## **City of Meriden Police Pension Fund**

Actuarial Valuation and Review as of July 1, 2006

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November 27, 2006

Mr. John Ivers City of Meriden Police Pension Fund 142 East Main Street Meriden, CT 06450

Dear Mr. Ivers:

We are pleased to submit this Actuarial Valuation and Review as of July 1, 2006. It summarizes the actuarial data used in the valuation, establishes the funding requirements for fiscal years ending June 30, 2008 and June 30, 2009 and analyzes the actuarial experience between July 1, 2004 and June 30, 2006.

The census information on which our calculations were based was prepared by the City of Meriden Police Plan and the financial information was provided by the City. That assistance is gratefully acknowledged. The actuarial calculations were completed by the persons listed below.

This actuarial valuation has been completed in accordance with generally accepted actuarial principles and practices. To the best of our knowledge, the information supplied in this actuarial valuation is complete and accurate. Further, in our opinion, the assumptions as approved by the Board are reasonably related to the experience of and the expectations for the Plan.

We look forward to reviewing this report at your next meeting and to answering any questions.

Sincerely,

THE SEGAL COMPANY

Bv:

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#### Purpose

This report has been prepared by The Segal Company to present a valuation of the City of Meriden Police Pension Fund as of July 1, 2006. The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits. The contribution requirements presented in this report are based on:

- > The benefit provisions of the Pension Plan, as administered by the Board;
- The characteristics of covered active participants, inactive vested participants, and retired participants and beneficiaries as of July 1, 2006, provided by the Board;
- ➤ The assets of the Plan as of June 30, 2006, provided by the City;
- Economic assumptions regarding future salary increases and investment earnings; and
- > Other actuarial assumptions, regarding employee terminations, retirement, death, etc.

### Significant Issues in Valuation Year

The following key findings were the result of this actuarial valuation:

- The recommended contribution for the fiscal year ending June 30, 2008 is \$3,509,801, compared to \$3,540,516 for the year ending June 30, 2006. The recommended contribution for the year ending June 30, 2009 is \$3,556,861.
- The actuarial valuation report as of July 1, 2006 is based on financial information as of that date. Changes in the value of assets subsequent to that date, to the extent that they exist, are not reflected. Declines in asset values will increase the actuarial cost of the Plan, while increases will decrease the actuarial cost of the Plan. For example, a 10% change in the current year's actuarial value of assets would produce a \$499,035 change in the recommended contribution level. Because the actuarial value of assets involves a smoothing method, a 10% change in market value would not be fully reflected immediately in the actuarial value of assets. Rather, that effect would be spread over a period of years. We have shown the full impact immediately so as to indicate the sensitivity of costs to market fluctuations.
- As indicated in Section 2, Subsection B of this report, the total unrecognized investment loss as of June 30, 2005 is \$2,794,445. This investment loss will be recognized in the determination of the actuarial value of assets for funding purposes in the next few years, to the extent it is not offset by recognition of investment gains derived from future experience. This implies that earning the assumed rate of investment return of 8.00% per year on a **market value** basis will result in investment losses on the actuarial value of assets in the next few years. Therefore, if the actual market return is

equal to the assumed 8.00% rate and all other actuarial assumptions are met, the contribution requirements would still increase in each of the next few years. Please note, the unrecognized asset losses have decreased from approximately \$6,654,000 to \$2,794,000. This decrease is a very positive sign. In addition, with approximately \$3,860,000 in asset losses recognized this year, it was nice to see that the funded percentage was constant. Changing the assumptions also helped keep the funded percentage constant.

For this valuation, there were a few assumption changes made. A table comparing the prior assumptions to the new assumptions is below:

	New	Assumption	Prior Assumption
Administrative expenses	\$30,000 per year		\$20,000 per year
Mortality table	RP2000 Combined	Healthy Blue Collar	1983 Group Annuity Mortality Table with margin
Retirement rates	Years of Service	Retirement Probability (%)	Age 51 or completion of 25 years of service
	20	10	
	21 - 24	5	
	25	10	
	26 - 29	5	
	30	100	
Salary increase	4.25%		3.00% in 2005 and 2006, 4.25% in 2007, 5.25% thereafter

If these assumption were not changed, the valuation contribution would have been \$3,963,265. In comparison, the valuation contribution is \$3,464,768.

SECTION 1: Valuation Summary for the City of Meriden Police Pension Fund

	2006	2004
Contributions for plan year beginning July 1:		
Valuation	\$3,464,768	\$3,482,456
Funding elements for plan year beginning July 1:		
Normal cost, including administrative expenses	\$1,312,235	\$1,606,755
Market value of assets	50,951,375	42,098,399
Actuarial value of assets	53,745,820	48,752,364
Actuarial accrued liability	79,947,211	72,823,660
Unfunded actuarial accrued liability	26,201,391	24,071,296
GASB 25/27 for plan year beginning July 1:		
Annual required contributions (ARC)	\$3,601,188*	\$3,413,205
Actual contributions	22	3,380,395
Percentage contributed		99.04%
Funded ratio	67.23%	66.95%
Covered payroll	\$5,940,009	\$7,039,682

Number of former participants due a refund of contributions

Number of retired participants and beneficiaries

Number of active participants

Total payroll

Average payroll

**Summary of Key Valuation Results** 

103

122

\$7,039,682

57,702

120

96

\$5,940,009

61,875

<sup>\*</sup>This ARC was developed in the July 1, 2004 Actuarial Report.

#### A. PARTICIPANT DATA

The Actuarial Valuation and Review considers the number and demographic characteristics of covered participants, including active participants, vested terminated participants, retired participants and beneficiaries. This section presents a summary of significant statistical data on these participant groups.

