

**MACOMB COUNTY EMPLOYEES RETIREMENT SYSTEM**  
**SIXTY-NINTH ANNUAL ACTUARIAL VALUATION**  
**DECEMBER 31, 2014**

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January 13, 2016

The Retirement Commission  
Macomb County Employees Retirement System  
Mount Clemens, Michigan

**Re: Macomb County Employees Retirement System Actuarial Valuation as of  
December 31, 2014**

Ladies and Gentlemen:

The results of the December 31, 2014 annual actuarial valuation of the Macomb County Employees Retirement System are presented in this report. The purpose of the valuation is to measure the System's funding progress and to determine the employer contributions for the 2016 fiscal year. This report should not be relied upon for any other purpose. This report may be provided to parties other than the System only in its entirety and only with the permission of the Commission.

The valuation was based upon the actuarial assumptions and methods adopted by the Retirement Commission, information furnished by the Retirement System concerning Retirement System provisions, financial transactions, DROP members, active members, terminated members, retirees and beneficiaries. We rely upon the System to thoroughly review this information before providing it to us for use in the valuation. Data was checked for internal and year-to-year consistency, but was not otherwise audited by us. As a result, we are unable to assume responsibility for the accuracy or completeness of the information and data provided.

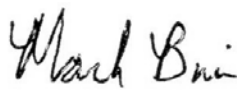
Future actuarial measurements may differ significantly from those presented in this report due to such factors as System experience differing from that anticipated by actuarial assumptions, changes in plan provisions, actuarial assumptions/methods or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements.

To the best of our knowledge the information contained in this report is accurate and all calculations have been made in conformity with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. Louise Gates and Mark Buis are independent of the plan sponsor and are Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Respectfully submitted,



Louise Gates, ASA, MAAA



Mark Buis, FSA, MAAA

LG/MB:sc

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## **SECTION A**

### **EXECUTIVE SUMMARY**

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## EXECUTIVE SUMMARY

### 1. Required Employer Contributions - Fiscal Year Beginning January 1, 2016

The computed employer contributions are as follows:

Division	Computed Employer Contributions*	
	% of Payroll	\$ Based on Projected Payroll
General County	13.22%	\$ 10,953,256
Sheriff's Department	19.48	5,835,096
Road Commission	26.76	3,676,718
Martha T. Berry MCF	7.46	444,465

\* Contribution rates are calculated as a percentage of the payroll of all active members (including those in the DROP). Dollar contributions are based on projected valuation payroll.

Additional detail on these contributions is shown on page B-2.

### 2. Contribution Rate Comparison

Division	Valuation as of December 31	
	2013	2014
General County	14.92%	13.22%
Sheriff's Department	19.98	19.48
Road Commission	23.39	26.76
Martha T. Berry MCF	10.67	7.46

### **3. Reasons for Change**

There are three general reasons why contributions change from one valuation to the next. The first is a change in the benefits or eligibility conditions of the plan. The second is a change in the valuation assumptions and methods. The third is the effect of differences during the year between the plan's actual experience and what the assumptions predicted.

This valuation of the System reflects the following reported benefit provision changes:

- Certain General Non-Union employees are eligible for the Deferred Retirement Option Plan (DROP)
- Changes in Road Commission employee benefits and eligibility for benefits. Please see page Appendix-4.

These benefit provision changes increased County contribution requirements. The remaining changes in contribution amounts over the prior year are due to Retirement System experience.

### **4. 2014 System Experience**

During calendar year 2014, System experience was overall favorable. The return on System assets was higher than long-term expectations (7.5% per year). In addition, the market smoothing techniques used in this valuation of the System recognize both past and current investment experience. As a result, the recognized rate of investment return in this valuation of the System was 9.47%. In addition, 126 individuals were reported to have moved from DROP status to Retirement status during 2014 without a corresponding payout of all DROP account balances during 2014 which contributed to the favorable experience.

## 5. Year 2014 Funding Position

The change in funding position over the prior year is due primarily to the favorable experience during calendar year 2013. This year valuation assets represent 97% of accrued liabilities; last year the ratio was 95%.

## 6. Retiree Reserve Balances

The liabilities for all divisions are larger than the reported assets allocated to the retiree reserve balances as of December 31, 2014. The liabilities and reserves are shown below:

	<u>General County</u>	<u>Sheriff's Department</u>	<u>Road Commission</u>	<u>Martha T. Berry MCF</u>
Retiree Liability	\$367,117,724	\$153,830,123	\$76,436,532	\$26,167,558
Retiree Reserve	<u>357,232,035</u>	<u>140,673,377</u>	<u>74,415,025</u>	<u>25,043,882</u>
Shortfall	\$ 9,885,689	\$ 13,156,746	\$ 2,021,507	\$ 1,123,676

As of the valuation date, there is a shortfall in the retiree reserve balances for all groups. We recommend assets equal to the shortfall for all groups be transferred from the Retirement System employer reserve to the Retiree Reserve to eliminate the shortfall.

## 7. Experience Study

We continue to recommend a study to review and update the actuarial assumptions used in annual valuations of the System.

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**SECTION B**

**VALUATION RESULTS AND  
COMPARATIVE INFORMATION**

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## **FINANCIAL OBJECTIVE**

The financial objective of the Retirement System is to establish and receive contributions, expressed as a percentage of employee member payroll, which will follow the expected pattern from year-to-year and will not have to be increased substantially for future generations of taxpayers. Your annual actuarial valuations determine how well the objective is being met.

The Retirement Commission of the Macomb County Employees Retirement System confirms that the System provides for payment of the required employer contribution as described in Section 20m of Michigan Public Act No. 728.

## **CONTRIBUTION RATES**

The Retirement System is supported by contributions from the employers and active members and by the investment income earned on System assets. Employee members of the System make contributions expressed as a percentage of their annual pay. The employer provides an actuarially determined contribution, the remainder needed to meet the financial objective.

Member and employer contributions cover both (i) normal cost, and (ii) the financing of the unfunded accrued liability over a period of future years. The normal cost is the portion of System costs allocated to the current year by the valuation method described in Section D. The unfunded accrued liability is the portion of System costs not covered by present System assets and future normal costs.

The contribution requirements for the fiscal year beginning January 1, 2016 are presented on the following page.

