

**DISTRICT OF COLUMBIA
RETIREMENT BOARD**

**VALUATION AS OF OCTOBER 1, 2001
FOR FISCAL YEAR 2003**

A MILLIMAN GLOBAL FIRM



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MARCH, 2002



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March 31, 2002

D.C. Retirement Board
1400 L Street, NW
Suite 300
Washington, DC 20005

Re: October 1, 2001 Actuarial Valuation

Dear Members of the Board:

At your request, we have made our annual actuarial valuation of the District of Columbia Retirement Fund as of October 1, 2001, for Fiscal Year 2003. The results of the valuation are contained in the following report. This report also contains the actuarial certification approved by the Board during its December 2001 meeting.

This report has been prepared for purposes of financial statement disclosure and for statutory funding calculations for FY 2003. Determinations for other purposes may be significantly different than those presented herein.

We have relied, without audit, on employee census data provided by the Office of Payroll and Retirement Services of the District of Columbia. Census data provided to us has been reviewed for reasonableness. The District of Columbia Retirement Board provided us with the market value of assets as of October 1, 2001.

The actuary has recommended the actuarial assumptions used in this valuation. We believe that the assumptions we have recommended, in the aggregate, are reasonably related to the experience of the Fund and the retirement program and to reasonable expectations, and represent our best estimate of anticipated future experience of the plan.

We hereby certify that, to the best of our knowledge, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices set forth by the American Academy of Actuaries.



D.C. Retirement Board
March 31, 2002
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The consulting actuaries signing below are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Respectfully submitted,

Milliman USA

A handwritten signature in black ink, appearing to read "John L. Colberg".

John L. Colberg, F.S.A.
Consulting Actuary

A handwritten signature in blue ink, appearing to read "Gene M. Kalwarski".

Gene M. Kalwarski, F.S.A.
Principal and Consulting Actuary

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**Required Actuarial Certifications
Under D.C. Code 1-784 (1981 ed.)
for Fiscal Year 2003
(Dollars in Millions)**

<u>Certification</u>	<u>Code Section</u>	<u>Teachers</u>	<u>Police</u>	<u>Fire</u>	<u>Police/Fire Combined</u>	<u>Total District</u>
FY 2003 Normal Contribution Rate	§1-784.3(a)(3)(A)	0.0%	28.5%	26.3%	27.9%	11.5%
Estimated FY 2003 Covered Payroll	NA	\$358.8	\$185.4	\$64.5	\$249.9	\$608.7
FY 2003 District Payment before §1-784.2(c)	NA	\$0.0	\$52.8	\$17.0	\$69.8	\$69.8
FY 2001 Shortfall / Overpayment	§1-784.2(c)	\$0.0	(\$0.3)	(\$0.6)	(\$0.9)	(\$0.9)
FY 2003 District Payment	NA	\$0.0	\$52.5	\$16.4	\$68.9	\$68.9
Present Value of Future Benefits	§1-784.3(a)(3)(B)	\$1,094.5	\$1,728.5	\$606.0	\$2,334.5	\$3,429.0
Current Value of Assets	§1-784.3(a)(3)(C)	\$778.9 ¹	\$779.1 ¹	\$315.9 ¹	\$1,095.0 ¹	\$1,873.9 ¹
Actuarial Value of Assets	§1-784.3(a)(3)(D)	\$846.5 ¹	\$850.9 ¹	\$342.5 ¹	\$1,193.4 ¹	\$2,039.9 ¹



Gene M. Kalwarski, F.S.A.

12/20/2001

(Date)

¹ These amounts are reflect benefits payable as of September 30, 2001 of \$2.6 million for teachers, \$1.2 million for police, and \$0.8 million for fire.

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SECTION I

BOARD SUMMARY

Valuation Comments

The report presents the results of the October 1, 2001 actuarial valuation of the D.C. Police Officers and Fire Fighters Retirement Fund and the D.C. Teachers Retirement Fund (the funds) for the District of Columbia Retirement Board (the Board).

Prior to June 30, 1997, the Board had also been responsible for management and control of the Judges Retirement Fund. However, Title XI of the Balanced Budget Act of 1997 (Public Law 105-33, 111 stat. 251) as amended, the “National Capital Revitalization and Self-Government Improvement Act of 1997” (the “Revitalization Act”), transferred management and control of the entire Judges Retirement Fund plus benefits accrued by the police officers, fire fighters, and teachers as of June 30, 1997 to the Federal Government.

Following the Federal legislation, the District government passed the Police Officers, Fire Fighters, and Teachers Retirement Benefit Replacement Plan (D.C. Law 12-152 codified as D.C. Code section 1-907.01 et seq., the “Replacement Plan Act” that required future District contributions to be made in accordance with the actuarially sound funding method specified in the law. In general, an actuarially sound funding method requires the employer to contribute a consistent amount (such as a level percent of pay) so benefits of the current workforce will be completely paid for (i.e., funded) by the time they leave employment due to retirement, disability, death, withdrawal, etc. Under the Replacement Plan Act, the District must contribute the level percent of pay that – combined with the actuarial value of assets, expected investment earnings, and future employee contributions – will pay for the benefits by the time the workforce leaves employment. The primary purposes of performing this valuation are as follows:

- to **determine the appropriate contribution** to the Funds to be paid by the District in Fiscal Year 2003 in accordance with the Replacement Plan Act;
- to **disclose asset and liability measures**; and
- to **analyze and report on trends** in the contributions, assets, and liabilities of the Funds over the past several years.

This valuation shows that there was an increase in the District contribution between Fiscal Year 2002 and Fiscal Year 2003. The required District payment increased from \$62.8 million to \$68.9 million, or 9.7%. As with FY 2002, the whole FY 2003 District payment is for the Police Officers and Fire Fighters Retirement Fund.

The required contribution for the Teachers Retirement Fund remains zero but is likely to be greater than zero in FY 2004 unless experience is significantly more favorable than our assumptions; for example, if investment returns substantially exceed the return assumption of 7.25%.

BOARD SUMMARY

Trends

One of the best ways to measure or evaluate the financial condition of a pension plan is to examine the historical trends that are evolving. Below, we present three charts which present trend information on the District's assets and liabilities, annual cash flows in and out of the funds, and the District contribution rate. Our comments on each follow.

Chart A: ASSETS / LIABILITIES

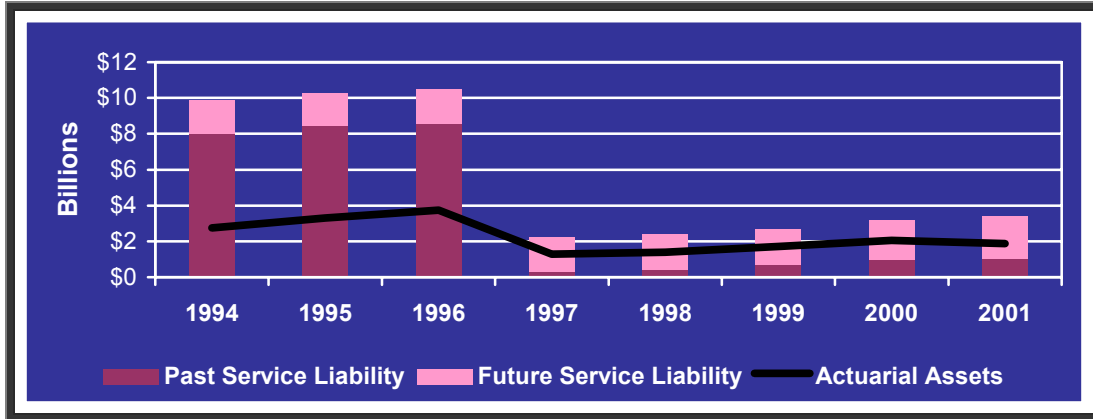


Chart B: CASH FLOWS

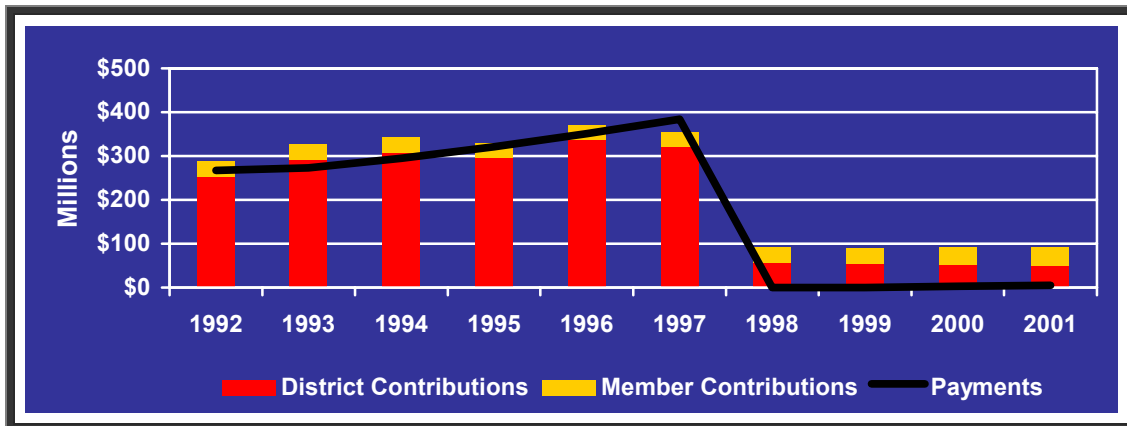
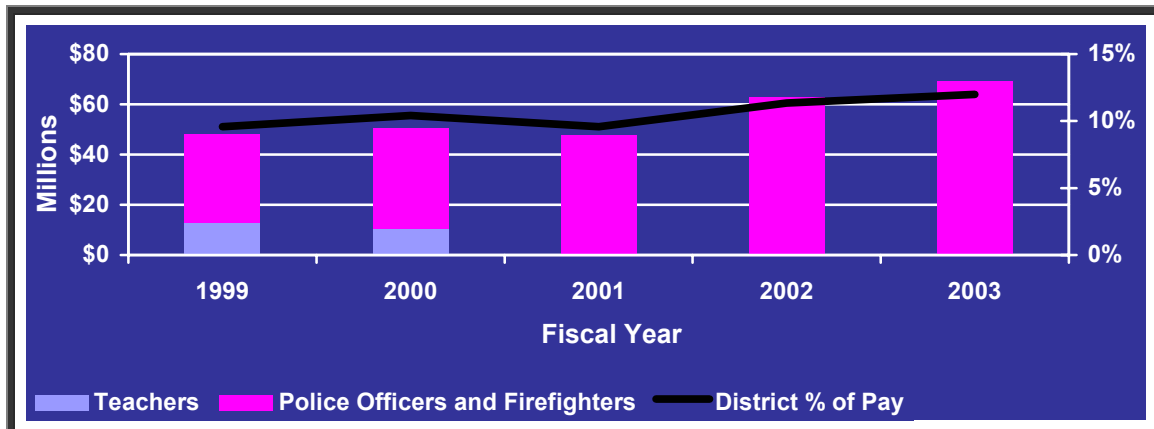


Chart C: DISTRICT CONTRIBUTION



BOARD SUMMARY

Comments

Chart A shows how the funding status has improved since the Federal government assumed the liabilities as of June 30, 1997. Since that date, assets have exceeded the past service liabilities and have reduced the District's contribution toward the benefits earned for future service.

