

**POST RETIREMENT BENEFITS ACTUARIAL VALUATION  
OF  
THE CITY OF NEW BEDFORD**

June 30, 2020 Actuarial Valuation Report

GASB 74 & 75

## **TABLE OF CONTENTS**

|                                     | <u>Page</u> |
|-------------------------------------|-------------|
| REPORT SUMMARY                      |             |
| Introduction                        | 1           |
| GASB Statements No. 74 & No. 75     | 2           |
| EXHIBITS                            |             |
| 1 Medical Premiums                  | 8           |
| 2 Membership Distribution           | 9           |
| 3 Summary of Plan Provisions        | 11          |
| 4 Actuarial Methods and Assumptions | 12          |
| CERTIFICATION                       | 16          |

## **Introduction**

This report presents the Governmental Accounting Standards Statements 74 & 75 based on the findings of an actuarial valuation as of June 30, 2020, of the New Bedford OPEB Plan.

The actuarial valuation is based on:

- Plan Provisions as of June 30, 2020.
- Employee data provided by the City
- Asset provided by the City as of June 30, 2020
- Actuarial assumptions approved by the Sherman Actuarial Services and the City

The valuation and forecast do not account for any subsequent changes in the plan.

**GASB Statements No. 74 and No. 75**

Effective for periods beginning after June 15, 2015, the Governmental Accounting Standards Board (GASB) requires the disclosure of Other Post Employment Benefits (OPEB) related liabilities for public employer financial statements in accordance with Statements 74 and 75. These statements, which amend GASB Statements No. 43 and No. 45, must be adhered to by any public employee retirement system that follows Generally Accepted Accounting Principles (GAAP).

These disclosures are intended to establish a reporting framework that distinguishes between:

- current financial information about plan assets and financial activities,
- actuarially determined information from a long-term perspective,
- the funded status of the plan, and
- progress being made in accumulating sufficient assets to pay benefits when due.

The statement requires the system to present two financial statements – a statement of fiduciary net position and a statement of changes in fiduciary net position. The statement of fiduciary net position presents the following items as of the end of the plan's reporting period, as applicable:

- Assets
- Deferred outflows of resources (consumption of net assets by the employers that is applicable to a future reporting period)
- Liabilities
- Deferred inflows of resources (acquisition of net assets by the employers that is applicable to a future reporting period)
- Fiduciary net position (Assets + Deferred outflows – Liabilities – Deferred inflows)

The system is considered a single employer OPEB plan since obligations exist for employees of one employer and plan assets can be used to pay the benefits of the employees the employer.

This report does not include all items required under GASB Statements No. 74 and No. 75. Rather, it provides all items required that are not readily available from other sources and investment reports prepared by the plan's investment consultant.

**Discount Rate**

The discount rate, and all other actuarial assumptions, are the as those described in Exhibit 4. The discount rate was selected based on a projection of employer and employee contributions, benefit payments (with and without subsidy), expenses and the long term expected rate of return on trust assets.

Based on these laws and assumptions, the OPEBs plan's Fiduciary Net Position was projected to not be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on OPEB plan investments is blended with the 20 year municipal bond rate to be applied to all periods of projected benefit payments to determine the total OPEB liability.

The City selected 2.5% as the long term expectation of investment returns. This is a reduction from 3.75% used last year.

**Net Position Restricted for OPEB**

The Net Position Restricted for OPEB Plan Benefits as of June 30, 2020 is \$2,043,555.

|                            |               |
|----------------------------|---------------|
| June 30, 2019 Net Position | 2,004,131     |
| Employer Contributions     | 14,843,263    |
| Employee Contributions     | 0             |
| Other Payments             | 0             |
| Benefit Payments           | (14,843,263)  |
| Expenses                   | (4,488)       |
| Investment Income          | <u>43,912</u> |
| June 30, 2020 Net Position | 2,043,555     |

**OPEB Liability as of June 30, 2020**

The following presents the changes in the OPEB liability during FYE 2020.

