

# DEVELOPMENT CHARGES BACKGROUND STUDY

---

City of Greater Sudbury

DRAFT EXECUTIVE REPORT

HEMSON Consulting Ltd.

---

March 2019

**TABLE OF CONTENTS**

---

**EXECUTIVE SUMMARY.....1**

    A.    PURPOSE OF THE DEVELOPMENT CHARGES (DC)  
            BACKGROUND STUDY ..... 1

    B.    DEVELOPMENT FORECAST ..... 2

    C.    DEVELOPMENT-RELATED CAPITAL PROGRAM ..... 2

    D.    CONSIDERATION FOR AREA RATING ..... 5

    E.    CALCULATED DEVELOPMENT CHARGES..... 6

**A.    DEVELOPMENT FORECAST ..... 10**

**B.    GENERAL SERVICES TECHNICAL APPENDIX ..... 26**

**C.    ENGINEERING INFRASTRUCTURE TECHNICAL APPENDIX ..... 36**

## EXECUTIVE SUMMARY

---

### A. PURPOSE OF THE DEVELOPMENT CHARGES (DC) BACKGROUND STUDY

Hemson Consulting Ltd. was retained by the City of Greater Sudbury to complete a Development Charges (DC) Background Study. This Background Study provides the basis to update the City's development charges to accurately reflect the servicing needs of new development in Greater Sudbury.

#### 1. Legislative Context

The City of Greater Sudbury DC Background Study is presented as part of the process to lead to the approval of a new DC by-law in compliance with the *Development Charges Act, 1997* (DCA). The study is prepared in accordance with the DCA and associated Regulations, including the amendments that came into force on January 1, 2016.

#### 2. Key Steps in Determining Future Development-Related Projects

In accordance with the DCA and associated regulation, several key steps are required to calculate development charges. This includes preparing a development forecast, establishing historical service levels, determining the increase in need for services arising from development and appropriate shares of costs, attribution to development types (i.e. residential and non-residential) and the final adjustment to the calculated rate through a cash flow analysis.

#### 3. DC Eligible and Ineligible Costs

Development charges are intended to pay for the initial round of capital costs needed to service new development over an identified planning period. This is based on the overlaying principle that "growth pays for growth". However, the DCA and associated regulation include several statutory adjustments and deductions that prevent these costs from fully being recovered by growth. Such adjustments include, but are not limited to: ineligible costs, including operating and maintenance costs; ineligible services, including tourism facilities, parkland acquisition, etc.; statutory ten per cent discount for "soft" or general services; deductions for costs that exceed historical service level caps; and statutory exemptions for specific uses (i.e. industrial expansions).

#### 4. The Development-Related Capital Forecast is Subject to Change

It is recommended that Council adopt the development-related capital forecast developed for the purposes of the DC Background Study. However, it is recognized

that the DC study is a point-in-time analysis and there may be changes to project timing, scope and costs through the City's normal annual budget process.

## B. DEVELOPMENT FORECAST

The development forecast used in this DC Background Study is based on the Reference Scenario as presented within the *Outlook for Growth to 2046* prepared for the City by Hemson Consulting Ltd. (dated March 2018). A ten-year planning horizon (2019-2028) is used for all services. However, as the recovery periods for many engineered services projects stretch well beyond the ten-year planning horizon, a forecast to 2041 was prepared for the purposes of calculating post-period benefit shares for projects where appropriate.

The table below provides a summary of the anticipated residential and non-residential growth over the 2019-2028 and 2019-2041 planning periods.

Development Forecast	2018 Estimate	2019 - 2028		2019 - 2041	
		Growth	Total at 2028	Growth	Total at 2041
<b>Residential</b>					
Total Occupied Dwellings	69,962	2,944	72,906	4,946	74,908
Total Population					
Census	162,272	2,918	165,190	5,061	167,333
Population in New Dwellings		7,402		12,275	
<b>Non-Residential</b>					
Employment	76,851	2,360	79,211	4,727	81,578
Non-Residential Building Space (sq.ft.)		1,804,390		3,741,570	

## C. DEVELOPMENT-RELATED CAPITAL PROGRAM

### 1. General Services

The gross costs of the development-related capital program for general services over the ten-year period from 2019 to 2028 amount to \$149.89 million. As shown in the table below, \$9.34 million is deemed eligible for recovery through DCs over the ten-year period.

Service	Development-Related Capital Program (2019 - 2028)		
	Gross Cost (\$000)	Costs Not Funded Through This By-Law (\$000)	Program Funded By DCs Through This By-law (\$000)
<b>1.0 GENERAL GOVERNMENT</b>	\$5,122.00	\$4,493.89	\$628.11
<b>2.0 LIBRARY SERVICES</b>	\$17,796.99	\$16,816.01	\$980.98
<b>3.0 FIRE SERVICES</b>	\$6,610.33	\$6,468.76	\$141.57
<b>4.0 POLICE SERVICES</b>	\$60,066.10	\$59,138.64	\$927.46
<b>5.0 PUBLIC SAFETY</b>	\$12,578.04	\$12,289.05	\$288.98
<b>6.0 PARKS AND RECREATION</b>	\$15,044.81	\$11,506.36	\$3,538.45
<b>7.0 AMBULANCE SERVICES</b>	\$1,537.00	\$1,215.40	\$321.60
<b>8.0 EMERGENCY PREPAREDNESS</b>	\$3,038.84	\$2,053.56	\$985.28
<b>9.0 TRANSIT</b>	\$28,098.79	\$26,574.92	\$1,523.87
<b>TOTAL 10 YEAR GENERAL SERVICES</b>	<b>\$149,892.90</b>	<b>\$140,556.59</b>	<b>\$9,336.30</b>

The remaining \$140.56 million is determined to be ineligible for funding through DCs over the ten-year period and is broken down as follows:

- Approximately \$19.82 million has been identified as subsidies or grants that the City anticipates receiving to fund growth-related projects.
- Non-development charge funding for replacement portions of the capital forecast and for portions of growth-related capital projects that benefit existing development will total an additional \$103.49 million. These portions of capital costs would have to be funded from property taxes and other non-development charge revenue sources.
- The DCA requires that growth-related net capital costs for general services, with the exception of transit and protection services, be reduced by ten per cent in calculating the applicable development charge for these services. In total, about \$1.85 million is identified as the required ten per cent reduction and must be funded from non-development charge sources.
- Development charges already collected from prior growth have been applied to certain projects. These shares amount to \$5.81 million.
- Currently available DC reserve fund balances have also been applied to the capital program, and total \$2.58 million.

- Finally, a share of the capital forecast is for portions of projects that relate to growth in the post-2028 period (for which future development charges could be collected). In total, about \$7.01 million falls within this definition and will be considered through subsequent DC by-law reviews.

Details regarding the capital programs for each individual general service are provided in Appendix B.

## 2. Engineered Services

The development-related capital program for engineered services is planned over the same ten-year period from 2019 to 2028. The gross costs amount to \$668.51 with \$37.95 million eligible for recovery through development charges, as shown in the table below.

Service	Development-Related Capital Program (2019 - 2028)		
	Gross Cost (\$000)	Costs Not Funded Through This By-Law (\$000)	Program Funded By DCs Through This By-law (\$000)
<b>1.0 ROADS AND RELATED</b>	\$338,926.26	\$317,771.32	\$21,154.95
<b>2.0 WATER</b>	\$56,830.39	\$54,353.36	\$2,477.02
<b>3.0 WASTEWATER</b>	\$196,355.79	\$184,465.47	\$11,890.32
<b>4.0 DRAINS</b>	\$76,398.63	\$73,970.63	\$2,428.00
<b>TOTAL 10 YEAR ENGINEERED SERVICES</b>	<b>\$668,511.07</b>	<b>\$630,560.78</b>	<b>\$37,950.29</b>

The remaining \$630.56 million is determined to be ineligible for funding through DCs over the ten-year period and is broken down as follows:

- Approximately \$196.55 million has been identified as grants, subsidies or other recoveries that the City anticipates receiving to fund growth-related projects.
- Non-development charge funding for replacement portions of the capital forecast and for portions of growth-related capital projects that benefit existing development will total an additional \$346.14 million. These portions of capital costs would have to be funded from property taxes and other non-development charge revenue sources.
- Development charges already collected from prior growth and applied to projects within the capital program amount to \$13.01 million.
- Currently available DC reserve fund balances have also been applied to the capital program, and total \$1.44 million.

- Finally, a share of the capital forecast is for portions of projects that relate to growth in the post-2028 period (for which future development charges could be collected). In total, about \$73.42 million falls within this definition and will be considered through subsequent DC by-law reviews.

Details regarding the capital programs for each individual engineered service are provided in Appendix C.

#### **D. CONSIDERATION FOR AREA RATING**

In accordance with the DCA, Council must give consideration to the use of area rating, also known as area-specific development charges. As part of the 2019 DC Background Study, the appropriateness of implementing area-specific development charges for the various City services was examined.

The DCA permits the City to designate in its DC by-law, the areas where development charges shall be imposed. The charges may apply to all lands in the City or to other designated development areas as specified in the DC by-law.

The following was considered with respect to area-specific development charges:

- Is the use of area-specific charges appropriate for some or all services?
- Are there any data limitations with calculating an area-specific development charge?

Area-specific DCs are typically considered where there is a clear benefit to a particular area (including the population or population and employment), and have been implemented primarily in standalone greenfield development areas.

Based on discussions with staff, and the analysis of the delivery of services, it is proposed that the City continue to calculate and collect DCs on a uniform, City-wide basis. The following table provides a description of the servicing needs for general and engineered services.

<b>City Services Considered</b>	<b>Servicing Needs</b>
General Services	<p>Services such as Library and Parks and Recreation are open and accessible to all residents in the City and are driven and planned for based on City-wide population growth.</p> <p>General Government, Fire, Police, Public Safety, Ambulance, Emergency Preparedness, and Transit services are provided to all residents and employees in the City and are driven and planned for based on City-wide population or population and employment growth.</p>
Engineered Services	<p>Roads and Related are provided through a City-wide network and is planned based on City-wide population and employment growth.</p> <p>For services such as Water, Wastewater and Drains services, a network of ponds, linear infrastructure and treatment facilities are used to provide services to City-wide population and employment growth.</p>

It is noted that through the DC study process, a thorough examination of the appropriateness of area-specific DCs for Water, Wastewater, and Drains services was undertaken. Through extensive discussions with City staff and stakeholders, it was determined that a City-wide approach would continue to be most appropriate for a number of reasons, including the following:

- Due to the nature of Water, Wastewater, and Drains servicing in the City, it is difficult to accurately assign benefitting areas for all capital projects; and
- There is the potential for issues of equity and fairness due to the timing of certain projects and the historically City-wide application of development charges. For example, certain locations may require major near-term plant upgrades, while others have seen similar recent projects funded on a City-wide basis.

#### **E. CALCULATED DEVELOPMENT CHARGES**

Development charges rates have been established under the parameters and limitations of the DCA. A City-wide uniform cost recovery approach is used to calculated development charges for all services.

The calculated charges are the maximum charges the City may adopt. Lower charges can be approved; however this will require either:

- A reduction in the capital plan and reduced service levels; or



- Financing from other sources, most likely through property tax increases.

### 1. Calculated Residential Development Charges Rates

The fully calculated residential charges are recommended to vary by unit type, reflecting the difference in occupancy patterns expected in various unit types and the associated differences in demand that would be placed on City services.

The following is a summary of the calculated residential development charges by unit type:

Service	Unadjusted Charge Per Capita	Residential Charge By Unit Type (1)		
		Single Detached	Semi Detached	Apartments and Multiples
General Government	\$64	\$207	\$167	\$120
Library Services	\$133	\$458	\$368	\$264
Fire Services	\$15	\$46	\$37	\$26
Police Services	\$95	\$323	\$260	\$187
Public Safety	\$30	\$104	\$83	\$60
Parks And Recreation	\$478	\$1,665	\$1,338	\$961
Ambulance Services	\$33	\$107	\$86	\$62
Emergency Preparedness	\$101	\$354	\$284	\$204
Transit	\$156	\$546	\$439	\$315
<b>Subtotal General Services Charge</b>	<b>\$1,105</b>	<b>\$3,810</b>	<b>\$3,062</b>	<b>\$2,199</b>
Roads And Related	\$2,172	\$7,372	\$5,922	\$4,254
Water Services	\$296	\$1,003	\$806	\$579
Wastewater Services	\$1,422	\$4,688	\$3,766	\$2,705
Drains	\$249	\$845	\$679	\$488
<b>Subtotal Engineered Services Charge</b>	<b>\$4,140</b>	<b>\$13,908</b>	<b>\$11,173</b>	<b>\$8,026</b>
<b>TOTAL CHARGE PER UNIT</b>	<b>\$5,245</b>	<b>\$17,718</b>	<b>\$14,235</b>	<b>\$10,225</b>
(1) Based on Persons Per Unit Of:		3.05	2.45	1.76

## 2. Calculated Non-Residential Development Charges Rates

The calculated non-residential charge is recommended to apply to two property types, industrial and non-industrial. For each sector, a charge per square foot of gross floor area is calculated.

