City of Grand Blanc

County of Genesee

State of Michigan

Amended and Restated
Comprehensive Financial Plan
For Pension and
Other Post-Employment Benefits
August 10, 2016

TABLE OF CONTENTS

Section **Pages**

Comprehensive Financial Plan

This Comprehensive Financial Plan (the "Plan") is being prepared pursuant to Act 34, Public Acts of Michigan, 2001, as amended ("Act 34"). In accordance with Act 34, the City of Grand Blanc (the "City") has chosen to issue bonds to finance the City's unfunded pension liability, as further described in this Plan.

The City qualifies to issue such bonds as the City meets the minimum bond rating requirement of Act 34, as of February 1, 2016 has closed its defined benefit pension plan for new employees, has established a defined contribution plan for such employees not eligible to participate in the defined benefit plan, and has the legal capacity to issue bonds in the required amount. The City's outstanding limited tax general obligation bond rating of "AA" from Standard & Poor's Rating Services was affirmed on June 13, 2016 in association with the City's proposed issuance of General Obligation Limited Tax Pension Obligation Bonds (POBs). A copy of the rating rationale is included in Appendix E herein.

As noted above, the City has the legal debt capacity to issue the POBs, as computed below:

LEGAL DEBT MARGIN - July 14, 2016			
2016 State Equalized Value (SEV)			$255,249,000
Legal Debt Limit - 10% of SEV			$25,524,900
Total Bonded Debt Outstanding		$4,862,226	
Less:	MTF Bonds	(175,000)	
	Revenue Bonds	(487,216)	
Amount Subject to Debt Limitation			4,200,010
LEGAL DEBT MARGIN AVAILABLE			**$21,324,890**

Source: Genesee County Equalization Department and Municipal Advisory Council of Michigan

The City proposes to issue bonds in the amount not to exceed $5,900,000 to fund its pension obligation, which is well within the City's legal debt capacity, leaving over 60% of the City's current bonding capacity remaining. Additionally, $3,348,098 of the City's outstanding debt was issued for the purpose of water or sewer improvements.

Pension Plans

The City of Grand Blanc currently participates in the Municipal Employees' Retirement System of Michigan ("MERS"), an agent multiple-employer defined benefit pension plan that covers all full-time employees and certain part-time employees of the City. As of the most recent actuarial report dated December 31, 2015, membership for the defined benefit plan consisted of 19 retirees and beneficiaries currently receiving benefits, 2 vested former members and 29 active employees. The City's defined benefit plan is comprised of 4 divisions.

Over the past ten years, the City's annual required contribution for its defined benefit pension plan increased from $229,802 in 2006 to $284,656 in 2015, as shown below.

Defined Benefit Contributions			
Year Ended	Annual Required Contribution	Annual Contribution	Percentage of ARC Contributed
12/31/2006	$229,802	$229,802	100.00%
12/31/2007	237,413	237,413	100.00%
12/31/2008	236,887	236,887	100.00%
12/31/2009	244,692	244,692	100.00%
12/31/2010	239,650	239,650	100.00%
12/31/2011	245,261	245,261	100.00%
12/31/2012	232,209	234,681	101.06%
12/31/2013	232,481	234,276	100.77%
12/31/2014	248,810	248,810	100.00%
12/31/2015	284,656	284,656	100.00%

These increases were largely attributed to changes in the assumptions used by MERS as well as a 25% investment loss incurred in 2008.

Defined Benefit Plan

As of December 31, 2015, the date of the most recent actuarial valuation, membership in the Act 34 defined benefit plan consisted of 50 members as follows:

- 29 active employees
- 2 vested former members
- 19 retirees and beneficiaries currently receiving benefits

As of December 31, 2015, the most recent actuarial valuation date, the defined benefit plan was 60.0% funded. As of December 31, 2014 and December 31, 2013, the defined benefit plan funded percentage was 65.8% and 69.3%, respectively. The decrease in funding percentage is attributable to a number of items including MERS changing several of the actuarial assumptions effective with the December 31, 2015 actuarial report, as well as recognized losses since the prior valuations. MERS now employs a 5 year asset smoothing (as compared to the prior 10-year asset smoothing method for investment gains and losses), which applied to the investment loss of 25.6% incurred in 2008. As of December 31, 2015, the actuarial accrued liability for benefits for the Act 34 defined benefit plan was $14,112,144 and the actuarial value of assets was $8,461,102, resulting in an unfunded liability of $5,651,042 for the defined benefit plan. The covered payroll (annual payroll for active employees covered by the plan, excluding Divisions 20 and 50) was $1,856,583 and the ratio for the unfunded actuarial accrued liability to the covered payroll was 304.4%. Further detail on the City's historical pension funding is provided below.

Historical Pension Funding						
Actuarial Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liability (AAL)	Unfunded AAL	Funded Ratio	Covered Payroll	UAAL as % of Covered Payroll
12/31/2010	$7,366,783	$9,824,969	$2,458,186	75.0%	$1,995,518	123.2%
12/31/2011	7,779,467	10,853,966	3,074,499	71.7%	1,879,121	163.6%
12/31/2012	8,014,654	11,554,404	3,539,750	69.4%	1,836,041	192.8%
12/31/2013	8,279,447	11,954,676	3,675,229	69.3%	1,815,584	202.4%
12/31/2014	8,400,807	12,766,296	4,365,489	65.8%	1,811,782	241.0%
12/31/2015	8,461,102	14,112,144	5,651,042	60.0%	1,856,583	304.4%

As noted above, effective with the December 31, 2015 actuarial report, MERS revised several of their actuarial assumptions. The main actuarial assumptions used and/or changes made in determining the actuarial valuation of the City's Act 34 defined benefit plan as of December 31, 2015 included:

- Entry Age Normal Method
- Fixed amortization policies
- Decreased price inflation, wage inflation, and discount rate
- 7.75% assumed investment rate of return (versus previously used 8.00%)
- A 5 year smoothing of investment returns (versus previously used 10 year smoothing)
- Inclusion of 0.25% for Administrative Expense

In addition to the defined benefit plan, the City began participating in a defined contribution plan during the year ended May 31, 1994. The plan is a single employer defined contribution plan administered by the International City Managers Association ("ICMA"). The plan covers all full-time employees that elected to participate in the plan. The City has no fiduciary responsibilities for the plan administration or investment of the funds.

Defined Contribution Plan

As noted above, the City's defined contribution plan covers all full-time employees that elected to participate in the plan. The plan provides for employees to be 100% vested after three years of service, with 0% vesting prior to that point. The minimum required contributions for plan participants is:

- Police Patrol and Police Command: 10% employer contribution and required 5% employee contribution.
- Administrative Support, Administrative Supervisory, DPW and Non-Union Personnel: 8.5% employer contribution with required 3.5% employee contribution.

Employees did not contribute to the defined contribution plan during the year ended May 31, 2015. During the year, contributions totaling $31,012 were made by the City in accordance with contribution requirements established by the City Council.

Post-Employment Health Benefit Plans

The City administers a single-employer defined benefit healthcare plan that provides other post-employment benefits ("OPEB"). The City of Grand Blanc Retiree Healthcare Plan (the "Plan") provides 100% of health insurance benefits to eligible retirees. Substantially all employees are eligible to receive postemployment benefits upon retirement in the form of health care, dental, and life insurance benefits. These benefits are provided by contractual agreement and are paid annually by the fund from which the employee retired. By contractual agreement, the City pays 100% of these costs for retirees under 65. During the fiscal year ending May 31, 2011 the City modified the plan to pay a monthly stipend to retirees greater than 65 years of age in lieu of health insurance. There are no provisions for employee contributions.

As of May 31, 2015, the date of the most recent actuarial valuation, the Plan had 16 retirees and survivors and 29 active plan members. The Plan had an accrued liability of $3,652,291. The market value of the Plan assets was $512,738 resulting in an unfunded actuarial accrued liability of $3,139,553. The Plan was 14.0% funded. The covered payroll (annual payroll for active employees covered by the plan) was $1,670,646 and the ratio for the unfunded actuarial accrued liability to the covered payroll was 187.9%.

The main actuarial assumptions used in determining the actuarial valuation as of May 31, 2015 included:

- A level dollar, closed amortization method
- An amortization period of 30 years
- A 6% investment rate of return
- A 4% general inflation rate
- A medical inflation rate declining from 8% in 2016 to 4% in 2024

The following are tables showing the City's contribution and funding progress of its post-employment health benefits plan over the past six years.

OPEB Contributions				
Year Ended May 31	Annual OPEB Cost	Annual Contribution	Percentage of OPEB Cost Contributed	Net Asset (Obligation)
2010	$458,493	$83,646	18.2%	($374,847)
2011	136,957	444,036	324.2%	(67,768)
2012	195,177	138,185	70.8%	(124,834)
2013	207,942	177,375	85.3%	(155,375)
2014	236,836	224,757	94.9%	(167,484)
2015	273,511	212,792	77.8%	(228,196)

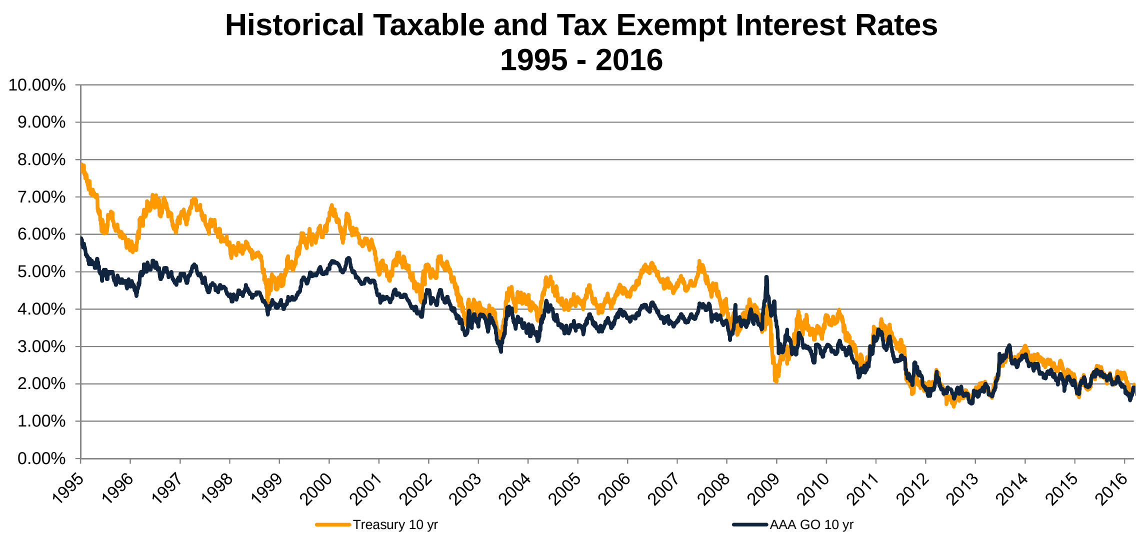
Historical OPEB Funding						
Actuarial Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liability (AAL)	Unfunded AAL	Funded Ratio	Covered Payroll	UAAL as % of Covered Payroll
6/1/2010	$10,000	$4,765,160	$4,755,160	0.2%	$1,984,438	239.6%
6/30/2012	282,742	2,880,295	2,597,553	9.8%	1,995,518	130.2%
5/31/2015	512,738	3,652,291	3,139,553	14.0%	2,033,909	154.4%

At the current time, the City anticipates continuing to use a "pay as you go" basis for funding its OPEB costs as well as paying the Sewer and Water Funds employees obligations for its OPEB costs. However, the City has taken steps to reduce the cost of such costs. Key points in the City's OPEB cost reduction strategy are highlighted below:

- In 2008, the City successfully negotiated with three major bargaining units to only provide health insurance to employees hired after September 2008.
- In 2010, the City successfully negotiated with retirees over the age of 65 to issue a monthly stipend in lieu of the City providing Medicare gap insurance. The monthly stipend funding includes $150 for the retiree and $150 for the retiree's spouse, if married. This change in OPEB funding capped the City's liability and greatly reduced the OPEB obligation by over half to $3.1 million.

Bond Issuance Considerations

The City intends to issue bonds as authorized by Act 34 to fund the unfunded pension liability for its Act 34 defined benefit pension plan. Given the near historic low interest rates, as shown on the graph below, the City anticipates receiving favorable interest rates for the pension obligation bonds it intends to issue.



The City understands that the value of assets and liabilities may change depending on market conditions and actuarial experiences differing from projections. The City recognizes that such changes may result in additional required contributions to the plan. The City also recognizes that such changes could result in the plan becoming overfunded.

The annual required contribution that the City makes for its Act 34 defined benefit pension plan is comprised of two parts, the unfunded accrued liability and the normal cost component. The unfunded accrued liability is the portion of the pension liability that is not funded, while the normal cost is the cost of future benefits earned by employees in the current year. Under Act 34, only the unfunded accrued liability may be financed with pension obligation bonds.

The City is expecting to issue pension obligation bonds for its Unfunded Accrued Actuarial Liability as of the most recent available actuarially determined UAAL using MERS revised assumptions for its Act 34 defined benefit plan, net of estimated issuance cost of $118,958. Below is a breakdown of the estimated sources and uses of funds for the pension obligation bonds. The bond proceeds will fully fund the City's unfunded accrued actuarial liability for its Act 34 defined benefit plan, which was $5,651,042 as of the December 31, 2015 valuation.

Sources and Uses	
Sources	
Bond Par Amount	$5,770,000
Total Sources	$5,770,000
Uses	
Pension Fund Deposit	$5,651,042
Costs of Issuance (Including Underwriter's Discount)	$118,958
Total Uses	$5,770,000

The following financial analysis assume the updated MERS assumptions for valuation, including a 7.75% investment return on the actuarial value of assets. Provided below is a comparison of the annual unfunded accrued actuarial liability amortization payment and normal cost for the unfunded accrued liability to the estimated bond payments and normal cost. The City intends to use the Option B scenario as provided in the table below.

