

**DALLAS POLICE AND FIRE PENSION SYSTEM  
SUPPLEMENTAL PLAN**

**ACTUARIAL VALUATION**

**AS OF JANUARY 1, 2011**

May 18, 2011

Mr. Richard L. Tettamant  
Administrator  
Dallas Police & Fire Pension System  
4100 Harry Hines Blvd., Suite 100  
Dallas, TX 75219

**Re: Dallas Police and Fire Pension System Supplemental Plan Actuarial Valuation as of  
January 1, 2011**

Dear Mr. Tettamant:

We certify that the information contained in this report is accurate and fairly presents the actuarial position of the Dallas Police and Fire Pension System Supplemental Plan (the Plan) as of January 1, 2011.

***Actuarial Valuation***

The primary purpose of the valuation report is to determine the City's contribution rate, to describe the current financial condition of the Plan, and to analyze changes in the Plan's condition. In addition, the report provides information required by the City of Dallas in connection with Governmental Accounting Standards Board Statements Number 25 and Number 27.

***Basis for Funding***

The member contribution rates are established by statute. The City's contribution rate is intended to be sufficient to amortize the unfunded actuarial accrued liability over five years, including the normal cost. The contribution is also limited to be within \$100,000 of the previous year's contribution. However, in no event will the City's contribution be less than the amount necessary to satisfy GASB 27. For 2011, the contribution is \$1,543,717.

***Funding Progress***

As of January 1, 2011, the City's contribution rate needed in order to meet the funding goal is 174.20% of covered payroll. This amount is greater than the 138.24% employer rate calculated as of January 1, 2010. The current contribution rate of 174.20% of covered payroll covers the normal cost and the amortization of the Unfunded Actuarial Accrued Liability (UAAL).

### ***Benefit Provisions***

The actuarial valuation reflects the benefit and contribution provisions set forth in the System's statutes. The valuation is based on the same benefit provisions as the previous valuation except for the following.

1. Removing the 0.25% restriction on DROP interest rate changes
2. Requiring member contributions while in active DROP
3. Allowing a one-time opportunity for active DROP members to rescind their DROP election
4. Providing benefits for members hired after February 28, 2011 with the following provisions
  - a. 2% accrual rate for the first 20 years of service, 2.5% accrual rate for the next 5 years of service and 3% accrual rate for service after 25 years
  - b. Average computation pay based on 60 months of pay
  - c. Retirement eligibility at age 55 with 20 years of service
5. Disability benefits with the following provisions
  - a. Own occupation definition for first two years of disability
  - b. Any occupation definition after two years of disability
  - c. On-duty disability retirement benefit will be based on a minimum of 50% of average computation pay
6. Survivor benefits for members who die while on active service will be based on a minimum of 25% of average computation pay

The plan modifications had no effect on the results since no participants in the Supplemental Plan are impacted.

### ***Assumptions and Methods***

The actuarial assumptions and methods used in the valuation are presented in Schedule C. Due to the change in the DROP interest rate determination, the assumed rate of return on DROP balances was changed from 9.0% to 8.5%. Otherwise, the valuation is based on the same assumptions and methods adopted by the Board of Trustees as the previous valuation.

The assumptions used are individually reasonable and reasonable in the aggregate.

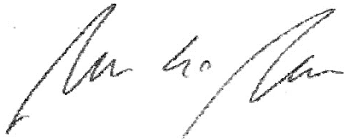
### ***Data***

Asset information and member data for retired, active, and inactive members was supplied as of January 1, 2011, by the Administrator. We have not subjected this data to any auditing procedures, but have examined the data for reasonableness and consistency with the prior year's data.

Mr. Richard Tettamant  
May 18, 2011  
Page 3

We are Enrolled Actuaries, Fellows of the Society of Actuaries, and Members of the American Academy of Actuaries. We meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. To the best of our knowledge, this report is complete and accurate and has been prepared in accordance with generally accepted actuarial principles and practice, and we are available to answer questions about it.