|  |              |
|--|--------------|
| June 30, 2019 Liability                | 528,488,722  |
| Service Cost                           | 18,941,395   |
| Interest on Liability and Service Cost | 20,229,162   |
| Change in Plan Provisions              | 0            |
| Experience (Gain) and Loss             | (46,043,123) |
| Change in Assumptions                  | 117,449,904  |
| Benefit Payments                       | (16,119,955) |
| Other                                  | <u>0</u>     |
| June 30, 2020 Liability                | 622,946,105  |

**Net OPEB Liability as of June 30, 2020**

The following presents the net OPEB liability of the system calculated using the discount rate of 2.5%, as well as what the system's net OPEB liability would be if it were calculated using a discount rate that is 1-percentage-point lower (1.5%) or 1-percentage-point higher (3.5%) than the current rate. The Plan Fiduciary Net Position as a percentage of the Total OPEB Liability is 0.3%.

|                             | <b>1% Decrease<br/>(1.5%)</b> | <b>Current Discount<br/>Rate (2.5%)</b> | <b>1% Increase<br/>(3.5%)</b> |
|-----------------------------|-------------------------------|---|-------------------------------|
| Total OPEB Liability        | 748,547,341                   | 622,946,105                             | 526,155,996                   |
| Plan Fiduciary Net Position | <u>2,043,555</u>              | <u>2,043,555</u>                        | <u>2,043,555</u>              |
| Net OPEB Liability          | 746,503,786                   | 620,902,550                             | 524,112,441                   |

The following presents the net OPEB liability of the system calculated using the current trend rates, as well as what the system's net OPEB liability would be if it were calculated using trend rates 1-percentage-point lower for all years or 1-percentage-point higher than the current rates.

|                             | <b>1% Decrease</b> | <b>Current Trend</b> | <b>1% Increase</b> |
|-----------------------------|--------------------|----------------------|--------------------|
| Total OPEB Liability        | 516,087,488        | 622,946,105          | 765,822,868        |
| Plan Fiduciary Net Position | <u>2,043,555</u>   | <u>2,043,555</u>     | <u>2,043,555</u>   |
| Net OPEB Liability          | 514,043,933        | 620,902,550          | 763,779,313        |

### OPEB Expense for FYE 2020

|   |                 |
|---|-----------------|
| Service Cost                            | 18,941,395      |
| Interest                                | 20,229,162      |
| Difference in Experience - Amortization | (11,431,377)    |
| Change in Assumptions - Amortization    | 28,625,765      |
| Changes in Plan Provisions              | 0               |
| Employee Contributions                  | 0               |
| Projected Earnings                      | (75,072)        |
| Administration Expense                  | 4,488           |
| Other Changes in Fiduciary Net Position | 0               |
| Asset (Gain) / Loss Amortization        | <u>(31,439)</u> |
| Total Expense                           | 56,262,922      |

### Schedules of Required Supplementary Information

|  | <u>2020</u> |
|--|-------------|
| Total OPEB Liability – Beginning   | 528,488,722 |
| Total OPEB Liability – Ending (a)  | 622,946,105 |
| Plan Fiduciary Net Position – Beginning                                  | 2,004,131   |
| Plan Fiduciary Net Position – Ending (b)                                 | 2,043,555   |
| Net OPEB Liability – Ending (a) – (b)                                    | 620,902,550 |
| Plan Fiduciary Net Positions as a percentage of the Total OPEB Liability | 0.3%        |
| Covered-employee payroll   | 182,902,245 |
| Net OPEB Liability as a percentage of Covered-employee Payroll           | 339.5%      |

**Reconciliation of Net OPEB Liability for 2020**

|                          |              |
|--------------------------|--------------|
| NOL Beginning of Year    | 526,484,591  |
| OPEB Expense             | 56,262,922   |
| Employer Contributions   | (16,119,955) |
| Deferred Outflow Changes | 88,849,067   |
| Deferred Inflow Changes  | (34,574,075) |
| Revenue                  | <u>0</u>     |
| NOL End of Year          | 620,902,550  |

**Schedule of Net Position Restricted for OPEB Plan Benefits Amortization Recognition**

Below is the schedule of amortization adjustments to the OPEB Expense for the coming years. A positive number indicates that the actual return was less than the expected return and will be added to the OPEB Expense.

