

CITY OF KALAMAZOO EMPLOYEES RETIREMENT SYSTEM
GASB STATEMENT NOS. 67 AND 68 ACCOUNTING AND
FINANCIAL REPORTING FOR PENSIONS
DECEMBER 31, 2015

May 16, 2016

Mr. Thomas C. Skrobola, Director of Management Services/CFO
City of Kalamazoo Employees Retirement System
241 West South Street
Kalamazoo, Michigan 49007-4796

Dear Tom:

This report provides accounting and financial reporting information that is intended to comply with the Governmental Accounting Standards Board (GASB) Statements No. 67 and No. 68 for the City of Kalamazoo Employees Retirement System. These calculations have been made on a basis that is consistent with our understanding of these Statements and the classification of the Plan as a single employer with component units. These results are subject to review by the System's auditor and may be revised.

GASB Statement No. 67 is the accounting standard that applies to the stand-alone financial reports issued by retirement systems. GASB Statement No. 68 establishes accounting and financial reporting for state and local government employers who provide their employees (including former employees) pension benefits through a trust.

Our calculation of the liability associated with the benefits described in this report was performed for the purpose of providing reporting and disclosure information that satisfies the requirements of GASB Statement Nos. 67 and 68. The Net Pension Liability is not an appropriate measure for measuring the sufficiency of Plan assets to cover the estimated cost of settling the employer's benefit obligation. The Net Pension Liability is not an appropriate measure for assessing the need for or amount of future employer contributions. A calculation of the plan's liability for purposes other than satisfying the requirements of GASB No. 67 may produce significantly different results. This report may be provided to parties other than the City of Kalamazoo Employees Retirement System only in its entirety and only with the permission of the System. GRS is not responsible for unauthorized use of this report.

This report is based upon information, furnished to us by the City, concerning retirement and ancillary benefits, active members, deferred vested members, retirees and beneficiaries, and financial data. This information was checked for internal consistency, but it was not audited.

This report complements the actuarial valuation report provided to the City of Kalamazoo Employees Retirement System for funding purposes and should be considered in conjunction with that report. Please see the actuarial valuation report as of December 31, 2014 for additional discussion of the nature of actuarial calculations and more information related to participant data, economic and demographic assumptions, and benefit provisions.

To the best of our knowledge, the information contained within this report is accurate and fairly represents the actuarial position of the City of Kalamazoo Employees Retirement System. All calculations have been made in conformity with generally accepted actuarial principles and practices as well as with the Actuarial Standards of Practice issued by the Actuarial Standards Board.

Mr. Thomas C. Skrobola

May 16, 2016

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The signing actuaries are independent of the plan sponsor.

James D. Anderson and Rebecca L. Stouffer are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Respectfully submitted,

By James D. Anderson
James D. Anderson
FSA, EA, MAAA

By Rebecca L. Stouffer
Rebecca L. Stouffer
ASA, MAAA

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SECTION A
EXECUTIVE SUMMARY

EXECUTIVE SUMMARY
AS OF DECEMBER 31, 2015

	2015
Actuarial Valuation Date	December 31, 2014
Measurement Date of the Net Pension Liability	December 31, 2015
Employer's Fiscal Year Ending Date (Reporting Date)	December 31, 2015

Membership

Number of	
- Retirees and Beneficiaries	965
- Inactive, Nonretired Members	41
- Active Members	624
- Total	1,630
Covered-employee Payroll #	\$ 37,198,788

Net Pension Liability

Total Pension Liability	\$ 463,309,018
Plan Fiduciary Net Position	589,527,061
Net Pension Liability	\$ (126,218,043)
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	127.24%
Net Pension Liability as a Percentage of Covered-employee Payroll #	(339.31)%

Development of the Single Discount Rate

Single Discount Rate	7.50%
Long-Term Expected Rate of Investment Return	7.50%
Long-Term Municipal Bond Rate*	3.57%
Last year ending December 31 in the 2016 to 2115 projection period for which projected benefit payments are fully funded	2114

Total Pension Expense \$ 5,773,607

Deferred Outflows and Deferred Inflows of Resources by Source to be Recognized in Future Pension Expenses

	Deferred Outflows of Resources	Deferred Inflows of Resources
Difference between expected and actual experience	\$ -	\$ 1,172,887
Changes in assumptions	9,317,125	-
Net difference between projected and actual earnings on pension plan investments	44,728,823	-
Total	\$ 54,045,948	\$ 1,172,887

Reflects payroll as of the actuarial valuation date that is one year prior to the measurement date. This payroll may differ from the GASB Statement No. 68 definition of covered-employee payroll.

* Source: "State & local bonds" rate from Federal Reserve statistical release (H.15) as of December 31, 2015. The statistical release describes this rate as of "Bond Buyer Index, general obligation, 20 years to maturity, mixed quality." In describing this index, the Bond Buyer notes that the bonds' average credit quality is roughly equivalent to Moody's Investors Service's Aa2 rating and Standard & Poor's Corp.'s AA.

DISCUSSION

Accounting Standard

For pension plans that are administered through trusts or equivalent arrangements, Governmental Accounting Standards Board (GASB) Statement No. 67 establishes standards of financial reporting for separately issued financial reports and specifies the required approach for measuring the pension liability. Similarly, GASB Statement No. 68 establishes standards for state and local government employers (as well as non-employer contributing entities) to account for and disclose the net pension liability, pension expense, and other information associated with providing retirement benefits to their employees (and former employees) on their basic financial statements.

The following discussion provides a summary of the information that is required to be disclosed under these accounting standards. A number of these disclosure items are provided in this report. However, certain information, such as notes regarding accounting policies and investments, is not included in this report and the retirement system and/or plan sponsor will be responsible for preparing and disclosing that information to comply with these accounting standards.

Financial Statements

GASB Statement No. 68 requires state or local governments to recognize the net pension liability and the pension expense on their financial statements. The net pension liability is the difference between the total pension liability and the plan's fiduciary net position. In traditional actuarial terms, this is analogous to the accrued liability less the market value of assets (not the smoothed actuarial value of assets that is often encountered in actuarial valuations performed to determine the employer's contribution requirement).

The pension expense recognized each fiscal year is equal to the change in the net pension liability from the beginning of the year to the end of the year, adjusted for deferred recognition of the liability and investment experience.

Pension plans that prepare their own, stand-alone financial statements are required to present two financial statements – a statement of fiduciary net position and a statement of changes in fiduciary net position in accordance with GASB Statement No. 67. The *statement of fiduciary net position* presents the assets and liabilities of the pension plan at the end of the pension plan's reporting period. The *statement of changes in fiduciary net position* presents the additions, such as contributions and investment income, and deductions, such as benefit payments and expenses, and net increase or decrease in the fiduciary net position.

Notes to Financial Statements

GASB Statement No. 68 requires the notes of the employer's financial statements to disclose the total pension expense, the pension plan's liabilities and assets, and deferred outflows and inflows of resources related to pensions.

GASB Statement Nos. 67 and 68 require the notes of the financial statements for the employers and pension plans, to include certain additional information. The list of disclosure items should include:

- a description of benefits provided by the plan;
- the type of employees and number of members covered by the pension plan;
- a description of the plan's funding policy, which includes member and employer contribution requirements;
- the pension plan's investment policies;
- the pension plan's fiduciary net position, net pension liability, and the pension plan's fiduciary net position as a percentage of the total pension liability;
- the net pension liability using a discount rate that is 1% higher and 1% lower than used to calculate the total pension liability and net pension liability for financial reporting purposes;
- significant assumptions and methods used to calculate the total pension liability;
- inputs to the discount rates; and
- certain information about mortality assumptions and the dates of experience studies.

Retirement systems that issue stand-alone financial statements are required to disclose additional information in accordance with GASB Statement No. 67. This information includes:

- the composition of the pension plan's Board and the authority under which benefit terms may be amended;
- a description of how fair value is determined;
- information regarding certain reserves and investments, which include concentrations of investments greater than or equal to 5%, receivables, and insurance contracts excluded from plan assets; and
- annual money-weighted rate of return.

Required Supplementary Information

GASB Statement No. 67 requires a 10-year fiscal history of:

- sources of changes in the net pension liability;
- information about the components of the net pension liability and related ratios, including the pension plan's fiduciary net position as a percentage of the total pension liability, and the net pension liability as a percent of covered-employee payroll; and a
- comparison of the actual employer contributions to the actuarially determined contributions based on the plan's funding policy.

These tables may be built prospectively as the information becomes available.

Timing of the Valuation

An actuarial valuation to determine the total pension liability is required to be performed at least every two years. The net pension liability and pension expense should be measured as of the pension plan's fiscal year end (measurement date) on a date that is within the employer's prior fiscal year. If the actuarial valuation used to determine the total pension liability is not calculated as of the measurement date, the total pension liability is required to be rolled forward from the actuarial valuation date to the measurement date.

The total pension liability shown in this report is based on an actuarial valuation performed as of December 31, 2014 and a measurement date of December 31, 2015.

Single Discount Rate

Projected benefit payments are required to be discounted to their actuarial present values using a Single Discount Rate that reflects (1) a long-term expected rate of return on pension plan investments (to the extent that the plan's fiduciary net position is projected to be sufficient to pay benefits) and (2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating (which is published by the Federal Reserve) as of the measurement date (to the extent that the contributions for use with the long-term expected rate of return are not met).

For the purpose of this valuation, the expected rate of return on pension plan investments is 7.50%; the municipal bond rate is 3.57% (based on the weekly rate closest to but not later than the measurement date of the "state & local bonds" rate from Federal Reserve statistical release (H.15)); and the resulting Single Discount Rate is 7.50%.