Very truly yours,



Richard A. Mackesey, FSA, EA, MAAA  
Principal, Consulting Actuary



R. Ryan Falls, FSA, EA, MAAA  
Director, Consulting Actuary

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Enclosures

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	<u>PAGE</u>
Section 1 - Summary of Principal Results .....	1
Section 2 - Comments on the Valuation .....	2
Section 3 - Actuarial Funding Requirements .....	4
Section 4 - Accounting Information .....	6
Section 5 - Summary of Asset Information .....	8
Schedule A - Membership Data .....	9
Schedule B - Summary of Benefits Provisions .....	10
Schedule C - Summary of Actuarial Methods and Assumptions .....	16

**Summary of Principal Results**

	January 1, 2011	January 1, 2010
<b>Membership</b>		
Active	39	40
Retired and terminated members and beneficiaries	113	112
<b>Compensation</b>		
Total	\$ 886,150	\$ 1,044,326
Average	\$ 22,722	\$ 26,108
<b>Assets</b>		
Market value	\$ 21,119,036	\$ 20,680,752
<b>Valuation Results</b>		
Unfunded actuarial accrued liability (UAAL)	\$ 13,189,869	\$ 12,768,518
City's normal cost contribution	\$ 145,714	\$ 178,325
Funding Policy contribution	\$ 1,543,717	\$ 1,443,717
<b>GASB No. 25</b>		
Actuarial accrued liability (AAL)	\$ 34,308,905	\$ 33,449,270
Assets	\$ 21,119,036	\$ 20,680,752
GASB ratio	61.6%	61.8%
Unfunded AAL	\$ 13,189,869	\$ 12,768,518

## Comments on the Valuation

### *Overview*

The current valuation indicates that a total contribution of \$1,543,717 should be contributed during 2011.

The contribution requirements are calculated to be sufficient to pay the City's portion of each year's normal cost and an amount calculated to amortize the UAAL.

### *GASB Statements*

Section 4 provides the information required for reporting under GASB No. 25.

### *Benefit Provisions*

Schedule B summarizes all the benefit provisions of the Plan. There are no significant benefits which were not taken into account in this valuation. The actuarial valuation reflects the benefit and contribution provisions set forth in the System's statutes. The valuation is based on the same benefit provisions as the previous valuation except for the following.

1. Removing the 0.25% restriction on DROP interest rate changes
2. Requiring member contributions while in active DROP
3. Allowing a one-time opportunity for active DROP members to rescind their DROP election
4. Providing benefits for members hired after February 28, 2011 with the following provisions
  - a. 2% accrual rate for the first 20 years of service, 2.5% accrual rate for the next 5 years of service and 3% accrual rate for service after 25 years
  - b. Average computation pay based on 60 months of pay
  - c. Retirement eligibility at age 55 with 20 years of service
5. Disability benefits with the following provisions
  - a. Own occupation definition for first two years of disability
  - b. Any occupation definition after two years of disability
  - c. On-duty disability retirement benefit will be based on a minimum of 50% of average computation pay
6. Survivor benefits for members who die while on active service will be based on a minimum of 25% of average computation pay

The plan modifications had no effect on the results since no participants in the Supplemental Plan are impacted.

***Actuarial Assumptions and Methods***

The actuarial assumptions and methods used in the valuation are presented in Schedule C. Due to the change in the DROP interest rate determination, the assumed rate of return on DROP balances was changed from 9.0% to 8.5%. Otherwise, the valuation is based on the same assumptions and methods adopted by the Board of Trustees as the previous valuation.

The assumptions used are individually reasonable and reasonable in the aggregate.

***GASB Statement No. 27***

Initially, under GASB Statement No. 27, employers were required to determine a pension expense based on a 40-year amortization of the UAAL for fiscal years beginning after June 15, 1996. After the 10-year transition period, the required amortization period is now 30 years. The amortization can assume payroll growth due to inflation, but no membership growth. If the actual contribution rate is less than the rate required by GASB No. 27, the excess must be expensed. This will result in the employer showing an accrued but unpaid liability for pension benefits on its financial statements.

