

CITY OF YPSILANTI FIRE AND POLICE RETIREMENT SYSTEM
58TH ACTUARIAL VALUATION REPORT
JUNE 30, 2013

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January 23, 2014

The Retirement Board
City of Ypsilanti
Fire and Police Retirement System
Ypsilanti, Michigan

Dear Board Members:

Submitted in this report are the results of the 58th Annual Actuarial Valuation of the City of Ypsilanti Fire and Police Retirement System, which is based on Act No. 345 of the Public Acts of 1937, as amended. The purpose of the valuation and gain (loss) analysis is to measure funding progress in relation to the actuarial cost method, to determine employer contribution rates and to determine actuarial information for Governmental Accounting Standards Board (GASB) Statements No. 25 and No. 27. The results of the valuation may not be applicable for other purposes.

The valuation was based upon data, furnished by the City, concerning financial operations and individual retirants, beneficiaries and members. Data was checked for year to year consistency, but was not audited by the actuary.

The actuarial methods and assumptions used in the actuarial valuation are summarized in Section D of this report. The assumptions are established by the Board after consulting with the actuary.

The date of the valuation was June 30, 2013.

This report should not be relied on for any purpose other than those described above. It was prepared at the request of the Board and is intended for use by the Retirement System and those designated or approved by the Board. This report may be provided to parties other than the System only in its entirety and only with the permission of the Board.

The signing actuaries are independent of the plan sponsor.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as: plan experience differing from that anticipated by the economic and demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of the actuary's assignment, the actuary did not perform an analysis of the potential range of such future measurements.

The Retirement Board

January 23, 2014

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This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge, this report is complete and accurate and was made in accordance with generally recognized actuarial methods in accordance with standards of practice prescribed by the Actuarial Standards Board and in compliance with the constitution of the State of Michigan. The actuarial assumptions used for the valuation produce results which we believe are reasonable.

Randall Dziubek is a Member of the American Academy of Actuaries (MAAA) and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Respectfully submitted,



David L. Hoffman



Randall J. Dziubek, ASA, MAAA

DLH/RJD:bd

SECTION A

BASIC FINANCIAL OBJECTIVE AND OPERATION OF THE RETIREMENT SYSTEM

BASIC FINANCIAL OBJECTIVE AND OPERATION OF THE RETIREMENT SYSTEM

Benefit Promises Made Which Must Be Paid For. A retirement system is an orderly means of handing out, keeping track of, and financing contingent pension promises to a group of employees. As each member of the retirement system acquires a unit of service credit he is, in effect, handed an "IOU" which reads: "The Retirement System promises to pay you one unit of retirement benefits, payments in cash commencing when you retire."

The principal related financial question is: When shall the money required to cover the "IOU" be contributed? This year, when the benefit of the member's service is received? Or, some future year when the "IOU" becomes a cash demand?

The constitution of the State of Michigan is directed to the question:

"Financial benefits arising on account of service rendered in each fiscal year shall be funded during that year and such funding shall not be used for financing unfunded accrued liabilities."

Section 9(2) of Act 345 is also directed to the question:

"Sec. 9(2). - - - For the purpose of creating and maintaining a fund for the payment of the pensions and other benefits payable hereunder the said city, village or municipality, subject to the provisions of this act, shall appropriate, at the end of such regular intervals as may be adopted, quarterly, semi-annually, or annually, an amount sufficient to maintain actuarially determined reserves covering pensions payable or which might be payable on account of service performed and to be performed by active members and pensions being paid retired members and beneficiaries - - -."

This retirement system meets this constitutional requirement by having as its ***financial objective to establish and receive contributions, expressed as percents of active member payroll, which will remain approximately level from year to year*** and will not have to be increased for future generations of taxpayers.

Section 20(m) of Act 728 of 2002 requires that an annual required contribution shall consist of a current service cost (the normal cost) and a payment for unfunded actuarial liability (both interest and principal). This requirement is consistent with the financial objective stated above.

A by-product of the level percent of payroll contribution objective is the accumulation of invested assets for varying periods of time. ***Invested assets are a by-product of level percent of payroll contributions, not the objective.*** Investment income becomes a major contributor to the retirement system, and the amount is directly related to the amount of contributions and investment performance.

If contributions to the retirement system are less than the preceding amount, the difference, plus investment earnings not realized thereon, will have to be contributed at some later time, or, benefits will have to be reduced, to satisfy the fundamental fiscal equation under which all retirement programs must operate; that is:

$$\mathbf{B = C + I - E}$$

The aggregate amount of Benefit payments to any group of members and their beneficiaries cannot exceed the sum of:

The aggregate amount of Contributions received on behalf of the group

. . . plus . . .

Investment earnings on contributions received and not required for immediate payment of benefits

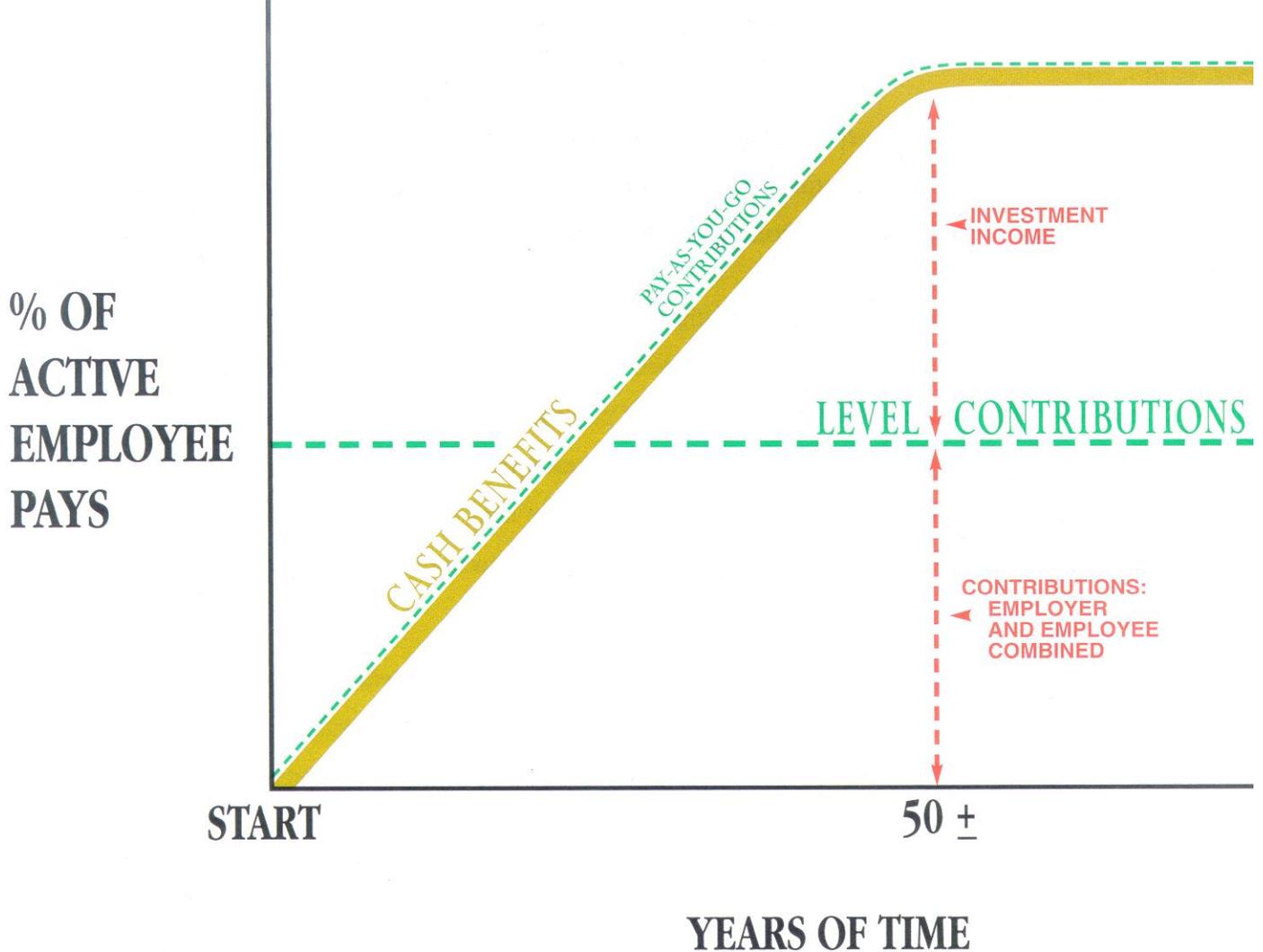
. . . minus . . .