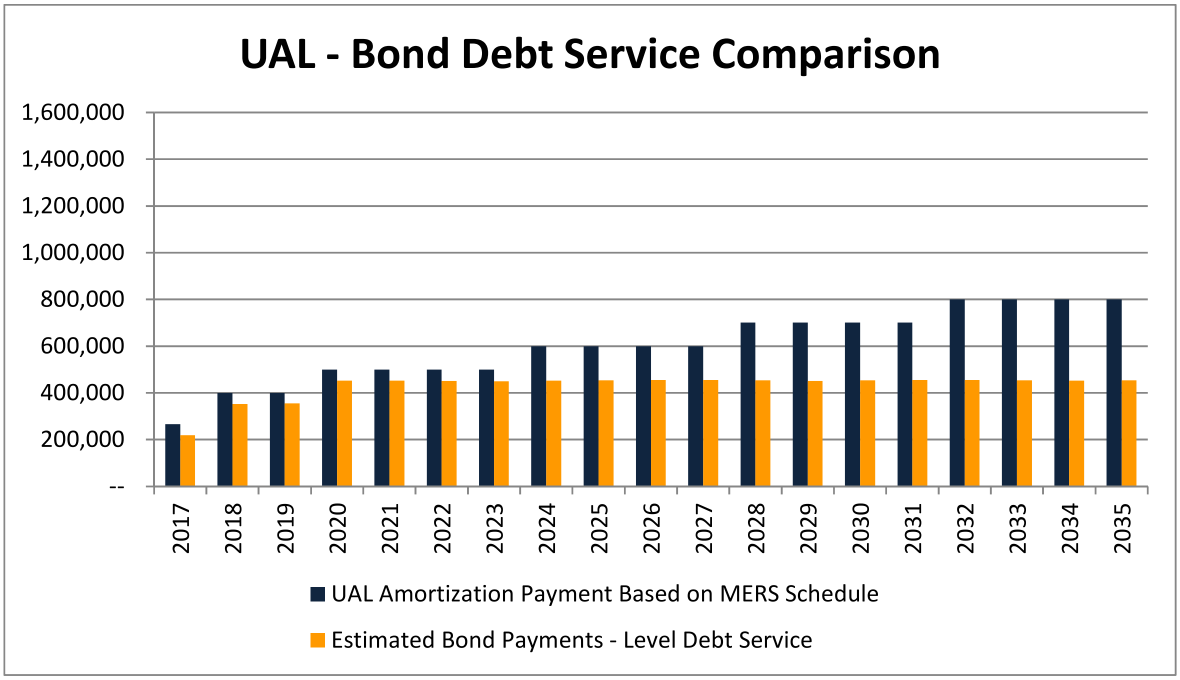
Baseline				POB Bonds				
Option B - 7.75% - Actuarial Value of Assets								
Fiscal Year Ending May 31	UAL Amortization Payment Based on MERS Schedule *	Normal Cost**	Total UAL Payments	Estimated Bond Payments ***	Normal Cost**	Total Bond and Normal Cost Payments	Difference	Present Value @ 3.81%****
2017	266,667	51,998	318,665	218,467	51,998	270,465	48,200	47,001
2018	400,000	49,934	449,934	353,087	49,934	403,021	46,913	44,050
2019	400,000	48,485	448,485	355,511	48,485	403,996	44,489	40,225
2020	500,000	47,447	547,447	452,557	47,447	500,004	47,443	41,305
2021	500,000	46,804	546,804	452,390	46,804	499,194	47,610	39,913
2022	500,000	46,027	546,027	451,585	46,027	497,612	48,415	39,083
2023	500,000	44,588	544,588	449,985	44,588	494,573	50,015	38,878
2024	600,000	43,116	643,116	452,341	43,116	495,457	147,659	110,522
2025	600,000	42,106	642,106	453,786	42,106	495,892	146,214	105,382
2026	600,000	40,961	640,961	454,516	40,961	495,477	145,484	100,968
2027	600,000	38,973	638,973	454,658	38,973	493,631	145,342	97,129
2028	700,000	36,355	736,355	453,682	36,355	490,037	246,318	158,505
2029	700,000	33,912	733,912	451,769	33,912	485,681	248,231	153,813
2030	700,000	32,092	732,092	453,917	32,092	486,009	246,083	146,828
2031	700,000	30,587	730,587	454,894	30,587	485,481	245,106	140,822
2032	800,000	28,668	828,668	454,946	28,668	483,614	345,054	190,894
2033	800,000	26,484	826,484	454,046	26,484	480,530	345,954	184,296
2034	800,000	24,253	824,253	452,086	24,253	476,339	347,914	178,467
2035	800,000	22,135	822,135	454,075	22,135	476,210	345,925	170,867
	$11,466,667	**$845,600**	**$12,312,267**	**$8,178,295**	**$845,600**	**$9,023,895**	**$3,288,372**	**$2,028,949**

* Assumes Option B calculation, sized for actuarial value of assets. 2017 year represents unpaid portion (8/12ths) of previously scheduled UAL amortization

** Revised Normal Cost estimate not yet received from actuary

*** Estimate only based on estimated taxable interest rates

**** Estimated bond true interest cost



Based on the preceding analysis, the City has determined that it is financially beneficial to pursue the issuance of pension obligation bonds in an amount not to exceed $5,900,000, including estimated costs of issuance.

Description of Action Required to Meet Obligations

The City allocates pension costs to the various funds that receive pension benefits. Similarly, the annual debt service for the Pension Obligation Bonds will be allocated proportionately to the funds receiving pension benefits. The City has 3 funds (General, Sewer and Water) which are allocated pension costs and will be allocated proportionate amounts of annual debt service for the Pension Obligation Bonds. Revenue sources for the funds that will be allocated portions of the annual bond payments include annual operating levies, state shared revenues, utilities, and other sources of annual revenue.

The City Manager completes an annual budget and presents it to the Grand Blanc City Council for approval. The annual debt service amounts for each fund within the budget will be included in the annual budget process to be presented and approved by the City Council annually. The pension obligation bonds will carry the City's limited tax general obligation full faith and credit pledge; therefore, the annual debt service will be legally required to be part of the City's total budget.

Plan Compliance

As outlined in Act 34, the Plan contains the following elements:

- **An analysis of the current and future obligations with respect to each retirement program of the City**. The City has a defined benefit plan as well as a defined contribution pension plan. Information regarding the defined benefit plan was obtained from MERS. Information with respect to both plans is contained within Appendix A.

- **An analysis of the current and future obligations with respect to the postemployment health care plan of the City.** The City has a defined benefit postemployment healthcare plan. Information regarding the defined benefit plan was obtained by the actuarial firm, Rodwan Consulting Company. Information with respect to the plan is contained within Appendix B.

- **Evidence that the issuance coupled with any other legally available funds, is sufficient to eliminate the unfunded pension liability.** The estimated unfunded pension liability for the Act 34 defined benefit plan is $5,651,042 as of December 31, 2015. The Sources and Uses of Funds provided by the City's financial advisor, Public Financial Management ("PFM"), demonstrate that the bond proceeds will cover the unfunded pension liability. The complete bond schedules prepared by PFM, along with the Sources and Uses, are provided under Appendix C.

- **The debt service amortization schedule**. The preliminary debt service amortization schedules for the pension obligation bonds provided by PFM can be found under Appendix D.

- **A description of actions required to satisfy the debt service amortization schedule.** The pension obligation bonds are a limited tax general obligation of the City, paid from various City funds. A description of actions the City takes to allocate costs to its various funds, create the annual budget and obtain budget approval from the City Council is contained on page 8 herein.

- **Certification that the Comprehensive Financial Plan is complete and accurate.** A certification from the Finance Director attesting that the Plan is complete with information provided by reliable sources is provided on page 10.

Act 34 also requires the Plan be prepared and made publically available. Accordingly, the City has prepared this Plan, which has been approved by the City Council on August 10, 2016, and has been made available for public review.

Certification

The City has prepared this Amended and Restated Comprehensive Financial Plan for Pension and Other Post-Employment Benefits as required under Act 34 for the issuance of Pension Obligation Bonds. In preparing this plan, information has been obtained from the Municipal Employees Retirement System and its actuaries, CBIZ Retirement Plan Services, and Public Financial Managment. The City believes the information provided by these firms to be reliable.

I certify that this Amended and Restated Comprehensive Financial Plan is complete and accurate to the best of my knowledge and belief.

By: Wendy Jean-Buhrer, City Manager

Dated: August 10, 2016

Appendix A: Analysis of Current and Future Retirement Program Obligations of the City of Grand Blanc

MUNICIPAL EMPLOYEES' RETIREMENT SYSTEM OF MICHIGAN

ANNUAL ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

GRAND BLANC, CITY OF (2513)

Spring, 2016

Grand Blanc, City of

In care of:
Municipal Employees' Retirement System of Michigan
1134 Municipal Way
Lansing, Michigan 48917

This report presents the results of the Annual Actuarial Valuation, prepared as of December 31, 2015. The report includes the determination of liabilities and contribution rates resulting from the participation of Grand Blanc, City of (2513) in the Municipal Employees' Retirement System of Michigan ("MERS"). MERS is a nonprofit organization, independent from the State, that has provided retirement plans for municipal employees for more than 65 years. Grand Blanc, City of is responsible for the employer contributions needed to provide MERS benefits for its employees and former employees under the Michigan Constitution and the MERS Plan Document.

The purpose of the December 31, 2015 annual actuarial valuation is to:

- Measure funding progress
- Establish contribution requirements for the fiscal year beginning June 1, 2017
- Provide actuarial information in connection with applicable Governmental Accounting Standards Board (GASB) statements

This valuation report should not be relied upon for any other purpose. Reliance on information contained in this report by anyone for anything other than the intended purpose could be misleading.

The valuation uses financial data, plan provision data, and participant data as of December 31, 2015 furnished by MERS. In accordance with Actuarial Standards of Practice No. 23, the data was checked for internal and year to year consistency as well as general reasonableness, but was not otherwise audited. CBIZ Retirement Plan Services does not assume responsibility for the accuracy or completeness of the data used in this valuation.

The actuarial assumptions and methods are adopted by the MERS Retirement Board, and are reviewed every five years in an Experience Study. The most recent study was completed in 2015, and this December 31, 2015 valuation report reflects changes in assumptions and methods. Please refer to the division-specific assumptions described in table(s) in this report, and to the Appendix on the MERS website at:
www.mersofmich.com/Portals/0/Assets/Resources/AAV-Appendix/MERS-2015AnnualActuarialValuation-Appendix.pdf.

The actuarial assumptions used for this valuation produce results that we believe are reasonable.

To the best of our knowledge, this report is complete and accurate, was prepared in conformity with generally recognized actuarial principles and practices, with the Actuarial Standards of Practice issued by the Actuarial Standards Board, and is in compliance with Act No. 220 of the Public Acts of 1996, as amended, and the MERS Plan Document as revised. All of the undersigned are members of the American Academy of Actuaries (MAAA), and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. The Retirement Board of the Municipal Employees' Retirement System of Michigan confirms that the System provides for payment of the required employer contribution as described in Section 20m of Act No. 314 of 1965 (MCL 38.1140m).

This information is purely actuarial in nature. It is not intended to serve as a substitute for legal, accounting or investment advice.

This report was prepared at the request of the Retirement Board and may be provided only in its entirety by the municipality to other interested parties (MERS customarily provides the full report on request to associated third parties such as the auditor for the municipality). CBIZ Retirement Plan Services is not responsible for the consequences of any unauthorized use.

You should notify MERS if you disagree with anything contained in the report or are aware of any information that would affect the results of the report that have not been communicated to us. If you have reason to believe that the plan provisions are incorrectly described, that important plan provisions relevant to this valuation are not described, that conditions have changed since the calculations were made, that the information provided in this report is inaccurate or is in anyway incomplete, or if you need further information in order to make an informed decision on the subject matter in this report, please contact your Regional Manager at 1.800.767.MERS(6377).

Sincerely,

Cathy Nagy, MAAA, FSA
Jim Koss, MAAA, ASA
Curtis Powell, MAAA, EA
Alan Sonnanstine, MAAA, ASA

TABLE OF CONTENTS

Executive Summary

New Actuarial Assumptions and Methods

The actuarial assumptions and methods are adopted by the MERS Retirement Board, and are reviewed every five years in an Experience Study. The Experience Study is a comprehensive, detailed analysis that reviews MERS' funding policy and compares actual experience with the current actuarial assumptions; the study recommends adjustments as necessary. The most recent study was completed in 2015, and this December 31, 2015 valuation report reflects several changes in actuarial assumptions.

The main assumption and method changes were:

- The mortality table was adjusted to reflect longer lifetimes.
- The assumed annual rate of investment return, net of all expenses, was lowered from 8% to 7.75%.
- The asset smoothing was changed from 10 to 5 years.
- The amortization period was moved to a fixed period amortization for the December 31, 2014 annual valuations.
    - The period will continue to gradually decrease for both open and closed divisions until the current unfunded accrued liability (UAL) is completely paid off.
    - Moving to this type of "fixed period amortization" means that all unfunded liabilities will be fully funded by a specific date in the future.
    - Once the amortization period drops below 15 years (10 years for closed divisions), any future liability and asset gains or losses will be spread over a 15-year fixed period for open divisions and a 10-year fixed period for closed divisions — creating "layers" of UAL on an annual basis.
    - This transparent method allows tracking of what changed your UAL, and sets a fixed period in time in which that UAL change will be fully funded.

