GRS Gabriel Roeder Smith & Company
Consultants & Actuaries

CITY OF DEARBORN CHAPTER 23 RETIREMENT SYSTEM

44TH ANNUAL ACTUARIAL VALUATION

JUNE 30, 2010

GRS
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February 16, 2011

Board of Trustees
City of Dearborn Chapter 23 Retirement System
Dearborn, Michigan

Re: City of Dearborn Chapter 23 Retirement System Actuarial Valuation as of June 30, 2010

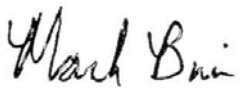
Dear Board Members:

The results of the 44th Annual Actuarial Valuation of the City of Dearborn Chapter 23 Retirement System are presented in this report. The purpose of the valuation was to measure the System's funding progress and to determine the employer contribution for the next fiscal year.

The valuation was based upon information, furnished by the City, concerning Retirement System benefits, financial transactions, and active members, terminated members, retirees and beneficiaries. Data was checked for internal and year-to-year consistency, but was not otherwise audited.

To the best of our knowledge, this report is complete and accurate and the valuation was conducted in accordance with standards of practice prescribed by the Actuarial Standards Board and in compliance with the applicable state statutes. All of the undersigned are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. It is our opinion that the actuarial assumptions used for the valuation produce results which are reasonable.

Respectfully submitted,



Mark Buis, FSA, MAAA Curtis Powell, EA, MAAA

MB/CP:mrb

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EXECUTIVE SUMMARY/BOARD SUMMARY

1. Required Employer Contributions to Support Retirement Benefits

The computed employer contribution for the fiscal year beginning July 1, 2011 is shown below.

Contribution	Amount
Fire	22.96% of payroll Plus $1,714,725
Police	23.19% of payroll Plus $1,457,670

2. Contribution Rate Comparison

The chart below compares the results of this valuation of the Retirement System with the results of the prior year's valuation:

Valuation Date	6/30/2009	6/30/2010
Fire	22.43% of payroll Plus $1,452,181	22.96% of payroll Plus $1,714,725
Police	23.25% of payroll Plus $906,363	23.19% of payroll Plus $1,457,670

3. Reasons for Change

There are three general reasons why contribution rates change from one valuation to the next. The first is a change in the benefits or eligibility conditions of the plan. The second is a change in the valuation assumptions used to predict future occurrences. The third is the difference during the year between the plan's actual experience and what the assumptions predicted.

EXECUTIVE SUMMARY/BOARD SUMMARY

There was no benefit changes reported to the actuary for the year ended June 30, 2010 for the Police members. For Fire members, the employer contribution rate was changed from 6% to 5%. There were no changes in actuarial assumptions for the year ended June 30, 2010. Experience for the year ended June 30, 2010 was overall less favorable than expected and is described in detail in the following section.

4. Plan Experience

As indicated in the prior section, System experience for the year ended June 30, 2010 was overall less favorable than expected. During the year ended June 30, 2010, the return on the market value of assets was higher than expected. However, the market value smoothing techniques used in this valuation of the System first recognized some past investment gains and losses this valuation. The resulting actuarial asset yield for the year ended June 30, 2010 was 3.6% for the both the Police and Fire Divisions. Detailed information related to System experience is shown on page B-2 for the respective Divisions.

5. Looking Ahead

Due to the asset smoothing method used in the valuation, only a portion of the current year asset loss was recognized this year. If the Market Value of Assets were used in this valuation (instead of the smoothed value), the estimated employer contribution would have been approximately $6.1 million for Police (instead of $4.2 million) and approximately $4.7 million for Fire (instead of $3.6 million) and the funded status would have been about 79.4% for Police (instead of 91.3%) and about 72.1% for Fire (instead of 82.7%). The June 30, 2011 valuation will likely show an increase in the employer contribution amount, as the remaining unrecognized losses work their way through the asset smoothing method.

6. Recommendation

Useful and reliable valuation results are dependent on an underlying set of appropriate actuarial assumptions. From time to time the assumptions should be reevaluated in the light of emerging experience – the plan's own and the experience of similar groups – and expected future experience. With a plan the size of the City of Dearborn Chapter 23 Retirement System, credible experience is limited and can vary significantly from year to year. Over an extended period, however, some trends can be detected. We believe that it is timely for an analysis to be made of the Retirement System's experience during the last 5 years. **Additionally, the GFOA recommends that a study be performed at least once every 5 years.** Such a study would:

- Analyze retirement probabilities, termination probabilities, probabilities of disablement, mortality rates and pay changes;
- look at economic and demographic experience separately;
- suggest appropriate changes in economic and demographic assumptions and show their effect on computed contribution rates; and
- review the amortization policy.

It is recommended that an experience study be conducted prior to the next regular annual actuarial valuation.

SECTION A

INTRODUCTION - FIRE

FUNDING OBJECTIVE

The funding objective of the Retirement System is to establish and receive contributions which will accumulate assets during each member's working years which, together with regular interest, will be sufficient to pay promised benefits after retirement.

CONTRIBUTION RATES

The Retirement System is supported by member contributions, City contributions and investment income from Retirement System assets.

Contributions which satisfy the funding objective are determined by the annual actuarial valuation and are sufficient to:

(1) Cover the actuarial present value of benefits allocated to the current year by the actuarial cost method described in Section E (the normal cost); and

(2) Finance over a period of future years the actuarial present value of benefits not covered by valuation assets and anticipated future normal costs (the unfunded actuarial accrued liability).

Computed contribution rates for the fiscal year beginning July 1, 2011 are shown on page A-2.

CONTRIBUTION REQUIREMENTS - FIRE

Development of Employer Contributions for the Indicated Valuation Date

Computed Employer Contributions for	June 30, 2009	June 30, 2010
Current Cost (Normal Cost):		
Age and Service Benefits	24.24 %	24.24 %
Disability Benefits	0.39 %	0.39 %
Death-in-Service Benefits	0.64 %	0.64 %
Termination Benefits	3.16 %	2.69 %
Total Normal Cost*	28.43 %	27.96 %
Less: Member Contributions	6.00 %	5.00 %
Employer Normal Cost	22.43 %	22.96 %
Accrued Liabilities Amortization	$1,452,181	$1,714,725

* *Effective 6/30/99 the Board of Trustees set a minimum employer contribution rate of 10% of total normal cost. The current cost when reduced by the accrued liability credit (if any) should not fall short of the minimum contribution.*

The employer contributions expressed as dollars are to be determined by multiplying the above normal cost percents by the amount of covered payroll at each pay date for the coming fiscal year and added to the Accrued Liability Amortization amount. Such covered payroll includes not only base pay but also all other types of pay usable in computing the member's final average pay.

For example, if the payroll in Fiscal Year 2012 for Fire was $8,409,561, the contribution would be developed as follows:

Normal Cost **	$ 1,930,835
Accrued Liability	1,714,725
Total	$ 3,645,560
Contribution as a % of Estimated Payroll	43.4%

***22.96% x $8,409,561 = $1,930,835*

SECTION B

FUNDING RESULTS

PRESENT VALUE OF FUTURE BENEFITS AND ACCRUED LIABILITY - FIRE

Determination of Unfunded Accrued Liability

	June 30, 2009	June 30, 2010
A. Accrued Liability		
1. For retirees and beneficiaries	$ 67,207,488	$ 68,397,876
2. For vested terminated members	189,010	203,015
3. For present active members		
a. Value of expected future benefit payments	66,623,835	65,697,144
b. Value of future normal costs	30,989,065	27,396,003
c. Active member accrued liability: (a) - (b)	35,634,770	38,301,141
4. Total accrued liability	103,031,268	106,902,032
B. Present Assets (Funding Value)	87,054,638	88,445,397
C. Unfunded Accrued Liability: (A.4) - (B)	15,976,630	18,456,635
D. Funding Ratio: (B) / (A.4)	84.5%	82.7%
E. Funding Ratio: Market Value Basis	68.0%	72.1%

DERIVATION OF EXPERIENCE GAIN/(LOSS) - FIRE

Actual experience will never (except by coincidence) exactly match assumed experience. Gains and losses often cancel each other over a period of years, but sizable year-to-year fluctuations are common. Detail on the derivation of the experience gain (loss) is shown below, along with a year-by-year comparative schedule.

