

Macomb County Employees Retirement System

Actuarial Valuation as of December 31, 2015

March 2017

Larry Langer
*Principal and
Consulting Actuary*

March 2017

Conduent
123 North Wacker Drive
Suite 1000
Chicago, IL 60606

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

larry.langer@conduent.com
tel 312.846.3669
fax 312.846.3502

Ladies and Gentlemen:

Macomb County retained Conduent HR Services (Conduent), formerly Buck Consultants at Xerox, to complete this actuarial valuation of the Macomb County Employees Retirement System. This report summarizes the actuarial valuation results of Macomb County Employees Retirement System as of December 31, 2015.

Purpose of This Report

Conduent has prepared this report for Macomb County for use in review of the operation of the plan, including determining contributions to be made to the plan, and as a source of information for the financial statements of the plan. An actuarial valuation is performed on the retirement plan annually as of the beginning of the fiscal year. The main purposes of the actuarial valuation detailed in this report are:

1. To determine if the Commission's funding policy for the Retirement Plan is being met considering current assets and the current employer and member contribution rates; or determine the employer contribution necessary to meet the Commission's funding policy for the Plan;
2. To disclose the funding assets and liability measures as of the valuation date;
3. To review the current funded status of the Plan;
4. To compare actual and expected experience under the Plan during the last fiscal year;
5. And to report trends in contributions, assets, liabilities, and funded status over the last several years.

This actuarial valuation provides a "snapshot" of the funded position of the Retirement Plan based on the plan provisions, membership, assets, and actuarial assumptions as of the valuation date. Actuarial projections are also performed to provide a long-term view of the expected future funding status and contribution patterns.

Use of this report for any other purpose may not be appropriate and may result in mistaken conclusions due to failure to understand applicable assumptions, methodologies, or inapplicability of the report for that purpose. Conduent will not accept any liability for any such statement made without prior review by Conduent.

Future actuarial measurements may differ significantly from current measurements due to plan experience differing from that anticipated by the economic and demographic assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements, and changes in plan provisions or applicable law. Because of limited scope, Conduent performed no analysis of the potential range of such future differences.

Data Used

The actuarial valuation is based on unaudited financial and member data provided by the staff of the Retirement System and summarized in this report. The benefits considered are those delineated in the plan as amended and restated effective December 31, 2015. The actuary did not verify the data submitted, but did perform tests for consistency and reasonableness.

Assumptions and Methods

All costs, liabilities and other factors under the Plan were determined in accordance with generally accepted actuarial principles and procedures. An actuarial cost method is used to measure the actuarial liabilities which we believe is reasonable. Conduent is solely responsible for the actuarial data and actuarial results presented in this report. This report fully and fairly discloses the actuarial position of the Plan.

In our opinion, the actuarial assumptions used are reasonable, taking into account the experience of the Plan and reasonable long-term expectations, and represent our best estimate of the anticipated long-term experience under the Plan. The actuary performs an analysis of Plan experience periodically and recommends changes if, in the opinion of the actuary, assumption changes are needed to more accurately reflect expected future experience.

Actuarial Certification

The assumptions and methods used to determine the Actuarially Determined Contribution (ADC) of the Macomb County Employees Retirement System as outlined in this report and all supporting schedules meet the parameters of the guidance from GASB for financial disclosure requirements. Based on member data and asset information provided by the Executive Director and staff of the Retirement System, we have prepared the Schedule of Funding Progress and Schedule of Employer Contributions that are included in the Financial Section of the Comprehensive Annual Financial Report.

This report contains many historical schedules. Conduent began performing these valuations beginning with the December 31, 2015 Annual Actuarial Valuation. Results prior to this date were replicated from the prior actuary and are included without audit or opinion.

Where presented, references to “funded ratio” and “unfunded accrued liability” typically are measured on an actuarial value of assets basis. It should be noted that the same measurements using market value of assets would result in different funded ratios and unfunded accrued liabilities. Moreover, the funded ratio presented is appropriate for evaluating the need and level of future contributions but makes no assessment regarding the funded status of the plan if the plan were to settle (i.e. purchase annuities) for a portion or all of its liabilities.

The Retirement Commission

March 2017

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The undersigned is an Enrolled Actuary, an Associate of the Society of Actuaries and Members of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained in this report. This report has been prepared in accordance with all Applicable Actuarial Standards of Practice. We are available to answer any questions on the material contained in the report, or to provide explanations or further details as may be appropriate.

Respectfully submitted,

Conduent Human Resource Services



Larry Langer, ASA, MAAA, EA
Principal, Retirement Consulting
Conduent Human Resource Services

LL/em

cc: James Blydenburgh (Conduent)

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Summary of Results

Overview

The Macomb County Employees Retirement System provides pension and ancillary benefit payments to the terminated and retired employees of Macomb County, Michigan. A Retirement Commission comprised of employer, employee, and appointed representatives is responsible for administering the Plan and making investment decisions. This report presents the results of the actuarial valuation of the Employees Retirement System as of December 31, 2015.

Membership

Actives

As of December 31, 2015, there were 2,223 employees in active service covered under the provisions of the Plan not participating in DROP. The significant age, service, and salary information for these employees is summarized below, along with comparative figures from the last actuarial valuation one year earlier.

	December 31, 2015	December 31, 2014
Active participants		
Number	2,223	2,134
Average age	44.2 years	44.2 years
Average service	9.3 years	9.9 years
Total annual valuation salary	\$ 110,557,514	\$ 110,159,044
Average annual salary	\$ 49,733	\$ 51,621

The number of active members increased by 4.2% from the previous valuation date. The average age of the active remained the same, and the average service decreased by 0.6 years. The total annual valuation salary increased by 0.4%. The average salary decreased by 3.8% from the previous valuation. There were 1,874 active members who were also reported active in the December 31, 2014 actuarial valuation. The total salary for this group increased by 0.4%, which was lower than the 7.0% increase we expected for the group.

Distributions of active members by age, service, and salary are given in Section 3.2. The salaries shown for active members are the actual annualized year salaries reported.

A schedule of active member data and reconciliation of the active membership from the previous year is shown in Sections 3.3 and 3.4.

Inactives

In addition to the active members, there were 652 inactive vested members who did not elect to receive their accumulated contributions when they left covered employment. The significant age and annual benefit information for these inactive members are summarized below with comparative figures from the last actuarial valuation one year earlier.

	December 31, 2015	December 31, 2014
Terminated vested participants		
Number	652	226
Average age	47.1 years	51.2 years
Average annual benefit payments	\$ 5,410	\$ 11,550

The number of inactive vested members increased by 288.5% from the previous valuation. The average age of the inactive vested members decreased by 4.1 years. The Average Monthly Pension Benefit for these members decreased by 53.2% from the previous valuation. The large change from last year is attributable to a large data cleanup by the employer.

Distributions of inactive members by age and pension benefit are given in Section 3.6.

Retirees and Beneficiaries

In addition to the active and inactive members, there were 2,184 retired members and 365 beneficiaries who are receiving monthly benefit payments on the valuation date. The significant age and annual benefit information for these members are summarized below with comparative figures from the last actuarial valuation performed one year earlier.

	December 31, 2015	December 31, 2014
Retired participants		
Number	2,184	2,248
Average Age	68.6 years	68.3 years
Average annual retirement benefits	\$ 21,083	\$ 20,417

	December 31, 2015	December 31, 2014
Survivors and beneficiaries of participants		
Number	365	243
Average Age	71.5 years	74.1 years
Average annual retirement benefits	\$ 13,496	\$ 13,422

The number of retired members and beneficiaries increased by 2.3% from the previous valuation date. The average age of the retired members and beneficiaries increased by 0.2 years. The total annual benefit payments for these members increased by 3.7% from the previous valuation date.

Distributions of retired members by age and form of payment are given in Section 3.6 and 3.7.

DROP Participants

In addition to the actives, inactives, and retirees, there were 338 DROP members who are receiving monthly benefit payments on the valuation date. The significant age and annual benefit information for these members are summarized below.

	December 31, 2015	December 31, 2014
DROP participants		
Number	338	294
Average Age	57.1 years	57.5 years
Average annual retirement benefits	\$ 28,014	\$ 27,970
Average pay	\$ 52,630	N/A

In our opinion, the membership data collected and prepared for use in this actuarial valuation meets the data quality standards required under Actuarial Standards of Practice No. 23.

Plan Assets

The Plan's assets are held in trust and invested for the exclusive benefit of plan members. The trust is funded by member and employer contributions, and pays benefits directly to eligible members in accordance with plan provisions. The assets are audited annually and are reported at fair value. On a fair value basis, the Plan has Net Assets Available for Benefits of \$885.5 million as of December 31, 2015. This includes a decrease of \$54.8 million over the Net Assets Available for Benefits of \$940.3 million as of December 31, 2014. During the prior year, the fair value of assets experienced an investment rate of return of -1.73%.

In order to reduce the volatility investment gains and losses can have on the Plan's actuarially required contribution and funded status, the Commission has adopted a five-year smoothing method to determine the actuarial value of assets used for funding purposes. This method recognizes gains and losses, i.e. the difference between actual investment return during the year and the expected return based on the valuation interest rate, on a level basis over a seven year period. In our opinion, this method complies with Actuarial Standards of Practice No. 44.