The Expenses of operating the program.

There are retirement systems designed to defer the bulk of contributions far into the future. Lured by artificially low present contributions, the inevitable consequence of a relentlessly increasing contribution rate -- to a level greatly in excess of the level percent of payroll rate -- is ignored.

This method of financing is prohibited in Michigan by the state constitution.

Computed Contribution Rate Needed to Finance Benefits. From a given schedule of benefits and from the data furnished, the actuary calculates the contribution rate by means of an actuarial valuation - the technique of assigning monetary values to the risks assumed in operating a retirement system.



CASH BENEFITS LINE. This relentlessly increasing line is the fundamental reality of retirement plan financing. It happens each time a new benefit is added for future retirements (and happens regardless of the design for contributing for benefits).

LEVEL CONTRIBUTION LINE. Determining the level contribution line requires detailed assumptions concerning a variety of experiences in future decades, including:

Economic Risk Areas

- Rates of investment return
- Rates of pay increase
- Changes in active member group size

Non-Economic Risk Areas

- Ages at actual retirement
- Rates of mortality
- Rates of withdrawal of active members (turnover)
- Rates of disability

SECTION B

VALUATION RESULTS

**CITY'S COMPUTED CONTRIBUTIONS FOR THE
FISCAL YEAR BEGINNING JULY 1, 2014**

Contributions for	Contributions Expressed as Percents of Annual Pay
Normal Cost	
Age and service pensions	20.07 %
Death-in-Service survivor pensions	0.42
Disability pensions	<u>1.32</u>
Total	21.81 %
Members' Contributions	
Gross contributions@	9.77
Less prospective refunds	<u>1.05</u>
Available for pensions	8.72
City's Normal Cost	13.09
Unfunded Actuarial Accrued Liabilities	
Retirants and beneficiaries*	1.25
Active members*	<u>26.13</u>
Total	<u>27.38</u>
City's Required Employer Contribution for Pensions	40.47 %
City Dollar Contribution#	\$1,395,423

@ *Weighted average of two rates.*

* *Financed as a level percent-of-payroll over an open period of 30 years.*

Adjusted for the time delay between valuation date and beginning of fiscal year.

REPORTED FUND BALANCE

Reserves	Reported Fund Balance June 30,	
	2013	2012
Reserve for Employees' Contributions	\$ 3,116,944	\$ 3,130,422
Reserve for Employer Contributions	(4,687,405)	(5,545,769)
Reserve for Retired Benefit Payments	29,690,175	29,367,027
Reserve for Undistributed Investment Income	-	-
Total Fund Balance	\$ 28,119,714	\$ 26,951,680

Valuation assets are equal to reported market value of assets, except that only 20% of the difference between the market-to-market rate of return and the projected rate of return (the 7.5% actuarial assumption) is recognized each year. Such spreading reduces the fluctuation in the City's computed contribution rate which might otherwise be caused by market value fluctuations. The details of the spreading technique are shown on pages C-10 to C-13. The present method was adopted for the 1993 year. The valuation assets as of June 30, 2013 total \$27,649,572.

In financing actuarial accrued liabilities, valuation assets allocated to pensions of \$27,649,572 were distributed as follows:

Reserves for	Valuation Assets Applied to Actuarial Accrued Liabilities for			Totals
	Active Members	Retirants & Beneficiaries	Contingency Reserve	
Employees' Contributions	\$ 3,116,944			\$ 3,116,944
Employer Contributions	(4,687,405)			(4,687,405)
Retired Benefit Payments	1,266,520	\$ 28,423,655		29,690,175
Reserve for Undistributed Investment Income	-			-
Valuation Asset Adjustment	(470,142)			(470,142)
Total	\$ (774,083)	\$ 28,423,655	\$ -	\$ 27,649,572

**DERIVATION OF EXPERIENCE GAIN (LOSS)
YEAR ENDED JUNE 30, 2013**

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

(1) UAAL* at start of year	\$ 14,728,813
(2) Normal cost from last valuation	486,732
(3) Actual employer contributions	1,222,085
(4) Interest accrual: [(1) + 1/2 [(2) - (3)]] x .075	1,077,085
(5) Expected UAAL before changes: (1) + (2) - (3) + (4)	15,070,545
(6) Change from benefit changes	(59,995)
(7) Change from revised actuarial assumptions/methods	0
(8) Expected UAAL after changes: (5) + (6) + (7)	15,010,550
(9) Actual UAAL at end of year	16,934,216
(10) Gain (loss): (8) - (9)	(1,923,666)
(11) Gain (loss) as percent of actuarial accrued liabilities at start of year: \$43,258,880	(4.4)%

* *Unfunded actuarial accrued liabilities.*

Valuation Date June 30,	Experience Gain (Loss) as a % of Beginning Accrued Liability
1999	4.4 %
2000	4.0
2001	1.6
2002	(4.3)
2003	(7.8)
2004	(6.5)
2005	(7.6)
2006	(4.1)
2007	1.0
2008	(2.1)
2009	(4.2)
2010	(3.9)
2011	(0.7)
2012	(7.9)
2013	(4.4)

SUMMARY STATEMENT OF SYSTEM RESOURCES AND OBLIGATIONS

PRESENT RESOURCES AND EXPECTED FUTURE RESOURCES

A. Present valuation assets:	
1. Net assets from system financial statements	\$28,119,714
2. Funding value adjustment	<u>(470,142)</u>
3. Valuation assets	27,649,572
B. Actuarial present value of expected future employer contributions:	
1. For normal costs	2,454,366
2. For unfunded actuarial accrued liability	<u>16,934,216</u>
3. Total	19,388,582
C. Actuarial present value of expected future member contributions	<u>1,803,471</u>
D. Total Present and Expected Future Resources	\$48,841,625

ACTUARIAL PRESENT VALUE OF EXPECTED FUTURE BENEFIT PAYMENTS

A. To retirants and beneficiaries	\$28,423,655
B. To vested terminated members	448,462
C. To present active members:	
1. Allocated to service rendered prior to valuation date - actuarial accrued liability	15,711,671
2. Allocated to service likely to be rendered after valuation date	<u>4,257,837</u>
3. Total	19,969,508
D. Total Actuarial Present Value of Expected Future Benefit Payments	\$48,841,625

COMMENTS AND CONCLUSION

COMMENT A: The overall 2012/2013 actuarial experience was less favorable than projected experience as reflected by the experience loss shown on page B-3. This experience loss is primarily attributable to lower than assumed return on investments on a market and funding value basis. In addition, there were larger than expected pay increases and no reported deaths among the retired population.

COMMENT B: The June 30, 2013 actuarial valuations reflect the following benefit changes for COAM active members:

Hired before July 1, 2012

Future accrued benefits after July 1, 2012 will be based on a 2.25% multiplier for the first 25 years and then 1.0% thereafter.

Hired on or after July 1, 2012

Accrued benefits will be based on a 2.0% multiplier and members shall contribute 10% of wages to the pension fund. Members will not be eligible for the annuity withdrawal provision.

The immediate effect of these benefit changes was a decrease in the employer contribution rate of 1.17% of payroll. Additional contribution rate reductions will emerge over time.

