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City of Meriden Police Employees' Pension Plan

Actuarial Valuation Report

July 1, 2012

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April 4, 2013

Introduction

Purpose of the Valuation

The purpose of the valuation is to determine the funded status of the plan as well as the recommended cash contribution for the plan year.

The ultimate cost of a pension plan is based primarily on the level of benefits promised by the plan. The pension fund's investment earnings service to reduce the cost of plan benefits and expenses. Thus,

City's ultimate cost	=	*benefits paid*	+	*expenses incurred*	-	*investment return*	-	*employee contributions*

The actuarial cost method distributes this ultimate cost over the working lifetime of current plan participants. By means of this budgeting process, costs are allocated to both past and future years, and a cost is assigned to the current year. The current year's allocated cost, or normal cost, is the building block upon which the range of annual cash contributions is developed.

Information Available in the Valuation Report

The Executive Summary and Introduction are intended to emphasize the notable results of the valuation from the perspective of the Plan Sponsor. Supporting technical detail is documented in Valuation Results and Actuarial Basis. A concise summary of the principal provisions of the Plan is outlined in Summary of Plan Provisions.

Contribution for 2014 and 2015 Fiscal Years

The actuarial valuation as of July 1, 2012 produces the contribution for the City's 2014 and 2015 fiscal years. The actuarially calculated contribution payable (after allowing for employee contributions) is as follows:

Fiscal Year Ending	
2014	**2015**
Amount	**Amount**
$4,201,533	$4,227,288

Introduction
(continued)

Asset Performance

The plan's assets provided the following rates of return on plan assets during the past two fiscal years.

	Fiscal Year Ending	
	2011	**2012**
Market Value Basis	20.0%	-3.6%
Actuarial Value Basis	6.7%	4.7%

The Actuarial Value of assets, rather than the Market Value, is used to determine plan contributions. The Actuarial Value spreads the asset volatility over five years, thereby smoothing out fluctuations that are inherent in the Market Value.

The valuation uses a long-term investment return assumption of 8.00% on the Actuarial Value of assets. Because the total return for 2011 and 2012 was less than this assumption, there was an actuarial loss from assets.

Participant Data

The valuation incorporates assumptions anticipating changes in the demographics of the participant population. Actual experience will produce greater or smaller than expected increases in the actuarial liabilities.

There were some liability losses which combined with the asset losses caused an increase in the contribution.

Plan Changes

The Employee Contributions percentages have been updated.

Assumption and Cost Method Changes

There was an adjustment to the Salary Scale to better reflect plan experience.

Changes since the Last Valuation

There were no additional changes from the last valuation.

New Accounting Standards

In June of 2012, The Government Accounting Standards Board (GASB) issued statements 67 and 68. GASB 67 is a new standard that pertains to financial reporting for pension plans. In general, it replaces GASB 25 and it is effective for fiscal years beginning after June 15, 2013. GASB 68 is a new standard that pertains to accounting and financial reporting for pensions. In general, it replaces GASB 27 and it is effective for fiscal years beginning after June 15, 2014. Both statements replace the relevant provisions of GASB 50.

Currently, your annual financial report tracks the Net Pension Obligation (NPO) and the NPO is displayed in the footnote section of the annual financial report. With GASB 68, the NPO will no longer be tracked. A new item called Net Pension Liability (NPL) will be displayed not as a footnote but directly on your balance sheet. For both standards, liabilities are calculated using the Entry Age Normal Cost Method. In general, the NPL is EAN Accrued Liability less the Market Value of Assets. A table that displays the NPL for the City's pension plan is below.

Valuation Date	Entry Age Normal Accrued Liability	Market Value Of Assets	Net Pension Liability
July 1, 2008	89,709,424	60,822,224	28,887,200
July 1, 2010	98,013,777	52,212,921	45,800,856
July 1, 2012	103,632,267	56,576,708	47,055,559

In addition to replacing the NPO with NPL, the Annual Required Contribution (ARC) will also be eliminated. Even though the ARC will be eliminated, we will work with you to develop a contribution policy. The new term for this is called the Actuarially Determined Contribution (ADC). One possible ADC is to use the same concepts that were used to develop the ARC which would mean no change in the present funding policy.

