GRS Gabriel Roeder Smith & Company
Consultants & Actuaries

BAY COUNTY RETIREE HEALTH CARE PLAN

ACTUARIAL VALUATION REPORT

FOR BAY-ARENAC BEHAVIORAL HEALTH AUTHORITY

AS OF DECEMBER 31, 2015

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GRS

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January 17, 2017

Bay County Voluntary Employees' Beneficiary
Association – Board of Trustees
Bay City, Michigan 48708

Dear Board Members:

Submitted in this report are the results of an Actuarial Valuation of the assets and liabilities associated with the employer financed retiree health benefits provided by Bay-Arenac Behavioral Health Authority (BABH) via the Bay County Voluntary Employees' Beneficiary Association. The date of the valuation was December 31, 2015. The annual required contributions have been calculated for the calendar years beginning January 1, 2016 and January 1, 2017.

This report was prepared at the request of Bay County/BABH and is intended for use by Bay County/BABH and those designated or approved by Bay County/BABH. This report may be provided to parties other than Bay County/BABH only in its entirety and only with the permission of Bay County/BABH. GRS is not responsible for unauthorized use of this report.

The actuarial calculations were prepared for purposes of complying with the requirements of Statement No. 45 of the Governmental Accounting Standards Board (GASB). In addition, we have included information which may be helpful if there is a trust requiring a GASB Statement No. 43 disclosure. The calculations reported herein have been made on a basis consistent with our understanding of these accounting standards. Determinations of the liability associated with the benefits described in this report for purposes other than satisfying Bay-Arenac Behavioral Health Authority's financial reporting requirements may be significantly different than the values shown in this report. This report is not compliant with GASB Statements No. 74 and No. 75. A separate report that incorporates GASB Statements No. 74 and No. 75 will need to be prepared at a later date, once implementation guides are issued for the new standards and following the end of the applicable fiscal year.

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.

The funded ratio reported in this valuation is not appropriate for assessing the sufficiency of Plan assets to cover the estimated cost of settling the Plan's benefit obligations.

This report should not be relied on for any purposes other than the purpose described in the primary communication.

The valuation was based upon information furnished by Bay County and Bay-Arenac Behavioral Health Authority, concerning retiree health benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency with the last valuation, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by Bay County and the Bay-Arenac Behavioral Health Authority.

To the best of our knowledge the information contained in this report is accurate and fairly presents the actuarial position of the Bay County Retiree Health Care Plan - BABH as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. James D. Anderson and Mark Buis are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. The signing actuaries are independent of the plan sponsor.

Respectfully submitted,

James D. Anderson

James D. Anderson, FSA, EA, MAAA

Mark Buis

Mark Buis, FSA, EA, FCA, MAAA

JDA/MB:sc

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

Annual Required Contribution and OPEB Cost

This report presents the Annual Required Contribution (ARC), one component of the annual Other Postemployment Benefits (OPEB) cost required to be recognized by the plan sponsor for purposes of complying with the accounting requirements of the Governmental Accounting Standards Board (GASB) Statement No. 45. In addition, the plan may need to comply with GASB Statement No. 43. Please consult with legal counsel and your auditors to determine whether you have a plan for GASB Statement No. 43 purposes.

We have calculated the Annual Required Contribution (ARC) for the calendar years beginning January 1, 2016 and January 1, 2017. Below is a summary of the results. In the first year GASB Statement No. 45 is adopted, the annual OPEB cost is equal to the ARC. In subsequent years, if there is a Net OPEB Obligation (NOO, see below), the annual OPEB cost is equal to the ARC for the fiscal year plus one year's interest on the Net OPEB Obligation plus an adjustment to the ARC.

Employer contributions to an OPEB trust act to reduce the NOO. In addition, actual premiums paid on behalf of retirees directly from the employer* might be employer contributions in relation to the ARC and act to reduce the NOO. The ARCs and estimated retiree premiums shown below include an adjustment for any implicit rate subsidy present in your pre-65 rates.

* *Premiums passed through the trust in the same fiscal year might also be treated as contributions for that year. We recommend all such transactions be discussed with your accounting professional prior to their occurrence.*

For additional details please see the Section titled "Valuation Results."

