

## 2021-22 Capital Budget

### A. The Nature of University Capital Expenditures

The Capital Budget for 2021-22 should be seen in the context of both recent trends in capital spending and the University's proposed Long-Range Space Plan as outlined in Table 13 of the Operating Budget. Table 14 sets out expenditures in the Capital Budget since 2017-18 in nine categories.

Category 1 shows all new construction, while categories 2 to 7 show renovations to existing space. Category 1 expenditures are usually funded from general University funds, the major exceptions being projects funded all or in part from external research grants, private funds, government, student contributions, and Housing construction, the latter being funded from the Housing budget. Categories 2 to 5 are funded primarily from general University funds and government, while category 6 is funded from Housing operations, and category 7 is funded by the particular Ancillary Unit undertaking the work. Categories 8 and 9 involve carrying costs and loan repayments, other expenditures such as purchases of land and buildings, and transfers from the Capital Budget for other purposes. Planned capital expenditures for 2021-22 total \$153.0 million.

Categories 2 to 5 involve **Maintenance, Modernization, and Infrastructure (MMI)** and are eligible to receive funds from the annual MMI transfer from the Operating Budget to the Capital Budget, which is budgeted to remain at \$15.5 million in 2021-22 (\$15.5 million in 2020-21). These expenditures are directed at modification of existing space and renewal and expansion of the utilities and infrastructure of the University.

In planning future expenditures on MMI, it is useful to review the current replacement value (CRV) of our fixed assets on campus. At February 25, 2021, our buildings and infrastructure have a CRV of approximately \$2,921 million, as shown in Figure D:

*Figure D*  
**CURRENT REPLACEMENT VALUE (BUILDINGS AND INFRASTRUCTURE)**

|   |                                 | CRV (\$M) | Square Metres | Major Buildings |
|---|---------------------------------|-----------|---------------|-----------------|
| 1 | Major Non-Residential Buildings | 1,919     | 558,711       | 72              |
| 2 | Utilities and Infrastructure    | 143       |               |                 |
| 3 | Subtotal, Eligible for MMI      | 2,062     | 558,711       | 72              |
| 4 | Housing                         | 623       | 265,946       | 14              |
| 5 | Other Ancillary Buildings       | 236       | 69,626        | 11              |
| 6 | Total                           | 2,921     | 894,283       | 97              |

On February 25, 2021, the University had approximately 559,000 gross square metres spread amongst 72 major non-residential buildings. The non-residential buildings, including utilities and infrastructure, are the physical assets generally eligible for MMI expenditures. The University also has 266,000 square metres of Housing space in ten major undergraduate residences, four major apartment buildings, and numerous smaller buildings for graduate students in Platt's Lane Estates. Other than Housing, there are many buildings which are operated largely or entirely as ancillaries: Western Student Recreation Centre, Thompson Recreation and Athletic Centre, TD Stadium, Boundary Layer Wind Tunnel, Western Day Care, the Ivey Spencer Leadership Centre, and facilities at the Research Parks.

With this background in mind, we briefly set out the nine categories of University capital expenditures.

1. **New Construction.** This category includes projects which create new buildings, including housing, additions to existing buildings, and other new facilities such as parking structures or lots, power plants and athletic fields. It does not include projects which improve the space within existing buildings or projects which upgrade other existing facilities.
2. **Major Building Renovations.** This category involves major maintenance and renovation expenditures on non-residential building projects, with projects generally spanning more than one year. Given that 54% of the 559,000 square metres in major buildings were built before 1980, renovations to major buildings will continue to be a part of our capital planning.
3. **Utilities and Infrastructure Projects.** This category involves projects with values greater than \$10,000 directed at the upgrading and new installation of utilities and other infrastructure, including boilers and chillers, sustainability and energy conservation initiatives, and electrical, water, and sewer distribution systems. Construction of a new Chiller Plant or major Power Plant expansion would be included in category 1.
4. **Modernization of Instructional and Research Facilities.** This category includes the renewal and modernization of classrooms, laboratories, libraries, and other space used for instruction and research, as well as upgrades to information technology. These expenditures are critical to maintaining Western's reputation as a leader in the quality of teaching and research. These projects are sometimes funded by the units themselves with operating or research funds.
5. **General Maintenance and Modernization Projects.** This category consists of a wide variety of maintenance and modernization projects which are not included in categories 2 to 4. Most of the projects are under \$100,000, involving such work as roof replacement, interior and exterior painting, road, bridge, and sidewalk repair, and general maintenance of structures and systems. A provision for unforeseen projects forms part of the allotment in this category.
6. **Housing Renovations.** This category includes all maintenance and modernization expenditures on University residences and apartment buildings. Construction of a new residence or apartment building would be included in category 1. Maintenance and modernization expenditures, projected to be \$11.2 million in 2021-22, are funded from Housing revenues. Housing has always set aside adequate maintenance funds and does not have the significant deferred maintenance on its buildings which may be observed in many other University buildings.
7. **Ancillary Projects.** This category includes capital expenditures on Ancillaries other than Housing, including Hospitality Services, the Book Store, Parking Services, student fee-funded units, self-