		June 30,	
		2009	**2010**
(1)	UAAL* at start of year	$12,537,660	$15,976,630
(2)	Normal cost from last valuation	1,836,452	1,898,763
(3)	Actual contributions	2,769,743	3,043,586
(4)	Interest accrual	875,149	1,116,806
(5)	Expected UAAL before changes: (1) + (2) - (3) + (4)	12,479,518	15,948,613
(6)	Change from benefit increases	0	(162,423)
(7)	Change in actuarial method	0	0
(8)	Expected UAAL after changes: (5) + (6) + (7)	12,479,518	15,786,190
(9)	Actual UAAL at end of year	15,976,630	18,456,635
(10)	Gain (loss): (8) - (9)	$ (3,497,112)	$ (2,670,445)

* *Unfunded actuarial accrued liabilities*

Valuation Date June 30	Experience Gain (Loss) As % of Beginning Accrued Liability
2008	1.0 %
2009	(3.5)%
2010	**(2.6)%**

SECTION C

FUND ASSETS

DEVELOPMENT OF FUNDING VALUE OF ASSETS (5-YEAR SMOOTHING) - FIRE

Year Ended June 30:	2010	2011	2012	2013	2014
A. Funding Value Beginning of Year	$87,054,638				
B. Market Value End of Year	77,115,112				
C. Market Value Beginning of Year	70,059,057				
D. Non Investment Net Cash Flow	(1,706,161)				
E. Investment Return					
E1. Total: B-C-D	8,762,216				
E2. Amount for Immediate Recognition (7.25%)	6,249,613	----------Scheduled----------			
E3. Amount for Phased in Recognition: E1-E2	2,512,603				
F. Phased in Recognition of Investment Return					
F1. Current Year: 0.20 x E3	502,521				
F2. First Prior Year	(3,776,938)	$ 502,521			
F3. Second Prior Year	(1,698,991)	(3,776,938)	$ 502,521		
F4. Third Prior Year	1,388,426	(1,698,991)	(3,776,938)	$ 502,521	
F5. Fourth Prior Year	432,289	1,388,426	(1,698,990)	(3,776,936)	$ 502,519
F6. Total Recognized Investment Gain	(3,152,693)	(3,584,982)	(4,973,407)	(3,274,415)	502,519
G. Funding Value End of Year					
G1. Preliminary Funding Value End of Year: (A+D+E2+F6)	88,445,397				
G2. Upper Corridor Limit: 120% x B	92,538,134				
G3. Lower Corridor Limit: 80% x B	61,692,090				
G4. Funding Value End of Year	88,445,397				
H. Difference Between Market Value & Funding Value	(11,330,285)	(7,745,303)	(2,771,896)	502,519	0
I. Market Rate of Return	12.66%				
J. Ratio of Funding Value to Market Value	114.69%				

The funding value of assets recognizes assumed investment return (line E2) fully each year. Differences between actual and assumed investment return (line E3) are phased in over a closed 5-year period. During periods when investment performance exceeds the assumed rate, funding value of assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, funding value of assets will tend to be greater than market value. The funding value of assets is **unbiased** with respect to market value. At any time it may be either greater or less than market value. If actual and assumed rates of investment return are exactly equal for 4 consecutive years, the funding value will become equal to market value.

SECTION D

CENSUS DATA

JUNE 30, 2010 VALUATION DATA SUMMARY - FIRE

For purposes of the June 30, 2010 valuation, information on 224 covered persons was furnished. These people may be briefly described as follows.

	No.	Averages			
				Annual Pay or Retirement Allowance	
		Age	Service	2010	2009
Actives	117	39.5	12.9	$71,877	$69,961
Retirees & Beneficiaries	106	62.9		47,266	46,503
Inactive Vested	1	44.0		22,614	22,614
	224				

Active member covered pays used in the valuation are developed in the following manner:

(1) Each member's covered pay during the past fiscal year is determined by the Controller's staff and reported to the actuary. Covered pay is the total, paid in the year ended with the June 30 valuation date, of (a) base pay plus (b) a variety of specified supplemental payments such as vacation pay, sick pay, holiday pay and so forth.

(2) The covered pay (1) is converted by the actuary to the equivalent annual rate as of the June 30 valuation date.

(3) If there is a pay increase amount that becomes known during the July 1 to October 1 period (when actuarial valuation data is being assembled), covered pay (2) is increased to reflect that known increase. Similarly, if pay negotiations are taking place at October 1, which will later change pays retroactive to June 30 or earlier, covered pay (2) is increased by the lower of the pay increase proposals in negotiation.

More detailed information regarding the covered persons is presented on the following pages.

ACTIVE MEMBERS - FIRE

Members in Active Service as of June 30, 2010
by Years of Service

Age	Years of Service							Total Count	Total Pay	Average Pay
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 & up			
25 - 29	11							11	$ 619,400	$ 56,309
30 - 34	6	10	1					17	1,095,956	64,468
35 - 39	5	16	12	3				36	2,467,804	68,550
40 - 44	1	2	9	8	2			22	1,654,141	75,188
45 - 49			4	2	9	1		16	1,322,163	82,635
50 - 54				3	3	6		12	997,251	83,104
55 - 59					2		1	3	252,846	84,282
Total	23	28	26	16	16	7	1	117	$ 8,409,561	$ 71,877

RETIRANTS AND BENEFICIARIES - FIRE

Attained Ages	Male		Female		Total	
	No.	Annual Allowance	No.	Annual Allowance	No.	Annual Allowance
Less than 45	1	$ 69,324			1	$ 69,324
45	1	42,324			1	42,324
47	1	52,920			1	52,920
49	2	124,512			2	124,512
50	2	128,412			2	128,412
52	2	127,656			2	127,656
53	1	61,680			1	61,680
54	3	148,212			3	148,212
55	4	258,516			4	258,516
56	2	111,180	2	$ 17,556	4	128,736
57	3	184,068	2	19,884	5	203,952
58	2	120,828	1	6,972	3	127,800
59	6	382,416			6	382,416
60	6	342,372			6	342,372
61	6	322,236			6	322,236
62	4	213,996			4	213,996
63	5	271,728	2	85,404	7	357,132
64	4	192,672			4	192,672
65	2	98,592	1	28,248	3	126,840
66	2	90,408			2	90,408
67	6	258,624	2	24,372	8	282,996
68	9	424,908	1	21,420	10	446,328
69	5	210,360			5	210,360
70	6	261,804			6	261,804
71	5	134,580	1	45,984	6	180,564
72	1	20,640			1	20,640
73	1	28,668			1	28,668
74	1	30,516			1	30,516
78	1	46,188			1	46,188
Totals	**94**	**$ 4,760,340**	**12**	**$ 249,840**	**106**	**$ 5,010,180**

TERMINATED VESTED MEMBERS - FIRE

Attained Ages	No.	Annual Allowance
43	1	$22,614
Totals	**1**	**$22,614**

SECTION E

METHODS AND ASSUMPTIONS

SUMMARY OF ASSUMPTIONS USED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION - FIRE (ASSUMPTIONS ADOPTED BY BOARD OF TRUSTEES AFTER CONSULTING WITH ACTUARY)

The assumptions were revised for the June 30, 2005 actuarial valuation, unless a different date is indicated for a particular assumption. It is anticipated that non-economic assumptions will be reviewed periodically after sufficient data has accumulated. The last review covered experience during the period 7/1/1999 to 6/30/2004. The next experience study will be done for the period 7/1/2005 to 6/30/2009.

ECONOMIC ASSUMPTIONS

The investment return rate assumed in the valuations was 7.25% per year, compounded annually (net after administrative expenses).

The **Wage Inflation Rate** assumed in this valuation was 3.75% per year. The Wage Inflation Rate is defined to be the portion of total pay increases for an individual that are due to macro economic forces including productivity, price inflation, and labor market conditions. The wage inflation rate does not include pay changes rated to individual merit and seniority effects.

No specific **Price Inflation** assumption is required to perform this valuation, since there are no benefits that are linked to price increases. However, a price inflation assumption on the order of 2.5% to 3.5% would be consistent with other economic assumptions. It is assumed that price inflation will be at least sufficient to cause the maximum COLA to be paid.

The assumed real rate of return over wage inflation is defined to be the portion of total investment return that is more than the assumed total wage growth rate. Considering other economic assumptions, the 7.25% investment return rate translates to an assumed real rate of return over wage inflation of 3.50%. The assumed real rate of return over price inflation would be higher – on the order of 3.75% to 4.75%, considering both an inflation assumption and an average expense provision.