	Annual Required Contribution	Estimated Premiums Paid for Retirees
Calendar Year Beginning 2016	$0	$484,579
Calendar Year Beginning 2017	0	506,694

Additional OPEB Reporting Requirements – Net OPEB Obligation

In addition to the annual cost described above, employers will have to disclose a Net OPEB Obligation (or asset). The NOO is the cumulative difference between annual OPEB cost and annual employer contributions in relation to the ARC accumulated from the implementation of Statement No. 45. The NOO is zero as of the beginning of the fiscal year that Statement No. 45 is implemented unless the employer chooses to recognize a beginning balance. The requirements for determining the employer's contributions in relation to the ARC are described in paragraph 13g. of Statement No. 45. Additional information required to be disclosed in the employer's financial statements is detailed in paragraphs 24 through 27 of Statement No. 45.

Liabilities and Assets

1. Present Value of Future Benefit Payments	$10,176,104
2. Actuarial Accrued Liability	8,502,548
3. Plan Assets	14,398,127
4. Unfunded Actuarial Accrued Liability (2) – (3)	(5,895,579)
5. Funded Ratio (3)/(2)	169.3%

The Present Value of Future Benefit Payments (PVFB) is the present value of all benefits projected to be paid from the plan for past and future service to current members. The Actuarial Accrued Liability is the portion of the PVFB allocated to past service by the Plan's funding method (see the Section titled "Actuarial Cost Method and Actuarial Assumptions").

SECTION A

VALUATION RESULTS

BAY COUNTY – BABH
DECEMBER 31, 2015

DEVELOPMENT OF THE ANNUAL REQUIRED CONTRIBUTION

Contributions for	Development of the Annual Required Contribution
	Calendar Year Beginning 2016
Employer Normal Cost	$186,490
Amortization of Unfunded Actuarial Accrued Liability	(401,914)
Annual Required Contribution (ARC)	$ 0
	Calendar Year Beginning 2017
Annual Required Contribution (ARC)	$ 0

The ARC shown in this report has been calculated to increase at the same rate as the projected increase in active member payroll (3.50% per year). The unfunded actuarial accrued liabilities were amortized as a level percent of active member payroll over a closed period of 22 years as of January 1, 2016. A 30-year amortization period for unfunded actuarial accrued liabilities is the maximum period that complies with the current GASB requirements. The long-term rate of investment return used in this valuation is 7.50%.

DETERMINATION OF UNFUNDED ACCRUED LIABILITY

A. Present Value of Future Benefits	
i) Retirees and Beneficiaries	$ 5,786,022
ii) Vested Terminated Members	0
iii) Active Members	4,390,082
Total Present Value of Future Benefits	$10,176,104
B. Present Value of Future Normal Costs	1,673,556
C. Actuarial Accrued Liability (A.-B.)	8,502,548
D. Actuarial Value of Assets	14,398,127
E. Unfunded Actuarial Accrued Liability (C.-D.)	$(5,895,579)
F. Funded Ratio (D./C.)	169.3%

The Unfunded Actuarial Accrued Liability (UAAL) is not booked as an expense all in one year and does not appear in the Employer's Statement of Net Assets. Nevertheless, it is reported in the Notes to the Financial Statements and in the Required Supplementary Information. These are information sections within the employer's financial statements.

COMMENTS

COMMENT A: The Annual Required Contribution (ARC) has decreased from the last valuation. Factors contributing to this decrease include, but are not limited to:

- Favorable premium experience;
- An adjustment to the retiree benefit election assumption in order to better reflect actual Plan experience; and
- Updated understanding of the Plan, members of the Behavioral Health AFSCME (division 23) are ineligible for health care during retirement.

Partially offsetting these factors was an increase due to:

- Resetting the health care trend cost rate.

COMMENT B: One of the key assumptions used in any valuation of the cost of postemployment benefits is the rate of return on the assets that will be used to pay Plan benefits. Higher assumed investment returns will result in a lower ARC. Lower returns will tend to increase the computed ARC. As requested by the plan sponsor, we have calculated the liability and the resulting ARC using an assumed annual rate of investment return of 7.50%. A 7.50% assumed rate may be appropriate to develop the liabilities of the plan in the case that the plan sponsor chooses to pre-fund the entire ARC and invests the resulting assets in such a way as to anticipate 7.50% return. It is our understanding the BABH has been pre-funding the entire ARC. The assumed rate of investment return is determined by the plan sponsor in conjunction with the auditor.