Chart B shows the change in cash flows. Prior to the June 30, 1997 freeze date, the District payment was around \$300 million per year, about equal to the benefit payments. Since 1997, the District payment has been in the \$50-\$60 million range. The District's liability for benefits earned only after June 30, 1997 produces very small benefit payments. This positive cash flow position should continue for a number of years.

Finally, Chart C, looks only at the District contributions for the applicable year. The District payment has remained fairly steady as a percentage of pay, with a slight increase in the past year due to the lower-than-assumed investment returns.

BOARD SUMMARY

DISTRICT OF COLUMBIA RETIREMENT BOARD SUMMARY OF PRINCIPAL VALUATION RESULTS (\$ in millions)			
Participant Data			
	October 1, 2001	October 1, 2000	Change
Active Members			
Hired Prior to Mid-November, 1996	7,837	8,475	-7.5%
Hired on or After Mid-November, 1996	3,786	2,758	37.3%
Total	11,623	11,233	3.5%
Retired Members and Beneficiaries (Post 6/30/97)	1,414	1,130	25.1%
Total Participants	13,037	12,363	5.5%
Annual Salaries of Active Members	\$ 565.2	\$ 553.6	2.1%
Annual Retirement Benefits for Retirees & Beneficiaries (post 6/30/97)	\$ 5.2	\$ 4.1	26.0%
Assets and Liabilities			
Present Value of Future District Benefits	\$ 3,429.0	\$ 3,147.3	9.0%
District Assets for Valuation Purposes	\$ 2,039.9	\$ 1,896.2	7.6%
Present Value of Future Employee Contributions	\$ 503.1	\$ 474.5	6.0%
Present Value of Future District Contributions	\$ 906.2	\$ 776.6	16.7%
Present Value of Future Salaries	\$ 6,840.0	\$ 6,520.7	4.9%
Current Value of District Assets	\$ 1,873.9	\$ 2,040.9	-8.2%
Contribution Results			
	Fiscal Year 2003	Fiscal Year 2002	Change
Normal Contribution Rate	11.5%	10.5%	1.0%
Projected Payroll	\$ 608.7	\$ 595.4	2.2%
District Payment Before D.C. Code §1-907.02(c) Adjustment	\$ 69.8	\$ 62.4	11.9%
District Payment After D.C. Code §1-907.02(c) Adjustment	\$ 68.9	\$ 62.8	9.7%

BOARD SUMMARY

DISTRICT OF COLUMBIA RETIREMENT BOARD TEACHERS' RETIREMENT FUND SUMMARY OF PRINCIPAL VALUATION RESULTS (\$ in millions)

Participant Data

	October 1, 2001	October 1, 2000	Change
Active Members			
Hired Prior to November 16, 1996	4,009	4,498	-10.9%
Hired on or After November 16, 1996	2,694	1,899	41.9%
Total	6,703	6,397	4.8%
Retired Members and Beneficiaries (Post 6/30/97)	829	664	24.8%
Total Participants	7,532	7,061	6.7%
Annual Salaries of Active Members	\$ 334.2	\$ 320.0	4.4%
Annual Retirement Benefits for Retirees & Beneficiaries (post 6/30/97)	\$ 2.9	\$ 1.9	52.6%

Assets and Liabilities

Present Value of Future District Benefits	\$ 1,094.5	\$ 1,054.6	3.8%
District Assets for Valuation Purposes	\$ 846.5	\$ 798.9	6.0%
Present Value of Future Employee Contributions	\$ 268.3	\$ 246.6	8.8%
Present Value of Future District Contributions	\$ 0.0	\$ 9.1	-100.0%
Present Value of Future Salaries	\$ 3,602.2	\$ 3,360.1	7.2%
Current Value of District Assets	\$ 778.9	\$ 861.3	-9.6%

Contribution Results

	Fiscal Year 2003	Fiscal Year 2002	Change
Normal Contribution Rate	0.0%	0.3%	-0.3%
Projected Payroll	\$ 358.8	\$ 343.7	4.4%
District Payment Before D.C. Code §1-907.02(c) Adjustment	\$ 0.0	\$ 1.0	-100.0%
District Payment After D.C. Code §1-907.02(c) Adjustment	\$ 0.0	\$ 0.0	0.0%

BOARD SUMMARY

DISTRICT OF COLUMBIA RETIREMENT BOARD POLICE OFFICERS AND FIRE FIGHTERS' RETIREMENT FUND SUMMARY OF PRINCIPAL VALUATION RESULTS (\$ in millions)

Participant Data

	October 1, 2001	October 1, 2000	Change
Active Members			
Hired Prior to February 15, 1980	503	622	-19.1%
Hired Between February 15, 1980 and November 10, 1996	3,325	3,355	-0.9%
Hired on or after November 10, 1996	1,092	859	27.1%
Total	4,920	4,836	1.7%
Retired Members and Beneficiaries (Post 6/30/97)	585	466	25.5%
Total Participants	5,505	5,302	3.8%
Annual Salaries of Active Members	\$ 231.0	\$ 233.6	-1.1%
Annual Retirement Benefits for Retirees & Beneficiaries (post 6/30/97)	\$ 2.3	\$ 2.2	4.5%

Assets and Liabilities

Present Value of Future District Benefits	\$ 2,334.5	\$ 2,092.7	11.6%
District Assets for Valuation Purposes	\$ 1,193.4	\$ 1,097.3	8.8%
Present Value of Future Employee Contributions	\$ 234.8	\$ 227.9	3.0%
Present Value of Future District Contributions	\$ 906.2	\$ 767.5	18.1%
Present Value of Future Salaries	\$ 3,237.8	\$ 3,160.6	2.4%
Current Value of District Assets	\$ 1,095.0	\$ 1,179.6	-7.2%

Contribution Results

	Fiscal Year 2003	Fiscal Year 2002	Change
Normal Contribution Rate	27.9%	24.4%	3.5%
Projected Payroll	\$ 249.9	\$ 251.7	-0.7%
District Payment Before D.C. Code §1-907.02(c) Adjustment	\$ 69.8	\$ 61.4	13.7%
District Payment After D.C. Code §1-907.02(c) Adjustment	\$ 68.9	\$ 62.8	9.7%

BOARD SUMMARY

DISTRICT OF COLUMBIA RETIREMENT BOARD POLICE OFFICERS' PORTION OF THE POLICE OFFICERS AND FIRE FIGHTERS' RETIREMENT FUND SUMMARY OF PRINCIPAL VALUATION RESULTS (\$ in millions)

Participant Data

	October 1, 2001	October 1, 2000	Change
Active Members			
Hired Prior to February 15, 1980	295	390	-24.4%
Hired Between February 15, 1980 and November 10, 1996	2,432	2,474	-1.7%
Hired on or after November 10, 1996	847	713	18.8%
Total	3,574	3,577	-0.1%
Retired Members and Beneficiaries (Post 6/30/97)	449	355	26.5%
Total Participants	4,023	3,932	2.3%
Annual Salaries of Active Members	\$ 171.0	\$ 170.9	0.1%
Annual Retirement Benefits for Retirees & Beneficiaries (post 6/30/97)	\$ 1.4	\$ 1.0	40.0%

Assets and Liabilities

Present Value of Future District Benefits	\$ 1,728.5	\$ 1,489.0	16.1%
District Assets for Valuation Purposes	\$ 850.9	\$ 781.9	8.8%
Present Value of Future Employee Contributions	\$ 178.0	\$ 169.8	4.8%
Present Value of Future District Contributions	\$ 699.5	\$ 537.3	30.2%
Present Value of Future Salaries	\$ 2,452.3	\$ 2,350.8	4.3%
Current Value of District Assets	\$ 779.1	\$ 839.1	-7.2%

Contribution Results

	Fiscal Year 2003	Fiscal Year 2002	Change
Normal Contribution Rate	28.5%	22.9%	5.6%
Projected Payroll	\$ 185.4	\$ 184.2	0.7%
District Payment Before D.C. Code §1-907.02(c) Adjustment	\$ 52.8	\$ 42.2	25.1%
District Payment After D.C. Code §1-907.02(c) Adjustment	\$ 52.5	\$ 43.7	20.1%

BOARD SUMMARY

DISTRICT OF COLUMBIA RETIREMENT BOARD FIRE FIGHTERS' PORTION OF THE POLICE OFFICERS AND FIRE FIGHTERS' RETIREMENT FUND SUMMARY OF PRINCIPAL VALUATION RESULTS (\$ in millions)

Participant Data

	October 1, 2001	October 1, 2000	Change
Active Members			
Hired Prior to February 15, 1980	208	232	-10.3%
Hired Between February 15, 1980 and November 10, 1996	893	881	1.4%
Hired on or after November 10, 1996	245	146	67.8%
Total	1,346	1,259	6.9%
Retired Members and Beneficiaries (Post 6/30/97)	136	111	22.5%
Total Participants	1,482	1,370	8.2%
Annual Salaries of Active Members	\$ 60.0	\$ 62.7	-4.3%
Annual Retirement Benefits for Retirees & Beneficiaries (post 6/30/97)	\$ 0.9	\$ 1.2	-25.0%

Assets and Liabilities

Present Value of Future District Benefits	\$ 606.0	\$ 603.7	0.4%
District Assets for Valuation Purposes	\$ 342.5	\$ 315.4	8.6%
Present Value of Future Employee Contributions	\$ 56.8	\$ 58.1	-2.2%
Present Value of Future District Contributions	\$ 206.7	\$ 230.2	-10.2%
Present Value of Future Salaries	\$ 785.5	\$ 809.8	-3.0%
Current Value of District Assets	\$ 315.9	\$ 340.5	-7.2%

Contribution Results

	Fiscal Year 2003	Fiscal Year 2002	Change
Normal Contribution Rate	26.3%	28.4%	-2.1%
Projected Payroll	\$ 64.5	\$ 67.5	-4.4%
District Payment Before D.C. Code §1-907.02(c) Adjustment	\$ 17.0	\$ 19.2	-11.5%
District Payment After D.C. Code §1-907.02(c) Adjustment	\$ 16.4	\$ 19.1	-14.1%

SECTION II

ASSETS AND LIABILITIES

ASSETS AND LIABILITIES

In this section we present details regarding both the Assets and Liabilities of the Fund. In the following subsections, we will summarize the following:

- a) the Current Value and Actuarial Value of District Assets;
- b) the Present Value of Future District Retirement Benefits; and
- c) the Present Value of Accrued Retirement Benefits.

Current Value of District Assets

In this subsection, we present details with regards to the **Current Value of District Assets**.

Table II-1 traces the increases and decreases in the Current Value of District Assets from October 1, 2000 through October 1, 2001. The allocation of benefit payments and investment income between police and fire are approximations based on the most recent information available from the District of Columbia and the D.C. Retirement Board.