More detailed information for this valuation year and the preceding valuation can be found in Section 3, Exhibits A, B, and C.

A historical perspective of how the participant population has changed over the past five valuations can be seen in this chart.

#### CHART 1

Participant Population: 1999 - 2006

Year Ended June 30	Active Participants	Vested Terminated Participants*	Retired Participants and Beneficiaries	Ratio of Non-Actives to Actives
1999	125	#####################################	101	0.81
2000	127		103	0.81
2002	124		106	0.85
2004	122		103	0.84
2006	96		120	1.25

<sup>\*</sup>Excludes terminated participants due a refund of employee contributions. There is one such participant as of July 1, 2006.

#### **Active Participants**

Plan costs are affected by the age, years of service and payroll of active participants. In this year's valuation, there were 96 active participants with an average age of 41.8, average years of service of 15.5 years and average payroll of \$61,875. The 122 active participants in the prior valuation had an average age of 41.2, average service of 14.9 years and average payroll of \$57,702.

Among the active participants, there were no participants with unknown age or service information.

## **Inactive Participants**

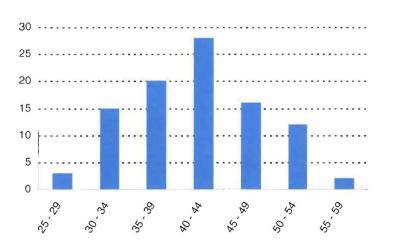
In this year's valuation, there were no participants with a vested right to a deferred or immediate vested benefit.

There was 1 participant entitled to a return of their employee contributions.

These graphs show a distribution of active participants by age and by years of service.

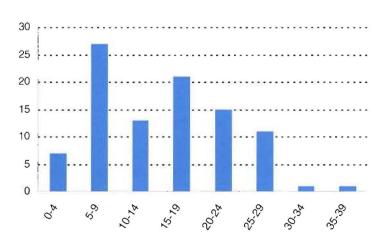
#### **CHART 2**

Distribution of Active Participants by Age as of June 30, 2006



#### **CHART 3**

Distribution of Active Participants by Years of Service as of June 30, 2006



## **Retired Participants and Beneficiaries**

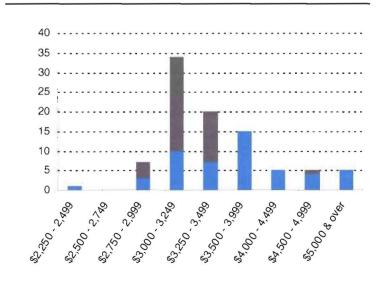
As of June 30, 2006, 92 retired participants and 28 beneficiaries were receiving total monthly benefits of \$368,682. For comparison, in the previous valuation, there were 79 retired participants and 24 beneficiaries receiving monthly benefits of \$277,880.

These graphs show a distribution of the current retired participants based on their monthly amount and age, by type of pension.

■ Disability ■ Regular

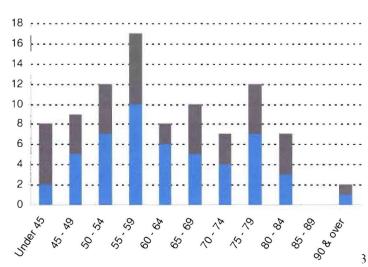
## CHART 4

Distribution of Retired Participants by Type and by Monthly Amount as of June 30, 2006



#### **CHART 5**

Distribution of Retired Participants by Type and by Age as of June 30, 2006



#### Valuation Results for the City of Meriden Police Pension Fund **SECTION 2:**

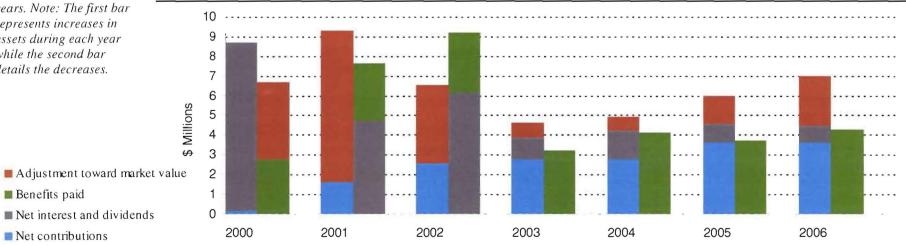
#### **B. FINANCIAL INFORMATION**

Retirement plan funding anticipates that, over the long term, both net contributions (less administrative expenses) and net investment earnings (less investment fees) will be needed to cover benefit payments.

Retirement plan assets change as a result of the net impact of these income and expense components. Additional financial information, including a summary of these transactions for the valuation year, is presented in Section 3, Exhibits D, E and F.

The chart depicts the components of changes in the actuarial value of assets over the last seven years. Note: The first bar represents increases in assets during each year while the second bar details the decreases.

**CHART 6** Comparison of Increases and Decreases in the Actuarial Value of Assets for Years Ended June 30, 2000 - 2006



It is desirable to have level and predictable plan costs from one year to the next. For this reason, the Board has approved an asset valuation method that gradually adjusts to market value. Under this valuation method, the full value of market fluctuations is not recognized in a single year and, as a result, the asset value and the plan costs are more stable.

The amount of the adjustment to recognize market value is treated as income, which may be positive or negative. Realized and unrealized gains and losses are treated equally and, therefore, the sale of assets has no immediate effect on the actuarial value.

The chart shows the determination of the actuarial value of assets as of the valuation date.