**CONTRIBUTIONS TO PROVIDE BENEFITS  
MEMBER AND EMPLOYER PORTIONS  
FOR THE FISCAL YEAR BEGINNING JANUARY 1, 2016**

Contribution for	Expressed as Percents of Active Member Payroll*			
	General County	Sheriff's Department	Road Commission	Martha T. Berry MCF
Normal cost:				
Age and service	13.65 %	19.40 %	18.73 %	12.83 %
Disability	0.71	0.94	0.65	0.81
Death-in-service	0.44	0.42	0.43	0.46
Total	<u>14.80</u>	<u>20.76</u>	<u>19.81</u>	<u>14.10</u>
Administrative expenses	0.10	0.10	0.10	0.10
Member contributions:				
Total**	2.36	3.48	3.14	2.49
Future refunds	0.29	0.11	0.16	0.29
Available	<u>2.07</u>	<u>3.37</u>	<u>2.98</u>	<u>2.20</u>
Employer normal cost	<u>12.83</u>	<u>17.49</u>	<u>16.93</u>	<u>12.00</u>
UAAL payment/(credit)	<u>0.39</u>	<u>1.99</u>	<u>9.83</u>	<u>(4.54)</u>
Total Computed Employer Rate	<u><u>13.22 %</u></u>	<u><u>19.48 %</u></u>	<u><u>26.76 %</u></u>	<u><u>7.46 %</u></u>

\* Including payroll of members currently in the DROP.

\*\* Weighted average.

For each division, the Unfunded Actuarial Accrued Liabilities (UAAL) or excess assets were amortized as a level percent-of-payroll over a period of 19 years.

Procedures for determining dollar contribution amounts are shown on the following page.

## CONVERTING CONTRIBUTION RATES TO DOLLAR AMOUNTS

For any period of time, the percent-of-payroll contribution rates need to be converted to dollar amounts. We recommend one of the following procedures.

- (1) Contribute dollar amounts for a period which are equal to the employer's percent-of-payroll contribution requirement multiplied by the covered active member payroll for the period (including the payroll of the members in the DROP). Adjustments should be made as necessary to exclude items of pay that are not covered compensation for Retirement System benefits and to include non-payroll payments that are covered compensation.
- (2) **Contribute the dollar amounts shown on page A-1 of this report.** These amounts are based on the contribution rates and reported payroll information adjusted to reflect assumed payroll increases between the valuation date and the beginning of the fiscal year for which the contributions are being determined.

**DETERMINATION OF UNFUNDED ACCRUED LIABILITY  
AS OF DECEMBER 31, 2014**

	General County	Sheriff's Department	Road Commission	Martha T. Berry MCF	Total
A. Accrued Liability					
1. For retirees and beneficiaries*					
a. Benefit payments	\$367,117,724	\$ 153,830,123	\$ 76,436,532	\$26,167,558	\$623,551,937
b. Reserves	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
c. Total	367,117,724	153,830,123	76,436,532	26,167,558	623,551,937
2. For vested terminated members	12,243,083	2,122,187	973,034	1,234,947	16,573,251
3. For present active members					
a. Value of expected future benefit payments	238,868,526	136,827,200	69,270,936	15,274,921	460,241,583
b. Value of future normal costs	<u>100,575,632</u>	<u>57,601,015</u>	<u>21,747,183</u>	<u>9,347,108</u>	<u>189,270,938</u>
c. Active member liability: (a) - (b)	<u>138,292,894</u>	<u>79,226,185</u>	<u>47,523,753</u>	<u>5,927,813</u>	<u>270,970,645</u>
4. Total	517,653,701	235,178,495	124,933,319	33,330,318	911,095,833
B. Valuation Assets	<u>512,995,018</u>	<u>226,696,095</u>	<u>105,693,839</u>	<u>37,180,180</u>	<u>882,565,132</u>
C. Unfunded Accrued Liability (Overfunding): (A.4) - (B)	<u>4,658,683</u>	<u>8,482,400</u>	<u>19,239,480</u>	<u>(3,849,862)</u>	<u>28,530,701</u>
D. Funding %	<u>99.1%</u>	<u>96.4%</u>	<u>84.6%</u>	<u>111.6%</u>	<u>96.9%</u>

\* Includes liabilities for individuals in the DROP.

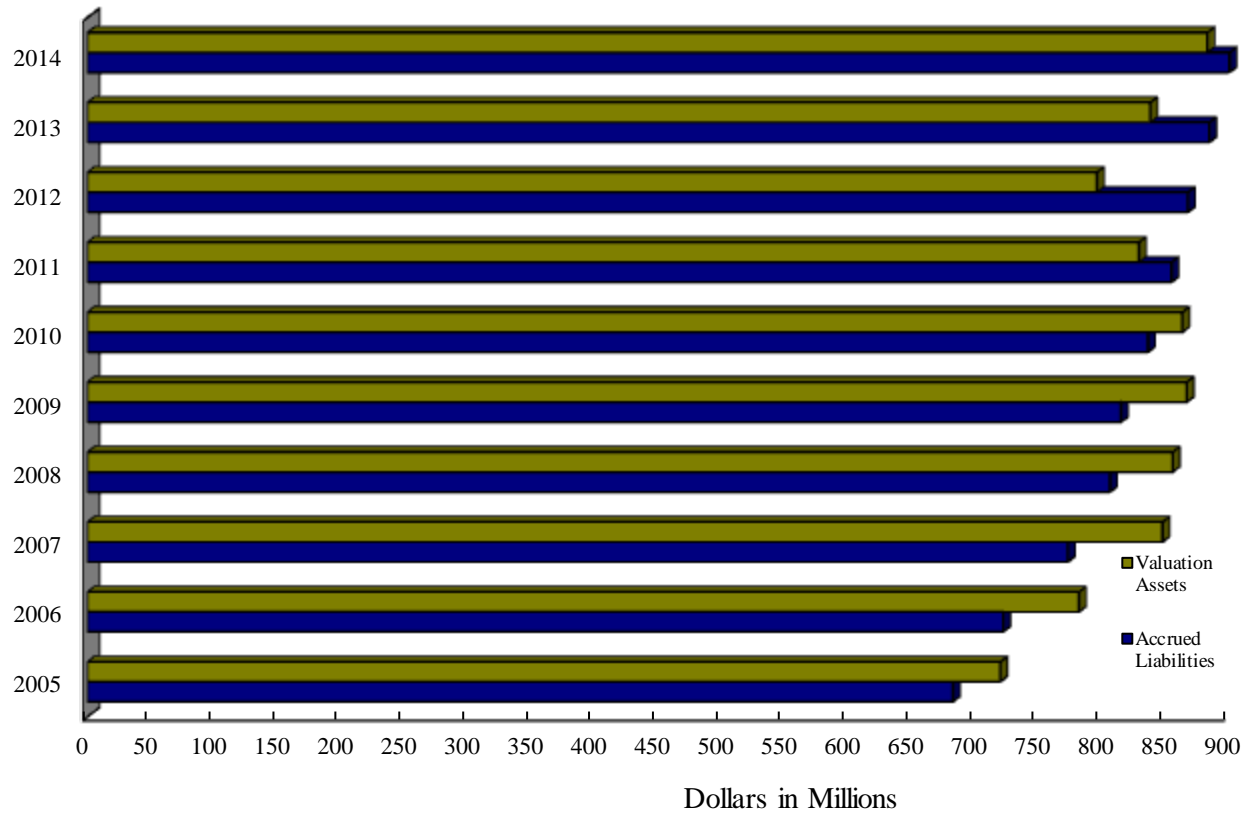
**DEVELOPMENT OF EXPERIENCE GAIN (LOSS)  
YEAR ENDED DECEMBER 31, 2014**

Actual experience will never (except by coincidence) exactly match 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) for all divisions is shown below.

