DETERMINATION OF REGULATORY FEES TO FINANCE GROWTH: TECHNICAL REPORT

City of Winnipeg

Report for
Council Consideration

HEMSON Consulting Ltd.

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EXECUTIVE SUMMARY

The following summarizes the findings of the City of Winnipeg's 2016 Regulatory Fee Study.

A. STUDY CALCULATES POTENTIAL REGULATORY FEES TO FUND DEVELOPMENT-RELATED COSTS

- The City should consider levying regulatory fees to fund capital projects throughout Winnipeg so that new development pays for its capital requirements and so that new services required by development are provided in a fiscally responsible manner.

- The study was prepared to calculate potential regulatory fees with reference to a forecast of the amount and type of residential and non-residential development anticipated in the City.

- A review of capital projects has been completed, including an analysis of gross expenditures, funding sources and net expenditures incurred or to be incurred by the City to provide for the expected development, including the determination of the development and non-development-related components of the capital projects.

- This report identifies the growth-related net capital costs attributable to development that is forecast to occur in the City of Winnipeg. These costs are apportioned to residential and non-residential development in a manner that reflects the increase in the need for each service.

- All services with development-related costs are included in the analysis. These City services include Parks and Open Spaces, Community Services, Solid Waste, Public Works, Transit, Fire and Paramedic Services, Police, Water, and Wastewater.

B. STUDY CONSISTENT WITH COMMON PRACTICES ACROSS CANADIAN MUNICIPALITIES

- This study provides the rationale and basis for the calculated regulatory fee rates. The methodology considers common practices as explored through the companion report entitled *Review of Municipal Growth Financing Mechanisms*, dated August 31, 2016.

- A City-wide average cost approach is used to calculate regulatory fees for all eligible services. This approach results in uniform charges levied throughout the City. This approach may be reviewed in subsequent regulatory fee studies.

- The calculated charges are the maximum charges the City may adopt. Lower charges may be approved; however, this will require a reduction in the capital plan, or financing from other sources, likely property taxes and utility rates.

C. DEVELOPMENT FORECAST

- A forecast of the amount, type and location of residential and non-residential development anticipated in the City of Winnipeg to 2041 is included in this report.

- A 10-year forecast, from 2017 to 2026 was used in the regulatory fees calculation for Parks and Open Spaces, Community Services, and Solid Waste services. A 15-year forecast, from 2017 to 2031 was used for Public Works projects. A longer term forecast period, from 2017 to 2041 was used for Transit, Fire and Paramedic Services, Police, Water, and Wastewater services.

- The City is forecast to add approximately 42,300 occupied dwelling units in the 10-year planning period from 2017 to 2026. The 15-year period to 2031 will see a total of 61,900 new dwelling units. The longer term planning period to 2041 will see an addition of 98,300 total dwelling units.

- The development forecast for the 10-year planning period from 2017 to 2026 estimates that the City's Census population will grow by approximately 86,400 people, and by about 127,400 to 2031 and 198,500 to 2041.

- Employment in Winnipeg is forecast to grow by approximately 53,300 employees over the next ten years, 75,500 to 2031 and 122,700 to 2041. Of this employment growth, 22.3 per cent is anticipated to be associated with Office growth, 21.9 per cent with Institutional growth, 21.4 per cent with Commercial/Retail growth, and 34.5 per cent with Industrial growth.

- This employment growth is projected to generate about 3.37 million square metres of new, non-residential building space between 2017 and 2026, 4.78 million square metres to 2031, and 7.76 million square metres to 2041. Of this non-residential building space, 9.5 per cent is anticipated to be associated with Major Office growth, 22.5 per cent with Institutional growth, 13.5 per cent with Commercial/Retail growth, and 54.5 per cent with Industrial growth.

- The following is a summary of the projected development in the City:

Growth Forecast	2016 Estimate	Planning Period 2017 - 2026		Planning Period 2017 - 2031		Planning Period 2017 - 2041	
		Growth	Total at 2026	Growth	Total at 2031	Growth	Total at 2041
Residential							
Total Dwellings	283,850	42,278	326,128	61,904	345,754	98,328	382,178
Total Population							
Census	711,494	86,354	797,848	127,378	838,871	198,458	909,952
Population In New Dwellings		*107,740*		*156,159*		*244,757*	
Non-Residential							
Total Employment	398,951	53,324	452,275	75,489	474,440	122,724	521,675
Major Office	*88,819*	*11,871*	*100,690*	*16,806*	105,625	*27,322*	116,141
Institutional	*87,397*	*11,681*	*99,078*	*16,537*	103,934	*26,885*	114,282
Commercial/Retail	*85,207*	*11,389*	*96,596*	*16,123*	101,330	*26,211*	111,418
Industrial	*137,529*	*18,382*	*155,911*	*26,023*	163,551	*42,306*	179,835
Non-Residential Building Space (sq.m.)		3,373,581		4,775,863		7,764,241	

D. DEVELOPMENT-RELATED CAPITAL FORECAST

10-Year Benefitting Period Services

- City staff, in collaboration with Hemson Consulting, has compiled a development-related capital forecast setting out projects that are required to service anticipated development in the City between 2017 and 2026.

- The gross cost of the City's development-related capital forecast for these services amounts to $287.76 million and provides for a wide range of capital projects. Of the $287.76 million, approximately $45.71 million has been identified as eligible for recovery through regulatory fees over the 2017-2026 planning period.

- Details of the capital programs for each service are provided in Appendix B.

15-Year Benefitting Period Services

- A development-related capital forecast has been compiled setting out projects that are required to service anticipated development in the City between 2017 and 2031.

- The gross cost of the City's development-related capital forecast for these services amounts to $3.47 billion and provides for a wide range of infrastructure expansions. Of the $3.47 billion, approximately $647.78 million has been identified as eligible for recovery through regulatory fees over the 2017-2031 planning period.

- Details of the capital programs for each service are provided in Appendix C.

25-Year Benefitting Period Services

- A development-related capital forecast has been prepared setting out projects that are required to service anticipated development in the City between 2017 and 2041.

- The gross cost of the City's development-related capital forecast for these services amounts to $4.37 billion. Of the $4.37 billion, approximately $738.50 million is to be recovered from regulatory fees over the 2017-2041 planning period.

- Details of the capital programs for each service are provided in Appendix C.

E. CALCULATED REGULATORY FEES

- A City-wide cost approach is used to calculate regulatory fees for all eligible services. Uniform residential and non-residential charges are levied throughout the City.

- The fully calculated non-residential charges are recommended to vary by employment category, reflecting the difference in employment densities expected across the four categories and associated differences in demand placed on municipal services.

Calculated Regulatory Fees

Service	Residential Charge Per Square Metre	Office Charge Per Square Metre	Institutional Charge Per Square Metre	Commercial/ Retail Charge Per Square Metre	Industrial Charge Per Square Metre
PARKS AND OPEN SPACES	$1.79	$0.00	$0.00	$0.00	$0.00
COMMUNITY SERVICES	$6.07	$0.00	$0.00	$0.00	$0.00
SOLID WASTE	$0.53	$1.17	$0.48	$0.79	$0.32
PUBLIC WORKS	$56.04	$126.06	$52.36	$85.09	$34.04
TRANSIT	$20.22	$44.53	$18.50	$30.06	$12.02
FIRE & PARAMEDIC SERVICES	$1.85	$4.09	$1.70	$2.76	$1.10
POLICE	$2.09	$4.60	$1.91	$3.11	$1.24
WATER	$4.50	$9.92	$4.12	$6.70	$2.68
WASTEWATER	$16.36	$36.14	$15.01	$24.40	$9.76
TOTAL CHARGE	**$109.45**	**$226.51**	**$94.08**	**$152.91**	**$61.16**

I INTRODUCTION

The City of Winnipeg has been undergoing a period of increasing growth over recent years, placing pressure on the City's infrastructure and resources. With growth expected to continue, the funding of new infrastructure for expanded City services will continue to be a challenge. Recognizing this challenge, the City has examined the costs and revenues associated with growth as well as the potential to introduce new funding mechanisms. More specifically, the City wishes to consider implementation of regulatory fees to fund development-related capital projects so that development may be serviced in a fiscally responsible manner.

Many comparable municipalities across Canada impose regulatory fees to pay for off-site, development-related infrastructure. Typically, the charges are determined with reference to a forecast of the amount, type and location of development anticipated in the municipality; as well as a review of capital works in progress and anticipated future capital projects including an analysis of gross expenditures, funding sources, and net expenditures incurred or to be incurred by the municipality to provide for the expected development, including the determination of the development and non-development-related components of the capital projects.

This study presents the results of the review to determine the net capital costs attributable to new development that is forecast to occur in the City of Winnipeg between 2017 and 2041. These development-related net capital costs are apportioned to residential and non-residential development in a manner that reflects the increase in the need for each service.

This report serves as a companion document to the August 31, 2016 report entitled *Review of Municipal Growth Financing Mechanisms*, which explores Winnipeg's context with respect to the funding of development-related costs, and includes a detailed review of regulatory fees and similar mechanisms employed by municipalities across Canada to fund development-related costs.

The remainder of this report sets out the information and analysis upon which the potential regulatory fees are based:

Section II designates the services for which the regulatory fees are proposed. It also briefly reviews the methodology that has been used in the study.

Section III presents a summary of the forecast of residential and non-residential development expected to occur within the City over three planning periods: from 2017 to 2026, from 2017 to 2031, and a longer-term planning period from 2017 to 2041.

Section IV summarizes the development-related capital forecast that has been developed by various departments.

Section V summarizes the calculation of applicable regulatory fees and the resulting calculated regulatory fees by class and type of development.

Section VI provides a discussion of implementation considerations and recommendations including by-law administration.

II A CITY-WIDE METHODOLOGY ALIGNS DEVELOPMENT-RELATED COSTS AND BENEFITS

This study has been tailored specifically for the City of Winnipeg. The approach to the proposed regulatory fees is focused on providing a reasonable alignment of development-related costs with the development that necessitates them. The study uses a City-wide approach for all services, which is deemed the best approach to align development-related costs and benefits.

A. CITY-WIDE REGULATORY FEES ARE CALCULATED

The City of Winnipeg provides a wide range of services to the community it serves. For all of the services that the City provides, the full range of capital facilities, land, equipment and infrastructure is available throughout the City. A widely accepted method for recovering the development-related capital costs for such services is to apportion them over all new development anticipated in Winnipeg. This approach can be reviewed in subsequent studies.

The following services are included in the City-wide regulatory fee calculation:

- Parks and Open Spaces;
- Community Services;
- Solid Waste;
- Public Works;
- Transit;
- Fire and Paramedic Services;
- Police Services;
- Water; and
- Wastewater.

These services form a reasonable basis upon which to plan and administer the regulatory fees. The resulting regulatory fee for these services is to be imposed against all development anywhere in the City.

B. KEY STEPS IN DETERMINING REGULATORY FEES FOR FUTURE DEVELOPMENT-RELATED PROJECTS

Several key steps are required in calculating regulatory fees for future development-related projects. These are summarized below.

1. Development Forecast

The first step in the methodology requires a development forecast to be prepared for the 10-year study period, 2017 to 2026, the 15-year study period to 2031, and for the 25-year study period to 2041. The development forecast is based on the latest population and employment estimates provided by City staff. The forecast considers the 2011 Census; the most recent year Census data are available.

For the residential portion of the forecast, both the net (or Census) population growth and population growth in new units is estimated. Population growth determines the need for additional facilities and provides the foundation for the development-related capital program.

When calculating the regulatory fee however, the development-related net capital costs are spread over the total additional population that occupy new housing units. This population in new units represents the population from which regulatory fees will be collected.

The non-residential portion of the forecast estimates the gross floor area (GFA) of building space to be developed over the 10-year period, 2017 to 2026, the 15-year period to 2031, and the 25-year period to 2041. Forecasts for growth in four major employment categories were calculated: Office, Institutional, Commercial/Retail, and Industrial. The forecasts of GFA are based on the employment forecasts for the City. Factors for floor space per worker are used to convert the employment forecasts into GFA for the purposes of this study.

2. Development-Related Capital Forecast and Analysis of Net Capital Costs to be Included in the Regulatory fees

A development-related capital forecast has been prepared by the City's departments as part of this study. The forecast identifies development-related projects and their gross and net costs, after allowing for capital grants, subsidies or other contributions. The capital forecast provides another cornerstone upon which regulatory fees are based.

The development-related capital forecast prepared for this study ensures that regulatory fees are only imposed to help pay for projects that have been or are intended to be purchased or built in order to accommodate future anticipated development. For

some projects in the development-related capital forecast, a portion of the project may confer benefits to existing residents. These portions of projects and their associated net costs are the funding responsibility of the City from non-regulatory fee sources. The amount of City funding for such shares is also identified as part of the preparation of the capital forecast.

Finally, in certain cases further adjustments are made to attribute portions of the regulatory fee-eligible project costs to prior growth, or to account for excess capacity that is anticipated to serve growth beyond the 10-, 15-, or 25-year study period.

3. Attribution to Types of Development

The next step in the determination of regulatory fees is the allocation of the development-related net capital costs between the residential and non-residential sectors. This is done using apportionments for different services in accordance with the demands placed and the benefits derived.

The apportionment is based on the expected demand for, and use of, the service by sector (e.g. shares of population and employment). The non-residential portion of the capital costs is further apportioned based on the respective shares of forecast employment growth under the four employment categories (Office, Institutional, Commercial/Retail, Industrial).

Each of the residential and non-residential components of the regulatory fee are applied on the basis of gross building space in square metres.

4. Final Adjustment

The final determination of the regulatory fee results from a cash flow analysis to account for the timing of projects and receipt of regulatory fees. Interest earnings or borrowing costs are therefore accounted for in the calculation.

III DEVELOPMENT FORECAST

This section provides the basis for the development forecasts used in calculating the regulatory fees, as well as a summary of the forecast results. A more detailed summary of the forecasts, including tables illustrating historical trends and forecast results is provided in Appendix A.

A. RESIDENTIAL FORECAST

When calculating the regulatory fee, the development-related net capital costs are spread over the total additional population that occupy new housing units. This population in new units represents the population from which regulatory fee will be collected.

Table 1 provides a summary of the residential forecast for two planning periods: a 10-year planning period, from 2017 to 2026; a 15-year planning period, from 2017 to 2031; and over the longer-term from 2017 to 2041. For regulatory fee calculation purposes:

- The 10-year planning period is applicable to Parks and Open Spaces, Community Services, and Solid Waste regulatory fees;
- The 15-year planning period is applicable to Public Works regulatory fees; and
- The longer-term development forecast to 2041 has been utilized in the calculation of Transit, Fire and Paramedic Service, Police Services, Water, and Wastewater regulatory fees.

As shown on Table 1, the City's Census population is expected to increase by about 86,400 people over the next ten years reaching approximately 797,800 by 2026. Over the 15-year period, Census population growth is expected to total 127,400 to reach 838,900 by 2031. Finally, the longer-term Census population is forecast to grow by approximately 198,500 people to 910,000 in 2041.

Over the 10-year planning period from 2017 to 2026, the total number of new residential occupied units will increase by approximately 42,300. This translates to a population growth in new units of 107,700. The population in new units was derived using data from Statistics Canada analysing household sizes in recently constructed

TABLE 1

CITY OF WINNIPEG
SUMMARY OF RESIDENTIAL AND NON-RESIDENTIAL
GROWTH FORECAST

Growth Forecast	2016 Estimate	Planning Period 2017 - 2026		Planning Period 2017 - 2031		Planning Period 2017 - 2041	
		Growth	Total at 2026	Growth	Total at 2031	Growth	Total at 2041
Residential							
Total Dwellings	283,850	42,278	326,128	61,904	345,754	98,328	382,178
Total Population							
Census	711,494	86,354	797,848	127,378	838,871	198,458	909,952
Population In New Dwellings		*107,740*		*156,159*		*244,757*	
Non-Residential							
Total Employment	398,951	53,324	452,275	75,489	474,440	122,724	521,675
Major Office	*88,819*	*11,871*	*100,690*	*16,806*	105,625	*27,322*	116,141
Institutional	*87,397*	*11,681*	*99,078*	*16,537*	103,934	*26,885*	114,282
Commercial/Retail	*85,207*	*11,389*	*96,596*	*16,123*	101,330	*26,211*	111,418
Industrial	*137,529*	*18,382*	*155,911*	*26,023*	163,551	*42,306*	179,835
Non-Residential Building Space (sq.m.)		3,373,581		4,775,863		7,764,241	

units. The forecast has projected growth over the 15-year planning period of 61,900 new units with population residing in the new units at 156,200; and longer-term planning period growth of 98,300 units and 244,800 residents.

To translate the per capita forecast to a residential floor space forecast, an assumption of 48.8 square metres per capita was used. This is based on a sampling of recently constructed dwellings.

B. NON-RESIDENTIAL FORECAST

The non-residential forecast projects an increase of approximately 53,300 employees to 2026, 75,500 to 2031, and 122,700 to 2041, the highest proportion of which is anticipated to be in the Industrial sector. These additional employees will be accommodated in 3.37 million square metres of new non-residential building space to 2026, 4.78 million square metres to 2031, and 7.76 million additional square metres to 2041. The employment numbers above exclude work at home employment since it does not generate any additional floor space.

Table 1 also provides a summary of the non-residential development forecasts used in this analysis.

IV THE DEVELOPMENT-RELATED CAPITAL FORECAST

Based on the development forecasts summarized in Section III and detailed in Appendix A, City staff, in collaboration with the consultants have created a development-related capital forecast setting out those projects that are required to service anticipated development. For Parks and Open Spaces, Community Services, and Solid Waste services, the capital plan covers the 10-year period from 2017 to 2026. The capital plan for Public Works covers the 15-year period from 2017 to 2031. Finally, regulatory fees for Transit, Fire and Paramedic, Police, Water, and Wastewater services are based on development anticipated in the City to 2041.

It is assumed that future capital budgets and forecasts will continue to bring forward the development-related projects contained herein, that are consistent with the development occurring in the City. It is acknowledged that changes to the forecast presented here may occur through the City's normal capital budget process.

A summary of the total development-related capital forecast is presented in Table 2. Further details on the capital plans for each individual service category are available in Appendices B, C, and D.

A. DEVELOPMENT-RELATED CAPITAL FORECAST FOR THE 10-YEAR BENEFITTING PERIOD

The development-related capital forecast for the 10-year benefitting period services (Parks and Open Spaces, Community Services, and Solid Waste) estimates a total gross cost of $287.76 million. Alternative funding sources have been identified in the amount of $74.06 million and account for contributions from other levels of government as well as private partners. Therefore, the net municipal cost of the capital program is reduced to $213.70 million.

The Parks and Open Spaces development-related capital program totals $55.11 million in net municipal costs and accounts for 25.8 per cent of the overall forecast. The program includes major improvements to Kilcona Park and Tyndall Park, as well as hard surfacing for outdoor athletic facilities.

The most significant portion of the development-related capital program is associated with Community Services, amounting to $123.99 million or 58.0 per cent. The

TABLE 2

CITY OF WINNIPEG
SUMMARY OF ALL SERVICES DEVELOPMENT-RELATED CAPITAL PROGRAM
2017-2026

Service	Gross Cost ($000)	Grants/ Subsidies ($000)	Municipal Cost ($000)
1.0 PARKS AND OPEN SPACES	$61,650	$6,540	$55,110
2.0 COMMUNITY SERVICES	$191,512	$67,521	$123,991
3.0 SOLID WASTE	$34,600	$0	$34,600
TOTAL 10-YEAR BENEFITTING PERIOD	**$287,762**	**$74,061**	**$213,701**
4.0 PUBLIC WORKS	$3,471,887	$1,714,532	$1,757,355
TOTAL 15-YEAR BENEFITTING PERIOD	**$3,471,887**	**$1,714,532**	**$1,757,355**
5.0 TRANSIT	$2,615,300	$1,514,841	$1,100,459
6.0 FIRE & PARAMEDIC SERVICES	$35,000	$0	$35,000
7.0 POLICE	$231,178	$2,800	$228,378
8.0 WATER	$310,868	$0	$310,868
9.0 WASTEWATER	$1,177,172	$267,680	$909,492
TOTAL 25-YEAR BENEFITTING PERIOD	**$4,369,518**	**$1,785,321**	**$2,584,197**

program includes development, redevelopment, expansion, or improvement of library and recreation facilities. Most notably, it includes the City's portion of a partnership with the YMCA to construct three new recreation facilities.

Finally, the Solid Waste development-related capital program totals $34.6 million in net municipal costs, or 16.19 per cent of the overall forecast. The program includes cell construction and construction of a new administration building for the Brady Road Resource Management Facility, as well as implementation of a Comprehensive Integrated Waste Management Strategy.

The capital forecast incorporates those projects identified to be related to development anticipated in the next ten years. It is not implied that all of these costs are to be recovered from new development by way of regulatory fees (see the following Section V for the method and determination of net capital costs attributable to development). For example, portions of this capital forecast may relate to providing servicing for replacement of existing capital facilities (e.g. upgrades to existing library facilities).

B. DEVELOPMENT-RELATED CAPITAL FORECAST FOR THE 15-YEAR BENEFITTING PERIOD

The development-related capital forecast for Public Works is anticipated to benefit development occurring over a 15-year period, from 2017 to 2031. The program includes the development of active transportation facilities as well as a number of major road and bridge projects that will help to serve new development areas. The total gross costs for this service are calculated at $3.47 billion. Approximately $1.71 billion is anticipated in grants from other levels of government, leaving $1.76 billion in net municipal costs.

Similar to the capital forecast for the 10-year benefitting period, it is not implied that all costs associated with this capital forecast are to be recovered from new development by way of regulatory fees over the 15-year benefitting period. Portions of this capital forecast may relate to providing servicing for replacement of existing capital facilities, for development which has occurred prior to 2017, or to account for infrastructure that will support new development beyond 2031.

C. DEVELOPMENT-RELATED CAPITAL FORECAST FOR THE 25-YEAR BENEFITTING PERIOD

The 25-year benefitting period services include major Transit, Fire and Paramedic, Police, Water, and Wastewater services. The total gross cost for these services is $4.37 billion. Alternative funding sources have been identified in the amount of $1.79 billion and represent contributions from other levels of government. Therefore, the net municipal cost of the capital program is reduced to approximately $2.58 billion.

The Transit development-related capital program totals $1.10 billion in net municipal costs, or 42.6 per cent of the overall forecast. The program includes construction of six Bus Rapid Transit corridors, annual purchases of additional transit buses due to ridership growth both within the current transit system and the future BRT routes, and the expansion and improvement of mechanical and storage facilities.

The development-related capital program for Fire and Paramedic Services totals $35.00 million, or 1.35 per cent of the overall forecast. It includes construction of four new fire stations and expansions to two existing stations, which will allow for additional capacity to help service intensification in existing neighbourhoods.

The Police development-related capital program totals $228.38 million in net municipal costs, or 8.8 per cent of the overall forecast. The program includes construction of new stations and a new headquarters, along with related technology needs.

The Water development-related capital program amounts to $310.87 million, or 12.0 per cent of the overall forecast. It includes water main extensions and upgrades, a water treatment plant capacity validation initiative, and a new water treatment plant.

Approximately $909.49 million, or 35.2 per cent of the overall forecast, accounts for the Wastewater development-related capital program. The Wastewater program includes expansions and upgrades to three sewage treatment plants and construction of interceptor sewers.

Again, it is not implied that all costs associated with the capital forecast for the 25-year benefitting period are to be recovered through regulatory fees. Portions of this capital forecast may relate to providing servicing for development which has occurred prior to 2017 or for replacement of existing capital facilities.

V CALCULATION OF POTENTIAL REGULATORY FEES

This section summarizes the calculation of regulatory fees for each service category. For all municipal services, the calculation of the "unadjusted" per capita (residential) and per square metre (non-residential) charges is reviewed. Adjustments to these amounts resulting from a cash flow analysis that takes interest earnings and borrowing costs into account are also discussed.

For residential development, the adjusted total per capita amount is converted to a charge per square metre using size assumptions derived from recently constructed units. For non-residential development, the charges are based on gross floor area of building space, and a variable charge by employment category (Office, Institutional, Commercial/Retail, and Industrial) is calculated based on employment density factors.

A. UNADJUSTED REGULATORY FEES CALCULATION FOR 10-YEAR BENEFITTING PERIOD SERVICES

A summary of the calculation for the "unadjusted" residential and non-residential regulatory fees for the 10-year benefitting period services is presented in Table 3. Further details of the calculation for each individual service category are available in Appendix B.

The net capital forecast for these services totals $213.70 million and incorporates those projects identified to be related to development anticipated in the next ten years. However, not all of the capital costs are to be recovered from new development by way of regulatory fees. As shown on Table 3, 65.1 per cent of the net municipal costs, or $139.12 million relates to replacement of existing capital facilities or for shares of projects that provide benefit to the existing population. An additional $28.87 million has been attributed to shares of projects that are expected to serve new residential development which occurred in the City during the 10-year period preceding 2017. These portions of the capital costs will have to be funded from non-regulatory fee revenue sources, which will largely be property taxes for this group of services.

The costs idetified for recovery through regulatory fees for these services total $45.71 million. This amount is allocated between the residential and non-residential sectors to derive the unadjusted regulatory fees. Parks and Open Spaces and Community

TABLE 3

CITY OF WINNIPEG
SUMMARY OF UNADJUSTED RESIDENTIAL AND NON-RESIDENTIAL CHARGES
10-YEAR SERVICES DEVELOPMENT-RELATED CAPITAL PROGRAM

10 Year Growth in New Units	107,740
10 Year Growth in Square Metres	3,373,581

Service	Development-Related Capital Program						Residential Share		Non-Res Share	
	Gross Cost ($000)	Grants/ Subsidies/ Recoveries ($000)	Replacement & Benefit to Existing ($000)	Prior Growth ($000)	Post 2026 ($000)	Total Costs for Recovery ($000)	%	($000)	%	($000)
1.0 PARKS AND OPEN SPACES	$61,650	$6,540	$45,695	$0	$0	$9,415	100%	$9,415	0%	$0
Unadjusted Charge Per Capita								$87.38		
Unadjusted Charge Per Sq.M.										$0.00
2.0 COMMUNITY SERVICES	$191,512	$67,521	$63,174	$28,871	$0	$31,946	100%	$31,946	0%	$0
Unadjusted Charge Per Capita								$296.51		
Unadjusted Charge Per Sq.M.										$0.00
3.0 SOLID WASTE	$34,600	$0	$30,248	$0	$0	$4,352	62%	$2,698	38%	$1,654
Unadjusted Charge Per Capita								$25.05		
Unadjusted Charge Per Sq.M.										$0.49
TOTAL 10-YEAR BENEFITTING PERIOD SERVICES	**$287,762.0**	**$74,060.6**	**$139,117.0**	**$28,871.4**	**$0.0**	**$45,713.0**		**$44,059.2**		**$1,653.8**

Services are deemed to benefit residential development only, while Solid Waste services are allocated between both sectors based on shares of population and employment growth. The allocation to the residential sector for Solid Waste services is calculated at 62 per cent, and 38 per cent to the non-residential sector.

Approximately $44.06 million of the regulatory fees eligible capital program for these services is deemed to benefit residential development. This includes $9.41 million for Parks and Open Spaces, $31.95 million for Community Services, and $2.70 for Solid Waste. When these amounts are divided by the 10-year growth in population in new dwelling units (107,740), unadjusted per-capita charges of $87.38 for Parks and Open Spaces, $296.51 for Community Services, and $25.05 for Solid Waste result.

The non-residential regulatory fees eligible capital program includes $1.65 million for Solid Waste services. These unadjusted uniform non-residential charge was calculated by dividing the eligible capital costs by the forecast 10-year increase in non-residential space, which totals 3.37 million square metres. The unadjusted per-square metre charges were calculated at $0.49 for Solid Waste.

The non-residential capital program is further divided by four employment categories. Based on employment forecasts under each category, approximately 22.3 per cent of the non-residential capital program is allocated to Office development, another 21.9 per cent is allocated to Institutional development, 21.4 per cent is allocated to Commercial/Retail development, and 34.5 per cent is allocated to Industrial development. Charges calculated for each of these employment categories are included in Tables 8 through 11. Much of the variation in these charges is due to variations in the forecast growth in new space under each category.

B. UNADJUSTED REGULATORY FEES CALCULATION FOR 15-YEAR BENEFITTING PERIOD SERVICES

Table 4 displays the calculation of the unadjusted rates to cover the Public Works development-related capital projects, which will service development in the City between 2017 and 2031. Further details of the calculation are available in Appendix C.

The net capital forecast for this service totals $1.76 billion; however, not all of the capital costs are to be recovered from new development by way of regulatory fees. Approximately 40.5 per cent of the net municipal costs, or $711.46 million relates to

TABLE 4

CITY OF WINNIPEG
SUMMARY OF UNADJUSTED RESIDENTIAL AND NON-RESIDENTIAL CHARGES
15-YEAR SERVICES DEVELOPMENT-RELATED CAPITAL PROGRAM

2017-2041 Growth in New Units	156,159
2017-2041 Growth in Square Metres	4,775,863

Service	Development-Related Capital Program						Residential Share		Non-Res Share	
	Gross Cost ($000)	Grants/ Subsidies/ Recoveries ($000)	Replacement & Benefit to Existing ($000)	Prior Growth ($000)	Post 2031 ($000)	Total Costs for Recovery ($000)	%	($000)	%	($000)
4.0 PUBLIC WORKS	$3,471,887	$1,714,532	$711,460	$165,611	$232,499	$647,785	62%	$401,626	38%	$246,158
Unadjusted Charge Per Capita								$2,571.91		
Unadjusted Charge Per Sq.M.										$51.54
TOTAL 15-YEAR BENEFITTING PERIOD SERVICES	**$3,471,887.1**	**$1,714,532.0**	**$711,460.2**	**$165,611.0**	**$232,499.4**	**$647,784.5**		**$401,626.4**		**$246,158.1**

replacement of existing capital facilities or for shares of projects that provide benefit to the existing community. An additional $165.61 million of the Public Works costs has been allocated to development that occurred during the 10-year period preceding 2017; this includes portions of recently completed projects as well as planned projects that are expected to benefit recent development. Finally, $232.50 million of the capital have been allocated to growth beyond 2031. These portions of capital costs will have to be funded from non-regulatory fee revenue sources, which will largely be property taxes for this service.

The costs eligible for recovery through regulatory fees for Public Works total $647.78 million. This amount is allocated between the residential and non-residential sectors to derive the unadjusted regulatory fees. The allocations of 62 per cent to the residential sector and 38 per cent to the non-residential sector are used for this service as Public Works projects are deemed to benefit both residential and non-residential development.

Approximately $401.63 million of the regulatory fees eligible capital program for Public Works is deemed to benefit residential development. When this amount is divided by the 15-year growth in population in new dwelling units (156,159), an unadjusted per-capita charge of $2,571.91 results.

The non-residential regulatory fees eligible capital program totals $246.16 million. The unadjusted uniform non-residential charge was calculated by dividing the eligible capital costs by the forecast 15-year increase in non-residential space (4.78 million square metres). The unadjusted per-square metre charge was calculated at $51.54.

The non-residential capital program is further divided by four employment categories based on employment forecasts under each category, and distinct charges were then calculated for each of these employment categories based on their unique forecast growth in new space. Calculated charges for Office, Institutional, Commercial/Retail, and Industrial development are summarized in Tables 8 through 11.

C. UNADJUSTED REGULATORY FEES CALCULATION FOR 25-YEAR BENEFITTING PERIOD SERVICES

Table 5 displays the calculation of the unadjusted rates to cover capital projects that will be used to service development in the City between 2017 and 2041. Further details of the calculation for each individual service category are available in Appendix D.

TABLE 5

CITY OF WINNIPEG
SUMMARY OF UNADJUSTED RESIDENTIAL AND NON-RESIDENTIAL CHARGES
25-YEAR SERVICES DEVELOPMENT-RELATED CAPITAL PROGRAM

2017-2041 Growth in New Units	244,757
2017-2041 Growth in Square Metres	7,764,241

Service	Development-Related Capital Program						Residential Share		Non-Res Share	
	Gross Cost ($000)	Grants/ Subsidies/ Recoveries ($000)	Replacement & Benefit to Existing ($000)	Prior Growth ($000)	Post 2041 ($000)	Total Costs for Recovery ($000)	%	($000)	%	($000)
5.0 TRANSIT	$2,615,300	$1,514,841	$703,415	$31,597	$0	$365,447	62%	$226,577	38%	$138,870
Unadjusted Charge Per Capita								$925.72		
Unadjusted Charge Per Sq.M.										$17.89
6.0 FIRE & PARAMEDIC SERVICES	$35,000	$0	$2,500	$808	$0	$31,692	62%	$19,649	38%	$12,043
Unadjusted Charge Per Capita								$80.28		
Unadjusted Charge Per Sq.M.										$1.55
7.0 POLICE	$231,178	$2,800	$186,972	$13,444	$0	$27,961	62%	$17,336	38%	$10,625
Unadjusted Charge Per Capita								$70.83		
Unadjusted Charge Per Sq.M.										$1.37
8.0 WATER	$310,868	$0	$227,969	$22,495	$0	$60,404	62%	$37,450	38%	$22,953
Unadjusted Charge Per Capita								$153.01		
Unadjusted Charge Per Sq.M.										$2.96
9.0 WASTEWATER	$1,177,172	$267,680	$656,075	$419	$0	$252,998	62%	$156,859	38%	$96,139
Unadjusted Charge Per Capita								$640.88		
Unadjusted Charge Per Sq.M.										$12.38
TOTAL 25-YEAR BENEFITTING PERIOD SERVICES	**$4,369,518.0**	**$1,785,321.4**	**$1,776,930.5**	**$68,764.6**	**$0.0**	**$738,501.6**		**$457,871.0**		**$280,630.6**

The net capital forecast for these services totals $2.58 billion; however, not all of the capital costs are to be recovered from new development by way of regulatory fees. Approximately 68.8 per cent of the net municipal costs, or $1.78 billion relates to replacement of existing capital facilities or for shares of projects that provide benefit to the existing community. An additional $68.76 million of the capital costs represent portions of recently completed projects or planned projects that are expected to service development that occurred over the 10-year period preceding 2017. These portions of capital costs will have to be funded from non-regulatory fee revenue sources, whether through property taxes or utility rates.

The costs eligible for recovery through regulatory fees for these services total $738.50 million. As all services in this category are deemed to benefit both residential and non-residential development, the eligible costs are allocated at 62 per cent to the residential sector and 38 per cent to the non-residential sector to derive the unadjusted regulatory fees.

Approximately $457.87 million of the regulatory fees eligible capital program for these services is deemed to benefit residential development. This includes $226.58 million for Transit, $19.65 million for Fire and Paramedic Services, $17.34 million for Police, $37.45 million for Water, and $156.86 million for Wastewater.