CHART 7

Determination of Actuarial Value of Assets

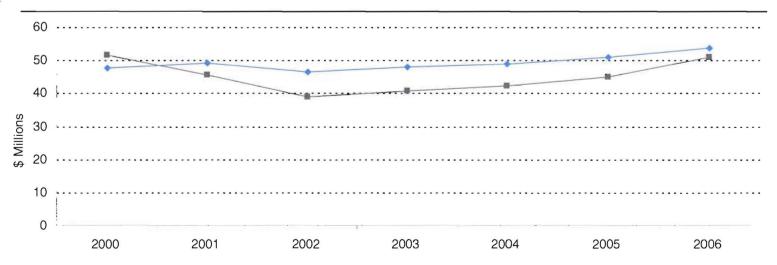
		Year Ended	
		June 30, 2006	June 30, 2005
1.	Actuarial value of assets at beginning of year	\$51,042,016	\$48,752,364
2.	Total contributions (City and employee)	3,662,504	3,758,716
3.	Total benefit payments and expenses	4,317,260	3,832,595
4.	Average asset value: $(1) + 0.5 x [(2) - (3)]$	50,714,638	48,715,425
5a.	Expected investment income: .08 x (4)	4.057,171	3,897,234
5b.	Expected end of year assets: $(1) + (2) - (3) + (5a)$	54,444,431	52.575,719
6a.	Actual investment income	6,698,929	2,882,682
6b.	Actual end of year assets	50,951,375	44,907,202
7.	Adjustment toward market value: 20% x [ (6b) – (5b) ]	-698,611	-1,533,703
8.	Actuarial value of assets at end of year: (5b) + (7), but not less than 80% of (6b), nor more than 120% of (6b)	\$53,745,820	\$51.042. <u>016</u>
9.	Actuarial value as a percentage of market value: $(8) \div (6b)$	105.48%	113.66%

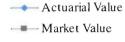
Both the actuarial value and market value of assets are representations of the City of Meriden Police Plan's financial status. As investment gains and losses are gradually taken into account, the actuarial value of assets tracks the market value of assets. The actuarial asset value is significant because the City of Meriden Police Plan's liabilities are compared to these assets to determine what portion, if any, remains unfunded. Amortization of the unfunded actuarial accrued liability is an important element in determining the contribution requirement.

This chart shows the change in the actuarial value of assets versus the market value over the past seven years.

#### CHART 8

#### Actuarial Value of Assets vs. Market Value of Assets as of June 30, 2000 - 2006





#### C. ACTUARIAL EXPERIENCE

To calculate the required contribution, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year actual experience is measured against the assumptions. If overall experience is more favorable than anticipated (an actuarial gain), the contribution requirement will decrease from the previous year. On the other hand, the contribution requirement will increase if overall actuarial experience is less favorable than expected (an actuarial loss).

Taking account of experience gains or losses in one year without making a change in assumptions reflects the belief that the single year's experience was a short-term

development and that, over the long term, experience will return to the original assumptions. For contribution requirements to remain stable, assumptions should approximate experience.

If assumptions are changed, the contribution requirement is adjusted to take into account a change in experience anticipated for all future years.

The total gain/(loss) is \$(5,900,042), (\$2,232,314) from investments and (\$3,667,728) from all other sources. The net experience variation from individual sources other than investments was 4.6% of the actuarial accrued liability. A discussion of the major components of the actuarial experience is on the following pages.

This chart provides a summary of the actuarial experience over the past two years.

# CHART 9 Actuarial Experience for Two-Year Period Ended June 30, 2006

1.	Net gain/(loss) from investments*	-\$2,232,314
2.	Net gain/(loss) from administrative expenses	-152.760
3.	Net gain/(loss) from other experience**	<u>-3,514,968</u>
4.	Net experience gain/(loss): $(1) + (2) + (3)$	-\$5,900,042

<sup>\*</sup> Details in Chart 10

<sup>\*\*</sup> Details in Chart 12

#### **Investment Rate of Return**

A major component of projected asset growth is the assumed rate of return. The assumed return should represent the expected long-term rate of return, based on the City of Meriden Police Plan's investment policy. For valuation purposes, the assumed rate of return on the actuarial value of assets is 8.00%. The actuarial smoothed rate of return was 6.62% for the 2005/2006 plan year and 4.85% for the 2004/2005 plan year. The market value rate of return was 15.03% for the 2005/2006 plan year and 6.85% for the 2004/2005 plan year.

Since the actuarial smoothed return for the year was less than the assumed return, the City of Meriden Police Plan experienced an actuarial loss during the two-year period ending June 30, 2006 with regard to its investments.

This chart shows the gain/(loss) due to investment experience.

# CHART 10 Actuarial Value Investment Experience

	Year Ended		
	June 30, 2006	June 30, 2005	
I. Smoothed return	\$3,358.560	\$2,363,531	
2. Average value of assets	50,714,638	48,715,425	
3. Smoothed rate of return: $(1) \div (2)$	6.62%	4.85%	
4. Assumed rate of return	8.00%	8.00%	
5. Expected return: (2) x (4)	\$4,057,171	\$3,897,234	
6. Actuarial gain/(loss): (1) – (5)	<u>-\$698,611</u>	-\$1,533,703	

Subsection B described the actuarial asset valuation method that gradually takes into account fluctuations in the market value rate of return. The effect of this is to stabilize the actuarial rate of return, which contributes to leveling pension plan costs.

