



# GASB 75 ACTUARIAL VALUATION

## Fiscal Year Ending June 30, 2020

# CITY OF SOUTH LYON

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**August 11, 2020**

**Paul Zelenak  
City of South Lyon  
335 S. Warren  
South Lyon, MI 48178**

This report summarizes the GASB actuarial valuation for the City of South Lyon 2019/20 fiscal year. To the best of our knowledge, the report presents a fair position of the funded status of the plan in accordance with GASB Statement No. 75 (Accounting and Financial Reporting by Employers for Post-Employment Benefits Other Than Pensions).

The information presented herein is based on the actuarial assumptions and substantive plan provisions summarized in this report and participant information furnished to us by the Plan Sponsor. We have reviewed the employee census provided by the Plan Sponsor for reasonableness when compared to the prior information provided but have not audited the information at the source, and therefore do not accept responsibility for the accuracy or the completeness of the data on which the information is based. When relevant data may be missing, we may have made assumptions we feel are neutral or conservative to the purpose of the measurement. We are not aware of any significant issues with and have relied on the data provided.

The discount rate, other economic assumptions, and demographic assumptions have been selected by the Plan Sponsor with the concurrence of Nyhart. In our opinion, the actuarial assumptions are individually reasonable and in combination represent our estimate of anticipated experience of the Plan. All calculations have been made in accordance with generally accepted actuarial principles and practice.

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); and
- changes in plan provisions or applicable law.

We did not perform an analysis of the potential range of future measurements due to the limited scope of our engagement.

To our knowledge, there have been no significant events prior to the current year's measurement date or as of the date of this report that could materially affect the results contained herein.



Neither Nyhart nor any of its employees has any relationship with the plan or its sponsor that could impair or appear to impair the objectivity of this report. Our professional work is in full compliance with the American Academy of Actuaries "Code of Professional Conduct" Precept 7 regarding conflict of interest. The undersigned meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Should you have any questions please do not hesitate to contact us.

Suraj M. Datta, ASA, MAAA  
Consulting Actuary

Emily Clauss, ASA, MAAA  
Valuation Actuary



# Executive Summary

## City of South Lyon GASB 75 Valuation for Fiscal Year Ending June 30, 2020

### Summary of Results

Presented below is the summary of GASB 75 results for the fiscal year ending June 30, 2020 compared to the prior fiscal year as shown in the City's Notes to Financial Statement.

|                                  | As of June 30, 2019 | As of June 30, 2020 |
|----------------------------------|---------------------|---------------------|
| <b>Total OPEB Liability</b>      | \$ 545,542          | \$ 696,587          |
| <b>Actuarial Value of Assets</b> | \$ 0                | \$ 0                |
| <b>Net OPEB Liability</b>        | \$ 545,542          | \$ 696,587          |
| <b>Funded Ratio</b>              | 0.0%                | 0.0%                |

|                                      | FY 2018/19 | FY 2019/20 |
|--------------------------------------|------------|------------|
| <b>OPEB Expense</b>                  | \$ 29,157  | \$ 46,356  |
| <b>Annual Employer Contributions</b> | \$ 13,622  | \$ 24,332  |

|                                  | As of June 30, 2019 | As of June 30, 2020 |
|----------------------------------|---------------------|---------------------|
| <b>Discount Rate</b>             | 3.51%               | 2.66%               |
| <b>Expected Return on Assets</b> | N/A                 | N/A                 |

|                                   | As of June 30, 2020 |
|-----------------------------------|---------------------|
| <b>Total Active Participants</b>  | 42                  |
| <b>Total Retiree Participants</b> | 5                   |

The active participants' number above may include active employees who currently have no health care coverage. Refer to Summary of Participants section for an accurate breakdown of active employees with and without coverage.

# Executive Summary

City of South Lyon GASB 75 Valuation for Fiscal Year Ending June 30, 2020

## Summary of Results

Below is a breakdown of total GASB 75 liabilities allocated to past and current service compared to the prior year. The table below also provides a breakdown of the Total OPEB Liability allocated to pre- and post- Medicare eligibility. The liability shown below includes explicit (if any) and implicit subsidies. Refer to the Substantive Plan Provisions section for complete information on the Plan Sponsor's GASB subsidies.

| Present Value of Future Benefits              | As of June 30, 2019 | As of June 30, 2020 |
|---|---------------------|---------------------|
| Active Employees                              | \$ 828,046          | \$ 931,127          |
| Retired Employees                             | 12,864              | 148,475             |
| <b>Total Present Value of Future Benefits</b> | <b>\$ 840,910</b>   | <b>\$ 1,079,602</b> |

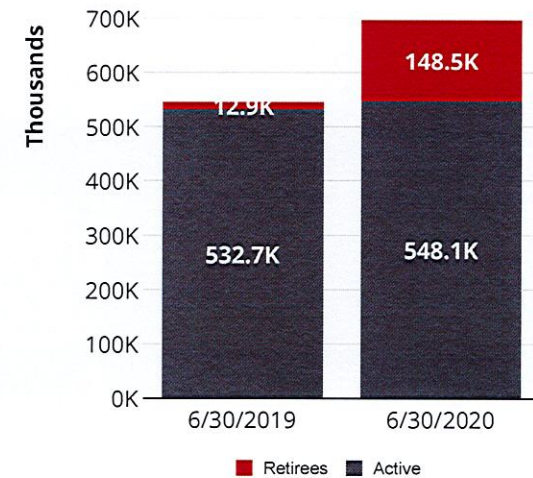
  

| Total OPEB Liability        | As of June 30, 2019 | As of June 30, 2020 |
|-----------------------------|---------------------|---------------------|
| Active Pre-Medicare         | \$ 532,678          | \$ 548,112          |
| Active Post-Medicare        | 0                   | 0                   |
| Active Liability            | \$ 532,678          | \$ 548,112          |
| Retiree Pre-Medicare        | \$ 12,864           | \$ 148,475          |
| Retiree Post-Medicare       | 0                   | 0                   |
| Retiree Liability           | \$ 12,864           | \$ 148,475          |
| <b>Total OPEB Liability</b> | <b>\$ 545,542</b>   | <b>\$ 696,587</b>   |

|               | As of June 30, 2019 | As of June 30, 2020 |
|---------------|---------------------|---------------------|
| Discount Rate | 3.51%               | 2.66%               |

## Changes In Total OPEB Liability



**Present Value of Future Benefits (PVFB)** is the amount needed as of June 30, 2020 and June 30, 2019, to fully fund the City's retiree health care subsidies for existing and future retirees and their dependents assuming all actuarial assumptions are met.

**Total OPEB Liability** is the portion of PVFB considered to be accrued or earned as of June 30, 2020 and June 30, 2019. This amount is a required disclosure in the Required Supplementary Information section.



