

Hampshire County Retirement System

**Independent Auditors' Report and
Management's Schedule of
Employer Allocations and
Schedule of Pension Amounts
By Employer**

December 31, 2018

Ron L. Beaulieu & Company

CERTIFIED PUBLIC ACCOUNTANTS

HAMPSHIRE COUNTY RETIREMENT SYSTEM

DECEMBER 31, 2018

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INDEPENDENT AUDITORS' REPORT

To the Retirement Board of
Hampshire County Retirement System
Northampton, Massachusetts

We have audited the accompanying schedule of employer allocations of Hampshire County Retirement System as of and for the year ended December 31, 2018, and the related notes to the schedule. We have also audited the total for all entities of the columns titled net pension liability, total deferred outflows of resources, total deferred inflows of resources, and total pension expense (specified column totals) included in the accompanying schedule of pension amounts by employer of Hampshire County Retirement System as of and for the year ended December 31, 2018, and the related notes to the schedule.

Management's Responsibility for the Schedules

Management is responsible for the preparation and fair presentation of these schedules in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of schedules that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express opinions on the schedule of employer allocations and the specified column totals included in the schedule of pension amounts by employer based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the schedule of employer allocations and specified column totals included in the schedule of pension amounts by employer are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the schedule of employer allocations and specified column totals included in the schedule of pension amounts by employer. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the schedule of employer allocations and specified column totals included in the schedule of pension amounts by employer, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the schedule of employer allocations and specified column totals included in the schedule of pension amounts by employer in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control.

Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting polices used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the schedule of employer allocations and specified column totals included in the schedule of pension amounts by employer.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Opinions

In our opinion, the schedules referred to above present fairly, in all material respects, the employer allocations and net pension liability, total deferred outflows of resources, total deferred inflows of resources, and total pension expense for the total of all participating entities for Hampshire County Retirement System, as of and for the year ended December 31, 2018, in accordance with accounting principles generally accepted in the United States of America.

Other Matters

We have audited, in accordance with auditing standards generally accepted in the United States of America, the financial statements of Hampshire County Retirement System as of and for the year ended December 31, 2018, and our report thereon, dated September 06, 2019, expressed an unmodified opinion on those financial statements.

Restriction on Use

Our report is intended solely for the information and use of Hampshire County Retirement System management, Retirement Board, Hampshire County Retirement System employers and their auditors and is not intended to be and should not be used by anyone other than these specified parties.

Ron L. Beaulieu & Co.

Portland, Maine
September 06, 2019

HAMPSHIRE COUNTY RETIREMENT SYSTEM
SCHEDULE OF EMPLOYER ALLOCATIONS
AS OF AND YEAR ENDED DECEMBER 31,

| Employer | 2018 | |
|--|---------------|------------|
| | Actual | Employer |
| | Employer | Allocation |
| | Contributions | Percentage |
| Hampshire Council of Governments | \$ 282,659 | 1.25081% |
| Town of Amherst | 6,211,314 | 27.48614% |
| Amherst Housing Authority | 189,499 | 0.83857% |
| Amherst-Pelham Regional School District | 1,358,348 | 6.01092% |
| Town of Belchertown | 2,907,783 | 12.86744% |
| Belchertown Housing Authority | 30,848 | 0.13651% |
| Belchertown Water District | 41,866 | 0.18526% |
| Town of Chesterfield | 83,732 | 0.37053% |
| Chesterfield/Goshen Regional School District | 81,529 | 0.36078% |
| Town of Cummington | 57,291 | 0.25352% |
| Foothills Health District | 13,221 | 0.05851% |
| Gateway Regional School District | 568,500 | 2.51571% |
| Town of Goshen | 70,511 | 0.31202% |
| Town of Granby | 980,077 | 4.33701% |
| Granby Housing Authority | 28,645 | 0.12676% |
| Town of Hadley | 1,105,022 | 4.88991% |
| Hadley Housing Authority | 8,815 | 0.03901% |
| Hampshire County Regional Housing Authority | 6,610 | 0.02925% |
| Hampshire County Regional School District | 485,682 | 2.14923% |
| Town of Hatfield | 583,924 | 2.58396% |
| Hatfield Housing Authority | 13,221 | 0.05851% |
| Town of Huntington | 105,436 | 0.46657% |
| Town of Middlefield | 48,477 | 0.21452% |
| Town of Pelham | 185,093 | 0.81907% |
| Town of Plainfield | 70,511 | 0.31202% |
| Quabbin Health District | 58,870 | 0.26051% |
| South Hadley Fire District #1 | 555,279 | 2.45720% |
| South Hadley Fire District #2 | 229,162 | 1.01408% |
| Town of South Hadley | 2,869,344 | 12.69734% |
| South Hadley Housing Authority | 57,291 | 0.25352% |
| So Hadley-Granby-Easthampton Veterans District | 15,424 | 0.06825% |
| Town of Southampton | 745,799 | 3.30029% |
| Town of Ware | 1,900,394 | 8.40957% |
| Ware Housing Authority | 56,311 | 0.24919% |
| Town of Westhampton | 200,517 | 0.88732% |
| Town of Williamsburg | 276,992 | 1.22574% |
| Town of Worthington | 113,996 | 0.50445% |
| Total | \$ 22,597,993 | 100.00000% |