The following is a summary of the fully calculated non-industrial and industrial charge:

Service	Unadjusted Charge Per Square Foot	Non-Residential Charge By Type	
		Non-Industrial Charge	Industrial Charge
General Government	\$0.08	\$0.09	\$0.09
Library Services	\$0.00	\$0.00	\$0.00
Fire Services	\$0.02	\$0.02	\$0.02
Police Services	\$0.12	\$0.14	\$0.14
Public Safety	\$0.04	\$0.05	\$0.05
Parks And Recreation	\$0.00	\$0.00	\$0.00
Ambulance Services	\$0.04	\$0.05	\$0.05
Emergency Preparedness	\$0.13	\$0.15	\$0.15
Transit	\$0.20	\$0.24	\$0.24
<b>Subtotal General Services Charge</b>	<b>\$0.64</b>	<b>\$0.74</b>	<b>\$0.74</b>
Roads And Related	\$2.81	\$5.37	\$2.40
Water Services	\$0.38	\$0.43	\$0.43
Wastewater Services	\$1.85	\$1.99	\$1.99
Drains	\$0.32	\$0.36	\$0.36
<b>Subtotal Engineered Services Charge</b>	<b>\$5.37</b>	<b>\$8.15</b>	<b>\$5.18</b>
<b>TOTAL CHARGE PER SQ.FT.</b>	<b>\$6.01</b>	<b>\$8.89</b>	<b>\$5.92</b>

The industrial and non-industrial rates are differentiated by the Roads and Related charge. The Roads and Related capital program is allocated to industrial and non-industrial development based on their respective shares of employment growth, and rates are then calculated based on the floor space forecast for each sector. This accounts for the typically lower road infrastructure demands per square foot associated with industrial development.

### **3. Comparison of Current and Calculated Development Charges**

The calculated fully serviced residential charges are comparable to the City's current DC rates. The single detached unit calculated charge of \$17,718 per unit is slightly lower (\$46) than the current charge of \$17,764 per unit. Reductions in the calculated DC rates are due to lower DC-eligible costs as compared with the 2014 DC Background Study.

The calculated non-residential, non-industrial charge of \$8.89 per square foot is also lower (\$0.51) than the current non-industrial charge of \$9.40 per square foot.

The calculated industrial charge of \$5.92 per square foot is \$1.00 higher than the current charge of \$4.92. This is due to a number of factors, including:

- A change in the Roads and Related cost allocations as compared with the previous DC study. This is due to a change in the ten-year forecast of employment and employment space by sector, as well as a change in methodology. In previous DC studies, a trip generation rate approach was used to allocate these costs between industrial and non-industrial development. However, it was determined through the 2019 DC Background Study that an employment-based approach would be more appropriate as it provides a more reliable and accurate reflection of each sector's demand for services. It is noted that a reliable source of trip generation data by employment sector is not currently available for the City of Greater Sudbury.
- A greater emphasis on Water, Wastewater, and Drains services as a share of the total calculated rate, as compared with the previous DC study. While there has been an overall reduction in the rates for other services, the total industrial rate is less impacted by the Roads and Related and general services charges than other sectors. This is due to the allocation of the Roads and Related charge between industrial and non-industrial development, as well as the lack of Parks and Recreation and Library charges for non-residential development, as the need for these services are considered to be driven by residential development.

## **APPENDIX A**

---

### **DEVELOPMENT FORECAST**

## APPENDIX A

### DEVELOPMENT FORECAST

This appendix provides the details of the development forecast used to prepare the 2019 Development Charges Background Study for the City of Greater Sudbury. The forecast method and key assumptions are discussed. The results of the forecasts are presented in the following 11 tables:

- A.1 Historical Population, Occupied Dwellings and Employment
- A.2 Historical Occupied Households by Unit Type
- A.3 Historical Annual Growth in Occupied Households by Unit Type
- A.4 Historical Households by Period of Construction Showing Household Size
- A.5 Historical Place of Work Employment
- A.6 Population, Household and Employment Forecast Summary
- A.7 Forecast of Occupied Households by Unit Type
- A.8 Forecast of Annual Growth in Occupied Households by Unit Type
- A.9 Forecast Population in New Households by Unit Type
- A.10 Forecast of Place of Work Employment
- A.11 Forecast of Annual Non-Residential Space Growth

#### A. FORECAST APPROACH AND KEY ASSUMPTIONS

The *Development Charges Act (DCA)* required the City to estimate “the anticipated amount, type and location of development” for which development charges may be imposed. The development forecast must cover both residential and non-residential development and be specific enough regarding the quantum, type, location and timing of development to allow the City to prepare a reasonable development-related capital program.

Forecasts of population, households and employment are based upon the Reference Scenario as presented within the *Outlook for Growth to 2046* prepared for the City by Hemson Consulting Ltd. (dated March 2018). The forecasts take into account the most currently available information regarding the demographic and economic outlook in the Greater Sudbury region, including information from the 2016 Census.

The planning period for general services is 2019 to 2028, or a ten-year period, as limited by the DCA. The engineered services are also recovered under a ten-year

planning period, however the recovery period for many engineered services projects stretch to 2031 or 2041 and beyond. The post-period benefit shares calculated on this basis. Further detail is shown in Appendix B for the general services and Appendix C for engineered services.

It is noted that the forecast is based on Census years and is translated into the timeframes required for DC purposes, generally pro-rating the Census periods to the DC time period.

## **B. HISTORICAL DEVELOPMENT IN THE CITY**

Historical growth and development figures are based on Statistics Canada Census data. A “Census-based” definition of population is used for the purposes of the DC study. The definition does not include Census net undercoverage, which is typically included in the definition of “total” population commonly used in municipal planning documents, including the City’s *Outlook for Growth to 2046*. For DC purposes, a ten-year historical period of 2009 to 2018 is used for calculating historical service levels.

Over the last ten years, the City’s Census population has grown from approximately 158,900 people in 2008 to 162,300 in 2018; this represents an increase of 2.1 per cent (Table 1). During the same time period, the number of occupied households increased at a higher rate of approximately 6.0 per cent, from 66,000 dwellings in 2008 to nearly 70,000 dwellings in 2018. The difference between the rates of population and occupied dwelling unit growth is the result of a decline in the average number of persons residing in existing housing units.

Historical employment figures are also shown in Table 1 and are based on Statistics Canada place of work data. Place of work data records where people work rather than their place of residence. The employment figures used for DC calculations include workers with no fixed place of work, but exclude *work at home* employment. Overall, the City’s employment growth has increased in the last ten years from approximately 74,200 in 2008 to 76,900 in 2018; this represents an increase of 3.6 per cent.

## **C. FORECAST RESULTS**

Development charges are levied on residential development as a charge per new unit and on non-residential development as a charge per unit of gross floor area (GFA).

## 1. Residential Development Forecast

The residential development forecast incorporates forecasts of population, households, and housing units by type. The population forecast to 2028 is anchored on the Census-based forecasts for the City established by the *Outlook for Growth to 2046*. As shown in Table 6, a Census population of 165,200 is anticipated in 2028; this is comparable to a total population of 169,800.

The residential forecast for 2041 is for a Census population of approximately 167,300. It is noted that this is comparable to a total population including Census net undercoverage of 172,000, as forecast within the City's *Outlook for Growth*.

The forecast of new households assumes that the total occupied units in the City will grow by approximately 2,940 units over the ten-year planning period from 2019 to 2028, to a total of 72,900 occupied households by the tenth year. It is anticipated that, of the 2,940 new households to be added, approximately 1,670 will be single detached, 130 will be semi-detached, 90 will be rows and 1,060 will be apartment units (Table 8). By 2041, a total of 74,900 occupied units are anticipated

In addition to the Census population forecast, a forecast of “population in new units” that will result from the addition of new housing units has been made, and serves as the basis of the residential development charges calculation. Population growth in new units is estimated by applying persons per unit (PPU) assumptions to the housing unit forecast. The PPU assumptions are based on historic household size by period of construction by unit type, as per a 2016 special run received by Statistics Canada (Table 4). The forecast population in new housing units is 7,400 for the ten-year period (2019 to 2028), and 12,275 to 2041 (Table 9).

For the purposes of levying residential development charges, the occupancy levels in both unit types (single detached, semi-detached, and apartments and multiples) are considered. The PPUs used to calculate the development charges are the calculated average PPU in new units over the first five years of the forecast period (2019-2024). The PPU assumptions used are 3.05 per single detached unit, 2.45 per semi-detached unit, and 1.76 people for apartments and multiple dwellings.

## 2. Non-Residential Development Forecast

Non-residential development charges are calculated on a unit of gross floor area (GFA) basis. Therefore, a forecast of new non-residential building space has been developed. As with the residential forecast, the floorspace forecast covers a ten-year period from 2019 to 2028.

The anticipated employment growth is consistent with the City's *Outlook for Growth*. As shown in Table 10, total employment is anticipated to reach 82,500 by 2028 and nearly 85,000 by 2041. However, only place of work employment is considered for the purposes of the DC calculation. Place of work employment is

anticipated to grow by 2,360 jobs over the ten-year planning period, to a total of 79,200.

Employment densities have been used to convert the employment forecast into building space estimates. The forecast considers three non-residential categories: employment land (industrial), population related (commercial and institutional) and major office. Rural employment growth is not anticipated to generate any additional floor space. The following densities, by employment type, have been utilized in this study:

Population-Related:	540 sq.ft. per employee
Employment Land:	1,000 sq.ft. per employee
Major Office:	290 sq.ft. per employee

Over the ten-year forecast period an additional 131,600 square feet of major office, 408,800 square feet of population-related employment space, and 1.36 million square feet of employment land space is projected to be built (Table 11). In total 1.80 million square feet of non-residential floor space is forecast to be added between 2019 and 2028 to accommodate 2,360 additional employees. By 2041, approximately 3.74 million square feet of new non-residential space is anticipated.



**APPENDIX A - TABLE 1**  
**CITY OF GREATER SUDBURY**  
**HISTORICAL POPULATION, OCCUPIED DWELLINGS & EMPLOYMENT SUMMARY**

Mid-Year	Census Population	Annual Growth	Total Population	Annual Growth	Occupied Households	Annual Growth	Av. Household Size (PPU)	Employment For DC Study	Annual Growth	Activity Rate
<b>2006</b>	<b>157,915</b>		<b>163,900</b>		<b>64,960</b>		<b>2.43</b>	<b>73,545</b>		<b>46.6%</b>
2007	158,405	490	164,100	200	65,487	527	2.42	73,870	325	46.6%
2008	158,896	491	164,300	200	66,019	532	2.41	74,197	327	46.7%
2009	159,389	493	164,500	200	66,555	536	2.39	74,525	328	46.8%
2010	159,884	495	164,700	200	67,095	540	2.38	74,854	329	46.8%
<b>2011</b>	<b>160,380</b>	<b>496</b>	<b>164,900</b>	<b>200</b>	<b>67,640</b>	<b>545</b>	<b>2.37</b>	<b>75,185</b>	<b>331</b>	<b>46.9%</b>
2012	160,628	248	165,139	239	67,949	309	2.36	75,400	215	47.0%
2013	160,877	249	165,379	240	68,260	311	2.35	75,616	216	47.1%
2014	161,126	249	165,619	240	68,572	312	2.34	75,833	217	47.2%
2015	161,375	249	165,859	240	68,885	313	2.33	76,050	217	47.3%
<b>2016</b>	<b>161,625</b>	<b>250</b>	<b>166,100</b>	<b>241</b>	<b>69,200</b>	<b>315</b>	<b>2.32</b>	<b>76,268</b>	<b>218</b>	<b>47.4%</b>
2017	161,948	323	166,465	365	69,580	380	2.31	76,559	291	47.5%
2018	162,272	324	166,798	333	69,962	382	2.30	76,851	292	47.6%
Growth 2009-2018		3,376		2,498		3,943			2,654	

Source: Statistics Canada, Census of Canada, Hemson estimates

**APPENDIX A - TABLE 2  
CITY OF GREATER SUDBURY  
HISTORICAL OCCUPIED HOUSEHOLDS BY UNIT TYPE**

Mid-Year	Occupied Households					Shares By Unit Type			
	Singles	Semis	Rows	Apartments	Total	Singles/Semis	Rows	Apartments	Total
<b>2006</b>	<b>40,050</b>	<b>3,085</b>	<b>2,770</b>	<b>19,055</b>	<b>64,960</b>	<b>62%</b>	<b>4%</b>	<b>29%</b>	<b>95%</b>
2007	40,559	3,116	2,756	19,051	65,487	62%	4%	29%	95%
2008	41,074	3,148	2,742	19,047	66,019	62%	4%	29%	95%
2009	41,596	3,180	2,728	19,043	66,555	62%	4%	29%	95%
2010	42,125	3,212	2,714	19,039	67,095	63%	4%	28%	95%
<b>2011</b>	<b>42,660</b>	<b>3,245</b>	<b>2,700</b>	<b>19,035</b>	<b>67,640</b>	<b>63%</b>	<b>4%</b>	<b>28%</b>	<b>95%</b>
2012	42,754	3,273	2,731	19,190	67,949	63%	4%	28%	95%
2013	42,848	3,301	2,763	19,347	68,260	63%	4%	28%	95%
2014	42,942	3,329	2,795	19,505	68,572	63%	4%	28%	95%
2015	43,036	3,357	2,827	19,664	68,885	62%	4%	29%	95%
<b>2016</b>	<b>43,130</b>	<b>3,385</b>	<b>2,860</b>	<b>19,825</b>	<b>69,200</b>	<b>62%</b>	<b>4%</b>	<b>29%</b>	<b>95%</b>
2017	43,547	3,421	2,882	20,112	69,962	62%	4%	29%	95%
2018	43,757	3,439	2,893	20,257	70,346	62%	4%	29%	95%

Source: Statistics Canada, Census of Canada, Hemson estimates

**APPENDIX A - TABLE 3**  
**CITY OF GREATER SUDBURY**  
**HISTORICAL ANNUAL GROWTH IN OCCUPIED HOUSEHOLDS BY UNIT TYPE**