When these amounts are divided by the 25-year growth in population in new dwelling units (244,757), unadjusted per-capita charges of $925.72 for Transit, $80.28 for Fire and Paramedic Services, $70.83 for Police, $153.01 for Water, and $640.88 for Wastewater result.

The non-residential regulatory fees eligible capital program totals $280.63 million, including $138.87 million for Transit, $12.04 million for Fire and Paramedic Services, $10.62 million for Police, $22.95 million for Water, and $96.14 million for Wastewater. These unadjusted uniform non-residential charges were calculated for each service by dividing the eligible capital costs by the forecast 25-year increase in non-residential space (7.57 million square metres). The unadjusted per-square metre charges were calculated at $17.89 for Transit, $1.55 for Fire and Paramedic Services, $1.37 for Police, $2.96 for Water, and $12.38 for Wastewater.

Once again, the non-residential capital program is further divided by four employment categories based on employment forecasts under each category. Calculated charges for Office, Institutional, Commercial/Retail, and Industrial development are summarized in Tables 8 through 11.

D. ADJUSTED RESIDENTIAL AND NON-RESIDENTIAL REGULATORY FEES

Final adjustments to the "unadjusted" regulatory fee rates are made through a cash flow analysis. The analysis, details of which are included in the appendices, considers the borrowing cost and interest earnings associated with the timing of expenditures and regulatory fee receipts for each service category.

Table 6 summarizes the results of the cash flow adjustments for the residential regulatory fee rates. After the cash flow analysis, the adjusted per capita rate increases for most services, with the exception of slight decreases for the Parks and Open Spaces and Community Services rates. A charge per square metre (total $109.45) was then calculated from the adjusted per capita rate based on an estimate of 48.8 square metres of residential space per capita. Sample charges based on units of 167 square metres and 79 square metres are also provided in Table 6.

Most of the non-residential regulatory fees also experience an increase after cash flow considerations. The adjusted per square metre charges for each service are provided in Tables 7 through 11 including both the calculated uniform non-residential charge and the variable charges for Office, Institutional, Commercial/Retail, and Industrial development. Total regulatory fee rates per square metre have been calculated at $226.51 for Office, $94.08 for Institutional, $152.91 for Commercial/Retail, and $61.16 for Industrial development.

TABLE 6

CITY OF WINNIPEG
CALCULATED REGULATORY FEES
RESIDENTIAL CHARGES BY UNIT TYPE

Service	Unadjusted Charge Per Capita	Adjusted Charge Per Capita	Adjusted Charge Per Square Metre	Sample Residential Charge	
				1,800 sq. ft. (167 sq. m.)	850 sq. ft. (79 sq. m.)
PARKS AND OPEN SPACES	$87.38	$87.26	$1.79	$299.33	$141.35
COMMUNITY SERVICES	$296.51	$296.40	$6.07	$1,015.06	$479.33
SOLID WASTE	$25.05	$25.97	$0.53	$88.63	$41.85
PUBLIC WORKS	$2,571.91	$2,735.87	$56.04	$9,371.32	$4,425.35
TRANSIT	$925.72	$987.01	$20.22	$3,381.30	$1,596.73
FIRE & PARAMEDIC SERVICES	$80.28	$90.43	$1.85	$309.37	$146.09
POLICE	$70.83	$101.92	$2.09	$349.50	$165.04
WATER	$153.01	$219.70	$4.50	$752.52	$355.35
WASTEWATER	$640.88	$798.87	$16.36	$2,735.81	$1,291.91
TOTAL CHARGE	**$4,851.56**	**$5,343.41**	**$109.45**	**$18,302.84**	**$8,643.00**

TABLE 7

CITY OF WINNIPEG
CALCULATED REGULATORY FEES
NON-RESIDENTIAL UNIFORM CHARGES PER SQUARE METRE

Service	Non-Residential Uniform Charge	
	Unadjusted Charge per Square Metre	Adjusted Charge per Square Metre
PARKS AND OPEN SPACES	$0.00	$0.00
COMMUNITY SERVICES	$0.00	$0.00
SOLID WASTE	$0.49	$0.50
PUBLIC WORKS	$51.54	$53.80
TRANSIT	$17.89	$19.00
FIRE & PARAMEDIC SERVICES	$1.55	$1.75
POLICE	$1.37	$1.96
WATER	$2.96	$4.23
WASTEWATER	$12.38	$15.42
TOTAL CHARGE PER SQUARE METRE	**$88.18**	**$96.66**

TABLE 8

CITY OF WINNIPEG
CALCULATED REGULATORY FEES
MAJOR OFFICE CHARGES PER SQUARE METRE

Service	Office Charge	
	Unadjusted Charge per Square Metre	Adjusted Charge per Square Metre
PARKS AND OPEN SPACES	$0.00	$0.00
COMMUNITY SERVICES	$0.00	$0.00
SOLID WASTE	$1.15	$1.17
PUBLIC WORKS	$120.77	$126.06
TRANSIT	$41.91	$44.53
FIRE & PARAMEDIC SERVICES	$3.63	$4.09
POLICE	$3.21	$4.60
WATER	$6.93	$9.92
WASTEWATER	$29.01	$36.14
TOTAL CHARGE PER SQUARE METRE	**$206.61**	**$226.51**

TABLE 9

CITY OF WINNIPEG
CALCULATED REGULATORY FEES
INSTITUTIONAL CHARGES PER SQUARE METRE

Service	Institutional Charge	
	Unadjusted Charge per Square Metre	Adjusted Charge per Square Metre
PARKS AND OPEN SPACES	$0.00	$0.00
COMMUNITY SERVICES	$0.00	$0.00
SOLID WASTE	$0.48	$0.48
PUBLIC WORKS	$50.17	$52.36
TRANSIT	$17.41	$18.50
FIRE & PARAMEDIC SERVICES	$1.51	$1.70
POLICE	$1.33	$1.91
WATER	$2.88	$4.12
WASTEWATER	$12.05	$15.01
TOTAL CHARGE PER SQUARE METRE	**$85.82**	**$94.08**

TABLE 10

CITY OF WINNIPEG
CALCULATED REGULATORY FEES
COMMERCIAL/RETAIL CHARGES PER SQUARE METRE

Service	Commercial/Retail Charge	
	Unadjusted Charge per Square Metre	Adjusted Charge per Square Metre
PARKS AND OPEN SPACES	$0.00	$0.00
COMMUNITY SERVICES	$0.00	$0.00
SOLID WASTE	$0.78	$0.79
PUBLIC WORKS	$81.52	$85.09
TRANSIT	$28.29	$30.06
FIRE & PARAMEDIC SERVICES	$2.45	$2.76
POLICE	$2.16	$3.11
WATER	$4.68	$6.70
WASTEWATER	$19.58	$24.40
TOTAL CHARGE PER SQUARE METRE	**$139.46**	**$152.91**

TABLE 11

CITY OF WINNIPEG
CALCULATED REGULATORY FEES
INDUSTRIAL CHARGES PER SQUARE METRE

Service	Industrial Charge	
	Unadjusted Charge per Square Metre	Adjusted Charge per Square Metre
PARKS AND OPEN SPACES	$0.00	$0.00
COMMUNITY SERVICES	$0.00	$0.00
SOLID WASTE	$0.31	$0.32
PUBLIC WORKS	$32.61	$34.04
TRANSIT	$11.32	$12.02
FIRE & PARAMEDIC SERVICES	$0.98	$1.10
POLICE	$0.87	$1.24
WATER	$1.87	$2.68
WASTEWATER	$7.83	$9.76
TOTAL CHARGE PER SQUARE METRE	**$55.79**	**$61.16**

VI ADMINISTRATION OF REGULATORY FEES

The following policies and practices should be considered when implementing the regulatory fee. The application of fees in other municipalities is described in more detail in the companion report entitled *Review of Municipal Growth Financing Mechanisms*.

A. SERVICE RESPONSIBILITY

- It is recommended that the City review its development agreement parameters to ensure that any capital projects recovered through a regulatory fee are also not required to be emplaced and funded by developers as condition of planning approval.

- Notwithstanding the above, the City may wish to enter into credit agreements with developers so that a developer receives a credit from a regulatory fee for regulatory fee infrastructure constructed on the municipality's behalf.

B. USE OF FUNDS

- Reserves funds or accounts should be established for each service adopted under a regulatory fee by-law.

- It is recommended that Council adopt the development-related capital forecast included in this study, subject to annual review through the City's normal capital budget process. Projects may be removed, added or substituted as long as they are development-related.

C. TIMING OF PAYMENT

- It is understood that the regulatory fee would be collected at building permit issuance. This is a common collection point in other municipalities.

D. INDEXING OF FEES

- It is recommended that the City establish a by-law policy for the indexing of fees once they are established.

- Indexing is commonly done annually (and in some cases semi-annually) in other communities using construction cost indices.

E. UPDATING OF BY-LAW

- It is recommended that Council update the by-law as needed for changes relating to the application of charges, definitions, exemptions and discounts.

- The regulatory fees may be commonly updated at three to five year intervals or when there are significant changes to the capital plan or development forecast.

F. PUBLIC COMMUNICATION

- It is recommended that City advertise the adoption of the regulatory fee by-law including the applicable fees.

- The regulatory fees and rules should be included within a pamphlet that can be posted on the City's website and made available at Planning, Property and Development offices.

G. DEMOLITION AND CONVERSION CREDITS

- Many municipalities provide credits when one use is converted to another use, assuming approvals are necessary. The credit is typically determined based on a notional charge calculated using the prior land-use relative to the calculated charge of the new land-use. Municipalities do not provide funds to the applicant when the notional existing land use charge exceeds the new land-use charge.

- Similarly, municipalities commonly provide credits when a building is demolished and redeveloped with a new building on the same site. The credit is based on the size and use of the existing building compared to the proposed new dwelling. Demolition credit periods are often in the 2- to 7-year range.

H. DISCOUNTS AND EXEMPTIONS

This section includes examples of exemptions and discounts that Council may wish to consider. Exemptions and discounts result in revenue losses that are typically recovered through tax or utility rates. It is expected that the City may refine its discount and exemption policy over time following the initial adoption of a regulatory fee.

1. Common Land-use Exemptions

- The most common exemptions used across Canada are for government buildings. This may include federal, provincial and municipal buildings, including agencies, boards and commissions; pubic schools; and exemptions for universities and colleges.

- Exemptions for small residential expansions and renovations are also common across Canadian municipalities.

2. Other Land-use Exemptions for Consideration

- Some municipalities target exemptions and/or discounts for non-profit organizations. This may include land uses such as places of worship and affordable housing.

3. Economic Development Incentives

- Some municipalities reduce fees within a defined area to encourage investment. Typically, this may include the downtown area of a community where growth has been slow to occur.

- Some municipalities also choose to reduce charges for industrial development, the rationale being that it is more of a "footloose" sector than residential, office and retail uses, making it thereby more sensitive to fees and charges.

4. Phase-ins

- The phase-in of regulatory fees is commonly advocated by the building industry when significant increases in charges are proposed.

- As with other discounts, phase-ins result in revenue losses that have to be made up through other revenue sources.

APPENDIX A

DEVELOPMENT FORECAST

APPENDIX A

DEVELOPMENT FORECAST

This appendix provides the details of the development forecasts used to prepare the 2016 *Determination of Regulatory Fees to Finance Growth: Technical Report* for the City of Winnipeg. The forecast method and key assumptions are discussed and the results of the forecasts are presented in the following tables:

Historical Development

Table 1 Historical Population, Dwelling Units & Employment
Table 2 Historical Residential Building Completions
Table 3 Historical Households by Period of Construction Showing Household Size
Table 4 Historical Place of Work Employment

Forecast Development

Table 5 Population, Household & Employment Forecast
Table 6 Forecast of Household Growth by Unit Type
Table 7 Forecast of Household Growth and Population in new Households
Table 8 Employment Growth by Category
Table 9 Employment Growth in New Non-Residential Space by Category

A. FORECAST AND KEY ASSUMPTIONS

A 10-year development forecast, from 2017 to 2026, has been used for Parks and Open Spaces, Community Services, and Solid Waste services in the City. A 15-year forecast to 2031 has been used for Public Works projects. For Transit, Fire and Paramedic Services, Police, Water, and Wastewater services, a long-term forecast from 2017 to 2041 has been used.

B. HISTORICAL DEVELOPMENT IN THE CITY

Historical growth and development figures presented in this appendix are based on Statistics Canada Census data, Canada Mortgage and Housing Corporation (CMHC) data and the City's historical development data. A "Census-based" definition of population is used for the purposes of the study. This definition does not include the Census net undercoverage which is typically included in the definition of "total"

population commonly used in municipal planning documents. A 10-year historical period of 2006 to 2016 was examined. Since 2011 was the year of the last Census, figures for 2012 to 2016 are estimates.

Table 1 shows that the rate of population growth in the City has increased in recent years. Between 2011 and 2016, Winnipeg's population grew by approximately 7.2 per cent to 711,500, as compared with 4.8 per cent growth over the prior five-year period. Similarly, household growth has accelerated; between 2011 and 2016 the number of occupied households in the City grew by roughly 5.6 per cent to 283,900, up from 2.9 per cent growth between 2006 and 2011.

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 the place of residence. The employment figures used for regulatory fees calculations includes employees with no fixed work place of work, but excludes work at home employment. Employment growth has increased significantly from 5.0 per cent over the 2006-2011 period to 12.0 per cent over the 2011-2016 period, reaching approximately 399,000 in 2016.

Details on historical housing unit growth in the City are provided in Table 2, Historical Residential Building Completions. This information is sourced from CMHC *Market Information.* Overall, the dominant type of new housing in Winnipeg constructed since 2006 has been single- and semi-detached units which represents 56 per cent of all housing completions from 2006–2015; however, over the past five years, row and apartment units have been constructed at increasing rates and the share of single- and semi-detached units has declined.

Table 3 provides details on historical occupancy patterns in the Winnipeg Census Metropolitan Area. The overall average occupancy level in Winnipeg for single and semi-detached units is 2.79 persons per housing unit (PPU). Occupancy levels for recently constructed units, between 2001 and 2011, are higher than the overall average and are used in the regulatory fees calculation since it better reflects the number of people that are likely to reside in new developments. The average PPU of single and semi-detached units built in the CMA in the period 2001 to 2011 is 3.33. Average PPUs for recently constructed row housing and apartments (excluding duplexes) are 2.31 and 1.74, respectively.

Table 4 summarizes the growth in historical employment by place of work in the City of Winnipeg between 2006 and 2016. The rate of employment growth has been consistent across the four categories assessed in this study (Office, Institutional, Commercial/Retail, and Industrial).

C. FORECAST METHOD AND RESULTS

This section describes the method used to establish the development forecast for the periods of 2017 to 2026, 2017 to 2031, and 2017 to 2041.

Regulatory fees are calculated on a per-capita basis for residential development, which is then translated to a charge per unit of gross floor area (GFA). For the residential forecast, a projection of both the *population growth* as well as the *population in new housing* is necessary:

- The *population growth* determines the need for additional facilities and provides the foundation for the development-related capital program.
- When calculating the regulatory fee, however, the development-related net capital costs are spread over the total additional population that occupies new dwelling units. This *population in new units* represents the population from which regulatory fees will be collected.

Fees are levied on non-residential development as a charge per unit of GFA. The non-residential forecast includes both a projection of employment growth as well as a projection of the floor space associated with employment growth in the City.

1. Residential Forecast

The residential development forecast incorporates anticipated growth in population and occupied dwelling units by type. As detailed in Table 5, the City's Census population is forecast to grow from approximately 711,500 in 2016 to 798,000 in 2026, 838,900 in 2031, and 910,000 in 2041. The 10-year population growth of 86,400 persons represents a 12.1 per cent increase over the existing base, the 15-year population growth of 127,400 represents a 17.9 per cent increase, and the longer-term increase of 198,500 persons to 2041 represents a 27.9 per cent increase.

Over the 10-year planning period from 2017 to 2026, the number of occupied housing units is forecast to increase from 283,900 in 2016 to 326,100 in 2026 and 345,800 in 2031. By 2041, this number is expected to reach 382,200 units. This reflects an average

annual increase of approximately 4,300 occupied dwelling units per year from 2017 to 2021 (the first five years), which decreases to approximately 3,500 new units per year toward 2041. The overall 10-year growth represents a 14.9 per cent (42,300 units) increase in occupied dwelling units over the next ten years. The 15-year growth of 61,900 new units represents and increase of 21.8 per cent, while the 25-year growth of 98,300 units represents a 34.6 per cent increase over the existing base in 2016.

A breakdown of anticipated housing in the City by unit type is shown in Table 6. The housing forecast shows that the City's housing market is expected to be increasingly represented by higher density built forms, and by apartments in particular. Over the 10-year period, the type of new housing in the City is forecast to be composed largely of apartment units (45.0 per cent), followed by single and semi-detached units (44.1 per cent), and rows (10.8 per cent). Over the 15-year period to 2031, housing growth is expected to be comprised of 46.5 per cent apartments, 42.3 per cent singles and semis, and 11.2 per cent rows. Housing growth over the 2017-2041 period is represented by 48.5 per cent in apartments, 39.9 per cent singles and semis, and 11.7 per cent rows. These patterns of housing unit growth represent a trend toward higher density housing over time.

Population growth in the new units is estimated by applying the following 2016 PPUs to the housing unit forecast: 3.33 for single and semi-detached units; 2.67 for rows; and 1.76 for apartments. The forecast of population expected to reside in new housing units over the 2017 to 2026 period is 107,700 additional persons. Over the 15-year planning period, 156,200 additional persons are expected to reside in new housing units, and over the 25-year period, 244,800 additional persons are anticipated. This population growth by unit type is shown in Table 7.

The floor space per capita assumption used to calculate the residential space forecast was 48.8 square metres per capita. It is based on the size and occupancy rates of recently constructed units in the City. The floor area assumptions are provided below and exclude basement space.

Singles/Semis:	167 square metres
Rows:	139 square metres
Apartments:	79 square metres

2. Non-Residential Forecast

Table 8 illustrates the forecast total employment growth in the City of Winnipeg by employment category to 2041. Non-residential regulatory fees are calculated on a per unit of gross floor area (GFA) basis. Therefore, a forecast of future non-residential building space has also been developed. As with the residential forecast, the

employment and GFA forecasts cover the 10-year period from 2017 to 2026, the 15-year period from 2017 to 2031, and the long-term period from 2017 to 2041.

As detailed in Tables 8 and 9, four categories of employment are distinguished for the purposes of determining non-residential employment and floor space growth:

- **Major Office employment** generally refers to office type employment contained within free standing buildings more than 20,000 net square feet (1,858 m^2).

- **Institutional employment** is public sector employment that primarily serves the residential population, such as education, health care, and local government. The rate of growth in this category is generally linked to the rate of population growth in the City.

- **Commercial/Retail employment**, like Institutional employment, primarily serves the City's residential population and its rate of growth is typically linked to population growth.

- **Industrial employment** refers to employment accommodated primarily in low-rise industrial-type buildings located within the City's business parks and industrial areas, as well as agricultural and primary industries in rural areas.

An assumed floorspace per worker (FSW) for each category is applied to the employment forecast in order to estimate the amount of associated GFA. The following FSW assumptions are used:

Office	27 m^2 per employee
Institutional	65 m^2 per employee
Commercial/Retail	40 m^2 per employee
Industrial	100 m^2 per employee

The non-residential floorspace forecast for the City is summarized in Table 9. The total floorspace growth is forecast at 3.37 million square metres over the 10-year period, 4.78 million square metres over the 15-year period, and 7.76 million square metres over the long-term to 2041. Although the largest component of floorspace growth over the 10-year period relates to Industrial employment (1.84 million square metres or 54.5 per cent) the rate of job growth is expected to remain relatively consistent across all four categories.

APPENDIX A
TABLE 1

CITY OF WINNIPEG
HISTORICAL POPULATION, DWELLING UNITS & EMPLOYMENT

Mid-Year	Census Population	Annual Growth	Occupied Households	Annual Growth	HH Size (PPU)	Employment by Place of Work (1)	Annual Growth	Activity Rate
2006	***633,451***		***261,109***		**2.43**	***339,450***		**53.6%**
2007	639,372	5,921	262,620	1,511	2.43	342,760	3,310	53.6%
2008	645,349	5,977	264,140	1,520	2.44	346,102	3,342	53.6%
2009	651,382	6,033	265,669	1,529	2.45	349,477	3,375	53.7%
2010	657,471	6,089	267,207	1,538	2.46	352,884	3,408	53.7%
2011	***663,617***	***6,146***	***268,753***	***1,546***	***2.47***	***356,325***	***3,441***	***53.7%***
2012	672,927	9,310	271,707	2,954	2.48	364,469	8,144	54.2%
2013	682,368	9,441	274,693	2,986	2.48	372,800	8,330	54.6%
2014	691,941	9,573	277,712	3,019	2.49	381,321	8,521	55.1%
2015	701,649	9,708	280,764	3,052	2.50	390,036	8,716	55.6%
2016	***711,494***	***9,845***	***283,850***	3,086	2.51	***398,951***	8,915	56.1%
Growth 2007-2016		78,043		22,741			59,501	

Source: Statistics Canada, 2011
1. Excludes Work at Home

APPENDIX A
TABLE 2

CITY OF WINNIPEG
HISTORICAL RESIDENTIAL BUILDING COMPLETIONS

	Completions (New Units By Type)				Completions (Share of New Units By Type)			
Year	Singles & Semis	Rows	Apartments	Total	Singles & Semis	Rows	Apartments	Total
2006	1,460	69	675	2,204	66%	3%	31%	100%
2007	1,309	77	712	2,098	62%	4%	34%	100%
2008	1,405	75	1,519	2,999	47%	3%	51%	100%
2009	1,240	104	872	2,216	56%	5%	39%	100%
2010	1,448	97	445	1,990	73%	5%	22%	100%
2011	1,498	229	972	2,699	56%	8%	36%	100%
2012	1,581	234	899	2,714	58%	9%	33%	100%
2013	1,882	143	1,235	3,260	58%	4%	38%	100%
2014	1,424	394	1,006	2,824	50%	14%	36%	100%
2015	1,597	380	1,623	3,600	44%	11%	45%	100%
Total	***14,844***	***1,802***	***9,958***	***26,604***	***56%***	***7%***	***37%***	***100%***
Last 10 Years	*1,484*	*180*	*996*	*2,660*	*56%*	*7%*	*37%*	*100%*
Last 5 Years	*1,596*	*276*	*1,147*	*3,019*	*53%*	*9%*	*38%*	*100%*

Source: CMHC

APPENDIX A
TABLE 3

CITY OF WINNIPEG CMA
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	1981-1985	1986-1990	1991-1995	1996-2000	2001-2005	2006-2011	Pre-2001	2001-2011	Total
Singles													
Household Population	49,275	43,740	100,610	59,365	74,490	78,695	23,345	21,940	28,500	34,570	451,460	63,070	514,530
Households	19,165	17,770	40,225	22,140	26,315	25,950	7,395	7,010	8,640	10,195	165,970	18,835	184,805
Household Size	2.57	2.46	2.50	2.68	2.83	3.03	3.16	3.13	3.30	3.39	2.72	**3.35**	2.78
Semis													
Household Population	1,115	935	2,550	5,955	14,835	2,375	325	390	695	535	28,480	1,230	29,710
Households	400	295	940	2,205	5,035	840	140	205	310	185	10,060	495	10,555
Household Size	2.79	3.17	2.71	2.70	2.95	2.83	2.32	1.90	2.24	2.89	2.83	**2.48**	2.81
Singles and Semis													
Household Population	50,390	44,675	103,160	65,320	89,325	81,070	23,670	22,330	29,195	35,105	479,940	64,300	544,240
Households	19,565	18,065	41,165	24,345	31,350	26,790	7,535	7,215	8,950	10,380	176,030	19,330	195,360
Household Size	2.58	2.47	2.51	2.68	2.85	3.03	3.14	3.09	3.26	3.38	2.73	**3.33**	2.79
Rows													
Household Population	475	480	2,700	5,110	7,965	4,115	695	540	450	765	22,080	1,215	23,295
Households	185	170	1,030	1,875	2,950	1,485	260	230	225	300	8,185	525	8,710
Household Size	2.57	2.82	2.62	2.73	2.70	2.77	2.67	2.35	2.00	2.55	2.70	**2.31**	2.67
Apartments (excl. Duplexes)													
Household Population	9,490	7,715	15,635	25,980	34,290	24,725	4,750	3,410	3,295	6,900	125,995	10,195	136,190
Households	5,750	4,785	9,790	16,735	20,740	14,460	2,890	1,870	1,950	3,895	77,020	5,845	82,865
Household Size	1.65	1.61	1.60	1.55	1.65	1.71	1.64	1.82	1.69	1.77	1.64	**1.74**	1.64
Duplexes													
Household Population	3,030	1,925	2,425	1,955	890	250	40	60	0	175	10,575	175	10,750
Households	1,340	770	930	815	285	90	10	20	0	60	4,260	60	4,320
Household Size	2.26	2.50	2.61	2.40	3.12	2.78	4.00	3.00	n/a	2.92	2.48	**2.92**	2.49
Apartments and Duplexes													
Household Population	12,520	9,640	18,060	27,935	35,180	24,975	4,790	3,470	3,295	7,075	136,570	10,370	146,940
Households	7,090	5,555	10,720	17,550	21,025	14,550	2,900	1,890	1,950	3,955	81,280	5,905	87,185
Household Size	1.77	1.74	1.68	1.59	1.67	1.72	1.65	1.84	1.69	1.79	1.68	**1.76**	1.69
All Units													
Household Population	62,910	54,315	121,220	93,255	124,505	106,045	28,460	25,800	32,490	42,180	616,510	74,670	691,180
Households	26,655	23,620	51,885	41,895	52,375	41,340	10,435	9,105	10,900	14,335	257,310	25,235	282,545
Household Size	2.36	2.30	2.34	2.23	2.38	2.57	2.73	2.83	2.98	2.94	2.40	**2.96**	2.45

Note: Population and household figures in this table are based on the National Household Survey and may differ from Census figures.
Source: Statistics Canada, 2011 National Household Survey Special Run.

APPENDIX A - TABLE 4
CITY OF WINNIPEG
HISTORICAL PLACE OF WORK EMPLOYMENT

Mid-Year	Major Office	Annual Growth	Institutional	Annual Growth	Commercial/ Retail	Annual Growth	Industrial	Annual Growth	Total For Study	Annual Growth	Work at Home	Annual Growth	Total w/ Work At Home	Annual Growth
2006	**75,572**		**74,362**		**72,499**		**117,017**		**339,450**		**15,015**		**354,465**	
2007	76,309	737	75,087	725	73,206	707	118,158	1,141	342,760	3,310	14,630	(385)	357,390	2,925
2008	77,053	744	75,819	732	73,920	714	119,310	1,152	346,102	3,342	14,254	(375)	360,356	2,967
2009	77,804	751	76,559	739	74,640	721	120,473	1,163	349,477	3,375	13,889	(366)	363,365	3,009
2010	78,563	759	77,305	746	75,368	728	121,648	1,175	352,884	3,408	13,532	(356)	366,416	3,051
2011	**79,329**	766	**78,059**	754	**76,103**	735	**122,834**	1,186	**356,325**	3,441	**13,185**	(347)	**369,510**	3,094
2012	81,142	1,813	79,843	1,784	77,842	1,739	125,642	2,808	364,469	8,144	13,486	301	377,956	8,446
2013	82,997	1,855	81,668	1,825	79,622	1,779	128,514	2,872	372,800	8,330	13,795	308	386,594	8,639
2014	84,894	1,897	83,535	1,867	81,442	1,820	131,451	2,937	381,321	8,521	14,110	315	395,431	8,836
2015	86,834	1,940	85,444	1,909	83,303	1,861	134,455	3,005	390,036	8,716	14,432	323	404,469	9,038
2016	**88,819**	**1,985**	**87,397**	**1,953**	**85,207**	**1,904**	**137,529**	**3,073**	**398,951**	**8,915**	**14,762**	**330**	**413,714**	**9,245**
Growth 2007-2016		13,247		13,035		12,708		20,512		59,501		(253)		59,249

APPENDIX A
TABLE 5

CITY OF WINNIPEG
POPULATION, HOUSEHOLD & EMPLOYMENT FORECAST

Year	Census Population	Annual Growth	Occupied Households	Annual Growth	Household Size PPU	Employment by POW	Annual Growth	Activity Rate
2011	***663,617***	***6,146***	***268,753***	***1,546***	**2.47**	***356,325***		**53.7%**
2012	672,927	9,310	271,707	2,954	2.48	364,469	8,144	54.2%
2013	682,368	9,441	274,693	2,986	2.48	372,800	8,330	54.6%
2014	691,941	9,573	277,712	3,019	2.49	381,321	8,521	55.1%
2015	701,649	9,708	280,764	3,052	2.50	390,036	8,716	55.6%
2016	***711,494***	***9,845***	***283,850***	***3,086***	***2.51***	***398,951***	***8,915***	***56.1%***
2017	719,908	8,414	288,049	4,199	2.50	407,559	8,608	56.6%
2018	728,422	8,514	292,310	4,261	2.49	413,476	5,917	56.8%
2019	737,037	8,615	296,633	4,324	2.48	418,763	5,287	56.8%
2020	745,753	8,717	301,021	4,388	2.48	425,774	7,011	57.1%
2021	***754,573***	***8,820***	***305,474***	***4,453***	***2.47***	***430,907***	***5,132***	***57.1%***
2022	763,036	8,463	309,497	4,023	2.47	435,227	4,320	57.0%
2023	771,594	8,558	313,574	4,076	2.46	439,659	4,432	57.0%
2024	780,248	8,654	317,704	4,130	2.46	444,232	4,573	56.9%
2025	788,999	8,751	321,888	4,184	2.45	448,354	4,122	56.8%
2026	***797,848***	***8,849***	***326,128***	***4,240***	***2.45***	***452,275***	***3,921***	***56.7%***
2027	805,889	8,041	329,962	3,834	2.44	456,414	4,139	56.6%
2028	814,011	8,122	333,841	3,879	2.44	460,589	4,175	56.6%
2029	822,215	8,204	337,766	3,925	2.43	464,830	4,241	56.5%
2030	830,501	8,287	341,737	3,971	2.43	469,867	5,037	56.6%
2031	***838,871***	***8,370***	***345,754***	***4,017***	***2.43***	***474,440***	***4,573***	***56.6%***
2032	846,165	7,293	349,451	3,697	2.42	478,622	4,182	56.6%
2033	853,522	7,357	353,187	3,736	2.42	483,422	4,800	56.6%
2034	860,943	7,421	356,964	3,776	2.41	487,984	4,562	56.7%
2035	868,428	7,485	360,780	3,817	2.41	492,674	4,690	56.7%
2036	***875,978***	***7,550***	***364,638***	***3,858***	***2.40***	***497,357***	***4,683***	***56.8%***
2037	882,670	6,692	368,080	3,442	2.40	502,100	4,743	56.9%
2038	889,413	6,743	371,555	3,475	2.39	506,905	4,804	57.0%
2039	896,207	6,794	375,063	3,508	2.39	511,770	4,866	57.1%
2040	903,054	6,846	378,604	3,541	2.39	516,699	4,929	57.2%
2041	**909,952**	**6,899**	**382,178**	**3,574**	**2.38**	**521,675**	**4,976**	**57.3%**
2017-2026		86,354		42,278			53,324	
2017-2031		127,378		61,904			75,489	
2017-2041		198,458		98,328			122,724	

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Source: Hemson Consulting Ltd., 2016

APPENDIX A
TABLE 6

CITY OF WINNIPEG
FORECAST OF HOUSEHOLD GROWTH BY UNIT TYPE

Year	Growth in Households by Unit Type			
	Singles & Semis	Rows	Apartments	Total Dwelling Unit Growth
2017	1,826	460	1,913	4,199
2018	1,877	462	1,922	4,261
2019	1,953	460	1,911	4,324
2020	2,001	463	1,924	4,388
2021	2,019	***472***	***1,962***	***4,453***
2022	1,802	431	1,790	4,023
2023	1,790	443	1,843	4,076
2024	1,786	455	1,889	4,130
2025	1,800	463	1,922	4,184
2026	1,796	***474***	***1,970***	***4,240***
2027	1,568	440	1,827	3,834
2028	1,513	459	1,907	3,879
2029	1,488	473	1,964	3,925
2030	1,474	484	2,012	3,971
2031	1,467	***495***	***2,056***	***4,017***
2032	1,327	460	1,911	3,697
2033	1,347	463	1,926	3,736
2034	1,356	469	1,951	3,776
2035	1,373	474	1,970	3,817
2036	1,395	***478***	***1,985***	***3,858***
2037	1,237	428	1,778	3,442
2038	1,241	433	1,800	3,475
2039	1,245	439	1,824	3,508
2040	1,249	445	1,847	3,541
2041	1,261	***449***	***1,865***	***3,574***
2017-2026	18,650	4,583	19,046	42,278
2017-2031	26,160	6,933	28,811	61,904
2017-2041	39,191	11,470	47,667	98,328

Source: Hemson Consulting Ltd., 2016

APPENDIX A
TABLE 7

CITY OF WINNIPEG
FORECAST OF HOUSEHOLD GROWTH AND POPULATION IN NEW HOUSEHOLDS

Year	Population in New Households *			
	Singles & Semis	Rows	Apartments	Total Occupied Dwellings
2017	6,073	1,231	3,359	10,663
2018	6,243	1,237	3,375	10,855
2019	6,498	1,230	3,356	11,084
2020	6,655	1,238	3,379	11,272
2021	***6,717***	***1,262***	***3,445***	***11,424***
2022	5,995	1,152	3,144	10,291
2023	5,954	1,186	3,236	10,376
2024	5,941	1,216	3,318	10,475
2025	5,986	1,237	3,376	10,599
2026	***5,974***	***1,268***	***3,459***	***10,701***
2027	5,215	1,176	3,208	9,599
2028	5,034	1,227	3,349	9,610
2029	4,949	1,264	3,449	9,662
2030	4,905	1,295	3,534	9,734
2031	***4,881***	***1,323***	***3,610***	***9,814***
2032	4,413	1,230	3,355	8,998
2033	4,480	1,240	3,383	9,103
2034	4,512	1,255	3,426	9,193
2035	4,567	1,268	3,459	9,294
2036	***4,641***	***1,277***	***3,486***	***9,404***
2037	4,115	1,144	3,122	8,381
2038	4,129	1,159	3,162	8,450
2039	4,143	1,174	3,202	8,519
2040	4,154	1,189	3,244	8,587
2041	***4,194***	***1,200***	***3,275***	***8,669***
2017-2026	62,036	12,257	33,447	107,740
2017-2031	87,020	18,542	50,597	156,159
2017-2041	130,368	30,678	83,711	244,757
* Based on PPUs:	3.33	2.67	1.76	

