

Houston Police Officers Pension System

Actuarial Valuation Report as of July 1, 2004

February, 2005

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Summary of Key Results (\$000)

| | July 1, 2004 | July 1, 2003 |
|-------------------------------------------------------------------------------------------------|--------------------|--------------------|
| Actuarially Calculated City Contribution Rate | | |
| ■ Normal Cost (City Portion) ⁽¹⁾ | 16.7% | 18.9% |
| ■ Amortization of Unfunded Actuarial Accrued Liability (Surplus) ⁽¹⁾ | <u>14.5</u> | <u>9.6</u> |
| ■ Actuarially Calculated City Contribution Rate (effective the following July 1) ⁽¹⁾ | 31.2% | 28.5% |
| Summary of Assets | | |
| ■ Market Value | \$ 2,422,768 | \$ 2,018,299 |
| ■ Actuarial Value | 2,466,070 | 2,394,411 |
| Summary of Liabilities | | |
| ■ Actuarial Accrued Liability ⁽²⁾ | \$ 3,339,224 | \$ 2,874,738 |
| ■ Actuarial Value of Assets | <u>(2,466,070)</u> | <u>(2,394,411)</u> |
| ■ Unfunded Actuarial Accrued Liability (Surplus) ⁽²⁾ | 873,154 | 480,327 |
| Summary of Data | | |
| ■ Number of Participants Included in the Valuation | | |
| — Active participants enrolled in DROP | 1,784 | 1,664 |
| — Other active participants | 3,441 | 3,723 |
| — Inactive participants | <u>2,105</u> | <u>1,918</u> |
| — Total | 7,330 | 7,305 |
| ■ Annual Total Direct Pay for Active and DROP Participants Included in the Valuation | | |
| — Active participants enrolled in DROP ⁽²⁾ | \$ 132,243 | \$ 107,928 |
| — Other active participants ⁽²⁾ | <u>197,597</u> | <u>192,477</u> |
| — Total ⁽²⁾ | 329,840 | 300,405 |
| ■ Annual Benefits for Inactive Participants | 70,307 | 61,531 |

(1) Average for the year. See page 8 for details.

(2) Before changes in plan provisions effective at October 9, 2004.

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Summary of Assets as of July 1, 2004 (\$000)

| Investment Category | Market Value | |
|-----------------------------------|--------------|------------|
| | Amount | Percent |
| ■ Cash and Short-Term Investments | \$ 222,833 | 9.2% |
| ■ Fixed Income Investments | 423,282 | 17.5 |
| ■ Equity Securities | 1,556,154 | 64.3 |
| ■ Alternative Investments | 218,897 | 9.0 |
| ■ Other Investments | 40 | 0.0 |
| ■ Other Assets (Liabilities) | | |
| — Miscellaneous receivables | 37,418 | 1.5 |
| — Miscellaneous payables | (35,576) | (1.5) |
| — Other liabilities | <u>(280)</u> | <u>0.0</u> |
| — Net | 1,562 | 0.0 |
| ■ Total | 2,422,768 | 100.0 |

Change in Assets Since the Prior Valuation (\$000)

| | |
|--------------------------------------------------------|-----------------|
| ■ Market Value as of July 1, 2003 | \$ 2,018,299 |
| ■ Contributions and Disbursements | |
| — City contributions | 36,645 |
| — Employee contributions | 26,393 |
| — Benefit payments | (92,697) |
| — Contributions refunds | <u>(852)</u> |
| — Net | (30,511) |
| ■ Net Investment Return | 450,075 |
| ■ Administrative and Investment Expenses | <u>(15,095)</u> |
| ■ Market value as of July 1, 2004 | 2,422,768 |
| ■ Approximate Annual Rate of Return (Net of Expenses)* | 21.7% |

* Calculated using a dollar-weighted rate of return assuming all contributions and disbursements are made uniformly throughout the year.

Development of Actuarial Value of Assets (\$000)

Actuarial Investment Gain (Loss) for the Year

| | |
|-------------------------------------------------------|------------------|
| ■ Market Value of Assets as of July 1, 2003 | \$ 2,018,299 |
| ■ City Contributions | 36,645 |
| ■ Employee Contributions | 26,393 |
| ■ Benefit Payments and Contribution Refunds | (93,549) |
| ■ Miscellaneous Contributions and Disbursements | 0 |
| ■ Expected Interest at 8.5% | <u>170,285</u> |
| ■ Expected Market Value of Assets as of June 30, 2004 | 2,158,073 |
| ■ Actual Market Value of Assets as of June 30, 2004 | <u>2,422,768</u> |
| ■ Actuarial Investment Gain (Loss) | 264,695 |

Schedule of Actuarial Investment Gains (Losses)

| <u>Plan Year Ending</u> | <u>Initial Actuarial Gain (Loss)</u> | <u>Five-Year Amortization</u> | <u>Unrecognized Gain (Loss) as of July 1, 2004*</u> |
|-------------------------|--------------------------------------|-------------------------------|-----------------------------------------------------|
| June 30, 2004 | \$ 264,695 | \$ 52,939 | \$ 211,756 |
| June 30, 2003 | (87,230) | (17,446) | (52,338) |
| June 30, 2002 | (370,576) | (74,115) | (148,231) |
| June 30, 2001 | (272,437) | (54,487) | <u>(54,489)</u> |
| | | | (43,302) |

* Deferred for recognition in future years.

Actuarial Value of Assets

| | |
|------------------------------------------------|---------------|
| ■ Market Value as of July 1, 2004 | \$ 2,422,768 |
| ■ (Gain) Loss to be Recognized in Future Years | <u>43,302</u> |
| ■ Actuarial Value as of July 1, 2004 | 2,466,070 |

Unfunded Actuarial Accrued Liability (Surplus) (\$000)

| | July 1, 2004 | July 1, 2003 |
|-----------------------------------------------------------------|--------------------|--------------------|
| ■ Actuarial Present Value of Future Benefits | | |
| — Active participants enrolled in DROP | \$ 1,719,644 | \$ 1,350,926 |
| — Other active participants | 1,367,868 | 1,328,493 |
| — Vested terminated participants | 0 | 448 |
| — Retirees and beneficiaries | <u>995,841</u> | <u>837,642</u> |
| — Total | 4,083,353 | 3,517,509 |
| ■ Actuarial Present Value of Future Employee Contributions | (250,091) | (211,160) |
| ■ Actuarial Present Value of Future Normal Costs (City Portion) | <u>(494,038)</u> | <u>(431,611)</u> |
| ■ Actuarial Accrued Liability | 3,339,224 | 2,874,738 |
| ■ Actuarial Value of Assets | <u>(2,466,070)</u> | <u>(2,394,411)</u> |
| ■ Unfunded Actuarial Accrued Liability (Surplus) | 873,154* | 480,327 |

* Before changes in plan provisions effective October 9, 2004.