Investment Return

| <u>FYE</u> | <u>(Gain) / Loss</u> | <u>Period</u> | <u>Increase (Decrease) arising from (Gains) or Losses</u> |             |             |             |             |
|------------|----------------------|---------------|---|-------------|-------------|-------------|-------------|
|            |                      |               | <u>2020</u>   | <u>2021</u> | <u>2022</u> | <u>2023</u> | <u>2024</u> |
| 2020       | 31,160               | 5             | 6,232   | 6,232       | 6,232       | 6,232       | 6,232       |
| 2019       | (39,402)             | 5             | (7,880)   | (7,880)     | (7,880)     | (7,882)     |             |
| 2018       | (71,860)             | 5             | (14,372)  | (14,372)    | (14,372)    |             |             |
| 2017       | (77,097)             | 5             | (15,419)  | (15,421)    |             |             |             |

Actuarial Assumptions

| <u>FYE</u> | <u>(Gain) / Loss</u> | <u>Period</u> | <u>Increase (Decrease) arising from (Gains) or Losses</u> |             |             |             |             |
|------------|----------------------|---------------|---|-------------|-------------|-------------|-------------|
|            |                      |               | <u>2020</u>   | <u>2021</u> | <u>2022</u> | <u>2023</u> | <u>2024</u> |
| 2020       | (46,043,123)         | 4.87          | (9,454,440)   | (9,454,440) | (9,454,440) | (9,454,440) | (8,225,363) |
| 2018       | 22,318,271           | 4.95          | 4,508,742   | 4,508,742   | 4,283,303   |             |             |

Experience

| <u>FYE</u> | <u>(Gain) / Loss</u> | <u>Period</u> | <u>Increase (Decrease) arising from (Gains) or Losses</u> |             |             |             |             |
|------------|----------------------|---------------|---|-------------|-------------|-------------|-------------|
|            |                      |               | <u>2020</u>   | <u>2021</u> | <u>2022</u> | <u>2023</u> | <u>2024</u> |
| 2020       | 117,449,904          | 4.87          | 24,117,023  | 24,117,023  | 24,117,023  | 24,117,023  | 20,981,812  |
| 2018       | (9,785,838)          | 4.95          | (1,976,937)   | (1,976,937) | (1,878,090) |             |             |



## **EXHIBITS**

## EXHIBIT 1 – MEDICAL PREMIUM

### Monthly Premiums effective July 1, 2020

Health benefits are available to employees and retirees through a number of plans. Retirees contribute 25% of the costs of the plan elected. The following are gross monthly rates per subscriber for plans in which current City retirees can enroll:

|          | <u>Individual</u> | <u>Family</u> |
|----------|-------------------|---------------|
| BCBS HMO | 822.50            | 1,960.88      |
| BCBS PPO | 1,039.88          | 2,503.36      |

### Medicare Supplemental Plans

|                              |        |
|------------------------------|--------|
| MEDEX 2 w/Blue Medicare Rx   | 360.59 |
| MEDEX 2 w/o Blue Medicare Rx | 188.07 |
| Medicare PPO                 | 327.58 |