Various other actuarial assumptions were revised, but the revisions had a smaller impact than the two assumption changes above (first two bullets). For a summary of all of the actuarial assumptions and methods, please refer to the division-specific assumptions described on the last page of this report, and to the Appendix.

The new amortization period layers and the new 5-year asset smoothing do not impact this 2015 annual valuation, other than the 6 year projections. These method changes will first impact the December 31, 2016 annual valuations.

The impacts of the assumption changes on the funded ratio and the required employer contributions are displayed on the next few pages. While these changes in assumptions will mean larger liabilities and contributions than anticipated by the prior assumptions for most employers, they will ensure each employer makes reasonable progress towards funding the unfunded liabilities of the employer. When discussing changes in assumptions it is important to remember that, although the assumptions used impact the annual contributions, the true cost of the plan will be based on what will actually happen in the future – independent of the assumptions used. MERS recognizes that many municipalities are already taking steps to reduce their UAL. The MERS Board approved a “phase in” of the total impact of the assumption changes over the next 5 years (impacting fiscal years beginning 2017 – 2021) as an option for you. Of course, if the employer pays less in the first 4 years, they will likely have to pay somewhat more in later years.

MERS created a dedicated resource page on their website, www.mersofmich.com, regarding this topic, with links to frequently asked questions, upcoming events and additional details.

Impacts from the Assumption Changes

The new actuarial assumptions changed your December 31, 2015 percent funded from 63% to 60%, a change of -3%.

One or more of your divisions is covered by an employer cap provision. Please see the employer contribution table on page 8 and the employee contribution rate table on page 9 to see the impact of the assumption changes on the required employer and employee contributions.

Funded Ratio and Required Employer Contributions

The MERS Defined Benefit Plan is an agent multiple-employer plan, meaning that assets are pooled for investment purposes but separate accounts are maintained for each individual employer. Each municipality is responsible for their own plan liabilities; MERS does not borrow from one municipality's account to pay for another.

The funded ratio of a plan is the percentage of the dollar value of the accrued benefits that is covered by the actuarial value of assets.

Your Funded Ratio:

For comparison purposes, we have included your December 31, 2015 funded ratio if it had been calculated under the previous assumptions. Note: Your actual funded level as of December 31, 2015 is the amount listed under the new assumptions.

	New Assumptions	Previous Assumptions	
	12/31/2015	12/31/2015	12/31/2014
Funded Ratio	60%	63%	66%

Michigan Law requires that pension plans be pre-funded, meaning money is set aside now to pay for future benefits. Pension plans are usually funded by employer and employee contributions, and investment income.

How quickly a plan attains the 100% funding goal depends on many factors such as:

- The current funded ratio
- The future experience of the plan
- The amortization period

It is more important to look at the trend in the funded ratio over a period of time than at a particular point in time.

Your Required Employer Contributions:

Your computed employer contributions are shown in the following table. Employee contributions, if any, are in addition to the computed employer contributions. Note: Your minimum required contribution is the amount listed under the new assumptions, with phase-in. For comparison purposes, we have included your computed employer contribution if it had been calculated under the previous assumptions.

	Percentage of Payroll				Monthly $ Based on Valuation Payroll			
	New Assumptions		Previous Assumptions		New Assumptions		Previous Assumptions	
	Phase-in	Full Impact			Phase-in	Full Impact		
Valuation Date:	12/31/2015	12/31/2015	12/31/2015	12/31/2014	12/31/2015	12/31/2015	12/31/2015	12/31/2014
Fiscal Year Beginning:	June 1, 2017	June 1, 2017	June 1, 2017	June 1, 2016	June 1, 2017	June 1, 2017	June 1, 2017	June 1, 2016
Division								
01 - Admin	11.50%	11.50%	11.50%	11.50%	$ 5,142	$ 5,142	$ 5,157	$ 4,498
02 - Plc Emply	14.29%	15.11%	14.04%	12.75%	8,614	9,108	8,488	6,928
10 - DPW	11.50%	11.50%	11.50%	11.50%	2,628	2,628	2,635	2,731
20 - Plc Command	37.62%	41.51%	36.53%	37.40%	15,536	17,144	15,133	12,635
Municipality Total					**$ 31,920**	**$ 34,022**	**$ 31,413**	**$ 26,792**

Under the new assumptions, both the full impact and the phased in employer contribution requirements are shown in the table above. The phase in allows the employer to spread the increase of the new actuarial assumptions over 5 fiscal years. By default, MERS will invoice you the phased in contribution amount. However, MERS strongly encourages employers to contribute more than the minimum required contribution, including paying the full amount of the impact of the changes, if possible.

Employee contribution rates reflected in the valuations are shown in the next table. Note that employer contribution caps are in effect for Division(s): 01, 02, 10. For these divisions the employee contribution rate may be adjusted in order to implement the employer cap provision. The impact of the change in actuarial assumptions on the employee contribution rate is shown in the next table. The MERS Board approved a “phase in” of this impact over the next 5 years (impacting fiscal years beginning 2017 – 2021) as an option for you. Of course, if the employees pay less in the first 4 years, they will likely have to pay somewhat more in later years.

	Employee Contribution Rate			
	New Assumptions		Previous Assumptions	
	Phase-in	Full Impact		
Valuation Date:	12/31/2015	12/31/2015	12/31/2015	12/31/2014
Fiscal Year Beginning:	June 1, 2017	June 1, 2017	June 1, 2017	June 1, 2016
Division				
01 - Admin	15.26%	18.26%	14.51%	12.97%
02 - Plc Emply	7.75%	8.61%	7.54%	6.25%
10 - DPW	14.78%	17.02%	14.21%	9.62%
20 - Plc Command	9.02%	9.02%	9.02%	8.22%

The calculations above phase-in the contribution increases (due to changes in assumptions) between the employer and member, in what the actuaries and MERS believe to be an equitable manner based on information received for this valuation report. However, there may be other approaches to phasing in the increase which would produce different results. Please contact your MERS representative if you believe an alternate application of the phase-in calculation should be applied.

The employer may contribute more than the minimum required contributions, as these additional contributions will earn investment income and may result in lower future contribution requirements. **MERS strongly encourages employers to contribute more than the minimum contribution shown above.**

Assuming that experience of the plan meets actuarial assumptions:

- To accelerate to a 100% funding ratio in 10 years, estimated monthly employer contributions for the entire employer would be $ 61,194, instead of $ 34,022.
- To accelerate to a 100% funding ratio in 20 years, estimated monthly employer contributions for the entire employer would be $ 37,074, instead of $ 34,022.

If you are interested in making additional contributions, please contact MERS and they can assist you with evaluating your options.

How and Why Do These Numbers Change?

In a defined benefit plan contributions vary from one annual actuarial valuation to the next as a result of the following:

- Changes in benefit provisions (see Table 2)
- Changes in actuarial assumptions and methods (see the Appendix)
- Experience of the plan (investment experience and demographic experience); this is the difference between actual experience of the plan and the actuarial assumptions

Actuarial valuations do not affect the ultimate cost of the plan; the benefit payments (current and future) determine the cost of the plan. Actuarial valuations only affect the timing of the contributions into the plan. Because assumptions are for the long term, plan experience will not match the actuarial assumptions in any given year (except by coincidence). Each annual actuarial valuation will adjust the required employer contributions up or down based on the prior year's actual experience.

Comments on Asset Smoothing

The actuarial value of assets, used to determine both your funded ratio and your required employer contribution, is based on a smoothed value of assets (10-year smoothing prior to 2016; 5-year smoothing beginning in 2016). A smoothing method reduces the volatility of the valuation results, which affects your required employer contribution and funded ratio. The smoothed actuarial rate of return for 2015 was 5.21%.

As of December 31, 2015 the actuarial value of assets is 113% of market value. This means that meeting the actuarial assumption in the next few years will require average annual market returns that exceed the 7.75% investment return assumption.

If the December 31, 2015 valuation results were based on market value on that date instead of smoothed funding value: i) the funded percent of your entire municipality would be 53% (instead of 60%); and ii) your total employer contribution requirement for the fiscal year starting June 1, 2017 would be $ 482,664 (instead of $ 408,264).

The asset smoothing method is a powerful tool for reducing the volatility of your required employer contributions. **However, if the current 13% difference between the smoothed value and the market value of assets is not made up, the result would be gradual increases in your employer contribution requirement over the next few years (to around the levels described above).**

Risk Characteristics of Defined Benefit Plans

It is important to understand that retirement plans, by their nature, are exposed to certain risks. While risks cannot be eliminated entirely, they can be mitigated through various strategies. Below are a few examples of risk (this is not an all-inclusive list):

- Economic - investment return, wage inflation, etc.
- Demographic - longevity, disability, retirement, etc.
- Plan Sponsor and Employees - contribution volatility, attract/retain employees, etc.

The MERS Retirement Board adopts certain assumptions and methods to mitigate the economic and demographic risks, and the contribution volatility risks. For example, the investment risk is the largest economic risk and is mitigated by having a balanced portfolio and a clearly defined investment strategy. Demographic risks vary based on the age of the workforce and are mitigated by preparing special studies called experience studies on a regular basis to determine if the assumptions used are reasonable compared to the experience. Risk may be mitigated through a plan design that provides benefits that are sustainable in the long run. An Experience Study is completed every five years to review the assumptions and methods. The next Experience Study will be completed in 2020.

Alternate Scenarios to Estimate the Potential Volatility of Results ("What If Scenarios")

The calculations in this report are based on assumptions about long-term economic and demographic behavior. These assumptions will never materialize in a given year, except by coincidence. Therefore the results will vary from one year to the next. The volatility of the results depends upon the characteristics of the plan. For example:

- Open divisions that have substantial assets compared to their active employee payroll will have more volatile employer contribution rates due to investment return fluctuations.
- Open divisions that have substantial accrued liability compared to their active employee payroll will have more volatile employer contribution rates due to demographic experience fluctuations.
- Small divisions will have more volatile contribution patterns than larger divisions because statistical fluctuations are relatively larger among small populations.
- Shorter amortization periods result in more volatile contribution patterns.

The analysis in this section is intended to review the potential volatility of the actuarial valuation results. It is important to note that calculations in this report are mathematical estimates based upon assumptions regarding future events, which may or may not materialize. Actuarial calculations can and do vary from one valuation to the next, sometimes significantly depending on the group’s size.

Many assumptions are important in determining the required employer contributions.

For example:

- Lower investment returns would result in higher required employer contributions, and vice-versa.

- Smaller than projected pay increases would lower required employer contributions.
- Reductions in the number of active employees would lower required contribution dollars, but would usually increase the contribution rate expressed as a percentage of (the now lower) payroll.
- Retirements at earlier ages than projected would usually increase required employer contributions.
- More non-vested terminations of employment than projected would decrease required contributions.
- More disabilities or survivor (death) benefits than projected would increase required contributions.
- Longer lifetimes after retirement than projected would increase required employer contributions.

In the table below, we show the impact of varying one actuarial assumption: the future annual rate of investment return. Lower investment returns would result in higher required employer contributions, and vice-versa.

The relative impact of each investment return scenario below will vary from year to year, as the participant demographics change. The impact of each scenario should be analyzed for a given year, not from year to year. The results in the table are based on the December 31, 2015 valuation, and are for the municipality in total, not by division. These results do not reflect a 5-year phase in of the impact of the new actuarial assumptions.

	Assumed Future Annual Smoothed Rate of Investment Return			
	Lower Future Annual Returns		Valuation Assumption	Higher Returns
12/31/2015 Valuation Results	**5.75%**	**6.75%**	**7.75%**	**8.75%**
Accrued Liability	$ 17,808,820	$ 15,792,299	$ 14,112,144	$ 12,705,534
Valuation Assets	$ 8,461,102	$ 8,461,102	$ 8,461,102	$ 8,461,102
Unfunded Accrued Liability	$ 9,347,718	$ 7,331,197	$ 5,651,042	$ 4,244,432
Funded Ratio	48%	54%	60%	67%
Monthly Normal Cost	$ 12,900	$ 6,589	$ 1,860	$ (1,709)
Monthly Amortization Payment	$ 44,916	$ 38,566	$ 32,162	$ 25,698
Total Employer Contribution[1,2]	$ 57,816	$ 45,155	$ 34,022	$ 23,989

1 If assets exceed accrued liabilities for a division, the division's amortization payment is negative and is used to reduce the division's employer contribution requirement. If the overfunding credit is larger than the normal cost, the division's full credit is included in the municipality's amortization payment above but the division's total contribution requirement is zero. This can cause the displayed normal cost and amortization payment to not add up to the displayed total employer contribution.

2 The above total employer contributions for the 5.75%, 6.75% and 8.75% scenarios do not reflect changes in the employee contribution rates due to the impact of a cap, if any, on employer contributions. Those scenarios are based on the same employee contribution rates as the 7.75% scenario.

Six Year Projection Scenarios

The table on the following page illustrates the plan's projected liabilities and computed employer contributions for the next six fiscal years, under the new actuarial assumptions and under three future economic/assumption scenarios. All four projections take into account the past financial losses that will continue to affect the smoothed rate of return for the next four years. Under the 7.75% scenarios, two sets of projections are shown:

- Based on the phase-in over 5 fiscal years (beginning in 2017) of the increased contribution requirements associated with the new actuarial assumptions. This projects your minimum required contribution.
- Based on no phase-in of the increased contribution requirements.

The 7.75% scenarios provide an estimate of computed employer contributions based on current actuarial assumptions, and a projected 7.75% market return. The other two scenarios may be useful if the municipality chooses to budget more conservatively, and make contributions in addition to the minimum requirements. The 6.75% and 5.75% projections provide an indication of the potential required employer contribution if MERS were to realize investment returns of 6.75% and 5.75% over the long-term.