See Independent Auditors' Report and management's notes to schedules.

HAMPSHIRE COUNTY RETIREMENT SYSTEM SCHEDULE OF PENSION AMOUNTS BY EMPLOYER AS OF AND YEAR ENDED DECEMBER 31,

| Employer | 2018 Deferred Outflows of Resources | | | | | | | | | | 2018 Deferred Inflows of Resources | | | | | | | | | | 2018 Pension Expense | |
|--|-------------------------------------|--|---|--|------------------------|--|--------------------------------------|--|---|--|------------------------------------|--|-------------------------------------|--|---|--------------------------------|--|--|--|--|----------------------|--|
| | Liability | Differences Between Expected and Actual Experience | Difference Between Projected and Actual Investment Earnings on Pension Plan | Assumptions of Changes in Proportionate Share of Contributions | Employer Contributions | Proportionate Share of Differences Between Employer Contributions and Proportionate Share of Contributions | Total Deferred Outflows of Resources | Differences Between Expected and Actual Experience | Difference Between Projected and Actual Investment Earnings on Pension Plan | Assumptions of Changes in Proportionate Share of Contributions | Employer Contributions | Proportionate Share of Differences Between Employer Contributions and Proportionate Share of Contributions | Total Deferred Inflows of Resources | Proportionate Share of Pension Expense | Net Amortization of Deferred Amounts from Changes in Proportion | Total Employer Pension Expense | | | | | | |
| Hampshire Council of Governments | \$ 2,697,437 | \$ - | \$ - | \$ 85,548 | \$ 200,343 | \$ - | \$ 674,515 | \$ - | \$ 169,347 | \$ 88,210 | \$ 68,023 | \$ 352,815 | \$ - | \$ - | \$ 349,719 | \$ 346,592 | | | | | | |
| Town of Amherst | 59,275,288 | - | - | 8,539,893 | 1,879,889 | 1,212,815 | 11,632,607 | 576,505 | 3,121,347 | 1,988,389 | 247,286 | 6,483,517 | 7,684,972 | 137,704 | 7,822,676 | | | | | | | |
| Amherst Housing Authority | 1,806,420 | - | - | 260,542 | 57,354 | 228,966 | 546,852 | 17,588 | 113,534 | 59,138 | 134,011 | 324,271 | 234,469 | (1,584) | 232,875 | | | | | | | |
| Amherst-Plainfield Regional School District | 12,362,861 | - | - | 1,687,581 | 411,114 | 170,155 | 2,449,450 | 126,075 | 813,816 | 423,306 | 21,317 | 1,385,116 | 1,680,619 | 18,991 | 1,699,600 | | | | | | | |
| Town of Belchertown | 27,749,303 | - | - | 3,897,889 | 860,062 | 282,706 | 5,160,657 | 269,887 | 1,742,122 | 507,446 | 166,134 | 3,064,589 | 3,387,684 | (5,370) | 3,382,294 | | | | | | | |
| Belchertown Housing Authority | 294,391 | - | - | 42,413 | 9,337 | 40,716 | 136,456 | 2,863 | 16,482 | 9,027 | 30,972 | 30,972 | 36,167 | 24,109 | 62,276 | | | | | | | |
| Belchertown Water District | 398,363 | - | - | 52,413 | 10,474 | 9,957 | 62,863 | 1,990 | 23,082 | 13,885 | 11,990 | 31,868 | 13,885 | 18,000 | 50,000 | | | | | | | |