A City Contribution rate of 102.25% will be required for the City to avoid showing an accrued pension liability on its financial statements for the fiscal year beginning in 2011, assuming no other changes are made. Under the current funding arrangement, the City would not be required to show an accrued but unpaid pension liability for the Supplemental Plan.

***Financial Data***

The financial data used in this report was supplied by the Administrator.

Section 5 reconciles the Plan's assets between 2010 and 2011. The estimated rate of return for 2010 was 4.52%.

***Membership Statistics***

Data on active members and on retired members was supplied by the Administrator. The active membership decreased from 40 members as of January 1, 2010, to 39 members as of January 1, 2011. The payroll decreased from January 1, 2010 to January 1, 2011 (\$1,044,326 for 2010 and \$886,150 for 2011). Schedule A shows a summary of the membership data.

**Actuarial Cost**

	<u>January 1, 2011</u>	<u>January 1, 2010</u>
1. Covered Payroll	\$ 886,150	\$ 1,044,326
2. Actuarial present value of future benefits	\$ 35,372,757	\$ 34,767,421
3. Actuarial present value of future normal costs	\$ 1,063,852	\$ 1,318,151
4. Actuarial accrued liability (2 - 3)	\$ 34,308,905	\$ 33,449,270
5. Actuarial value of assets	\$ 21,119,036	\$ 20,680,752
6. Unfunded actuarial accrued liability (UAAL) (4 - 5)	\$ 13,189,869	\$ 12,768,518
7. City's normal cost contribution	\$ 149,568	\$ 178,325
8. Funding Policy contribution	\$ 1,543,717	\$ 1,443,717
9. Total contribution as a percentage of covered payroll (8 ÷ 1)	174.20%	138.24%

### Analysis of Change in UAAL

1. UAAL as of January 1, 2010	\$12,768,518
2. Changes due to:	
a. Expected increase/(amortization)	\$ (232,750)
b. Actual contributions (greater)/less than expected	2,555
c. Plan amendment	(279,619)
d. Liability experience	118,605
e. Asset experience	<u>812,560</u>
f. Total changes	\$ 421,351
3. UAAL as of January 1, 2011	\$13,189,869

**Historical Trend Information**

(As required by GASB #25 - Amounts are in millions of dollars)

<u>Date</u>	<u>Actuarial Value of Assets</u>	<u>Actuarial Liability (AAL) Entry Age</u>	<u>Unfunded AAL (UAAL)</u>	<u>Funded Ratio</u>	<u>Covered Payroll</u>	<u>UAAL as a Percentage of Covered Payroll</u>
January 1, 2006	19.961	26.370	6.409	75.7%	0.928	690.6%
January 1, 2007	23.314	28.663	5.349	81.3%	0.866	617.7%
January 1, 2008	25.254	30.098	4.844	83.9%	0.938	516.4%
January 1, 2009	18.140	32.053	13.913	56.6%	1.043	1,333.9%
January 1, 2010	20.681	33.449	12.768	61.8%	1.044	1,223.0%
January 1, 2011	21.119	34.309	13.190	61.6%	0.886	1,488.7%

**GASB #25 Schedule of Employer Contributions  
 for Year Ending December 31, 2010**

<u>Annual Required Contribution</u>	<u>Percentage Contributed</u>
\$1,443,717	100%

**Summary of Accumulated Benefits  
(FASB ASC 960)**

**Accumulated Benefits at January 1, 2011**

Vested benefits of participants and beneficiaries currently receiving payments		\$ 27,394,489
Other vested benefits		7,102,847
Nonvested benefits		<u>435,582</u>
Total benefits		\$ 34,932,918