Under the prior standards the ARC served as both the contribution policy and the accounting expense. As noted above the ARC is eliminated and replaced with the ADC with regard to the funding policy. The new pension expense will be quite different from the ARC and it has several components (including normal cost, interest cost, amortization components, actual return and plan changes). The new pension expense will help reconcile the change in the Net Pension Liability each year. In addition, it will be more volatile than the ARC and so not suitable for use as a contribution policy.

If the City wants to see how the pension expense works, please let us know and we will prepare a sample exhibit. Like the Net Pension Liability, the calculation of the pension expense is based upon the Entry Age Normal Cost Method and will no longer be a footnote but reported directly in the annual financial report.

Certification

This report presents the results of the July 1, 2012 Actuarial Valuation for the City of Meriden Police Employees' Pension Plan (the Plan) for the purpose of estimating the funded status of the Plan and determining the Annual Required Contribution (ARC) for the fiscal years ending June 30, 2014 and June 30, 2015. This report is intended to satisfy the requirements of Connecticut General Statute 7-450a. This report may not be appropriate for any other purpose.

The valuation has been performed in accordance with generally accepted actuarial principles and practices. It is intended to comply with all applicable Actuarial Standards of Practice.

I certify that the actuarial assumptions and methods that were selected by me and represent my best estimate of anticipated actuarial experience under the Plan.

In preparing this valuation, I have relied on employee data provided by the Plan Sponsor, and on asset and contribution information provided by the Plan Sponsor. I have audited neither the employee data nor the financial information, although I have reviewed them for reasonableness.

The results in this valuation report are based on the Plan as summarized in the *Summary of Plan Provisions* section of this report and the actuarial assumptions and methods detailed in the *Actuarial Basis* section of this report.

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 or 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 this report, an analysis of the potential range of such future measurements has not been performed.

I am a member of the American Academy of Actuaries and meet its Qualification Standards to render the actuarial opinion contained herein.

Timothy A. Ryor, FSPA, FCA, MAAA, Enrolled Actuary
11-05126

April 4, 2013

Valuation Results

A. Actuarial Balance Sheet and Funded Ratio

	July 1, 2012	July 1, 2010
Actuarial Liabilities		
Accrued Liability for:		
Active Employees	$21,535,410	$24,509,546
Retirees, Disabled and Beneficiaries	82,062,594	73,469,968
Terminated Vested Employees	34,263	34,263
Total	103,632,267	98,013,777
Source of Funds		
Plan Assets	$64,914,508	$61,620,597
Unfunded Accrued Liability	38,717,759	36,393,180
Total	$103,632,267	$98,013,777
Funded Ratio		
Plan Assets divided by Actuarial Accrued Liability	63%	63%

Valuation Results
(continued)

B. Determination of Actuarial Gain/(Loss)

The Actuarial Gain/(Loss) for a year is the difference between the Expected Unfunded Actuarial Accrued Liability and the Actual Unfunded Actuarial Accrued Liability, without regard to any plan changes or changes in methods or actuarial assumptions. Such a gain/(loss) is also referred to as an Experience Gain/(Loss), since it reflects the difference between what was expected and what was actually experienced.