COMMENT C: Based on the number of plan members as of this valuation, the plan sponsor is required by GASB to perform actuarial valuations at least biennially unless there are significant changes in the OPEB. It is our understanding that the County will need to comply with GASB Statement No. 74 reporting effective with the fiscal year beginning after June 15, 2016 and GASB Statement No. 75 reporting effective with the fiscal year beginning after June 15, 2017. Please verify the next required valuation with the auditor.

COMMENTS

COMMENT D: The contribution rates shown include amortization of the unfunded actuarial accrued liability over a closed 22-year period. The amortization period decreased by 2 years from that used in the June 30, 2013 valuation. The maximum time period permitted by the GASB Statements No. 43 and No. 45 for amortization of the unfunded actuarial accrued liability is 30 years. A shorter amortization period would result in a higher ARC.

COMMENT E: The asset split between the various groups was provided by the County.

COMMENT F: This valuation covers the retiree health benefits provided by the Bay-Arenac Behavioral Health Authority via the Bay County Voluntary Employees' Beneficiary Association.

COMMENT G: The "Cadillac" tax is a 40% excise tax paid by the coverage provider (employer and/or insurer) on the value of health plan costs in excess of certain thresholds. The thresholds are $10,200 for single coverage or $27,500 for family coverage in 2020. Many plans are below the thresholds today, but are likely to exceed them in the next decade. The thresholds will be indexed at CPI-U, which is lower than the medical inflation rates affecting the cost of the plans. There is considerable uncertainty about how the tax would be applied, and considerable latitude in grouping of participants for tax purposes. Combining early retiree and Medicare eligible retiree costs is allowed and can keep plans under the thresholds for a longer period of time.

For this valuation, no load was applied to the health care liabilities to approximate the cost for future excise tax. We have not identified any other specific provision of health care reform that would be expected to have a significant impact on the measured obligation. As additional guidance on the legislation is issued, we will review and monitor those impacts.

COMMENT H: The GASB issued Statements Nos. 74 and 75 for OPEB valuations similar to the new pension standards. GASB Statement No. 74 for the plan OPEB disclosures is effective for fiscal years beginning after June 15, 2016. GASB Statement No. 75 for employer OPEB disclosures is effective for employer fiscal years beginning after June 15, 2017. The GASB has not yet issued implementation guides for these new standards. These guides will provide additional clarification related to the implementation of Statements Nos. 74 and 75. Our understanding of the application of the recent GASB Statements is stated below, however GRS consultants are not auditors and we recommend consultation with your auditors for final determination of which standards will be applicable. Bay-Arenac Behavioral Health Authority and the County currently pre-fund the benefits and have the assets set aside in a qualified trust; as a result, Bay-Arenac Behavioral Health Authority and the County will need to comply with both GASB Statements Nos.74 and 75. The information necessary for GASB Statement No. 74 for the fiscal year beginning after June 15, 2016 will be provided at a later date, following the availability of the necessary information and the end of the fiscal year. The basis for the GASB Statement No. 74 information will likely be the December 31, 2015 valuation, where roll-forward techniques will be applied. Another full valuation of the Plan will be necessary before complying with the requirements of GASB Statement No. 75.

SECTION B

RETIREE PREMIUM RATE DEVELOPMENT

RETIREE PREMIUM RATE DEVELOPMENT

Initial premium rates were developed for the two classes of retirees (pre-65 and post-65). The January 1, 2016 fully-insured rates provided by the Bay-Arenac Behavioral Health Authority were utilized to determine the appropriate premium rates. The pre-65 fully-insured premiums are blended rates based on the combined experience of active and pre-65 retired members; therefore, there is an implicit employer subsidy for the non-Medicare eligible retirees since the average cost of providing health care benefits to retirees under age 65 is higher than the average cost of providing health care benefits to active employees. The true per capita cost for the pre-65 retirees is developed by adjusting the demographic differences between the active employees and retirees to reflect this implicit rate subsidy for the retirees. For the post-65 retirees, the fully-insured premium rate was used as the basis of the initial per capita cost without adjustments since the rate reflects the demographics of the post-65 retiree group.

Age graded and sex distinct premiums are utilized in this valuation. The premiums developed by the preceding processes are appropriate for the unique age and sex distribution currently existing. Over the future years covered by this valuation, the age and sex distribution will most likely change. Therefore, our process "distributes" the average premium over all age/sex combinations and assigns a unique premium for each specific age/sex combination. The age/sex specific premiums more accurately reflect the health care utilization and cost at that age.