**ASC 960 Reconciliation**

<b>Accumulated benefits at January 1, 2010</b>		\$ 33,831,079
Benefits accumulated and actuarial gains/losses	\$ 560,087	
Interest	2,793,856	
Benefits paid	(1,964,422)	
Plan amendment	(287,682)	
Assumption changes	<u>0</u>	
Total change	1,101,839	
<b>Accumulated benefits at January 1, 2011</b>		\$ 34,932,918

### Reconciliation of Fund Assets

	<u>Year Ending December 31, 2010</u>
1. Value of fund at beginning of year	\$ 20,680,752
2. Contributions	
a. City	1,443,717
b. Member	<u>34,355</u>
c. Total	\$ 1,478,072
3. Benefit payments	(1,964,422)
4. Refunds	0
5. Gross earnings	968,492
6. Expenses	(43,858)
7. Value of assets at end of year	21,119,036
8. Estimated rate of return	4.52%

### Membership Data

	<u>January 1, 2011</u>	<u>January 1, 2010</u>
1. Active members (excluding DROP)		
a. Number	11	13
b. Compensation	\$ 372,354	\$ 433,017
c. Average compensation	\$ 33,850	\$ 33,309
d. Average age	45.73	46.46
e. Average service (years)	18.91	19.31
2. Active members (DROP only)		
a. Number	28	27
b. Compensation	\$ 513,796	\$ 611,309
c. Average Compensation	\$ 18,350	\$ 22,641
d. Average age	54.64	54.26
e. Average total service	30.93	30.07
f. DROP account balance	\$ 1,934,159	\$ 1,785,839
3. Inactive members		
a. Number	113	112
b. Total annual benefit	\$ 1,804,837	\$ 1,699,279
c. Average annual benefit	\$ 15,972	\$ 15,172

**Summary of Benefit Provisions  
As of January 1, 2011  
For Actuarial Calculations**

The Supplemental Plan was adopted and effective on March 1, 1973. Contributing Group B members who hold a permanent rank higher than the highest Civil Service rank held as a result of competitive examination are allowed to join the Supplemental Plan within 60 days of attaining such higher rank, or within 60 days of the effective date, if later.

**Definitions**

**Computation Pay:** The difference between the monthly base pay for the rank currently held and the monthly rate of pay due for the highest Civil Service rank held as a result of competitive examination.

**Average Computation Pay:** Computation Pay averaged over 36 months.

**Pension Service:** The period, in years, months, and days, during which the Member made contributions under the terms of the Combined Plan or any Pension Plan within the Pension Plan.

**Qualified Surviving Spouse:** The Member's legal spouse at the time of death providing the marriage occurred prior to the Member's termination of employment (entering DROP is not considered termination of employment).

**Pension Plan:** The Dallas Police and Fire Pension System Supplemental Plan.

Qualified Surviving Children: All surviving unmarried children under 19 years of age and children that become handicapped before age 23 provided they were born or adopted before the Member terminated his employment.

**Contribution Rates**

The City's contributions are made in accordance with actuarial requirements.

The contribution rate for Members not participating in DROP is currently 8.50%. The contribution rate for Members participating in DROP will be 3.0% for pay periods ending on or after October 1, 2011, 6.0% for pay periods ending on or after October 1, 2012, and 8.5% for pay periods ending on or after October 1, 2013.

**Service Retirement Benefits**

Annual Normal Retirement Pension

Condition for Retirement: Attainment of age 50 and five years of Pension Service.

Amount for Pension: 3% of Average Computation Pay for each year of Pension Service to a maximum of 32 such years.

Early Retirement Pension

Condition for Retirement:

- a. Attainment of age 45 and five years of Pension Service.

Amount of Pension: 3% of Average Computation Pay for each year of Pension Service reduced 2/3 of 1% for each month by which retirement precedes age 50.

b. 20 years of Pension Service

Amount of Pension: 20 & out multiplier of Average Compensation Pay for each year of Pension Service.

