

**THE ANNE ARUNDEL COUNTY
EMPLOYEES'
RETIREMENT PLAN**

**ACTUARIAL VALUATION
AS OF
JANUARY 1, 2011**

Bolton Partners, Inc.
100 Light Street, 9th Floor
Baltimore, MD 21202

TABLE OF CONTENTS

| | <u>Page</u> |
|--|-------------|
| Introductory Letter..... | 1 - 2 |
| Trust Fund Asset Statement | 3 |
| Development of Actuarial Value of Assets | 4 |
| Participant Summary..... | 5 |
| Service - Age Distribution..... | 6 |
| Actuarial Costs..... | 7 - 8 |
| Assumptions and Methods | 9 - 11 |
| Plan Provisions | 12 - 16 |
| Summary of Major Legislative Changes | 17 - 19 |
| Statement No. 25 of the GASB | 20 - 21 |
| Actuarial Certification | 22 |



May 2, 2011

PERSONAL & CONFIDENTIAL

Andrea Fulton
Personnel Officer
Anne Arundel County Government
P.O. Box 6675
Annapolis, MD 21401

Re: Employees' Retirement Plan Valuation

Dear Andrea:

The following report sets forth the actuarial valuation as of January 1, 2011 of the Anne Arundel County Employees' Retirement Plan, for the plan year beginning on that date. The valuation is based on participant data submitted by the personnel department of Anne Arundel County, Aetna and Prudential and unaudited asset data submitted by the County.

INVESTMENT PERFORMANCE

The market value of plan assets as of December 31, 2010 was \$471,549,911. The average investment return for the fund on a market basis for the year ended December 31, 2010 was 14.5% and 1.9% on an actuarial basis.

The plan utilizes an actuarial averaging method to smooth out swings in investment performance and thus in asset values from year to year. Under the method, investment gains or losses above or below the 8% actuarial assumption are phased in over a five year period. As of December 31, 2010, the actuarial value of assets was \$522,165,145. Details of the development of the actuarial value of assets are set forth later in this report.

PRINCIPAL RESULTS

The principal purpose of the valuation is to set forth the County's contributions for the fiscal year ending June 30, 2012. In addition, the report sets forth the information on the plan for the County's financial statements and for the plan's own financial statements.

Bolton Partners, Inc.

100 Light Street • 9th Floor • Baltimore, Maryland 21202 • (410) 547-0500 • (800) 394-0263 • Fax (410) 685-1924
Actuarial, Benefit and Investment Consultants

Andrea Fulton
May 2, 2011
Page Two

The total recommended employer contribution for the plan year and fiscal year ending June 30, 2011 increased from \$17,490,119 to \$18,882,680. This is in addition to employee contributions of 4% of pay from the employees in Tier 1. The increase can be broken down to the following factors:

| | |
|------------------------------------|--------|
| January 1, 2010 valuation | 13.9% |
| Investment Loss | 0.1% |
| Pay Increases | (0.2%) |
| New Entrants/Change in Normal Cost | (0.2%) |
| COLA | (0.1%) |
| Expenses | 0.0% |
| Asset Method Change | 1.5% |
| Demographics and Other Changes | 0.3% |
| January 1, 2011 valuation | 15.3% |

The overall funded ratio for the plan decreased from 86.8% to 83.2% (due to the asset method change described on page 4).

The Normal Cost was adjusted upward to reflect Bill 74-09 which increased the FY10 pensionable pay and has a temporary effect. Pay amounts shown in this report (and employer contributions as a percentage of payroll) are based on cash payroll amounts that exclude the extra pay used for pension purposes.

The balance of this report sets forth details of changes in participation in the plan and the results of the valuation. A statement of funding progress under GASB 25 is also included.

Sincerely,

BOLTON PARTNERS, INC.



