

Bremner & Colchester Growth
Management Strategies -
Fiscal Impact Analysis of
Recommended Community
Design Concepts
Final Report



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I. Introduction

Strathcona County commissioned the consulting team led by Urban Strategies to develop growth management strategies for two potential urban growth areas in the County. Strathcona County Council received the Bremner Growth Management Strategy as information in September 2014 and the Colchester Growth Management Strategy in January 2016.¹

This report presents the fiscal impact analysis that has been undertaken by Applications Management Consulting Ltd. in conjunction with Strathcona County Administration, to evaluate and compare the incremental effects the development of the Bremner and Colchester recommended community design concepts would have on the financial position of the County. This includes changes to municipal revenues and expenditures associated with providing services to each recommended community design concept along with the additional assessment the recommended Bremner and Colchester land use concepts would generate for the County.

The analysis in this report has been prepared to compare the potential fiscal impacts of the recommended community design concepts that have been defined for the Bremner and Colchester lands on the municipal operations of Strathcona County. The results of the fiscal impact analysis examine the overall impacts of each community design concept in the context of the rest of the County.

I.1. COMMUNITY DESIGN CONCEPTS

The recommended community design concepts identified for Bremner and Colchester and assessed to evaluate the potential fiscal impacts on the municipal operations of Strathcona County are illustrated in Figure 1.²

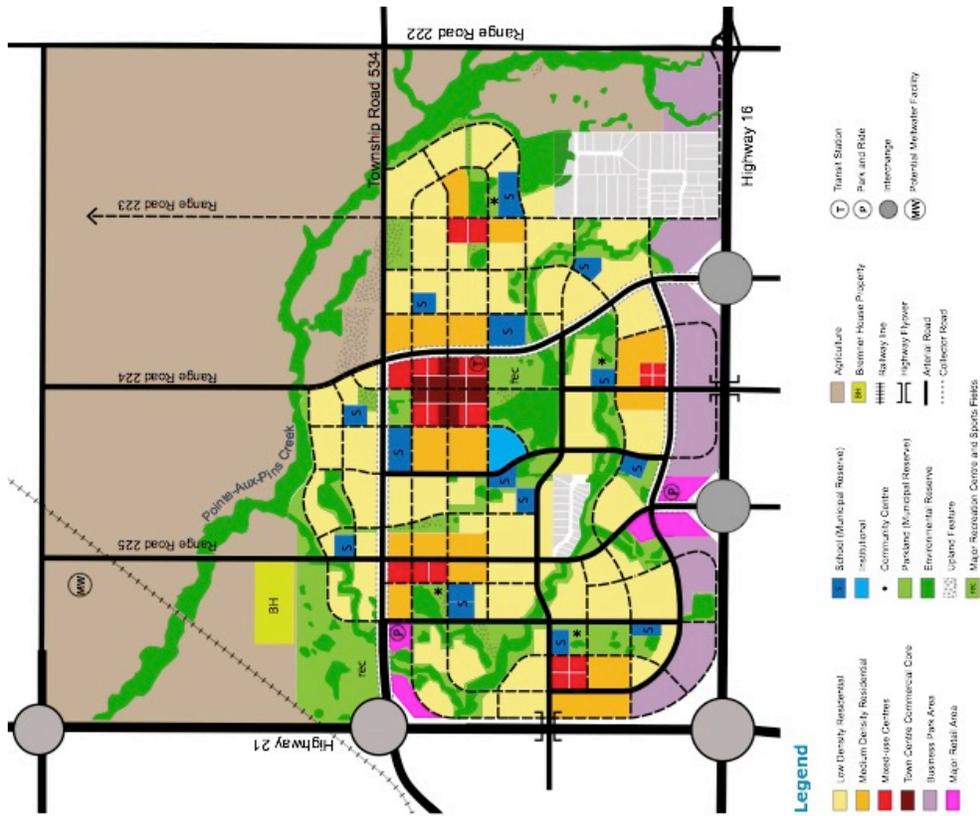
¹ Urban Strategies et al., Bremner Growth Management Strategy (Draft). September 2014. Urban Strategies et al., Colchester Growth Management Strategy (Draft). January 2016.

² Urban Strategies, July 22, 2015.

Figure 1: Bremner & Colchester Recommended Community Design Concepts

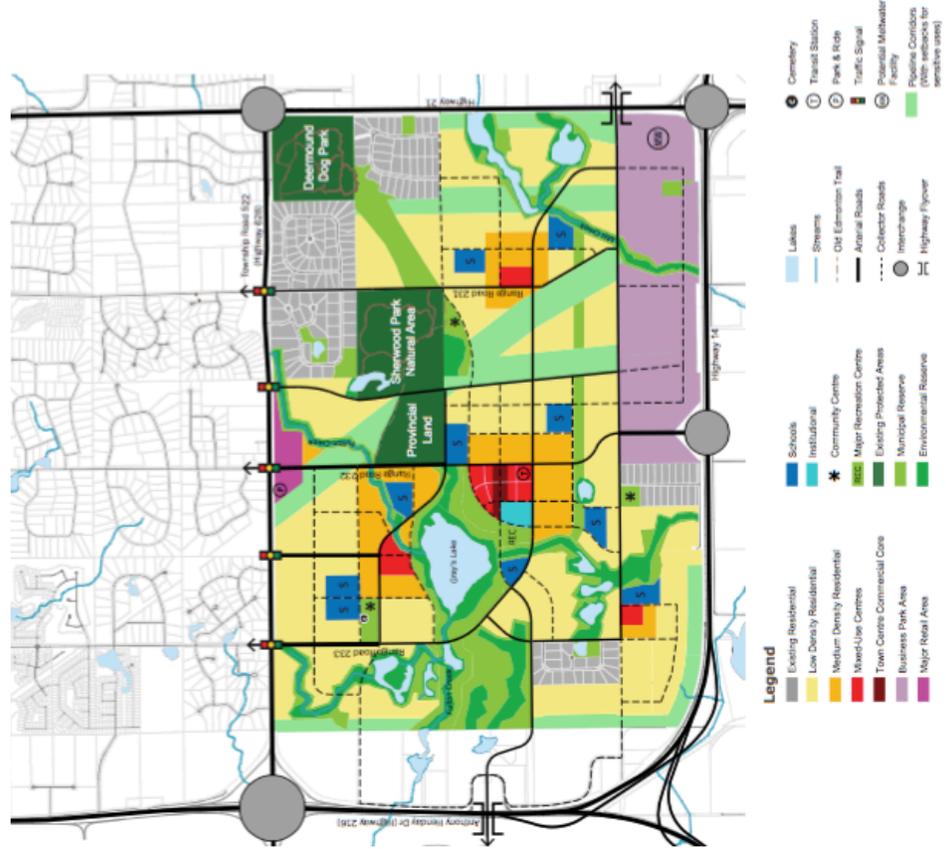
BREMNER

Figure 6.4, Bremner GMS (Sep 2014)