# GASB Disclosures

City of South Lyon GASB 75 Valuation for Fiscal Year Ending June 30, 2020

## Schedule of Changes in Net OPEB Liability and Related Ratios

| OPEB Liability   | FY 2019/20 |           | FY 2018/19 |           | FY 2017/18   |
|--|------------|-----------|------------|-----------|--------------|
| Total OPEB Liability                                     |            |           |            |           |              |
| Total OPEB Liability - beginning of year                 | \$         | 545,542   | \$         | 464,775   | \$ 601,126   |
| Service cost   |            | 28,071    |            | 23,545    | 28,001       |
| Interest   |            | 19,711    |            | 18,637    | 22,363       |
| Change of benefit terms                                  |            | 0         |            | 0         | 0            |
| Changes in assumptions                                   |            | 42,861    |            | 13,697    | (9,871)      |
| Differences between expected and actual experience       |            | 84,734    |            | 38,510    | (167,844)    |
| Benefit payments   |            | (24,332)  |            | (13,622)  | (9,000)      |
| Net change in total OPEB liability                       | \$         | 151,045   | \$         | 80,767    | \$ (136,351) |
| Total OPEB Liability - end of year                       | \$         | 696,587   | \$         | 545,542   | \$ 464,775   |
|  |            |           |            |           |              |
| Plan Fiduciary Net Position                              |            |           |            |           |              |
| Plan fiduciary net position - beginning of year          | \$         | 0         | \$         | 0         | \$ 0         |
| Contributions - employer                                 |            | 24,332    |            | 13,622    | 9,000        |
| Contributions - active employees                         |            | 0         |            | 0         | 0            |
| Net investment income                                    |            | 0         |            | 0         | 0            |
| Benefit payments   |            | (24,332)  |            | (13,622)  | (9,000)      |
| Trust administrative expenses                            |            | 0         |            | 0         | 0            |
| Net change in plan fiduciary net position                | \$         | 0         | \$         | 0         | \$ 0         |
| Plan fiduciary net position - end of year                | \$         | 0         | \$         | 0         | \$ 0         |
|  |            |           |            |           |              |
| Net OPEB Liability - end of year                         | \$         | 696,587   | \$         | 545,542   | \$ 464,775   |
|  |            |           |            |           |              |
| Plan fiduciary net position as % of total OPEB liability |            | 0.0%      |            | 0.0%      | 0.0%         |
| Covered employee payroll                                 | \$         | 2,633,383 | \$         | 2,705,916 | \$ 2,084,986 |
| Net OPEB liability as % of covered payroll               |            | 26.5%     |            | 20.2%     | 22.3%        |

# GASB Disclosures

City of South Lyon GASB 75 Valuation for Fiscal Year Ending June 30, 2020

## OPEB Expense

| OPEB Expense  | FY 2019/20 |         | FY 2018/19 |          |
|---|------------|---------|------------|----------|
| Discount Rate   |            |         |            |          |
| Beginning of year   |            | 3.51%   |            | 3.87%    |
| End of year   |            | 2.66%   |            | 3.51%    |
|   |            |         |            |          |
| Service cost  | \$         | 28,071  | \$         | 23,545   |
| Interest  |            | 19,711  |            | 18,637   |
| Change of benefit terms   |            | 0       |            | 0        |
| Projected earnings on OPEB plan investments                                   |            | 0       |            | 0        |
| Reduction for contributions from active employees                             |            | 0       |            | 0        |
| OPEB plan administrative expenses   |            | 0       |            | 0        |
|   |            |         |            |          |
| Current period recognition of deferred outflows / (inflows) of resources      |            |         |            |          |
| Differences between expected and actual experience                            | \$         | (5,580) | \$         | (13,283) |
| Changes in assumptions  |            | 4,154   |            | 258      |
| Net difference between projected and actual earnings on OPEB plan investments |            | 0       |            | 0        |
| Total current period recognition  | \$         | (1,426) | \$         | (13,025) |
|   |            |         |            |          |
| Total OPEB expense  | \$         | 46,356  | \$         | 29,157   |



# GASB Disclosures

City of South Lyon GASB 75 Valuation for Fiscal Year Ending June 30, 2020

## Deferred Outflows / (Inflows) of Resources

Deferred Outflows / (Inflows) of Resources represents the following items that have not been recognized in the OPEB Expense:

1. Differences between expected and actual experience of the OPEB plan
2. Changes of assumptions
3. Differences between projected and actual earnings in OPEB plan investments (for funded plans only)

The initial amortization period for the first two items noted above is based on expected future service lives while the difference between the projected and actual earnings in OPEB plan investment is amortized over five years. All balances are amortized linearly on a principal only basis and new bases will be created annually for each of the items above.

| Differences between expected and actual experience for FYE | Initial Balance | Initial Amortization Period | Annual Recognition | Unamortized Balance as of June 30, 2020 |
|--|-----------------|-----------------------------|--------------------|---|
| June 30, 2018  | \$ (167,844)    | 10                          | \$ (16,784)        | \$ (117,492)                            |
| June 30, 2019  | \$ 38,510       | 11                          | \$ 3,501           | \$ 31,508                               |
| June 30, 2020  | \$ 84,734       | 11                          | \$ 7,703           | \$ 77,031                               |

| Changes in assumptions for FYE | Initial Balance | Initial Amortization Period | Annual Recognition | Unamortized Balance as of June 30, 2020 |
|--------------------------------|-----------------|-----------------------------|--------------------|---|
| June 30, 2018                  | \$ (9,871)      | 10                          | \$ (987)           | \$ (6,910)                              |
| June 30, 2019                  | \$ 13,697       | 11                          | \$ 1,245           | \$ 11,207                               |
| June 30, 2020                  | \$ 42,861       | 11                          | \$ 3,896           | \$ 38,965                               |

| Net Difference between projected and actual earnings in OPEB plan investments for FYE | Initial Balance | Initial Amortization Period | Annual Recognition | Unamortized Balance as of June 30, 2020 |
|---|-----------------|-----------------------------|--------------------|---|
| June 30, 2018   | \$ 0            | N/A                         | \$ 0               | \$ 0                                    |
| June 30, 2019   | \$ 0            | N/A                         | \$ 0               | \$ 0                                    |
| June 30, 2020   | \$ 0            | N/A                         | \$ 0               | \$ 0                                    |

# GASB Disclosures

City of South Lyon GASB 75 Valuation for Fiscal Year Ending June 30, 2020

## Deferred Outflows / (Inflows) of Resources (Continued)

| As of fiscal year ending June 30, 2020  | Deferred Outflows | Deferred Inflows    |
|---|-------------------|---------------------|
| Differences between expected and actual experience                            | \$ 108,539        | \$ (117,492)        |
| Changes in assumptions  | 50,172            | (6,910)             |
| Net difference between projected and actual earnings in OPEB plan investments | N/A               | N/A                 |
| <b>Total</b>  | <b>\$ 158,711</b> | <b>\$ (124,402)</b> |

## Annual Amortization of Deferred Outflows / (Inflows)

The balances as of June 30, 2020 of the deferred outflows / (inflows) of resources will be recognized in OPEB expense in the future fiscal years as noted below.

| FYE        | Balance    |
|------------|------------|
| 2021       | \$ (1,426) |
| 2022       | \$ (1,426) |
| 2023       | \$ (1,426) |
| 2024       | \$ (1,426) |
| 2025       | \$ (1,426) |
| Thereafter | \$ 41,439  |



# GASB Disclosures

## City of South Lyon GASB 75 Valuation for Fiscal Year Ending June 30, 2020

### Sensitivity Results

The following presents the Net OPEB Liability as of June 30, 2020, calculated using the discount rate assumed and what it would be using a 1% higher and 1% lower discount rate.

- The current discount rate is 2.66%.
- The 1% decrease in discount rate would be 1.66%.
- The 1% increase in discount rate would be 3.66%.

| As of June 30, 2020   | Net OPEB Liability |
|-----------------------|--------------------|
| 1% Decrease           | \$ 741,647         |
| Current Discount Rate | \$ 696,587         |
| 1% Increase           | \$ 653,637         |

The following presents the Net OPEB Liability as of June 30, 2020, using the health care trend rates assumed and what it would be using 1% higher and 1% lower health care trend rates.

- The current health care trend rate starts at an initial rate of 8.00%, decreasing to an ultimate rate of 4.50%.
- The 1% decrease in health care trend rates would assume an initial rate of 7.00%, decreasing to an ultimate rate of 3.50%.
- The 1% increase in health care trend rates would assume an initial rate of 9.00%, decreasing to an ultimate rate of 5.50%.

| As of June 30, 2020 | Net OPEB Liability |
|---------------------|--------------------|
| 1% Decrease         | \$ 648,571         |
| Current Trend Rates | \$ 696,587         |
| 1% Increase         | \$ 750,860         |

\* HRA trend rate is a flat 2.00%. The sensitivity results above account for a 1% increase/decrease to this rate as well.

# Projection of GASB Disclosures

## City of South Lyon GASB 75 Valuation for Fiscal Year Ending June 30, 2020

The Total OPEB Liability (TOL) is expected to change on an annual basis as a result of expected and unexpected events. Under normal circumstances, it is generally expected to have a net increase each year. Below is a list of the most common events affecting the total OPEB liability and whether they increase or decrease the liability.