Mid-Year	Annual Growth in Occupied Households				Shares By Unit Type			
	Singles/Semis	Rows	Apartments	Total	Singles/Semis	Rows	Apartments	Total
<b>2006</b>								
2007	509	(14)	(4)	491	104%	(3%)	(1%)	100%
2008	515	(14)	(4)	497	104%	(3%)	(1%)	100%
2009	522	(14)	(4)	504	104%	(3%)	(1%)	100%
2010	529	(14)	(4)	511	104%	(3%)	(1%)	100%
<b>2011</b>	<b>535</b>	<b>(14)</b>	<b>(4)</b>	<b>517</b>	<b>103%</b>	<b>(3%)</b>	<b>(1%)</b>	<b>100%</b>
2012	94	31	155	280	34%	11%	55%	100%
2013	94	32	157	283	33%	11%	55%	100%
2014	94	32	158	284	33%	11%	56%	100%
2015	94	32	159	285	33%	11%	56%	100%
<b>2016</b>	<b>94</b>	<b>33</b>	<b>161</b>	<b>288</b>	<b>33%</b>	<b>11%</b>	<b>56%</b>	<b>100%</b>
2017	417	22	287	726	57%	3%	40%	100%
2018	210	11	145	366	57%	3%	40%	100%
Growth 2009-2018	2,683	151	1,210	4,044	66%	4%	30%	100%

Source: Statistics Canada, Census of Canada, Hemson estimates

**APPENDIX A - TABLE 4**  
**CITY OF GREATER SUDBURY**  
**HISTORICAL HOUSEHOLDS BY PERIOD OF CONSTRUCTION SHOWING HOUSEHOLD SIZE**

Dwelling Unit Type	Period of Construction										Period of Construction Summaries		
	Pre 1945	1946-1960	1961-1970	1971-1980	1981-1990	1991-1995	1996-2000	2001-2005	2006-2010	2011-2016	Pre 2006	2006-2016	Total
<b>Singles</b>													
Household Population	9,180	24,105	18,650	19,145	12,155	7,565	4,480	4,380	6,870	4,160	99,660	11,030	110,690
Households	4,125	10,330	7,680	7,455	4,455	2,605	1,470	1,445	2,180	1,380	39,565	3,560	43,125
Household Size	2.23	2.33	2.43	2.57	2.73	2.90	3.05	3.03	3.15	3.01	2.52	3.10	2.57
<b>Semis</b>													
Household Population	320	1,220	1,115	2,405	1,100	1,045	460	225	260	265	7,890	525	8,415
Households	155	520	440	960	460	380	165	75	110	110	3,155	220	3,375
Household Size	2.06	2.35	2.53	2.51	2.39	2.75	2.79	3.00	2.36	2.41	2.50	2.39	2.49
<b>Rows</b>													
Household Population	250	715	1,380	1,800	1,380	595	290	210	120	205	6,620	325	6,945
Households	90	290	525	680	625	245	135	75	65	105	2,665	170	2,835
Household Size	2.78	2.47	2.63	2.65	2.21	2.43	2.15	2.80	1.85	1.95	2.48	1.91	2.45
<b>Apartments (excl. Duplexes): Bachelor or 1BR</b>													
Household Population	775	1,480	1,615	1,675	1,045	325	275	100	110	175	7,290	285	7,575
Households	660	1,330	1,410	1,475	965	315	270	85	95	155	6,510	250	6,760
Household Size	1.17	1.11	1.15	1.14	1.08	1.03	1.02	1.18	1.16	1.13	1.12	1.14	1.12
<b>Apartments (excl. Duplexes): 2BR or more</b>													
Household Population	1,970	3,040	3,510	2,960	2,030	820	550	245	385	720	15,125	1,105	16,230
Households	955	1,590	1,920	1,725	1,230	480	340	150	230	410	8,390	640	9,030
Household Size	2.06	1.91	1.83	1.72	1.65	1.71	1.62	1.63	1.67	1.76	1.80	1.73	1.80
<b>Apartments (excl. Duplexes) - Total</b>													
Household Population	2,785	4,615	5,210	4,710	3,120	1,225	885	350	520	890	22,900	1,410	24,310
Households	1,605	2,920	3,340	3,185	2,200	815	595	230	320	565	14,890	885	15,775
Household Size	1.74	1.58	1.56	1.48	1.42	1.50	1.49	1.52	1.63	1.58	1.54	1.59	1.54
<b>Duplexes</b>													
Household Population	1,375	2,715	1,655	1,105	595	340	180	75	135	165	8,040	300	8,340
Households	725	1,350	860	545	285	135	60	25	50	70	3,985	120	4,105
Household Size	1.90	2.01	1.92	2.03	2.09	2.52	3.00	3.00	2.70	2.36	2.02	2.50	2.03
<b>All Units</b>													
Household Population	13,910	33,370	28,010	29,165	18,350	10,770	6,295	5,240	7,905	5,685	145,110	13,590	158,700
Households	6,700	15,410	12,845	12,825	8,025	4,180	2,425	1,850	2,725	2,230	64,260	4,955	69,215
Household Size	2.08	2.17	2.18	2.27	2.29	2.58	2.60	2.83	2.90	2.55	2.26	2.74	2.29

Source: Statistics Canada, 2016 Census Special Run

APPENDIX A - TABLE 5  
CITY OF GREATER SUDBURY  
HISTORICAL PLACE OF WORK EMPLOYMENT

Mid-Year	Major Office	Annual Growth	Population-Related	Annual Growth	Employment Land	Annual Growth	Other Rural	Annual Growth	Total For DC Study	Annual Growth	Work at Home	Annual Growth	Total w/ Work At Home	Annual Growth
<b>2006</b>	<b>2,732</b>		<b>35,391</b>		<b>31,538</b>		<b>3,884</b>		<b>73,545</b>		<b>3,330</b>		<b>76,875</b>	
2007	2,775	43	35,787	396	31,412	(126)	3,888	4	73,862	317	3,157	(173)	77,019	144
2008	2,818	43	36,187	400	31,287	(125)	3,892	4	74,184	322	2,993	(164)	77,177	158
2009	2,862	44	36,592	405	31,162	(125)	3,896	4	74,512	328	2,837	(156)	77,349	172
2010	2,907	45	37,001	409	31,037	(125)	3,900	4	74,845	333	2,690	(147)	77,535	186
<b>2011</b>	<b>2,952</b>	45	<b>37,415</b>	414	<b>30,913</b>	(124)	<b>3,905</b>	5	<b>75,185</b>	<b>340</b>	<b>2,550</b>	<b>(140)</b>	<b>77,735</b>	<b>200</b>
2012	2,936	(16)	37,527	112	30,975	62	3,961	56	75,399	214	2,663	113	78,062	327
2013	2,920	(16)	37,639	112	31,037	62	4,018	57	75,614	215	2,781	118	78,395	333
2014	2,904	(16)	37,751	112	31,099	62	4,076	58	75,830	216	2,905	124	78,735	340
2015	2,888	(16)	37,864	113	31,162	63	4,134	58	76,048	218	3,034	129	79,082	347
<b>2016</b>	<b>2,873</b>	<b>(15)</b>	<b>37,977</b>	<b>113</b>	<b>31,225</b>	<b>63</b>	<b>4,193</b>	<b>59</b>	<b>76,268</b>	<b>220</b>	<b>3,170</b>	<b>136</b>	<b>79,438</b>	<b>356</b>
2017	2,886	13	38,079	102	31,385	160	4,209	16	76,559	291	3,182	12	79,741	303
2018	2,899	13	38,181	102	31,546	161	4,225	16	76,851	292	3,194	12	80,045	304
Growth 2009-2018		37		1,589		384		329		2,339		357		2,696

Note: Employment Values Include No Fixed Place of Work Employment

Source: Statistics Canada, Census of Canada & Hemson estimates

**APPENDIX A - TABLE 6  
CITY OF GREATER SUDBURY  
POPULATION, HOUSEHOLD & EMPLOYMENT FORECAST SUMMARY**

Mid-Year	Census Population	Annual Growth	Total Population	Annual Growth	Total Occupied Households	Annual Growth	Av. Household Size (PPU)	Place of Work Employment	Annual Growth	Activity Rate
<b>2016</b>	<b>161,625</b>		<b>166,133</b>		<b>69,200</b>		<b>2.34</b>	<b>76,268</b>		<b>47.2%</b>
2017	161,948	323	166,465	332	69,580	380	2.33	76,559	291	47.3%
2018	162,272	324	166,798	333	69,962	382	2.32	76,851	292	47.4%
2019	162,596	324	167,131	333	70,346	384	2.31	77,145	294	47.4%
2020	162,921	325	167,465	334	70,732	386	2.30	77,439	294	47.5%
<b>2021</b>	<b>163,247</b>	<b>326</b>	<b>167,800</b>	<b>335</b>	<b>71,119</b>	<b>387</b>	<b>2.30</b>	<b>77,737</b>	<b>298</b>	<b>47.6%</b>
2022	163,556	309	168,118	318	71,392	273	2.29	77,992	255	47.7%
2023	163,866	310	168,437	319	71,666	274	2.29	78,248	256	47.8%
2024	164,177	311	168,756	319	71,941	275	2.28	78,504	256	47.8%
2025	164,488	311	169,076	320	72,217	276	2.28	78,761	257	47.9%
<b>2026</b>	<b>164,800</b>	<b>312</b>	<b>169,396</b>	<b>320</b>	<b>72,495</b>	<b>278</b>	<b>2.27</b>	<b>79,021</b>	<b>260</b>	<b>47.9%</b>
2027	164,995	195	169,596	200	72,700	205	2.27	79,116	95	48.0%
2028	165,190	195	169,797	201	72,906	206	2.27	79,211	95	48.0%
2029	165,385	195	169,998	201	73,112	206	2.26	79,306	95	48.0%
2030	165,580	195	170,199	201	73,319	207	2.26	79,401	95	48.0%
<b>2031</b>	<b>165,776</b>	<b>196</b>	<b>170,400</b>	<b>201</b>	<b>73,526</b>	<b>207</b>	<b>2.25</b>	<b>79,502</b>	<b>101</b>	<b>48.0%</b>
2032	165,987	211	170,617	217	73,702	176	2.25	79,727	225	48.0%
2033	166,199	212	170,834	217	73,879	177	2.25	79,953	226	48.1%
2034	166,411	212	171,052	218	74,056	177	2.25	80,180	227	48.2%
2035	166,623	212	171,270	218	74,234	178	2.24	80,408	228	48.3%
<b>2036</b>	<b>166,835</b>	<b>212</b>	<b>171,488</b>	<b>218</b>	<b>74,412</b>	<b>178</b>	<b>2.24</b>	<b>80,635</b>	<b>227</b>	<b>48.3%</b>
2037	166,934	99	171,590	102	74,511	99	2.24	80,822	187	48.4%
2038	167,034	100	171,692	102	74,610	99	2.24	81,010	188	48.5%
2039	167,134	100	171,794	102	74,709	99	2.24	81,199	189	48.6%
2040	167,234	100	171,896	102	74,808	99	2.24	81,388	189	48.7%
<b>2041</b>	<b>167,333</b>	<b>99</b>	<b>172,000</b>	<b>104</b>	<b>74,908</b>	<b>100</b>	<b>2.23</b>	<b>81,578</b>	<b>190</b>	<b>48.8%</b>
Growth 2019-2028		2,918		2,999		2,944			2,360	
Growth 2019-2031		3,504		3,602		3,564			2,651	
Growth 2019-2041		5,061		5,202		4,946			4,727	

Source: Hemson estimates

**APPENDIX A - TABLE 7**  
**CITY OF GREATER SUDBURY**  
**FORECAST OF OCCUPIED HOUSEHOLDS BY UNIT TYPE**

Mid-Year	Occupied Households					Shares By Unit Type				
	Singles	Semis	Rows	Apartments	Total	Singles	Semis	Rows	Apartments	Total
<b>2016</b>	<b>43,130</b>	<b>3,385</b>	<b>2,860</b>	<b>19,825</b>	<b>69,200</b>	<b>62%</b>	<b>5%</b>	<b>4%</b>	<b>29%</b>	<b>100%</b>
2017	43,338	3,403	2,871	19,968	69,580	62%	5%	4%	29%	100%
2018	43,547	3,421	2,882	20,112	69,962	62%	5%	4%	29%	100%
2019	43,757	3,439	2,893	20,257	70,346	62%	5%	4%	29%	100%
2020	43,968	3,457	2,904	20,403	70,732	62%	5%	4%	29%	100%
<b>2021</b>	<b>44,180</b>	<b>3,475</b>	<b>2,916</b>	<b>20,548</b>	<b>71,119</b>	<b>62%</b>	<b>5%</b>	<b>4%</b>	<b>29%</b>	<b>100%</b>
2022	44,344	3,486	2,923	20,639	71,392	62%	5%	4%	29%	100%
2023	44,509	3,497	2,930	20,730	71,666	62%	5%	4%	29%	100%
2024	44,674	3,508	2,937	20,822	71,941	62%	5%	4%	29%	100%
2025	44,840	3,519	2,944	20,914	72,217	62%	5%	4%	29%	100%
<b>2026</b>	<b>45,006</b>	<b>3,531</b>	<b>2,951</b>	<b>21,007</b>	<b>72,495</b>	<b>62%</b>	<b>5%</b>	<b>4%</b>	<b>29%</b>	<b>100%</b>
2027	45,113	3,540	2,960	21,087	72,700	62%	5%	4%	29%	100%
2028	45,221	3,549	2,969	21,167	72,906	62%	5%	4%	29%	100%
2029	45,329	3,558	2,978	21,247	73,112	62%	5%	4%	29%	100%
2030	45,437	3,567	2,987	21,328	73,319	62%	5%	4%	29%	100%
<b>2031</b>	<b>45,546</b>	<b>3,574</b>	<b>2,997</b>	<b>21,409</b>	<b>73,526</b>	<b>62%</b>	<b>5%</b>	<b>4%</b>	<b>29%</b>	<b>100%</b>
2032	45,631	3,579	3,003	21,489	73,702	62%	5%	4%	29%	100%
2033	45,717	3,584	3,009	21,569	73,879	62%	5%	4%	29%	100%
2034	45,802	3,589	3,015	21,650	74,056	62%	5%	4%	29%	100%
2035	45,888	3,594	3,021	21,731	74,234	62%	5%	4%	29%	100%
<b>2036</b>	<b>45,973</b>	<b>3,601</b>	<b>3,026</b>	<b>21,812</b>	<b>74,412</b>	<b>62%</b>	<b>5%</b>	<b>4%</b>	<b>29%</b>	<b>100%</b>
2037	46,031	3,609	3,036	21,835	74,511	62%	5%	4%	29%	100%
2038	46,089	3,617	3,046	21,858	74,610	62%	5%	4%	29%	100%
2039	46,147	3,625	3,056	21,881	74,709	62%	5%	4%	29%	100%
2040	46,205	3,633	3,066	21,904	74,808	62%	5%	4%	29%	100%
<b>2041</b>	<b>46,264</b>	<b>3,641</b>	<b>3,075</b>	<b>21,928</b>	<b>74,908</b>	<b>62%</b>	<b>5%</b>	<b>4%</b>	<b>29%</b>	<b>100%</b>