COLCHESTER

Figure 6.4, Colchester GMS (Jan 2016)



I.2. STRUCTURE OF REPORT

Following the introduction section, the report includes the following sections:

- ▶ **Approach to Analysis:** This section provides an overview of the information regarding the approach undertaken in conducting the fiscal impact analysis. It also includes a discussion of the key assumptions in the analysis.
- ▶ **Fiscal Impact Analysis:** This section provides an overview of the fiscal impacts of developing the Bremner and Colchester lands on the operations of Strathcona County, based on the recommended community design concept defined for each in the Bremner and Colchester growth management strategies.
- ▶ **Key Findings:** This section summarizes the key findings of the fiscal impact analysis.

2. Approach to Analysis

The fiscal impact analysis was conducted using a modified version of the County's Municipal Fiscal Impact Model (MFIM). The MFIM was originally developed approximately 20 years ago to address questions posed by Strathcona County Administration and Council at the time regarding the fiscal impacts of future development. To have the technical resources and support to answer this question, Strathcona County commissioned Applications Management Consulting Ltd. to develop a Municipal Fiscal Impact Model. This model was updated and refined over time to consider and assess both urban and rural development in the County. When the County undertook an initial evaluation of future growth node options in the County approximately 10 years ago, the MFIM was used to conduct the fiscal impact analysis.

For this analysis, the base year data in the MFIM and the baseline financial forecasts for development elsewhere in the County, other than in Bremner and Colchester, are based on the same base year data and similar forecasts utilized in the fiscal impact analyses that were previously undertaken to evaluate the initial community design concepts developed for the Bremner and Colchester lands.^{3,4} This allows for a more straightforward comparative analysis of the two recommended community design concepts.

2.1. SCOPE OF ANALYSIS

As shown in Figure 2, the fiscal impact analysis captures various streams of municipal revenues and expenditures.

On the revenue side, the fiscal impact analysis includes municipal property tax revenues from the assessment that would be generated from proposed development in each of the Bremner and Colchester recommended design concepts and the rest of the County as well as the operating revenues associated with providing municipal services to County ratepayers.

On the expenditure side, the fiscal impact analysis includes projected operating costs associated with servicing County ratepayers and capital costs that would be funded from the County's municipal operations. While the costs of constructing the linear infrastructure (roads, utilities) required to service future development will be primarily funded by developers directly or through off-site development levies, the analysis includes the capital costs that would be incurred by Strathcona County to provide any additional

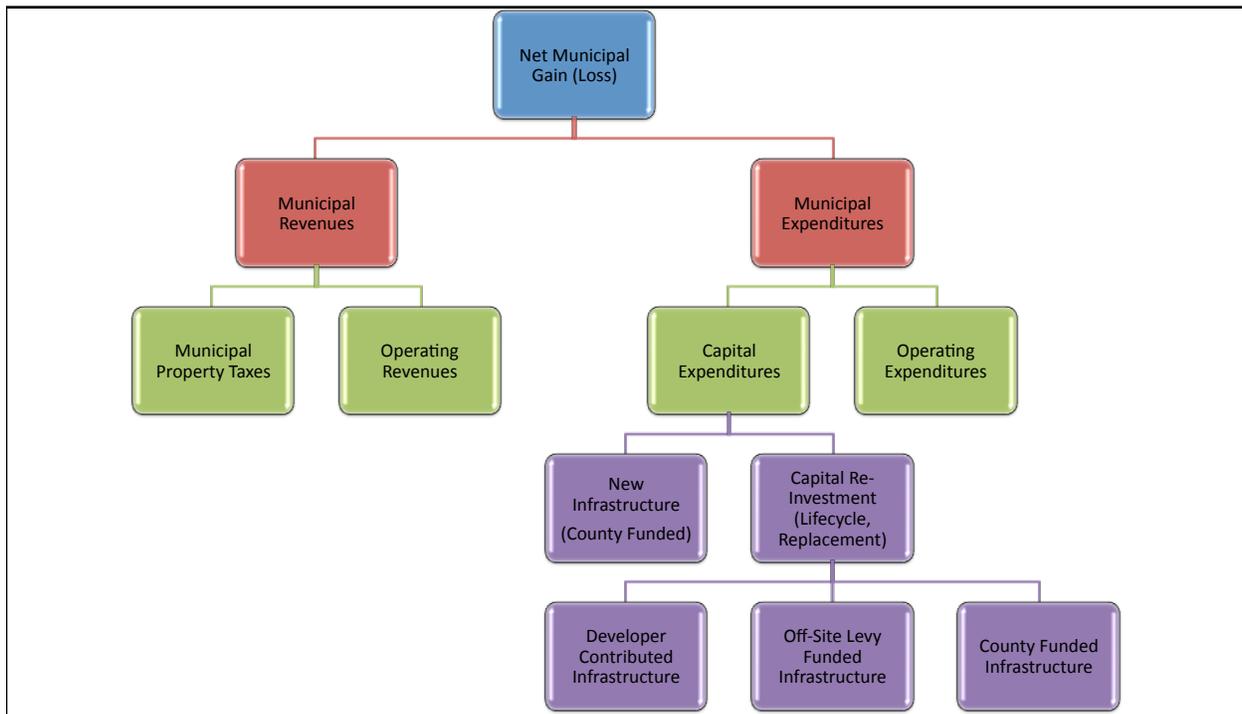
³ Applications Management Consulting Ltd., Bremner Growth Management Strategy - Fiscal Impact Analysis of Three Community Design Concepts (Final Report). September 2014.

Applications Management Consulting Ltd., Colchester Growth Management Strategy - Fiscal Impact Analysis of Three Community Design Concepts (Draft Final Report). September 2015.

⁴ In this analysis, some additional capital projects were included in the County's base capital plan and some base capital project costs and funding assumptions were adjusted.

infrastructure (not funded from developers) as well as to maintain and replace any new and/or enhanced assets that are added to the County's asset base. The analysis and results presented in this report are expressed in real 2013 dollars (consistent with previous Bremner and Colchester fiscal impact analyses).