### Expected Events

- Increases in TOL due to additional benefit accruals as employees continue to earn service each year
- Increases in TOL due to interest as the employees and retirees age
- Decreases in TOL due to benefit payments

### Unexpected Events

- Increases in TOL when actual premium rates increase more than expected. A liability decrease occurs when the reverse happens.
- Increases in TOL when more new retirements occur than expected or fewer terminations occur than anticipated. Liability decreases occur when the opposite outcomes happen.
- Increases or decreases in TOL depending on whether benefits are improved or reduced.

| Projection of Total OPEB Liability (TOL) | FY 2019/20 |                | FY 2020/21 |            |
|--|------------|----------------|------------|------------|
| TOL as of beginning of year              | \$         | 545,542        | \$         | 696,587    |
| Normal cost as of beginning of year      |            | 28,071         |            | 42,275     |
| Exp. benefit payments during the year    |            | (24,332)       |            | (37,653)   |
| Interest adjustment to end of year       |            | 19,711         |            | 19,156     |
| Exp. TOL as of end of year               | \$         | 568,992        | \$         | 720,365    |
| Actuarial Loss / (Gain)                  |            | 127,595        |            | TBD        |
| <b>Actual TOL as of end of year</b>      | <b>\$</b>  | <b>696,587</b> | <b>\$</b>  | <b>TBD</b> |

|                                       |       |       |
|---------------------------------------|-------|-------|
| Discount rate as of beginning of year | 3.51% | 2.66% |
| Discount rate as of end of year       | 2.66% | TBD   |



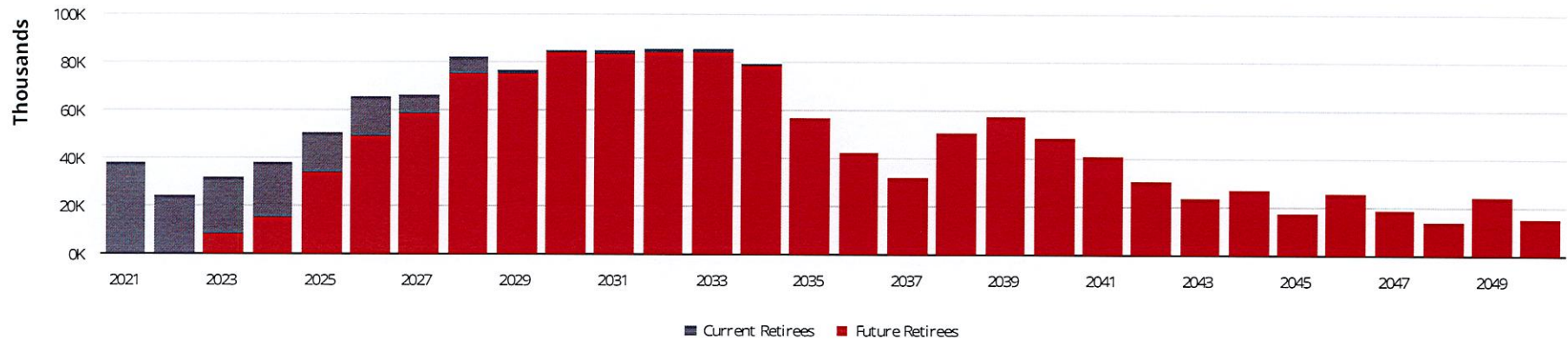
# Cash Flow Projections

City of South Lyon GASB 75 Valuation for Fiscal Year Ending June 30, 2020

The below projections show the actuarially estimated employer-paid contributions for retiree health benefits for the next thirty years. Results are shown separately for a closed group of current/future retirees. These projections include explicit and implicit subsidies.

| FYE  | Current Retirees | Future Retirees* | Total     | FYE  | Current Retirees | Future Retirees* | Total     | FYE  | Current Retirees | Future Retirees* | Total     |
|------|------------------|------------------|-----------|------|------------------|------------------|-----------|------|------------------|------------------|-----------|
| 2021 | \$ 37,512        | \$ 141           | \$ 37,653 | 2031 | \$ 920           | \$ 83,620        | \$ 84,540 | 2041 | \$ 0             | \$ 40,618        | \$ 40,618 |
| 2022 | \$ 23,560        | \$ 283           | \$ 23,843 | 2032 | \$ 931           | \$ 84,321        | \$ 85,252 | 2042 | \$ 0             | \$ 30,508        | \$ 30,508 |
| 2023 | \$ 23,474        | \$ 8,032         | \$ 31,506 | 2033 | \$ 942           | \$ 84,426        | \$ 85,368 | 2043 | \$ 0             | \$ 23,602        | \$ 23,602 |
| 2024 | \$ 23,378        | \$ 14,835        | \$ 38,213 | 2034 | \$ 953           | \$ 78,589        | \$ 79,542 | 2044 | \$ 0             | \$ 26,935        | \$ 26,935 |
| 2025 | \$ 16,546        | \$ 34,111        | \$ 50,657 | 2035 | \$ 0             | \$ 56,727        | \$ 56,727 | 2045 | \$ 0             | \$ 17,205        | \$ 17,205 |
| 2026 | \$ 16,455        | \$ 48,877        | \$ 65,332 | 2036 | \$ 0             | \$ 41,896        | \$ 41,896 | 2046 | \$ 0             | \$ 25,392        | \$ 25,392 |
| 2027 | \$ 7,460         | \$ 58,875        | \$ 66,335 | 2037 | \$ 0             | \$ 31,896        | \$ 31,896 | 2047 | \$ 0             | \$ 18,515        | \$ 18,515 |
| 2028 | \$ 7,425         | \$ 74,908        | \$ 82,333 | 2038 | \$ 0             | \$ 50,218        | \$ 50,218 | 2048 | \$ 0             | \$ 13,811        | \$ 13,811 |
| 2029 | \$ 898           | \$ 75,461        | \$ 76,359 | 2039 | \$ 0             | \$ 57,519        | \$ 57,519 | 2049 | \$ 0             | \$ 24,433        | \$ 24,433 |
| 2030 | \$ 909           | \$ 84,030        | \$ 84,939 | 2040 | \$ 0             | \$ 48,577        | \$ 48,577 | 2050 | \$ 0             | \$ 15,248        | \$ 15,248 |

## Projected Employer Pay-go Cost



\* Projections for future retirees do not take into account future new hires.

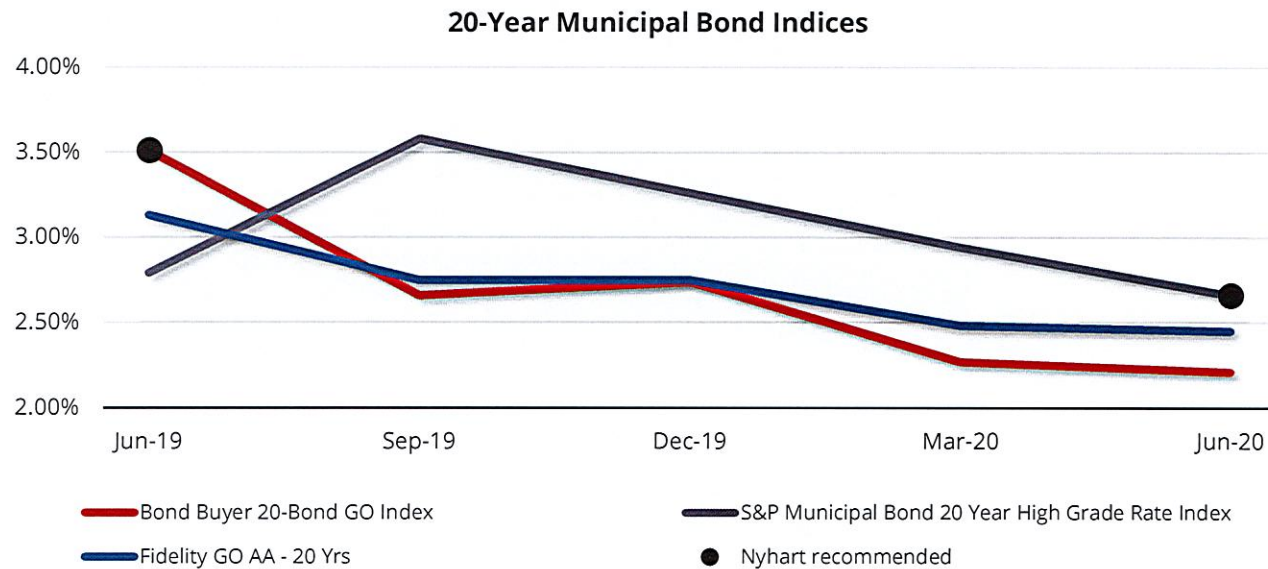
## Discussion of Discount Rates

### City of South Lyon GASB 75 Valuation for Fiscal Year Ending June 30, 2020

Under GASB 75, the discount rate used in valuing OPEB liabilities for unfunded plans as of the Measurement Date must be based on a yield for 20-year tax-exempt general obligation municipal bonds with an average rating of AA /Aa or higher (or equivalent quality on another rating scale).