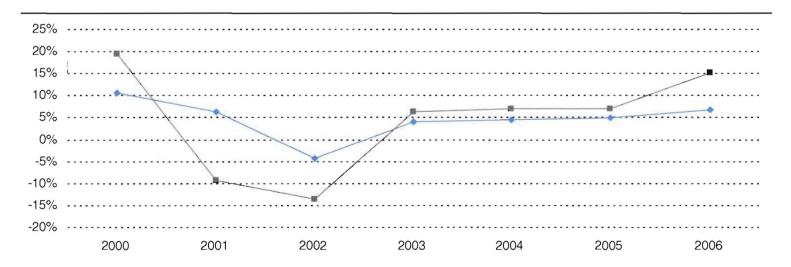
#### **Administrative Expenses**

Administrative expenses for the years. ended June 30, 2006 and 2005 totaled \$188,702 compared to the assumption of \$40,000 (\$20,000 per year). This resulted in a loss of \$152,760 for the year. Because of this experience loss, we have adjusted the actuarial expense assumption to \$30,000 per year. If this trend continues, we will continue increasing the expense assumption.

This chart illustrates how this leveling effect has actually worked over the years 2000 - 2006.

CHART 11

Market and Actuarial Rates of Return for Years Ended June 30, 2000 - 2006



Actuarial Value

Market Value



### Other Experience

There are other differences between the expected and the actual experience that appear when the new valuation is compared with the projections from the previous valuation. These include:

- > the extent of turnover among the participants,
- retirement experience (earlier or later than expected),
- > mortality (more or fewer deaths than expected),
- > the number of disability retirements, and

> salary increases different than assumed.

The net loss from this other experience for the two-year period ending June 30, 2006 amounted to (\$3,514,968) which is 4.4% of the actuarial accrued liability. Please note, we have listed a \$2,637,137 retirement experience loss. This extra liability is primarily attributable to a plan change that allowed retiring officers to buy additional service.

A brief summary of the demographic gain/(loss) experience of the City of Meriden Police Plan for the two-year period ending June 30, 2006 is shown in the chart below.

The chart shows elements of the experience gain/(loss) for the most recent years.

# CHART 12 Experience Due to Changes in Demographics for Two-Year Period Ended June 30, 2006

1.	Retirement	-\$2,637,137
2.	Deaths among retirees and beneficiaries	-798,451
3.	Disability retirements	453,278
4.	Salary increase more than expected for continuing actives	-506,891
5.	Miscellaneous	<u>-25,767</u>
6.	Total	-\$3.514.968

#### D. VALUATION CONTRIBUTION

The amount of annual contribution required to fund the Plan is comprised of an employer normal cost payment and a payment on the unfunded/(overfunded) actuarial accrued liability. This total amount is then divided by the projected payroll for active members to determine the funding rate of 58.33% of payroll.

The valuation contribution is based on a 30-year amortization of the unfunded/ actuarial accrued liability as specified in the law governing the System. As of July 1, 2006, there are 23 years remaining on this schedule.

The chart compares this valuation contribution with the prior valuation.

CHART 13
Valuation Contribution

		Year Beginning July 1			
		2006		2004	
		Amount	% of Payroll	Amount	% of Payroll
1.	Total normal cost	\$1,282,235	21.59%	\$1,586,755	22.54%
2.	Administrative expenses	30,000	0.51%	20,000	0.28%
3.	Expected employee contributions	-319,982	<u>-5.39%</u>	<u>-346,174</u>	<u>-4.92%</u>
4.	Employer normal cost: $(1) + (2) + (3)$	\$992,253	16.70%	\$1,260,581	17.91%
5.	Actuarial accrued liability	79,947,211		72.823,660	
6.	Actuarial value of assets	53,745,820		48,752,364	
7.	Unfunded actuarial accrued liability: (5) - (6)	\$26,201,391		\$24,071,296	
8.	Payment on unfunded/(overfunded) actuarial accrued liability	2,339,255	39.38%	2,087,935	29.66%
9.	Total valuation contribution: (4) + (8), adjusted for timing*	\$3,464,768	<u>58,33%</u>	\$3,482,456	49.47%
10.	Projected payroll	\$5,940.009		\$7,039,682	

<sup>\*</sup>Recommended contributions are assumed to be paid at the middle of every year.

The contribution rates as of July 1, 2006 are based on all of the data described in the previous sections, the actuarial assumptions described in Section 4, and the Plan provisions adopted at the time of preparation of the Actuarial Valuation. They include all changes affecting future costs, adopted benefit changes, actuarial gains and losses and changes in the actuarial assumptions.

#### Reconciliation of Valuation Contribution

The chart below details the changes in the valuation contribution from the prior valuation to the current year's valuation.

The chart reconciles the contribution from the prior valuation to the amount determined in this valuation.

# CHART 14 Reconciliation of Valuation Contribution from July 1, 2004 to July 1, 2006

Valuation Contribution as of July 1, 2004	\$3,482,456
Effect of change in administrative expense assumption	\$10.400
Effect of change in other actuarial assumptions	-508,897
Effect of contributions less than recommended contribution	32,133
Effect of investment loss	207,273
Effect of other gains and losses on accrued liability	340,552
Effect of net other changes, including fewer active participants	<u>-99,149</u>
Total change	<u>-\$17,688</u>
Valuation Contribution as of July 1, 2006	\$3,464,768

#### E. INFORMATION REQUIRED BY THE GASB

Governmental Accounting Standards Board (GASB) reporting information provides standardized information for comparative purposes of governmental pension plans. This information allows a reader of the financial statements to compare the funding status of one governmental plan to another on relatively equal terms.

Critical information to GASB is the historical comparison of the GASB required contribution to the actual contributions. This comparison demonstrates whether a plan is being funded on an actuarially sound basis and in accordance with the GASB funding requirements. Chart 15 below presents a graphical representation of this information for the Plan.

The other critical piece of information regarding the Plan's financial status is the funded ratio. This ratio compares the

actuarial value of assets to the actuarial accrued liabilities of the plan as calculated under GASB. High ratios indicate a well-funded plan with assets sufficient to pay most benefits. Lower ratios may indicate recent changes to benefit structures, funding of the plan below actuarial requirements, poor asset performance, or a variety of other changes.