(Continued on Next Page)

SUMMARY OF ASSUMPTIONS USED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION - FIRE (CONTINUED)

Pay increase assumptions for individual active members are shown for sample ages on page E-5. Part of the assumption for each age is for merit and/or seniority increase, and the other 3.75% recognizes wage inflation, including price inflation, productivity increases, and other macro economic forces.

NON-ECONOMIC ASSUMPTIONS

The mortality table used to measure healthy retired life mortality was the 1994 Group Annuity Mortality (GAM) tables (multiplied by 110%) for men and the 1994 Group Annuity Mortality (GAM) tables (multiplied by 100%) for women. Related values are shown on Page E-4. For disabled retirees, these tables were set forward 10 years to reflect impaired mortality.

The probabilities of age/service retirement for members eligible to retire are shown on Page E-4.

The probabilities of separation from service (including ***death-in-service*** and ***disability***) are shown for sample ages on page E-5.

The interest rate used in determining refunds of accumulated contributions, paid to members who terminate prior to retirement, was 0% per annum. ***The actual rate of earnings and losses is credited for defined contribution purposes***.

The actuarial cost method of valuation used in determining all benefit liabilities and normal cost was the entry age normal actuarial cost method. Differences between assumed experience and actual experience ("actuarial gains and losses") become part of actuarial accrued liabilities.

Unfunded actuarial accrued liabilities are amortized over periods of future years to produce contribution amounts (principal & interest) which are level dollar contributions.

(Concluded on next page)

SUMMARY OF ASSUMPTIONS USED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION - FIRE (CONCLUDED)

The unfunded actuarial accrued liability (UAAL) was determined using the funding value of assets and actuarial accrued liability calculated as of the valuation. The UAAL amortization payment (one component of the contribution requirement), is the level dollar amount required to fully amortize the UAAL over a 20-year period beginning on the valuation date. This UAAL payment does not reflect any payments expected to be made between the valuation date and the date contributions determined by this report are scheduled to begin.

Employer contribution dollars were assumed to be ***paid in equal installments throughout*** the employer fiscal year.

Present assets (cash and investments) are valued on a market-related basis effective June 30, 1994. At each year end (June 30), the funding asset value is moved toward market value, by immediate recognition of assumed earnings and a five year phase-in of the difference between actual and assumed earnings. Effective June 30, 2003, the funding value must be within a range of 80% - 120% of the market value. However, as adopted by the Board, the 20% corridor did not apply for the June 30, 2009 valuation.

The data about persons now covered and about present assets was furnished by the System's administrative staff. Although examined for general reasonableness, the data was not audited by the Actuary.

The actuarial valuation computations were made by or under the supervision of a Member of the American Academy of Actuaries (MAAA).

SUMMARY OF ASSUMPTIONS USED - FIRE
JUNE 30, 2010

Single Life Retirement Values

Sample Attained Ages	Present Value of $1 Monthly Level For Life		Present Value of $1 Monthly the First Year Increasing 2% Yearly		Future Life Expectancy (years)	
	Men	Women	Men	Women	Men	Women
			(Increases delayed 2 years)			
45	$150.01	$156.35	$183.73	$194.79	34.46	39.68
50	142.83	151.03	171.95	185.26	29.80	34.89
55	133.72	143.96	158.00	173.56	25.29	30.17
60	122.60	134.87	142.02	159.56	21.01	25.59
			(Increases immediate)			
65	109.88	124.03	126.97	146.45	17.08	21.28
70	96.25	111.62	108.90	128.99	13.60	17.30
75	81.52	96.94	90.32	109.54	10.51	13.60
80	66.26	80.88	71.95	89.39	7.85	10.31
Ref:	261 x 1.10	262 x 1.00	261 x 1.10	262 x 1.00		

Probabilities of Retirement for Members Eligible to Retire

Retirement Ages	Percent of Eligible Active Members Retiring Within Next Year
45-51	10%
52	10%
53	10%
54	15%
55	25%
56	25%
57	20%
58	20%
59	25%
60	50%
61	50%
62	50%
63	50%
64	50%
65	100%
Ref:	1024

SUMMARY OF ASSUMPTIONS USED - FIRE
JUNE 30, 2010

Rates of Separation from Active Employment before Normal Retirement

Sample Ages	% of Active Members Separating Within Next Year						
	Death		Disability				
			Duty		Non-Duty		
	Male	Female	Male	Female	Male	Female	Other
25	0.05%	0.02%	0.02%	0.02%	0.01%	0.01%	0.88%
30	0.06%	0.02%	0.02%	0.02%	0.01%	0.01%	0.72%
35	0.06%	0.03%	0.02%	0.02%	0.01%	0.01%	0.37%
40	0.08%	0.05%	0.04%	0.07%	0.01%	0.02%	0.15%
45	0.11%	0.07%	0.05%	0.08%	0.02%	0.03%	0.12%
50	0.18%	0.10%	0.10%	0.11%	0.03%	0.04%	0.12%
55	0.31%	0.16%	0.18%	0.15%	0.06%	0.05%	0.12%
Ref	261 x 0.70	262 x 0.70	9 x .20	10 x .20	9 x 0.07	10 x 0.07	54 x 0.25

Pay Increase Assumptions for Individual Members

Sample Ages	Percent Increase in Pay During Next Year		
	Base Portion	Merit & Seniority	Total
25	3.75%	3.50%	7.25%
30	3.75%	2.90%	6.65%
35	3.75%	2.20%	5.95%
40	3.75%	1.70%	5.45%
45	3.75%	1.20%	4.95%
50	3.75%	0.70%	4.45%
55	3.75%	0.50%	4.25%
Ref		223	

SUMMARY OF ASSUMPTIONS USED - FIRE
JUNE 30, 2010
MISCELLANEOUS AND TECHNICAL ASSUMPTIONS

Marriage Assumption:	80% of participants are assumed to be married for purposes of death-in-service benefits. Male spouses are assumed to be three years older than female spouses for active member valuation purposes.
Pay Increase Timing:	Reported pays were adjusted by 3% to account for an increase scheduled to take effect on July 1, 2010. Future pay increases are thereafter assumed to occur at the end of the fiscal year. This means that the reported pay with the 3% adjustment is assumed to be the pay that will be paid during the fiscal year following the valuation date.
Decrement Timing:	Decrements of all types are assumed to occur mid-year.
Eligibility Testing:	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date of the valuation.
Decrement Relativity:	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
Decrement Operation:	Disability and turnover decrements do not operate during retirement eligibility.
Service Credit Accruals:	It is assumed that members accrue one year of service credit per year.
Miscellaneous Loading Factors:	The normal cost and active accrued liabilities for all decrements were increased by 1.00% to account for the additional cost resulting from participants electing to receive benefits in a form other than the normal form. The normal cost and active accrued liabilities for all decrements were increased by 4.01% to account for the inclusion of unused sick leave, vacation, etc., in the calculation of Final Average Salary.
Option Factors:	Option factors are based upon 7.25% interest and the 1994 Group Annuity Mortality Table (multiplied by 110% for males) with a 95% Unisex Blend, and a 2% compound COLA with a two year delay.
Incidence of Contributions:	Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.
Normal Form of Benefit:	A 50% automatic joint and survivor payment is the assumed normal form of benefit.

SUMMARY OF ASSUMPTIONS USED - FIRE
JUNE 30, 2010
MISCELLANEOUS AND TECHNICAL ASSUMPTIONS

Benefit Service:	Exact fractional service is used to determine the amount of benefit payable.
Pay Annualization:	If reported pay for members was less than the base pay rate, the base pay rate was used.

SECTION F

PLAN PROVISIONS

SUMMARY OF PROVISIONS (2010) EVALUATED AND/OR CONSIDERED - FIRE

1. ***Voluntary Retirement***. Fire members may retire after either: completing 25 years of service regardless of age, or attaining age 55 and completing 10 years of service.

2. ***Compulsory Retirement***. A member must retire upon attaining age 60, except that under certain conditions a member may be extended in service to age 65 (1986 amendments to the A.D.E.A. provide that this provision may no longer be operative).

3. ***Final Average Salary***. The average of a member's annual pays during the highest 36 consecutive months of service contained within the last 10 years of service. The final average salary computation includes overtime taken in cash, accumulated overtime limited to 160 hours, and up to 160 hours of accumulated unused vacation days.

4. ***Age and Service Allowance***. Final average salary times the sum of 2.8% times the first 26 years of service plus 2.2% times the 27th year of service plus 1.0% times the next 3 years of service plus 0% times additional years of service.