<u>Age</u>	<u>20 &amp; Out Multiplier</u>
50 & above	3.00%
49	3.00% reduced by 2/3 of 1% for each month prior to age 50
48	2.75%
47	2.50
46	2.25
45 & below	2.00

Special Rule for Members of former Old Plan or Plan A

Group B Members who formerly were Members of either the former Old Plan or Plan A may elect to receive Group A benefits and receive a reimbursement of the additional contributions paid under Group B provisions in excess of the contributions that would have been made under Group A.

*Disability Retirement Benefits*

Service-Related Disability

Condition for Retirement: Disability preventing the Member from performing his or her duties with his or her department and lasting for a period of not less than 90 days.

Amount of Pension: 60% plus 3% for each year of Pension Service (maximum 32 years) over 20, of Average Computation Pay.

#### Non-Service Related Disability

Condition for Retirement: Disability preventing the Member from performing his or her duties with his or her department and lasting for a period of not less than 90 days.

Amount of Pension: 3% of Average Computation Pay for each year of Pension Service (maximum 32 years).

#### Survivor Benefits

Survivor Benefits for Qualified Surviving Spouse: 1.50% of the Member's Average Computation Pay for each year of Pension Service with a minimum of 20 such years and a maximum of 32 such years.

Survivor Benefits when no Qualified Surviving Spouse: Death in Active Service: 50% of Service Retirement Pension calculated with a minimum of 20 years of Pension Service. The benefit will be paid as a lump sum equal to the value of the lesser of a 10-year benefit or the remainder of the 10-year period if Qualified Surviving Children receive benefit.

Survivor Benefits After Retirement: The Qualified Surviving Spouse shall receive 50% of any benefits paid to the Member. The percentage is increased if the Qualified Surviving Spouse has attained age 55, there are no Qualified Surviving Children who are eligible for death benefits and the Member retired after age 55 with 20 years of Pension Service or if the Member's age plus Pension Service at retirement was at least 78.

Survivor Benefits After Retirement or Termination for a Non-Qualifying Surviving Spouse: The Surviving Spouse shall receive 50% of any benefits paid to the Member. However, the Member's benefit will be reduced for this coverage.

Survivor Benefits for Qualified Surviving Children: An amount equal to the amount paid to a Qualified Surviving Spouse is divided among the Qualified Surviving Children and continues to be paid as long as one or more of the children continue to qualify.

#### **Post-Retirement Adjustments**

Annually, on the first day of October, benefits in pay status will be increased by an amount equal to 4% of the original pension amount. New Members hired after December 31, 2006 will not be eligible for an automatic increase.

#### **Benefit Supplement**

If a Member retires with 20 years of Pension Service or if a Member is receiving a service related disability the Member or the Member's Qualified Surviving Spouse is entitled to receive 3% of the monthly benefit payable to the Member when the Member or the Qualified Surviving Spouse attains age 55. This supplement is also available for both the Member or the Member's Non-Qualifying Surviving Spouse for a member who has elected a reduced benefit to obtain coverage for a Non-Qualifying Surviving Spouse.

#### **Deferred Retirement Option Plan**

As of January 1, 1993, at normal retirement age, a Member may elect to enter the Deferred Retirement Option Plan (DROP). As of January 1, 1999, a member may also elect to enter DROP after 20 years of Pension Service. Retirement benefits will be calculated as if the Member retired on that date. Employee contributions made under the Combined Pension Plan will cease, as will accruals under the Combined Pension Plan. Each month, the retirement

benefit will be accumulated in an account earning interest based on a ten-year average of the System's actual market return. Upon termination of employment, the Member will have the balance in account in addition to the monthly benefit payable as though the Member retired at the date the Member entered DROP.

**Summary of Actuarial Methods and Assumptions  
 (Effective as of January 1, 2011)**

**Investment Return:** 8.50% per annum, compounded annually, net all expenses including administrative expenses. This rate reflects an underlying inflation rate of 4.00% and a real rate of return of 4.50%.

DROP balances are assumed to earn 8.5% per annum.

