total interest earned plus a matching death benefit which is limited to a maximum of \$5,000.

\* However, if the death occurred more than 180 calendar days after the member's last day in pay status, or if the deceased had applied for a refund of contributions or terminated employment, the lump sum will be the same as if the member had less than one year of service and the death was not job-related.

#### Deferred Retirement Option Plan (DROP)

A member may elect to participate in the Deferred Retirement Option Plan (DROP) upon completion of at least 25 years of creditable service (excluding sick leave) and attainment of at least 52 years of age. Under the DROP, the member may defer receipt of a retirement allowance and continue employment for a period not to exceed five years, nor to be less than three years. At the end of this period, the member may withdraw from active service and receive the retirement benefit based on his or her years of service credit at the time of enrollment in the DROP, and also receive a payment for the deferred retirement benefits, employee contributions while participating in the DROP, and interest earned on DROP deposits.

The effect of Act 2011-27 is that no new participants will be allowed to enter DROP with an effective participation date after June 1, 2011.

#### Member Contributions

Each member contributes 10% of salary. DROP participants continue to contribute during the DROP period, but receive a refund of these contributions with interest upon retirement.





### 3 - SPECIAL PRIVILEGES AT RETIREMENT – ALL MEMBERS

In lieu of the full retirement allowance, any member may, at retirement, elect to receive a reduced retirement allowance equal in value to the full allowance, with the provision that:

Option 1. If the member dies before the annuity payments equal or exceed the present value of the member's annuity at the date of retirement, the balance is paid to a designated beneficiary or to the estate, or

Option 2. After the member's death, the member's allowance is continued throughout the life of the designated beneficiary, or

Option 3. After the member's death, one half of the member's allowance is continued throughout the life of the designated beneficiary, or

Option 4. Some other benefit is paid either to the member or to the designated beneficiary provided such benefit, together with the reduced retirement allowance, is of equivalent actuarial value to his retirement allowance and is approved by the Board of Control.



**SCHEDULE I**

**SCHEDULE OF MEMBERSHIP DATA  
AS OF SEPTEMBER 30, 2016**

**ACTIVE STATE EMPLOYEES**

Attained Age	Completed Years of Service										Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	
<b>Under 25</b>	479	380	2								861
Avg. Pay	\$25,525	\$29,959	\$18,589								\$27,466
<b>25 to 29</b>	693	1,555	298	8							2,554
Avg. Pay	\$27,463	\$32,945	\$37,596	\$30,265							\$31,992
<b>30 to 34</b>	428	1,159	1,047	348	4						2,986
Avg. Pay	\$27,987	\$33,454	\$40,604	\$39,232	\$47,285						\$35,869
<b>35 to 39</b>	300	814	866	1,156	282	6					3,424
Avg. Pay	\$28,487	\$34,356	\$40,609	\$44,811	\$45,645	\$50,302					\$39,911
<b>40 to 44</b>	301	647	683	961	755	153	5				3,505
Avg. Pay	\$29,443	\$34,393	\$40,888	\$46,273	\$49,937	\$51,940	\$45,770				\$42,621
<b>45 to 49</b>	279	593	585	791	720	776	252	4			4,000
Avg. Pay	\$27,873	\$35,240	\$40,935	\$45,522	\$49,595	\$58,623	\$55,902	\$52,757			\$46,032
<b>50 to 54</b>	215	552	556	665	580	672	802	173	5		4,220
Avg. Pay	\$31,221	\$34,581	\$40,146	\$43,197	\$50,413	\$55,331	\$60,652	\$64,709	\$45,022		\$48,183
<b>55 to 59</b>	139	422	487	580	473	515	635	430	116	4	3,801
Avg. Pay	\$31,013	\$35,864	\$40,880	\$41,938	\$46,146	\$53,364	\$58,389	\$67,629	\$62,155	\$65,367	\$49,097
<b>60 to 64</b>	158	437	321	406	345	328	354	108	68	16	2,541
Avg. Pay	\$52,716	\$49,666	\$38,822	\$44,108	\$46,133	\$52,748	\$57,132	\$66,673	\$64,600	\$55,653	\$49,716
<b>65 to 69</b>	38	142	201	167	116	99	109	10	7	4	893
Avg. Pay	\$57,786	\$51,720	\$55,247	\$48,449	\$53,383	\$52,694	\$59,927	\$61,205	\$66,775	\$59,513	\$53,745
<b>70 &amp; up</b>	14	43	71	47	48	30	47	6	6	4	316
Avg. Pay	\$38,621	\$59,506	\$67,272	\$53,061	\$51,736	\$54,588	\$62,386	\$55,255	\$64,947	\$65,902	\$58,252
<b>Total</b>	3,044	6,744	5,117	5,129	3,323	2,579	2,204	731	202	28	29,101
Avg. Pay	\$29,734	\$35,340	\$41,307	\$44,397	\$48,790	\$55,278	\$58,859	\$66,526	\$62,797	\$59,056	\$43,480