SECTION B

FINANCIAL STATEMENTS

PENSION EXPENSE UNDER GASB STATEMENT NO. 68
FISCAL YEAR ENDED DECEMBER 31, 2015

A. Expense

1. Service Cost	\$	6,187,334
2. Interest on the Total Pension Liability		32,334,356
3. Current-Period Benefit Changes		-
4. Employee Contributions (made negative for addition here)		(1,084,798)
5. Projected Earnings on Plan Investments (made negative for addition here)		(45,936,512)
6. Pension Plan Administrative Expense		125,770
7. Other Changes in Plan Fiduciary Net Position		174,885
8. Recognition of Outflow (Inflow) of Resources due to Liabilities		2,790,366
9. Recognition of Outflow (Inflow) of Resources due to Assets		11,182,206
10. Total Pension Expense	\$	5,773,607

**STATEMENT OF OUTFLOWS AND INFLOWS ARISING FROM THE CURRENT
REPORTING PERIOD
FISCAL YEAR ENDED DECEMBER 31, 2015**

A. Outflows (Inflows) of Resources due to Liabilities

1. Difference between expected and actual experience of the Total Pension Liability (gains) or losses	\$ (1,574,739)
2. Assumption Changes (gains) or losses	\$ 12,509,343
3. Recognition period for Liabilities: Average of the expected remaining service lives of all employees {in years }	3.9187
4. Outflow (Inflow) of Resources to be recognized in the current pension expense for the difference between expected and actual experience of the Total Pension Liability	\$ (401,852)
5. Outflow (Inflow) of Resources to be recognized in the current pension expense for Assumption Changes	\$ 3,192,218
6. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Liabilities	<u>\$ 2,790,366</u>
7. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses for the difference between expected and actual experience of the Total Pension Liability	\$ (1,172,887)
8. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses for Assumption Changes	\$ 9,317,125
9. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Liabilities	<u>\$ 8,144,238</u>

B. Outflows (Inflows) of Resources due to Assets

1. Net difference between projected and actual earnings on pension plan investments (gains) or losses	\$ 55,911,029
2. Recognition period for Assets {in years }	5.0000
3. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Assets	\$ 11,182,206
4. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Assets	\$ 44,728,823

**STATEMENT OF OUTFLOWS AND INFLOWS ARISING FROM THE CURRENT AND
PRIOR REPORTING PERIODS
FISCAL YEAR ENDED DECEMBER 31**

A. Outflows and Inflows of Resources due to Liabilities and Assets to be Recognized in Current Pension Expense

	<u>Outflows of Resources</u>	<u>Inflows of Resources</u>	<u>Net Outflows of Resources</u>
1. Due to Liabilities	\$ 3,192,218	\$ 401,852	\$ 2,790,366
2. Due to Assets	11,182,206	-	11,182,206
3. Total	\$ 14,374,424	\$ 401,852	\$ 13,972,572

B. Outflows and Inflows of Resources by Source to be Recognized in Current Pension Expense

	<u>Outflows of Resources</u>	<u>Inflows of Resources</u>	<u>Net Outflows of Resources</u>
1. Differences between expected and actual experience	\$ -	\$ 401,852	\$ (401,852)
2. Assumption Changes	3,192,218	-	3,192,218
3. Net Difference between projected and actual earnings on pension plan investments	11,182,206	-	11,182,206
4. Total	\$ 14,374,424	\$ 401,852	\$ 13,972,572

C. Deferred Outflows and Deferred Inflows of Resources by Source to be Recognized in Future Pension Expenses

	<u>Deferred Outflows of Resources</u>	<u>Deferred Inflows of Resources</u>	<u>Net Deferred Outflows of Resources</u>
1. Differences between expected and actual experience	\$ -	\$ 1,172,887	\$ (1,172,887)
2. Assumption Changes	9,317,125	-	9,317,125
3. Net Difference between projected and actual earnings on pension plan investments	44,728,823	-	44,728,823
4. Total	\$ 54,045,948	\$ 1,172,887	\$ 52,873,061

D. Deferred Outflows and Deferred Inflows of Resources by Year to be Recognized in Future Pension Expenses

<u>Year Ending December 31</u>	<u>Net Deferred Outflows of Resources</u>
2016	\$ 13,972,572
2017	13,972,572
2018	13,745,712
2019	11,182,205
2020	-
Thereafter	-
Total	\$ 52,873,061

**STATEMENT OF FIDUCIARY NET POSITION
AS OF DECEMBER 31, 2015**

	2015
Assets	
Cash and Deposits	\$ 319,605
Receivables	
Accounts Receivable - Sale of Investments	\$ 3,482,263
Accrued Interest and Other Dividends	972,779
Contributions	-
Accounts Receivable - Other	231
Total Receivables	\$ 4,455,273
Investments	
Fixed Income	\$ 162,747,038
Domestic Equities	291,526,071
International Equities	120,004,197
Real Estate	31,119,150
Other	-
Total Investments	\$ 605,396,456
Total Assets	\$ 610,171,334
 Liabilities	
Payables	
Accounts Payable - Purchase of Investments	\$ 20,451,191
Accrued Expenses	41,474
Accounts Payable - Other	151,608
Total Liabilities	\$ 20,644,273
 Net Position Restricted for Pensions	 \$ 589,527,061

**STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR YEAR ENDED DECEMBER 31, 2015**

	2015
Additions	
Contributions	
Employer	\$ 1,602,053
Employee	1,084,798
Other	-
Total Contributions	\$ 2,686,851
Investment Income	
Net Appreciation in Fair Value of Investments	\$ (24,387,321)
Interest and Dividends	16,452,203
Less Investment Expense	(2,039,399)
Net Investment Income	\$ (9,974,517)
Other	\$ -
Total Additions	\$ (7,287,666)
 Deductions	
Benefit payments, including refunds of employee contributions	\$ 28,356,700
Pension Plan Administrative Expense	125,770
Other	174,885
Total Deductions	\$ 28,657,355
Net Increase in Net Position	\$ (35,945,021)
 Net Position Restricted for Pensions	
Beginning of Year	\$ 625,472,082
End of Year	\$ 589,527,061

SECTION C

REQUIRED SUPPLEMENTARY INFORMATION

**SCHEDULE OF CHANGES IN THE NET PENSION LIABILITY AND RELATED RATIOS
FISCAL YEAR ENDED DECEMBER 31, 2015**

A. Total pension liability	
1. Service Cost	\$ 6,187,334
2. Interest on the Total Pension Liability	32,334,356
3. Changes of benefit terms	-
4. Difference between expected and actual experience of the Total Pension Liability	(1,574,739)
5. Changes of assumptions	12,509,343
6. Benefit payments, including refunds of employee contributions	(28,356,700)
7. Net change in total pension liability	\$ 21,099,594
8. Total pension liability – beginning	442,209,424
9. Total pension liability – ending	<u><u>\$ 463,309,018</u></u>
B. Plan fiduciary net position	
1. Contributions – employer	\$ 1,602,053
2. Contributions – employee	1,084,798
3. Net investment income	(9,974,517)
4. Benefit payments, including refunds of employee contributions	(28,356,700)
5. Pension Plan Administrative Expense	(125,770)
6. Other	(174,885)
7. Net change in plan fiduciary net position	\$ (35,945,021)
8. Plan fiduciary net position – beginning	625,472,082
9. Plan fiduciary net position – ending	<u><u>\$ 589,527,061</u></u>
C. Net pension liability	<u><u>\$ (126,218,043)</u></u>
D. Plan fiduciary net position as a percentage of the total pension liability	127.24%
E. Covered-employee payroll #	\$ 37,198,788
F. Net pension liability as a percentage of covered-employee payroll #	(339.31)%

Reflects payroll as of the actuarial valuation date that is one year prior to the measurement date. This payroll may differ from the GASB Statement No. 68 definition of covered-employee payroll.

SCHEDULES OF REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF CHANGES IN THE EMPLOYERS' NET PENSION LIABILITY AND RELATED RATIOS
Ultimately 10 Fiscal Years will be displayed
(which may be built prospectively starting from 2014)

Fiscal year ending December 31,	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
Total Pension Liability										
Service Cost	\$ 6,187,334	\$ 6,259,728								
Interest on the Total Pension Liability	32,334,356	31,603,299								
Benefit Changes	-	-								
Difference between expected and actual experience of the Total Pension Liability	(1,574,739)	-								
Assumption Changes	12,509,343	-								
Benefit Payments and Refunds	(28,356,700)	(27,802,129)								
Net Change in Total Pension Liability	21,099,594	10,060,898								
Total Pension Liability - Beginning	442,209,424	432,148,526								
Total Pension Liability - Ending (a)	\$ 463,309,018	\$ 442,209,424								
Plan Fiduciary Net Position										
Employer Contributions	\$ 1,602,053	\$ 760,912								
Employee Contributions	1,084,798	1,067,029								
Pension Plan Net Investment Income	(9,974,517)	41,065,446								
Benefit Payments and Refunds	(28,356,700)	(27,802,129)								
Pension Plan Administrative Expense	(125,770)	(122,107)								
Other	(174,885)	(110,326)								
Net Change in Plan Fiduciary Net Position	(35,945,021)	14,858,825								
Plan Fiduciary Net Position - Beginning	625,472,082	610,613,257								
Plan Fiduciary Net Position - Ending (b)	\$ 589,527,061	\$ 625,472,082								
Net Pension Liability - Ending (a) - (b)	(126,218,043)	(183,262,658)								
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	127.24 %	141.44 %								
Covered-employee Payroll #	\$ 37,198,788	\$ 36,331,892								
Net Pension Liability as a Percentage of Covered-employee Payroll #	(339.31)%	(504.41)%								
Notes to Schedule:										
N/A										

Reflects payroll as of the actuarial valuation date that is one year prior to the measurement date. This payroll may differ from the GASB Statement No. 68 definition of covered-employee payroll.

SCHEDULES OF REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF THE EMPLOYERS' NET PENSION LIABILITY

Ultimately 10 Fiscal Years will be displayed
(which may be built prospectively starting from 2014)

FY Ending December 31,	Total Pension Liability	Plan Net Position	Net Pension Liability	Plan Net Position as a % of Total Pension Liability	Covered- Employee Payroll #	Net Pension Liability as a % of Covered Payroll
2006			-			
2007			-			
2008			-			
2009			-			
2010			-			
2011			-			
2012			-			
2013			-			
2014	\$442,209,424	\$625,472,082	\$ (183,262,658)	141.44%	\$36,331,892	(504.41)%
2015	463,309,018	589,527,061	(126,218,043)	127.24%	37,198,788	(339.31)%

Reflects payroll as of the actuarial valuation date that is one year prior to the measurement date. This payroll may differ from the GASB Statement No. 68 definition of covered-employee payroll.