Figure 2: Municipal Revenue & Expenditure Components



The assumptions incorporated into the fiscal impact analysis are based on the best information available at the time of completing the analysis. The assumptions and results of the fiscal impact analysis that has been undertaken serve as a starting point for further discussions and subsequent refinements to the analysis as more detail becomes available in future phases of planning for Bremner or Colchester, as required.

2.2. ANALYSIS TIMEFRAME

The period over which the analysis has been conducted is 41 years (2013-2054), consistent with the build-out timeframe of the Bremner recommended community design concept. This requires the development of information and assumptions regarding both the short term and long term growth.

2.3. KEY STUDY ASSUMPTIONS

The following is a summary of the information utilized and the key assumptions employed in preparing the fiscal impact analysis. Further to direction set out by Strathcona County Administration, many of the key assumptions remain unchanged from the previous fiscal impact analyses undertaken of the initial community design concepts developed for the Bremner and Colchester lands.

- **Timeframe for the Analysis:** The Base Year for the fiscal impact analysis is 2013. It is assumed that development on either the Bremner or Colchester lands would not commence until 2020.

- ▶ **Inflation:** All projections of revenues, expenditures and assessment, along with corresponding impacts, are presented in base year (2013) dollars.⁵
- ▶ **2013 Financial Information:** The County's 2013 operating budget detail (by account code) was used as the basis for seeding the County's fiscal impact analysis with Base Year data. This data was used to identify the County's various revenue and expenditure streams by municipal service area.
- ▶ **Municipal Mill Rates:** The analysis is limited to an examination of the fiscal impacts on municipal property tax rates. Base Year (2013) municipal tax rates were used in the analysis. It was assumed that the current splits in municipal mill rates would remain in place over the forecast period.
- ▶ **Population Growth:** The same annual population forecasts were applied for the Bremner and Colchester recommended community design concepts. Using the population forecasts developed for the County for the Bremner Growth Management Strategy (three community design concepts), it was assumed that Colchester would capture the same annual growth projected for the Bremner lands, to build-out of the Colchester recommended concept. It is projected that Bremner (recommended concept) would be fully built out at the end of 2054, and Colchester (recommended concept) would build out at the end of 2048.
- ▶ **Projected Development in Bremner and Colchester:** The development parameters for each recommended community design concept were defined by Urban Strategies.⁶ Assessment projections were developed with the assistance of Strathcona County's Assessment Branch. It was assumed that the rate of development would be similar for both concepts. See **Appendix A** for detail regarding the development statistics defined for the Bremner and Colchester recommended community design concepts.
- ▶ **Projected Capital Requirements to Service Bremner and Colchester:** The County developed projections of future 'soft' capital requirements to service the Bremner and Colchester recommended community design concepts and the associated annual lifecycle costs to maintain these additional assets. Information on how these projects would be funded was also provided, and incremental operating impacts associated with new infrastructure were identified. See **Appendix B** for a summary of the soft capital projections prepared by the County.

Projected road and utility servicing costs associated with servicing the Bremner and Colchester recommended community design concepts are based on analysis undertaken by ISL Engineering and Land Services Ltd. (ISL). Assumptions regarding phasing of infrastructure, funding of infrastructure construction and lifecycle costs to maintain the infrastructure that would be the responsibility of the County were made by the County and Applications Management Consulting Ltd. See **Appendix C** for a summary of the assumptions regarding road and utility servicing requirements.

⁵ Where costs are provided in 2014 real dollars (ISL infrastructure estimates) or adjustments to cost figures been made, it is assumed that any inflation impacts are negligible and that the stated costs are representative in real dollars terms (2013 \$).

⁶ Table 6.5 (Recommended Community Design Concept Statistics) in both Bremner Growth Management Strategy and Colchester Growth Management Strategy.

3. Fiscal Impact Analysis

This section provides an overview of the development assumptions and municipal revenue and expenditure projections for Strathcona County, including the proposed Bremner and Colchester community design concepts.

3.1. DEVELOPMENT PARAMETERS

The development parameters associated with the Bremner and Colchester recommended community design concepts at full build-out are summarized in the table below:⁷

Table 1: Bremner and Colchester: Development Parameters

	BREMNER		COLCHESTER	
Land Area (Net Ha)		% NDA		% NDA
Residential (NRA)	607	74%	457	73%
Non-Residential	217	26%	165	27%
Total Net Developable Area (NDA)	824		622	
Residential		per NRA		per NRA
Dwelling Units	21,216	35	14,836	32
Population	53,978	89	38,851	85
Assessment (\$M)		% Total		% Total
Residential	\$8,279	82%	\$5,980	81%
Non-Residential	\$1,870	18%	\$1,418	19%
Total	\$10,149		\$7,398	

The net developable areas, projected dwelling units and population estimates defined for each growth area are based on information provided by Urban Strategies. Both community design concepts comprise different combinations of the following types of development:

- Residential: Low Density, Medium Density, Mixed Use

⁷ Refer to **Appendix A** for detailed development statistics. Figures may not match figures reported by Urban Strategies due to rounding.

► Non-Residential⁸: Mixed Use, Major Retail, and Business Park

The Bremner lands comprise 824 hectares of net developable area compared to 622 hectares for the Colchester lands. The mix of residential to non-residential lands is similar for both concepts (73%-74% residential lands, 27%-26% non-residential lands).

Assessment projections were generated using input provided by the County's Assessment Branch for the earlier Bremner and Colchester fiscal impact analyses (three community design concepts) and the detailed development statistics defined for the Bremner and Colchester recommended community design concepts.

The timing of when development proceeds in Bremner and Colchester is dependent on when the County's current Urban Services Area, Sherwood Park, gets built out and the County's projected population growth over the forecast period. Based on the population forecasts developed for the County, it is projected that Sherwood Park would be largely built out by 2021, and development in Bremner or Colchester would commence in 2020. Bremner (recommended concept) would be fully built out at the end of 2054 and Colchester (recommended concept) would build out at the end of 2048.

Figures 3 and 4 illustrate the population and assessment projections for the County with the Bremner and Colchester recommended community design concepts.

⁸ The recommended Bremner and Colchester concepts also include lands for Institution use, namely schools. Non-commercial Institution properties do not generate taxable assessment for the County. Thus, for the purposes of analysis and reporting, Non-Residential development excludes Institution lands.