Change in Unfunded Actuarial Accrued Liability (Surplus) Since the Prior Valuation (\$000)

| | |
|---------------------------------------------------------------------------------------------------|-----------------|
| ■ Unfunded Actuarial Accrued Liability (Surplus) as of July 1, 2003 | \$ 480,327 |
| ■ Expected Change Due to Normal Operation | |
| — Normal Cost (City Portion) | 56,776 |
| — City Actuarially Determined Contribution | (73,299) |
| — Interest ⁽¹⁾ | 72,109 |
| — Recognition of Prior Asset Losses (Gains) | <u>121,055</u> |
| — Net Change | 176,641 |
| ■ Expected Change Due to City Funding Less Than Actuarial Rate | 38,180 |
| ■ Change Due to Actuarial Experience | |
| — Actuarial (Gain) Loss From Asset Sources | (52,939) |
| — Actuarial (Gain) Loss From Liability Sources Other Than Additional Pay Components | 206,137 |
| — Actuarial (Gain) Loss From Additional Pay Components ⁽²⁾ | <u>71,639</u> |
| — Net Change | 224,837 |
| ■ Change in Actuarial Assumptions and Methods | (46,831) |
| ■ Unfunded Actuarial Accrued Liability (Surplus) as of July 1, 2004 Before Plan Provision Changes | 873,154 |
| ■ Change in Plan Provisions | |
| — Change Due to Provisions Other Than Pay Definition | (162,783) |
| — Change Due to Change in Pay Definition ⁽³⁾ | <u>(27,640)</u> |
| — Net Change | (190,423) |
| ■ Change in DROP Assumptions Subsequent to Changes in Plan Provisions | <u>16,227</u> |
| ■ Unfunded Actuarial Accrued Liability (Surplus) as of July 1, 2004 After Plan Provision Changes | 698,958 |

(1) Excludes interest on the unrecognized investment losses

(2) Includes CMEPP, SOSP, and Weekend/Shift Differential

(3) Excludes CMEPP and SOSP

Historical Unfunded Actuarial Accrued Liability (Surplus) (\$000)

| Valuation Date | Actuarial Accrued Liability (AAL) | Actuarial Value of Assets (AVA) | AVA as a Percentage of AAL | Unfunded AAL (Surplus) | Covered Payroll | UAAL (Surplus) as a Percentage of Covered Payroll |
|----------------|-----------------------------------|---------------------------------|----------------------------|------------------------|-----------------|---------------------------------------------------|
| July 1, 1984 | \$ 507,883 | \$ 230,143 | 45% | \$ 277,740 | \$ 111,489 | 249% |
| July 1, 1986 | 454,067 | 420,487 | 93 | 33,580 | 125,963 | 27 |
| July 1, 1987 | 488,387 | 505,483 | 104 | (17,096) | 126,960 | (13) |
| July 1, 1988 | 524,894 | 516,177 | 98 | 8,717 | 121,667 | 7 |
| July 1, 1989 | 581,681 | 585,358 | 101 | (3,677) | 122,803 | (3) |
| July 1, 1990 | 663,278 | 676,684 | 102 | (13,406) | 126,665 | (11) |
| July 1, 1992 | 853,975 | 774,785 | 91 | 79,190 | 143,020 | 55 |
| July 1, 1993 | 936,674 | 857,535 | 92 | 79,139 | 159,321 | 50 |
| July 1, 1994 | 984,495 | 947,456 | 96 | 37,039 | 162,143 | 23 |
| July 1, 1995 | 1,000,423 | 1,038,256 | 104 | (37,833) | 174,761 | (22) |
| July 1, 1996 | 1,199,748 | 1,168,056 | 97 | 31,692 | 182,251 | 17 |
| July 1, 1997 | 1,258,217 | 1,329,570 | 106 | (71,353) | 187,134 | (38) |
| July 1, 1998 | 1,549,341 | 1,518,081 | 98 | 31,260 | 196,364 | 16 |
| July 1, 1999 | 1,773,829 | 1,746,312 | 98 | 27,517 | 246,569 | 11 |
| July 1, 2000 | 1,966,404 | 2,013,491 | 102 | (47,087) | 250,691 | (19) |
| July 1, 2001 | 2,306,427 | 2,226,307 | 97 | 80,120 | 264,226 | 30 |
| July 1, 2002 | 2,593,730 | 2,337,157 | 90 | 256,573 | 286,150 | 90 |
| July 1, 2003 | 2,874,738 | 2,394,411 | 83 | 480,327 | 300,405 | 160 |
| July 1, 2004 | 3,339,224 | 2,466,070 | 74 | 873,154 | 329,840 | 265 |

Historical Solvency Test (\$000)

Actuarial Accrued Liability for:

| Valuation Date | Actuarial Accrued Liability for: | | | Actuarial Value of Assets | Portion of Actuarial Accrued Liability Covered by Assets | | |
|----------------|----------------------------------|-----------------------------------------------|---------------------------------------------|---------------------------|----------------------------------------------------------|------|------|
| | Employee Contributions | Retirees, Beneficiaries, and Vested Deferreds | Active Participants (City-Financed Portion) | | (1) | (2) | (3) |
| | (1) | (2) | (3) | | (1) | (2) | (3) |
| July 1, 1989 | \$ 82,919 | \$ 222,585 | \$ 276,177 | \$ 585,358 | 100% | 100% | 100% |
| July 1, 1990 | 87,430 | 261,114 | 314,734 | 676,684 | 100 | 100 | 100 |
| July 1, 1991 | 98,099 | 338,914 | 416,962 | 774,785 | 100 | 100 | 81 |
| July 1, 1992 | 105,464 | 372,674 | 458,536 | 857,535 | 100 | 100 | 83 |
| July 1, 1993 | 114,279 | 401,989 | 468,227 | 947,456 | 100 | 100 | 92 |
| July 1, 1994 | 123,471 | 416,053 | 460,899 | 1,038,256 | 100 | 100 | 100 |
| July 1, 1995 | 91,687 | 764,518 | 343,543 | 1,168,056 | 100 | 100 | 91 |
| July 1, 1996 | 95,615 | 812,498 | 350,104 | 1,329,570 | 100 | 100 | 100 |
| July 1, 1998 | 99,298 | 1,017,723 | 432,320 | 1,518,081 | 100 | 100 | 93 |
| July 1, 1999 | 107,008 | 1,157,882 | 508,939 | 1,746,312 | 100 | 100 | 95 |
| July 1, 2000 | 111,099 | 1,324,079 | 531,225 | 2,013,491 | 100 | 100 | 100 |
| July 1, 2001 | 138,248 | 707,152 | 1,461,027* | 2,226,307 | 100 | 100 | 95 |
| July 1, 2002 | 145,255 | 718,779 | 1,729,696 | 2,337,157 | 100 | 100 | 85 |
| July 1, 2003 | 153,634 | 838,090 | 1,883,014 | 2,394,411 | 100 | 100 | 74 |
| July 1, 2004 | 153,088 | 995,841 | 2,190,295 | 2,466,070 | 100 | 100 | 60 |

* Prior to July 1, 2001 the Actuarial Accrued Liability for DROP Participants was included in the Inactive liability.

Actuarially Calculated City Contribution Rate

| | Plan Year 2005 | | | Plan Year 2004 |
|------------------------------------------------------------------------------------------|--------------------------------------------|---------------------------------------------|-----------------------------------------------------|------------------------------------------|
| | July 1, 2004 through October 8, 2004 | October 9, 2004 through June 30, 2005 | Average July 1, 2004 through June 30, 2005 | July 1, 2003 through June 30, 2004 |
| ■ City Normal Cost Rate | 18.0% | 16.2% | 16.7% | 18.9% |
| ■ Rate to Amortize Unfunded Actuarial Accrued Liability (Surplus) Over 30 Years | <u>16.8</u> | <u>13.6</u> | <u>14.5</u> | <u>9.6</u> |
| ■ Actuarially Calculated City Contribution Rate | 34.8 | 29.8 | 31.2 | 28.5 |

Change in Actuarially Calculated City Contribution Rate Since the Prior Valuation

| | |
|---------------------------------------------------------------------------------|--------------|
| ■ Actuarially Calculated City Contribution Rate as of July 1, 2003 | 28.5% |
| ■ Change in Actuarially Calculated City Contribution Rate | |
| — Normal operation | 3.0 |
| — Effect of City contribution less than actuarial rate | 0.8 |
| — Actuarial (gain) loss from asset sources | (1.1) |
| — Actuarial (gain) loss from liability sources other than additional pay | 2.9 |
| — Actuarial (gain) loss from additional pay components ⁽¹⁾ | 0.7 |
| — Change in actuarial assumptions and methods | <u>(0.0)</u> |
| ■ Actuarially Calculated City Contribution Rate as of July 1, 2004 | 34.8 |
| ■ Effect of Change in Plan Provisions Effective October 9, 2004 | |
| — Change due to Provisions other than Pay Definition | (5.1) |
| — Change due to Change in Pay Definition ⁽²⁾ | (0.3) |
| ■ Effect of Change in DROP Assumptions Subsequent to Changes in Plan Provisions | <u>0.4</u> |
| ■ Actuarially Calculated City Contribution Rate as of July 1, 2004 | 29.8 |
| ■ Average Actuarially Calculated City Contribution Rate | 31.2 |

(1) Includes CMEPP, SOSP, and Weekend/Shift Differential.