5. ***Deferred Allowance***. A member with 10 or more years of service who leaves City employment before retirement is entitled to receive an allowance computed in the same manner as an age and service allowance, payments beginning upon the member's application at age 55 or when the member would have attained 25 years of service, whichever is earlier.

6. ***Duty Disability Allowance***. A member who becomes totally and permanently disabled from duty-connected causes receives, subject to offsetting for worker's compensation, a duty disability allowance computed in nearly the same manner as an age and service allowance. The member will receive as a minimum, a benefit equal to 70% of his final average salary.

7. ***Non-Duty Disability Allowance***. A member with 10 or more years of service who becomes totally and permanently disabled from other than duty-connected causes receives a non-duty disability allowance computed in nearly the same manner as an age and service allowance.

SUMMARY OF PROVISIONS (2010) EVALUATED AND/OR CONSIDERED – FIRE (CONTINUED)

8. ***Death-in-Service Benefits***. Upon the death of a member, the surviving dependents receive, subject to offsetting for worker's compensation, the following benefits:

   (a) The surviving spouse receives an allowance equal to the B-100 allowance (joint and 100% survivor actuarial equivalent benefit) which would have been payable had the deceased member retired at the time and elected Option B-100. The minimum allowance payable to the surviving spouse is 20% of the member's final average salary.

   (b) Dependent children under age 18 (age 23 if they are full time students) each receive an allowance of 15% of the member's final average salary until they reach age 18 (23). If there are 4 or more dependent children, each child receives an equal share of 50% of the member's final average salary until they reach the above ages.

   (c) If there are neither a surviving spouse nor children, each dependent parent receives an annuity equal to 15% of the member's final average salary.

9. ***Benefit Changes After Retirement***. Each January 1 or July 1, beginning with the January 1 or July 1 that is at least 24 full months after retirement, the amount of monthly benefit will be re-determined. The re-determined amount is the amount payable in the prior year increased by 2% provided that such re-determined amount does not exceed the amount otherwise payable adjusted for inflation. This provision provides "compound" increases after retirement. Persons retired prior to July 1, 2002 are covered by different provisions.

10. ***Annuity Withdrawal***. Upon retirement, a member may withdraw a lump sum not to exceed the amount of his accumulated member contributions (not including interest) at time of retirement. A fire member may also make an annuity withdrawal after 25 years of credited service before retirement. The life allowance otherwise payable is *not* reduced to reflect the withdrawal of contributions.

SUMMARY OF PROVISIONS (2010) EVALUATED AND/OR CONSIDERED – FIRE (CONTINUED)

11. ***Optional Benefit Forms***. Retiring members may elect to receive a reduced retirement allowance with the provision that a portion (100%, 75%, or 50%) of the reduced amount will continue to a beneficiary after the death of the retiree. The reduction amount is based upon 7.25% interest, the 1994 Group Annuity Mortality Table, a 2% compound COLA with a two-year delay and the ages of the retiree and beneficiary on the retirement date or the member's 25 year service anniversary if earlier.

    If a member retires on or after April 1, 1999 and elects to have 50% of his benefit continue to his spouse upon his death, there will be no reduction in his benefit. Similarly, those who elect to have 75% or 100% of their benefit continue to their spouse, will only have their benefits reduced by the excess of the cost of the elected option over the cost of the 50% option.

    If a member elects an optional form and the beneficiary predeceases the member, the amount payable to the member "pops up" to the amount that would have been payable if the optional form had not been elected. This "pop-up" benefit is provided at no cost to the retiring member.

12. ***Member Contributions***. Fire members contribute 5.0% of annual pay. If a member terminates employment before any allowance is payable, accumulated contributions are refunded.

13. ***Employer Contributions***. The City contributes the remainder amounts necessary to finance the retirement system. The minimum employer contribution is 10% of the normal cost.

SECTION G

GLOSSARY

Actuarial Accrued Liability	The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as "accrued liability" or "past service liability."
Accrued Service	The service credited under the plan which was rendered before the date of the actuarial valuation.
Actuarial Assumptions	Estimates of future plan experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.
Actuarial Cost Method	A mathematical budgeting procedure for allocating the dollar amount of the "actuarial present value of future plan benefits" between the actuarial present value of future normal cost and the actuarial accrued liability. Sometimes referred to as the "actuarial funding method."
Actuarial Equivalent	A single amount or series of amounts of equal value to another single amount or series of amounts, computed on the basis of the rate(s) of interest and mortality tables used by the plan.
Actuarial Present Value	The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.
Amortization	Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.
Experience Gain (Loss)	A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions during the period between two actuarial valuation dates, in accordance with the actuarial cost method being used.
Normal Cost	The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as "current service cost." Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.

Reserve Account	An account used to indicate that funds have been set aside for a specific purpose and is not generally available for other uses.
Unfunded Actuarial Accrued Liability	The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as "unfunded accrued liability."
Valuation Assets	The value of current plan assets recognized for valuation purposes. Generally based on market value plus a portion of unrealized appreciation or depreciation.

SECTION A

INTRODUCTION - POLICE

FUNDING OBJECTIVE

The funding objective of the Retirement System is to establish and receive contributions which will accumulate assets during each member's working years which, together with regular interest, will be sufficient to pay promised benefits after retirement.

CONTRIBUTION RATES

The Retirement System is supported by member contributions, City contributions and investment income from Retirement System assets.

Contributions which satisfy the funding objective are determined by the annual actuarial valuation and are sufficient to:

(1) Cover the actuarial present value of benefits allocated to the current year by the actuarial cost method described in Section E (the normal cost); and

(2) Finance over a period of future years the actuarial present value of benefits not covered by valuation assets and anticipated future normal costs (the unfunded actuarial accrued liability).

Computed contribution rates for the fiscal year beginning July 1, 2011 are shown on page A-2.

CONTRIBUTION REQUIREMENTS - POLICE

Development of Employer Contributions for the Indicated Valuation Date

Computed Employer Contributions for	June 30, 2009	June 30, 2010
Current Cost (Normal Cost):		
Age and Service Benefits	23.61 %	23.55 %
Disability Benefits	1.30 %	1.30 %
Death-in-Service Benefits	0.49 %	0.49 %
Termination Benefits	2.85 %	2.85 %
Total Normal Cost	28.25 %	28.19 %
Less: Member Contributions	5.00 %	5.00 %
Employer Normal Cost*	23.25 %	23.19 %
Accrued Liabilities Amortization	$906,363	$1,457,670

* *Effective 6/30/99 the Board of Trustees set a minimum employer contribution rate of 10% of total normal cost. The current cost when reduced by the accrued liability credit should not fall short of the minimum contribution.*

The employer contributions expressed as dollars are to be determined by multiplying the above normal cost percents by the amount of covered payroll at each pay date for the coming fiscal year and added to the Accrued Liability Amortization amount. Such covered payroll includes not only base pay but also all other types of pay usable in computing the member's final average pay.

For example, if the payroll in Fiscal Year 2011 for Police was $11,721,188, the contribution would be developed as follows:

Normal Cost **	$ 2,718,143
Accrued Liability	1,457,670
Total	$ 4,175,813
Contribution as a % of Estimated Payroll	35.6%

***23.19% x $11,721,188 = $2,718,143*

SECTION B

FUNDING RESULTS

PRESENT VALUE OF FUTURE BENEFITS AND ACCRUED LIABILITY
POLICE

Determination of Unfunded Accrued Liability

	June 30, 2009	June 30, 2010
A. Accrued Liability		
1. For retirees and beneficiaries	$ 99,393,636	$ 107,437,212
2. For vested terminated members	1,210,781	1,425,706
3. For present active members		
a. Value of expected future benefit payments	105,522,537	99,661,611
b. Value of future normal costs	33,584,802	29,148,627
c. Active member accrued liability: (a) - (b)	71,937,734	70,512,984
4. Total accrued liability	172,542,151	179,375,902
B. Present Assets (Funding Value)	162,570,509	163,686,109
C. Unfunded Accrued Liability: (A.4) - (B)	9,971,642	15,689,793
D. Funding Ratio: (B) / (A.4)	94.2%	91.3%
E. Funding Ratio: Market Value Basis	75.8%	79.4%

DERIVATION OF EXPERIENCE GAIN/(LOSS) - POLICE

Actual experience will never (except by coincidence) exactly match assumed experience. Gains and losses often cancel each other over a period of years, but sizable year-to-year fluctuations are common. Detail on the derivation of the experience gain (loss) is shown below, along with a year-by-year comparative schedule.