Figure 3: Population Forecasts

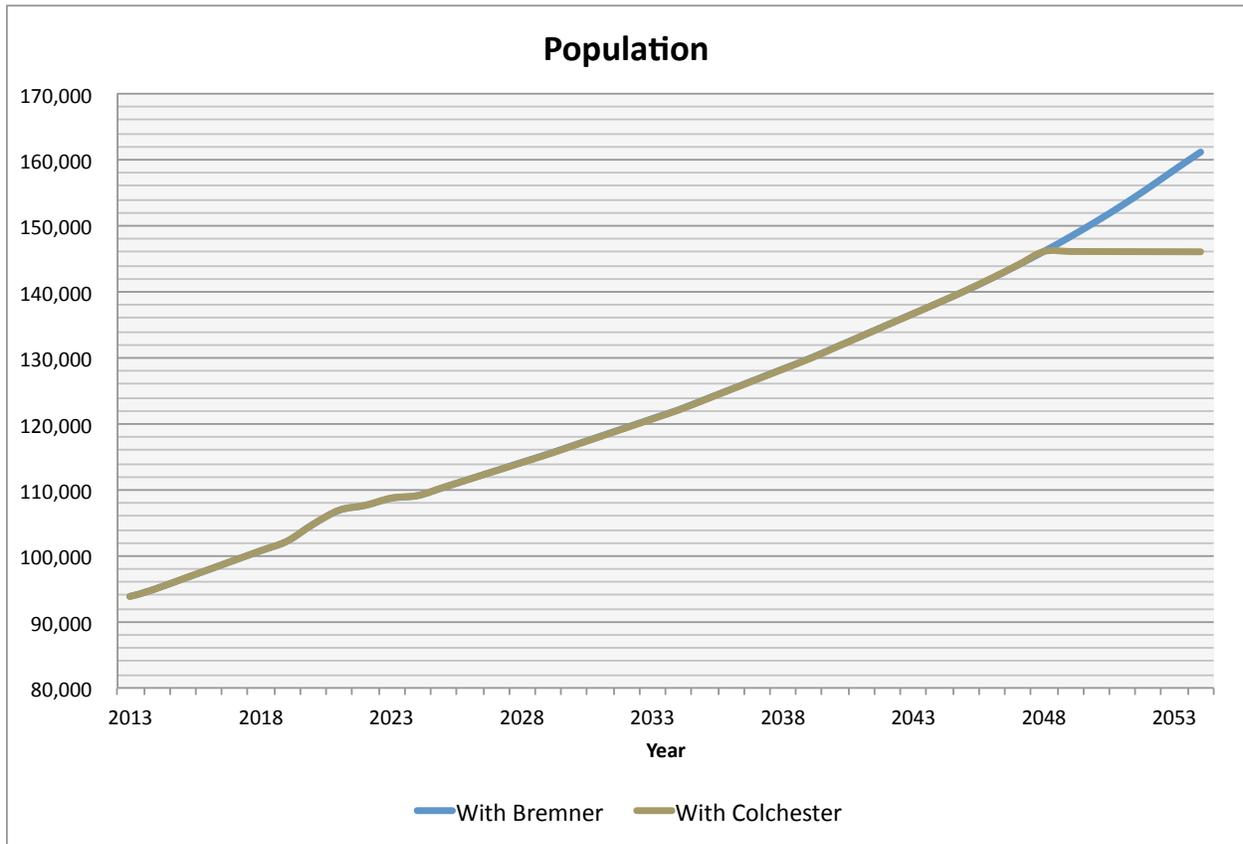
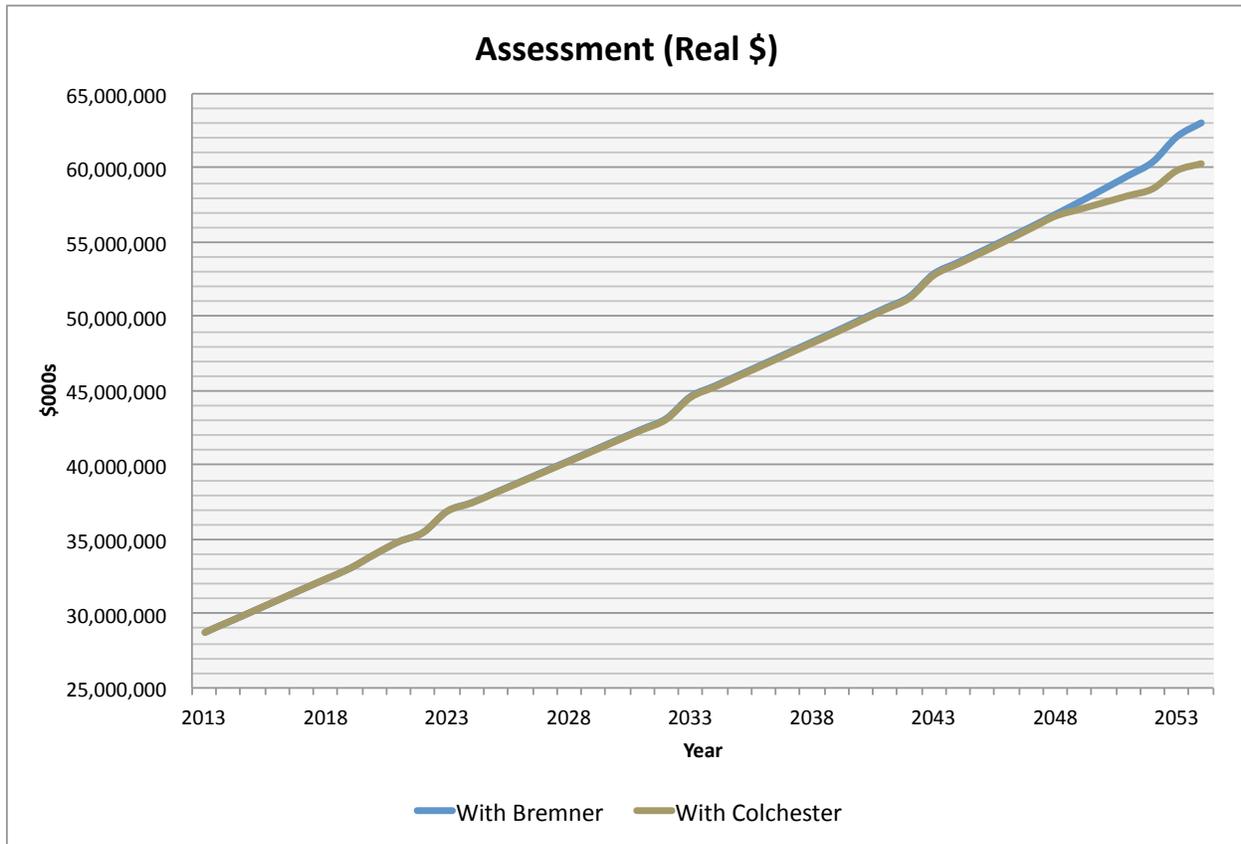


Figure 4: Assessment Projections



3.2. MUNICIPAL OPERATING COSTS

In the County's MFIM, municipal operating costs include those costs identified in the County's operating budget, net of any transfers to reserves and capital-related expenditures (e.g. expensed capital, principal repayments on debt). Projections of municipal operating expenditures over the forecast period are based on changes in key cost drivers as well as assumptions regarding marginal costs of service delivery.