Thomas B. Lowman, FSA



David W. Ballard, CEBS

Trust Fund Asset Statement

**TRUST FUND ASSET STATEMENT FOR
YEAR ENDED DECEMBER 31, 2010**

| | |
|-------------------------------------|------------------|
| Original Market Value 1/1/2010 | \$417,595,479 |
| Audit Adjustment | \$ 0 |
| Market Value 1/1/2010 | \$417,595,479 |
| Receipts: | |
| Employer Contributions | \$ 17,249,740 |
| Employee Contributions | 4,631,616 |
| Interest and Dividends | 8,644,568 |
| Realized and Unrealized Gain/(Loss) | 52,920,208 |
| Other | <u>712,250</u> |
| Total Receipts: | \$ 84,158,382 |
| Disbursements: | |
| Benefit Payments | \$ 29,527,746 |
| Administrative Expenses | 491,325 |
| Investment Expenses | <u>2,158,784</u> |
| Total Disbursements | \$ 32,177,855 |
| Net Increase/(Decrease) | \$ 51,980,527 |
| Preliminary Ending Value 12/31/2010 | \$469,576,006 |
| Contribution Receivable | \$ 1,973,905 |
| Ending Value 12/31/2010 | \$471,549,911 |

(Note: There may be dollar rounding differences)

**Development of Actuarial
Value of Assets**

ACTUARIAL VALUE OF ASSETS

| | <u>2009</u> | <u>2010</u> |
|---|-----------------------|----------------------|
| 1. AVA/MVA Beginning of Year | \$488,275,803 | \$417,595,479 |
| 2. Contributions | 19,785,103 | 21,881,356 |
| 3. Benefit Payments | 27,261,843 | 29,527,746 |
| 4. Administrative Expenses | 472,589 | 491,325 |
| 5. Expected 8% Return | 38,744,091 | 33,082,130 |
| 6. Expected Asset Value (1. + 2. - 3. - 4. + 5.) | \$519,070,565 | \$442,539,894 |
| 7. Market Value End of Year | \$417,595,479 | \$469,576,006 |
| 8. Prior Deferred Gain/(Loss) | (\$93,820,894) | N/A |
| 9. Asset Gain/(Loss) (7. - 8. - 6.) | (\$7,654,192) | \$27,036,112 |
| 10. 80% of 2009 Gain/(Loss) of (\$7,654,192) | (\$6,123,354) | |
| 11. 60% of 2008 Gain/(Loss) of (\$183,699,815) | (\$110,219,889) | |
| 12. 40% of 2007 Gain/(Loss) of \$29,141,591 | \$11,656,636 | |
| 13. 20% of 2006 Gain/(Loss) of \$23,711,795 | \$4,742,359 | |
| 14. Initial Actuarial Value of Assets 1/1/2010 | \$517,539,727 | |
| 15. Contribution Receivable | \$2,016,366 | |
| 16. Audit Adjustment | \$0 | |
| 17. Final Actuarial Value of Assets 1/1/2010 | \$519,556,093 | |
| 18. 80% of 2010 Gain/(Loss) of \$27,036,112 | | \$21,628,889 |
| 19. 60% of 2009 Gain/(Loss) of (\$7,654,192) | | (\$4,592,515) |
| 20. 40% of 2008 Gain/(Loss) of (\$183,699,815) | | (\$73,479,926) |
| 21. 20% of 2007 Gain/(Loss) of \$29,141,591 | | \$5,828,318 |
| 22. Initial Actuarial Value of Assets 1/1/2011 | | \$520,191,240 |
| 23. Contribution Receivable | | \$1,973,905 |
| 24. Audit Adjustment | | \$0 |
| 25. Final Actuarial Value of Assets 1/1/2011 | | \$522,165,145 |
| Rate of Return on Actuarial Value of Assets (<i>net of investment expenses</i>) | 7.7% | 1.9% |

Effective with the 1/1/2011 actuarial valuation, the actuarial value of assets is calculated by spreading the market value investment gains or losses in excess of the assumed rate of return over a 5-year period. The actuarial value of assets as of 1/1/2011 using the prior method is \$550,786,200. An amortization charge of \$28,621,055 is established to reflect this change (see page 8).