For the current valuation, the discount rate was selected from the range of indices as shown in the table below, where the range is given as the spread between the lowest and highest rate shown.

|                           | Bond Buyer Go 20-Bond Municipal Bond Index | S&P Municipal Bond 20-Year High Grade Rate Index | Fidelity 20-Year Go Municipal Bond Index | Bond Index Range | Actual Discount Rate Used |
|---------------------------|--|--|--|------------------|---------------------------|
| Yield as of July 1, 2019  | 3.51%                                      | 2.79%  | 3.13%                                    | 2.79% - 3.51%    | <b>3.51%</b>              |
| Yield as of June 30, 2020 | 2.21%                                      | 2.66%  | 2.45%                                    | 2.21% - 2.66%    | <b>2.66%</b>              |





# Summary of Plan Participants

City of South Lyon GASB 75 Valuation for Fiscal Year Ending June 30, 2020

## Active Employees

| Actives with coverage              | Single <sup>1</sup> | Non-Single | Total     | Avg. Age    | Avg. Svc    | Salary              |
|------------------------------------|---------------------|------------|-----------|-------------|-------------|---------------------|
| General                            | 8                   | 17         | 25        | 45.1        | 9.7         | \$ 1,388,745        |
| Police                             | 3                   | 11         | 14        | 45.3        | 18.7        | \$ 1,037,350        |
| <b>Total actives with coverage</b> | <b>11</b>           | <b>28</b>  | <b>39</b> | <b>45.1</b> | <b>12.9</b> | <b>\$ 2,426,095</b> |

| Actives without coverage              | Total    | Avg. Age    | Avg. Svc    | Salary            |
|---------------------------------------|----------|-------------|-------------|-------------------|
| <b>Total actives without coverage</b> | <b>3</b> | <b>48.0</b> | <b>16.8</b> | <b>\$ 207,288</b> |

Active employees who currently have no coverage are assumed not to elect coverage at retirement. They have been excluded from the GASB valuation.

## Active Age-Service Distribution

| Age          | Years of Service |           |          |          |          |          |          |          |          |          | Total     |
|--------------|------------------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
|              | < 1              | 1 to 4    | 5 to 9   | 10 to 14 | 15 to 19 | 20 to 24 | 25 to 29 | 30 to 34 | 35 to 39 | 40 & up  |           |
| Under 25     |                  |           |          |          |          |          |          |          |          |          | 0         |
| 25 to 29     |                  | 3         |          |          |          |          |          |          |          |          | 3         |
| 30 to 34     |                  |           | 2        |          | 1        |          |          |          |          |          | 3         |
| 35 to 39     | 1                | 2         | 1        | 1        | 1        |          |          |          |          |          | 6         |
| 40 to 44     |                  | 1         | 1        | 2        | 1        | 1        |          |          |          |          | 6         |
| 45 to 49     | 1                | 1         |          |          |          | 6        | 1        |          |          |          | 9         |
| 50 to 54     | 1                |           | 2        |          | 2        | 1        | 3        |          |          |          | 9         |
| 55 to 59     |                  | 3         |          |          | 1        | 1        |          | 1        |          |          | 6         |
| 60 to 64     |                  |           |          |          |          |          |          |          |          |          | 0         |
| 65 to 69     |                  |           |          |          |          |          |          |          |          |          | 0         |
| 70 & up      |                  |           |          |          |          |          |          |          |          |          | 0         |
| <b>Total</b> | <b>3</b>         | <b>10</b> | <b>6</b> | <b>3</b> | <b>6</b> | <b>9</b> | <b>4</b> | <b>1</b> | <b>0</b> | <b>0</b> | <b>42</b> |

<sup>1</sup> Single enrollment above includes employee only and employee + child(ren) coverage levels.

# Summary of Plan Participants

City of South Lyon GASB 75 Valuation for Fiscal Year Ending June 30, 2020

## Retirees

| Retirees with coverage              | Single   | Non-Single | Total    | Avg. Age    |
|-------------------------------------|----------|------------|----------|-------------|
| General                             | 3        | 1          | 4        | *           |
| Police                              | 1        |            | 1        | *           |
| <b>Total retirees with coverage</b> | <b>4</b> | <b>1</b>   | <b>5</b> | <b>60.9</b> |

\*Average age is shown in aggregate for privacy purposes.

## Retiree Age Distribution

| Age          | Retirees |
|--------------|----------|
| < 45         |          |
| 45 to 49     |          |
| 50 to 54     |          |
| 55 to 59     | 2        |
| 60 to 64     | 3        |
| 65 to 69     |          |
| 70 to 74     |          |
| 75 to 79     |          |
| 80 to 84     |          |
| 85 to 89     |          |
| 90 & up      |          |
| <b>Total</b> | <b>5</b> |



# Substantive Plan Provisions

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## City of South Lyon GASB 75 Valuation for Fiscal Year Ending June 30, 2020

### Eligibility

All employees retiring under Regular, work related disability, or workers compensation retirement are eligible to continue healthcare coverage until age 65. Police Regular retirees are required to have 25 years of service to be eligible for the employer stipend. General retirees have no service requirement.

### Spouse Benefit

Spousal coverage continues until the earlier of (1) the date the retiree becomes Medicare eligible and (2) the date the spouse becomes Medicare eligible. Surviving spouses are eligible for COBRA coverage.

### Medical Benefits

Same benefits are available to retirees as active employees. The HRA PPO Gold health plan is fully-insured and partially experience-rated. The monthly funding rates vary by age and are effective on July 1, 2020. Rates at sample ages are as shown below.

| Age | Rate      |
|-----|-----------|
| 55  | \$ 616.33 |
| 60  | \$ 750.10 |
| 64  | \$ 829.14 |

### Retiree Cost Sharing

Retirees pay for the portion of the premium rates not covered by the City's explicit subsidy.

### Explicit Subsidy

Eligible Police retirees receive a stipend of up to \$700 per month for healthcare premiums. Eligible General retirees receive a stipend of up to \$500 per month for healthcare premiums. To the extent the stipend exceeds the monthly healthcare premiums, the remainder may be used to offset spousal healthcare premiums.

### HRA

The City funds \$4,000 annually in a health reimbursement account. The cost of this benefit is not included in the healthcare premium funding rates shown above. The flat monthly premium for the HRA benefit as of July 1, 2020 is \$135.21 for single coverage and \$269.88 for two-person coverage.

# Actuarial Methods and Assumptions

## City of South Lyon GASB 75 Valuation for Fiscal Year Ending June 30, 2020

The actuarial assumptions used in this report represent a reasonable long-term expectation of future OPEB outcomes. As national economic and City experience change over time, the assumptions will be tested for ongoing reasonableness and, if necessary, updated.