Valuation Year Ending 12/31	Fiscal Year Beginning 6/1	Actuarial Accrued Liability	Valuation Assets	Funded Percentage	Computed Annual Employer Contribution [1]
7.75% Assumed Interest Discount Rate and Future Annual Market Rate of Return					
WITH 5-YEAR PHASE-IN					
2015	2017	$ 14,112,144	$ 8,461,102	60%	$ 383,040
2016	2018	14,559,354	8,508,537	58%	430,464
2017	2019	15,008,224	8,557,985	57%	478,056
2018	2020	15,457,517	8,593,243	56%	527,556
2019	2021	15,899,706	8,637,140	54%	579,576
2020	2022	16,347,287	8,962,896	55%	606,264
NO 5-YEAR PHASE-IN					
2015	2017	$ 14,112,144	$ 8,461,102	60%	$ 408,264
2016	2018	14,559,354	8,508,537	58%	444,516
2017	2019	15,008,224	8,592,677	57%	483,204
2018	2020	15,457,517	8,678,691	56%	524,664
2019	2021	15,899,706	8,758,108	55%	569,412
2020	2022	16,347,287	9,107,121	56%	594,636
6.75% Assumed Interest Discount Rate and Future Annual Market Rate of Return					
NO 5-YEAR PHASE-IN					
2015	2017	$ 15,792,299	$ 8,461,102	54%	$ 541,860
2016	2018	16,270,374	8,427,646	52%	580,980
2017	2019	16,750,028	8,513,111	51%	621,636
2018	2020	17,229,935	8,657,442	50%	665,520
2019	2021	17,702,690	8,791,698	50%	713,520
2020	2022	18,180,924	9,207,008	51%	743,232
5.75% Assumed Interest Discount Rate and Future Annual Market Rate of Return					
NO 5-YEAR PHASE-IN					
2015	2017	$ 17,808,820	$ 8,461,102	48%	$ 693,792
2016	2018	18,321,686	8,346,734	46%	736,584
2017	2019	18,836,311	8,446,041	45%	780,504
2018	2020	19,351,281	8,669,149	45%	827,580
2019	2021	19,859,322	8,878,113	45%	879,336
2020	2022	20,373,279	9,338,654	46%	917,748

[1] The above required annual employer contribution does not reflect future changes in the employee contribution rates due to the impact of a cap, if any, on employer contributions.

Employer Contribution Details (Without a 5-year Phase-In)
For the Fiscal Year Beginning June 1, 2017

Table 1

Division	Amort. Period for Unfund. Liab.[4,5]	Employer Contributions[1]			Blended Employer Contribut.[6]	Employee Contribution Rate	Employee Contribut. Conversion Factor[2]
		Normal Cost	Unfunded Accrued Liability	Total Computed Employer Contribut.			
Percentage of Payroll							
01 - Admin	23	-3.56%	15.06%	11.50%		18.26%	0.72%
02 - Plc Emply	23	4.26%	10.85%	15.11%		8.61%	0.81%
10 - DPW	23	-4.05%	15.55%	11.50%		17.02%	0.74%
20 - Plc Command	23	4.38%	37.13%	41.51%		9.02%	0.81%
Estimated Monthly Contribution[3]							
01 - Admin	23	$ (1,592)	$ 6,734	$ 5,142			
02 - Plc Emply	23	2,568	6,540	9,108			
10 - DPW	23	(925)	3,553	2,628			
20 - Plc Command	23	1,809	15,335	17,144			
Total Municipality		**$ 1,860**	**$ 32,162**	**$ 34,022**			
Estimated Annual Contribution[3]		**$ 22,320**	**$ 385,944**	**$ 408,264**			

1 The above employer contribution requirements are in addition to the employee contributions, if any.

2 If employee contributions are increased/decreased by 1.00% of pay, the employer contribution requirement will decrease/increase by the Employee Contribution Conversion Factor. The conversion factor is usually under 1%, because employee contributions may be refunded at termination of employment, and not used to fund retirement pensions. Employer contributions will all be used to fund pensions.

3 For divisions that are open to new hires, estimated contributions are based on projected fiscal year payroll. Actual contributions will be based on actual reported monthly pays, and will be different from the above amounts. For divisions that will have no new hires, invoices will be based on the above dollar amounts which are based on projected fiscal year payroll. See description of Open Divisions and Closed Divisions in the Appendix.

4 If projected assets exceed projected liabilities as of the beginning of the June 1, 2017 fiscal year, the negative unfunded accrued liability is amortized (spread) over 10 years. This amortization is used to reduce the employer contribution rate. Note that if the overfunding credit is larger than the normal cost, the full credit is shown above but the total contribution requirement is zero. This will cause the displayed normal cost and unfunded accrued liability contributions to not add across.

5 If the division is closed to new hires, with new hires not covered by MERS Defined Benefit Plan or Hybrid Plan provisions, the amortization period will decrease as follows: Under Amortization Option A, the period will decrease by 2 years each valuation year, until it reaches 6 or 5 years. Then it decreases by 1 year each valuation year until the UAL is paid off. Under Amortization Option B, the period will decrease by 2 years each valuation year, until it reaches 16 or 15 years. Thereafter, the period will reduce by 1 year each valuation year, until the UAL is paid off. This will result in amortization payments that increase faster than the usual 3.75% each year. If the division is closed to new hires, with new hires (and transfers) covered by MERS Defined Benefit Plan or Hybrid Plan provisions, the standard open division amortization period will apply.

6 For linked divisions, the employer will be invoiced the Total Required Employer Contribution rate shown above for each linked division (a contribution rate for the open division; a contribution dollar for the closed-but-linked division), unless the employer elects to contribute the Blended Employer Contribution rate shown above, by contacting MERS at 800-767-2308.

Note that the Employer Contribution Details shown in Table 1 do **not** reflect phase-in over 5 fiscal years (beginning in 2017) of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 1 above. The contribution requirements including the 5-year phase-in are shown on page 8.

Note that employer contribution caps are in effect for Division(s): 01, 02, 10. For these divisions the employee contribution rates in Table 1 do **not** reflect phase-in over 5 fiscal years (beginning in 2017) of the increased employee contribution requirements associated with the new actuarial assumptions. The full employee contribution rate without phase-in is shown in Table 1 above. The employee contribution requirements including the 5-year phase-in are shown on page 9.

Please see the Comments on Asset Smoothing.

Benefit Provisions

Table 2

01 - Admin: Open Division

	2015 Valuation	2014 Valuation
Benefit Multiplier:	2.25% Multiplier (80% max)	2.25% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	55/25	55/25
Early Retirement (Reduced):	50/25 55/15	50/25 55/15
Final Average Compensation:	5 years	5 years
Employee Contributions:	18.26%	12.97%
Act 88:	No	No

02 - Plc Emply: Open Division

	2015 Valuation	2014 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	50/25	50/25
Early Retirement (Reduced):	55/15	55/15
Final Average Compensation:	5 years	5 years
Employee Contributions:	8.61%	6.25%
Act 88:	No	No

10 - DPW: Open Division

	2015 Valuation	2014 Valuation
Benefit Multiplier:	2.00% Multiplier (no max)	2.00% Multiplier (no max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	55/25	55/25
Early Retirement (Reduced):	50/25 55/15	50/25 55/15
Final Average Compensation:	5 years	5 years
Employee Contributions:	17.02%	9.62%
Act 88:	No	No

Table 2 (continued)

20 - Plc Command: Open Division

	2015 Valuation	2014 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	55/25	55/25
Early Retirement (Reduced):	50/25 55/15	50/25 55/15
Final Average Compensation:	5 years	5 years
Employee Contributions:	9.02%	8.22%
Act 88:	No	No

Note that employer contribution caps are in effect for Division(s): 01, 02, 10. For these divisions the 2015 Valuation employee contribution rates in Table 2 do **not** reflect phase-in over 5 fiscal years (beginning in 2017) of the increased employee contribution requirements associated with the new actuarial assumptions. The full employee contribution rate without phase-in is shown in Table 2 above. The employee contribution requirements including the 5-year phase-in are shown on page 9.

Participant Summary

Table 3

Division	2015 Valuation Number	2015 Valuation Annual Payroll[1]	2014 Valuation Number	2014 Valuation Annual Payroll[1]	2015 Valuation Average Age	2015 Valuation Average Benefit Service[2]	2015 Valuation Average Eligibility Service[2]
01 - Admin							
Active Employees	9	$ 490,808	9	$ 469,376	52.5	12.8	13.4
Vested Former Employees	1	9,968	1	9,968	53.0	12.2	12.2
Retirees and Beneficiaries	6	185,702	5	166,642	65.7		
02 - Plc Emply							
Active Employees	10	$ 661,600	10	$ 652,051	34.3	7.2	7.2
Vested Former Employees	1	19,372	1	19,372	40.4	11.3	11.3
Retirees and Beneficiaries	5	224,859	3	130,716	55.7		
10 - DPW							
Active Employees	5	$ 250,829	5	$ 284,941	43.0	10.1	10.2
Vested Former Employees	0	0	0	0	0.0	0.0	0.0
Retirees and Beneficiaries	2	82,424	1	56,232	67.1		
20 - Plc Command							
Active Employees	5	$ 453,346	5	$ 405,414	45.3	17.3	21.5
Vested Former Employees	0	0	0	0	0.0	0.0	0.0
Retirees and Beneficiaries	6	345,312	6	345,312	59.7		
Total Municipality							
Active Employees	**29**	**$ 1,856,583**	**29**	**$ 1,811,782**	**43.3**	**11.2**	**12.1**
Vested Former Employees	**2**	**29,340**	**2**	**29,340**	**46.7**	**11.8**	**11.8**
Retirees and Beneficiaries	**19**	**838,297**	**15**	**698,902**	**61.3**		
Total Participants	**50**		**46**				

1 Annual payroll for active employees; annual deferred benefits payable for vested former employees; annual benefits being paid for retirees and beneficiaries.

2 Description can be found under Miscellaneous and Technical Assumptions in the Appendix.

Reported Assets (Market Value)

Table 4

Division	2015 Valuation		2014 Valuation	
	Employer and Retiree[1]	Employee[2]	Employer and Retiree[1]	Employee[2]
01 - Admin	$ 1,737,203	$ 363,484	$ 1,855,262	$ 351,578
02 - Plc Emply	2,072,148	135,094	2,107,085	206,072
10 - DPW	457,728	206,678	417,313	270,833
20 - Plc Command	2,173,828	306,044	2,452,746	264,872
Municipality Total	**$ 6,440,907**	**$ 1,011,300**	**$ 6,832,406**	**$ 1,093,355**
Combined Reserves	**$ 7,452,207**		**$ 7,925,761**	

1 Reserve for Employer Contributions and Benefit Payments

2 Reserve for Employee Contributions

The December 31, 2015 valuation assets are equal to 1.135382 times the reported market value of assets (compared to 1.059937 as of December 31, 2014). The derivation of valuation assets is described, and detailed calculations of valuation assets are shown, in the Appendix.

Flow of Valuation Assets

Table 5

Year Ended 12/31	Employer Contributions Required	Employer Contributions Additional	Employee Contributions	Investment Income	Benefit Payments	Employee Contribution Refunds	Net Transfers	Valuation Asset Balance
2005	$ 224,640		$ 3,924	$ 293,349	$ (32,036)	$ (23,246)	$ 0	$ 4,813,274
2006	229,802		33,692	395,206	(83,582)	0	0	5,388,392
2007	237,413		41,549	438,812	(135,108)	(489)	40,660	6,011,229
2008	236,887		50,955	290,891	(181,367)	0	0	6,408,595
2009	244,692		67,625	369,359	(229,144)	0	0	6,861,127
2010	239,650		80,250	430,276	(254,878)	(9,113)	19,471	7,366,783
2011	245,261	$ 0	97,361	406,538	(336,300)	(176)	0	7,779,467
2012	232,209	2,472	96,213	359,946	(455,653)	0	0	8,014,654
2013	232,481	1,795	111,420	473,252	(554,155)	0	0	8,279,447
2014	248,810	0	134,793	461,913	(672,829)	(51,327)	0	8,400,807
2015	284,656	0	160,444	400,992	(785,797)	0	0	8,461,102

Notes:

Transfers in and out are usually related to the transfer of participants between municipalities, and to employer and employee payments for service credit purchases (if any) that the governing body has approved.

Additional employer contributions, if any, are shown separately starting in 2011. Prior to 2011, additional contributions are combined with the required employer contributions.

In the actuarial valuation additional employer contributions are combined with required contributions and used to reduce computed future required employer contributions.

The investment income column reflects the recognized investment income based on the smoothed value of assets. It does not reflect the market value investment return in any given year.

