

HOUSTON MUNICIPAL EMPLOYEES PENSION SYSTEM
ACTUARIAL VALUATION REPORT
FOR THE YEAR BEGINNING JULY 1, 2008

March 2, 2009

Board of Trustees
Houston Municipal Employees Pension System
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Suite 2450
Houston, TX 77002-2555

Dear Members of the Board:

Subject: Actuarial Valuation as of July 1, 2008

This report describes the current actuarial condition of the Houston Municipal Employees Pension System (HMEPS), determines the calculated employer contribution rate, and analyzes changes in this contribution rate. Valuations are prepared annually, as of July 1, the first day of the HMEPS plan year.

Under the HMEPS statute, the employer contribution rate is determined actuarially, based on the Board's funding policy and HMEPS' governing law. The contribution rate determined by a given actuarial valuation and implemented by the Board becomes effective twelve months after the valuation date, i.e., the rates determined by this July 1, 2008 actuarial valuation will be used by the Board when determining the employer contribution rate for the year beginning July 1, 2009 and ending June 30, 2010.

Under the 2004 Meet & Confer Agreement between the Board and the City of Houston, a three-year funding schedule was implemented consisting of a \$63 million employer contribution and \$300 million pension obligation note for FY 2005, a \$69 million employer contribution for FY 2006 and a \$72 million employer contribution for FY 2007. The funding schedule was developed to substantially increase the funded level of the plan and maintain adequate funding levels over the three-year period ending June 30, 2007.

A Fourth Amendment to the Meet & Confer Agreement between the Board and the City of Houston was adopted in 2007 (Fourth Amendment). As part of this amendment, another funding schedule was implemented consisting of a \$75 million employer contribution for FY 2008, a \$78.5 million employer contribution for FY 2009, a \$83.5 million employer contribution for FY 2010, and a \$88.5 million employer contribution for FY 2011.

The employer contribution amounts for FY 2008 and FY 2009 were not set by actuarial valuations. Therefore, the calculated contribution rates from those valuations are not being contributed. Instead, employer contributions of \$75 million for FY 2008 and \$78.5 million for FY 2009 are to be made under the terms of the Fourth Amendment.

The calculated required employer contribution rate for FY2010 is 19.20% of payroll. Using an estimated payroll of \$517.0 million for FY2010 projects an estimated calculated employer contribution for FY2010 of \$99.3 million. This compares to the actual \$83.5 million employer contribution that will be paid under the terms of the Fourth Amendment.

Financing objectives and funding policy

The amortization period is set by statute, and was modified under the Meet and Confer. The contribution rate and liabilities are computed using the Entry Age actuarial cost method. The employer contribution rate is the sum of two pieces: the employer normal cost rate and the amortization rate. The normal cost rate is determined as a percent of pay. The employer normal cost is the difference between this and the weighted member contribution rate. The amortization rate is determined as a level percent of pay. It is the amount required to amortize the unfunded actuarial accrued liability over an open period (30 years as of July 1, 2008). The amortization rate is adjusted for the one-year deferral in contribution rates.

Progress toward realization of financing objectives

The funded ratio (the ratio of the actuarial value of assets to the actuarial accrued liability) is a standard measure of a plan's funded status. In the absence of benefit improvements, it should increase over time, until it reaches 100%. The funded ratio as of July 1, 2008 is 70.1%. This is the same funded ratio as in the 2007 valuation.

The calculated employer contribution rate for FY 2010 is 19.20%. This rate is less than the 19.47% rated calculated in the 2007 valuation, mostly due to the covered payroll being larger than expected due to the active population increase. Please see Table 6 for a detailed analysis of the change in the calculated employer contribution rate from the prior year to this year.

It should be noted that the above information is based on the measurement of the System as of June 30, 2008. The investment markets have suffered tremendous losses since that date. If the actuarial valuation had been performed at the end of October instead of the end of August, the results would likely have been dramatically different. The actuarial gains discussed above would have been completely eliminated by the additional investment losses that have occurred since the valuation date.

In the absence of a significant recovery in the investment markets during the remainder of fiscal year 2009, the contribution rate needed to amortize the UAAL over 30 years will increase over the next few valuation cycles.

Benefit provisions

The benefit provisions reflected in this valuation are those which were in effect on July 1, 2008. The Fourth Amendment between the City and the Board changed the benefit provisions substantially, effective January 1, 2008. The benefits for employees hired prior to January 1, 2008 were not modified, but the benefits for employees newly hired on or after January 1, 2008 were modified substantially, including the elimination of member contributions.

The benefit provisions are summarized in Appendix B.

Assumptions and methods

Actuarial assumptions and methods are set by the Board of Trustees, based upon recommendations made by the plan's actuary. The assumptions used in this valuation have not been modified since the previous valuation. The assumptions used in the valuation were adopted by the Board based on our recommendations following an Experience Analysis performed for the five year period ending July 1, 2004.

The results of the actuarial valuation are dependent on the actuarial assumptions used. Actual results can and almost certainly will differ, as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities, calculated contribution rates and funding periods. The actuarial calculations are intended to provide information for rational decision making.

The actuarial assumptions and methods used in this report comply with the parameters for disclosure that appear in GASB 25.

All assumptions and methods are described in Appendix A.

Data

Member data for retired, active and inactive members was supplied as of July 1, 2008 by the HMEPS staff. We did not audit this data, but we did apply a number of tests to the data, and we concluded that it was reasonable and consistent with the prior year's data.

Asset information as of July 1, 2008 was taken from the Comprehensive Annual Financial Report for the Year Ended June 30, 2008.

Plan Experience

As part of each valuation, we examine the System's experience relative to the assumptions. The aggregate results of these analyses are disclosed in Tables 5 & 6. This past fiscal year the System had a total liability loss of approximately \$29.3 million. Most of the loss can be traced to larger than expected salary increases. Relative to the total liabilities of the System we do not consider

this aggregate loss significant. However, this is the fourth valuation in a row to experience a salary loss. We will determine if this recent experience is part of a long-term trend or a short-term fluctuation in conjunction with the next experience study.

We were asked to determine if an unanticipated actuarial cost occurred in the administration of the Deferred Retirement Option Plan (DROP). It is our opinion that the administration of the (DROP) had no material unanticipated actuarial costs during the prior fiscal year.

Certification

All of the tables contained in this actuarial valuation report and in the actuarial section of the HMEPS CAFR were prepared by Gabriel, Roeder, Smith & Company. We certify that the information presented herein is accurate and fairly portrays the actuarial position of HMEPS as of July 1, 2008.

All of our work conforms with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, our calculations also comply with the requirements of state law and, where applicable, the Internal Revenue Code, ERISA, and the Statements of the Governmental Accounting Standards Board. The undersigned are independent actuaries and consultants. Mr. Newton is an Enrolled Actuary and also a Member of the American Academy of Actuaries, and meets the Qualification Standards of the American Academy of Actuaries. Both of the undersigned are experienced in performing valuations for large public retirement systems.

Sincerely,
Gabriel, Roeder, Smith & Company



Joseph P. Newton, FSA, EA, MAAA
Senior Consultant



Lewis Ward
Consultant

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Executive Summary

Item	July 1, 2008	July 1, 2007
Membership		
• Number of:		
- Active members	12,653	12,376
- Retirees and beneficiaries	8,155	7,971
- Inactive members	<u>5,730</u>	<u>5,413</u>
- Total	26,538	25,760
• Annualized Payroll supplied by HMEPS	\$ 483,815	\$ 448,925
Calculated Contribution rates		
• Employer	19.20%	19.47%
Assets		
• Market value	\$ 2,262,033	\$ 2,344,597
• Actuarial value	2,310,384	2,193,745
• Estimation of return on market value	-0.3%	17.9%
• Estimation of return on actuarial value	9.0%	21.5%
• Employer contribution	\$ 73,272	\$ 70,265
• Member contribution	\$ 21,176	\$ 20,966
• Ratio of actuarial value to market value	102.1%	93.6%
Actuarial Information		
• Employer normal cost %	5.85%	5.84%
• Unfunded actuarial accrued liability (UAAL)	\$ 985,986	\$ 934,968
• Amortization rate	13.35%	13.63%
• Funding period	30.0 years	30.0 years
• GASB funded ratio	70.1%	70.1%
Projected employer contribution based on calculated rate		
• Fiscal year ending June 30,	2010	2009
• Projected payroll (millions)	\$ 517.0	\$ 481.8
• Projected employer contribution (millions)	\$ 99.3	\$ 93.8
(actual contribution rate set by Meet & Confer)		

Note: Dollar amounts in \$000, unless otherwise noted

¹ Employee contribution rate is 5%. Members newly hired after January 1, 2008 are noncontributory.

Contribution Requirements

- The Executive Summary shows the new, calculated contribution rate
- Rates shown on the Executive Summary are calculated rates for the twelve-month period beginning July 1, 2009, based on current board policy
- Table 6 reconciles the calculated contribution rate from the prior valuation to the current valuation
- The changes to the benefit provisions due to the Fourth Amendment were reflected in the prior year's valuation
- No changes to the benefit provisions were reflected in this valuation
- There were no changes to the actuarial assumptions
- Amortization payment is based on
 - 30-year open funding period beginning July 1, 2008
 - Contributions increase as level percentage of pay
 - Total payroll increases 3.00% per year
 - No future growth in the number of active members is taken into account
- The Plan's funded ratio remained the same as from the prior year and the Plan's contribution rate decreased from the prior year primarily due to the gain on the actuarial value of assets
 - Analysis of the change in contribution rates is shown on Table 6
- The Plan experienced a gain on the actuarial value of assets
 - As part of the Fourth Amendment, all of the deferred investment gains for years 2006 and prior were fully recognized as of July 1, 2007
 - The actuarial value of assets is greater than the market value of assets creating a deferred net asset loss (approximately \$48 million). This will increase the required contribution rate over the next several valuations if no offsetting asset gains occur during the next few years. (This is reflected in Table 7)
- Post valuation investment losses
 - As stated previously, the turmoil in the investment markets have caused more investment losses for the System which have not been recognized in this valuation. In the absence of a significant recovery in the investment markets, the UAAL and GASB ARC could increase significantly over the next five valuations.