	<u>Year Ending December 31, 2014</u>
(1) UAAL at start of year	\$ 46,389,041
(2) Normal cost	21,345,090
(3) Actual contributions	25,749,883
(4) Interest accrual	3,313,998
(5) Expected UAAL before changes: (1)+(2)-(3)+(4)	45,300,238
(6) Change from benefits	6,042,627
(7) Change in assumptions/methods	0
(8) Expected UAAL after changes: (5)+(6)+(7)	51,342,865
(9) Actual UAAL at end-of-year	28,530,701
(10) Gain (loss): (8)-(9)	22,812,164
(11) Gain (loss) as percent of actuarial accrued liabilities at start of year	2.6%

## ASSETS & ACCRUED LIABILITIES FOR ALL SYSTEM MEMBERS

Valuation Year



2005 assets equaled 106% of accrued liabilities.

2014 assets equaled 97% of accrued liabilities.

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**SECTION C**

**SUMMARY OF BENEFIT PROVISIONS AND  
VALUATION DATA**

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**BRIEF SUMMARY OF ANCILLARY BENEFIT PROVISIONS  
(DECEMBER 31, 2014)**

**Eligibility**

**Amount**

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**REGULAR RETIREMENT**

Please refer to the Appendix.

**DEFERRED RETIREMENT**

Please refer to the Appendix.

**NON-DUTY DEATH-IN-SERVICE**

10 or more years of service.

Computed as a regular retirement but actuarially reduced in accordance with a 100% joint and survivor election.

**DUTY DEATH-IN-SERVICE**

No age or service requirements.  
Must be in receipt of worker's compensation.

Refund of accumulated contributions. Upon termination of worker's compensation payments the same amount is paid to the spouse and to unmarried children under 18.

**NON-DUTY DISABILITY**

10 or more years of service.

Computed as a regular retirement with a minimum benefit of \$400 per month.

**DUTY DISABILITY**

No age or service requirements.  
Must be in receipt of worker's compensation.

Computed as a regular retirement with a minimum benefit of \$400 per month. During the worker's compensation period the County financed portion cannot exceed the difference between 65% of final average compensation and worker's compensation payments.

**MEMBER CONTRIBUTIONS**

Please refer to the Appendix.



## SUMMARY OF DROP PROVISIONS

Please refer to the Appendix for DROP eligibility provisions. The other provisions of the DROP are listed below:

- The DROP is a forward DROP.
- Members can DROP when they first become eligible for an unreduced benefit.
- Upon entering the DROP, 100% of the member's monthly retirement benefit will be credited to the DROP account.
- The DROP account will be credited with the same interest rate used to accumulate member contributions (currently 3.5%).
- The maximum DROP period is five years. Members may continue to work past the maximum DROP period but no additional retirement benefits will be credited to the member's DROP account. Interest on the DROP account will continue to accrue for members working past the maximum DROP period.
- Member contributions to the Retirement System will cease upon entering the DROP.
- Upon actual retirement, the member would receive a monthly annuity equal to the accrued benefit credited to the DROP account under any form of payment available from the plan, and the lump sum amount accumulated in the DROP account. Members elect their form of payment at time of DROP.
- The monthly annuity as of the DROP date is calculated based on service, final average compensation and benefit provisions as of the DROP date less the annuity withdrawal reduction, if applicable; this amount is not changed for any subsequent changes in pay or benefit provisions. The annuity withdrawal is paid at the time of DROP.
- For POLC (Union 1 & 20) and MCDPSA (Union 26), interest is earned on the DROP account balance at the end of each month, and shall be paid to the employee's DROP account no later than the last day of the following month.
- For POLC (Union 1), effective August 20, 2010, for new entries into DROP, upon reaching the five year maximum DROP participation period, the DROP participant shall terminate his/her employment.
- For POAM (Union 7), effective August 6, 2010, an employee of Macomb County who is a member of the POAM-Deputies and Dispatchers, may voluntarily elect to participate in the DROP, upon obtaining the minimum age and service requirements for a normal service retirement.

**REPORTED FINANCIAL INFORMATION  
YEAR ENDED DECEMBER 31, 2014  
(MARKET VALUE)**

**Revenues and Disbursements during 2014**

**Revenues:**

a. Member contributions	\$ 3,597,063	
b. Employer contributions	22,152,820	
c. Interest and dividends	9,913,675	
d. Investment gains (losses)	<u>60,282,265</u>	
e. Total		\$95,945,823

**Disbursements:**

a. Refunds of member contributions	328,355	
b. Annuity Withdrawals	4,136,418	
c. Retirement and DROP Benefits Paid	53,608,254	
d. Investment expenses	5,782,515	
e. Administrative expenses	<u>523,640</u>	
f. Total		64,379,182

**Reserve Increase:**

Total revenues minus total disbursements	<u><u>\$31,566,641</u></u>
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**Assets and Reserves as of December 31, 2014**

**Assets:**

a. Cash & short-term*	\$ 17,253,542
b. Other	0
c. Fixed income	64,002,516
d. Corporate bonds	96,572
e. Equities	605,436,434
f. Real estate	0
g. Limited partnerships	<u>253,467,096</u>

Total \$940,256,160

**Reserve Accounts:**

a. Member contributions	\$ 46,460,019
b. Reserve for benefits now being paid	597,364,319
c. Reserve for future benefits	296,431,822
d. Supplemental reserve	0

Total \$940,256,160

\* Includes receivables and payables.

## DETERMINATION OF VALUATION ASSETS

Year Ended December 31:	2013	2014	2015	2016	2017	2018
A. Funding Value Beginning of Year	\$795,605,544	\$837,652,540				
B. Market Value End of Year	908,689,519	940,256,160				
C. Market Value Beginning of Year	787,937,454	908,689,519				
D. Non-Investment Net Cash Flow	(39,755,866)	(32,846,784)				
E. Investment Income						
E1. Market Total: B - C - D	160,507,931	64,413,425				
E2. Amount for Immediate Recognition (7.5%)	58,179,571	61,592,186				
E3. Amount for Phased-In Recognition: E1-E2	102,328,360	2,821,239				
F. Phased-In Recognition of Investment Income						
F1. Current Year: 0.2 x E3	20,465,672	564,248				
F2. First Prior Year	4,445,087	20,465,672	\$ 564,248			
F3. Second Prior Year	(14,853,155)	4,445,087	20,465,672	\$ 564,248		
F4. Third Prior Year	5,545,340	(14,853,155)	4,445,087	20,465,672	\$ 564,248	
F5. Fourth Prior Year	8,020,347	5,545,338	(14,853,153)	4,445,087	20,465,672	\$564,247
G. Total of Items F1 - F5	23,623,291	16,167,190	10,621,854	25,475,007	21,029,920	564,247
H. Funding Value End of Year: A + D + E2 + G	837,652,540	882,565,132				
I. Difference between Market & Funding Value	71,036,979	57,691,028				
J. Recognized Rate of Return - Funding Value Basis	10.55%	9.47%				
K. Recognized Rate of Return - Market Value Basis	20.90%	7.22%				