Actuarial Accrued Liabilities and Valuation Assets
As of December 31, 2015

Table 6

Division	Actuarial Accrued Liability	Valuation Assets[1]	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
01 - Admin				
Active Employees	$ 1,530,204	$ 362,780	23.7%	$ 1,167,424
Vested Former Employees	62,011	29,231	47.1%	32,780
Retirees And Beneficiaries	1,992,367	1,992,367	100.0%	0
Pending Refunds	704	704	100.0%	0
Total	**$ 3,585,286**	**$ 2,385,082**	**66.5%**	**$ 1,200,204**
02 - Plc Emply				
Active Employees	$ 926,087	$ 125,350	13.5%	$ 800,737
Vested Former Employees	46,357	7,037	15.2%	39,320
Retirees And Beneficiaries	2,673,865	2,371,387	88.7%	302,478
Pending Refunds	2,289	2,289	100.0%	0
Total	**$ 3,648,598**	**$ 2,506,063**	**68.7%**	**$ 1,142,535**
10 - DPW				
Active Employees	$ 521,841	$ 205,366	39.4%	$ 316,475
Vested Former Employees	0	0	0.0%	0
Retirees And Beneficiaries	865,211	548,491	63.4%	316,720
Pending Refunds	498	498	100.0%	0
Total	**$ 1,387,550**	**$ 754,355**	**54.4%**	**$ 633,195**
20 - Plc Command				
Active Employees	$ 1,613,395	$ 306,044	19.0%	$ 1,307,351
Vested Former Employees	0	0	0.0%	0
Retirees And Beneficiaries	3,877,315	2,509,558	64.7%	1,367,757
Pending Refunds	0	0	0.0%	0
Total	**$ 5,490,710**	**$ 2,815,602**	**51.3%**	**$ 2,675,108**
Total Municipality				
Active Employees	**$ 4,591,527**	**$ 999,540**	**21.8%**	**$ 3,591,987**
Vested Former Employees	**108,368**	**36,268**	**33.5%**	**72,100**
Retirees and Beneficiaries	**9,408,758**	**7,421,803**	**78.9%**	**1,986,955**
Pending Refunds	**3,491**	**3,491**	**100.0%**	**0**
Total Participants	**$ 14,112,144**	**$ 8,461,102**	**60.0%**	**$ 5,651,042**

[1] Includes both employer and employee assets.

Please see the Comments on Asset Smoothing.

See the MERS Fiscal Responsibility Policy on the MERS website at:
http://www.mersofmich.com/Portals/0/Assets/PageResources/MERS/PlanDocument/Pension/MERSPlanDocument_Section46.pdf .

Actuarial Accrued Liabilities - Comparative Schedule

Table 7

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2001	$ 1,246,405	$ 1,127,472	90%	$ 118,933
2002	1,621,050	1,248,576	77%	372,474
2003	1,761,082	1,443,333	82%	317,749
2004	6,420,140	4,346,643	68%	2,073,497
2005	6,596,608	4,813,274	73%	1,783,334
2006	7,395,179	5,388,392	73%	2,006,787
2007	8,262,376	6,011,229	73%	2,251,147
2008	8,846,947	6,408,595	72%	2,438,352
2009	9,451,646	6,861,127	73%	2,590,519
2010	9,824,969	7,366,783	75%	2,458,186
2011	10,853,966	7,779,467	72%	3,074,499
2012	11,554,404	8,014,654	69%	3,539,750
2013	11,954,676	8,279,447	69%	3,675,229
2014	12,766,296	8,400,807	66%	4,365,489
2015	14,112,144	8,461,102	60%	5,651,042

Notes: Actuarial assumptions were revised for the 2004, 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

Division 01 - Admin

Table 8-01: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2005	$ 1,496,507	$ 1,135,010	76%	$ 361,497
2006	1,630,188	1,295,722	79%	334,466
2007	1,684,981	1,467,044	87%	217,937
2008	1,820,261	1,584,681	87%	235,580
2009	1,894,882	1,726,407	91%	168,475
2010	1,956,747	1,881,500	96%	75,247
2011	2,710,906	2,258,083	83%	452,823
2012	3,024,183	2,302,346	76%	721,837
2013	3,107,567	2,337,570	75%	769,997
2014	3,239,155	2,339,111	72%	900,044
2015	3,585,286	2,385,082	67%	1,200,204

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

Table 9-01: Computed Employer Contributions - Comparative Schedule

Valuation Date	Active Employees		Computed Employer	Employee Contribution
December 31	Number	Annual Payroll	Contribution[1]	Rate[2]
2005	11	$ 533,373	11.50%	1.13%
2006	11	552,149	11.50%	0.87%
2007	10	503,715	11.50%	0.22%
2008	9	479,394	11.50%	0.87%
2009	9	497,436	11.50%	0.00%
2010	9	481,834	10.49%	0.00%
2011	9	470,481	11.50%	4.60%
2012	8	415,377	11.50%	10.86%
2013	9	443,021	11.50%	11.47%
2014	9	469,376	11.50%	12.97%
2015	9	490,808	11.50%	18.26%

[1] For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

[2] For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 for the 12/31/2015 valuation do **not** reflect phase-in over 5 fiscal years (beginning in 2017) of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 8.

See the Benefit Provision History on page 29 for past benefit provision changes.

Division 02 - Plc Emply

Table 8-02: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2005	$ 2,149,431	$ 1,638,393	76%	$ 511,038
2006	2,341,648	1,830,881	78%	510,767
2007	2,812,078	2,095,109	75%	716,969
2008	2,273,877	1,734,527	76%	539,350
2009	2,358,454	1,884,182	80%	474,272
2010	2,503,334	2,111,844	84%	391,490
2011	2,843,894	2,254,053	79%	589,841
2012	2,798,959	2,227,220	80%	571,739
2013	3,018,696	2,336,839	77%	681,857
2014	3,193,145	2,451,801	77%	741,344
2015	3,648,598	2,506,063	69%	1,142,535

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

Table 9-02: Computed Employer Contributions - Comparative Schedule

Valuation Date	Active Employees		Computed Employer	Employee Contribution
December 31	Number	Annual Payroll	Contribution[1]	Rate[2]
2005	12	$ 709,590	11.50%	0.69%
2006	12	727,895	11.50%	0.69%
2007	13	845,764	11.50%	1.82%
2008	12	748,072	11.50%	3.33%
2009	11	712,646	11.50%	3.40%
2010	11	720,977	11.50%	2.61%
2011	10	661,124	11.50%	5.00%
2012	10	658,965	11.68%	5.22%
2013	10	639,368	12.52%	6.02%
2014	10	652,051	12.75%	6.25%
2015	10	661,600	15.11%	8.61%

[1] For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

[2] For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 for the 12/31/2015 valuation do **not** reflect phase-in over 5 fiscal years (beginning in 2017) of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 8.

See the Benefit Provision History on page 29 for past benefit provision changes.

Division 10 - DPW

Table 8-10: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2005	$ 1,062,360	$ 658,076	62%	$ 404,284
2006	1,210,617	697,878	58%	512,739
2007	1,278,747	739,415	58%	539,332
2008	1,365,714	770,601	56%	595,113
2009	1,349,865	818,327	61%	531,538
2010	1,387,290	852,615	61%	534,675
2011	1,080,941	631,862	59%	449,079
2012	1,098,532	652,793	59%	445,739
2013	1,139,128	686,735	60%	452,393
2014	1,234,508	729,391	59%	505,117
2015	1,387,550	754,355	54%	633,195

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

Table 9-10: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution[1]	Employee Contribution Rate[2]
	Number	Annual Payroll		
2005	5	$ 277,596	11.50%	3.47%
2006	5	258,642	11.50%	7.46%
2007	5	276,083	11.50%	7.47%
2008	6	331,799	11.50%	7.06%
2009	5	283,437	11.50%	7.80%
2010	5	289,560	11.50%	7.64%
2011	4	226,144	11.50%	8.99%
2012	5	255,685	11.50%	8.77%
2013	5	253,155	11.50%	9.74%
2014	5	284,941	11.50%	9.62%
2015	5	250,829	11.50%	17.02%

[1] For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

[2] For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 for the 12/31/2015 valuation do **not** reflect phase-in over 5 fiscal years (beginning in 2017) of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 8.

See the Benefit Provision History on page 29 for past benefit provision changes.

Division 20 - Plc Command

Table 8-20: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2005	$ 1,888,310	$ 1,381,795	73%	$ 506,515
2006	2,212,726	1,563,911	71%	648,815
2007	2,486,570	1,709,661	69%	776,909
2008	3,387,095	2,318,786	68%	1,068,309
2009	3,848,445	2,432,211	63%	1,416,234
2010	3,977,598	2,520,824	63%	1,456,774
2011	4,218,225	2,635,469	63%	1,582,756
2012	4,632,730	2,832,295	61%	1,800,435
2013	4,689,285	2,918,303	62%	1,770,982
2014	5,099,488	2,880,504	57%	2,218,984
2015	5,490,710	2,815,602	51%	2,675,108

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

Table 9-20: Computed Employer Contributions - Comparative Schedule

Valuation Date	Active Employees		Computed Employer	Employee Contribution
December 31	Number	Annual Payroll	Contribution[1]	Rate[2]
2005	6	$ 465,882	11.50%	2.26%
2006	6	496,355	11.50%	4.56%
2007	5	409,922	11.50%	8.96%
2008	6	513,260	11.50%	9.92%
2009	6	490,919	16.05%	10.99%
2010	6	503,147	15.87%	10.98%
2011	6	521,372	16.42%	11.74%
2012	6	506,014	19.02%	14.76%
2013	6	480,040	21.28%	14.78%
2014	5	405,414	37.40%	8.22%
2015	5	453,346	41.51%	9.02%

[1] For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

[2] For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 for the 12/31/2015 valuation do **not** reflect phase-in over 5 fiscal years (beginning in 2017) of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 8.

See the Benefit Provision History on page 29 for past benefit provision changes.

GASB 68 Information

The following information has been prepared to provide some of the information necessary to complete GASB Statement No. 68 disclosures. Statement 68 is effective for fiscal years beginning after June 15, 2014. Additional resources, including an Implementation Guide, are available at www.mersofmich.com .

Actuarial Valuation Date:		12/31/2015
Measurement Date of Total Pension Liability (TPL):		12/31/2015

At 12/31/2015, the following employees were covered by the benefit terms:

Inactive employees or beneficiaries currently receiving benefits:	19
Inactive employees entitled to but not yet receiving benefits:	2
Active employees:	29
	50

Total Pension Liability as of 12/31/2014 measurement date:	$	12,436,096
Total Pension Liability as of 12/31/2015 measurement date:	$	13,737,084
Service Cost for the year ending on the 12/31/2015 measurement date:	$	215,880

Change in the Total Pension Liability due to:

- Benefit changes[1]:	$	(52,648)
- Differences between expected and actual experience[2]:	$	339,272
- Changes in assumptions[2]:	$	581,812

[1] A change in liability due to benefit changes is immediately recognized when calculating pension expense for the year.

[2] Changes in liability due to differences between actual and expected experience, and changes in assumptions, are recognized in pension expense over the average remaining service lives of all employees.

Average expected remaining service lives of all employees (active and inactive):		6
Covered employee payroll: (Needed for Required Supplementary Information)	$	1,856,583

Sensitivity of the Net Pension Liability to changes in the discount rate:

	1% Decrease (7.00%)	Current Discount Rate (8.00%)	1% Increase (9.00%)
Change in Net Pension Liability as of 12/31/2015:	$ 1,606,514	-	$ (1,346,999)

Note: The current discount rate shown for GASB 68 purposes is higher than the MERS assumed rate of return. This is because for GASB 68 purposes, the discount rate must be gross of administrative expenses, whereas for funding purposes it is net of administrative expenses.

Benefit Provision History

The following benefit provision history is provided by MERS. Any corrections to this history or discrepancies between this information and information displayed elsewhere in the valuation report should be reported to MERS. All provisions are listed by date of adoption.

01 - Admin

6/1/2015	Member Contribution Rate 11.47%
6/1/2014	Member Contribution Rate 10.86%
6/1/2013	Member Contribution Rate 4.60%
6/1/2011	Member Contribution Rate 0.00%
6/1/2010	Member Contribution Rate 0.87%
6/1/2009	Member Contribution Rate 0.22%
6/1/2008	Member Contribution Rate 0.87%
6/1/2007	Member Contribution Rate 1.13%
6/1/2006	Member Contribution Rate 1.27%
6/1/2004	Benefit FAC-5 (5 Year Final Average Compensation)
6/1/2004	10 Year Vesting
6/1/2004	Benefit B-3 (80% max)
6/1/2004	Benefit F55 (With 25 Years of Service)
6/1/2004	Member Contribution Rate 0.00%
6/1/1993	Fiscal Month - June

02 - Plc Emply

6/1/2015	Member Contribution Rate 6.02%
6/1/2014	Member Contribution Rate 5.22%
6/1/2013	Member Contribution Rate 5.00%
6/1/2012	Member Contribution Rate 2.61%
6/1/2011	Member Contribution Rate 3.40%
6/1/2010	Member Contribution Rate 3.33%
6/1/2009	Member Contribution Rate 1.82%
6/1/2007	Member Contribution Rate 0.69%
6/1/2006	Member Contribution Rate 2.35%
6/1/2002	Benefit F50 (With 25 Years of Service)
10/1/1997	Member Contribution Rate 0.00%
6/1/1996	Member Contribution Rate 0.70%
6/1/1993	Benefit FAC-5 (5 Year Final Average Compensation)
6/1/1993	10 Year Vesting
6/1/1993	Benefit B-4 (80% max)
6/1/1993	Benefit F55 (With 25 Years of Service)
6/1/1993	Member Contribution Rate 0.00%
6/1/1993	Fiscal Month - June

10 - DPW

6/1/2015	Member Contribution Rate 9.74%
6/1/2014	Member Contribution Rate 8.77%
6/1/2013	Member Contribution Rate 8.99%

10 - DPW

6/1/2012	Member Contribution Rate 7.64%
6/1/2011	Member Contribution Rate 7.80%
6/1/2010	Member Contribution Rate 7.06%
6/1/2009	Member Contribution Rate 7.47%
6/1/2008	Member Contribution Rate 7.46%
6/1/2007	Member Contribution Rate 3.47%
6/1/2006	Member Contribution Rate 4.34%
6/1/2004	Day of work defined as 8 Hours a Day for All employees.
6/1/2004	Benefit FAC-5 (5 Year Final Average Compensation)
6/1/2004	10 Year Vesting
6/1/2004	Benefit B-2
6/1/2004	Benefit F55 (With 25 Years of Service)
6/1/2004	Member Contribution Rate 1.34%
6/1/1993	Fiscal Month - June

20 - Plc Command

6/1/2015	Participant Contribution Rate 9.02%
6/1/2014	Member Contribution Rate 8.22%
4/1/2014	Member Contribution Rate 8.00%
6/1/2013	Member Contribution Rate 10.77%
6/1/2012	Member Contribution Rate 10.98%
6/1/2011	Member Contribution Rate 10.99%
6/1/2010	Member Contribution Rate 7.46%
6/1/2009	Member Contribution Rate 6.98%
6/1/2008	Member Contribution Rate 4.56%
1/1/2008	Member Contribution Rate 4.29%
6/1/2007	Member Contribution Rate 2.26%
8/1/2006	Benefit B-4 (80% max)
8/1/2006	Member Contribution Rate 4.29%
6/1/2004	Benefit FAC-5 (5 Year Final Average Compensation)
6/1/2004	10 Year Vesting
6/1/2004	Benefit B-3 (80% max)
6/1/2004	Benefit F55 (With 25 Years of Service)
6/1/2004	Member Contribution Rate 0.00%
6/1/1993	Fiscal Month - June

Plan Provisions, Actuarial Assumptions, and Actuarial Funding Method

Details on MERS plan provisions, actuarial assumptions, and actuarial methodology can be found in the Appendix. Some actuarial assumptions are specific to this municipality and its divisions. These are listed below.