SCHEDULE OF CONTRIBUTIONS

**Ultimately 10 Fiscal Years will be displayed
(which may be built prospectively starting from 2014)**

FY Ending December 31,	Actuarially Determined Contribution	Actual Contribution	Contribution Deficiency (Excess)	Covered- Employee Payroll #	Actual Contribution as a % of Covered Payroll
2006					
2007					
2008					
2009					
2010					
2011					
2012					
2013					
2014	\$ -	\$ 760,912	\$ (760,912)	\$ 36,331,892	2.09%
2015	-	1,602,053	(1,602,053)	37,198,788	4.31%

Reflects payroll as of the actuarial valuation date that is one year prior to the measurement date. This payroll may differ from the GASB Statement No. 68 definition of covered-employee payroll.

NOTES TO SCHEDULE OF CONTRIBUTIONS

Valuation Date: December 31, 2014
Notes: Actuarially determined contribution amounts are calculated as of December 31 each year, which is immediately prior to the beginning of the fiscal year in which contributions are reported.

Methods and Assumptions Used to Determine Contribution Rates for the Fiscal Year Ending December 31, 2015:

Actuarial Cost Method	Entry-Age Normal
Amortization Method	Level Percent-of-Payroll, Open Period
Remaining Amortization Period	10 years
Asset Valuation Method	5-Year smoothed market
Inflation	3.5% (which includes price inflation of 2.75%)
Salary Increases	3.5% to 15.5% including inflation
Investment Rate of Return	7.50%
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the 2014 valuation pursuant to an experience study of the period 2009 - 2013.
Mortality	RP-2000 Mortality Combined Healthy Tables, projected 20 years with U.S. Projection Scale BB.

Other Information:

Notes: N/A

SCHEDULE OF INVESTMENT RETURNS**Ultimately 10 Fiscal Years will be displayed**

<u>FY Ending</u> <u>December 31,</u>	<u>Annual</u> <u>Return¹</u>
2006	
2007	
2008	
2009	
2010	
2011	
2012	
2013	
2014	6.82 %
2015	(1.62)%

¹ Annual money-weighted rate of return, net of investment expenses.

SECTION D

SCHEDULES BY EMPLOYER

**SCHEDULE OF EMPLOYER ALLOCATIONS OF NET PENSION LIABILITY
(INCLUDING SENSITIVITY ANALYSIS)**

Employer	FY 2015 Employer Contributions ⁽¹⁾	PVFB ⁽²⁾	Proportionate Share ⁽³⁾	Net Pension Liability		
				1% Decrease 6.50%	Current Single Discount Rate 7.50%	1% Increase 8.50%
Metro Transit	\$ 175,265	\$ 26,291,110	5.139%	\$ (3,636,323)	\$ (6,486,345)	\$ (8,860,058)
Wastewater	\$ -	\$ 49,297,001	9.636%	\$ (6,818,370)	\$ (12,162,371)	\$ (16,613,256)
Water	\$ -	\$ 39,422,676	7.706%	\$ (5,452,715)	\$ (9,726,362)	\$ (13,285,778)
All Other Groups	\$ 1,426,788	\$ 396,601,103	77.519%	\$ (54,851,937)	\$ (97,842,965)	\$ (133,649,129)
Total ⁽⁴⁾	\$ 1,602,053	\$ 511,611,890	100.000%	\$ (70,759,345)	\$ (126,218,043)	\$ (172,408,221)

⁽¹⁾ Provided for use in preparing disclosures under GASB Statement No. 68 paragraph 81.

⁽²⁾ As discussed with the City and the auditor, proportionate shares have been developed on the basis of Present Value Future Benefits (PVFB) for each employer. This basis reflects the long-term obligation of each employer to the Plan. The PVFB was adjusted from the actuarial valuation date to the measurement date using standard actuarial roll-forward techniques.

⁽³⁾ The Plan has been identified as a single employer Plan. Given that the Plan has component units, GASB Statement 68 paragraph 18 requires that stand-alone financial statements for each government "...account for and report its participation in the single-employer or agent pension plan as if it was a cost-sharing employer and should apply the requirements of paragraphs 48–82."

⁽⁴⁾ Employer level numbers may not add to collective-development numbers due to rounding.

SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

	<u>Metro Transit</u>	<u>Wastewater</u>	<u>Water</u>	<u>All Other Groups</u>	<u>Total ⁽¹⁾</u>
Proportionate Share	5.139%	9.636%	7.706%	77.519%	100.000%
Net Pension Liability	\$ (6,486,345)	\$ (12,162,371)	\$ (9,726,362)	\$ (97,842,965)	\$ (126,218,043)
Deferred Outflows of Resources					
1. Differences Between Expected and Actual Experience	\$ -	\$ -	\$ -	\$ -	\$ -
2. Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	2,298,614	4,310,069	3,446,803	34,673,336	44,728,822
3. Changes of Assumptions	478,807	897,798	717,978	7,222,542	9,317,125
4. Changes in Proportion and Differences Between Employer Contributions and Share of Contributions	-	-	-	-	-
5. Total Deferred Outflows of Resources	2,777,421	5,207,867	4,164,781	41,895,878	54,045,947
Deferred Inflows of Resources					
1. Differences Between Expected and Actual Experience	\$ (60,275)	\$ (113,019)	\$ (90,383)	\$ (909,210)	\$ (1,172,887)
2. Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	-	-	-	-	-
3. Changes of Assumptions	-	-	-	-	-
4. Changes in Proportion and Differences Between Employer Contributions and Share of Contributions	-	-	-	-	-
5. Total Deferred Inflows of Resources	(60,275)	(113,019)	(90,383)	(909,210)	(1,172,887)
Pension Expense					
1. Proportionate Share of Plan Pension Expense	\$ 296,706	\$ 556,345	\$ 444,914	\$ 4,475,642	\$ 5,773,607
2. Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	92,935	(154,374)	(123,454)	184,893	-
3. Total Employer Pension Expense	389,641	401,971	321,460	4,660,535	5,773,607

⁽¹⁾ Employer-level numbers may not add to collective-development numbers due to rounding.

SCHEDULE OF DEFERRED RESOURCES BY EMPLOYER BY YEAR

Schedule of Deferred (Inflows) and Outflows					
Employer	2016	2017	2018	2019	2020
Metro Transit	\$ 718,050	\$ 718,050	\$ 706,392	\$ 574,654	\$ -
Wastewater	\$ 1,346,397	\$ 1,346,397	\$ 1,324,537	\$ 1,077,517	\$ -
Water	\$ 1,076,726	\$ 1,076,726	\$ 1,059,245	\$ 861,701	\$ -
All Other Groups	\$ 10,831,398	\$ 10,831,398	\$ 10,655,538	\$ 8,668,334	\$ -
Total ⁽¹⁾	\$ 13,972,571	\$ 13,972,571	\$ 13,745,712	\$ 11,182,206	\$ -

⁽¹⁾ Employer-level numbers may not add to collective-development numbers due to rounding.

SECTION E

NOTES TO FINANCIAL STATEMENTS

Long-Term Expected Return on Plan Assets

The assumed rate of investment return was adopted by the plan's trustees after considering input from the plan's investment consultant(s). Additional information about the assumed rate of investment return is included in our actuarial valuation report as of December 31, 2014 and the 2009-2013 experience study report dated February 19, 2015. The assumed rate of investment return falls within a reasonable range of the long-term expected rate of return.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These real rates of return are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. For each major asset class that is included in the pension plan's target asset allocation as of December 31, 2015, these best estimates are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return *
U.S. Small Cap (Manager 1)	5.00%	6.00%
U.S. Small Cap (Manager 2)	10.00%	6.00%
International Developed Equity	10.00%	5.00%
U.S. Large Cap (Manager 1)	30.00%	5.00%
U.S. Large Cap (Manager 2)	5.00%	5.00%
Emerging Markets	10.00%	6.75%
Domestic Fixed Income	25.00%	0.75%
Real Estate (Manager 1)	2.50%	3.75%
Real Estate (Manager 2)	2.50%	3.75%
Total	100.00%	

* Real rate of return is based on investment manager inflation assumption of 2.25%.

The figures in the above table were supplied by the City of Kalamazoo. Gabriel, Roeder, Smith & Company does not provide investment advice.

Single Discount Rate

A Single Discount Rate of 7.50% was used to measure the total pension liability. This Single Discount Rate was based on the expected rate of return on pension plan investments of 7.50%. The projection of cash flows used to determine this Single Discount Rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on these assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Regarding the sensitivity of the net pension liability to changes in the Single Discount Rate, the following presents the plan's net pension liability, calculated using a Single Discount Rate of 7.50%, as well as what the plan's net pension liability would be if it were calculated using a Single Discount Rate that is one percent lower or one percent higher:

Sensitivity of the Net Pension Liability to the Single Discount Rate Assumption

	1% Decrease 6.50%	Current Single Rate 7.50%	1% Increase 8.50%
Total Pension Liability	\$ 518,767,716	\$ 463,309,018	\$ 417,118,840
Plan Fiduciary Net Position	<u>589,527,061</u>	<u>589,527,061</u>	<u>589,527,061</u>
Net Pension Liability/(Asset)	\$ (70,759,345)	\$ (126,218,043)	\$ (172,408,221)

Summary of Population Statistics

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	965
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	41
Active Plan Members	<u>624</u>
Total Plan Members	1,630

SECTION F

SUMMARY OF BENEFITS

BRIEF SUMMARY OF BENEFIT PROVISIONS*
DECEMBER 31, 2015

Eligibility	Amount
REGULAR RETIREMENT (no reduction factor for age)	
General: Age 57 with 25 years of service, or age 62 with 10 years of service. AFSCME members only may also retire at age 60 with 20 years of service.	Total service multiplied by: 2.1% of FAC – KMEA – effective 1/1/08 2.1% of FAC – AFSCME – effective 10/2/07 2.1% of FAC – Metro Transit 2.3% of FAC – Exempt members 2.1% of FAC – Other General members–CSO – effective 1/1/08 2.7% of FAC – Public Safety members FAC (final average compensation) – Highest 3 consecutive years out of the last 10.
Public Safety: 25 years of service or age 50 with 10 years of service.	Maximum benefit for Public Safety members is equal to 70.2% of FAC.
EARLY RETIREMENT (age reduction factor used)	
General: Age 55 with 15 years of service.	Computed as a regular retirement but reduced by 4/10 of 1% for each month and fraction of a month by which retirement precedes age 62 if less than 25 years of service or age 57 if 25 or more years of service.
Public Safety: 20 years of service.	2% of final average compensation multiplied by years of credited service.
DEFERRED RETIREMENT	
10 years of service for most members, 5 years for Exempt hired before 9/1/2010, 9 years for AFSCME and 8 years for KMEA hired before 1/1/2009. Benefit begins at age 62 for General employees, and at age 50 for Public Safety employees.	General: Computed as a regular or early retirement but based upon service and final average compensation at termination date. Public Safety: Computed as early retirement.
NON-DUTY DEATH-IN-SERVICE	
10 years of service for most members, 5 years for Exempt hired before 9/1/2010, 9 years for AFSCME and 8 years for KMEA hired before 1/1/2009.	General: Computed as a regular retirement but actuarially reduced in accordance with a 100% joint and survivor election. Public Safety: A benefit of 33-1/3% of final compensation is paid to the surviving spouse. Unmarried children under 18 years of age receive equal shares of 25% of final compensation.
DUTY DEATH-IN-SERVICE	
Payable to the survivors of a member who died in the line of duty.	A benefit of 33-1/3% of final compensation is paid to the surviving spouse. Unmarried children under 18 years of age receive equal shares of 25% of final compensation. Worker's compensation payments are offset.