(2) Excludes CMEPP and SOSP.

Historical City Contributions as a Percentage of Covered Payroll

| Actuarially Calculated City Contribution Rate | | Actual City Contribution Rate | |
|-----------------------------------------------|---------------------|------------------------------------|-------|
| Valuation Date | Rate | Period | Rate |
| July 1, 1990 | 14.2% | July 1, 1991 through June 30, 1993 | 14.3% |
| July 1, 1992 | 19.0 | July 1, 1993 through June 30, 1994 | 19.0 |
| July 1, 1993 | 18.0 | July 1, 1994 through June 30, 1995 | 18.0 |
| July 1, 1994 | 18.0 | July 1, 1995 through June 30, 1996 | 18.0 |
| July 1, 1995 | 17.4 | July 1, 1996 through June 30, 1997 | 16.2 |
| July 1, 1996 | 16.2 | July 1, 1997 through June 30, 1998 | 16.2 |
| July 1, 1997 | 16.8 ⁽¹⁾ | July 1, 1998 through June 30, 1999 | 15.2 |
| July 1, 1998 | 16.2 | July 1, 1999 through June 30, 2000 | 12.4 |
| July 1, 1999 ⁽²⁾ | 16.3 | July 1, 2000 through June 30, 2001 | 12.2 |
| July 1, 2000 | 11.3 | July 1, 2001 through June 30, 2002 | 12.4 |
| July 1, 2001 | 20.5 | July 1, 2002 through June 30, 2003 | 12.1 |
| July 1, 2002 | 24.4 | July 1, 2003 through June 30, 2004 | 12.2 |
| July 1, 2003 | 28.5 | July 1, 2004 through June 30, 2005 | 11.3 |
| July 1, 2004 | 31.2 ⁽¹⁾ | July 1, 2005 through June 30, 2006 | N/A |

⁽¹⁾ Average for the year.

⁽²⁾ For the period July 1, 1999 through July 1, 2000 the City Contribution rates are shown as a percentage of total direct pay less overtime rather than base pay.

Projection of Estimated Assets and Liabilities (\$000)

| Year Beginning July 1 | Annual Covered Payroll | Estimated City Contributions | | | | Estimated Employee Contributions | | Benefit Payments | Net Cash Flow | Market Value of Assets at End of Year | Unfunded Actuarial Liability (Surplus) at End of Year | Funded Percentage |
|-----------------------|------------------------|------------------------------|---------|----------|---------|----------------------------------|---------|------------------|---------------|---------------------------------------|-------------------------------------------------------|-------------------|
| | | Actuarial | | Actual | | Amount | Percent | | | | | |
| | | Amount | Percent | Amount | Percent | | | | | | | |
| 2004 | \$325,545 | \$92,780 | 28.5% | \$36,645 | 11.3% | \$29,299 | 9.00% | \$198,283 | \$(132,339) | \$2,498,373 | \$864,407 | 74% |
| 2005 | 336,939 | 105,125 | 31.2 | 53,910 | 16.0 | 30,459 | 9.04 | 190,442 | (106,073) | 2,600,246 | 971,673 | 72 |
| 2006 | 348,732 | 111,943 | 32.1 | 58,910 | 16.9 | 31,665 | 9.08 | 195,630 | (105,055) | 2,711,838 | 1,006,088 | 73 |
| 2007 | 360,938 | 119,470 | 33.1 | 63,910 | 17.7 | 32,954 | 9.13 | 207,283 | (110,419) | 2,827,327 | 1,024,329 | 73 |
| 2008 | 373,570 | 122,531 | 32.8 | 68,910 | 18.4 | 34,256 | 9.17 | 219,895 | (116,729) | 2,946,062 | 1,096,897 | 73 |
| 2009 | 386,645 | 124,113 | 32.1 | 73,910 | 19.1 | 35,610 | 9.21 | 233,885 | (124,365) | 3,066,934 | 1,170,980 | 72 |
| 2010 | 400,178 | 129,257 | 32.3 | 78,910 | 19.7 | 37,016 | 9.25 | 250,947 | (135,021) | 3,186,982 | 1,246,634 | 72 |
| 2011 | 414,184 | 134,610 | 32.5 | 83,910 | 20.3 | 38,478 | 9.29 | 270,304 | (147,916) | 3,303,801 | 1,323,955 | 71 |
| 2012 | 428,681 | 140,179 | 32.7 | 93,910 | 21.9 | 39,996 | 9.33 | 289,466 | (155,560) | 3,422,587 | 1,397,881 | 71 |
| 2013 | 443,684 | 145,528 | 32.8 | 103,910 | 23.4 | 41,618 | 9.38 | 304,113 | (158,585) | 3,548,320 | 1,467,990 | 71 |

The projection is based on the economic and demographic assumptions summarized in Section VI, including an 8.5% investment return beginning as of July 1, 2004. The total covered payroll is assumed to increase by 3.5% per year. As actual economic (such as the actual investment return from July 1, 2004 through June 30, 2005) and demographic experience vary, the results will change.

The projection assumes the Assumptions and Methods and the Plan Provisions as summarized in Section VI do not change throughout the projection period. It also assumes that new entrants receive the separate plan provisions detailed in Section VI. The expected City normal cost as a percentage of payroll for new entrants is 5.2%. City normal cost was assumed to decrease linearly from 16.2% to 5.2% over 30 years.

This projection is incomplete without the accompanying report.