As of December 31, 2015, the assets available for benefits on an actuarial value basis were \$902.9 million. This includes an increase of \$20.4 million over the actuarial value of assets of \$882.6 million as of December 31, 2014. During the prior year, the actuarial value of assets experienced an actuarial rate of return of 6.86%.

A summary of the assets held for investment, a summary of changes in assets, and the development of the actuarial value of assets is shown in Section 2.

Actuarial Experience

Differences between the expected experience based on the actuarial assumptions and the actual experience create changes in the actuarial accrued liability, actuarial value of assets, and the unfunded actuarial accrued liability from one year to the next. These changes create an actuarial gain if the experience is favorable and an actuarial loss if the experience is unfavorable. The Plan experienced a total net actuarial loss of \$3.3 million during the prior year. This total net loss is about 0.4% of the plan's prior year actuarial accrued liability.

The demographic experience tracks actual changes in the plan's population compared to the assumptions for decrements such as mortality, turnover, and retirement, as well as pay increases. The Plan experienced a demographic gain of \$2.8 million during the year ending December 31, 2015. This gain decreased the unfunded actuarial accrued liability by \$2.8 million and increased the funded ratio by 0.3%.

Continued tracking of the demographic experience is warranted in order to confirm the appropriateness of the actuarial assumptions. Details of the demographic, economic, and other assumptions used to value the plan liabilities and normal cost can be found in Section 6. In our opinion, the economic assumptions comply with Actuarial Standards of Practice No. 27 and the demographic assumptions comply with Actuarial Standards of Practice No. 35.

On the asset side, the Plan experienced a loss on an actuarial value of assets basis. The actual rate of return on the actuarial value of plan assets for the year ending December 31, 2015 was approximately 6.86% compared to the assumption of 7.50%, resulting in an asset loss of \$6.1 million. This loss increased the unfunded actuarial accrued liability by \$6.1 million and decreased the funded ratio by 0.6%.

The rate of return on the fair value of assets for the year ending December 31, 2015 was lower than the assumed rate of 7.50%. The actuarial value of the assets recognizes only 1/5 of the 2015 loss on fair value, delaying the recognition of the remaining 4/5 over the next four years. Moreover, the actuarial value of assets also recognizes deferred portions of prior years' gains and losses on fair value. It should be noted that the plan's assumed asset return of 7.25% (changing from 7.50% for the December 31, 2015 valuation) is a long-term rate and short-term performance is not necessarily indicative of expected long-term future returns.

A summary of the actuarial gains and losses experienced during the prior year is shown in Section 1.3 and Section 1.4.

Actuarial Contributions

Effective with the December 31, 2013 annual valuation, the Retirement Commission established a closed 20 year amortization policy assuming 5% payment increases. For this valuation, the period is 18 years.

The normal cost represents the cost of the benefits that accrue during the year for active members under the Entry Age Actuarial Cost Method. It is determined as a level percentage of pay which, if paid from entry age to the assumed retirement age, assuming all the actuarial assumptions are exactly met by plan experience would accumulate to a fund sufficient to pay all benefits provided by the Plan. The expected member contributions are subtracted from this amount to determine the employer normal cost. The employer normal cost for 2016 has been determined to be \$13.4 million or 12.57% of pay.

The cost method also determines the actuarial accrued liability which represents the value of all accumulated past normal cost payments. This amount is compared to the actuarial value of assets to determine if the Plan is ahead or behind in funding as of the valuation date. The difference between the total actuarial accrued liability and the actuarial value of assets equals the amount of unfunded actuarial accrued liability or surplus (if negative) on the valuation date. This amount is amortized and added to the employer normal cost to determine the annual actuarially required employer contribution for the year.

The unfunded actuarial accrued liability as of December 31, 2015 is \$74.6 million. This represents an increase of \$46.1 million in the unfunded actuarial accrued liability from last year's amount of \$28.5 million.

The annual actuarially required employer contribution for 2017 is \$19.9 million, or 18.6% of pay. This represents a decrease of \$1.0 million in the employer contribution amount of \$20.9 million for 2016, or a decrease of 0.3% of pay from last year's employer contribution rate of 18.9%.

The actuarial liabilities and development of the annual actuarial employer contribution is shown in Sections 1.1 and 1.2.

In our opinion, the measurement of the benefit obligations and determination of the actuarial cost of the Plan is performed in compliance with Actuarial Standards of Practice No. 4.

Funded Status

The funded status is a measure of the progress that has been made in funding the plan as of the valuation date. It is determined as a ratio of the actuarial value of assets divided by the total actuarial accrued liability on the valuation date. A ratio of over 100% represents a plan that is ahead in funding, and a ratio of less than 100% represents a plan that is behind in funding on the valuation date.

As of December 31, 2015 the funded ratio of the Plan is 92.4%. This represents a decrease of 4.5% from last year's funded ratio of 96.9% as of December 31, 2014.

A history of the unfunded actuarial accrued liability and the funded ratio is shown in Section 1.6.

Changes in Plan Provisions

There have been no changes in benefits or other plan provisions considered in this actuarial valuation since the last valuation performed as of December 31, 2014 other than the closing of the Retirement System to new members as of December 31, 2015 and a \$1,000 termination benefit.

Changes in Actuarial Assumptions, Methods, or Procedures

The December 31, 2015 annual actuarial valuation is the first performed by Conduent. As part of the transition from the prior actuary, we replicated the results of the December 31, 2014 annual actuarial valuation. As expected we were not able to match results exactly, likely due to differences in software used. Our actuarial accrued liability was within 1.5% of that developed by the prior actuary, which, in our opinion, is well within reason for transition. These results were reviewed with the Retirement Commission in its March 9, 2017 Retirement Commission meeting.

As part of the transition process, Conduent recommended changes to the assumptions used effective with the December 31, 2015 annual actuarial valuation. The Retirement Commission adopted these recommendations at its March 9, 2017 meeting. The changes were based upon an analysis of recent experience and future expectations regarding, administrative expense, salary increases and expected returns, as well as knowledge obtained from recent published mortality tables and anticipated future improvements published by the Society of Actuaries. The changes include:

- The mortality table was updated from RP2000 projected to 2015 to RP2014 Blue Collar for Road Commission and Sheriffs and RP 2014 for all others
- The MP2016 mortality improvement scale was added for all. The prior actuarial valuation did not include any mortality improvement.
- Base pay projections and inflation was reduced from 5.00% to 3.00%
- Investment return was reduced from 7.50% to 7.25%
- The administrative expense load was changed from 0.10% of payroll to the previous year's administrative expense increased by the inflation assumption and allocated by employer payroll.

As noted in Section 1.3, the total change in the accrued liability associated with the assumption changes was an increase of approximately \$32.1 Million.

Before the December 31, 2016 actuarial valuation is finalized, Conduent will provide recommendations to the Retirement Commission on potential changes in funding policy.

Comparative Summary of Key Actuarial Valuation Results

Actuarial Valuation as of December 31, 2015 December 31, 2014

Summary of Member Data

Number of Members Included in the Valuation

Active Members	2,223	2,134
Inactive Members	652	226
Retirees and beneficiaries	2,549	2,785
DROP Participants	<u>338</u>	<u>N/A</u>
Total	5,762	5,145

Annual Payroll

Average (actual)	47,348	51,621
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Annual Benefit Payments

Inactive Members (Average)	5,410	11,550
Retirees and beneficiaries (Average)	23,054	19,735
DROP Participants (Average)	28,014	27,970

Summary of Assets

Fair Value

Rate of Return	(1.73)%	7.22%
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Actuarial Value

Rate of Return	6.86%	9.47%
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Summary of Liabilities

Total Actuarial Accrued Liability	977,566,461	911,095,833
Actuarial Value of Assets	902,930,628	882,565,132
Unfunded Actuarial Accrued Liability	74,635,833	28,530,701
Funded Ratio	92.37%	96.87%
Maturity Ratio	58.14%	70.26%

Section 1: Actuarial Funding Results

Section 1.1 - Actuarial Liabilities and Normal Cost

Actuarial Liabilities based on December 31, 2015 Valuation	General County	Sheriff's Department	Road Commission	Martha T. Berry	Totals
1. Present Value of Projected Benefits					
Active Members					
Retirement Benefits	188,308,320	117,490,965	55,729,912	11,230,222	372,759,419
Withdrawal Benefits	11,636,510	1,629,912	692,507	1,060,472	15,019,401
Disability Benefits	16,790,721	7,847,411	2,939,507	1,765,854	29,343,493
Death Benefits	2,772,163	2,237,188	833,214	258,474	6,101,039
Return on Contributions	<u>1,176,821</u>	<u>177,748</u>	<u>119,720</u>	<u>156,448</u>	<u>1,630,737</u>
Total	220,684,535	129,383,224	60,314,860	14,471,470	424,854,089
2. Vested Inactive Members with Deferred Benefits	17,745,377	4,071,655	368,504	1,350,899	23,536,435
3. Non-Vested Inactive Members with Deferred Benefits	445,618	18,985	0	56,636	521,239
4. Retired Members and Beneficiaries Receiving Benefits	322,506,514	120,878,488	74,924,932	25,969,461	544,279,395
5. DROP Participants Receiving Benefits	<u>78,168,357</u>	<u>47,352,007</u>	<u>13,164,941</u>	<u>2,386,931</u>	<u>141,072,236</u>
6. Total Present Value of Projected Benefits (1 + 2 + 3 + 4 + 5)	639,550,401	301,704,359	148,773,237	44,235,397	1,134,263,394
7. Present Value of Future Normal Costs	<u>78,546,381</u>	<u>52,737,236</u>	<u>17,091,796</u>	<u>8,321,520</u>	<u>159,696,933</u>
8. Total Actuarial Accrued Liability (6. – 7.)	561,004,020	248,967,123	131,681,441	35,913,877	977,566,461