**RETIREES, BENEFICIARIES AND DROP MEMBERS  
AS OF DECEMBER 31, 2014  
TABULATED BY RETIREMENT TYPE  
GENERAL COUNTY**

Age	Age and Service		Death-in-Service Survivor		Disability		Totals	
	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances
Under 20	2	\$ 43,771					2	\$ 43,771
20 - 24	2	17,851			1	\$ 9,316	3	27,167
25 - 29	2	22,404			2	19,419	4	41,823
30 - 34	3	53,476					3	53,476
35 - 39					1	7,884	1	7,884
40 - 44	4	26,528			1	14,396	5	40,924
45 - 49	1	4,574			5	59,311	6	63,885
50 - 54	118	3,199,401	2	\$ 35,222	8	126,033	128	3,360,656
55 - 59	251	5,983,685	2	61,314	8	158,773	261	6,203,772
60 - 64	392	7,968,013	2	43,192	7	66,932	401	8,078,137
65 - 69	364	6,495,431	3	37,358	6	58,947	373	6,591,736
70-74	276	4,673,884	3	31,543	11	133,639	290	4,839,066
75-79	143	2,022,348	1	35,774	6	63,015	150	2,121,137
80-84	123	1,379,320	2	21,787	5	38,786	130	1,439,893
85-89	98	1,088,016	5	39,079	2	17,318	105	1,144,413
90+	52	351,255	2	7,033	3	4,945	57	363,233
<b>Totals</b>	<b>1,831</b>	<b>\$33,329,957</b>	<b>22</b>	<b>\$312,302</b>	<b>66</b>	<b>\$778,714</b>	<b>1,919</b>	<b>\$34,420,973</b>

**RETIREES, BENEFICIARIES AND DROP MEMBERS  
AS OF DECEMBER 31, 2014  
TABULATED BY RETIREMENT TYPE**

**SHERIFF'S DEPARTMENT**

Age	Age and Service		Death-in-Service Survivor		Disability		Totals	
	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances
35 - 39	1	\$ 39,059			1	\$ 22,925	2	\$ 61,984
40 - 44					2	49,466	2	49,466
45 - 49	20	918,795			8	259,189	28	1,177,984
50 - 54	55	2,607,196	1	\$ 27,328	4	131,734	60	2,766,258
55 - 59	60	2,940,839			7	172,152	67	3,112,991
60 - 64	53	2,180,032			4	92,932	57	2,272,964
65 - 69	33	1,179,327	1	34,242	4	88,596	38	1,302,165
70 - 74	35	1,222,576			1	13,446	36	1,236,022
75 - 79	22	587,877			1	15,031	23	602,908
80 - 84	10	163,370			2	18,644	12	182,014
85 - 89	12	151,788					12	151,788
90+	4	46,161					4	46,161
<b>Totals</b>	<b>305</b>	<b>\$12,037,020</b>	<b>2</b>	<b>\$61,570</b>	<b>34</b>	<b>\$864,115</b>	<b>341</b>	<b>\$12,962,705</b>

**RETIREES, BENEFICIARIES AND DROP MEMBERS  
AS OF DECEMBER 31, 2014  
TABULATED BY RETIREMENT TYPE**

**ROAD COMMISSION**

Age	Age and Service		Death-in-Service Survivor		Disability		Totals	
	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances
Under 20	3	\$ 42,902			1	\$ 7,187	4	\$ 50,089
20 - 24					1	7,187	1	7,187
25 - 29					1	7,187	1	7,187
35 - 39					1	2,396	1	2,396
40 - 44					3	18,316	3	18,316
45 - 49	1	37,046			1	22,028	2	59,074
50 - 54	19	575,340	1	\$ 23,419	2	37,324	22	636,083
55 - 59	40	1,208,935	1	30,240	4	66,682	45	1,305,857
60 - 64	61	1,768,571			3	41,214	64	1,809,785
65 - 69	45	1,217,813			3	53,840	48	1,271,653
70 - 74	25	567,318			3	27,336	28	594,654
75 - 79	35	718,872	1	31,504			36	750,376
80 - 84	28	520,173			4	25,494	32	545,667
85 - 89	19	283,005	1	5,197	3	21,777	23	309,979
90+	13	72,369	1	6,355			14	78,724
<b>Totals</b>	<b>289</b>	<b>\$7,012,344</b>	<b>5</b>	<b>\$96,715</b>	<b>30</b>	<b>\$337,968</b>	<b>324</b>	<b>\$7,447,027</b>

**RETIREES, BENEFICIARIES AND DROP MEMBERS  
AS OF DECEMBER 31, 2014  
TABULATED BY RETIREMENT TYPE**

**MARTHA T. BERRY MCF**

Age	Age and Service		Death-in-Service Survivor		Disability		Totals	
	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances
35 - 39	1	\$ 11,296					1	\$ 11,296
40 - 44	3	5,009					3	5,009
45 - 49			1	\$ 10,350	2	\$ 24,619	3	34,969
50 - 54	12	204,488			2	27,489	14	231,977
55 - 59	20	463,446			2	42,364	22	505,810
60 - 64	33	517,154			1	6,181	34	523,335
65 - 69	29	413,498			2	16,923	31	430,421
70 - 74	29	334,462			4	21,326	33	355,788
75 - 79	23	208,732			3	19,607	26	228,339
80 - 84	13	113,565	1	6,388	3	7,399	17	127,352
85 - 89	10	70,690			1	6,813	11	77,503
90 +	6	19,717					6	19,717
<b>Totals</b>	<b>179</b>	<b>\$2,362,057</b>	<b>2</b>	<b>\$16,738</b>	<b>20</b>	<b>\$172,721</b>	<b>201</b>	<b>\$2,551,516</b>

**INACTIVE MEMBERS DECEMBER 31, 2014**  
**TABULATED BY VALUATION DIVISIONS**

*Inactive members* included in the valuation are summarized in the table below. An inactive member is a person who has left covered employment after completing 8 or more years of service, but has not yet applied for a retirement allowance, and who has not withdrawn his or her accumulated contributions from the Employees' Savings Fund. Included in this group are 4 employees who are covered under the Reciprocal Retirement Act.