Source: Hemson estimates

**APPENDIX A - TABLE 8**  
**CITY OF GREATER SUDBURY**  
**FORECAST OF ANNUAL GROWTH IN OCCUPIED HOUSEHOLDS BY UNIT TYPE**

Mid-Year	Annual Growth in Occupied Households					Shares By Unit Type				
	Singles	Semis	Rows	Apartments	Total	Singles	Semis	Rows	Apts.	Total
<b>2016</b>										
2017	208	18	11	143	380	55%	5%	3%	38%	100%
2018	209	18	11	144	382	55%	5%	3%	38%	100%
2019	210	18	11	145	384	55%	5%	3%	38%	100%
2020	211	18	11	146	386	55%	5%	3%	38%	100%
<b>2021</b>	<b>212</b>	<b>18</b>	<b>12</b>	<b>145</b>	<b>387</b>	<b>55%</b>	<b>5%</b>	<b>3%</b>	<b>37%</b>	<b>100%</b>
2022	164	11	7	91	273	60%	4%	3%	33%	100%
2023	165	11	7	91	274	60%	4%	3%	33%	100%
2024	165	11	7	92	275	60%	4%	3%	33%	100%
2025	166	11	7	92	276	60%	4%	3%	33%	100%
<b>2026</b>	<b>166</b>	<b>12</b>	<b>7</b>	<b>93</b>	<b>278</b>	<b>60%</b>	<b>4%</b>	<b>3%</b>	<b>33%</b>	<b>100%</b>
2027	107	9	9	80	205	52%	4%	4%	39%	100%
2028	108	9	9	80	206	52%	4%	4%	39%	100%
2029	108	9	9	80	206	52%	4%	4%	39%	100%
2030	108	9	9	81	207	52%	4%	4%	39%	100%
<b>2031</b>	<b>109</b>	<b>7</b>	<b>10</b>	<b>81</b>	<b>207</b>	<b>53%</b>	<b>3%</b>	<b>5%</b>	<b>39%</b>	<b>100%</b>
2032	85	5	6	80	176	48%	3%	3%	45%	100%
2033	86	5	6	80	177	49%	3%	3%	45%	100%
2034	85	5	6	81	177	48%	3%	3%	46%	100%
2035	86	5	6	81	178	48%	3%	3%	46%	100%
<b>2036</b>	<b>85</b>	<b>7</b>	<b>5</b>	<b>81</b>	<b>178</b>	<b>48%</b>	<b>4%</b>	<b>3%</b>	<b>46%</b>	<b>100%</b>
2037	58	8	10	23	99	59%	8%	10%	23%	100%
2038	58	8	10	23	99	59%	8%	10%	23%	100%
2039	58	8	10	23	99	59%	8%	10%	23%	100%
2040	58	8	10	23	99	59%	8%	10%	23%	100%
<b>2041</b>	<b>59</b>	<b>8</b>	<b>9</b>	<b>24</b>	<b>100</b>	<b>59%</b>	<b>8%</b>	<b>9%</b>	<b>24%</b>	<b>100%</b>
Growth 2019-2028	1,674	128	87	1,055	2,944	57%	4%	3%	36%	100%
Growth 2019-2031	1,999	153	115	1,297	3,564	56%	4%	3%	36%	100%
Growth 2019-2041	2,717	220	193	1,816	4,946	55%	4%	4%	37%	100%

Source: Hemson estimates



**APPENDIX A - TABLE 9**  
**CITY OF GREATER SUDBURY**  
**FORECAST POPULATION IN NEW HOUSEHOLDS BY UNIT TYPE**

Mid-Year	Assumed Average Occupancies (PPU)					Forecast Population in New Households				
	Singles	Semis	Rows	Apartments	Total	Singles	Semis	Rows	Apartments	Total
<b>2016</b>	<b>3.10</b>	<b>2.49</b>	<b>2.45</b>	<b>1.70</b>						
2017	3.09	2.48	2.44	1.70						
2018	3.08	2.48	2.43	1.70						
2019	3.07	2.47	2.42	1.70	2.50	644	44	27	247	962
2020	3.06	2.46	2.42	1.70	2.50	645	44	27	248	964
<b>2021</b>	<b>3.04</b>	<b>2.45</b>	<b>2.41</b>	<b>1.70</b>	<b>2.49</b>	<b>646</b>	<b>44</b>	<b>29</b>	<b>247</b>	<b>966</b>
2022	3.04	2.45	2.40	1.70	2.55	498	27	17	155	697
2023	3.03	2.44	2.40	1.70	2.55	500	27	17	155	699
2024	3.03	2.44	2.39	1.70	2.54	500	27	17	157	701
2025	3.02	2.43	2.39	1.70	2.54	502	27	17	157	703
<b>2026</b>	<b>3.02</b>	<b>2.43</b>	<b>2.38</b>	<b>1.70</b>	<b>2.53</b>	<b>501</b>	<b>29</b>	<b>17</b>	<b>158</b>	<b>705</b>
2027	3.01	2.42	2.38	1.70	2.45	322	22	21	136	501
2028	3.01	2.42	2.38	1.70	2.45	325	22	21	136	504
2029	3.00	2.41	2.37	1.70	2.44	324	22	21	136	503
2030	3.00	2.41	2.37	1.70	2.44	324	22	21	138	505
<b>2031</b>	<b>2.99</b>	<b>2.41</b>	<b>2.36</b>	<b>1.70</b>	<b>2.44</b>	<b>326</b>	<b>17</b>	<b>24</b>	<b>138</b>	<b>505</b>
2032	2.99	2.40	2.36	1.70	2.37	254	12	14	136	416
2033	2.98	2.40	2.36	1.70	2.37	257	12	14	136	419
2034	2.98	2.40	2.36	1.70	2.36	253	12	14	138	417
2035	2.98	2.40	2.35	1.70	2.36	256	12	14	138	420
2036	2.97	2.39	2.35	1.70	2.35	253	17	12	138	420
2037	2.97	2.39	2.35	1.70	2.57	172	19	23	39	253
2038	2.97	2.39	2.35	1.70	2.57	172	19	23	39	253
2039	2.97	2.39	2.35	1.70	2.56	172	19	23	39	253
2040	2.97	2.39	2.34	1.70	2.56	172	19	23	39	253
<b>2041</b>	<b>2.96</b>	<b>2.38</b>	<b>2.34</b>	<b>1.70</b>	<b>2.56</b>	<b>175</b>	<b>19</b>	<b>21</b>	<b>41</b>	<b>256</b>
Growth 2019-2023	3.05	2.45	2.44	1.70	2.52	2,933	186	117	1,052	4,288
Growth 2019-2028	3.04	2.45	2.41	1.70	2.51	5,083	313	210	1,796	7,402
Growth 2019-2031	3.03	2.44	2.40	1.70	2.50	6,057	374	276	2,208	8,915
Growth 2019-2041	3.02	2.43	2.37	1.70	2.48	8,193	534	457	3,091	12,275

Source: Statistics Canada, 2016 Census Special Run & Hemson estimates

APPENDIX A - TABLE 10  
CITY OF GREATER SUDBURY  
FORECAST OF PLACE OF WORK EMPLOYMENT

Mid-Year	Major Office	Annual Growth	Population-Related	Annual Growth	Employment Land	Annual Growth	Other Rural	Annual Growth	Total For DC Study	Annual Growth	Work at Home	Annual Growth	Total w/ Work At Home	Annual Growth
<b>2016</b>	<b>2,873</b>		<b>37,977</b>		<b>31,225</b>		<b>4,193</b>		<b>76,268</b>		<b>3,170</b>		<b>79,438</b>	
2017	2,886	13	38,079	102	31,385	160	4,209	16	76,559	291	3,182	12	79,741	303
2018	2,899	13	38,181	102	31,546	161	4,225	16	76,851	292	3,194	12	80,045	304
2019	2,912	13	38,284	103	31,708	162	4,241	16	77,145	294	3,206	12	80,351	306
2020	2,925	13	38,387	103	31,870	162	4,257	16	77,439	294	3,218	12	80,657	306
<b>2021</b>	<b>2,940</b>	<b>15</b>	<b>38,490</b>	<b>103</b>	<b>32,033</b>	<b>163</b>	<b>4,274</b>	<b>17</b>	<b>77,737</b>	<b>298</b>	<b>3,231</b>	<b>13</b>	<b>80,969</b>	<b>312</b>
2022	2,952	12	38,561	71	32,191	158	4,288	14	77,992	255	3,242	11	81,234	265
2023	2,964	12	38,632	71	32,350	159	4,302	14	78,248	256	3,253	11	81,501	267
2024	2,976	12	38,703	71	32,509	159	4,316	14	78,504	256	3,264	11	81,768	267
2025	2,988	12	38,774	71	32,669	160	4,330	14	78,761	257	3,275	11	82,036	268
<b>2026</b>	<b>3,000</b>	<b>12</b>	<b>38,846</b>	<b>72</b>	<b>32,830</b>	<b>161</b>	<b>4,345</b>	<b>15</b>	<b>79,021</b>	<b>260</b>	<b>3,284</b>	<b>9</b>	<b>82,305</b>	<b>269</b>
2027	3,004	4	38,892	46	32,870	40	4,350	5	79,116	95	3,288	4	82,404	99
2028	3,008	4	38,938	46	32,910	40	4,355	5	79,211	95	3,292	4	82,503	99
2029	3,012	4	38,984	46	32,950	40	4,360	5	79,306	95	3,296	4	82,602	99
2030	3,016	4	39,030	46	32,990	40	4,365	5	79,401	95	3,300	4	82,701	99
<b>2031</b>	<b>3,022</b>	<b>6</b>	<b>39,077</b>	<b>47</b>	<b>33,032</b>	<b>42</b>	<b>4,371</b>	<b>6</b>	<b>79,502</b>	<b>101</b>	<b>3,304</b>	<b>4</b>	<b>82,805</b>	<b>104</b>
2032	3,032	10	39,124	47	33,187	155	4,384	13	79,727	225	3,314	10	83,041	236
2033	3,042	10	39,172	48	33,342	155	4,397	13	79,953	226	3,324	10	83,277	236
2034	3,052	10	39,220	48	33,498	156	4,410	13	80,180	227	3,334	10	83,514	237
2035	3,062	10	39,268	48	33,655	157	4,423	13	80,408	228	3,344	10	83,752	238
<b>2036</b>	<b>3,074</b>	<b>12</b>	<b>39,315</b>	<b>47</b>	<b>33,812</b>	<b>157</b>	<b>4,434</b>	<b>11</b>	<b>80,635</b>	<b>227</b>	<b>3,352</b>	<b>8</b>	<b>83,987</b>	<b>235</b>
2037	3,083	9	39,336	21	33,959	147	4,444	10	80,822	187	3,360	8	84,182	195
2038	3,092	9	39,357	21	34,107	148	4,454	10	81,010	188	3,368	8	84,378	196
2039	3,101	9	39,378	21	34,256	149	4,464	10	81,199	189	3,376	8	84,575	197
2040	3,110	9	39,399	21	34,405	149	4,474	10	81,388	189	3,384	8	84,772	197
<b>2041</b>	<b>3,118</b>	<b>8</b>	<b>39,420</b>	<b>21</b>	<b>34,555</b>	<b>150</b>	<b>4,485</b>	<b>11</b>	<b>81,578</b>	<b>190</b>	<b>3,391</b>	<b>7</b>	<b>84,970</b>	<b>198</b>
Growth 2019-2028		109		757		1,364		130		2,360		98		2,458
Growth 2019-2031		123		896		1,486		146		2,651		110		2,760
Growth 2019-2041		219		1,239		3,009		260		4,727		197		4,925

Note: Includes No Fixed Place of Work Employment

**APPENDIX A - TABLE 11**  
**CITY OF GREATER SUDBURY**  
**FORECAST OF ANNUAL NON-RESIDENTIAL SPACE GROWTH**

<b>Employment Density</b>	
Population-Related Weighted	540 ft <sup>2</sup> per employee
Employment Land	1000 ft <sup>2</sup> per employee
Major Office	290 ft <sup>2</sup> per employee