Normal Cost for Fiscal year Beginning December 31, 2015	General County	Sheriff's Department	Road Commission	Martha T. Berry	Totals
1. Normal Cost	9,330,140	4,896,781	2,167,812	800,282	17,195,015
2. Expected Member Contribution	<u>(1,943,434)</u>	<u>(1,188,509)</u>	<u>(459,528)</u>	<u>(166,970)</u>	<u>(3,758,441)</u>
3. Employer Normal Cost	7,386,706	3,708,272	1,708,284	633,312	13,436,574

Section 1.2 – Actuarial Contributions

	General County	Sheriff's Department	Road Commission	Martha T. Berry	Totals
1. Total Actuarial Accrued Liability					
a. Active Members					
i. Retirement Benefits	127,135,140	71,257,529	40,931,901	5,071,608	244,396,178
ii. Withdrawal Benefits	5,674,027	645,976	327,418	406,189	7,053,610
iii. Death Benefits	1,426,432	1,110,529	456,881	89,046	3,082,888
iv. Disability Benefits	7,921,261	3,635,315	1,534,132	581,333	13,672,041
v. Return on Employee Contributions	<u>(18,706)</u>	<u>(3,361)</u>	<u>(27,268)</u>	<u>1,774</u>	<u>(47,561)</u>
vi. Total	142,138,154	76,645,988	43,223,064	6,149,950	268,157,156
b. Inactive Members with Deferred Benefits	18,190,995	4,090,640	368,504	1,407,535	24,057,674
c. Retired Members and Beneficiaries Receiving Benefits	322,506,514	120,878,488	74,924,932	25,969,461	544,279,395
d. DROP Participants Receiving Benefits	<u>78,168,357</u>	<u>47,352,007</u>	<u>13,164,941</u>	<u>2,386,931</u>	<u>141,072,236</u>
e. Total (1.a.vi. + 1.b. + 1.c.)	561,004,020	248,967,123	131,681,441	35,913,877	977,566,461
2. Actuarial Value of Assets	521,864,679	235,587,948	107,801,706	37,676,295	902,930,628
3. Unfunded Actuarial Accrued Liability (UAAL) (1.e. -2.)	39,139,341	13,379,175	23,879,735	(1,762,418)	74,635,833
4. Funded Ratio (2. / 1.e.)	93.02%	94.63%	81.87%	104.91%	92.37%
5. Maturity Ratio [(1.b. + 1.c.) / 1.e]	60.73%	50.20%	57.18%	76.23%	58.14%
6. Employer Contribution for fiscal 2017					
Employer Normal Cost	9,330,140	4,896,781	2,167,812	800,282	17,195,015
Member Contribution	(1,943,434)	(1,188,509)	(459,528)	(166,970)	(3,758,441)
Administrative Expense	315,838	139,571	65,073	22,891	543,373
UAAL Contribution	2,617,795	894,853	1,597,172	(117,878)	4,991,942
Timing Adjustment	<u>516,017</u>	<u>237,135</u>	<u>168,526</u>	<u>26,916</u>	<u>948,594</u>
Total Employer Contribution Dollar	10,836,356	4,979,831	3,539,055	565,241	19,920,483
Total Employer Contribution (% of Pay)	17.63%	18.42%	28.56%	9.40%	18.63%
7. Discount Rate	7.25%	7.25%	7.25%	7.25%	
8. Amortization payments increase assumption	5.00%	5.00%	5.00%	5.00%	
9. Amortization period for 2017 contribution ¹	18	18	18	18	

¹ Closed 20-year period beginning with December 31, 2014 Valuation

Section 1.3 - Actuarial (Gain) / Loss (\$'s in 000's)

	General County	Sheriff's Department	Road Commission	Martha T. Berry	Totals
1. Total Actuarial Accrued Liability					
a. Actuarial Accrued Liability at December 31, 2014	527,312	235,608	126,601	33,601	923,122
b. Normal Cost at December 31, 2014*	11,077	5,518	2,605	883	20,083
c. Interest on a. + b. to End of Year	40,379	18,084	9,690	2,586	70,739
d. Benefit Payments and Refund of Contributions with Interest to End of Year	40,551	13,543	8,640	2,914	65,648
e. Effect of Assumption Changes	<u>22,640</u>	<u>4,657</u>	<u>3,245</u>	<u>1,509</u>	<u>32,051</u>
f. Expected Actuarial Accrued Liability (a. + b. + c. – d. + e.)	560,857	250,324	133,501	35,665	980,347
2. Actuarial Accrued Liability at December 31, 2015	<u>561,004</u>	<u>248,967</u>	<u>131,681</u>	<u>35,914</u>	<u>977,566</u>
3. Liability (Gain) / Loss (2. – 1.f.)	147	(1,357)	(1,820)	249	(2,781)
4. Expected Actuarial Value of Assets					
a. Actuarial Value of Assets at December 31, 2014	512,995	226,696	105,694	37,180	882,565
b. Interest on a. to End of Year	38,475	17,002	7,927	2,789	66,193
c. Contribution Made	13,938	6,749	3,418	844	24,949
d. Interest on c. to End of Year	523	253	128	32	936
e. Benefit Payments and Refund of Contributions with Interest to End of Year	<u>40,551</u>	<u>13,543</u>	<u>8,640</u>	<u>2,914</u>	<u>65,648</u>
f. Expected Actuarial Value of Assets at December 31, 2015 (a. + b. + c. + d. – e.)	525,380	237,157	108,527	37,931	908,995
5. Actuarial Value of Assets as of December 31, 2015	<u>521,865</u>	<u>235,588</u>	<u>107,801</u>	<u>37,676</u>	<u>902,930</u>
6. Actuarial Asset (Gain) / Loss (4.f. -5.)	3,515	1,569	726	255	6,065
7. Actuarial (Gain) / Loss (3. + 6.)	3,662	212	(1,094)	504	3,284

* Duplicated using % of payroll provided by prior actuary.

Section 1.4 - Analysis of Financial Experience

Analysis of Actuarial (Gains) and Losses Resulting from Differences Between Assumed Experience and Actual Experience (\$'s in 000's)

Type of (Gain) or Loss	Year End December 31, 2015	Last Year's AAL
COLA Experience	0	0.00%
Salary Experience	(14,754)	(1.60)%
Investment Experience	6,065	0.66%
Retirement Experience	(1,119)	(0.12)%
Turnover Experience	(674)	(0.07)%
Deaths among active Experience	(655)	(0.07)%
Disability retirements Experience	(192)	(0.02)%
Change in service accrual rate	0	0.00%
Inactive mortality Experience	2,815	0.30%
Return to Work	(981)	(0.11)%
New Entrants	3,268	0.35%
Contribution Shortfall	0	0.00%
Other	<u>9,511</u>	<u>1.03%</u>
(Gain) or Loss During Year From Experience	3,284	0.36%

Section 1.5 - Actuarial Balance Sheet

Financial Resources		December 31, 2015
1. Actuarial Value of Assets		902,930,628
2. Present Value of Future Contributions		
a. Expected Member Contributions		36,247,171
b. Employer Normal Cost		120,449,762
c. State Appropriations		0
d. Total		156,696,933
3. Unfunded Actuarial Accrued Liability/(Reserve)		74,635,833
4. Total Assets [1. + 2.(d) + 3.]		1,134,263,394
Benefit Obligations		December 31, 2015
1. Present Value of Future Benefits		
a. Active members		424,854,089
b. Inactive members		24,057,674
c. Retirees, disabilities and beneficiaries		544,279,395
d. DROP members		<u>141,072,236</u>
e. Total		1,134,263,394

Section 1.6 - History of UAAL and Funded Ratio (\$'s in 000's)

Valuation Date	Actuarial Value of Assets (AVA) (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded Actuarial Accrued Liability (UAAL) (b-a)	Funded Ratio (AVA as a % of AAL) (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll (b-a)/(c)
December 31, 2006	781,450	721,658	(59,793)	108.3%	128,821	(46.4)%
December 31, 2007	847,305	772,650	(74,655)	109.7%	126,696	(58.9)%
December 31, 2008	855,266	805,888	(49,377)	106.1%	121,823	(40.5)%
December 31, 2009	866,357	814,564	(51,793)	106.4%	116,523	(44.4)%
December 31, 2010	862,916	837,168	(25,748)	103.1%	110,795	(23.2)%
December 31, 2011	828,692	854,324	25,632	97.0%	108,900	23.5%
December 31, 2012	795,606	867,219	71,613	91.7%	105,392	67.9%
December 31, 2013	837,653	884,042	46,389	94.8%	102,253	45.4%
December 31, 2014	882,565	911,096	28,531	96.9%	110,159	25.9%
December 31, 2015	902,931	977,566	74,636	92.4%	110,558	67.5%