**EXHIBIT 2 – ACTIVE MEMBERSHIP**

|                            | <u>Actives</u> | <u>Retirees and<br/>Beneficiaries</u> | <u>Total</u> |
|----------------------------|----------------|---------------------------------------|--------------|
| ADULT ED                   | 22             |                                       | 22           |
| AIRPORT                    | 6              |                                       | 6            |
| ART DEPT                   | 14             |                                       | 14           |
| ASHLEY                     | 32             |                                       | 32           |
| ASSESSORS                  | 13             |                                       | 13           |
| AUDITORS                   | 33             |                                       | 33           |
| BROOKS                     | 34             |                                       | 34           |
| CABLE1%2%                  | 9              |                                       | 9            |
| CAMPBELL ELEMENTARY        | 45             |                                       | 45           |
| CARNEY ACADEMY             | 119            |                                       | 119          |
| CENTRAL OFFICE - PERSONNEL | 36             |                                       | 36           |
| CFO                        | 3              |                                       | 3            |
| CITY CLERK                 | 7              |                                       | 7            |
| CITY COUNC                 | 15             |                                       | 15           |
| CLERKCOM                   | 3              |                                       | 3            |
| COMMSERV                   | 20             |                                       | 20           |
| COMP SERV                  | 14             |                                       | 14           |
| CONGDON                    | 27             |                                       | 27           |
| CUSTODIANS                 | 19             |                                       | 19           |
| DEVALLES                   | 31             |                                       | 31           |
| DPI WW                     | 29             |                                       | 29           |
| ELECTIONS                  | 3              |                                       | 3            |
| EMS                        | 32             |                                       | 32           |
| ENVIRON                    | 4              |                                       | 4            |
| FIRE                       | 211            |                                       | 211          |
| GOMES ELEMENTARY           | 75             |                                       | 75           |
| GUIDANCE HEALTH/PUPIL      | 93             |                                       | 93           |
| HATHAWAY                   | 32             |                                       | 32           |
| HAYDEN/MCFADDEN ELEMENTARY | 103            |                                       | 103          |
| HEALTH                     | 22             |                                       | 22           |
| KEITH MIDDLE SCHOOL        | 132            |                                       | 132          |
| LABOR REL                  | 7              |                                       | 7            |
| LIBRARY                    | 28             |                                       | 28           |
| LICENSING                  | 2              |                                       | 2            |
| LINCOLN                    | 60             |                                       | 60           |
| MAINTENANCE                | 139            |                                       | 139          |
| MAYOR                      | 7              |                                       | 7            |
| MIS                        | 10             |                                       | 10           |
| MUSIC DEPARTMENT           | 17             |                                       | 17           |
| NEW BEDFORD HIGH SCHOOL    | 310            |                                       | 310          |
| NORMANDIN MIDDLE SCHOOL    | 130            |                                       | 130          |
| PACHECO                    | 44             |                                       | <u>44</u>    |

|                          |          |              |              |
|--------------------------|----------|--------------|--------------|
| PARENTING TEEN           | 4        |              | 4            |
| PARK & REC               | 5        |              | 5            |
| PARKER                   | 36       |              | 36           |
| PHYS ED                  | 27       |              | 27           |
| PLANDEPT                 | 4        |              | 4            |
| POLICE                   | 283      |              | 283          |
| PRAB                     | 36       |              | 36           |
| PULASKI ELEMENTARY       | 89       |              | 89           |
| PURCHASING               | 3        |              | 3            |
| RENAISSANCE              | 25       |              | 25           |
| RETIREMENT               | 4        |              | 4            |
| RODMAN                   | 18       |              | 18           |
| RSVLT MDL                | 119      |              | 119          |
| SEALAB                   | 13       |              | 13           |
| SOLICITORS               | 14       |              | 14           |
| SPEC ED                  | 46       |              | 46           |
| SWIFT ELEMENTARY         | 19       |              | 19           |
| TAYLOR                   | 27       |              | 27           |
| TOURISM                  | 1        |              | 1            |
| TRAFFIC                  | 11       |              | 11           |
| TREASURERS               | 12       |              | 12           |
| TRINITY DAY ACADEMY      | 32       |              | 32           |
| VETERANS                 | 5        |              | 5            |
| WALSH FLD                | 3        |              | 3            |
| WATER                    | 78       |              | 78           |
| WHALING CITY ALTERNATIVE | 29       |              | 29           |
| WINSLOW                  | 24       |              | 24           |
| WORKERCOMP               | 7        |              | 7            |
| ZOO                      | 21       |              | 21           |
| COMMUNITY DEVELOPMENT    | 12       |              | 12           |
| DEPUTY SUPERINTENDENT    | 7        |              | 7            |
| DIRECTORS AND CLERKS     | 1        |              | 1            |
| ED ACCESS                | 2        |              | 2            |
| FAMILY WELCOME CENTER    | 8        |              | 8            |
| Human Capital Services   | 9        |              | 9            |
| INSPECTIONAL SERVICES    | 16       |              | 16           |
| JACOBS ELEMENTARY        | 46       |              | 46           |
| PAROCHICAL SCHOOL        | 3        |              | 3            |
| SUPERINTENDENT OFFICE    | 5        | 1,907        | 1,912        |
| TRANSPORTATION           | 3        |              | 3            |
| All Others               | <u>0</u> | <u>1,678</u> | <u>1,678</u> |
| <Total>                  | 3,099    | 3,712        | 6,811        |