Actuarial Gain/(Loss)	
1. Expected unfunded actuarial accrued liability July 1, 2012	
a. Expected unfunded actuarial accrued liability July 1, 2011	
i. Unfunded actuarial accrued liability July 1, 2010	$36,393,180
ii. Employer Normal Cost for 2010/2011	816,044
iii. Employer Contributions for 2010/2011	3,683,113
iv. Interest at 8.00% to July 1, 2011 on (i), (ii) and (iii)	2,832,248
v. Expected unfunded actuarial accrued liability July 1, 2011: (i) + (ii) - (iii) + (iv)	36,358,359
b. Expected unfunded actuarial accrued liability July 1, 2011	
i. Unfunded actuarial accrued liability July 1, 2011	36,358,359
ii. Estimated Employer Normal Cost for 2011/2012	816,044
iii. Employer Contributions for 2011/2012	4,028,938
iv. Interest at 8.00% to July 1, 2012 on (i), (ii) and (iii)	2,815,895
v. Expected unfunded actuarial accrued liability July 1, 2012: (i) + (ii) - (iii) + (iv)	35,961,360
2. Actual unfunded actuarial accrued liability July 1, 2012 for gain/(loss) determination	39,629,532
3. Actuarial gain/(loss): (1b)(v) - (2)	(3,668,172)
4. Sources of gain/(loss)	
a. Net gain/(loss) from investments	(2,890,557)
b. Net gain/(loss) from liabilities	(777,615)
c. Total net gain/(loss): (a) + (b)	(3,668,172)

C. Valuation Results - July 1, 2010 and Employer Contribution for Fiscal 2014 and 2015

Based on the employee data and asset information furnished us, the actuarial methods and assumptions and the plan provisions, the results of the July 1, 2012 valuation are:

	Police Plan
1. a. Total normal cost	1,046,893
b. Employee contributions	245,445
c. Town normal cost	801,448
2. Accrued liability	
a. Active	21,535,410
b. Vested	-
c. Retirees, Beneficiaries, Disabled	82,096,857
d. Total accrued liabilitity	103,632,267
3. Market value of assets	56,576,708
4. Actuarial value of assets	64,914,508
5. Unfunded accrued liability: (2d) - (4)	38,717,759
6. Payment on unfunded accrued liabilty	
a. Interest rate	8.00%
b. Amortization years	30
c. Payment	3,184,444
7. Estimated administrative expenses	30,000
8. Annual town cost, adjusted for timing	4,176,528
9. Payroll	4,462,636
a. Cost as a percentage of payroll	93.59%
10. Budget for Fiscal Year ending June 30, 2014	
a. Normal cost	825,492
b. Amortization	3,184,444
c. Expenses	30,000
d. Total, adjusted for timing	4,201,533
11. Budget for Fiscal Year ending June 30, 2015	
a. Total, adjusted for timing	4,227,288

Valuation Results
(continued)

D. Assets

Development of Asset Market Values

Summary of Fund Activity		
	July 1, 2010 - June 30, 2011	**July 1, 2011 - June 30, 2012**
1. Beginning value	$ 52,212,921	$ 60,536,012
2. Contributions		
a. City contributions during year	3,683,113	4,028,938
b. Employee contributions during year	310,185	294,635
c. Total for plan year	3,993,298	4,323,573
3. Disbursements		
a. Benefit payments during year	5,874,394	6,087,311
b. Administrative expenses during year	26,304	26,954
c. Transfers to OPEB	0	0
d. Other	9,083	8,090
e. Total for plan year	5,909,781	6,122,355
4. Net investment return		
a. Interest and dividends	1,574,018	1,341,255
b. Realized and unrealized gain (loss)	8,986,281	(3,178,583)
c. Investment-related expenses	(320,725)	(323,194)
d. Total	10,239,574	(2,160,522)
5. Ending value	60,536,012	56,576,708
6. Approximate rate of return	20.0%	-3.6%

Valuation Results
(continued)

D. Assets

The Actuarial Value of assets is used in the determination of plan contributions. It phases in differences between the Market Value and the Expected Actuarial Value by recognizing 20% of the difference each year. A method of smoothing is used because the Market Value can swing widely from one year to the next, resulting in undesirable fluctuations in pension contributions.