Calculation of Contribution Rates

The funds available to pay benefits come from two sources, contributions and investment income on those contributions (the majority of the funds available to pay benefits come from investment income). HMEPS receives contributions from two sources, employer contributions which are determined as a percent of pay, and in some cases by member contributions. As shown in Table 2, the employer contribution rate has two components:

- The normal cost percentage (NC%)
- The amortization percentage (UAAL%)

The NC% is the theoretical amount which would be required to pay the members' benefits, based on the plan provisions for new employees, if this amount had been contributed from each member's entry date and if the fund's experience exactly followed the actuarial assumptions. This is the amount it should cost to provide the benefits for an average new member. The NC% is shown in Table 4.

Some of the members are required to make employee contributions, and for those members, only the excess of the NC% over the member contribution rate is included in the employer contribution rate.

The actuarial accrued liability (AAL) is the difference between (i) the actuarial present value of all future benefits for all current participants of the fund, including active, inactive and retired members, and (ii) the actuarial present value of future normal costs. Thus the AAL represents the liability associated with past years. The unfunded actuarial accrued liability (UAAL) is the difference between the AAL and the actuarial value of assets (AVA). It is the shortfall/excess between the liability associated with prior years (the AAL) and the assets actually accumulated (the AVA). This shortfall/excess can arise from several sources, including actuarial gains and losses which are caused by differences between actual experience and the plan's assumptions, changes to the plan's actuarial assumptions, and amendments to the benefit provisions.

The UAAL% is the amount required to fund this difference. It is the amount, expressed as a level percentage of payroll, necessary to amortize the UAAL. The Meet & Confer Agreement has specified that this amortization should be over a period of 30 years beginning July 1, 2008. Item 11a of Table 2 shows the UAAL%.

The calculated rate is used in determining the contributions necessary to meet the funding policy for the twelve-month period beginning July 1, 2009. Note however, that under the terms of the Fourth Amendment the FY 2010 contribution is already set at \$83.5 million.

Financial Data and Experience

As of July 1, 2008, HMEPS has a total market value of about \$2.26 billion. Financial information was gathered from the 2008 HMEPS Comprehensive Annual Financial Report.

This report includes a number of exhibits related to plan assets. Table 8 shows how the total market value is distributed among the various classes of investments. Currently, 43.5% of invested assets are held in equities, compared with 51.6% last year and compared with a 50% investment policy target. 37.9% of invested assets are held in limited partnerships, real estate trusts, loans and mortgages, compared with 30.1% last year and compared with a 30% investment policy target.

Table 9 shows a reconciliation of the market values between the beginning and end of FY2008.

During FY2008, the dollar-weighted total investment return on market values was (0.25)%, as shown on Table 12. The Comprehensive Annual Financial Report states the time-weighted return for FY2008 was 0.5%.

In determining the contribution rates and funded status of the System, an actuarial value of assets (AVA) is used, rather than the market value of assets. The method used to compute the AVA takes the difference between actual earnings and expected earnings (based on the assumed 8.5% investment return rate) each year, and recognizes the difference over five years, at 20% per year. This “smoothing method” is intended to help reduce the volatility of the contribution rates from year to year.

Under the terms of the Fourth Amendment, all of the deferred gains/(losses) from 2006 and prior were fully recognized as of July 1, 2007. Only the 2007 investment gain and the 2008 investment loss have the normal deferral that is part of the AVA methodology. In future years the number of deferral bases will grow until we are once again recognizing prior years’ excess investment gains/losses over five years.

The development of the AVA is shown on Table 10 and Table 11. The AVA is \$2.31 billion. The AVA is 102.1 % of the MVA, compared to 93.6 % last year.

In addition to the market return, Table 12 also shows the return on the actuarial value of assets for HMEPS. For FY2008, this return was 8.97%. Because this is greater than the assumed 8.5% investment return, an actuarial gain occurred decreasing the unfunded actuarial accrued liabilities of the plan. Table 14 shows a summary of market and actuarial return rates in recent years.

Member Data

Member data as of July 1, 2008 was supplied electronically by HMEPS staff. While we did not audit this data, we did perform various tests to ensure that it was internally consistent, consistent with the prior year's data, and was reasonable overall.

Table 20 shows the number of members by category (active, inactive, retired, etc.). Tables 21(a-c) show active member statistics by Group. Tables 18 and 19 show summaries of certain historical data, including membership statistics.

The number of active members increased from 12,376 to 12,653, a 2.2 % increase. This is the fourth year in a row that active membership has increased.

The total payroll shown on the statistical tables is the amount that was supplied by HMEPS, annualized if necessary. For the cost calculations, the pays were adjusted in accordance with the actuarial assumptions to reflect one year's salary increase.

Total active member payroll increased 7.8% last year, compared with a 6.3% increase the prior year. Similar to the number of active members, this is the fourth valuation in a row in which the total covered payroll increased.

This uptrend in payroll is significant because the methodology used in the valuation to amortize the unfunded liability assumes a growing payroll into the future. If the payroll does not grow at the assumed 3% a year on average, then the amortization payments will be understated and the funding position of the plan will not strengthen over time.

Benefit Provisions

Appendix B includes a summary of the benefit provisions for HMEPS.

As stated previously, the Fourth Amendment substantially changed the benefits for employees hired on or after January 1, 2008. For these employees the benefits of the System will be as follows:

- *Normal Retirement Eligibility* at age 62 with 5 years of service
- *Normal Retirement Benefit* is 1.8% of AMS times service up to 25 years; and 1.0% of AMS for service in excess of 25 years
- *Normal Form of Payment* is a life annuity payable for the member's lifetime only
- *Early Retirement Eligibility* is age 55 with 10 years of service or the Rule of 75
- *Early Retirement Reduction* is 0.25% for each month by which benefit commencement precedes Normal Retirement Eligibility
- *Employee Contributions* are not required
- *Post-retirement Cost of Living Adjustments* are not provided automatically

For employees hired prior to January 1, 2008, there were no changes to the benefits.

All of the changes were reflected in the prior year's valuation. There were no changes to the benefits reflected in this valuation.

This valuation reflects all benefits offered to HMEPS members. There are no ancillary benefits that might be deemed a HMEPS liability if continued beyond the availability of funding by the current funding source.

Actuarial Methods and Assumptions

Appendix A includes a summary of the actuarial assumptions and methods used in this valuation. Costs are determined using the Entry Age Normal actuarial cost method. The assumed investment return rate is 8.50%. The Board adopted the actuarial assumptions used in this valuation in connection with the actuarial experience study performed by GRS in 2005 and independently reviewed by Mercer Consulting. These assumptions have been in effect since the July 1, 2004 valuation.

Please see Appendix A for a complete description of these assumptions.

It is expected that the next experience study will be performed in fiscal year 2010, using data through the five-year period ending June 30, 2009.

GASB 25 and Funding Progress

Governmental Accounting Standards Board Statement No. 25 (GASB 25) contains certain accounting requirements for HMEPS. In particular, it requires the inclusion of two special schedules in the HMEPS annual report:

1. Schedule of Funding Progress
2. Schedule of Employer Contributions

Information needed to prepare the Schedule of Funding Progress is included in Table 16. This shows that the funded ratio (ratio of actuarial assets to accrued liabilities) decreased dramatically over the three-year period ending with the 2003 valuation, and has subsequently generally increased over the last five valuations.

GASB 25 also requires that plans calculate an Annual Required Contribution (ARC), and, if actual contributions received are less than the ARC, this must be disclosed. For this disclosure, HMEPS treats the employer contribution rate established under the Meet & Confer Agreement as the ARC, as long as this produces a funding period of 30 years or less.

Under GASB 25, the ARC must be calculated in accordance with certain parameters. In particular, it must include a payment to amortize the UAAL. This amortization payment must be computed using a funding period no greater than 30 years. Further, the amortization payment included in the ARC may be computed as a level dollar amount, or it may be computed as an amount which increases with payroll (level-percentage-of-pay). However, if payments are computed on a level-percentage-of-payroll approach, the payroll growth assumption may not anticipate future membership growth.

Since the recommended employer contribution rate is computed as a level-percentage-of-payroll using an amortization period of 30 years from the valuation date, the recommended rate meets the definition of an acceptable ARC.

Summary of Cost Items

	Valuation as of July 1, 2008		Valuation as of July 1, 2007	
	Cost Item (1)	Cost as % of Pay (2)	Cost Item (3)	Cost as % of Pay (4)
1. Participants				
a. Actives	12,653		12,376	
b. Retirees	6,186		6,017	
c. Disabled retirees	428		446	
d. Beneficiaries	1,541		1,508	
e. Inactive, deferred vested	2,931		2,922	
f. Inactive, nonvested	2,799		2,491	
g. Total	26,538		25,760	
2. Covered payroll	\$ 483,815		\$ 448,925	
3. Averages for active members				
a. Average age	45.2		45.2	
b. Average years of service	9.3		9.3	
c. Average pay (\$)	\$ 38,237		\$ 36,274	
4. Present value of future pay	\$ 3,123,720		\$ 2,941,394	
5. Total normal cost rate	5.85%		5.84%	
6. Present value of future benefits	\$ 3,598,904	743.9%	\$ 3,428,781	763.8%
7. Present value of future normal costs	\$ 301,762	62.4%	\$ 288,646	64.3%
8. Service purchase receivable	\$ (772)		\$ (11,422)	
9. Actuarial accrued liability (6 - 7 + 8)	\$ 3,296,370	681.3%	\$ 3,128,713	696.9%
10. Present actuarial assets	\$ 2,310,384	477.5%	\$ 2,193,745	488.7%
11. Unfunded actuarial accrued liability (UAAL)	\$ 985,986	203.8%	\$ 934,968	208.3%
12. Funding period	30 years		30 years	
13. Employer contribution rate				
a. Normal cost	5.85%		5.84%	
b. Amortization charge	13.35%		13.63%	
c. Total	19.20%		19.47%	
14. Average estimated return				
a. Based on market value	-0.25%		17.85%	
b. Based on actuarial value	8.97%		21.51%	
15. GASB 25 funded ratio	70.1%		70.1%	