Source: Hemson Consulting Ltd., 2016

APPENDIX A
TABLE 8

CITY OF WINNIPEG
EMPLOYMENT GROWTH BY CATEGORY

Mid-Year	Major Office	Annual Growth	Institutional	Annual Growth	Commercial/ Retail	Annual Growth	Industrial	Annual Growth	Total For Study	Annual Growth	Work at Home	Annual Growth	Total w/ Work At Home	Annual Growth
2016	**88,819**		**87,397**		**85,207**		**137,529**		**398,951**		**14,762**		**413,714**	
2017	90,735	1,916	89,283	1,886	87,046	1,838	140,496	2,967	407,559	8,608	15,081	319	422,640	8,926
2018	92,052	1,317	90,579	1,296	88,309	1,264	142,536	2,040	413,476	5,917	15,300	219	428,776	6,136
2019	93,229	1,177	91,737	1,158	89,438	1,129	144,358	1,823	418,763	5,287	15,495	196	434,259	5,483
2020	94,790	1,561	93,273	1,536	90,936	1,497	146,775	2,417	425,774	7,011	15,755	259	441,529	7,271
2021	**95,933**	1,143	**94,397**	1,124	**92,032**	1,096	**148,544**	1,769	**430,907**	5,132	**15,945**	190	**446,851**	5,322
2022	96,895	962	95,344	946	92,955	923	150,034	1,489	435,227	4,320	16,105	160	451,332	4,480
2023	97,881	987	96,315	971	93,901	947	151,562	1,528	439,659	4,432	16,269	164	455,927	4,596
2024	98,900	1,018	97,317	1,002	94,878	977	153,138	1,577	444,232	4,573	16,438	169	460,670	4,743
2025	99,817	918	98,219	903	95,758	880	154,559	1,421	448,354	4,122	16,590	153	464,944	4,274
2026	**100,690**	**873**	**99,078**	**859**	**96,596**	**837**	**155,911**	**1,352**	**452,275**	**3,921**	**16,735**	**145**	**469,010**	**4,066**
2027	101,612	921	99,985	907	97,480	884	157,337	1,427	456,414	4,139	16,889	153	473,303	4,292
2028	102,541	929	100,900	915	98,371	892	158,777	1,439	460,589	4,175	17,043	154	477,632	4,329
2029	103,485	944	101,829	929	99,277	906	160,239	1,462	464,830	4,241	17,200	157	482,030	4,398
2030	104,607	1,121	102,932	1,103	100,353	1,076	161,975	1,736	469,867	5,037	17,386	186	487,253	5,224
2031	**105,625**	**1,018**	**103,934**	**1,002**	**101,330**	**977**	**163,551**	**1,576**	**474,440**	**4,573**	**17,556**	**169**	**491,995**	**4,742**
2032	106,556	931	104,850	916	102,223	893	164,993	1,442	478,622	4,182	17,710	155	496,332	4,337
2033	107,624	1,069	105,902	1,052	103,248	1,025	166,648	1,655	483,422	4,800	17,888	178	501,310	4,978
2034	108,640	1,016	106,901	999	104,223	974	168,221	1,573	487,984	4,562	18,057	169	506,041	4,731
2035	109,684	1,044	107,928	1,027	105,224	1,002	169,837	1,617	492,674	4,690	18,230	174	510,904	4,863
2036	**110,727**	**1,043**	**108,954**	**1,026**	**106,224**	**1,000**	**171,452**	**1,614**	**497,357**	**4,683**	**18,404**	**173**	**515,761**	**4,857**
2037	111,783	1,056	109,993	1,039	107,237	1,013	173,087	1,635	502,100	4,743	18,579	176	520,680	4,919
2038	112,852	1,070	111,046	1,052	108,263	1,026	174,743	1,656	506,905	4,804	18,757	178	525,661	4,982
2039	113,936	1,083	112,112	1,066	109,303	1,039	176,420	1,677	511,770	4,866	18,937	180	530,707	5,046
2040	115,033	1,097	113,192	1,080	110,355	1,053	178,119	1,699	516,699	4,929	19,119	182	535,818	5,111
2041	**116,141**	**1,108**	**114,282**	**1,090**	**111,418**	**1,063**	**179,835**	**1,715**	**521,675**	**4,976**	**19,303**	**184**	**540,978**	**5,160**
2017-2026		11,871		11,681		11,389		18,382		53,324		1,973		55,297
2017-2031		16,806		16,537		16,123		26,023		75,489		2,793		78,282
2017-2041		27,322		26,885		26,211		42,306		122,724		4,541		127,265

Source: Hemson Consulting Ltd., 2016

APPENDIX A
TABLE 9

CITY OF WINNIPEG
EMPLOYMENT GROWTH IN NEW NON-RESIDENTIAL SPACE BY CATEGORY

	Major Office		Institutional		Commercial/Retail		Industrial		Total	
Density m^2 per empl.		27		65		40		100		
Year	Employment Growth	Growth in New Space (m^2)	Employment Growth	Growth in New Space (m^2)	Employment Growth	Growth in New Space (m^2)	Employment Growth	Growth in New Space (m^2)	Employment Growth	Growth in New Space (m^2)
2017	1,916	51,743	1,886	122,572	1,838	73,539	2,967	296,738	8,608	544,591
2018	1,317	35,567	1,296	84,253	1,264	50,549	2,040	203,971	5,917	374,340
2019	1,177	31,780	1,158	75,284	1,129	45,168	1,823	182,257	5,287	334,489
2020	1,561	42,145	1,536	99,835	1,497	59,898	2,417	241,695	7,011	443,572
2021	***1,143***	***30,851***	***1,124***	***73,081***	***1,096***	***43,846***	***1,769***	***176,925***	***5,132***	***324,704***
2022	962	25,970	946	61,520	923	36,910	1,489	148,937	4,320	273,338
2023	987	26,639	971	63,104	947	37,860	1,528	152,772	4,432	280,376
2024	1,018	27,491	1,002	65,123	977	39,071	1,577	157,658	4,573	289,343
2025	918	24,776	903	58,690	880	35,212	1,421	142,085	4,122	260,763
2026	***873***	***23,569***	***859***	***55,832***	***837***	***33,498***	***1,352***	***135,167***	***3,921***	***248,066***
2027	921	24,879	907	58,936	884	35,360	1,427	142,681	4,139	261,856
2028	929	25,094	915	59,444	892	35,664	1,439	143,911	4,175	264,113
2029	944	25,493	929	60,389	906	36,231	1,462	146,198	4,241	268,312
2030	1,121	30,279	1,103	71,727	1,076	43,034	1,736	173,647	5,037	318,688
2031	***1,018***	***27,488***	***1,002***	***65,116***	***977***	***39,067***	***1,576***	***157,642***	***4,573***	***289,313***
2032	931	25,138	916	59,550	893	35,728	1,442	144,166	4,182	264,582
2033	1,069	28,854	1,052	68,352	1,025	41,009	1,655	165,476	4,800	303,692
2034	1,016	27,423	999	64,962	974	38,975	1,573	157,268	4,562	288,627
2035	1,044	28,189	1,027	66,777	1,002	40,064	1,617	161,663	4,690	296,694
2036	***1,043***	***28,151***	***1,026***	***66,686***	***1,000***	***40,009***	***1,614***	***161,443***	***4,683***	***296,289***
2037	1,056	28,512	1,039	67,541	1,013	40,522	1,635	163,512	4,743	300,087
2038	1,070	28,878	1,052	68,409	1,026	41,043	1,656	165,613	4,804	303,942
2039	1,083	29,249	1,066	69,287	1,039	41,570	1,677	167,739	4,866	307,845
2040	1,097	29,626	1,080	70,179	1,053	42,105	1,699	169,899	4,929	311,809
2041	***1,108***	***29,911***	***1,090***	***70,855***	***1,063***	***42,511***	***1,715***	***171,536***	***4,976***	***314,812***
2017-2026	11,871	320,530	11,681	759,295	11,389	455,551	18,382	1,838,205	53,324	3,373,581
2017-2031	16,806	453,764	16,537	1,074,908	16,123	644,907	26,023	2,602,284	75,489	4,775,863
2017-2041	27,322	737,695	26,885	1,747,505	26,211	1,048,442	42,306	4,230,599	122,724	7,764,241

Source: Hemson Consulting Ltd., 2016

APPENDIX B

10-YEAR BENEFITTING PERIOD SERVICES TECHNICAL APPENDIX

APPENDIX B

10-YEAR BENEFITTING PERIOD SERVICES TECHNICAL APPENDIX

This appendix provides the detailed analysis undertaken to establish the regulatory fee rates for each of the services for the 10-year benefitting period provided by the City of Winnipeg. Three services have been analysed as part of this study:

Appendix B.1 Parks and Open Spaces

Appendix B.2 Community Services

Appendix B.3 Solid Waste

Every sub-section contains a set of two tables. The tables provide the background data and analysis undertaken to arrive at the calculated regulatory fee rates for that particular service. An overview of the content and purpose of each of the tables is given below.

TABLE 1 2017 – 2026 DEVELOPMENT-RELATED CAPITAL PROGRAM AND CALCULATION OF THE "UNADJUSTED" REGULATORY FEES

Based on the development forecasts presented in Appendix A, City staff in collaboration with consultants, have created a growth-related capital forecast that sets out the projects required to service anticipated development for the 10-year period from 2017–2026.

To determine the share of the costs for recovery through regulatory fees, the project costs are reduced by any anticipated grants, subsidies or other recoveries, "replacement" shares and benefit to existing shares, and shares allocated to recent development in the City.

A replacement share represents the portion of a capital project that will benefit the existing community. It could for example, represent a portion of a new facility that will, at least in part, replace a facility that is demolished, redeployed or will otherwise not be available to serve its former function. The replacement share of the capital program is not deemed to be development-related and is therefore removed from the regulatory fee calculation. The capital cost for replacement will require funding from non-regulatory fee sources, typically property taxes or user fees.

Further, in certain cases a portion of costs has been allocated to "prior growth". This account for portions of projects which are deemed to benefit recent development

which occurred in the City during the 10-year period preceding 2017. Again, these costs will require funding from non-regulatory fee sources.

The capital program less any replacement shares or benefit to existing shares and prior growth shares yields the development-related costs that may be included in the regulatory fee calculation for recovery against growth over the forecast period from 2017 to 2026.

Calculation of the Unadjusted Regulatory Fee Rates

The section below the capital program displays the calculation of the "unadjusted" regulatory fee rates. The term "unadjusted" regulatory fee is used to distinguish the charge that is calculated prior to cash flow financing considerations. The cash flow analysis is shown in Table 2.

The first step in determining the unadjusted regulatory fee rate is to allocate the development-related net capital cost between the residential and non-residential sectors. For Community Services and Parks and Open Spaces, the development-related costs have been allocated entirely to the residential sector, as the need for these services is driven by residential development. For Solid Waste, the development-related costs have been apportioned as 62 per cent residential and 38 per cent non-residential. This apportionment is based on the anticipated shares of population and employment growth over the 10-year forecast period.

The 38 per cent non-residential apportionment of the development-related net capital cost has been further broken down into four employment category apportionments based on anticipated shares of employment growth in each sector. The result is an apportionment of 22.3 per cent Office, 21.9 per cent Institutional, 21.4 per cent Commercial/Retail, and 34.5 per cent Industrial.

The next step in calculating regulatory fee rates is to divide the residential share of the 2017-2026 costs by the forecast population growth in new dwelling units. This gives the unadjusted residential regulatory fee per capita. The non-residential development-related net capital costs are divided by the forecasted increase in non-residential gross floor area (GFA). This yields a charge per square metre of new non-residential development, and has been repeated for each of the four employment categories.

TABLE 2 CASH FLOW ANALYSIS

A cash flow analysis is also undertaken to account for the timing of projects and receipt of regulatory fees. Interest earnings or borrowing costs are accounted for in the calculation. Based on the development forecast, the analysis calculates the regulatory fee rate required to finance the net development-related capital spending plan, including provisions for any borrowing costs or interest earnings on the reserve funds. The cash flow analysis is designed so that the closing cash balance at the end of the planning period is as close to nil as possible.

In order to determine appropriate regulatory fee rates reflecting borrowing and earnings necessary to support the net development-related funding requirement, assumptions are used for the inflation rate and interest rate. An inflation rate of 2.0 per cent is used for the funding requirements, an interest rate of 5.5 per cent is used for borrowing on the funds and an interest rate of 3.5 per cent is applied to positive balances.

Table 2 displays the results of the cash flow analysis and provides the adjusted or final per capita residential and per square metre (of GFA) non-residential regulatory fees. Additional cash flow analyses separate the uniform non-residential charge into adjusted charges for Office, Institutional, Commercial/Retail, and Industrial development.

APPENDIX B.1

PARKS AND OPEN SPACES

APPENDIX B.1

PARKS AND OPEN SPACES

Parks and Open Spaces are managed through the City of Winnipeg's Public Works department and include the City's network of parks, trails, and athletic fields.

TABLE 1 2017–2026 DEVELOPMENT-RELATED CAPITAL PROGRAM AND CALCULATION OF THE "UNADJUSTED" REGULATORY FEES

As shown in Table 1, the 2017-2026 development-related gross cost for Parks and Open Spaces is approximately $61.65 million. The capital program relates to major improvements to Kilcona Park and Tyndall Park as well as hard surfacing for outdoor athletic facilities.

As these projects are partially related to improvements to existing infrastructure, a large proportion of "benefit to existing" shares have been deducted. Benefit to existing shares have been calculated at 88 per cent for most projects, which represents the share of Winnipeg's 2016 population relative to the anticipated 2026 population. A lower benefit to existing share of 70 per cent was used for the Tyndall Park project, which is expected to serve new growth to a greater extent.

The remaining regulatory fee share totals $9.41 million, all of which is to be recovered over the 10-year planning period under review. This amount is apportioned 100 per cent to residential development. The resulting unadjusted residential charge for Parks and Open Space is $87.38 per capita.

TABLE 2 CASH FLOW ANALYSIS

The cash-flow analysis is displayed in Table 2 and considers the timing of the regulatory fees revenues to determine the adjusted rates. After cash flow considerations, the residential charge decreases slightly to $87.26 per capita.

PARKS AND OPEN SPACES
SUMMARY

2017-2026 Development-Related Capital Program		Unadjusted Charge		**Adjusted Charge**		**Adjusted Charges**			
						Office	**Institutional**	**Commercial**	**Industrial**
Total	Net Recoverable	$/capita	$/sq.m	**$/capita**	**$/sq.m**	**$/sq.m**	**$/sq.m**	**$/sq.m**	**$/sq.m**
$61,650,000	$9,414,618	$87.38	$0.00	**$87.26**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**

APPENDIX B.1
TABLE 1

CITY OF WINNIPEG
DEVELOPMENT-RELATED CAPITAL PROGRAM

Service	Proj(Rows	Timing	Gross Project Cost	Grants/ Subsidies/ Other Recoveries	Net Municipal Cost	Ineligible Costs Replacement & BTE	Development Related Costs	Costs for Recovery		
								Prior Growth	2017-2026	Post 2026
1.0 PARKS AND OPEN SPACES										
	1.1.1 Kilcona Park Master Plan	2021	$ 2,350,000	$ -	$ 2,350,000	$ 2,064,779	$ 285,221	$ -	$ 285,221	$ -
	1.1.2 Kilcona Park	2023	$ 30,000,000	$ -	$ 30,000,000	$ 26,358,883	$ 3,641,117	$ -	$ 3,641,117	$ -
	1.1.3 Hard Surfacing - Tennis, Basketball	various	$ 7,500,000	$ -	$ 7,500,000	$ 6,589,721	$ 910,279	$ -	$ 910,279	$ -
	1.1.4 Tyndall Park	various	$ 21,800,000	$ 6,540,000	$ 15,260,000	$ 10,682,000	$ 4,578,000	$ -	$ 4,578,000	$ -
TOTAL PARKS AND OPEN SPACES			**$ 61,650,000**	**$ 6,540,000**	**$ 55,110,000**	**$ 45,695,382**	**$ 9,414,618**	**$ -**	**$ 9,414,618**	**$ -**

Residential Calculation		
Residential Share of Development-Related Costs	100%	$9,414,618
10 Year Population Growth in New Housing Units		107,740
Unadjusted Per Unit Charge		**$87.38**
Non-Residential Calculation		
Non-Residential Share of Development-Related Costs	0%	$0
10 Year Growth in Square Metres		3,373,581
Unadjusted Per Square Metre Charge		**$0.00**
Non-Residential Allocation		
10 Year Growth in Square Metres: Major Office		320,530
10 Year Growth in Square Metres: Institutional		759,295
10 Year Growth in Square Metres: Commercial/Retail		455,551
10 Year Growth in Square Metres: Industrial		1,838,205
Office Per Square Metre Charge (Unadjusted)	22.3%	**$0.00**
Institutional Per Square Metre Charge (Unadjusted)	21.9%	**$0.00**
Commercial/Retail Per Square Metre Charge (Unadjusted)	21.4%	**$0.00**
Industrial Per Square Metre Charge (Unadjusted)	34.5%	**$0.00**

APPENDIX B.1
TABLE 2

CITY OF WINNIPEG
CASHFLOW AND DETERMINATION OF REGULATORY FEE
PARKS AND OPEN SPACES
RESIDENTIAL CHARGE
(in $000)

PARKS AND OPEN SPACES	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	TOTAL
OPENING CASH BALANCE	$0.0	$388.3	$815.3	$1,286.6	$1,801.1	$2,043.3	$2,507.1	($1,205.9)	($845.4)	($443.6)	
2017-2026 RESIDENTIAL FUNDING REQUIREMENTS											
- Parks And Open Spaces: Non Inflated	$548.8	$548.8	$548.8	$548.8	$834.0	$548.8	$4,189.9	$548.8	$548.8	$548.8	**$9,414.6**
- Parks And Open Spaces: Inflated	$548.8	$559.8	$571.0	$582.4	$902.8	$606.0	$4,718.6	$630.4	$643.0	$655.9	**$10,418.7**
NEW RESIDENTIAL DEVELOPMENT											
- Population in New Units	10,663	10,855	11,084	11,272	11,424	10,291	10,376	10,475	10,599	10,701	**107,740**
REVENUE											
- Charge Receipts: Inflated	$930.4	$966.1	$1,006.2	$1,043.7	$1,079.0	$991.4	$1,019.6	$1,049.9	$1,083.6	$1,115.9	**$10,285.8**
INTEREST											
- Interest on Opening Balance	$0.0	$13.6	$28.5	$45.0	$63.0	$71.5	$87.7	($66.3)	($46.5)	($24.4)	**$172.2**
- Interest on In-year Transactions	$6.7	$7.1	$7.6	$8.1	$3.1	$6.7	($101.7)	$7.3	$7.7	$8.0	**($39.3)**
TOTAL REVENUE	$937.1	$986.8	$1,042.4	$1,096.9	$1,145.1	$1,069.7	$1,005.6	$990.9	$1,044.8	$1,099.5	**$10,418.7**
CLOSING CASH BALANCE	$388.3	$815.3	$1,286.6	$1,801.1	$2,043.3	$2,507.1	($1,205.9)	($845.4)	($443.6)	($0.0)	

Adjusted Charge Per Capita	**$87.26**

Allocation of Capital Program	
Residential Sector	100%
Non-Residential Sector	0%
Rates for 2016	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX B.2

COMMUNITY SERVICES

APPENDIX B.2

COMMUNITY SERVICES

Winnipeg's Community Services department manages a variety of recreational facilities and libraries.

TABLE 1 2017–2026 DEVELOPMENT-RELATED CAPITAL PROGRAM & CALCULATION OF THE "UNADJUSTED" REGULATORY FEES

The development-related capital program for Community Services totals $191.51 million. It includes several large improvements, expansions, and construction projects associated with Winnipeg's libraries and recreation facilities.

Of these costs, a total of $67.52 million is anticipated to be funded through external sources, including grants from other levels of government as well as a financial partnership with the YMCA to construct three new recreation facilities. A total benefit to existing share of $63.17 million has been identified. Benefit to existing shares for individual projects range from 20 to 80 per cent depending on whether the project represents an entirely new facility or an expansion to an existing facility, and whether it is to be located within a modest or fast growing neighbourhood. Finally, for each of these projects a share of the costs has been allocated to prior growth over the past 10 years; this amount totals roughly $28.87 million.

The share for recovery through regulatory fees in the 2017 to 2026 period totals approximately $31.95 million. This development-related net capital cost is allocated entirely to residential development and is divided by the 10-year growth in population in new dwelling units (107,700) to derive an unadjusted charge of $296.51 per capita.

TABLE 2 CASH FLOW ANALYSIS

After cash flow consideration, the residential calculated charge decreases slightly to $296.40 per capita. The following table summarizes the calculation of the Community Services charge:

COMMUNITY SERVICES SUMMARY

2017-2026 Development-Related Capital Program		Unadjusted Charge		**Adjusted Charge**		**Adjusted Charges**			
						Office	**Institutional**	**Commercial**	**Industrial**
Total	Net Recoverable	$/capita	$/sq.m	**$/capita**	**$/sq.m**	**$/sq.m**	**$/sq.m**	**$/sq.m**	**$/sq.m**
$191,512,000	$31,946,218	$296.51	$0.00	**$296.40**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**

APPENDIX B.2
TABLE 1

CITY OF WINNIPEG
DEVELOPMENT-RELATED CAPITAL PROGRAM

Service	Project Description	Timing	Gross Project Cost	Grants/ Subsidies/ Other Recoveries	Net Municipal Cost	Ineligible Costs Replacement & BTE	Development Related Costs	Costs for Recovery		
								Prior Growth	2017-2026	Post 2026
2.0 COMMUNITY SERVICES										
2.1 Libraries										
2.1.1	South Winnipeg Library (formally referred to as Waverly West Library)	various	$ 11,849,000	$ -	$ 11,849,000	$ 9,479,200	$ 2,369,800	$ 1,124,993	$ 1,244,807	$ -
2.1.2	South East Library (formally known Sage Creek)	various	$ 13,078,000	$ -	$ 13,078,000	$ 10,462,400	$ 2,615,600	$ 1,241,680	$ 1,373,920	$ -
2.1.3	Transcona Library	various	$ 8,183,000	$ -	$ 8,183,000	$ 4,091,500	$ 4,091,500	$ 1,942,320	$ 2,149,180	$ -
	Subtotal Libraries		**$ 33,110,000**	**$ -**	**$ 33,110,000**	**$ 24,033,100**	**$ 9,076,900**	**$ 4,308,994**	**$ 4,767,906**	**$ -**
2.2 Recreation										
2.2.1	YMCA (three facilities incl. pools)	various	$ 100,000,000	$ 50,000,000	$ 50,000,000	$ 25,000,000	$ 25,000,000	$ 11,868,021	$ 13,131,979	$ -
2.2.2	Maples CC	various	$ 21,200,000	$ 6,360,000	$ 14,840,000	$ 7,420,000	$ 7,420,000	$ 3,522,429	$ 3,897,571	$ -
2.2.3	South Winnipeg Recreation Centre	various	$ 30,000,000	$ 9,000,000	$ 21,000,000	$ 4,200,000	$ 16,800,000	$ 7,975,310	$ 8,824,690	$ -
2.2.4	Transcona Pool	various	$ 7,202,000	$ 2,160,600	$ 5,041,400	$ 2,520,700	$ 2,520,700	$ 1,196,629	$ 1,324,071	$ -
	Subtotal Recreation		**$ 158,402,000**	**$ 67,520,600**	**$ 90,881,400**	**$ 39,140,700**	**$ 51,740,700**	**$ 24,562,388**	**$ 27,178,312**	**$ -**
TOTAL COMMUNITY SERVICES			**$ 191,512,000**	**$ 67,520,600**	**$ 123,991,400**	**$ 63,173,800**	**$ 60,817,600**	**$ 28,871,382**	**$ 31,946,218**	**$ -**

Residential Calculation		
Residential Share of Development-Related Costs	100%	$31,946,218
10 Year Population Growth in New Housing Units		107,740
Unadjusted Per Unit Charge		**$296.51**
Non-Residential Calculation		
Non-Residential Share of Development-Related Costs	0%	$0
10 Year Growth in Square Metres		3,373,581
Unadjusted Per Square Metre Charge		**$0.00**
Non-Residential Allocation		
10 Year Growth in Square Metres: Major Office		320,530
10 Year Growth in Square Metres: Institutional		759,295
10 Year Growth in Square Metres: Commercial/Retail		455,551
10 Year Growth in Square Metres: Industrial		1,838,205
Office Per Square Metre Charge (Unadjusted)	22.3%	**$0.00**
Institutional Per Square Metre Charge (Unadjusted)	21.9%	**$0.00**
Commercial/Retail Per Square Metre Charge (Unadjusted)	21.4%	**$0.00**
Industrial Per Square Metre Charge (Unadjusted)	34.5%	**$0.00**

APPENDIX B.2
TABLE 2

CITY OF WINNIPEG
CASHFLOW AND DETERMINATION OF REGULATORY FEE
COMMUNITY SERVICES
RESIDENTIAL CHARGE
(in $000)

COMMUNITY SERVICES	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**TOTAL**
OPENING CASH BALANCE	$0.0	($35.1)	($13.4)	$81.8	$242.8	$462.1	$314.4	$187.5	$88.0	$27.1	
2017-2026 RESIDENTIAL FUNDING REQUIREMENTS											
- Community Services: Non Inflated	$3,194.6	$3,194.6	$3,194.6	$3,194.6	$3,194.6	$3,194.6	$3,194.6	$3,194.6	$3,194.6	$3,194.6	**$31,946.2**
- Community Services: Inflated	$3,194.6	$3,258.5	$3,323.7	$3,390.2	$3,458.0	$3,527.1	$3,597.7	$3,669.6	$3,743.0	$3,817.9	**$34,980.2**
NEW RESIDENTIAL DEVELOPMENT											
- Population in New Units	10,663	10,855	11,084	11,272	11,424	10,291	10,376	10,475	10,599	10,701	**107,740**
REVENUE											
- Charge Receipts: Inflated	$3,160.5	$3,281.7	$3,418.0	$3,545.5	$3,665.2	$3,367.7	$3,463.4	$3,566.4	$3,680.8	$3,790.5	**$34,939.7**
INTEREST											
- Interest on Opening Balance	$0.0	($1.9)	($0.7)	$2.9	$8.5	$16.2	$11.0	$6.6	$3.1	$0.9	**$46.5**
- Interest on In-year Transactions	($0.9)	$0.4	$1.7	$2.7	$3.6	($4.4)	($3.7)	($2.8)	($1.7)	($0.8)	**($5.9)**
TOTAL REVENUE	$3,159.5	$3,280.2	$3,418.9	$3,551.1	$3,677.3	$3,379.5	$3,470.7	$3,570.1	$3,682.2	$3,790.7	**$34,980.2**
CLOSING CASH BALANCE	($35.1)	($13.4)	$81.8	$242.8	$462.1	$314.4	$187.5	$88.0	$27.1	$0.0	

Adjusted Charge Per Capita	**$296.40**

Allocation of Capital Program	
Residential Sector	100%
Non-Residential Sector	0%
Rates for 2016	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX B.3

SOLID WASTE

APPENDIX B.3

SOLID WASTE

Solid Waste services are managed through the City's Water and Waste Department.

TABLE 1 2017–2026 DEVELOPMENT-RELATED CAPITAL PROGRAM & CALCULATION OF THE "UNADJUSTED" REGULATORY FEES

The development-related capital program for Solid Waste services totals $34.60 million. This primarily accounts for costs associated with cell construction at the Brady Road Resource Management Facility, in addition to a new administrative building. An amount is also included for implementation of the City's Comprehensive Integrated Waste Management Strategy.

Benefit to existing shares have been calculated at 87 per cent for all items, or the share of Winnipeg's present population and employment relative to it's anticipated 2026 population and employment. This amount totals $30.25 million.

The remaining total of $4.35 million is allocated 62 per cent to residential development ($2.70 million) and 38 per cent to non-residential development ($1.65 million). The residential share of the net development-related capital cost is divided by the 10-year growth in population in new dwelling units to derive an unadjusted charge of $25.05 per capita. The non-residential share of the net growth related capital cost is further allocated to each employment sector according to relative employment growth forecasts, and divided by the 10-year forecast growth in floor space by sector, resulting in unadjusted charges of $1.15 per square metre for Office, $0.48 per square metre for Institutional, $0.78 per square metre for Commercial/Retail, and $0.31 per square metre for Industrial development.

TABLE 2 CASH FLOW ANALYSIS

After cash flow consideration, the residential and non-residential calculated charges increase slightly, as indicated in the following table.

SOLID WASTE SUMMARY

2017-2026 Development-Related Capital Program		Unadjusted Charge		**Adjusted Charge**		**Adjusted Charges**			
						Office	**Institutional**	**Commercial**	**Industrial**
Total	Net Recoverable	$/capita	$/sq.m	**$/capita**	**$/sq.m**	**$/sq.m**	**$/sq.m**	**$/sq.m**	**$/sq.m**
$34,600,000	$4,352,187	$25.05	$0.49	**$25.97**	**$0.50**	**$1.17**	**$0.48**	**$0.79**	**$0.32**

APPENDIX B.3
TABLE 1

CITY OF WINNIPEG
DEVELOPMENT-RELATED CAPITAL PROGRAM

Service	Project Description	Timing	Gross Project Cost	Grants/ Subsidies/ Other Recoveries	Net Municipal Cost	Ineligible Costs Replacement & BTE	Development Related Costs	Costs for Recovery		
								Prior Growth	2017-2026	Post 2026
3.0 SOLID WASTE										
3.1.1	Brady Road Resource Management Facility - Administration Building	2017	$ 2,500,000	$ -	$ 2,500,000	$ 2,185,536	$ 314,464	$ -	$ 314,464	$ -
3.1.2	Brady Road Resource Management Facility - Cell Construction - Phase 1	2017	$ 2,100,000	$ -	$ 2,100,000	$ 1,835,850	$ 264,150	$ -	$ 264,150	$ -
3.1.3	Brady Road Resource Management Facility - Cell Construction - Phase 1	2018	$ 2,200,000	$ -	$ 2,200,000	$ 1,923,271	$ 276,729	$ -	$ 276,729	$ -
3.1.4	Brady Road Resource Management Facility - Cell Construction - Phase 1	2019	$ 2,300,000	$ -	$ 2,300,000	$ 2,010,693	$ 289,307	$ -	$ 289,307	$ -
3.1.5	Brady Road Resource Management Facility - Cell Construction - Phase 2	2019	$ 600,000	$ -	$ 600,000	$ 524,529	$ 75,471	$ -	$ 75,471	$ -
3.1.6	Brady Road Resource Management Facility - Cell Construction - Phase 2	2020	$ 3,850,000	$ -	$ 3,850,000	$ 3,365,725	$ 484,275	$ -	$ 484,275	$ -
3.1.7	Brady Road Resource Management Facility - Cell Construction - Phase 2	2021	$ 2,950,000	$ -	$ 2,950,000	$ 2,578,932	$ 371,068	$ -	$ 371,068	$ -
3.1.8	Brady Road Resource Management Facility - Cell Construction - Phase 2	2022	$ 3,100,000	$ -	$ 3,100,000	$ 2,710,064	$ 389,936	$ -	$ 389,936	$ -
3.1.9	Brady Road Resource Management Facility - Cell Construction - Phase 2	2023	$ 3,250,000	$ -	$ 3,250,000	$ 2,841,196	$ 408,804	$ -	$ 408,804	$ -
3.1.10	Brady Road Resource Management Facility - Cell Construction - Phase 2	2024	$ 3,400,000	$ -	$ 3,400,000	$ 2,972,328	$ 427,672	$ -	$ 427,672	$ -
3.1.11	Brady Road Resource Management Facility - Cell Construction - Phase 2	2025	$ 3,600,000	$ -	$ 3,600,000	$ 3,147,171	$ 452,829	$ -	$ 452,829	$ -
3.1.12	Brady Road Resource Management Facility - Cell Construction - Phase 2	2026	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
3.1.13	Comprehensive Integrated Waste Management Strategy (CIWMS) - 4R Winnip	2017	$ 4,750,000	$ -	$ 4,750,000	$ 4,152,518	$ 597,482	$ -	$ 597,482	$ -
TOTAL SOLID WASTE			**$ 34,600,000**	**$ -**	**$ 34,600,000**	**$ 30,247,813**	**$ 4,352,187**	**$ -**	**$ 4,352,187**	**$ -**

Residential Calculation		
Residential Share of Development-Related Costs	62%	$2,698,356
10 Year Population Growth in New Housing Units		107,740
Unadjusted Per Unit Charge		**$25.05**
Non-Residential Calculation		
Non-Residential Share of Development-Related Costs	38%	$1,653,831
10 Year Growth in Square Metres		3,373,581
Unadjusted Per Square Metre Charge		**$0.49**
Non-Residential Allocation		
10 Year Growth in Square Metres: Major Office		320,530
10 Year Growth in Square Metres: Institutional		759,295
10 Year Growth in Square Metres: Commercial/Retail		455,551
10 Year Growth in Square Metres: Industrial		1,838,205
Office Per Square Metre Charge (Unadjusted)	22.3%	**$1.15**
Institutional Per Square Metre Charge (Unadjusted)	21.9%	**$0.48**
Commercial/Retail Per Square Metre Charge (Unadjusted)	21.4%	**$0.78**
Industrial Per Square Metre Charge (Unadjusted)	34.5%	**$0.31**

APPENDIX B.3
TABLE 2 - PAGE 1

CITY OF WINNIPEG
CASHFLOW AND DETERMINATION OF REGULATORY FEE
SOLID WASTE
RESIDENTIAL CHARGE
(in $000)

SOLID WASTE	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	TOTAL
OPENING CASH BALANCE	$0.00	($464.69)	($375.73)	($331.08)	($357.47)	($303.75)	($291.80)	($289.50)	($297.37)	($320.33)	
2017-2026 RESIDENTIAL FUNDING REQUIREMENTS											
- Solid Waste: Non Inflated	$729.2	$171.6	$226.2	$300.3	$230.1	$241.8	$253.5	$265.2	$280.8	$0.0	**$2,698.4**
- Solid Waste: Inflated	$729.2	$175.0	$235.3	$318.6	$249.0	$266.9	$285.4	$304.6	$328.9	$0.0	**$2,893.0**
NEW RESIDENTIAL DEVELOPMENT											
- Population in New Units	10,663	10,855	11,084	11,272	11,424	10,291	10,376	10,475	10,599	10,701	**107,740**
REVENUE											
- Charge Receipts: Inflated	$276.9	$287.6	$299.5	$310.7	$321.1	$295.1	$303.5	$312.5	$322.5	$332.1	**$3,061.5**
INTEREST											
- Interest on Opening Balance	$0.0	($25.6)	($20.7)	($18.2)	($19.7)	($16.7)	($16.0)	($15.9)	($16.4)	($17.6)	**($166.7)**
- Interest on In-year Transactions	($12.4)	$2.0	$1.1	($0.2)	$1.3	$0.5	$0.3	$0.1	($0.2)	$5.8	**($1.7)**
TOTAL REVENUE	$264.5	$264.0	$279.9	$292.2	$302.8	$278.9	$287.7	$296.7	$306.0	$320.3	**$2,893.0**
CLOSING CASH BALANCE	($464.7)	($375.7)	($331.1)	($357.5)	($303.7)	($291.8)	($289.5)	($297.4)	($320.3)	$0.0	