<b>Valuation Divisions</b>	<b>Number</b>	<b>Estimated Deferred</b>
General County	179	\$1,902,554
Sheriff's Department	18	383,737
Road Commission	13	154,010
Martha T. Berry MCF	16	169,965
Totals	226	\$2,610,266



**GENERAL COUNTY ACTIVE MEMBERS DECEMBER 31, 2014  
BY AGE AND YEARS OF SERVICE**

Age	Years of Service on Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll*
20-24	13							13	\$ 450,467
25-29	64	4						68	2,491,438
30-34	75	34	14					123	5,314,936
35-39	71	50	51	14				186	9,077,665
40-44	66	51	58	44	4	1		224	11,245,752
45-49	71	50	67	49	32	16		285	14,773,116
50-54	52	48	72	28	13	15	2	230	11,362,072
55-59	42	31	68	14	9	1		165	8,056,646
60	8	3	6	3	2			22	1,171,702
61	4	5	5	1				15	662,962
62	2	2	3	1		1		9	406,710
63	3	7	5					15	656,207
64	1	3	1	4	1			10	367,129
65		2						2	107,709
66		1	1	2	2	1	1	8	458,175
67		2	1	1				4	260,442
68		2						2	72,300
69		3						3	94,080
70				1				1	50,554
71		1						1	1,825
72	1							1	97,631
74		1						1	154,410
76	1		1					2	55,148
77		1						1	29,163
79+				1				1	14,610
<b>Totals</b>	<b>474</b>	<b>301</b>	<b>353</b>	<b>163</b>	<b>63</b>	<b>35</b>	<b>3</b>	<b>1,392</b>	<b>\$67,432,849</b>

\* Valuation Payroll excludes pay for members electing the DROP.

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

Age: 45.6 years  
Service: 9.2 years  
Annual Pay: \$48,443

**SHERIFF'S DEPARTMENT ACTIVE MEMBERS DECEMBER 31, 2014  
BY AGE AND YEARS OF SERVICE**

Age	Years of Service on Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll*
20-24	20							20	\$ 839,747
25-29	42	4						46	2,076,899
30-34	15	19	18					52	3,211,256
35-39	3	8	35	10				56	3,832,387
40-44	3	13	18	49	6			89	6,512,054
45-49	1	8	9	26	29			73	5,205,599
50-54	2	4	14	2	10			32	2,304,164
55-59		3	1	3	2			9	614,890
60	1				2			3	219,645
<b>Totals</b>	<b>87</b>	<b>59</b>	<b>95</b>	<b>90</b>	<b>49</b>			<b>380</b>	<b>\$24,816,641</b>

\* Valuation Payroll excludes pay for members electing the DROP.

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

Age: 39.3 years

Service: 11.8 years

Annual Pay: \$65,307

**ROAD COMMISSION ACTIVE MEMBERS DECEMBER 31, 2014  
BY AGE AND YEARS OF SERVICE**

Age	Years of Service on Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll*
20-24	3							3	\$ 59,812
25-29	2	1						3	125,401
30-34	4	2	9	1				16	764,830
35-39	4	3	12	11				30	1,698,564
40-44	6	4	16	15	10			51	2,945,731
45-49	4		6	11	11	14		46	2,896,126
50-54	6	2	9	9	8	11		45	2,703,410
55-59	1	1	6	7	1		1	17	1,030,882
62		1	1		1			3	203,776
<b>Totals</b>	<b>30</b>	<b>14</b>	<b>59</b>	<b>54</b>	<b>31</b>	<b>25</b>	<b>1</b>	<b>214</b>	<b>\$12,428,532</b>

\* Valuation Payroll excludes pay for members electing the DROP.

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

Age: 44.8 years

Service: 15.1 years

Annual Pay: \$58,077

**MARTHA T. BERRY MCF ACTIVE MEMBERS DECEMBER 31, 2014  
BY AGE AND YEARS OF SERVICE**

Age	Years of Service on Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll*
20-24	3							3	\$ 87,122
25-29	7	1						8	277,486
30-34	20	4						24	985,403
35-39	14	9	3					26	976,796
40-44	11	6	7	1	1			26	855,491
45-49	10	5	6	4	2			27	1,008,283
50-54	10		3	1	1	1		16	585,692
55-59	7	1	2					10	369,979
60		2	1					3	109,977
61		2						2	84,554
62	1	1						2	109,478
63	1							1	30,761
<b>Totals</b>	<b>84</b>	<b>31</b>	<b>22</b>	<b>6</b>	<b>4</b>	<b>1</b>		<b>148</b>	<b>\$5,481,022</b>

\* Valuation Payroll excludes pay for members electing the DROP.

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

Age: 42.3 years

Service: 6.1 years

Annual Pay: \$37,034

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**SECTION D**

**ACTUARIAL COST METHODS AND ACTUARIAL  
ASSUMPTIONS**

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## VALUATION METHODS

**Actuarial Cost Method:** Normal cost and the allocation of benefit values between service rendered before and after the valuation date were determined using an 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 to the value of the member's benefits.
- (ii) each annual normal cost is a constant percentage of the member's year-by-year projected covered pay.

**Amortization of Unfunded Actuarial Valuation Method:** Unfunded actuarial accrued liabilities were amortized by level percent-of-payroll contributions (principal and interest combined). Active member payroll was assumed to increase 5.0% for the purpose of determining the level-percent contributions.

**Asset Valuation Method:** The actuarial value equals:

- (a) Actuarial value of assets from the previous valuation, plus
- (b) employer and member contributions since the last valuation, minus
- (c) benefit payments and refunds since the last valuation, plus
- (d) estimated investment income at the assumed investment return, plus
- (e) portion of gain (loss) recognized in the current valuation.

For the above purpose, gain (loss) is defined as the excess during the period of the investment return on the market value of assets over the expected investment income. Twenty percent of the difference is recognized over a 5-year period in the actuarial value of assets.

This method was first adopted for the December 31, 2005 actuarial valuation.

## ACTUARIAL ASSUMPTIONS USED FOR THE VALUATION

**Investment Return** (net of investment expenses).

2.5% per year in excess of pay inflation (real rate of return). If pay inflation matches the assumption of 5.0%, this implies a 7.5% rate of return.

This assumption is used to equate the value of payments due at different points in time and was first used for the December 31, 1993 valuation. Approximate rates of investment return, for the purpose of comparisons with assumed rates, are shown below.

**Pay Projections.** These assumptions are used to project current pays to those upon which benefits will be based. The assumptions were first used for the December 31, 2005 valuation.