Note: Dollar amounts in \$000

Calculation of Annual Required Contribution Rate

	July 1, 2008 (1)	July 1, 2007 (2)
1. Covered payroll	\$ 483,815	\$ 448,925
2. Covered payroll adjusted for one-year's pay increase	\$ 501,984	\$ 465,776
3. Present value of future pay	\$ 3,123,720	\$ 2,941,394
4. Employer normal cost rate	5.85%	5.84%
5. Actuarial accrued liability for active members		
a. Present value of future benefits for active members	\$ 1,694,571	\$ 1,603,789
b. Less: present value of future employer normal costs	(173,489)	(163,093)
c. Less: present value of future employee contributions	(128,273)	(125,552)
d. Service Purchase Receivable ¹	(772)	(11,422)
e. Actuarial accrued liability	\$ 1,392,037	\$ 1,303,722
6. Total actuarial accrued liability for:		
a. Retirees and beneficiaries	\$ 1,769,057	\$ 1,689,541
b. Inactive participants	135,276	135,450
c. Active members (Item 5d)	1,392,037	1,303,722
d. Total	\$ 3,296,370	\$ 3,128,713
7. Actuarial value of assets	\$ 2,310,384	\$ 2,193,745
8. Unfunded actuarial accrued liability (UAAL) (Item 6d - Item 7)	\$ 985,986	\$ 934,968
9. Funding period	30 years	30 years
10. Assumed payroll growth rate	3.00%	3.00%
11. Employer Contribution requirement		
a. UAAL amortization payment as % of pay	13.35%	13.63%
b. Employer normal cost	5.85%	5.84%
c. Contribution requirement (a + b)	19.20%	19.47%

Note: Dollar amounts in \$000

¹ Includes actual current receivable for actives who have entered into an obligation. It's anticipated that a majority of the receivable will be received by the next valuation date.

Actuarial Present Value of Future Benefits

	July 1, 2008 (1)	July 1, 2007 (2)
1. Active members		
a. Retirement benefits	\$ 1,500,022	\$ 1,413,633
b. Deferred termination benefits	95,592	94,027
c. Refunds	13,340	13,501
d. Death benefits	55,449	52,992
e. Disability benefits	30,168	29,636
f. Total	<u>\$ 1,694,571</u>	<u>\$ 1,603,789</u>
2. Members in Pay Status		
a. Service retirements	\$ 1,600,403	\$ 1,529,071
b. Disability retirements	37,648	38,518
c. Beneficiaries	131,006	121,952
d. Total	<u>\$ 1,769,057</u>	<u>\$ 1,689,541</u>
4. Inactive members		
a. Vested terminations	\$ 131,754	\$ 132,899
b. Nonvested terminations	3,522	2,551
c. Total	<u>\$ 135,276</u>	<u>\$ 135,450</u>
5. Total actuarial present value of future benefits	<u>\$ 3,598,904</u>	<u>\$ 3,428,780</u>

Note: Dollar amounts in \$000

Analysis of Normal Cost

	<u>July 1, 2008</u>	<u>July 1, 2007</u>
	(1)	(2)
1. Gross normal cost rate		
a. Retirement benefits	4.33%	4.29%
b. Deferred termination benefits	0.63%	0.63%
c. Refunds	0.33%	0.35%
d. Disability benefits	0.26%	0.27%
e. Death benefits	0.30%	0.30%
f. Total	<u>5.85%</u>	<u>5.84%</u>

Calculation of Total Actuarial Gain or Loss

1. Unfunded actuarial accrued liability (UAAL) as of July 1, 2007	\$ 934,968
2. Employer normal cost for year*	27,578
3. Employer Contributions during year ending June 30, 2008*	(73,272)
4. Interest on UAAL for one year	79,472
5. Interest on Item 2 and Item 3 for one-half year	<u>(1,902)</u>
6. Expected UAAL as of July 1, 2008 (1+2+3+4+5)	\$ 966,844
7. Actual UAAL as of July 1, 2008	\$ 985,986
8. Actuarial gain/(loss) for the period (6 - 7)	\$ (19,142)
 <u>SOURCE OF GAINS/(LOSSES)</u>	
9. Asset gain/(loss) (See Table 13)	\$ 10,163
10. Assumption changes	0
11. Changes from Meet & Confer	0
12. Total liability gain/(loss) for the period	<u>\$ (29,305)</u>
13. Actuarial gain/(loss) for the period	\$ (19,142)

Note: Dollar amounts in \$000

*Employee contributions are excluded due to use of replacement life normal cost method for ongoing plan.
 New members (Group D) do not contribute to the plan.

Change in Calculated Contribution Rate Since the Prior Valuation

1.	Calculated Contribution Rate as of July 1, 2007		19.47%
2.	Change in Contribution Rate During Year		
	a. Change in Employer Normal Cost	0.01%	
	b. Assumption changes	0.00%	
	c. Recognition of prior asset losses (gains)	(0.76%)	
	d. Actuarial (gain) loss from current year asset performance	0.61%	
	e. Actuarial (gain) loss from liability sources	0.44%	
	f. Impact of City contributing different than actuarially required*	0.27%	
	g. Effect of Payroll growing faster than Payroll Growth Rate	(0.63%)	
	h. Effect of resetting amortization period to 30	(0.21%)	
	i. Total Change		<u>(0.27%)</u>
3.	Calculated Rate as of July 1, 2008		19.20%

*The City will contribute \$78.5 million in FY2009 compared to an approximate ARC of \$97 million

Near Term Outlook

Valuation as of July 1,	Unfunded Actuarial Accrued Liability (UAAL, in 000s)	Funded Ratio	Calculated Contribution Rate	Funding Period (Years) ²	Market Value of Fund (in 000s)	For Fiscal Year Ending June 30,	Covered Compensation	Employer Contributions	Employee Contributions	Benefit Payments and Refunds	Net External Cash Flow
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(8)	(9)	(10)	(11)
2008	\$ 985,986	70.1%	19.20%	30.0	\$ 2,262,033	2009	\$ 483,815	\$ 78,500 ¹	\$ 19,867	\$ 206,531	\$ (108,163)
2009	1,019,254	70.1%	19.72%	30.0	2,341,639	2010	501,037	83,500	18,596	209,262	(107,166)
2010	1,051,618	70.2%	20.00%	29.0	2,429,052	2011	515,707	88,500	17,353	222,240	(116,387)
2011	1,083,059	70.2%	20.12%	28.0	2,514,288	2012	530,199	106,046	16,116	235,303	(113,142)
2012	1,138,251	69.6%	20.76%	27.0	2,610,151	2013	545,285	109,726	14,921	248,731	(124,084)
2013	1,152,426	70.1%	20.81%	26.0	2,702,764	2014	560,545	116,376	13,759	263,523	(133,389)
2014	1,162,848	70.6%	20.87%	25.0	2,793,557	2015	576,405	119,960	12,638	277,103	(144,505)
2015	1,172,463	71.1%	20.92%	24.0	2,880,488	2016	593,015	123,741	11,566	291,506	(156,200)
2016	1,181,043	71.5%	20.99%	23.0	2,962,627	2017	609,834	127,583	10,530	306,564	(168,451)
2017	1,188,478	71.9%	21.06%	22.0	3,038,986	2018	627,391	131,685	9,547	319,819	(178,587)
2018	1,194,436	72.3%	21.12%	21.0	3,111,277	2019	645,746	135,975	8,618	321,490	(176,897)

These projections are based on the Fourth Amendment assuming that the benefit provisions that went into effect January 1, 2008 remain in effect throughout the projection. Also, beginning in FY2012, the employer contributions shown above are based on the calculated contribution rate from the actuarial valuation performed one year prior (i.e. the FY 2012 rate is set by the June 30, 2010 valuation). Any changes to future accruals or failure to contribute the calculated rate will change the results of this projection.

¹ The agreement between the City and HMEPS includes a \$75 million employer contribution for FY 2008, a \$78.5 million employer contribution for FY 2009, a \$83.5 million employer contribution for FY2010, and a \$88.5 million in FY2011.

² The agreement between the City and HMEPS included an open 30 year amortization period until the 2009 valuation. Beginning with the 2009 valuation, the amortization period will be a closed 30 years from July 1, 2009.

Note: Dollar amounts in \$000.