Section 1.7 - Solvency Test (\$'s in 000's)

Valuation Date	Aggregate Accrued Liability For				Portion of Accrued Liabilities Covered by Assets		
	(1)	(2)	(3)	Valuation Assets	(1)	(2)	(3)
	Active Member Contributions	Inactive Members	Active Members (Employer- Financed Portion)				
December 31, 2011	3,736	573,550	277,038	828,692	100.00%	100.00%	90.75%
December 31, 2012	3,569	589,270	274,380	795,606	100.00%	100.00%	73.90%
December 31, 2013	3,720	627,384	252,938	937,653	100.00%	100.00%	81.66%
December 31, 2014	3,597	640,125	267,374	882,565	100.00%	100.00%	89.33%
December 31, 2015	3,668	709,409	264,489	902,931	100.00%	100.00%	71.78%

Section 2: Plan Assets

Section 2.1 - Summary of Fair Value of Assets

Asset Category	Fair Value as of Dec. 31, 2015		Fair Value as of Dec. 31, 2014	
	Amount	%	Amount	%
1. Cash and Short-Term Investments				
a. Cash and cash equivalents	36,050,277	4.05%	17,253,542	1.83%
b. Other short-term	<u>1,945</u>	<u>0.00%</u>	<u>0</u>	<u>0.00%</u>
c. Total	36,052,222	4.05%	17,253,542	1.83%
2. Investments at Fair Value				
a. U.S. Treasury and agencies	0	0.00%	0	0.00%
b. Fixed Income	61,890,245	6.95%	64,099,088	6.82%
c. Domestic Stocks and Equity	551,380,141	61.88%	605,436,434	64.39%
d. International Equity	0	0.00%	0	0.00%
e. Real Estate	0	0.00%	0	0.00%
f. Hedge Funds	<u>241,730,630</u>	<u>27.13%</u>	<u>253,467,096</u>	<u>26.96%</u>
g. Total	855,001,016	95.96%	923,002,618	98.17%
3. Other Assets	0	0.00%	0	0.00%
4. Total Assets (1.c. + 2.g. + 3.)	891,053,238	100.00%	940,256,160	100.00%
5. Receivables ¹				
a. Interest and Dividends	456,316			
b. Investments Sold	995,094			
c. Other Receivables	<u>0</u>			
d. Total	1,451,410			
6. Payables ¹				
a. Payable for Investments Purchased	0			
b. Securities Lending Obligation in Excess of Collateral	0			
c. Accounts Payable and Accrued Liabilities	<u>7,052,145</u>			
d. Total	7,052,145			
7. Net Assets for Pension [4. + 5.d. – 6.d.]	885,452,503		940,256,160	

¹ Prior year receivables and payables were included in the cash and cash equivalents category in the prior actuary report.

Section 2.2 - Changes in Fair Value of Assets

Transactions	December 31, 2015	December 31, 2014
Additions		
1. Contributions		
a. Contributions from Employers	21,281,612	22,152,820
b. Contributions from Plan Members	<u>3,667,705</u>	<u>3,597,063</u>
c. Total	24,949,317	25,749,883
2. Net Investment Income		
a. Interest and Dividends	6,834,437	9,913,675
b. Net Appreciation(Depreciation)	(16,974,183)	60,282,265
c. Rental Income	0	0
d. Net Securities Lending Income	0	0
e. Securities Lending Unrealized Gain/(Loss)	0	0
f. Miscellaneous	<u>0</u>	<u>0</u>
g. Total	(10,139,746)	70,195,940
h. Investment Expense	<u>5,809,052</u>	<u>5,782,515</u>
i. Net Investment Income	(15,948,798)	64,413,425
3. Total Additions	9,000,519	90,163,308
Deductions		
4. Total Additions		
a. Retirement Benefits	62,808,671	57,744,672
b. Refund of Contributions	467,958	328,355
c. Death	0	0
d. Supplemental Payment	0	0
e. Administrative Expenses	<u>527,547</u>	<u>523,640</u>
5. Total Deductions	63,804,176	58,596,667
6. Net Increase	(54,803,657)	31,566,641
7. Net Assets Held in Trust for Pension Benefits		
a. Beginning of Year	940,256,160	908,689,519
b. End of Year	885,452,503	940,256,160

Section 2.3 - Actuarial Value of Assets

Development of Actuarial Value of Assets	Amount			
1. Actuarial Value of Assets as of December 31, 2014	882,565,132			
2. Unrecognized Return as of December 31, 2014	<u>57,691,028</u>			
3. Fair Value of Assets as of December 31, 2014 (1. + 2.)	940,256,160			
4. Contribution				
a. Member (includes purchased service)	3,667,705			
b. Employer	21,281,612			
c. State appropriations	<u>0</u>			
d. Total	24,949,317			
5. Distributions				
a. Benefit payments	62,808,671			
b. Refund of contributions	467,958			
c. Administrative Expenses	<u>527,547</u>			
d. Total	63,804,176			
6. Expected Return at 7.50% on				
a. Item 1	66,192,385			
b. Item 4 (d.)	935,599			
c. Item 5 (d.)	2,392,657			
d. Total [a. + b. - c.]	64,735,327			
7. Actual Return on Fair Value for Fiscal Year	(15,948,798)			
8. Return on be Spread for Fiscal year [(7. – 6(b))]	(80,684,125)			
9. Total Fair Value of Assets as of December 31, 2015	885,452,503			
10. Return to be Spread				
	Fiscal Year	Return to be Spread	Unrecognized Percent	Unrecognized Return
	2015	(80,684,125)	80%	(64,547,300)
	2014	2,821,240	60%	1,692,744
	2013	102,328,360	40%	40,931,344
	2012	22,225,435	20%	4,445,087
	2011	(74,265,775)	0%	0
		Total		(17,478,125)
11. Preliminary Actuarial Value of Assets (9. – 10.)	902,930,628			
12. Corridor				
a. Lower Limit: 80% * 9.	708,362,003			
b. Upper Limit: 120% * 9.	1,062,543,003			
c. Adjustment to 11. to fit limits	0			
13. Actuarial Value of Assets (11. + 12.c.)	902,930,628			
14. Recognized Rate of Return for the Year on Actuarial Value of Assets ¹	6.86%			
15. Rate of Return for the Year on Market Value of Assets (2. X 7. / [3. + 9. – 7.]	(1.73)%			

¹ The rate of return is based on the change in the actuarial value of assets from last year to this year. The rate of return is calculated assuming contributions and disbursements occur halfway through the year.

Section 2.3 - Actuarial Value of Assets (cont'd)

Allocation of Retirement Systems Assets

	General County	Sheriff's Department	Road Commission	Martha T. Berry	Total
1. Valuation assets at start of year	512,995,018	226,696,095	105,693,839	37,180,180	882,565,132
2. Employee Contributions	1,998,859	1,033,281	461,755	173,810	3,667,705
3. Employer contributions	11,939,393	5,715,220	2,956,376	670,623	21,281,612
4. Benefits paid	38,831,958	13,034,492	8,251,490	2,690,731	62,808,671
5. Refund of contributions	253,660	19,436	76,700	118,162	467,958
6. Administrative expense allocated on BOT asset value	<u>306,639</u>	<u>135,506</u>	<u>63,178</u>	<u>22,224</u>	<u>527,547</u>
7. Average valuation assets [1. + 0.5*(2. + 3. - 4. - 5. - 6.)]	500,268,016	223,475,629	103,207,221	36,186,838	863,137,704
8. Investment income allocated on average valuation assets	34,323,666	15,332,786	7,081,104	2,482,799	59,220,355
9. Transfer in	0	0	0	0	0
Transfer out	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Net transfer of assets	0	0	0	0	0
10. Valuation assets at end of year [1. + 2. +3. - 4. - 5. - 6. + 8. + 9.]	521,864,679	235,587,948	107,801,706	37,676,295	902,930,628
11. Total Revenues [2. +3. + 8.]	48,261,918	22,081,287	10,499,235	3,327,232	84,169,672
Percentage of revenue attributable to:					
Employee contributions	4.1%	4.7%	4.4%	5.2%	4.4%
Employer contributions	24.7%	25.9%	28.2%	20.2%	25.3%
Investment income	71.0%	69.4%	67.5%	74.6%	70.4%
12. Total Expenditures [4. + 5. + 6.]	39,392,257	13,189,434	8,391,368	2,831,117	63,804,176
Percentage of expenditures attributable to:					
Benefits paid	98.6%	98.8%	98.3%	95.0%	98.4%
Refund of contributions	0.6%	0.1%	0.9%	4.2%	0.7%
Investment income	0.8%	1.0%	0.8%	0.8%	0.8%