Summary of Active Participants as of July 1, 2004

| Age Last Birthday | -----Completed Years of Service----- | | | | | | | | Total |
|-------------------|--------------------------------------|------------|------------|------------|------------|------------|------------|-----------|-------------|
| | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | Over 34 | |
| 15-19 | Number | | | | | | | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Tot Earnings | | | | | | | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Avg Earnings | | | | | | | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20-24 | Number | | | | | | | | |
| | 45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 45 |
| | Tot Earnings | | | | | | | | |
| | 1,169,104 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,169,104 |
| | Avg Earnings | | | | | | | | |
| | 25,980 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25,980 |
| 25-29 | Number | | | | | | | | |
| | 286 | 58 | 0 | 0 | 0 | 0 | 0 | 0 | 344 |
| | Tot Earnings | | | | | | | | |
| | 11,528,212 | 3,134,276 | 0 | 0 | 0 | 0 | 0 | 0 | 14,662,488 |
| | Avg Earnings | | | | | | | | |
| | 40,308 | 54,039 | 0 | 0 | 0 | 0 | 0 | 0 | 42,624 |
| 30-34 | Number | | | | | | | | |
| | 195 | 508 | 109 | 0 | 0 | 0 | 0 | 0 | 812 |
| | Tot Earnings | | | | | | | | |
| | 8,227,261 | 27,830,239 | 6,576,190 | 0 | 0 | 0 | 0 | 0 | 42,633,690 |
| | Avg Earnings | | | | | | | | |
| | 42,191 | 54,784 | 60,332 | 0 | 0 | 0 | 0 | 0 | 52,505 |
| 35-39 | Number | | | | | | | | |
| | 61 | 364 | 591 | 88 | 7 | 0 | 0 | 0 | 1,111 |
| | Tot Earnings | | | | | | | | |
| | 2,597,488 | 20,213,566 | 36,112,705 | 6,014,576 | 511,711 | 0 | 0 | 0 | 65,450,046 |
| | Avg Earnings | | | | | | | | |
| | 42,582 | 55,532 | 61,104 | 68,347 | 73,102 | 0 | 0 | 0 | 58,911 |
| 40-44 | Number | | | | | | | | |
| | 12 | 99 | 196 | 410 | 408 | 4 | 0 | 0 | 1,129 |
| | Tot Earnings | | | | | | | | |
| | 551,462 | 5,541,195 | 12,007,280 | 28,123,477 | 29,304,944 | 295,465 | 0 | 0 | 75,823,824 |
| | Avg Earnings | | | | | | | | |
| | 45,955 | 55,972 | 61,262 | 68,594 | 71,826 | 73,866 | 0 | 0 | 67,160 |
| 45-49 | Number | | | | | | | | |
| | 1 | 10 | 55 | 160 | 443 | 196 | 5 | 0 | 870 |
| | Tot Earnings | | | | | | | | |
| | 45,873 | 583,874 | 3,371,761 | 10,946,892 | 32,572,228 | 14,864,003 | 368,125 | 0 | 62,752,756 |
| | Avg Earnings | | | | | | | | |
| | 45,873 | 58,387 | 61,305 | 68,418 | 73,526 | 75,837 | 73,625 | 0 | 72,130 |
| 50-54 | Number | | | | | | | | |
| | 0 | 5 | 8 | 55 | 181 | 229 | 107 | 1 | 586 |
| | Tot Earnings | | | | | | | | |
| | 0 | 272,440 | 503,743 | 3,694,256 | 13,091,063 | 17,204,780 | 8,114,352 | 75,777 | 42,956,410 |
| | Avg Earnings | | | | | | | | |
| | 0 | 54,488 | 62,968 | 67,168 | 72,326 | 75,130 | 75,835 | 75,777 | 73,304 |
| 55-59 | Number | | | | | | | | |
| | 0 | 0 | 1 | 6 | 53 | 66 | 89 | 48 | 263 |
| | Tot Earnings | | | | | | | | |
| | 0 | 0 | 58,499 | 400,972 | 3,754,152 | 5,000,398 | 6,638,280 | 3,742,688 | 19,594,989 |
| | Avg Earnings | | | | | | | | |
| | 0 | 0 | 58,499 | 66,829 | 70,833 | 75,764 | 74,587 | 77,973 | 74,506 |
| 60-64 | Number | | | | | | | | |
| | 0 | 0 | 0 | 2 | 1 | 20 | 12 | 16 | 51 |
| | Tot Earnings | | | | | | | | |
| | 0 | 0 | 0 | 138,508 | 82,700 | 1,444,102 | 888,074 | 1,276,012 | 3,829,396 |
| | Avg Earnings | | | | | | | | |
| | 0 | 0 | 0 | 69,254 | 82,700 | 72,205 | 74,006 | 79,751 | 75,086 |
| Over 64 | Number | | | | | | | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 13 | 14 |
| | Tot Earnings | | | | | | | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 66,752 | 900,827 | 967,579 |
| | Avg Earnings | | | | | | | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 66,752 | 69,294 | 69,113 |
| Total | Number | | | | | | | | |
| | 600 | 1,044 | 960 | 721 | 1,093 | 515 | 214 | 78 | 5,225 |
| | Tot Earnings | | | | | | | | |
| | 24,119,400 | 57,575,590 | 58,630,179 | 49,318,681 | 79,316,798 | 38,808,748 | 16,075,584 | 5,995,304 | 329,840,283 |
| | Avg Earnings | | | | | | | | |
| | 40,199 | 55,149 | 61,073 | 68,403 | 72,568 | 75,357 | 75,120 | 76,863 | 63,127 |

Average Age = 41.7 Average Service = 15.9



Historical Active Participant Data

| Valuation Date | Number of Participants | Average Age | Annual Covered Payroll (\$000) | Average Annual Covered Payroll | Percentage Increase in Average Covered Payroll |
|-----------------------------|------------------------|-------------|--------------------------------|--------------------------------|------------------------------------------------|
| January 1, 1980 | 3,029 | N/A | \$ 58,169 | \$ 19,204 | 10.4% |
| January 1, 1982 | 3,243 | N/A | 89,529 | 27,607 | 43.8 |
| July 1, 1984 | 3,997 | N/A | 111,489 | 27,893 | 1.0 |
| July 1, 1986 | 4,526 | 33.5 | 125,963 ⁽¹⁾ | 27,831 | (0.2) |
| July 1, 1987 | 4,494 | 34.4 | 126,960 | 28,251 | 1.5 |
| July 1, 1988 | 4,239 | 35.0 | 121,667 | 28,702 | 1.6 |
| July 1, 1989 | 4,105 | 35.7 | 122,803 | 29,915 | 4.2 |
| July 1, 1990 | 4,073 | 36.2 | 126,665 ⁽²⁾ | 31,099 | 4.0 |
| July 1, 1992 | 4,120 | 36.8 | 143,020 | 34,714 | 11.6 |
| July 1, 1993 | 4,498 | 36.7 | 159,321 | 35,420 | 2.0 |
| July 1, 1994 | 4,705 | 36.8 | 162,143 | 34,462 | (2.7) |
| July 1, 1995 | 4,921 | 36.9 | 174,761 | 35,513 | 3.0 |
| July 1, 1996 ⁽³⁾ | 4,395 | 35.1 | 150,903 | 34,335 | (3.3) |
| July 1, 1997 | 4,282 | 35.5 | 149,631 | 34,944 | 1.8 |
| July 1, 1998 | 4,247 | 35.9 | 153,479 | 36,138 | 3.4 |
| July 1, 1999 | 4,253 | 36.3 | 187,967 ⁽⁴⁾ | 44,196 ⁽⁴⁾ | 22.3 ⁽⁴⁾ |
| July 1, 2000 | 4,137 | 36.7 | 179,415 | 43,368 | (1.9) |
| July 1, 2001 ⁽⁵⁾ | 5,325 | 40.2 | 264,226 ⁽⁶⁾ | 49,620 ⁽⁶⁾ | 14.4 ⁽⁶⁾ |
| July 1, 2002 | 5,352 | 40.7 | 286,150 | 53,466 | 7.8 |
| July 1, 2003 | 5,387 | 41.3 | 300,405 | 55,765 | 4.3 |
| July 1, 2004 | 5,225 | 41.7 | 329,840 | 63,127 | 13.2 |

(1) Reflects the July 5, 1986 pay decrease.

(2) Reflects the November 1, 1990 pay increase.

(3) For the July 1, 1996 to July 1, 2000 valuations includes those participants currently accruing benefits (i.e. excludes current DROP participants).

(4) Definition of covered payroll changed from base pay to total direct pay less overtime.

(5) Beginning July 1, 2001 includes active participants eligible for DROP.

(6) Beginning July 1, 2001 the definition of total direct pay changed from the average of the last 26 pay periods to the highest bi-weekly pay period.