The annuity withdrawal provision has been eliminated for POAM members hired on or after July 1, 2012 as well.

Further contribution rate reductions will emerge as new POAM members are hired.

COMMENT C: The June 30, 1996 and later actuarial valuations reflect benefit increases for existing retirees who were receiving benefits below the January 1, 1996 estimated Federal and State poverty levels. Future increases in the poverty level are not reflected in this report, but would lead to higher City contribution rates. These increases will be included in the actuarial valuation when such increases are reported to the actuary in future years.

COMMENT D: As of June 30, 2013 the funded ratio is 62%. Market value of System assets was \$28.12 million. The difference between valuation assets and the market value of assets, \$(0.47) million, represents accumulated investment gains scheduled for phased-in recognition in the next four actuarial valuations. Without investment gains, it is expected that the System's funded ratio at that fourth year would be approximately 63%.

COMMENTS AND CONCLUSION

The table that follows shows our best, rough estimate of computed employer contributions in the next five actuarial valuations, assuming a 7.5% market value return, payroll growth as shown below, and no actuarial gains or losses. The change in the contribution from year to year reflects the phase-in of the accumulated investment gains (\$0.47 million) discussed above.

Valuation Date	Payroll	Estimated Employer Contribution
June 30, 2013	\$3,187,910	40.47%
June 30, 2014	\$3,315,426	39.35%
June 30, 2015	\$3,448,043	38.49%
June 30, 2016	\$3,585,965	38.48%
June 30, 2017	\$3,729,404	37.68%
June 30, 2018	\$3,878,580	37.20%

Please remember that these are rough estimates and, as seen in recent years, actual experience can deviate significantly from assumed, even over the near term. These numbers are being provided at the request of the City; our understanding is that they are to be used for advanced preliminary budgeting numbers.

Please note that about 1/3rd of the rates shown above are for normal cost and 2/3^{rds} for payment of unfunded actuarial accrued liability (UAAL). In dollars for the 2013 results, this was about \$0.45 million for normal cost and \$0.95 million for UAAL. If actual future payroll differs significantly from these projected payroll numbers the normal cost dollar amount will change proportionally while the UAAL dollar amount would be unchanged.

CONCLUSION: The City's contributions (members' contributions are additional) to the City of Ypsilanti Fire and Police Retirement System, for the fiscal year beginning July 1, 2014, have been computed to be 40.47% of active member payroll. This computed contribution meets the requirements of PA 728 of 2002.

COMPARATIVE STATEMENT

Valuation Date June 30,	Fiscal Year	Actuarial Accrued Liabilities & Reserves	Valuation Assets	% Funded	Unfunded Actuarial Accrued Liabilities & Reserves			City's Contribution Rate		
					Dollars	Amortiz. Period	% of Payroll	Percent	Dollars	
									Computed	Actual
1995	96-97	\$ 22,829,553	\$ 23,970,822	105.0 %	\$ (1,141,269)	30	-	13.55 %	\$ 452,235	\$ 470,000
1996	97-98	23,778,940	24,612,528	103.5	(833,588)	30	-	14.15	707,556	526,000
1997	98-99	24,914,577	25,839,088	103.7	(924,511)	30	-	14.14	748,246	595,000
1998	99-00	25,708,661	27,766,480	108.0	(2,057,819)	30	-	12.83	742,909	595,000
1999	00-01	27,010,112	30,351,193	112.4	(3,341,081)	30	-	11.35	720,531	595,000
2000	01-02	26,204,216	32,718,398	124.9	(6,514,182)	10	-	0.00 *	0	595,000
2001	02-03	26,933,083	34,479,264	128.0	(7,546,181)	10	-	0.00	0	0
2002	03-04	27,899,273	34,970,658	125.3	(7,071,385)	10	-	0.00	0	0
2003	04-05	29,020,485	33,916,996	116.9	(4,896,511)	10	-	0.00	0	0
2004	05-06	31,251,133	32,569,762	104.2	(1,318,629)	10	-	11.78 #	500,602	500,602
2005	06-07	32,774,898	31,180,708	95.1	1,594,190	30	-	16.54	730,106	730,106
2006	07-08	34,980,132	30,843,790	88.2	4,136,342	30	-	21.57 #	941,417	941,417
2007	08-09	36,211,916	32,056,915	88.5	4,155,001	30	-	21.91 #	946,937	946,937
2008	09-10	37,869,913	32,934,094	87.0	4,935,819	30	128.4 %	23.07 #	968,212	968,212
2009	10-11	39,453,312	32,472,100	82.3	6,981,212	30	179	25.64 #	1,089,013	1,018,284
2010	11-12	42,135,741	31,649,135	75.1	10,486,606	30	263.8	27.91 #*	1,199,984	1,120,305
2011	12-13	42,667,144	31,577,876	74.0	11,089,268	30	285	29.03	1,222,085	1,222,085
2012	13-14	43,258,880	28,530,067	66.0	14,728,813	30	432	36.51	1,347,529	
2013	14-15	44,643,783	27,649,572	61.9	16,994,211	30	533	41.61	1,434,731	
2013#	14-15	44,583,788	27,649,572	62.0	16,934,216	30	531	40.47	1,395,423	

* Revised actuarial assumptions.

Retirement System was amended.

The Ratio of Valuation Assets to AAL is a traditional measure of a system's funding progress. Except in years when the system is amended or actuarial assumptions are revised, this ratio is expected to increase gradually toward 100%.

The Ratio of UAAL to Valuation Payroll is another relative index of condition. Unfunded actuarial accrued liabilities represent debt, while active member payroll represents the system's capacity to collect contributions to pay toward debt. The lower the ratio, the greater the financial strength - and vice-versa.

SECTION C

SUMMARY OF BENEFIT PROVISIONS AND VALUATION DATA

**BRIEF SUMMARY OF ACT 345 BENEFIT PROVISIONS
(JUNE 30, 2013)**

Eligibility

Amount

SERVICE RETIREMENT

20 or more years of service, 25 years for Fire Chief, regardless of age or age 60 regardless of service.	Straight life pension equals 3.0% of 3-year average final compensation (AFC) times years of service for police and 3.0% AFC times first 25 years of service plus 1% of AFC times years of service in excess of 25 years for IAFF. For COAM members hired before July 1, 2012, future accrual will be 2.25% AFC times first 25 years of service plus 1% of AFC times years of service in excess of 25 years.
25 or more years of service regardless of age for Fire members hired after July 1, 2007.	Straight life pension equals 2.5% of AFC times years of service, with a 75% maximum.
25 or more years of service regardless of age for POAM/COAM members hired after July 1, 2009.	Straight life pension equals 2.0% of AFC times years of service.
25 or more years of service regardless of age for COAM members hired after July 1, 2012.	Straight life pension equals 2.25% of AFC times years of service.

DEFERRED RETIREMENT

10 or more years of service.	Computed as service retirement but based upon service, AFC and benefit in effect at termination. Benefit begins at date retirement would have occurred had member remained in employment.
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DEATH AFTER RETIREMENT SURVIVOR'S PENSION

Payable to a surviving spouse, if any, upon the death of a retired member who was receiving a straight life pension which was effective July 1, 1975 or later.	Spouse's pension equals 60% of the straight life pension the deceased retirant was receiving.
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NON-DUTY DEATH-IN-SERVICE SURVIVOR'S PENSION

Payable to a surviving spouse, if any, upon the death of a member with 10 or more years of service.	Accrued straight life pension actuarially reduced in accordance with an Option I election.
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DUTY DEATH-IN-SERVICE SURVIVOR'S PENSION

Payable upon the expiration of worker's compensation to the survivors of a member who died in the line of duty.	Same amount that was paid by worker's compensation.
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**BRIEF SUMMARY OF ACT 345 BENEFIT PROVISIONS
(JUNE 30, 2013)**

Eligibility

Amount

NON-DUTY DISABILITY

Payable upon the total and permanent disability of a member with 5 or more years of service.	To Age 55: 1.5% of AFC times years of service. At Age 55: Same as Service Retirement Pension.
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DUTY DISABILITY

Payable upon the total and permanent disability of a member in the line of duty.	To Age 55: 50% of AFC. At Age 55: Same as Service Retirement Pension with service credit from date of disability to age 55.
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POST-RETIREMENT BENEFIT INCREASES

Retirees who are receiving benefits below the estimated Federal and State poverty levels have their benefits increased up to the poverty level.