TABLE II-1 CURRENT VALUE OF DISTRICT ASSETS AS OF OCTOBER 1, 2001 (\$ in millions)					
	Teachers	Police	Fire	Police & Fire	Total Fund
1. Market Value of Assets as of October 1, 2000 ¹	\$ 861.3	\$ 839.1	\$ 340.5	\$ 1,179.6	\$ 2,040.9
2. FY 2001 District Contributions	6.6	32.9	14.1	47.0	53.6
3. FY 2001 Employee Contributions ²	25.1	12.5	4.4	16.9	42.0
4. FY 2001 Actual Benefit Payments ³	0.0	(0.6)	(0.2)	(0.8)	(0.8)
5. FY 2001 Investment Earnings	(111.5)	(103.6)	(42.1)	(145.7)	(257.2)
6. Actual Current Value of Assets as of October 1, 2001	\$ 781.5	\$ 780.3	\$ 316.7	\$ 1,097.0	\$ 1,878.5
7. Benefits Payable for FY 2001	(2.6)	(1.2)	(0.8)	(2.0)	(4.6)
8. Final Current Value of Assets as of October 1, 2001	\$ 778.9	\$ 779.1	\$ 315.9	\$ 1,095.0	\$ 1,873.9
9. Approximate Rate of Return					(12.2%)

¹ The current value of assets as of October 1, 2000 was equal to the market value less estimated benefits payable of \$1.6 million for the teachers fund and \$2.2 million for the police officers and fire fighters fund.

² The employee contributions for police officers and fire fighters were allocated based on their covered payroll.

³ The fund paid \$3.8 million in benefits which was already reflected as benefits payable.

ASSETS AND LIABILITIES

Actuarial Value of District Assets

In this subsection, we present details with regards to the **Actuarial Value of District Assets**.

An actuarial value of assets is a “smoothed” value of assets based upon the market value of assets. Actuarial value, rather than market value, of assets is used to determine the District contribution.

Since the annual District contribution is based on the difference between the present value of future benefits and assets, fluctuations in assets can cause similar fluctuations in annual contributions. The use of an actuarial value of assets can help reduce the effect of market fluctuations on the District contributions.

The current actuarial value of assets method approved by the Board is the expected actuarial value of assets (assuming a 7.25% rate of return) plus 1/3 of the difference between the expected and actual market value of assets. There is then a final adjustment made for the effect of the adjustment pursuant to D.C. Code § 1-907.02(c). This adjustment is explained in further detail in Section III of this report.

Table II-2 shows the development of the Actuarial Value of District Assets as of October 1, 2001.

TABLE II-2					
ACTUARIAL VALUE OF DISTRICT ASSETS					
AS OF OCTOBER 1, 2001					
(\$ in millions)					
	Teachers	Police	Fire	Police & Fire	Total Fund
1. Actuarial Value of Assets as of October 1, 2000	\$ 798.9	\$ 781.9	\$ 315.4	\$ 1,097.3	\$ 1,896.2
2. FY 2001 District Contributions	6.6	32.9	14.1	47.0	53.6
3. FY 2001 Employee Contributions ¹	25.1	12.5	4.4	16.9	42.0
4. FY 2001 Estimated Benefit Payments	(2.6)	(1.8)	(1.0)	(2.8)	(5.4)
5. FY 2001 Expected Investment Earnings	<u>59.2</u>	<u>59.5</u>	<u>24.0</u>	<u>83.5</u>	<u>142.7</u>
6. Expected Actuarial Value of Assets as of October 1, 2001	\$ 887.2	\$ 885.0	\$ 356.9	\$ 1,241.9	\$ 2,129.1
7. Final Current Value of Assets as of October 1, 2001	<u>778.9</u>	<u>779.1</u>	<u>315.9</u>	<u>1,095.0</u>	<u>1,873.9</u>
8. Smoothed Value of Assets as of October 1, 2001 [(6.) + 1/3 x (7. - 6.)]	\$ 851.1	\$ 849.7	\$ 343.2	\$ 1,192.9	\$ 2,044.0
9. Present Value of D.C. Code §1-907.02(c) Adjustment	<u>(4.6)</u>	<u>1.2</u>	<u>(0.7)</u>	<u>0.5</u>	<u>(4.1)</u>
10. Final Actuarial Value of Asset as of October 1, 2001 [(8.) + (9.)]	\$ 846.5	\$ 850.9	\$ 342.5	\$ 1,193.4	\$ 2,039.9

¹ The employee contributions for police officers and fire fighters were allocated based on their covered payroll.

ASSETS AND LIABILITIES

Present Value of Future District Retirement Benefits

In this subsection, we detail the calculation of the present value of future District benefits. This calculation is necessary for developing the fiscal year 2003 District payment.

The present value of future benefits represents the total lump sum value on the valuation date which would be sufficient to pay for all future benefits of current participants and beneficiaries (including inactive members) considering expected future salary increases, service credits, employment termination, mortality, and cost of living adjustments.

TABLE II-3 PRESENT VALUE OF FUTURE DISTRICT BENEFITS AS OF OCTOBER 1, 2001 (\$ in millions)					
	Teachers	Police	Fire	Police & Fire	Total Fund
1. Active Present Value of Future District Benefits	\$ 1,048.0	\$ 1,677.9	\$ 587.5	\$ 2,265.4	\$ 3,313.4
2. Retiree Present Value of Future District Benefits	\$ 46.5	\$ 50.4	\$ 18.5	\$ 68.9	\$ 115.4
3. Total Present Value of Future District Benefits	\$ 1,094.5	\$ 1,728.5	\$ 606.0	\$ 2,334.5	\$ 3,429.0

ASSETS AND LIABILITIES

Present Value of Accrued District Retirement Benefits

In Table II-4, we disclose the accumulated liability of the Fund if everyone stopped working or if the Plans were terminated.

The present value of accrued benefits represents the total lump sum value on the valuation date which would be sufficient to pay for all benefits accrued to the valuation date.

We have one comment on the present value of accrued benefits. The fact that plan assets exceed these liabilities does not constitute “overfunding”. Under the funding method employed by the plan (as required by law), liabilities accruing each year are not paid for as earned in that year. Rather, benefits are funded in a way as to maintain a level funding pattern (as a percent of pay) between the valuation date and retirement date. The funding method for this valuation is referred to as the “aggregate” actuarial cost method. Therefore, assets are expected to exceed liabilities accrued to date early in a member’s career in order to avoid a dramatic escalation in costs for benefits earned late in a member’s career (when salary and service are highest).

TABLE II-4 PRESENT VALUE OF ACCRUED DISTRICT BENEFITS AS OF OCTOBER 1, 2001 (\$ in millions)					
	Teachers	Police	Fire	Police & Fire	Total Fund
1. Present Value of Accrued District Benefits as of October 1, 2001	\$ 225.0	\$ 335.8	\$ 144.8	\$ 480.6	\$ 705.6
2. Actuarial Value of Assets as of October 1, 2001 (Table II-2)	<u>846.5</u>	<u>850.9</u>	<u>342.5</u>	<u>1,193.4</u>	<u>2,039.9</u>
3. Unfunded Present Value of Accrued District Benefits (1. - 2., not less than zero)	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0

SECTION III

CONTRIBUTIONS

CONTRIBUTIONS

In this section, we develop the fiscal year 2003 District payment. The normal contribution rate developed is a percentage of active member payroll. The dollar amount of the District payment is determined by applying the contribution rate to the projected payroll for fiscal year 2003.

An actuarially sound funding method is designed so that the benefits of the current workforce will be completely paid for (i.e., funded) by the time they leave employment due to retirement, disability, death, withdrawal, etc. The first step in this process is to determine the present value, as of the valuation date, of all future benefits payable from the retirement funds. In the District's case, this figure is the **present value of future District benefits** developed in Table II-3.

The present value of future District benefits will be funded from three sources: assets, future employee contributions, and future District contributions. The assets, of course, are known as of the valuation date. For these purposes, actuaries, commonly use an **actuarial value of assets**.

An actuarial value of assets is a "smoothed market value" and is used to keep the contribution rate from fluctuating due to sudden upswings or downturns in the financial markets. As mentioned earlier in this report, the Board has elected to use an actuarial value of asset method for determining the annual District contribution.

The second source for paying future benefits is current employee contributions. These are specified as a fixed percentage of future pay (7% or 8%, depending upon hire date).

Future District contributions must make up any difference between the future District benefits and the actuarial value of assets plus future employee contributions. Thus, the value of future **District contributions** is the present value of future District benefits less the actuarial value of assets less the present value of future employee contributions.

The future District contributions are spread over the future payroll of the workforce to determine the **normal contribution rate**. The District contribution applicable to the fiscal year is the normal contribution rate times the projected payroll.

Finally, the District payment reflects the adjustment pursuant to D.C. Code §1-907.02(c). Further explanation of this adjustment can be found on page III-3.

CONTRIBUTIONS

Development of the Fiscal Year 2003 District Payment

Table III-1 shows the development of the fiscal year 2003 District payment.

TABLE III-1 FY 2003 PAYMENT (\$ in millions)					
	Teachers	Police	Fire	Police & Fire	Total Fund
1. Present Value of Future District Benefits	\$ 1,094.5	\$ 1,728.5	\$ 606.0	\$ 2,334.5	\$ 3,429.0
2. Actuarial Value of Assets	846.5	850.9	342.5	1,193.4	2,039.9
3. Present Value of Future Employee Contributions	<u>268.3</u>	<u>178.0</u>	<u>56.8</u>	<u>234.8</u>	<u>503.1</u>
4. Present Value of Future Normal Costs [(1) - (2) - (3), not less than \$0]	\$ 0.0	\$ 699.6	\$ 206.7	\$ 906.3	\$ 886.0
5. Present Value of Future Payroll	\$ 3,602.2	\$ 2,452.3	\$ 785.5	N/A	N/A
6. Normal Contribution Rate [(4) / (5)]	0.0%	28.5%	26.3%	27.9%	11.5%
7. Projected FY 2003 Payroll	\$ 358.8	\$ 185.4	\$ 64.5	\$ 249.9	\$ 608.7
8. FY 2003 District Payment Before §1-907.02(c) [(6) x (7)]	\$ 0.0	\$ 52.8	\$ 17.0	\$ 69.8	\$ 69.8
9. D.C. Code §1-907.02(c) Adjustment	<u>0.0¹</u>	<u>(0.3)</u>	<u>(0.6)</u>	<u>(0.9)</u>	<u>(0.9)</u>
10. FY 2003 Payment [(8) + (9), not less than \$0]	\$ 0.0	\$ 52.5	\$ 16.4	\$ 68.9	\$ 68.9

¹ The actual teachers D.C. Code §1-907.02(c) adjustment is \$(3.9). Since the FY 2003 District payment is \$0 the adjustment cannot be applied and will be carried forward for use in future years.

CONTRIBUTIONS

§1-907.02(c) Adjustment to the Fiscal Year 2003 District Payment

Beginning in fiscal year 2001, the District payment was adjusted pursuant to D.C. Code §1-907.02(c). This section stipulates that "... the enrolled actuary shall determine whether the amount appropriated for the applicable fiscal year resulted in an overpayment or a shortfall based upon the actual covered payroll."

The D.C. Code §1-907.02(c) adjustment to the fiscal year 2003 District payment is calculated by taking the actual fiscal year 2001 covered payroll for each employee class (which is provided by the District) and then multiplying by the fiscal year 2001 normal contribution rate for each employee class, which were certified in our October 1, 1999 report. This result gives the fiscal year 2001 contribution that was **required** to be made by the District. The required contribution is then compared to the fiscal year 2001 contribution that was **actually paid** by the District. The difference between the required and actual contributions is the preliminary D.C. Code §1-907.02(c) adjustment.