		June 30,	
		2009	**2010**
(1)	UAAL* at start of year	$ 3,165,904	$ 9,971,642
(2)	Normal cost from last valuation	2,814,504	2,942,885
(3)	Actual contributions	3,703,372	2,960,685
(4)	Interest accrual	197,307	722,299
(5)	Expected UAAL before changes: (1) + (2) - (3) + (4)	2,474,343	10,676,141
(6)	Change from benefit increases	0	0
(7)	Change in actuarial method	0	0
(8)	Expected UAAL after changes: (5) + (6) + (7)	2,474,343	10,676,141
(9)	Actual UAAL at end of year	9,971,642	15,689,793
(10)	Gain (loss): (8) - (9)	$ (7,497,300)	$ (5,013,652)

* *Unfunded actuarial accrued liabilities.*

Valuation Date June 30	Experience Gain (Loss) As % of Beginning Accrued Liability
2008	3.0 %
2009	(4.6)%
2010	**(2.9)%**

SECTION C

FUND ASSETS

DEVELOPMENT OF FUNDING VALUE OF ASSETS (5-YEAR SMOOTHING) - POLICE

Year Ended June 30:	2010	2011	2012	2013	2014
A. Funding Value Beginning of Year	$162,570,509				
B. Market Value End of Year	142,466,658				
C. Market Value Beginning of Year	130,789,847				
D. Non Investment Net Cash Flow	(4,588,728)				
E. Investment Return					
E1. Total: B-C-D	16,265,539				
E2. Amount for Immediate Recognition (7.25%)	11,620,021	----------Scheduled----------			
E3. Amount for Phased in Recognition: E1-E2	4,645,518				
F. Phased in Recognition of Investment Return					
F1. Current Year: 0.20 x E3	929,104				
F2. First Prior Year	(7,058,037)	$ 929,104			
F3. Second Prior Year	(3,173,137)	(7,058,037)	$ 929,104		
F4. Third Prior Year	2,584,519	(3,173,137)	(7,058,037)	$ 929,104	
F5. Fourth Prior Year	801,858	2,584,520	(3,173,136)	(7,058,038)	$929,102
F6. Total Recognized Investment Gain	(5,915,693)	(6,717,550)	(9,302,069)	(6,128,934)	929,102
G. Funding Value End of Year					
G1. Preliminary Funding Value End of Year: (A+D+E2+F6)	163,686,109				
G2. Upper Corridor Limit: 120% x B	170,959,990				
G3. Lower Corridor Limit: 80% x B	113,973,326				
G4. Funding Value End of Year	163,686,109				
H. Difference Between Market Value & Funding Value	(21,219,451)	(14,501,901)	(5,199,832)	929,102	0
I. Market Rate of Return	12.66%				
J. Ratio of Funding Value to Market Value	114.89%				

The funding value of assets recognizes assumed investment return (line E2) fully each year. Differences between actual and assumed investment return (line E3) are phased in over a closed 5-year period. During periods when investment performance exceeds the assumed rate, funding value of assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, funding value of assets will tend to be greater than market value. The funding value of assets is **unbiased** with respect to market value. At any time it may be either greater or less than market value. If actual and assumed rates of investment return are exactly equal for 4 consecutive years, the funding value will become equal to market value.

SECTION D

CENSUS DATA

JUNE 30, 2010 VALUATION DATA SUMMARY - POLICE

For purposes of the June 30, 2010 valuation, information on 342 covered persons was furnished. These people may be briefly described as follows.

	No.	Averages			
				Annual Pay or Retirement Allowance	
		Age	Service	2010	2009
Actives	141	42.5	17.6	$83,129	$85,524
Retirees & Beneficiaries	194	60.7		39,743	38,567
Inactive Vested	7	42.4		21,844	21,780
	342				

Active member covered pays used in the valuation are developed in the following manner:

(1) Each member's covered pay during the past fiscal year is determined by the Controller's staff and reported to the actuary. Covered pay is the total, paid in the year ended with the June 30 valuation date, of (a) base pay plus (b) a variety of specified supplemental payments such as vacation pay, sick pay, holiday pay and so forth.

(2) The covered pay (1) is converted by the actuary to the equivalent annual rate as of the June 30 valuation date.

(3) If there is a pay increase amount that becomes known during the July 1 to October 1 period (when actuarial valuation data is being assembled), covered pay (2) is increased to reflect that known increase. Similarly, if pay negotiations are taking place at October 1, which will later change pays retroactive to June 30 or earlier, covered pay (2) is increased by the lower of the pay increase proposals in negotiation.

More detailed information regarding the covered persons is presented on the following pages.

ACTIVE MEMBERS - POLICE

Members in Active Service as of June 30, 2010
by Years of Service

Age	Years of Service							Total Count	Total Pay	Average Pay
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 & up			
25 - 29		1						1	$ 91,225	$ 91,225
30 - 34		14	4					18	1,368,939	76,052
35 - 39		3	17	6				26	2,108,312	81,089
40 - 44		1	3	22	11			37	3,046,727	82,344
45 - 49			2	5	30	4		41	3,531,923	86,144
50 - 54				1	9	6		16	1,414,993	88,437
55 - 59			1	1				2	159,069	79,535
Total	-	19	27	35	50	10		141	$ 11,721,188	$ 83,129

RETIRANTS AND BENEFICIARIES - POLICE

Attained Ages	Male		Female		Total	
	No.	Annual Allowance	No.	Annual Allowance	No.	Annual Allowance
Less than 45	6	$ 187,428	3	$ 90,552	9	$ 277,980
46	2	119,280			2	119,280
47			1	67,812	1	67,812
48	3	182,112	1	59,628	4	241,740
49	5	226,080	1	62,832	6	288,912
50	2	113,052	3	47,652	5	160,704
51	4	194,880	2	84,084	6	278,964
52	5	319,920			5	319,920
53	2	71,040	5	249,036	7	320,076
54	5	345,528			5	345,528
55	7	399,516			7	399,516
56	3	173,388	3	102,468	6	275,856
57	4	186,288			4	186,288
58	5	262,848	2	74,100	7	336,948
59	4	189,456	2	38,100	6	227,556
60	11	509,100	1	22,464	12	531,564
61	6	254,976	1	12,000	7	266,976
62	7	293,904	1	7,572	8	301,476
63	8	249,000	1	6,960	9	255,960
64	3	125,628			3	125,628
65	7	329,232			7	329,232
66	2	121,128			2	121,128
67	12	414,852	1	23,724	13	438,576
68	11	320,904	1	10,860	12	331,764
69	4	163,428	2	30,336	6	193,764
70	5	155,316			5	155,316
71	6	167,628	1	14,244	7	181,872
72	4	106,032			4	106,032
73	3	116,820	2	18,168	5	134,988
74	4	110,328			4	110,328
75	2	72,408			2	72,408
76	3	84,768			3	84,768
78	3	74,460			3	74,460
79	1	30,120			1	30,120
80	1	16,620			1	16,620
Totals	**160**	**$ 6,687,468**	**34**	**$ 1,022,592**	**194**	**$ 7,710,060**

TERMINATED VESTED MEMBERS - POLICE

Attained Ages	No.	Annual Allowance
33	1	$ 22,226
37	1	19,924
41	1	31,435
42	1	20,709
43	1	19,392
48	2	39,219
Totals	**7**	**$152,905**

SECTION E

METHODS AND ASSUMPTIONS

SUMMARY OF ASSUMPTIONS USED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION - POLICE (ASSUMPTIONS ADOPTED BY BOARD OF TRUSTEES AFTER CONSULTING WITH ACTUARY)

The assumptions were last revised for the June 30, 2005 actuarial valuation, unless a different date is indicated for a particular assumption. It is anticipated that non-economic assumptions will be reviewed periodically after sufficient data has accumulated. The last review covered experience during the period 7/1/1999 to 6/30/2004. The next experience study will be done for the period 7/1/2005 to 6/30/2009.

ECONOMIC ASSUMPTIONS

The investment return rate assumed in the valuations was 7.25% per year, compounded annually (net after administrative expenses).

The **Wage Inflation Rate** assumed in this valuation was 3.75% per year. The Wage Inflation Rate is defined to be the portion of total pay increases for an individual that are due to macro economic forces including productivity, price inflation, and labor market conditions. The wage inflation rate does not include pay changes rated to individual merit and seniority effects.