MEMBER CONTRIBUTIONS

10% of pay (Fire Chief: 5%).
5% of pay for POAM hired after July 1, 2009.
5% of pay for employees who choose to participate in the DROP during the employee's participation period.

DROP (DEFERRED RETIREMENT OPTION PLAN)

Participation is open to any member who has reached the age and service conditions for unreduced retirement.	A regular retirement benefit is computed for the member as of his DROP election date based upon final average compensation (FAC) and service credit as of this date. Monthly payments equal to 100% of the computed monthly benefit are deposited into the DROP Reserve Account (DRA) on behalf of the member. Interest is credited monthly to this balance in the DRA at the rate of 4%, compounded annually. Employer contributions will continue while the member participates in the DROP. Employer contributions are not deposited in the DRA. Member contributions shall cease as of the member's DROP election date. The member may remain in the DROP for up to five years and then must terminate employment. The member's monthly benefit at retirement will be the original monthly payment determined at the DROP election date. The member has the option at that time to receive the DRA balance as a lump-sum, as a roll-over or leave the accumulated balance in the Plan.
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**RETIRANTS AND BENEFICIARIES ADDED TO AND REMOVED FROM ROLLS
COMPARATIVE STATEMENT**

Year Ended June 30,	Added to Rolls			Removed from Rolls		Rolls End of Year				% Incr. in Annual Pensions	Average Pension	Present Value of Pensions
	No.	Annual Pensions	Post-Ret. Increases	No.	Annual Pensions	No.	Active Per Retired	Annual Pensions				
								Dollars	% of Pay			
1985	2	\$ 50,137			\$ 368	42	1.6	\$ 409,718	19.9 %	13.8 %	\$ 9,755	\$ 4,542,985
1990	3	42,779	\$ 40,405	2	16,742	67	1.0	933,398	39.4	7.7	13,931	10,159,853
1995	7	138,032		1	25,434	85	0.8	1,284,091	41.6	9.6	15,107	14,427,739
1996	6	117,023	43,747	1	9,210	90	0.8	1,435,651	41.8	11.8	15,952	15,854,562
1997	2	40,767		1	19,947	91	0.8	1,456,471	40.9	1.5	16,005	15,887,077
1998			2,190			91	0.8	1,458,661	38.6	0.2	16,029	15,649,774
1999	3	73,511	3,908	3	37,695	91	0.8	1,498,385	38.9	2.7	16,466	16,061,894
2000	6	180,781	2,591	4	55,996	93	0.7	1,625,761	43.6	8.5	17,481	16,749,097
2001	2	20,819	13,725	4	40,320	91	0.7	1,619,985	42.5	(0.4)	17,802	16,575,035
2002	3	53,805	2,446	3	43,160	91	0.7	1,633,076	42.3	0.8	17,946	16,589,766
2003			12,136	1	16,549	90	0.7	1,628,663	40.7	(0.3)	18,096	16,279,677
2004	2	24,041	2,533	3	33,849	89	0.7	1,621,388	41.7	(0.4)	18,218	16,177,858
2005	2	70,098	5,147	4	43,496	87	0.7	1,653,137	40.9	2.0	19,002	16,648,815
2006	1	75,314	12,483			88	0.7	1,740,934	43.6	5.3	19,783	17,361,798
2007	6	195,338	1,390	1	21,610	93	0.6	1,916,052	48.4	10.1	20,603	19,207,107
2008	9	213,336	(6,350)	1	15,816	101	0.5	2,107,222	54.8	10.0	20,864	21,167,561
2009	2	91,683	4,166	4	56,198	99	0.5	2,146,873	55.2	1.9	21,686	21,685,046
2010	1	29,237	5,248	1	48,732	99	0.5	2,132,626	58.8	1.2	21,542	21,714,152
2011	3	79,359	(366)	0	0	102	0.5	2,211,619	63.6	5.0	21,683	22,522,725
2012	6	299,010	2,997	0	0	108	0.3	2,513,626	99.1	13.7	23,274	25,926,503
2013	5	238,831	6,432	0	0	113	0.3	2,758,889	103.7	9.8	24,415	28,423,655

Note: DROP participants are not included in these totals. There were six (6) members participating in the DROP as of June 30, 2013 with annual benefits of \$297,143.

**RETIRANTS AND BENEFICIARIES JUNE 30, 2013
TABULATED BY TYPE OF PENSIONS BEING PAID**

Type of Pensions Being Paid	Number	Annual Pensions
Age and Service Pension		
Regular pension - benefit terminating upon death of retiree	21	\$ 445,756
Regular pension - automatic 60% joint and survivor benefit	66	1,771,612
Option 1 pension - joint and survivor benefit	4	100,767
Option 2 pension - modified joint and survivor benefit	4	154,684
Pension being paid survivor beneficiary of deceased age and service retiree	<u>11</u>	<u>175,079</u>
Total age and service pensions	106	2,647,898
Casualty Pensions		
Duty disability pension	6	97,395
Non - duty disability pension		
Duty death	<u>1</u>	<u>13,596</u>
Total casualty pensions	<u>7</u>	<u>110,991</u>
Total Pensions Being Paid	113	\$ 2,758,889

Note: DROP participants are not included in these totals. There were six (6) members participating in the DROP as of June 30, 2013 with annual benefits of \$297,143.

RETIRANTS AND BENEFICIARIES - BY ATTAINED AGES
JUNE 30, 2013

Attained Ages	No.	Annual Pensions
40 - 44	1	\$ 27,999
45 - 49	10	385,706
50 - 54	14	575,309
55 - 59	7	194,369
60 - 64	10	202,948
65 - 69	28	648,426
70 - 74	17	299,169
75 - 79	8	129,442
80 - 84	4	74,669
85 - 89	7	125,476
90 - 94	6	81,780
95 - 99	1	13,596
100 & Over		
Totals	113	\$ 2,758,889

Note: DROP participants are not included in these totals. There were six (6) members participating in the DROP as of June 30, 2013 with annual benefits of \$297,143.

DROP MEMBERS - BY ATTAINED AGES
JUNE 30, 2013

Attained Ages	No.	Annual Pensions
40 - 44	1	\$ 49,162
45 - 49	1	52,046
50 - 54	2	112,514
55 - 59	2	83,421
Totals	6	\$ 297,143