For FY 2002 the teachers had a credit balance of \$4.5 million that could not be applied due to a zero District payment. The carryover amount is applied to the required teachers payment this year. The remaining unused portion will continue to be carried forward.

Table III-2 shows the development of the D.C. Code §1-907.02(c) adjustment for each employee class.

TABLE III-2			
D.C. CODE §1-907.02(c) ADJUSTMENT TO THE FY 2003 PAYMENT			
(\$ in millions)			
	Teachers	Police	Fire
1. Actual FY 2001 Covered Payroll	\$ 314.6	\$ 173.4	\$ 60.7
2. FY 2001 Normal Contribution Rate	2.3%	18.8%	22.3%
3. Actual FY 2001 Contribution Required	\$ 7.2	\$ 32.6	\$ 13.5
4. Actual FY 2001 Contribution Paid	<u>6.6</u>	<u>32.9</u>	<u>14.1</u>
5. Preliminary D.C. Code §1-907.02(c) Adjustment to FY 2003 Payment [(3) - (4)]	\$ 0.6	\$ (0.3)	\$ (0.6)
6. FY 2002 Unrecognized Amount	<u>(4.5)</u>	<u>0.0</u>	<u>0.0</u>
7. Final D.C. Code §1-907.02(c) Adjustment to FY 2003 Payment [(5) + (6)]	\$ (3.9)	\$ (0.3)	\$ (0.6)

APPENDICES

Appendix A	Membership Data and Profile
Appendix B	Actuarial Assumptions and Procedures
Appendix C	Summary of the Provisions of the Program
Appendix D	Auditor's Information

APPENDIX A

MEMBERSHIP DATA AND PROFILE

APPENDIX A - MEMBERSHIP DATA AND PROFILE

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The District of Columbia's Office of Pay and Retirement Services provided the actuary with membership data as of September 30, 2001. Assumptions were made on elements missing from the data provided.

APPENDIX A - MEMBERSHIP DATA AND PROFILE

RETIRED MEMBERSHIP STATISTICS AS OF SEPTEMBER 30, 2001 AVERAGE ANNUITY BY RETIREMENT TYPE			
	Teachers	Police	Fire
Total Benefits			
Number of Service Retirements	4,280	3,133	919
Average Service Annuity	\$ 33,247	\$ 38,678	\$ 46,656
Number of Disability Retirements	507	1,367	592
Average Disability Annuity	\$ 23,872	\$ 34,043	\$ 38,510
Number of Survivors	427	1,187	484
Average Survivor Annuity	\$ 15,382	\$ 19,325	\$ 21,497
Federal Benefits¹			
Number of Service Retirements	4,280	3,133	919
Estimated Average Service Annuity	\$ 32,810	\$ 38,477	\$ 46,204
Number of Disability Retirements	507	1,367	592
Average Disability Annuity	\$ 21,917	\$ 33,488	\$ 37,662
Number of Survivors	427	1,187	484
Average Survivor Annuity	\$ 15,382	\$ 19,325	\$ 21,497
Joint Federal and District Benefits			
Number of Service Retirements	785	367	85
Estimated Average District Service Annuity	\$ 2,382	\$ 1,711	\$ 4,880
Number of Disability Retirements	44	82	51
Average District Disability Annuity	\$ 22,528	\$ 9,247	\$ 9,842
Number of Survivors	0	0	0
Average District Survivor Annuity	\$ 0	\$ 0	\$ 0

ACTIVE MEMBERSHIP STATISTICS AS OF SEPTEMBER 30, 2001			
Employee Class	Average Age	Average Service	Average Salary
Teachers	45.2	13.6	\$ 50,200
Police	37.1	11.4	\$ 49,400
Fire	38.2	13.1	\$ 45,600

^{1.} Includes participants who are the responsibility of both the Federal and District Governments.

Data Assumptions

The following assumptions were made with respect to information provided by the District of Columbia:

(a) **Active Members**

Data for active members was predominantly used as provided by the District. No active police officers or fire fighters were eliminated from the data. One teacher was eliminated because their information was not valid.

Teachers

Charter school teachers data is not available so the active liabilities and payroll were increased by 1.5%.

(b) **Former Members**

The data submitted for former members included participants who have withdrawn contributions and are no longer entitled to a deferred benefit. After further investigation and consultation with staff members of the Board, we have made the following assumptions regarding former Members:

Teachers

An examination of a little more than one-third of the records of former teachers on file yielded nine teachers who are entitled to a deferred benefit. Consequently, we have assumed that there are 25 teachers with deferred vested benefits, all females age 50 with fifteen years of service and a final salary of \$48,720.

Police/Fire

Since practically all police officers and fire fighters withdraw their contributions if they terminate prior to retirement, we have assumed that there are no police officers or fire fighters with a deferred vested benefit.

(c) **Retired Members**

All retired members whose sex was not on file were designed by the letter C. These retirees were assumed to be all male (with female spouses) for the police officers and fire fighters' program and assumed to be all female (with male spouses) for the teachers' program. The date of retirement appears to be given for active members. Members are assumed to have recovered all contributions if they have been receiving benefits for more than 3 years (teachers) or 2 years (police/fire).

The Board provided the fiscal year 2001 employee and District contributions for all three classes of employees. However, these contributions were not split between police officers and fire fighters. We allocated the employee contributions between police officers and fire fighters based on payroll. The District provided the allocation of the fiscal year 2001 Police/fire District contribution of \$49.2 million.

APPENDIX A - MEMBERSHIP DATA AND PROFILE

District of Columbia Teachers' Retirement Fund

SCHEDULE OF ACTIVE PARTICIPANTS HIRED BEFORE NOVEMBER 16, 1996										
	Years of Service									Total
	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	Over 40	
Under 20	0	0	0	0	0	0	0	0	0	0
20 - 24	0	0	0	0	0	0	0	0	0	0
25 - 29	0	26	0	0	0	0	0	0	0	26
30-34	1	121	28	2	0	0	0	0	0	152
35-39	0	97	115	23	0	0	0	0	0	235
40-44	0	76	131	113	25	0	0	0	0	345
45-49	0	65	181	159	130	55	6	0	0	596
50-54	1	60	155	172	123	335	272	12	0	1,130
55-59	0	46	92	87	52	140	491	127	1	1,036
60-64	0	15	46	44	18	33	81	101	11	349
Over 65	0	8	15	17	6	11	22	27	34	140
Total	2	514	763	617	354	574	872	267	46	4,009

SCHEDULE OF ACTIVE PARTICIPANTS HIRED ON OR AFTER NOVEMBER 16, 1996										
	Years of Service									Total
	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	Over 40	
Under 20	1	0	0	0	0	0	0	0	0	1
20 - 24	284	0	0	0	0	0	0	0	0	284
25 - 29	741	2	0	0	0	0	0	0	0	743
30-34	505	5	0	0	0	0	0	0	0	510
35-39	248	2	0	0	0	0	0	0	0	250
40-44	251	2	0	0	0	0	0	0	0	253
45-49	231	1	0	0	0	0	0	0	0	232
50-54	220	4	0	0	0	0	0	0	0	224
55-59	128	2	0	0	0	0	0	0	0	130
60-64	44	0	0	0	0	0	0	0	0	44
Over 65	23	0	0	0	0	0	0	0	0	23
Total	2,676	18	0	0	0	0	0	0	0	2,694

SCHEDULE OF ALL ACTIVE PARTICIPANTS										
	Years of Service									Total
	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	Over 40	
Under 20	1	0	0	0	0	0	0	0	0	1
20 - 24	284	0	0	0	0	0	0	0	0	284
25 - 29	741	28	0	0	0	0	0	0	0	769
30-34	506	126	28	2	0	0	0	0	0	662
35-39	248	99	115	23	0	0	0	0	0	485
40-44	251	78	131	113	25	0	0	0	0	598
45-49	231	66	181	159	130	55	6	0	0	828
50-54	221	64	155	172	123	335	272	12	0	1,354
55-59	128	48	92	87	52	140	491	127	1	1,166
60-64	44	15	46	44	18	33	81	101	11	393
Over 65	23	8	15	17	6	11	22	27	34	163
Total	2,678	532	763	617	354	574	872	267	46	6,703

APPENDIX A - MEMBERSHIP DATA AND PROFILE

District of Columbia Teachers' Retirement Fund

SCHEDULE OF AVERAGE SALARIES FOR ACTIVES HIRED BEFORE NOVEMBER 16, 1996									
	Years of Service								
	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	Over 40
Under 20	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
20 - 24	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
25 - 29	\$ 0	\$ 39,626	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
30-34	\$ 33,417	\$ 42,430	\$ 42,405	\$ 47,984	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
35-39	\$ 0	\$ 44,468	\$ 52,755	\$ 55,017	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
40-44	\$ 0	\$ 48,049	\$ 53,481	\$ 56,500	\$ 56,260	\$ 0	\$ 0	\$ 0	\$ 0
45-49	\$ 0	\$ 48,224	\$ 55,770	\$ 58,844	\$ 59,547	\$ 61,022	\$ 56,625	\$ 0	\$ 0
50-54	\$ 118,490	\$ 49,370	\$ 57,090	\$ 59,910	\$ 60,960	\$ 61,514	\$ 61,743	\$ 58,918	\$ 0
55-59	\$ 0	\$ 50,690	\$ 58,266	\$ 59,325	\$ 59,357	\$ 61,828	\$ 62,095	\$ 63,200	\$ 62,715
60-64	\$ 0	\$ 48,119	\$ 57,956	\$ 57,398	\$ 60,739	\$ 60,922	\$ 60,390	\$ 62,101	\$ 61,949
Over 65	\$ 0	\$ 51,953	\$ 57,142	\$ 60,557	\$ 58,331	\$ 60,284	\$ 60,532	\$ 62,255	\$ 64,345
Total	\$ 75,954	\$ 46,100	\$ 55,160	\$ 58,546	\$ 59,818	\$ 61,486	\$ 61,666	\$ 62,496	\$ 63,736

SCHEDULE OF AVERAGE SALARIES FOR ACTIVES HIRED ON OR AFTER NOVEMBER 16, 1996									
	Years of Service								
	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	Over 40
Under 20	\$ 34,114	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
20 - 24	\$ 32,453	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
25 - 29	\$ 34,738	\$ 40,239	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
30-34	\$ 38,578	\$ 39,649	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
35-39	\$ 40,855	\$ 37,918	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
40-44	\$ 41,883	\$ 43,079	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
45-49	\$ 42,749	\$ 35,157	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
50-54	\$ 45,520	\$ 45,637	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
55-59	\$ 46,391	\$ 40,239	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
60-64	\$ 46,500	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Over 65	\$ 42,772	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 38,855	\$ 41,050	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