funded support units, and self-funded research units. These units pay a charge to the University for the space they occupy.

- 8. Carrying Costs and Debt Repayments.** This category consists of principal repayments and interest on debt for capital projects.
- 9. Other Capital Expenditures.** This category includes asset acquisitions and other miscellaneous expenditures. It has been an established principle in Western's Campus Master Plan that the University pursue, as appropriate, the purchase of lands contiguous to University property as lands become available. Western will continue to seek to protect the Regional Facilities zoning around the main campus and to buy land near our campus when it comes up for sale. The University will also look to acquire strategic physical assets.

The last twelve lines of Table 14 are labeled A to M. Line A shows total sources of funding for the Capital Budget, including debt; line B, sources of funds less expenditures; line C, the capital reserve at year-end; and line D, capital debt outstanding at year-end. Details on these items are shown in Tables 16 and 18. Annual changes in the capital reserve (line C) are driven by the differences between funding and expenditure (line B). Thus for 2019-20, line B shows a deficit of \$13,331, the difference between funding of \$33,720 and expenditures of \$47,051 (all figures in \$000). The accumulated capital reserve in line C decreases by this same amount of \$13,331.

Line E shows the replacement value of non-residential buildings and utilities and infrastructure, the assets eligible for MMI spending, while line F shows the ratio of the annual MMI expenditure to the replacement value. For example, in 2019-20, MMI expenditures were \$28.8 million, while the estimated replacement value of non-residential buildings, utilities, and infrastructure was \$2.26 billion. The ratio of the two is 1.3%, as shown in line F.

Line G of Table 14 shows the annual transfer from the Operating Budget to the Capital Budget for Maintenance, Modernization, and Infrastructure (the MMI transfer). The annual transfer has been maintained at \$15.5 million since 2017-18, a funding commitment that has established Western as a leader among Canadian universities in maintaining its facilities and dealing with deferred maintenance.

Line H of Table 14 shows the ratio of the annual MMI transfer to total MMI expenditures; for example, in 2019-20, the transfer was \$15.5 million and expenditures were \$28.8 million, so the ratio is 53.9%. This ratio will fluctuate with the level of MMI expenditure each year. Other sources of funding for MMI expenditures can include the annual capital facilities renewal grant from the Province (projected at \$5.7 million for 2020-21 and 2021-22), special Provincial grants, additional one-time allocations from the University's Operating Budget, one-time allocations from the Province, fundraising, and borrowing.

Line J contains an estimate of maintenance spending, defined narrowly as spending required to bring aging facilities up to their condition when originally built. In fact, whenever Western undertakes a major maintenance project, there is also modernization of the facility, and whenever we carry out a major modernization project, there is generally some maintenance expenditure; it is thus difficult to separate the two. Line J is calculated on the assumption that 2/3 of the expenditures in categories 2, 3, and 5 involve maintenance (the remaining 1/3 is modernization), while 1/3 of the expenditures in category 4 involve maintenance (the remaining 2/3 is modernization). While the ratio of maintenance

to modernization would vary by project and by year, Facilities Management considers them a reasonable average for the four categories over a number of years.

The value of line J in 2019-20 is \$16.2 million, or 0.7% (line K) of the replacement value in that year. A standard target in industry for this ratio is 2.0%; if large buildings last an average of 50 years, then average maintenance spending should be 2.0% of replacement value. When the actual ratio is consistently lower than 2.0%, as has been the case at Western and most Canadian universities over the last three decades, the level of deferred maintenance will grow. As Western continues to renovate aging buildings, there will be years that deferred maintenance will decline.

Table 15 outlines major capital projects, which are assigned to one of the nine categories. Where possible, the year and month of the start and end of the project(s) are shown.