Summary of Inactive Participants as of July 1, 2004

| | Number | Annual Benefits (\$000) | Average Annual Benefit |
|-------------------------|----------|----------------------------|---------------------------|
| ■ Retirees | 1,556 | \$ 53,918 | \$ 34,652 |
| ■ Beneficiaries | 476 | 14,177 | 29,784 |
| ■ Disabled Participants | 73 | 2,212 | 30,301 |
| ■ Deferred Vesteds | <u>0</u> | <u>0</u> | <u>0</u> |
| ■ Total | 2,105 | 70,307 | 33,400 |

In addition to annual benefits, there is \$67,525,000 in the PROP accounts.

Inactive Participants Added to and Removed from Rolls

| Period Ended | Added to Rolls | | Removed from Rolls | | Rolls at the End of the Year | | Percentage Increase in Annual Benefits | Average Annual Benefit |
|-------------------|----------------|-------------------------|--------------------|-------------------------|------------------------------|-------------------------|----------------------------------------|------------------------|
| | Number | Annual Benefits (\$000) | Number | Annual Benefits (\$000) | Number | Annual Benefits (\$000) | | |
| December 31, 1979 | 68 | \$ 845 | 12 | \$ 126 | 548 | \$ 4,370 | 19.6% | \$ 7,974 |
| December 31, 1980 | 73 | 1,120 | 19 | 123 | 602 | 5,389 | 23.3 | 8,951 |
| December 31, 1981 | 81 | 1,191 | 17 | 184 | 666 | 6,499 | 20.6 | 9,759 |
| December 31, 1982 | 104 | 1,106 | 24 | 240 | 746 | 7,842 | 20.7 | 10,513 |
| December 31, 1983 | 82 | 967 | 35 | 362 | 793 | 8,931 | 13.9 | 11,262 |
| June 30, 1984 | 53 | 779 | 18 | 150 | 855 | 4,760 | 6.6 | 11,095 |
| June 30, 1985 | 83 | 1,141 | 42 | 259 | 896 | 10,166 | 6.8 | 11,346 |
| June 30, 1986 | 44 | 530 | 37 | 431 | 903 | 10,939 | 7.6 | 12,114 |
| June 30, 1987 | 42 | 585 | 36 | 421 | 909 | 11,321 | 3.5 | 12,455 |
| June 30, 1988 | 138 | 2,668 | 25 | 243 | 1,022 | 14,069 | 24.3 | 13,766 |
| June 30, 1989 | 89 | 1,349 | 46 | 502 | 1,065 | 16,127 | 14.6 | 15,142 |
| June 30, 1990 | 105 | 1,811 | 29 | 457 | 1,141 | 18,029 | 11.8 | 15,801 |
| June 30, 1992 | 222 | 4,662 | 75 | 1,127 | 1,288 | 22,999 | 27.6 | 17,857 |
| June 30, 1993 | 105 | 2,012 | 16 | 205 | 1,377 | 25,474 | 10.8 | 18,500 |
| June 30, 1994 | 106 | 2,172 | 64 | 953 | 1,419 | 27,286 | 7.1 | 19,229 |
| June 30, 1995 | 107 | 2,425 | 48 | 847 | 1,478 | 29,464 | 8.0 | 19,935 |
| June 30, 1996* | 893 | 19,109 | 36 | 602 | 2,335 | 48,624 | 65.0 | 20,824 |
| June 30, 1997 | 182 | 3,481 | 29 | 618 | 2,488 | 52,772 | 8.5 | 21,211 |
| June 30, 1998 | 159 | 3,483 | 28 | 589 | 2,619 | 63,957 | 21.2 | 24,420 |
| June 30, 1999 | 150 | 3,770 | 46 | 1,001 | 2,723 | 70,432 | 10.1 | 25,866 |
| June 30, 2000 | 233 | 6,421 | 36 | 857 | 2,920 | 76,401 | 8.5 | 26,165 |
| June 30, 2001** | 131 | 3,755 | 1,250 | 33,892 | 1,801 | 54,006 | (29.3) | 29,987 |
| June 30, 2002 | 104 | 2,809 | 46 | 1,113 | 1,859 | 55,013 | 1.9 | 29,593 |
| June 30, 2003 | 106 | 2,967 | 47 | 1,109 | 1,918 | 61,531 | 11.8 | 32,081 |
| June 30, 2004 | 220 | 9,172 | 33 | 1,014 | 2,105 | 70,307 | 14.3 | 33,400 |

* From June 30, 1996 through June 30, 2001 includes DROP participants.

** Beginning July 1, 2001 excludes active participants eligible for DROP.

Summary of Actuarial Methods and Assumptions

Actuarial Methods

Actuarial Value of Assets

Gains and losses in the market value of assets, based on the difference between the actual and the assumed rate of return, are recognized over five years.

Actuarial Cost Method

Entry Age Normal Method with liabilities allocated from date of entry to assumed retirement age. The Unfunded Actuarial Accrued Liability (Surplus), including effects of actuarial gains and losses, is amortized as a level percentage of pay over 30 years. The contribution is increased for interest for one-half of a year to reflect timing of payments.

Economic Assumptions

Investment Return

8.5% per year, net of expenses

Payroll Growth Rate/Inflation

3.50% per year

Individual Merit Increase Rate

| <u>Service</u> | <u>Increase</u> |
|----------------|-----------------|
| 1 | 7.00% |
| 2 | 0.25 |
| 3 | 0.25 |
| 4 | 5.00 |
| 5 | 9.50 |
| 6 | 8.50 |
| 7 | 0.75 |
| 8 | 0.50 |
| 9 | 7.75 |
| 10 | 1.00 |
| 11 | 9.00 |
| 12 | 0.75 |
| 13 | 1.25 |
| 14 | 1.50 |
| 15 | 0.50 |
| 16 | 5.50 |
| 17 | 0.75 |
| 18 and over | 0.00 |

Individual Pay Increase Rate

Merit plus 3%

DROP Crediting Rate

9.0% per year

Summary of Actuarial Methods and Assumptions (continued)

Demographic Assumptions

| | |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Entry Age | Date sworn. |
| DROP Participation Rates | 100% of active participants are assumed to elect the DROP. Participants are assumed to elect the maximum duration for the back DROP, up to 20 years. |
| DROP Antiselection | DROP benefits are loaded by 1% to reflect possible antiselection of back DROP provisions |
| PROP Antiselection | PROP benefits are loaded by 1% to reflect possible antiselection of PROP provisions. PROP benefits are assumed to be paid as a lump sum. |

Retirement Rates

| Age | Service | | | | | | |
|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------------|
| | <u>20-21</u> | <u>22-23</u> | <u>24-25</u> | <u>26-27</u> | <u>28-29</u> | <u>30-39</u> | <u>40 and over</u> |
| 40-54 | 5% | 5% | 5% | 10% | 20% | 20% | 100% |
| 55-59 | 5 | 10 | 10 | 30 | 30 | 40 | 100 |
| 60-64 | 10 | 10 | 25 | 50 | 50 | 50 | 100 |
| 65 and over | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

Mortality Rates

| | |
|-------------------------------------------------|---------------------------------------------------------------------------------------|
| ▶ Active participants and non-disabled retirees | 1994 Group Annuity Mortality Table (see table below for sample rates). |
| ▶ Disabled retirees | 1987 Commissioners Group Disabled Mortality Table (see table below for sample rates). |

Disability Rates

Graduated rates (see table below for sample rates).

Percentage of Deaths and Disabilities in the Line of Duty

100%.

Termination Rates and Terminated Vested Pension Benefit Election

Graduated rates (see table below for sample rates). 50% of members eligible to receive a terminated vested pension are assumed to elect the pension at age 60 instead of a refund of contributions.

Summary of Actuarial Methods and Assumptions (continued)

Marital Status at Benefit Eligibility

- ▶ Percentage married 90%. (No beneficiaries other than the spouse assumed).
- ▶ Age difference Husbands assumed to be three years older than wives.