Section 2.4 - Historical Asset Rate of Return

Year Ending December 31	Actuarial Value of Assets	Market Value of Assets
2010	3.30%	12.90%
2011	0.15%	(1.42)%
2012	0.11%	11.51%
2013	10.55%	20.90%
2014	9.47%	7.22%
2015	6.86%	(1.73)%

Section 2.5 - Forecast of Expected Benefit Payments (\$000)

Year Ending December 31	Active Employees	Retired , Disabled, Beneficiary, and Deferred Vested Participants	DROP Participants	Grand Total
2016	7,449	51,599	11,402	70,450
2017	4,680	50,643	8,731	64,054
2018	6,410	50,123	12,588	69,121
2019	7,970	49,681	18,207	75,858
2020	10,791	49,090	17,571	77,452
2021	14,624	48,472	14,896	77,993
2022	17,570	47,845	9,516	74,931
2023	20,540	47,368	9,235	77,142
2024	24,047	46,704	9,197	79,947
2025	27,057	45,980	9,160	82,197
2026	29,585	45,231	9,151	83,966
2027	31,569	44,480	9,148	85,197
2028	35,443	43,499	9,098	88,040
2029	39,268	42,527	9,019	90,814
2030	42,068	41,489	8,980	92,537
2031	44,931	40,684	8,901	94,515
2032	47,428	39,584	8,823	95,835
2033	49,768	38,394	8,737	96,899
2034	51,934	37,159	8,643	97,735
2035	53,435	35,879	8,539	97,853
2036	54,015	34,527	8,425	96,967
2037	55,632	33,098	8,299	97,029
2038	57,035	31,636	8,162	96,832
2039	58,969	30,154	8,010	97,133
2040	61,171	28,620	7,841	97,633
2041	62,990	27,094	7,659	97,743
2042	64,714	25,515	7,461	97,690
2043	65,568	23,929	7,244	96,741
2044	65,491	22,367	7,010	94,868
2045	65,301	20,797	6,758	92,855
2046	64,817	19,249	6,487	90,553

Section 3: Member Data

Section 3.1 - Summary of Members Included

As of December 31	General County		Sheriff's Department		Road Commission		Martha T. Berry		Total	
	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014
Active Members										
1. Number	1,448	1,392	408	380	199	214	168	148	2,223	2,134
2. Average Age	45.8	45.6	39.0	39.3	43.8	44.8	42.7	42.3	44.2	44.2
3. Average Credited Service	8.7	9.2	11.0	11.8	13.7	15.1	5.1	6.1	9.3	10.0
4. Average Annual Earning	43,215	48,443	61,039	65,307	59,889	58,077	34,867	37,034	47,348	51,621
Retirees, Disableds and Beneficiaries										
1. Number	1,758	1,919	293	341	307	324	191	201	2,549	2,785
2. Average Age	69.7	68.2	64.6	62.9	69.1	68.8	69.0	67.8	69.0	67.7
3. Average Monthly Pension Benefit	1,688	1,495	3,807	3,168	2,188	1,915	1,132	1,058	1,950	1,717
DROP Participants										
1. Number	233	221	65	57	31	10	9	6	338	294
2. Average Age	58.3	58.4	53.2	52.9	56.9	61.2	57.5	58.4	57.1	57.5
3. Average Monthly Pension Benefit	1,873	1,888	3,961	4,124	2,637	2,320	1,498	1,615	2,334	2,331
Vested Terminations¹										
1. Number	475	179	51	18	3	13	123	16	652	226
2. Average Age	47.4	51.1	46.1	49.1	48.7	51.9	46.1	53.7	47.1	51.2
3. Average Monthly Pension Benefit	478	886	905	1,777	1,892	987	123	885	451	962
Total Number of Members	3,914	3,490	817	739	540	551	491	365	5,762	5,145

¹ Vested at time of termination, not refunded contributions or commenced benefit.

Section 3.2 - Age and Service Distribution of Active Members as of December 31, 2015 – Total

Attained Age		0-4	5-9	10-14	15-19	20-24	25-29	30-34	Over 34	Total
15-19	Number	0	0	0	0	0	0	0	0	0
	Total Salary	0	0	0	0	0	0	0	0	0
	Average Salary	0	0	0	0	0	0	0	0	0
20-24	Number	54	0	0	0	0	0	0	0	54
	Total Salary	1,718,446	0	0	0	0	0	0	0	1,718,446
	Average Salary	31,823	0	0	0	0	0	0	0	31,823
25-29	Number	145	12	0	0	0	0	0	0	157
	Total Salary	4,993,772	N/A	0	0	0	0	0	0	5,482,848
	Average Salary	34,440	N/A	0	0	0	0	0	0	34,923
30-34	Number	154	46	42	2	1	0	0	0	245
	Total Salary	5,754,883	2,216,071	2,430,284	N/A	N/A	0	0	0	10,569,867
	Average Salary	37,369	48,175	57,864	N/A	N/A	0	0	0	43,142
35-39	Number	107	53	107	38	0	0	0	0	305
	Total Salary	3,977,876	2,525,832	6,254,827	2,239,049	0	0	0	0	14,997,584
	Average Salary	37,176	47,657	58,456	58,922	0	0	0	0	49,172
40-44	Number	98	49	96	109	25	0	0	0	377
	Total Salary	3,712,209	2,317,664	5,416,389	6,735,718	1,577,544	0	0	0	19,759,524
	Average Salary	37,880	47,299	56,421	61,796	63,102	0	0	0	52,413
45-49	Number	103	51	105	91	71	27	1	0	449
	Total Salary	3,761,036	2,401,338	5,299,505	5,634,336	4,679,536	1,588,303	N/A	0	23,431,542
	Average Salary	36,515	47,085	50,471	61,916	65,909	58,826	N/A	0	52,186
50-54	Number	93	48	94	40	27	15	2	0	319
	Total Salary	3,581,348	2,168,730	4,642,401	2,067,952	1,754,820	N/A	N/A	0	15,314,766
	Average Salary	38,509	45,182	49,387	51,699	64,993	N/A	N/A	0	48,009
55-59	Number	58	31	75	27	9	1	0	0	201
	Total Salary	2,066,927	1,385,905	3,445,031	1,228,660	N/A	N/A	0	0	8,736,902
	Average Salary	35,637	44,707	45,934	45,506	N/A	N/A	0	0	43,467
60-64	Number	28	14	25	5	5	0	0	1	78
	Total Salary	1,236,502	N/A	1,288,807	N/A	N/A	0	0	N/A	3,784,584
	Average Salary	44,161	N/A	51,552	N/A	N/A	0	0	N/A	48,520
65-69	Number	3	7	5	5	2	2	1	0	25
	Total Salary	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	968,572
	Average Salary	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	38,743
70+	Number	2	2	2	6	1	0	0	0	13
	Total Salary	N/A	N/A	N/A	N/A	N/A	0	0	0	N/A
	Average Salary	N/A	N/A	N/A	N/A	N/A	0	0	0	N/A
Total	Number	845	313	551	332	141	45	4	1	2,223
	Total Salary	30,982,761	14,612,612	28,972,901	18,580,469	9,030,682	2,789,877	N/A	N/A	105,254,524
	Average Salary	36,666	46,686	52,582	57,525	64,047	61,997	N/A	N/A	47,348

Section 3.2 - Age and Service Distribution of Active Members as of December 31, 2015 - General County (continued)

Attained Age		0-4	5-9	10-14	15-19	20-24	25-29	30-34	Over 34	Total
15-19	Number	0	0	0	0	0	0	0	0	0
	Total Salary	0	0	0	0	0	0	0	0	0
	Average Salary	0	0	0	0	0	0	0	0	0
20-24	Number	17	0	0	0	0	0	0	0	17
	Total Salary	N/A	0	0	0	0	0	0	0	N/A
	Average Salary	N/A	0	0	0	0	0	0	0	N/A
25-29	Number	73	6	0	0	0	0	0	0	79
	Total Salary	2,078,078	N/A	0	0	0	0	0	0	2,228,057
	Average Salary	28,467	N/A	0	0	0	0	0	0	28,203
30-34	Number	100	28	13	0	1	0	0	0	142
	Total Salary	3,552,225	1,196,300	N/A	0	N/A	0	0	0	5,321,457
	Average Salary	35,522	42,725	N/A	0	N/A	0	0	0	37,475
35-39	Number	79	39	54	16	0	0	0	0	188
	Total Salary	2,881,643	1,872,442	2,818,881	N/A	0	0	0	0	8,289,710
	Average Salary	36,476	48,011	52,201	N/A	0	0	0	0	44,094
40-44	Number	75	37	53	55	8	0	0	0	228
	Total Salary	2,976,526	1,648,145	2,749,733	2,815,672	N/A	0	0	0	10,530,954
	Average Salary	39,687	44,544	51,882	51,194	N/A	0	0	0	46,188
45-49	Number	77	40	80	51	26	13	0	0	287
	Total Salary	2,909,601	1,786,723	3,880,318	2,869,345	1,517,600	N/A	0	0	13,664,606
	Average Salary	37,787	44,668	48,504	56,262	58,369	N/A	0	0	47,542
50-54	Number	66	45	67	33	11	10	2	0	234
	Total Salary	2,472,876	2,011,140	3,021,147	1,524,236	N/A	N/A	N/A	0	10,451,977
	Average Salary	37,468	44,692	45,092	46,189	N/A	N/A	N/A	0	44,667
55-59	Number	44	27	67	21	6	1	0	0	166
	Total Salary	1,578,209	1,187,575	2,926,928	830,140	N/A	N/A	0	0	6,956,747
	Average Salary	35,868	43,984	43,685	39,530	N/A	N/A	0	0	41,908
60-64	Number	26	10	24	5	4	0	0	1	70
	Total Salary	1,161,568	N/A	1,171,514	N/A	N/A	0	0	N/A	3,365,531
	Average Salary	44,676	N/A	48,813	N/A	N/A	0	0	N/A	48,079
65-69	Number	2	7	5	5	2	2	1	0	24
	Total Salary	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	948,004
	Average Salary	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	39,500
70+	Number	2	2	2	6	1	0	0	0	13
	Total Salary	N/A	N/A	N/A	N/A	N/A	0	0	0	N/A
	Average Salary	N/A	N/A	N/A	N/A	N/A	0	0	0	N/A
Total	Number	561	241	365	192	59	26	3	1	1,448
	Total Salary	20,117,969	10,791,981	17,298,592	9,300,780	3,340,281	1,507,646	N/A	N/A	62,574,982
	Average Salary	35,861	44,780	47,393	48,442	56,615	57,986	N/A	N/A	43,215