* This represents a brief summary of Plan provisions. As always official Plan documents, including the Ordinance and any applicable Collective Bargaining Agreements, will ultimately govern the benefits payable from the Plan.

**BRIEF SUMMARY OF BENEFIT PROVISIONS*
DECEMBER 31, 2015 (CONTINUED)**

Eligibility	Amount
NON-DUTY DISABILITY	
10 years of service for most members, 5 years for General Exempt hired before 9/1/2010, 9 years for AFSCME and 8 years for KMEA hired before 1/1/2009.	Computed as regular retirement. Reduced on a dollar-for-dollar basis by amount of worker's compensation, if any.
DUTY DISABILITY	
No age or service requirements.	General: Computed as regular retirement with additional service credit granted from day of actual retirement to date of voluntary retirement eligibility. Public Safety: Computed as regular retirement. During worker's compensation period benefit cannot exceed the difference between final compensation and worker's compensation.
DEATH AFTER RETIREMENT	
Spouse of Public Safety member retired on or after July 1, 1972.	50% of the regular retirement benefit the deceased retiree was receiving.
POST-RETIREMENT BENEFIT INCREASES (Eligibility for PRAs vary by retirement type)	
AFSCME members who retire on and after 10/25/1999.	1% increases compounded annually, beginning 1 year after retirement; 2% compounded annually beginning at age 75.
KMEA members.	1.5% increases compounded annually, beginning the latter of the Retirees 64 th birthday and 1 year after retirement; 2% compounded annually beginning at age 75 (effective in 2002).
Transit Union members.	1% increases compounded annually, beginning 1 year after retirement; 2% compounded annually beginning at age 75.
Public Safety members who retired on and after 1/1/95 with 25 or more years of service.	2% increases compounded annually.
Exempt members.	1.5% increases compounded annually one year after retirement for members who elected to contribute by May 2006.
13TH CHECKS	
Retired by 12/31/1999; retired at least 5 years; have attained age 70 prior to June 1 of the year preceding the periodic payment to be made; had at least 25 years of service with the City; ineligible for post-retirement benefit increases; pension less than \$20,000. Continuation of this program is conditional as described in the ordinance.	The periodic payment described herein shall be made in June every third year, commencing 2001; however, no payment shall be made in any year in which the fund's actuary projects (based upon a valuation of the fund as of December 31 of the prior year) the need for City contributions to the fund (for one or more actuarial grouping) within 10 years of the projection nor if the actuary recommends a contribution by the City (for one or more actuarial grouping) for that year. In the event a periodic payment is not made in a year in which it would otherwise occur (because of the actuary's projection or recommendation), then the payment shall be made in the next year in which no such actuarial projection or recommendation is made. In the event that a periodic payment is so delayed, future periodic payments shall be made every third year thereafter (so long as not prohibited by an actuarial projection or recommendation).

* This represents a brief summary of Plan provisions. As always official Plan documents, including the Ordinance and any applicable Collective Bargaining Agreements, will ultimately govern the benefits payable from the Plan.

BRIEF SUMMARY OF BENEFIT PROVISIONS*
DECEMBER 31, 2015 (CONCLUDED)

Eligibility	Amount
MEMBER CONTRIBUTIONS	
AFSCME members:	1% - effective 10/2/06. If funding % goes below 120% contribution rate reverts to 2%.
Transit Union and KMEA members:	1% of AC.
Exempt members:	1.5% of AC, 3% of AC for Exempt Members hired after 6/1/2006, 3.5% for Exempt Members who signed up for the PRA by May of 2006.
Non-Sworn Public Safety members:	1% of AC.
Sworn Public Safety members:	4.5% of AC. If funding % goes below 120% contribution rate reverts to 6.5%.
CITY CONTRIBUTIONS	
	Actuarially determined amounts, which, together with member contributions, are sufficient to cover both (i) normal costs of the plan, and (ii) financing of unfunded accrued benefit values over a selected period of future years.

** This represents a brief summary of Plan provisions. As always official Plan documents, including the Ordinance and any applicable Collective Bargaining Agreements, will ultimately govern the benefits payable from the Plan.*

SECTION G

ACTUARIAL COST METHOD AND ACTUARIAL ASSUMPTIONS

VALUATION METHODS

The normal cost was computed as follows:

The series of contributions necessary to accumulate the present value at time of retirement of the portion of a member's pension attributable to service likely to be rendered after the valuation date was computed so that each contribution in the series was a constant percentage of the member's year-by-year projected covered compensation. This is the individual entry age normal actuarial cost method.

The accrued liability was computed and financed as follows:

Retirees and Beneficiaries: The discounted value of pensions likely to be paid retirees and beneficiaries was computed using the investment return and mortality assumptions. This amount was financed by applicable accrued assets.

Active and Inactive members: The discounted value of benefits likely to be paid active and inactive members on account of service rendered prior to the valuation date was computed using the assumptions outlined on the following pages. The computed amount was reduced by applicable valuation assets and the remainder (or overfunding) was financed as a level percent-of-payroll over a rolling period of 10 years.

Asset valuation method: Last year's valuation assets are increased by contributions and expected investment income on last year's valuation assets and non-investment net cash flow and reduced by refunds, benefit payments and expenses. To this amount is added the phased-in recognition of investment income. The phased-in recognition is the sum over the five years ending on the valuation date of 20% of the difference between each year's expected return and actual market return. The market value of assets was used for GASB Statements No. 67 and No. 68 reporting purposes and in the projection of Plan Fiduciary Net Position shown in Section H of this report.

ACTUARIAL ASSUMPTIONS USED FOR THE VALUATION

The actuarial assumptions used for this report were based upon the results of an Experience Study for the City of Kalamazoo Employees Retirement System covering the period January 1, 2009 through December 31, 2013. A report dated February 19, 2015 presented the results of this experience study. The actuarial assumptions represent estimates of future experience. Unless otherwise noted the assumptions were first used with the actuarial valuation date of December 31, 2014.

INVESTMENT RETURN. The rate of investment return is compounded annually net of investment expenses.

Investment Return	7.50%
Wage Inflation	3.50%
Price Inflation	2.75%
Spread Between Investment Return and Wage Inflation	4.00%
Spread Between Investment Return and Price Inflation	4.75%

These assumptions are used to equate the value of payments due at different points in time.

INVESTMENT EXPENSES. 0.50% of average valuation assets.

ADMINISTRATIVE EXPENSES. 0.65% of covered member payroll was added to the Normal Cost in anticipation of administrative expenses expected to be paid during the fiscal year.

**ACTUARIAL ASSUMPTIONS USED FOR THE VALUATION
(CONTINUED)**

PAY PROJECTIONS. These assumptions are used to project current pays to those upon which benefits will be based.

The annual rate of pay increases consists of two parts:

- (i) a long-term rate of pay inflation equal to 3.5%.
- (ii) merit and longevity increases which vary according to age or length of service.

These rates are illustrated below.

Years of Service	KMEA	AFSCME	All Exempt	Non-Sworn Public Safety	Transit Union	Public Safety
1	6.0%	8.0%	6.0%	8.0%	7.0%	12.0%
2	5.0	3.0	6.0	7.0	7.0	12.0
3	4.0	3.0	0.5	6.0	6.0	5.5
4	2.0	2.0	0.5	4.0	5.0	4.5
5	1.0	2.0	0.5	3.0	4.0	4.5
6	1.0	1.0	0.3	1.5	0.0	4.0
7	1.0	0.0	0.3	1.5	0.0	4.0
8	1.0	0.0	0.3	1.5	0.0	4.0
9	0.0	0.0	0.3	1.5	0.0	1.5
10	0.0	0.0	0.3	1.5	0.0	1.3
11	0.0	0.0	0.3	0.5	0.0	1.0
12	0.0	0.0	0.3	0.3	0.0	1.0
13	0.0	0.0	0.3	0.3	0.0	0.5
14	0.0	0.0	0.3	0.3	0.0	0.5
thereafter	0.0	0.0	0.3	0.3	0.0	0.5

If the number of active members remains constant and the group demographics do not change, the County payroll is expected to increase 3.50% annually, the base portion of the individual pay increase assumptions. This increasing payroll was recognized in amortizing unfunded actuarial accrued liabilities.

**ACTUARIAL ASSUMPTIONS USED FOR THE VALUATION
(CONTINUED)**

The mortality table used was the RP-2000 Mortality Combined Healthy Tables, projected 20 years with U.S. Projection Scale BB.

Ages	Value at Retirement of \$1 Monthly for Life*		Future Life Expectancy (years)	
	Men	Women	Men	Women
50	\$144.67	\$147.85	32.99	35.59
55	137.49	141.58	28.37	30.90
60	128.51	133.44	23.94	26.34
65	117.58	123.33	19.74	21.98
70	104.59	111.45	15.83	17.93
75	89.73	97.95	12.26	14.25
80	73.73	83.02	9.13	10.95

* Values are before post-retirement increases are reflected.