Participant Summary

PARTICIPANT SUMMARY

| | <u>Inactive Participants</u> | | | <u>Total</u> |
|-------------------------------------|------------------------------|-------------------------------|---------------------------|--------------|
| | <u>Active Participants</u> | <u>With Deferred Benefits</u> | <u>Receiving Benefits</u> | |
| Participants as of January 1, 2010 | 2,278 | 257 | 1,270 | 3,805 |
| Retired | (65) | (4) | 69 | 0 |
| Terminated Vested | (18) | 18 | 0 | 0 |
| Terminated Non-Vested/Paid Lump Sum | (46) | (20) | 0 | (66) |
| Disabled | (4) | 0 | 4 | 0 |
| Deceased/Payments Expired | (4) | 0 | (27) | (31) |
| New Beneficiary | 0 | 0 | 4 | 4 |
| Benefit Unfrozen | 0 | 0 | 1 | 1 |
| New QDRO | 0 | 0 | 4 | 4 |
| Transfers In | 0 | 0 | 0 | 0 |
| Transfers Out | (1) | 0 | 0 | (1) |
| New Hires | 99 | 0 | 0 | 99 |
| Data Adjustment | 0 | 6 | 0 | 6 |
| Net Change | (39) | 0 | 55 | 16 |
| Participants as of January 1, 2011 | 2,239 | 257 | 1,325 | 3,821 |

Service - Age Distribution

AGE, SERVICE AND AVERAGE SALARY DISTRIBUTION

| Age as of 1/1/2011 | Under 1 | 01-04 | 05-09 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40 + | Total |
|-----------------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|--------------|--------------|-------------|-----------------|
| Under 25 | 15 31,651 | 33 33,621 | 2 36,743 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 50 33,155 |
| 25-29 | 11 39,927 | 75 38,357 | 24 39,392 | 2 42,370 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 112 38,805 |
| 30-34 | 12 38,873 | 79 45,057 | 56 44,461 | 20 47,814 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 167 44,743 |
| 35-39 | 14 37,641 | 73 48,484 | 65 51,615 | 41 55,025 | 15 54,048 | 1 43,264 | 0 0 | 0 0 | 0 0 | 0 0 | 209 50,389 |
| 40-44 | 11 36,509 | 76 44,543 | 63 52,748 | 51 51,365 | 22 64,743 | 42 60,907 | 3 57,989 | 0 0 | 0 0 | 0 0 | 268 51,813 |
| 45-49 | 7 46,737 | 78 45,160 | 77 51,776 | 78 59,432 | 41 60,762 | 84 65,696 | 40 58,842 | 3 51,721 | 0 0 | 0 0 | 408 56,350 |
| 50-54 | 9 46,052 | 69 46,993 | 72 53,807 | 54 57,898 | 45 64,046 | 72 67,166 | 50 67,702 | 28 64,352 | 6 66,757 | 0 0 | 405 59,168 |
| 55-59 | 4 42,394 | 64 53,988 | 52 53,175 | 48 64,188 | 35 60,078 | 62 65,512 | 32 75,624 | 26 65,396 | 24 65,046 | 2 92,910 | 349 61,612 |
| 60-64 | 0 0 | 33 58,465 | 29 57,677 | 43 58,482 | 21 71,493 | 35 63,288 | 20 67,619 | 10 85,588 | 6 55,231 | 1 57,595 | 198 62,780 |
| 65-69 | 0 0 | 6 70,918 | 8 58,811 | 8 53,178 | 6 70,422 | 9 63,664 | 7 89,448 | 2 73,158 | 2 103,977 | 3 84,096 | 51 69,600 |
| 70 & Up | 1 40,500 | 3 52,686 | 4 52,234 | 4 55,500 | 6 51,282 | 3 60,049 | 1 51,147 | 0 0 | 0 0 | 0 0 | 22 53,113 |
| Total | 84 38,818 | 589 46,186 | 452 51,250 | 349 57,083 | 191 62,527 | 308 64,889 | 153 67,728 | 69 67,529 | 38 65,815 | 6 82,617 | 2,239 55,158 |