Mid-Year	Major Office	Population Related	Employment Land	Total For DC Study
<b>2016</b>				
2017				
2018	3,770	55,080	161,000	219,850
2019	3,770	55,620	162,000	221,390
2020	3,770	55,620	162,000	221,390
<b>2021</b>	<b>4,350</b>	<b>55,620</b>	<b>163,000</b>	<b>222,970</b>
2022	3,480	38,340	158,000	199,820
2023	3,480	38,340	159,000	200,820
2024	3,480	38,340	159,000	200,820
2025	3,480	38,340	160,000	201,820
<b>2026</b>	<b>3,480</b>	<b>38,880</b>	<b>161,000</b>	<b>203,360</b>
2027	1,160	24,840	40,000	66,000
2028	1,160	24,840	40,000	66,000
2029	1,160	24,840	40,000	66,000
2030	1,160	24,840	40,000	66,000
<b>2031</b>	<b>1,740</b>	<b>25,380</b>	<b>42,000</b>	<b>69,120</b>
2032	2,900	25,380	155,000	183,280
2033	2,900	25,920	155,000	183,820
2034	2,900	25,920	156,000	184,820
2035	2,900	25,920	157,000	185,820
<b>2036</b>	<b>3,480</b>	<b>25,380</b>	<b>157,000</b>	<b>185,860</b>
2037	2,610	11,340	147,000	160,950
2038	2,610	11,340	148,000	161,950
2039	2,610	11,340	149,000	162,950
2040	2,610	11,340	149,000	162,950
<b>2041</b>	<b>2,320</b>	<b>11,340</b>	<b>150,000</b>	<b>163,660</b>
Growth 2019-2028	31,610	408,780	1,364,000	1,804,390
Growth 2019-2031	35,670	483,840	1,486,000	2,005,510
Growth 2019-2041	63,510	669,060	3,009,000	3,741,570

*Note: Includes No Fixed Place of Work Employment*

**APPENDIX B**

---

**GENERAL SERVICES  
TECHNICAL APPENDIX**

27  
APPENDIX B.1  
TABLE 1

CITY OF GREATER SUDBURY  
DEVELOPMENT-RELATED CAPITAL PROGRAM  
GENERAL GOVERNMENT

Project Description	Timing		Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs			Total DC Eligible Costs	DC Eligible Costs			
	Start	Finish				BTE %	Replacement & BTE Shares	10% Reduction		Prior DCs	Available DC Reserves	2019 - 2028	Post 2028
<b>1.0 GENERAL GOVERNMENT</b>													
<b>1.1 Development-Related Studies</b>													
1.1.1 Zoning By-Law Update	2021	2021	\$ 25,000	\$ -	\$ 25,000	50.0%	\$ 12,500	\$ 1,250	\$ 11,250	\$ -	\$ -	\$ 11,250	\$ -
1.1.2 Zoning By-Law Update	2028	2028	\$ 25,000	\$ -	\$ 25,000	50.0%	\$ 12,500	\$ 1,250	\$ 11,250	\$ -	\$ -	\$ 11,250	\$ -
1.1.3 Official Plan Update	2013	2019	\$ 275,000	\$ -	\$ 275,000	50.0%	\$ 137,500	\$ 13,750	\$ 123,750	\$ 47,778	\$ 13,139	\$ 62,833	\$ -
1.1.4 Official Plan Update	2023	2028	\$ 235,000	\$ -	\$ 235,000	50.0%	\$ 117,500	\$ 11,750	\$ 105,750	\$ -	\$ -	\$ 105,750	\$ -
1.1.5 Development Charges Study	2018	2019	\$ 81,000	\$ -	\$ 81,000	0.0%	\$ -	\$ 8,100	\$ 72,900	\$ 47,971	\$ -	\$ 24,929	\$ -
1.1.6 Development Charges Study	2023	2024	\$ 81,000	\$ -	\$ 81,000	0.0%	\$ -	\$ 8,100	\$ 72,900	\$ -	\$ -	\$ 72,900	\$ -
1.1.7 Development Guidelines Document	2019	2022	\$ 200,000	\$ -	\$ 200,000	0.0%	\$ -	\$ 20,000	\$ 180,000	\$ -	\$ -	\$ 180,000	\$ -
1.1.8 Downtown Master Plan Update	2022	2022	\$ 150,000	\$ 100,000	\$ 50,000	97.8%	\$ 48,900	\$ 110	\$ 990	\$ -	\$ -	\$ 990	\$ -
1.1.9 Housing Background Study	2020	2021	\$ 90,000	\$ -	\$ 90,000	97.8%	\$ 88,020	\$ 198	\$ 1,782	\$ -	\$ -	\$ 1,782	\$ -
1.1.10 Population Projection Forecast	2018	2019	\$ 50,000	\$ -	\$ 50,000	0.0%	\$ -	\$ 5,000	\$ 45,000	\$ -	\$ 10,000	\$ 35,000	\$ -
1.1.11 Population Projection Forecast	2022	2023	\$ 50,000	\$ -	\$ 50,000	0.0%	\$ -	\$ 5,000	\$ 45,000	\$ -	\$ -	\$ 45,000	\$ -
1.1.12 Land and Planning Software	2019	2022	\$ 3,860,000	\$ -	\$ 3,860,000	97.8%	\$ 3,775,080	\$ 8,492	\$ 76,428	\$ -	\$ -	\$ 76,428	\$ -
Subtotal Development-Related Studies			\$ 5,122,000	\$ 100,000	\$ 5,022,000		\$ 4,192,000	\$ 83,000	\$ 747,000	\$ 95,749	\$ 23,139	\$ 628,112	\$ -
<b>TOTAL GENERAL GOVERNMENT</b>			\$ 5,122,000	\$ 100,000	\$ 5,022,000		\$ 4,192,000	\$ 83,000	\$ 747,000	\$ 95,749	\$ 23,139	\$ 628,112	\$ -

<b>Residential Development Charge Calculation</b>		
Residential Share of 2019 - 2028 DC Eligible Costs	76%	\$477,365
10-Year Growth in Population in New Units		7,402
Unadjusted Development Charge Per Capita		<b>\$64.49</b>
<b>Non-Residential Development Charge Calculation</b>		
Non-Residential Share of 2019 - 2028 DC Eligible Costs	24%	\$150,747
10-Year Growth in Square Feet		1,804,390
Unadjusted Development Charge Per Square Foot		<b>\$0.08</b>

<b>Notional Reserve Fund Balance</b>	
Balance as at December 31, 2018	\$11,767
Revenue Losses	\$11,372
<b>Total</b>	<b>\$23,139</b>

28  
APPENDIX B.2  
TABLE 2

CITY OF GREATER SUDBURY  
DEVELOPMENT-RELATED CAPITAL PROGRAM  
LIBRARY SERVICES

Project Description	Timing		Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs			Total DC Eligible Costs	DC Eligible Costs			
	Start	Finish				BTE %	Replacement & BTE Shares	10% Reduction		Prior DCs	Available DC Reserves	2019 - 2028	Post 2028
<b>2.0 LIBRARY SERVICES</b>													
<b>2.1 Buildings, Land &amp; Furnishings</b>													
2.1.1 South Branch Expansion	2009	2014	\$ 5,713,696	\$ 138,888	\$ 5,574,808	35.0%	\$ 1,951,183	\$ 362,363	\$ 3,261,263	\$ 890,377	\$ 89,127	\$ 748,500	\$ 1,533,260
2.1.2 Mackenzie Library Study	2013	2015	\$ 50,625	\$ -	\$ 50,625	56.0%	\$ 28,350	\$ 2,228	\$ 20,048	\$ -	\$ -	\$ 10,024	\$ 10,024
2.1.3 Main Library - Business Plan/Study/Consultant	2018	2018	\$ 245,000	\$ -	\$ 245,000	56.0%	\$ 137,200	\$ 10,780	\$ 97,020	\$ -	\$ -	\$ 48,510	\$ 48,510
Subtotal Buildings, Land & Furnishings			\$ 6,009,321	\$ 138,888	\$ 5,870,433		\$ 2,116,733	\$ 375,370	\$ 3,378,330	\$ 890,377	\$ 89,127	\$ 807,033	\$ 1,591,793
<b>2.2 Material Acquisitions</b>													
2.2.1 Circulation Materials Collection	2014	2028	\$ 10,387,608	\$ -	\$ 10,387,608	98.2%	\$ 10,200,631	\$ 18,698	\$ 168,279	\$ -	\$ -	\$ 168,279	\$ -
2.2.2 Electronic Materials	2019	2028	\$ 1,400,065	\$ -	\$ 1,400,065	98.2%	\$ 1,374,864	\$ 2,520	\$ 22,681	\$ -	\$ -	\$ 5,670	\$ 17,011
Subtotal Material Acquisitions			\$ 11,787,673	\$ -	\$ 11,787,673		\$ 11,575,495	\$ 21,218	\$ 190,960	\$ -	\$ -	\$ 173,950	\$ 17,011
<b>TOTAL LIBRARY SERVICES</b>			<b>\$ 17,796,994</b>	<b>\$ 138,888</b>	<b>\$ 17,658,106</b>		<b>\$ 13,692,228</b>	<b>\$ 396,588</b>	<b>\$ 3,569,290</b>	<b>\$ 890,377</b>	<b>\$ 89,127</b>	<b>\$ 980,983</b>	<b>\$ 1,608,804</b>

<b>Residential Development Charge Calculation</b>			
Residential Share of 2019 - 2028 DC Eligible Costs	100%	\$980,983	
10-Year Growth in Population in New Units		7,402	
Unadjusted Development Charge Per Capita		<b>\$132.53</b>	
<b>Non-Residential Development Charge Calculation</b>			
Non-Residential Share of 2019 - 2028 DC Eligible Costs	0%	\$0	
10-Year Growth in Square Feet		1,804,390	
Unadjusted Development Charge Per Square Foot		<b>\$0.00</b>	

2019 - 2028 Net Funding Envelope	\$980,983
<b>Notional Reserve Fund Balance</b>	
Balance as at December 31, 2018	\$0
Revenue Losses	\$89,127
<b>Total</b>	<b>\$89,127</b>

29  
APPENDIX B.3  
TABLE 2

CITY OF GREATER SUDBURY  
DEVELOPMENT-RELATED CAPITAL PROGRAM  
FIRE SERVICES

Project Description	Timing		Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs			Total DC Eligible Costs	DC Eligible Costs			
	Start	Finish				BTE %	Replacement & BTE Shares	0% Reduction		Prior DCs	Available DC Reserves	2019 - 2028	Post 2028
<b>3.0 FIRE SERVICES</b>													
<b>3.1 Buildings, Land &amp; Furnishings</b>													
3.1.1 Station Redevelopment (including land)	2022	2022	\$ 4,630,000	\$ -	\$ 4,630,000	75.0%	\$ 3,472,500	\$ -	\$ 1,157,500	\$ -	\$ 1,157,500	\$ -	\$ -
Fire Training Centre (to expand for single detached houses)	2026	2026	\$ 1,230,500	\$ -	\$ 1,230,500	80.0%	\$ 984,400	\$ -	\$ 246,100	\$ -	\$ 104,531	\$ 141,569	\$ -
Subtotal Buildings, Land & Furnishings			\$ 5,860,500	\$ -	\$ 5,860,500		\$ 4,456,900	\$ -	\$ 1,403,600	\$ -	\$ 1,262,031	\$ 141,569	\$ -
<b>3.2 Vehicles</b>													
3.2.1 Training Vehicles	2018	2018	\$ 42,500	\$ -	\$ 42,500	0.0%	\$ -	\$ -	\$ 42,500	\$ -	\$ 42,500	\$ -	\$ -
Subtotal Vehicles			\$ 42,500	\$ -	\$ 42,500		\$ -	\$ -	\$ 42,500	\$ -	\$ 42,500	\$ -	\$ -
<b>3.3 Equipment</b>													
3.3.1 Two Generators	2015	2020	\$ 120,000	\$ -	\$ 120,000	97.8%	\$ 117,360	\$ -	\$ 2,640	\$ -	\$ 2,640	\$ -	\$ -
3.3.2 Records Management System (RMS)	2014	2015	\$ 155,755	\$ -	\$ 155,755	97.8%	\$ 152,328	\$ -	\$ 3,427	\$ -	\$ 3,427	\$ -	\$ -
3.3.3 Prevention Inspection Scheduling System	2016	2016	\$ 43,897	\$ -	\$ 43,897	97.8%	\$ 42,931	\$ -	\$ 966	\$ -	\$ 966	\$ -	\$ -
3.3.4 Mobile for Public Safety (MDT)	2017	2018	\$ 121,130	\$ -	\$ 121,130	97.8%	\$ 118,465	\$ -	\$ 2,665	\$ -	\$ 2,665	\$ -	\$ -
3.3.5 Mobile Responder (Cellular Dispatch)	2018	2019	\$ 266,550	\$ -	\$ 266,550	97.8%	\$ 260,686	\$ -	\$ 5,864	\$ -	\$ 5,864	\$ -	\$ -
Subtotal Equipment			\$ 707,332	\$ -	\$ 707,332		\$ 691,771	\$ -	\$ 15,561	\$ -	\$ 15,561	\$ -	\$ -
<b>TOTAL FIRE SERVICES</b>			\$ 6,610,332	\$ -	\$ 6,610,332		\$ 5,148,671	\$ -	\$ 1,461,661	\$ -	\$ 1,320,092	\$ 141,569	\$ -

<b>Residential Development Charge Calculation</b>		
Residential Share of 2019 - 2028 DC Eligible Costs	76%	\$107,592
10-Year Growth in Population in New Units		7,402
Unadjusted Development Charge Per Capita		<b>\$14.54</b>
<b>Non-Residential Development Charge Calculation</b>		
Non-Residential Share of 2019 - 2028 DC Eligible Costs	24%	\$33,977
10-Year Growth in Square Feet		1,804,390
Unadjusted Development Charge Per Square Foot		<b>\$0.02</b>

2019 - 2028 Net Funding Envelope	\$1,747,817
<b>Notional Reserve Fund Balance</b>	
Balance as at December 31, 2018	\$1,277,082
Revenue Losses	\$43,010
<b>Total</b>	<b>\$1,320,092</b>