INACTIVE VESTED MEMBERS - BY ATTAINED AGES
JUNE 30, 2013

Attained Ages	No.	Estimated Annual Pensions
38	1	\$42,774
Totals	1	\$42,774

ACTIVE MEMBERS IN VALUATION - COMPARATIVE SCHEDULE

Year Ended June 30,	Number Added During Year		Terminations During Year										End of Year No.	Valuation Payroll	Group Averages			
			Normal Retirement		Disability Retirement		Died-in Service		Withdrawals			Pay			% Incr.	Age	Service	
	A	E	A	E	A	E	A	E	A	A	A							E
1995	5	8	4	3.2	0	0.2	0	0.0	0	4	4	2.9	67	\$3,085,734	\$46,056	6.3 %	35.1 yrs.	8.7 yrs.
1996	14	7	4	3.0	0	0.2	0	0.0	0	3	3	2.8	74	3,437,601	46,454	0.9	34.7	7.6
1997	6	8	1	2.6	0	0.2	0	0.1	1	6	7	3.7	72	3,564,118	49,502	6.6	35.5	8.0
1998	5	5	0	2.1	0	0.2	0	0.1	2	3	5	3.2	72	3,776,037	52,445	5.9	36.1	8.6
1999	4	5	2	2.2	0	0.3	0	0.1	0	3	3	2.9	71	3,855,156	54,298	3.5	37.6	9.1
2000	5	10	4	2.8	0	0.2	1	0.1	0	5	5	2.7	66	3,728,601	56,494	4.0	36.9	8.8
2001	4	3	0	1.7	0	0.2	0	0.0	0	3	3	2.3	67	3,813,904	56,924	0.8	37.9	9.4
2002	5	9	1	0.8	0	0.3	0	0.0	0	8	8	2.3	63	3,858,409	61,245	7.6	37.6	10.2
2003	2	3	0	0.5	0	0.1	0	0.0	0	3	3	1.9	62	4,003,846	64,578	5.4	38.7	11.3
2004	2	3	2	1.8	0	0.2	0	0.0	1	0	1	1.7	61	3,891,478	63,795	(1.2)	39.0	11.9
2005	3	5	2	1.2	0	0.2	0	0.0	0	3	3	1.6	59	4,042,199	68,512	7.4	39.5	12.5
2006	5	5	1	2.9	0	0.2	1	0.0	0	3	3	1.3	59	3,996,679	67,740	(1.1)	39.3	12.6
2007	8	7	3	4.3	0	0.2	1	0.0	0	3	3	2.3	60	3,957,733	65,962	(2.6)	37.3	10.9
2008	3	8	4	2.8	0	0.2	0	0.0	0	4	4	1.9	55	3,843,177	69,876	5.9	37.7	11.6
2009	2	3	1	2.8	0	0.2	0	0.0	0	2	2	1.9	54	3,889,397	72,026	3.1	38.8	12.3
2010	0	1	0	5.1	0	0.2	0	0.0	0	1	1	0.4	53	3,975,109	75,002	7.3	42.7	13.6
2011	2	1	1	5.1	0	0.2	0	0.0	0	3	3	0.4	51	3,892,132	76,316	1.8	41.3	14.9
2012	2	9	6	4.3	0	0.1	0	0.0	0	3	3	0.8	44	3,412,398	77,555	1.6	41.6	14.8
2013	1	6	5	1.4	0	0.1	0	0.0	1	0	1	1.1	39	3,187,910	81,741	5.4	41.1	14.4

A = Actual number of persons.

E = Expected number of persons.

Note: Actual counts, valuation payroll and group averages include DROP participants.

ACTIVE MEMBERS JUNE 30, 2013
BY ATTAINED AGE AND YEARS OF SERVICE

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
20-24	2							2	\$ 110,592
25-29	1	2						3	195,093
30-34		7						7	554,520
35-39		1	3					4	311,422
40-44			2	5				7	647,954
45-49				4	2	1		7	594,768
50-54				2		1		3	245,585
55-59								0	0
Totals	3	10	5	11	2	2		33	\$ 2,659,934
DROP								6	\$ 527,976
Totals	3	10	5	11	2	2		39	\$ 3,187,910

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Group Averages:

Age: 41.1 years
Service: 14.4 years
Annual Pay: \$81,741

DERIVATION OF VALUATION ASSETS
MARKET VALUE WITH 20% RECOGNITION OF THE DIFFERENCE BETWEEN
THE MARKET RATE OF RETURN AND THE PROJECTED RATE OF RETURN

	1989	1990	1991	1992	1993	1994	1995
Beginning of Year:							
(1) Market Value	\$18,588,355	\$20,609,921	\$20,193,121	\$20,487,287	\$21,523,460	\$22,960,936	\$21,752,529
(2) Valuation Assets	17,580,218	19,774,199	21,183,338	21,829,960	22,204,796	23,085,622	23,480,820
End of Year:							
(3) Market Value	20,609,921	20,193,121	20,487,287	21,523,460	22,960,936	21,752,529	23,543,512
(4) Net Additions to Assets, Excluding Investment Income, Administrative Expenses, and Retiree Health Insurance	(145,307)	(292,674)	(524,324)	(616,864)	(530,070)	(413,962)	(833,803)
(5) Total Investment Income =(3)-(1)-(4)	2,166,873	(124,126)	818,490	1,653,037	1,967,546	(794,445)	2,624,786
(6) Projected Rate of Return	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%
(7) Projected Investment Income =(6)x[(2)+.5x(4)]	1,225,530	1,373,950	1,464,482	1,506,507	1,535,783	1,601,505	1,614,474
(8) Investment Income In Excess of Projected Income	941,343	(1,498,076)	(645,992)	146,530	431,763	(2,395,950)	1,010,312
(9) Excess Investment Income Recognized This Year (5-year recognition)							
(9a) From This Year	188,269	(299,615)	(129,198)	29,306	86,353	(479,190)	202,062
(9b) From One Year Ago	(303,568)	188,269	(299,615)	(129,198)	29,306	86,353	(479,190)
(9c) From Two Years Ago	250,576	(303,568)	188,269	(299,615)	(129,198)	29,306	86,353
(9d) From Three Years Ago	492,199	250,576	(303,568)	188,269	(299,615)	(129,198)	29,306
(9e) From Four Years Ago	486,282	492,201	250,576	(303,569)	188,267	(299,616)	(129,200)
(10) Change in Valuation Assets =(4)+(7)+9[a..e]	2,193,981	1,409,139	646,622	374,836	880,826	395,198	490,002
End of Year:							
(3) Market Value	20,609,921	20,193,121	20,487,287	21,523,460	22,960,936	21,752,529	23,543,512
(11) Valuation Assets = (2) + (10)	19,774,199	21,183,338	21,829,960	22,204,796	23,085,622	23,480,820	23,970,822
Rate of Return:							
Market Value	11.7%	(0.6)%	4.1%	8.2%	9.3%	(3.5)%	12.3%
Asset Value	13.4%	8.7%	5.6%	4.6%	6.4%	3.5%	5.7%

DERIVATION OF VALUATION ASSETS
MARKET VALUE WITH 20% RECOGNITION OF THE DIFFERENCE BETWEEN
THE MARKET RATE OF RETURN AND THE PROJECTED RATE OF RETURN

	1996	1997	1998	1999	2000	2001	2002
Beginning of Year:							
(1) Market Value	\$23,543,512	\$24,653,827	\$27,468,157	\$31,304,085	\$33,313,844	\$33,763,825	\$31,168,835
(2) Valuation Assets	23,970,822	24,612,528	25,839,088	27,766,480	30,351,189	32,718,396	34,479,264
End of Year:							
(3) Market Value	24,653,827	27,468,157	31,304,085	33,313,844	33,763,825	31,168,835	27,758,724
(4) Net Additions to Assets, Excluding Investment Income, Administrative Expenses, and Retiree Health Insurance	(919,389)	(725,382)	(549,377)	(725,382)	(549,377)	(779,265)	(743,567)
(5) Total Investment Income: =(3)-(1)-(4)	2,029,704	3,539,712	4,385,305	3,539,712	4,385,305	(1,815,725)	(2,666,544)
(6) Projected Rate of Return	7.00%	7.00%	7.00%	7.00%	8.00%	8.00%	8.00%
(7) Projected Investment Income: =(6)x[(2)+.5x(4)]	1,645,779	1,697,489	1,789,508	1,920,886	2,390,714	2,586,301	2728598
(8) Investment Income In Excess of Projected Income	383,925	1,842,223	2,595,797	739,374	(1,006,200)	(4,402,026)	(5,395,142)
(9) Excess Investment Income Recognized This Year (5-year recognition)							
(9a) From This Year	76,785	368,445	519,159	147,875	(201,240)	(880,405)	(1,079,028)
(9b) From One Year Ago	202,062	76,785	368,445	519,159	147,875	(201,240)	(880,405)
(9c) From Two Years Ago	(479,190)	202,062	76,785	368,445	519,159	147,875	(201,240)
(9d) From Three Years Ago	86,353	(479,190)	202,062	76,785	368,445	519,159	147,875
(9e) From Four Years Ago	29,306	86,351	(479,190)	202,060	76,787	368,443	(1,356,237)
(10) Change in Valuation Assets: =(4)+(7)+9[a..e]	641,706	1,226,560	1,927,392	2,584,709	2,367,207	1,760,868	(1,384,004)
End of Year:							
(3) Market Value	24,653,827	27,468,157	31,304,085	33,313,844	33,763,825	31,168,835	27,758,724
(11) Valuation Assets: = (2) + (10)	24,612,528	25,839,088	27,766,480	30,351,189	32,718,396	34,479,264	33,095,260
Rate of Return:							
Market Value	8.8%	14.6%	16.1%	8.6%	4.2%	(5.4)%	(8.7)%
Asset Value	6.6%	8.0%	9.7%	11.8%	11.0%	7.9%	(1.9)%