APPENDIX A - MEMBERSHIP DATA AND PROFILE

District of Columbia Police Officers and Fire Fighters' Retirement Fund

SCHEDULE OF ACTIVE POLICE OFFICERS HIRED BEFORE NOVEMBER 16, 1996										
	Years of Service									Total
	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	Over 40	
Under 20	0	0	0	0	0	0	0	0	0	0
20 - 24	0	0	0	0	0	0	0	0	0	0
25 - 29	0	63	0	0	0	0	0	0	0	69
30-34	0	168	6	5	0	0	0	0	0	579
35-39	0	98	406	116	0	0	0	0	0	971
40-44	0	20	757	305	40	1	0	0	0	621
45-49	0	2	255	104	123	73	7	0	0	335
50-54	0	0	26	3	23	26	52	4	0	108
55-59	0	0	0	0	0	3	25	9	0	37
60-64	0	0	0	0	0	0	5	2	0	7
Over 65	0	0	0	0	0	0	0	0	0	0
Total	0	351	1,450	533	186	103	89	15	0	2,727

SCHEDULE OF ACTIVE POLICE OFFICERS HIRED ON OR AFTER NOVEMBER 16, 1996										
	Years of Service									Total
	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	Over 40	
Under 20	0	0	0	0	0	0	0	0	0	0
20 - 24	47	0	0	0	0	0	0	0	0	47
25 - 29	324	19	0	0	0	0	0	0	0	343
30-34	260	27	0	0	0	0	0	0	0	287
35-39	92	8	0	0	0	0	0	0	0	100
40-44	41	4	0	0	0	0	0	0	0	45
45-49	12	1	0	0	0	0	0	0	0	13
50-54	6	1	0	0	0	0	0	0	0	7
55-59	3	1	0	0	0	0	0	0	0	4
60-64	0	0	0	0	0	0	0	0	0	0
Over 65	1	0	0	0	0	0	0	0	0	1
Total	786	61	0	0	0	0	0	0	0	847

SCHEDULE OF ALL ACTIVE POLICE OFFICERS										
	Years of Service									Total
	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	Over 40	
Under 20	0	0	0	0	0	0	0	0	0	0
20 - 24	47	0	0	0	0	0	0	0	0	47
25 - 29	324	82	6	0	0	0	0	0	0	412
30-34	260	195	406	5	0	0	0	0	0	866
35-39	92	106	757	116	0	0	0	0	0	1,071
40-44	41	24	255	305	40	1	0	0	0	666
45-49	12	3	26	104	123	73	7	0	0	348
50-54	6	1	0	3	23	26	52	4	0	115
55-59	3	1	0	0	0	3	25	9	0	41
60-64	0	0	0	0	0	0	5	2	0	7
Over 65	1	0	0	0	0	0	0	0	0	1
Total	786	412	1,450	533	186	103	89	15	0	3,574

APPENDIX A - MEMBERSHIP DATA AND PROFILE

District of Columbia Police Officers and Fire Fighters' Retirement Fund

SCHEDULE OF AVERAGE SALARIES FOR ACTIVE POLICE OFFICERS HIRED BEFORE NOVEMBER 16, 1996									
	Years of Service								
	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	Over 40
Under 20	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
20 - 24	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
25 - 29	\$ 0	\$ 45,825	\$ 46,661	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
30-34	\$ 0	\$ 46,740	\$ 48,924	\$ 49,155	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
35-39	\$ 0	\$ 47,023	\$ 49,836	\$ 53,915	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
40-44	\$ 0	\$ 47,048	\$ 50,074	\$ 56,207	\$ 58,198	\$ 67,184	\$ 0	\$ 0	\$ 0
45-49	\$ 0	\$ 46,423	\$ 51,078	\$ 55,893	\$ 62,842	\$ 63,935	\$ 59,575	\$ 0	\$ 0
50-54	\$ 0	\$ 0	\$ 0	\$ 57,675	\$ 66,821	\$ 63,732	\$ 66,037	\$ 60,663	\$ 0
55-59	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 60,100	\$ 62,901	\$ 59,576	\$ 0
60-64	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 67,366	\$ 65,091	\$ 0
Over 65	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 46,671	\$ 49,632	\$ 55,589	\$ 62,336	\$ 63,804	\$ 64,723	\$ 60,601	\$ 0

SCHEDULE OF AVERAGE SALARIES FOR ACTIVE POLICE OFFICERS HIRED ON OR AFTER NOVEMBER 16, 1996									
	Years of Service								
	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	Over 40
Under 20	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
20 - 24	\$ 36,442	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
25 - 29	\$ 39,016	\$ 42,288	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
30-34	\$ 39,451	\$ 42,692	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
35-39	\$ 39,907	\$ 43,017	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
40-44	\$ 41,558	\$ 42,105	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
45-49	\$ 39,791	\$ 49,400	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
50-54	\$ 75,155	\$ 42,105	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
55-59	\$ 77,337	\$ 43,355	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
60-64	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Over 65	\$ 40,101	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 39,678	\$ 42,681	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

APPENDIX A - MEMBERSHIP DATA AND PROFILE

District of Columbia Police Officers and Fire Fighters' Retirement Fund

SCHEDULE OF ACTIVE FIRE FIGHTERS HIRED BEFORE NOVEMBER 16, 1996										
	Years of Service									Total
	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	Over 40	
Under 20	0	0	0	0	0	0	0	0	0	0
20 - 24	0	0	0	0	0	0	0	0	0	0
25 - 29	0	19	29	0	0	0	0	0	0	48
30-34	0	78	153	4	0	0	0	0	0	235
35-39	0	78	107	73	1	0	0	0	0	259
40-44	0	10	52	155	46	1	0	0	0	264
45-49	0	0	3	59	102	38	1	0	0	203
50-54	0	2	1	0	11	39	16	2	0	71
55-59	0	1	0	0	0	1	15	1	0	18
60-64	0	0	0	1	0	0	0	1	0	2
Over 65	0	0	0	0	0	0	0	1	0	1
Total	0	188	345	292	160	79	32	5	0	1,101

SCHEDULE OF ACTIVE FIRE FIGHTERS HIRED ON OR AFTER NOVEMBER 16, 1996										
	Years of Service									Total
	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	Over 40	
Under 20	0	0	0	0	0	0	0	0	0	0
20 - 24	30	0	0	0	0	0	0	0	0	30
25 - 29	86	1	0	0	0	0	0	0	0	87
30-34	77	7	0	0	0	0	0	0	0	84
35-39	18	8	0	0	0	0	0	0	0	26
40-44	12	4	0	0	0	0	0	0	0	16
45-49	1	0	0	0	0	0	0	0	0	1
50-54	1	0	0	0	0	0	0	0	0	1
55-59	0	0	0	0	0	0	0	0	0	0
60-64	0	0	0	0	0	0	0	0	0	0
Over 65	0	0	0	0	0	0	0	0	0	0
Total	225	20	0	0	0	0	0	0	0	245

SCHEDULE OF ALL ACTIVE FIRE FIGHTERS										
	Years of Service									Total
	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	Over 40	
Under 20	0	0	0	0	0	0	0	0	0	0
20 - 24	30	0	0	0	0	0	0	0	0	30
25 - 29	86	20	29	0	0	0	0	0	0	135
30-34	77	85	153	4	0	0	0	0	0	319
35-39	18	86	107	73	1	0	0	0	0	285
40-44	12	14	52	155	46	1	0	0	0	280
45-49	1	0	3	59	102	38	1	0	0	204
50-54	1	2	1	0	11	39	16	2	0	72
55-59	0	1	0	0	0	1	15	1	0	18
60-64	0	0	0	1	0	0	0	1	0	2
Over 65	0	0	0	0	0	0	0	1	0	1
Total	225	208	345	292	160	79	32	5	0	1,346

APPENDIX A - MEMBERSHIP DATA AND PROFILE

District of Columbia Police Officers and Fire Fighters' Retirement Fund

SCHEDULE OF AVERAGE SALARIES FOR ACTIVE FIRE FIGHTERS HIRED BEFORE NOVEMBER 16, 1996									
	Years of Service								
	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	Over 40
Under 20	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
20 - 24	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
25 - 29	\$ 0	\$ 38,633	\$ 40,647	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
30-34	\$ 0	\$ 38,617	\$ 41,780	\$ 45,308	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
35-39	\$ 0	\$ 39,104	\$ 42,787	\$ 51,218	\$ 41,195	\$ 0	\$ 0	\$ 0	\$ 0
40-44	\$ 0	\$ 39,053	\$ 43,183	\$ 50,806	\$ 56,059	\$ 48,007	\$ 0	\$ 0	\$ 0
45-49	\$ 0	\$ 0	\$ 42,708	\$ 50,426	\$ 57,432	\$ 59,747	\$ 53,545	\$ 0	\$ 0
50-54	\$ 0	\$ 79,330	\$ 43,465	\$ 0	\$ 58,821	\$ 59,224	\$ 61,434	\$ 48,007	\$ 0
55-59	\$ 0	\$ 32,436	\$ 0	\$ 0	\$ 0	\$ 59,735	\$ 69,401	\$ 74,083	\$ 0
60-64	\$ 0	\$ 0	\$ 0	\$ 43,465	\$ 0	\$ 0	\$ 0	\$ 77,936	\$ 0
Over 65	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 48,007	\$ 0
Total	\$ 0	\$ 39,244	\$ 42,221	\$ 50,732	\$ 57,031	\$ 59,340	\$ 64,922	\$ 59,208	\$ 0

SCHEDULE OF AVERAGE SALARIES FOR ACTIVE FIRE FIGHTERS HIRED ON OR AFTER NOVEMBER 16, 1996									
	Years of Service								
	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	Over 40
Under 20	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
20 - 24	\$ 32,741	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
25 - 29	\$ 32,800	\$ 32,436	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
30-34	\$ 33,418	\$ 37,301	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
35-39	\$ 40,356	\$ 36,125	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
40-44	\$ 36,544	\$ 36,248	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
45-49	\$ 130,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
50-54	\$ 89,438	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
55-59	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
60-64	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Over 65	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 34,492	\$ 36,377	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

APPENDIX A - MEMBERSHIP DATA AND PROFILE

District of Columbia Teachers' Retirement Fund

AGE-BENEFIT DISTRIBUTION OF RETIREES AND BENEFICIARIES					
BENEFITS PAYABLE IN TOTAL					
Age	Count	Annual Benefits	Age	Count	Annual Benefits
Under 24	46	\$ 206,592	69	193	\$ 6,139,896
25	1	50,136	70	203	6,053,724
26	0	0	71	207	6,539,232
27	0	0	72	194	5,719,980
28	0	0	73	145	4,210,404
29	0	0	74	154	4,723,308
30	0	0	75	175	5,191,860
31	2	8,736	76	129	3,713,472
32	0	0	77	128	3,731,760
33	1	43,296	78	122	3,492,060
34	1	37,284	79	148	4,517,172
35	0	0	80	121	3,597,384
36	1	1,452	81	115	3,620,772
37	0	0	82	96	2,963,532
38	0	0	83	77	2,386,392
38	0	0	84	104	3,214,596
40	4	60,360	85	80	2,415,780
41	2	59,064	86	76	2,497,164
42	2	22,440	87	72	2,164,224
43	1	4,824	88	55	1,837,308
44	2	35,292	89	62	2,121,084
45	4	74,472	90	49	1,672,764
46	6	64,944	91	45	1,485,384
47	1	17,448	92	28	878,748
48	3	54,814	93	35	1,145,268
49	6	129,600	94	37	1,450,812
50	5	81,108	95	22	827,244
51	7	107,796	96	11	436,620
52	11	216,012	97	11	396,252
53	23	501,756	98	8	336,252
54	32	667,152	99	5	147,948
55	55	1,337,160	100 and over	7	276,036
56	63	1,862,256			
57	131	4,039,056			
58	152	4,819,956			
59	158	4,912,572			
60	144	4,734,096			
61	141	4,518,155			
62	140	4,612,044			
63	185	6,079,632			
64	186	6,039,612			
65	192	6,217,836			
66	201	6,597,510			
67	194	6,167,220			
68	198	6,680,580			
Totals:				5,214	\$ 160,966,695