30  
APPENDIX B.4  
TABLE 2

CITY OF GREATER SUDBURY  
DEVELOPMENT-RELATED CAPITAL PROGRAM  
POLICE SERVICES

Project Description	Timing		Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs			Total DC Eligible Costs	DC Eligible Costs			
	Start	Finish				BTE %	Replacement & BTE Shares	0% Reduction		Prior DCs	Available DC Reserves	2019 - 2028	Post 2028
<b>4.0 POLICE SERVICES</b>													
<b>4.1 Personal Equipment</b>													
4.1.1 Equipment for 4 new officers	2019	2019	\$ 33,052	\$ -	\$ 33,052	0.0%	\$ -	\$ -	\$ 33,052	\$ -	\$ -	\$ 33,052	\$ -
4.1.2 Equipment for 4 new officers	2020	2020	\$ 33,052	\$ -	\$ 33,052	0.0%	\$ -	\$ -	\$ 33,052	\$ -	\$ -	\$ 33,052	\$ -
Subtotal Personal Equipment			\$ 66,104	\$ -	\$ 66,104		\$ -	\$ -	\$ 66,104	\$ -	\$ -	\$ 66,104	\$ -
<b>4.2 Buildings, Land &amp; Furnishings</b>													
4.2.1 Headquarters Expansion	2013	2023	\$ 60,000,000	\$ -	\$ 60,000,000	97.8%	\$ 58,680,000	\$ -	\$ 1,320,000	\$ -	\$ 326,976	\$ 861,360	\$ 131,664
Subtotal Buildings, Land & Furnishings			\$ 60,000,000	\$ -	\$ 60,000,000		\$ 58,680,000	\$ -	\$ 1,320,000	\$ -	\$ 326,976	\$ 861,360	\$ 131,664
<b>TOTAL POLICE SERVICES</b>			<b>\$ 60,066,104</b>	<b>\$ -</b>	<b>\$ 60,066,104</b>		<b>\$ 58,680,000</b>	<b>\$ -</b>	<b>\$ 1,386,104</b>	<b>\$ -</b>	<b>\$ 326,976</b>	<b>\$ 927,464</b>	<b>\$ 131,664</b>

<b>Residential Development Charge Calculation</b>			
Residential Share of 2019 - 2028 DC Eligible Costs	76%	\$704,873	
10-Year Growth in Population in New Units		7,402	
Unadjusted Development Charge Per Capita		<b>\$95.23</b>	
<b>Non-Residential Development Charge Calculation</b>			
Non-Residential Share of 2019 - 2028 DC Eligible Costs	24%	\$222,591	
10-Year Growth in Square Feet		1,804,390	
Unadjusted Development Charge Per Square Foot		<b>\$0.12</b>	

2019 - 2028 Net Funding Envelope	\$927,464
<b>Notional Reserve Fund Balance</b>	
Balance as at December 31, 2018	\$304,345
Revenue Losses	\$22,631
<b>Total</b>	<b>\$326,976</b>



31  
APPENDIX B.5  
TABLE 2

CITY OF GREATER SUDBURY  
DEVELOPMENT-RELATED CAPITAL PROGRAM  
PUBLIC SAFETY

Project Description	Timing		Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs			Total DC Eligible Costs	DC Eligible Costs			
	Start	Finish				BTE %	Replacement & BTE Shares	0% Reduction		Prior DCs	Available DC Reserves	2019 - 2028	Post 2028
<b>5.0 PUBLIC SAFETY</b>													
<b>5.1 Public Safety Equipment</b>													
5.1.1 Communication Infrastructure	2012	2014	\$ 12,228,035	\$ -	\$ 12,228,035	91.0%	\$ 11,127,512	\$ -	\$ 1,100,523	\$ 526,091	\$ 9,525	\$ 285,135	\$ 279,773
5.1.2 Next Generation 911	2019	2020	\$ 350,000	\$ -	\$ 350,000	97.8%	\$ 342,300	\$ -	\$ 7,700	\$ -	\$ -	\$ 3,850	\$ 3,850
Subtotal Public Safety Equipment			\$ 12,578,035	\$ -	\$ 12,578,035		\$ 11,469,812	\$ -	\$ 1,108,223	\$ 526,091	\$ 9,525	\$ 288,985	\$ 283,623
<b>TOTAL PUBLIC SAFETY</b>			\$ 12,578,035	\$ -	\$ 12,578,035		\$ 11,469,812	\$ -	\$ 1,108,223	\$ 526,091	\$ 9,525	\$ 288,985	\$ 283,623

<b>Residential Development Charge Calculation</b>		
Residential Share of 2019 - 2028 DC Eligible Costs	76%	\$219,628
10-Year Growth in Population in New Units		7,402
Unadjusted Development Charge Per Capita		<b>\$29.67</b>
<b>Non-Residential Development Charge Calculation</b>		
Non-Residential Share of 2019 - 2028 DC Eligible Costs	24%	\$69,356
10-Year Growth in Square Feet		1,804,390
Unadjusted Development Charge Per Square Foot		<b>\$0.04</b>

2019 - 2028 Net Funding Envelope	\$288,985
<b>Notional Reserve Fund Balance</b>	
Balance as at December 31, 2018	\$0
Revenue Losses	\$9,525
<b>Total</b>	<b>\$9,525</b>

32  
APPENDIX B.6  
TABLE 2

CITY OF GREATER SUDBURY  
DEVELOPMENT-RELATED CAPITAL PROGRAM  
PARKS AND RECREATION

Project Description	Timing		Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs			Total DC Eligible Costs	DC Eligible Costs			
	Start	Finish				BTE %	Replacement & BTE Shares	10% Reduction		Prior DCs	Available DC Reserves	2019 - 2028	Post 2028
<b>6.0 PARKS AND RECREATION</b>													
<b>6.1 Indoor Recreation</b>													
Gerry McCrory Countryside Sports Complex - 2nd Ice Pad	2012	2012	\$ 10,375,315	\$ 11,200	\$ 10,364,115	0.0%	\$ -	\$ 1,036,412	\$ 9,327,704	\$ 2,720,753	\$ 147,161	\$ 3,229,895	\$ 3,229,895
Subtotal Indoor Recreation			\$ 10,375,315	\$ 11,200	\$ 10,364,115		\$ -	\$ 1,036,412	\$ 9,327,704	\$ 2,720,753	\$ 147,161	\$ 3,229,895	\$ 3,229,895
<b>6.2 Outdoor Recreation</b>													
James Jerome Sports Complex Renewal Program	2012	2012	\$ 3,584,492	\$ 2,505,598	\$ 1,078,894	70.0%	\$ 755,226	\$ 32,367	\$ 291,301	\$ -	\$ 145,651	\$ 145,651	\$ -
Val Caron Skate Park	2020	2020	\$ 750,000	\$ -	\$ 750,000	98.2%	\$ 736,500	\$ 1,350	\$ 12,150	\$ -	\$ -	\$ 12,150	\$ -
Walden Mini Soccer Fields	2019	2023	\$ 210,000	\$ -	\$ 210,000	50.0%	\$ 105,000	\$ 10,500	\$ 94,500	\$ -	\$ -	\$ 94,500	\$ -
Rayside Balfour Soccer Field	2019	2023	\$ 125,000	\$ -	\$ 125,000	50.0%	\$ 62,500	\$ 6,250	\$ 56,250	\$ -	\$ -	\$ 56,250	\$ -
Subtotal Outdoor Recreation			\$ 4,669,492	\$ 2,505,598	\$ 2,163,894		\$ 1,659,226	\$ 50,467	\$ 454,201	\$ -	\$ 145,651	\$ 308,551	\$ -
<b>TOTAL PARKS AND RECREATION</b>			<b>\$ 15,044,807</b>	<b>\$ 2,516,798</b>	<b>\$ 12,528,009</b>		<b>\$ 1,659,226</b>	<b>\$ 1,086,878</b>	<b>\$ 9,781,905</b>	<b>\$ 2,720,753</b>	<b>\$ 292,812</b>	<b>\$ 3,538,445</b>	<b>\$ 3,229,895</b>

<b>Residential Development Charge Calculation</b>		
Residential Share of 2019 - 2028 DC Eligible Costs	100%	\$3,538,445
10-Year Growth in Population in New Units		7,402
Unadjusted Development Charge Per Capita		<b>\$478.04</b>
<b>Non-Residential Development Charge Calculation</b>		
Non-Residential Share of 2019 - 2028 DC Eligible Costs	0%	\$0
10-Year Growth in Square Feet		1,804,390
Unadjusted Development Charge Per Square Foot		<b>\$0.00</b>

2019 - 2028 Net Funding Envelope	\$5,019,842
<b>Notional Reserve Fund Balance</b>	
Balance as at December 31, 2018	\$0
Revenue Losses	\$292,812
<b>Total</b>	<b>\$292,812</b>

33  
APPENDIX B.7  
TABLE 2

CITY OF GREATER SUDBURY  
DEVELOPMENT-RELATED CAPITAL PROGRAM  
AMBULANCE SERVICES

Project Description	Timing		Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs			Total DC Eligible Costs	DC Eligible Costs			
	Start	Finish				BTE %	Replacement & BTE Shares	10% Reduction		Prior DCs	Available DC Reserves	2019 - 2028	Post 2028
<b>7.0 AMBULANCE SERVICES</b>													
<b>7.1 Buildings, Land &amp; Equipment</b>													
7.1.1 Station Redevelopment	2022	2023	\$ 1,532,000	\$ -	\$ 1,532,000	25.0%	\$ 383,000	\$ 114,900	\$ 1,034,100	\$ -	\$ 296,806	\$ 321,600	\$ 415,694
7.1.2 Equipment for Two FTE's - ACP and PCP	2016	2016	\$ 5,000	\$ -	\$ 5,000	0.0%	\$ -	\$ 500	\$ 4,500	\$ -	\$ 4,500	\$ -	\$ -
Subtotal Buildings, Land & Equipment			\$ 1,537,000	\$ -	\$ 1,537,000		\$ 383,000	\$ 115,400	\$ 1,038,600	\$ -	\$ 301,306	\$ 321,600	\$ 415,694
<b>TOTAL AMBULANCE SERVICES</b>			<b>\$ 1,537,000</b>	<b>\$ -</b>	<b>\$ 1,537,000</b>		<b>\$ 383,000</b>	<b>\$ 115,400</b>	<b>\$ 1,038,600</b>	<b>\$ -</b>	<b>\$ 301,306</b>	<b>\$ 321,600</b>	<b>\$ 415,694</b>

<b>Residential Development Charge Calculation</b>		
Residential Share of 2019 - 2028 DC Eligible Costs	76%	\$244,416
10-Year Growth in Population in New Units		7,402
Unadjusted Development Charge Per Capita		<b>\$33.02</b>
<b>Non-Residential Development Charge Calculation</b>		
Non-Residential Share of 2019 - 2028 DC Eligible Costs	24%	\$77,184
10-Year Growth in Square Feet		1,804,390
Unadjusted Development Charge Per Square Foot		<b>\$0.04</b>

2019 - 2028 Net Funding Envelope	\$321,600
<b>Notional Reserve Fund Balance</b>	
Balance as at December 31, 2018	\$287,975
Revenue Losses	\$13,331
<b>Total</b>	<b>\$301,306</b>

34  
APPENDIX B.8  
TABLE 2

CITY OF GREATER SUDBURY  
DEVELOPMENT-RELATED CAPITAL PROGRAM  
EMERGENCY PREPAREDNESS

Project Description	Timing		Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs			Total DC Eligible Costs	DC Eligible Costs			
	Start	Finish				BTE %	Replacement & BTE Shares	10% Reduction		Prior DCs	Available DC Reserves	2019 - 2028	Post 2028
<b>8.0 EMERGENCY PREPAREDNESS</b>													
<b>8.1 Buildings, Land &amp; Equipment</b>													
8.1.1 CLELC Phase II	2009	2009	\$ 2,284,795	\$ 1,000,000	\$ 1,284,795	0.0%	\$ -	\$ 128,480	\$ 1,156,316	\$ 432,676	\$ 25,040	\$ 698,600	\$ -
8.1.2 Garage for mobile command unit Community Evacuation Centres	2009	2009	\$ 354,042	\$ -	\$ 354,042	0.0%	\$ -	\$ 35,404	\$ 318,638	\$ -	\$ -	\$ 286,679	\$ 31,959
8.1.3 (Generators)	2020	2023	\$ 400,000	\$ -	\$ 400,000	97.8%	\$ 391,200	\$ 880	\$ 7,920	\$ -	\$ -	\$ -	\$ 7,920
Subtotal Buildings, Land & Equipment			\$ 3,038,837	\$ 1,000,000	\$ 2,038,837		\$ 391,200	\$ 164,764	\$ 1,482,873	\$ 432,676	\$ 25,040	\$ 985,279	\$ 39,879
<b>TOTAL EMERGENCY PREPAREDNESS</b>			\$ 3,038,837	\$ 1,000,000	\$ 2,038,837		\$ 391,200	\$ 164,764	\$ 1,482,873	\$ 432,676	\$ 25,040	\$ 985,279	\$ 39,879

<b>Residential Development Charge Calculation</b>		
Residential Share of 2019 - 2028 DC Eligible Costs	76%	\$748,812
10-Year Growth in Population in New Units		7,402
Unadjusted Development Charge Per Capita		<b>\$101.16</b>
<b>Non-Residential Development Charge Calculation</b>		
Non-Residential Share of 2019 - 2028 DC Eligible Costs	24%	\$236,467
10-Year Growth in Square Feet		1,804,390
Unadjusted Development Charge Per Square Foot		<b>\$0.13</b>

2019 - 2028 Net Funding Envelope	\$985,279
<b>Notional Reserve Fund Balance</b>	
Balance as at December 31, 2018	\$0
Revenue Losses	\$25,040
<b>Total</b>	<b>\$25,040</b>