Statement of Plan Net Assets

	July 1, 2008	July 1, 2007
	(1)	(2)
A. ASSETS		
1. Current Assets		
a. Cash and short term investments		
1) Cash on hand	\$ 956	\$ 3,148
2) Short term investments	50,710	91,352
b. Accounts Receivable		
1) Sale of investments	52,292	14,714
2) Other	7,589	6,864
c. Total Current Assets	\$ 111,547	\$ 116,078
2. Long Term Investments		
a. US Government securities	\$ 46,189	\$ 48,020
b. Corporate bonds	88,482	88,502
c. Capital stocks	487,617	652,859
d. Commingled Funds	537,365	588,541
e. LP's, real estate trusts, loans and mortgages	675,680	551,970
f. Total long term investments	\$ 1,835,333	\$ 1,929,892
3. Other Assets		
a. Collateral on securities lending	\$ 141,334	\$ 132,467
b. Furniture, fixtures and equipment, net	419	419
c. Note receivable - City of Houston	300,000	300,000
d. Accrued interest on note receivable	69,894	52,343
e. Total other assets	\$ 511,647	\$ 485,229
4. Total Assets	\$ 2,458,527	\$ 2,531,199
B. LIABILITIES		
1. Current Liabilities		
a. Amounts due on asset purchases	\$ 51,158	\$ 49,930
b. Accrued liabilities	4,002	4,204
c. Collateral on securities lending	141,334	132,467
2. Total Liabilities	196,494	186,601
3. Net Assets Held in Trust	\$ 2,262,033	\$ 2,344,597
C. ASSET ALLOCATION FOR CASH & LONG TERM INVESTMENTS		
1. Cash	0.0%	1.0%
2. Fixed Income	18.6%	17.3%
3. Real Assets	18.9%	15.2%
4. Domestic Equities	23.5%	29.7%
5. International Equities	20.0%	21.9%
6. Alternative Investments	<u>19.0%</u>	<u>14.9%</u>
7. Total	100.0%	100.0%

Note: Dollar amounts in \$000
Columns may not add due to rounding

Reconciliation of Plan Net Assets

	Year Ending	
	June 30, 2008 (1)	June 30, 2007 (2)
1. Market value of assets at beginning of year	\$ 2,344,597	\$ 2,052,296
2. Revenue for the year		
a. Contributions		
i. Member contributions	\$ 21,176	\$ 20,966
ii. Employer contributions (see note)	73,272	70,265
iii. Total	\$ 94,448	\$ 91,231
b. Net investment income		
i. Interest	\$ 13,453	\$ 15,923
ii. Dividends	14,381	15,275
iii. Earnings from LP's and real estate trusts	13,424	25,035
iv. Net appreciation (depreciation) on investments	(64,877)	287,179
v. Interest income - City of Houston note receivable	29,206	27,846
vi. Net proceeds from lending securities	1,025	284
vii. Less investment expenses	(6,540)	(6,437)
viii. Other	634	1,185
c. Total revenue	\$ 95,154	\$ 457,521
3. Expenditures for the year		
a. Refunds	\$ 1,760	\$ 1,398
b. Benefit payments	169,483	157,716
c. Administrative and miscellaneous expenses	6,475	6,106
d. Total expenditures	\$ 177,718	\$ 165,220
4. Increase in net assets (Item 2c - Item 3d)	\$ (82,564)	\$ 292,301
5. Market value of assets at end of year (Item 1 + Item 4)	\$ 2,262,033	\$ 2,344,597

Note: Dollar amounts in \$000

Employer contribution does not include amounts contributed to the replacement benefit plan.

Calculation of Excess Investment Income

Item (1)	Year Ending June 30,				
	2008 (2)	2007 (3)	2006 (4)	2005 (5)	2004 (6)
1. Market value of assets at beginning of year	\$ 2,344,597	\$ 2,052,296	\$ 1,824,852	\$ 1,418,725	\$ 1,266,190
2. Net external cash flow during the year	(76,795)	(67,883)	(66,492)	210,263	(70,340)
3. Market value of assets at end of year	2,262,033	2,344,597	2,052,296	1,824,852	1,418,725
4. Actual investment income during the year based on market value: (3) - (2) - (1)	\$ (5,769)	\$ 360,184	\$ 293,936	\$ 195,864	\$ 222,875
5. Assumed earnings rate	8.50%	8.50%	8.50%	8.50%	8.50%
6. Expected earnings for the year on:					
a. Market value of assets at beginning of year	199,291	174,445	155,112	120,592	107,626
b. Net external cash flow	(3,197)	(2,826)	(2,768)	8,754	(2,928)
c. Total: (a) + (b)	196,094	171,619	152,344	129,346	104,698
7. Excess investment income for the year: (4) - (6)	\$ (201,863)	\$ 188,565	\$ 141,592	\$ 66,518	\$ 118,177

Note: Dollar amounts in \$000

Development of Actuarial Value of Assets

	July 1, 2008 <u>(1)</u>	July 1, 2007 <u>(2)</u>
1. Excess (Shortfall) of invested income for current and previous four years		
a. Current year	\$ (201,863)	\$ 188,565
b. Current year - 1	188,565	141,592
c. Current year - 2	141,592	66,518
d. Current year - 3	66,518	118,177
e. Current year - 4	<u>118,177</u>	<u>(77,263)</u>
f. Total for five years	\$ 312,990	\$ 437,589
2. Deferral of excess (shortfall) of invested income		
a. Current year (80%/80%)	\$ (161,490)	\$ 150,852
b. Current year - 1 (60%/0%) ¹	113,139	0
c. Current year - 2 (0%/0%) ¹	0	0
d. Current year - 3 (0%/0%) ¹	0	0
e. Current year - 4 (0%/0%) ¹	<u>0</u>	<u>0</u>
f. Total deferred for year	\$ (48,351)	\$ 150,852
3. Market value of assets at end of year	\$ 2,262,033	\$ 2,344,597
4. Actuarial value of assets at end of year: (3) - (2f)	\$ 2,310,384	\$ 2,193,745

¹ The Fourth Amendment recognized the deferred gains prior to FY2007 as of July 1, 2007.

Estimation of Dollar-Weighted Investment Return

Item (1)	Market Value (2)	Actuarial Value (3)
1. Assets as of July 1, 2007 (A)	\$ 2,344,597	\$ 2,193,745
2. Contributions during FY08	94,448	94,448
3. Benefit payments made during FY08	169,483	169,483
4. Refunds of contributions during FY08	1,760	1,760
5. Expenses during FY08	6,475	6,475
6. Investment return during FY08	706	199,909
7. Assets as of July 1, 2008 (B): (1 + 2 - 3 - 4 - 5 + 6)	2,262,033	2,310,384
8. Approximate rate of return on average invested assets		
a. Net investment income (6 - 5 = I)	(5,769)	193,434
b. Estimated return based on $(2I/(A + B - I))$	-0.25%	8.97%

Note: Dollar amounts in \$000

Investment Experience Gain or Loss

Item (1)	Valuation as of 6/30/2008 (2)	Valuation as of 6/30/2007 (3)
1. Actuarial assets, prior valuation	\$ 2,193,745	\$ 1,867,293
2. Total contributions since prior valuation	\$ 94,448	\$ 91,231
3. Benefits and refunds since prior valuation	\$ (171,243)	\$ (159,114)
4. Assumed net investment income at 8.5%		
a. Beginning assets	\$ 186,468	\$ 158,720
b. Contributions	3,932	3,798
c. Benefits and refunds paid	(7,129)	(6,624)
d. Total	\$ 183,271	\$ 155,894
5. Expected actuarial assets (Sum of Items 1 through 4)	\$ 2,300,221	\$ 1,955,304
6. Actual actuarial assets, this valuation	\$ 2,310,384	\$ 2,193,745
7. Early recognition of deferred investment gains	\$ 0	\$ 135,198
8. Asset gain (loss) since prior valuation (Item 6 - Item 5 - Item 7)	\$ 10,163	\$ 103,243

Note: Dollar amounts in \$000

History of Investment Returns

For Fiscal Year Ending (1)	Market Value ¹ (2)	Actuarial Value (3)
June 30, 2000	22.10%	13.00%
June 30, 2001	(4.56%)	8.97%
June 30, 2002	(7.99%)	3.64%
June 30, 2003	2.34%	1.69%
June 30, 2004	18.10%	4.16%
June 30, 2005	12.85%	4.12%
June 30, 2006	16.41%	8.95%
June 30, 2007	17.85%	21.51%
June 30, 2008	(0.25%)	8.97%
Average Return - last 5 years	12.77%	9.37%
Average Return - last 9 years	8.01%	8.19%

¹ Dollar-weighted return.

Historical Solvency Test

Valuation Date	Aggregated Accrued Liabilities for				Actuarial Value of Assets	by Reported Assets		
	Active Members Contributions	Retirees Beneficiaries and Vested Terminations ¹	Members (City Financed Portion)			(5)/(2)	[(5)-(2)]/(3)	[(5)-(2)-(3)]/
		(3)						(4)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
July 1, 1991	\$ 32,606	\$ 289,174	\$ 366,542	\$ 558,144	100.0%	100.0%	64%	
July 1, 1992	32,850	317,849	414,600	608,524	100.0%	100.0%	62%	
July 1, 1993	32,866	369,561	437,894	660,637	100.0%	100.0%	59%	
July 1, 1994	32,410	384,100	470,189	713,696	100.0%	100.0%	63%	
July 1, 1995	31,130	420,830	511,752	770,189	100.0%	100.0%	62%	
July 1, 1996	45,819	438,486	558,154	857,332	100.0%	100.0%	67%	
July 1, 1998	34,781	502,335	703,025	1,095,617	100.0%	100.0%	79%	
July 1, 1999	33,985	599,270	706,678	1,222,240	100.0%	100.0%	83%	
July 1, 2000	38,292	646,611	824,470	1,376,020	100.0%	100.0%	84%	
July 1, 2001	36,449	804,901	1,114,456	1,490,179	100.0%	100.0%	58%	
July 1, 2002	35,888	893,568	1,585,733	1,519,717	100.0%	100.0%	37%	
July 1, 2003	44,388	1,115,801	2,118,063	1,510,264	100.0%	100.0%	17%	
July 1, 2004	62,062	1,355,157	1,216,599	1,501,235	100.0%	100.0%	7%	
July 1, 2005	48,150	1,577,345	1,099,777	1,777,656	100.0%	100.0%	14%	
July 1, 2006	58,043	1,729,863	1,106,389	1,867,293	100.0%	100.0%	7%	
July 1, 2007	69,544	1,824,992	1,234,178	2,193,745	100.0%	100.0%	24%	
July 1, 2008	81,182	1,904,333	1,310,855	2,310,384	100.0%	100.0%	25%	

Note: Dollar amounts in \$000

¹ Column (3) included AAL for DROP participants until 2003, now in Column (4)