Determination of the Actuarial Value of Assets	
1. Actuarial value of assets at July 1, 2010	$ 61,620,597
2. Employer and employee contributions for 2011	3,993,268
3. Disbursements during 2011	(5,900,698)
4. Expected return during 2011	4,853,352
5. Expected actuarial asset value at July 1, 2011	64,566,549
6. Market value July 1, 2011	60,536,012
7. Appreciation (depreciation) recognized 20% x [(6) - (5)]	(806,107)
8. Actuarial asset value at July 1, 2011 (5) + (7)	63,760,442
9. Contributions for 2012	4,323,573
10. Disbursements during 2012	(6,114,265)
11. Expected return during 2012	5,029,208
12. Expected actuarial asset value at July 1, 2012	66,998,957
13. Market value July 1, 2012	56,576,708
14. Appreciation (depreciation) recognized 20% x [(13) - (12)]	(2,084,450)
15. Actuarial asset value at July 1, 2012	64,914,508
16. Actuarial value as a percent of market value	114.7%
2010-2011 Year return on Actuarial Value of Assets	6.7%
2011-2012 Year return on Actuarial Value of Assets	4.7%

Valuation Results
(continued)

E. Membership Data

Employee Participation: July 1, 2010 - July 1, 2012

Participant Data					
		Terminated Vested			
	Active	With Monthly Benefit	Contributions Only	Retired, Disabled and Beneficiaries	Total
Total Participants July 1, 2010	69	0	1	132	202
Adjustments	0	0	0	0	0
Retirements - non disabled	-8	0	0	+8	0
Disability Retirements	-1	0	0	+1	0
Terminations					
With vested benefit	0	0	N/A	0	0
Vested in contributions only	0	N/A	0	N/A	0
Lump sum settlements	0	0	0	N/A	0
Deaths					
Without beneficiary	0	0	0	-5	-5
With beneficiary	-1	0	0	-3	-4
New beneficiaries	N/A	0	0	+4	+4
Rehires	0	0	0	0	0
New entrants	N/A	N/A	N/A	N/A	N/A
Total Participants July 1, 2012	59	0	1	137	197
Average age					
July 1, 2010	44.8				
July 1, 2012	45.5				
Average service					
July 1, 2010	17.6				
July 1, 2012	18.0				
Total annual plan salaries					
July 1, 2010	$5,027,254				
July 1, 2012	4,462,636				
Total monthly benefits					
July 1, 2010		$0		$489,093	
July 1, 2012		0		544,337	

Actuarial Basis

A. Actuarial Cost Methods

Asset Valuation Method

The Actuarial Value of assets used in the development of plan contributions phases in differences between the Market Value and the Expected Actuarial Value by recognizing 20% of the difference each year.

Actuarial Funding Method

The actuarial valuation method used in the cost calculations is the Entry Age Normal Actuarial Cost Method. Recommended annual contributions until the actuarial accrued liability is completely funded will consist of two pieces:

a. Normal Cost - The actuarial cost to fund benefit units earned during the year.

b. Amortization Payments of Unfunded Actuarial Accrued Liability - The actuarial cost to amortize the unfunded portion of the actuarial liability. The amortization period is 30 years.

Process

The valuation is performed as of the first day of a plan year. The valuation is used to determine the City contributions for the following two fiscal years. To accomplish this objective, we apply the City's Normal Cost Accrual Rate from the valuation year, to the estimated payroll for the target year to determine the Normal Cost for that year. We assume the dollar amount of the amortization payments on the unfunded liability will remain unchanged between the two years.

Actuarial Basis
(continued)

B. Actuarial Assumptions

The actuarial assumptions used in the determination of costs and liabilities are as follows:

Interest: 8% compounded annually, net of investment expenses.

Salary Scale: It is assumed that salaries will increase by 3% per annum (compounded) plus a 3% annual general wage inflation.

Prior Valuation: It is assumed that salaries will increase by 4% per annum (compounded).

Mortality: Retirement: RP-2000 Mortality Table with separate male and female rates, with blue collar adjustment, separate tables for non-annuitants and annuitants, projected to the valuation date with Scale AA.

Disability: RP-2000 Mortality Table with separate male and female rates, with no collar adjustment, combined table for non-annuitants and annuitants.

Mortality Improvement: Retirement: Projected to date of decrement using Scale AA (generational mortality).

Disability: None.