| Town of Chatham | 775,041 | - | - | 145,100 | 23,921 | 48,463 | 196,584 | 7,990 | 23,082 | 13,885 | 11,990 | 31,868 | 13,885 | (1,682) | 30,186 | | | | | | | |
| Chatham Regional School District | 775,041 | - | - | 112,004 | 2,673 | 69,316 | 183,993 | 7,567 | 48,846 | 25,443 | 75,085 | 157,288 | 100,875 | (1,682) | 155,606 | | | | | | | |
| Chatham Health District | 546,729 | - | - | 78,768 | 17,333 | 89,238 | 178,343 | 5,317 | 34,324 | 17,879 | 6,384 | 63,904 | 70,883 | 10,669 | 81,351 | | | | | | | |
| Foothill Health District | 126,180 | - | - | 18,179 | 4,002 | 17,784 | 39,965 | 1,227 | 7,922 | 4,128 | 6,384 | 16,359 | 16,359 | 6,324 | 22,683 | | | | | | | |
| Gateway Regional School District | 5,425,269 | - | - | 781,626 | 172,081 | 101,626 | 953,687 | 52,765 | 340,602 | 177,415 | 448,172 | 1,016,954 | 703,378 | (152,492) | 864,486 | | | | | | | |
| Town of Granby | 672,887 | - | - | 96,944 | 21,340 | 57,722 | 176,006 | 6,544 | 42,244 | 22,004 | 33,881 | 104,673 | 87,239 | 2,845 | 90,084 | | | | | | | |
| Town of Granby Housing Authority | 9,352,987 | - | - | 1,347,501 | 296,628 | 133,218 | 1,777,347 | 90,966 | 587,187 | 305,868 | 284,113 | 1,268,124 | 1,212,604 | (78,821) | 1,189,283 | | | | | | | |
| Granby Housing Authority | 273,365 | - | - | 39,384 | 8,670 | 672 | 48,726 | 2,659 | 17,162 | 8,939 | 1,103 | 29,863 | 35,441 | (7) | 35,434 | | | | | | | |
| Town of Hadley | 10,545,345 | - | - | 1,519,266 | 334,443 | 378,831 | 2,233,550 | 102,563 | 662,044 | 344,850 | 270,170 | 1,379,627 | 1,387,191 | 25,149 | 1,362,042 | | | | | | | |
| Hadley Housing Authority | 84,127 | - | - | 12,120 | 2,668 | 218 | 15,006 | 818 | 5,282 | 2,751 | 342 | 9,193 | 10,907 | - | 10,907 | | | | | | | |
| Hampshire County Regional Housing Authority | 63,079 | - | - | 9,088 | 2,001 | 13,147 | 24,236 | 614 | 3,960 | 2,063 | 16,133 | 22,770 | 8,178 | (20) | 8,158 | | | | | | | |
| Hampshire County Regional School District | 4,634,926 | - | - | 667,762 | 146,995 | 28,070 | 842,827 | 46,079 | 290,984 | 151,569 | 148,210 | 635,842 | 600,913 | (6,423) | 594,490 | | | | | | | |
| Town of Hatfield | 5,572,444 | - | - | 802,831 | 176,729 | 300,328 | 1,279,888 | 54,197 | 349,842 | 182,238 | 17,898 | 604,165 | 722,461 | 80,335 | 802,796 | | | | | | | |
| Hatfield Housing Authority | 126,180 | - | - | 18,179 | 4,002 | 17,787 | 29,968 | 1,227 | 7,922 | 4,128 | 510 | 13,785 | 16,359 | 3,557 | 19,916 | | | | | | | |
| Town of Huntington | 1,006,182 | - | - | 144,962 | 31,911 | 29,513 | 206,396 | 9,786 | 63,169 | 32,904 | 147,305 | 253,164 | 130,450 | (8,327) | 122,123 | | | | | | | |
| Town of Middlefield | 462,624 | - | - | 66,651 | 14,672 | 17,320 | 98,643 | 4,499 | 29,044 | 15,129 | 6,384 | 55,056 | 59,979 | (744) | 59,235 | | | | | | | |