Adjusted Charge Per Capita	**$25.97**

Allocation of Capital Program	
Residential Sector	62%
Non-Residential Sector	38%
Rates for 2016	
Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX B.3
TABLE 2 - PAGE 2

CITY OF WINNIPEG
CASHFLOW AND DETERMINATION OF REGULATORY FEE
SOLID WASTE
OFFICE CHARGE
(in $000)

SOLID WASTE	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	TOTAL
OPENING CASH BALANCE	$0.00	($40.17)	($23.58)	($18.27)	($10.39)	($5.87)	($9.23)	($13.77)	($19.35)	($31.71)	
2017-2026 MAJOR OFFICE FUNDING REQUIREMENTS											
- Solid Waste: Non Inflated	$99.5	$23.4	$30.9	$41.0	$31.4	$33.0	$34.6	$36.2	$38.3	$0.0	**$368.2**
- Solid Waste: Inflated	$99.5	$23.9	$32.1	$43.5	$34.0	$36.4	$38.9	$41.6	$44.9	$0.0	**$394.8**
NEW MAJOR OFFICE DEVELOPMENT											
- Growth in Square Metres	51,743	35,567	31,780	42,145	30,851	25,970	26,639	27,491	24,776	23,569	**320,530**
REVENUE											
- Charge Receipts: Inflated	$60.4	$42.4	$38.6	$52.2	$39.0	$33.5	$35.0	$36.9	$33.9	$32.9	**$404.7**
INTEREST											
- Interest on Opening Balance	$0.0	($2.2)	($1.3)	($1.0)	($0.6)	($0.3)	($0.5)	($0.8)	($1.1)	($1.7)	**($9.5)**
- Interest on In-year Transactions	($1.1)	$0.3	$0.1	$0.2	$0.1	($0.1)	($0.1)	($0.1)	($0.3)	$0.6	**($0.4)**
TOTAL REVENUE	$59.3	$40.5	$37.4	$51.4	$38.5	$33.1	$34.4	$36.0	$32.5	$31.7	**$394.8**
CLOSING CASH BALANCE	($40.2)	($23.6)	($18.3)	($10.4)	($5.9)	($9.2)	($13.8)	($19.3)	($31.7)	$0.0	

Adjusted Charge Per Square Metre	**$1.17**

Allocation of Capital Program	
Residential Sector	62%
Non-Residential Sector	38%
Rates for 2016	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Non-res Split:	
Office	22%
Institutional	22%
Commercial/R	21%
Industrial	34%

APPENDIX B.3
TABLE 2 - PAGE 3

CITY OF WINNIPEG
CASHFLOW AND DETERMINATION OF REGULATORY FEE
SOLID WASTE
INSTITUTIONAL CHARGE
(in $000)

SOLID WASTE	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	TOTAL
OPENING CASH BALANCE	$0.00	($39.53)	($23.21)	($17.98)	($10.23)	($5.78)	($9.08)	($13.55)	($19.04)	($31.21)	
2017-2026 INSTITUTIONAL FUNDING REQUIREMENTS											
- Solid Waste: Non Inflated	$97.9	$23.0	$30.4	$40.3	$30.9	$32.5	$34.0	$35.6	$37.7	$0.0	**$362.3**
- Solid Waste: Inflated	$97.9	$23.5	$31.6	$42.8	$33.4	$35.8	$38.3	$40.9	$44.2	$0.0	**$388.4**
NEW INSTITUTIONAL DEVELOPMENT											
- Growth in Square Metres	122,572	84,253	75,284	99,835	73,081	61,520	63,104	65,123	58,690	55,832	**759,295**
REVENUE											
- Charge Receipts: Inflated	$59.4	$41.7	$38.0	$51.4	$38.4	$32.9	$34.5	$36.3	$33.3	$32.4	**$398.2**
INTEREST											
- Interest on Opening Balance	$0.0	($2.2)	($1.3)	($1.0)	($0.6)	($0.3)	($0.5)	($0.7)	($1.0)	($1.7)	**($9.3)**
- Interest on In-year Transactions	($1.1)	$0.3	$0.1	$0.2	$0.1	($0.1)	($0.1)	($0.1)	($0.3)	$0.6	**($0.4)**
TOTAL REVENUE	$58.4	$39.8	$36.8	$50.5	$37.9	$32.5	$33.9	$35.4	$32.0	$31.2	**$388.4**
CLOSING CASH BALANCE	($39.5)	($23.2)	($18.0)	($10.2)	($5.8)	($9.1)	($13.5)	($19.0)	($31.2)	$0.0	

Adjusted Charge Per Square Metre	**$0.48**

Allocation of Capital Program	
Residential Sector	62%
Non-Residential Sector	38%
Rates for 2016	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Non-res Split:	
Office	22%
Institutional	22%
Commercial/R	21%
Industrial	34%

APPENDIX B.3
TABLE 2 - PAGE 4

CITY OF WINNIPEG
CASHFLOW AND DETERMINATION OF REGULATORY FEE
SOLID WASTE
COMMERCIAL/RETAIL CHARGE
(in $000)

SOLID WASTE	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	TOTAL
OPENING CASH BALANCE	$0.00	($38.54)	($22.62)	($17.53)	($9.97)	($5.63)	($8.85)	($13.21)	($18.56)	($30.42)	
2017-2026 INSTITUTIONAL FUNDING REQUIREMENTS											
- Solid Waste: Non Inflated	$95.5	$22.5	$29.6	$39.3	$30.1	$31.6	$33.2	$34.7	$36.8	$0.0	**$353.2**
- Solid Waste: Inflated	$95.5	$22.9	$30.8	$41.7	$32.6	$34.9	$37.4	$39.9	$43.1	$0.0	**$378.7**
NEW COMMERCIAL DEVELOPMENT											
- Growth in Square Metres	73,539	50,549	45,168	59,898	43,846	36,910	37,860	39,071	35,212	33,498	**455,551**
REVENUE											
- Charge Receipts: Inflated	$57.9	$40.6	$37.0	$50.1	$37.4	$32.1	$33.6	$35.4	$32.5	$31.5	**$388.2**
INTEREST											
- Interest on Opening Balance	$0.0	($2.1)	($1.2)	($1.0)	($0.5)	($0.3)	($0.5)	($0.7)	($1.0)	($1.7)	**($9.1)**
- Interest on In-year Transactions	($1.0)	$0.3	$0.1	$0.1	$0.1	($0.1)	($0.1)	($0.1)	($0.3)	$0.6	**($0.4)**
TOTAL REVENUE	$56.9	$38.8	$35.9	$49.3	$36.9	$31.7	$33.0	$34.5	$31.2	$30.4	**$378.7**
CLOSING CASH BALANCE	($38.5)	($22.6)	($17.5)	($10.0)	($5.6)	($8.9)	($13.2)	($18.6)	($30.4)	($0.0)	

Adjusted Charge Per Square Metre	**$0.79**

Allocation of Capital Program	
Residential Sector	62%
Non-Residential Sector	38%
Rates for 2016	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Non-res Split:	
Office	22%
Institutional	22%
Commercial/R	21%
Industrial	34%

APPENDIX B.3
TABLE 2 - PAGE 5

CITY OF WINNIPEG
CASHFLOW AND DETERMINATION OF REGULATORY FEE
SOLID WASTE
INDUSTRIAL CHARGE
(in $000)

SOLID WASTE	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**TOTAL**
OPENING CASH BALANCE	$0.00	($62.20)	($36.52)	($28.30)	($16.09)	($9.09)	($14.29)	($21.32)	($29.96)	($49.11)	
2017-2026 INSTITUTIONAL FUNDING REQUIREMENTS											
- Solid Waste: Non Inflated	$154.1	$36.3	$47.8	$63.4	$48.6	$51.1	$53.6	$56.0	$59.3	$0.0	**$570.1**
- Solid Waste: Inflated	$154.1	$37.0	$49.7	$67.3	$52.6	$56.4	$60.3	$64.4	$69.5	$0.0	**$611.2**
NEW INDUSTRIAL DEVELOPMENT											
- Growth in Square Metres	296,738	203,971	182,257	241,695	176,925	148,937	152,772	157,658	142,085	135,167	**1,838,205**
REVENUE											
- Charge Receipts: Inflated	$93.5	$65.6	$59.8	$80.8	$60.4	$51.8	$54.2	$57.1	$52.5	$50.9	**$626.6**
INTEREST											
- Interest on Opening Balance	$0.0	($3.4)	($2.0)	($1.6)	($0.9)	($0.5)	($0.8)	($1.2)	($1.6)	($2.7)	**($14.7)**
- Interest on In-year Transactions	($1.7)	$0.5	$0.2	$0.2	$0.1	($0.1)	($0.2)	($0.2)	($0.5)	$0.9	**($0.7)**
TOTAL REVENUE	$91.9	$62.7	$57.9	$79.5	$59.6	$51.2	$53.3	$55.7	$50.4	$49.1	**$611.2**
CLOSING CASH BALANCE	($62.2)	($36.5)	($28.3)	($16.1)	($9.1)	($14.3)	($21.3)	($30.0)	($49.1)	$0.0	

Adjusted Charge Per Square Metre	**$0.32**

Allocation of Capital Program	
Residential Sector	62%
Non-Residential Sector	38%
Rates for 2016	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Non-res Split:	
Office	22%
Institutional	22%
Commercial/R	21%
Industrial	34%

APPENDIX C

15-YEAR BENEFITTING PERIOD SERVICES

TECHNICAL APPENDIX

APPENDIX C

15-YEAR BENEFITTING PERIOD SERVICES TECHNICAL APPENDIX

This appendix provides the detailed analysis undertaken to establish the regulatory fee rates for Public Works services, which is anticipated to benefit development over the 15-year period between 2017 and 2031. The City's Public Works department manages a range of transportation-related projects including active transportation facilities, roads, and bridges.

This appendix contains a set of two tables. The tables provide the background data and analysis undertaken to arrive at the calculated regulatory fee rates, as described below.

TABLE 1 2017 – 2031 DEVELOPMENT-RELATED CAPITAL PROGRAM AND CALCULATION OF THE "UNADJUSTED" REGULATORY FEES

Based on the development forecasts presented in Appendix A, City staff in collaboration with consultants, have created a growth-related capital forecast for Public Works that sets out the projects required to service anticipated development over the 15-year period from 2017–2031. Most of the major projects in the capital program are identified in the City's Transportation Master Plan, which is also based on growth to 2031. The gross cost of the program totals approximately $3.47 billion. This include a number of planned major road and bridge rehabilitations, widenings, grade separations, and extensions, as well as construction of pedestrian and cycling paths.

To determine the regulatory fee share of the program, the project costs are reduced by any anticipated grants, subsidies or other recoveries. These amounts total $1.71 billion.

Other deductions include benefit to existing shares. Many of these shared have been identified by City staff as the portion of each project which represents improvements to existing infrastructure. Some projects involve both a road widening and reconstruction, in which case the cost of reconstructing existing lanes is estimated and identified as a benefit to existing share. These reconstruction costs have been

estimated by City staff at $1.97 million per lane kilometre. Benefit to existing shares for this service total $711.46 million.

Some projects included with the development related program have been recently completed, while several planned projects are anticipated to benefit development that occurred in the City over the 10-year period preceding 2017. These amounts have been deducted as "prior growth" shares, and total $165.11 million for this service.

Finally, several large-scale and long-term road and bridge projects are included that are anticipated to benefit development that occurs beyond 2031. These "post-2031" benefits have been deducted based on population and employment shares between periods.

The remaining development-related costs for recovery between 2017 and 2031 total $647.78 million.

Calculation of the Unadjusted Regulatory Fee Rates

The $647.78 in costs for recovery through regulatory fees is allocated among new residential and non-residential development to result in "unadjusted" regulatory fee rates. The term "unadjusted" regulatory fee is used to distinguish the charge that is calculated prior to cash flow financing considerations. The cash flow analysis is shown in Table 2.

The first step in determining the unadjusted regulatory fee rate is to allocate the development-related net capital cost between the residential and non-residential sectors. In the case of Public Works services, development-related costs have been apportioned as 62 per cent residential ($401.63 million) and 38 per cent non-residential ($246.16 million). This apportionment is based on the anticipated shares of population and employment growth over the 15-year forecast period.

The 38 per cent non-residential apportionment of the development-related net capital cost has been further broken down into four employment category apportionments based on anticipated shares of employment growth in each sector. The result is an apportionment of 22.3 per cent Office, 21.9 per cent Institutional, 21.4 per cent Commercial/Retail, and 34.5 per cent Industrial.

Next, the residential share of the costs for recovery is divided by the forecast population growth in new dwelling units from 2017 to 2031 of approximately 156,200. This gives the unadjusted residential regulatory fee of $2,571.91 per capita.

The non-residential development-related net capital costs are divided by the forecasted increase in non-residential gross floor area (GFA): approximately 453,800 square metres for Office, 1.75 million square metres for Institutional, 644,900 million square metres for Commercial/Retail, and 2.60 million square metres for Industrial development. This yields an unadjusted charge per square metre of new development for each employment category: $120.77 per square metre for Office, $50.17 per square metre for Institutional, $81.52 per square metre for Commercial/Retail, and $32.61 per square metre for Industrial development.

TABLE 2 CASH FLOW ANALYSIS

A cash flow analysis is also undertaken to account for the timing of projects and receipt of regulatory fees. Interest earnings or borrowing costs are accounted for in the calculation. Based on the development forecast, the analysis calculates the regulatory fee rate required to finance the net development-related capital spending plan, including provisions for any borrowing costs or interest earnings on the reserve funds. An inflation rate assumption of 2.0 per cent is used for the funding requirements, an interest rate of 5.5 per cent is used for borrowing on the funds and an interest rate of 3.5 per cent is applied to positive balances.

The cash flow analysis is designed so that the closing cash balance at the end of the planning period is as close to nil as possible. Table 2 displays the results of the cash flow analysis. The adjusted or final per capita residential and per square metre (of GFA) non-residential regulatory fees are summarized below:

PUBLIC WORKS SUMMARY									
2017-2031 Development-Related Capital Program		Unadjusted Charge		**Adjusted Charge**		**Adjusted Charges**			
						Office	**Institutional**	**Commercial**	**Industrial**
Total	Net Recoverable	$/capita	$/sq.m	**$/capita**	**$/sq.m**	**$/sq.m**	**$/sq.m**	**$/sq.m**	**$/sq.m**
$3,471,887,115	$647,784,514	$2,571.91	$51.54	**$2,735.87**	**$53.80**	**$126.06**	**$52.36**	**$85.09**	**$34.04**

APPENDIX C
TABLE 1 - PAGE 1

CITY OF WINNIPEG
DEVELOPMENT-RELATED CAPITAL PROGRAM

Service	Project Description	Timing	Gross Project Cost	Grants/ Subsidies/ Other Recoveries	Net Municipal Cost	Ineligible Costs Replacement & BTE (1)	Development Related Costs	Costs for Recovery		
								Prior Growth	2017-2031	Post 2031
4.0 PUBLIC WORKS										
4.1 Active Transportation Facilities										
4.1.1	Pedestrian/Bicycle paths (past project)	2017	$ 20,400,000	$ 13,600,000	$ 6,800,000	$ 4,533,333	$ 2,266,667	$ 915,855	$ 1,350,812	$ -
4.1.2	Pedestrian/Bicycle paths (future projects)	Various	$ 330,000,000	$ 66,000,000	$ 264,000,000	$ 176,000,000	$ 88,000,000	$ -	$ 55,582,870	$ 32,417,130
	Subtotal Active Transportation Facilities		**$ 350,400,000**	**$ 79,600,000**	**$ 270,800,000**	**$ 180,533,333**	**$ 90,266,667**	**$ 915,855**	**$ 56,933,682**	**$ 32,417,130**
4.2 Studies										
4.2.1	Transportation Master Plan	Various	$ 3,750,000	$ -	$ 3,750,000	$ 1,875,000	$ 1,875,000	$ -	$ 1,875,000	$ -
	Subtotal Studies		**$ 3,750,000**	**$ -**	**$ 3,750,000**	**$ 1,875,000**	**$ 1,875,000**	**$ -**	**$ 1,875,000**	**$ -**
4.3 Major Projects										
4.3.1	Public Works East Yard (past project)	2017	$ 49,400,000	$ -	$ 49,400,000	$ 32,115,334	$ 17,284,666	$ 6,983,933	$ 10,300,734	$ -
4.3.2	Chief Peguis Trail (1st section) (P3) (past project)	2017	$ 108,500,000	$ 31,300,000	$ 77,200,000	$ 23,160,000	$ 54,040,000	$ 21,835,060	$ 32,204,940	$ -
4.3.3	Disraeli Bridge (P3) (past project)	2017	$ 195,000,000	$ -	$ 195,000,000	$ 126,771,054	$ 68,228,946	$ 27,568,155	$ 40,660,791	$ -
4.3.4	Waverley Underpass (past project)	2017	$ 155,000,000	$ 91,800,000	$ 63,200,000	$ 41,086,824	$ 22,113,176	$ 8,934,910	$ 13,178,267	$ -
4.3.5	Pembina Underpass (past project)	2017	$ 90,000,000	$ 58,200,000	$ 31,800,000	$ 20,673,433	$ 11,126,567	$ 4,495,730	$ 6,630,837	$ -
4.3.6	Plessis Road Underpass (past project)	2017	$ 87,500,000	$ 57,500,000	$ 30,000,000	$ 15,000,000	$ 15,000,000	$ 6,060,805	$ 8,939,195	$ -
4.3.7	Waverley West Roads & Bridge (past project)	2017	$ 70,700,000	$ 33,200,000	$ 37,500,000	$ 11,250,000	$ 26,250,000	$ 10,606,408	$ 15,643,592	$ -
4.3.8	Land Acquisition - Transportation Right of Way	Various	$ 3,000,000	$ -	$ 3,000,000	$ -	$ 3,000,000	$ -	$ 3,000,000	$ -
4.3.9	Henderson Highway North of Gilmore to City Limit	2018	$ 700,000	$ -	$ 700,000	$ 350,000	$ 350,000	$ 141,419	$ 208,581	$ -

APPENDIX C
TABLE 1 - PAGE 2

CITY OF WINNIPEG
DEVELOPMENT-RELATED CAPITAL PROGRAM

Service	Project Description	Timing	Gross Project Cost	Grants/ Subsidies/ Other Recoveries	Net Municipal Cost	Ineligible Costs Replacement & BTE (1)	Development Related Costs	Costs for Recovery		
								Prior Growth	2017-2031	Post 2031
4.3	**Major Projects (continued)**									
4.3.10	Marion U/P, Widening & Realignment	2019	$ 86,383,760	$ -	$ 86,383,760	$ 56,158,771	$ 30,224,989	$ 12,212,517	$ 18,012,472	$ -
4.3.11	Kenaston (Ness to Taylor): Bridge and Approach	2019	$ 38,872,692	$ 23,323,615	$ 15,549,077	$ 10,366,051	$ 5,183,026	$ 2,094,220	$ 3,088,805	$ -
4.3.12	Kenaston (Ness to Taylor), Road	2019	$ 259,151,280	$ 155,490,768	$ 103,660,512	$ 30,747,600	$ 72,912,912	$ 29,460,729	$ 43,452,183	$ -
4.3.13	St James Bridge South Bound	2020	$ 49,362,148	$ 29,617,289	$ 19,744,859	$ 14,808,645	$ 4,936,215	$ 1,994,496	$ 2,941,719	$ -
4.3.14	Louise Bridge	2020	$ 123,405,371	$ 74,043,223	$ 49,362,148	$ 24,681,074	$ 24,681,074	$ 9,972,478	$ 14,708,596	$ -
4.3.15	Arlington Bridge or alternative	2020	$ 246,810,742	$ 148,086,445	$ 98,724,297	$ 65,816,198	$ 32,908,099	$ 13,296,638	$ 19,611,461	$ -
4.3.16	St Mary's Widening (St Anne to Marion)	2021	$ 78,352,617	$ 47,011,570	$ 31,341,047	$ 18,921,600	$ 12,419,447	$ 5,018,123	$ 7,401,324	$ -
4.3.17	Osborne Underpass - widening	2023	$ 66,804,045	$ 40,082,427	$ 26,721,618	$ 21,377,294	$ 5,344,324	$ 2,159,393	$ 3,184,930	$ -
4.3.18	Fermor (Lagimodiere to Plessis)	2024	$ 50,929,201	$ 30,557,520	$ 20,371,680	$ 15,768,000	$ 4,603,680	$ 1,860,134	$ 2,743,546	$ -
4.3.19	Chief Peguis Trail (Main to Route 90)	2019	$ 380,952,381	$ 228,571,429	$ 152,380,952	$ -	$ 152,380,952	$ -	$ 96,247,395	$ 56,133,558
4.3.20	Clement Parkway (Grant to Wilkes)	2021	$ 129,233,459	$ 77,540,076	$ 51,693,384	$ -	$ 51,693,384	$ -	$ 32,650,757	$ 19,042,626
4.3.21	Bishop Grandin (Lagimodiere to Fermor)	2025	$ 102,102,525	$ 61,261,515	$ 40,841,010	$ -	$ 40,841,010	$ -	$ 25,796,143	$ 15,044,867
4.3.22	Schreyer Parkway (Plessis to Peguis)	2025	$ 76,576,894	$ 45,946,136	$ 30,630,758	$ -	$ 30,630,758	$ -	$ 19,347,107	$ 11,283,650
4.3.23	Bishop Grandin (Kenaston to McGillivray)	2026	$ 122,000,000	$ 73,200,000	$ 48,800,000	$ -	$ 48,800,000	$ -	$ 30,823,228	$ 17,976,772
4.3.24	Clement Parkway (McGillvray to Wilkes)	2027	$ 122,000,000	$ 73,200,000	$ 48,800,000	$ -	$ 48,800,000	$ -	$ 30,823,228	$ 17,976,772
4.3.25	Silver (Rt 90 to Sturgeon)	2028	$ 109,000,000	$ 65,400,000	$ 43,600,000	$ -	$ 43,600,000	$ -	$ 27,538,786	$ 16,061,214
4.3.26	Chief Peguis Trail (Schreyer Parkway to 101)	2029	$ 134,000,000	$ 80,400,000	$ 53,600,000	$ -	$ 53,600,000	$ -	$ 33,855,021	$ 19,744,979
4.3.27	Hwy 6 extension	2030	$ 182,000,000	$ 109,200,000	$ 72,800,000	$ -	$ 72,800,000	$ -	$ 45,982,193	$ 26,817,807
	Subtotal Major Projects (continued)		**$ 2,357,937,115**	**$ 1,362,932,013**	**$ 995,005,102**	**$ 258,645,233**	**$ 736,359,869**	**$ 78,068,728**	**$ 458,208,895**	**$ 200,082,246**
TOTAL PUBLIC WORKS			**$ 3,471,887,115**	**$ 1,714,532,013**	**$ 1,757,355,102**	**$ 711,460,210**	**$ 1,045,894,892**	**$ 165,611,003**	**$ 647,784,514**	**$ 232,499,375**

Note 1: Cost of road reconstruction based on $1.971 million per lane km

Residential Calculation		
Residential Share of Development-Related Costs	62%	$401,626,398
15 Year Population Growth in New Housing Units		156,159
Unadjusted Per Unit Charge		**$2,571.91**
Non-Residential Calculation		
Non-Residential Share of Development-Related Costs	38%	$246,158,115
15 Year Growth in Square Metres		4,775,863
Unadjusted Per Square Metre Charge		**$51.54**
Non-Residential Allocation		
15 Year Growth in Square Metres: Major Office		453,764
15 Year Growth in Square Metres: Institutional		1,074,908
15 Year Growth in Square Metres: Commercial/Retail		644,907
15 Year Growth in Square Metres: Industrial		2,602,284
Office Per Square Metre Charge (Unadjusted)	22.3%	**$120.77**
Institutional Per Square Metre Charge (Unadjusted)	21.9%	**$50.17**
Commercial/Retail Per Square Metre Charge (Unadjusted)	21.4%	**$81.52**
Industrial Per Square Metre Charge (Unadjusted)	34.5%	**$32.61**

APPENDIX C
TABLE 2 - PAGE 1

CITY OF WINNIPEG
CASHFLOW AND DETERMINATION OF REGULATORY FEE
PUBLIC WORKS
RESIDENTIAL CHARGE
(in $000)

PUBLIC WORKS	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	TOTAL
OPENING CASH BALANCE	$0.0	($54,714.4)	($29,629.5)	($108,090.1)	($108,379.7)	($110,019.5)	($87,248.7)	($64,645.3)	($39,614.2)	($43,587.1)	($36,661.0)	($32,907.0)	($26,216.8)	($23,858.5)	($30,988.4)	
2017-2041 RESIDENTIAL FUNDING REQUIREMENTS																
- Public Works: Non Inflated	$82,422.6	$2,628.2	$102,195.5	$25,601.2	$27,331.2	$2,498.9	$4,473.6	$4,199.9	$30,487.7	$21,609.3	$21,609.3	$19,573.0	$23,489.0	$31,007.9	$2,498.9	**$401,626.4**
- Public Works: Inflated	$82,422.6	$2,680.8	$106,324.2	$27,168.2	$29,584.2	$2,759.0	$5,038.0	$4,824.4	$35,721.2	$25,825.1	$26,341.6	$24,336.5	$29,789.8	$40,112.0	$3,297.3	**$446,225.0**
NEW RESIDENTIAL DEVELOPMENT																
- Population in New Units	10,663	10,855	11,084	11,272	11,424	10,291	10,376	10,475	10,599	10,701	9,599	9,610	9,662	9,734	9,814	**156,159**
REVENUE																
- Charge Receipts: Inflated	$29,172.6	$30,291.8	$31,549.5	$32,726.3	$33,831.0	$31,085.2	$31,968.8	$32,919.3	$33,975.2	$34,988.2	$32,012.8	$32,690.4	$33,524.7	$34,450.0	$35,427.8	**$490,613.3**
INTEREST																
- Interest on Opening Balance	$0.0	($3,009.3)	($1,629.6)	($5,945.0)	($5,960.9)	($6,051.1)	($4,798.7)	($3,555.5)	($2,178.8)	($2,397.3)	($2,016.4)	($1,809.9)	($1,441.9)	($1,312.2)	($1,704.4)	**($43,810.8)**
- Interest on In-year Transactions	($1,464.4)	$483.2	($2,056.3)	$97.3	$74.3	$495.7	$471.3	$491.7	($48.0)	$160.4	$99.2	$146.2	$65.4	($155.7)	$562.3	**($577.5)**
TOTAL REVENUE	$27,708.2	$27,765.7	$27,863.6	$26,878.6	$27,944.4	$25,529.8	$27,641.4	$29,855.5	$31,748.4	$32,751.2	$30,095.6	$31,026.7	$32,148.1	$32,982.1	$34,285.7	**$446,225.0**
CLOSING CASH BALANCE	($54,714.4)	($29,629.5)	($108,090.1)	($108,379.7)	($110,019.5)	($87,248.7)	($64,645.3)	($39,614.2)	($43,587.1)	($36,661.0)	($32,907.0)	($26,216.8)	($23,858.5)	($30,988.4)	($0.0)	

Adjusted Charge Per Capita	**$2,735.87**

Allocation of Capital Program	
Residential Sector	62%
Non-Residential Sector	38%
Rates for 2016	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX C
TABLE 2 - PAGE 2

CITY OF WINNIPEG
CASHFLOW AND DETERMINATION OF REGULATORY FEE
PUBLIC WORKS
OFFICE CHARGE
(in $000)

PUBLIC WORKS	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	TOTAL
OPENING CASH BALANCE	$0.0	($4,854.0)	($840.1)	($11,510.7)	($10,179.3)	($10,563.4)	($7,849.7)	($5,133.0)	($2,034.8)	($3,395.1)	($3,554.5)	($3,517.3)	($3,087.7)	($3,246.6)	($3,975.7)	
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS																
- Public Works: Non Inflated	$11,246.6	$358.6	$13,944.7	$3,493.3	$3,729.4	$341.0	$610.4	$573.1	$4,160.1	$2,948.6	$2,948.6	$2,670.7	$3,205.1	$4,231.1	$341.0	**$54,802.3**
- Public Works: Inflated	$11,246.6	$365.8	$14,508.0	$3,707.1	$4,036.8	$376.5	$687.4	$658.3	$4,874.2	$3,523.9	$3,594.3	$3,320.7	$4,064.8	$5,473.3	$449.9	**$60,887.8**
NEW MAJOR OFFICE DEVELOPMENT																
- Growth in Square Metres	51,743	35,567	31,780	42,145	30,851	25,970	26,639	27,491	24,776	23,569	24,879	25,094	25,493	30,279	27,488	**453,764**
REVENUE																
- Charge Receipts: Inflated	$6,522.5	$4,573.1	$4,168.0	$5,637.8	$4,209.5	$3,614.5	$3,781.7	$3,980.7	$3,659.3	$3,550.7	$3,823.0	$3,933.1	$4,075.6	$4,937.6	$4,572.1	**$65,039.1**
INTEREST																
- Interest on Opening Balance	$0.0	($267.0)	($46.2)	($633.1)	($559.9)	($581.0)	($431.7)	($282.3)	($111.9)	($186.7)	($195.5)	($193.5)	($169.8)	($178.6)	($218.7)	**($4,055.8)**
- Interest on In-year Transactions	($129.9)	$73.6	($284.4)	$33.8	$3.0	$56.7	$54.1	$58.1	($33.4)	$0.5	$4.0	$10.7	$0.2	($14.7)	$72.1	**($95.5)**
TOTAL REVENUE	$6,392.6	$4,379.8	$3,837.4	$5,038.5	$3,652.7	$3,090.2	$3,404.1	$3,756.5	$3,513.9	$3,364.4	$3,631.5	$3,750.4	$3,905.9	$4,744.3	$4,425.6	**$60,887.8**
CLOSING CASH BALANCE	($4,854.0)	($840.1)	($11,510.7)	($10,179.3)	($10,563.4)	($7,849.7)	($5,133.0)	($2,034.8)	($3,395.1)	($3,554.5)	($3,517.3)	($3,087.7)	($3,246.6)	($3,975.7)	$0.0	

Adjusted Charge Per Square Metre	**$126.06**

Allocation of Capital Program	
Residential Sector	62%
Non-Residential Sector	38%
Rates for 2016	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Non-res Split:	
Office	22%
Institutional	22%
Commercial/R	21%
Industrial	34%

APPENDIX C
TABLE 2 - PAGE 3

CITY OF WINNIPEG
CASHFLOW AND DETERMINATION OF REGULATORY FEE
PUBLIC WORKS
INSTITUTIONAL CHARGE
(in $000)

PUBLIC WORKS	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	TOTAL
OPENING CASH BALANCE	$0.0	($4,776.3)	($826.6)	($11,326.4)	($10,016.3)	($10,394.3)	($7,724.1)	($5,050.9)	($2,002.2)	($3,340.7)	($3,497.6)	($3,461.0)	($3,038.3)	($3,194.6)	($3,912.0)	
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS																
- Public Works: Non Inflated	$11,066.6	$352.9	$13,721.4	$3,437.4	$3,669.7	$335.5	$600.7	$563.9	$4,093.5	$2,901.4	$2,901.4	$2,628.0	$3,153.8	$4,163.3	$335.5	**$53,925.1**
- Public Works: Inflated	$11,066.6	$359.9	$14,275.8	$3,647.8	$3,972.2	$370.4	$676.4	$647.8	$4,796.2	$3,467.5	$3,536.8	$3,267.6	$3,999.8	$5,385.7	$442.7	**$59,913.2**
NEW INSTITUTIONAL DEVELOPMENT																
- Growth in Square Metres	122,572	84,253	75,284	99,835	73,081	61,520	63,104	65,123	58,690	55,832	58,936	59,444	60,389	71,727	65,116	**1,074,908**
REVENUE																
- Charge Receipts: Inflated	$6,418.1	$4,499.9	$4,101.3	$5,547.6	$4,142.1	$3,556.6	$3,721.2	$3,917.0	$3,600.7	$3,493.9	$3,761.8	$3,870.2	$4,010.3	$4,858.5	$4,498.9	**$63,998.0**
INTEREST																
- Interest on Opening Balance	$0.0	($262.7)	($45.5)	($623.0)	($550.9)	($571.7)	($424.8)	($277.8)	($110.1)	($183.7)	($192.4)	($190.4)	($167.1)	($175.7)	($215.2)	**($3,990.9)**
- Interest on In-year Transactions	($127.8)	$72.4	($279.8)	$33.2	$3.0	$55.8	$53.3	$57.2	($32.9)	$0.5	$3.9	$10.5	$0.2	($14.5)	$71.0	**($94.0)**
TOTAL REVENUE	$6,290.3	$4,309.7	$3,776.0	$4,957.8	$3,594.2	$3,040.7	$3,349.6	$3,696.4	$3,457.7	$3,310.6	$3,573.4	$3,690.3	$3,843.4	$4,668.3	$4,354.7	**$59,913.2**
CLOSING CASH BALANCE	($4,776.3)	($826.6)	($11,326.4)	($10,016.3)	($10,394.3)	($7,724.1)	($5,050.9)	($2,002.2)	($3,340.7)	($3,497.6)	($3,461.0)	($3,038.3)	($3,194.6)	($3,912.0)	$0.0	

Adjusted Charge Per Square Metre	**$52.36**

Allocation of Capital Program	
Residential Sector	62%
Non-Residential Sector	38%
Rates for 2016	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Non-res Split:	
Office	22%
Institutional	22%
Commercial/R	21%
Industrial	34%

APPENDIX C
TABLE 2 - PAGE 4

CITY OF WINNIPEG
CASHFLOW AND DETERMINATION OF REGULATORY FEE
PUBLIC WORKS
COMMERCIAL/RETAIL CHARGE
(in $000)