Current and Future Retirees

Expected Health Care Cost by Age for Medical and Prescription Drugs		
Age	**Male**	**Female**
45	$ 391.53	$ 512.59
50	529.71	600.19
55	692.32	711.64
60	869.75	836.03
64	1,012.35	938.35
65	263.53	242.67
70	303.97	273.34
75	337.46	299.49

The dental and vision premium rates were not "age graded" for this valuation because dental and vision claims do not vary significantly by age. The monthly dental and vision premium rates used in this valuation are shown below:

	Dental and Vision			
	Pre-65		**Post-65**	
Group	**One-Person**	**Two-Person**	**One-Person**	**Two-Person**
BABH	$23.46	$49.57	$23.46	$49.57

James E. Pranschke is a Member of the American Academy of Actuaries (MAAA) and meets the Qualification Standards of the American Academy of Actuaries to certify the per capita retiree health care rates shown above.

James E. Pranschke

James E. Pranschke, FSA, MAAA

SECTION C

SUMMARY OF BENEFITS

BAY COUNTY RETIREE HEALTH CARE PLAN – BABH
SUMMARY OF THE BENEFIT PROVISIONS AS OF DECEMBER 31, 2015

Leaving Employment as a Result of	Eligibility for Pension Benefit	Eligibility for Retiree Health Benefit	When do retiree health benefits commence?	Coverage Provided by Employer Retiree	 Spouse	Retiree Health Care Provider(s)	Type of Insurance	Retiree Share of Cost for Retiree	 Spouse (while Retiree is alive)	 Spouse (after Retiree's death)
Normal/Early Retirement	Age 55 with 8/10& yrs of svc ** Age 55 with 30 yrs of svc Age 60 with 8/62 with 10& yrs of svc	Age 55 with 30 yrs of svc Age 60 with 8 yrs of svc Age 62 with 10 yrs of svc	Immediately	Medical Prescription drug Dental Vision	Medical Prescription drug Dental Vision	BC/BS United American	fully-insured fully-insured fully-insured fully-insured	See Schedule D See Schedule D Zero cost for Retiree with at least 20 yrs svc. Zero cost for Retiree with at least 20 yrs svc.	See Schedule D See Schedule D See Schedule D See Schedule D	See Schedule D See Schedule D See Schedule D See Schedule D
Deferred Vested Termination	8 yrs of svc 10 yrs of svc*	None				N/A N/A N/A N/A		N/A N/A N/A N/A	N/A N/A N/A N/A	N/A N/A N/A N/A
Non-Duty Disability	10 or more years of credited svc	10 or more years of credited svc	Immediately	Medical Prescription drug Dental* Vision	Medical Prescription drug Dental* Vision	BC/BS United American	fully-insured fully-insured fully-insured fully-insured	See Schedule D See Schedule D	See Schedule D See Schedule D	See Schedule D See Schedule D
Duty Disability	No age or svc requirement	No age or svc requirement	Immediately	Medical Prescription drug Dental Vision	Medical Prescription drug Dental Vision	BC/BS United American	fully-insured fully-insured fully-insured fully-insured	See Schedule D See Schedule D	See Schedule D See Schedule D	See Schedule D See Schedule D
Non-Duty Death-in-Svc	10 or more years of credited svc	10 or more years of credited svc	Immediately -Surviving Spouse		Medical Prescription drug Dental Vision	BC/BS United American	fully-insured fully-insured fully-insured fully-insured			
Duty Death-in-Svc	No age or svc requirement Benefits begin upon termination of Worker's Compensation	No age or svc requirement Benefits begin upon termination of Worker's Compensation	Immediately -Surviving Spouse		Medical Prescription drug Dental Vision	BC/BS United American	fully-insured fully-insured fully-insured fully-insured			

Medicare Reimbursement is not offered to any members.

& *10 yrs of svc (age 62 with 10 yrs of svc) for members hired after 1/1/2015.*

** *Eligible for retirement with a reduced pension.*

BABH part-time members do not qualify for retiree health care. They do not have access to the plan.

Behavioral Health AFSCME (Division No. 23) members do not qualify for retiree health care.