| Town of Pelham | 1,766,367 | - | - | 254,483 | 56,020 | 34,303 | 344,806 | 17,179 | 110,894 | 57,763 | 213,964 | 399,800 | 229,007 | (18,701) | 210,306 | | | | | | | |
| Quabbin Health District | 672,887 | - | - | 96,944 | 21,340 | 38,615 | 157,899 | 6,544 | 42,244 | 22,004 | 2,718 | 73,510 | 87,239 | 24,803 | 112,042 | | | | | | | |
| Quabbin Fire District #1 | 561,803 | - | - | 80,940 | 17,817 | 26,179 | 124,936 | 5,464 | 35,270 | 18,372 | 1,451 | 60,557 | 72,837 | 4,237 | 77,074 | | | | | | | |
| South Hadley Fire District #2 | 5,299,079 | - | - | 763,447 | 168,059 | 14,873 | 946,379 | 51,538 | 332,680 | 173,288 | 250,491 | 807,997 | 687,019 | (48,256) | 638,763 | | | | | | | |
| South Hadley Fire District #2 | 2,186,916 | - | - | 315,073 | 69,357 | 118,000 | 503,030 | 21,270 | 137,296 | 71,516 | 316,551 | 546,633 | 283,531 | (34,736) | 246,795 | | | | | | | |
| Town of South Hadley | 27,382,473 | - | - | 3,945,039 | 888,428 | 545,382 | 5,398,849 | 266,319 | 1,719,092 | 895,451 | 1,414,675 | 4,295,537 | 3,550,105 | 111,986 | 3,662,091 | | | | | | | |
| South Hadley Housing Authority | 546,729 | - | - | 78,768 | 17,333 | 19,988 | 116,105 | 5,317 | 34,324 | 17,879 | 4,602 | 62,122 | 70,883 | 2,796 | 73,679 | | | | | | | |
| So Hadley-Granby-Easthampton Veterans District | 147,185 | - | - | 21,205 | 4,668 | 361 | 26,234 | 1,432 | 9,240 | 4,813 | 584 | 16,079 | 19,082 | (9) | 19,079 | | | | | | | |
| Town of Southhampton | 7,117,247 | - | - | 1,025,394 | 225,722 | 273,606 | 1,524,722 | 69,222 | 446,826 | 232,745 | 127,835 | 876,628 | 922,743 | (17,430) | 905,313 | | | | | | | |
| Town of Ware | 18,135,674 | - | - | 2,612,837 | 575,168 | 158,887 | 3,347,892 | 176,386 | 1,138,571 | 593,865 | 269,957 | 2,177,979 | 2,351,269 | (60,684) | 2,270,585 | | | | | | | |
| Ware Housing Authority | 537,391 | - | - | 77,423 | 17,043 | 50,315 | 144,781 | 5,227 | 33,738 | 17,574 | 910 | 57,449 | 69,672 | 27,532 | 97,204 | | | | | | | |
| Town of Westhampton | 1,813,552 | - | - | 275,669 | 60,688 | 91,615 | 427,992 | 18,611 | 120,134 | 62,576 | 72,392 | 273,713 | 248,090 | (8,274) | 238,816 | | | | | | | |
| Town of Williamsburg | 2,843,372 | - | - | 380,835 | 83,834 | 148,505 | 614,174 | 25,709 | 165,953 | 86,442 | 108,025 | 386,129 | 342,710 | (40,324) | 302,386 | | | | | | | |
| Town of Worthington | 1,087,873 | - | - | 156,732 | 34,502 | 206,824 | 398,058 | 10,581 | 69,297 | 35,575 | 60,058 | 194,511 | 141,041 | 46,625 | 187,666 | | | | | | | |
| Total | \$ 215,655,193 | \$ - | \$ - | \$ 31,069,809 | \$ 6,839,448 | \$ 5,087,322 | \$ 42,966,579 | \$ 2,097,438 | \$ 13,538,991 | \$ 7,052,869 | \$ 5,087,322 | \$ 27,776,020 | \$ 27,959,438 | \$ - | \$ 27,959,438 | | | | | | | |