Years of Service	Annual Rate of Pay Increase								
	Base (Economic)	Merit and Longevity				Total			
		General County	Sheriff's Department	Road Commission	Martha T. Berry MCF	General County	Sheriff's Department	Road Commission	Martha T. Berry MCF
1	5.0%	3.0 %	7.0 %	6.0 %	3.0 %	8.0%	12.0%	11.0%	8.0%
2	5.0	3.0	7.0	6.0	3.0	8.0	12.0	11.0	8.0
3	5.0	3.0	7.0	6.0	3.0	8.0	12.0	11.0	8.0
4	5.0	3.0	4.0	6.0	3.0	8.0	9.0	11.0	8.0
5	5.0	3.0	4.0	6.0	3.0	8.0	9.0	11.0	8.0
6	5.0	3.0	4.0	6.0	3.0	8.0	9.0	11.0	8.0
7	5.0	1.0	4.0	2.0	1.0	6.0	9.0	7.0	6.0
8	5.0	1.0	1.0	2.0	1.0	6.0	6.0	7.0	6.0
9	5.0	1.0	1.0	2.0	1.0	6.0	6.0	7.0	6.0
10	5.0	1.0	1.0	2.0	1.0	6.0	6.0	7.0	6.0
11+	5.0	1.0	1.0	1.0	1.0	6.0	6.0	6.0	6.0

*The mortality table (a risk assumption)* used was the RP 2000 Mortality Table, adjusted for projected mortality improvements to 2015 with no setbacks for males or females. This table was first used for the December 31, 2005 valuation. The membership size in the plan is not sufficiently large to determine if there is a margin for mortality improvement. However, based on our experience with a broad cross section of plans similar in nature to this plan, it is our opinion that there is no provision for future mortality improvement in the current mortality assumption. Sample values follow:

Sample Ages	Single Life Retirement Values			
	Values at Retirement of \$1 Monthly for Life		Future Life Expectancy (years)	
	Men	Women	Men	Women
50	\$144.50	\$146.68	32.29	34.38
55	136.81	139.67	27.59	29.64
60	126.95	130.80	23.05	25.08
65	115.04	120.11	18.79	20.80
70	101.33	107.82	14.89	16.86
75	85.49	93.96	11.34	13.29
80	68.54	78.58	8.25	10.09

This assumption is used to measure the probabilities of members dying before retirement and the probabilities of each pension payment being made after retirement.

The table above was set forward 4 years for males and females for the purpose of valuing disabled lives.

*Rates of disability* were as follows:

Sample Ages	% of Active Members Becoming Disabled within Next Year
25	0.09 %
30	0.11
35	0.15
40	0.22
45	0.36
50	0.61
55	1.01
60	1.66



*The rates of retirement (a risk assumption)* used to measure the probability of eligible members retiring during the next year were as follows:

<b>Retirement Ages</b>	<b>General County</b>	<b>Sheriff's Department</b>	<b>Road Commission</b>	<b>Martha T. Berry MCF</b>	<b>Retirement Service</b>	<b>Sheriff's Department</b>
50	15 %			15 %	25	50 %
51	15			15	26	40
52	15			15	27	40
53	15			15	28	40
54	15			15	29	40
55	15		25 %	15	30	40
56	15		25	15	31	35
57	15		25	15	32	25
58	15		25	15	33	25
59	25		25	25	34	25
60	25	25 %	25	25	35 & Up	100
61	25	25	30	25		
62	25	25	30	25		
63	25	25	30	25		
64	25	25	30	25		
65	25	100	100	25		
66	25			25		
67	25			25		
68	25			25		
69	25			25		
70 & Up	100			100		

These tables were first used for the December 31, 2005 valuation.

For all General County and Martha T. Berry MCF members hired on or after January 1, 2002 the following retirement probabilities will apply:

<b>Retirement Ages</b>	<b>General County</b>	<b>Martha T. Berry MCF</b>
55	10 %	10 %
56	10	10
57	10	10
58	10	10
59	20	20
60	20	20
61	20	20
62	25	25
63	25	25
64	25	25
65	25	25
66	25	25
67	25	25
68	25	25
69	25	25
70 & Up	100	100

*Rates of separation from active membership (a risk assumption)* were as follows: (rates do not apply to members eligible for regular retirement and do not include separation on account of death or disability). This assumption measures the probabilities of members remaining in employment.

Sample Ages	Years of Service	% of Active Members Separating within Next Year			
		General County	Sheriff's Department	Road Commission	Martha T. Berry MCF
ALL	0	12.00 %	4.00 %	6.50 %	12.00 %
	1	9.00	4.00	6.00	9.00
	2	8.00	3.00	5.50	8.00
	3	6.00	3.00	5.00	6.00
	4	6.00	3.00	4.50	6.00
25	5 & Over	5.80	1.60	2.50	5.80
30		5.30	1.10	2.00	5.30
35		4.30	1.00	2.00	4.30
40		3.30	0.75	1.50	3.30
45		2.30	0.50	1.00	2.30
50	1.80	0.25	0.50	1.80	
55	1.75	0.25	0.50	1.75	
60	1.50	0.25	0.50	1.50	

These tables were first used for the December 31, 2005 valuation.

*Effect of lump sum payments on FAC:* 4.5% for General County and Martha T. Berry MCF members.

11.0% for Command Officer and Inspectors hired before 12/1/96; 1% for other CBU members.

6.0% for Road Commission members.

*Administrative expense load:* 0.10% of payroll.

## MISCELLANEOUS AND TECHNICAL ASSUMPTIONS

<b>Marriage Assumption:</b>	100% of males and 100% of females are assumed to be married for purposes of death-in-service benefits. Male spouses are assumed to be three years older than female spouses.
<b>Pay Increase Timing:</b>	Six months after the valuation date.
<b>Decrement Timing:</b>	Decrements of all other types are assumed to occur mid-year.
<b>Eligibility Testing:</b>	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.
<b>Benefit Service:</b>	Exact fractional service is used to determine the amount of benefit payable.
<b>Decrement Relativity:</b>	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
<b>Decrement Operation:</b>	Disability and death-in-service decrements do not operate during the first 5 years of service. Disability and withdrawal do not operate during retirement eligibility.
<b>Normal Form of Benefit:</b>	The assumed normal form of benefit is the straight life form.
<b>Incidence of Contributions:</b>	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.
<b>DROP Model:</b>	The valuation of the DROP is based on the assumption that the individual will elect the most valuable option (enter DROP then retire, or , retire directly from County employment). The funding of System benefits takes place from plan entry until retirement.

## 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, turnover 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 and 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.

**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 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 book value plus a portion of unrealized appreciation or depreciation.

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**SECTION E**

**FINANCIAL DISCLOSURE INFORMATION**

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## SCHEDULE OF FUNDING PROGRESS

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b) – (a)	Funded Ratio (a)/(b)	Covered Payroll** (c)	UAAL as a Percentage of Covered Payroll [(b) – (a)] / (c)
12/31/05 #	\$719,336,871	\$682,144,687	\$(37,192,184)	105.5 %	\$ 134,886,588	(27.6) %
12/31/06	781,450,248	721,657,669	(59,792,579)	108.3	128,820,986	(46.4)
12/31/07	847,305,155	772,649,767	(74,655,387)	109.7	126,696,252	(58.9)
12/31/08 #*	855,265,571	805,888,089	(49,377,481)	106.1	121,822,674	(40.5)
12/31/09 *	866,356,598	814,563,728	(51,792,870)	106.4	116,522,938	(44.4)
12/31/10 *	862,915,501	837,167,835	(25,747,666)	103.1	110,795,240	(23.2)
12/31/11	828,692,442	854,323,946	25,631,504	97.0	108,900,180	23.5
12/31/12 *	795,605,544	867,218,699	71,613,155	91.7	105,391,874	67.9
12/31/13 #*	837,652,540	884,041,581	46,389,041	94.8	102,252,875	45.4
12/31/14	882,565,132	911,095,833	28,530,701	96.9	110,159,044	25.9

\* Plan amended.