Schedule of Funding Progress

Date	Actuarial Value of Assets (AVA)	Actuarial Accrued Liability (AAL)	Unfunded Actuarial		Annual Payroll	UAAL as % of Payroll (4)/(6)
			Accrued Liability (UAAL) (3) - (2)	Funded Ratio (2)/(3)		
(1)	(2)	(3)	(4)	(5)	(6)	(7)
July 1, 1992	\$ 608,524	\$ 765,299	\$ 156,775	79.5%	\$ 314,686	49.8%
July 1, 1993	660,637	840,321	179,684	78.6%	340,249	52.8%
July 1, 1994	713,696	886,699	173,003	80.5%	366,561	47.2%
July 1, 1995	770,189	963,712	193,523	79.9%	378,511	51.1%
July 1, 1996	857,332	1,042,459	185,127	82.2%	367,610	50.4%
July 1, 1998	1,095,617	1,240,141	144,524	88.3%	397,698	36.3%
July 1, 1999	1,222,240	1,339,933	117,693	91.2%	407,733	28.9%
July 1, 2000	1,376,020	1,509,373	133,353	91.2%	432,604	30.8%
July 1, 2001	1,490,179	1,955,806	465,627	76.2%	418,234	111.3%
July 1, 2002	1,519,717	2,515,189	995,472	60.4%	399,794	249.0%
July 1, 2003	1,510,264	3,278,251	1,767,987	46.1%	390,314	453.0%
July 1, 2004	1,501,235	2,633,817	1,132,582	57.0%	366,190	309.3%
July 1, 2005	1,777,656	2,725,272	947,616	65.2%	404,565	234.2%
July 1, 2006	1,867,293	2,894,295	1,027,002	64.5%	422,496	243.1%
July 1, 2007	2,193,745	3,128,713	934,968	70.1%	448,925	208.3%
July 1, 2008	2,310,384	3,296,370	985,986	70.1%	483,815	203.8%

Note: Dollar amounts in \$000

Historical City Contribution Rates

Valuation Date	Calculated Contribution Rate ¹	Time Period for Contribution Rate	Actual Contribution Rate
(1)	(2)	(3)	(4)
July 1, 1987	5.83%	January 1, 1988 through December 31, 1988	5.15%
July 1, 1988	6.27	January 1, 1989 through December 31, 1989	5.15
July 1, 1989	6.88	January 1, 1990 through December 31, 1990	6.27
July 1, 1990	6.23	January 1, 1991 through December 31, 1991	6.27
July 1, 1991	8.77	January 1, 1992 through June 30, 1993	6.27
July 1, 1992	9.11	July 1, 1993 through June 30, 1994	9.11
July 1, 1993	9.30	July 1, 1994 through June 30, 1995	9.30
July 1, 1994	8.80	July 1, 1995 through June 30, 1996	8.80
July 1, 1995	9.20	July 1, 1996 through June 30, 1997	9.20
July 1, 1996	9.10	July 1, 1997 through June 30, 1998	9.10
		July 1, 1998 through June 30, 1999	9.10
July 1, 1998	9.30	July 1, 1999 through June 30, 2000	9.30
July 1, 1999	9.80	July 1, 2000 through June 30, 2001	10.00
July 1, 2000	9.50	July 1, 2001 through June 30, 2002	10.00
July 1, 2001	17.70	July 1, 2002 through June 30, 2003	10.00
July 1, 2002	31.80	July 1, 2003 through June 30, 2004	14.70
July 1, 2003	52.89	July 1, 2004 through June 30, 2005	92.55 ^{2,3}
July 1, 2004	29.43	July 1, 2005 through June 30, 2006	15.49 ³
July 1, 2005	24.10	July 1, 2006 through June 30, 2007	15.89 ³
July 1, 2006	24.63	July 1, 2007 through June 30, 2008	15.52 ⁴
July 1, 2007	19.47	July 1, 2008 through June 30, 2009	N/A
July 1, 2008	19.20	July 1, 2009 through June 30, 2010	N/A

¹ Rate determined by the actuarial valuation is for the fiscal year beginning on the July 1st next following the valuation date.

² Includes \$300 million note.

³ As pursuant to the three year funding schedule from the 2004 Meet and Confer agreement.

⁴ As pursuant to the three year funding schedule from the Fourth Amendment.

Historical Active Participant Data

Valuation Date	Active Count	Average Age	Average Svc	Covered Payroll	Average Salary	Percent Changes
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1988	11,344	N/A	N/A	\$227,900	\$20,090	1.9%
1989	11,356	N/A	N/A	\$235,400	\$20,729	3.2%
1990	12,037	40.0	N/A	\$258,556	\$21,480	3.6%
1991	12,488	40.3	N/A	\$284,914	\$22,815	6.2%
1992	12,913	40.5	N/A	\$314,686	\$24,370	6.8%
1993	13,112	40.9	N/A	\$340,249	\$25,949	6.5%
1994	14,027	40.9	N/A	\$366,561	\$26,133	0.7%
1995	14,364	41.3	N/A	\$378,511	\$26,351	0.8%
1996	14,067	41.8	N/A	\$367,610	\$26,133	(0.8%)
1998 ¹	13,764	42.8	9.8	\$394,919	\$28,692	9.8%
1999 ¹	13,286	42.9	9.8	\$396,617	\$29,852	4.0%
2000 ¹	13,126	43.7	10.3	\$421,591	\$32,119	7.6%
2001 ¹	12,928	43.9	10.3	\$413,021	\$31,948	(0.5%)
2002	12,527	44.7	11.0	\$399,794	\$31,915	(0.1%)
2003	12,120	45.2	11.2	\$390,314	\$32,204	0.9%
2004	11,856	45.1	10.3	\$366,190	\$30,886	(4.1%)
2005 ²	11,974	44.8	9.6	\$404,565	\$33,787	9.4%
2006	12,145	44.8	9.3	\$422,496	\$34,788	3.0%
2007	12,376	45.2	9.3	\$448,925	\$36,274	4.3%
2008	12,653	45.2	9.3	\$483,815	\$38,237	5.4%

Note: Dollar amounts in \$000

¹ Excludes DROP participants

² Beginning with the 2005 valuation, a change in methodology now annualizes payroll for new entrants. If the methodology had not been changed, the covered payroll for 2005 would have been \$376,208,345 and the average payroll would have been \$31,419.

Retirees, Beneficiaries, and Disabled Participants Added to and Removed from Rolls

Valuation July 1, (1)	Added to Rolls		Removed from Rolls		Rolls-End of Year		% Increase in Annual Allowances (8)	Average Annual Allowances (9)
	Number (2)	Annual Allowances (3)	Number (4)	Annual Allowances (5)	Number (6)	Annual Allowances (7)		
1994	306	\$ 2,474	227	\$ 1,593	4,268	\$ 33,971	4.8%	\$ 7,959
1995	393	3,044	220	1,307	4,441	36,482	7.4%	8,215
1996	416	3,119	239	1,438	4,618	38,815	6.4%	8,405
1998	693	5,840	441	3,212	4,870	43,394	11.8%	8,910
1999	432	2,131	303	1,515	4,999	46,732	7.7%	9,348
2000	360	3,412	255	1,380	5,104	49,970	6.9%	9,790
2001	652	8,937	299	1,030	5,457	57,877	15.8%	10,606
2002	777	15,061	306	2,476	5,928	72,256	24.8%	12,189
2003	598	11,497	311	1,873	6,215	84,519	17.0%	13,599
2004	942	25,189	279	2,624	6,878	107,084	26.7%	15,569
2005	861	18,054	216	1,926	7,523	123,212	15.1%	16,378
2006	654	14,722	397	2,246	7,780	135,688	10.1%	17,441
2007	440	10,280	249	3,007	7,971	142,961	5.4%	17,935
2008	464	11,052	280	3,420	8,155	150,592	5.3%	18,466

Note: Dollar amounts in \$000

Membership Data

	July 1, 2008 (1)	July 1, 2007 (2)	July 1, 2006 (3)
1. Active members			
a. Number	12,653	12,376	12,145
b. Number vested	7,234	7,374	7,524
c. Total payroll	\$ 483,815,000	\$ 448,925,000	\$ 422,496,000
d. Average salary	38,237	36,274	34,788
e. Average age	45.2	45.2	44.8
f. Average service	9.3	9.3	9.3
2. Inactive participants			
a. Vested	2,931	2,922	2,786
b. Total annual benefits (deferred)	\$ 19,810,841	\$ 18,906,765	\$ 16,531,225
c. Average annual benefit	6,759	6,470	5,934
d. NonVested	2,799	2,491	1,849
3. Service retirees			
a. Number	6,186	6,017	5,847
b. Total annual benefits	\$ 131,764,882	\$ 125,245,967	\$ 119,286,669
c. Average annual benefit	21,300	20,815	20,401
d. Average age	66.7	66.3	65.9
4. Disabled retirees			
a. Number	428	446	452
b. Total annual benefits	\$ 3,647,751	\$ 3,700,152	\$ 3,658,166
c. Average annual benefit	8,523	8,296	8,093
d. Average age	62.2	61.9	61.3
5. Beneficiaries and spouses			
a. Number	1,541	1,508	1,481
b. Total annual benefits	\$ 15,179,749	\$ 14,014,497	\$ 12,742,777
c. Average annual benefit	9,851	9,293	8,604
d. Average age	68.5	68.7	68.4