See Independent Auditors' Report and management's notes to schedules.

HAMPSHIRE COUNTY RETIREMENT SYSTEM
NOTES TO SCHEDULES
DECEMBER 31, 2018

NOTE 1 - DESCRIPTION OF PLAN

The following description of the Hampshire County Retirement System (the Plan), a cost sharing multiemployer plan serving 37 employers, provides only general information. Participants should refer to the Plan agreement for a complete description of the Plan's provisions.

General

The Plan is a defined benefit plan covering all member unit employees deemed eligible by the retirement board, with the exception of the school department employees who serve in a teaching capacity.

Plan Amendments

The Plan did not adopt any significant plan amendments during 2018.

Administration of the Plan

The Plan is administered by a five person Board of Retirement consisting of the Chairperson who shall be appointed by the other four board members, a second member appointed by the Advisory Council, a third and fourth member who shall be elected by the members in or retired from the service of the Plan, and a fifth member, who shall not be a member of the Plan, appointed by the other four board members. The Board of Retirement has the authority to amend or establish policies that are not governed by Massachusetts Law or the Public Employee Retirement Administration Commission.

Contributions

Participation in the plan is required for all full-time employees. There are three classes of membership:

Group 1:

General employees, including clerical, administrative, technical, and all other employees not otherwise classified.

Group 2:

Certain specified hazardous duty positions.

Group 4:

Police officers, firefighters, and other specified hazardous positions.

HAMPSHIRE COUNTY RETIREMENT SYSTEM
 NOTES TO SCHEDULES
 DECEMBER 31, 2018

NOTE 1 - DESCRIPTION OF PLAN (CONTINUED)

Membership of each group as of December 31, 2018:

| <u>Group</u> | Active members | Inactive (retired) members receiving benefits | Inactive (retired) members entitled to benefits but not yet receiving benefits | Total |
|--------------|-------------------|---|---|--------------|
| Group 1 | 1,634 | 1,090 | 545 | 3,269 |
| Group 2 & 4 | 374 | 218 | 126 | 718 |
| | <u>2,008</u> | <u>1,308</u> | <u>671</u> | <u>3,987</u> |

Member contributions vary depending on the most recent date of membership:

| | |
|------------------|--|
| Prior to 1975: | 5% of compensation |
| 1975-1983: | 7% of compensation |
| 1984-6/30/96: | 8% of compensation |
| 7/1/96-present: | 9% of compensation |
| 1979 to present: | an additional 2% of compensation in excess of \$30,000 |

Upon termination, a member may withdraw their contributions plus statutory interest.

Employers were required to contribute \$22,597,993, for the year ended December 31, 2018.

Payment of Benefits

Once a member has met one of the conditions below, they are eligible to receive benefits:

Tier 1 (Membership prior to April 2, 2012):

- 1) Completion of 20 years of service, or
- 2) Reach age 55 if hired prior to 1978, or classified as Group 4, or
- 3) Reach age 55 with 10 years of service, if hired after 1978, and if classified in Group 1 and 2, or
- 4) Disabled or death

Tier 2 (Membership on or after April 2, 2012):

- 1) If classified as Group 1, attain age 60 with 10 years of creditable service, or
- 2) If classified as Group 2, attain age 55 with 10 years creditable service, or
- 3) If classified as Group 4, attain age 55, or
- 4) Disabled or death

HAMPSHIRE COUNTY RETIREMENT SYSTEM
NOTES TO SCHEDULES
DECEMBER 31, 2018

NOTE 1 - DESCRIPTION OF PLAN (CONTINUED)

The amount of benefit is determined by their benefit rate and cannot exceed 80% of the member's highest three year average compensation. The benefit amount may be adjusted for a cost of living adjustment by annual vote of the Retirement Board. Cost of Living adjustment may be granted in an amount determined by the Retirement Board up to a maximum of 3% on the first \$13,000.