Valuation Earnings

Highest pay in the last 26 pay periods preceding the valuation date, annualized and increased for one-half year of assumed pay increases. For participants who are not Police officers or senior Police officers with less than 17 years of employment, no increase is assumed for 2004.

Sample Rates

| Sample Rates per 100 Participants | | | | | | |
|-----------------------------------|-----------------------|--------|-------------------------------|-------------|------------|--------|
| Age | Nondisabled Mortality | | Disabled Mortality (Ultimate) | Termination | Disability | |
| | Male | Female | All | All | Male | Female |
| 20 | 0.05 | 0.03 | 2.82 | 4.44 | 0.08 | 0.10 |
| 25 | 0.07 | 0.03 | 2.82 | 3.99 | 0.08 | 0.10 |
| 30 | 0.08 | 0.04 | 2.82 | 3.02 | 0.08 | 0.12 |
| 35 | 0.09 | 0.05 | 2.82 | 1.92 | 0.10 | 0.16 |
| 40 | 0.11 | 0.07 | 2.82 | 0.92 | 0.14 | 0.22 |
| 45 | 0.16 | 0.10 | 2.82 | 0.21 | 0.21 | 0.30 |
| 50 | 0.26 | 0.14 | 2.82 | 0.00 | 0.37 | 0.54 |
| 55 | 0.44 | 0.23 | 2.82 | 0.00 | 0.79 | 1.08 |
| 60 | 0.80 | 0.44 | 3.14 | 0.00 | 2.15 | 2.86 |
| 65 | 1.45 | 0.86 | 3.98 | 0.00 | 0.00 | 0.00 |

Changes in Methods and Assumptions Since the Prior Valuation

The individual merit increase component of the salary increase assumption was revised to better reflect future anticipated experience. The previous assumption is shown below:

| Age | Increase |
|---------|----------|
| 20 | 5.00% |
| 25 | 4.30 |
| 30 | 1.80 |
| 35 | 0.55 |
| 40 | 0.25 |
| 45 | 0.25 |
| Over 50 | 0.00 |

The non-merit component of the salary increase assumption was changed from 4.0% to 3.0%.

Summary of Actuarial Methods and Assumptions (continued)

The assumed retirement rates were revised to better reflect future anticipated plan experience. The previous rates are shown below:

| <u>Number of Years of Service</u> | <u>Probability of Retiring Within One Year</u> |
|---------------------------------------|----------------------------------------------------|
| 20 | 15% |
| 21-22 | 5 |
| 23 | 10 |
| 24-25 | 15 |
| 26-28 | 30 |
| 29-40 | 20 |
| Over 40 | 100 |

The assumed rate of payroll growth/inflation was changed from 4.0% to 3.5% to better reflect the anticipated future experience of the plan.

Summary of Plan Provisions

Covered Members

All police officers sworn before September 1, 1975 are covered under Plan 1, except those who elected by December 31, 1981 to participate in Plan 3.

All police officers sworn on or after September 1, 1975, but before September 1, 1981 are covered under Plan 2, except those who elected by December 31, 1981 to participate in Plan 3 and those from Police Cadet Classes 70 and 71 who elected to transfer to Plan 1.

All other police officers are covered by Plan 3, except those from Police Cadet Classes 70 and 71 who elected to pay additional contributions and transfer to Plan 1.

Final Compensation

Prior to November 28, 1998

Monthly base salary paid to the participant in his/her last month of service. For any participant from a position held for less than 3 years, final compensation is the average monthly base salary for the 3 years prior to retirement.

After November 28, 1998 but prior to July 1, 2001

Monthly total direct pay less overtime paid to the participant in his/her last month of service. For any participant from a position held for less than 3 years, final compensation is the average monthly base pay for the 3 years prior to retirement plus the other current components of total direct pay.

After July 1, 2001

Highest biweekly pay period (excluding overtime) during the last 26 pay periods annualized. Amounts not paid on a biweekly basis are deducted from period paid. Annual amounts are divided by 26 and added to the highest pay period, including motorcycle allowances.

Service Retirement

Eligibility

20 years of service.

Benefit:

▶ Prior to November 1, 1955

\$75 per month plus \$2 per month for each year of service in excess of 25 years.

▶ After November 1, 1955 but prior to January 13, 1968

30% of final compensation plus 1% of final compensation for each year of service in excess of 20 years.

Summary of Plan Provisions (continued)

- ▶ After January 13, 1968 but prior to July 1, 1986
Plans 1 and 2: 30% of final compensation plus 2% of final compensation for each year of service in excess of 20 years.
Plan 3: 2% of final compensation for each year of service up to 40 years, reduced 0.42% for each month benefit commencement precedes age 55.
- ▶ After July 1, 1986 but prior to July 1, 1988
2% of final compensation for each year of service up to 40 years.
- ▶ After July 1, 1988 but prior to September 1, 1997
45% of final compensation plus 2% of final compensation for each year of service in excess of 20 years; maximum 80% of final compensation. Benefit based on prior formula is payable until July 1, 1991 and recomputed benefit is payable thereafter.
- ▶ After September 1, 1997 but prior to July 1, 2001
50% of final compensation plus 2% of final compensation for each year of service in excess of 20 years; maximum 80% of final compensation.
- ▶ After July 1, 2001
55% of final compensation plus 2% of final compensation for service in excess of 20 years.

The Pension System recomputed the benefit of each person who retired before July 1, 2001. The retiree's benefit was increased by the result of multiplying the difference between 55% and the percentage used at the time of retirement in computing the retiree's benefit for the first 20 years of service by the base salary of the retiree at the time of retirement. Retroactive cost-of-living increases were not applied to the increased benefit. This recomputed benefit is effective for all payments on or after July 1, 2001.

Additional Benefits

An extra monthly benefit of \$150.00 is payable for life. Effective November 28, 1998, a \$5,000 lump sum is payable upon retirement.

Terminated Vested Pension Benefit

Eligibility

More than 10 but less than 20 years of service.
Termination on or after November 28, 1998.

Benefit

2.75% of final compensation times years of service. This benefit commences at age 60 or at termination of service if later.

Summary of Plan Provisions (continued)

Deferred Retirement Option Plan (DROP)

Eligibility 20 years of service

Benefit:

- ▶ After September 1, 1995 but prior to September 1, 1997 Eligible participants may elect to participate in the DROP until they leave active service. The member's retirement pension will be calculated based on service and earnings at the time the DROP is elected.

A notional account will be maintained for each DROP participant. This account will be credited with the following amounts while the member is participant of the DROP:

- The member's monthly retirement pension, including applicable cost-of-living adjustments,
- The member's contribution to the Pension System, and
- Investment earnings/losses at the rate of the Pension System's earnings/losses averaged over a five-year period. Effective July 1, 2001, this rate is subject to a minimum of 0%.

A benefit equal to the DROP account balance is paid at the time the member leaves active service. The payment is made as a single lump sum.

If a DROP participant suffers an on-duty disability resulting in the inability to perform his/her usual and customary duties as a police officer or dies in the line of duty, he (or his survivors) are allowed to revoke the DROP election and to receive the more generous on-duty disability or death benefits.

- ▶ After September 1, 1997 but prior to December 1, 1998 The Pension System recomputed the benefit of each person who entered the DROP before September 1, 1997. The benefit was increased in the same manner as the retiree's benefit.
- ▶ After December 1, 1998 but prior to July 1, 2001 The Pension System recomputed the benefit of each person who entered the DROP before December 1, 1998. The benefit was recalculated based on Total Direct Pay less overtime upon entry to the DROP. This recomputed benefit is effective for all payments on or after December 1, 1998.