For each municipal service area defined in this analysis, operating costs were disaggregated into urban and rural costs by the County. Then, for each of the urban and rural costs, the County provided the percentage of Base Year operating expenditures assumed to be fixed (or constant).⁹ The remaining portion of costs are deemed to be variable, and grow with changes in the specified key driver. Population has been identified as the primary driver for all service areas.

Overall, it has been assumed that approximately 55% of the County's operating costs are fixed with the remaining 45% of operating costs varying with changes to population. Therefore, as development in Bremner or Colchester occurs, the variable portion of the County's urban operating costs would increase with the increase in population.

⁹ Marginal cost assumptions are applied to Base Year operating costs adjusted to reflect operating costs net of interest payments.

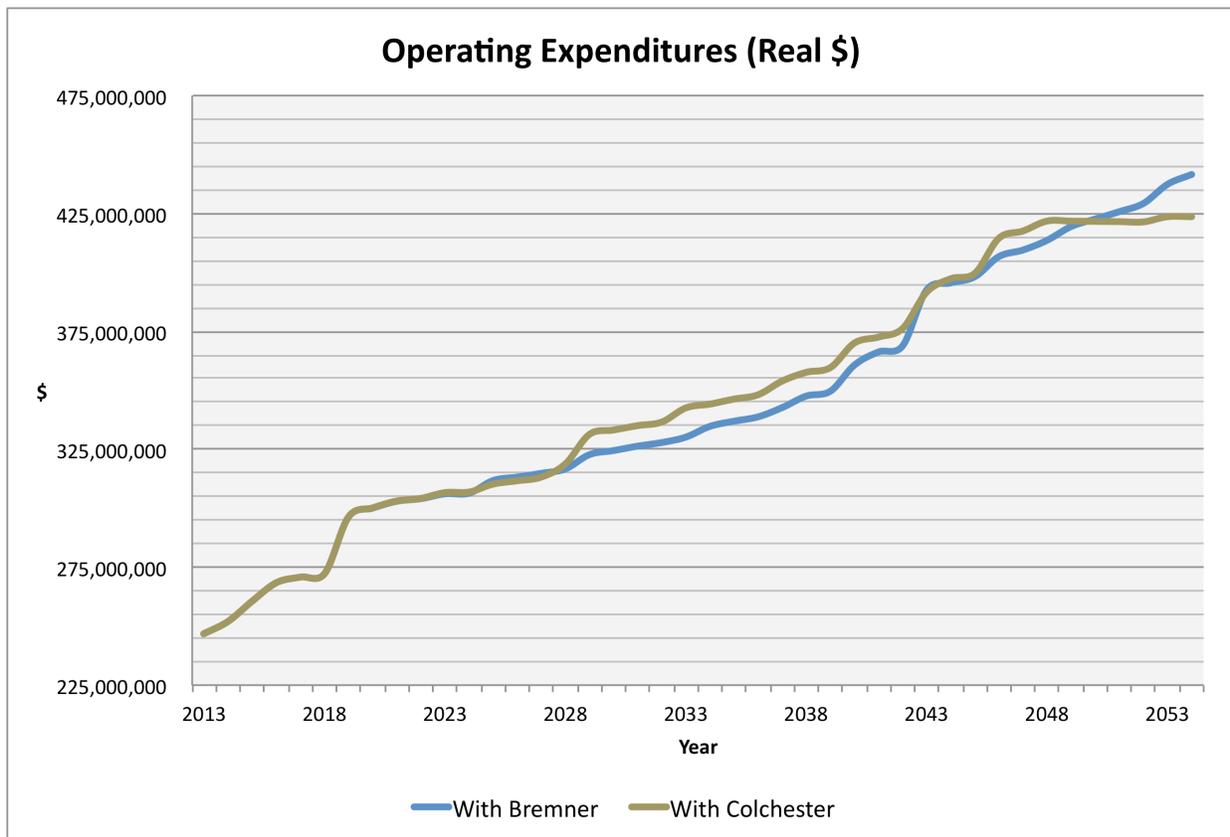
In addition to the operating cost forecasts projected using the marginal cost assumptions, the operating cost projections in the analysis also include:

- ▶ Interest payments on existing and future capital debentures.
- ▶ Incremental operating costs associated with capital projects that are assumed to be over and above the marginal operating cost projections.

Operating cost impacts related to capital projections (debt financing, incremental operating costs) are further discussed in the next section.

Figure 5 illustrates the operating expenditure projections for the County with the Bremner and Colchester recommended community design concepts.

Figure 5: Operating Expenditures



3.3. MUNICIPAL CAPITAL COSTS

In this analysis, capital costs include those expenditures that are funded from the County's municipal operating budget and therefore exclude portions of capital projects funded from reserves or externally through grants, developer contributions and other non-municipal revenue sources.¹⁰ The capital

¹⁰ The analysis includes total project costs and assumptions about funding. However, only those expenditures assumed to be funded from municipal operations are included in the fiscal impact analysis and results.

expenditures included in this analysis include the principal portion of debenture payments for debt issued to fund capital projects as well as capital costs that are expensed items (Pay-As-You-Go).¹¹

In the initial Bremner fiscal impact analysis, (three community design concepts) the County prepared a 30-year long term capital plan (Years 2014-2043) that captured the capital needs required to service the build-out of Sherwood Park. This plan was subsequently extended to 2059 to align with the forecast period of the Bremner fiscal impact analysis. The capital plan identified (1) new facility / asset acquisition needs, (2) annual capital program expenditures and (3) asset rehabilitation and replacement costs for the following municipal asset categories: Buildings, Electronic Hardware / Software, Machinery and Equipment, Program Parks & Open Space Development, Roadway Infrastructure, Utilities, and Vehicles.