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Accounting

The schedules are prepared using the accrual method of accounting.

Basis of Allocation

The Schedule of Employer Allocations is prepared using the historical measure basis of actual contributions.

NOTE 3 - NET PENSION LIABILITY

The net pension liability is the actuarial total liability less the fiduciary net position. The components of the net pension liability are as follows:

| | 2018 |
|-------------------------------|-----------------------------|
| Total pension liability | <u>\$524,593,396</u> |
| Plan fiduciary net position | <u>308,938,203</u> |
| Net pension liability (asset) | <u><u>\$215,655,193</u></u> |

The following are significant assumptions used to measure the total pension liability and projected cash flows:

- 1) Discount rate is estimated to be 7.45% per year based on prior results.
- 2) Inflation is estimated to be 3%.
- 3) Asset allocation is estimated to be 28% fixed income; 55% equities; 12% real estate; and 5% other.
- 4) Increase in salaries will be 4.25% per year for Group 1 and 4.75% for Group 4.
- 5) Mortality was based upon the RP2000 Table projected with scale BB with base year of 2009. Mortality for disabled lives used a base year of 2012.
- 6) Cost of Living Allowance base is fixed at \$13,000.
- 7) Mortality assumptions reflect the recent experience study published in 2014.

HAMPSHIRE COUNTY RETIREMENT SYSTEM
NOTES TO SCHEDULES
DECEMBER 31, 2018

NOTE 4 – COMPONENTS OF SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Net Pension Liability

The Net Pension Liability is the product of the Total Net Pension Liability multiplied by the Employer Allocation Percentage for the year ended December 31, 2018.

Difference between Expected and Actual Experience

The difference between the projected total pension liability and accrued liability is the amount of the difference between expected and actual experience. Each employer's proportionate share of this amount is the product of the Difference between Expected and Actual Experience multiplied by the Employer's Allocation Percentage for the year ended December 31, 2018, as shown in the schedule of employer allocations.

Difference between Projected and Actual Investment Earnings on Pension Plan Investments

The difference between the actual earnings on plan investments compared to the plan's expected rate of return of 7.45% is amortized over a closed period of 5 years. Each employer's proportionate share of this amount is the product of the Total Difference Between Projected and Actual Investment Earnings on Pension Plan Investments multiplied by the Employer's Allocation Percentage for the year ended December 31, 2018, as shown in the schedule of employer allocations.

Changes of Assumptions

The discount rate assumption was changed from 7.50% down to 7.45%. Each employer's proportionate share of this amount is the product of the Change of Assumptions multiplied by the Employer's Allocation Percentage for the year ended December 31, 2018, as shown in the schedule of employer allocations.

Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions

The Changes in Proportion are the December 31, 2018 Net Pension Liability multiplied by the December 31, 2017 Employer Allocation Percentage less the current year Net Pension Liability plus the December 31, 2018 Net Difference between Projected and Actual Investment Earnings on Pension Plan Investments multiplied by the December 31, 2017 Employer Allocation Percentage less the current year Net Difference between Projected and Actual Investment Earnings on Pension Plan Investments. The changes in proportion are amortized over the average expected remaining service life of members, which is 6.79 years in 2018. The first year is recognized as pension expense and the remaining years are shown as either deferred outflows of resources or deferred inflows of resources.