Section 3.2 - Age and Service Distribution of Active Members as of December 31, 2015 - Sheriff's Department (continued)

Attained Age		0-4	5-9	10-14	15-19	20-24	25-29	30-34	Over 34	Total
15-19	Number	0	0	0	0	0	0	0	0	0
	Total Salary	0	0	0	0	0	0	0	0	0
	Average Salary	0	0	0	0	0	0	0	0	0
20-24	Number	27	0	0	0	0	0	0	0	27
	Total Salary	1,041,406	0	0	0	0	0	0	0	1,041,406
	Average Salary	38,571	0	0	0	0	0	0	0	38,571
25-29	Number	54	4	0	0	0	0	0	0	58
	Total Salary	2,396,924	N/A	0	0	0	0	0	0	2,634,611
	Average Salary	44,387	N/A	0	0	0	0	0	0	45,424
30-34	Number	25	14	21	0	0	0	0	0	60
	Total Salary	1,104,212	N/A	1,457,155	0	0	0	0	0	3,427,785
	Average Salary	44,168	N/A	69,386	0	0	0	0	0	57,130
35-39	Number	5	4	36	13	0	0	0	0	58
	Total Salary	N/A	N/A	2,394,211	N/A	0	0	0	0	3,888,701
	Average Salary	N/A	N/A	66,506	N/A	0	0	0	0	67,047
40-44	Number	7	4	25	39	11	0	0	0	86
	Total Salary	N/A	N/A	1,597,191	2,930,514	N/A	0	0	0	5,845,257
	Average Salary	N/A	N/A	63,888	75,141	N/A	0	0	0	67,968
45-49	Number	5	5	13	24	26	0	0	0	73
	Total Salary	N/A	N/A	N/A	1,843,278	1,931,944	0	0	0	5,122,191
	Average Salary	N/A	N/A	N/A	76,803	74,306	0	0	0	70,167
50-54	Number	3	2	16	3	8	3	0	0	35
	Total Salary	N/A	N/A	N/A	N/A	N/A	N/A	0	0	2,292,002
	Average Salary	N/A	N/A	N/A	N/A	N/A	N/A	0	0	65,486
55-59	Number	1	1	4	2	2	0	0	0	10
	Total Salary	N/A	N/A	N/A	N/A	N/A	0	0	0	N/A
	Average Salary	N/A	N/A	N/A	N/A	N/A	0	0	0	N/A
60-64	Number	0	0	0	0	1	0	0	0	1
	Total Salary	0	0	0	0	N/A	0	0	0	N/A
	Average Salary	0	0	0	0	N/A	0	0	0	N/A
65-59	Number	0	0	0	0	0	0	0	0	0
	Total Salary	0	0	0	0	0	0	0	0	0
	Average Salary	0	0	0	0	0	0	0	0	0
70+	Number	0	0	0	0	0	0	0	0	0
	Total Salary	0	0	0	0	0	0	0	0	0
	Average Salary	0	0	0	0	0	0	0	0	0
Total	Number	127	34	115	81	48	3	0	0	408
	Total Salary	5,322,105	2,132,159	7,575,409	6,131,297	3,471,779	N/A	0	0	24,904,062
	Average Salary	41,906	62,711	65,873	75,695	72,329	N/A	0	0	61,039

Section 3.2 - Age and Service Distribution of Active Members as of December 31, 2015 - Road Commission (continued)

Attained Age		0-4	5-9	10-14	15-19	20-24	25-29	30-34	Over 34	Total
15-19	Number	0	0	0	0	0	0	0	0	0
	Total Salary	0	0	0	0	0	0	0	0	0
	Average Salary	0	0	0	0	0	0	0	0	0
20-24	Number	6	0	0	0	0	0	0	0	6
	Total Salary	N/A	0	0	0	0	0	0	0	N/A
	Average Salary	N/A	0	0	0	0	0	0	0	N/A
25-29	Number	4	1	0	0	0	0	0	0	5
	Total Salary	N/A	N/A	0	0	0	0	0	0	N/A
	Average Salary	N/A	N/A	0	0	0	0	0	0	N/A
30-34	Number	8	1	8	2	0	0	0	0	19
	Total Salary	N/A	N/A	N/A	N/A	0	0	0	0	N/A
	Average Salary	N/A	N/A	N/A	N/A	0	0	0	0	N/A
35-39	Number	6	1	14	9	0	0	0	0	30
	Total Salary	N/A	N/A	N/A	N/A	0	0	0	0	1,772,749
	Average Salary	N/A	N/A	N/A	N/A	0	0	0	0	59,092
40-44	Number	5	1	16	14	6	0	0	0	42
	Total Salary	N/A	N/A	N/A	N/A	N/A	0	0	0	2,666,833
	Average Salary	N/A	N/A	N/A	N/A	N/A	0	0	0	63,496
45-49	Number	6	0	5	12	16	14	1	0	54
	Total Salary	N/A	0	N/A	N/A	N/A	N/A	N/A	0	3,520,449
	Average Salary	N/A	0	N/A	N/A	N/A	N/A	N/A	0	65,193
50-54	Number	6	0	8	4	8	2	0	0	28
	Total Salary	N/A	0	N/A	N/A	N/A	N/A	0	0	1,787,630
	Average Salary	N/A	0	N/A	N/A	N/A	N/A	0	0	63,844
55-59	Number	3	2	4	4	1	0	0	0	14
	Total Salary	N/A	N/A	N/A	N/A	N/A	0	0	0	N/A
	Average Salary	N/A	N/A	N/A	N/A	N/A	0	0	0	N/A
60-64	Number	0	0	1	0	0	0	0	0	1
	Total Salary	0	0	N/A	0	0	0	0	0	N/A
	Average Salary	0	0	N/A	0	0	0	0	0	N/A
65-69	Number	0	0	0	0	0	0	0	0	0
	Total Salary	0	0	0	0	0	0	0	0	0
	Average Salary	0	0	0	0	0	0	0	0	0
70+	Number	0	0	0	0	0	0	0	0	0
	Total Salary	0	0	0	0	0	0	0	0	0
	Average Salary	0	0	0	0	0	0	0	0	0
Total	Number	44	6	56	45	31	16	1	0	199
	Total Salary	1,815,998	N/A	3,539,465	2,990,060	2,116,236	N/A	N/A	0	11,917,815
	Average Salary	41,273	N/A	63,205	66,446	68,266	N/A	N/A	0	59,889

Section 3.2 - Age and Service Distribution of Active Members as of December 31, 2015 (continued)