The projects listed in Table 15 reflect the Long-Range Space Plan outlined in Table 13 of the Operating Budget portion of this document. These projects include new construction that will create new student and research spaces, and major building renovations and utilities and infrastructure projects – reflecting the need to maintain and modernize Western’s aging physical plant. With new building construction on campus continuing, Western is utilizing scarce developable land in the core campus. The Campus Master Plan, approved in June 2015, highlights the constraints in the amount of buildable land on our campus and the fact that new buildings are being constructed on parking lots – thus increasing the pressure on available parking. We continue planning for the construction of parking structures at the periphery of campus – including siting, a funding plan, and the required parking fee rates to finance the structures. Campus sustainability, energy conservation, and infrastructure projects are also included on Table 15 (examples include upgrades to Western’s central power plant, chiller facilities, and major electrical upgrades). Often, these projects are comprised of multiple projects completed over a number of years.

## **B. Sources of Funding and Capital Expenditures in 2021-22**

Table 16 displays sources of funding for budgeted capital expenditures with estimates of comparative data for 2020-21, divided into five major categories: federal, provincial and municipal government grants; funds transferred from Western’s Operating Budget; interest earned; borrowing; and other sources. As compared to a decade ago, the University’s Capital Budget is more dependent on transfers from the Operating Budget and debt.

Table 17 shows expenditures in categories 1 and 2 for 2020-21 (estimates as of February 22, 2021) and 2021-22 (current proposals).

**Table 14**  
**CAPITAL BUDGET SUMMARY, 2017-18 TO 2021-22**  
**(\$000)**

| Category | Purpose   | Actual<br>2017-18 | Actual<br>2018-19 | Actual<br>2019-20 | Projected<br>2020-21 | Budget<br>2021-22 |
|----------|---|-------------------|-------------------|-------------------|----------------------|-------------------|
|          | <b>New Construction</b>                                     |                   |                   |                   |                      |                   |
| 1        | New Construction (Table 17, line 9)                         | 51,484            | 17,285            | 6,233             | 14,153               | 55,402            |
|          |   |                   |                   |                   |                      |                   |
|          | <b>Maintenance, Modernization, and Infrastructure (MMI)</b> |                   |                   |                   |                      |                   |
| 2        | Major Building Renovations (Table 17, line 17)              | 18,924            | 10,983            | 8,624             | 23,494               | 34,512            |
| 3        | Utilities and Infrastructure Projects                       | 4,262             | 13,610            | 4,115             | 6,312                | 19,994            |
| 4        | Modernization of Instructional and Research Facilities      | 7,543             | 5,732             | 8,944             | 6,046                | 7,951             |
| 5        | General Maintenance and Modernization Projects              | 5,526             | 7,750             | 7,078             | 7,941                | 16,833            |
|          | Sub-Total MMI   | 36,255            | 38,075            | 28,761            | 43,793               | 79,290            |
|          | <b>Other</b>  |                   |                   |                   |                      |                   |
| 6        | Housing Renovations   | 9,565             | 7,988             | 6,747             | 7,301                | 11,211            |
| 7        | Ancillary Projects  | 1,776             | 856               | 1,482             | 2,558                | 1,601             |
| 8        | Carrying Costs and Debt Repayments                          | 2,964             | 2,448             | 1,095             | 1,000                | 3,500             |
| 9        | Other Capital Expenditures                                  | 88                | -1,012            | 2,733             | 142                  | 2,000             |
|          | Sub-Total Other   | 14,393            | 10,280            | 12,057            | 11,001               | 18,312            |
|          |   |                   |                   |                   |                      |                   |
| 10       | <b>Total Expenditures</b>                                   | <b>102,132</b>    | <b>65,640</b>     | <b>47,051</b>     | <b>68,947</b>        | <b>153,004</b>    |