This assumption is used to measure the probabilities of members dying before retirement and the probabilities of each benefit payment being made after retirement. Rates for disabled members were set forward 7 years.

**ACTUARIAL ASSUMPTIONS USED FOR THE VALUATION
(CONTINUED)**

The rates of retirement used to measure the probability of eligible members retiring during the next year were as follows:

Retirement Ages	KMEA	AFSCME	All Exempt	Non-Sworn Public Safety	Transit Union
55	2%	6%	10%	10%	10%
56	2	7	10	10	10
57	5	10	25	25	25
58	5	7	25	25	25
59	7	6	20	20	20
60	15	30	25	25	25
61	15	20	30	30	30
62	50	60	30	30	30
63	15	25	15	15	15
64	10	25	15	15	15
65	100	100	100	100	100
		Years of Service	Public Safety		
		20	2%		
		21	4		
		22	4		
		23	2		
		24	2		
		25	70		
		26	30		
		27	45		
		28	25		
		29	25		
		30	100		

Retirement probabilities were applied for General and Transit members after both attaining age 55 and completing 15 years of service, or age 62 with 10 years of service (5 years for Exempt hired before 9/1/2010, 9 years for AFSCME and 8 years for KMEA hired before 1/1/2009). AFSCME members are also considered eligible for retirement at age 60 with 20 or more years of service. Retirement probabilities were applied for Public Safety members upon completion of 20 years of service with 100% retirement probability assumed at age 60 with 10 years of service. The assumptions above were first used for the December 31, 2009 valuation.

**ACTUARIAL ASSUMPTIONS USED FOR THE VALUATION
(CONCLUDED)**

Rates of disability were as follows:

Sample Ages	% of Active Members Becoming Disabled Within Next Year	
	Public Safety Metro Transit AFSCME	KMEA Exempt CSO
	20	0.23%
25	0.27	0.04
30	0.32	0.04
35	0.40	0.04
40	0.55	0.10
45	0.76	0.13
50	1.45	0.25
55	2.84	0.45
60	0.00	0.71

Rates of separation from active membership were as shown below (rates do not apply to members eligible to retire 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					
		KMEA	AFSCME	All Exempt	Non-Sworn Public Safety	Transit Union	Public Safety
	0	15.0%	15.0%	15.0%	15.0%	15.0%	6.0%
	1	14.0	14.0	14.0	14.0	14.0	4.0
	2	9.0	9.0	9.0	9.0	9.0	3.0
	3	8.0	8.0	8.0	8.0	8.0	2.5
	4	7.0	7.0	7.0	7.0	7.0	2.5
25	5 or Over	7.4	7.4	7.4	7.4	7.4	2.2
30		5.8	5.8	5.8	5.8	5.8	2.0
35		5.0	5.0	5.0	5.0	5.0	1.4
40		4.0	4.0	4.0	4.0	4.0	1.1
45		3.3	3.3	3.3	3.3	3.3	0.8
50		2.5	2.5	2.5	2.5	2.5	0.6
55		2.0	2.0	2.0	2.0	2.0	0.4
60		2.0	2.0	2.0	2.0	2.0	0.4

The assumptions above were first used for the December 31, 2009 valuation.

MISCELLANEOUS AND TECHNICAL ASSUMPTIONS

Active Member Group Size	The number of active members was assumed to remain constant.
Marriage Assumption	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.
Pay Increase Timing	Was assumed to occur in the middle of the year. This means that the pays reported for the valuation are assumed to be rates of pay on the valuation date.
Decrement Timing	Decrements are assumed to occur at the middle of the fiscal year.
Eligibility Testing	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
Benefit Service	Exact fractional service is used to determine the amount of benefit payable.
Decrement Relativity	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
Decrement Operation	Death-in-service decrement does not operate until member becomes vested. Withdrawal does not operate during retirement eligibility.
Normal Form of Benefit	The assumed normal form of benefit is straight life form. For public safety members, the assumed normal form of benefit is an automatic 50% Joint and Survivor form. 90% of public safety members were assumed to be married for the purposes of this benefit.
Incidence of Contributions	Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made. New entrant normal cost contributions are applied to the funding of new entrant benefits.
Post-Retirement Adjustment Timing	Post-retirement adjustments (PRAs) were assumed to be paid on January 1 of each year for Public Safety and Exempt retirees (beginning the year immediately following retirement for Public Safety retirees and the second year following retirement for Exempt retirees). PRAs were assumed to be paid on the first of the month immediately following the retiree's birthday for all other groups.

**MISCELLANEOUS AND TECHNICAL ASSUMPTIONS
(CONCLUDED)**

**Active Member Pay
Adjustments**

New hire pays were annualized. Pays were adjusted for members on Worker's Compensation or Leave of Absence for part of the valuation year.

SECTION H

CALCULATION OF THE SINGLE DISCOUNT RATE

CALCULATION OF THE SINGLE DISCOUNT RATE

GASB Statement No. 67 includes a specific requirement for the discount rate that is used for the purpose of the measurement of the Total Pension Liability. This rate considers the ability of the fund to meet benefit obligations in the future. To make this determination, employer contributions, employee contributions, benefit payments, expenses and investment returns are projected into the future. The Plan Net Position (assets) in future years can then be determined and compared to its obligation to make benefit payments in those years. As long as assets are projected to be on hand in a future year, the assumed valuation discount rate is used. In years where assets are not projected to be sufficient to meet benefit payments, the use of a municipal bond rate is required, as described in the following paragraph.

The Single Discount Rate (SDR) is equivalent to applying these two rates to the benefits that are projected to be paid during the different time periods. The SDR reflects (1) the long-term expected rate of return on pension plan investments (during the period in which the fiduciary net position is projected to be sufficient to pay benefits) and (2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating (which is published by the Federal Reserve) as of the measurement date (to the extent that the contributions for use with the long-term expected rate of return are not met).

For the purpose of this valuation, the expected rate of return on pension plan investments is 7.50%; the municipal bond rate is 3.57%; and the resulting Single Discount Rate is 7.50%.

The tables in this section provide background for the development of the Single Discount Rate.

The **Projection of Contributions** table shows the development of expected contributions in future years. Normal Cost contributions for future hires are not included (nor are their liabilities).

The **Projection of Plan Fiduciary Net Position** table shows the development of expected asset levels in future years.

The **Present Values of Projected Benefit Payments** table shows the development of the Single Discount Rate (SDR). It breaks down the benefit payments into present values for funded and unfunded portions and shows the equivalent total at the SDR.

**SINGLE DISCOUNT RATE DEVELOPMENT
PROJECTION OF CONTRIBUTIONS**

Year	Payroll for Current Employees	Contributions from Current Employees	Normal Cost and Expense		UAL Contributions	Total Contributions
				Contributions		
1	\$ 35,971,965	\$ 1,029,571	\$	5,231,704	\$ (5,231,704)	\$ 1,029,571
2	34,729,173	996,230		5,053,942	(5,053,942)	996,230
3	33,562,316	968,694		4,896,111	(4,896,111)	968,694
4	32,620,974	949,674		4,776,983	(4,776,983)	949,674
5	31,585,307	924,647		4,634,663	(4,634,663)	924,647
6	30,165,595	888,280		4,432,249	(4,432,249)	888,280
7	28,562,634	849,036		4,206,478	(4,206,478)	849,036
8	26,657,124	794,434		3,916,305	(3,916,305)	794,434
9	24,722,981	733,739		3,607,596	(3,607,596)	733,739
10	23,305,688	693,034		3,397,458	(3,397,458)	693,034
11	22,046,740	658,751		3,217,770	(3,217,770)	658,751
12	20,837,526	627,268		3,049,136	(3,049,136)	627,268
13	19,694,934	598,738		2,893,055	(2,893,055)	598,738
14	18,295,057	558,358		2,685,875	(2,685,875)	558,358
15	16,716,885	511,040		2,448,144	(2,448,144)	511,040
16	14,938,439	453,015		2,166,040	(2,166,040)	453,015
17	12,958,761	384,500		1,836,864	(1,836,864)	384,500
18	11,455,568	336,475		1,600,039	(1,600,039)	336,475
19	10,213,143	299,803		1,419,006	(1,419,006)	299,803
20	8,836,281	257,386		1,218,349	(1,218,349)	257,386
21	7,549,020	215,569		1,024,065	(1,024,065)	215,569
22	5,868,869	153,387		739,535	(739,535)	153,387
23	4,343,371	98,535		487,054	(487,054)	98,535
24	3,474,046	70,951		357,708	(357,708)	70,951
25	2,867,856	53,622		276,182	(276,182)	53,622
26	2,410,768	42,264		221,194	(221,194)	42,264
27	1,967,247	30,865		166,562	(166,562)	30,865
28	1,576,049	22,004		123,086	(123,086)	22,004
29	1,303,727	17,310		98,286	(98,286)	17,310
30	1,073,584	13,839		78,823	(78,823)	13,839
31	877,735	11,161		62,974	(62,974)	11,161
32	713,575	8,869		50,376	(50,376)	8,869
33	557,907	6,659		38,490	(38,490)	6,659
34	418,085	4,880		28,214	(28,214)	4,880
35	310,825	3,622		20,677	(20,677)	3,622
36	228,928	2,603		15,042	(15,042)	2,603
37	145,158	1,619		9,308	(9,308)	1,619
38	87,336	979		5,498	(5,498)	979
39	56,411	614		3,570	(3,570)	614
40	25,263	253		1,631	(1,631)	253
41	9,403	94		612	(612)	94
42	3,015	30		200	(200)	30
43	-	-		-	-	-
44	-	-		-	-	-
45	-	-		-	-	-
46	-	-		-	-	-
47	-	-		-	-	-
48	-	-		-	-	-
49	-	-		-	-	-
50	-	-		-	-	-