There are changes to the actuarial methods and assumptions since the last GASB valuation, which was for the fiscal year ending June 30, 2018. Refer to Actuary's Notes section for complete information on these changes. For the current year GASB valuation, we have also updated the per capita costs. We expect to update discount rate, health care trend rates, mortality table, and per capita costs again in the next full GASB valuation, which will be for the fiscal year ending June 30, 2022.

|                                 |   |
|---------------------------------|---|
| <b>Measurement Date</b>         | For fiscal year ending June 30, 2020, a June 30, 2020 measurement date was used.  |
| <b>Actuarial Valuation Date</b> | June 30, 2020 with no adjustments to get to the June 30, 2020 measurement date. Liabilities as of July 1, 2019 are based on an actuarial valuation date of July 1, 2018 projected to July 1, 2019 on a "no loss / no gain" basis. |
| <b>Discount Rate</b>            | 2.66% as of June 30, 2020 and 3.51% as of July 1, 2019 for accounting disclosure purposes.<br>Refer to the Discussion of Discount Rates section for more information on selection of the discount rate.                           |
| <b>Payroll Growth</b>           | From the MERS actuarial valuation as of December 31, 2018. Sample rates are as follows and include assumed inflation of 3.75%:  |

| Age | Total Salary Growth Rate |
|-----|--------------------------|
| 20  | 14.75%                   |
| 25  | 10.95%                   |
| 30  | 6.85%                    |
| 35  | 5.65%                    |
| 40  | 4.95%                    |
| 45  | 4.56%                    |
| 50  | 4.27%                    |
| 55  | 4.05%                    |
| 60  | 3.75%                    |

|                       |                |
|-----------------------|----------------|
| <b>Inflation Rate</b> | 3.75% per year |
|-----------------------|----------------|



# Actuarial Methods and Assumptions

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## City of South Lyon GASB 75 Valuation for Fiscal Year Ending June 30, 2020

### Cost Method

Allocation of Actuarial Present Value of Future Benefits for services prior and after the Measurement Date was determined using Entry Age Normal Level % of Salary method where:

- Service Cost for each individual participant, payable from date of employment to date of retirement, is sufficient to pay for the participant's benefit at retirement; and
- Annual Service Cost is a constant percentage of the participant's salary that is assumed to increase according to the Payroll Growth.

### Employer Funding Policy

Pay-as-you-go cash basis

### Census Data

Census information was provided by the City and it was provided in June 2020. We have reviewed it for reasonableness and no material modifications were made to the census data.

### Experience Study

Best actuarial practices call for a periodic assumption review and Nyhart recommends the City to complete an actuarial assumption review (also referred to as an experience study) in the future.

### Health Care Coverage Election Rate

Active employees with current coverage: 100%

Active employees with no coverage: 0%

Inactive employees with current coverage: 100%

Inactive employees with no coverage: 0%

It is assumed 100% of current and future eligible retirees receive the stipend regardless of whether they have healthcare coverage through the City.

### Spousal Coverage

Spousal coverage for current and future retirees is based on actual data.

Spousal age for current retirees is based on actual data. For future retirees, husbands are assumed to be three years older than wives.

# Actuarial Methods and Assumptions

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## City of South Lyon GASB 75 Valuation for Fiscal Year Ending June 30, 2020

### Mortality

General: SOA Pub-2010 General Headcount Weighted Mortality Table fully generational using Scale MP-2019

Police: SOA Pub-2010 Public Safety Headcount Weighted Mortality Table fully generational using Scale MP-2019

Disabled General Retirees: SOA Pub-2010 Non-Safety Disabled Retiree Headcount Weighted Mortality Table fully generational using Scale MP-2019

Disabled Police Retirees: SOA Pub-2010 Public Safety Disabled Retiree Headcount Weighted Mortality Table fully generational using Scale MP-2019

Surviving Spouses: SOA Pub-2010 Contingent Survivor Headcount Weighted Mortality Table fully generational using Scale MP-2019

### Disability

From the MERS actuarial valuation as of December 31, 2018. Since 20% of disability incidence are assumed to be work related, we have used 20% of the rates shown in the MERS actuarial valuation. Sample rates are as follows:

| Age | Percent Becoming<br>Disabled (Work Related) |
|-----|---|
| 20  | 0.004%                                      |
| 25  | 0.004%                                      |
| 30  | 0.004%                                      |
| 35  | 0.010%                                      |
| 40  | 0.016%                                      |
| 45  | 0.040%                                      |
| 50  | 0.058%                                      |
| 55  | 0.076%                                      |
| 60+ | 0.078%                                      |



# Actuarial Methods and Assumptions

## City of South Lyon GASB 75 Valuation for Fiscal Year Ending June 30, 2020

### Turnover Rate

Assumption used to project terminations (voluntary and involuntary) prior to meeting minimum retirement eligibility for retiree health coverage. The rates represent the probability of termination in the next 12 months.

The termination rates are based on MERS pension actuarial valuation for FYE December 31, 2018, adjusted by 0.6 for the City's actual experience from 2014 through 2018. Sample annual turnover rates are shown below:

| Years of Service | Rate  | Years of Service | Rate |
|------------------|-------|------------------|------|
| 0                | 11.8% | 10               | 2.8% |
| 1                | 9.8%  | 15               | 2.0% |
| 2                | 8.0%  | 20               | 1.6% |
| 3                | 6.3%  | 25               | 1.3% |
| 4                | 5.0%  | 30+              | 1.3% |
| 5                | 4.1%  |                  |      |

### Retirement Rate

100% at age 58 for Police employees  
100% at age 61 for General employees

### Health Care Trend Rates

| FYE  | Medical/Rx | FYE   | Medical/Rx |
|------|------------|-------|------------|
| 2021 | 8.0%       | 2025  | 6.0%       |
| 2022 | 7.5%       | 2026  | 5.5%       |
| 2023 | 7.0%       | 2027  | 5.0%       |
| 2024 | 6.5%       | 2028+ | 4.5%       |

The initial trend rate was based on a combination of employer history, national trend surveys, and professional judgment.

The ultimate trend rate was selected based on historical medical CPI information.

HRA benefit premium is assumed to increase 2.0% per year. General and Police stipends are assumed to remain flat (0% increase).

### Retiree Contributions

Retiree contributions are assumed to increase according to health care trend rates.

# Actuarial Methods and Assumptions

City of South Lyon GASB 75 Valuation for Fiscal Year Ending June 30, 2020

## Per Capita Costs

Annual per capita costs were calculated based on the 2020 funding rates. Since the rates are age appropriate, they have been used without adjustment as shown on page 15. These costs are assumed to increase with health care trend rates.

The HRA benefit per capita cost was based on the HRA monthly premium and was actuarially increased using a retiree load of 1.5. Annual pre-65 HRA per capita costs are as shown below:

| Retiree  | Spouse   |
|----------|----------|
| \$ 2,434 | \$ 2,424 |

The per capita costs represent the cost of coverage for a retiree-only population.

Actuarial standards require the recognition of higher inherent costs for a retired population versus an active population.

## Explicit Subsidy

The difference between (a) the premium rate and (b) the retiree contribution. Below is an example of the monthly explicit subsidies for a General retiree age 60 with spouse of the same age enrolled in the HRA PPO Gold Plan.

|         | Premium<br>Rate | Retiree<br>Contribution | Explicit<br>Subsidy |
|---------|-----------------|-------------------------|---------------------|
|         | A               | B                       | C = A - B           |
| Retiree | \$ 885.31       | \$ 385.31               | \$ 500.00           |
| Spouse  | \$ 884.77       | \$ 884.77               | \$ 0.00             |

## Implicit Subsidy

The difference between (a) the per capita cost and (b) the premium rate. Below is an example of the monthly implicit subsidies for a General retiree age 60 with spouse of the same age enrolled in the HRA PPO Gold Plan

|         | Per Capita<br>Cost | Premium<br>Rate | Implicit<br>Subsidy |
|---------|--------------------|-----------------|---------------------|
|         | A                  | B               | C = A - B           |
| Retiree | \$ 952.93          | \$ 885.31       | \$ 67.62            |
| Spouse  | \$ 952.10          | \$ 884.77       | \$ 67.33            |

All employers that utilize premium rates based on blended active/retiree claims experience will have an implicit subsidy. There is an exception for Medicare plans using a true community-rated premium rate.