Although GASB requires that the actuarial value of assets be used to determine the funded ratio, Chart 16 shows the funded ratio calculated using both the actuarial value of assets and the market value of assets.

The details regarding the calculations of these values and other GASB numbers may be found in Section 4, Exhibits II, III, and IV.

These graphs show key GASB factors.

CHART 15
Required Versus Actual Contributions

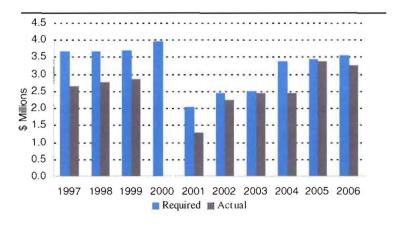
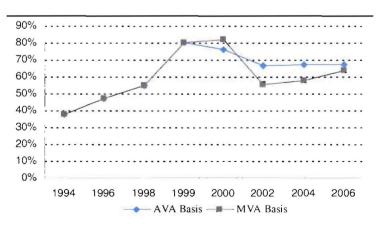


CHART 16 Funded Ratio



SECTION 3: Supplemental Information for the City of Meriden Police Pension Fund

EXHIBIT A

Table of Plan Coverage

	Year Ende	ed June 30	
Category	2006	2004	Change From Prior Year
Active participants in valuation:			
Number	96	122	-21.3%
Average age	41.8	41.2	N/A
Average service	15.5	14.9	N/A
Total payroll	\$5.940,009	\$7,039,682	-15.6%
Average payroll	61.875	57,702	7.2%
Account balances	3,805,252	3,924,650	-3.0%
Total active vested participants	62	72	-13.9%
Retired participants:			et til 1990 til til 1990 til 1
Number in pay status	50	37	35.1%
Average age	62.5	67.2	N/A
Average monthly benefit	\$3,797	\$3,227	17.7%
Disabled participants:		***************************************	
Number in pay status	42	42	0.0%
Average age	61.1	60.7	N/A
Average monthly benefit	\$3,198	\$2,926	9.3%
Beneficiaries in pay status	28	24	16.7%
Inactive Non-Vested participants	1	yang.	0.0%

SECTION 3: Supplemental Information for the City of Meriden Police Pension Fund

EXHIBIT B
Participants in Active Service as of June 30, 2006
By Age, Years of Service, and Average Payroll

	Years of Service									
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	
25 – 29	3	2	l					~ ~		
	\$58,219	\$58,219	\$58,219							
30 - 34	15	3	9	3						
	\$58,610	\$58,219	\$58.871	\$58,219						
35 – 39	20	l	12	3	4	= =	= =	= =		
	\$59,943	\$58,219	\$59,417	\$62,033	\$60,383	~ -		A. 16		
40 – 44	28	1	3	5	14	5				
	\$62,061	\$58,219	\$58,219	\$60,507	\$62,216	\$66,252				
45 – 49	16		I	2	2	7	4			
	\$65,798		\$58.219	\$58,219	\$58.219	\$67,065	\$73,052			
50 - 54	12		I		1	3	6	I		
	\$64,561		\$58.219		\$58,219	\$61,103	\$69,461	\$58,219		
55 – 59	2						1		1	
	\$61,079						\$58,219		\$63,939	
Total	96	7	27	13	21	15	11	ı	1	
	\$61,875	\$58.219	\$58,969	\$59.979	\$61,296	\$65,602	\$69,745	\$58.219	\$63,939	

SECTION 3: Supplemental Information for the City of Meriden Police Pension Fund

EXHIBIT C
Reconciliation of Participant Data

	Active Participants	Due a refund of employee contributions	Disableds	Retired Participants	Beneficiaries	Total
Number as of July 1, 2004	122	Ī	42	37	24	226
Terminations – without vested rights	-1	1	N/A	N/A	N/A	0
Retirements	-17	0	N/A	17	N/A	0
New disabilities	1-4	0	4	N/A	N/A	0
Died with beneficiary	0	0	-4	-2	6	0
Died without beneficiary	0	0	0	-2	-2	-4
Return of employee contributions	<u>-4</u>	<u>-1</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>-5</u>
Number as of July 1, 2006	96	1	42	50	28	217

EXHIBIT D
Summary Statement of Income and Expenses on an Actuarial Value Basis

	Year Ended Ju	ne 30, 2006	Year Ended June 30, 2005	
Contribution income:	eroogie			
Employer contributions	\$3,240,504		\$3,380,395	
Employee contributions	422,000		378.321	
Less administrative expenses	<u>-51,972</u>		<u>-136,730</u>	
Net contribution income		\$3.610,532		\$3,621,986
Investment income:				
Interest, dividends and other income	\$1,116,954		\$1,249,176	
Adjustment toward market value	2,484.501		1,424,975	
Less investment fees	<u>-242,895</u>		-310,620	
Net investment income		<u>3,358,560</u>		2.363,531
Total income available for benefits		\$6,969,092		\$5,985,517
Less benefit payments		-\$4,265,288		-\$3,695,865
Change in reserve for future benefits		\$2,703,804		\$2,289,652

## **EXHIBIT E**

## **Table of Financial Information**

	Year Ended June 30, 2006	Year Ended June 30, 2005	
Cash equivalents	\$8,995.692	\$1,095,901	
Accounts receivable	313,905	323,799	
Investments	41.643.812	43,489,160	
Total assets	\$50.953,409	\$44.908.860	
Less accounts payable	-\$2.034	-\$1,658	
Net assets at market value	\$50.951,375	\$44,907,202	
Net assets at actuarial value	<u>\$53,745,820</u>	\$51.042.016	