Average Age:45.42      Average Service: 11.25



**SCHEDULE I** (Continued)

**SCHEDULE OF MEMBERSHIP DATA  
AS OF SEPTEMBER 30, 2016**

**ACTIVE STATE POLICE**

Attained Age	Completed Years of Service										Total	
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up		
<b>Under 25</b> Avg. Pay												
<b>25 to 29</b> Avg. Pay		1 \$47,235	1 \$45,803									2 \$46,519
<b>30 to 34</b> Avg. Pay		3 \$45,741	36 \$49,958	27 \$54,549								66 \$51,644
<b>35 to 39</b> Avg. Pay		4 \$45,760	29 \$52,796	55 \$55,387	32 \$58,216							120 \$55,194
<b>40 to 44</b> Avg. Pay		1 \$51,159	14 \$56,296	45 \$57,595	64 \$63,648	30 \$67,074						154 \$61,797
<b>45 to 49</b> Avg. Pay		2 \$48,064	15 \$51,412	30 \$54,784	60 \$68,464	63 \$74,316	14 \$82,831	1 \$85,893				185 \$67,817
<b>50 to 54</b> Avg. Pay		2 \$63,273	10 \$52,676	12 \$58,547	15 \$65,275	30 \$75,454	11 \$80,700	5 \$95,630	1 \$99,978			86 \$70,517
<b>55 to 59</b> Avg. Pay	1 \$70,075	1 \$78,810	6 \$60,360	4 \$64,317	7 \$69,167	3 \$77,644	5 \$87,187		1 \$70,420			28 \$71,135
<b>60 to 64</b> Avg. Pay		3 \$78,428	3 \$57,928	2 \$59,830	1 \$70,723	2 \$68,377	1 \$72,396					12 \$67,383
<b>65 to 69</b> Avg. Pay						1 \$76,677						1 \$76,677
<b>70 &amp; up</b> Avg. Pay						1 \$84,276						1 \$84,276
<b>Total</b> Avg. Pay	1 \$70,075	17 \$56,201	114 \$52,609	175 \$56,194	179 \$64,683	130 \$72,988	31 \$82,441	6 \$94,007	2 \$85,199			655 \$62,921