## EXHIBIT 3 – SUMMARY OF PLAN PROVISIONS:

|  |   |
|--|---|
| <b><i>Retiree Medical Insurance:</i></b>       | Participants may select from a variety of plans offered by the City. Retirees contribute 25% of the costs of the plan elected.  |
| <b><i>Life Insurance:</i></b>                  | The City of New Bedford provides \$5,000 of Basic Life Insurance. Retirees contribute \$1.23 per month for coverage.  |
| <b><i>Spousal Coverage:</i></b>                | Current and future retirees may elect to include their spouses as part of their post-retirement benefits. There is lifetime spousal coverage for medical insurance.   |
| <b><i>Administrative Costs:</i></b>            | The City pays administrative costs for each member of the plan as part of the monthly premium.  |
| <b><i>Section 18 Coverage:</i></b>             | The City has elected to adopt Section 18 under Chapter 32B of the General Laws of Massachusetts, which requires that an employee or retiree must participate in the Medicare program as the primary payer once one reaches age 65 and is Medicare eligible. |
| <b><i>Retirement Eligibility:</i></b>          | Age 55 with 10 years of service, or 20 years of service.  |
| <b><i>Ordinary Disability Eligibility:</i></b> | 10 years of service and under age 55.   |
| <b><i>Termination Eligibility:</i></b>         | 10 years of service.  |

## EXHIBIT 4 – ACTUARIAL METHODS AND ASSUMPTIONS:

### *Interest:*

Partial Prefunding: 2.5% per year, net of investment expenses. The previous disclosure used 3.75%.

### *Actuarial Cost Method:*

Entry Age Normal. Benefits are attributed ratably to service from date of hire until full eligibility date. Full eligibility date is assumed to be first eligibility for retiree medical benefits.

### *Healthcare Cost Trend Rate:*

| <u>Year</u>  | <u>Inflation Rate</u> |
|--------------|-----------------------|
| 2020 & after | 4.5%                  |

### *Participation:*

95% of future retiree teachers and are assumed to participate in the retiree medical plan, 95% of future non-teacher retirees are expected to participate in the retiree medical plan and 100% of future retirees are expected to elect life insurance.

### *Marital Status:*

60% of male employees and 50% of female employees are assumed to have a covered spouse at retirement. Wives are assumed to be three years younger than their husbands.

***Pre-Age 65 Retirees***

Current retirees who are under age 65 are assumed to remain in their current medical plan until age 65. Current active employees who are assumed to retire prior to age 65 are valued with a weighted-average premium. This weighted-average premium is based on the medical plan coverage of current retirees under age 65.