| Line |   | Actual<br>2017-18 | Actual<br>2018-19 | Actual<br>2019-20 | Projected<br>2020-21 | Budget<br>2021-22 |
|------|---|-------------------|-------------------|-------------------|----------------------|-------------------|
|      | <b>Sources of Funding, Reserves, and Debt</b>                                   |                   |                   |                   |                      |                   |
| A    | Total Sources of Funding, Including Debt (Table 16)                             | 110,681           | 84,228            | 33,720            | 65,969               | 131,722           |
| B    | Sources of Funding less Expenditures  | 8,549             | 18,588            | -13,331           | -2,978               | -21,282           |
| C    | Capital Reserve, Year End (Table 18)  | 50,300            | 68,888            | 55,557            | 52,579               | 31,297            |
| D    | Capital Debt Outstanding, Year End (Table 18)                                   | 375,759           | 362,141           | 353,923           | 345,974              | 337,668           |
|      |   |                   |                   |                   |                      |                   |
| E    | Replacement Value of Non-Residential Buildings, Utilities & Infrastructure, \$M | 1,985             | 2,113             | 2,264             | 2,062                | 2,089             |
| F    | MMI Expenditures/Replacement Value  | 1.8%              | 1.8%              | 1.3%              | 2.1%                 | 3.8%              |
| G    | Annual MMI transfer from Operating to Capital Budget                            | 15,500            | 15,500            | 15,500            | 15,500               | 15,500            |
| H    | MMI transfer/MMI Expenditures   | 42.8%             | 40.7%             | 53.9%             | 35.4%                | 19.5%             |
| J    | Estimate of Maintenance Expenditure   | 21,656            | 23,473            | 16,193            | 27,180               | 50,210            |
| K    | Maintenance Expenditure/Replacement Value                                       | 1.1%              | 1.1%              | 0.7%              | 1.3%                 | 2.4%              |
|      |   |                   |                   |                   |                      |                   |
| L    | Number of Major Buildings   | 94                | 95                | 97                | 97                   | 97                |
| M    | Total Gross Square Meters (000's)   | 854               | 859               | 890               | 894                  | 894               |

Category 8 does not include carrying costs and loan repayments for Residences and Apartments, Research Park and Richard Ivey School of Business Foundation.

Line B is equal to Line A Total Sources of Funding less Total Expenses.

The change in line C from one year to the next is equal to Line B.

Line J consists of 2/3 of Category 2, 3 and 5 and 1/3 of Category 4.

**Table 15**  
**MAJOR CAPITAL PROJECTS**

|    |  | Category | Start   | End    |
|----|--|----------|---------|--------|
| 1  | <b><i>Projects Underway or Soon-to-Start</i></b>   |          |         |        |
| 2  | Modernization of Thames Hall   | 2        | Jan 17  | Oct 21 |
| 3  | Weldon Library Modernization   | 2        | Sept 19 | tbd    |
| 4  | Biomedical Research Facility - Phase 1 of Medical School Project   | 1        | Jan 17  | Jul 22 |
| 5  | Creation of Indigenous Learning Spaces in Althouse Building  | 2        | Sep 20  | tbd    |
| 6  | Entrepreneurship and Innovation Centre   | 1        | Jun 19  | Dec 22 |
| 7  | Sports Facilities: TD Stadium Renewal  | 1&2      | Nov 20  | Apr 22 |
| 8  | University-wide Campus Sustainability/Energy Conservation/Infrastructure Projects (multiple stages -- ongoing) | 1,3&5    | Ongoing |        |
| 9  | Pedestrian-friendly Campus Initiatives -- Open Space Strategy  | 1&5      | Ongoing |        |
| 10 | <b><i>Projects in Various Planning Stages</i></b>  |          |         |        |
| 11 | University Gathering Hub -- Common/Gathering Spaces  | 1        | tbd     | tbd    |
| 12 | Medicine/Science/Engineering Interdisciplinary Research Facility   | 1        | tbd     | tbd    |
| 13 | Renewal/Replacement/Expansion of Medical School Facilities: Future Phases of Medical School Project            | 1&2      | tbd     | tbd    |
| 14 | Expansion of Engineering Facilities  | 1        | tbd     | tbd    |
| 15 | Multi-Level Parking Structures   | 1        | tbd     | tbd    |
| 16 | Indoor Sports Facilities: Multi-Purpose Field House  | 1        | tbd     | tbd    |
| 17 | Space Realignment in the Natural Sciences Centre   | 2        | tbd     | tbd    |
| 18 | Ivey Leadership Centre Renewal and Expansion   | 1&2      | tbd     | tbd    |
| 19 | Renewal/Replacement of McIntosh Gallery  | 1&2      | tbd     | tbd    |
| 20 | Renewal/Replacement of Chemistry Laboratory Facilities   | 1&2      | tbd     | tbd    |
| 21 | <b><i>Projects for Future Consideration (requires funding plan)</i></b>  |          |         |        |
| 22 | Renewal of UCC, Law Building, Spencer Engineering Building, Elborn College, Talbot College                     | 2        | tbd     | tbd    |
| 23 | Social Sciences Centre Realignment/Expansion   | 1&2      | tbd     | tbd    |
| 24 | Renewal and/or Realignment of Library Facilities -- Future Phases  | 2        | tbd     | tbd    |
| 25 | New Research Initiatives/Partnerships at the Research Parks  | 1        | tbd     | tbd    |
| 26 | Residence Projects   | 1&6      | tbd     | tbd    |
| 27 | Asset Acquisitions   | 9        | tbd     | tbd    |