Average Age:43.93      Average Service: 15.69



**SCHEDULE I** (Continued)

**SCHEDULE OF MEMBERSHIP DATA  
AS OF SEPTEMBER 30, 2016**

**ACTIVE LOCAL EMPLOYEES**

Attained Age	Completed Years of Service										Total	
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up		
<b>Under 25</b>	1,598	1,374	21									2,993
Avg. Pay	\$20,768	\$27,834	\$34,463									\$24,108
<b>25 to 29</b>	1,377	3,045	992	33								5,447
Avg. Pay	\$24,183	\$32,211	\$40,620	\$42,857								\$31,777
<b>30 to 34</b>	884	2,154	1,941	838	22							5,839
Avg. Pay	\$25,367	\$33,424	\$42,672	\$47,345	\$52,246							\$37,347
<b>35 to 39</b>	690	1,644	1,571	1,519	669	16						6,108
Avg. Pay	\$25,496	\$33,561	\$42,820	\$48,807	\$52,959	\$48,418						\$40,992
<b>40 to 44</b>	786	1,479	1,366	1,421	1,362	607	14					7,035
Avg. Pay	\$23,918	\$32,631	\$41,389	\$48,079	\$54,534	\$61,168	\$67,500					\$43,251
<b>45 to 49</b>	558	1,418	1,263	1,247	1,420	1,266	399	6				7,577
Avg. Pay	\$25,444	\$33,945	\$39,309	\$46,886	\$52,700	\$60,699	\$63,461	\$43,124				\$45,889
<b>50 to 54</b>	466	1,179	1,215	1,170	1,125	998	687	252	7			7,099
Avg. Pay	\$27,273	\$34,079	\$38,561	\$42,689	\$49,675	\$57,169	\$64,244	\$66,842	\$67,048			\$45,651
<b>55 to 59</b>	324	969	1,015	1,056	1,054	850	566	367	159	6		6,366
Avg. Pay	\$26,132	\$32,832	\$37,338	\$42,725	\$46,258	\$53,333	\$60,827	\$68,591	\$67,931	\$57,281		\$45,261
<b>60 to 64</b>	216	667	725	721	685	538	387	180	95	38		4,252
Avg. Pay	\$35,702	\$39,299	\$35,864	\$41,697	\$45,179	\$51,992	\$56,670	\$62,004	\$66,325	\$70,516		\$44,915
<b>65 to 69</b>	80	245	332	274	226	167	112	39	19	13		1,507
Avg. Pay	\$30,390	\$35,164	\$39,391	\$42,026	\$46,073	\$52,794	\$60,875	\$61,971	\$59,788	\$87,831		\$44,049
<b>70 &amp; up</b>	44	164	190	145	119	81	53	17	12	10		835
Avg. Pay	\$24,908	\$24,057	\$37,094	\$39,079	\$39,462	\$46,909	\$50,573	\$53,023	\$62,265	\$55,344		\$37,286
<b>Total</b>	7,023	14,338	10,631	8,424	6,682	4,522	2,218	861	292	67		55,058
Avg. Pay	\$24,479	\$32,826	\$40,276	\$45,622	\$50,342	\$56,993	\$61,433	\$65,917	\$66,624	\$70,426		\$41,163

Average Age: 44.23

Average Service: 9.85



**SCHEDULE I** (Continued)

**SCHEDULE OF MEMBERSHIP DATA  
AS OF SEPTEMBER 30, 2016**

**NUMBER OF SERVICE RETIREMENTS  
AND THEIR BENEFITS BY AGE**

<b>Age</b>	<b>Number of Members</b>	<b>Total Annual Benefits</b>	<b>Average Annual Benefits</b>
Under 50	332	\$ 10,511,358	\$ 31,661
50 – 54	1498	48,439,602	32,336
55 – 59	3246	101,333,048	31,218
60 – 64	7485	192,371,964	25,701
65 – 69	9553	216,042,151	22,615
70 – 74	7140	147,200,194	20,616
75 – 79	4822	93,997,758	19,494
80 – 84	3190	55,872,312	17,515
85 – 89	1661	26,118,489	15,725
90 – 94	660	8,997,774	13,633
95 & Over	158	1,971,867	12,480
Total	39,745	\$ 902,856,517	\$ 22,716

Average Age:69.16

\*Includes post-DROP members in suspended status who are also active with a second retirement account.

**NUMBER OF BENEFICIARIES  
AND THEIR BENEFITS BY AGE**

<b>Age</b>	<b>Number of Members</b>	<b>Total Annual Benefits</b>	<b>Average Annual Benefits</b>
Under 50	170	\$ 1,683,812	\$ 9,905
50 – 54	94	1,210,922	12,882
55 – 59	203	2,836,114	13,971
60 – 64	309	4,201,288	13,596
65 – 69	452	5,720,362	12,656
70 – 74	569	7,165,742	12,594
75 – 79	627	7,826,542	12,483
80 – 84	609	6,711,298	11,020
85 – 89	442	4,250,102	9,616
90 – 94	222	2,132,086	9,604
95 & Over	81	560,348	6,918
Total	3,778	\$ 44,298,616	\$ 11,725

Average Age: 73.71



**SCHEDULE I** (Continued)  
**SCHEDULE OF MEMBERSHIP DATA**  
**AS OF SEPTEMBER 30, 2016**  
**NUMBER OF DISABLED RETIREES**  
**AND THEIR BENEFITS BY AGE**

<b>Age</b>	<b>Number of Members</b>	<b>Total Annual Benefits</b>	<b>Average Annual Benefits</b>
Under 50	370	\$ 5,482,776	\$ 14,818
50 – 54	502	7,939,863	15,816
55 – 59	778	11,564,793	14,865
60 – 64	949	13,095,629	13,799
65 – 69	765	10,160,098	13,281
70 – 74	479	5,588,393	11,667
75 – 79	205	2,316,973	11,302
80 – 84	117	1,373,675	11,741
85 – 89	41	449,483	10,963
90 – 94	13	139,152	10,704
95 & Over	7	45,192	6,456
Total	4,226	\$ 58,156,027	\$ 13,761

Average Age:61.91