35  
APPENDIX B.9  
TABLE 2

CITY OF GREATER SUDBURY  
DEVELOPMENT-RELATED CAPITAL PROGRAM  
TRANSIT

Project Description	Timing		Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs			Total DC Eligible Costs	DC Eligible Costs			
	Start	Finish				BTE %	Replacement & BTE Shares	0% Reduction		Prior DCs	Available DC Reserves	2019 - 2028	Post 2028
<b>9.0 TRANSIT</b>													
<b>9.1 Buildings, Land &amp; Equipment</b>													
9.1.1 Transit Garage Expansion	2013	2014	\$ 18,098,787	\$ 8,667,158	\$ 9,431,629	57.0%	\$ 5,376,029	\$ -	\$ 4,055,600	\$ 1,141,607	\$ 190,237	\$ 1,468,736	\$ 1,255,020
Subtotal Buildings, Land & Equipment			\$ 18,098,787	\$ 8,667,158	\$ 9,431,629		\$ 5,376,029	\$ -	\$ 4,055,600	\$ 1,141,607	\$ 190,237	\$ 1,468,736	\$ 1,255,020
<b>9.2 Growth Projects</b>													
9.2.1 PTIF Phase 2 Growth Projects	2019	2027	\$ 10,000,000	\$ 7,400,000	\$ 2,600,000	96.1%	\$ 2,497,759	\$ -	\$ 102,241	\$ -	\$ -	\$ 55,131	\$ 47,109
Subtotal Growth Projects			\$ 10,000,000	\$ 7,400,000	\$ 2,600,000		\$ 2,497,759	\$ -	\$ 102,241	\$ -	\$ -	\$ 55,131	\$ 47,109
<b>TOTAL TRANSIT</b>			<b>\$ 28,098,787</b>	<b>\$ 16,067,158</b>	<b>\$ 12,031,629</b>		<b>\$ 7,873,788</b>	<b>\$ -</b>	<b>\$ 4,157,841</b>	<b>\$ 1,141,607</b>	<b>\$ 190,237</b>	<b>\$ 1,523,867</b>	<b>\$ 1,302,130</b>

<b>Residential Development Charge Calculation</b>			
Residential Share of 2019 - 2028 DC Eligible Costs	76%	\$1,158,139	
10-Year Growth in Population in New Units		7,402	
Unadjusted Development Charge Per Capita		<b>\$156.46</b>	
<b>Non-Residential Development Charge Calculation</b>			
Non-Residential Share of 2019 - 2028 DC Eligible Costs	24%	\$365,728	
10-Year Growth in Square Feet		1,804,390	
Unadjusted Development Charge Per Square Foot		<b>\$0.20</b>	

<b>Notional Reserve Fund Balance</b>	
Balance as at December 31, 2018	\$129,190
Revenue Losses	\$61,047
<b>Total</b>	<b>\$190,237</b>

Transit Ridership Analysis - DC Allocations			
Timing	Ridership	Allocation	DC Allocation
2018	4,354,638	96.1%	BTE
2019-2028	96,117	2.1%	In-Period
2029-2041	82,131	1.8%	Post-Period
<b>Total</b>	<b>4,532,886</b>	<b>100%</b>	

## **APPENDIX C**

---

### **ENGINEERING INFRASTRUCTURE TECHNICAL APPENDIX**

37  
APPENDIX C.1  
TABLE 2

CITY OF GREATER SUDBURY  
DEVELOPMENT-RELATED CAPITAL PROGRAM  
ROADS AND RELATED

Project Description			Timing		Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible Costs				
			Start	Finish				BTE %	Replacement & BTE Shares		Prior DCs	Available DC Reserves	2019 - 2028	Post-2028	
												%	\$		
1.0 ROADS AND RELATED															
1.1	Property Acquisition - future projects		2014	2028	\$ 9,000,000	\$ -	\$ 9,000,000	50.0%	\$ 4,500,000	\$ 4,500,000	\$ 1,349,763	\$ -	\$ 1,540,279	51%	\$ 1,609,958
1.2	Lasalle Notre Dame Intersection Improvements		2013	2014	\$ 8,051,462	\$ 38,630	\$ 8,012,832	75.0%	\$ 6,009,624	\$ 2,003,208	\$ 1,342,151	\$ -	\$ 323,218	51%	\$ 337,839
1.3	Lasalle Notre Dame Intersection - Engineering/Property Acquisition/Utilities		2013	2014	\$ 2,273,907	\$ -	\$ 2,273,907	0.0%	\$ -	\$ 2,273,907	\$ 1,523,518	\$ -	\$ 366,896	51%	\$ 383,493
1.4	MR80: Valleyview to Donaldson		2009	2009	\$ 10,745,020	\$ 3,350,401	\$ 7,394,619	30.0%	\$ 2,218,386	\$ 5,176,233	\$ 2,795,995	\$ 907,210	\$ 720,223	51%	\$ 752,805
1.5	Maley Drive - Phase 1		2009	2023	\$ 86,176,000	\$ 53,427,500	\$ 32,748,500	50.0%	\$ 16,374,250	\$ 16,374,250	\$ 815,547	\$ -	\$ 6,844,386	56%	\$ 8,714,317
1.6	Maley Drive - Phase 2		2023	2028	\$ 45,050,000	\$ 30,033,333	\$ 15,016,667	50.0%	\$ 7,508,334	\$ 7,508,334	\$ -	\$ -	\$ -	100%	\$ 7,508,334
1.7	MR 15 MR 80 Intersection Improvements		2014	2014	\$ 2,859,068	\$ 64,210	\$ 2,794,858	75.0%	\$ 2,096,144	\$ 698,715	\$ 223,741	\$ -	\$ 232,234	51%	\$ 242,740
1.8	Barry Downe Road from Westmount Road to Kingsway		2018	2019	\$ 5,100,000	\$ -	\$ 5,100,000	94.2%	\$ 4,803,360	\$ 296,640	\$ -	\$ -	\$ 145,040	51%	\$ 151,601
1.9	MR 35 Widening from Azilda to Chelmsford		2018	2022	\$ 39,400,000	\$ -	\$ 39,400,000	94.2%	\$ 37,108,307	\$ 2,291,693	\$ -	\$ -	\$ 1,120,502	51%	\$ 1,171,191
1.10	Lasalle Barry Downe Intersection Improvements		2024	2028	\$ 4,900,000	\$ -	\$ 4,900,000	94.2%	\$ 4,614,993	\$ 285,007	\$ -	\$ -	\$ 139,352	51%	\$ 145,656
1.11	MR 4 from Highway 17 to C. Johnson Road		2012	2014	\$ 19,636,493	\$ 16,847,483	\$ 2,789,010	80.0%	\$ 2,231,208	\$ 557,802	\$ 373,727	\$ -	\$ 90,002	51%	\$ 94,073
1.12	Four Laning MR 80 - Frost to Glenn		2010	2010	\$ 6,965,587	\$ 1,485,838	\$ 5,479,749	40.0%	\$ 2,191,899	\$ 3,287,849	\$ -	\$ -	\$ 1,446,349	56%	\$ 1,841,501
1.13	Second Ave (Sudbury) Donna Drive to Kenwood Road		2014	2014	\$ 5,400,000	\$ 152,987	\$ 5,247,013	30.0%	\$ 1,574,104	\$ 3,672,909	\$ -	\$ -	\$ 1,795,834	51%	\$ 1,877,075
1.14	Crean Hill Road from MR 4 to Victoria Mine		2014	2018	\$ 10,513,057	\$ 7,969,378	\$ 2,543,679	80.0%	\$ 2,034,943	\$ 508,736	\$ -	\$ -	\$ 248,742	51%	\$ 259,994
1.15	Moonlight Ave from Kingsway to Bancroft Drive		2015	2015	\$ 2,623,001	\$ -	\$ 2,623,001	94.2%	\$ 2,470,435	\$ 152,566	\$ -	\$ -	\$ 74,596	51%	\$ 77,970
1.16	Kingsway Realignment - EA and Design		2020	2023	\$ 2,500,000	\$ -	\$ 2,500,000	93.7%	\$ 2,341,842	\$ 158,158	\$ -	\$ -	\$ -	100%	\$ 158,158
1.17	Kingsway Realignment		2024	2028	\$ 26,190,000	\$ 16,399,836	\$ 9,790,164	93.7%	\$ 9,170,807	\$ 619,357	\$ -	\$ -	\$ -	100%	\$ 619,357
1.18	Remington		2028	2028	\$ 5,075,000	\$ 1,268,750	\$ 3,806,250	33.3%	\$ 1,267,481	\$ 2,538,769	\$ -	\$ -	\$ -	100%	\$ 2,538,769
1.19	Martilla		2028	2028	\$ 5,225,000	\$ 1,306,250	\$ 3,918,750	33.3%	\$ 1,304,944	\$ 2,613,806	\$ -	\$ -	\$ -	100%	\$ 2,613,806
1.20	Silver Hills (extension to Bancroft Drive)		2015	2019	\$ 8,600,000	\$ 2,150,000	\$ 6,450,000	33.3%	\$ 2,147,850	\$ 4,302,150	\$ -	\$ -	\$ 2,103,496	51%	\$ 2,198,654
1.21	Silver Hills Drive (extension to Bancroft Drive)		2012	2012	\$ 3,267,169	\$ -	\$ 3,267,169	0.0%	\$ -	\$ 3,267,169	\$ 914,274	\$ -	\$ 1,150,426	51%	\$ 1,202,469
1.22	Montrose Avenue		2015	2028	\$ 5,362,500	\$ 1,340,625	\$ 4,021,875	33.3%	\$ 1,339,284	\$ 2,682,591	\$ 602,000	\$ -	\$ 1,017,285	51%	\$ 1,063,305
1.23	John Street (Valley East, Easterly Extension)		2028	2028	\$ 2,185,000	\$ 546,250	\$ 1,638,750	33.3%	\$ 545,704	\$ 1,093,046	\$ -	\$ -	\$ -	100%	\$ 1,093,046
1.24	Traffic System Improvements (New Traffic Lights)		2019	2028	\$ 4,000,000	\$ -	\$ 4,000,000	94.2%	\$ 3,767,341	\$ 232,659	\$ -	\$ -	\$ 113,757	51%	\$ 118,903
1.25	Elgin Greenway from Nelson Street to Cedar Street		2018	2020	\$ 3,878,000	\$ 2,548,000	\$ 1,330,000	94.2%	\$ 1,252,641	\$ 77,359	\$ -	\$ -	\$ 37,824	51%	\$ 39,535
1.26	Active Transportation		2017	2023	\$ 7,500,000	\$ -	\$ 7,500,000	94.2%	\$ 7,063,764	\$ 436,236	\$ -	\$ -	\$ 213,293	51%	\$ 222,943
1.27	Transportation Master Plan Update		2023	2024	\$ 250,000	\$ -	\$ 250,000	97.8%	\$ 244,500	\$ 5,500	\$ -	\$ -	\$ 5500	0%	\$ -
1.28	Event Centre Roads Infrastructure - Street C		2019	2021	\$ 3,700,000	\$ 925,000	\$ 2,775,000	33.3%	\$ 924,075	\$ 1,850,925	\$ -	\$ -	\$ 814,235	56%	\$ 1,036,690
1.29	Auger Extension		2019	2024	\$ 2,500,000	\$ 625,000	\$ 1,875,000	33.3%	\$ 624,375	\$ 1,250,625	\$ -	\$ -	\$ 611,481	51%	\$ 639,144
Subtotal					\$ 338,926,264	\$ 140,479,471	\$ 198,446,793		\$ 127,730,593	\$ 70,716,199	\$ 9,940,716	\$ 907,210	\$ 21,154,947		\$ 38,713,326
TOTAL ROADS AND RELATED					\$ 338,926,264	\$ 140,479,471	\$ 198,446,793		\$ 127,730,593	\$ 70,716,199	\$ 9,940,716	\$ 907,210	\$ 21,154,947		\$ 38,713,326

<b>Residential Development Charge Calculation</b>		
Residential Share of 2019 - 2028 DC Eligible Costs	76%	\$16,077,760
Growth in Population in New Units to 2028		7,402
Unadjusted Development Charge Per Capita		<b>\$2,172.08</b>
<b>Non-Residential Development Charge Calculations</b>		
Non-Residential Share of 2019 - 2028 DC Eligible Costs	24%	\$5,077,187
Growth in Non-Residential Square Feet to 2028		1,804,390
Unadjusted Development Charge Per Square Foot		<b>\$2.81</b>
Growth in Industrial Square Feet to 2028	58%	1,364,000
Unadjusted Development Charge Per Square Foot		<b>\$2.16</b>
Growth in Non-Industrial Square Feet to 2028	42%	440,390
Unadjusted Development Charge Per Square Foot		<b>\$4.84</b>

2019 - 2028 Net Funding Envelope	\$46,446,756
<b>Notional Reserve Fund Balance</b>	
Balance as at December 31, 2018	\$0
Revenue Losses	\$907,210
<b>Total</b>	<b>\$907,210</b>