# Actuarial Methods and Assumptions

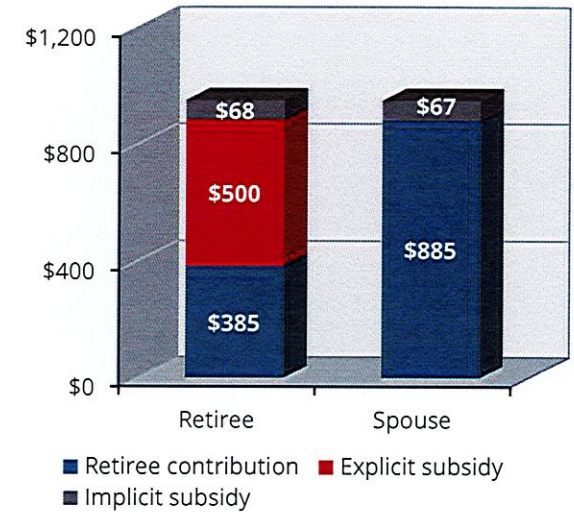
City of South Lyon GASB 75 Valuation for Fiscal Year Ending June 30, 2020

## GASB Subsidy Breakdown

Below is a breakdown of the GASB 75 monthly total cost for a General retiree age 60 with spouse of the same age enrolled in the HRA PPO Gold Plan.

|                      | Retiree |        | Spouse |        |
|----------------------|---------|--------|--------|--------|
| Retiree contribution | \$      | 385.31 | \$     | 884.77 |
| Explicit subsidy     | \$      | 500.00 | \$     | 0.00   |
| Implicit subsidy     | \$      | 67.62  | \$     | 67.33  |
| Total monthly cost   | \$      | 952.93 | \$     | 952.10 |

## GASB Subsidy Breakdown





# APPENDIX

The background of the slide is an abstract composition of geometric shapes. The top half is a solid dark blue. The bottom half is divided into several overlapping planes of white and light gray, creating a sense of depth and perspective. A large, vibrant red triangle enters from the bottom right corner, overlapping the white and gray planes.



# Appendix

## City of South Lyon GASB 75 Valuation for Fiscal Year Ending June 30, 2020

### Comparison of Participant Demographic Information

The active participants' number below may include active employees who currently have no health care coverage. Refer to Summary of Participants section for an accurate breakdown of active employees with and without coverage.

|                       | As of June 30, 2018 | As of June 30, 2020 |
|-----------------------|---------------------|---------------------|
| Active Participants   | 40                  | 42                  |
| Retired Participants  | 1                   | 5                   |
| Averages for Active   |                     |                     |
| Age                   | 46.4                | 45.3                |
| Service               | 15.7                | 13.2                |
| Averages for Inactive |                     |                     |
| Age                   | 62.3                | 60.9                |

# Appendix

## City of South Lyon GASB 75 Valuation for Fiscal Year Ending June 30, 2020

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### Detailed Actuary's Notes

There have been no substantive plan provision changes since the last full valuation, which was for the fiscal year ending June 30, 2018.

The following assumptions have been updated since the prior valuation:

1. Mortality tables have been updated from SOA RPH-2017 Total Dataset Mortality Table fully generational using Scale MP-2017 for all current and future retiree to the following:
  - a. General: SOA Pub-2010 General Headcount Weighted Mortality Table fully generational using Scale MP-2019
  - b. Police: SOA Pub-2010 Public Safety Headcount Weighted Mortality Table fully generational using Scale MP-2019
  - c. Disabled General Retirees: SOA Pub-2010 Non-Safety Disabled Retiree Headcount Weighted Mortality Table fully generational using Scale MP-2019
  - d. Disabled Police Retirees: SOA Pub-2010 Public Safety Disabled Retiree Headcount Weighted Mortality Table fully generational using Scale MP-2019
  - e. Surviving Spouses: SOA Pub-2010 Contingent Survivor Headcount Weighted Mortality Table fully generational using Scale MP-2019

The impact of this change is an increase in liabilities for the City.

2. Discount rate as of the Measurement Date is based on a yield for 20-year tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher (or equivalent quality on another rating scale). The prior valuation used a discount rate of 3.51% as of July 1, 2019. The current full valuation uses a discount rate of 2.66% as of June 30, 2020. This change has caused an increase in liabilities.



# Appendix

## City of South Lyon GASB 75 Valuation for Fiscal Year Ending June 30, 2020

### PA 202 Uniform Assumption Disclosures

The information presented below is for the purposes of filing Form No. 5572 under PA 202 uniform assumption requirements. Per regulation, Form No. 5572 must be filed no later than six months after the end of the fiscal year. Governmental fund revenues are not shown below and should be determined by the City. Refer to the Michigan Department of Treasury website for additional information.

| Form 5572 Line | Description  | City of South Lyon |
|----------------|--|--------------------|
| Line 28        | Actuarial Value of Assets                                | \$0                |
| Line 29        | Actuarial Accrued Liability                              | \$660,712          |
| Line 31        | Actuarially Determined Contribution (ADC) for FY 2019/20 | \$60,044           |

Line 31 (Actuarially Determined Contribution) was calculated using level dollar amortization with a 3.5% discount rate. The amortization period is a closed, 29-year period.

Under PA 202 requirements, uniform assumption setting is mandated in reporting of liabilities, assets, and ADC. The following is a description of the PA 202 uniform assumption guidance and final assumption used for the City for purposes of calculating the figures above.

| Assumption                | Uniform Assumption Guidance   | City Assumption   |
|---------------------------|---|---|
| Investment Rate of Return | Maximum of 7.00%  | 3.50% (for funding/ADC purposes)  |
| Discount Rate             | Blended discount rate calculated per GASB 74/75: <ul style="list-style-type: none"><li>• Maximum of 7.0% where plan assets are sufficient to make projected benefit payments</li><li>• 3.50% for periods where assets are insufficient to make projected benefit payments</li></ul> | 3.50% (for calculation of the OPEB liability)   |
| Salary Increase           | Minimum of 3.50% or based on actuarial experience study within the past 5 years   | Same as GASB 75 valuation   |
| Mortality Table           | A version of PUB-2010 with Scale MP-2018 generational mortality improvement or based on actuarial experience study within the past 5 years  | Same PUB-2010 mortality tables as GASB 75 valuation with Scale MP-2018 generational mortality improvement |
| Amortization Period       | Maximum closed period of 29 years for Retiree Health Systems  | For FY 2020, 29 years on a closed period basis  |
| Asset Valuation           | Market Value as reported on Financial Statements  | N/A   |
| Healthcare Inflation      | Non-Medicare: 8.25% decreasing 0.25% per year to a 4.50% long-term rate<br>Medicare: 6.50% decreasing 0.25% per year to 4.50% long-term rate  | Same as PA 202 uniform assumption   |



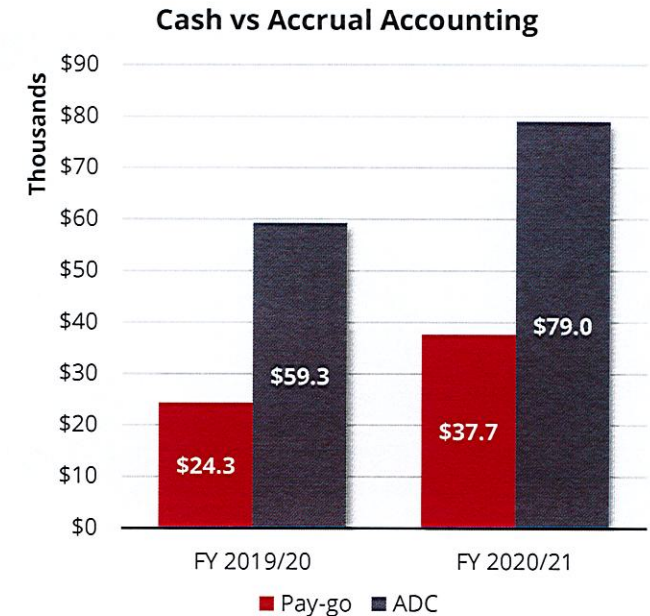
# Appendix

## City of South Lyon GASB 75 Valuation for Fiscal Year Ending June 30, 2020

### Actuarially Determined Contributions

The Actuarially Determined Contributions calculated below are recommended target contributions and assumes that the City has the ability to contribute these amounts on an annual basis. The City has the responsibility to decide how much it should contribute after considering its other needs and the OPEB participants' needs.