Distribution of Group A Active Members by Age and by Years of Service

Attained Age	0 No. & Avg. Comp.	1 No. & Avg. Comp.	2 No. & Avg. Comp.	3 No. & Avg. Comp.	4 No. & Avg. Comp.	5-9 No. & Avg. Comp.	10-14 No. & Avg. Comp.	15-19 No. & Avg. Comp.	20-24 No. & Avg. Comp.	25-29 No. & Avg. Comp.	30-34 No. & Avg. Comp.	35 & Over No. & Avg. Comp.	Total No. & Avg. Comp.
Under 25	105 \$24,258	80 \$25,031	53 \$25,657	42 \$25,215	3 \$25,665	3 \$33,121							286 \$24,982
25-29	178 \$29,414	189 \$30,945	179 \$31,709	105 \$31,387	43 \$29,301	84 \$29,853	2 \$25,762						780 \$30,609
30-34	115 \$30,941	173 \$32,704	146 \$32,284	121 \$33,180	74 \$35,056	160 \$35,489	29 \$35,584						818 \$33,311
35-39	115 \$33,232	165 \$34,353	143 \$37,436	134 \$36,882	71 \$34,641	249 \$36,364	113 \$41,137	57 \$38,292	1 \$43,861				1,048 \$36,426
40-44	69 \$32,549	151 \$36,115	130 \$38,407	138 \$37,998	84 \$35,907	252 \$38,259	171 \$42,438	169 \$43,788	48 \$38,698	1 \$33,500			1,213 \$38,864
45-49	87 \$32,677	159 \$35,820	138 \$35,197	124 \$38,461	91 \$42,606	332 \$38,287	245 \$42,773	248 \$43,692	152 \$44,804	138 \$43,478	2 \$32,493		1,716 \$40,177
50-54	59 \$38,683	115 \$33,674	125 \$38,719	125 \$38,760	79 \$40,091	275 \$37,603	236 \$41,582	264 \$48,601	141 \$48,954	139 \$49,385	21 \$62,718		1,579 \$42,480
55-59	30 \$46,244	85 \$38,265	80 \$39,834	108 \$41,154	64 \$39,696	213 \$41,355	211 \$46,928	193 \$47,599	104 \$50,689	84 \$45,278	28 \$56,620	2 \$59,486	1,202 \$44,499
60-64	16 \$50,096	48 \$45,534	46 \$45,290	61 \$43,219	42 \$42,987	141 \$41,751	137 \$46,158	99 \$48,826	52 \$57,509	44 \$56,750	12 \$55,963	7 \$67,262	705 \$47,073
65 & Over	5 \$32,452	9 \$66,284	12 \$54,735	16 \$37,630	13 \$37,598	57 \$42,617	62 \$42,489	32 \$51,145	13 \$49,813	8 \$52,203	2 \$76,718	6 \$52,532	235 \$45,704
Total	783 \$31,915	1,175 \$34,266	1,052 \$35,855	974 \$36,810	564 \$37,741	1,766 \$38,028	1,206 \$43,235	1,062 \$46,051	511 \$47,992	414 \$47,381	65 \$58,345	15 \$60,333	9,587 \$39,340
Average:		Age: Service:	45.31 8.67		Number of participants:		Fully vested: Not Vested:	5,039 4,548		Males: Females:	5,312 4,275		

Distribution of Group B Active Members by Age and by Years of Service

Attained Age	0 No. & Avg. <u>Comp.</u>	1 No. & Avg. <u>Comp.</u>	2 No. & Avg. <u>Comp.</u>	3 No. & Avg. <u>Comp.</u>	4 No. & Avg. <u>Comp.</u>	5-9 No. & Avg. <u>Comp.</u>	10-14 No. & Avg. <u>Comp.</u>	15-19 No. & Avg. <u>Comp.</u>	20-24 No. & Avg. <u>Comp.</u>	25-29 No. & Avg. <u>Comp.</u>	30-34 No. & Avg. <u>Comp.</u>	35 & Over No. & Avg. <u>Comp.</u>	Total No. & Avg. <u>Comp.</u>
Under 25													
25-29						6	2						8
						\$32,216	\$34,617						\$32,816
30-34						27	53						80
						\$30,191	\$30,481						\$30,383
35-39						49	160	43					252
						\$31,421	\$34,389	\$35,524					\$34,005
40-44						38	173	164	32				407
						\$31,402	\$34,523	\$36,758	\$34,706				\$35,147
45-49						37	138	154	68	54			451
						\$34,203	\$34,888	\$36,130	\$35,869	\$33,673			\$35,258
50-54						34	145	153	56	41	5		434
						\$35,222	\$36,121	\$38,271	\$40,352	\$40,171	\$42,400		\$37,810
55-59						25	124	116	40	19	3		327
						\$39,417	\$34,509	\$36,382	\$38,808	\$37,151	\$40,040		\$36,279
60-64						13	62	56	25	17	4	1	178
						\$37,292	\$38,229	\$37,891	\$45,300	\$45,322	\$55,199	\$28,812	\$40,053
65 & Over						1	24	21	6	6			58
						\$21,616	\$35,465	\$35,086	\$46,581	\$48,138			\$37,550
Total						230	881	707	227	137	12	1	2,195
						\$33,462	\$34,860	\$36,852	\$38,651	\$38,179	\$46,076	\$28,812	\$36,013
Average:	Age:	48.53	Number of participants:		Fully vested:	2,195	Males:	1,105					
	Service:	15.86			Not Vested:	0	Females:	1,090					

Distribution of Group D Active Members by Age and by Years of Service

Attained Age	0 No. & Avg. <u>Comp.</u>	1 No. & Avg. <u>Comp.</u>	2 No. & Avg. <u>Comp.</u>	3 No. & Avg. <u>Comp.</u>	4 No. & Avg. <u>Comp.</u>	5-9 No. & Avg. <u>Comp.</u>	10-14 No. & Avg. <u>Comp.</u>	15-19 No. & Avg. <u>Comp.</u>	20-24 No. & Avg. <u>Comp.</u>	25-29 No. & Avg. <u>Comp.</u>	30-34 No. & Avg. <u>Comp.</u>	35 & Over No. & Avg. <u>Comp.</u>	Total No. & Avg. <u>Comp.</u>
Under 25	139 \$24,634												139 \$24,634
25-29	178 \$28,059												178 \$28,059
30-34	118 \$34,667												118 \$34,667
35-39	99 \$31,034												99 \$31,034
40-44	104 \$32,532												104 \$32,532
45-49	96 \$35,234												96 \$35,234
50-54	65 \$36,718												65 \$36,718
55-59	46 \$40,853												46 \$40,853
60-64	14 \$48,406												14 \$48,406
65 & Over	2 \$41,745												2 \$41,745
Total	871 \$31,703												871 \$31,703
Average:		Age:	35.93	Number of participants:				Fully vested:	-	Males:	474		
		Service:	0.26					Not Vested:	871	Females:	397		

Distribution of All Active Members by Age and by Years of Service All Employees

Attained Age	0 No. & Avg. Comp.	1 No. & Avg. Comp.	2 No. & Avg. Comp.	3 No. & Avg. Comp.	4 No. & Avg. Comp.	5-9 No. & Avg. Comp.	10-14 No. & Avg. Comp.	15-19 No. & Avg. Comp.	20-24 No. & Avg. Comp.	25-29 No. & Avg. Comp.	30-34 No. & Avg. Comp.	35 & Over No. & Avg. Comp.	Total No. & Avg. Comp.
Under 25	244 \$24,472	80 \$25,031	53 \$25,657	42 \$25,215	3 \$25,665	3 \$33,121							425 \$24,868
25-29	356 \$28,737	189 \$30,945	179 \$31,709	105 \$31,387	43 \$29,301	90 \$30,011	4 \$30,190						966 \$30,158
30-34	233 \$32,828	173 \$32,704	146 \$32,284	121 \$33,180	74 \$35,056	187 \$34,724	82 \$32,286						1,016 \$33,238
35-39	214 \$32,215	165 \$34,353	143 \$37,436	134 \$36,882	71 \$34,641	298 \$35,551	273 \$37,182	100 \$37,102	1 \$43,861				1,399 \$35,609
40-44	173 \$32,539	151 \$36,115	130 \$38,407	138 \$37,998	84 \$35,907	290 \$37,360	344 \$38,458	333 \$40,326	80 \$37,101	1 \$33,500			1,724 \$37,604
45-49	183 \$34,018	159 \$35,820	138 \$35,197	124 \$38,461	91 \$42,606	369 \$37,877	383 \$39,932	402 \$40,795	220 \$42,042	192 \$40,720	2 \$32,493		2,263 \$38,987
50-54	124 \$37,653	115 \$33,674	125 \$38,719	125 \$38,760	79 \$40,091	309 \$37,341	381 \$39,504	417 \$44,811	197 \$46,509	180 \$47,286	26 \$58,811		2,078 \$41,324
55-59	76 \$42,981	85 \$38,265	80 \$39,834	108 \$41,154	64 \$39,696	238 \$41,152	335 \$42,331	309 \$43,388	144 \$47,389	103 \$43,779	31 \$55,016	2 \$59,486	1,575 \$42,686
60-64	30 \$49,307	48 \$45,534	46 \$45,290	61 \$43,219	42 \$42,987	154 \$41,375	199 \$43,688	155 \$44,876	77 \$53,545	61 \$53,565	16 \$55,772	8 \$62,456	897 \$45,701
65 & Over	7 \$35,107	9 \$66,284	12 \$54,735	16 \$37,630	13 \$37,598	58 \$42,255	86 \$40,529	53 \$44,782	19 \$48,792	14 \$50,461	2 \$76,718	6 \$52,532	295 \$44,074
Total	1,654 \$31,804	1,175 \$34,266	1,052 \$35,855	974 \$36,810	564 \$37,741	1,996 \$37,502	2,087 \$39,700	1,769 \$42,375	738 \$45,119	551 \$45,093	77 \$56,433	16 \$58,363	12,653 \$38,237
Average:		Age: Service:	45.22 9.34		Number of participants:		Fully vested: Not Vested:	7,234 5,419		Males: Females:	6,417 6,236		

Summary of Actuarial Assumptions and Methods

The following methods and assumptions were used in preparing the July 1, 2008, actuarial valuation. These assumptions were adopted by the Board effective for the July 1, 2004 valuation.

1. Valuation Date

The valuation date is July 1st of each plan year. This is the date as of which the actuarial present value of future benefits and the actuarial value of assets are determined.

2. Actuarial Cost Method

The actuarial valuation uses the Entry Age Normal actuarial cost method. Under this method, the employer contribution rate is the sum of (i) the employer normal cost rate, and (ii) a rate that will amortize the unfunded actuarial liability.