Attained Age		0-4	5-9	10-14	15-19	20-24	25-29	30-34	Over 34	Total
15-19	Number	0	0	0	0	0	0	0	0	0
	Total Salary	0	0	0	0	0	0	0	0	0
	Average Salary	0	0	0	0	0	0	0	0	0
20-24	Number	4	0	0	0	0	0	0	0	4
	Total Salary	N/A	0	0	0	0	0	0	0	N/A
	Average Salary	N/A	0	0	0	0	0	0	0	N/A
25-29	Number	14	1	0	0	0	0	0	0	15
	Total Salary	N/A	N/A	0	0	0	0	0	0	N/A
	Average Salary	N/A	N/A	0	0	0	0	0	0	N/A
30-34	Number	21	3	0	0	0	0	0	0	24
	Total Salary	786,208	N/A	0	0	0	0	0	0	900,665
	Average Salary	37,438	N/A	0	0	0	0	0	0	37,528
35-39	Number	17	9	3	0	0	0	0	0	29
	Total Salary	N/A	N/A	N/A	0	0	0	0	0	1,046,424
	Average Salary	N/A	N/A	N/A	0	0	0	0	0	36,084
40-44	Number	11	7	2	1	0	0	0	0	21
	Total Salary	N/A	N/A	N/A	N/A	0	0	0	0	716,480
	Average Salary	N/A	N/A	N/A	N/A	0	0	0	0	34,118
45-49	Number	15	6	7	4	3	0	0	0	35
	Total Salary	N/A	N/A	N/A	N/A	N/A	0	0	0	1,144,296
	Average Salary	N/A	N/A	N/A	N/A	N/A	0	0	0	32,694
50-54	Number	18	1	3	0	0	0	0	0	22
	Total Salary	N/A	N/A	N/A	0	0	0	0	0	783,157
	Average Salary	N/A	N/A	N/A	0	0	0	0	0	35,598
55-59	Number	10	1	0	0	0	0	0	0	11
	Total Salary	N/A	N/A	0	0	0	0	0	0	N/A
	Average Salary	N/A	N/A	0	0	0	0	0	0	N/A
60-64	Number	2	4	0	0	0	0	0	0	6
	Total Salary	N/A	N/A	0	0	0	0	0	0	N/A
	Average Salary	N/A	N/A	0	0	0	0	0	0	N/A
65-69	Number	1	0	0	0	0	0	0	0	1
	Total Salary	N/A	0	0	0	0	0	0	0	N/A
	Average Salary	N/A	0	0	0	0	0	0	0	N/A
70+	Number	0	0	0	0	0	0	0	0	0
	Total Salary	0	0	0	0	0	0	0	0	0
	Average Salary	0	0	0	0	0	0	0	0	0
Total	Number	113	32	15	5	3	0	0	0	168
	Total Salary	3,726,689	1,310,823	N/A	N/A	N/A	0	0	0	5,857,665
	Average Salary	32,980	40,963	N/A	N/A	N/A	0	0	0	34,867

Section 3.3 - Member Data Reconciliation

	Inactive Members						
	Active Data	Deferred Benefits ¹	DROP	Retired Members	Disabled Members	Beneficiaries	Total
As of December 31, 2014	2,134	226	294	2,099	149	243	5,145
Changes due to:							
Age/Service Retirements	(37)	(11)	0	48	0	0	0
Disability Retirements	(1)	(1)	0	0	2	0	0
Deaths Without Beneficiary	0	0	0	(38)	(9)	(22)	(69)
Deaths With Beneficiary	(2)	0	(2)	(34)	(2)	40	0
Non-Vested Terminations	(41)	0	0	0	0	0	(41)
Vested Terminations	(93)	93	0	0	0	0	0
Rehires	9	(9)	0	0	0	0	0
Cash-Outs	(10)	(4)	0	0	0	0	(14)
Expiration of Benefits	0	0	0	(1)	0	(5)	(6)
Data Corrections	0	358 ¹	0	(14)	(46)	72	370
Transfers Out	0	0	0	0	0	0	0
DROP	(76)	0	46	30	0	0	0
New Entrants	340	0	0	0	0	37	377
Net Change	89	426	44	(9)	(55)	122	617
As of December 31, 2015	2,223	652	338	2,090	94	365	5,762

¹ Includes participants owed a refund of their contributions.

Section 3.4 - Schedule of Active Member Data

Valuation Date	Number					Annual Earnings	Annual Average Earnings	Percent Increase / (Decrease) in Average Earnings
	General County	Sheriff's Department	Road Commission	Martha T. Berry	Total			
December 31, 2009	1,497	419	245	164	2,325	116,522,938	50,117	
December 31, 2010	1,452	401	230	174	2,257	110,795,240	49,090	(2.0)%
December 31, 2011	1,422	390	216	170	2,198	108,900,180	49,545	0.9%
December 31, 2012	1,334	376	213	156	2,079	105,391,874	50,694	2.3%
December 31, 2013	1,328	377	207	156	2,068	102,252,875	49,445	(2.5)%
December 31, 2014	1,392	380	214	148	2,134	110,159,004	51,621	4.4%
December 31, 2015	1,448	408	199	168	2,223	105,254,524	47,348	(8.3)%

Section 3.5 - Schedule of Inactive Member Data

Valuation Date	Number					Annual Retirement Benefits	Average Annual Retirement Benefits
	General County	Sheriff's Department	Road Commission	Martha T. Berry	Total		
December 31, 2013	185	18	14	19	236	2,795,885	11,847
December 31, 2014	179	18	13	16	226	2,610,266	11,550
December 31, 2015	475	51	3	123	652	3,527,398	5,410

Section 3.6 - Schedule of Retired Members by Type of Benefit and Option Elected

Amount of Monthly Pension Benefit	Number of Recipients	Type of Pension Benefit			Option Selected			
		1	2	3	1	3	4	5
\$ 1 - \$ 300	115	59	53	3	80	9	22	4
301 - 600	354	260	81	13	180	37	65	72
601 - 900	373	297	62	14	164	46	59	104
901 - 1,200	318	259	41	18	121	37	65	95
1,201 - 1,500	224	185	27	12	81	33	45	65
1,501 - 1,800	209	173	26	10	82	25	38	64
1,801 - 2,100	189	154	23	12	56	28	54	51
2,101 - 2,400	161	145	13	3	43	21	46	51
2,401 - 2,700	130	119	10	1	35	20	32	43
2,701 - 3,000	117	106	10	1	27	13	41	36
3,001 - 3,300	92	81	10	1	18	7	33	34
3,301 - 3,600	70	66	2	2	14	6	19	31
3,601 - 3,900	54	50	2	2	13	6	20	15
3,901 - 4,200	37	35	1	1	5	4	12	16
Over \$4,200	106	101	4	1	21	8	43	34
Totals	2,549	2,090	365	94	940	300	594	715

Type Of Pension Benefit

1. Regular retirement
2. Survivor payment
3. Disability

Option Selected

- 1 = Straight Life
- 3 = Years Certain
- 4 = Joint and Survivor
- 5 = Pop-Up

Section 3.6a - Schedule of DROP Participants by Option Elected

Amount of Monthly Pension Benefit	Number of Recipients	Option Selected			
		1	3	4	5
\$ 1 - \$ 300	0	0	0	0	0
301 - 600	4	2	0	0	2
601 - 900	32	9	1	4	18
901 - 1,200	39	11	5	6	17
1,201 - 1,500	37	10	1	8	18
1,501 - 1,800	30	8	1	5	16
1,801 - 2,100	26	11	4	7	4
2,101 - 2,400	28	4	4	7	13
2,401 - 2,700	21	5	1	6	9
2,701 - 3,000	33	8	0	6	19
3,001 - 3,300	16	5	2	3	6
3,301 - 3,600	16	3	0	3	10
3,601 - 3,900	8	0	1	1	6
3,901 - 4,200	9	2	0	2	5
Over \$4,200	39	7	3	12	17
Totals	338	85	23	70	160

Option Selected

1 = Straight Life

3 = Years Certain

4 = Joint and Survivor

5 = Pop-Up

Section 3.7 - Schedule of Benefit Payments

Attained Age	Regular Retirement & Survivor Payment		Disability		Total	
	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances
Under 30	9	99,066	0	0	9	99,066
30-34	8	113,718	0	0	8	113,718
35-39	2	46,943	1	22,925	3	69,869
40-44	6	24,881	4	69,381	10	94,262
45-49	10	204,405	13	314,782	23	519,186
50-54	105	3,018,832	15	274,463	120	3,293,296
55-59	286	8,443,906	14	312,756	300	8,756,661
60-64	461	10,729,657	13	200,295	474	10,929,952
65-69	524	10,796,426	10	140,964	534	10,937,390
70-74	378	7,180,316	10	113,704	388	7,294,020
75	62	995,953	2	21,166	64	1,017,119
76	50	892,581	1	6,030	51	898,611
77	52	957,281	0	0	52	957,281
78	46	636,987	3	35,051	49	672,039
79	45	654,680	0	0	45	654,680
80	34	455,992	1	15,285	35	471,277
81	37	520,299	2	15,407	39	535,705
82	36	495,777	0	0	36	495,777
83	42	480,016	1	9,667	43	489,683
84	40	399,558	2	13,199	42	412,757
85	20	266,226	1	1,637	21	267,864
86	47	498,883	0	0	47	498,883
87	29	362,747	1	6,813	30	369,559
88	24	278,987	0	0	24	278,987
89	20	221,009	0	0	20	221,009
90	25	251,138	0	0	25	251,138
91	11	78,357	0	0	11	78,357
92	13	97,612	0	0	13	97,612
93	6	36,892	0	0	6	36,892
94	5	29,749	0	0	5	29,749
95	5	46,108	0	0	5	46,108
96	8	22,565	0	0	8	22,565
97	5	44,626	0	0	5	44,626
98	2	9,395	0	0	2	9,395
99	0	0	0	0	0	0
100	0	0	0	0	0	0
101	1	2,417	0	0	1	2,417
102	0	0	0	0	0	0
103	1	4,685	0	0	1	4,685
Total	2,455	49,398,670	94	1,573,525	2,549	50,972,195