PUBLIC WORKS	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	TOTAL
OPENING CASH BALANCE	$0.0	($4,656.7)	($805.9)	($11,042.6)	($9,765.4)	($10,133.9)	($7,530.5)	($4,924.3)	($1,952.1)	($3,257.0)	($3,410.0)	($3,374.3)	($2,962.1)	($3,114.6)	($3,814.0)	
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS																
- Public Works: Non Inflated	$10,789.3	$344.0	$13,377.6	$3,351.3	$3,577.7	$327.1	$585.6	$549.8	$3,990.9	$2,828.7	$2,828.7	$2,562.1	$3,074.8	$4,059.0	$327.1	**$52,573.9**
- Public Works: Inflated	$10,789.3	$350.9	$13,918.1	$3,556.4	$3,872.6	$361.2	$659.5	$631.5	$4,676.0	$3,380.6	$3,448.2	$3,185.7	$3,899.6	$5,250.8	$431.6	**$58,411.9**
NEW COMMERCIAL DEVELOPMENT																
- Growth in Square Metres	73,539	50,549	45,168	59,898	43,846	36,910	37,860	39,071	35,212	33,498	35,360	35,664	36,231	43,034	39,067	**644,907**
REVENUE																
- Charge Receipts: Inflated	$6,257.3	$4,387.2	$3,998.5	$5,408.5	$4,038.3	$3,467.5	$3,627.9	$3,818.8	$3,510.5	$3,406.3	$3,667.6	$3,773.2	$3,909.8	$4,736.8	$4,386.2	**$62,394.4**
INTEREST																
- Interest on Opening Balance	$0.0	($256.1)	($44.3)	($607.3)	($537.1)	($557.4)	($414.2)	($270.8)	($107.4)	($179.1)	($187.5)	($185.6)	($162.9)	($171.3)	($209.8)	**($3,890.9)**
- Interest on In-year Transactions	($124.6)	$70.6	($272.8)	$32.4	$2.9	$54.4	$51.9	$55.8	($32.1)	$0.5	$3.8	$10.3	$0.2	($14.1)	$69.2	**($91.6)**
TOTAL REVENUE	$6,132.7	$4,201.7	$3,681.4	$4,833.6	$3,504.2	$2,964.5	$3,265.7	$3,603.8	$3,371.0	$3,227.6	$3,483.9	$3,597.9	$3,747.1	$4,551.3	$4,245.6	**$58,411.9**
CLOSING CASH BALANCE	($4,656.7)	($805.9)	($11,042.6)	($9,765.4)	($10,133.9)	($7,530.5)	($4,924.3)	($1,952.1)	($3,257.0)	($3,410.0)	($3,374.3)	($2,962.1)	($3,114.6)	($3,814.0)	$0.0	

Adjusted Charge Per Square Metre	**$85.09**

Allocation of Capital Program	
Residential Sector	62%
Non-Residential Sector	38%
Rates for 2016	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Non-res Split:	
Office	22%
Institutional	22%
Commercial/R	21%
Industrial	34%

APPENDIX C
TABLE 2 - PAGE 5

CITY OF WINNIPEG
CASHFLOW AND DETERMINATION OF REGULATORY FEE
PUBLIC WORKS
INDUSTRIAL CHARGE
(in $000)

PUBLIC WORKS	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	TOTAL
OPENING CASH BALANCE	$0.0	($7,516.1)	($1,300.8)	($17,823.3)	($15,761.8)	($16,356.6)	($12,154.6)	($7,948.1)	($3,150.8)	($5,257.0)	($5,503.9)	($5,446.3)	($4,781.0)	($5,027.1)	($6,156.0)	
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS																
- Public Works: Non Inflated	$17,414.5	$555.3	$21,592.2	$5,409.1	$5,774.6	$528.0	$945.2	$887.4	$6,441.5	$4,565.7	$4,565.7	$4,135.4	$4,962.8	$6,551.4	$528.0	**$84,856.9**
- Public Works: Inflated	$17,414.5	$566.4	$22,464.5	$5,740.2	$6,250.6	$582.9	$1,064.4	$1,019.3	$7,547.3	$5,456.4	$5,565.5	$5,141.9	$6,294.1	$8,475.0	$696.7	**$94,279.9**
NEW INDUSTRIAL DEVELOPMENT																
- Growth in Square Metres	296,738	203,971	182,257	241,695	176,925	148,937	152,772	157,658	142,085	135,167	142,681	143,911	146,198	173,647	157,642	**2,602,284**
REVENUE																
- Charge Receipts: Inflated	$10,099.6	$7,081.1	$6,453.8	$8,729.7	$6,518.1	$5,596.7	$5,855.6	$6,163.8	$5,666.1	$5,498.0	$5,919.7	$6,090.1	$6,310.7	$7,645.4	$7,079.5	**$100,707.8**
INTEREST																
- Interest on Opening Balance	$0.0	($413.4)	($71.5)	($980.3)	($866.9)	($899.6)	($668.5)	($437.1)	($173.3)	($289.1)	($302.7)	($299.5)	($263.0)	($276.5)	($338.6)	**($6,280.1)**
- Interest on In-year Transactions	($201.2)	$114.0	($440.3)	$52.3	$4.7	$87.7	$83.8	$90.0	($51.7)	$0.7	$6.2	$16.6	$0.3	($22.8)	$111.7	**($147.9)**
TOTAL REVENUE	$9,898.4	$6,781.7	$5,942.0	$7,801.7	$5,655.9	$4,784.9	$5,271.0	$5,816.7	$5,441.0	$5,209.6	$5,623.2	$5,807.2	$6,048.0	$7,346.1	$6,852.6	**$94,279.9**
CLOSING CASH BALANCE	($7,516.1)	($1,300.8)	($17,823.3)	($15,761.8)	($16,356.6)	($12,154.6)	($7,948.1)	($3,150.8)	($5,257.0)	($5,503.9)	($5,446.3)	($4,781.0)	($5,027.1)	($6,156.0)	$0.0	

Adjusted Charge Per Square Metre	**$34.04**

Allocation of Capital Program	
Residential Sector	62%
Non-Residential Sector	38%
Rates for 2016	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Non-res Split:	
Office	22%
Institutional	22%
Commercial/R	21%
Industrial	34%

APPENDIX D

25-YEAR BENEFITTING PERIOD SERVICES

TECHNICAL APPENDIX

APPENDIX D

25-YEAR BENEFITTING PERIOD SERVICES TECHNICAL APPENDIX

This appendix provides the detailed analysis undertaken to establish the regulatory fee rates for each of the services for the 25-year benefitting period provided by the City of Winnipeg. Five services have been analysed as part of this benefiting period:

Appendix D.1 Transit

Appendix D.2 Fire & Paramedic Services

Appendix D.3 Police

Appendix D.4 Water

Appendix D.5 Wastewater

Every sub-section contains a set of two tables. The tables provide the background data and analysis undertaken to arrive at the calculated regulatory fee rates for that particular service. An overview of the content and purpose of each of the tables is given below.

TABLE 1 2017 – 2041 DEVELOPMENT-RELATED CAPITAL PROGRAM AND CALCULATION OF THE "UNADJUSTED" REGULATORY FEES

Based on the development forecasts presented in Appendix A, City staff in collaboration with consultants, have created a growth-related capital forecast that sets out the projects required to service anticipated development over the 25-year period from 2017–2041.

To determine the share of the program to be recovered through regulatory fees, the project costs are reduced by any anticipated grants, subsidies or other recoveries, as well as "replacement" shares and benefit to existing shares. Further, in certain cases a portion of costs has been allocated to "prior growth" to account for portions of projects which are deemed to benefit recent development which occurred in the City during the 10-year period preceding 2017.

The capital program less grants and other funding sources, any replacement shares or benefit to existing shares, and prior growth shares yields the development-related costs

that may be included in the regulatory fee calculation for recovery against growth over the forecast period from 2017 to 2041.

Calculation of the Unadjusted Regulatory Fee Rates

The section below the capital program displays the calculation of the "unadjusted" regulatory fee rates. The term "unadjusted" regulatory fee is used to distinguish the charge that is calculated prior to cash flow financing considerations. The cash flow analysis is shown in Table 2.

The first step in determining the unadjusted regulatory fee rate is to allocate the development-related net capital cost between the residential and non-residential sectors. For all 25-year benefitting period services, the development-related costs have been apportioned as 62 per cent residential and 38 per cent non-residential. This apportionment is based on the anticipated shares of population and employment growth over the 25-year forecast period. The 38 per cent non-residential apportionment of the development-related net capital cost has been further broken down into four employment category apportionments based on anticipated shares of employment growth in each sector. The result is an apportionment of 22.3 per cent Office, 21.9 per cent Institutional, 21.4 per cent Commercial/Retail, and 34.5 per cent Industrial.

Next, the residential share of the costs is divided by the forecast population growth in new dwelling units from 2017 to 2041 of approximately 244,800. This gives the unadjusted residential regulatory fee per capita.

The non-residential development-related net capital costs are divided by the forecast increase in non-residential gross floor area (GFA): approximately 737,700 square metres for Office, 1.75 million square metres for Institutional, 1.05 square metres for Commercial/Retail, and 4.23 million square metres for Industrial development. This yields a charge per square metre of new development for each employment category.

TABLE 2 CASH FLOW ANALYSIS

A cash flow analysis is also undertaken to account for the timing of projects and receipt of regulatory fees. Interest earnings or borrowing costs are accounted for in the calculation. Based on the development forecast, the analysis calculates the regulatory fee rate required to finance the net development-related capital spending plan, including provisions for any borrowing costs or interest earnings on the reserve funds.

An inflation rate assumption of 2.0 per cent is used for the funding requirements, an interest rate of 5.5 per cent is used for borrowing on the funds and an interest rate of 3.5 per cent is applied to positive balances.

The cash flow analysis is designed so that the closing cash balance at the end of the planning period is as close to nil as possible. Table 2 displays the results of the cash flow analysis and provides the adjusted or final per capita residential and per square metre (of GFA) non-residential regulatory fees.

APPENDIX D.1

TRANSIT

APPENDIX D.1

TRANSIT

Winnipeg Transit provides public transit-services City-wide, and manages major rapid transit projects as well as the fleet of transit buses and inventory of mechanical and storage facilities.

TABLE 1 2017–2041 DEVELOPMENT-RELATED CAPITAL PROGRAM AND CALCULATION OF THE "UNADJUSTED" REGULATORY FEES

The development-related capital program for Transit services totals $2.62 billion. This includes construction activity associated with six major new bus rapid transit corridors, the purchasing of additional transit buses, and the expansion of a mechanical and storage facility.

A large proportion of this capital program is anticipated to be funded through grants form other levels of government, at $1.51 billion.

The benefit to existing shares for projects under this service are based on the shares of present and forecast 2041 population and employment. This amounts to a total of $703.41 million. It is noted that this represents a conservative approach to the calculation of costs for recovery through regulatory fees. It is recommended that as information becomes available, the benefit to existing shares be updated to account for transit ridership projections for the existing population in comparison with ridership projections due to growth.

Finally, the Southwest BRT corridor represents a recent project undertaken by the City. To account for this, a "prior growth" share has been assigned representing costs allocated to recent development over the previous 10 years. This amount totals $31.60 million.

Costs for recovery through regulatory fees total $365.45 million. After residential and non-residential apportionments, unadjusted charges are calculated at $925.72 per capita for residential development, $41.91 per square metre for Office, $17.41 per square metre for Institutional, $28.29 per square metre for Commercial/Retail, and $11.32 per square metre for Industrial development.

TABLE 2 CASH FLOW ANALYSIS

After cash flow considerations, both the residential and non-residential charges increase as shown in the following table:

TRANSIT SUMMARY									
2017-2041 Development-Related Capital Program		Unadjusted Charge		**Adjusted Charge**		**Adjusted Charges**			
						Office	**Institutional**	**Commercial**	**Industrial**
Total	Net Recoverable	$/capita	$/sq.m	**$/capita**	**$/sq.m**	**$/sq.m**	**$/sq.m**	**$/sq.m**	**$/sq.m**
$2,615,300,000	$365,446,506	$925.72	$17.89	**$987.01**	**$19.00**	**$44.53**	**$18.50**	**$30.06**	**$12.02**

APPENDIX D.1
TABLE 1

CITY OF WINNIPEG
DEVELOPMENT-RELATED CAPITAL PROGRAM

Service	Project Description	Timing	Gross Project Cost	Grants/ Subsidies/ Other Recoveries	Net Municipal Cost	Ineligible Costs Replacement & BTE	Development Related Costs	Costs for Recovery		
								Prior Growth	2017-2041	Post 2041
5.0 TRANSIT										
5.1.1	BRT - Southwest Corridor 1st leg (past project)	2017	$ 135,800,000	$ 45,500,000	$ 90,300,000	$ 47,723,227	$ 42,576,773	$ 12,766,177	$ 29,810,596	$ -
5.1.2	BRT - Southwest Corridor 2nd leg (past project)	2017	$ 377,000,000	$ 243,800,000	$ 133,200,000	$ 70,395,724	$ 62,804,276	$ 18,831,171	$ 43,973,106	$ -
5.1.3	BRT - East Corridor	2021	$ 425,000,000	$ 255,000,000	$ 170,000,000	$ 120,829,636	$ 49,170,364	$ -	$ 49,170,364	$ -
5.1.4	BRT - West Corridor	2023	$ 326,000,000	$ 195,600,000	$ 130,400,000	$ 92,683,439	$ 37,716,561	$ -	$ 37,716,561	$ -
5.1.5	BRT - North Corridor	2030	$ 166,000,000	$ 99,600,000	$ 66,400,000	$ 47,194,634	$ 19,205,366	$ -	$ 19,205,366	$ -
5.1.6	BRT - Northeast Corridor	2034	$ 485,000,000	$ 291,000,000	$ 194,000,000	$ 137,887,938	$ 56,112,062	$ -	$ 56,112,062	$ -
5.1.7	BRT - Southeast Corridor	2038	$ 485,000,000	$ 291,000,000	$ 194,000,000	$ 137,887,938	$ 56,112,062	$ -	$ 56,112,062	$ -
5.1.8	Garages - Exp of Mech & Storage at Ft Rouge, New at North	2023	$ 100,000,000	$ 60,000,000	$ 40,000,000	$ 28,430,503	$ 11,569,497	$ -	$ 11,569,497	$ -
5.1.9	Additional Transit Buses - Current transit system	Various	$ 82,500,000	$ 29,017,241	$ 53,482,759	$ -	$ 53,482,759	$ -	$ 53,482,759	$ -
5.1.10	Additional Transit Buses - Future BRT routes	Various	$ 33,000,000	$ 4,324,138	$ 28,675,862	$ 20,381,729	$ 8,294,133	$ -	$ 8,294,133	$ -
TOTAL TRANSIT			**$ 2,615,300,000**	**$ 1,514,841,379**	**$ 1,100,458,621**	**$ 703,414,768**	**$ 397,043,853**	**$ 31,597,347**	**$ 365,446,506**	**$ -**

Residential Calculation		
Residential Share of Development-Related Costs	62%	$226,576,834
25 Year Population Growth in New Housing Units		244,757
Unadjusted Per Unit Charge		**$925.72**
Non-Residential Calculation		
Non-Residential Share of Development-Related Costs	38%	$138,869,672
25 Year Growth in Square Metres		7,764,241
Unadjusted Per Square Metre Charge		**$17.89**
Non-Residential Allocation		
25 Year Growth in Square Metres: Major Office		737,695
25 Year Growth in Square Metres: Institutional		1,747,505
25 Year Growth in Square Metres: Commercial/Retail		1,048,442
25 Year Growth in Square Metres: Industrial		4,230,599
Office Per Square Metre Charge (Unadjusted)	22.3%	**$41.91**
Institutional Per Square Metre Charge (Unadjusted)	21.9%	**$17.41**
Commercial/Retail Per Square Metre Charge (Unadjusted)	21.4%	**$28.29**
Industrial Per Square Metre Charge (Unadjusted)	34.5%	**$11.32**

APPENDIX D.1
TABLE 2 - PAGE 1

CITY OF WINNIPEG
CASHFLOW AND DETERMINATION OF REGULATORY FEE
TRANSIT
RESIDENTIAL CHARGE
(in $000)

TRANSIT	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
OPENING CASH BALANCE	$0.0	($37,764.2)	($30,311.8)	($22,019.7)	($12,871.9)	($36,649.2)	($28,975.3)	($55,850.3)	($48,628.7)	($40,658.2)	($31,914.0)	($23,818.3)	($15,066.6)
2017-2041 RESIDENTIAL FUNDING REQUIREMENTS													
- Transit: Non Inflated	$47,278.0	$1,532.1	$1,532.1	$1,532.1	$32,017.7	$1,532.1	$32,089.4	$1,532.1	$1,532.1	$1,532.1	$1,532.1	$1,532.1	$1,532.1
- Transit: Inflated	$47,278.0	$1,562.7	$1,594.0	$1,625.8	$34,657.0	$1,691.5	$36,137.9	$1,759.9	$1,795.1	$1,831.0	$1,867.6	$1,904.9	$1,943.0
NEW RESIDENTIAL DEVELOPMENT													
- Population in New Units	10,663	10,855	11,084	11,272	11,424	10,291	10,376	10,475	10,599	10,701	9,599	9,610	9,662
REVENUE													
- Charge Receipts: Inflated	$10,524.5	$10,928.2	$11,382.0	$11,806.5	$12,205.0	$11,214.5	$11,533.2	$11,876.2	$12,257.1	$12,622.5	$11,549.1	$11,793.6	$12,094.5
INTEREST													
- Interest on Opening Balance	$0.0	($2,077.0)	($1,667.1)	($1,211.1)	($708.0)	($2,015.7)	($1,593.6)	($3,071.8)	($2,674.6)	($2,236.2)	($1,755.3)	($1,310.0)	($828.7)
- Interest on In-year Transactions	($1,010.7)	$163.9	$171.3	$178.2	($617.4)	$166.7	($676.6)	$177.0	$183.1	$188.9	$169.4	$173.1	$177.7
TOTAL REVENUE	$9,513.7	$9,015.1	$9,886.1	$10,773.6	$10,879.7	$9,365.4	$9,263.0	$8,981.4	$9,765.6	$10,575.2	$9,963.3	$10,656.6	$11,443.5
CLOSING CASH BALANCE	($37,764.2)	($30,311.8)	($22,019.7)	($12,871.9)	($36,649.2)	($28,975.3)	($55,850.3)	($48,628.7)	($40,658.2)	($31,914.0)	($23,818.3)	($15,066.6)	($5,566.1)

TRANSIT	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	TOTAL
OPENING CASH BALANCE	($5,566.1)	($10,965.4)	($620.7)	$9,409.1	$20,148.4	($18,349.4)	($8,254.1)	$2,779.4	$13,067.3	($30,052.0)	($20,888.3)	($10,896.6)	
2017-2041 RESIDENTIAL FUNDING REQUIREMENTS													
- Transit: Non Inflated	$13,439.4	$1,532.1	$1,532.1	$1,532.1	$36,321.5	$1,532.1	$1,532.1	$1,532.1	$36,321.5	$1,532.1	$1,532.1	$1,532.1	**$226,576.8**
- Transit: Inflated	$17,385.3	$2,021.5	$2,062.0	$2,103.2	$50,858.9	$2,188.2	$2,231.9	$2,276.6	$55,051.3	$2,368.5	$2,415.9	$2,464.2	**$279,075.9**
NEW RESIDENTIAL DEVELOPMENT													
- Population in New Units	9,734	9,814	8,998	9,103	9,193	9,294	9,404	8,381	8,450	8,519	8,587	8,669	**244,757**
REVENUE													
- Charge Receipts: Inflated	$12,428.4	$12,781.1	$11,952.8	$12,334.1	$12,705.2	$13,101.7	$13,521.9	$12,291.9	$12,641.0	$12,999.1	$13,364.9	$13,762.4	**$305,671.3**
INTEREST													
- Interest on Opening Balance	($306.1)	($603.1)	($34.1)	$329.3	$705.2	($1,009.2)	($454.0)	$97.3	$457.4	($1,652.9)	($1,148.9)	($599.3)	**($25,367.5)**
- Interest on In-year Transactions	($136.3)	$188.3	$173.1	$179.0	($1,049.2)	$191.0	$197.6	$175.3	($1,166.3)	$186.0	$191.6	$197.7	**($1,227.9)**
TOTAL REVENUE	$11,985.9	$12,366.3	$12,091.7	$12,842.5	$12,361.1	$12,283.4	$13,265.5	$12,564.5	$11,932.1	$11,532.3	$12,407.7	$13,360.8	**$279,075.9**
CLOSING CASH BALANCE	($10,965.4)	($620.7)	$9,409.1	$20,148.4	($18,349.4)	($8,254.1)	$2,779.4	$13,067.3	($30,052.0)	($20,888.3)	($10,896.6)	($0.0)	

Adjusted Charge Per Capita	**$987.01**

Allocation of Capital Program	
Residential Sector	62%
Non-Residential Sector	38%
Rates for 2016	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX D.1
TABLE 2 - PAGE 2

CITY OF WINNIPEG
CASHFLOW AND DETERMINATION OF REGULATORY FEE
TRANSIT
OFFICE CHARGE
(in $000)

TRANSIT	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
OPENING CASH BALANCE	$0.0	($4,261.2)	($3,068.9)	($1,961.0)	($268.3)	($3,614.3)	($2,748.8)	($6,594.1)	($5,770.4)	($5,021.9)	($4,276.1)	($3,396.6)	($2,434.2)
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS													
- Transit: Non Inflated	$6,451.1	$209.1	$209.1	$209.1	$4,368.8	$209.1	$4,378.6	$209.1	$209.1	$209.1	$209.1	$209.1	$209.1
- Transit: Inflated	$6,451.1	$213.2	$217.5	$221.8	$4,729.0	$230.8	$4,931.0	$240.1	$244.9	$249.8	$254.8	$259.9	$265.1
NEW MAJOR OFFICE DEVELOPMENT													
- Growth in Square Metres	51,743	35,567	31,780	42,145	30,851	25,970	26,639	27,491	24,776	23,569	24,879	25,094	25,493
REVENUE													
- Charge Receipts: Inflated	$2,303.9	$1,615.4	$1,472.3	$1,991.4	$1,486.9	$1,276.7	$1,335.8	$1,406.1	$1,292.6	$1,254.2	$1,350.4	$1,389.3	$1,439.6
INTEREST													
- Interest on Opening Balance	$0.0	($234.4)	($168.8)	($107.9)	($14.8)	($198.8)	($151.2)	($362.7)	($317.4)	($276.2)	($235.2)	($186.8)	($133.9)
- Interest on In-year Transactions	($114.0)	$24.5	$22.0	$31.0	($89.2)	$18.3	($98.9)	$20.4	$18.3	$17.6	$19.2	$19.8	$20.6
TOTAL REVENUE	$2,189.9	$1,405.5	$1,325.4	$1,914.5	$1,383.0	$1,096.3	$1,085.7	$1,063.8	$993.5	$995.6	$1,134.4	$1,222.2	$1,326.3
CLOSING CASH BALANCE	($4,261.2)	($3,068.9)	($1,961.0)	($268.3)	($3,614.3)	($2,748.8)	($6,594.1)	($5,770.4)	($5,021.9)	($4,276.1)	($3,396.6)	($2,434.2)	($1,373.1)

TRANSIT	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	TOTAL
OPENING CASH BALANCE	($1,373.1)	($2,094.0)	($846.6)	$353.4	$1,868.4	($3,440.0)	($2,108.9)	($676.8)	$889.4	($4,795.3)	($3,339.2)	($1,741.7)	
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS													
- Transit: Non Inflated	$1,833.8	$209.1	$209.1	$209.1	$4,956.1	$209.1	$209.1	$209.1	$4,956.1	$209.1	$209.1	$209.1	**$30,916.6**
- Transit: Inflated	$2,372.2	$275.8	$281.4	$287.0	$6,939.7	$298.6	$304.5	$310.6	$7,511.8	$323.2	$329.7	$336.2	**$38,080.2**
NEW MAJOR OFFICE DEVELOPMENT													
- Growth in Square Metres	30,279	27,488	25,138	28,854	27,423	28,189	28,151	28,512	28,878	29,249	29,626	29,911	**737,695**
REVENUE													
- Charge Receipts: Inflated	$1,744.1	$1,615.0	$1,506.5	$1,763.8	$1,709.8	$1,792.7	$1,826.1	$1,886.5	$1,948.9	$2,013.4	$2,080.1	$2,142.2	**$41,643.7**
INTEREST													
- Interest on Opening Balance	($75.5)	($115.2)	($46.6)	$12.4	$65.4	($189.2)	($116.0)	($37.2)	$31.1	($263.7)	($183.7)	($95.8)	**($3,401.8)**
- Interest on In-year Transactions	($17.3)	$23.4	$21.4	$25.8	($143.8)	$26.1	$26.6	$27.6	($153.0)	$29.6	$30.6	$31.6	**($161.7)**
TOTAL REVENUE	$1,651.3	$1,523.3	$1,481.4	$1,802.0	$1,631.4	$1,629.7	$1,736.7	$1,876.8	$1,827.1	$1,779.3	$1,927.1	$2,078.0	**$38,080.2**
CLOSING CASH BALANCE	($2,094.0)	($846.6)	$353.4	$1,868.4	($3,440.0)	($2,108.9)	($676.8)	$889.4	($4,795.3)	($3,339.2)	($1,741.7)	($0.0)	

Adjusted Charge Per Square Metre	**$44.53**

Allocation of Capital Program	
Residential Sector	62%
Non-Residential Sector	38%
Rates for 2016	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Non-res Split:	
Office	22%
Institutional	22%
Commercial/R	21%
Industrial	34%

APPENDIX D.1
TABLE 2 - PAGE 3

CITY OF WINNIPEG
CASHFLOW AND DETERMINATION OF REGULATORY FEE
TRANSIT
INSTITUTIONAL CHARGE
(in $000)

TRANSIT	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
OPENING CASH BALANCE	$0.0	($4,193.0)	($3,019.8)	($1,929.6)	($264.0)	($3,556.4)	($2,704.8)	($6,488.6)	($5,678.1)	($4,941.5)	($4,207.7)	($3,342.2)	($2,395.3)
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS													
- Transit: Non Inflated	$6,347.9	$205.7	$205.7	$205.7	$4,298.9	$205.7	$4,308.5	$205.7	$205.7	$205.7	$205.7	$205.7	$205.7
- Transit: Inflated	$6,347.9	$209.8	$214.0	$218.3	$4,653.3	$227.1	$4,852.1	$236.3	$241.0	$245.8	$250.8	$255.8	$260.9
NEW INSTITUTIONAL DEVELOPMENT													
- Growth in Square Metres	122,572	84,253	75,284	99,835	73,081	61,520	63,104	65,123	58,690	55,832	58,936	59,444	60,389
REVENUE													
- Charge Receipts: Inflated	$2,267.1	$1,589.5	$1,448.7	$1,959.6	$1,463.1	$1,256.3	$1,314.4	$1,383.6	$1,271.9	$1,234.1	$1,328.8	$1,367.1	$1,416.6
INTEREST													
- Interest on Opening Balance	$0.0	($230.6)	($166.1)	($106.1)	($14.5)	($195.6)	($148.8)	($356.9)	($312.3)	($271.8)	($231.4)	($183.8)	($131.7)
- Interest on In-year Transactions	($112.2)	$24.1	$21.6	$30.5	($87.7)	$18.0	($97.3)	$20.1	$18.0	$17.3	$18.9	$19.4	$20.2
TOTAL REVENUE	$2,154.8	$1,383.0	$1,304.2	$1,883.9	$1,360.9	$1,078.7	$1,068.4	$1,046.8	$977.6	$979.6	$1,116.2	$1,202.7	$1,305.0
CLOSING CASH BALANCE	($4,193.0)	($3,019.8)	($1,929.6)	($264.0)	($3,556.4)	($2,704.8)	($6,488.6)	($5,678.1)	($4,941.5)	($4,207.7)	($3,342.2)	($2,395.3)	($1,351.1)

TRANSIT	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	TOTAL
OPENING CASH BALANCE	($1,351.1)	($2,060.5)	($833.1)	$347.7	$1,838.5	($3,385.0)	($2,075.2)	($665.9)	$875.2	($4,718.5)	($3,285.8)	($1,713.9)	
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS													
- Transit: Non Inflated	$1,804.5	$205.7	$205.7	$205.7	$4,876.8	$205.7	$205.7	$205.7	$4,876.8	$205.7	$205.7	$205.7	**$30,421.7**
- Transit: Inflated	$2,334.3	$271.4	$276.9	$282.4	$6,828.7	$293.8	$299.7	$305.7	$7,391.6	$318.0	$324.4	$330.9	**$37,470.6**
NEW INSTITUTIONAL DEVELOPMENT													
- Growth in Square Metres	71,727	65,116	59,550	68,352	64,962	66,777	66,686	67,541	68,409	69,287	70,179	70,855	**1,747,505**
REVENUE													
- Charge Receipts: Inflated	$1,716.2	$1,589.1	$1,482.4	$1,735.5	$1,682.4	$1,764.0	$1,796.9	$1,856.3	$1,917.7	$1,981.2	$2,046.9	$2,107.9	**$40,977.1**
INTEREST													
- Interest on Opening Balance	($74.3)	($113.3)	($45.8)	$12.2	$64.3	($186.2)	($114.1)	($36.6)	$30.6	($259.5)	($180.7)	($94.3)	**($3,347.4)**
- Interest on In-year Transactions	($17.0)	$23.1	$21.1	$25.4	($141.5)	$25.7	$26.2	$27.1	($150.5)	$29.1	$30.1	$31.1	**($159.1)**
TOTAL REVENUE	$1,624.9	$1,498.9	$1,457.6	$1,773.1	$1,605.2	$1,603.6	$1,708.9	$1,846.8	$1,797.8	$1,750.8	$1,896.3	$2,044.7	**$37,470.6**
CLOSING CASH BALANCE	($2,060.5)	($833.1)	$347.7	$1,838.5	($3,385.0)	($2,075.2)	($665.9)	$875.2	($4,718.5)	($3,285.8)	($1,713.9)	$0.0	

Adjusted Charge Per Square Metre	**$18.50**

Allocation of Capital Program	
Residential Sector	62%
Non-Residential Sector	38%
Rates for 2016	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Non-res Split:	
Office	22%
Institutional	22%
Commercial/R	21%
Industrial	34%

APPENDIX D.1
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CITY OF WINNIPEG
CASHFLOW AND DETERMINATION OF REGULATORY FEE
TRANSIT
COMMERCIAL/RETAIL CHARGE
(in $000)

TRANSIT	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
OPENING CASH BALANCE	$0.0	($4,088.0)	($2,944.1)	($1,881.3)	($257.4)	($3,467.3)	($2,637.0)	($6,326.0)	($5,535.8)	($4,817.7)	($4,102.2)	($3,258.4)	($2,335.3)
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS													
- Transit: Non Inflated	$6,188.8	$200.6	$200.6	$200.6	$4,191.2	$200.6	$4,200.6	$200.6	$200.6	$200.6	$200.6	$200.6	$200.6
- Transit: Inflated	$6,188.8	$204.6	$208.7	$212.8	$4,536.7	$221.4	$4,730.5	$230.4	$235.0	$239.7	$244.5	$249.4	$254.3
NEW COMMERCIAL DEVELOPMENT													
- Growth in Square Metres	73,539	50,549	45,168	59,898	43,846	36,910	37,860	39,071	35,212	33,498	35,360	35,664	36,231
REVENUE													
- Charge Receipts: Inflated	$2,210.3	$1,549.7	$1,412.4	$1,910.5	$1,426.5	$1,224.8	$1,281.5	$1,348.9	$1,240.0	$1,203.2	$1,295.5	$1,332.8	$1,381.1
INTEREST													
- Interest on Opening Balance	$0.0	($224.8)	($161.9)	($103.5)	($14.2)	($190.7)	($145.0)	($347.9)	($304.5)	($265.0)	($225.6)	($179.2)	($128.4)
- Interest on In-year Transactions	($109.4)	$23.5	$21.1	$29.7	($85.5)	$17.6	($94.8)	$19.6	$17.6	$16.9	$18.4	$19.0	$19.7
TOTAL REVENUE	$2,100.8	$1,348.4	$1,271.5	$1,836.7	$1,326.8	$1,051.7	$1,041.6	$1,020.6	$953.1	$955.1	$1,088.3	$1,172.5	$1,272.3
CLOSING CASH BALANCE	($4,088.0)	($2,944.1)	($1,881.3)	($257.4)	($3,467.3)	($2,637.0)	($6,326.0)	($5,535.8)	($4,817.7)	($4,102.2)	($3,258.4)	($2,335.3)	($1,317.3)

TRANSIT	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	TOTAL
OPENING CASH BALANCE	($1,317.3)	($2,008.9)	($812.2)	$339.0	$1,792.4	($3,300.1)	($2,023.2)	($649.2)	$853.3	($4,600.3)	($3,203.4)	($1,670.9)	
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS													
- Transit: Non Inflated	$1,759.2	$200.6	$200.6	$200.6	$4,754.6	$200.6	$200.6	$200.6	$4,754.6	$200.6	$200.6	$200.6	**$29,659.5**
- Transit: Inflated	$2,275.8	$264.6	$269.9	$275.3	$6,657.6	$286.4	$292.2	$298.0	$7,206.4	$310.0	$316.2	$322.6	**$36,531.7**
NEW COMMERCIAL DEVELOPMENT													
- Growth in Square Metres	43,034	39,067	35,728	41,009	38,975	40,064	40,009	40,522	41,043	41,570	42,105	42,511	**1,048,442**
REVENUE													
- Charge Receipts: Inflated	$1,673.2	$1,549.3	$1,445.2	$1,692.0	$1,640.3	$1,719.8	$1,751.8	$1,809.8	$1,869.7	$1,931.6	$1,995.6	$2,055.1	**$39,950.3**
INTEREST													
- Interest on Opening Balance	($72.4)	($110.5)	($44.7)	$11.9	$62.7	($181.5)	($111.3)	($35.7)	$29.9	($253.0)	($176.2)	($91.9)	**($3,263.5)**
- Interest on In-year Transactions	($16.6)	$22.5	$20.6	$24.8	($138.0)	$25.1	$25.5	$26.5	($146.8)	$28.4	$29.4	$30.3	**($155.1)**
TOTAL REVENUE	$1,584.2	$1,461.3	$1,421.1	$1,728.7	$1,565.0	$1,563.4	$1,666.1	$1,800.5	$1,752.8	$1,706.9	$1,848.8	$1,993.5	**$36,531.7**
CLOSING CASH BALANCE	($2,008.9)	($812.2)	$339.0	$1,792.4	($3,300.1)	($2,023.2)	($649.2)	$853.3	($4,600.3)	($3,203.4)	($1,670.9)	$0.0	

Adjusted Charge Per Square Metre	**$30.06**

Allocation of Capital Program	
Residential Sector	62%
Non-Residential Sector	38%
Rates for 2016	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Non-res Split:	
Office	22%
Institutional	22%
Commercial/R	21%
Industrial	34%

APPENDIX D.1
TABLE 2 - PAGE 5

CITY OF WINNIPEG
CASHFLOW AND DETERMINATION OF REGULATORY FEE
TRANSIT
INDUSTRIAL CHARGE
(in $000)

TRANSIT	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
OPENING CASH BALANCE	$0.0	($6,598.2)	($4,752.0)	($3,036.5)	($415.5)	($5,596.4)	($4,256.3)	($10,210.5)	($8,935.1)	($7,775.9)	($6,621.2)	($5,259.3)	($3,769.2)
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS													
- Transit: Non Inflated	$9,989.0	$323.7	$323.7	$323.7	$6,764.8	$323.7	$6,780.0	$323.7	$323.7	$323.7	$323.7	$323.7	$323.7
- Transit: Inflated	$9,989.0	$330.2	$336.8	$343.5	$7,322.4	$357.4	$7,635.3	$371.8	$379.3	$386.9	$394.6	$402.5	$410.5
NEW INDUSTRIAL DEVELOPMENT													
- Growth in Square Metres	296,738	203,971	182,257	241,695	176,925	148,937	152,772	157,658	142,085	135,167	142,681	143,911	146,198
REVENUE													
- Charge Receipts: Inflated	$3,567.5	$2,501.2	$2,279.7	$3,083.6	$2,302.4	$1,976.9	$2,068.4	$2,177.2	$2,001.4	$1,942.0	$2,091.0	$2,151.2	$2,229.1
INTEREST													
- Interest on Opening Balance	$0.0	($362.9)	($261.4)	($167.0)	($22.8)	($307.8)	($234.1)	($561.6)	($491.4)	($427.7)	($364.2)	($289.3)	($207.3)
- Interest on In-year Transactions	($176.6)	$38.0	$34.0	$48.0	($138.1)	$28.3	($153.1)	$31.6	$28.4	$27.2	$29.7	$30.6	$31.8
TOTAL REVENUE	$3,390.9	$2,176.3	$2,052.3	$2,964.5	$2,141.5	$1,697.5	$1,681.2	$1,647.2	$1,538.4	$1,541.6	$1,756.5	$1,892.5	$2,053.6
CLOSING CASH BALANCE	($6,598.2)	($4,752.0)	($3,036.5)	($415.5)	($5,596.4)	($4,256.3)	($10,210.5)	($8,935.1)	($7,775.9)	($6,621.2)	($5,259.3)	($3,769.2)	($2,126.1)

TRANSIT	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	TOTAL
OPENING CASH BALANCE	($2,126.1)	($3,242.4)	($1,310.9)	$547.2	$2,893.0	($5,326.6)	($3,265.5)	($1,047.9)	$1,377.2	($7,425.1)	($5,170.5)	($2,697.0)	
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS													
- Transit: Non Inflated	$2,839.5	$323.7	$323.7	$323.7	$7,674.1	$323.7	$323.7	$323.7	$7,674.1	$323.7	$323.7	$323.7	**$47,871.9**
- Transit: Inflated	$3,673.2	$427.1	$435.7	$444.4	$10,745.6	$462.3	$471.6	$481.0	$11,631.4	$500.4	$510.4	$520.7	**$58,964.1**
NEW INDUSTRIAL DEVELOPMENT													
- Growth in Square Metres	173,647	157,642	144,166	165,476	157,268	161,663	161,443	163,512	165,613	167,739	169,899	171,536	**4,230,599**
REVENUE													
- Charge Receipts: Inflated	$2,700.6	$2,500.7	$2,332.7	$2,731.0	$2,647.5	$2,775.9	$2,827.5	$2,921.1	$3,017.8	$3,117.6	$3,220.9	$3,317.0	**$64,481.9**
INTEREST													
- Interest on Opening Balance	($116.9)	($178.3)	($72.1)	$19.2	$101.3	($293.0)	($179.6)	($57.6)	$48.2	($408.4)	($284.4)	($148.3)	**($5,267.5)**
- Interest on In-year Transactions	($26.7)	$36.3	$33.2	$40.0	($222.7)	$40.5	$41.2	$42.7	($236.9)	$45.8	$47.4	$48.9	**($250.4)**
TOTAL REVENUE	$2,556.9	$2,358.6	$2,293.8	$2,790.2	$2,526.0	$2,523.4	$2,689.2	$2,906.1	$2,829.1	$2,755.1	$2,984.0	$3,217.6	**$58,964.1**
CLOSING CASH BALANCE	($3,242.4)	($1,310.9)	$547.2	$2,893.0	($5,326.6)	($3,265.5)	($1,047.9)	$1,377.2	($7,425.1)	($5,170.5)	($2,697.0)	$0.0	

Adjusted Charge Per Square Metre	**$12.02**

Allocation of Capital Program	
Residential Sector	62%
Non-Residential Sector	38%
Rates for 2016	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Non-res Split:	
Office	22%
Institutional	22%
Commercial/R	21%
Industrial	34%

APPENDIX D.2

FIRE & PARAMEDIC SERVICES

APPENDIX D.2

FIRE & PARAMEDIC SERVICES

Winnipeg Fire Paramedic Service is responsible for the provision of fire prevention and suppression, inspections, public education, and emergency response services.