Average Age: 47.81

Average Service: 12.30

Average Salary: \$55,158

Actuarial Costs

ACTUARIAL COSTS

| | <u>As of</u> <u>01/01/2010</u> | <u>As of</u> <u>01/01/2011</u> |
|---|---|---|
| Participants | | |
| Active | 2,278 | 2,239 |
| Terminated Vested | 257 | 257 |
| Disabled | 76 | 80 |
| Retirees | 1,120 | 1,167 |
| Beneficiaries | <u>74</u> | <u>78</u> |
| Total | 3,805 | 3,821 |
| Active Payroll (Rate at January 1 st) | \$126,030,706 | \$123,498,129 |
| 1. Actuarial Liability | | |
| Active Participants | \$264,950,679 | \$266,638,920 |
| Terminated Vested Participants | 16,507,500 | 19,284,154 |
| Participants Receiving Benefits | <u>317,382,952</u> | <u>341,346,513</u> |
| Total | \$598,841,131 | \$627,269,587 |
| 2. Actuarial Value of Assets | \$519,556,093 | \$522,165,145 |
| 3. Unfunded Actuarial Liability (1-2) | \$ 79,285,038 | \$ 105,104,442 |
| 4. County's Normal Cost | \$ 10,947,064 | \$ 10,645,732 |
| 5. Amortization Payment | \$ 4,766,491 | \$ 6,356,231 |
| 6. Estimated Expenses | \$ 481,000 | \$ 482,000 |
| 7. Total Recommended Contributions as of January 1 st (4 + 5 + 6) | \$ 16,194,555 | \$ 17,483,963 |
| 8. Total Recommended Contribution as of December 31 st (7 x 1.08) | \$ 17,490,119 | \$ 18,882,680 |
| 9. Contribution as a % of total payroll | 13.9% | 15.3% |

UNFUNDED LIABILITY AMORTIZATION SCHEDULE

| <u>Charge</u> | <u>Amortization Period</u> | | | <u>Balances</u> | | <u>2011 Payment</u> |
|-------------------------------|----------------------------|--------------------------|-----------------------|-----------------|--------------------|-------------------------|
| | <u>Date Created</u> | <u>Initial Years</u> | <u>Years Left</u> | <u>Initial</u> | <u>Outstanding</u> | |
| Actuarial Loss | 01/01/2005 | 30 | 24 | \$ 9,888,883 | \$10,787,958 | \$ 702,427 |
| Actuarial Loss | 01/01/2006 | 30 | 25 | \$ 7,157,528 | \$ 7,721,101 | \$ 491,221 |
| Actuarial Loss | 01/01/2007 | 30 | 26 | \$ 8,028,164 | \$ 8,551,125 | \$ 532,342 |
| Assumption Change | 01/01/2008 | 30 | 27 | \$13,407,985 | \$14,082,522 | \$ 859,008 |
| Actuarial Loss | 01/01/2009 | 30 | 28 | \$45,836,717 | \$47,413,882 | \$2,837,309 |
| Asset Method Change | 01/01/2011 | 30 | 30 | \$28,621,055 | \$28,621,055 | \$1,653,857 |
| <u>Credit</u> | | | | | | |
| Unfunded Accrued Liability | 01/01/2004 | 30 | 23 | \$ 215,150 | \$ 238,738 | \$ 15,281 |
| Actuarial Gain | 01/01/2008 | 30 | 27 | \$ 5,585,598 | \$ 5,866,600 | \$ 357,852 |
| Actuarial Gain | 01/01/2010 | 30 | 29 | \$ 1,937,140 | \$ 1,971,219 | \$ 115,855 |
| Actuarial Gain | 01/01/2011 | 30 | 30 | \$ 3,996,644 | \$ 3,996,644 | \$ 230,945 |
| Net Total | | | | | \$105,104,442 | \$6,356,231 |

Note: Bases are amortized as an equal percent of payroll each year. Total payroll is assumed to increase 3.5% annually.

Assumptions and Methods

ASSUMPTIONS AND METHODS

Funding Method: Projected Unit Credit Actuarial Cost Method. The contribution equals the sum of the normal cost and the amount necessary to amortize the frozen unfunded actuarial liabilities and any actuarial gains or losses over a period of years. Amortization payments increase 3.5%.

Asset Method: Asset smoothing method. Spreading the investment gains or losses in excess of the assumed return over a 5-year period. Actuarial Value of Assets recognizes adjustments resulting from an audit.

Interest: 8% compounded annually.

COLA Increases: Benefits accrued before Bill 88-96 are assumed to increase by 3.0% of the original benefit each year from retirement.

Benefits accrued after Bill 88-96 are assumed to increase by 2.1% of the current benefit each year from retirement.

Salary Increases: The following graded schedule is used:

| <u>Attained Age</u> | <u>% Increase at Attained Age</u> |
|---------------------|-----------------------------------|
| 20 | 7.0% |
| 25 | 6.5% |
| 30 | 6.0% |
| 35 | 5.5% |
| 40 | 5.0% |
| 45 | 4.5% |
| 50 | 4.0% |
| 55 | 4.0% |

Mortality: *Healthy:* RP-2000 Blue Collar Mortality table for males and females projected to 2011 using scale AA. Pre-Termination mortality uses 70% of these rates.