Increase in Final Average Compensation

Division	FAC Increase Assumption
All Divisions	2.00%

Withdrawal Rate Scaling Factor

Division	Withdrawal Rate Scaling Factor
All Divisions	100%

Miscellaneous and Technical Assumptions

Loads – None.

Grand Blanc, City of (2513) - Total of All Divisions
Projected Normal Cost Payments Based on December 31, 2014 Actuarial Valuation Data
Using Revised Assumptions*

Valuation Date Year Ending	For Calendar Year Beginning	Normal Cost
12/31/2014	1/1/2015	58,582
12/31/2015	1/1/2016	54,945
12/31/2016	1/1/2017	51,998
12/31/2017	1/1/2018	49,934
12/31/2018	1/1/2019	48,485
12/31/2019	1/1/2020	47,447
12/31/2020	1/1/2021	46,804
12/31/2021	1/1/2022	46,027
12/31/2022	1/1/2023	44,588
12/31/2023	1/1/2024	43,116
12/31/2024	1/1/2025	42,106
12/31/2025	1/1/2026	40,961
12/31/2026	1/1/2027	38,973
12/31/2027	1/1/2028	36,355
12/31/2028	1/1/2029	33,912
12/31/2029	1/1/2030	32,092
12/31/2030	1/1/2031	30,587
12/31/2031	1/1/2032	28,668
12/31/2032	1/1/2033	26,484
12/31/2033	1/1/2034	24,253
12/31/2034	1/1/2035	22,135

** Revised assumptions adopted by MERS Retirement Board, first effective with December 31, 2015 annual valuations.*

CBIZ Retirement Plan Services
CBIZ Benefits & Insurance Services, Inc.
17199 Laurel Park North, Ste. 405
Livonia, MI 48152
http://retirement.cbiz.com

August 8, 2016

Grand Blanc, City of

In care of:
Municipal Employees' Retirement System of Michigan
1134 Municipal Way
Lansing, Michigan 48917

Re: Grand Blanc, City of (2513) – Divisions 01, 02, 10, 20 – Projections of Amortization Payment of Unfunded Accrued Liability

As requested by Grand Blanc, City of (2513) – divisions 01, 02, 10, and 20, we have illustrated the series of amortization payments scheduled to fund the unfunded accrued liability (UAL) calculated as of December 31, 2015, using the data and benefit provisions from the December 31, 2015 annual actuarial valuation. The results are calculated using a 7.75% investment return assumption, as well as the 5.75% and 6.75% investment return assumptions, as requested by the Michigan Department of Treasury for their analysis of application requests to issue Long-Term Securities under PA 329 of 2012.

The purpose of this letter is to show the pattern in the annual amortization payment under the amortization policy for closed divisions (Option B) and to show the amortization payments of the UAL calculated using both the actuarial value and market value of assets.

The estimates from this study should not be used for short term budgeting purposes because the assumptions are designed to be a long term expectation of future events. These estimates illustrate the long term pattern of amortization payments under different funding policies. A projection of contribution rates for budgeting purposes would require additional analysis, which is beyond the scope of this study.

Please note this letter should be distributed to any interested parties only in its entirety.

Grand Blanc, City of

All divisions are open as of the December 31, 2015 valuation date. However, as requested, these divisions have been treated as being closed to new entrants as of December 31, 2015 (with new hires covered by a Defined Contribution plan) for purposes of this study.

We projected the annual amortization payments, starting with the amortization periods in effect for the calendar year beginning January 1, 2016, under the Option B amortization policy. The 2016 and 2017 amortization payments shown in this analysis will not match the amortization portion of the projected employer contributions from the 2013, 2014 and 2015 annual valuations because these annual valuations determine the contributions for a particular fiscal year, not a calendar year, and for the 2013 and 2014 valuations, the underlying actuarial assumptions are

CBIZ Retirement Plan Services
CBIZ Benefits & Insurance Services, Inc.
17199 Laurel Park North, Ste. 405
Livonia, MI 48152
http://retirement.cbiz.com

different. **Any normal cost payments are in addition to the amortization payment, and are not affected by the amortization policy used.**

These results are for illustration purposes only. Actual amortization payments will depend on the results of future annual actuarial valuations.

Comments on Pension Obligation Bonds

A discussion of pension obligation bonds is beyond the scope of this letter. It is important for the City to understand and acknowledge the following implications of funding the UAL using pension obligation bonds:

1. **The City will continue to be responsible for funding the employer normal cost as long as there are active members in the plan, and**
2. **If future financial or demographic experience is less favorable than assumed, additional UAL may emerge which would require additional City contributions.**
3. **Fully funding the current UAL does not guarantee that there will be no employer contribution requirements in the future.**

Our calculations were based on the following:

- Demographic information, financial information, benefit provisions and Funding Methods provided by MERS for the December 31, 2015 annual actuarial valuation.
- The actuarial assumptions that were used in the December 31, 2015 annual actuarial valuation, except for any phase-in of the impact of assumption changes.

As always, the MERS actuaries will closely watch the funding progress of all closed divisions. While not currently anticipated, the actuaries may recommend changes to the amortization policy in the future if they deem it necessary for the financial security of benefits provided by the municipality, which could result in more accelerated employer contributions than those shown in this report.

The undersigned are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. Please see page 3 of this document for additional disclosures required by the Actuarial Standards of Practice.

If you have any questions or need additional information, please contact MERS at (800) 767-6377.

Sincerely,

W. James Koss, ASA, MAAA
Actuary

Curt Powell, EA, MAAA
Senior Analyst

CBIZ Retirement Plan Services
CBIZ Benefits & Insurance Services, Inc.
17199 Laurel Park North, Ste. 405
Livonia, MI 48152
http://retirement.cbiz.com

Additional Disclosures Required by Actuarial Standards of Practice No. 41

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period, or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of the actuary's assignment, the actuary did not perform an analysis of the potential range of such future measurements.

This report should not be relied on for any purpose other than the purpose described in the primary communication. Determination of the financial results associated with the benefits described in this report in a manner other than the intended purpose may produce significantly different results.

The calculation was based upon information furnished by the Employer and MERS staff, concerning Retirement System benefits and member information. CBIZ Retirement Plan Services is not responsible for the accuracy or completeness of the information provided to us for these calculations.

The developed findings included in this report consider data or other information through December 31, 2015. The findings are based on actuarial assumptions which were first used in the December 31, 2015 actuarial valuations.

CBIZ Retirement Plan Services
CBIZ Benefits & Insurance Services, Inc.
17199 Laurel Park North, Ste. 405
Livonia, MI 48152
http://retirement.cbiz.com

Grand Blanc, City of (2513) - All Divisions
Projected Amortization Payments Based on December 31, 2015 Actuarial Valuation Data
Closed Amortization Policy Option B - Using 7.75% Interest Rate

	Based on the Actuarial Value of Assets		Based on the Market Value of Assets	
Calendar Year Beginning January 1	Beginning of Year UAL Balance	Amortization Payment	Beginning of Year UAL Balance	Amortization Payment
2016	5,700,000	400,000	6,700,000	400,000
2017	5,700,000	400,000	6,700,000	500,000
2018	5,700,000	400,000	6,700,000	500,000
2019	5,700,000	500,000	6,700,000	500,000
2020	5,700,000	500,000	6,700,000	600,000
2021	5,600,000	500,000	6,600,000	600,000
2022	5,500,000	500,000	6,500,000	600,000
2023	5,300,000	600,000	6,300,000	700,000
2024	5,200,000	600,000	6,100,000	700,000
2025	5,000,000	600,000	5,900,000	700,000
2026	4,700,000	600,000	5,600,000	700,000
2027	4,400,000	700,000	5,200,000	800,000
2028	4,100,000	700,000	4,800,000	800,000
2029	3,700,000	700,000	4,400,000	800,000
2030	3,300,000	700,000	3,900,000	900,000
2031	2,800,000	800,000	3,300,000	900,000
2032	2,200,000	800,000	2,600,000	900,000
2033	1,500,000	800,000	1,800,000	1,000,000
2034	800,000	800,000	1,000,000	1,000,000
2035	-	-	-	-

CBIZ Retirement Plan Services
CBIZ Benefits & Insurance Services, Inc.
17199 Laurel Park North, Ste. 405
Livonia, MI 48152
http://retirement.cbiz.com

Grand Blanc, City of (2513) - All Divisions
Projected Amortization Payments Based on December 31, 2015 Actuarial Valuation Data
Closed Amortization Policy Option B - Using 6.75% Interest Rate

	Based on the Actuarial Value of Assets		Based on the Market Value of Assets	
Calendar Year Beginning January 1	Beginning of Year UAL Balance	Amortization Payment	Beginning of Year UAL Balance	Amortization Payment
2016	7,300,000	400,000	8,300,000	500,000
2017	7,400,000	500,000	8,400,000	500,000
2018	7,400,000	500,000	8,400,000	600,000
2019	7,300,000	600,000	8,400,000	600,000
2020	7,300,000	600,000	8,300,000	700,000
2021	7,100,000	600,000	8,100,000	700,000
2022	7,000,000	700,000	7,900,000	700,000
2023	6,800,000	700,000	7,700,000	800,000
2024	6,500,000	700,000	7,400,000	800,000
2025	6,200,000	700,000	7,100,000	800,000
2026	5,900,000	800,000	6,700,000	900,000
2027	5,500,000	800,000	6,300,000	900,000
2028	5,100,000	800,000	5,800,000	900,000
2029	4,600,000	800,000	5,200,000	1,000,000
2030	4,000,000	900,000	4,600,000	1,000,000
2031	3,400,000	900,000	3,800,000	1,000,000
2032	2,700,000	900,000	3,000,000	1,100,000
2033	1,900,000	1,000,000	2,100,000	1,100,000
2034	1,000,000	1,000,000	1,100,000	1,200,000
2035	-	-	-	-

CBIZ Retirement Plan Services
CBIZ Benefits & Insurance Services, Inc.
17199 Laurel Park North, Ste. 405
Livonia, MI 48152
http://retirement.cbiz.com

Grand Blanc, City of (2513) - All Divisions
Projected Amortization Payments Based on December 31, 2015 Actuarial Valuation Data
Closed Amortization Policy Option B - Using 5.75% Interest Rate

Calendar Year Beginning January 1	Based on the Actuarial Value of Assets: Beginning of Year UAL Balance	Based on the Actuarial Value of Assets: Amortization Payment	Based on the Market Value of Assets: Beginning of Year UAL Balance	Based on the Market Value of Assets: Amortization Payment
2016	9,300,000	500,000	10,400,000	600,000
2017	9,400,000	600,000	10,400,000	600,000
2018	9,300,000	600,000	10,300,000	700,000
2019	9,300,000	600,000	10,300,000	700,000
2020	9,100,000	700,000	10,100,000	800,000
2021	8,900,000	700,000	9,900,000	800,000
2022	8,700,000	800,000	9,600,000	800,000
2023	8,400,000	800,000	9,300,000	900,000
2024	8,000,000	800,000	8,900,000	900,000
2025	7,700,000	900,000	8,500,000	900,000
2026	7,200,000	900,000	8,000,000	1,000,000
2027	6,700,000	900,000	7,400,000	1,000,000
2028	6,100,000	1,000,000	6,800,000	1,100,000
2029	5,500,000	1,000,000	6,100,000	1,100,000
2030	4,800,000	1,000,000	5,300,000	1,100,000
2031	4,000,000	1,100,000	4,500,000	1,200,000
2032	3,200,000	1,100,000	3,500,000	1,200,000
2033	2,200,000	1,100,000	2,500,000	1,300,000
2034	1,200,000	1,200,000	1,300,000	1,300,000
2035	-	-	-	-

Appendix B: Analysis of Current and Future Post Employment Healthcare Benefit Obligations of the City of Grand Blanc

July 22, 2015

City of Grand Blanc
203 E. Grand Blanc Road
Grand Blanc, MI 48439

Attention: Wendy Jean-Buhrer, Finance Director/Assistant City Manager

This report contains the results of an actuarial valuation of the liabilities associated with retiree health benefits provided by the City of Grand Blanc for its employees, together with computed contributions to systematically finance these benefits.

The date of the valuation was May 31, 2015.

The purpose of the actuarial valuation is to:

- Compute the liabilities associated with post-retirement health benefits likely to be paid on behalf of current active employees and retirees, and

- Compute a pre-funding contribution rate for the City to finance the post-retirement health benefits as they accrue.