***Post-Age 65 Retirees***

Current retirees over age 65 remain in their current medical plan until death for purposes of measuring their contributions. It is assumed that future retirees are Medicare eligible. It is furthermore assumed that all current retirees over 65 will participate in the Medicare Supplement plan in the same proportion as current retirees over 65. Per capita costs were developed from the City developed monthly costs. Amounts to be received in the future for the Medicare Part D Retiree Drug Subsidy are not reflected in the valuation.

***Termination Benefit:***

95% of current active teachers and 95% of current active non-teachers over age 50 with at least 10 years of service are expected to elect medical coverage starting at age 65.

***Medical Plan Costs:***

The estimated gross per capita incurred claim costs for all retirees and beneficiaries for 2020-21 at age 64 and 65 are \$16,125 and \$3,818, respectively. Medicare eligible retirees' per capita claims costs at age 65 is \$3,355.

It is assumed that future retirees participate in the same manner as current retirees. Employee cost sharing is based on current rates. The cost sharing varies by medical plan. Future cost sharing is based on the weighted average of the current cost sharing of retirees and beneficiaries.

**NON-TEACHERS**

The below tables represent values of the assumed annual rates of withdrawal, disability, death and service retirement:

**Group 1 and 2**

| Age | Disability | Service Retirement |        |                     |                       | Years of Service | Rates of Withdrawal |
|-----|------------|--------------------|--------|---------------------|-----------------------|------------------|---------------------|
|     |            | Male               | Female | Male Post 2012 Hire | Female Post 2012 Hire |                  |                     |
| 25  | 0.0001     |                    |        |                     |                       | 0                | 0.2800              |
| 30  | 0.0002     |                    |        |                     |                       | 5                | 0.1020              |
| 35  | 0.0003     |                    |        |                     |                       | 10               | 0.0650              |
| 40  | 0.0007     |                    |        |                     |                       | 15               | 0.0417              |
| 45  | 0.0010     |                    |        |                     |                       | 20               | 0.0400              |
| 50  | 0.0013     | 0.0360             | 0.1019 |                     |                       | 25               | 0.0400              |
| 55  | 0.0016     | 0.0477             | 0.0469 |                     |                       | 30+              | 0.0000              |
| 60  | 0.0018     | 0.1057             | 0.0774 | 0.0477              | 0.0469                |                  |                     |
| 62  | 0.0019     | 0.1473             | 0.1168 | 0.0632              | 0.0509                |                  |                     |
| 65  | 0.0016     | 0.2615             | 0.1939 | 0.1057              | 0.0774                |                  |                     |
| 69  | 0.0014     | 0.2500             | 0.2000 | 0.2136              | 0.1708                |                  |                     |

**Group 4**

| Age | Disability | Service Retirements |           | Years of Service | Rates of Withdrawal |
|-----|------------|---------------------|-----------|------------------|---------------------|
|     |            | Pre 2012            | Post 2012 |                  |                     |
| 25  | 0.0005     |                     |           | 0 - 1            | 0.150               |
| 30  | 0.0010     |                     |           | 2 - 3            | 0.125               |
| 35  | 0.0020     |                     |           | 4 - 5            | 0.100               |
| 40  | 0.0025     |                     |           | 6 - 7            | 0.075               |
| 45  | 0.0040     | .0443               |           | 8 - 9            | 0.050               |
| 50  | 0.0076     | .0382               | 0.0191    | 10 - 19          | 0.060               |
| 55  | 0.0076     | .1110               | 0.0370    | 20+              | 0.000               |
| 60  | 0.0065     | .1871               | 0.0936    |                  |                     |
| 62  | 0.0065     | .2176               | 0.1741    |                  |                     |
| 65  | 0.0000     | 1.0000              | 0.2500    |                  |                     |

**Mortality:** It is assumed that both pre-retirement mortality and beneficiary mortality is represented by the RP-2014 Blue Collar Mortality with Scale MP-2015, fully generational. Mortality for retired members for Group 1 and 2 is represented by the RP-2014 Blue Collar Mortality Table set forward five years for males and 3 years for females, fully generational. Mortality for retired members for Group 4 is represented by the RP-2014 Blue Collar Mortality Table set forward three years for males, and six years for females, fully generational. Mortality for disabled members for Group 1 and 2 is represented by the RP-2000 Mortality Table set forward six years. Mortality for disabled members for Group 4 is represented by the RP-2000 Mortality Table set forward two years. Generational adjusting is based on Scale MP-2015.