**Table 16**  
**CAPITAL BUDGET: SOURCES OF FUNDING**  
**(\$000)**

|    |  | <b>Projected<br/>2020-21</b> | <b>Budget<br/>2021-22</b> |
|----|--|------------------------------|---------------------------|
| 1  | <b>Government Grants</b>   |                              |                           |
| 2  | MCU Annual Capital Grant (Facilities Renewal Program)                                  | 5,748                        | 5,748                     |
| 3  | <b>Sub-Total</b>   | <b>5,748</b>                 | <b>5,748</b>              |
| 4  | <b>Operating Budget</b>  |                              |                           |
| 5  | Operating Budget MMI Transfer - Base   | 15,500                       | 15,500                    |
| 6  | Operating Budget MMI Transfer - Base (Ancillaries)                                     | 600                          | 600                       |
| 7  | Operating Budget - Pedestrian-friendly Campus Initiatives - Open Space Strategy        | 6,000                        | 10,000                    |
| 8  | Operating Budget - University-wide Campus Sustainability and Infrastructure Projects   | 5,000                        | 10,000                    |
| 9  | Operating Budget - FRSF Transfer   | 3,000                        | 3,000                     |
| 10 | Operating Budget - CRC Transfer  | 904                          | 936                       |
| 11 | Operating Budget - Engineering Building Facilities Expansion/Renewal                   | 11,061                       | 0                         |
| 12 | Operating Budget - Classroom Modernization   | 812                          | 0                         |
| 13 | Health Sciences Operating Budget - LHSB Classroom Addition                             | 0                            | 1,700                     |
| 14 | Medicine Operating Budget - RRI Cuddy Wing Chiller Replacement                         | 100                          | 1,440                     |
| 15 | Miscellaneous Faculty/Department Budgets   | 2,009                        | 1,463                     |
| 16 | <b>Sub-Total</b>   | <b>44,986</b>                | <b>44,639</b>             |
| 17 | <b>Interest Earned</b>   | <b>300</b>                   | <b>300</b>                |
| 18 | <b>Borrowing</b>   |                              |                           |
| 19 | Long-Range Space Plan  | 0                            | 64,389                    |
| 20 | <b>Sub-Total</b>   | <b>0</b>                     | <b>64,389</b>             |
| 21 | <b>Other</b>   |                              |                           |
| 22 | Student Contribution - Western Student Recreation Centre                               | 1,406                        | 1,449                     |
| 23 | Sports & Recreation Services - Student Contribution for Artificial Turf Playing Fields | 174                          | 178                       |
| 24 | Energy Conservation Incentives (Rebates)   | 100                          | 100                       |
| 25 | Projects Funded by Housing   | 7,301                        | 11,211                    |
| 26 | Projects Funded by Ancillaries   | 3,396                        | 2,107                     |
| 27 | Projects Funded by Units   | 2,558                        | 1,601                     |
| 28 | <b>Sub-Total</b>   | <b>14,935</b>                | <b>16,646</b>             |
| 29 | <b>Total Sources of Funding</b>  | <b>65,969</b>                | <b>131,722</b>            |

**Table 17**  
**CAPITAL EXPENDITURES FOR NEW CONSTRUCTION AND MAJOR BUILDING RENOVATIONS**  
**2020-21 and 2021-22**  
**(\$000)**