Disabled: RP-2000 Blue Collar Mortality table for males and females set forward nine years and then projected to 2011 using scale AA.

ASSUMPTIONS AND METHODS

(continued)

100% of pre-retirement deaths are assumed to be non-duty-related.

Disability:

Sample rates are:

| <u>Age</u> | <u>Rate</u> |
|------------|-------------|
| 30 | .0264% |
| 35 | .0396% |
| 40 | .0809% |
| 45 | .1337% |
| 50 | .2162% |
| 55 | .3548% |
| 60 | .5297% |
| 64 | .7211% |

10% of disablement is assumed to be duty-related.

Turnover¹:

Sample rates are:

| <u>Age</u> | <u>Males</u> | <u>Rate</u> | <u>Females</u> |
|------------|--------------|-------------|----------------|
| 20 | 12.47% | | 21.57% |
| 25 | 9.97% | | 18.12% |
| 30 | 6.78% | | 13.34% |
| 35 | 4.37% | | 9.05% |
| 40 | 3.48% | | 7.48% |
| 45 | 2.40% | | 5.95% |
| 50 | 0.45% | | 1.11% |

Retirement²:

| <u>Age</u> | <u>Sample Rates</u> | | |
|------------|---------------------|-----------|-----------|
| | <u>20</u> | <u>30</u> | <u>31</u> |
| 50 | 5% | 40% | 40% |
| 55 | 7% | 30% | 5% |
| 60 | 20% | 20% | 20% |
| 65 | 50% | 50% | 50% |
| 68 | 100% | 100% | 100% |

¹ Tier 1 terminations prior to age 40 are assumed to elect a refund

² 100% at age 68

ASSUMPTIONS AND METHODS

(continued)

| | |
|---------------------------------------|---|
| <u>Disability Leave:</u> | Active liabilities (which depend on credit service) are loaded by 1.5% to account for future crediting of disability service. |
| <u>Military Service:</u> | Active liabilities (which depend on credit service) are loaded by 1% to account for future crediting of military service. |
| <u>Marriage:</u> | It is assumed that 70% of employees are married. |
| <u>Other Methods and Assumptions:</u> | Administrative Expenses are \$482,000 for FY2012 and \$481,000 for FY2011 (average of actual expenses for the two years preceding the valuation date). Males are assumed to be four years older than their spouses. The Tier 1 service cap of 60% is valued as 62% to account for Disability and Military service credit not being limited by the 30-year cap on service. Actual military service information for actives is not available. Members are assumed to stay in their current tier. |

Plan Provisions

PLAN PROVISIONS

(for Members in Tier 1)

| | |
|--|---|
| <u>Normal Retirement Age:</u> | Age 60, or if earlier, when the participant has reached 30 years of service. |
| <u>Early Retirement Age:</u> | Age 50 and the completion of 20 years of service. |
| <u>Normal Form of Benefit:</u> | Monthly life annuity with modified cash refund. |
| <u>Cost of Living Increase</u> <u>(simple, for benefits accrued as of 1/31/97):</u> | Retiree benefits are adjusted each year. The revised benefit amount is the lesser of: a. Prior year benefit plus base benefit multiplied by increase in the current March CPI from March CPI for prior year, or b. Benefit increased by 3% of original benefit. |
| <u>Cost of Living Increase</u> <u>(compound, for benefits accrued after 1/31/97):</u> | Retiree benefits are adjusted each year. The revised benefit amount is the lesser of: a. Prior year benefit multiplied by 60% of the increase in the current March CPI from March CPI for prior year, or b. Benefit increased by 2.5%. |
| <u>Employee Contributions:</u> | 4% of compensation. |
| <u>Compensation:</u> | Regular annual rate of pay, exclusive of extra compensation of any kind such as overtime pay, bonuses, and commissions. |
| <u>Final Earnings:</u> | The average of the highest 3 years of the last 5 annual basic pays. |
| <u>Normal Retirement Benefit Formula:</u> | 2% of final earnings for each year of service, maximum 60%. |
| <u>Early Retirement Benefit Formula:</u> | Same as normal retirement, but reduced by the following factors: |

PLAN PROVISIONS

(for Members in Tier 1)

(continued)

| <u>Years Early</u> | <u>Reduction Factor</u> |
|--------------------|-------------------------|
| 1 | 2% |
| 2 | 5% |
| 3 | 9% |
| 4 | 14% |
| 5 | 20% |
| 6 | 28% |
| 7 | 36% |
| 8 | 44% |
| 9 | 52% |
| 10 | 60% |

Termination Prior to Retirement:

Less than 5 years of service:

Return of employee contributions with 4.25% interest.