Section 3.7a - Schedule of Benefit Payments

Deferred Vested Members		
Attained Age	No.	Estimated Annual Allowances
Under 30	42	0
30	53	2,955
31	78	16,407
32	94	74,281
33	92	76,281
34	142	76,987
35	101	91,433
36	29	55,609
37	14	5,090
38	4	5,655
39	1	391
40	0	0
41	0	0
42	0	0
43	0	0
44	2	356
45	0	0
46	0	0
47	0	0
48	0	0
49	0	0
50	0	0
51	0	0
52	0	0
53	0	0
54	0	0
55	0	0
56	0	0
57	0	0
58	0	0
59	0	0
60	0	0
61	0	0
62	0	0
63	0	0
64	0	0
65	0	0
66	0	0
67	0	0
Total	652	3,198,234

Section 3.7b - Schedule of Benefit Payments

Attained Age	No.	DROP Members
		Estimated Annual Allowances
Under 30	0	0
30	0	0
31	0	0
32	0	0
33	0	0
34	0	0
35	0	0
36	0	0
37	0	0
38	0	0
39	0	0
40	0	0
41	0	0
42	0	0
43	0	0
44	0	0
45	0	0
46	3	86,313
47	2	107,238
48	4	179,766
49	7	338,439
50	18	630,347
51	27	1,001,895
52	27	841,812
53	26	933,271
54	25	813,716
55	20	532,486
56	20	568,658
57	20	606,477
58	21	502,004
59	21	375,674
60	17	384,306
61	21	334,362
62	16	275,302
63	14	337,013
64	7	150,206
65	8	190,777
66	2	14,033
67	1	9,012
68	11	255,553
Total	338	9,468,687

Section 4: Actuarial Assumptions and Methods and Additional Information for Funding

Valuation Date

12/31/2015

Actuarial Methods

Actuarial Cost Method

Entry Age

Amortization Method

Period

18 years. Initially established as 20 years with the December 31, 2013 annual actuarial valuation

Open or Closed

Closed - each year the period is expected to reduce by 1 year

Aggregate or Layered basis

Aggregate - the entire UAAL as of the valuation date is amortized

UAAL Payment Increase

The UAAL payments are developed such that they increase by 5% per year

Assets Valuation Method

5-year adjusted market value

Actuarial Assumptions

Investment Rate of Return	7.25%
Payroll Increases	4.0%-10.0% Vary by Employee Group
Inflation Assumption	3.00%

Marriage Assumption

100% of males and 100% of females are married, with males three years older than their female spouse.

Expenses

Previous year's administrative expense increased by the inflation assumption and allocated by employer payroll.

Participant Data

All census data used in these calculations was supplied by the employer.

Section 4 - Actuarial Assumptions, Methods and Additional Information for Funding

Retirement age:

According to the following rates upon the attainment of retirement eligibility.

Normal Retirement Age Category (see Section 4)						
Age	General	Sheriff's	Road	MTB	Retirement Service	Sheriff's Department
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	35%
58	15%	-	25%	15%	33	35%
59	25%	-	25%	25%	34	35%
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%	-	-

Section 4 - Actuarial Assumptions, Methods and Additional Information for Funding

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

Retirement Rates		
Retirement Ages	General County	Martha T. Berry MCF
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%

Healthy Mortality

RP2014 Blue Collar for Road Commission and Sheriffs and RP2014 for all others, both with MP2016 mortality improvement scale

Disability Incidence

Disability Rates	
Age	% 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%

Section 4 - Actuarial Assumptions, Methods and Additional Information for Funding

Turnover

% of Active Members Separating within Next Year					
Sample Age	Years of Service	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%

Changes Since the Prior Valuation

- The mortality table was updated from RP2000 projected to 2015 to RP2014 Blue Collar for Road Commission and Sheriffs and RP 2014 for all others
- The MP2016 mortality improvement scale was added for all. The prior actuarial valuation did not include any mortality improvement.
- Base pay projections and inflation was reduced from 5.00% to 3.00%
- Investment return was reduced from 7.50% to 7.25%
- The administrative expense load was changed from 0.10% of payroll to the previous year's administrative expense increased by the inflation assumption and allocated by employer payroll.

Section 5: Summary of Plan Provisions

Division Code	Division Name	Benefit Tier	Service Needed to Vest	DROP Eligible?	Retirement Eligibility (Age/Service)	Multiplier	Employer Maximum	FAC Period	Employee Contribution
0	General Non Union	Hired on or before 12/31/01 or vested by 2/26/09	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/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.

Section 5 – Summary of Plan Provisions

Division Code	Division Name	Benefit Tier	Service Needed to Vest	DROP Eligible?	Retirement Eligibility (Age/Service)	Multiplier	Employer Maximum	FAC Period	Employee Contribution
16	UAW Local 412 Unity 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.

Section 5 – Summary of Plan Provisions

Division Code	Division Name	Benefit Tier	Service Needed to Vest	DROP Eligible?	Retirement Eligibility (Age/Service)	Multiplier	Employer Maximum	FAC Period	Employee Contribution
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%
		Hired into the County on or after 6/1/6013	15 years	No	60/15, 25 & out	2.64% for 25 yrs	66% of FAC	3 years	4%
7	POAM Dispatchers	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 6/1/6013	15 years	No	60/15, 25 & out	2.4%(26 yrs) / 1%	66% of FAC	3 years	4%
20	POLC Captains	Hired before 6/1/2013	8 years	Yes	60/8, 25 & out	2.4%(26 yrs) / 1%	65% of FAC	3 years	4%
		Hired into the County on or after 6/1/6013	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%
26	Corrections Officers	Hired into the County on or after 6/1/6013	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.

Division Code	Division Name	Benefit Tier	Service Needed to Vest	DROP Eligible?	Retirement Eligibility (Age/Service)	Multiplier	Employer Maximum	FAC Period	Employee Contribution
31	Road Commission Non Union	Hired into the County (Dept of Roads) before 4/1/11	8 years	No	60/8, Rule of 70 (min age 55)	2.4% / 1% (26 yrs)	65% of FAC	3 years	3.5%
		Hired into the County (Dept of Roads) on or after 4/4/11 and before 6/1/13	8 years	No	55/25, 60/8	2.4% / 1% (26 yrs)	65% of FAC	3 years	3.5%
		Hired into the County (Dept of Roads) on or after 6/1/13	15 years	No	55/25, 60/15	2.4% / 1% (26 yrs)	65% of FAC	3 years	3.5%
32	Road Commission ADTECH	Hired before 10/19/09	8 years	Yes*	60/8, Rule of 70 (min age 55)	2.4% / 1% (26 yrs)	65% of FAC	3 years	3.5%
		Hired on/after 10/19/09 and before 12/17/13	8 years	Yes*	55/25, 60/8	2.4% / 1% (26 yrs)	65% of FAC	3 years	3.5%
		Hired on/after 12/17/13	15 years	No	55/25, 60/15	2.4% / 1% (26 yrs)	65% of FAC	3 years	3.5%
33	Road Commission AFSCME Local 893	Hired before 6/15/10	8 years	Yes*	Rule of 70 (min age 55)	2.4% / 1% (26 yrs)	65% of FAC	3 years	3.5%
		Hired on/after 6/15/10 and before 6/1/13	8 years	Yes*	55/25, 65/8	2.4% / 1% (26 yrs)	65% of FAC	3 years	3.5%
		Hired on/after 6/1/13	15 years	No	55/25, 65/15	2.4% / 1% (26 yrs)	65% of FAC	3 years	3.5%

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

Section 5 – Summary of Plan Provisions

Division Code	Division Name	Benefit Tier	Service Needed to Vest	DROP Eligible?	Retirement Eligibility (Age/Service)	Multiplier	Employer Maximum	FAC Period	Employee Contribution
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 2/26/2009	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.

Participation in the plan

The Retirement System is closed to new hires effective December 31, 2015

Termination Benefit

At termination, participants are eligible for a \$1,000 lump sum payment.

Section 5 – Summary of Plan Provisions

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.

Glossary

Actuarial Accrued Liability

Total accumulated cost to fund pension benefits arising from service in all prior years.

Actuarial Cost Method

Technique used to assign or allocate, in a systematic and consistent manner, the expected cost of a pension plan for a group of plan members to the years of service that give rise to that cost.

Actuarial Present Value of Future Benefits

Amount which, together with future interest, is expected to be sufficient to pay all future benefits.

Actuarial Valuation

Study of probable amounts of future pension benefits and the necessary amount of contributions to fund those benefits.

Actuary

Person who performs mathematical calculations pertaining to pension and insurance benefits based on specific procedures and assumptions.

GASB 67

Governmental Accounting Standards Board Statement Number 67.

Maturity Ratio

The ratio of the actuarial accrued liability for members who are no longer active to the total actuarial accrued liability. A ratio of over 50% indicates a mature plan. The higher the maturity ratio, the more volatile the contribution rate will be from year to year given actuarial gains and losses.

Normal Cost

That portion of the actuarial present value of benefits assigned to a particular year in respect to an individual participant or the plan as a whole.

Unfunded Actuarial Accrued Liability (UAAL)

The portion of the actuarial accrued liability not offset by plan assets.