SECTION 3: Supplemental Information for the City of Meriden Police Pension Fund

EXHIBIT F
Development of the Fund Through June 30, 2006

Year Ended June 30	Employer Contributions	Employee Contributions	Other Contributions	Net Investment Return*	Administrative Expenses	Benefit Payments	Actuarial Value of Assets at End of Year
2000	\$0	\$313,986	\$0	\$4,623,606	\$163,100	\$2,765,915	\$47,533,791
2001	1,280,356	329,419	0	2,928.487	0	2.875,818	49,196,235
2002	2,238,485	341,211	0	-2,157,720	26,642	3,037,054	46,554,515
2003	2,448,000	405.686	0	1,884,562	98,265	3,231.536	47,962,962
2004	2,448,000	374,642	0	2,120,310	40,901	4,112,649	48,752,364
2005	3,380,395	378,321	0	2,363,531	136,730	3,695,865	51,042.016
2006	3,240,504	422,000	0	3,358,560	51.972	4,265,288	53,745,820

<sup>\*</sup> Net of investment fees

# EXHIBIT G Development of Unfunded Actuarial Accrued Liability

		Year Er	nded	
	June 30	), 2006	June 30	, 2005
Unfunded actuarial accrued liability at beginning of year		\$23,823,230		\$24,071,296
2. Normal cost at beginning of year		1,679,059		1,606,755
3. Total contributions		-3,662,504		-3,758,716
4. Interest				
(a) For whole year on $(1) + (2)$	\$2.040,183		\$2,054,244	
(b) For half year on (3)	<u>-146,500</u>		<u>-150.349</u>	
(c) Total interest		1,893,683		1.903,895
5. Expected unfunded actuarial accrued liability		\$23,733,468		\$23,823,230
6. Changes due to:				
(a) (Gain)/loss	\$5,900,042			
(b) Assumptions	<u>-3,432,119</u>		-	
(c) Total changes		2,467,923		
7. Unfunded actuarial accrued liability at end of year		\$26,201,391		\$23,823,230

#### **EXHIBIT H**

#### **Definitions of Pension Terms**

The following list defines certain technical terms for the convenience of the reader:

## Assumptions or Actuarial Assumptions:

The estimates on which the cost of the Plan is calculated including:

- (a) <u>Investment return</u> the rate of investment yield that the Plan will earn over the long-term future;
- (b) <u>Mortality rates</u> the death rates of employees and pensioners; life expectancy is based on these rates;
- (c) <u>Retirement rates</u> the rate or probability of retirement at a given age;
- (d) <u>Turnover rates</u> the rates at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement.

#### **Normal Cost:**

The amount of contributions required to fund the benefit allocated to the current year of service.

## Actuarial Accrued Liability For Actives:

The equivalent of the accumulated normal costs allocated to the years before the valuation date.

## Actuarial Accrued Liability For Pensioners:

The single sum value of lifetime benefits to existing pensioners. This sum takes account of life expectancies appropriate to the ages of the pensioners and the interest that the sum is expected to earn before it is entirely paid out in benefits.

## Unfunded Actuarial Accrued Liability:

The extent to which the actuarial accrued liability of the Plan exceeds the assets of the Plan. There is a wide range of approaches to paying off the unfunded actuarial accrued liability, from meeting the interest accrual only to amortizing it over a specific period of time.

Amortization of the Unfunded

Actuarial Accrued Liability: Payments made over a period of years equal in value to the Plan's unfunded actuarial

accrued liability.

**Investment Return:** The rate of earnings of the Plan from its investments, including interest, dividends and

capital gain and loss adjustments, computed as a percentage of the average value of the fund. For actuarial purposes, the investment return often reflects a smoothing of the capital gains and losses to avoid significant swings in the value of assets from one

year to the next.

E)	(HIBIT I		
Sı	mmary of Actuarial Valuation Results		
Tŀ	e valuation was made with respect to the following data supplied to us:		
1.	Retired participants as of the valuation date (including 28 beneficiaries in pay status)		120
2.	Participants active during the year ended June 30, 2006		96
	Fully vested	62	
	Not vested	34	
3.	Inactive Non-Vested participants as of June 30, 2006		1
Tł	e actuarial factors as of the valuation date are as follows:		
1.	Normal cost, including administrative expenses		\$1,312,235
2.	Present value of future benefits		90,787,386
3.	Present value of future normal costs		10,840,175
4.	Actuarial accrued liability		79,947.211
	Datisad marticipants and handfulgring	\$52,973,975	
	Retired participants and beneficiaries	44-17.017.0	
	Active participants	26.948,767	
5.	Active participants	26.948,767	53,745,820

## EXHIBIT I (continued)

## **Development of Annual Required Contribution**

The determination of the recommended contribution is as follows:	
. Total normal cost	\$1,282,235
. Administrative expenses	30,000
. Expected employee contributions	<u>-319,982</u>
Employer normal cost: $(1) + (2) + (3)$	\$992,253
. Payment on unfunded/(overfunded) actuarial accrued liability	2,339,255
Total valuation contribution: (4) + (5), adjusted for timing	\$3,464,768
Projected City normal cost as of July 1, 2007: $[(1) + (3)] \times 1.045 + (2)$	1,035,554
Recommended contribution for fiscal year ending June 30, 2008: (5) + (7), adjusted for interest	\$3,509,80
Projected City normal cost as of July 1, 2008: $[(1) + (3)] \times 1.045^2 + (2)$	1.080.80
0. Recommended contribution for fiscal year ending June 30, 2009: (5) + (9), adjusted for interest	\$3,556,86