|  | FY 2019/20                         |               | FY 2020/21                         |               |
|--|------------------------------------|---------------|------------------------------------|---------------|
| Discount rate <sup>2</sup>                         | 3.51%                              |               | 2.66%                              |               |
| Payroll growth factor used for amortization        | N/A                                |               | N/A                                |               |
| Actuarial cost method                              | Entry Age Normal Level % of Salary |               | Entry Age Normal Level % of Salary |               |
| Amortization type                                  | Level Dollar                       |               | Level Dollar                       |               |
| Amortization period (years)                        | 29                                 |               | 28                                 |               |
| Total OPEB Liability (TOL) – beginning of year     | \$                                 | 542,542       | \$                                 | 696,587       |
| Actuarial value of assets – beginning of year      |                                    | 0             |                                    | 0             |
| Unfunded TOL – beginning of year                   | \$                                 | 542,542       | \$                                 | 696,587       |
| Normal Cost  | \$                                 | 28,071        | \$                                 | 42,275        |
| Amortization of Unfunded TOL                       |                                    | 29,258        |                                    | 34,675        |
| Total normal cost plus amortization                | \$                                 | 57,329        | \$                                 | 76,950        |
| Interest to the end of year                        |                                    | 2,012         |                                    | 2,047         |
| Actuarially Determined Contribution - Preliminary  | \$                                 | 59,341        | \$                                 | 78,997        |
| Expected benefit payments                          | \$                                 | 24,332        | \$                                 | 37,653        |
| <b>Actuarially Determined Contribution – Final</b> | <b>\$</b>                          | <b>59,341</b> | <b>\$</b>                          | <b>78,997</b> |



**Actuarially Determined Contribution (ADC)** is the target or recommended contribution to a defined benefit OPEB plan, which if paid on an ongoing basis, will provide sufficient resources to fund future costs for services to be earned and liabilities attributed to past services. This is typically higher than the pay-as-you-go cost because it includes recognition of employer costs expected to be paid in future accounting periods.

<sup>2</sup> The Discount Rate is set based on the long-term expected return on assets. Because the City has not set up an OPEB trust as of the measurement date(s), the discount rates associated with the GASB 75 valuation were used (3.51% as of July 1, 2019 and 2.66% as of June 30, 2020) for consistency with the City's discount rate selection under the PA 202 uniform assumption disclosures. If the City begins pre-funding for OPEB purposes, the discount rate used to calculate the Actuarially Determined Contribution will be based on the expected return of the City's OPEB assets.



# GLOSSARY

The background of the slide is an abstract composition of geometric planes. A large, dark blue plane occupies the upper half. Below it, a white plane and a red plane intersect to form a perspective view of a corner or a series of overlapping surfaces. The red plane is in the foreground, sloping upwards from the bottom right towards the center. The white plane is behind it, also sloping upwards from the bottom left towards the center. The blue plane is the background, meeting the other two at their top edges.



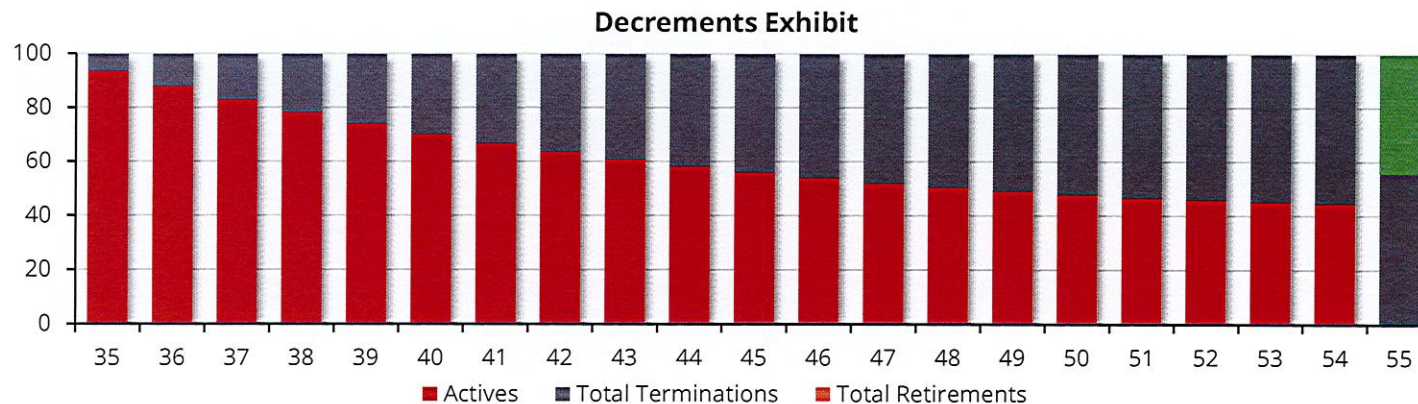
# Glossary – Decrements Exhibit

City of South Lyon GASB 75 Valuation for Fiscal Year Ending June 30, 2020

The table below illustrates how actuarial assumptions can affect a long-term projection of future liabilities. Starting with 100 employees at age 35, the illustrated actuarial assumptions show that 44.43 employees out of the original 100 are expected to retire and could elect retiree health benefits at age 55.

| Age | # Remaining Employees | # of Terminations per Year <sup>3</sup> | # of Retirements per Year | Total Decrements |
|-----|-----------------------|---|---------------------------|------------------|
| 35  | 100.000               | 6.276                                   | 0.000                     | 6.276            |
| 36  | 93.724                | 5.677                                   | 0.000                     | 5.677            |
| 37  | 88.047                | 5.136                                   | 0.000                     | 5.136            |
| 38  | 82.911                | 4.648                                   | 0.000                     | 4.648            |
| 39  | 78.262                | 4.209                                   | 0.000                     | 4.209            |
| 40  | 74.053                | 3.814                                   | 0.000                     | 3.814            |
| 41  | 70.239                | 3.456                                   | 0.000                     | 3.456            |
| 42  | 66.783                | 3.131                                   | 0.000                     | 3.131            |
| 43  | 63.652                | 2.835                                   | 0.000                     | 2.835            |
| 44  | 60.817                | 2.564                                   | 0.000                     | 2.564            |
| 45  | 58.253                | 2.316                                   | 0.000                     | 2.316            |

| Age | # Remaining Employees | # of Terminations per Year | # of Retirements per Year | Total Decrements |
|-----|-----------------------|----------------------------|---------------------------|------------------|
| 46  | 55.938                | 2.085                      | 0.000                     | 2.085            |
| 47  | 53.853                | 1.866                      | 0.000                     | 1.866            |
| 48  | 51.987                | 1.656                      | 0.000                     | 1.656            |
| 49  | 50.331                | 1.452                      | 0.000                     | 1.452            |
| 50  | 48.880                | 1.253                      | 0.000                     | 1.253            |
| 51  | 47.627                | 1.060                      | 0.000                     | 1.060            |
| 52  | 46.567                | 0.877                      | 0.000                     | 0.877            |
| 53  | 45.690                | 0.707                      | 0.000                     | 0.707            |
| 54  | 44.983                | 0.553                      | 0.000                     | 0.553            |
| 55  | 44.430                | 0.000                      | 44.430                    | 44.430           |



<sup>3</sup> The above rates are illustrative rates and are not used in our GASB calculations.