No specific **Price Inflation** assumption is required to perform this valuation, since there are no benefits that are linked to price increases. However, a price inflation assumption on the order of 2.5% to 3.5% would be consistent with other economic assumptions. It is assumed that price inflation will be at least sufficient to cause the maximum COLA to be paid.

The assumed real rate of return over wage inflation is defined to be the portion of total investment return that is more than the assumed total wage growth rate. Considering other economic assumptions, the 7.25% investment return rate translates to an assumed real rate of return over wage inflation of 3.50%. The assumed real rate of return over price inflation would be higher – on the order of 3.75% to 4.75%, considering both an inflation assumption and an average expense provision.

(Continued on Next Page)

SUMMARY OF ASSUMPTIONS USED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION - POLICE (CONTINUED)

Pay increase assumptions for individual active members are shown for sample ages on page E-5. Part of the assumption for each age is for merit and/or seniority increase, and the other 3.75% recognizes wage inflation, including price inflation, productivity increases, and other macro economic forces.

NON-ECONOMIC ASSUMPTIONS

The mortality table used to measure healthy retired life mortality was the 1994 Group Annuity Mortality (GAM) tables (multiplied by 110%) for men and the 1994 Group Annuity Mortality (GAM) tables (multiplied by 100%) for women. Related values are shown on Page E-4. For disabled retirees, we used the healthy tables set forward 10 years to reflect impaired mortality.

The probabilities of age/service retirement for members eligible to retire are shown on Page E-4.

The probabilities of separation from service (including ***death-in-service*** and ***disability***) are shown for sample ages on page E-5.

The interest rate used in determining refunds of accumulated contributions, paid to members who terminate prior to retirement, was 0% per annum. ***The actual rate of earnings and losses is credited for defined contribution purposes***.

The actuarial cost method of valuation used in determining all benefit liabilities and normal cost was the entry age normal actuarial cost method. Differences between assumed experience and actual experience ("actuarial gains and losses") become part of actuarial accrued liabilities.

Unfunded actuarial accrued liabilities are amortized over periods of future years to produce contribution amounts (principal & interest) which are level dollar contributions.

(Concluded on next page)

SUMMARY OF ASSUMPTIONS USED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION - POLICE (CONCLUDED)

The unfunded actuarial accrued liability (UAAL) was determined using the funding value of assets and actuarial accrued liability calculated as of the valuation. The UAAL amortization payment (one component of the contribution requirement), is the level dollar amount required to fully amortize the UAAL over a 20-year period beginning on the valuation date. This UAAL payment does not reflect any payments expected to be made between the valuation date and the date contributions determined by this report are scheduled to begin.

Employer contribution dollars were assumed to be ***paid in equal installments throughout*** the employer fiscal year.

Present assets (cash and investments) are valued on a market-related basis effective June 30, 1994. At each year end (June 30), the funding asset value is moved toward market value, by immediate recognition of assumed earnings and a five year phase-in of the difference between actual and assumed earnings. Effective June 30, 2003, the funding value must be within a range of 80% - 120% of the market value. However, as adopted by the Board, the 20% corridor did not apply for the June 30, 2009 valuation.

The data about persons now covered and about present assets were furnished by the System's administrative staff. Although examined for general reasonableness, the data was not audited by the Actuary.

The actuarial valuation computations were made by or under the supervision of a Member of the American Academy of Actuaries (MAAA).

SUMMARY OF ASSUMPTIONS USED - POLICE
JUNE 30, 2010

Single Life Retirement Values

Sample Attained Ages	Present Value of $1 Monthly Level For Life		Present Value of $1 Monthly the First Year Increasing 2% Yearly		Future Life Expectancy (years)	
	Men	Women	Men	Women	Men	Women
			(Increases delayed 2 years)			
45	$150.01	$156.35	$183.73	$194.79	34.46	39.68
50	142.83	151.03	171.95	185.26	29.80	34.89
55	133.72	143.96	158.00	173.56	25.29	30.17
60	122.60	134.87	142.02	159.56	21.01	25.59
			(Increases immediate)			
65	109.88	124.03	126.97	146.45	17.08	21.28
70	96.25	111.62	108.90	128.99	13.60	17.30
75	81.52	96.94	90.32	109.54	10.51	13.60
80	66.26	80.88	71.95	89.39	7.85	10.31
Ref:	261 x 1.10	262 x 1.00	261 x 1.10	262 x 1.00		

Probabilities of Retirement for Members Eligible to Retire

Retirement Ages	Percent of Eligible Active Members Retiring Within Next Year
45-49	30%
50	25%
51	25%
52	15%
53	15%
54	15%
55	30%
56	25%
57	25%
58	25%
59	25%
60	30%
61	30%
62	30%
63	30%
64	30%
65	100%
Ref	1025

SUMMARY OF ASSUMPTIONS USED - POLICE
JUNE 30, 2010

Rates of Separation from Active Employment before Normal Retirement

Sample Ages	% of Active Members Separating Within Next Year						
	Death		Disability				
			Duty		Non-Duty		
	Male	Female	Male	Female	Male	Female	Other
25	0.05%	0.02%	0.05%	0.07%	0.02%	0.03%	1.35%
30	0.06%	0.02%	0.05%	0.07%	0.02%	0.03%	1.17%
35	0.06%	0.03%	0.05%	0.07%	0.02%	0.03%	0.69%
40	0.08%	0.05%	0.14%	0.25%	0.06%	0.11%	0.27%
45	0.11%	0.07%	0.19%	0.28%	0.08%	0.12%	0.15%
50	0.18%	0.10%	0.34%	0.40%	0.15%	0.17%	0.15%
55	0.31%	0.16%	0.63%	0.54%	0.27%	0.23%	0.15%
Ref	261 x 0.70	262 x 0.70	9 x .70	10 x .70	9 x 0.30	10 x 0.30	53 x 0.30

Pay Increase Assumptions for Individual Members

Sample Ages	Percent Increase in Pay During Next Year		
	Base Portion	Merit & Seniority	Total
25	3.75%	3.50%	7.25%
30	3.75%	2.60%	6.35%
35	3.75%	1.10%	4.85%
40	3.75%	0.50%	4.25%
45	3.75%	0.50%	4.25%
50	3.75%	0.50%	4.25%
55	3.75%	0.50%	4.25%
Ref		224	

SUMMARY OF ASSUMPTIONS USED - POLICE
JUNE 30, 2010
MISCELLANEOUS AND TECHNICAL ASSUMPTIONS

Marriage Assumption:	80% of participants are assumed to be married for purposes of death-in-service benefits. Male spouses are assumed to be three years older than female spouses for active member valuation purposes.
Pay Increase Timing:	Reported pays were adjusted by 3% to account for an increase scheduled to take effect on July 1, 2010. Future pay increases are thereafter assumed to occur at the end of the fiscal year. This means that the reported pay with the 3% adjustment is assumed to be the pay that will be paid during the fiscal year following the valuation date.
Decrement Timing:	Decrements of all types are assumed to occur mid-year.
Eligibility Testing:	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date of the valuation.
Decrement Relativity:	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
Decrement Operation:	Disability and turnover decrements do not operate during retirement eligibility.
Service Credit Accruals:	It is assumed that members accrue one year of service credit per year.
Miscellaneous Loading Factors:	The normal cost and active accrued liabilities for all decrements were increased by 1.00% to account for the additional cost resulting from participants electing to receive benefits in a form other than the normal form. The normal cost and active accrued liabilities for all decrements were increased by 4.69% to account for the inclusion of unused sick leave, vacation, etc., in the calculation of Final Average Salary.
Option Factors:	Option factors are based upon 7.25% interest, the 1994 Group Annuity Mortality Table (multiplied by 110% for males) with a 95% Unisex Blend and a 2% compound COLA with a two year delay.
Incidence of Contributions:	Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.
Normal Form of Benefit:	A 50% automatic joint and survivor payment is the assumed normal form of benefit.
Benefit Service:	Exact fractional service is used to determine the amount of benefit payable.
Pay Annualization:	If reported pay for members was less than the base pay rate, the base pay rate was used.

SECTION F

PLAN PROVISIONS

SUMMARY OF PROVISIONS (2010) EVALUATED AND/OR CONSIDERED POLICE

1. ***Voluntary Retirement***. A Police member may retire after either: completing 25 years of service regardless of age; or attaining age 55 and completing 10 years of service.

2. ***Compulsory Retirement***. A member must retire upon attaining age 60, except that under certain conditions a member may be extended in service to age 65 (1986 amendments to the A.D.E.A. provide that this provision may no longer be operative).