TABLE 1 2017–2041 DEVELOPMENT-RELATED CAPITAL PROGRAM AND CALCULATION OF THE "UNADJUSTED" REGULATORY FEES

The development-related capital program for Fire and Paramedic Services totals $35.00 million. This includes construction of new stations and expansions to two existing stations.

No grants or other funding sources have been identified for these projects. With the exception of a 50 per cent benefit to existing share for the Sage Creek project ($2.50 million), no amounts have been allocated to benefit to existing as the new and expanded stations are intended to extend Fire and Paramedic Services to future neighbourhoods. Since the Sage Creek project was recently undertaken by the City, and additional share, reflecting 10 years of prior growth, has been deducted from the costs associated with Sage Creek ($808,300).

The remaining costs for recovery total $31.69 million. After residential and non-residential apportionments, unadjusted charges are calculated at $80.28 per capita for residential development, $3.63 per square metre for Office, $1.51 per square metre for Institutional, $2.45 per square metre for Commercial/Retail, and $0.98 per square metre for Industrial development.

TABLE 2 CASH FLOW ANALYSIS

After cash flow considerations, both the residential and non-residential charges increase as shown in the following table:

FIRE & PARAMEDIC SERVICES
SUMMARY

2017-2041 Development-Related Capital Program		Unadjusted Charge		**Adjusted Charge**		**Adjusted Charges**			
						Office	**Institutional**	**Commercial**	**Industrial**
Total	Net Recoverable	$/capita	$/sq.m	**$/capita**	**$/sq.m**	**$/sq.m**	**$/sq.m**	**$/sq.m**	**$/sq.m**
$35,000,000	$31,691,674	$80.28	$1.55	**$90.43**	**$1.75**	**$4.09**	**$1.70**	**$2.76**	**$1.10**

APPENDIX D.2
TABLE 1

CITY OF WINNIPEG
DEVELOPMENT-RELATED CAPITAL PROGRAM

Service	Project Description	Timing	Gross Project Cost	Grants/ Subsidies/ Other Recoveries	Net Municipal Cost	Ineligible Costs Replacement & BTE	Development Related Costs	Costs for Recovery		
								Prior Growth	2017-2041	Post 2041
6.0 FIRE & PARAMEDIC SERVICES										
6.1.1	Sage Creek (past project)	2017	$ 5,000,000	$ -	$ 5,000,000	$ 2,500,000	$ 2,500,000	$ 808,326	$ 1,691,674	$ -
6.1.2	Waverly West Fire Station	2019	$ 8,000,000	$ -	$ 8,000,000	$ -	$ 8,000,000	$ -	$ 8,000,000	$ -
6.1.3	North Fire Station	2023	$ 8,000,000	$ -	$ 8,000,000	$ -	$ 8,000,000	$ -	$ 8,000,000	$ -
6.1.4	Station 1 Expansion	2021	$ 3,000,000	$ -	$ 3,000,000	$ -	$ 3,000,000	$ -	$ 3,000,000	$ -
6.1.5	West Station	2032	$ 8,000,000	$ -	$ 8,000,000	$ -	$ 8,000,000	$ -	$ 8,000,000	$ -
6.1.6	Station 2 Expansion	2034	$ 3,000,000	$ -	$ 3,000,000	$ -	$ 3,000,000	$ -	$ 3,000,000	$ -
TOTAL FIRE & PARAMEDIC SERVICES			**$ 35,000,000**	**$ -**	**$ 35,000,000**	**$ 2,500,000**	**$ 32,500,000**	**$ 808,326**	**$ 31,691,674**	**$ -**

Residential Calculation		
Residential Share of Development-Related Costs	62%	$19,648,838
25 Year Population Growth in New Housing Units		244,757
Unadjusted Per Unit Charge		**$80.28**
Non-Residential Calculation		
Non-Residential Share of Development-Related Costs	38%	$12,042,836
25 Year Growth in Square Metres		7,764,241
Unadjusted Per Square Metre Charge		**$1.55**
Non-Residential Allocation		
25 Year Growth in Square Metres: Major Office		737,695
25 Year Growth in Square Metres: Institutional		1,747,505
25 Year Growth in Square Metres: Commercial/Retail		1,048,442
25 Year Growth in Square Metres: Industrial		4,230,599
Office Per Square Metre Charge (Unadjusted)	22.3%	**$3.63**
Institutional Per Square Metre Charge (Unadjusted)	21.9%	**$1.51**
Commercial/Retail Per Square Metre Charge (Unadjusted)	21.4%	**$2.45**
Industrial Per Square Metre Charge (Unadjusted)	34.5%	**$0.98**

APPENDIX D.2
TABLE 2 - PAGE 1

CITY OF WINNIPEG
CASHFLOW AND DETERMINATION OF REGULATORY FEE
FIRE & PARAMEDIC SERVICES
RESIDENTIAL CHARGE
(in $000)

FIRE & PARAMEDIC SERVICES	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
OPENING CASH BALANCE	$0.00	($86.94)	$927.02	($3,271.4)	($2,350.68)	($3,399.71)	($2,541.28)	($7,334.72)	($6,631.02)	($5,853.11)	($4,998.35)	($4,196.65)	($3,328.06)
2017-2041 RESIDENTIAL FUNDING REQUIREMENTS													
- Fire & Paramedic Services: Non Inflated	$1,048.8	$0.0	$4,960.0	$0.0	$1,860.0	$0.0	$4,960.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
- Fire & Paramedic Services: Inflated	$1,048.8	$0.0	$5,160.4	$0.0	$2,013.3	$0.0	$5,585.8	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
NEW RESIDENTIAL DEVELOPMENT													
- Population in New Units	10,663	10,855	11,084	11,272	11,424	10,291	10,376	10,475	10,599	10,701	9,599	9,610	9,662
REVENUE													
- Charge Receipts: Inflated	$964.2	$1,001.2	$1,042.8	$1,081.7	$1,118.2	$1,027.4	$1,056.6	$1,088.1	$1,123.0	$1,156.4	$1,058.1	$1,080.5	$1,108.1
INTEREST													
- Interest on Opening Balance	$0.0	($4.8)	$32.4	($179.9)	($129.3)	($187.0)	($139.8)	($403.4)	($364.7)	($321.9)	($274.9)	($230.8)	($183.0)
- Interest on In-year Transactions	($2.3)	$17.5	($113.2)	$18.9	($24.6)	$18.0	($124.6)	$19.0	$19.7	$20.2	$18.5	$18.9	$19.4
TOTAL REVENUE	$961.9	$1,014.0	$962.0	$920.7	$964.3	$858.4	$792.3	$703.7	$777.9	$854.8	$801.7	$868.6	$944.4
CLOSING CASH BALANCE	($86.9)	$927.0	($3,271.4)	($2,350.7)	($3,399.7)	($2,541.3)	($7,334.7)	($6,631.0)	($5,853.1)	($4,998.4)	($4,196.6)	($3,328.1)	($2,383.6)

FIRE & PARAMEDIC SERVICES	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**TOTAL**
OPENING CASH BALANCE	($2,383.64)	($1,356.15)	($239.28)	($5,986.32)	($5,165.78)	($6,929.94)	($6,089.74)	($5,164.16)	($4,302.32)	($3,360.55)	($2,333.60)	($1,216.06)	
2017-2041 RESIDENTIAL FUNDING REQUIREMENTS													
- Fire & Paramedic Services: Non Inflated	$0.0	$0.0	$4,960.0	$0.0	$1,860.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$19,648.8**
- Fire & Paramedic Services: Inflated	$0.0	$0.0	$6,675.5	$0.0	$2,604.4	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$23,088.3**
NEW RESIDENTIAL DEVELOPMENT													
- Population in New Units	9,734	9,814	8,998	9,103	9,193	9,294	9,404	8,381	8,450	8,519	8,587	8,669	**244,757**
REVENUE													
- Charge Receipts: Inflated	$1,138.7	$1,171.0	$1,095.1	$1,130.0	$1,164.0	$1,200.3	$1,238.8	$1,126.2	$1,158.1	$1,190.9	$1,224.5	$1,260.9	**$28,004.8**
INTEREST													
- Interest on Opening Balance	($131.1)	($74.6)	($13.2)	($329.2)	($284.1)	($381.1)	($334.9)	($284.0)	($236.6)	($184.8)	($128.3)	($66.9)	**($4,836.1)**
- Interest on In-year Transactions	$19.9	$20.5	($153.5)	$19.8	($39.6)	$21.0	$21.7	$19.7	$20.3	$20.8	$21.4	$22.1	**($80.4)**
TOTAL REVENUE	$1,027.5	$1,116.9	$928.5	$820.5	$840.3	$840.2	$925.6	$861.8	$941.8	$1,027.0	$1,117.5	$1,216.1	**$23,088.3**
CLOSING CASH BALANCE	($1,356.2)	($239.3)	($5,986.3)	($5,165.8)	($6,929.9)	($6,089.7)	($5,164.2)	($4,302.3)	($3,360.5)	($2,333.6)	($1,216.1)	$0.0	

Adjusted Charge Per Capita	**$90.43**

Allocation of Capital Program	
Residential Sector	62%
Non-Residential Sector	38%
Rates for 2016	
Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX D.2
TABLE 2 - PAGE 2

CITY OF WINNIPEG
CASHFLOW AND DETERMINATION OF REGULATORY FEE
FIRE & PARAMEDIC SERVICES
OFFICE CHARGE
(in $000)

FIRE & PARAMEDIC SERVICES	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
OPENING CASH BALANCE	$0.00	$69.76	$223.21	($353.49)	($186.77)	($338.94)	($238.23)	($908.37)	($826.89)	($751.53)	($675.62)	($586.53)	($488.92)
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS													
- Fire & Paramedic Services: Non Inflated	$143.1	$0.0	$676.8	$0.0	$253.8	$0.0	$676.8	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
- Fire & Paramedic Services: Inflated	$143.1	$0.0	$704.1	$0.0	$274.7	$0.0	$762.2	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
NEW MAJOR OFFICE DEVELOPMENT													
- Growth in Square Metres	51,743	35,567	31,780	42,145	30,851	25,970	26,639	27,491	24,776	23,569	24,879	25,094	25,493
REVENUE													
- Charge Receipts: Inflated	$211.7	$148.4	$135.3	$183.0	$136.6	$117.3	$122.7	$129.2	$118.8	$115.2	$124.1	$127.6	$132.3
INTEREST													
- Interest on Opening Balance	$0.0	$2.4	$7.8	($19.4)	($10.3)	($18.6)	($13.1)	($50.0)	($45.5)	($41.3)	($37.2)	($32.3)	($26.9)
- Interest on In-year Transactions	$1.2	$2.6	($15.6)	$3.2	($3.8)	$2.1	($17.6)	$2.3	$2.1	$2.0	$2.2	$2.2	$2.3
TOTAL REVENUE	$212.9	$153.5	$127.4	$166.7	$122.5	$100.7	$92.0	$81.5	$75.4	$75.9	$89.1	$97.6	$107.7
CLOSING CASH BALANCE	$69.8	$223.2	($353.5)	($186.8)	($338.9)	($238.2)	($908.4)	($826.9)	($751.5)	($675.6)	($586.5)	($488.9)	($381.2)

FIRE & PARAMEDIC SERVICES	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	TOTAL
OPENING CASH BALANCE	($381.23)	($239.15)	($101.33)	($900.61)	($785.26)	($1,032.20)	($921.38)	($801.34)	($669.06)	($523.67)	($364.25)	($189.82)	
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS													
- Fire & Paramedic Services: Non Inflated	$0.0	$0.0	$676.8	$0.0	$253.8	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$2,681.1**
- Fire & Paramedic Services: Inflated	$0.0	$0.0	$910.9	$0.0	$355.4	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$3,150.4**
NEW MAJOR OFFICE DEVELOPMENT													
- Growth in Square Metres	30,279	27,488	25,138	28,854	27,423	28,189	28,151	28,512	28,878	29,249	29,626	29,911	**737,695**
REVENUE													
- Charge Receipts: Inflated	$160.2	$148.4	$138.4	$162.0	$157.1	$164.7	$167.8	$173.3	$179.1	$185.0	$191.1	$196.8	**$3,826.1**
INTEREST													
- Interest on Opening Balance	($21.0)	($13.2)	($5.6)	($49.5)	($43.2)	($56.8)	($50.7)	($44.1)	($36.8)	($28.8)	($20.0)	($10.4)	**($664.3)**
- Interest on In-year Transactions	$2.8	$2.6	($21.2)	$2.8	($5.5)	$2.9	$2.9	$3.0	$3.1	$3.2	$3.3	$3.4	**($11.3)**
TOTAL REVENUE	$142.1	$137.8	$111.6	$115.3	$108.4	$110.8	$120.0	$132.3	$145.4	$159.4	$174.4	$189.8	**$3,150.4**
CLOSING CASH BALANCE	($239.2)	($101.3)	($900.6)	($785.3)	($1,032.2)	($921.4)	($801.3)	($669.1)	($523.7)	($364.2)	($189.8)	($0.0)	

Adjusted Charge Per Square Metre	**$4.09**

Allocation of Capital Program	
Residential Sector	62%
Non-Residential Sector	38%
Rates for 2016	
Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Non-res Split:	
Office	22%
Institutional	22%
Commercial/R	21%
Industrial	34%

APPENDIX D.2
TABLE 2 - PAGE 3

CITY OF WINNIPEG
CASHFLOW AND DETERMINATION OF REGULATORY FEE
FIRE & PARAMEDIC SERVICES
INSTITUTIONAL CHARGE
(in $000)

FIRE & PARAMEDIC SERVICES	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
OPENING CASH BALANCE	$0.00	$68.65	$219.64	($347.83)	($183.78)	($333.52)	($234.42)	($893.83)	($813.65)	($739.50)	($664.80)	($577.15)	($481.09)
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS													
- Fire & Paramedic Services: Non Inflated	$140.8	$0.0	$666.0	$0.0	$249.7	$0.0	$666.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
- Fire & Paramedic Services: Inflated	$140.8	$0.0	$692.9	$0.0	$270.3	$0.0	$750.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
NEW INSTITUTIONAL DEVELOPMENT													
- Growth in Square Metres	122,572	84,253	75,284	99,835	73,081	61,520	63,104	65,123	58,690	55,832	58,936	59,444	60,389
REVENUE													
- Charge Receipts: Inflated	$208.3	$146.0	$133.1	$180.0	$134.4	$115.4	$120.8	$127.1	$116.9	$113.4	$122.1	$125.6	$130.1
INTEREST													
- Interest on Opening Balance	$0.0	$2.4	$7.7	($19.1)	($10.1)	($18.3)	($12.9)	($49.2)	($44.8)	($40.7)	($36.6)	($31.7)	($26.5)
- Interest on In-year Transactions	$1.2	$2.6	($15.4)	$3.2	($3.7)	$2.0	($17.3)	$2.2	$2.0	$2.0	$2.1	$2.2	$2.3
TOTAL REVENUE	$209.5	$151.0	$125.4	$164.1	$120.6	$99.1	$90.6	$80.2	$74.1	$74.7	$87.7	$96.1	$106.0
CLOSING CASH BALANCE	$68.6	$219.6	($347.8)	($183.8)	($333.5)	($234.4)	($893.8)	($813.6)	($739.5)	($664.8)	($577.1)	($481.1)	($375.1)

FIRE & PARAMEDIC SERVICES	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	TOTAL
OPENING CASH BALANCE	($375.13)	($235.32)	($99.71)	($886.20)	($772.69)	($1,015.68)	($906.63)	($788.52)	($658.35)	($515.29)	($358.42)	($186.78)	
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS													
- Fire & Paramedic Services: Non Inflated	$0.0	$0.0	$666.0	$0.0	$249.7	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$2,638.2**
- Fire & Paramedic Services: Inflated	$0.0	$0.0	$896.3	$0.0	$349.7	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$3,100.0**
NEW INSTITUTIONAL DEVELOPMENT													
- Growth in Square Metres	71,727	65,116	59,550	68,352	64,962	66,777	66,686	67,541	68,409	69,287	70,179	70,855	**1,747,505**
REVENUE													
- Charge Receipts: Inflated	$157.7	$146.0	$136.2	$159.5	$154.6	$162.1	$165.1	$170.5	$176.2	$182.0	$188.1	$193.7	**$3,764.8**
INTEREST													
- Interest on Opening Balance	($20.6)	($12.9)	($5.5)	($48.7)	($42.5)	($55.9)	($49.9)	($43.4)	($36.2)	($28.3)	($19.7)	($10.3)	**($653.7)**
- Interest on In-year Transactions	$2.8	$2.6	($20.9)	$2.8	($5.4)	$2.8	$2.9	$3.0	$3.1	$3.2	$3.3	$3.4	**($11.2)**
TOTAL REVENUE	$139.8	$135.6	$109.8	$113.5	$106.7	$109.0	$118.1	$130.2	$143.1	$156.9	$171.6	$186.8	**$3,100.0**
CLOSING CASH BALANCE	($235.3)	($99.7)	($886.2)	($772.7)	($1,015.7)	($906.6)	($788.5)	($658.4)	($515.3)	($358.4)	($186.8)	$0.0	

Adjusted Charge Per Square Metre	**$1.70**

Allocation of Capital Program	
Residential Sector	62%
Non-Residential Sector	38%
Rates for 2016	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Non-res Split:	
Office	22%
Institutional	22%
Commercial/R	21%
Industrial	34%

APPENDIX D.2
TABLE 2 - PAGE 4

CITY OF WINNIPEG
CASHFLOW AND DETERMINATION OF REGULATORY FEE
FIRE & PARAMEDIC SERVICES
COMMERCIAL/RETAIL CHARGE
(in $000)

FIRE & PARAMEDIC SERVICES	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
OPENING CASH BALANCE	$0.00	$66.93	$214.14	($339.12)	($179.17)	($325.16)	($228.54)	($871.44)	($793.26)	($720.97)	($648.14)	($562.68)	($469.04)
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS													
- Fire & Paramedic Services: Non Inflated	$137.3	$0.0	$649.3	$0.0	$243.5	$0.0	$649.3	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
- Fire & Paramedic Services: Inflated	$137.3	$0.0	$675.5	$0.0	$263.5	$0.0	$731.2	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
NEW COMMERCIAL DEVELOPMENT													
- Growth in Square Metres	73,539	50,549	45,168	59,898	43,846	36,910	37,860	39,071	35,212	33,498	35,360	35,664	36,231
REVENUE													
- Charge Receipts: Inflated	$203.1	$142.4	$129.8	$175.5	$131.1	$112.5	$117.7	$123.9	$113.9	$110.5	$119.0	$122.5	$126.9
INTEREST													
- Interest on Opening Balance	$0.0	$2.3	$7.5	($18.7)	($9.9)	($17.9)	($12.6)	($47.9)	($43.6)	($39.7)	($35.6)	($30.9)	($25.8)
- Interest on In-year Transactions	$1.2	$2.5	($15.0)	$3.1	($3.6)	$2.0	($16.9)	$2.2	$2.0	$1.9	$2.1	$2.1	$2.2
TOTAL REVENUE	$204.2	$147.2	$122.3	$159.9	$117.6	$96.6	$88.3	$78.2	$72.3	$72.8	$85.5	$93.6	$103.3
CLOSING CASH BALANCE	$66.9	$214.1	($339.1)	($179.2)	($325.2)	($228.5)	($871.4)	($793.3)	($721.0)	($648.1)	($562.7)	($469.0)	($365.7)

FIRE & PARAMEDIC SERVICES	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	TOTAL
OPENING CASH BALANCE	($365.73)	($229.43)	($97.21)	($863.99)	($753.33)	($990.23)	($883.91)	($768.76)	($641.86)	($502.37)	($349.44)	($182.10)	
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS													
- Fire & Paramedic Services: Non Inflated	$0.0	$0.0	$649.3	$0.0	$243.5	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$2,572.1**
- Fire & Paramedic Services: Inflated	$0.0	$0.0	$873.8	$0.0	$340.9	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$3,022.3**
NEW COMMERCIAL DEVELOPMENT													
- Growth in Square Metres	43,034	39,067	35,728	41,009	38,975	40,064	40,009	40,522	41,043	41,570	42,105	42,511	**1,048,442**
REVENUE													
- Charge Receipts: Inflated	$153.7	$142.3	$132.8	$155.5	$150.7	$158.0	$161.0	$166.3	$171.8	$177.5	$183.3	$188.8	**$3,670.5**
INTEREST													
- Interest on Opening Balance	($20.1)	($12.6)	($5.3)	($47.5)	($41.4)	($54.5)	($48.6)	($42.3)	($35.3)	($27.6)	($19.2)	($10.0)	**($637.3)**
- Interest on In-year Transactions	$2.7	$2.5	($20.4)	$2.7	($5.2)	$2.8	$2.8	$2.9	$3.0	$3.1	$3.2	$3.3	**($10.9)**
TOTAL REVENUE	$136.3	$132.2	$107.1	$110.7	$104.0	$106.3	$115.2	$126.9	$139.5	$152.9	$167.3	$182.1	**$3,022.3**
CLOSING CASH BALANCE	($229.4)	($97.2)	($864.0)	($753.3)	($990.2)	($883.9)	($768.8)	($641.9)	($502.4)	($349.4)	($182.1)	($0.0)	

Adjusted Charge Per Square Metre	**$2.76**

Allocation of Capital Program	
Residential Sector	62%
Non-Residential Sector	38%
Rates for 2016	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Non-res Split:	
Office	22%
Institutional	22%
Commercial/R	21%
Industrial	34%

APPENDIX D.2
TABLE 2 - PAGE 5

CITY OF WINNIPEG
CASHFLOW AND DETERMINATION OF REGULATORY FEE
FIRE & PARAMEDIC SERVICES
INDUSTRIAL CHARGE
(in $000)

FIRE & PARAMEDIC SERVICES	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
OPENING CASH BALANCE	$0.00	$108.02	$345.63	($547.35)	($289.19)	($524.83)	($368.88)	($1,406.54)	($1,280.37)	($1,163.69)	($1,046.14)	($908.20)	($757.05)
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS													
- Fire & Paramedic Services: Non Inflated	$221.6	$0.0	$1,048.0	$0.0	$393.0	$0.0	$1,048.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
- Fire & Paramedic Services: Inflated	$221.6	$0.0	$1,090.3	$0.0	$425.4	$0.0	$1,180.2	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
NEW INDUSTRIAL DEVELOPMENT													
- Growth in Square Metres	296,738	203,971	182,257	241,695	176,925	148,937	152,772	157,658	142,085	135,167	142,681	143,911	146,198
REVENUE													
- Charge Receipts: Inflated	$327.8	$229.8	$209.4	$283.3	$211.5	$181.6	$190.0	$200.0	$183.9	$178.4	$192.1	$197.6	$204.8
INTEREST													
- Interest on Opening Balance	$0.0	$3.8	$12.1	($30.1)	($15.9)	($28.9)	($20.3)	($77.4)	($70.4)	($64.0)	($57.5)	($50.0)	($41.6)
- Interest on In-year Transactions	$1.9	$4.0	($24.2)	$5.0	($5.9)	$3.2	($27.2)	$3.5	$3.2	$3.1	$3.4	$3.5	$3.6
TOTAL REVENUE	$329.6	$237.6	$197.3	$258.2	$189.7	$155.9	$142.5	$126.2	$116.7	$117.5	$137.9	$151.2	$166.7
CLOSING CASH BALANCE	$108.0	$345.6	($547.4)	($289.2)	($524.8)	($368.9)	($1,406.5)	($1,280.4)	($1,163.7)	($1,046.1)	($908.2)	($757.0)	($590.3)

FIRE & PARAMEDIC SERVICES	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	TOTAL
OPENING CASH BALANCE	($590.30)	($370.31)	($156.90)	($1,394.53)	($1,215.92)	($1,598.28)	($1,426.68)	($1,240.82)	($1,035.99)	($810.86)	($564.01)	($293.92)	
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS													
- Fire & Paramedic Services: Non Inflated	$0.0	$0.0	$1,048.0	$0.0	$393.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$4,151.5**
- Fire & Paramedic Services: Inflated	$0.0	$0.0	$1,410.4	$0.0	$550.3	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$4,878.2**
NEW INDUSTRIAL DEVELOPMENT													
- Growth in Square Metres	173,647	157,642	144,166	165,476	157,268	161,663	161,443	163,512	165,613	167,739	169,899	171,536	**4,230,599**
REVENUE													
- Charge Receipts: Inflated	$248.1	$229.8	$214.3	$250.9	$243.2	$255.0	$259.8	$268.4	$277.3	$286.4	$295.9	$304.8	**$5,924.3**
INTEREST													
- Interest on Opening Balance	($32.5)	($20.4)	($8.6)	($76.7)	($66.9)	($87.9)	($78.5)	($68.2)	($57.0)	($44.6)	($31.0)	($16.2)	**($1,028.6)**
- Interest on In-year Transactions	$4.3	$4.0	($32.9)	$4.4	($8.4)	$4.5	$4.5	$4.7	$4.9	$5.0	$5.2	$5.3	**($17.6)**
TOTAL REVENUE	$220.0	$213.4	$172.8	$178.6	$167.9	$171.6	$185.9	$204.8	$225.1	$246.9	$270.1	$293.9	**$4,878.2**
CLOSING CASH BALANCE	($370.3)	($156.9)	($1,394.5)	($1,215.9)	($1,598.3)	($1,426.7)	($1,240.8)	($1,036.0)	($810.9)	($564.0)	($293.9)	$0.0	

Adjusted Charge Per Square Metre	**$1.10**

Allocation of Capital Program	
Residential Sector	62%
Non-Residential Sector	38%
Rates for 2016	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Non-res Split:	
Office	22%
Institutional	22%
Commercial/R	21%
Industrial	34%

APPENDIX D.3

POLICE

APPENDIX D.3

POLICE

The Winnipeg Police Service provide protection services to the City.

TABLE 1 2017–2041 DEVELOPMENT-RELATED CAPITAL PROGRAM AND CALCULATION OF THE "UNADJUSTED" REGULATORY FEES

The 2017 to 2026 development-related capital program includes costs associated with new police stations and headquarters, along with associated technology requirements. The capital program amounts to $231.18 million.

Grant funding in the amount of $2.80 million has been identified in association with the new headquarters. Benefit to existing shares have been allocated primarily based on existing shares of population and employment compared to 2041, these shares total $186.97 million. In addition, as each of these projects is anticipated to benefit recent development, a prior growth share (for 10 previous years) has been deducted. This amount totals $13.44 million.

The remaining $27.96 million in costs for recovery through regulatory fees is apportioned to residential and non-residential development. This results in unadjusted charges of $70.83 per capita for residential development, $3.21 per square metre for Office, $1.33 per square metre for Institutional, $2.16 per square metre for Commercial/Retail, and $0.87 per square metre for Industrial development.