APPENDIX A - MEMBERSHIP DATA AND PROFILE

District of Columbia Teachers' Retirement Fund

AGE-BENEFIT DISTRIBUTION OF RETIREES AND BENEFICIARIES ESTIMATED BENEFITS PAYABLE BY THE DISTRICT OF COLUMBIA					
Age	Count	Annual Benefits	Age	Count	Annual Benefits
Under 24	0	\$ 0	54	11	\$ 171,586
25	0	0	55	22	54,782
26	0	0	56	49	238,785
27	0	0	57	95	420,378
28	0	0	58	102	266,055
29	0	0	59	93	242,046
30	0	0	60	62	126,630
31	0	0	61	48	129,093
32	0	0	62	55	163,334
33	0	0	63	60	162,810
34	0	0	64	52	114,217
35	0	0	65	40	91,808
36	0	0	66	22	51,581
37	0	0	67	14	28,352
38	0	0	68	18	40,600
38	0	0	69	17	41,592
40	0	0	70	9	23,073
41	0	0	71	13	36,628
42	0	0	72	9	21,217
43	0	0	73	2	5,408
44	0	0	74	2	3,647
45	1	15,000	75	2	5,301
46	1	21,768	76	2	2,312
47	1	17,448	77	0	0
48	2	47,160	78	0	0
49	3	63,672	79	1	3,620
50	1	20,328			
51	2	28,872			
52	8	84,450			
53	10	117,812			
			Totals:	829	\$ 2,861,365

APPENDIX A - MEMBERSHIP DATA AND PROFILE

District of Columbia Teachers' Retirement Fund

AGE-BENEFIT DISTRIBUTION OF RETIREES AND BENEFICIARIES ESTIMATED BENEFITS PAYABLE BY THE FEDERAL GOVERNMENT					
Age	Count	Annual Benefits	Age	Count	Annual Benefits
Under 24	46	\$ 206,592	69	193	\$ 6,098,304
25	1	50,136	70	203	6,030,651
26	0	0	71	207	6,502,604
27	0	0	72	194	5,698,763
28	0	0	73	145	4,204,996
29	0	0	74	154	4,719,661
30	0	0	75	175	5,186,559
31	2	8,736	76	129	3,711,160
32	0	0	77	128	3,731,760
33	1	43,296	78	122	3,492,060
34	1	37,284	79	148	4,513,552
35	0	0	80	121	3,597,384
36	1	1,452	81	115	3,620,772
37	0	0	82	96	2,963,532
38	0	0	83	77	2,386,392
38	0	0	84	104	3,214,596
40	4	60,360	85	80	2,415,780
41	2	59,064	86	76	2,497,164
42	2	22,440	87	72	2,164,224
43	1	4,824	88	55	1,837,308
44	2	35,292	89	62	2,121,084
45	4	59,472	90	49	1,672,764
46	6	43,176	91	45	1,485,384
47	1	0	92	28	878,748
48	3	7,654	93	35	1,145,268
49	6	65,928	94	37	1,450,812
50	5	60,780	95	22	827,244
51	7	78,924	96	11	436,620
52	11	131,562	97	11	396,252
53	23	383,944	98	8	336,252
54	32	495,566	99	5	147,948
55	55	1,282,378	100 and over	7	276,036
56	63	1,623,471			
57	131	3,618,678			
58	152	4,553,901			
59	158	4,670,526			
60	144	4,607,466			
61	141	4,389,062			
62	140	4,448,710			
63	185	5,916,822			
64	186	5,925,395			
65	192	6,126,028			
66	201	6,545,929			
67	194	6,138,868			
68	198	6,639,980			
			Totals:	5,214	\$ 158,105,330

APPENDIX A - MEMBERSHIP DATA AND PROFILE

District of Columbia Police Officers and Fire Fighters' Retirement Fund

AGE-BENEFIT DISTRIBUTION OF RETIREES AND BENEFICIARIES POLICE OFFICERS' BENEFITS PAYABLE IN TOTAL					
Age	Count	Annual Benefits	Age	Count	Annual Benefits
Under 24	107	\$ 271,224	69	71	\$ 2,738,548
25	0	0	70	72	2,626,286
26	1	1,932	71	91	3,269,999
27	0	0	72	75	2,620,201
28	0	0	73	88	3,240,243
29	1	5,148	74	113	4,201,391
30	2	3,996	75	86	3,207,974
31	4	102,696	76	75	2,707,117
32	6	126,264	77	74	2,615,287
33	6	130,656	78	74	2,455,621
34	6	116,724	79	58	1,914,604
35	8	170,064	80	60	1,840,022
36	6	112,824	81	41	1,268,412
37	5	115,224	82	46	1,367,584
38	6	86,328	83	61	2,003,886
38	14	282,864	84	46	1,576,309
40	8	142,428	85	46	1,276,716
41	13	251,592	86	44	1,546,336
42	12	183,636	87	41	1,312,985
43	13	236,110	88	23	627,199
44	25	586,964	89	23	839,489
45	35	988,430	90	25	722,825
46	49	1,514,586	91	18	536,597
47	68	2,190,982	92	18	519,852
48	96	3,152,936	93	13	508,177
49	127	4,137,422	94	8	184,245
50	182	5,948,455	95	10	296,511
51	197	6,499,185	96	4	101,652
52	218	7,720,225	97	3	43,140
53	235	8,074,074	98	1	16,212
54	318	10,841,971	99	2	41,220
55	373	13,419,785	100 and over	2	48,896
56	228	7,860,392			
57	233	8,243,706			
58	205	7,244,727			
59	206	7,134,271			
60	165	5,894,052			
61	158	5,642,521			
62	172	6,212,006			
63	154	5,241,055			
64	152	5,310,613			
65	121	4,249,063			
66	141	4,838,094			
67	112	4,059,243			
68	87	2,982,005			
Totals:				5,687	\$ 190,652,009

APPENDIX A - MEMBERSHIP DATA AND PROFILE

District of Columbia Police Officers and Fire Fighters' Retirement Fund

AGE-BENEFIT DISTRIBUTION OF RETIREES AND BENEFICIARIES POLICE OFFICERS' BENEFITS PAYABLE BY THE DISTRICT OF COLUMBIA					
Age	Count	Annual Benefits	Age	Count	Annual Benefits
Under 24	0	\$ 0	49	41	\$ 74,874
25	0	0	50	38	75,100
26	0	0	51	40	47,622
27	0	0	52	35	52,595
28	0	0	53	38	61,072
29	0	0	54	37	51,651
30	0	0	55	17	11,634
31	4	37,332	56	15	21,242
32	3	0	57	10	12,981
33	0	0	58	8	18,044
34	4	70,668	59	6	5,137
35	6	36,768	60	2	9,989
36	3	66,900	61	0	0
37	4	70,428	62	2	9,422
38	2	22,932	63	0	0
38	5	117,108	64	0	0
40	1	0	65	0	0
41	6	85,668	66	0	0
42	0	0	67	0	0
43	3	20,964	68	1	1,743
44	7	19,493			
45	19	74,228			
46	27	108,950			
47	29	120,730			
48	36	80,885			
			Totals:	449	\$ 1,386,160

APPENDIX A - MEMBERSHIP DATA AND PROFILE

District of Columbia Police Officers and Fire Fighters' Retirement Fund

AGE-BENEFIT DISTRIBUTION OF RETIREES AND BENEFICIARIES POLICE OFFICERS' BENEFITS PAYABLE BY THE FEDERAL GOVERNMENT					
Age	Count	Annual Benefits	Age	Count	Annual Benefits
Under 24	107	\$ 271,224	69	71	\$ 2,738,548
25	0	0	70	72	2,626,286
26	1	1,932	71	91	3,269,999
27	0	0	72	75	2,620,201
28	0	0	73	88	3,240,243
29	1	5,148	74	113	4,201,391
30	2	3,996	75	86	3,207,974
31	4	65,364	76	75	2,707,117
32	6	126,264	77	74	2,615,287
33	6	130,656	78	74	2,455,621
34	6	46,056	79	58	1,914,604
35	8	133,296	80	60	1,840,022
36	6	45,924	81	41	1,268,412
37	5	44,796	82	46	1,367,584
38	6	63,396	83	61	2,003,886
38	14	165,756	84	46	1,576,309
40	8	142,428	85	46	1,276,716
41	13	165,924	86	44	1,546,336
42	12	183,636	87	41	1,312,985
43	13	215,146	88	23	627,199
44	25	567,471	89	23	839,489
45	35	914,202	90	25	722,825
46	49	1,405,636	91	18	536,597
47	68	2,070,252	92	18	519,852
48	96	3,072,051	93	13	508,177
49	127	4,062,548	94	8	184,245
50	182	5,873,355	95	10	296,511
51	197	6,451,563	96	4	101,652
52	218	7,667,630	97	3	43,140
53	235	8,013,002	98	1	16,212
54	318	10,790,320	99	2	41,220
55	373	13,408,151	100 and over	2	48,896
56	228	7,839,150			
57	233	8,230,725			
58	205	7,226,683			
59	206	7,129,134			
60	165	5,884,063			
61	158	5,642,521			
62	172	6,202,584			
63	154	5,241,055			
64	152	5,310,613			
65	121	4,249,063			
66	141	4,838,094			
67	112	4,059,243			
68	87	2,980,262			
		Totals:		5,687	\$ 189,265,849

APPENDIX A - MEMBERSHIP DATA AND PROFILE

District of Columbia Police Officers and Fire Fighters' Retirement Fund

AGE-BENEFIT DISTRIBUTION OF RETIREES AND BENEFICIARIES FIRE FIGHTERS' BENEFITS PAYABLE IN TOTAL					
Age	Count	Annual Benefits	Age	Count	Annual Benefits
Under 24	38	\$ 62,580	69	33	\$ 1,260,038
25	1	1,956	70	33	1,260,815
26	0	0	71	42	1,495,606
27	0	0	72	53	2,040,075
28	0	0	73	44	1,861,381
29	1	38,748	74	43	1,754,059
30	1	1,620	75	49	1,889,338
31	0	0	76	31	1,267,722
32	1	26,004	77	42	1,520,383
33	1	15,048	78	27	985,900
34	0	0	79	28	1,107,496
35	0	0	80	38	1,387,440
36	1	16,128	81	29	976,521
37	2	67,308	82	33	1,131,845
38	1	21,564	83	35	1,372,904
38	1	16,020	84	28	1,123,836
40	2	22,628	85	28	979,096
41	2	33,432	86	23	795,287
42	4	53,820	87	16	668,362
43	5	93,360	88	11	373,158
44	6	130,471	89	16	513,570
45	6	164,801	90	9	274,565
46	6	167,364	91	11	320,061
47	15	470,962	92	9	327,940
48	26	832,729	93	7	205,870
49	27	912,342	94	5	108,012
50	23	800,135	95	4	74,088
51	29	1,163,150	96	1	44,880
52	34	1,468,455	97	2	25,824
53	31	1,266,415	98	0	0
54	40	1,525,186	99	1	21,336
55	72	3,060,532	100 and over	2	45,828
56	70	2,871,188			
57	67	2,887,849			
58	64	2,814,577			
59	64	2,681,995			
60	87	3,390,906			
61	87	3,620,874			
62	93	4,024,510			
63	73	3,015,100			
64	61	2,324,505			
65	53	2,231,511			
66	66	2,514,677			
67	49	1,906,132			
68	52	2,124,290			
		Totals:		1,995	\$ 76,054,108