|    |   | <b>Projected<br/>2020-21</b> | <b>Budget<br/>2021-22</b> |
|----|---|------------------------------|---------------------------|
| 1  | <b><i>Category 1: New Construction</i></b>                                  |                              |                           |
| 2  | Entrepreneurship and Innovation Centre                                      | 1,375                        | 24,200                    |
| 3  | Biomedical Research Facility - Phase 1 of Medical School Project            | 10,300                       | 21,700                    |
| 4  | Sports Facilities: TD Stadium Renewal                                       | 400                          | 4,600                     |
| 5  | University Gathering Hub - Common/Gathering Spaces                          | 0                            | 3,000                     |
| 6  | Arthur and Sonia Labatt Health Sciences Building Classroom Addition         | 102                          | 1,598                     |
| 7  | Medicine/Science/Engineering Interdisciplinary Research Facility            | 101                          | 254                       |
| 8  | Western Centre for Public Health and Family Medicine - 3rd Floor Completion | 1,875                        | 50                        |
| 9  | <b><i>Total, Category 1</i></b>   | <b><i>14,153</i></b>         | <b><i>55,402</i></b>      |
|    |   |                              |                           |
| 10 | <b><i>Category 2: Major Building Renovations</i></b>                        |                              |                           |
| 11 | Weldon Library Modernization  | 1,595                        | 14,132                    |
| 12 | Modernization of Thames Hall  | 15,675                       | 11,720                    |
| 13 | Creation of Indigenous Learning Spaces in Althouse Building                 | 474                          | 5,750                     |
| 14 | Somerville House Renovations to Create Student Space                        | 200                          | 2,750                     |
| 15 | Medical School Innovation Hub   | 1,598                        | 123                       |
| 16 | Renewal of Spencer Engineering Building                                     | 3,952                        | 37                        |
| 17 | <b><i>Total, Category 2</i></b>   | <b><i>23,494</i></b>         | <b><i>34,512</i></b>      |



**Table 18**  
**CAPITAL RESERVES AND DEBT AT FISCAL YEAR END**  
**(\$000)**

|   |                               | Actual<br>2017-18 | Actual<br>2018-19 | Actual<br>2019-20 | Projected<br>2020-21 | Budget<br>2021-22 |
|---|-------------------------------|-------------------|-------------------|-------------------|----------------------|-------------------|
| 1 | <b>A. Capital Reserves</b>    |                   |                   |                   |                      |                   |
| 2 | General Capital Fund          | 25,783            | 32,271            | 40,437            | 41,987               | 28,386            |
| 3 | Designated Capital Fund       | 24,517            | 36,617            | 15,120            | 10,592               | 2,911             |
| 4 | <b>Total Capital Reserves</b> | <b>50,300</b>     | <b>68,888</b>     | <b>55,557</b>     | <b>52,579</b>        | <b>31,297</b>     |

|    |   | Actual<br>2017-18 | Actual<br>2018-19 | Actual<br>2019-20 | Projected<br>2020-21 | Budget<br>2021-22 |
|----|---|-------------------|-------------------|-------------------|----------------------|-------------------|
| 5  | <b>B. Capital Debt</b>                      |                   |                   |                   |                      |                   |
| 6  | New Construction, Major Renovations & Other | 51,141            | 22,821            | 0                 | 0                    | 64,389            |
| 7  | Housing                                     | 107,003           | 88,346            | 73,879            | 59,779               | 50,561            |
| 8  | Research Park                               | 27,015            | 26,142            | 25,235            | 24,295               | 23,318            |
| 9  | Unused and Invested Debenture Proceeds      | 190,600           | 224,832           | 254,809           | 261,900              | 199,400           |
| 10 | <b>Total Capital Debt</b>                   | <b>375,759</b>    | <b>362,141</b>    | <b>353,923</b>    | <b>345,974</b>       | <b>337,668</b>    |

*Line 2 includes the required \$6 million general capital reserve fund.*

*Line 3 includes fund balances for large capital projects.*

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## Long-Term Financial Trends

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The Operating and Capital Budgets set out in Tables 2 and 14 of this document describe proposed spending of some \$982 million for the single year of 2021-22. That spending will take place, however, in a long-term context which must be understood in evaluating the Operating and Capital Budgets. The Administration and Board have identified three elements of that long-term context which should be reviewed in the annual Budget of the University: capital reserves and debt, employee future benefits, and deferred maintenance.

### A. Capital Reserves and Debt

Table 18 displays Capital Reserves and Debt for fiscal years ending April 30. Capital Reserves are divided into two categories:

- the General Capital Fund, which includes funds not yet designated for specific purposes and funds designated for future projects.
- the Designated Capital Fund, which has been assigned to specific capital projects.

The Designated Capital Fund includes the remaining funds from the sale of the Gibbons property. The University's intention is that when the Gibbons funds are spent, there will be naming opportunities to honor the Gibbons name.

Capital Debt is divided into the following categories:

- **New Construction, Major Renovations, Infrastructure, and Other** – represents debt on projects that are largely new construction, additions to existing buildings, other new facilities, non-residential projects that involve major maintenance, and renovations to existing space. It also includes debt on purchases of property.
- **Housing** – debt required for new construction, maintenance, and modernization projects for University residences and apartment buildings.
- **Research Park** – debt incurred by the Research Park.
- **Unused and Invested Debenture Proceeds** – unused proceeds from Western's debenture issuances that have been committed and invested until specific capital projects require the funding.