- a. The valuation is prepared on the projected benefit basis, under which the present value, at the investment return rate assumed to be earned in the future (currently 8.5 percent), of each participant's expected benefit payable at retirement or death is determined, based on his/her age, service, sex and compensation. The calculations take into account the probability of a participant's death or termination of employment prior to becoming eligible for a benefit, as well as the possibility of his/her terminating with a service, disability, or survivor's benefit. Future salary increases are also anticipated. The present value of the expected benefits payable on account of the active participants is added to the present value of the expected future payments to retired participants and beneficiaries to obtain the present value of all expected benefits payable from the Plan on account of the present group of participants and beneficiaries.
- b. The employer contributions required to support the benefits of the Plan are determined using a level funding approach, and consist of a normal contribution and an accrued liability contribution.
- c. The normal contribution is determined using the "entry age normal" method. Under this method, a calculation is made to determine the average uniform and constant percentage rate of employer contribution which, if applied to the compensation of each new participant during the entire period of his/her anticipated covered service, would be required to meet the cost of all benefits payable on his behalf based on the benefits provisions for new employees hired on or after January 1, 2008.

- d. The unfunded accrued liability contributions are determined by subtracting the actuarial value of assets from the actuarial accrued liability and amortizing the result over 30 years from the valuation date.

The contribution rate determined by this valuation will not be effective until one year later and the determination of the rate reflects this deferral. It is assumed that there will be no change in the employer normal cost rate due to the deferral, and it is assumed that payments are made uniformly throughout the year.

3. Actuarial Value of Assets

The actuarial value of assets is based on the market value of assets with a five-year phase-in of actual investment return in excess of (less than) expected investment income. Expected investment income is determined using the assumed investment return rate and the market value of assets (adjusted for receipts and disbursements during the year). The returns are computed net of administrative and investment expenses.

4. Economic Assumptions

- a. Investment return: 8.50% per year, compounded annually, composed of an assumed 3.00% inflation rate and a 5.50% net real rate of return. This rate represents the assumed return, net of all investment and administrative expenses.
- b. Salary increase rate: A service-related component, plus a 3.00% inflation component, plus a 0.0% general increase, as follows:

Years of Service	Service-related Component	Total Annual Rate of Increase Including 3.00% Inflation Component and 0.0% General Increase Rate
(1)	(2)	(3)
0	2.50%	5.50%
1	2.00	5.00
2	1.75	4.75
3	1.25	4.25
4	1.00	4.00
5	1.00	4.00
6	1.00	4.00
7	1.00	4.00
8	0.50	3.50
9	0.50	3.50
10 or more	0.00	3.00

- c. Payroll growth rate: In the amortization of the unfunded actuarial accrued liability, payroll is assumed to increase 3.00% per year. This increase rate is solely due to the effect of inflation on salaries, with no allowance for future membership growth.

5. Demographic Assumptions

a. Retirement Rates

	Expected Retirements per 100 Lives			
	Group A & B Members		Group D Members	
Age	Males	Females	Males	Females
(1)	(2)	(3)	(4)	(5)
50	20	13	5	5
51-54	14	13	5	5
55	14	15	6	6
56	14	15	7	7
57	14	15	8	8
58	14	15	9	9
59	14	15	10	10
60	16	16	12	12
61	16	18	15	15
62	30	30	35	35
63	30	25	25	25
64	22	25	22	25
65	28	25	28	25
66-69	22	19	22	19
70	100	100	100	100

b. DROP Participation

90% of eligible members are assumed to enter DROP at first eligibility.

c. DROP Entry Date

Active members (not already in DROP) are assumed to take advantage of the DROP and enter when first eligible. For members who have already entered DROP, the actual DROP entry date supplied in the data is used.

d. DROP Interest Credit

4.25% per year

e. Mortality rates (for active and retired members)

- Healthy males – Based on the 1994 Uninsured Pensioners Mortality Tables for males. Rates are set-forward one year.
- Healthy females - Based on the 1994 Uninsured Pensioners Mortality Tables for females. Rates are set-forward one year.
- Disabled males and females – 1965 Railroad Retirement Board Disabled Life Table. Rates are set-back one year for males and 5 years for females.

Sample rates are shown below:

Expected Deaths per 100 Lives				
Age	Healthy Males	Healthy Females	Disabled Males	Disabled Females
(1)	(2)	(3)	(6)	(7)
25	0.07	0.03	4.41	4.41
30	0.09	0.04	4.41	4.41
35	0.09	0.05	4.41	4.41
40	0.12	0.08	4.41	4.41
45	0.19	0.11	4.43	4.41
50	0.31	0.17	4.50	4.44
55	0.53	0.28	4.72	4.53
60	0.97	0.55	5.21	4.78
65	1.75	1.04	5.92	5.33
70	2.79	1.61	7.14	6.11
75	4.39	2.72	9.06	7.47
80	7.38	4.73	12.16	9.55

f. Termination Rates and Disability Rates

Termination rates (for causes other than death, disability or retirement):

Termination rates are a function of the member's age and service. Termination rates are not applied after a member becomes eligible for a retirement benefit. Rates at selected ages are shown below.

Probability of Decrement Due to Withdrawal – Male Members

Age	Years of Service										
	0	1	2	3	4	5	6	7	8	9	10+
20	0.3384	0.2667	0.2137	0.1759	0.1499	0.1290	0.1173	0.1177	0.1264	0.1350	0.1518
30	0.2555	0.2043	0.1644	0.1352	0.1147	0.0995	0.0895	0.0848	0.0839	0.0840	0.0876
40	0.1893	0.1506	0.1197	0.0971	0.0812	0.0703	0.0622	0.0554	0.0494	0.0445	0.0396
50	0.1483	0.1141	0.0873	0.0676	0.0540	0.0451	0.0390	0.0341	0.0297	0.0249	0.0191
60	0.1271	0.0931	0.0677	0.0471	0.0327	0.0239	0.0201	0.0209	0.0246	0.0246	0.0261

Probability of Decrement Due to Withdrawal – Female Members

Age	Years of Service										
	0	1	2	3	4	5	6	7	8	9	10+
20	0.2955	0.2470	0.2142	0.1877	0.1687	0.1515	0.1353	0.1251	0.1235	0.1286	0.1385
30	0.2288	0.1931	0.1638	0.1416	0.1251	0.1121	0.1013	0.0931	0.0875	0.0833	0.0795
40	0.1708	0.1423	0.1167	0.0990	0.0860	0.0769	0.0703	0.0640	0.0567	0.0478	0.0368
50	0.1302	0.1019	0.0824	0.0676	0.0579	0.0514	0.0466	0.0421	0.0367	0.0296	0.0207
60	0.1064	0.0705	0.0634	0.0481	0.0405	0.0348	0.0297	0.0270	0.0268	0.0281	0.0303

Rates of Decrement Due to Disability

Age	Males	Females
20	.00045	.00043
25	.00045	.00043
30	.00045	.00043
35	.00054	.00051
40	.00081	.00077
45	.00162	.00153
50	.00360	.00340
55	.00765	.00723
60	.01566	.01479

Rates of disability are reduced to zero once a member becomes eligible for retirement.

Service Connected Deaths and Disabilities assumed to be 10% of decrement

6. Other Assumptions

- a. Percent married: 70% of employees are assumed to be married. (No beneficiaries other than the spouse assumed)

- b. Age difference: Male members are assumed to be three years older than their spouses, and female members are assumed to be three years younger than their spouses.
- c. Percent electing annuity on death (when eligible): All of the spouses of vested, married participants are assumed to elect an annuity.
- d. Percent electing deferred termination benefit: Vested terminating members are assumed to elect a refund or a deferred benefit, whichever is more valuable at the time of termination.
- e. There will be no recoveries once disabled.
- f. No surviving spouse will remarry and there will be no children's benefit.
- g. Assumed age for commencement of deferred benefits: Members electing to receive a deferred benefit are assumed to commence receipt at the first age at which unreduced benefits are available.
- h. Administrative expenses: The assumed investment return rate represents the anticipated net return after payment of all investment and administrative expenses.
- i. Pay increase timing: Beginning of (fiscal) year. This is equivalent to assuming that reported pays represent amounts paid to members during the year ended on the valuation date.
- j. Decrement timing: Decrements of all types are assumed to occur mid-year.
- k. Eligibility testing: Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
- l. Decrement relativity: Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
- m. 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.
- n. Benefit Service: All members are assumed to accrue 1 year of service each year. Exact fractional service is used to determine the amount of benefit payable.

7. Participant Data

Participant data was supplied on electronic files. There were separate files for (i) active members, (ii) inactive members, and (ii) members and beneficiaries receiving benefits.

The data for active members included birth date, sex, most recent hire date, salary paid during last fiscal year, hours worked by the employee, and employee contribution amounts. For retired members and beneficiaries, the data included date of birth, sex, amount of monthly benefit, and date of retirement. Also included was the member's Group and for members participating in DROP, their account balances and monthly DROP income.

All healthy and disabled retirees are assumed to have 100% joint and survivor, prorated by the 70% marriage assumption and reflecting the 3 year spousal age differential. All non-children beneficiaries are assumed to have life only benefits and all children beneficiaries' annuities are assumed to stop at age 21.

Salary supplied for the current year was based on the earnings for the year preceding the valuation date. This salary was adjusted by the salary increase rate for one year. For members who worked less than 1900 hours but were not new entrants, the salary was annualized to 1900 hours.

In fiscal years when a 27th pay period occurs the individual pays for employees who were employed throughout the year will be adjusted by multiplying their reported pay by the ratio of 26/27. In years that have only 26 pay periods no adjustment would be needed.

Assumptions were made to correct for missing, bad, or inconsistent data. These had no material impact on the results presented.

8. Group Transfers

Beginning with the July 1, 2006 valuation it is assumed that 20% of the then current Group B members would transfer to Group A at the rate of 5% per year for the next four years. As of the July 1, 2008 valuation we still have two years of the assumption remaining and therefore we are assuming that 5% of the Group B members will transfer to Group A each year for the next two years, ultimately resulting in 10% of current Group B members transferring to Group A.

Summary of Plan Provisions

The provisions summarized in this section apply to persons who are members (active employees). Former members may have been covered under different plan provisions, depending on their dates of separation from service.

1. Covered Members

Any person who is a participant of Group A, under the original act.