HAMPSHIRE COUNTY RETIREMENT SYSTEM
NOTES TO SCHEDULES
DECEMBER 31, 2018

NOTE 4 – COMPONENTS OF SCHEDULE OF PENSION AMOUNTS BY EMPLOYER (CONTINUED)

Collective Deferred Outflows of Resources and Deferred Inflows of Resources

| | Year of deferral | Amortization period | Balance January 1 | Additions | Deletions | Balance December 31 |
|--|---------------------|------------------------|-----------------------|----------------------|------------------------|------------------------|
| Deferred outflows of resources: | | | | | | |
| Difference between projected and actual investments earnings | | | | | | |
| | 2014 | 5 years | \$ 1,479,402 | \$ - | \$ (1,479,402) | \$ - |
| | 2015 | 5 years | 8,536,754 | - | (4,268,377) | 4,268,377 |
| | 2016 | 5 years | 139,092 | - | (46,364) | 92,728 |
| | 2018 | 5 years | - | 33,385,880 | (6,677,176) | 26,708,704 |
| | | | <u>\$ 10,155,248</u> | <u>\$ 33,385,880</u> | <u>\$ (12,471,319)</u> | <u>\$ 31,069,809</u> |
| Changes in assumptions | 2016 | 5.1 years | \$ 10,096,329 | \$ - | \$ (3,256,881) | \$ 6,839,448 |
| Deferred inflows of resources: | | | | | | |
| Differences between expected and actual experience | | | | | | |
| | 2016 | 5.1 years | \$ (2,643,349) | \$ - | \$ 852,693 | \$ (1,790,656) |
| | 2017 | 6.79 years | (370,828) | - | 64,046 | (306,782) |
| | | | <u>\$ (3,014,177)</u> | <u>\$ -</u> | <u>\$ 916,739</u> | <u>\$ (2,097,438)</u> |
| Difference between projected and actual investments earnings | 2017 | 5 years | \$ (18,051,988) | \$ - | \$ 4,512,997 | \$ (13,538,991) |
| Changes in assumptions | 2017 | 6.79 years | \$ (8,524,559) | \$ - | \$ 1,472,290 | \$ (7,052,269) |

Pension Expense

Each employer's proportionate share of the collective pension expense is equal to the Total Pension Expense multiplied by the Employer's Allocation Percentage for the year ended December 31, 2018, as shown in the schedule of employer allocations.

| | |
|---|----------------------|
| Service cost | \$ 12,771,414 |
| Interest cost | 37,396,643 |
| Employee contributions | (8,378,578) |
| Projected earnings on pension plan investments | (23,721,476) |
| Administrative expenses | 870,363 |
| Recognition of deferred outflows and deferred inflows of resources: | |
| Differences between expected and actual experience | (916,739) |
| Changes of assumptions | 1,784,591 |
| Differences between projected and actual earnings on plan investments | 7,958,322 |
| Pension Expense per Actuarial Certification Report | <u>\$ 27,764,540</u> |

Subsequent to the measurement date of the pension liability, there were adjustments made to the financial statements of the Plan.

HAMPSHIRE COUNTY RETIREMENT SYSTEM
NOTES TO SCHEDULES
DECEMBER 31, 2018

NOTE 4 – COMPONENTS OF SCHEDULE OF PENSION AMOUNTS BY EMPLOYER (CONTINUED)

Below is the reconciliation between the Actuarial Certification report and the Schedule of Pension Amounts by Employer:

| | |
|--------------------------------|---------------|
| Actuarial Certification Report | \$ 27,764,540 |
| Year end accruals | 194,898 |
| Total Pension Expense | \$ 27,959,438 |

NOTE 5 – FUTURE RECOGNITION OF DEFERRED OUTFLOWS OF RESOURCES AND DEFERRED INFLOWS OF RESOURCES

Amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in the pension expense as follows:

| Total | 2019 | 2020 | 2021 | 2022 | 2023 | Thereafter |
|--------------|-----------|-----------|---------|-----------|-------------|------------|
| \$15,220,559 | 7,346,772 | 3,078,395 | 868,259 | 5,140,840 | (1,213,707) | - |

NOTE 6 - MANAGEMENT REVIEW

Management has reviewed subsequent events as of September 06, 2019, the date the schedules were available to be issued. At that time, there were no material subsequent events.