5 years of service or more:

At the discretion of the employee, either a return of contributions with interest or the accrued normal retirement benefit taking into account final earnings and service at date of termination, payable at normal retirement date.

Disability:

Must be totally and permanently disabled (except as the result of activities specified in the County code) regardless of length of service.

Line of Duty Disability:

The greater of the accrued benefit or 66 2/3% of final earnings, payable immediately, unreduced.

Non-Line of Duty Disability:

Five years of service are required to receive non-duty benefits. The greater of the accrued benefit or 25% of final earnings, payable immediately, unreduced.

PLAN PROVISIONS

(for Members in Tier 1)

(continued)

Pre-Retirement Spouse's Benefit:

Married and eligible for early retirement:

The greatest of.

- \$10 per month
- 50% of the accrued benefit
- The accrued benefit, reduced actuarially for early commencement and the joint and 100% survivor form.

Other Pre-Retirement Death Benefits:

Return of employee contributions with 4.25% interest plus a lump sum of 50% of final earnings.

PLAN PROVISIONS

(for Members in Tier 2)

| | |
|--|--|
| <u>Normal Retirement Age:</u> | Age 60, or if earlier, when the participant has reached 30 years of service. |
| <u>Early Retirement Age:</u> | Age 50 and the completion of 20 years of service. |
| <u>Normal Form of Benefit:</u> | Monthly life annuity. |
| <u>Cost of Living Increase</u> <u>(compound, for benefits accrued after 1/31/97):</u> | Retiree benefits are adjusted each year. The revised benefit amount is the lesser of: <ul style="list-style-type: none">a. Prior year benefit multiplied by 60% of the increase in the current March CPI from March CPI for prior year, orb. Benefit increased by 2.5%. |
| <u>Employee Contributions:</u> | No employee contributions required or allowed. |
| <u>Compensation:</u> | Regular annual rate of pay, exclusive of extra compensation of any kind such as overtime pay, bonuses, and commissions. |
| <u>Final Earnings:</u> | The average of the highest 3 years of the last 5 years of annual basic pays. |
| <u>Normal Retirement Benefit Formula:</u> | 1.0% of final earnings for each year of service. |
| <u>Early Retirement Benefit Formula:</u> | Same as normal retirement, but reduced for early commencement (using the same factors as Tier 1). |
| <u>Termination Prior to Retirement:</u> <i>Less than 5 years of service:</i> | No benefit is payable. |
| <i>5 years of service or more:</i> | The accrued normal retirement benefit taking into account final earnings and service at date of termination, payable at normal retirement date. |
| <u>Disability:</u> | Must be totally and permanently disabled (except as the result of activities specified in the County code) regardless of length of service. |

PLAN PROVISIONS

(for Members in Tier 2)

(continued)

Line of Duty Disability:

The greater of the accrued benefit or 66 2/3% of final earnings, payable immediately, unreduced.

Non-Line of Duty Disability:

Five years of service are required to receive non-duty benefits. The greater of the accrued benefit or 25% of final earnings, payable immediately, unreduced.

Pre-Retirement Spouse's Benefit:

Married and eligible for early retirement:

The greatest of:

- \$10 per month
- 50% of the accrued benefit
- The accrued benefit, reduced actuarially for early commencement and the joint and 100% survivor form.

Unmarried or not eligible for early retirement:

A lump sum of 50% of final earnings.

Summary of Legislative Changes

SUMMARY OF MAJOR LEGISLATIVE CHANGES

County Council Bill No. 36-89:

Effective 7/1/89.

Pension benefits and vesting provisions were improved. The accrual percentage per year of service was increased from 1.8% to 2.0%, permitting accrual of the maximum 60% benefit in 30 years instead of 33-1/3.