**DERIVATION OF VALUATION ASSETS
MARKET VALUE WITH 20% RECOGNITION OF THE DIFFERENCE BETWEEN
THE MARKET RATE OF RETURN AND THE PROJECTED RATE OF RETURN**

	2003	2004	2005	2006	2007	2008
Beginning of Year:						
(1) Market Value	\$27,758,724	\$26,539,534	\$28,249,831	\$28,640,403	\$30,236,677	\$33,605,000
(2) Valuation Assets	33,095,260	31,921,572	30,476,636	31,180,708	30,843,790	32,056,915
End of Year:						
(3) Market Value	26,539,534	28,249,831	28,640,403	30,236,677	33,605,000	30,628,653
(4) Net Additions to Assets, Excluding Investment Income, Administrative Expenses, and Retiree Health Insurance	(1,244,169)	(1,387,895)	(1,365,010)	(1,150,381)	(1,056,000)	(1,278,148)
(5) Total Investment Income: =(3)-(1)-(4)	24,979	3,098,192	1,755,582	2,746,655	4,424,323	(1,698,199)
(6) Projected Rate of Return	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%
(7) Projected Investment Income: =(6)x[(2)+.5x(4)]	2,597,854	2,498,210	2,383,530	2,448,441	2,425,263	2,513,427
(8) Investment Income In Excess of Projected Income	(2,572,875)	599,982	(627,948)	298,214	1,999,060	(4,211,626)
(9) Excess Investment Income Recognized This Year (5-year recognition)						
(9a) From This Year	(514,575)	119,996	(125,590)	59,643	399,812	(842,325)
(9b) From One Year Ago	(1,079,028)	(514,575)	119,996	(159,080)	59,643	399,812
(9c) From Two Years Ago	(880,405)	(1,079,028)	(514,575)	88,070	(159,080)	59,643
(9d) From Three Years Ago	(201,240)	(880,405)	(1,079,028)	(544,581)	88,070	(159,080)
(9e) From Four Years Ago	147,875	(201,239)	(880,406)	(1,079,030)	(544,583)	183,850
(10) Change in Valuation Assets: =(4)+(7)+9[a..e]	(1,173,688)	(1,444,936)	(1,461,083)	(336,918)	1,213,125	877,179
End of Year:						
(3) Market Value	26,539,534	28,249,831	28,640,403	30,236,677	33,605,000	30,628,653
(11) Valuation Assets: = (2) + (10)	31,921,572	30,476,636	29,015,553	30,843,790	32,056,915	32,934,094
Rate of Return:						
Market Value	0.1%	12.0%	6.4%	9.8%	14.9%	(5.2)%
Asset Value	0.2%	(0.2)%	(0.3)%	2.7%	7.5%	6.9%

DERIVATION OF VALUATION ASSETS
MARKET VALUE WITH 20% RECOGNITION OF THE DIFFERENCE BETWEEN
THE MARKET RATE OF RETURN AND THE PROJECTED RATE OF RETURN

	2009	2010	2011	2012	2013	2014	2015	2016	2017
Beginning of Year:									
(1) Market Value	\$30,628,653	\$25,358,400	\$26,887,526	\$30,726,406	\$26,951,680				
(2) Valuation Assets	32,934,094	32,472,100	31,649,135	31,577,876	28,530,067				
End of Year:									
(3) Market Value	25,358,400	26,887,526	30,726,406	26,951,680	28,119,714				
(4) Net Additions to Assets, Excluding Investment Income, Administrative Expenses, and Retiree Health Insurance	(1,055,282)	(1,605,721)	(1,308,318)	(3,253,205)	(1,960,578)				
(5) Total Investment Income; =(3)-(1)-(4)	(4,214,971)	3,134,847	5,147,198	(521,521)	3,128,612				
(6) Projected Rate of Return	8.00%	7.50%	7.50%	7.50%	7.50%				
(7) Projected Investment Income: =(6)x[(2)+.5x(4)]	2,592,516	2,375,193	2,324,623	2,246,346	2,066,233				
(8) Investment Income In Excess of Projected Income	(6,807,487)	759,654	2,822,575	(2,767,867)	1,062,379				
(9) Excess Investment Income Recognized This Year (5-year recognition)									
(9a) From This Year	(1,361,497)	151,931	564,515	(553,573)	212,476				
(9b) From One Year Ago	(842,325)	(1,361,497)	151,931	564,515	(553,573)	\$ 212,476			
(9c) From Two Years Ago	399,812	(842,325)	(1,361,497)	151,931	564,515	(553,573)	\$ 212,476		
(9d) From Three Years Ago	59,643	399,812	(842,325)	(1,361,497)	151,931	564,515	(553,573)	\$ 212,476	
(9e) From Four Years Ago	(254,861)	59,642	399,812	(842,326)	(1,361,499)	151,930	564,515	(553,575)	\$ 212,475
(10) Change in Valuation Assets: =(4)+(7)+9[a..e]	(461,994)	(822,965)	(71,259)	(3,047,809)	(880,495)				
End of Year:									
(3) Market Value	25,358,400	26,887,526	30,726,406	26,951,680	28,119,714				
(11) Valuation Assets: = (2) + (10)	32,472,100	31,649,135	31,577,876	28,530,067	27,649,572				
Rate of Return:									
Market Value	(14.0)%	12.8%	19.6%	(1.8)%	12.0%				
Valuation Assets	1.8%	2.5%	4.0%	0.7%	3.9%				

**SUMMARY OF
CURRENT ASSET INFORMATION
FURNISHED FOR VALUATION**

Balance Sheet as of June 30, 2013

Current Assets (Market Value)	Reserve for		
Cash & Equivalent	\$ 1,933,736	Employees' Contributions	\$ 3,116,944
Accruals & Receivables	0	Employer Contributions	(4,687,405)
Common & Preferred Stock	19,616,126	Retired Benefit Payments	29,690,175
Bonds	6,860,912	Undistributed Income	0
Real Estate Investments	489,340		
Total Current Assets	28,900,114		
Less Accounts Payable	780,400		
Total Net Assets	\$ 28,119,714	Total Reserves	\$ 28,119,714

Receipts and Disbursements

	2012-2013	2011-2012
Balance - July 1,	\$ 26,951,680	\$ 30,726,406
Receipts:		
Employees' Contributions	303,679	357,684
Employer Contributions	1,222,085	1,120,305
Investment Income	3,304,904	(392,366)
Disbursements:		
Benefit Payments *	3,106,675	2,679,538
Refund of Member Contributions	379,667	2,051,656
Expenses	176,292	129,155
Balance June 30,	\$ 28,119,714	\$ 26,951,680
Ratio of investment income (net of expenses and health insurance premiums) to mean assets balance	12.0%	(1.8)%

* Including payments made to DROP accounts for members currently in the DROP

SECTION D

SUMMARY OF ACTUARIAL COST METHOD AND ASSUMPTIONS

ACTUARIAL COST METHOD

Normal cost and the allocation of benefit values between service rendered before and after the valuation date was determined using the individual entry age actuarial cost method having the following characteristics:

- (i) The annual normal costs for each individual active member, payable from the date of hire to the date of retirement, are sufficient to accumulate the actuarial present value of the member's benefit at the time of retirement;
- (ii) each annual normal cost is a constant percentage of the member's year-by-year projected covered pay.