Persons who became employees of the City of Houston after September 1, 1981 and prior to September 1, 1999, and elected officials of the City of Houston who assumed office after September 1, 1981 and prior to September 1, 1999, participate in Group B, but may make an irrevocable election to participate in Group A instead.

Persons who become employees of the City and persons who are elected as City officials after September 1, 1999 and prior to January 1, 2008 become members of Group A. Certain persons who were or became a Director of a City Department, Chief Financial Executive, or Executive Director of HMEPS on or after September 1, 1999 and prior to January 1, 2005 participate in Group C. Effective January 1, 2005, all Group C participation ceased and all Group C participants became Group A participants. Accruals earned by Group C participants prior to January 1, 2005 are retained, but all future accruals are based on the Group A formulas.

All future references to Group C participants in this appendix are intended to reflect this change in the Group C status.

Covered employees newly hired on or after January 1, 2008 will be members of Group D.

A former employee who is rehired on or after January 1, 2008 is a member of the group in which such employee participated at the time of his/her immediately preceding separation from service.

2. Monthly Final Average Salary (FAS)

The sum of the seventy-eight highest biweekly salaries paid to a member during his period of credited service, divided by thirty-six. Salary includes base pay, longevity pay, and any shift differential pay.

3. Credited Service

All services and work performed by an employee, including prior service. For members of Group A and former Group C, all services and work performed after September 1, 1943

must have been accompanied by corresponding contributions to HMEPS by the employee or legally authorized repayments must have been made.

Credited service for former participants in Group C means the number of years of eligible service after the executive official's effective date of participation in Group C. A former Group C member receives two times the number of actual years of credited service in Group C solely for the purpose of fulfilling the eligibility requirements in Group C.

4. Normal Retirement

- a. Eligibility Prior to January 1, 2005 (with 68 points as of January 1, 2005):

The earliest of:

age 62 and 5 years of Credited Service

5 years of Credited Service, and age plus years of Credited Service equal 70 or more

age 65 (Group C only)

On or after January 1, 2005 (less than 68 points as of January 1, 2005):

The earliest of:

age 62 and 5 years of Credited Service

5 years of Credited Service, and age plus years of Credited Service equal 75 or more with minimum age 50

For employees newly hired on or after January 1, 2008 (Group D):

Age 62 and 5 years of Credited Service

- b. Benefit Prior to January 1, 2005:

Group A: 3.25% of FAS for each of the first 10 years of Credited Service plus 3.50% for Credited Service greater than 10 years but less than 20 years plus 4.25% for FAS for each year of Credited Service greater than 20 years (excludes current DROP participants). Maximum benefit is 90% of FAS for all future retirees.

Group B: 1.75% of FAS for each of the first 10 years of Credited Service plus 2.00% of FAS for each year of Credited Service from 10 through 20, and 2.75% of FAS for each year of Credited Service over 20. Maximum benefit is 90% of FAS for all future retirees.

Group C: Double the rate for Group A

All accruals after January 1, 2005:

All accruals under the prior multipliers were frozen as of January 1, 2005 and the following benefit multipliers apply to service after that date:

Group A: 2.50% of FAS for each of the first 20 years of Credited Service plus 3.25% of FAS for each year Credited Service greater than 20 years. Maximum benefit is 90% of FAS for all future retirees.

Group B: 1.75% of FAS for each of the first 10 years of Credited Service plus 2.00% of FAS for each year of Credited Service from 10 through 20, and 2.50% of FAS for each year of Credited Service over 20. Maximum benefit is 90% of FAS for all future retirees.

Group D: 1.80% of FAS for each of the first 25 years of Credited Service, and 1.00% of FAS for each year of Credited Service over 25. Maximum benefit is 90% of FAS for all future retirees.

5. Vested Pension

a. Eligibility 5 years of Credited Service.

b. Benefit Group A and Group C: Either the accrued normal retirement benefit with payments beginning at the normal retirement eligibility date or a refund of employee contributions, if any, without interest.

Group B and Group D: Accrued normal retirement benefit payable at the normal retirement eligibility date.

If the actuarial present value of a pension is less than \$20,000, a terminated participant who is not eligible to begin receiving a pension may request an early lump sum distribution of the pension. Such early lump sum distribution is irrevocable. Credited Service associated therewith can be reinstated after reemployment and pursuant to the rules of the plan.

6. Withdrawal Benefit

If a nonvested member withdraws from service with less than 5 years, a refund of the member's contributions is made without interest, upon request.

7. Service-Connected Disability Retirement

- a. Eligibility Any age

- b. Benefit Group A: Accrued normal retirement benefit, but not less than 20% of final monthly salary at time of disability plus 1% of final monthly salary per year of Credited Service, to a maximum of 40% of final monthly salary.

Group B and Group D: Accrued normal retirement benefit, but not less than 20% of final monthly salary at time of disability.

8. Non-service-Connected Disability Retirement

- a. Eligibility 5 years of Credited Service.

- b. Benefit Accrued normal retirement benefit payable immediately.

9. Pre-retirement Survivor Benefits

A. Service-connected

- a. Eligibility Any age or Credited Service

- b. Benefit If there is a surviving spouse, 100% of FAS payable to the spouse. 10% of FAS is payable to each qualifying dependent to a maximum of 20% for all dependents. Surviving spouse's benefit will be reduced by the amount of dependent benefits. If no surviving spouse, dependent benefits are 50% of the amount a surviving spouse would have received for each dependent to a maximum of 100% for all dependents in the aggregate.

B. Non service-connected

- a. Eligibility 5 years of Credited Service

- b. Benefit Benefits for survivorship and terminated vested Group D members after January 1, 2008:

If there is a surviving spouse, 50% of accrued normal retirement benefit payable to the spouse plus 10% of accrued normal

retirement benefit to each qualifying dependent to a maximum of 20% for all dependents. If there is no surviving spouse, dependent benefits are doubled.

For all other Groups on or after August 1, 2001:

If there is a surviving spouse, 100% of accrued normal retirement benefit payable to the spouse and 10% of accrued normal retirement benefit to each qualifying dependent to a maximum of 20% for all dependents in the aggregate. The surviving spouse's benefit will be reduced by dependent benefits, if any. If there is no surviving spouse, each dependent will receive 50% of the benefit a surviving spouse would have received subject to a maximum of 100% of a surviving spouse's benefit for all dependents in the aggregate.

10. Postretirement Survivor Benefits

All Groups except Group D members:

If there is a surviving spouse, 100% of the retirement benefit the deceased retiree was receiving at the time of death payable to the spouse and 10% of that retirement benefit payable to each qualifying dependent to a maximum of 20% for all dependents. The surviving spouse's benefit will be reduced by dependent benefits, if any. If there is no surviving spouse, each dependent will receive 50% of the benefit a surviving spouse would have received subject to 100% of a surviving spouse's benefit for all dependents in the aggregate.

Group D members:

Life only to the retiree. Group D members may elect other options based on actuarial factors.

11. Benefit Adjustments

Before January 1, 2005:

Each year, effective February 1, monthly benefits will be increased 4.0%, not compounded, for all retirees and survivors whose benefit was effective on or before January 1 of the current year.

On or after January 1, 2005:

Each year, effective February 1, monthly benefits will be increased 3.0%, not compounded, for all retirees and survivors. This will

affect all members currently in payment status and members who enter payment status in the future. For members hired on or after January 1, 2005 future increases will be 2.0%, not compounded. However, pre-2005 retirees who are rehired will receive a 3% COLA on their subsequent benefit instead.

Group D Members:

None assumed. Group D members may elect an actuarially equivalent optional form of payment with a COLA feature.

12. Contribution Rates.

- a. Members 5% of salary only for Group A members. None for Group B or Group D members.
- b. City Beginning in 1993, the rate required to fund the Retirement Fund on an actuarial reserve basis. However, effective September 1, 1999, the minimum contribution rate is equal to the greater of 10% of covered payroll or twice the contribution rate a Group A member is required to make by statute. As negotiated in the meet and confer agreement, the city contributions will be \$69 million for FY2006, \$72 million for FY2007, \$75 million for FY2008, \$78.5 million for FY2009, \$83.5 million for FY2010, and \$88.5 million for FY2011.

13. Deferred Retirement Option

- a. Eligibility Participants (other than Group D) who are eligible to retire but who have not retired and who remain in service with the City may participate in the DROP.
- b. Monthly DROP
Credit An amount equal to the accrued normal retirement benefit as of the effective date of DROP participation. The Monthly DROP Credit is credited to a notional account (DROP Account) on the last calendar day each month.
- c. DROP Credits-
Interest Interest is credited to the DROP Account at the beginning of each day based on the DROP Account balance at the end of the previous day and posted monthly on the last calendar day of each month. Effective January 1, 2005, the annual interest rate effective

beginning January 1 each year is half of HMEPS' investment return percentage for the prior fiscal year, not less than 2.5% and not greater than 7.5%.

d. DROP Credits-

COLA On or after January 1, 2005:

The Monthly DROP Credit for participants who entered the DROP effective on or before January 1 of the then current year will be increased effective February 1 each year by 3.0%, not compounded.

The Monthly DROP Credit for participants who were first hired on or after January 1, 2005 who entered the DROP effective on or before January 1 of the then current year will be increased effective February 1 each year by 2.0%, not compounded.

e. DROP Account

Balance The sum of a participant's Monthly DROP (DROP Benefit) Credits, Monthly DROP Credit Adjustments, applicable interest, and employee contributions as applicable.

14. DROP Benefit Pay-out A terminated DROP participant may elect to:
- a. Receive the entire DROP Account Balance in a lump sum.
 - b. Receive the DROP Account Balance in periodic payments as approved by the Pension Board.
 - c. Receive a portion of the DROP Account balance in a lump sum and the remainder in periodic payments as approved by the Pension Board.
 - d. Receive a partial payment of not less than \$1,000, no more than once each six months.
 - e. Defer election of a payout option until a future date.
15. Post DROP Retirement The Final Pension is the accrued normal retirement benefit as of the effective date of DROP participation, increased with COLAs since DROP entry.

Changes in Plan Provisions Since Prior Year

None.