**TEACHERS**

The below tables represent values of the assumed annual rates of withdrawal, disability, death and service retirement:

**Retirement – Males**

| Age | Not in Retirement Plus |       | Retirement Plus |         |       |
|-----|------------------------|-------|-----------------|---------|-------|
|     | Less than 20           | 20+   | Less than 20    | 20 - 30 | 30+   |
| 47  | 0.000                  | 0.000 | 0.000           | 0.000   | 0.000 |
| 48  | 0.000                  | 0.000 | 0.000           | 0.000   | 0.000 |
| 49  | 0.000                  | 0.000 | 0.000           | 0.000   | 0.000 |
| 50  | 0.000                  | 0.020 | 0.000           | 0.010   | 0.020 |
| 51  | 0.000                  | 0.020 | 0.000           | 0.010   | 0.020 |
| 52  | 0.000                  | 0.020 | 0.000           | 0.010   | 0.020 |
| 53  | 0.000                  | 0.020 | 0.000           | 0.015   | 0.020 |
| 54  | 0.000                  | 0.030 | 0.000           | 0.025   | 0.020 |
| 55  | 0.035                  | 0.030 | 0.050           | 0.030   | 0.060 |
| 56  | 0.035                  | 0.035 | 0.050           | 0.060   | 0.200 |
| 57  | 0.050                  | 0.040 | 0.050           | 0.100   | 0.400 |
| 58  | 0.055                  | 0.050 | 0.050           | 0.150   | 0.500 |
| 59  | 0.060                  | 0.060 | 0.100           | 0.200   | 0.500 |
| 60  | 0.075                  | 0.150 | 0.100           | 0.250   | 0.400 |
| 61  | 0.120                  | 0.250 | 0.200           | 0.300   | 0.400 |
| 62  | 0.140                  | 0.300 | 0.200           | 0.350   | 0.350 |
| 63  | 0.140                  | 0.300 | 0.250           | 0.400   | 0.350 |
| 64  | 0.140                  | 0.300 | 0.250           | 0.400   | 0.350 |
| 65  | 0.300                  | 0.300 | 0.250           | 0.400   | 0.350 |
| 66  | 0.300                  | 0.250 | 0.300           | 0.300   | 0.400 |
| 67  | 0.300                  | 0.250 | 0.300           | 0.300   | 0.400 |
| 68  | 0.300                  | 0.250 | 0.300           | 0.300   | 0.400 |
| 69  | 0.300                  | 0.250 | 0.300           | 0.300   | 0.400 |
| 70+ | 1.000                  | 1.000 | 1.000           | 1.000   | 1.000 |