3. ***Final Average Salary***. The average of a member's annual pays during the highest 36 consecutive months of service contained within the last 10 years of service. The final average salary computation includes overtime taken in cash, accumulated overtime limited to 120 hours, and carry-over time limited to 40 hours. Pay for up to 20 days of unused vacation time or paid time off may be included in this computation.

4. ***Age and Service Allowance***. Allowance equals final average salary times the sum of 2.8% times the first 25 years of service plus 1.0% times the next five years of service. The allowance for members holding the rank of sergeant or higher is equal to final average salary times the sum of 2.8% times the first 24 years of service plus 3.8% times the next year of service plus 1.4% times the next five years of service.

5. ***Deferred Allowance.*** A member with 10 or more years of service who leaves City employment before retirement is entitled to receive an allowance computed in the same manner as an age and service allowance, payments beginning upon the member's application at age 55 or when the member would have attained 25 years of service, whichever is earlier.

6. ***Duty Disability Allowance***. A member who becomes totally and permanently disabled from duty-connected causes receives, subject to offsetting for worker's compensation, a duty disability allowance computed in nearly the same manner as an age and service allowance. The member will receive as a minimum 70% of his final average salary.

SUMMARY OF PROVISIONS (2010) EVALUATED AND/OR CONSIDERED POLICE (CONTINUED)

7. ***Non-Duty Disability Allowance***. A member with 10 or more years of service who becomes totally and permanently disabled from other than duty-connected causes receives a non-duty disability allowance computed in nearly the same manner as an age and service allowance.

8. ***Death-in-Service Benefits***. Upon the death of a member, the surviving dependents receive, subject to offsetting for worker's compensation, the following benefits:

   (a) The surviving spouse receives an allowance equal to the B-100 allowance (joint and 100% survivor actuarial equivalent benefit) which would have been payable had the deceased member retired at the time and elected Option B-100. The minimum allowance payable to the surviving spouse is 20% of the member's final average salary.

   (b) Dependent children under age 18 (age 23 if they are full time students) each receive an allowance of 15% of the member's final average salary until they reach age 18 (23). If there are 4 or more dependent children, each child receives an equal share of 50% of the member's final average salary until they reach the above ages.

   (c) If there are neither a surviving spouse nor children, each dependent parent receives an annuity equal to 15% of the member's final average salary.

9. ***Benefit Changes After Retirement***. Commencing 24 full months after retirement the amount of the monthly benefit will be redetermined. The redetermined amount is the amount payable in the prior year increased by the lesser of 2% or the percent change in the Consumer Price Index for the prior calendar year. This provision provides "compound" increases after retirement. Supervisory police retired prior to July 1, 2001 and Non-supervisory police retired prior to March 1, 1999 are covered by different provisions.

SUMMARY OF PROVISIONS (2010) EVALUATED AND/OR CONSIDERED POLICE (CONCLUDED)

10. ***Annuity Withdrawal***. Upon retirement, a member may withdraw a sum not to exceed the amount of his accumulated member contributions (not including interest) at time of retirement. A police member may also make an annuity withdrawal after 25 years of credited service before retirement. The life allowance otherwise payable is not reduced to reflect the withdrawal of contributions.

11. ***Optional Benefit Forms.*** Retiring members may elect to receive a reduced retirement allowance with the provision that a portion (100%, 75%, or 50%) of the reduced amount will continue to a beneficiary after the death of the retiree. The reduction amount is based upon 7.25% interest, the 1994 Group Annuity Mortality Table, a 2% compound COLA with a two year delay and the ages of the retiree and beneficiary on the retirement date or the member's 25 year service anniversary if earlier.

    If a police member retires on or after April 1, 1999 and elects to have 50% of his benefit continue to his spouse upon his death, there will be no reduction in his benefit. Similarly, those who elect to have 75% or 100% of their benefit continue to their spouse, will only have their benefits reduced by the excess of the cost of the elected option over the cost of the 50% option.

    If a member elects an optional form and the beneficiary predeceases the member, the amount payable to the member "pops up" to the amount that would have been payable if the optional form had not been elected. This "pop-up" benefit is provided at no cost to the retiring member.

12. ***Member Contributions***. Police members contribute 5% of annual pay. If a member terminates employment before any allowance is payable, accumulated contributions are refunded.

13. ***Employer Contributions***. The City contributes the remainder amounts necessary to finance the retirement system. The minimum employer contribution is 10% of the normal cost.

SECTION G

GLOSSARY

Actuarial Accrued Liability	The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as "accrued liability" or "past service liability."
Accrued Service	The service credited under the plan which was rendered before the date of the actuarial valuation.
Actuarial Assumptions	Estimates of future plan experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.
Actuarial Cost Method	A mathematical budgeting procedure for allocating the dollar amount of the "actuarial present value of future plan benefits" between the actuarial present value of future normal cost and the actuarial accrued liability. Sometimes referred to as the "actuarial funding method."
Actuarial Equivalent	A single amount or series of amounts of equal value to another single amount or series of amounts, computed on the basis of the rate(s) of interest and mortality tables used by the plan.
Actuarial Present Value	The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.
Amortization	Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.
Experience Gain (Loss)	A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions during the period between two actuarial valuation dates, in accordance with the actuarial cost method being used.
Normal Cost	The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as "current service cost." Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.

Reserve Account	An account used to indicate that funds have been set aside for a specific purpose and is not generally available for other uses.
Unfunded Actuarial Accrued Liability	The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as "unfunded accrued liability."
Valuation Assets	The value of current plan assets recognized for valuation purposes. Generally based on market value plus a portion of unrealized appreciation or depreciation.

APPENDIX

ACCOUNTING DISCLOSURES – POLICE & FIRE

STATEMENT OF PLAN ASSETS – POLICE & FIRE
AS OF JUNE 30, 2009 AND 2010

	2009	2010
Assets		
Cash and short-term investments	$ 2,258,452	$ 16,888,040
Receivables		
Accounts receivable and miscellaneous	4,414,197	208,607
Accrued interest and dividends	370,043	292,704
Unsettled trades	0	0
Subtotals	4,784,240	501,311
Investments, at fair value		
Fixed income	64,484,405	76,315,946
Stocks	48,267,341	50,972,051
Real estate	8,384,567	7,937,868
Co-mingled and mutual funds	72,830,506	80,537,399
Limited partnerships	0	0
Subtotals	193,966,819	215,763,264
Total Assets	201,009,511	233,152,615
Liabilities		
Payables	150,113	13,560,351
Other	10,494	10,494
Subtotals	160,607	13,570,845
Net assets held in trust for pension benefits (A schedule of funding progress for the plan is presented on page Appendix-6.)	$200,848,904	$219,581,770

STATEMENT OF CHANGES IN PLAN ASSETS – POLICE & FIRE FOR THE FISCAL YEARS ENDED JUNE 30, 2009 AND 2010

	Reconciliation as of June 30,	
	2009	2010
Additions		
Contributions		
Employer	$ 6,473,115	$ 6,004,270
Plan members	1,153,236	1,075,861
Total contributions	7,626,351	7,080,131
Investment return		
Net appreciation	(44,047,157)	21,351,358
Interest and dividends	8,272,183	4,444,405
Miscellaneous	0	0
	(35,774,974)	25,795,763
Less investment expense	687,868	768,006
Net investment return	(36,462,842)	25,027,757
Total additions	(28,836,491)	32,107,888
Deductions		
Benefits	11,904,443	12,465,989
Refunds of contributions	742,227	909,033
Total deductions	12,646,670	13,375,022
Net increase	(41,483,161)	18,732,866
Net assets held in trust for pension benefits		
Beginning of year	242,332,065	200,848,904
End of year	$200,848,904	$219,581,770

NOTES TO THE FINANCIAL STATEMENTS FOR THE FISCAL YEAR ENDED JUNE 30, 2010

A. Summary of Significant Accounting Policies

Basis of Accounting. The accompanying financial statements are on the accrual basis of accounting.

Methods Used to Value Investments. Investments are reported at fair value. Short-term investments are reported at cost, which approximates fair value. Securities traded on a national or international exchange are valued at the last reported sales price at current exchange rates. Mortgages are valued on the basis of future principal and interest payments, and are discounted at prevailing interest rates for similar instruments. The fair value of real estate investments is based on independent appraisals. Investments that do not have an established market are reported at estimated fair value.