Full vesting was granted after 5 years of service. The old provisions used a graded scale granting 75% vesting after 10 years, climbing to 100% vesting after 15 years.

County Council Bill No. 34-92:

Effective 6/1/92 through 8/31/92.

Participants age 50 or older with at least 20 years of service could elect to retire with an additional pension equal to 1/12 of 2% for each year of credited service. The additional amount could be taken as a pension increase, a lump sum, or as a temporary supplement to age 62. Appropriate actuarial adjustments apply.

State House Bill No. 687:

Effective 7/1/90.

County employees were given the opportunity to apply for credit under the County's plan for previous service with the State of Maryland (or a political subdivision of the State).

County Council Bill 90-93:

Effective 12/22/93.

Plan participants are required to pay the full actuarial value for service purchases. Purchases can only be made at retirement. To be eligible, an employee must have 60 months of County service. Existing plan participants must be notified of their right to purchase service under existing law.

SUMMARY OF MAJOR LEGISLATIVE CHANGES

(continued)

County Council Bill No. 82-94:

Effective 10/31/94.

Transfers assets from general employees plan to A&E plan for participants who have transferred between these two plans.

County Council Bill No. 88-96:

Effective 12/4/96.

The previous method of calculating cost of living increases will only apply to benefits accrued as of 1/31/97. The cost of living increase for future benefits is a compound increase equal to 60% of the annual change in the CPI, not to exceed 2.5%. Employees hired, or rehired, on or after 12/4/96 will be Tier Two employees and will have different benefits than current employees.

County Council Bill No. 41-99:

Effective 6/15/99.

Employees paid under the deputy sheriff employees pay schedule become Tier Two members of the Detention Center Plan effective as of January 1, 1999. Service credited under the Employees' Plan will count as credited service in the Detention Center Plan and no future benefit will be paid from the Employees' Plan. Assets are transferred from the Employees' Plan to the Detention Center Plan in an amount equal to the projected unit credit accrued liability in the Employees' Plan.

Recodification:

Effective 2/25/2002.

Allows a benefit based on disability leave service and pre-plan military service to be paid over the 60% cap. Normal Retirement was changed to the earlier of 30 years of service or age 60.

SUMMARY OF MAJOR LEGISLATIVE CHANGES

(continued)

County Council Bill No. 74-09:

Effective 12/11/2009.

For non-represented members, FY2010 annual pay shall be determined by increasing FY2009 annual pay by an assumed 3% for determining the final average basic pay.

County Council Bill No. 6-10:

Effective 4/18/2010.

Provides for a disability benefit for those participants who are totally and permanently disabled as a result of qualified military service.