This valuation has been conducted in accordance with generally accepted actuarial principles and practices. Data concerning active employees, retirees and assets was provided by City. This data has been reviewed for reasonableness, but no attempt has been made to audit such information. The valuation was based on the benefit provisions as submitted by the City. This valuation was prepared under the supervision of a Member of the American Academy of Actuaries who meets the qualification standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Respectfully submitted,

Denise M. Jones Sandra W. Rodwan, M.A.A.A

City of Grand Blanc
Post-Employment Health Benefits

Actuarial Valuation as of May 31, 2015

Table of Contents

Section One: Valuation Summary

Section Two: Actuarial Calculations – Funding

Section Three: Benefit Provisions

Section Four: Actuarial Assumptions and Methods

Section Five: Valuation Data

RODWAN
consulting
company

Section One:

Valuation Summary

RODWAN

consulting company

Purpose of Valuation

The purpose of this actuarial valuation of post-retirement health benefits as of May 31, 2015 is to:

- Compute the liabilities associated with post-retirement health benefits likely to be paid on behalf of current active and retired participants,
- Compute a pre-funding contribution rate to finance the benefits as they accrue.

Assumptions Used in the Valuation

The liabilities and pre-funding contribution rate are very sensitive to the long-term assumptions used in making the valuation. The assumptions used in making this valuation, summarized in Section Four, are only one reasonable set out of a large number of possibilities. To the extent that actual experience differs from the long-term assumptions, the liabilities and contribution rates will be greater or less than those indicated in this report. The assumptions having the greatest impact are the rate of medical care inflation and the investment return rate. We have assumed an 8% annual rate for medical care inflation in the first year, decreasing in increments of 0.5% over the next 8 years to the ultimate 4% assumption. The assumed investment return rate was 6.0%. Please refer to Comments 2 and 3 on page 4. Liabilities and computed contributions can change significantly in future years depending upon the actual and assumed rates of medical care inflation, investment return, benefit provisions and demographics of the participant group.

Actuarial Accrued Liabilities

Actuarial accrued liabilities as of May 31, 2015, were computed to be $3,652,291. Of this amount, $1,854,599 was attributable to current active employees and $1,797,692 to current retirees.

Funding Value of Assets

The market value of assets was reported to be $512,738 as of May 31, 2015.

Computed Contribution Rate

The total annual contribution rate computed to pre-fund post-retirement health benefits was computed to be $273,512. There are two components of this rate, the normal cost and an amortization payment for unfunded actuarial accrued liability. The normal cost contribution was computed to be $52,008. The amortization payment was computed to be $221,504. The amortization period used was 30 years as level dollar payments. The 30 year period is the maximum permitted for reporting purposes under Statements 43 and 45 of the Governmental Accounting Standards Board.

Participants

Active Employees	29
Active Employee Payroll	$1,670,646
Retirees	16
Inactive Vested Employees	0

Section Two:

Actuarial Calculations – Funding

RODWAN
consulting
company

Actuarial Accrued Liabilities

The actuarial accrued liability as May 31, 2015 was computed to be $3,652,291.

Active participants	$1,854,599
Inactive Vested participants	0
Retired participants	1,797,692
Total Actuarial Accrued Liability	3,652,291
Funding Value of Assets	512,738
Unfunded Actuarial Accrued Liability	$3,139,553

Computed Contribution Rates – Annual Required Contribution

The computed contribution rate consists of two components: normal cost and amortization of unfunded actuarial accrued liability. Normal cost was computed to be a level as a percent of pay from date of hire to date of termination. The normal cost can be considered to be the ongoing cost.

The portion of the total present value of future benefits allocated to service already rendered is the actuarial accrued liability. We have amortized the unfunded actuarial accrued liability over 30 years as level dollar payments.

The computed contribution amounts are as follows:

	City of Grand Blanc Computed Employer Contributions
Normal Cost	$52,008
Unfunded Actuarial Accrued Liability	221,504
Total Computed Contribution	
Fiscal Year 2015	$273,512
Fiscal Year 2016	$289,922
Fiscal Year 2017	$307,317

Comments

Comment 1: Governmental Accounting Standards Board (GASB) Statements 43 and 45 concern financial reporting for "other post employment benefits" (OPEB), which are non-pension benefits including retiree health benefits. The standards apply to the plan (Statement 43) and the plan sponsor (Statement 45). Among the required disclosures are the annual OPEB expense, liabilities, funded status and funding progress. Actuarial valuations to determine these disclosures are required every 3 years for plans with fewer than 200 participants and every 2 years for plans with 200 or more participants.

Comment 2: The GASB statements do not mandate that the plan sponsor pre-fund OPEB liabilities. However, if the plan sponsor's funding policy is to contribute less than the Annual Required Contribution (ARC), the GASB standards require that a lower assumed rate of investment return be used to compute the liabilities and Annual Required Contribution. This will increase the liabilities, ARC, and the OPEB obligation that must be reported in the financial statements. The OPEB obligation represents the cumulative difference between the annual OPEB cost and the employer's actual contribution.

For purposes of this valuation we have assumed a rate of investment return (6.0%) based upon the assumption that the City will contribute the actuarially determined annual required contribution. If a higher rate of investment return is assumed, the liabilities and ARC would be less. If a lower rate of investment return is assumed the liabilities and ARC would be greater.

Comment 3: Liabilities for health insurance premiums are highly dependent upon the underlying assumptions concerning medical care inflation and the discount rate. For the purposes of this valuation, we have assumed an 8% annual increase for medical care inflation in the first year, decreasing in increments of 0.5% over the next 8 years to the ultimate 4% assumption. Liabilities and computed contributions would be greater if a higher medical care inflation rate is assumed or a lower discount rate, and conversely.

Comment 4: The unfunded actuarial accrued liabilities were amortized as level dollar amounts over the maximum 30 year period permitted for reporting purposes under the GASB standards. A shorter period would result in higher computed contribution rates.

Comment 5: In order for assets to be considered in determining the unfunded actuarial accrued liability, the assets must be a) irrevocably held in a trust or equivalent arrangement, b) dedicated to providing benefits to retirees and their beneficiaries in accordance with the terms of the plan, and c) legally protected from creditors of the employer or plan.

Section Three:

Benefit Provisions

RODWAN
consulting
company

Benefit Provision Summary

Retiree health benefit provided by the City are stated in the detailed contracts applicable for each employee group, and depend upon date of hire.

Police Officers

Normal Retirement Retiree Health Eligibility

Full-Time Police Officers hired before 8/15/08 are eligible for retiree health care at age 50 with 25 years of service to age 65. At age 65 the City provides a stipend.

Full-Time Police Officers hired after 8/15/08 are eligible for retiree health care at age 50 with 25 years of service to age 65. At age 65 the City provides a stipend.

Benefits for Spouses of Retired Members

Spouses of retired employees are eligible to receive retiree health care benefits. Coverage continues to surviving spouses of deceased retirees, or until the spouse remarries.

Early/Deferred Retirement, Disability and Death-In-Service Eligibility

No retiree health care benefits will be provided.

Other Full Time Employees

Normal Retirement Retiree Health Eligibility

Members are eligible for retiree health care at age 55 with 20 years of service (eligibility for a MERS pension is 55 and 25 years of service) to age 65. At 65, the City provides a stipend.

Early Retirement Eligibility

Members are eligible for reduced retiree health care at age 50 with 20 years of service to age 65. At age 65 the City provides a stipend.

Benefits for Spouses of Retired Members

Spouses of retired employees are eligible to receive retiree health care benefits. Coverage continues to surviving spouses of deceased retirees, or until the spouse remarries.

Deferred Retirement, Disability and Death-In-Service Eligibility

No retiree health care benefits will be provided.

Section Four:

Actuarial Assumptions And Methods

RODWAN consulting company

Actuarial Assumptions

Economic Assumptions

(i) Interest Rate	6.0% (net of expenses)
(ii) Inflation Rate	
Medical	4.0%
Wage	4.0%

Demographic Assumptions

(i) Mortality RP 2000 Projected to 2014

Sample Ages	Future Life Expectancy (Years)	
	Men	Women
55	27.5	29.6
60	23.0	25.1
65	18.8	20.8
70	14.9	16.9
75	11.3	13.3
80	8.3	10.1

The actuarial valuation process uses the probabilities of death at every age based upon the mortality table.

(ii) Disability

Sample Ages	Percent Becoming Disabled At Indicated Age
20	0.02%
25	0.02
30	0.02
35	0.02
40	0.05
45	0.12
50	0.25
55	0.40
60	0.45

(ii) **Termination of Employment** Service related rates for first 5 years of employment. Age related rates after first 5 years of employment

Sample Ages	**Years of Service**	
ALL	0	18.00%
	1	18.00
	2	16.00
	3	12.00
	4	10.00
25	5 & Over	9.00
30		9.00
35		7.00
40		5.00
45		4.00
50		3.00
55		3.00
60		3.00
65		2.00

(iii) **Rates of Retirement**

Age	POAM	All Others
50	22%	--%
51	22	--
52	22	--
53	22	--
54	24	--
55	18	18
56	14	15
57	16	10
58	18	15
59	18	20
60	20	20
61	24	24
62	24	24
63	24	24
64	27	27
65	30	30
66	30	30
67	30	30
68	30	30
69	30	30
70	100	100

Actuarial Method Used for the Valuation

Normal Cost. Normal cost and the allocation of actuarial present values between service rendered before and after the valuation date were determined using an individual entry-age actuarial cost method having the following characteristics:

- The annual normal costs for each individual active participant, payable from date of hire to date of retirement, are sufficient to accumulate the value of the participant's benefit at the time of retirement;

- Each annual normal cost is a constant percentage of the participant's year-by-year projected covered pay, expressed in dollars.

Financing of Unfunded Actuarial Accrued Liability. Unfunded actuarial accrued liability was amortized as a dollar amount over 30 years.

Section Five:

Valuation Data

RODWAN
consulting
company

Premium Summary

Blue Cross monthly age-related premium rates effect 7/2015 for Medical and Pharmacy were reported as follows:

Age	Medical & Pharmacy
50	$571.22
51	596.48
52	624.31
53	652.45
54	682.84
55	713.22
56	746.16
57	779.43
58	814.93
59	832.52
60	868.02
61	898.72
62	918.87
63	944.14
64	959.49
65	959.49

The Post-65 stipend established by City Council was reported to be $150/mo. for 1 person and $300/mo. for 2 persons.

The Dental premium was reported to be $53 for single, $106 for single plus one.

The Vision premium was reported to be $15 for single, $23 for single plus one.

Valuation Assets

The market value of assets as of May 31, 2015 was reported to be $512,738.

Participant Summary

The valuation included 16 persons receiving approximately $143,010 per year in employer financed retiree health benefits.

Retirees – May 31, 2015

Attained Age	Total
50	1
53	2
54	1
56	1
59	1
61	1
62	2
63	1
66	1
72	2
74	1
80	1
85	1
Totals	**16**

Active Members - May 31, 2015
Age and Service Distribution

Attained Age	Service 0-4	5-9	10-14	15-19	20-24	25-29	Over 30	No.
25-29	2	1						3
30-34		2						2
35-39	1	1	2					4
40-44	1	1	1	3				6
45-49	1		1	1	1			4
50-54	1	1			1	3		6
55-59			1	1			1	3
60-64					1			1
Totals	**6**	**6**	**5**	**5**	**3**	**3**	**1**	**29**

Group Averages

Age: 44.7 years
Service: 14.1 years

Appendix C: Evidence that the Pension Obligation Bonds will Eliminate the Unfunded Pension Liability of the Defined Benefit Plan

Sources and Uses	
Sources	
Bond Par Amount	$5,770,000
Total Sources	$5,770,000
Uses	
Pension Fund Deposit	$5,651,042
Costs of Issuance (Including Underwriter's Discount)	$118,958
Total Uses	$5,770,000

555 Briarwood Circle
Suite 333
Ann Arbor, MI 48108
734-994-9700
734-994-9710 fax
www.pfm.com

SOURCES AND USES OF FUNDS

City of Grand Blanc
Limited Tax General Obligation Pension Bonds, Series 2016
(Federally Taxable)
7.75% Return - AVA

Dated Date	10/01/2016
Delivery Date	10/01/2016

Sources:		
Bond Proceeds:		
Par Amount	5,770,000.00	
	5,770,000.00	
Uses:		
Project Fund Deposits:		
Pension Fund Deposit	5,651,042.00	
Delivery Date Expenses:		
Cost of Issuance	75,683.00	
Underwriter's Discount	43,275.00	
	118,958.00	
	5,770,000.00	

Appendix D: Debt Service Amortization Schedule

The PFM Group
Financial & Investment Advisors

555 Briarwood Circle
Suite 333
Ann Arbor, MI 48108

734-994-9700
734-994-9710 fax
www.pfm.com

BONDS DEBT SERVICE

City of Grand Blanc
Limited Tax General Obligation Pension Bonds, Series 2016
(Federally Taxable)
7.75% Return - AVA