- ▶ Selected new assets / facilities in this capital plan were identified to benefit both Sherwood Park (including Cambrian) and future growth in Bremner or Colchester. In these situations, the project costs allocated to Sherwood Park were included as part of the baseline capital projections.
- ▶ The need for capital projects identified in the capital plan was determined using several factors: link to population growth, threshold triggers and departmental input.
- ▶ The capital plan identified project costs, funding assumptions and operating costs impacts associated with the capital projects. The portion of costs that would be debt financed (principal repayment) or expensed from the capital cost projections included in the fiscal impact analysis.¹²
- ▶ Operating cost impacts associated with the capital plan include the interest payments on debt financed projects and incremental operating cost impacts noted by the County in its capital plan.

For the initial Bremner analysis, the County also provided information on its existing debentures. The annual principal and interest payments were calculated, with the principal repayments forming part of the capital expenditure projections and the interest payments forming part of the operating expenditure projections in the analysis. This fiscal impact analysis incorporates the same existing debenture listing.

Projections of municipal capital expenditures in the County to service the Bremner and Colchester recommended community design concepts are based on the long-term capital plan the County developed for 'soft' (non-linear) infrastructure and information provided by ISL regarding the road and utility ('hard') infrastructure requirements to service each recommended community design concept.

Based on the population growth assumptions for the Bremner and Colchester concepts, the County projected future 'soft' capital projects and costs required to service the Bremner and Colchester recommended community design concepts. Table 2 summarizes the anticipated capital requirements.

- ▶ The County identified population thresholds that determined when a new asset would be required.
- ▶ The funding assumptions for the new assets was provided by the County. In this analysis, it was assumed that any new facilities required to service Bremner or Colchester would be funded 50% grants / 50% debt. In the previous analyses (three community design concepts), these facilities were all grant funded.
- ▶ Annual capital program expenditures included in the County's capital plan were linked to Bremner's and Colchester's population growth.

¹¹ Interest payments are typically classified as operating expenditures and have been included in the operating cost projections.

¹² Projects identified as being reserve funded in the County's capital plan represent costs that are expensed from the County's operating budget in the given year. For the purposes of this analysis, it has been assumed that these funding amounts reflect costs that are expensed or Pay-As-You-Go (PAYG).

Refer to **Appendix B** for an overview of the County's capital plan for 'soft' capital costs to service growth for the recommended community design concepts in Bremner and Colchester:

Table 2: "Soft" Capital Asset Growth

ASSET	TRIGGER	BREMNER COSTS (\$000) (RECOMMENDED)	COLCHESTER COSTS (\$000) (RECOMMENDED)	FUNDING
Admin Building	30K threshold	\$ 35,000	\$ 25,000	50% Grant / 50% Debt
Police Stations	department input	\$ 15,000	\$ 20,000	50% Grant / 50% Debt
Fire Stations	15K threshold	\$ 60,000	\$ 30,000	50% Grant / 50% Debt
Regional Recreation Facility	65K+ threshold	\$ 70,000	\$ 60,000	50% Grant / 50% Debt
Neighbourhood Recreation Facilities and Parks (e.g. Sports, Fields, Outdoor Rinks, Parks)	10K to 20 K threshold	\$ 7,500	\$ 7,500	50% Grant / 50% Debt
Community Recreation Facility (e.g. Swimming Pool)	20K to 40K threshold	\$ 12,500	\$ 12,500	50% Grant / 50% Debt
Park 'n' Ride (land included)	Multiple threshold triggers	\$ 17,686	\$ 11,401	50% Grant / 50% Debt
Transit Bus Barn	Multiple threshold triggers	\$ 21,281	\$ 36,712	50% Grant / 50% Debt
Public Service Yard & Shop	10K threshold	\$ 15,000	\$ 30,000	50% Grant / 50% Debt
Specialized Recreation / Civic Facility (e.g. Festival Place)	50K+ threshold	\$ 20,000	\$ 20,000	50% Grant / 50% Debt
Enviroservice Station	department input	\$ 4,000		Grant
TOTAL		\$ 277,967	\$ 253,113	

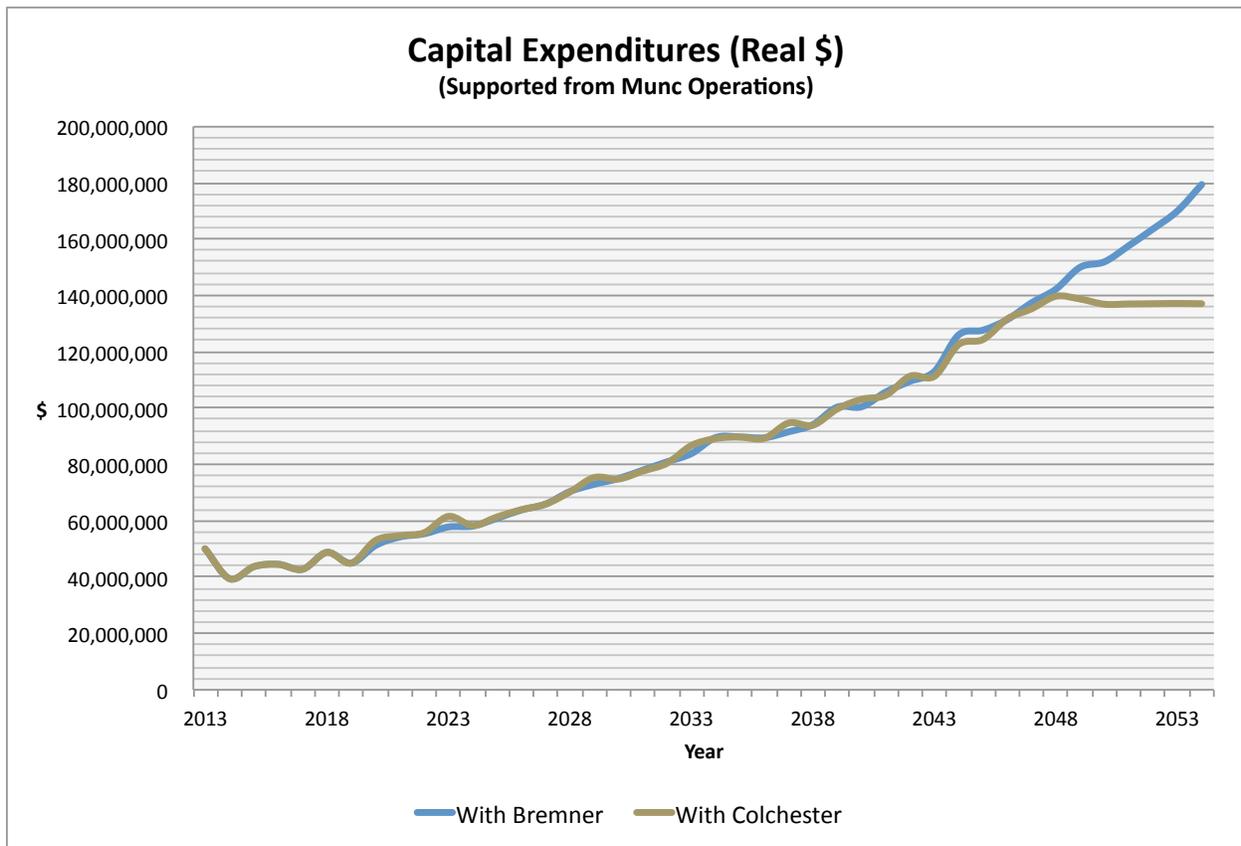
Projections of the "hard" infrastructure requirements to service the Bremner and Colchester recommended community design concepts were based on information provided by ISL. ISL provided asset inventories and capital costs for both off-site and on-site roads and utilities (water; wastewater; storm) infrastructure it determined was required to service Bremner and Colchester. Refer to **Appendix C** for further detail on the "hard" capital assumptions to service the Bremner and Colchester recommended community design concepts.