Schedule D
Bay-Arenac Behavioral Health
Retiree Health Insurance Premium Contribution
for those who retire on or after January 16, 2004

Retiree Health Insurance Coverage - % paid by the employer based on years of service at retirement (subject to eligibility)

Years of Service	Employer Paid (%)	Retiree Paid (%)	Employer Paid Spousal Coverage	Retiree Paid Spousal Coverage
8	40%	60%	0%	100%
9	45%	55%	0%	100%
10	50%	50%	0%	100%
11	55%	45%	0%	100%
12	60%	40%	0%	100%
13	65%	35%	0%	100%
14	70%	30%	0%	100%
15	75%	25%	0%	100%
16	80%	20%	0%	100%
17	85%	15%	0%	100%
18	90%	10%	0%	100%
19	95%	5%	0%	100%
20	100%	0%	0%	100%
21	100%	0%	5%	95%
22	100%	0%	10%	90%
23	100%	0%	15%	85%
24	100%	0%	20%	80%
25	100%	0%	25%	75%
26	100%	0%	30%	70%
27	100%	0%	35%	65%
28	100%	0%	40%	60%
29	100%	0%	45%	55%
30	100%	0%	50%	50%
31	100%	0%	55%	45%
32	100%	0%	60%	40%
33	100%	0%	65%	35%
34	100%	0%	70%	30%
35	100%	0%	75%	25%
36	100%	0%	80%	20%
37	100%	0%	85%	15%
38	100%	0%	90%	10%
39	100%	0%	95%	5%
40	100%	0%	100%	0%

SECTION D
SUMMARY OF PARTICIPANT DATA

BAY COUNTY - BABH
ACTIVE MEMBERS AS OF DECEMBER 31, 2015
BY AGE AND YEARS OF SERVICE*

Age	Years of Service to Valuation Date							Totals
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.
20-24	3							3
25-29	15							15
30-34	20	11						31
35-39	10	6	5					21
40-44	15	11	5	6				37
45-49	9	7	6	6	2			30
50-54	6	6	5	3	2	6		28
55-59	7	7	2	6		1	2	25
60-64		5	1	2		1		9
65 & Over								
Totals	**85**	**53**	**24**	**23**	**4**	**8**	**2**	**199**

* *Excludes 5 part-time employees and 16 members who belong to Behavioral Health AFSCME (division 23).*

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

Age:	43.5	years
Service:	8.3	years

BAY COUNTY - BABH
INACTIVE MEMBERS AS OF DECEMBER 31, 2015
BY AGE

Number of Retiree and Beneficiary Contracts

	Opt-Out/ Ineligible	One-Person Coverage	Two-Person Coverage*	Total
Male	16	18	7	41
Female	35	41	3	79
Total	51	59	10	120

** Includes family coverage.*

Age	Current Retirees Number of Those Covered BABH
0-44	1
45-49	1
50-54	3
55-59	20
60-64	17
65-69	15
70-74	7
75-79	2
80-84	1
85-89	1
90-94	1
95 +	
Totals	69

There are no terminated members eligible for deferred Plan benefits.

SECTION E

ACTUARIAL COST METHOD AND ACTUARIAL ASSUMPTIONS

ACTUARIAL METHODS FOR BAY COUNTY - BABH AS OF DECEMBER 31, 2015

Actuarial Cost Method. Normal cost and the allocation of benefit values between service rendered before and after the valuation date was determined using an **Individual Entry-Age Actuarial Cost Method** having the following characteristics:

(i) the annual normal cost for each individual active member, payable from the date of employment to the date of retirement, is sufficient to accumulate the value of the member's benefit at the time of retirement; and

(ii) each annual normal cost is a constant percentage of the member's year by year projected covered pay.

Actuarial gains (losses), as they occur, reduce (increase) the Unfunded Actuarial Accrued Liability.

Financing of Unfunded Actuarial Accrued Liabilities. Unfunded Actuarial Accrued Liabilities (UAAL) (full funding credit if assets exceed liabilities) were amortized as a level percent of payroll. The UAAL was determined using the actuarial value of assets and actuarial accrued liability calculated as of the valuation date and projected to the beginning of the calendar year at the assumed rate of investment return.

Actuarial Value Assets. The Actuarial Value of Assets is set equal to the reported market value of assets. The County reported the asset split between the various groups.