Capital Debt is viewed as part of the capitalization structure of the University and a resource that can help the University advance its Long-Range Space and Campus Master Plans. As part of the overall management of capitalization, the University has increased its Capital Debt, primarily through debenture issuances of \$190 million and \$100 million in 2007 and 2017, respectively, and by entering into a \$100 million fifteen-year facility in 2013 to finance a 1,000 bed residence and other capital projects. The University's debentures necessitate an annual credit rating review. Standard & Poor's confirmed Western's credit rating of AA in February 2021.

The Board of Governors has approved a Capital Debt Policy that outlines the principles used in guiding the University's overall capitalization and debt management strategy. Western is in compliance with both of its compliance ratios set out in the policy (net assets-to-debt and debt burden). The University

also utilizes monitoring ratios as part of its management strategy. Figure E shows selected Capital Debt monitoring ratios for the years ending April 30.

*Figure E*  
**CAPITAL DEBT MONITORING RATIOS**

|       | FTE<br>Enrolment | Debt (\$M) | Debt<br>per FTE (\$) | Combined<br>Revenue (\$M)* | Debt /<br>Revenue (%) |
|-------|------------------|------------|----------------------|----------------------------|-----------------------|
| 2017  | 32,528           | 283.7      | 8,722                | 1,253.1                    | 22.6%                 |
| 2018  | 33,059           | 375.8      | 11,369               | 1,253.7                    | 30.0%                 |
| 2019  | 33,356           | 362.2      | 10,859               | 1,318.0                    | 27.5%                 |
| 2020  | 33,737           | 353.9      | 10,490               | 1,248.0                    | 28.4%                 |
| 2021p | 35,222           | 345.9      | 9,821                | 1,188.0                    | 29.1%                 |

The projected debt is based on Board-approved projects with allowance for other projects, which may be presented to the Board during the period under consideration.

## B. Employee Future Benefits

Subject to eligibility rules set within various collective agreements, the University provides medical, dental, and life insurance benefits to eligible employees after their employment with Western has ended.

The obligation for these employee future benefits are projected by actuarial valuation every three years. In the years between valuations, an extrapolation of the actuarial valuation is used to determine the projected benefit obligations. At April 30, 2020, the University's accrued benefit liability relating to the employee future benefit plans was \$561.8 million (2019 - \$546.5 million). The annual expense for non-pension employee future benefits in 2020 was \$21.9 million (2019 - \$23.4 million).

A recent review of major research universities identified only five institutions with significant post-employment benefit obligations greater than \$190 million, ranging from \$192 million to \$644 million and an unweighted average of \$393 million. Western ranked second in total liability for employee future benefits. Figure F outlines the University employee future benefits, the obligation and expense for years ending April 30.

*Figure F*  
**EMPLOYEE FUTURE BENEFITS (EFB) AS A % OF TOTAL EXPENSES**

|      | EFB Obligation<br>(\$M) | EFB Expense<br>(\$M) | Total University<br>Expenses (\$M) | EFB Expense<br>as % of Total |
|------|-------------------------|----------------------|------------------------------------|------------------------------|
| 2016 | 525.7                   | 25.4                 | 1,079                              | 2.4%                         |
| 2017 | 473.5                   | 28.9                 | 1,113                              | 2.6%                         |
| 2018 | 495.3                   | 21.8                 | 1,122                              | 1.9%                         |
| 2019 | 546.5                   | 23.4                 | 1,170                              | 2.0%                         |
| 2020 | 561.8                   | 21.9                 | 1,182                              | 1.9%                         |

### C. Deferred Maintenance

Deferred Maintenance is defined as work on the maintenance of physical facilities that has been deferred on a planned or unplanned basis to a future budget cycle or postponed until funds become available. To avoid increasing the size of the deferred maintenance backlog, it is necessary to carry out replacement of facility components on an annual basis.