SINGLE DISCOUNT RATE DEVELOPMENT
PROJECTION OF PLAN FIDUCIARY NET POSITION

Year	Projected Beginning Plan Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Administrative Expenses	Projected Investment Earnings at 7.50%	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(e)	(f)=(a)+(b)-(c)-(d)+(e)
1	\$ 589,527,061	\$ 1,029,571	\$ 28,856,083	\$ 233,818	\$ 43,181,290	\$ 604,648,022
2	604,648,022	996,230	29,913,224	225,740	44,275,506	619,780,793
3	619,780,793	968,694	30,972,125	218,155	45,370,738	634,929,945
4	634,929,945	949,674	31,857,404	212,036	46,473,852	650,284,032
5	650,284,032	924,647	32,833,211	205,304	47,588,803	665,758,967
6	665,758,967	888,280	33,974,008	196,076	48,706,418	681,183,581
7	681,183,581	849,036	35,130,695	185,657	49,819,611	696,535,875
8	696,535,875	794,434	36,487,192	173,271	50,919,529	711,589,374
9	711,589,374	733,739	37,888,914	160,699	51,995,155	726,268,655
10	726,268,655	693,034	38,977,486	151,487	53,054,858	740,887,576
11	740,887,576	658,751	39,963,570	143,304	54,114,007	755,553,460
12	755,553,460	627,268	40,907,852	135,444	55,178,308	770,315,740
13	770,315,740	598,738	41,738,162	128,017	56,254,128	785,302,427
14	785,302,427	558,358	42,668,603	118,918	57,342,717	800,415,980
15	800,415,980	511,040	43,664,933	108,660	58,438,182	815,591,608
16	815,591,608	453,015	44,732,553	97,100	59,535,331	830,750,302
17	830,750,302	384,500	45,917,642	84,232	60,626,547	845,759,474
18	845,759,474	336,475	46,716,761	74,461	61,721,401	861,026,129
19	861,026,129	299,803	47,275,272	66,385	62,844,781	876,829,056
20	876,829,056	257,386	47,837,386	57,436	64,008,070	893,199,690
21	893,199,690	215,569	48,258,361	49,069	65,219,135	910,326,964
22	910,326,964	153,387	48,817,672	38,148	66,481,198	928,105,729
23	928,105,729	98,535	49,193,872	28,232	67,799,098	946,781,259
24	946,781,259	70,951	49,082,435	22,581	69,203,059	966,950,253
25	966,950,253	53,622	48,736,728	18,641	70,727,970	988,976,476
26	988,976,476	42,264	48,201,010	15,670	72,399,354	1,013,201,414
27	1,013,201,414	30,865	47,571,843	12,787	74,239,078	1,039,886,727
28	1,039,886,727	22,004	46,835,108	10,244	76,267,372	1,069,330,752
29	1,069,330,752	17,310	45,951,356	8,474	78,508,108	1,101,896,340
30	1,101,896,340	13,839	45,008,259	6,978	80,985,181	1,137,880,123
31	1,137,880,123	11,161	43,991,815	5,705	83,721,341	1,177,615,105
32	1,177,615,105	8,869	42,902,604	4,638	86,741,526	1,221,458,257
33	1,221,458,257	6,659	41,776,438	3,626	90,071,186	1,269,756,039
34	1,269,756,039	4,880	40,613,217	2,718	93,736,320	1,322,881,304
35	1,322,881,304	3,622	39,393,365	2,020	97,765,612	1,381,255,154
36	1,381,255,154	2,603	38,132,591	1,488	102,190,057	1,445,313,735
37	1,445,313,735	1,619	36,865,422	944	107,041,094	1,515,490,082
38	1,515,490,082	979	35,560,107	568	112,352,375	1,592,282,761
39	1,592,282,761	614	34,222,270	367	118,161,081	1,676,221,819
40	1,676,221,819	253	32,874,087	164	124,506,148	1,767,853,969
41	1,767,853,969	94	31,504,982	61	131,428,970	1,867,777,991
42	1,867,777,991	30	30,124,652	20	138,974,098	1,976,627,447
43	1,976,627,447	-	28,739,186	-	147,188,822	2,095,077,083
44	2,095,077,083	-	27,351,296	-	156,123,650	2,223,849,437
45	2,223,849,437	-	25,965,628	-	165,832,600	2,363,716,408
46	2,363,716,408	-	24,585,366	-	176,373,447	2,515,504,489
47	2,515,504,489	-	23,214,530	-	187,808,030	2,680,097,989
48	2,680,097,989	-	21,857,123	-	200,202,525	2,858,443,391
49	2,858,443,391	-	20,517,753	-	213,627,748	3,051,553,386
50	3,051,553,386	-	19,201,543	-	228,159,463	3,260,511,307

SINGLE DISCOUNT RATE DEVELOPMENT
PROJECTION OF PLAN FIDUCIARY NET POSITION (CONCLUDED)

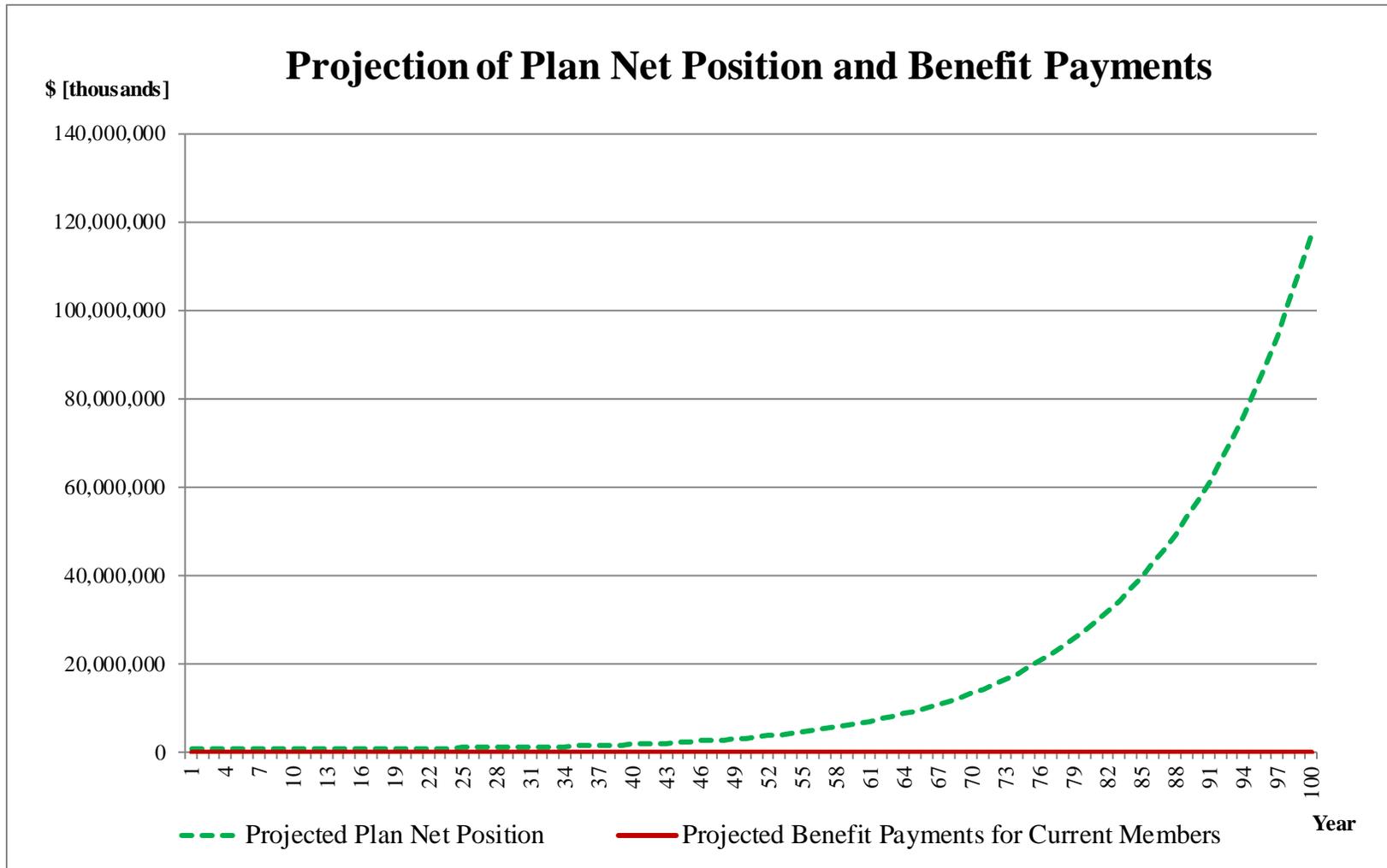
Year	Projected Beginning Plan Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Administrative Expenses	Projected Investment Earnings at 7.50%	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(e)	(f)=(a)+(b)-(c)-(d)+(e)
51	\$ 3,260,511,307	\$ -	\$ 17,913,202	\$ -	\$ 243,878,747	\$ 3,486,476,852
52	3,486,476,852	-	16,656,162	-	260,872,450	3,730,693,139
53	3,730,693,139	-	15,432,784	-	279,233,718	3,994,494,073
54	3,994,494,073	-	14,244,569	-	299,062,541	4,279,312,046
55	4,279,312,046	-	13,092,538	-	320,466,309	4,586,685,816
56	4,586,685,816	-	11,977,678	-	343,560,393	4,918,268,532
57	4,918,268,532	-	10,900,655	-	368,468,755	5,275,836,632
58	5,275,836,632	-	9,862,390	-	395,324,594	5,661,298,837
59	5,661,298,837	-	8,864,404	-	424,271,007	6,076,705,439
60	6,076,705,439	-	7,909,057	-	455,461,680	6,524,258,063
61	6,524,258,063	-	6,999,787	-	489,061,608	7,006,319,884
62	7,006,319,884	-	6,140,766	-	525,247,876	7,525,426,994
63	7,525,426,994	-	5,336,334	-	564,210,530	8,084,301,190
64	8,084,301,190	-	4,590,627	-	606,153,553	8,685,864,116
65	8,685,864,116	-	3,907,149	-	651,295,939	9,333,252,906
66	9,333,252,906	-	3,288,616	-	699,872,874	10,029,837,165
67	10,029,837,165	-	2,736,618	-	752,137,019	10,779,237,567
68	10,779,237,567	-	2,251,308	-	808,359,920	11,585,346,178
69	11,585,346,178	-	1,831,124	-	868,833,538	12,452,348,592
70	12,452,348,592	-	1,472,808	-	933,871,913	13,384,747,696
71	13,384,747,696	-	1,171,711	-	1,003,812,932	14,387,388,917
72	14,387,388,917	-	922,277	-	1,079,020,209	15,465,486,849
73	15,465,486,849	-	718,377	-	1,159,885,062	16,624,653,534
74	16,624,653,534	-	553,819	-	1,246,828,622	17,870,928,337
75	17,870,928,337	-	422,573	-	1,340,304,065	19,210,809,829
76	19,210,809,829	-	319,035	-	1,440,798,990	20,651,289,784
77	20,651,289,784	-	238,183	-	1,548,837,963	22,199,889,564
78	22,199,889,564	-	175,711	-	1,664,985,247	23,864,699,101
79	23,864,699,101	-	128,007	-	1,789,847,719	25,654,418,813
80	25,654,418,813	-	92,027	-	1,924,078,022	27,578,404,808
81	27,578,404,808	-	65,270	-	2,068,377,957	29,646,717,496
82	29,646,717,496	-	45,661	-	2,223,502,131	31,870,173,965
83	31,870,173,965	-	31,497	-	2,390,261,888	34,260,404,356
84	34,260,404,356	-	21,427	-	2,569,529,538	36,829,912,467
85	36,829,912,467	-	14,376	-	2,762,242,906	39,592,140,997
86	39,592,140,997	-	9,512	-	2,969,410,224	42,561,541,709
87	42,561,541,709	-	6,203	-	3,192,115,400	45,753,650,906
88	45,753,650,906	-	3,985	-	3,431,523,671	49,185,170,592
89	49,185,170,592	-	2,519	-	3,688,887,702	52,874,055,775
90	52,874,055,775	-	1,570	-	3,965,554,125	56,839,608,331
91	56,839,608,331	-	961	-	4,262,970,589	61,102,577,959
92	61,102,577,959	-	574	-	4,582,693,326	65,685,270,711
93	65,685,270,711	-	333	-	4,926,395,291	70,611,665,669
94	70,611,665,669	-	186	-	5,295,874,918	75,907,540,401
95	75,907,540,401	-	100	-	5,693,065,526	81,600,605,828
96	81,600,605,828	-	50	-	6,120,045,435	87,720,651,213
97	87,720,651,213	-	25	-	6,579,048,840	94,299,700,029
98	94,299,700,029	-	14	-	7,072,477,502	101,372,177,516
99	101,372,177,516	-	10	-	7,602,913,313	108,975,090,820
100	108,975,090,820	-	-	-	8,173,131,811	117,148,222,631