Summary of Plan Provisions (continued)

- ▶ After July 1, 2001
The Pension System recomputed the benefit of each person who entered the DROP before July 1, 2001. The member's benefit was increased by the result of multiplying the difference between 55% and the percentage used at the time of DROP entry in computing the member's benefit for the first 20 years of service by the base salary of the member at the time of DROP entry. Retroactive cost-of-living increases were applied to the increased benefit. The account balance for each participant was recomputed as if this new benefit had been effective since DROP entry.
- Benefit Recalculation
Effective July 1, 2001, monthly benefit at retirement will be recalculated to be the greater of (i) current monthly benefit, or (ii) monthly benefit based on service at DROP entry and Final Compensation at retirement date.
- Back DROP Option
Effective on July 1, 2001, a back DROP option is available for all eligible participants. The DROP account is recalculated under the option based on what the account balance would have been had the participant elected the DROP earlier than he/she actually did. The initial DROP entry date cannot be backdated prior to September 1, 1995 or prior to 20 years of credited service, and must be on the first of the month selected.

Postretirement Option Plan (PROP)

- Eligibility
Retired from DROP
- Benefit:
 - ▶ After November 28, 1998 but prior to July 1, 2001
A retired member is allowed to leave all or a portion of their DROP account in the System. These accounts are credited every calendar year with the 30-year Treasury bond rate as of June of the preceding year.
 - ▶ After July 1, 2001
The interest rate earned on PROP accounts will be the same as the interest rate credited to DROP accounts, including a minimum credited rate of 0%.

Summary of Plan Provisions (continued)

Disability Retirement

Eligibility

Effective July 1, 2001, participant partially or totally disabled is eligible for Disability Retirement as defined below:

- Total: Disability is defined as “unable to perform his/her usual and customary duties as a police officer”.
- Partial: Disability is an impairment which renders the participant unable to work as a police officer and which is expected to last 12 months.

Benefit:

▶ Duty-connected

Total: The service retirement benefit accrued to date of disability (or 20 years, if greater).

Partial: 35% of final compensation is payable for life or as long as he remains incapacitated.

▶ Not duty-connected

Total or partial: The disability benefit is 2.75% of final compensation times years of service up to 20, minimum 27.5% of final compensation.

Additional Benefits

An education allowance equal to 100% of final compensation less disability benefit is payable for up to four years for off-duty or duty-related disability.

Proportionate members injured while on-duty as a municipal worker will receive immediate off-duty benefit upon Board approval.

Survivor Benefits

Eligibility

Surviving spouses and dependent children and parents of participants, including surviving spouses of retired or disabled participants who were not married at the time of retirement or disability, provided the spouse was married to the participant for at least 5 years at the time of death:

Benefit

Spouse's benefit upon death before retirement:

▶ Prior to September 1, 1997

If duty-connected: monthly lifetime benefit equal to 100% of final compensation at date of death.

If not duty-connected: monthly lifetime benefit equal to 100% of the service retirement benefit the participant had accrued at the time of death.

Spouse's benefit upon death after retirement: monthly lifetime benefit equal to actual benefit payable at time of death.

Summary of Plan Provisions (continued)

Dependent children's benefit if no surviving spouse: the benefit that would have been payable to the spouse is divided equally among the dependent children.

If there is a surviving spouse, the dependent children of Plan 1 and Plan 2 participants receive \$25 per month. Dependent children include unmarried children who are under age 18, and for Plan 3, full-time students under age 22, or permanently disabled children.

Dependent parent's income if no surviving spouse or children, but there is a dependent parent: the benefit that would have been payable to the spouse will be paid to the dependent parent.

- ▶ After September 1, 1997 but prior to July 1, 2001 The Pension System recomputed the benefit of each survivor whose original benefit was computed prior to September 1, 1997. The benefit was increased in the same manner as the retiree's benefit.
- ▶ After July 1, 2001 The Pension System recomputed the benefit of each survivor whose original benefit was computed prior to July 1, 2001. The benefit was increased in the same manner as the retiree's benefit.

Additional Benefits

Effective December 1, 1998, a \$5,000 lump sum is paid upon the death of an active member.

Effective July 1, 2001, an extra monthly benefit of \$150.00 is payable for life. Children receiving equivalent of the spouse's benefit do not receive this additional benefit.

Benefit Adjustments

Cost-of-Living

Monthly benefits for participants receiving payments are increased each April 1 by 2/3 of the increase in the Consumer Price Index for All Urban Consumers (CPI-U) for the preceding calendar year. Effective September 1, 1997 this increase is subject to a minimum of 3.0% per year compounded and a maximum increase of 8.0% per year compounded.

Summary of Plan Provisions (continued)

13th Benefit Check

Effective November 28, 1998, a 13th benefit check is paid to current retirees and DROP members when:

- The assets on the fund equal or exceed the liabilities after the 13th benefit check is paid.
- The return on investments for the preceding fiscal year exceeds 9.25%.
- The payment of the benefit will not cause the City of Houston's contribution to the System to increase.

Service Adjustments

Effective November 28, 1998, participants with previous service with the City in non-classified positions may use that service to satisfy the service requirement of 20 years for retirement purposes only.

Effective July 1, 2001, participants who have service credit in more than one City of Houston Pension Plan may use their combined service to qualify for DROP participation.

Effective July 1, 2001, participants involuntarily transferred to the System from the Houston Municipal Employees System will receive service under this plan for years worked while serving as a City Marshall, Airport Police or Park Police.

Contributions

Employee Contributions

Prior to December 1, 1998, each participant contributes 8.75% of base salary. After December 1, 1998, each participant contributes 8.75% of average total direct pay less overtime.

Refunds

Refunds of contributions are made if

- (i) The participant dies before 10 years of service and the death is not duty-connected,
- (ii) The participant dies with no eligible survivor,
- (iii) A Plan 1 or 2 participant leaves service before eligibility for retirement after completing 5 years of service, or
- (iv) A Plan 3 participant leaves service with less than 20 years of service.

Contributions are refunded without interest.

Summary of Plan Provisions (continued)

| | | |
|-----------------------|-----------------------------------------------------------|--------------------------|
| Employer Contribution | The city will follow the following contribution schedule: | |
| | Fiscal Year Ending (June 30) | City Contribution Amount |
| | 2001 | \$ 30,645,000 |
| | 2002 | 32,645,000 |
| | 2003 | 34,645,000 |
| | 2004 | 36,645,000 |
| 2005 | 36,645,000 | |

Changes in Plan Provisions from Since the Prior Valuation

There were no changes to the plan provisions from the prior valuation to the date of the current valuation.

Changes in Plan Provisions Subsequent to Current Valuation

Changes due to the Meet & Confer agreement with the City are detailed on page 28.