\*\* Excludes pay for members electing DROP.

# Certain assumptions or methods revised.



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## **APPENDIX**

### **SUMMARY OF BENEFIT PROVISIONS**

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# BENEFIT PROVISION SUMMARY AS OF DECEMBER 31, 2014 FOR GENERAL EMPLOYEES

Division Code	Division Name	Benefit Tier	Service Needed to Vest	DROP Eligible?	Retirement Eligibility	Retirement Benefit		FAC Period	Employee Contribution
					Eligibility (age/service)	Multiplier	Employer Maximum		
0	General Non Union	Hired on or before 12/31/01 or vested by 2/26/09	8 years	Yes*	60/8, Rule of 70 (min age 50)	2.4% / 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8	2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15	2.20%	66% of FAC	5 years	2.5%
2	UAW Animal Shelter	Hired on or before 12/31/01 or vested by 2/27/09	8 years	Yes*	60/8, Rule of 70 (min age 50)	2.4% / 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8	2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15	2.20%	66% of FAC	5 years	2.5%
3	AFSCME Local 411	Hired on or before 12/31/01 or vested by 2/27/09	8 years	Yes*	60/8, Rule of 70 (min age 50)	2.4% / 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8	2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15	2.20%	66% of FAC	5 years	2.5%
6	Macomb County Environmental Health Association	Hired on or before 12/31/01 or vested by 5/1/09	8 years	Yes*	60/8, Rule of 70 (min age 50)	2.4% / 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8	2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15	2.20%	66% of FAC	5 years	2.5%
8	Teamsters 214 Court Reporters	Hired on or before 12/31/01 or vested by 2/27/09	8 years	Yes*	60/8, Rule of 70 (min age 50)	2.4% / 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8	2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15	2.20%	66% of FAC	5 years	2.5%
9	International Union of Operating Engineers (Boiler Operators)	Hired on or before 12/31/01 or vested by 5/1/09	8 years	Yes*	60/8, Rule of 70 (min age 50)	2.4% / 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8	2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15	2.20%	66% of FAC	5 years	2.5%
10	TPOAM Circuit Court Officers	Hired on or before 12/31/01 or vested by 7/24/09	8 years	Yes*	60/8, Rule of 70 (min age 50)	2.4% / 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8	2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15	2.20%	66% of FAC	5 years	2.5%
11	MNA Unit I Health Dept.	Hired on or before 12/31/01 or vested by 5/1/09	8 years	Yes*	60/8, Rule of 70 (min age 50)	2.4% / 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8	2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15	2.20%	66% of FAC	5 years	2.5%
12	UAW Local 412 Unit 49 Information Technology	Hired on or before 12/31/01 or vested by 2/27/09	8 years	Yes*	60/8, Rule of 70 (min age 50)	2.4% / 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8	2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15	2.20%	66% of FAC	5 years	2.5%
13	UAW Local 889 Specialized Offices	Hired on or before 12/31/01 or vested by 2/27/09	8 years	Yes*	60/8, Rule of 70 (min age 50)	2.4% / 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8	2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15	2.20%	66% of FAC	5 years	2.5%
15	Building Trades Association	Hired on or before 12/31/01 or vested by 5/1/09	8 years	Yes*	60/8, Rule of 70 (min age 50)	2.4% / 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8	2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15	2.20%	66% of FAC	5 years	2.5%

\* Must be vested on 12/31/2012, otherwise not eligible for DROP.

Division code 88 people were included in Division 00

## BENEFIT PROVISION SUMMARY AS OF DECEMBER 31, 2014 FOR GENERAL EMPLOYEES (CONCLUDED)

Division Code	Division Name	Benefit Tier	Service Needed to Vest	DROP Eligible?	Retirement Eligibility		Retirement Benefit			
					Eligibility (age/service)	Multiplier	Employer Maximum	FAC Period	Employee Contribution	
16	UAW Local 412 Unit 46 Assistant Prosecutors	Hired on or before 12/31/01 or vested by 9/14/09	8 years	Yes*	60/8, Rule of 70 (min age 50)		2.4%/ 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8		2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15		2.20%	66% of FAC	5 years	2.5%
18	Teamsters Local 214 FOC/Circuit Court	Hired on or before 12/31/01 or vested by 7/24/09	8 years	Yes*	60/8, Rule of 70 (min age 50)		2.4%/ 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8		2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15		2.20%	66% of FAC	5 years	2.5%
19	General	Hired on or before 12/31/01 or vested by 2/27/09	8 years	Yes*	60/8, Rule of 70 (min age 50)		2.4%/ 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8		2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15		2.20%	66% of FAC	5 years	2.5%
21	POAM JJC	Hired on or before 12/31/01 or vested by 5/1/09	8 years	Yes*	60/8, Rule of 70 (min age 50)		2.4%/ 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8		2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15		2.20%	66% of FAC	5 years	2.5%
24	UAW Local 889 MCCSA	Hired on or before 12/31/01 or vested by 2/27/09	8 years	Yes*	60/8, Rule of 70 (min age 50)		2.4%/ 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8		2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15		2.20%	66% of FAC	5 years	2.5%
25	UAW Local 412 Unit 75 Supervisors	Hired on or before 12/31/01 or vested by 2/27/09	8 years	Yes*	60/8, Rule of 70 (min age 50)		2.4%/ 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8		2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15		2.20%	66% of FAC	5 years	2.5%
27	TPOAM Macomb Co. Senior Service Employees Association	Hired on or before 12/31/01 or vested by 2/27/09	8 years	Yes*	60/8, Rule of 70 (min age 50)		2.4%/ 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8		2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15		2.20%	66% of FAC	5 years	2.5%
28	TPOAM Juvenile Court & Justice Center Employees	Hired on or before 12/31/01 or vested by 6/19/09	8 years	Yes*	60/8, Rule of 70 (min age 50)		2.4%/ 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8		2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15		2.20%	66% of FAC	5 years	2.5%
30	UAW Local 412 Unit 95 Assistant Corporation Counsel	Hired on or before 12/31/01 or vested by 2/27/09	8 years	Yes*	60/8, Rule of 70 (min age 50)		2.4%/ 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8		2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15		2.20%	66% of FAC	5 years	2.5%
43	UAW Local 889 Probate Court/ Corporation Counsel	Hired on or before 12/31/01 or vested by 6/19/09	8 years	Yes*	60/8, Rule of 70 (min age 50)		2.4%/ 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8		2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15		2.20%	66% of FAC	5 years	2.5%
44	UAW Local 412 - Unit 98 MCCSA Professionals	Hired on or before 12/31/01 or vested by 2/26/09	8 years	Yes*	60/8, Rule of 70 (min age 50)		2.4%/ 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8		2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15		2.20%	66% of FAC	5 years	2.5%

\* Must be vested on 12/31/2012, otherwise not eligible for DROP.