Amortization Factors. The following amortization factors were used in developing the Annual Required Contribution for the calendar years shown:

	Calendar Year Beginning January 1,	
	2016	**2017**
BABH (Level Percent of Pay)	14.6687	14.2337

ACTUARIAL ASSUMPTIONS FOR
BAY COUNTY - BABH
AS OF DECEMBER 31, 2015

The rationale for all assumptions, except the investment return, used in this valuation is included in the 5-year experience study ending December 31, 2011, issued July 3, 2013. All assumptions are expectations of future experience, not market measures.

Investment Return (net of investment expenses): 7.50% a year, compounded annually.

Rates of price inflation are not specifically used for this valuation. However, a rate of price inflation of 2.75% would be consistent with other assumptions in this report.

Pay Projections. These assumptions are used to project current pays to those upon which future contributions will be based. In addition to the Merit and Longevity rates shown in the table, members are also assumed to receive a base increase of 3.5%.

Years of Service	Annual Rate of Pay Increase for Merit & Longevity BABH
1	3.75 %
2	3.00
3	2.25
4	2.25
5	0.75
6+	0.75

If the number of active members remains constant, the total active member payroll will increase by about the level of pay inflation (assumed to be 3.5% per year). This increasing payroll was recognized in amortizing unfunded actuarial accrued liabilities for the active employees, for the open groups. The payroll growth assumptions were first adopted for the December 31, 2012 pension actuarial valuation.

Mortality. The RP-2000 Mortality Combined Healthy Tables, projected 20 years with U.S. Population Scale BB (multiplied by 75% for pre-retirement mortality and 110% for post-retirement mortality for both males and females) were used for healthy lives. The life expectancy at various ages under this mortality table are shown below:

Sample	Future Life Expectancy (Years)^	
Ages	**Men**	**Women**
50	32.15	34.70
55	27.56	30.04
60	23.16	25.50
65	19.01	21.19
70	15.16	17.19
75	11.66	13.58
80	8.62	10.36

^ *These life expectancies are based on post-retirement mortality.*

The RP-2000 Mortality Combined Healthy Tables, projected 20 years with U.S. Population Scale BB with ages set forward 10 years was used for disabled lives.

The mortality assumptions were first adopted for the December 31, 2012 pension actuarial valuation. The mortality rates were adjusted to include margin for future mortality improvements as described in the table shown above.

ACTUARIAL ASSUMPTIONS FOR
BAY COUNTY - BABH
AS OF DECEMBER 31, 2015

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

Retirement Ages	Percent of Active Members Retiring within Next Year BABH
55	15 %
56	10
57	10
58	10
59	10
60	25
61	20
62	10
63	10
64	10
65	25
66	10
67	10
68	10
69	10
70	100

ACTUARIAL ASSUMPTIONS FOR
BAY COUNTY - BABH
AS OF DECEMBER 31, 2015

The following table shows the rates of retirement for the 55 & 8 and/or 55 & 10 Early Retirement provision:

Retirement Ages	55 & 8 and/or 55 & 10 Early Retirement BABH
55	5 %
56	5
57	5
58	5
59	5
60	5
61	5

The retirement assumptions were first adopted for the December 31, 2012 pension actuarial valuation.

Rates of Disability. These rates represent the probabilities of active members becoming disabled. This assumption was first adopted for the December 31, 2012 pension actuarial valuation.

Percent Becoming Disabled	
Sample Ages	BABH
20	0.06 %
25	0.06
30	0.06
35	0.06
40	0.15
45	0.20
50	0.37
55	0.67
60	1.06

We assumed that 85% of disabilities are non-duty related and 15% are duty related.

Rates of Separation from Active Membership. These rates do not apply to members eligible to retire and do not include separation on account of death or disability. This assumption measures the probabilities of members remaining in employment. This assumption was first adopted for the December 31, 2012 pension actuarial valuation.

		% of Active Members Separating within Next Year
Sample Ages	Years of Service	BABH
ALL	0	15.00%
	1	9.00
	2	9.00
	3	8.00
	4	8.00
20	5 & Over	7.50
25		7.50
30		7.00
35		7.00
40		4.00
45		3.00
50		2.00
55		2.00
60		2.00

ACTUARIAL ASSUMPTIONS FOR BAY COUNTY - BABH AS OF DECEMBER 31, 2015 (CONCLUDED)

Health care cost trend rates are displayed in the following table:

Year After Valuation	Medical and Drug Valuation Trend Rate BABH
1	9.00%
2	8.25%
3	7.50%
4	6.75%
5	6.25%
6	5.75%
7	5.25%
8	4.75%
9	4.25%
10	3.50%
11	3.50%
12+	3.50%

Dental and vision trends are 3.5% for all subsequent years after the valuation.