**SINGLE DISCOUNT RATE DEVELOPMENT
PRESENT VALUES OF PROJECTED BENEFIT PAYMENTS**

Year	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of Funded Benefit Payments using Expected Return Rate (v)	Present Value of Unfunded Benefit Payments using Municipal Bond Rate (vf)	Present Value of Benefit Payments using Single Discount Rate (sdr)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v ^{(a)-.5}	(g)=(e)*vf ^{(a)-.5}	(h)=((c)/(1+sdr)) ^{(a)-.5}
1	\$ 589,527,061	\$ 28,856,083	\$ 28,856,083	\$ -	\$ 27,831,278	\$ -	\$ 27,831,278
2	604,648,022	29,913,224	29,913,224	-	26,838,024	-	26,838,024
3	619,780,793	30,972,125	30,972,125	-	25,849,363	-	25,849,363
4	634,929,945	31,857,404	31,857,404	-	24,733,225	-	24,733,225
5	650,284,032	32,833,211	32,833,211	-	23,712,387	-	23,712,387
6	665,758,967	33,974,008	33,974,008	-	22,824,445	-	22,824,445
7	681,183,581	35,130,695	35,130,695	-	21,954,913	-	21,954,913
8	696,535,875	36,487,192	36,487,192	-	21,211,773	-	21,211,773
9	711,589,374	37,888,914	37,888,914	-	20,489,918	-	20,489,918
10	726,268,655	38,977,486	38,977,486	-	19,608,005	-	19,608,005
11	740,887,576	39,963,570	39,963,570	-	18,701,455	-	18,701,455
12	755,553,460	40,907,852	40,907,852	-	17,807,762	-	17,807,762
13	770,315,740	41,738,162	41,738,162	-	16,901,588	-	16,901,588
14	785,302,427	42,668,603	42,668,603	-	16,072,897	-	16,072,897
15	800,415,980	43,664,933	43,664,933	-	15,300,657	-	15,300,657
16	815,591,608	44,732,553	44,732,553	-	14,581,174	-	14,581,174
17	830,750,302	45,917,642	45,917,642	-	13,923,227	-	13,923,227
18	845,759,474	46,716,761	46,716,761	-	13,177,244	-	13,177,244
19	861,026,129	47,275,272	47,275,272	-	12,404,448	-	12,404,448
20	876,829,056	47,837,386	47,837,386	-	11,676,223	-	11,676,223
21	893,199,690	48,258,361	48,258,361	-	10,957,186	-	10,957,186
22	910,326,964	48,817,672	48,817,672	-	10,310,865	-	10,310,865
23	928,105,729	49,193,872	49,193,872	-	9,665,416	-	9,665,416
24	946,781,259	49,082,435	49,082,435	-	8,970,718	-	8,970,718
25	966,950,253	48,736,728	48,736,728	-	8,286,078	-	8,286,078
26	988,976,476	48,201,010	48,201,010	-	7,623,252	-	7,623,252
27	1,013,201,414	47,571,843	47,571,843	-	6,998,834	-	6,998,834
28	1,039,886,727	46,835,108	46,835,108	-	6,409,716	-	6,409,716
29	1,069,330,752	45,951,356	45,951,356	-	5,850,017	-	5,850,017
30	1,101,896,340	45,008,259	45,008,259	-	5,330,188	-	5,330,188
31	1,137,880,123	43,991,815	43,991,815	-	4,846,338	-	4,846,338
32	1,177,615,105	42,902,604	42,902,604	-	4,396,601	-	4,396,601
33	1,221,458,257	41,776,438	41,776,438	-	3,982,505	-	3,982,505
34	1,269,756,039	40,613,217	40,613,217	-	3,601,503	-	3,601,503
35	1,322,881,304	39,393,365	39,393,365	-	3,249,609	-	3,249,609
36	1,381,255,154	38,132,591	38,132,591	-	2,926,145	-	2,926,145
37	1,445,313,735	36,865,422	36,865,422	-	2,631,542	-	2,631,542
38	1,515,490,082	35,560,107	35,560,107	-	2,361,270	-	2,361,270
39	1,592,282,761	34,222,270	34,222,270	-	2,113,893	-	2,113,893
40	1,676,221,819	32,874,087	32,874,087	-	1,888,945	-	1,888,945
41	1,767,853,969	31,504,982	31,504,982	-	1,683,978	-	1,683,978
42	1,867,777,991	30,124,652	30,124,652	-	1,497,858	-	1,497,858
43	1,976,627,447	28,739,186	28,739,186	-	1,329,275	-	1,329,275
44	2,095,077,083	27,351,296	27,351,296	-	1,176,819	-	1,176,819
45	2,223,849,437	25,965,628	25,965,628	-	1,039,255	-	1,039,255
46	2,363,716,408	24,585,366	24,585,366	-	915,359	-	915,359
47	2,515,504,489	23,214,530	23,214,530	-	804,019	-	804,019
48	2,680,097,989	21,857,123	21,857,123	-	704,192	-	704,192
49	2,858,443,391	20,517,753	20,517,753	-	614,921	-	614,921
50	3,051,553,386	19,201,543	19,201,543	-	535,325	-	535,325

SINGLE DISCOUNT RATE DEVELOPMENT
PRESENT VALUES OF PROJECTED BENEFIT PAYMENTS (CONCLUDED)

Year	Projected		Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of	Present Value of	Present Value of
	Beginning Plan Net Position	Projected Benefit Payments			Funded Benefit Payments using Expected Return Rate (v)	Unfunded Benefit Payments using Municipal Bond Rate (vf)	Benefit Payments using Single Discount Rate (sdr)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v ^{(a)-5}	(g)=(e)*vf ^{(a)-5}	(h)=((c)/(1+sdr) ^{(a)-5})
51	\$ 3,260,511,307	\$ 17,913,202	\$ 17,913,202	\$ -	\$ 464,564	\$ -	\$ 464,564
52	3,486,476,852	16,656,162	16,656,162	-	401,827	-	401,827
53	3,730,693,139	15,432,784	15,432,784	-	346,338	-	346,338
54	3,994,494,073	14,244,569	14,244,569	-	297,370	-	297,370
55	4,279,312,046	13,092,538	13,092,538	-	254,251	-	254,251
56	4,586,685,816	11,977,678	11,977,678	-	216,373	-	216,373
57	4,918,268,532	10,900,655	10,900,655	-	183,178	-	183,178
58	5,275,836,632	9,862,390	9,862,390	-	154,168	-	154,168
59	5,661,298,837	8,864,404	8,864,404	-	128,900	-	128,900
60	6,076,705,439	7,909,057	7,909,057	-	106,985	-	106,985
61	6,524,258,063	6,999,787	6,999,787	-	88,079	-	88,079
62	7,006,319,884	6,140,766	6,140,766	-	71,879	-	71,879
63	7,525,426,994	5,336,334	5,336,334	-	58,105	-	58,105
64	8,084,301,190	4,590,627	4,590,627	-	46,498	-	46,498
65	8,685,864,116	3,907,149	3,907,149	-	36,814	-	36,814
66	9,333,252,906	3,288,616	3,288,616	-	28,824	-	28,824
67	10,029,837,165	2,736,618	2,736,618	-	22,313	-	22,313
68	10,779,237,567	2,251,308	2,251,308	-	17,075	-	17,075
69	11,585,346,178	1,831,124	1,831,124	-	12,919	-	12,919
70	12,452,348,592	1,472,808	1,472,808	-	9,666	-	9,666
71	13,384,747,696	1,171,711	1,171,711	-	7,154	-	7,154
72	14,387,388,917	922,277	922,277	-	5,238	-	5,238
73	15,465,486,849	718,377	718,377	-	3,795	-	3,795
74	16,624,653,534	553,819	553,819	-	2,722	-	2,722
75	17,870,928,337	422,573	422,573	-	1,932	-	1,932
76	19,210,809,829	319,035	319,035	-	1,357	-	1,357
77	20,651,289,784	238,183	238,183	-	942	-	942
78	22,199,889,564	175,711	175,711	-	647	-	647
79	23,864,699,101	128,007	128,007	-	438	-	438
80	25,654,418,813	92,027	92,027	-	293	-	293
81	27,578,404,808	65,270	65,270	-	193	-	193
82	29,646,717,496	45,661	45,661	-	126	-	126
83	31,870,173,965	31,497	31,497	-	81	-	81
84	34,260,404,356	21,427	21,427	-	51	-	51
85	36,829,912,467	14,376	14,376	-	32	-	32
86	39,592,140,997	9,512	9,512	-	20	-	20
87	42,561,541,709	6,203	6,203	-	12	-	12
88	45,753,650,906	3,985	3,985	-	7	-	7
89	49,185,170,592	2,519	2,519	-	4	-	4
90	52,874,055,775	1,570	1,570	-	2	-	2
91	56,839,608,331	961	961	-	1	-	1
92	61,102,577,959	574	574	-	1	-	1
93	65,685,270,711	333	333	-	0	-	0
94	70,611,665,669	186	186	-	0	-	0
95	75,907,540,401	100	100	-	0	-	0
96	81,600,605,828	50	50	-	0	-	0
97	87,720,651,213	25	25	-	0	-	0
98	94,299,700,029	14	14	-	0	-	0
99	101,372,177,516	10	10	-	0	-	0
100	108,975,090,820	-	-	-	-	-	-
Totals	\$ 511,272,801	\$ -	\$ -	\$ -	\$ 511,272,801	\$ -	\$ 511,272,800