EXHIBIT II

Supplementary Information Required by the GASB – Schedule of Employer Contributions

Plan Year Ended June 30	Annual Required Contributions	Actual Contributions	Percentage Contributed	
1997	\$3,672,100	\$2,649,600	72.2%	
1998	3,645,000	2,760,600	75.7%	
1999	3,696,100	2,835,600	76.7%	
2000	3,951,500	0	0.0%	
2001	2,046,300	1,280,356	62.6%	
2002	2,440,500	2,238,485	91.7%	
2003	2,489,520	2,448,000	98.3%	
2004	3,357,184	2,448,000	72.9%	
2005	3,413.205	3.380.395	99.0%	
2006	3,540,516	3,250,504	91.5%	
2007	3,601,188		• •	
2008	3,509.801			
2009	3,556,861		м ж	

SECTION 4: Reporting Information for the City of Meriden Police Pension Fund

EXHIBIT III

Supplementary Information Required by the GASB – Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded/ (Overfunded) AAL (UAAL) (b) - (a)	Funded Ratio (a) / (b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroli* [(b) - (a)] / (c)
07/01/1996	\$23,942,200	\$51,111.500	\$27,169,300	46.84%	\$4,862.700	558.73%
07/01/1997	N/A	N/A	N/A	N/A	N/A	N/A
07/01/1998	31,181,100	57,141,300	25,690,200	54.57%	6,138,200	418.53%
07/01/1999	45,525,200	56,997,800	11.472,600	79.87%	6,150,900	186.52%
07/01/2000	47,533,791	62,801,146	15,267.355	75.69%	6,098.900	250.33%
07/01/2001	N/A	N/A	N/A	N/A	N/A	N/A
07/01/2002	46,554,515	70,304,895	23,750,380	66.22%	6,771,911	350.72%
07/01/2003	N/A	N/A	N/A	N/A	N/A	N/A
07/01/2004	48,752,364	72.823,660	24,071,296	66.95%	7.039,682	341.94%
07/01/2005	N/A	N/A	N/A	N/A	N/A	N/A
07/01/2006	53,745,820	79,947,211	26,201,391	67.23%	5,940.009	441.10%

<sup>\*</sup> Not less than zero

## **EXHIBIT IV**

## Supplementary Information Required by the GASB

Valuation date	July 1, 2006
Actuarial cost method	Entry Age Normal Cost Method
Amortization method	Level dollar, closed
Remaining amortization period	23 years remaining as of July 1, 2006
Asset valuation method	20% annual phase-in of investment returns greater/(less) than expected
Actuarial assumptions:	
Investment rate of return	8.00%
Projected salary increases	4.25%
Plan membership:	
Retired participants and beneficiaries receiving benefits	120
Terminated participants not vested but entitled to a refund of employer contributions	1
Active participants	<u>96</u>
Total	217

SECTION 4: Reporting Information for the City of Meriden Police Pension Fund

EXHIBIT V

Development of the Net Pension Obligation and the Annual Pension Cost Pursuant to GASB 27

Plan Year Ended June 30	Employer Annual Required Contribution (a)	Employer Amount Contributed* (b)	Interest on NPO (h)* 8.00% (c)	ARC Adjustment (h) / (e) (d)	Amortization Factor (e)	Pension Cost (a) + (c) - (d) (f)	Change in NPO (f) – (b) (g)	NPO Balance NPO + (g) (h)
1997	\$3,672,100	\$2,649,600	\$432,171	\$471,743	11.4514	\$3,632,527	\$982,927	\$6,385,059
1998	3,645,000	2,760,600	510,805	565,673	11.2875	3,590,131	829,531	7,214,591
1999	3,696,100	2,835,600	577,167	677,485	10.6490	3,595,782	760,182	7,974,773
2000	3,951,500	0	637,982	761,979	10.4659	3.827.503	3,827,503	11,802,276
2001	2,046,300	1,280.356	973,688	1.035,717	11.3953	1,984,271	703,915	12,506,191
2002	2,440,500	2,238,485	1,031,761	1,106,821	11.2992	2,365,440	126,955	12,633,146
2003	2,489,520	2,448,000	1,042,235	1,128,443	11.1952	2,403,312	-44,688	12,588,458
2004	3,357,184	2,448,000	1,007,077	1,108,554	11.3557	3,255,707	807,707	13,396,165
2005	3,413,205	3,482,456	1,071,693	1,193,343	11.2258	3,291,555	-88,840	13,307,325
2006	3,540,516	3,240.504	1,064,586	1,200,443	11.0853	3,404,659	164,155	13,471,480

SECTION 4: Reporting Information for the City of Meriden Police Pension Fund

#### **EXHIBIT VI**

**Actuarial Assumptions and Actuarial Cost Method** 

**Mortality Rates:** 

RP2000 Combined Healthy Blue Collar (previously, 1983 Group Annuity Mortality Table with margins)

Terminatio	nination Rates before Retirement:				e (%)		
		Mor	tality	Disa	bility	Witho	drawal
	Age	Male	Female	Male	Female	Male	Female
	20	0.03	0.01	0.12	0.12	0.00	0.00
	25	0.03	0.02	0.17	0.17	0.00	0.00
	30	0.05	0.03	0.22	0.22	0.00	0.00
	35	0.06	0.04	0.29	0.29	0.00	0.00
	40	0.09	0.05	0.44	0.44	0.00	0.00
	45	0.16	0.08	0.72	0.72	0.00	0.00
	50	0.29	0.12	1.21	1.21	0.00	0.00
	55	0.46	0.19	2.02	2.02	0.00	0.00
	60	0.69	0.32	3.25	3.25	0.00	0.00

25% of deaths prior to retirement and 100% of the disabilities with less than 10 years of service are assumed to be service connected.