MISCELLANEOUS AND TECHNICAL ASSUMPTIONS FOR BAY COUNTY - BABH AS OF DECEMBER 31, 2015

Administrative Expenses No explicit assumption has been made for administrative expenses.

Decrement Operation Disability and death-in-service decrements do not operate during the first 5 years of service. Disability and withdrawal do not operate during retirement eligibility.

Decrement Timing Decrements of all types are assumed to occur mid-year.

Eligibility Testing Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.

Incidence of Contributions Contributions are assumed to be received continuously throughout the year based upon the contributions shown in this report.

Marriage Assumption 100% of males and 100% of females are assumed to be married for purposes of death-in-service benefits. Male spouses are assumed to be three years older than female spouses.

Medicare Coverage Assumed to be available for all covered employees on attainment of age 65. Disabled retirees were assumed to be eligible for Medicare coverage at age 65.

Part-Time Employees Part-time employees are not eligible for retiree health care benefits even if they are eligible for benefits from the Retirement System. Part-time employees were excluded from the valuation.

Health Care Coverage at Retirement The table below shows the assumed portion of future retirees electing one-person or two-person/family coverage, or opting out of coverage entirely. For those that elect two-person coverage, the assumption regarding the percentage of retirees that would continue coverage to the spouse upon death of the retiree is also shown.

Group	One-Person		Two-Person/Family		Opt-Out		Percentage to Spouse	
	Males	Females	Males	Females	Males	Females	Males	Females
BABH	15.00%	45.00%	60.00%	30.00%	25.00%	25.00%	80.00%	80.00%

APPENDIX A
OVERVIEW

GASB BACKGROUND

The purpose of this valuation is to provide information on the cost associated with providing postemployment benefits other than pensions, or OPEB, to current and former employees. The information is designed to assist you in complying with Governmental Accounting Standards Board (GASB) Statements No. 43 and No. 45. OPEB benefits are most often associated with postemployment health care, but cover almost any benefit not provided through a pension plan, including life insurance, dental and vision benefits. It is important to note that OPEB benefits, by definition, do not include benefits *currently* being provided to active employees – however, this report includes the liabilities for benefits expected to be paid to current active employees in the future when they retire.

GASB Statements No. 43 and No. 45 were released in the spring of 2004. GASB Statement No. 43 covers the accounting rules for OPEB *plans* while GASB Statement No. 45 describes the rules for *employers* sponsoring OPEB plans. Your auditor can assist you in determining which statements apply to your particular situation.

The specific items required to be disclosed on an OPEB sponsor's financial statements are described in detail in GASB Statements No. 43 and No. 45.

GASB Statement No. 45

Among the requirements of Statement No. 45 are recognition each year of an expense called the Annual OPEB Cost, and the accumulation of a liability to be disclosed on the employer's Statement of Net Assets called the Net OPEB Obligation (NOO).

The fundamental items required to determine the Annual OPEB Cost and the NOO are:

- the Annual Required Contribution (ARC)
- the Employer's Contributions in relation to the ARC

Although GASB does not require OPEB contributions, it has chosen to call the base component of the annual OPEB cost the Annual Required Contribution. The ARC is provided in this report.

Paragraph 13g. of Statement No. 45 states:

> "An employer has made a contribution in relation to the ARC if the employer has:
>
> 1. made payments of benefits directly to or on behalf of a retiree or beneficiary,
> 2. made premium payments to an insurer, or
> 3. irrevocably transferred assets to a trust, or equivalent arrangement in which Plan assets are dedicated to providing benefits to retirees and their beneficiaries in accordance with the terms of the Plan and are legally protected from creditors of the employer(s) or plan administrator."

For each fiscal year shown in this report, we have provided the ARC and the estimated benefits and/or premiums (based on valuation assumptions).

The NOO is the cumulative difference between the Annual OPEB Cost each year and the Employer's Contribution in relation to the ARC. The Annual OPEB Cost for a year is equal to:

- the ARC, plus
- interest on the prior year's NOO, plus
- amortization of the prior year's NOO.

The Annual OPEB Cost and NOO are generally developed by the plan sponsor's auditor based on information contained herein and elsewhere.