**Separations Before Normal Retirement:** Representative values of the assumed annual rates of withdrawal, death, and disability are as follows:

Age	Annual Rate per 1,000 Members							
	<u>Withdrawal</u>		<u>Mortality - Disableds</u>		<u>Mortality - Other</u>		<u>Disability</u>	
	Police	Fire	Male	Female	Male	Female	Police	Fire
20	47.0	23.0	48.30	26.30	.48	.28	.35	.70
25	47.0	23.0	48.30	26.30	.62	.29	.37	.75
30	35.0	18.0	36.20	23.70	.78	.33	.42	.84
35	25.0	18.0	27.80	21.40	.85	.45	.48	.96
40	25.0	18.0	28.20	20.90	1.00	.65	.57	1.15
45	25.0	18.0	32.20	22.40	1.46	.92	.79	1.58
50	NA	NA	38.30	25.70	2.33	1.31	NA	NA
60	NA	NA	60.30	33.10	7.09	3.86	NA	NA
70	NA	NA	73.90	41.10	21.73	12.71	NA	NA
75	NA	NA	84.20	49.20	34.05	20.38	NA	NA

**Salary Increases:** Representative values of the assumed annual rates of future salary increase attributable to seniority and promotion are as follows:

Years of Service	Annual Rate of Salary Increase
0	9.64%
5	9.19
10	7.72
15	5.82
20	4.56
25	4.08
30	4.00

Total payroll is assumed to increase 4.00% per year. New hires are assumed to replace terminations.

Overtime and other non-computation pay are assumed to be 11% of base pay. The City contribution rate is determined as a percentage of total pay. This assumption is based on the revised compensation package adopted by the city council in 2007.

**Retirement Rates:** To determine the value of future normal cost, the percentage of population assumed to retire at various ages is as follows:

Age	Rate	Age	Rate	Age	Rate
38	2%	48	2%	58	20%
39	2	49	2	59	20
40	2	50	4	60	20
41	2	51	3	61	20
42	2	52	3	62	20
43	2	53	3	63	20
44	2	54	3	64	20
45	2	55	25	65	100
46	2	56	20		
47	2	57	20		

Rates are applied when a member is eligible to retire. That is, age 50 with five years or 20 years.

**Postretirement Mortality:** According to the 1994 Group Annuity Mortality Table for males and females, set back one year for males and females.

**DROP Election:** Members are assumed to elect DROP at age 50 with five years. Any active members who satisfy this criteria and have not entered DROP are assumed to never join DROP.

**Spouses:** 80% of active members are assumed to be married with the male three years older than the female. The age of the youngest child is assumed to be one year.

**Assumed Postretirement Cost of Living:** Annually, on the first day of October, benefits in pay status will be increased by an amount equal to 4% of the original pension amount for eligible Members. New Members hired after December 31, 2006 will not be eligible for an automatic increase.

**Future Expenses:** All expenses, investment and administration, are paid from the Fund. The 8.50% assumed rate of return is net of these expenses.

**Valuation Method:** The method used to determine Normal Cost and Accrued Actuarial Liability is the Entry Age Normal Cost Method. Under the Entry Age Normal Cost Method, an annual Normal Cost is determined for each covered active Member which is the contribution required to provide all the projected pension benefits assuming this contribution is payable over a period ending on the date of retirement (separation from active service) and expressed as a level percentage of compensation. The Actuarial Accrued Liability is determined as the excess of the total present value of all pension benefits over the total present value of future Normal Costs. The Unfunded Actuarial Accrued Liability as of the valuation date is determined as the excess of the Actuarial Accrued Liability over the assets of the Fund.

The Normal Cost and Accrued Actuarial Liability are derived by making certain assumptions as to the rates of interest, mortality, turnover, etc., which are assumed to reflect experience for many years into the future. Since actual experience will differ from the assumptions, the costs determined must be regarded as estimates of the true costs of the Plan. The effects of any actuarial gains or losses are immediately reflected in the Unfunded Actuarial Accrued Liability and the Normal Cost.

*Actuarial Value of Assets:* The actuarial value of assets is the market value of assets.