TABLE 2 CASH FLOW ANALYSIS

After cash flow considerations, both the residential and non-residential charges increase as shown in the following table:

POLICE
SUMMARY

2017-2041 Development-Related Capital Program		Unadjusted Charge		**Adjusted Charge**		**Adjusted Charges**			
						Office	**Institutional**	**Commercial**	**Industrial**
Total	Net Recoverable	$/capita	$/sq.m	**$/capita**	**$/sq.m**	**$/sq.m**	**$/sq.m**	**$/sq.m**	**$/sq.m**
$231,178,000	$27,961,441	$70.83	$1.37	**$101.92**	**$1.96**	**$4.60**	**$1.91**	**$3.11**	**$1.24**

APPENDIX D.3
TABLE 1

CITY OF WINNIPEG
DEVELOPMENT-RELATED CAPITAL PROGRAM

Service	Project Description	Timing	Gross Project Cost	Grants/ Subsidies/ Other Recoveries	Net Municipal Cost	Ineligible Costs Replacement & BTE	Development Related Costs	Costs for Recovery		
								Prior Growth	2017-2041	Post 2041
7.0 POLICE										
7.1.1	North Station Information Technology Requirements	2017	$ 490,000	$ -	$ 490,000	$ 350,377	$ 139,623	$ 41,864	$ 97,758	$ -
7.1.2	North District Police Station	2017	$ 20,188,000	$ -	$ 20,188,000	$ 14,435,552	$ 5,752,448	$ 1,724,808	$ 4,027,639	$ -
7.1.3	Headquarters (past project)	2017	$ 178,200,000	$ 2,800,000	$ 175,400,000	$ 149,090,000	$ 26,310,000	$ 7,888,764	$ 18,421,236	$ -
7.1.4	East District Station (past project)	2017	$ 13,900,000	$ -	$ 13,900,000	$ 9,939,280	$ 3,960,720	$ 1,187,578	$ 2,773,142	$ -
7.1.5	West District Station (past project)	2017	$ 18,400,000	$ -	$ 18,400,000	$ 13,157,032	$ 5,242,968	$ 2,601,303	$ 2,641,665	$ -
TOTAL POLICE			**$ 231,178,000**	**$ 2,800,000**	**$ 228,378,000**	**$ 186,972,242**	**$ 41,405,758**	**$ 13,444,317**	**$ 27,961,441**	**$ -**

Residential Calculation		
Residential Share of Development-Related Costs	62%	$17,336,093
25 Year Population Growth in New Housing Units		244,757
Unadjusted Per Unit Charge		**$70.83**
Non-Residential Calculation		
Non-Residential Share of Development-Related Costs	38%	$10,625,347
25 Year Growth in Square Metres		7,764,241
Unadjusted Per Square Metre Charge		**$1.37**
Non-Residential Allocation		
25 Year Growth in Square Metres: Major Office		737,695
25 Year Growth in Square Metres: Institutional		1,747,505
25 Year Growth in Square Metres: Commercial/Retail		1,048,442
25 Year Growth in Square Metres: Industrial		4,230,599
Office Per Square Metre Charge (Unadjusted)	22.3%	**$3.21**
Institutional Per Square Metre Charge (Unadjusted)	21.9%	**$1.33**
Commercial/Retail Per Square Metre Charge (Unadjusted)	21.4%	**$2.16**
Industrial Per Square Metre Charge (Unadjusted)	34.5%	**$0.87**

APPENDIX D.3
TABLE 2 - PAGE 1

CITY OF WINNIPEG
CASHFLOW AND DETERMINATION OF REGULATORY FEE
POLICE
RESIDENTIAL CHARGE
(in $000)

POLICE	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
OPENING CASH BALANCE	$0.00	($16,696.18)	($16,466.26)	($16,176.0)	($15,825.22)	($15,413.24)	($15,082.68)	($14,700.46)	($14,261.18)	($13,757.71)	($13,188.16)	($12,700.07)	($12,159.44)
2017-2041 RESIDENTIAL FUNDING REQUIREMENTS													
- Police: Non Inflated	$17,336.1	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
- Police: Inflated	$17,336.1	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
NEW RESIDENTIAL DEVELOPMENT													
- Population in New Units	10,663	10,855	11,084	11,272	11,424	10,291	10,376	10,475	10,599	10,701	9,599	9,610	9,662
REVENUE													
- Charge Receipts: Inflated	$1,086.8	$1,128.5	$1,175.3	$1,219.2	$1,260.3	$1,158.0	$1,190.9	$1,226.3	$1,265.7	$1,303.4	$1,192.6	$1,217.8	$1,248.9
INTEREST													
- Interest on Opening Balance	$0.0	($918.3)	($905.6)	($889.7)	($870.4)	($847.7)	($829.5)	($808.5)	($784.4)	($756.7)	($725.3)	($698.5)	($668.8)
- Interest on In-year Transactions	($446.9)	$19.7	$20.6	$21.3	$22.1	$20.3	$20.8	$21.5	$22.1	$22.8	$20.9	$21.3	$21.9
TOTAL REVENUE	$639.9	$229.9	$290.2	$350.8	$412.0	$330.6	$382.2	$439.3	$503.5	$569.6	$488.1	$540.6	$602.0
CLOSING CASH BALANCE	($16,696.2)	($16,466.3)	($16,176.0)	($15,825.2)	($15,413.2)	($15,082.7)	($14,700.5)	($14,261.2)	($13,757.7)	($13,188.2)	($12,700.1)	($12,159.4)	($11,557.5)

POLICE	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	TOTAL
OPENING CASH BALANCE	($11,557.46)	($10,887.29)	($10,143.20)	($9,445.22)	($8,668.79)	($7,810.66)	($6,863.68)	($5,820.47)	($4,849.11)	($3,787.64)	($2,630.17)	($1,370.60)	
2017-2041 RESIDENTIAL FUNDING REQUIREMENTS													
- Police: Non Inflated	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$17,336.1**
- Police: Inflated	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$17,336.1**
NEW RESIDENTIAL DEVELOPMENT													
- Population in New Units	9,734	9,814	8,998	9,103	9,193	9,294	9,404	8,381	8,450	8,519	8,587	8,669	**244,757**
REVENUE													
- Charge Receipts: Inflated	$1,283.4	$1,319.8	$1,234.3	$1,273.6	$1,312.0	$1,352.9	$1,396.3	$1,269.3	$1,305.3	$1,342.3	$1,380.1	$1,421.1	**$31,564.0**
INTEREST													
- Interest on Opening Balance	($635.7)	($598.8)	($557.9)	($519.5)	($476.8)	($429.6)	($377.5)	($320.1)	($266.7)	($208.3)	($144.7)	($75.4)	**($14,314.4)**
- Interest on In-year Transactions	$22.5	$23.1	$21.6	$22.3	$23.0	$23.7	$24.4	$22.2	$22.8	$23.5	$24.2	$24.9	**$86.5**
TOTAL REVENUE	$670.2	$744.1	$698.0	$776.4	$858.1	$947.0	$1,043.2	$971.4	$1,061.5	$1,157.5	$1,259.6	$1,370.6	**$17,336.1**
CLOSING CASH BALANCE	($10,887.3)	($10,143.2)	($9,445.2)	($8,668.8)	($7,810.7)	($6,863.7)	($5,820.5)	($4,849.1)	($3,787.6)	($2,630.2)	($1,370.6)	($0.0)	

Adjusted Charge Per Capita	**$101.92**

Allocation of Capital Program	
Residential Sector	62%
Non-Residential Sector	38%
Rates for 2016	
Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX D.3
TABLE 2 - PAGE 2

CITY OF WINNIPEG
CASHFLOW AND DETERMINATION OF REGULATORY FEE
POLICE
OFFICE CHARGE
(in $000)

POLICE	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
OPENING CASH BALANCE	$0.00	($2,185.91)	($2,136.26)	($2,098.93)	($2,004.94)	($1,958.85)	($1,932.32)	($1,898.12)	($1,854.65)	($1,820.72)	($1,788.97)	($1,745.35)	($1,695.24)
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS													
- Police: Non Inflated	$2,365.5	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
- Police: Inflated	$2,365.5	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
NEW MAJOR OFFICE DEVELOPMENT													
- Growth in Square Metres	51,743	35,567	31,780	42,145	30,851	25,970	26,639	27,491	24,776	23,569	24,879	25,094	25,493
REVENUE													
- Charge Receipts: Inflated	$238.1	$167.0	$152.2	$205.8	$153.7	$132.0	$138.1	$145.3	$133.6	$129.6	$139.6	$143.6	$148.8
INTEREST													
- Interest on Opening Balance	$0.0	($120.2)	($117.5)	($115.4)	($110.3)	($107.7)	($106.3)	($104.4)	($102.0)	($100.1)	($98.4)	($96.0)	($93.2)
- Interest on In-year Transactions	($58.5)	$2.9	$2.7	$3.6	$2.7	$2.3	$2.4	$2.5	$2.3	$2.3	$2.4	$2.5	$2.6
TOTAL REVENUE	$179.6	$49.6	$37.3	$94.0	$46.1	$26.5	$34.2	$43.5	$33.9	$31.8	$43.6	$50.1	$58.2
CLOSING CASH BALANCE	($2,185.9)	($2,136.3)	($2,098.9)	($2,004.9)	($1,958.8)	($1,932.3)	($1,898.1)	($1,854.6)	($1,820.7)	($1,789.0)	($1,745.3)	($1,695.2)	($1,637.1)

POLICE	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	TOTAL
OPENING CASH BALANCE	($1,637.09)	($1,543.72)	($1,458.78)	($1,380.59)	($1,271.04)	($1,161.15)	($1,036.48)	($901.45)	($752.65)	($589.09)	($409.75)	($213.53)	
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS													
- Police: Non Inflated	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$2,365.5**
- Police: Inflated	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$2,365.5**
NEW MAJOR OFFICE DEVELOPMENT													
- Growth in Square Metres	30,279	27,488	25,138	28,854	27,423	28,189	28,151	28,512	28,878	29,249	29,626	29,911	**737,695**
REVENUE													
- Charge Receipts: Inflated	$180.3	$166.9	$155.7	$182.3	$176.7	$185.3	$188.7	$195.0	$201.4	$208.1	$215.0	$221.4	**$4,304.0**
INTEREST													
- Interest on Opening Balance	($90.0)	($84.9)	($80.2)	($75.9)	($69.9)	($63.9)	($57.0)	($49.6)	($41.4)	($32.4)	($22.5)	($11.7)	**($1,951.2)**
- Interest on In-year Transactions	$3.2	$2.9	$2.7	$3.2	$3.1	$3.2	$3.3	$3.4	$3.5	$3.6	$3.8	$3.9	**$12.6**
TOTAL REVENUE	$93.4	$84.9	$78.2	$109.5	$109.9	$124.7	$135.0	$148.8	$163.6	$179.3	$196.2	$213.5	**$2,365.5**
CLOSING CASH BALANCE	($1,543.7)	($1,458.8)	($1,380.6)	($1,271.0)	($1,161.1)	($1,036.5)	($901.5)	($752.6)	($589.1)	($409.7)	($213.5)	$0.0	

Adjusted Charge Per Square Metre	**$4.60**

Allocation of Capital Program	
Residential Sector	62%
Non-Residential Sector	38%
Rates for 2016	
Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Non-res Split:	
Office	22%
Institutional	22%
Commercial/R	21%
Industrial	34%

APPENDIX D.3
TABLE 2 - PAGE 3

CITY OF WINNIPEG
CASHFLOW AND DETERMINATION OF REGULATORY FEE
POLICE
INSTITUTIONAL CHARGE
(in $000)

POLICE	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
OPENING CASH BALANCE	$0.00	($2,150.92)	($2,102.06)	($2,065.33)	($1,972.85)	($1,927.49)	($1,901.39)	($1,867.74)	($1,824.96)	($1,791.58)	($1,760.33)	($1,717.41)	($1,668.11)
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS													
- Police: Non Inflated	$2,327.7	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
- Police: Inflated	$2,327.7	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
NEW MAJOR OFFICE DEVELOPMENT													
- Growth in Square Metres	122,572	84,253	75,284	99,835	73,081	61,520	63,104	65,123	58,690	55,832	58,936	59,444	60,389
REVENUE													
- Charge Receipts: Inflated	$234.3	$164.3	$149.7	$202.5	$151.2	$129.8	$135.9	$143.0	$131.5	$127.6	$137.3	$141.3	$146.4
INTEREST													
- Interest on Opening Balance	$0.0	($118.3)	($115.6)	($113.6)	($108.5)	($106.0)	($104.6)	($102.7)	($100.4)	($98.5)	($96.8)	($94.5)	($91.7)
- Interest on In-year Transactions	($57.6)	$2.9	$2.6	$3.5	$2.6	$2.3	$2.4	$2.5	$2.3	$2.2	$2.4	$2.5	$2.6
TOTAL REVENUE	$176.7	$48.9	$36.7	$92.5	$45.4	$26.1	$33.7	$42.8	$33.4	$31.2	$42.9	$49.3	$57.2
CLOSING CASH BALANCE	($2,150.9)	($2,102.1)	($2,065.3)	($1,972.8)	($1,927.5)	($1,901.4)	($1,867.7)	($1,825.0)	($1,791.6)	($1,760.3)	($1,717.4)	($1,668.1)	($1,610.9)

POLICE	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	TOTAL
OPENING CASH BALANCE	($1,610.88)	($1,519.01)	($1,435.43)	($1,358.49)	($1,250.70)	($1,142.56)	($1,019.89)	($887.02)	($740.60)	($579.66)	($403.19)	($210.11)	
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS													
- Police: Non Inflated	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$2,327.7**
- Police: Inflated	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$2,327.7**
NEW MAJOR OFFICE DEVELOPMENT													
- Growth in Square Metres	71,727	65,116	59,550	68,352	64,962	66,777	66,686	67,541	68,409	69,287	70,179	70,855	**1,747,505**
REVENUE													
- Charge Receipts: Inflated	$177.4	$164.2	$153.2	$179.4	$173.9	$182.3	$185.7	$191.9	$198.2	$204.8	$211.5	$217.9	**$4,235.1**
INTEREST													
- Interest on Opening Balance	($88.6)	($83.5)	($78.9)	($74.7)	($68.8)	($62.8)	($56.1)	($48.8)	($40.7)	($31.9)	($22.2)	($11.6)	**($1,919.9)**
- Interest on In-year Transactions	$3.1	$2.9	$2.7	$3.1	$3.0	$3.2	$3.2	$3.4	$3.5	$3.6	$3.7	$3.8	**$12.4**
TOTAL REVENUE	$91.9	$83.6	$76.9	$107.8	$108.1	$122.7	$132.9	$146.4	$160.9	$176.5	$193.1	$210.1	**$2,327.7**
CLOSING CASH BALANCE	($1,519.0)	($1,435.4)	($1,358.5)	($1,250.7)	($1,142.6)	($1,019.9)	($887.0)	($740.6)	($579.7)	($403.2)	($210.1)	($0.0)	

Adjusted Charge Per Square Metre	**$1.91**

Allocation of Capital Program	
Residential Sector	62%
Non-Residential Sector	38%
Rates for 2016	
Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Non-res Split:	
Office	22%
Institutional	22%
Commercial/R	21%
Industrial	34%

HEMSON

APPENDIX D.3
TABLE 2 - PAGE 4

CITY OF WINNIPEG
CASHFLOW AND DETERMINATION OF REGULATORY FEE
POLICE
COMMERCIAL/RETAIL CHARGE
(in $000)

POLICE	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
OPENING CASH BALANCE	$0.00	($2,097.02)	($2,049.39)	($2,013.58)	($1,923.42)	($1,879.19)	($1,853.74)	($1,820.94)	($1,779.23)	($1,746.69)	($1,716.22)	($1,674.38)	($1,626.31)
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS													
- Police: Non Inflated	$2,269.3	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
- Police: Inflated	$2,269.3	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
NEW MAJOR OFFICE DEVELOPMENT													
- Growth in Square Metres	73,539	50,549	45,168	59,898	43,846	36,910	37,860	39,071	35,212	33,498	35,360	35,664	36,231
REVENUE													
- Charge Receipts: Inflated	$228.4	$160.2	$146.0	$197.5	$147.4	$126.6	$132.4	$139.4	$128.2	$124.4	$133.9	$137.7	$142.7
INTEREST													
- Interest on Opening Balance	$0.0	($115.3)	($112.7)	($110.7)	($105.8)	($103.4)	($102.0)	($100.2)	($97.9)	($96.1)	($94.4)	($92.1)	($89.4)
- Interest on In-year Transactions	($56.1)	$2.8	$2.6	$3.5	$2.6	$2.2	$2.3	$2.4	$2.2	$2.2	$2.3	$2.4	$2.5
TOTAL REVENUE	$172.3	$47.6	$35.8	$90.2	$44.2	$25.4	$32.8	$41.7	$32.5	$30.5	$41.8	$48.1	$55.8
CLOSING CASH BALANCE	($2,097.0)	($2,049.4)	($2,013.6)	($1,923.4)	($1,879.2)	($1,853.7)	($1,820.9)	($1,779.2)	($1,746.7)	($1,716.2)	($1,674.4)	($1,626.3)	($1,570.5)

POLICE	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	TOTAL
OPENING CASH BALANCE	($1,570.52)	($1,480.94)	($1,399.46)	($1,324.45)	($1,219.36)	($1,113.93)	($994.34)	($864.80)	($722.04)	($565.13)	($393.09)	($204.85)	
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS													
- Police: Non Inflated	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$2,269.3**
- Police: Inflated	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$2,269.3**
NEW MAJOR OFFICE DEVELOPMENT													
- Growth in Square Metres	43,034	39,067	35,728	41,009	38,975	40,064	40,009	40,522	41,043	41,570	42,105	42,511	**1,048,442**
REVENUE													
- Charge Receipts: Inflated	$172.9	$160.1	$149.4	$174.9	$169.5	$177.8	$181.1	$187.0	$193.2	$199.6	$206.2	$212.4	**$4,129.0**
INTEREST													
- Interest on Opening Balance	($86.4)	($81.5)	($77.0)	($72.8)	($67.1)	($61.3)	($54.7)	($47.6)	($39.7)	($31.1)	($21.6)	($11.3)	**($1,871.8)**
- Interest on In-year Transactions	$3.0	$2.8	$2.6	$3.1	$3.0	$3.1	$3.2	$3.3	$3.4	$3.5	$3.6	$3.7	**$12.1**
TOTAL REVENUE	$89.6	$81.5	$75.0	$105.1	$105.4	$119.6	$129.5	$142.8	$156.9	$172.0	$188.2	$204.9	**$2,269.3**
CLOSING CASH BALANCE	($1,480.9)	($1,399.5)	($1,324.5)	($1,219.4)	($1,113.9)	($994.3)	($864.8)	($722.0)	($565.1)	($393.1)	($204.9)	$0.0	

Adjusted Charge Per Square Metre	**$3.11**

Allocation of Capital Program	
Residential Sector	62%
Non-Residential Sector	38%
Rates for 2016	
Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Non-res Split:	
Office	22%
Institutional	22%
Commercial/R	21%
Industrial	34%

APPENDIX D.3
TABLE 2 - PAGE 5

CITY OF WINNIPEG
CASHFLOW AND DETERMINATION OF REGULATORY FEE
POLICE
INDUSTRIAL CHARGE
(in $000)

POLICE	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
OPENING CASH BALANCE	$0.00	($3,384.70)	($3,307.82)	($3,250.02)	($3,104.49)	($3,033.12)	($2,992.04)	($2,939.08)	($2,871.77)	($2,819.25)	($2,770.07)	($2,702.53)	($2,624.95)
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS													
- Police: Non Inflated	$3,662.8	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
- Police: Inflated	$3,662.8	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
NEW MAJOR OFFICE DEVELOPMENT													
- Growth in Square Metres	296,738	203,971	182,257	241,695	176,925	148,937	152,772	157,658	142,085	135,167	142,681	143,911	146,198
REVENUE													
- Charge Receipts: Inflated	$368.7	$258.5	$235.6	$318.7	$238.0	$204.3	$213.8	$225.0	$206.9	$200.7	$216.1	$222.3	$230.4
INTEREST													
- Interest on Opening Balance	$0.0	($186.2)	($181.9)	($178.8)	($170.7)	($166.8)	($164.6)	($161.6)	($157.9)	($155.1)	($152.4)	($148.6)	($144.4)
- Interest on In-year Transactions	($90.6)	$4.5	$4.1	$5.6	$4.2	$3.6	$3.7	$3.9	$3.6	$3.5	$3.8	$3.9	$4.0
TOTAL REVENUE	$278.1	$76.9	$57.8	$145.5	$71.4	$41.1	$53.0	$67.3	$52.5	$49.2	$67.5	$77.6	$90.0
CLOSING CASH BALANCE	($3,384.7)	($3,307.8)	($3,250.0)	($3,104.5)	($3,033.1)	($2,992.0)	($2,939.1)	($2,871.8)	($2,819.2)	($2,770.1)	($2,702.5)	($2,624.9)	($2,534.9)

POLICE	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	TOTAL
OPENING CASH BALANCE	($2,534.90)	($2,390.32)	($2,258.81)	($2,137.73)	($1,968.11)	($1,797.94)	($1,604.91)	($1,395.83)	($1,165.41)	($912.15)	($634.47)	($330.64)	
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS													
- Police: Non Inflated	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$3,662.8**
- Police: Inflated	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$3,662.8**
NEW MAJOR OFFICE DEVELOPMENT													
- Growth in Square Metres	173,647	157,642	144,166	165,476	157,268	161,663	161,443	163,512	165,613	167,739	169,899	171,536	**4,230,599**
REVENUE													
- Charge Receipts: Inflated	$279.1	$258.5	$241.1	$282.3	$273.6	$286.9	$292.2	$301.9	$311.9	$322.2	$332.9	$342.8	**$6,664.4**
INTEREST													
- Interest on Opening Balance	($139.4)	($131.5)	($124.2)	($117.6)	($108.2)	($98.9)	($88.3)	($76.8)	($64.1)	($50.2)	($34.9)	($18.2)	**($3,021.2)**
- Interest on In-year Transactions	$4.9	$4.5	$4.2	$4.9	$4.8	$5.0	$5.1	$5.3	$5.5	$5.6	$5.8	$6.0	**$19.6**
TOTAL REVENUE	$144.6	$131.5	$121.1	$169.6	$170.2	$193.0	$209.1	$230.4	$253.3	$277.7	$303.8	$330.6	**$3,662.8**
CLOSING CASH BALANCE	($2,390.3)	($2,258.8)	($2,137.7)	($1,968.1)	($1,797.9)	($1,604.9)	($1,395.8)	($1,165.4)	($912.2)	($634.5)	($330.6)	($0.0)	

Adjusted Charge Per Square Metre	**$1.24**

Allocation of Capital Program	
Residential Sector	62%
Non-Residential Sector	38%
Rates for 2016	
Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Non-res Split:	
Office	22%
Institutional	22%
Commercial/R	21%
Industrial	34%

APPENDIX D.4

WATER

APPENDIX D.4

WATER

Water services are managed through the City of Winnipeg's Water and Waste Department.

TABLE 1 2017–2041 DEVELOPMENT-RELATED CAPITAL PROGRAM AND CALCULATION OF THE "UNADJUSTED" REGULATORY FEES

The development-related capital program for Water services totals $310.87 million. The majority of the program accounts for a new water treatment plant which was constructed in 2009, but provided capacity to accommodate new development through the 25-year benefitting period. Other major projects include an extensions and upgrades to two water mains to serve future growth.

No grants, subsidies, or other recovery amounts have been identified. City staff identified benefit to existing shares of 75 per cent for the water treatment plant and 50 per cent for an upgrade to the Transcona water main. These amounts total $227.97 million. An additional $22.50 million was deducted from the costs associated with the 2009 water treatment plant to account for benefits to development that occurred prior to 2017.

Resulting costs for recovery over the 2017-2041 benefitting period total $60.40 million. This results in unadjusted charge calculations of $153.01 per capita for residential development, $6.93 per square metre for Office, $2.88 per square metre for Institutional, $4.68 per square metre for Commercial/Retail, and $1.87 per square metre for Industrial development.

TABLE 2 CASH FLOW ANALYSIS

After cash flow considerations, both the residential and non-residential charges increase as shown in the following table:

WATER SUMMARY									
2017-2041 Development-Related Capital Program		Unadjusted Charge		**Adjusted Charge**		**Adjusted Charges**			
						Office	**Institutional**	**Commercial**	**Industrial**
Total	Net Recoverable	$/capita	$/sq.m	**$/capita**	**$/sq.m**	**$/sq.m**	**$/sq.m**	**$/sq.m**	**$/sq.m**
$310,868,000	$60,403,580	$153.01	$2.96	**$219.70**	**$4.23**	**$9.92**	**$4.12**	**$6.70**	**$2.68**

APPENDIX D.4
TABLE 1

CITY OF WINNIPEG
DEVELOPMENT-RELATED CAPITAL PROGRAM

Service	Project Description	Timing	Gross Project Cost	Grants/ Subsidies/ Other Recoveries	Net Municipal Cost	Ineligible Costs Replacement & BTE	Development Related Costs	Costs for Recovery		
								Prior Growth	2017-2041	Post 2041
8.0 WATER										
8.1.1	Water Treatment Plant Capacity Validation	2018	$ 150,000	$ -	$ 150,000	$ -	$ 150,000	$ -	$ 150,000	$ -
8.1.2	Saskatchewan Avenue Water Main	2017	$ 4,830,000	$ -	$ 4,830,000	$ -	$ 4,830,000	$ -	$ 4,830,000	$ -
8.1.3	Transcona Water Main Reliability Upgrade	2018	$ 5,788,000	$ -	$ 5,788,000	$ 2,894,000	$ 2,894,000	$ -	$ 2,894,000	$ -
8.1.4	Water Treatment Plant (past project)	2017	$ 300,100,000	$ -	$ 300,100,000	$ 225,075,000	$ 75,025,000	$ 22,495,420	$ 52,529,580	$ -
TOTAL WATER			**$ 310,868,000**	**$ -**	**$ 310,868,000**	**$ 227,969,000**	**$ 82,899,000**	**$ 22,495,420**	**$ 60,403,580**	**$ -**

Residential Calculation		
Residential Share of Development-Related Costs	62%	$37,450,220
25 Year Population Growth in New Housing Units		244,757
Unadjusted Per Unit Charge		**$153.01**
Non-Residential Calculation		
Non-Residential Share of Development-Related Costs	38%	$22,953,360
25 Year Growth in Square Metres		7,764,241
Unadjusted Per Square Metre Charge		**$2.96**
Non-Residential Allocation		
25 Year Growth in Square Metres: Major Office		737,695
25 Year Growth in Square Metres: Institutional		1,747,505
25 Year Growth in Square Metres: Commercial/Retail		1,048,442
25 Year Growth in Square Metres: Industrial		4,230,599
Office Per Square Metre Charge (Unadjusted)	22.3%	**$6.93**
Institutional Per Square Metre Charge (Unadjusted)	21.9%	**$2.88**
Commercial/Retail Per Square Metre Charge (Unadjusted)	21.4%	**$4.68**
Industrial Per Square Metre Charge (Unadjusted)	34.5%	**$1.87**

APPENDIX D.4
TABLE 2 - PAGE 1

CITY OF WINNIPEG
CASHFLOW AND DETERMINATION OF REGULATORY FEE
WATER
RESIDENTIAL CHARGE
(in $000)

WATER	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
OPENING CASH BALANCE	$0.0	($34,133.9)	($35,494.8)	($34,869.2)	($34,113.0)	($33,224.9)	($32,512.4)	($31,688.4)	($30,741.5)	($29,656.3)	($28,428.5)	($27,376.4)	($26,211.0)
2017-2041 RESIDENTIAL FUNDING REQUIREMENTS													
- Water: Non Inflated	$35,562.9	$1,887.3	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
- Water: Inflated	$35,562.9	$1,925.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
NEW RESIDENTIAL DEVELOPMENT													
- Population in New Units	10,663	10,855	11,084	11,272	11,424	10,291	10,376	10,475	10,599	10,701	9,599	9,610	9,662
REVENUE													
- Charge Receipts: Inflated	$2,342.6	$2,432.5	$2,533.5	$2,628.0	$2,716.7	$2,496.2	$2,567.2	$2,643.5	$2,728.3	$2,809.7	$2,570.7	$2,625.1	$2,692.1
INTEREST													
- Interest on Opening Balance	$0.0	($1,877.4)	($1,952.2)	($1,917.8)	($1,876.2)	($1,827.4)	($1,788.2)	($1,742.9)	($1,690.8)	($1,631.1)	($1,563.6)	($1,505.7)	($1,441.6)
- Interest on In-year Transactions	($913.6)	$8.9	$44.3	$46.0	$47.5	$43.7	$44.9	$46.3	$47.7	$49.2	$45.0	$45.9	$47.1
TOTAL REVENUE	$1,429.1	$564.0	$625.6	$756.2	$888.1	$712.5	$823.9	$946.9	$1,085.3	$1,227.7	$1,052.1	$1,165.4	$1,297.6
CLOSING CASH BALANCE	($34,133.9)	($35,494.8)	($34,869.2)	($34,113.0)	($33,224.9)	($32,512.4)	($31,688.4)	($30,741.5)	($29,656.3)	($28,428.5)	($27,376.4)	($26,211.0)	($24,913.4)

WATER	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	TOTAL
OPENING CASH BALANCE	($24,913.4)	($23,468.8)	($21,864.8)	($20,360.2)	($18,686.5)	($16,836.7)	($14,795.4)	($12,546.7)	($10,452.8)	($8,164.7)	($5,669.6)	($2,954.5)	
2017-2041 RESIDENTIAL FUNDING REQUIREMENTS													
- Water: Non Inflated	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$37,450.2**
- Water: Inflated	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$37,488.0**
NEW RESIDENTIAL DEVELOPMENT													
- Population in New Units	9,734	9,814	8,998	9,103	9,193	9,294	9,404	8,381	8,450	8,519	8,587	8,669	**244,757**
REVENUE													
- Charge Receipts: Inflated	$2,766.4	$2,845.0	$2,660.6	$2,745.5	$2,828.1	$2,916.3	$3,009.8	$2,736.1	$2,813.8	$2,893.5	$2,974.9	$3,063.4	**$68,039.6**
INTEREST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**$0.00**
- Interest on Opening Balance	($1,370.2)	($1,290.8)	($1,202.6)	($1,119.8)	($1,027.8)	($926.0)	($813.7)	($690.1)	($574.9)	($449.1)	($311.8)	($162.5)	**($30,754.0)**
- Interest on In-year Transactions	$48.4	$49.8	$46.6	$48.0	$49.5	$51.0	$52.7	$47.9	$49.2	$50.6	$52.1	$53.6	**$202.4**
TOTAL REVENUE	$1,444.6	$1,604.0	$1,504.6	$1,673.7	$1,849.8	$2,041.3	$2,248.8	$2,093.9	$2,288.1	$2,495.1	$2,715.1	$2,954.5	**$37,488.0**
CLOSING CASH BALANCE	($23,468.8)	($21,864.8)	($20,360.2)	($18,686.5)	($16,836.7)	($14,795.4)	($12,546.7)	($10,452.8)	($8,164.7)	($5,669.6)	($2,954.5)	($0.0)	

Adjusted Charge Per Capita	**$219.70**

Allocation of Capital Program	
Residential Sector	62%
Non-Residential Sector	38%
Rates for 2016	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX D.4
TABLE 2 - PAGE 2

CITY OF WINNIPEG
CASHFLOW AND DETERMINATION OF REGULATORY FEE
WATER
OFFICE CHARGE
(in $000)

WATER	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
OPENING CASH BALANCE	$0.0	($4,458.6)	($4,604.9)	($4,524.5)	($4,321.9)	($4,222.5)	($4,165.3)	($4,091.6)	($3,997.9)	($3,924.8)	($3,856.3)	($3,762.3)	($3,654.3)
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS													
- Water: Non Inflated	$4,852.6	$257.5	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
- Water: Inflated	$4,852.6	$262.7	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
NEW MAJOR OFFICE DEVELOPMENT													
- Growth in Square Metres	51,743	35,567	31,780	42,145	30,851	25,970	26,639	27,491	24,776	23,569	24,879	25,094	25,493
REVENUE													
- Charge Receipts: Inflated	$513.3	$359.9	$328.0	$443.7	$331.3	$284.4	$297.6	$313.3	$288.0	$279.4	$300.9	$309.5	$320.7
INTEREST													
- Interest on Opening Balance	$0.0	($245.2)	($253.3)	($248.8)	($237.7)	($232.2)	($229.1)	($225.0)	($219.9)	($215.9)	($212.1)	($206.9)	($201.0)
- Interest on In-year Transactions	($119.3)	$1.7	$5.7	$7.8	$5.8	$5.0	$5.2	$5.5	$5.0	$4.9	$5.3	$5.4	$5.6
TOTAL REVENUE	$394.0	$116.4	$80.5	$202.6	$99.4	$57.2	$73.7	$93.7	$73.1	$68.5	$94.0	$108.0	$125.4
CLOSING CASH BALANCE	($4,458.6)	($4,604.9)	($4,524.5)	($4,321.9)	($4,222.5)	($4,165.3)	($4,091.6)	($3,997.9)	($3,924.8)	($3,856.3)	($3,762.3)	($3,654.3)	($3,528.9)

WATER	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	TOTAL
OPENING CASH BALANCE	($3,528.9)	($3,327.6)	($3,144.6)	($2,976.0)	($2,739.9)	($2,503.0)	($2,234.2)	($1,943.2)	($1,622.4)	($1,269.8)	($883.3)	($460.3)	
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS													
- Water: Non Inflated	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$5,110.1**
- Water: Inflated	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$5,115.3**
NEW MAJOR OFFICE DEVELOPMENT													
- Growth in Square Metres	30,279	27,488	25,138	28,854	27,423	28,189	28,151	28,512	28,878	29,249	29,626	29,911	**737,695**
REVENUE													
- Charge Receipts: Inflated	$388.6	$359.8	$335.6	$392.9	$380.9	$399.4	$406.8	$420.3	$434.2	$448.6	$463.4	$477.3	**$9,277.8**
INTEREST													
- Interest on Opening Balance	($194.1)	($183.0)	($173.0)	($163.7)	($150.7)	($137.7)	($122.9)	($106.9)	($89.2)	($69.8)	($48.6)	($25.3)	**($4,192.0)**
- Interest on In-year Transactions	$6.8	$6.3	$5.9	$6.9	$6.7	$7.0	$7.1	$7.4	$7.6	$7.9	$8.1	$8.4	**$29.5**
TOTAL REVENUE	$201.3	$183.1	$168.6	$236.1	$236.9	$268.7	$291.1	$320.8	$352.6	$386.6	$423.0	$460.3	**$5,115.3**
CLOSING CASH BALANCE	($3,327.6)	($3,144.6)	($2,976.0)	($2,739.9)	($2,503.0)	($2,234.2)	($1,943.2)	($1,622.4)	($1,269.8)	($883.3)	($460.3)	$0.0	

Adjusted Charge Per Square Metre	**$9.92**

Allocation of Capital Program	
Residential Sector	62%
Non-Residential Sector	38%
Rates for 2016	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Non-res Split:	
Office	22%
Institutional	22%
Commercial/R	21%
Industrial	34%

APPENDIX D.4
TABLE 2 - PAGE 3

CITY OF WINNIPEG
CASHFLOW AND DETERMINATION OF REGULATORY FEE
WATER
INSTITUTIONAL CHARGE
(in $000)

WATER	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
OPENING CASH BALANCE	$0.0	($4,387.3)	($4,531.2)	($4,452.0)	($4,252.7)	($4,154.9)	($4,098.6)	($4,026.1)	($3,933.9)	($3,861.9)	($3,794.6)	($3,702.1)	($3,595.8)
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS													
- Water: Non Inflated	$4,774.9	$253.4	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
- Water: Inflated	$4,774.9	$258.5	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
NEW INSTITUTIONAL DEVELOPMENT													
- Growth in Square Metres	122,572	84,253	75,284	99,835	73,081	61,520	63,104	65,123	58,690	55,832	58,936	59,444	60,389
REVENUE													
- Charge Receipts: Inflated	$505.1	$354.1	$322.8	$436.6	$326.0	$279.9	$292.8	$308.3	$283.4	$275.0	$296.0	$304.6	$315.6
INTEREST													
- Interest on Opening Balance	$0.0	($241.3)	($249.2)	($244.9)	($233.9)	($228.5)	($225.4)	($221.4)	($216.4)	($212.4)	($208.7)	($203.6)	($197.8)
- Interest on In-year Transactions	($117.4)	$1.7	$5.6	$7.6	$5.7	$4.9	$5.1	$5.4	$5.0	$4.8	$5.2	$5.3	$5.5
TOTAL REVENUE	$387.7	$114.5	$79.2	$199.3	$97.8	$56.3	$72.5	$92.2	$72.0	$67.4	$92.5	$106.3	$123.4
CLOSING CASH BALANCE	($4,387.3)	($4,531.2)	($4,452.0)	($4,252.7)	($4,154.9)	($4,098.6)	($4,026.1)	($3,933.9)	($3,861.9)	($3,794.6)	($3,702.1)	($3,595.8)	($3,472.4)

WATER	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	TOTAL
OPENING CASH BALANCE	($3,472.4)	($3,274.4)	($3,094.2)	($2,928.4)	($2,696.0)	($2,462.9)	($2,198.5)	($1,912.1)	($1,596.4)	($1,249.5)	($869.1)	($452.9)	
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS													
- Water: Non Inflated	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$5,028.3**
- Water: Inflated	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$5,033.4**
NEW INSTITUTIONAL DEVELOPMENT													
- Growth in Square Metres	71,727	65,116	59,550	68,352	64,962	66,777	66,686	67,541	68,409	69,287	70,179	70,855	**1,747,505**
REVENUE													
- Charge Receipts: Inflated	$382.3	$354.0	$330.3	$386.7	$374.8	$393.0	$400.3	$413.6	$427.3	$441.4	$456.0	$469.6	**$9,129.3**
INTEREST													
- Interest on Opening Balance	($191.0)	($180.1)	($170.2)	($161.1)	($148.3)	($135.5)	($120.9)	($105.2)	($87.8)	($68.7)	($47.8)	($24.9)	**($4,124.9)**
- Interest on In-year Transactions	$6.7	$6.2	$5.8	$6.8	$6.6	$6.9	$7.0	$7.2	$7.5	$7.7	$8.0	$8.2	**$29.0**
TOTAL REVENUE	$198.1	$180.2	$165.9	$232.4	$233.1	$264.4	$286.4	$315.6	$346.9	$380.4	$416.2	$452.9	**$5,033.4**
CLOSING CASH BALANCE	($3,274.4)	($3,094.2)	($2,928.4)	($2,696.0)	($2,462.9)	($2,198.5)	($1,912.1)	($1,596.4)	($1,249.5)	($869.1)	($452.9)	$0.0	