GASB Statement No. 43

If the Plan has assets for Statement No. 43 purposes, then certain additional information useful in complying with the Statement is contained in this report.

OPEB PRE-FUNDING

Many employers fund retiree health care benefits using the pay-as-you-go (or cash disbursement) method. Under this method, the employer's annual contribution is equal to the actual disbursements during the year for OPEB for retired employees. This method of funding will result in increasing contributions over time. First, per capita cash disbursements will tend to increase from year to year as the cost of health care services, or the utilization of these services, increases. Second, the number of retired members is likely to increase for years to come. The more retirees, the greater the disbursements as a percentage of employee payroll.

A retiree health care plan is similar to a defined benefit pension plan in that promises are made to employees to provide them with a benefit payable at some future date. For defined benefit pension plan sponsors, a common funding objective is to contribute to a fund, annual amounts which will i) remain level as a percentage of active member payroll, and ii) when combined with present assets and future investment return be sufficient to meet the financial obligations of the Plan to current and future retirees.

The GASB statements are not funding requirements. They are accounting standards that require plan sponsors to calculate the annual expense associated with OPEB using certain methods.

The ultimate determination as to the level of pre-funding will be the result of decisions made in an attempt to support benefit security for members and the fiscal management needs of the employer.

APPENDIX B

GLOSSARY

Accrued Service. The service credited under the plan which was rendered before the date of the actuarial valuation.

Actuarial Accrued Liability. The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as "accrued liability" or "past service liability."

Actuarial Assumptions. Estimates of future plan experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

Actuarial Cost Method. A mathematical budgeting procedure for allocating the dollar amount of the "actuarial present value of future plan benefits" between the actuarial present value of future normal cost and the actuarial accrued liability. Sometimes referred to as the "actuarial funding method."

Actuarial Equivalent. A single amount or series of amounts of equal value to another single amount or series of amounts, computed on the basis of the rate(s) of interest and mortality tables used by the plan.

Actuarial Present Value. The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Amortization. Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.

GLOSSARY

Annual Required Contribution (ARC). The ARC is the normal cost plus the portion of the unfunded actuarial accrued liability to be amortized in the current period. The ARC is an amount that is actuarially determined in accordance with the requirements so that, if paid on an ongoing basis, it would be expected to provide sufficient resources to fund both the normal cost for each year and the amortized unfunded actuarial accrued liability.

Governmental Accounting Standards Board (GASB). GASB is the private, nonpartisan, nonprofit organization that works to create and improve the rules U.S. state and local governments follow when accounting for their finances and reporting them to the public.

Implicit Rate Subsidy. It is common practice for employers to allow retirees to continue in the employer's group health insurance plan (which also covers active employees), often charging the retiree some portion of the premium charged for active employees. Under the theory that retirees have higher utilization of services, the difference between the true cost of providing retiree coverage and what the retiree is being charged is known as the implicit rate subsidy.

Medical Trend Rate (Health Care Inflation). The increase in the cost of providing health care benefits over time. Trend includes such elements as pure price inflation, changes in utilization, advances in medical technology, and cost shifting.

Normal Cost. The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as "current service cost." Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.

Other Postemployment Benefits (OPEB). OPEB are postemployment benefits other than pensions. OPEB generally takes the form of health insurance, dental, vision, prescription drugs, life insurance or other health care benefits.

Reserve Account. An account used to indicate that funds have been set aside for a specific purpose and are not generally available for other uses.

Unfunded Actuarial Accrued Liability. The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as "unfunded actuarial accrued liability."

Valuation Assets. The value of current plan assets recognized for valuation purposes.

January 17, 2017

Ms. Katie Meeth, Retirement Administrator/Accountant
Bay County Retiree Health Care Plan
Bay County Building
515 Center Avenue, Suite 706
Bay City, Michigan 48708

Re: Bay County Retiree Health Care Plan

Dear Ms. Meeth:

Enclosed is a copy of the December 31, 2015 actuarial valuation of Bay County Retiree Health Care Plan - BABH.

Should you have any questions on the enclosed report, please feel free to call me.

Respectfully submitted,

James D. Anderson

James D. Anderson, FSA, EA, MAAA

JDA:sc
Enclosures

cc: Jerry Desloover, Rehman, Robson
Shana M. Neeson, GRS
Stephanie Crawford, GRS