Financing of Unfunded Actuarial Accrued Liabilities. Unfunded actuarial accrued liabilities (the portion of total liabilities not covered by present assets or expected future normal cost contributions) were amortized by level (principal and interest combined) percent-of-payroll contributions over an open period of 30 years.

ACTUARIAL ASSUMPTIONS USED FOR THE VALUATIONS

The actuary calculates the contribution requirements and benefit values of the System by applying actuarial assumptions to the benefit provisions and people information furnished, using the actuarial cost method described on the previous page.

The principal areas of financial risk which require assumptions about future experiences are:

- (i) Long-term rates of investment return to be generated by the assets of the Fund.
- (ii) Patterns of pay increases to members.
- (iii) Rates of mortality among members, retirants and beneficiaries.
- (iv) Rates of withdrawal of active members (without entitlement to a retirement benefit).
- (v) Rates of disability among members.
- (vi) The age patterns of actual retirement.

In making a valuation, the actuary calculates the monetary effect of each assumption for as long as a present covered person survives - - - a period of time which can be as long as a century.

Actual experience of the System will not coincide exactly with assumed experience, regardless of the wisdom of the assumptions, or the skill of the actuary and the precision of the many calculations made. Each valuation provides a complete recalculation of assumed future experience and takes into account all past differences between assumed and actual experience. The result is a continual series of adjustments (usually small) to the computed contribution rate.

From time to time it becomes appropriate to modify one or more of the assumptions, to reflect experience trends (but not random year to year fluctuations).

VALUATION ASSUMPTIONS

The rate of investment return (regular interest), net of expenses, used in making the valuation was 7.5% per annum, compounded annually. This rate is not the assumed real return which, for funding purposes, is the rate of return in excess of average salary increases. Considering other assumptions used in the valuation, the 7.5% translates to a real return of approximately 3.5%. Experience over the last 5 years has been as illustrated below:

	Year Ended June 30,					5-Year Average
	2013	2012	2011	2010	2009	
1) Gross investment return	4.5 %	1.2 %	4.5 %	3.0 %	2.2 %	3.1 %
Less: expenses	0.6	0.5	0.5	0.5	0.4	0.5
2) Net nominal rate of return#	3.9	0.7	4.0	2.5	1.8	2.6
3) Increase in CPI	1.8	1.7	3.6	1.1	(1.4)	1.3
4) Average salary increase	5.4	1.6	1.8	7.3	3.1	3.8
5) Real return:						
- funding purposes	(1.5)	(0.9)	2.2	(4.8)	(1.3)	(1.3)
- assumption	3.5	3.5	3.5	3.5	3.5	3.5

The nominal rate of return was computed using the approximate formula: $i = I$ divided by $1/2 (A+B-I)$, where I is realized investment income net of expenses and prior to 1997, health care premiums, A is the beginning of year asset value and B is the end of year asset value.

The mortality table used to measure post-retirement mortality was the RP-2000 Mortality Table projected to 2010. This table was first used for the June 30, 2010 valuation.

Sample Ages	Single Life Retirement Values			
	Present Value of		Future Life	
	\$1 Monthly for Life		Expectancy (Years)	
	Men	Women	Men	Women
45	\$149.55	\$151.61	36.55	38.92
50	143.70	146.33	31.81	34.12
55	135.81	139.26	27.13	29.40
60	125.75	130.27	22.62	24.85
65	113.65	119.46	18.40	20.57
70	99.83	107.03	14.56	16.65
75	84.10	93.08	11.08	13.11
80	67.47	77.78	8.09	9.96

This assumption is used to measure the probabilities of members dying before retirement and the probabilities of each benefit payment being made after retirement. There is currently no margin for future mortality improvement in the mortality assumption. It is assumed that 50% of deaths before retirement are duty related.

**SAMPLE RATES OF SEPARATION
(EXCLUDING DEATHS AND DISABILITY)
FROM ACTIVE EMPLOYMENT BEFORE RETIREMENT**

Sample Ages	Years of Service	% of Active Members Separating within Next Year	
		Police	Fire
ALL	0	25.00 %	8.00 %
	1	15.00	6.00
	2	10.00	5.00
	3	7.00	4.00
	4	5.00	3.00
25 30 35 40	5 & Over	6.50	2.50
		5.46	2.50
		3.25	1.40
		1.30	0.60
		0.65	0.50
45 50 55 60		0.65	0.50
		0.65	0.50
		0.65	0.50

These rates were first used for the June 30, 2010 valuation.

Sample Ages	Percent Increase in Salary During Next Year		Service at Beginning of Year	Additional Service Based Merit & Seniority Portion of Annual Increases
	Base	Merit and Seniority		
20	4.00 %	1.00 %	1	4.00 %
25	4.00	1.00	2	3.00
30	4.00	0.70	3-5	1.75
35	4.00	0.50		
40	4.00	0.30		
45	4.00	0.10		
50	4.00	0.10		
55	4.00	0.10		
60	4.00	0.00		

These assumptions were first used for the June 30, 2010 valuation.

If the number of active members remains constant, then the total active member payroll will increase 4.0% annually, the base portion of the individual salary increase assumptions. This increasing payroll was recognized in amortizing unfunded actuarial accrued liabilities.

Sample rates of becoming disabled are as follows:

Sample Ages	Percent Becoming Disabled within Next Year	
	Men	Women
20	0.10 %	0.04 %
25	0.13	0.07
30	0.14	0.11
35	0.21	0.19
40	0.30	0.27
45	0.46	0.40
50	0.74	0.63

It is assumed that 90% of disabilities are duty related. For disabled members, mortality rates are from the standard mortality table set forward 10 years.

Probabilities of retirement for members eligible to retire were:

Years of Service	Active Members Retiring within Next Year					
	20 and Out Eligibility		25 and Out Eligibility		Retirement	
	Police	Fire	Police	Fire	Ages	Fire Chief
20	20 %	10 %			45	20 %
21	20	15			46	20
22	20	15			47	20
23	20	15			48	20
24	60	50			49	20
25	60	50	70 %	70 %	50	20
26	60	50	50	20	51	15
27	60	50	50	20	52	10
28	60	50	50	20	53	10
29	60	50	50	20	54	10
30	100	100	100	100	55	10
					56	10
					57	10
					58	10
					59	20
					60	100

A member was assumed to be eligible for retirement after attaining age 40 with 20 or more years of service (age 45 with 25 or more years of service for Fire Chief, new hires as of July 1, 2007 for Fire, and new hires as of July 1, 2009 for Police) or after attaining age 60 with 10 or more years of service.

These rates were first used for the June 30, 2010 valuation.

SUMMARY OF ASSUMPTIONS USED
JUNE 30, 2013

Pensions in an Inflationary Environment

**Value of \$1,000/month Retirement Benefit
To an Individual Who Retires at Age 40
In an Environment of 4.0% Inflation**

<u>Age</u>	<u>Value</u>
40	\$ 1,000
41	962
42	925
43	889
44	855
45	822
50	676
55	555
60	456
65	375
70	308
75	253
80	208
85	171

The life expectancy of a 40 year old male retiree is age 81. The life expectancy for a 40 year old female retiree is age 84. Half of the people will outlive their life expectancy. The effects of even moderate amounts of inflation can be significant for those who live to an advanced age.