APPENDIX A - MEMBERSHIP DATA AND PROFILE

District of Columbia Police Officers and Fire Fighters' Retirement Fund

AGE-BENEFIT DISTRIBUTION OF RETIREES AND BENEFICIARIES FIRE FIGHTERS' BENEFITS PAYABLE BY THE DISTRICT OF COLUMBIA					
Age	Count	Annual Benefits	Age	Count	Annual Benefits
Under 24	0	\$ 0	44	2	\$ 9,763
25	0	0	45	4	95,304
26	0	0	46	5	84,717
27	0	0	47	5	34,478
28	0	0	48	14	185,205
29	0	0	49	8	32,751
30	0	0	50	9	42,638
31	0	0	51	15	69,795
32	1	26,004	52	14	60,229
33	1	15,048	53	7	31,709
34	0	0	54	5	24,772
35	0	0	55	13	59,579
36	1	16,128	56	7	16,386
37	0	0	57	7	33,078
38	0	0	58	8	16,527
38	0	0	59	3	12,307
40	0	0	60	1	4,670
41	0	0	61	1	5,654
42	0	0	62	2	0
43	2	40,020	63	1	0
			Totals:	136	\$ 916,762

APPENDIX A - MEMBERSHIP DATA AND PROFILE

District of Columbia Police Officers and Fire Fighters' Retirement Fund

AGE-BENEFIT DISTRIBUTION OF RETIREES AND BENEFICIARIES FIRE FIGHTERS' BENEFITS PAYABLE BY THE FEDERAL GOVERNMENT					
Age	Count	Annual Benefits	Age	Count	Annual Benefits
Under 24	38	\$ 62,580	69	33	\$ 1,260,038
25	1	1,956	70	33	1,260,815
26	0	0	71	42	1,495,606
27	0	0	72	53	2,040,075
28	0	0	73	44	1,861,381
29	1	38,748	74	43	1,754,059
30	1	1,620	75	49	1,889,338
31	0	0	76	31	1,267,722
32	1	0	77	42	1,520,383
33	1	0	78	27	985,900
34	0	0	79	28	1,107,496
35	0	0	80	38	1,387,440
36	1	0	81	29	976,521
37	2	67,308	82	33	1,131,845
38	1	21,564	83	35	1,372,904
38	1	16,020	84	28	1,123,836
40	2	22,628	85	28	979,096
41	2	33,432	86	23	795,287
42	4	53,820	87	16	668,362
43	5	53,340	88	11	373,158
44	6	120,708	89	16	513,570
45	6	69,497	90	9	274,565
46	6	82,647	91	11	320,061
47	15	436,484	92	9	327,940
48	26	647,524	93	7	205,870
49	27	879,591	94	5	108,012
50	23	757,497	95	4	74,088
51	29	1,093,355	96	1	44,880
52	34	1,408,226	97	2	25,824
53	31	1,234,706	98	0	0
54	40	1,500,414	99	1	21,336
55	72	3,000,953	100 and over	2	45,828
56	70	2,854,802			
57	67	2,854,771			
58	64	2,798,050			
59	64	2,669,688			
60	87	3,386,236			
61	87	3,615,220			
62	93	4,024,510			
63	73	3,015,100			
64	61	2,304,505			
65	53	2,231,511			
66	66	2,514,677			
67	49	1,906,132			
68	52	2,124,290			
Totals:				1,995	\$ 75,137,346

APPENDIX B

ACTUARIAL ASSUMPTIONS AND PROCEDURES

APPENDIX B – ACTUARIAL ASSUMPTIONS AND PROCEDURES

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APPENDIX B – ACTUARIAL ASSUMPTIONS AND PROCEDURES

Actuarial Assumptions

1. Annual Rate of Investment Return: 7.25%
2. Annual Increase in Cost-of-Living: 5.00%
3. Rates of Salary Increases for Liabilities¹

Service	(% at selected service)		
	Teachers	Police ²	Fire ²
0	8.8	8.8	8.2
5	8.6	7.4	7.9
10	7.6	7.2	7.6
15	6.4	6.9	7.1
20	5.7	6.6	6.8
25	5.4	6.0	6.5
30	5.3	5.5	6.3

¹ The rates include an annual assumed general wage increase of 5.0%

² Additional increases are reflected to account for the Base Retention Differential of 5% after 20 years of service for police officers and Retention incentives of 5%, 10%, and 15% after 15, 20, and 25 years of service, respectively, for fire fighters.

4. Withdrawal

TEACHERS		
NUMBER OF WITHDRAWALS PER 1,000 MEMBERS AT SELECTED AGES		
Age	Male	Female
25	140	140
30	80	80
35	50	50
40	35	35
45	28	28
50	20	20
55	0	0

APPENDIX B – ACTUARIAL ASSUMPTIONS AND PROCEDURES

4. Withdrawal, cont.

POLICE		
NUMBER OF WITHDRAWALS PER 1,000 MEMBERS AT SELECTED AGES		
Age	Male	Female
25	66	66
30	34	34
35	17	17
40	7	7
45	4	4
50	0	0
55	0	0

FIRE		
NUMBER OF WITHDRAWALS PER 1,000 MEMBERS AT SELECTED AGES		
Age	Male	Female
25	30	30
30	10	10
35	8	8
40	6	6
45	5	5
50	0	0
55	0	0

5. Mortality

Teachers

Active Members:

Male: 1994 Uninsured Pension (UP94) Male Table set forward 1 year

Female: 1994 Uninsured Pension (UP94) Female Table set forward 1 year

Inactive Healthy Members:

Male: 1994 Uninsured Pension (UP94) Male Table

Female: 1994 Uninsured Pension (UP94) Female Table set forward 3 years

APPENDIX B – ACTUARIAL ASSUMPTIONS AND PROCEDURES

5. Mortality, cont.

Teachers

Inactive Disabled Members:

NUMBER OF DEATHS PER 10,000 MEMBERS AT SELECTED AGES		
Age	Male	Female
25	300	300
30	300	300
35	300	300
40	300	300
45	300	300
50	307	300
55	315	300
60	324	300
65	332	300
70	475	300
75	658	343
80	901	518
85	1,121	728

Police Officers and Fire Fighters

Active Members:

Male: 1994 Uninsured Pension (UP94) Male Table set forward 3 years

Female: 1994 Uninsured Pension (UP94) Female Table set forward 3 years

Inactive Healthy Members:

Male: 1994 Uninsured Pension (UP94) Male Table set forward 2 years

Female: 1994 Uninsured Pension (UP94) Female Table set forward 2 years

APPENDIX B – ACTUARIAL ASSUMPTIONS AND PROCEDURES

Inactive Disabled Members:

NUMBER OF DEATHS PER 10,000 MEMBERS AT SELECTED AGES		
Age	Male	Female
25	113	70
30	113	70
35	113	70
40	113	70
45	113	70
50	113	70
55	113	70
60	163	104
65	237	149
70	330	214
75	486	305
80	812	529
85	1,244	903

6. Disability

Teachers

NUMBER OF DISABLEMENTS PER 10,000 MEMBERS AT SELECTED AGES		
Age	Male	Female
25	4	4
30	7	7
35	12	12
40	16	16
45	26	26
50	40	40
55	69	69
60	71	71
65	0	0

Police¹

NUMBER OF DISABLEMENTS PER 10,000 MEMBERS AT SELECTED AGES		
Age	Male	Female
25	26	26
30	34	34
35	51	51
40	75	75
45	118	118
50	195	195
55	341	341
60	500	500
65	500	500

¹ It is assumed that 50% of the disabilities are due to accidents in the line of duty.

APPENDIX B – ACTUARIAL ASSUMPTIONS AND PROCEDURES

Fire¹

NUMBER OF DISABLEMENTS PER 10,000 MEMBERS AT SELECTED AGES		
Age	Male	Female
25	40	26
30	52	34
35	77	51
40	113	75
45	177	118
50	293	195
55	520	341
60	743	500
65	743	500

¹ It is assumed that 50% of the disabilities are due to accidents in the line of duty.

7. Retirement

Teachers

NUMBER OF RETIREMENTS PER 1,000 MEMBERS AT SELECTED AGES		
Age	First Year Eligible	Subsequent Years
45	--	--
50	200	--
55	200	150
56	400	150
57	600	150
58	600	150
59	600	150
60	200	200
65 ¹	200	400
70	200	1,000

¹ Between the ages of 65 and 70, teachers are assumed to retire at the rate of 200 per 1,000

Police Officers and Fire Fighters

NUMBER OF RETIREMENTS PER 1,000 MEMBERS AT SELECTED AGES		
Age	Police	Fire
45	150	60
50	230	130
55	400	350
56	500	350
57	500	350
58	500	350
59	500	350
60	1,000	1,000
65	1,000	1,000
70	1,000	1,000

Actuarial Procedures

1. Asset Valuation Method

For purposes of determining the fiscal year 2003 District payment, an actuarial value of assets is used. The actuarial value of assets is equal to the expected market value of assets at 9/30/2001 plus 1/3 of the difference between the expected market value and the actual market value at 9/30/2001.

2. Funding Method

The funding method required by the “Replacement Plan Act” is the aggregate funding method.

APPENDIX C

**SUMMARY OF
THE PROVISIONS OF
THE PROGRAMS**

APPENDIX C – SUMMARY OF THE PROVISIONS OF THE PROGRAMS

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Teachers' Retirement Program	C-2
Police Officers' and Fire Fighters' Retirement Program	C-6

Summary of Program Provisions: District of Columbia Retirement Program for Teachers

1. **Membership**

Permanent, temporary, and probationary teachers for the District of Columbia public day schools become members automatically on their date of employment. Other employees covered by the Retirement of Public School Teachers Act—including librarians, principals, and counselors—also become members on their date of employment. Substitute teachers and employees of the Department of School Attendance and Work Permits are not covered.

2. **Required Member Contributions**

Members hired before November 16, 1996 contribute 7% of annual pay minus any pay received for summer school. Members hired on or after November 16, 1996 contribute 8% of annual pay minus pay received for summer school.

3. **Voluntary Member Contributions**

Members can contribute up to 10% of annual pay toward an annuity in addition to any vested pension.

4. **Service**

School Service – one year of school service is granted for each year of employment with the D.C. public day schools.