B. Plan Description and Contribution Information

Membership information as of June 30, 2010, the date of the latest actuarial valuation, is as follows:

	Fire	Police	Combined
Retirees and beneficiaries	106	194	300
Terminated vested members	1	7	8
Active members	117	141	258
Total	224	342	566

Plan Description. The City of Dearborn Chapter 23 Police and Fire Retirement System is a single-employer defined benefit pension plan that covers the Police and Fire employees of the City of Dearborn.

The plan provides retirement, disability, and death benefits to plan members and their beneficiaries.

NOTES TO THE FINANCIAL STATEMENTS FOR THE FISCAL YEAR ENDED JUNE 30, 2010 (CONTINUED)

Contributions. Police and Fire members contribute 5.0% of annual pay to the Fund.

The employer's funding policy provides for periodic employer contributions based upon a ***fundamental financial objective of having rates of contribution which remain relatively level from generation to generation of the City of Dearborn citizens.*** To determine the employer contribution rates and to assess the extent to which the fundamental financial objective is being achieved, the System has actuarial valuations prepared annually. In preparing those valuations, the entry age actuarial cost method is used to determine normal cost and actuarial accrued liabilities.

For funding purposes, unfunded actuarial accrued liabilities are amortized as a level dollar amount. Effective for the June 30, 2010 valuation, the remaining unfunded/(overfunded) amounts are amortized over 20 years.

On the basis of the June 30, 2010 actuarial valuation, the employer rates were determined to be as follows:

Contributions for	Percents of Active Member Payroll Fire
Employer Normal Cost*	22.96 %
Accrued Liabilities	$1,714,725

Contributions for	Percents of Active Member Payroll Police
Employer Normal Cost*	23.19 %
Accrued Liabilities	$1,457,670

* *Per Board action, effective 6/30/99 the minimum employer contribution rate is 10% of the total normal cost.*

RESERVES AS OF JUNE 30, 2010

The Combined Fund balances were reported as follows:

	Year Ended	
	June 30, 2010	**June 30, 2009**
Members Deposit Fund	$ 11,293,688	$ 11,088,400
Employer Accumulation Fund	34,054,677	20,965,583
Benefit Reserve Fund	174,233,405	168,794,921
Market Value	$219,581,770	$200,848,904

Funding value of trust assets. At each year end (June 30), the funding asset value is moved toward market value, by immediate recognition of assumed earnings and a five year phase-in of the difference between actual and assumed earnings. The intent is to recognize the long-term validity of market value changes while screening out the market's short-term moods.

The funding value of assets at June 30, 2010 was determined to be $252,131,506. The funding value is used in actuarial determinations of financial condition and employer contribution rates.

Recommendation: The following June 30 transfers are recommended. These are accounting transfers that do not affect the investment of the funds.

	Recommended Reserve Transfers	
Division	**Benefit Reserve Fund**	**Employer Accumulation Fund**
Police	$978,647	$(978,647)
Fire	623,036	(623,036)

In performing the actuarial valuation, these transfers were assumed to have been made.

REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF FUNDING PROGRESS

(Dollar amounts in millions)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) -Entry Age (b)	Unfunded AAL (UAAL) (b)-(a)	Funded Ratio (a)/(b)	Covered Payroll (c)	UAAL as a Percent of Covered Payroll [(b)-(a)]/(c)
FIRE						
6/30/99*	$62.51	$54.32	$ (8.19)	115.1 %	$6.68	-
6/30/00	69.20	58.66	(10.54)	118.0 %	7.13	-
6/30/01	73.07	60.48	(12.59)	120.8 %	7.05	-
6/30/02	74.05	67.73	(6.32)	109.3 %	7.28	-
6/30/03	72.58	72.40	(0.18)	100.2 %	7.41	-
6/30/03*	72.58	74.15	1.57	97.9 %	7.41	21.2 %
6/30/04	71.73	78.89	7.16	90.9 %	8.06	88.8 %
6/30/05	72.24	82.43	10.19	87.6 %	7.96	128.0 %
6/30/05#	72.24	83.08	10.84	87.0 %	7.96	136.2 %
6/30/06	74.82	89.05	14.23	84.0 %	8.13	175.0 %
6/30/07	80.63	94.26	13.63	85.5 %	7.92	172.1 %
6/30/08	85.99	98.53	12.54	87.3 %	8.10	154.8 %
6/30/09	87.05	103.03	15.98	84.5 %	8.34	191.6 %
6/30/10*	88.45	106.90	18.45	82.7 %	8.44	218.6 %
POLICE						
6/30/99*	$114.04	$ 89.29	$(24.75)	127.7 %	$11.52	-
6/30/00	126.82	97.04	(29.78)	130.7 %	12.16	-
6/30/01	134.14	103.99	(30.15)	129.0 %	12.44	-
6/30/02	135.68	112.11	(23.57)	121.0 %	12.32	-
6/30/02*	135.68	115.83	(19.85)	117.1 %	12.32	-
6/30/03	133.94	122.18	(11.76)	109.6 %	12.78	-
6/30/04	132.85	131.12	(1.73)	101.3 %	13.48	-
6/30/05	133.39	137.81	4.42	96.8 %	12.69	34.8 %
6/30/05*#	133.39	139.87	6.48	95.4 %	12.69	51.1 %
6/30/06	138.89	151.07	12.18	91.9 %	14.78	82.4 %
6/30/07	150.39	158.62	8.23	94.8 %	12.92	63.7 %
6/30/08	160.82	163.99	3.17	98.1 %	12.46	25.4 %
6/30/09	162.57	172.54	9.97	94.2 %	12.85	77.6 %
6/30/10	163.69	179.38	15.69	91.3 %	11.60	135.3 %

* *After change in benefit provisions.*

\# *After change in actuarial assumptions.*

SCHEDULE OF EMPLOYER CONTRIBUTIONS

FIRE

Year Ended June 30	Annual Required Contribution	Actual Contributions	Percent Contributed
2000	$ 298,614	$ 288,809	96.7%
2001	200,271	198,035	98.9%
2002	205,908	206,922	100.5%
2003	202,396	202,571	100.1%
2004	230,545	230,545	100.0%
2005	2,007,148	2,007,148	100.0%
2006	2,462,234	2,462,234	100.0%
2007	2,501,558	2,501,558	100.0%
2008	2,872,442	2,872,442	100.0%
2009	2,769,743	2,769,743	100.0%
2010	3,009,691	3,043,586	101.1%

POLICE

Year Ended June 30	Annual Required Contribution	Actual Contributions	Percent Contributed
2000	$ 741,502	$ 731,240	98.6%
2001	360,820	348,249	96.5%
2002	354,698	354,317	99.9%
2003	368,206	370,646	100.7%
2004	421,598	421,598	100.0%
2005	2,353,982	2,573,982	109.3%
2006	3,644,682	3,424,682	94.0%
2007	3,609,697	3,622,529	100.4%
2008	3,985,808	3,899,689	97.8%
2009	3,704,989	3,703,372	100.0%
2010	2,972,544	2,960,685	99.6%

COMBINED POLICE AND FIRE

Year Ended June 30	Annual Required Contribution	Actual Contributions	Percent Contributed
2000	$1,040,116	$1,020,049	98.1%
2001	561,091	546,284	97.4%
2002	560,606	561,239	100.1%
2003	570,602	573,217	100.5%
2004	652,503	652,503	100.0%
2005	4,361,130	4,581,130	105.0%
2006	6,106,916	5,886,916	96.4%
2007	6,111,255	6,124,087	100.2%
2008	6,858,250	6,772,131	98.7%
2009	6,474,732	6,473,115	100.0%
2010	5,982,235	6,004,271	100.4%

SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

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

Valuation date	June 30, 2010
Actuarial cost method	Entry Age Normal
Amortization method	Level dollar
Remaining amortization period	20 years
Asset valuation method	5-year smoothed market 80%/120% corridor
Actuarial assumptions:	
Investment rate of return*	7.25%
Projected salary increases*	3.75%
*Includes wage-inflation at	3.75%
Cost-of-living adjustments	Varies by Labor Contract

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February 16, 2011

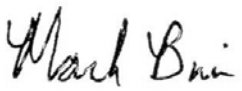
Mr. Jim O'Connor, Finance Director
City of Dearborn
4500 Maple Street - City Hall
Dearborn, Michigan 48126

Re: June 30, 2010 Valuation for Chapter 23

Dear Jim:

Enclosed are 18 copies of this report.

Sincerely,



Mark Buis

MB:mrb
Enclosures

cc: Plante & Moran (+1 report copy)