SECTION I
GLOSSARY OF TERMS

GLOSSARY OF TERMS

<i>Actuarial Accrued Liability (AAL)</i>	The AAL is the difference between the actuarial present value of all benefits and the actuarial value of future normal costs. The definition comes from the fundamental equation of funding which states that the present value of all benefits is the sum of the Actuarial Accrued Liability and the present value of future normal costs. The AAL may also be referred to as "accrued liability" or "actuarial liability."
<i>Actuarial Assumptions</i>	These assumptions are estimates of future experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and compensation increases. Actuarial assumptions are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (compensation increases, payroll growth, inflation and investment return) consist of an underlying real rate of return plus an assumption for a long-term average rate of inflation.
<i>Accrued Service</i>	Service credited under the system which was rendered before the date of the actuarial valuation.
<i>Actuarial Equivalent</i>	A single amount or series of amounts of equal actuarial value to another single amount or series of amounts, computed on the basis of appropriate actuarial assumptions.
<i>Actuarial Cost Method</i>	A mathematical budgeting procedure for allocating the dollar amount of the actuarial present value of the pension trust benefits between future normal cost and actuarial accrued liability. The actuarial cost method may also be referred to as the actuarial funding method.
<i>Actuarial Gain (Loss)</i>	The difference in liabilities between actual experience and expected experience during the period between two actuarial valuations is the gain (loss) on the accrued liabilities.
<i>Actuarial Present Value (APV)</i>	The amount of funds currently required to provide a payment or series of payments in the future. The present value is determined by discounting future payments at predetermined rates of interest and probabilities of payment.
<i>Actuarial Valuation</i>	The actuarial valuation report determines, as of the actuarial valuation date, the service cost, total pension liability, and related actuarial present value of projected benefit payments for pensions.
<i>Actuarial Valuation Date</i>	The date as of which an actuarial valuation is performed.
<i>Actuarially Determined Contribution (ADC) or Annual Required Contribution (ARC)</i>	A calculated contribution into a defined benefit pension plan for the reporting period, most often determined based on the funding policy of the plan. Typically the Actuarially Determined Contribution has a normal cost payment and an amortization payment.

GLOSSARY OF TERMS

<i>Amortization Payment</i>	The amortization payment is the periodic payment required to pay off an interest-discounted amount with payments of interest and principal.
<i>Amortization Method</i>	The method used to determine the periodic amortization payment may be a level dollar amount, or a level percent of pay amount. The period will typically be expressed in years, and the method will either be “open” (meaning, reset each year) or “closed” (the number of years remaining will decline each year).
<i>Cost-of-Living Adjustments</i>	Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.
<i>Cost-Sharing Multiple-Employer Defined Benefit Pension Plan (cost-sharing pension plan)</i>	A multiple-employer defined benefit pension plan in which the pension obligations to the employees of more than one employer are pooled and pension plan assets can be used to pay the benefits of the employees of any employer that provides pensions through the pension plan.
<i>Covered-Employee Payroll</i>	The payroll of employees that are provided with pensions through the pension plan.
<i>Deferred Retirement Option Program (DROP)</i>	A program that permits a plan member to elect a calculation of benefit payments based on service credits and salary, as applicable, as of the DROP entry date. The plan member continues to provide service to the employer and is paid for the service by the employer after the DROP entry date; however, the pensions that would have been paid to the plan member are credited to an individual member account within the defined benefit pension plan until the end of the DROP period. Other variations for DROP exist and will be more fully detailed in the plan provision section of the valuation report.
<i>Deferred Inflows and Outflows</i>	The deferred inflows and outflows of pension resources are amounts used under GASB Statement No. 68 in developing the annual pension expense. Deferred inflows and outflows arise with differences between expected and actual experiences; changes of assumptions. The portion of these amounts not included in pension expense should be included in the deferred inflows or outflows of resources.
<i>Discount Rate</i>	For GASB purposes, the discount rate is the single rate of return that results in the present value of all projected benefit payments to be equal to the sum of the funded and unfunded projected benefit payments, specifically: <ol style="list-style-type: none"> 1. The benefit payments to be made while the pension plans’ fiduciary net position is projected to be greater than the benefit payments that are projected to be made in the period; and 2. The present value of the benefit payments not in (1) above, discounted using the municipal bond rate.

GLOSSARY OF TERMS

<i>Entry Age Actuarial Cost Method (EAN)</i>	The EAN is a cost method for allocating the costs of the plan between the normal cost and the accrued liability. The actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis (either level dollar or level percent of pay) over the earnings or service of the individual between entry age and assumed exit ages(s). The portion of the actuarial present value allocated to a valuation year is the normal cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future normal costs is the actuarial accrued liability. The sum of the accrued liability plus the present value of all future normal costs is the present value of all benefits.
<i>GASB</i>	The Governmental Accounting Standards Board is an organization that exists in order to promulgate accounting standards for governmental entities.
<i>Fiduciary Net Position</i>	The fiduciary net position is the market value of the assets of the trust dedicated to the defined benefit provisions.
<i>Long-Term Expected Rate of Return</i>	The long-term rate of return is the expected return to be earned over the entire trust portfolio based on the asset allocation of the portfolio.
<i>Money-Weighted Rate of Return</i>	The money-weighted rate of return is a method of calculating the returns that adjusts for the changing amounts actually invested. For purposes of GASB Statement No. 67, money-weighted rate of return is calculated as the internal rate of return on pension plan investments, net of pension plan investment expense.
<i>Multiple-Employer Defined Benefit Pension Plan</i>	A multiple-employer plan is a defined benefit pension plan that is used to provide pensions to the employees of more than one employer.
<i>Municipal Bond Rate</i>	The Municipal Bond Rate is the discount rate to be used for those benefit payments that occur after the assets of the trust have been depleted.
<i>Net Pension Liability (NPL)</i>	The NPL is the liability of employers and non-employer contributing entities to plan members for benefits provided through a defined benefit pension plan.
<i>Non-Employer Contributing Entities</i>	Non-employer contributing entities are entities that make contributions to a pension plan that is used to provide pensions to the employees of other entities. For purposes of the GASB accounting statements, plan members are not considered non-employer contributing entities.
<i>Normal Cost</i>	The portion of the actuarial present value allocated to a valuation year is called the normal cost. For purposes of application to the requirements of this Statement, the term normal cost is the equivalent of service cost.

GLOSSARY OF TERMS

<i>Other Postemployment Benefits (OPEB)</i>	All postemployment benefits other than retirement income (such as death benefits, life insurance, disability, and long-term care) that are provided separately from a pension plan, as well as postemployment healthcare benefits regardless of the manner in which they are provided. Other post-employment benefits do not include termination benefits.
<i>Real Rate of Return</i>	The real rate of return is the rate of return on an investment after adjustment to eliminate inflation.
<i>Service Cost</i>	The service cost is the portion of the actuarial present value of projected benefit payments that is attributed to a valuation year.
<i>Total Pension Expense</i>	The total pension expense is the sum of the following items that are recognized at the end of the employer's fiscal year: <ol style="list-style-type: none"> 1. Service Cost 2. Interest on the Total Pension Liability 3. Current-Period Benefit Changes 4. Employee Contributions (made negative for addition here) 5. Projected Earnings on Plan Investments (made negative for addition here) 6. Pension Plan Administrative Expense 7. Other Changes in Plan Fiduciary Net Position 8. Recognition of Outflow (Inflow) of Resources due to Liabilities 9. Recognition of Outflow (Inflow) of Resources due to Assets
<i>Total Pension Liability (TPL)</i>	The TPL is the portion of the actuarial present value of projected benefit payments that is attributed to past periods of member service.
<i>Unfunded Actuarial Accrued Liability (UAAL)</i>	The UAAL is the difference between actuarial accrued liability and valuation assets.
<i>Valuation Assets</i>	The valuation assets are the assets used in determining the unfunded liability of the plan. For purposes of GASB Statement Nos. 67 and 68, the valuation assets are equal to the market value of assets.



May 16, 2016

Mr. Thomas C. Skrobola
Director of Management Services/CFO
City of Kalamazoo
241 West South Street
Kalamazoo, Michigan 49007-4796

Dear Tom,

Please find enclosed an electronic copy of the GASB Statement Nos. 67 and 68 Accounting and Financing Reporting Schedules report of the City of Kalamazoo Employees Retirement System.

We will be happy to meet with the Board to discuss the results of this report.

Sincerely yours,



James D. Anderson, FSA, EA, MAAA

JDA:sc
Enclosures