Percent Married: 75% of all actives and retirees are assumed to be married

Age of Spouse: Males are assumed to be three years older than their spouses

Net Investment Return:

8.00%

SECTION 4: Reporting Information for the City of Meriden Police Pension Fund

Retirement Rates:			
	Years of Service	Retirement Probability (%)	
	20	10	•
	21 - 24	5	
	25	10	
	26 - 29	5	
	30	100	
	(Previously, age	e 51 or completion	of 25 years of service, but not later than age 65)
Salary Increases:	4.25% Previous	sly,	
	Year	Rate (%	)
	2007	4.25%	
· ·	2008 and af	ter 5.25%	
Pay adjustment:	insurance which		to reflect holiday and longevity pay and determination of benefits. It is assumed that 90% insurance.
Cost of Living Increase	1 1		
After Retirement:	3% per year for retirements after July 1, 2002 for participants with more than 25 years of service, 2% per year for retirements after July 1, 2002 for participants with less than 25 years of service and 3.75% for members in pay status as of July 1, 2002.		
Administrative Expenses:	\$30,000 per yea	ar (previously, \$20,	000 per year)
Actuarial Value of Assets:	Sum of actuarial value at beginning of year, contributions, and expected investment earnings based on the actuarial interest assumption less benefit payments plus 20% of market value at end of year in excess of that sum, plus additional adjustment toward market value as necessary so that final actuarial value is within 20% of market value.		

#### **Actuarial Cost Method:**

Entry Age Normal Actuarial Cost Method. Entry Age is the age at the time the participant would have commenced participation if the plan had always been in existence. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are allocated by salary and service, with Normal Cost determined as if the current benefit accrual rate had always been in effect.

#### **Changes in Assumptions:**

Based on past experience and future expectations, the following actuarial assumptions were changed:

The salary increase assumption has been changed to 4.25% per year. A table showing the prior assumption is below.

<u>Prior Assu</u>	mption
2005	3.00%
2006	3.00%
2007	4.25%
2008 and later	5.25%

- The expense assumption was increased from \$20,000 per year to \$30,000 per year.
- ➤ The mortality table was changed from the 1983 Group Annuity Mortality Table with margins to the RP2000 Combined Healthy Blue Collar Table
- Retirement rates were added in the table shown below.

Years of Service	Retirement Probability (%)
20	10
21 - 24	5
25	10
26 - 29	5
30	100

Previously, the retirement age was age 51 or completion of 25 years of service, but not later than age 65.

#### **EXHIBIT VII**

## **Summary of Plan Provisions**

This exhibit summarizes the major provisions of the City of Meriden Police Plan included in the valuation. It is not intended to be, nor should it be interpreted as, a complete statement of all plan provisions.

Plan Year:	July 1 through June 30
Normal Retirement:	
Age Requirement	None
Service Requirement	20 years
Amount	2.5% times years of service (maximum 20 years) plus 1.6% of service in excess of 20 years and up to 30 years, times base rate of pay at retirement plus 50% of emoluments (longevity pay, holiday pay, life insurance (as long as language remains in collective bargaining agreement)).

#### Disability:

#### Service Connected

Age RequirementNoneService RequirementNone

Amount If the employee is disabled in the course of duties under the Social Security definition from performing gainful employment, they will receive retirement benefits based on

no less than the 25 year level.

#### Non-Service Connected

Age Requirement None

Service Requirement 10 years if hired after July 1, 1971; otherwise none

Amount An employee with less than 20 years of service will be retired immediately as though

they had 20 years of service. An employee with 20 or more years of service will

receive the regular benefit formula.

### Vesting:

Age Requirement

None

Service Requirement

10 years

Amount

2.0% of base rate of pay times years of service. No emoluments or COLA will be

used in the calculation of this benefit.

#### Spouse's Pre-Retirement Death Benefit:

#### Lump Sum Benefit

Age Requirement

None

Service Requirement

None

Amount

Refund of employee contributions

#### Service Connected Spouse's Benefit

Age Requirement

None

Service Requirement

None

Amount

An annuity equal to the full pension the officer would have been entitled to if he or she had been retired with at least 20 years of service. If the spouse has not remarried prior to the 20<sup>th</sup> employment anniversary date, the pension shall revert back to 50% of the pension he or she had been receiving. Benefit is payable until death or remarriage.

## Non-Service Connected Spouse's Benefit

Age Requirement

None

Service Requirement

20 years

Amount

An annuity of 50% of the pension the employee would have received if he or she had

retired the day before death, payable until death or remarriage.

Post-Retirement Death Benefits:	
Lump - sum Benefit	100% of contributions made on behalf of the employee, less total benefits paid to the pensioner.
Spouse's Benefit	An annuity of 50% of the pension the retired employee was receiving at the time of death, payable until death or remarriage.
Cost of Living Adjustment:	Police officers who retire after March 17, 2003 with a minimum of 25 years of service shall receive a COLA of 3% on base pay (does not include emoluments) per year to begin one year after retirement. Police officers who retire with 20 or more years of service, but less than 25 years of service, shall receive a COLA of 2% on base pay (does not include emoluments) to begin one year after retirement. Previously, the COLA was linked to the percentage increase in the negotiated wages. The COLA is only available to officers who work for the City until retirement.
Employee Contribution Rate:	7.5% of salary. 5.5% is for pension purposes and 2% goes to the health fund
Group Covered:	Covers Police hired on or before March 1, 2003.
Changes in Plan Provisions:	During the period, police officers were allowed to purchase extra service with their unused sick and vacation time.