Period Ending	Principal	Coupon	Interest	Debt Service	Annual Debt Service
05/01/2017	105,000	1.360%	113,466.94	218,466.94	218,466.94
11/01/2017			96,543.38	96,543.38	
05/01/2018	160,000	1.610%	96,543.38	256,543.38	353,086.76
11/01/2018			95,255.38	95,255.38	
05/01/2019	165,000	1.790%	95,255.38	260,255.38	355,510.76
11/01/2019			93,778.63	93,778.63	
05/01/2020	265,000	1.950%	93,778.63	358,778.63	452,557.26
11/01/2020			91,194.88	91,194.88	
05/01/2021	270,000	2.150%	91,194.88	361,194.88	452,389.76
11/01/2021			88,292.38	88,292.38	
05/01/2022	275,000	2.400%	88,292.38	363,292.38	451,584.76
11/01/2022			84,992.38	84,992.38	
05/01/2023	280,000	2.730%	84,992.38	364,992.38	449,984.76
11/01/2023			81,170.38	81,170.38	
05/01/2024	290,000	2.950%	81,170.38	371,170.38	452,340.76
11/01/2024			76,892.88	76,892.88	
05/01/2025	300,000	3.090%	76,892.88	376,892.88	453,785.76
11/01/2025			72,257.88	72,257.88	
05/01/2026	310,000	3.180%	72,257.88	382,257.88	454,515.76
11/01/2026			67,328.88	67,328.88	
05/01/2027	320,000	3.430%	67,328.88	387,328.88	454,657.76
11/01/2027			61,840.88	61,840.88	
05/01/2028	330,000	3.610%	61,840.88	391,840.88	453,681.76
11/01/2028			55,884.38	55,884.38	
05/01/2029	340,000	3.780%	55,884.38	395,884.38	451,768.76
11/01/2029			49,458.38	49,458.38	
05/01/2030	355,000	3.950%	49,458.38	404,458.38	453,916.76
11/01/2030			42,447.13	42,447.13	
05/01/2031	370,000	4.040%	42,447.13	412,447.13	454,894.26
11/01/2031			34,973.13	34,973.13	
05/01/2032	385,000	4.130%	34,973.13	419,973.13	454,946.26
11/01/2032			27,022.88	27,022.88	
05/01/2033	400,000	4.240%	27,022.88	427,022.88	454,045.76
11/01/2033			18,542.88	18,542.88	
05/01/2034	415,000	4.340%	18,542.88	433,542.88	452,085.76
11/01/2034			9,537.38	9,537.38	
05/01/2035	435,000	4.385%	9,537.38	444,537.38	454,074.76
	5,770,000		2,408,295.12	8,178,295.12	8,178,295.12

Appendix E: Evidence of Rating

S&P Global Ratings

RatingsDirect®

Summary:

Grand Blanc, Michigan; General Obligation

Primary Credit Analyst:
Katelyn A Batesel, Centennial (303) 721-4683; katelyn.batesel@spglobal.com

Secondary Contact:
Blake E Yocom, Chicago (1) 312-233-7056; blake.yocom@spglobal.com

Table Of Contents

Summary:

Grand Blanc, Michigan; General Obligation

Credit Profile		
US$5.115 mil ltd tax GO pension bnds (Federally Taxable) ser 2016 due 05/01/2034		
Long Term Rating	AA/Stable	New
Grand Blanc Brownfield Redev Auth, Michigan		
Grand Blanc, Michigan		
Grand Blanc Brownfield Redev Auth (Grand Blanc) brownfield redevelopment bnds (ltd tax GO) (taxable) (Grand Blanc) ser 2015 due 10/01/2039		
Long Term Rating	AA/Stable	Affirmed
Grand Blanc Brownfield Redev Auth (Grand Blanc) GO		
Long Term Rating	NR	Withdrawn

Rationale

S&P Global Ratings assigned its 'AA' long-term rating to Grand Blanc, Mich.'s series 2016 general obligation (GO) limited-tax pension obligation bonds. At the same time, S&P Global Ratings affirmed its 'AA' long-term rating and underlying rating (SPUR) on the city's existing GO debt. We have withdrawn our rating on the city's 2014 bonds, as they did not sell that year but rather were postponed until 2015, at which point we assigned them a rating as the city's series 2015 bonds (the rating on which we are affirming). The outlook is stable.

The city's full-faith-and-credit and limited ad valorem property tax GO pledge secures the payment of principal of, and interest on, the series 2016 bonds. We view the city's limited-tax GO pledge as on par with that of an unlimited-tax GO pledge, as we believe the city has sufficient credit strengths to make any difference in risk between the two pledges negligible. Proceeds from the series 2016 bonds will be used to fund a portion of city's unfunded actuarially accrued liability (UAAL) under its defined benefit pension plan. The plan's UAAL was $4.365 million as of Dec. 31, 2014, it is currently estimated to be approximately $5 million, and may be found to be higher pending the 2015 valuation of the plan. The city is authorized to issue as much as $5.9 million to fund the liability, and will issue enough to cover the most recent valuation at the time of issuance up to the $5.9 million authorized amount. The current valuation of the plan's UAAL is based on the assumption of an 8% rate of return on investments, whereas after the issuance of the bonds a more conservative assumption of 7.75% will be used. If the real rate of return differs from the aforementioned projection, then the plan will either be over- or underfunded and the city will be obligated to make further payments in order to fully fund the plan. Compared with the Michigan Employees Retirement System's (MERS) UAAL amortization payment schedule, the city projects that its debt service payments on the bonds should yield annual cost savings that will grow substantially over time.

The city's series 2015 limited-tax GO bonds are secured by both the city's full faith and credit and limited taxing powers as well as tax increment revenue, but we rate the bonds based on the limited ad valorem GO pledge as we view it as the stronger security.

The series 2001 Michigan Transportation Fund (MTF) bonds are secured by the full-faith-and-credit and limited ad valorem property tax GO pledge and MTF revenue. We rate the bonds based on the GO pledge, but we consider the pledge of the city's MTF revenue on par with its GO pledge. If either of the ratings were to change, the rating on the 2001 bonds would reflect the stronger of the two pledges. The city issued the series 2001 bonds pursuant to the provisions of Act 51, Public Acts of Michigan, 1951, as amended, and Act 175, Public Acts of Michigan, 1952, as amended. The bonds are secured by a first-lien pledge of state-collected annual gas and weight taxes returned to Grand Blanc from the MTF for highway and road purposes, pursuant to Act 51, as amended. Pledged revenue coverage from receipts for fiscal year-end June 30, 2015 on estimated maximum annual debt service ($186,000 in 2015) was 3.03x. The final payment on the bonds is scheduled to be made later in 2016 and we note that based on 2015 revenue, coverage would equate to approximately 3.15x. MTF receipts have been stable, growing by 9.6% since 2013. According to Act 175, maximum annual principal and interest payments for MTF debt obligations cannot exceed 50% of the city's previous fiscal year distribution, providing a minimum coverage level of 2x.

The long-term rating reflects our assessments of the following factors for the city:

- Adequate economy, with projected per capita effective buying income (EBI) at 118% of the national level and market value per capita of $62,102;
- Strong management, with good financial policies and practices under our Financial Management Assessment (FMA) methodology;
- Strong budgetary performance, with operating surpluses in the general fund and at the total governmental fund level in fiscal 2015;
- Very strong budgetary flexibility, with an available fund balance in fiscal 2015 of 83% of operating expenditures, and the flexibility to raise additional revenue despite statewide tax caps;
- Very strong liquidity, with total government available cash at 88.6% of total governmental fund expenditures and 20.6x governmental debt service, and access to external liquidity we consider strong;
- Very weak debt and contingent liability position, with debt service carrying charges at 4.3% of expenditures and net direct debt that is 181.4% of total governmental fund revenue, as well as a large pension and other postemployment benefit (OPEB) obligation; and
- Strong institutional framework score.

Adequate economy

We consider Grand Blanc's economy adequate. The city, with an estimated population of 7,641, is located in Genesee County. The city has a projected per capita EBI of 118% of the national level and per capita market value of $62,102. Overall, the city's market value grew by 8.7% over the past year to $474.5 million in 2016. The county unemployment rate was 5.8% in 2015.

The City of Grand Blanc encompasses approximately 3.7 miles in Genesee County, approximately 8miles south of the City of Flint. Although a number of local enterprises have recently expanded their operations and a number of retail and residential projects have been approved, we note that the city's proximity to Flint may generate negative economic pressures. The city's largest industries include the educational, health, and social services sector as well as the retail and manufacturing sectors. The largest employers include Grand Blanc Schools (337 employees), MediLodge (275), and Kroger (150).

Strong management

We view the city's management as strong, with good financial policies and practices under our FMA methodology, indicating our view that financial practices exist in most areas, but that governance officials might not formalize or monitor all of them on a regular basis.

Highlights of management's policies and practices include:

- The use of two to three years of historical data as well as consultations with state officials and the county assessor to develop budget forecasts;
- Monthly reporting to the council on budget-to-actual performance;
- Maintenance of a one-year long-term financial plan as part of its budgeting process;
- Maintenance of a formal investment management policy supported by monthly reporting to the council on holdings; and
- Adherence to a formal fund balance policy that requires that at least 50% of expenditures be kept on hand.

We note that the city does not maintain a debt management policy and that its capital improvement plan does not extend at least four years beyond the current budget.

Strong budgetary performance

Grand Blanc's budgetary performance is strong, in our opinion. The city had operating surpluses of 5.7% of expenditures in the general fund and of 6.2% across all governmental funds in fiscal 2015. Our assessment accounts for our expectation that budgetary results could deteriorate somewhat from 2015 results in the near term.

Although the city budgeted for a nearly $109,000 general fund deficit for fiscal 2016, management estimates that it finished the year with an approximately $39,000 surplus, which it attributes to conservative budgeting. Management further anticipates that the city will post a surplus in its total governmental funds as well. It is the city's practice to budget two years into the future, and as such we note that management has forecast deficits in both the general and total governmental funds for fiscal 2017 to fund a number of capital projects as well as a break-even result in the general fund and a surplus in the total governmental funds for fiscal 2018. Given the historical strength of the city's budgetary performance, we believe that management's projections will be reasonably accurate and that the city's performance will remain strong for the foreseeable future.

Very strong budgetary flexibility

Grand Blanc's budgetary flexibility is very strong, in our view, with an available fund balance in fiscal 2015 of 83% of operating expenditures, or $2.9 million. We expect the available fund balance to remain above 30% of expenditures for the current and next fiscal years, which we view as a positive credit factor. In addition, the city has the flexibility to raise additional revenue despite statewide tax caps, which we view as a positive credit factor.

Although is the city is projecting that it will draw down on its reserves in 2017, we believe that it will maintain very strong budgetary flexibility for the foreseeable future.

We understand that the city is below its Headlee limit and could generate approximately $1.75 million in additional revenue, if needed.

Very strong liquidity

In our opinion, Grand Blanc's liquidity is very strong, with total government available cash at 88.6% of total governmental fund expenditures and 20.6x governmental debt service in 2015. In our view, the city has strong access to external liquidity if necessary.

We believe that the city has strong access to external liquidity because it has issued GO, revenue, and tax-increment-backed debt, which demonstrates access to capital markets. We do not expect that the city's liquidity will change significantly over the next two years.

Very weak debt and contingent liability profile

In our view, Grand Blanc's debt and contingent liability profile is very weak. Total governmental fund debt service is 4.3% of total governmental fund expenditures, and net direct debt is 181.4% of total governmental fund revenue.

The county has no additional debt plans, and as such we do not anticipate that its debt profile will change materially within the next few years.

In our opinion, a credit weakness is Grand Blanc's large pension and OPEB obligation. Grand Blanc's combined required pension and actual OPEB contributions totaled 10.5% of total governmental fund expenditures in 2015, with 5.7% representing required contributions to pension obligations and 4.7% representing OPEB payments. The city made its full annual required pension contribution in 2015. The funded ratio of the largest pension plan is 65.8%.

The city participates in MERS, which is an agent multi-employer public employee retirement system administered by the Retirement Board of MERS. As of Dec. 31, 2014, the plan was 65.8% funded. After this issuance, the plan should either be fully funded or quite close to fully funded, depending on the timing of the issuance and pension valuation. However, pension bond structures introduce some risk to the longer-term debt and contingent liability profile.

The city also participates in a single-employer defined contribution plan administered by the International City Managers Assn. The city offers OPEBs through the MERS Retiree Health Funding vehicle, which was funded at 14% as of May 31, 2015.

Strong institutional framework

The institutional framework score for Michigan municipalities with a population of 4,000 to 600,000 is strong.

Outlook

The stable outlook reflects our expectation that the city will be able to maintain strong budgetary flexibility and performance for the foreseeable future. Consequently, we do not anticipate changing the rating within the two-year outlook horizon.

Upside scenario

Should economic indicators improve significantly, and should the city's debt profile materially improve, we could consider raising the rating.

Downside scenario

Should the city's budgetary performance deteriorate to such a degree that its flexibility were materially harmed, we could consider lowering the rating.

Related Criteria And Research

Related Criteria

- USPF Criteria: Local Government GO Ratings Methodology And Assumptions, Sept. 12, 2013
- USPF Criteria: Financial Management Assessment, June 27, 2006
- USPF Criteria: Debt Statement Analysis, Aug. 22, 2006
- USPF Criteria: Special Tax Bonds, June 13, 2007
- USPF Criteria: Limited-Tax GO Debt, Jan. 10, 2002
- USPF Criteria: Methodology: Rating Approach To Obligations With Multiple Revenue Streams, Nov. 29, 2011
- USPF Criteria: Assigning Issue Credit Ratings Of Operating Entities, May 20, 2015
- Criteria: Use of CreditWatch And Outlooks, Sept. 14, 2009

Related Research

- S&P Public Finance Local GO Criteria: How We Adjust Data For Analytic Consistency, Sept. 12, 2013
- 2015 Update Of Institutional Framework For U.S. Local Governments

Certain terms used in this report, particularly certain adjectives used to express our view on rating relevant factors, have specific meanings ascribed to them in our criteria, and should therefore be read in conjunction with such criteria. Please see Ratings Criteria at www.standardandpoors.com for further information. Complete ratings information is available to subscribers of RatingsDirect at www.globalcreditportal.com. All ratings affected by this rating action can be found on the S&P Global Ratings public website at www.standardandpoors.com. Use the Ratings search box located in the left column.