Adjusted Charge Per Square Metre	**$4.12**

Allocation of Capital Program	
Residential Sector	62%
Non-Residential Sector	38%
Rates for 2016	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Non-res Split:	
Office	22%
Institutional	22%
Commercial/R	21%
Industrial	34%

APPENDIX D.4
TABLE 2 - PAGE 4

CITY OF WINNIPEG
CASHFLOW AND DETERMINATION OF REGULATORY FEE
WATER
COMMERCIAL/RETAIL CHARGE
(in $000)

WATER	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
OPENING CASH BALANCE	$0.0	($4,277.3)	($4,417.7)	($4,340.5)	($4,146.1)	($4,050.8)	($3,995.9)	($3,925.2)	($3,835.3)	($3,765.2)	($3,699.5)	($3,609.3)	($3,505.7)
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS													
- Water: Non Inflated	$4,655.3	$247.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
- Water: Inflated	$4,655.3	$252.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
NEW COMMERCIAL DEVELOPMENT													
- Growth in Square Metres	73,539	50,549	45,168	59,898	43,846	36,910	37,860	39,071	35,212	33,498	35,360	35,664	36,231
REVENUE													
- Charge Receipts: Inflated	$492.4	$345.3	$314.7	$425.6	$317.8	$272.9	$285.5	$300.5	$276.3	$268.1	$288.6	$296.9	$307.7
INTEREST													
- Interest on Opening Balance	$0.0	($235.3)	($243.0)	($238.7)	($228.0)	($222.8)	($219.8)	($215.9)	($210.9)	($207.1)	($203.5)	($198.5)	($192.8)
- Interest on In-year Transactions	($114.5)	$1.6	$5.5	$7.4	$5.6	$4.8	$5.0	$5.3	$4.8	$4.7	$5.1	$5.2	$5.4
TOTAL REVENUE	$377.9	$111.6	$77.2	$194.4	$95.3	$54.9	$70.7	$89.9	$70.2	$65.7	$90.2	$103.6	$120.3
CLOSING CASH BALANCE	($4,277.3)	($4,417.7)	($4,340.5)	($4,146.1)	($4,050.8)	($3,995.9)	($3,925.2)	($3,835.3)	($3,765.2)	($3,699.5)	($3,609.3)	($3,505.7)	($3,385.4)

WATER	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	TOTAL
OPENING CASH BALANCE	($3,385.4)	($3,192.3)	($3,016.7)	($2,855.0)	($2,628.5)	($2,401.2)	($2,143.4)	($1,864.2)	($1,556.4)	($1,218.2)	($847.3)	($441.6)	
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS													
- Water: Non Inflated	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$4,902.3**
- Water: Inflated	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$4,907.3**
NEW COMMERCIAL DEVELOPMENT													
- Growth in Square Metres	43,034	39,067	35,728	41,009	38,975	40,064	40,009	40,522	41,043	41,570	42,105	42,511	**1,048,442**
REVENUE													
- Charge Receipts: Inflated	$372.8	$345.2	$322.0	$377.0	$365.4	$383.2	$390.3	$403.2	$416.5	$430.3	$444.6	$457.9	**$8,900.6**
INTEREST													
- Interest on Opening Balance	($186.2)	($175.6)	($165.9)	($157.0)	($144.6)	($132.1)	($117.9)	($102.5)	($85.6)	($67.0)	($46.6)	($24.3)	**($4,021.5)**
- Interest on In-year Transactions	$6.5	$6.0	$5.6	$6.6	$6.4	$6.7	$6.8	$7.1	$7.3	$7.5	$7.8	$8.0	**$28.3**
TOTAL REVENUE	$193.1	$175.6	$161.7	$226.5	$227.3	$257.8	$279.2	$307.7	$338.2	$370.9	$405.8	$441.6	**$4,907.3**
CLOSING CASH BALANCE	($3,192.3)	($3,016.7)	($2,855.0)	($2,628.5)	($2,401.2)	($2,143.4)	($1,864.2)	($1,556.4)	($1,218.2)	($847.3)	($441.6)	($0.0)	

Adjusted Charge Per Square Metre	**$6.70**

Allocation of Capital Program	
Residential Sector	62%
Non-Residential Sector	38%
Rates for 2016	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Non-res Split:	
Office	22%
Institutional	22%
Commercial/R	21%
Industrial	34%

APPENDIX D.4
TABLE 2 - PAGE 5

CITY OF WINNIPEG
CASHFLOW AND DETERMINATION OF REGULATORY FEE
WATER
INDUSTRIAL CHARGE
(in $000)

WATER	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
OPENING CASH BALANCE	$0.0	($6,903.8)	($7,130.4)	($7,005.8)	($6,692.1)	($6,538.2)	($6,449.7)	($6,335.5)	($6,190.4)	($6,077.2)	($5,971.2)	($5,825.6)	($5,658.4)
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS													
- Water: Non Inflated	$7,513.9	$398.8	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
- Water: Inflated	$7,513.9	$406.7	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
NEW INDUSTRIAL DEVELOPMENT													
- Growth in Square Metres	296,738	203,971	182,257	241,695	176,925	148,937	152,772	157,658	142,085	135,167	142,681	143,911	146,198
REVENUE													
- Charge Receipts: Inflated	$794.8	$557.3	$507.9	$687.0	$512.9	$440.4	$460.8	$485.1	$445.9	$432.7	$465.9	$479.3	$496.6
INTEREST													
- Interest on Opening Balance	$0.0	($379.7)	($392.2)	($385.3)	($368.1)	($359.6)	($354.7)	($348.5)	($340.5)	($334.2)	($328.4)	($320.4)	($311.2)
- Interest on In-year Transactions	($184.8)	$2.6	$8.9	$12.0	$9.0	$7.7	$8.1	$8.5	$7.8	$7.6	$8.2	$8.4	$8.7
TOTAL REVENUE	$610.0	$180.2	$124.6	$313.7	$153.9	$88.5	$114.1	$145.1	$113.2	$106.0	$145.6	$167.2	$194.1
CLOSING CASH BALANCE	($6,903.8)	($7,130.4)	($7,005.8)	($6,692.1)	($6,538.2)	($6,449.7)	($6,335.5)	($6,190.4)	($6,077.2)	($5,971.2)	($5,825.6)	($5,658.4)	($5,464.3)

WATER	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	TOTAL
OPENING CASH BALANCE	($5,464.3)	($5,152.6)	($4,869.1)	($4,608.1)	($4,242.5)	($3,875.7)	($3,459.6)	($3,008.9)	($2,512.2)	($1,966.2)	($1,367.7)	($712.7)	
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS													
- Water: Non Inflated	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$7,912.6**
- Water: Inflated	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$7,920.6**
NEW INDUSTRIAL DEVELOPMENT													
- Growth in Square Metres	173,647	157,642	144,166	165,476	157,268	161,663	161,443	163,512	165,613	167,739	169,899	171,536	**4,230,599**
REVENUE													
- Charge Receipts: Inflated	$601.7	$557.1	$519.7	$608.4	$589.8	$618.4	$629.9	$650.8	$672.3	$694.6	$717.6	$739.0	**$14,365.9**
INTEREST													
- Interest on Opening Balance	($300.5)	($283.4)	($267.8)	($253.4)	($233.3)	($213.2)	($190.3)	($165.5)	($138.2)	($108.1)	($75.2)	($39.2)	**($6,491.0)**
- Interest on In-year Transactions	$10.5	$9.7	$9.1	$10.6	$10.3	$10.8	$11.0	$11.4	$11.8	$12.2	$12.6	$12.9	**$45.6**
TOTAL REVENUE	$311.7	$283.5	$261.0	$365.6	$366.8	$416.1	$450.7	$496.7	$545.9	$598.6	$654.9	$712.7	**$7,920.6**
CLOSING CASH BALANCE	($5,152.6)	($4,869.1)	($4,608.1)	($4,242.5)	($3,875.7)	($3,459.6)	($3,008.9)	($2,512.2)	($1,966.2)	($1,367.7)	($712.7)	($0.0)	

Adjusted Charge Per Square Metre	**$2.68**

Allocation of Capital Program	
Residential Sector	62%
Non-Residential Sector	38%
Rates for 2016	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Non-res Split:	
Office	22%
Institutional	22%
Commercial/R	21%
Industrial	34%

APPENDIX D.5

WASTEWATER

APPENDIX D.5

WASTEWATER

Wastewater is managed through the City of Winnipeg's Water and Waste Department.

TABLE 1 2017–2041 DEVELOPMENT-RELATED CAPITAL PROGRAM AND CALCULATION OF THE "UNADJUSTED" REGULATORY FEES

The development-related capital program for Wastewater and Stormwater totals $1.18 billion. Large amounts are included for major upgrades and expansions to three sewage treatment plants, including that of the West End Sewage Treatment Plant (WEWPCC) project which was undertaken in 2008 but is expected to service growth new development over the 2017-2041 period. The capital program also includes construction of two interceptor sewers.

Provincial and federal grants totalling $267.68 are anticipated to help fund costs associated with the three sewage treatment plants. City staff have identified benefit to existing shares ranging from 68 to 93 per cent of the net municipal costs of these plants. These amounts total $656.07 million. For the 2008 WEWPCC initiative, an additional amount of $419,100 has been deducted to account for prior growth.

The remaining costs total $253.00 million. After residential and non-residential apportionments, unadjusted charges are calculated at $640.88 per capita for residential development, $29.01 per square metre for Office, $12.05 per square metre for Institutional, $19.58 per square metre for Commercial/Retail, and $7.83 per square metre for Industrial development.

TABLE 2 CASH FLOW ANALYSIS

After cash flow considerations, the residential and non-residential charges increase as shown in the following table:

WASTEWATER SUMMARY

2017-2041 Development-Related Capital Program		Unadjusted Charge		**Adjusted Charge**		**Adjusted Charges**			
						Office	**Institutional**	**Commercial**	**Industrial**
Total	Net Recoverable	$/capita	$/sq.m	**$/capita**	**$/sq.m**	**$/sq.m**	**$/sq.m**	**$/sq.m**	**$/sq.m**
$1,177,172,000	$252,998,355	$640.88	$12.38	**$798.87**	**$15.42**	**$36.14**	**$15.01**	**$24.40**	**$9.76**

APPENDIX D.5
TABLE 1

CITY OF WINNIPEG
DEVELOPMENT-RELATED CAPITAL PROGRAM

Service	Project Description	Timing	Gross Project Cost	Grants/ Subsidies/ Other Recoveries	Net Municipal Cost	Ineligible Costs Replacement & BTE	Development Related Costs	Costs for Recovery		
								Prior Growth	2017-2041	Post 2041
9.0 WASTEWATER										
9.1.1	Plessis Road Interceptor	2017	$ 7,300,000	$ -	$ 7,300,000	$ -	$ 7,300,000	$ -	$ 7,300,000	$ -
9.1.2	Kenaston Boulevard Interceptor	2021	$ 6,442,000	$ -	$ 6,442,000	$ -	$ 6,442,000	$ -	$ 6,442,000	$ -
9.1.3	WEWPCC (past project)	2017	$ 33,230,000	$ 13,260,000	$ 19,970,000	$ 18,572,100	$ 1,397,900	$ 419,145	$ 978,755	$ -
9.1.4	SEWPCC (future)	2019	$ 335,600,000	$ 59,420,000	$ 276,180,000	$ 187,802,400	$ 88,377,600	$ -	$ 88,377,600	$ -
9.1.5	NEWPCC (future)	2023	$ 794,600,000	$ 195,000,000	$ 599,600,000	$ 449,700,000	$ 149,900,000	$ -	$ 149,900,000	$ -
TOTAL WASTEWATER			**$ 1,177,172,000**	**$ 267,680,000**	**$ 909,492,000**	**$ 656,074,500**	**$ 253,417,500**	**$ 419,145**	**$ 252,998,355**	**$ -**

Residential Calculation		
Residential Share of Development-Related Costs	62%	$156,858,980
25 Year Population Growth in New Housing Units		244,757
Unadjusted Per Unit Charge		**$640.88**
Non-Residential Calculation		
Non-Residential Share of Development-Related Costs	38%	$96,139,375
25 Year Growth in Square Metres		7,764,241
Unadjusted Per Square Metre Charge		**$12.38**
Non-Residential Allocation		
25 Year Growth in Square Metres: Major Office		737,695
25 Year Growth in Square Metres: Institutional		1,747,505
25 Year Growth in Square Metres: Commercial/Retail		1,048,442
25 Year Growth in Square Metres: Industrial		4,230,599
Office Per Square Metre Charge (Unadjusted)	22.3%	**$29.01**
Institutional Per Square Metre Charge (Unadjusted)	21.9%	**$12.05**
Commercial/Retail Per Square Metre Charge (Unadjusted)	21.4%	**$19.58**
Industrial Per Square Metre Charge (Unadjusted)	34.5%	**$7.83**

APPENDIX D.5
TABLE 2 - PAGE 1

CITY OF WINNIPEG
CASHFLOW AND DETERMINATION OF REGULATORY FEE
WASTEWATER
RESIDENTIAL CHARGE
(in $000)

WASTEWATER	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
OPENING CASH BALANCE	$0.00	$3,444.73	$12,565.20	($36,104.8)	($28,367.38)	($24,275.10)	($16,374.60)	($115,225.22)	($111,782.05)	($107,835.80)	($103,371.54)	($99,545.75)	($95,308.21)
2017-2041 RESIDENTIAL FUNDING REQUIREMENTS													
- Wastewater: Non Inflated	$5,132.8	$0.0	$54,794.1	$0.0	$3,994.0	$0.0	$92,938.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
- Wastewater: Inflated	$5,132.8	$0.0	$57,007.8	$0.0	$4,323.3	$0.0	$104,663.3	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
NEW RESIDENTIAL DEVELOPMENT													
- Population in New Units	10,663	10,855	11,084	11,272	11,424	10,291	10,376	10,475	10,599	10,701	9,599	9,610	9,662
REVENUE													
- Charge Receipts: Inflated	$8,518.3	$8,845.1	$9,212.4	$9,556.0	$9,878.5	$9,076.8	$9,334.8	$9,612.3	$9,920.7	$10,216.4	$9,347.6	$9,545.5	$9,789.1
INTEREST													
- Interest on Opening Balance	$0.0	$120.6	$439.8	($1,985.8)	($1,560.2)	($1,335.1)	($900.6)	($6,337.4)	($6,148.0)	($5,931.0)	($5,685.4)	($5,475.0)	($5,242.0)
- Interest on In-year Transactions	$59.2	$154.8	($1,314.4)	$167.2	$97.2	$158.8	($2,621.5)	$168.2	$173.6	$178.8	$163.6	$167.0	$171.3
TOTAL REVENUE	$8,577.6	$9,120.5	$8,337.8	$7,737.4	$8,415.6	$7,900.5	$5,812.7	$3,443.2	$3,946.2	$4,464.3	$3,825.8	$4,237.5	$4,718.5
CLOSING CASH BALANCE	$3,444.7	$12,565.2	($36,104.8)	($28,367.4)	($24,275.1)	($16,374.6)	($115,225.2)	($111,782.0)	($107,835.8)	($103,371.5)	($99,545.8)	($95,308.2)	($90,589.7)

WASTEWATER	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	TOTAL
OPENING CASH BALANCE	($90,589.75)	($85,336.85)	($79,504.54)	($74,033.62)	($67,947.77)	($61,221.60)	($53,798.97)	($45,622.04)	($38,008.29)	($29,688.32)	($20,615.83)	($10,743.08)	
2017-2041 RESIDENTIAL FUNDING REQUIREMENTS													
- Wastewater: Non Inflated	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$156,859.0**
- Wastewater: Inflated	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$171,127.2**
NEW RESIDENTIAL DEVELOPMENT													
- Population in New Units	9,734	9,814	8,998	9,103	9,193	9,294	9,404	8,381	8,450	8,519	8,587	8,669	**244,757**
REVENUE													
- Charge Receipts: Inflated	$10,059.3	$10,344.8	$9,674.4	$9,983.0	$10,283.3	$10,604.2	$10,944.3	$9,948.9	$10,231.4	$10,521.2	$10,817.3	$11,139.0	**$247,404.8**
INTEREST													
- Interest on Opening Balance	($4,982.4)	($4,693.5)	($4,372.7)	($4,071.8)	($3,737.1)	($3,367.2)	($2,958.9)	($2,509.2)	($2,090.5)	($1,632.9)	($1,133.9)	($590.9)	**($76,181.2)**
- Interest on In-year Transactions	$176.0	$181.0	$169.3	$174.7	$180.0	$185.6	$191.5	$174.1	$179.0	$184.1	$189.3	$194.9	**($96.4)**
TOTAL REVENUE	$5,252.9	$5,832.3	$5,470.9	$6,085.9	$6,726.2	$7,422.6	$8,176.9	$7,613.7	$8,320.0	$9,072.5	$9,872.7	$10,743.1	**$171,127.2**
CLOSING CASH BALANCE	($85,336.9)	($79,504.5)	($74,033.6)	($67,947.8)	($61,221.6)	($53,799.0)	($45,622.0)	($38,008.3)	($29,688.3)	($20,615.8)	($10,743.1)	$0.0	

Adjusted Charge Per Capita	**$798.87**

Allocation of Capital Program	
Residential Sector	62%
Non-Residential Sector	38%
Rates for 2016	
Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX D.5
TABLE 2 - PAGE 2

CITY OF WINNIPEG
CASHFLOW AND DETERMINATION OF REGULATORY FEE
WASTEWATER
OFFICE CHARGE
(in $000)

WASTEWATER	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
OPENING CASH BALANCE	$0.00	$1,190.25	$2,566.08	($4,108.86)	($2,690.07)	($2,210.17)	($1,277.23)	($14,907.50)	($14,566.08)	($14,299.65)	($14,050.25)	($13,707.67)	($13,314.14)
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS													
- Wastewater: Non Inflated	$700.4	$0.0	$7,476.7	$0.0	$545.0	$0.0	$12,681.5	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
- Wastewater: Inflated	$700.4	$0.0	$7,778.8	$0.0	$589.9	$0.0	$14,281.4	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
NEW MAJOR OFFICE DEVELOPMENT													
- Growth in Square Metres	51,743	35,567	31,780	42,145	30,851	25,970	26,639	27,491	24,776	23,569	24,879	25,094	25,493
REVENUE													
- Charge Receipts: Inflated	$1,870.2	$1,311.2	$1,195.1	$1,616.5	$1,207.0	$1,036.4	$1,084.3	$1,141.4	$1,049.2	$1,018.1	$1,096.2	$1,127.7	$1,168.6
INTEREST													
- Interest on Opening Balance	$0.0	$41.7	$89.8	($226.0)	($148.0)	($121.6)	($70.2)	($819.9)	($801.1)	($786.5)	($772.8)	($753.9)	($732.3)
- Interest on In-year Transactions	$20.5	$22.9	($181.1)	$28.3	$10.8	$18.1	($362.9)	$20.0	$18.4	$17.8	$19.2	$19.7	$20.4
TOTAL REVENUE	$1,890.6	$1,375.8	$1,103.8	$1,418.8	$1,069.8	$932.9	$651.1	$341.4	$266.4	$249.4	$342.6	$393.5	$456.7
CLOSING CASH BALANCE	$1,190.3	$2,566.1	($4,108.9)	($2,690.1)	($2,210.2)	($1,277.2)	($14,907.5)	($14,566.1)	($14,299.7)	($14,050.2)	($13,707.7)	($13,314.1)	($12,857.4)

WASTEWATER	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	TOTAL
OPENING CASH BALANCE	($12,857.41)	($12,124.08)	($11,457.03)	($10,842.92)	($9,982.55)	($9,119.44)	($8,140.35)	($7,079.85)	($5,911.15)	($4,626.59)	($3,218.11)	($1,677.05)	
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS													
- Wastewater: Non Inflated	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$21,403.5**
- Wastewater: Inflated	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$23,350.5**
NEW MAJOR OFFICE DEVELOPMENT													
- Growth in Square Metres	30,279	27,488	25,138	28,854	27,423	28,189	28,151	28,512	28,878	29,249	29,626	29,911	**737,695**
REVENUE													
- Charge Receipts: Inflated	$1,415.7	$1,310.9	$1,222.8	$1,431.7	$1,387.9	$1,455.2	$1,482.3	$1,531.3	$1,582.0	$1,634.3	$1,688.5	$1,738.9	**$33,803.1**
INTEREST													
- Interest on Opening Balance	($707.2)	($666.8)	($630.1)	($596.4)	($549.0)	($501.6)	($447.7)	($389.4)	($325.1)	($254.5)	($177.0)	($92.2)	**($10,437.8)**
- Interest on In-year Transactions	$24.8	$22.9	$21.4	$25.1	$24.3	$25.5	$25.9	$26.8	$27.7	$28.6	$29.5	$30.4	**($14.9)**
TOTAL REVENUE	$733.3	$667.0	$614.1	$860.4	$863.1	$979.1	$1,060.5	$1,168.7	$1,284.6	$1,408.5	$1,541.1	$1,677.1	**$23,350.5**
CLOSING CASH BALANCE	($12,124.1)	($11,457.0)	($10,842.9)	($9,982.6)	($9,119.4)	($8,140.3)	($7,079.9)	($5,911.2)	($4,626.6)	($3,218.1)	($1,677.1)	$0.0	

Adjusted Charge Per Square Metre	**$36.14**

Allocation of Capital Program	
Residential Sector	62%
Non-Residential Sector	38%
Rates for 2016	
Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Non-res Split:	
Office	22%
Institutional	22%
Commercial/R	21%
Industrial	34%

APPENDIX D.5
TABLE 2 - PAGE 3

CITY OF WINNIPEG
CASHFLOW AND DETERMINATION OF REGULATORY FEE
WASTEWATER
INSTITUTIONAL CHARGE
(in $000)

WASTEWATER	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
OPENING CASH BALANCE	$0.00	$1,171.20	$2,525.00	($4,043.09)	($2,647.01)	($2,174.79)	($1,256.79)	($14,668.87)	($14,332.92)	($14,070.76)	($13,825.35)	($13,488.25)	($13,101.02)
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS													
- Wastewater: Non Inflated	$689.2	$0.0	$7,357.0	$0.0	$536.3	$0.0	$12,478.5	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
- Wastewater: Inflated	$689.2	$0.0	$7,654.2	$0.0	$580.5	$0.0	$14,052.8	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
NEW INSTITUTIONAL DEVELOPMENT													
- Growth in Square Metres	122,572	84,253	75,284	99,835	73,081	61,520	63,104	65,123	58,690	55,832	58,936	59,444	60,389
REVENUE													
- Charge Receipts: Inflated	$1,840.2	$1,290.2	$1,175.9	$1,590.6	$1,187.7	$1,019.8	$1,066.9	$1,123.1	$1,032.4	$1,001.8	$1,078.6	$1,109.7	$1,149.9
INTEREST													
- Interest on Opening Balance	$0.0	$41.0	$88.4	($222.4)	($145.6)	($119.6)	($69.1)	($806.8)	($788.3)	($773.9)	($760.4)	($741.9)	($720.6)
- Interest on In-year Transactions	$20.1	$22.6	($178.2)	$27.8	$10.6	$17.8	($357.1)	$19.7	$18.1	$17.5	$18.9	$19.4	$20.1
TOTAL REVENUE	$1,860.4	$1,353.8	$1,086.2	$1,396.1	$1,052.7	$918.0	$640.7	$336.0	$262.2	$245.4	$337.1	$387.2	$449.4
CLOSING CASH BALANCE	$1,171.2	$2,525.0	($4,043.1)	($2,647.0)	($2,174.8)	($1,256.8)	($14,668.9)	($14,332.9)	($14,070.8)	($13,825.3)	($13,488.3)	($13,101.0)	($12,651.6)

WASTEWATER	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	TOTAL
OPENING CASH BALANCE	($12,651.60)	($11,930.00)	($11,273.64)	($10,669.36)	($9,822.76)	($8,973.46)	($8,010.04)	($6,966.53)	($5,816.53)	($4,552.53)	($3,166.59)	($1,650.21)	
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS													
- Wastewater: Non Inflated	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$21,060.9**
- Wastewater: Inflated	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$22,976.7**
NEW INSTITUTIONAL DEVELOPMENT													
- Growth in Square Metres	71,727	65,116	59,550	68,352	64,962	66,777	66,686	67,541	68,409	69,287	70,179	70,855	**1,747,505**
REVENUE													
- Charge Receipts: Inflated	$1,393.1	$1,289.9	$1,203.3	$1,408.8	$1,365.7	$1,431.9	$1,458.5	$1,506.8	$1,556.7	$1,608.2	$1,661.5	$1,711.0	**$33,262.0**
INTEREST													
- Interest on Opening Balance	($695.8)	($656.2)	($620.0)	($586.8)	($540.3)	($493.5)	($440.6)	($383.2)	($319.9)	($250.4)	($174.2)	($90.8)	**($10,270.7)**
- Interest on In-year Transactions	$24.4	$22.6	$21.1	$24.7	$23.9	$25.1	$25.5	$26.4	$27.2	$28.1	$29.1	$29.9	**($14.6)**
TOTAL REVENUE	$721.6	$656.4	$604.3	$846.6	$849.3	$963.4	$1,043.5	$1,150.0	$1,264.0	$1,385.9	$1,516.4	$1,650.2	**$22,976.7**
CLOSING CASH BALANCE	($11,930.0)	($11,273.6)	($10,669.4)	($9,822.8)	($8,973.5)	($8,010.0)	($6,966.5)	($5,816.5)	($4,552.5)	($3,166.6)	($1,650.2)	$0.0	

Adjusted Charge Per Square Metre	**$15.01**

Allocation of Capital Program	
Residential Sector	62%
Non-Residential Sector	38%
Rates for 2016	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Non-res Split:	
Office	22%
Institutional	22%
Commercial/R	21%
Industrial	34%

APPENDIX D.5
TABLE 2 - PAGE 4

CITY OF WINNIPEG
CASHFLOW AND DETERMINATION OF REGULATORY FEE
WASTEWATER
COMMERCIAL/RETAIL CHARGE
(in $000)

WASTEWATER	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
OPENING CASH BALANCE	$0.00	$1,141.85	$2,461.73	($3,941.78)	($2,580.68)	($2,120.30)	($1,225.30)	($14,301.32)	($13,973.78)	($13,718.19)	($13,478.93)	($13,150.28)	($12,772.75)
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS													
- Wastewater: Non Inflated	$671.9	$0.0	$7,172.7	$0.0	$522.8	$0.0	$12,165.8	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
- Wastewater: Inflated	$671.9	$0.0	$7,462.5	$0.0	$565.9	$0.0	$13,700.7	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
NEW COMMERCIAL DEVELOPMENT													
- Growth in Square Metres	73,539	50,549	45,168	59,898	43,846	36,910	37,860	39,071	35,212	33,498	35,360	35,664	36,231
REVENUE													
- Charge Receipts: Inflated	$1,794.1	$1,257.9	$1,146.5	$1,550.8	$1,157.9	$994.2	$1,040.2	$1,094.9	$1,006.5	$976.7	$1,051.6	$1,081.9	$1,121.0
INTEREST													
- Interest on Opening Balance	$0.0	$40.0	$86.2	($216.8)	($141.9)	($116.6)	($67.4)	($786.6)	($768.6)	($754.5)	($741.3)	($723.3)	($702.5)
- Interest on In-year Transactions	$19.6	$22.0	($173.7)	$27.1	$10.4	$17.4	($348.2)	$19.2	$17.6	$17.1	$18.4	$18.9	$19.6
TOTAL REVENUE	$1,813.8	$1,319.9	$1,058.9	$1,361.1	$1,026.3	$895.0	$624.7	$327.5	$255.6	$239.3	$328.6	$377.5	$438.2
CLOSING CASH BALANCE	$1,141.9	$2,461.7	($3,941.8)	($2,580.7)	($2,120.3)	($1,225.3)	($14,301.3)	($13,973.8)	($13,718.2)	($13,478.9)	($13,150.3)	($12,772.8)	($12,334.6)

WASTEWATER	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	TOTAL
OPENING CASH BALANCE	($12,334.59)	($11,631.08)	($10,991.15)	($10,402.02)	($9,576.63)	($8,748.61)	($7,809.34)	($6,791.97)	($5,670.79)	($4,438.46)	($3,087.25)	($1,608.86)	
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS													
- Wastewater: Non Inflated	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$20,533.2**
- Wastewater: Inflated	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$22,401.0**
NEW COMMERCIAL DEVELOPMENT													
- Growth in Square Metres	43,034	39,067	35,728	41,009	38,975	40,064	40,009	40,522	41,043	41,570	42,105	42,511	**1,048,442**
REVENUE													
- Charge Receipts: Inflated	$1,358.2	$1,257.6	$1,173.1	$1,373.5	$1,331.4	$1,396.0	$1,422.0	$1,469.0	$1,517.7	$1,567.9	$1,619.8	$1,668.2	**$32,428.6**
INTEREST													
- Interest on Opening Balance	($678.4)	($639.7)	($604.5)	($572.1)	($526.7)	($481.2)	($429.5)	($373.6)	($311.9)	($244.1)	($169.8)	($88.5)	**($10,013.3)**
- Interest on In-year Transactions	$23.8	$22.0	$20.5	$24.0	$23.3	$24.4	$24.9	$25.7	$26.6	$27.4	$28.3	$29.2	**($14.3)**
TOTAL REVENUE	$703.5	$639.9	$589.1	$825.4	$828.0	$939.3	$1,017.4	$1,121.2	$1,232.3	$1,351.2	$1,478.4	$1,608.9	**$22,401.0**
CLOSING CASH BALANCE	($11,631.1)	($10,991.2)	($10,402.0)	($9,576.6)	($8,748.6)	($7,809.3)	($6,792.0)	($5,670.8)	($4,438.5)	($3,087.2)	($1,608.9)	$0.0	

Adjusted Charge Per Square Metre	**$24.40**

Allocation of Capital Program	
Residential Sector	62%
Non-Residential Sector	38%
Rates for 2016	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Non-res Split:	
Office	22%
Institutional	22%
Commercial/R	21%
Industrial	34%

APPENDIX D.5
TABLE 2 - PAGE 5

CITY OF WINNIPEG
CASHFLOW AND DETERMINATION OF REGULATORY FEE
WASTEWATER
INDUSTRIAL CHARGE
(in $000)

WASTEWATER	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
OPENING CASH BALANCE	$0.00	$1,843.01	$3,973.37	($6,362.24)	($4,165.35)	($3,422.27)	($1,977.69)	($23,083.06)	($22,554.40)	($22,141.87)	($21,755.68)	($21,225.23)	($20,615.88)
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS													
- Wastewater: Non Inflated	$1,084.5	$0.0	$11,577.1	$0.0	$843.9	$0.0	$19,636.2	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
- Wastewater: Inflated	$1,084.5	$0.0	$12,044.8	$0.0	$913.4	$0.0	$22,113.6	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
NEW INDUSTRIAL DEVELOPMENT													
- Growth in Square Metres	296,738	203,971	182,257	241,695	176,925	148,937	152,772	157,658	142,085	135,167	142,681	143,911	146,198
REVENUE													
- Charge Receipts: Inflated	$2,895.8	$2,030.3	$1,850.5	$2,503.0	$1,868.9	$1,604.7	$1,679.0	$1,767.3	$1,624.6	$1,576.4	$1,697.3	$1,746.2	$1,809.4
INTEREST													
- Interest on Opening Balance	$0.0	$64.5	$139.1	($349.9)	($229.1)	($188.2)	($108.8)	($1,269.6)	($1,240.5)	($1,217.8)	($1,196.6)	($1,167.4)	($1,133.9)
- Interest on In-year Transactions	$31.7	$35.5	($280.3)	$43.8	$16.7	$28.1	($562.0)	$30.9	$28.4	$27.6	$29.7	$30.6	$31.7
TOTAL REVENUE	$2,927.5	$2,130.4	$1,709.2	$2,196.9	$1,656.5	$1,444.6	$1,008.2	$528.7	$412.5	$386.2	$530.5	$609.4	$707.2
CLOSING CASH BALANCE	$1,843.0	$3,973.4	($6,362.2)	($4,165.4)	($3,422.3)	($1,977.7)	($23,083.1)	($22,554.4)	($22,141.9)	($21,755.7)	($21,225.2)	($20,615.9)	($19,908.7)

WASTEWATER	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	TOTAL
OPENING CASH BALANCE	($19,908.67)	($18,773.16)	($17,740.29)	($16,789.40)	($15,457.18)	($14,120.72)	($12,604.67)	($10,962.59)	($9,152.94)	($7,163.91)	($4,982.98)	($2,596.78)	
2017-2041 MAJOR OFFICE FUNDING REQUIREMENTS													
- Wastewater: Non Inflated	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$33,141.7**
- Wastewater: Inflated	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	**$36,156.3**
NEW INDUSTRIAL DEVELOPMENT													
- Growth in Square Metres	173,647	157,642	144,166	165,476	157,268	161,663	161,443	163,512	165,613	167,739	169,899	171,536	**4,230,599**
REVENUE													
- Charge Receipts: Inflated	$2,192.1	$2,029.9	$1,893.5	$2,216.8	$2,149.0	$2,253.2	$2,295.2	$2,371.1	$2,449.6	$2,530.7	$2,614.5	$2,692.5	**$52,341.4**
INTEREST													
- Interest on Opening Balance	($1,095.0)	($1,032.5)	($975.7)	($923.4)	($850.1)	($776.6)	($693.3)	($602.9)	($503.4)	($394.0)	($274.1)	($142.8)	**($16,162.1)**
- Interest on In-year Transactions	$38.4	$35.5	$33.1	$38.8	$37.6	$39.4	$40.2	$41.5	$42.9	$44.3	$45.8	$47.1	**($23.1)**
TOTAL REVENUE	$1,135.5	$1,032.9	$950.9	$1,332.2	$1,336.5	$1,516.0	$1,642.1	$1,809.6	$1,989.0	$2,180.9	$2,386.2	$2,596.8	**$36,156.3**
CLOSING CASH BALANCE	($18,773.2)	($17,740.3)	($16,789.4)	($15,457.2)	($14,120.7)	($12,604.7)	($10,962.6)	($9,152.9)	($7,163.9)	($4,983.0)	($2,596.8)	$0.0	

Adjusted Charge Per Square Metre	**$9.76**

Allocation of Capital Program	
Residential Sector	62%
Non-Residential Sector	38%
Rates for 2016	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Non-res Split:	
Office	22%
Institutional	22%
Commercial/R	21%
Industrial	34%