The estimates of deferred maintenance are different from estimates of debt or employee future benefits in the previous sections. There are actual contracts in place for the first two categories that allow us to make reasonable estimates. For deferred maintenance, this is not the case; therefore, we have to find other ways to quantify this liability. In 2001, a common capital-asset management system was purchased by the Ontario University system to assess, track, and report on the condition of facilities. The system requires that each major component of a building – roof sections, classrooms, heating, ventilation, air-conditioning systems and so on – be inspected, either entirely or on a sample basis. Data on the findings of these inspections are entered into a central database. The system uses industry-standard cost and lifecycle data to forecast the timing and costs of capital renewal projects. In 2019, at the request of the Ministry of Colleges and Universities, cost-forecasting methodologies were updated in the Ontario university sector to produce a more harmonized approach for facility assessment across provincially owned and broader public sector assets. Overall, this sector wide harmonization has led to an increase in estimates of deferred maintenance, primarily due to the inclusion of soft costs, which added approximately 30% to deferred maintenance estimates. Other factors have included automatic renewal requirements to maintain assets and changes to maintenance life cycles. The University, in coordination with all other Ontario universities, is now undertaking a campus wide review of its facilities data, to further improve upon our estimates. This data review is being conducted by a common vendor across the sector and is expected to be complete by 2024-25. As the facility data improves, the estimates of deferred maintenance may fluctuate from year to year. As at February 25, 2021, the Facilities Management Division estimates that deferred maintenance at Western is \$261 million for non-residential buildings and \$43 million for residences. Approximately 49% of the deferred maintenance for non-residential buildings relates to mechanical and electrical requirements. Other major components include maintenance driven by code requirements and maintenance for roofs and windows.

A common measure for determining the overall condition of facilities is the ratio of deferred maintenance over current replacement value of the facilities. The calculation as at February 25, 2021 is shown in Figure G.

*Figure G*  
**DEFERRED MAINTENANCE TO CURRENT REPLACEMENT VALUE**

|   |                                 | Non-Residential<br>Buildings | Combined<br>Residences |
|---|---------------------------------|------------------------------|------------------------|
| 1 | Current Replacement Value (CRV) | \$2,062 million              | \$623 million          |
| 2 | Deferred Maintenance (DM)       | \$261 million                | \$43 million           |
| 3 | DM/CRV                          | 12.7%                        | 6.9%                   |

The average age of buildings for universities in the Province of Ontario was 56 years as of March 2021. Western's average age is 40 years. Over 53% of our buildings were built before 1980. Western's residences are funded through rents which cover maintenance; the University has never had a problem with deferred maintenance on residences. A ratio of 12.7% (Deferred Maintenance/Current Replacement Value) for non-residential buildings indicates a significant need for maintenance funding. If the average component of a large building lasts 50 years, then on average, maintenance spending should be 2.0% of replacement value. This level of spending is a standard target in the industry. When the actual ratio is consistently less than 2.0%, as has been the case at most Canadian universities, the volume of deferred maintenance will grow. Failure to adequately address deferred maintenance results in substandard facilities and could result in the failure of critical systems. Based on the current replacement value of our facilities at \$2.1 billion, spending on major maintenance for campus buildings at 2.0% should be in the range of \$42 million annually.

As explained at the start of the Capital Budget, the annual maintenance transfer is used for Maintenance, Modernization, and Infrastructure (MMI). The Administration is sometimes asked by faculty and staff if the MMI transfer is too large. As lines G and E in Table 14 show, the ratio of the MMI transfer to the current replacement value of our non-residential buildings, utilities, and infrastructure has been below 1% in recent years (Figure H).

*Figure H*  
**MMI TRANSFER TO CRV RATIO 2017-18 to 2021-22**

|   |           | Actual<br>2017-18 | Actual<br>2018-19 | Actual<br>2019-20 | Projected<br>2020-21 | Budget<br>2021-22 |
|---|-----------|-------------------|-------------------|-------------------|----------------------|-------------------|
| 1 | MMI (\$M) | 15.50             | 15.50             | 15.50             | 15.50                | 15.50             |
| 2 | CRV (\$M) | 1,985             | 2,113             | 2,264             | 2,062                | 2,089             |
| 3 | Ratio     | 0.78%             | 0.73%             | 0.68%             | 0.75%                | 0.74%             |

Thus, the MMI transfer from the Operating to the Capital Budget is less than half of the 2.0% required to keep deferred maintenance from growing. Continuation of this MMI transfer is essential to maintaining a safe and reliable campus infrastructure, which supports modern research and teaching, and sustains faculty, staff, and student morale.

Line J of Table 14 presents an estimate of maintenance spending from all sources, with maintenance defined as spending required to bring aging facilities up to their condition when originally built. The last time the ratio was about 2.0% was 2010-11. The estimated ratios for 2020-21 and 2021-22 will not reach the 2.0% target. Additional funding, from provincial and federal sources, will be required to catch up and maintain the 2.0% target in future periods, in order to begin to restore the condition of University facilities.