## BENEFIT PROVISION SUMMARY AS OF DECEMBER 31, 2014 FOR SHERIFF EMPLOYEES

Division Code	Division Name	Benefit Tier	Service Needed to Vest	DROP Eligible?	Retirement Eligibility		Retirement Benefit		FAC Period	Member Contribution
					Eligibility (age/service)	Multiplier	Employer Maximum			
1	POLC- Command	Hired before 8/20/2010	8 years	Yes	60/8, 25 & out	2.4%(26 yrs) / 1%	65% of FAC	3 years	4%	
		Hired on/after 8/20/2010	15 years	Yes	60/15, 25 & out	2.4%(26 yrs) / 1%	65% of FAC	3 years	4%	
7	POAM Deputies	Hired before 6/1/2013	8 years	Yes*	60/8, 25 & out	2.64% for 25 yrs	66% of FAC	3 years	4%	
7	POAM Dispatchers	Hired Into the County on or after 6/1/2013	15 years	No	60/15, 25 & out	2.64% for 25 yrs	66% of FAC	3 years	4%	
		Hired before 6/1/2013	8 years	Yes*	60/8, 25 & out	2.4%(26 yrs) / 1%	66% of FAC	3 years	4%	
	POLC Captains	Hired Into the County on or after 6/1/2013	15 years	No	60/15, 25 & out	2.4%(26 yrs) / 1%	66% of FAC	3 years	4%	
		Hired before 6/1/2013	8 years	Yes	60/8, 25 & out	2.4%(26 yrs) / 1%	65% of FAC	3 years	4%	
20	Corrections Officers	Hired Into the County on or after 6/1/2013	15 years	Yes	60/15, 25 & out	2.4%(26 yrs) / 1%	65% of FAC	3 years	4%	
26	Corrections Officers	Hired before 6/1/2013	8 years	Yes*	60/8, 25 & out	2.4%(26 yrs) / 1%	66% of FAC	3 years	4%	
		Hired Into the County on or after 6/1/2013	15 years	No	60/15, 25 & out	2.4%(26 yrs) / 1%	66% of FAC	3 years	4%	

\* Must be vested on 12/31/2012, otherwise not eligible for DROP.

# BENEFIT PROVISION SUMMARY AS OF DECEMBER 31, 2014 FOR ROAD COMMISSION EMPLOYEES

Division Code	Division Name	Benefit Tier	Service Needed to Vest	DROP Eligible?	Retirement Eligibility	Retirement Benefit		FAC Period	Member Contributions
					Eligibility (age/service)	Multiplier	Employer Maximum		
31	Road Commission Non Union	Hired on or before 7/31/2007 or vested by 1/29/2015	8 years	Yes*	60/8, Rule of 70 (min age 50)	2.4% / 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on or after 8/1/2007 and before 6/1/2013	8 years	No	55/25, 60/8	2.20%	66% of FAC	5 years	2.5%
		Hired on or after 6/1/2013 and before 1/1/2016	15 years	No	55/25, 60/15	2.20%	66% of FAC	5 years	2.5%
32	Road Commission ADTECH	Hired on or before 7/31/2007 or vested by 1/29/2015	8 years	Yes*	60/8, Rule of 70 (min age 50)	2.4% / 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on or after 8/1/2007 and before 12/17/2013	8 years	Yes*	55/25, 60/8	2.20%	66% of FAC	5 years	2.5%
		Hired on or after 12/17/2013 and before 1/1/2016	15 years	No	55/25, 60/15	2.20%	66% of FAC	5 years	2.5%
33	Road Commission AFSCME Local 893	Hired on or before 7/31/2007 or vested by 1/29/2015	8 years	Yes*	60/8, Rule of 70 (min age 50)	2.4% / 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on or after 8/1/2007 and before 6/1/2013	8 years	Yes*	55/25, 65/8	2.20%	66% of FAC	5 years	2.5%
		Hired on or after 6/1/2013 and before 1/1/2016	15 years	No	55/25, 65/15	2.20%	66% of FAC	5 years	2.5%

\* Must be vested on 12/31/2012, otherwise not eligible for DROP.

## BENEFIT PROVISION SUMMARY AS OF DECEMBER 31, 2014 FOR MARTHA T. BERRY EMPLOYEES

Division Code	Division Name	Benefit Tier	Service Needed to Vest	DROP Eligible?	Retirement Eligibility	Retirement Benefit		FAC Period	Member Contributions
					Eligibility (age/service)	Multiplier	Employer Maximum		
4	MNA (RNs at MTB)	Hired before 1/1/2012	8 years	Yes*	55/25, 60/8	2.20%	66% of FAC	5 years	2.5%
		Hired on or after 1/1/2012	15 years	No	55/25, 60/15	2.20%	66% of FAC	5 years	2.5%
5	Service Employees International Union (LPNs at MTB)	Hired before 1/1/2012	8 years	Yes*	55/25, 60/8	2.20%	66% of FAC	5 years	2.5%
		Hired on or after 1/1/2012	15 years	No	55/25, 60/15	2.20%	66% of FAC	5 years	2.5%
14	AFSCME 411 MTB	Hired on or before 12/31/2001 or vested by 6/15/2009	8 years	Yes*	60/8, Rule of 70 (min age 50)	2.4% / 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8	2.20%	66% of FAC	5 years	2.5%
		Hired on or after 1/1/2012	15 years	No	55/25, 60/15	2.20%	66% of FAC	5 years	2.5%
40	MTB Non Union Employees	Hired on or before 12/31/2001 or vested by 2/26/2009	8 years	No	60/8, Rule of 70 (min age 50)	2.4% / 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	No	55/25, 60/8	2.20%	66% of FAC	5 years	2.5%
		Hired on or after 1/1/2012	15 years	No	55/25, 60/15	2.20%	66% of FAC	5 years	2.5%
42	MTB UAW Supervisors	Hired on or before 12/31/2001 or vested by 6/26/2009	8 years	Yes*	60/8, Rule of 70 (min age 50)	2.4% / 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8	2.20%	66% of FAC	5 years	2.5%
		Hired on or after 1/1/2012	15 years	No	55/25, 60/15	2.20%	66% of FAC	5 years	2.5%

\* Must be vested on 12/31/2012, otherwise not eligible for DROP.