**Retirement – Females**

| Age | Not in Retirement Plus |       | Retirement Plus |         |       |
|-----|------------------------|-------|-----------------|---------|-------|
|     | Less than 20           | 20+   | Less than 20    | 20 - 30 | 30+   |
| 47  | 0.000                  | 0.000 | 0.000           | 0.000   | 0.000 |
| 48  | 0.000                  | 0.000 | 0.000           | 0.000   | 0.000 |
| 49  | 0.000                  | 0.000 | 0.000           | 0.000   | 0.000 |
| 50  | 0.000                  | 0.010 | 0.000           | 0.010   | 0.015 |
| 51  | 0.000                  | 0.010 | 0.000           | 0.010   | 0.015 |
| 52  | 0.000                  | 0.015 | 0.000           | 0.010   | 0.015 |
| 53  | 0.000                  | 0.020 | 0.000           | 0.010   | 0.015 |
| 54  | 0.000                  | 0.020 | 0.000           | 0.010   | 0.020 |
| 55  | 0.035                  | 0.040 | 0.030           | 0.030   | 0.050 |
| 56  | 0.035                  | 0.040 | 0.030           | 0.050   | 0.150 |
| 57  | 0.035                  | 0.040 | 0.040           | 0.080   | 0.350 |
| 58  | 0.050                  | 0.060 | 0.080           | 0.100   | 0.350 |
| 59  | 0.065                  | 0.080 | 0.080           | 0.150   | 0.350 |
| 60  | 0.085                  | 0.150 | 0.100           | 0.200   | 0.350 |
| 61  | 0.100                  | 0.200 | 0.120           | 0.250   | 0.350 |
| 62  | 0.120                  | 0.200 | 0.120           | 0.300   | 0.350 |
| 63  | 0.120                  | 0.250 | 0.150           | 0.300   | 0.350 |
| 64  | 0.200                  | 0.300 | 0.200           | 0.300   | 0.350 |
| 65  | 0.300                  | 0.400 | 0.250           | 0.400   | 0.350 |
| 66  | 0.300                  | 0.300 | 0.250           | 0.300   | 0.350 |
| 67  | 0.300                  | 0.300 | 0.300           | 0.300   | 0.300 |
| 68  | 0.300                  | 0.300 | 0.300           | 0.300   | 0.300 |
| 69  | 0.300                  | 0.300 | 0.300           | 0.300   | 0.300 |
| 70+ | 1.000                  | 1.000 | 1.000           | 1.000   | 1.000 |

**Disability**

| Age | Disability |
|-----|------------|
| 20  | 0.00004    |
| 30  | 0.00006    |
| 40  | 0.00010    |
| 50  | 0.00050    |
| 60  | 0.00070    |
| 60  | 0.00070    |

**Withdrawal**

| Age | Service |        |       |        |       |        |
|-----|---------|--------|-------|--------|-------|--------|
|     | 0       |        | 5     |        | 10+   |        |
|     | Male    | Female | Male  | Female | Male  | Female |
| 20  | 0.130   | 0.100  | 0.055 | 0.070  | 0.015 | 0.050  |
| 30  | 0.150   | 0.150  | 0.054 | 0.088  | 0.015 | 0.045  |
| 40  | 0.133   | 0.105  | 0.052 | 0.050  | 0.017 | 0.022  |
| 50  | 0.162   | 0.098  | 0.070 | 0.050  | 0.023 | 0.020  |

Mortality: It is assumed that mortality is represented by the RP-2014 Blue Collar Mortality with Scale MP-2015, fully generational. Generational adjusting is based on Scale MP-2015.

## CERTIFICATION:

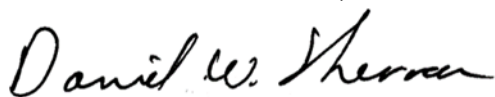
This report fairly represents the actuarial position of the New Bedford OPEB Plan as of June 30, 2020, in accordance with generally accepted actuarial principles applied consistently with the preceding valuation. In our opinion, the actuarial assumptions used to compute actuarial accrued liability and normal cost are reasonably related to plan experience and to reasonable expectations, and represents our best estimate of anticipated plan experience.

The funded status measure is appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations. The funded status measure is appropriate for assessing the need for or the amount of future contributions.

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 our assignment, we did not perform an analysis of the potential range of such future measurements.

The report was prepared under the supervision of Daniel Sherman, an Associate of the Society of Actuaries and a Member of the American Academy of Actuaries, who takes responsibility for the overall appropriateness of the analysis, assumptions and results. Daniel Sherman is deemed to meet the General Qualification Standard and the basic education and experience requirement in the OPEB area. Based on over thirty years of performing valuations of similar complexity, Mr. Sherman is qualified by experience. Daniel Sherman has met the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Sherman Actuarial Services, LLC



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Daniel W. Sherman, ASA, MAAA

December, 2020