Statement No. 25 of the GASB

**STATEMENT NO. 25 OF THE
 GOVERNMENTAL ACCOUNTING STANDARDS BOARD**

Schedules of Funding Progress

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Unfunded AAL (UAAL) (b-a) | Actuarial Accrued Liability (AAL) (b) | Funded Ratio (a/b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b - a)/c) |
|---|--|--|--|-----------------------------------|------------------------------------|--|
| 01/01/1994 | \$146,310,144 | \$26,804,749 | \$173,114,893 | 84.5% | \$67,987,153 | 39.4% |
| 01/01/1995 | \$158,437,212 | \$18,728,958 | \$177,166,170 | 89.4% | \$72,811,217 | 25.7% |
| 01/01/1996 | \$176,801,858 | \$23,788,900 | \$200,590,758 | 88.1% | \$73,841,336 | 32.2% |
| 01/01/1997 | \$214,676,343 | \$24,353,891 | \$239,030,234 | 89.8% | \$78,200,977 | 31.1% |
| 01/01/1998 | \$235,935,651 | \$16,452,008 | \$252,387,659 | 93.5% | \$82,842,730 | 19.9% |
| 01/01/1999 | \$258,183,198 | \$16,182,891 | \$274,366,089 | 94.1% | \$87,089,448 | 18.6% |
| 01/01/2000 | \$282,462,621 | \$15,746,760 | \$298,209,381 | 94.7% | \$89,714,539 | 17.6% |
| 01/01/2001 | \$302,805,427 | \$36,506,591 | \$339,312,018 | 89.2% | \$88,927,130 | 41.1% |
| 01/01/2002 | \$321,443,897 | \$36,352,728 | \$357,796,625 | 89.8% | \$100,417,059 | 36.2% |
| 01/01/2003 | \$335,539,414 | \$36,932,955 | \$372,472,369 | 90.1% | \$101,172,221 | 36.5% |
| 01/01/2004 | \$367,756,502 | \$ (215,150) | \$367,541,352 | 100.1% | \$100,944,238 | (0.2)% |
| 01/01/2005 | \$395,501,876 | \$ 9,669,948 | \$405,171,824 | 97.6% | \$103,105,736 | 9.4% |
| 01/01/2006 | \$422,234,496 | \$16,997,830 | \$439,232,326 | 96.1% | \$107,290,189 | 15.8% |
| 01/01/2007 | \$456,656,849 | \$25,314,781 | \$481,971,630 | 94.7% | \$116,709,102 | 21.7% |
| 01/01/2008 ¹ | \$492,788,674 | \$20,144,823 | \$512,933,497 | 96.1% | \$117,222,681 | 17.2% |
| 01/01/2008 ² | \$492,788,674 | \$33,552,808 | \$526,341,482 | 93.6% | \$117,222,681 | 28.6% |
| 01/01/2009 | \$488,275,803 | \$79,919,177 | \$568,194,980 | 85.9% | \$124,803,488 | 64.0% |
| 01/01/2010 | \$519,556,093 | \$79,285,038 | \$598,841,131 | 86.8% | \$126,030,706 | 62.9% |
| 01/01/2011 ³ | \$550,786,200 | \$76,483,387 | \$627,269,587 | 87.8% | \$123,498,129 | 61.9% |
| 01/01/2011 ⁴ | \$522,165,145 | \$105,104,442 | \$627,269,587 | 83.2% | \$123,498,129 | 85.1% |

Schedules of County's Contributions

| Year Ended December 31 | Annual Required Contribution | Actual Contribution | Percentage Contributed |
|---------------------------------------|---|--------------------------------|-----------------------------------|
| 2010 | \$17,284,082 | \$17,284,080 ⁵ | 100.0% |

¹ Prior to Assumption Changes

² After Assumption Changes

³ Prior to Asset Method Change

⁴ After Asset Method Change

⁵ On an accrual basis. Subject to verification.

**STATEMENT NO. 25 OF THE
GOVERNMENTAL ACCOUNTING STANDARDS BOARD**

(continued)

The information presented in the required supplementary schedules was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation follows.

| | |
|--|---|
| Actuarial cost method | Projected Unit Credit |
| Amortization method | Level percent of pay |
| Remaining amortization period | Remaining Amortization periods range from 23 to 30 years with an average of 27 years. |
| Asset valuation method | 5-year smoothed market |
| Actuarial assumptions: | |
| Investment rate of return | 8.0% |
| Projected salary increases | Varies by age |
| Post Retirement Cost-of-living adjustments | 3.0% for pre 2/97 accruals 2.1% for post 2/97 accruals |

ACTUARIAL CERTIFICATION

The information contained in this report was prepared for the internal use of The Anne Arundel County Employees' Retirement Plan and its auditors in connection with our actuarial valuations of the pension plan. It is neither intended nor necessarily suitable for other purposes. Bolton Partners, Inc. is not responsible for the consequences of any other use. A valuation report is a snapshot of a plan's estimated financial condition at a particular point in time; it does not predict a pension plan's future financial condition or its ability to pay benefits in the future.

In preparing the results presented in this report, we have relied upon information provided to us regarding plan provisions, plan participants, and plan assets. We have reviewed this information for overall reasonableness and consistency, but have neither audited nor independently verified this information. The accuracy of the results presented in this report is dependent upon the accuracy and completeness of the underlying information. The plan sponsor is solely responsible for the validity and completeness of this information.

The valuation summarized in this report involves actuarial calculations that require assumptions about future events. We believe that the assumptions and methods used in this report are reasonable and appropriate for the purposes for which they have been used.

Future actuarial measurements may differ significantly from the current measurements presented in this report, due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

The undersigned credentialed actuary meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained in this report and is currently compliant with the Continuing Professional Development requirement of the Society of Actuaries. We are not aware of any direct or material indirect financial interest or relationship, including investments or other services that could create a conflict of interest that would impair the objectivity of our work.

BOLTON PARTNERS, INC.



Thomas B. Lowman, FSA, EA, MAAA