SUMMARY OF ASSUMPTIONS USED
JUNE 30, 2013
MISCELLANEOUS AND TECHNICAL ASSUMPTIONS

Marriage Assumption:	90% of members are assumed to be married for purposes of death-in-service benefits. 80% of members are assumed to be married at retirement.
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.
Decrement Timing:	Decrements of all types are assumed to occur mid-year.
Eligibility Testing:	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
Benefit Service:	Exact fractional service is used to determine the amount of benefit payable.
Decrement Relativity:	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
Decrement Operation:	Disability and mortality decrements do not operate during the first 5 years of service. Disability and turnover decrements do not operate during retirement eligibility.
Normal Form of Benefit:	The assumed normal form of benefit is 60% Joint and Survivor.
Loads:	Retirement Present Values were loaded by 5.5% to account for the subsidized annuity withdrawal.
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. New entrant normal cost contributions are applied to the funding of new entrant benefits.

GLOSSARY

ACTUARIAL ACCRUED LIABILITY. The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as "accrued liability" or "past service liability".

ACCRUED SERVICE. The service credited under the plan which was rendered before the date of the actuarial valuation.

ACTUARIAL ASSUMPTIONS. Estimates of future plan experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turn-over and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

ACTUARIAL COST METHOD. A mathematical budgeting procedure for allocating the dollar amount of the "actuarial present value of future plan benefits" between the actuarial present value of future normal cost and the actuarial accrued liability. Sometimes referred to as the "actuarial funding method".

ACTUARIAL EQUIVALENT. A single amount or series of amounts of equal value to another single amount or series of amounts, computed on the basis of the rate(s) of interest and mortality tables used by the plan.

ACTUARIAL PRESENT VALUE. The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

AMORTIZATION. Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.

EXPERIENCE GAIN (LOSS). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions during the period between two actuarial valuation dates, in accordance with the actuarial cost method being used.

GLOSSARY

NORMAL COST. The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as "current service cost". Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.

PLAN TERMINATION LIABILITY. The actuarial present value of future plan benefits based on the assumption that there will be no further accruals for the future service and salary. The termination liability will generally be less than the liabilities computed on a "going-concern" basis and is not normally determined in a routine actuarial valuation.

RESERVE ACCOUNT. An account used to indicate that funds have been set aside for a specific purpose and are not generally available for other uses.

UNFUNDED ACTUARIAL ACCRUED LIABILITY. The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as "unfunded accrued liability".

VALUATION ASSETS. The value of current plan assets recognized for valuation purposes. Generally based on market value, adjusted to eliminate some of the market value fluctuation.

SECTION E

CERTAIN DISCLOSURES REQUIRED BY STATEMENTS NO. 25 AND NO. 27 OF THE GOVERNMENTAL ACCOUNTING STANDARDS BOARD

This information is presented in draft form for review by the System's auditor. Please let us know if there are any items that the auditor changes so that we may maintain consistency with the System's financial statements.

**GASB STATEMENTS NO. 25 AND NO. 27
REQUIRED ACTUARIAL INFORMATION
SCHEDULE OF FUNDING PROGRESS**

Actuarial Valuation June 30,	(a) Actuarial Value of Assets	(b) Entry Age Actuarial Accrued Liability	(b-a) Unfunded Accrued Liability (UAL)	(a/b) Funded Ratio	(c) Annual Covered Payroll	[(b-a)/c] UAL as a Percentage of Covered Payroll
1996	\$24,612,528	\$23,506,576	\$ (1,105,952)	105	\$3,437,601	-
1996 #	24,612,528	23,778,940	(833,588)	104	3,437,601	-
1997	25,839,088	24,914,577	(924,511)	104	3,564,118	-
1998	27,766,480	25,708,661	(2,057,819)	108	3,776,037	-
1999	30,351,193	27,010,112	(3,341,081)	112	3,855,156	-
2000	32,479,327	27,824,096	(4,655,231)	117	3,728,601	-
2000 *	32,440,367	26,204,216	(6,236,151)	124	3,728,601	-
2001	34,479,264	26,933,083	(7,546,181)	128	3,813,904	-
2002	34,970,658	27,899,273	(7,071,385)	125	3,858,409	-
2003	33,916,996	29,020,485	(4,896,511)	117	4,003,846	-
2004 #	32,569,762	31,251,133	(1,318,629)	104	3,891,478	-
2005	31,180,708	32,774,898	1,594,190	95	4,042,199	39 %
2006 #	30,843,790	34,980,132	4,136,342	88	3,996,679	103
2007 #	34,292,073	36,211,916	1,919,843	95	3,957,733	49
2008 #	32,934,094	37,869,913	4,935,819	87	3,843,177	128
2009 #	32,472,100	39,453,312	6,981,212	82	3,889,397	179
2010 #*	31,649,135	42,135,741	10,486,606	75	3,975,109	264
2011	31,577,876	42,667,144	11,089,268	74	3,892,132	285
2012	28,530,067	43,258,880	14,728,813	66	3,412,398	432
2013	27,649,572	44,643,783	16,994,211	62	3,187,910	533
2013 #	27,649,572	44,583,788	16,934,216	62	3,187,910	531

* After changes in actuarial assumptions and/or methods.

After changes in benefit provisions.

GASB STATEMENTS NO. 25 AND NO. 27
REQUIRED SUPPLEMENTARY INFORMATION

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

Valuation date	6/30/2013
Actuarial cost method	Individual entry age
Amortization method for unfunded actuarial accrued liabilities	Level percent open
Remaining amortization period	30-years
Asset valuation method	5-year smoothed market
Actuarial assumptions:	
Investment rate of return	7.50%
Projected salary increases including salary inflation at	4.0% - 9.0%
Cost-of-living adjustments	4.00%
	None

Membership of the plan consisted of the following at June 30, 2013, the date of the latest actuarial valuation:

Retirees and beneficiaries receiving benefits	113
DROP members	6
Terminated plan members entitled to but not yet receiving benefits	1
Active plan members	<u>33</u>
Total	153

GASB STATEMENTS NO. 25 AND NO. 27
REQUIRED ACTUARIAL INFORMATION – PENSIONS ONLY
SCHEDULE OF EMPLOYER CONTRIBUTIONS

Fiscal Year Ending June 30,	Annual Required Contribution	Percent Contributed @
1994	\$ 556,629	100.0 %
1995 *	455,744	100.8
1996	441,249	101.7
1997	452,235	103.9
1998 #	526,112	100.0
1999	545,090	100.0
2000 *	529,048	100.0
2001	477,827	100.0
2002	0	100.0
2003	0	100.0
2004 #	0	100.0
2005	0	100.0
2006 #	500,602	100.0
2007 #	730,106	100.0
2008 #	941,417	100.0
2009 #	946,937	100.0
2010 #	968,212	100.0
2011	1,018,284	100.0
2012	1,120,305	100.0
2013 #	1,222,085	100.0

* After changes in actuarial assumptions and/or methods.

After changes in benefit provisions.

@ Excludes contribution for reimbursement of health insurance premiums, if any.

January 23, 2014

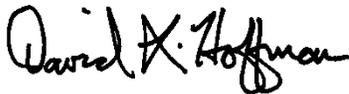
Retirement Board
City of Ypsilanti Fire and Police Retirement System
One South Huron Street
Ypsilanti, Michigan 48197

Attention: Retirement Board Chairperson

Enclosed are eight copies of the report of the 58th Annual Actuarial Valuation of the City of Ypsilanti Fire and Police Retirement System. I will be happy to meet with the Retirement Board to discuss the report.

Please note that this report includes required reporting for GASB No. 25 and No. 27. Our fee quote for the fiscal year does not include costs for reporting under GASB No. 67 and No. 68. If the Board wishes to implement the new reporting standards now, we will be happy to provide a fee quote.

Sincerely,



David L. Hoffman

DLH:bd
Enclosures

cc: Ms. Marilou T. Uy, Finance Director (+8 report copies)
Mr. Michael VanOverbeke, Attorney (+1 report copy)