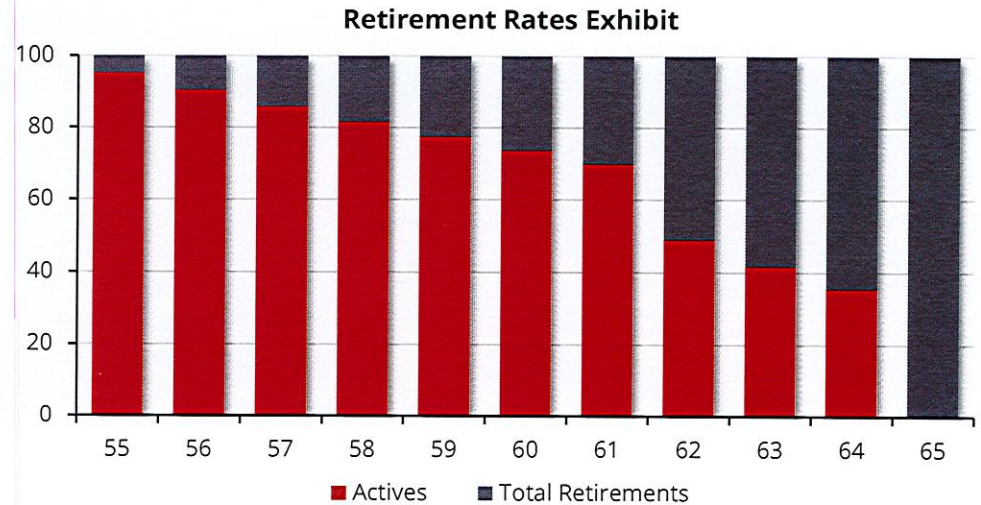
## Glossary – Retirement Rates Exhibit

City of South Lyon GASB 75 Valuation for Fiscal Year Ending June 30, 2020

The table below illustrates how actuarial assumptions can affect a long-term projection of future liabilities. The illustrated retirement rates show the number of employees who are assumed to retire annually based on 100 employees age 55 who are eligible for retiree health care coverage. The average age at retirement is 62.0.

| Age | Active Employees BOY | Annual Retirement Rates* | # Retirements per Year | Active Employees EOY |
|-----|----------------------|--------------------------|------------------------|----------------------|
| 55  | 100.000              | 5.0%                     | 5.000                  | 95.000               |
| 56  | 95.000               | 5.0%                     | 4.750                  | 90.250               |
| 57  | 90.250               | 5.0%                     | 4.513                  | 85.738               |
| 58  | 85.738               | 5.0%                     | 4.287                  | 81.451               |
| 59  | 81.451               | 5.0%                     | 4.073                  | 77.378               |
| 60  | 77.378               | 5.0%                     | 3.869                  | 73.509               |
| 61  | 73.509               | 5.0%                     | 3.675                  | 69.834               |
| 62  | 69.834               | 30.0%                    | 20.950                 | 48.884               |
| 63  | 48.884               | 15.0%                    | 7.333                  | 41.551               |
| 64  | 41.551               | 15.0%                    | 6.233                  | 35.318               |
| 65  | 35.318               | 100.0%                   | 35.318                 | 0.000                |

\* The above rates are illustrative rates and are not used in our GASB calculations.



# Glossary – Definitions

## City of South Lyon GASB 75 Valuation for Fiscal Year Ending June 30, 2020

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GASB 75 defines several unique terms not commonly employed in the funding of pension and retiree health plans. The definitions of the terms used in the GASB actuarial valuations are noted below.

1. **Actuarial Assumptions** – Assumptions as to the occurrence of future events affecting health care costs, such as: mortality, withdrawal, disablement and retirement; changes in compensation and Government provided health care benefits; rates of investment earnings and asset appreciation or depreciation; procedures used to determine the Actuarial Value of Assets; characteristics of future entrants for Open Group Actuarial Cost Methods; and other relevant items.
2. **Actuarial Cost Method** – A procedure for determining the Actuarial Present Value of Future Benefits and expenses and for developing an actuarially equivalent allocation of such value to time periods, usually in the form of a Service Cost and a Total OPEB Liability.
3. **Actuarially Determined Contribution** - A target or recommended contribution to a defined benefit OPEB plan for the reporting period, determined in accordance with the parameters and in conformity with Actuarial Standards of Practice.
4. **Actuarial Present Value** – The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. For purposes of this standard, each such amount or series of amounts is:
  - a. adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, Social Security, marital status, etc.);
  - b. multiplied by the probability of the occurrence of an event (such as survival, death, disability, termination of employment, etc.) on which the payment is conditioned; and
  - c. discounted according to an assumed rate (or rates) of return to reflect the time value of money.
5. **Deferred Outflow / (Inflow) of Resources** – represents the following items that have not been recognized in the OPEB Expense:
  - a. Differences between expected and actual experience of the OPEB plan
  - b. Changes in assumptions
  - c. Differences between projected and actual earnings in OPEB plan investments (for funded plans only)
6. **Explicit Subsidy** – The difference between (a) the amounts required to be contributed by the retirees based on the premium rates and (b) actual cash contribution made by the employer.
7. **Funded Ratio** – The actuarial value of assets expressed as a percentage of the Total OPEB Liability.



# Glossary – Definitions

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## City of South Lyon GASB 75 Valuation for Fiscal Year Ending June 30, 2020

8. **Healthcare Cost Trend Rate** – The rate of change in the per capita health claims costs over time as a result of factors such as medical inflation, utilization of healthcare services, plan design, and technological developments.
9. **Implicit Subsidy** – In an experience-rated healthcare plan that includes both active employees and retirees with blended premium rates for all plan members, the difference between (a) the age-adjusted premiums approximating claim costs for retirees in the group (which, because of the effect of age on claim costs, generally will be higher than the blended premium rates for all group members) and (b) the amounts required to be contributed by the retirees.
10. **OPEB** – Benefits (such as death benefits, life insurance, disability, and long-term care) that are paid in the period after employment and that are provided separately from a pension plan, as well as healthcare benefits paid in the period after employment, regardless of the manner in which they are provided. OPEB does not include termination benefits or termination payments for sick leave.
11. **OPEB Expense** – Changes in the Net OPEB Liability in the current reporting period, which includes Service Cost, interest cost, changes of benefit terms, expected earnings on OPEB Plan investments, reduction of active employees' contributions, OPEB plan administrative expenses, and current period recognition of Deferred Outflows / (Inflows) of Resources.
12. **Pay-as-you-go** – A method of financing a benefit plan under which the contributions to the plan are generally made at about the same time and in about the same amount as benefit payments and expenses becoming due.
13. **Per Capita Costs** – The current cost of providing postretirement health care benefits for one year at each age from the youngest age to the oldest age at which plan participants are expected to receive benefits under the plan.
14. **Present Value of Future Benefits** – Total projected benefits include all benefits estimated to be payable to plan members (retirees and beneficiaries, terminated employees entitled to benefits but not yet receiving them, and current active members) as a result of their service through the valuation date and their expected future service. The actuarial present value of total projected benefits as of the valuation date is the present value of the cost to finance benefits payable in the future, discounted to reflect the expected effects of the time value (present value) of money and the probabilities of payment. Expressed another way, it is the amount that would have to be invested on the valuation date so that the amount invested plus investment earnings will provide sufficient assets to pay total projected benefits when due.
15. **Real Rate of Return** – the rate of return on an investment after adjustment to eliminate inflation.

## Glossary – Definitions

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### City of South Lyon GASB 75 Valuation for Fiscal Year Ending June 30, 2020

16. **Select and Ultimate Rates** – Actuarial assumptions that contemplate different rates for successive years. Instead of a single assumed rate with respect to, for example, the investment return assumption, the actuary may apply different rates for the early years of a projection and a single rate for all subsequent years. For example, if an actuary applies an assumed investment return of 8% for year 20W0, then 7.5% for 20W1, and 7% for 20W2 and thereafter, then 8% and 7.5% select rates, and 7% is the ultimate rate.
17. **Service Cost** – The portion of the Actuarial Present Value of projected benefit payments that are attributed to a valuation year by the Actuarial Cost Method.
18. **Substantive Plan** – The terms of an OPEB plan as understood by the employer(s) and plan members.
19. **Total OPEB Liability** – That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of Future Benefits which is attributed to past periods of employee service (or not provided for by the future Service Costs).