38  
APPENDIX C.2  
TABLE 1  
CITY OF GREATER SUDBURY  
DEVELOPMENT-RELATED CAPITAL PROGRAM  
WATER

Project Description	Timing		Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible Costs				
	Start	Finish				BTE %	Replacement & BTE Shares		Prior DCs	Available DC Reserves	2019 - 2028	Post-2028	
												%	\$
<b>2.0 WATER</b>													
2.1 New Valley Wells	2011	2012	\$ 7,195,923	\$ -	\$ 7,195,923	50.0%	\$ 3,597,962	\$ 3,597,962	\$ 506,041	\$ 109,214	\$ 1,439,954	52%	\$ 1,542,753
2.2 Valley Water Looping	2020	2024	\$ 11,300,000	\$ -	\$ 11,300,000	94.9%	\$ 10,728,161	\$ 571,839	\$ -	\$ -	\$ 276,065	52%	\$ 295,774
2.3 Wanapitei Trunk Watermain - Preliminary Design Geotechnical Study	2019	2020	\$ 690,000	\$ -	\$ 690,000	94.8%	\$ 654,377	\$ 35,623	\$ 17,782	\$ -	\$ 8,613	52%	\$ 9,228
2.4 Regent Street - Bouchard St to Walford Rd and Bouchard - Regent St to Southview Dr	2013	2015	\$ 2,234,533	\$ -	\$ 2,234,533	94.8%	\$ 2,119,168	\$ 115,365	\$ -	\$ -	\$ 55,694	52%	\$ 59,670
2.5 Update to W/WW Master Plan/General Studies	2019	2023	\$ 3,100,000	\$ -	\$ 3,100,000	97.6%	\$ 3,024,739	\$ 75,261	\$ -	\$ -	\$ 45,989	39%	\$ 29,272
2.6 MR 35	2018	2022	\$ 2,150,000	\$ -	\$ 2,150,000	94.9%	\$ 2,041,199	\$ 108,801	\$ -	\$ -	\$ 47,258	57%	\$ 61,543
2.7 Second Avenue Sudbury	2014	2017	\$ 710,933	\$ -	\$ 710,933	94.8%	\$ 674,229	\$ 36,704	\$ -	\$ -	\$ 15,943	57%	\$ 20,762
2.8 Lorne Street	2016	2018	\$ 2,524,000	\$ -	\$ 2,524,000	94.8%	\$ 2,393,691	\$ 130,309	\$ -	\$ -	\$ 56,600	57%	\$ 73,709
2.9 Maley Drive (Barrydowne to Railway Tracks)	2018	2019	\$ 2,450,000	\$ -	\$ 2,450,000	94.8%	\$ 2,323,511	\$ 126,489	\$ -	\$ -	\$ 54,941	57%	\$ 71,548
2.10 Lorne Street (Kelly Lake to Elm)	2019	2020	\$ 5,525,000	\$ -	\$ 5,525,000	94.8%	\$ 5,239,755	\$ 285,245	\$ -	\$ -	\$ 123,897	57%	\$ 161,348
2.11 Notre Dame - Wilma to Cambrian Heights Drive	2021	2022	\$ 1,000,000	\$ -	\$ 1,000,000	94.8%	\$ 948,372	\$ 51,628	\$ -	\$ -	\$ 22,425	57%	\$ 29,203
2.12 Garson - Various Water Upgrades for Growth (booster/wells)	2020	2025	\$ 14,700,000	\$ -	\$ 14,700,000	94.8%	\$ 13,941,067	\$ 758,933	\$ -	\$ -	\$ 329,645	57%	\$ 429,288
2.13 Lo-Ellen Booster Station	2028	2028	\$ 1,500,000	\$ -	\$ 1,500,000	0.0%	\$ -	\$ 1,500,000	\$ -	\$ -	\$ -	100%	\$ 1,500,000
2.14 Maley Drive Watermain	2028	2028	\$ 1,750,000	\$ -	\$ 1,750,000	0.0%	\$ -	\$ 1,750,000	\$ -	\$ -	\$ -	100%	\$ 1,750,000
Subtotal			\$ 56,830,389	\$ -	\$ 56,830,389		\$ 47,686,228	\$ 9,144,161	\$ 523,823	\$ 109,214	\$ 2,477,025		\$ 6,034,099
<b>TOTAL WATER</b>			\$ 56,830,389	\$ -	\$ 56,830,389		\$ 47,686,228	\$ 9,144,161	\$ 523,823	\$ 109,214	\$ 2,477,025		\$ 6,034,099

<b>Residential Development Charge Calculation</b>		
Residential Share of 2019 - 2028 DC Eligible Costs	72%	\$1,783,458
Growth in Served Population in New Units to 2028		6,020
Unadjusted Development Charge Per Capita		<b>\$296.26</b>
<b>Non-Residential Development Charge Calculation</b>		
Non-Residential Share of 2019 - 2028 DC Eligible Costs	28%	\$693,567
Growth in Non-Residential Square Feet to 2028		1,804,390
Unadjusted Development Charge Per Square Foot		<b>\$0.38</b>

<b>Notional Reserve Fund Balance</b>	
Balance as at December 31, 2018	\$0
Revenue Losses	\$109,214
<b>Total</b>	<b>\$109,214</b>



CITY OF GREATER SUDBURY  
DEVELOPMENT-RELATED CAPITAL PROGRAM  
WASTEWATER

Project Description	Timing		Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible Costs				
	Start	Finish				BTE %	Replacement & BTE Shares		Prior DCs	Available DC Reserves	2019 - 2028	Post-2028	
												%	\$
<b>3.0 WASTEWATER</b>													
3.1 BioSolids Management Facility	2013	2015	\$ 70,049,434	\$ 11,475,645	\$ 58,573,789	86.0%	\$ 50,373,459	\$ 8,200,330	\$ -	\$ -	\$ 3,391,315	59%	\$ 4,809,016
3.2 Walden WWTP - Design	2014	2023	\$ 2,000,000	\$ -	\$ 2,000,000	62.0%	\$ 1,240,000	\$ 760,000	\$ 211,464	\$ -	\$ 124,532	77%	\$ 424,004
3.3 Walden WWTP - Construction & Contract Administration	2024	2028	\$ 27,400,000	\$ -	\$ 27,400,000	62.0%	\$ 16,988,000	\$ 10,412,000	\$ -	\$ -	\$ 2,363,788	77%	\$ 8,048,212
3.4 WWTP Upgrades for Azilda	2019	2028	\$ 16,894,000	\$ -	\$ 16,894,000	97.8%	\$ 16,519,674	\$ 374,326	\$ 124,853	\$ -	\$ 114,672	54%	\$ 134,802
3.5 WWTP Upgrades for Chelmsford	2025	2028	\$ 14,690,000	\$ -	\$ 14,690,000	97.8%	\$ 14,364,508	\$ 325,492	\$ -	\$ -	\$ 149,614	54%	\$ 175,878
3.6 Helene Lift Station Upgrades	2025	2028	\$ 3,231,000	\$ -	\$ 3,231,000	80.0%	\$ 2,584,800	\$ 646,200	\$ -	\$ -	\$ 297,029	54%	\$ 349,171
3.7 Update to W/WW Master Plan/General Studies	2019	2023	\$ 5,600,000	\$ -	\$ 5,600,000	97.5%	\$ 5,460,692	\$ 139,308	\$ -	\$ -	\$ 85,126	39%	\$ 54,182
3.8 Sudbury WWTP Upgrades Phase 1	2009	2011	\$ 10,184,732	\$ -	\$ 10,184,732	59.0%	\$ 6,008,992	\$ 4,175,740	\$ 2,210,105	\$ 351,895	\$ 667,376	59%	\$ 946,365
3.9 Sudbury WWTP Upgrades Phase 2	2013	2016	\$ 16,808,436	\$ -	\$ 16,808,436	59.0%	\$ 9,916,977	\$ 6,891,459	\$ -	\$ -	\$ 2,850,020	59%	\$ 4,041,439
3.10 Sudbury WWTP Upgrades Phase 3	2019	2021	\$ 5,750,000	\$ -	\$ 5,750,000	78.0%	\$ 4,485,000	\$ 1,265,000	\$ -	\$ -	\$ 523,151	59%	\$ 741,849
3.11 Jacob St Sewer ( Lively Phase I)	2018	2019	\$ 4,000,000	\$ -	\$ 4,000,000	62.0%	\$ 2,480,000	\$ 1,520,000	\$ -	\$ -	\$ 345,079	77%	\$ 1,174,921
3.12 Gatchell Outfall Sewer	2014	2021	\$ 8,975,000	\$ -	\$ 8,975,000	94.8%	\$ 8,511,638	\$ 463,362	\$ -	\$ -	\$ 191,627	59%	\$ 271,735
3.13 Lively Phase II - Upgrade Sanitary Sewer Pipes	2016	2022	\$ 5,078,000	\$ -	\$ 5,078,000	62.0%	\$ 3,148,360	\$ 1,929,640	\$ -	\$ -	\$ 438,077	77%	\$ 1,491,563
3.14 Algonquin Forcemain	2017	2018	\$ 1,245,191	\$ 824,269	\$ 420,922	50.0%	\$ 210,461	\$ 210,461	\$ -	\$ -	\$ 87,038	59%	\$ 123,423
3.15 Laurier Lift Station	2018	2019	\$ 1,500,000	\$ -	\$ 1,500,000	97.8%	\$ 1,466,764	\$ 33,236	\$ -	\$ -	\$ 13,745	59%	\$ 19,491
3.16 Ramsey Lift Station	2019	2022	\$ 1,200,000	\$ -	\$ 1,200,000	50.0%	\$ 600,000	\$ 600,000	\$ -	\$ -	\$ 248,135	59%	\$ 351,865
3.17 Maley Drive Sanitary Sewer	2028	2028	\$ 1,750,000	\$ -	\$ 1,750,000	0.0%	\$ -	\$ 1,750,000	\$ -	\$ -	\$ -	100%	\$ 1,750,000
Subtotal			\$ 196,355,793	\$ 12,299,914	\$ 184,055,879		\$ 144,359,324	\$ 39,696,555	\$ 2,546,422	\$ 351,895	\$ 11,890,322		\$ 24,907,916
<b>TOTAL WASTEWATER</b>			\$ 196,355,793	\$ 12,299,914	\$ 184,055,879		\$ 144,359,324	\$ 39,696,555	\$ 2,546,422	\$ 351,895	\$ 11,890,322		\$ 24,907,916

**Residential Development Charge Calculation**

Residential Share of 2019 - 2028 DC Eligible Costs	72%	\$8,561,032
Growth in Serviced Population in New Units to 2028		6,020
Unadjusted Development Charge Per Capita		<b>\$1,422.10</b>

**Non-Residential Development Charge Calculation**

Non-Residential Share of 2019 - 2028 DC Eligible Costs	28%	\$3,329,290
Growth in Non-Residential Square Feet to 2028		1,804,390
Unadjusted Development Charge Per Square Foot		<b>\$1.85</b>

**Notional Reserve Fund Balance**

Balance as at December 31, 2018	\$0
Revenue Losses	\$351,895
<b>Total</b>	<b>\$351,895</b>

40  
APPENDIX C.4  
TABLE 1

CITY OF GREATER SUDBURY  
DEVELOPMENT-RELATED CAPITAL PROGRAM  
DRAINS

Project Description			Timing		Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible Costs				
			Start	Finish				BTE %	Replacement & BTE Shares		Prior DCs	Available DC Reserves	2019 - 2028	Post-2028	
														%	\$
4.0 DRAINS															
4.1	Implement results of Ramey Lake Subwatershed Study (multiple projects - investment in new projects/assets) - PHASE 1		2019	2028	\$ 12,500,000	\$ 8,333,250	\$ 4,166,750	93.7%	\$ 3,903,148	\$ 263,602	\$ -	\$ -	\$ 100,616	62%	\$ 162,986
4.2	Implement results of Junction Creek Subwatershed Study (multiple projects) - PHASE 1		2019	2028	\$ 20,000,000	\$ 13,333,200	\$ 6,666,800	93.7%	\$ 6,245,037	\$ 421,763	\$ -	\$ -	\$ 160,985	62%	\$ 260,778
4.3	Implement results of Whitewater Lake Subwatershed Study (multiple projects) - PHASE 1		2019	2028	\$ 7,500,000	\$ 4,999,950	\$ 2,500,050	93.7%	\$ 2,341,889	\$ 158,161	\$ -	\$ -	\$ 60,369	62%	\$ 97,792
4.4	Implement results of Whitson River Subwatershed Study (multiple projects) - PHASE 1		2020	2028	\$ 25,000,000	\$ 16,666,500	\$ 8,333,500	93.7%	\$ 7,806,296	\$ 527,204	\$ -	\$ -	\$ 201,231	62%	\$ 325,972
4.5	Green Ave Stormwater Conveyance Improvements		2018	2019	\$ 3,500,000	\$ 440,000	\$ 3,060,000	50.0%	\$ 1,530,000	\$ 1,530,000	\$ -	\$ -	\$ 649,087	58%	\$ 880,913
4.6	Countryside Stormwater Pond and Channel		2018	2019	\$ 3,200,000	\$ -	\$ 3,200,000	25.0%	\$ 800,000	\$ 2,400,000	\$ -	\$ -	\$ 916,068	62%	\$ 1,483,932
4.7	Lavalee Drain F		2019	2019	\$ 250,000	\$ -	\$ 250,000	50.0%	\$ 125,000	\$ 125,000	\$ -	\$ -	\$ 47,712	62%	\$ 77,288
4.8	Minnow Lake Stormwater Treatment Station		2014	2014	\$ 3,643,442	\$ -	\$ 3,643,442	93.7%	\$ 3,412,946	\$ 230,496	\$ -	\$ -	\$ 87,979	62%	\$ 142,517
4.9	Rockwood Storm Sewer		2010	2014	\$ 805,184	\$ -	\$ 805,184	25.0%	\$ 201,296	\$ 603,888	\$ -	\$ 69,560	\$ 203,951	62%	\$ 330,378
Subtotal					\$ 76,398,626	\$ 43,772,900	\$ 32,625,726		\$ 26,365,613	\$ 6,260,113	\$ -	\$ 69,560	\$ 2,427,998		\$ 3,762,555
TOTAL DRAINS					\$ 76,398,626	\$ 43,772,900	\$ 32,625,726		\$ 26,365,613	\$ 6,260,113	\$ -	\$ 69,560	\$ 2,427,998		\$ 3,762,555

<b>Residential Development Charge Calculation</b>			
Residential Share of 2019 - 2028 DC Eligible Costs	76%	\$1,845,278	
Growth in Population in New Units to 2028		7,402	
Unadjusted Development Charge Per Capita		<b>\$249.29</b>	
<b>Non-Residential Development Charge Calculation</b>			
Non-Residential Share of 2019 - 2028 DC Eligible Costs	24%	\$582,719	
Growth in Non-Residential Square Feet to 2028		1,804,390	
Unadjusted Development Charge Per Square Foot		<b>\$0.32</b>	

<b>Notional Reserve Fund Balance</b>	
Balance as at December 31, 2018	\$0
Revenue Losses	\$69,560
<b>Total</b>	<b>\$69,560</b>