Termination prior to retirement: Sample rates are as follows:

Age	Disability*	Withdrawal
20	0.12%	0.00%
25	0.17	0.00
30	0.22	0.00
35	0.29	0.00
40	0.44	0.00
45	0.72	0.00
50	1.21	0.00
55	2.02	0.00
60	3.25	0.00

**100% of disabilities with less than 10 years of service are considered service connected.*

Actuarial Basis
(continued)

B. Actuarial Assumptions (continued)

Retirement Rates: Sample rates are as follows:

Years of Service	Retirement
20	25%
21-24	10
25 - 29	15
30	50
31-34	20
35	100

Percent Married: 75%.

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

Administrative Expense: We have included estimated administrative expenses in the development of the normal cost.

Cost of Living: Retirement date prior to July 1, 2002: 3.75%

Retirement date on or after July 1, 2002:

25 or more years of service: 3%
Less than 25 years of service: 2%

Portion of benefit due to Emolument: Active liabilities are loaded 6.7% to reflect the portion of future benefits based on 50% of emoluments.

Summary of Plan Provisions

This summary outlines the major features of the Plan. It does not give full details or cover all aspects of the Plan. The actual terms and conditions of the Plan are stated in documents with the City.

Effective date	Originally effective June 13, 1913. Amended and restated as of July 1, 2006.
Eligibility for Participation	Regular full-time police officers hired prior to March 18, 2003, covered under Local 1016 collective bargaining agreement.
Years of Service	Completed whole years of employment during which employee has made required contributions.
Base Rate of Pay	Salary or wages including elective deferrals under 401(k) or Sec. 125, limited by IRC 401(a)(17).
Emoluments	Longevity payments, holiday pay, life insurance and health insurance minus cost share.
Accrued Benefit	2% of Base Pay times Years of Service up to 20 Years, plus 1.6% of Base Pay times Years of Service in excess of 20 Years and less than 30 Years, plus 50% of current Emoluments.
Normal Retirement	
Age & Service Requirements	Earlier of • 20 Years of Service • Age 65 and 10 Years of Service
Benefit	Accrued Benefit
Termination	
Prior to completion of 10 Years of Service	Return of employee contributions plus regular interest.
After completion of 10 Years of Service	Accrued Benefit, payable when Member would have completed 20 Years.

Summary of Plan Provisions
(continued)

Disability	
Eligibility	None if service-related; otherwise completion of 10 Years of Service.
Benefit	• Service-related: If disabled from employment as police officer, Accrued Benefit as if Officer had no less than 20 Years of Service. • Service-related: If disabled from any gainful employment, Accrued Benefit as if Officer had no less than 25 Years of Service. • Non-Service related: Accrued Benefit as if Officer had no less than 20 Years of Service.
Death Prior to Retirement	
Prior to completion of 20 Years of Service	Non-service related: Return of employee contributions plus regular interest. Service-related: Surviving spouse receives 100% of Accrued Benefit as if Officer had 20 Years of Service. Upon attainment of date Officer would have attained 20 Years, spouse's benefit decreases to 50% of the pension amount. Payable until death or remarriage.
After completion of 20 Years of Service	Surviving spouse receives one-half of Accrued Benefit. Payable until death or remarriage.
Post-retirement Death Benefit	Surviving spouse receives one-half of amount Member was receiving at time of death. Payable until death or remarriage.
Normal Form of Retirement Benefit	Single life annuity.
Employee Contributions	6% of Base Pay plus Emoluments. (In addition, 2% is contributed to the Retiree Health Insurance Fund.) Prior Valuation: 5½% of Base Pay plus Emoluments. (In addition, 2% is contributed to the Retiree Health Insurance Fund.)

Summary of Plan Provisions
(continued)

COLA

Retirement prior to January 1, 2003: Based on increases in Base Pay for the rank held at retirement.

Retirement after January 1, 2003:
- Active members retiring with at least 25 Years of Service: 3% of Base Pay, excluding Emoluments
- Active members retiring with at least 20 but fewer than 25 Years of Service: 2% of Base Pay, excluding Emoluments
- Active members retiring on a Disability Pension: 2% of Base Pay, excluding Emoluments
- Active members retiring with less than 20 Years of Service: none.

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