Credited Service – service granted in addition to school service.

5. **Voluntary Retirement**

For participants hired before November 16, 1996:

Eligibility – age 62 with 5 years of school service; age 60 with 20 years of total service, including 5 years of school service; age 55 with 30 years of total service, including 5 years of school service.

Benefit – 1.5% of 3-year average pay times service up to 5 years, plus 1.75% of average pay times service between 5 and 10 years, plus 2% of 3-year average pay times service over 10 years, with each period subject to a minimum benefit of 1.0% of average pay plus \$25.

For participants hired on or after November 16, 1996:

Eligibility – age 62 with 5 years of school service; age 60 with 20 years of total service, including 5 years of school service; or any age with 30 years of total service, including 5 years of school service.

Benefit – 2.0% of 3-year average pay times service up to 5 years subject to minimum benefit of 1.0% of 3-year average pay plus \$25.

6. *Involuntary Retirement*

Eligibility – retired involuntarily for reasons other than misconduct or delinquency with 25 years of total service, including 5 years of school service; or age 50 with 20 years of total service, including 5 years of school service.

Benefit – Voluntary Retirement benefit reduced 1/6% per month (2% per year) that date of retirement is before age 55.

7. *Disability Retirement*

Eligibility – 5 years of school service and a physical or mental disability that prevents the member from performing his/her job.

Benefit – Voluntary Retirement benefit subject to a minimum of the lesser of 40% of average pay and the benefit that the member would receive projecting service to age 60.

8. *Deferred Vested Retirement*

Eligibility – 5 years of school service.

Benefit – Voluntary Retirement benefit beginning at age 62.

9. *Lump Sum Death Benefit*

Eligibility – death before completion of 18 months of school service or death without an eligible spouse, child, or parent.

Benefit – Refund of paid contributions.

10. Installment Benefits Payable upon Death

Spouse Only

Eligibility – death before retirement and married for at least two years or have a child by the marriage.

Benefit – 55% of the Voluntary Retirement benefit subject to the minimums specified in the Disability Retirement Benefit.

Spouse and Dependent Children

Eligibility – for the spouse, as described above; for the children, unmarried and under 18, 22 if full-time student, or any child dependent because of a disability incurred before age 18. Death does not have to occur before retirement for the children's benefits.

Benefit – spouse benefit as described above plus a benefit per child of the smallest of 60% of average pay divided by the number of children, \$900, and \$2,700 divided by the number of children; payable until the children are no longer eligible.

Dependent Children Only

Eligibility – same as the children's benefit above.

Benefit – per child, the smallest of 75% of average pay divided by the number of eligible children, \$1,080, and \$3,240 divided by the number of children payable until the children are no longer eligible.

Surviving Parents Only

Eligibility – death before retirement and no eligible spouse or children, and parents receive at least one-half of their total income from member.

Benefit – spouse benefit as described above.

11. Cost-of-Living Adjustments

All participants receive an increase each March based on the annual change in the Consumer Price Index (all items – U.S. City average) from December to December.

12. **Form of Payment Options**

Normal Form of Payment – Single Life Annuity

Joint and 55% Survivor (to spouse) – The original benefit is reduced by 2.5% of annual pension up to \$3,600, plus 10% of any amount over \$3,600.

Variable Survivor – A joint and 55% survivor annuity with the original benefit reduced 10% plus an additional 5% for each full 5 years, up to 25 years, the survivor is younger, with a total reduction of 40% for any survivor who is 25 or more years younger.

Insurance Option – benefits may be reduced and the balance used to purchase life insurance.

13. **Benefit Changes Since Prior Valuation**

None.

Summary of Program Provisions: Retirement Program for District of Columbia Police Officers and Fire Fighters

1. Membership

All police officers and fire fighters of the District of Columbia automatically become members on their date of employment. Police Cadets are not eligible.

2. Required Member Contributions

Members hired before November 10, 1996 contribute 7% of annual salary, including any differential for special assignment, but excluding overtime, longevity, holiday, or military pay. Members hired on or after November 10, 1996 contribute 8% of annual salary, including any differential for special assignment, but excluding overtime, longevity, holiday, or military pay.

3. Average Pay

For those hired before February 15, 1980, basic pay for the highest 12 months. For those hired on or after February 15, 1980, basic pay for the highest 36 months divided by three.

4. Longevity Pay (Police Only)

Members who complete 25 years of active service prior to retirement are entitled to an additional 15% of their basic compensation. Members who complete 30 years of active service are entitled to an additional 20% of their basic pay.

5. Service

Departmental Service – each full year and additional months of employment with either the Metropolitan Police Force or the D.C. Fire Department.

Credited Service – service granted in addition to departmental service for service with the military or federal government.

6. *Normal Retirement Benefit*

For participants hired before November 10, 1996:

Eligibility – Age 50 with 25 years of departmental service (20 years of service and no age requirement if hired before February 15, 1980).

Benefit – 2.5% of average pay times departmental service up to 25 years (20 years if hired before February 15, 1980) plus 3% of average pay times departmental service over 25 (or 20) years plus 2.5% of average pay times credited service, subject to a maximum benefit of 80% of pay.

For participants hired on or after November 10, 1996:

Eligibility – Age 60 or 25 years of departmental service and no age requirement.

Benefit – 2.5% of average pay times departmental service subject to a maximum benefit of 80% of pay.

7. *Disability Retirement*

Service-related

Eligibility – disabled as a result of an illness or injury in the line of duty.

Benefit for those hired before February 15, 1980 – 2.5% of average pay times total years of service, subject to a minimum benefit of 66-2/3% of average pay and subject to a maximum benefit of 70% of average pay.

Benefit for those hired on or after February 15, 1980 – 70% of final pay times percentage of disability, subject to a minimum benefit of 40% of final pay.

Non-service-related

Eligibility – 5 years of departmental service and a physical or mental disability that prevents the member from performing his/her job.

Benefit for those hired before February 15, 1980 – 2% of average pay times total years of service, subject to a minimum benefit of 40% of average pay and subject to a maximum benefit of 70% of average pay.

Benefit for those hired on or after February 15, 1980 – 70% of final pay times percentage of disability, subject to a minimum benefit of 30% of final pay.

8. **Deferred Vested Retirement**

Eligibility – 5 years of departmental service.

Benefit – Normal Retirement benefit beginning at age 55.

9. **Lump Sum Death Benefit**

Eligibility – 5 years of duty not resulting from willful misconduct, an intention to bring about his/her own death, or drunkenness.

Benefit – \$50,000. Additional amounts will be paid by the Federal government (outside of the retirement fund).

10. **Installment Benefits Payable upon Death**

Spouse Only

Eligibility – death and married for at least two years or have a child by the marriage.

Benefit – 40% of the greater of average pay and the salary for step 6 salary class 1 of the D.C. Police and Fireman's Salary Act in effect, adjusted for cost-of-living increases if death occurs after retirement.

Spouse Only; member killed in line of duty

Eligibility – death (killed in line of duty) and married for at least two years or have a child by the marriage.

Benefit – 100% of the greater of average pay and the salary for step 6 salary class 1 of D.C. Police and Fireman's Salary Act in effect, adjusted for cost-of-living increases if death occurs after retirement.

Spouse and Dependent Children

Eligibility – for the spouse, as described above; for the children, unmarried and under 18, 22 if full-time student, or any child dependent because of a disability incurred before age 18.

Benefit – spouse benefit as described above plus a benefit per child of the smallest of 60% of average pay divided by the number of children, \$2,918, and \$8,754 divided by the number of children; payable until the children are no longer eligible.

Dependent Children Only

Eligibility – same as the children’s benefit above.

Benefit – per child, 75% of average pay divided by the number of eligible children.

Refund of Contributions

If no eligible dependent exists, all contributions will be refunded to a named beneficiary.

11. Cost-of-Living Adjustments

Employees (not beneficiaries) who retired prior to February 15, 1980, receive the same percentage increase as active employees’ salary increases.

All other retired participants receive an increase each March based on the annual change in the consumer Price Index (All Urban Consumers) from December to December.

12. Form of Payment Options

Normal Form of Payment – Single Life Annuity.

Additional Survivor Benefit – The original benefit is reduced 10%. This 10% amount is reduced by 5% for each full 5 years the survivor is younger (but not more than 40%) and is added to the survivor’s benefit.

13. Benefit Changes Since Prior Valuation

Paramedic and Emergency Medical Technician Lateral Transfer to Firefighting – Allows Fire and Emergency Medical Services Department personnel to be uniformed firefighters and gives the option to purchase past service.

Police and Fire Survival Annuity Adjustment – As of October 1, 2000, the annuity paid to a widow (surviving spouse) of a police officer or firefighter killed in the line of duty after December 29, 1943 is increased to 100% of the member’s salary at time of death.

Police Officers Longevity Pay – Each officer or member who completes 25 years of service prior to retirement is entitled to include their longevity pay as part of the average pay for his/her retirement benefits.

APPENDIX D

AUDITOR'S INFORMATION

APPENDIX D – AUDITOR’S INFORMATION

District of Columbia Retirement Board						
Required Supplementary Information Pursuant to GASB Statement #25						
Schedule of Funding Progress						
Actuarial Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (b/a)	Covered Payroll (c)	UAAL as of Percentage of Covered Payroll [(b-a)/(c)]
	(a)	(b)	(b-a)	(b/a)	(c)	[(b-a)/(c)]
The District of Columbia Retirement Board uses the aggregate actuarial cost method and is therefore not required to disclose a schedule of funding progress.						

District of Columbia Retirement Board						
Required Supplementary Information Pursuant to GASB Statement #25						
Schedule of Employer Contributions						
(\$ Millions)						
Year Ended September 30	Teacher’s Retirement Fund		Police Officer’s and Firefighter’s Retirement Fund		Total Fund	
	Annual Required Contribution	Percentage Contributed	Annual Required Contribution	Percentage Contributed	Annual Required Contribution	Percentage Contributed
1998	\$ 9.6	100 %	\$ 47.7	100 %	\$ 57.3	100 %
1999	\$ 12.8	145 %	\$ 35.1	100 %	\$ 47.9	112 %
2000	\$ 10.7	100 %	\$ 39.9	100 %	\$ 50.6	100 %
2001	\$ 6.6	100 %	\$ 47.0	100 %	\$ 53.6	100 %

APPENDIX D – AUDITOR’S INFORMATION

District of Columbia Retirement Board		
Required Supplementary Information Pursuant to GASB Statement #25		
Additional Information		
	Teacher’s Retirement Fund	Police Officers and Firefighters Retirement Fund
Valuation Date:	October 1, 1997	October 1, 1997
Actuarial Cost Method:	Aggregate	Aggregate
Amortization Method:	N/A	N/A
Remaining Amortization Period:	N/A	N/A
Asset Valuation Method:	Market Value	Market Value
Actuarial Assumptions:		
Investment Rate of Return:	7.25%	7.25%
Projected Salary Increases: includes inflation at	5.3%-8.8% 5.0%	5.3%-8.8% 5.0%
Cost of Living Adjustments:	5.0% ¹	5.0% ¹

¹ Post-1996 hires have COLAs capped at 3.00%

Please refer to the actuarial valuation report for more details on the assumptions.