Summary of Changes in Plan Provisions Due to Meet & Confer Agreement

Effective October 9, 2004, the System entered into an agreement with the City to change benefits to members as described below. These changes are reflected in the Projection of Estimated Assets and Liabilities on page 11.

| | |
|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pension Compensation | The definition of compensation was changed to exclude Exempt Time and Strategic Officer Staffing Pay as well as overtime pay. |
| Final Average Compensation | Compensation used to determine the retirement benefit was changed from the highest biweekly pay period during the last 26 pay periods to an average of the last three years of compensation. This average will be phased in beginning with the pay period ending after October 9, 2004 until the new definition is fully phased in after 78 pay periods. |
| Service Retirement Eligibility | For new members who become participants after October 9, 2004, retirement eligibility will begin at age 55 with 10 years of service, rather than at any age with 20 years of service. |
| Service Retirement Benefit | <p>For current members, the benefit will be calculated using the new definition of Final Average Compensation. During the transitional period before October 7, 2007, a member may receive a monthly pension or DROP benefit determined under one of three alternatives: 1) the benefit calculated using the new definition of Final Average Compensation; 2) the benefit the member would have received had he retired or entered the DROP immediately before October 9, 2004; or 3) a benefit calculated using a sliding average of the pay received for the pay periods elapsed since October 9, 2004.</p> <p>For new members, the benefit will be 2.25% of Final Average Compensation for each of the first 20 years of service plus 2% of Final Average Compensation for each year of service in excess of 20 years, with a maximum of 80% of Final Average Compensation.</p> |
| Additional Benefits | New members after October 9, 2004 will not receive a \$5,000 lump-sum benefit upon retirement, death, or disability. |
| Deferred Retirement Option Plan (DROP) | <p>The DROP is closed to new members after October 9, 2004. Instead, new members will have a partial lump sum optional payment (PLOP) of up to 20% of the actuarial value of the accrued pension at retirement.</p> <p>Additionally, a minimum of 3.00% interest will be credited to existing DROP accounts with a maximum of 7.00%. If the actuary certifies that past service costs are fully funded, the credit may be as high as 10.00%.</p> |
| Postretirement Option | The PROP is closed to new members after October 9, 2004. |

Plan (PROP)

Disability Education Allowance New members after October 9, 2004 will not be eligible for this benefit.

Benefit Adjustments The annual cost-of-living adjustment will be 80% of the increase in the Consumer Price Index for All Urban Consumers (CPI-U) for the preceding year, with a minimum of 2.4% and a maximum of 8%, rather than 2/3 of the CPI-U with a minimum of 3% and a maximum of 8%.

13th Benefit Check No 13th benefit payment will be paid unless the funded ratio of the plan is at least 120%.

Contributions Beginning October 9, 2004, members will contribute 9% of pay rather than 8.75%. The additional 0.25% of pay will be credited to the plan's general fund and not to a member's DROP account. New members who become participants after October 9, 2004 will contribute 10.25% of pay. This amount will be credited to the plan's general fund.

City Contribution The city agrees to the following contribution schedule:

| <u>Fiscal Year</u> | <u>Amount</u> |
|--------------------|-----------------------------------------------------------|
| 2005 | \$36,645,000 |
| 2006 | 16% of total compensation, with a minimum of \$53,000,000 |
| 2007 - 2012 | \$5,000,000 above the prior year's payment |

Beginning in Fiscal Year 2013 and continuing until the plan's funded ratio is 100%, payments will increase each year by \$5,000,000 or, if the scheduled payment is less than the actuarial rate, \$10,000,000. In addition, once the plan's funded ratio is 100%, the city will pay the actuarially required rate, but not less than 16% of covered pay.

Additionally, beginning in Fiscal Year 2013 and once the funded ratio reaches 75%, if the funded ratio drops below 75%, the City will pay additional amounts in the following fiscal year to return the plan to 75% funded. Once the fund ratio reaches 80%, the City will contribute additional amounts to return the plan to 80% funded.

Summary of Changes in Assumptions Due to Meet & Confer Agreement

Retirement rates for new members after October 9, 2004

100% of members are assumed to retire after reaching 37.5 years of service

| Age | Service | | | | | | |
|-------------|---------|-------|-------|-------|-------|---------|---------------|
| | 20-21 | 22-23 | 24-25 | 24-27 | 28-29 | 30-37.5 | 37.5 and Over |
| 40-54 | 5% | 5% | 5% | 10% | 20% | 20% | 100% |
| 55-59 | 5 | 10 | 10 | 30 | 30 | 40 | 100 |
| 60-64 | 10 | 10 | 25 | 50 | 50 | 50 | 100 |
| 65 and over | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

DROP Participation Rates

100% of eligible active participants are assumed to elect the DROP. Participants are assumed to elect the maximum duration for the back DROP, up to 20 years, except in cases where the DROP benefit as of October 9, 2004 determined using the highest biweekly pay period during the last 26 pay periods is greater than the back-DROP benefit using the new definition of Final Average Compensation. If the employee is currently participating in the DROP and his current actual DROP benefit is greater than his estimated back-DROP benefit, then his current DROP benefit is used for valuation purposes.

These provisions have been reflected only in the development of the October 9, 2004 through June 30, 2005 contribution rate and the projection of assets and liabilities. The remaining results reflect only those plan provisions in effect July 1, 2004.

Actuarial Certification, Reliances and Distribution

This report describes the results of an actuarial valuation of the Houston Police Officers Pension System. The Houston Police Officers Pension System retained Towers Perrin to perform this actuarial valuation for the purposes of determining the funding status for the plan year July 1, 2004 through June 30, 2005.

The consulting actuaries are members of the Society of Actuaries and other professional actuarial organizations and meet their "General Qualification Standard for Prescribed Statements of Actuarial Opinions" relating to pension plans.

In preparing the actuarial results, we have relied upon information provided by the Board of Trustees regarding plan provisions, plan participants, plan assets, and other matters. While the scope of our engagement did not call for us to perform an audit or independent verification of this information, we have reviewed this information for reasonableness but have not audited it. The accuracy of the results presented in this report is dependent upon the accuracy and completeness of the underlying information. Historical information for years prior to 1986 was prepared by the prior actuaries and was not subjected to our actuarial review.

The actuarial methods and assumptions used in this valuation were selected by the Board of Trustees. The Board has sole authority to determine the actuarial assumptions. In our opinion, the actuarial assumptions used are appropriate for purposes of the valuation and, in the aggregate, are reasonably related to the experience of the Fund and to reasonable expectations as of the valuation date.

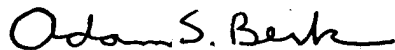
The funding determination portion of this actuarial valuation has been conducted in accordance with principles of practice prescribed by the Actuarial Standards Board and the requirements of the Texas Government Code. Section 802.101 of the Texas Government Code requires the use of actuarial "assumptions and methods that are reasonable in the aggregate, considering the experience of the program and reasonable expectations, and that, in combination, offer the actuary's best estimate of anticipated experience under the program."

The results shown in this report are reasonable actuarial results. However, a different set of results could also be considered reasonable actuarial results, since the Actuarial Standards of Practice describe a "best-estimate range" for each assumption, rather than a single best-estimate value. Thus, reasonable results differing from those presented in this report could have been developed by selecting different points within the best-estimate ranges for various assumptions.

It should be noted that other than the City agreement to maintain a funded status floor as specified under the 2004 Meet and Confer (see City Contribution Schedule on page 29), the City funding schedule could potentially not be sufficient to cover all future benefit payments of the Houston Police Officers Pension System. Moreover, it is possible that the Houston Police Officers Pension System will fall below the funded status floor as actual experience differs from assumed and/or assumptions change. Towers Perrin has not been provided detailed provisions on how the funded status floor will be maintained if the funded status declines below specified levels.

The information contained in this report was prepared for the internal use of the Houston Police Officers Pension System and its auditors in connection with our actuarial valuation of the pension plan. It is neither intended nor necessarily suitable for other purposes. The Houston Police Officers Pension System may also distribute this actuarial valuation report to the appropriate authorities who have the legal right to require the Houston Police Officers Pension System to provide them with this report, in which case, the Houston Police Officers Pension System will use best efforts to notify Towers Perrin in advance of this distribution. Further distribution to, or use by, other parties of all or part of this report is expressly prohibited without Towers Perrin's prior written consent.

Towers Perrin



Adam S. Berk
A.S.A., C.F.A., E.A., M.A.A.A.



Steven R. Rusher
F.S.A., E.A., M.A.A.A.

February, 2005