- ▶ Funding assumptions for off-site asset construction were determined by the County. Off-site levies were assumed to fund the water and wastewater capital projects as well as at-grade intersections, proposed overpasses and Rural Road widening. The construction of other off-site road projects, including service interchanges, systems interchanges, and highway widening, were assumed to be a shared responsibility between the developers and the Province. In this analysis, it is assumed that any 'municipal' share of provincial road projects would be funded by developers, through off-site levies, resulting in no capital funding requirements by the County.
- ▶ It was assumed that all on-site asset construction would be funded by the developers.

- ▶ For assets that were identified to be the responsibility of the County to maintain and eventually replace, annual lifecycle and replacement costs were incorporated into the analysis. Lifecycle costs for utility capital assets were assumed to be 2% of the original construction cost each year. This captures both lifecycle and replacement. For roads (overpasses and Rural Road widening), annual lifecycle costs were projected to average 1% per year and annual replacement costs were projected based on a 30 year useful life.
- ▶ Timing assumptions for the “hard” capital projects were estimated. Off-Site infrastructure was phased in one to four stages over the course of the respective Bremner and Colchester developments. The timing of the on-site infrastructure was linked to the rate of residential development in the Bremner and Colchester recommended concepts.

Figure 6 illustrates the capital expenditure projections for the County with the Bremner and Colchester recommended community design concepts.

Figure 6: Capital Expenditures



3.4. MUNICIPAL TRANSFERS TO RESERVES

In this analysis, it has been assumed there would be no change to the Base Year transfer to reserve amounts.¹³

¹³ Any costs in the County’s capital plan that are identified to be reserve funded are assumed to represent PAYG or directly expensed costs.

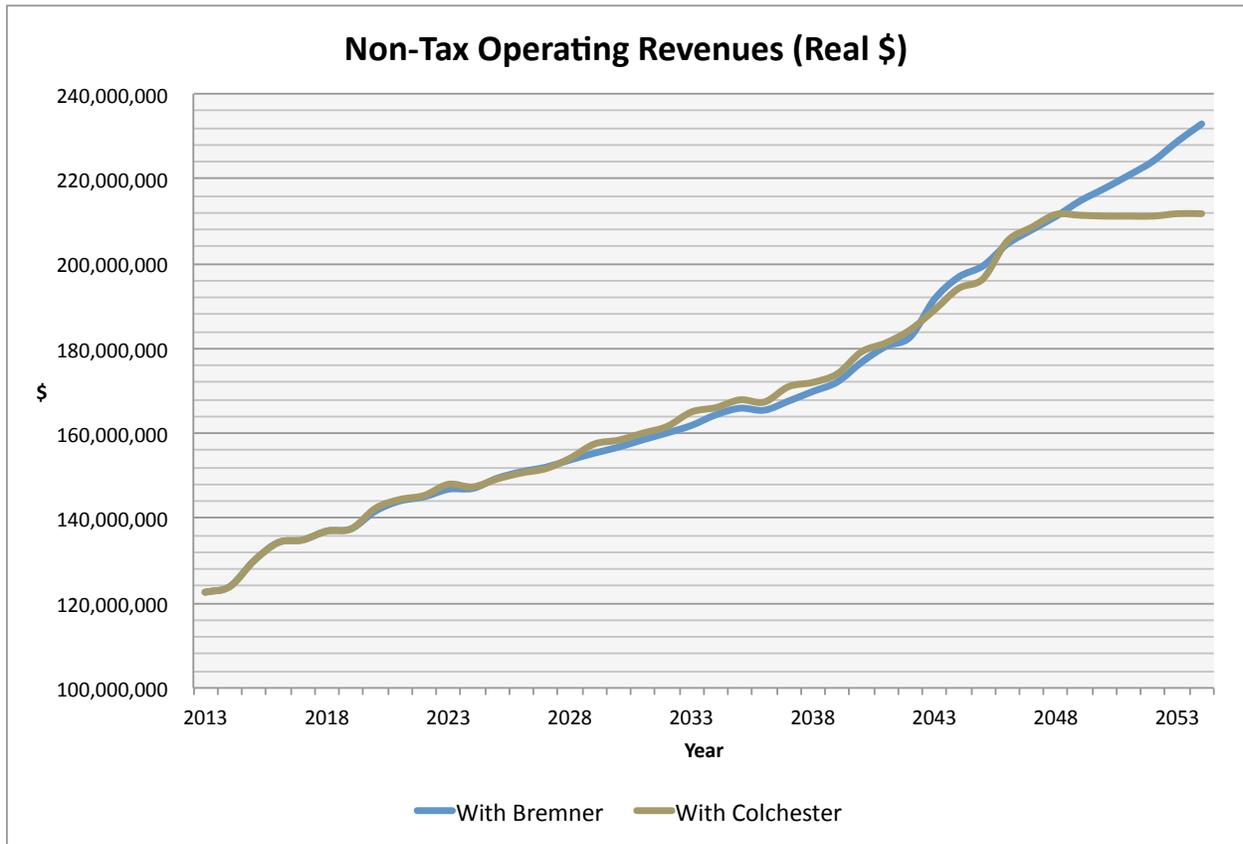
3.5. MUNICIPAL OPERATING REVENUES

Operating revenues include the following categories of revenues:

- ▶ **Department-Specific Operating Revenues:** In the analysis department-specific operating revenues are based on assumptions made regarding cost recovery rates for municipal services. For each municipal service area, the portion of operating budget costs (net of operating grants and reserve transfers) recovered from operating revenues in the BaseYear was calculated. For the purposes of the analysis, it was assumed that the County's utilities function and the Broadmoor Public Golf Course would operate on a 100% cost recovery basis, thus requiring no tax-supported funding. The calculated cost recovery rates using Base Year data were assumed to be maintained over the forecast period.
- ▶ **Operating Grants:** It has been assumed that all Base Year operating grant amounts would remain constant over the forecast period with the exception of grants reported under the Family and Community Services. The Base Year grant amounts were projected to grow with population growth.
- ▶ **Transfers From Reserves:** It has been assumed there would be no change to the Base Year transfer from reserve amounts.
- ▶ **Other Revenues:** Several other revenue items were included in the analysis:
 - ▶ **Penalties and Costs on Taxes:** The revenues collected from penalties and costs on property taxes are based on a percentage of the previous year's municipal property taxes. The percentage assumed in the analysis is calculated based on the 2013 Base Year data.
 - ▶ **Return on Investment:** For the purposes of the analysis, it was assumed that the Base Year interest income would remain constant over the forecast period.
 - ▶ **Concessions & Franchises:** It was assumed these revenues would growth at a rate of 25% of the annual assessment growth in the County.

Figure 7 illustrates total operating revenue projections, net of municipal property taxes, for the County with the Bremner and Colchester recommended community design concepts.

Figure 7: Non-Tax Operating Revenues



4. Key Findings

The following table summarizes the key findings of the fiscal impact analysis at build-out of each of the Bremner and Colchester recommended community design concepts. Refer to **Appendix A** for additional detail.

Table 3: Bremner and Colchester (Recommended Concepts) - Key Findings

		Bremner		Colchester		Variation
LAND USE STATISTICS						
Land Area (Hectares)						
		607.0	74%	457.0	73%	32.8%
		217.0	26%	165.0	27%	31.5%
	Net Developable Area	824.0		622.0		32.5%
Residential						
	D. Units	21,216		14,836		43.0%
	Population	53,978		38,851		38.9%
Assessment (Real \$)						
Total Assmt (\$M)	Residential	\$ 8,279	81.6%	\$ 5,980	80.8%	38.5%
	Non-Residential	\$ 1,870	18.4%	\$ 1,418	19.2%	31.9%
	Total	\$ 10,150		\$ 7,397		37.2%
Assmt (\$M) Per Ha	Residential	Res Ha \$ 13.64		\$ 13.08		4.2%
	Non-Residential	Non-Res Ha \$ 8.62		\$ 8.59		0.3%
	Total	GDA \$ 6.12		\$ 5.86		4.5%
Assmt Per Capita	Residential	\$ 153,387		\$ 153,910		0.3%
	Non-Residential	\$ 34,645		\$ 36,494		5.3%
	Total	\$ 188,033		\$ 190,404		1.3%
Projected Build-Out		2054		2048		
REVENUES & EXPENDITURES (Real \$) (Incremental, At Build-Out)						
Operating Budget - Expenditures						
	Operating	✓\$ 107,756,171		✓\$ 90,071,278		19.6%
	Capital	✓\$ 132,853,929		✓\$ 93,404,627		42.2%
	Total	✓\$ 240,610,100		✓\$ 183,475,905		31.1%
Operating Budget - Revenues						
	Operating	✓\$ 80,432,272		✓\$ 60,327,773		33.3%
	Grants	✓\$ 1,461,122		✓\$ 1,052,248		38.9%
	Other	✓\$ 302,765		✓\$ 224,389		34.9%
	Total	✓\$ 82,196,160		✓\$ 61,604,410		33.4%
Property Tax Requirement		\$ 158,413,940		\$ 121,871,495		30.0%
County Municipal Tax Rate - Projected (Real)						
	Residential	✓ 4.062		✓ 4.086		0.6%
	Non-Residential	✓ 7.743		✓ 7.788		0.6%

4.1. DEVELOPMENT PARAMETERS

4.1.1. LAND AREA

- ▶ The Bremner lands comprise 824 hectares of net developable area compared to 622 hectares for the Colchester lands. Approximately 32% more land is available for residential and non-residential development in Bremner.
- ▶ The land composition is very similar in both concepts. Residential lands comprise 74% of total net developable lands in Bremner, compared to 73% in Colchester.

4.1.2. RESIDENTIAL DEVELOPMENT

- ▶ Bremner includes a slightly higher mix of multi-family dwelling types. The overall residential density for Bremner is 34.95 units per net residential hectare (upnrh) compared to 32.46 upnrh in Colchester. This results in an higher proportion of dwelling units and population compared to the amount of residential lands available.
- ▶ At full build-out, Bremner can accommodate approximately 54,000 residents compared to a build population of 38,850 for Colchester.
- ▶ The projected number of dwelling units at build-out varies by 43% across the two concepts; population projections at build-out vary by 39%, and total projected residential assessment at build-out varies by 39% across the concepts.
- ▶ Bremner is projected to build-out by the end of 2054; Colchester is projected to build out by the end of 2048.

4.1.3. NON-RESIDENTIAL DEVELOPMENT

- ▶ The land composition for non-residential use differs for the Bremner and Colchester lands. For Bremner, the mix is 18% Mixed Use / 16% Major Retail / 66% Business Park. For Colchester, the mix is 8% Mixed Use / 7% Major Retail / 85% Business Park.
- ▶ Based on the differing composition of non-residential assessment in Bremner and Colchester, non-residential assessment varies by 3% (Business Park) to 203% (Major Retail) between the two concepts. However, total projected non-residential assessment at build-out varies by 32% between the Bremner and Colchester concepts which is consistent with the percent difference in amount of non-residential lands.
- ▶ Bremner and Colchester generate a similar non-residential assessment yield at \$8.6 million per hectare.

4.1.4. ASSESSMENT

- ▶ Bremner generates \$10.15 billion of assessment compared to \$7.40 billion in Colchester (37% difference). In both concepts, the share of assessment is similar (81%-82% residential assessment / 18%-19% non-residential assessment).
- ▶ On a per hectare basis, Bremner generates a slightly higher assessment yield at \$6.12 million per gross developable hectare compared to \$5.86 million per gross developable hectare for Colchester.
- ▶ On a per capita basis, Colchester generates a slightly higher assessment yield at \$190,404 per capita compared to \$188,033 per capita for Bremner.

4.2. OPERATING BUDGET

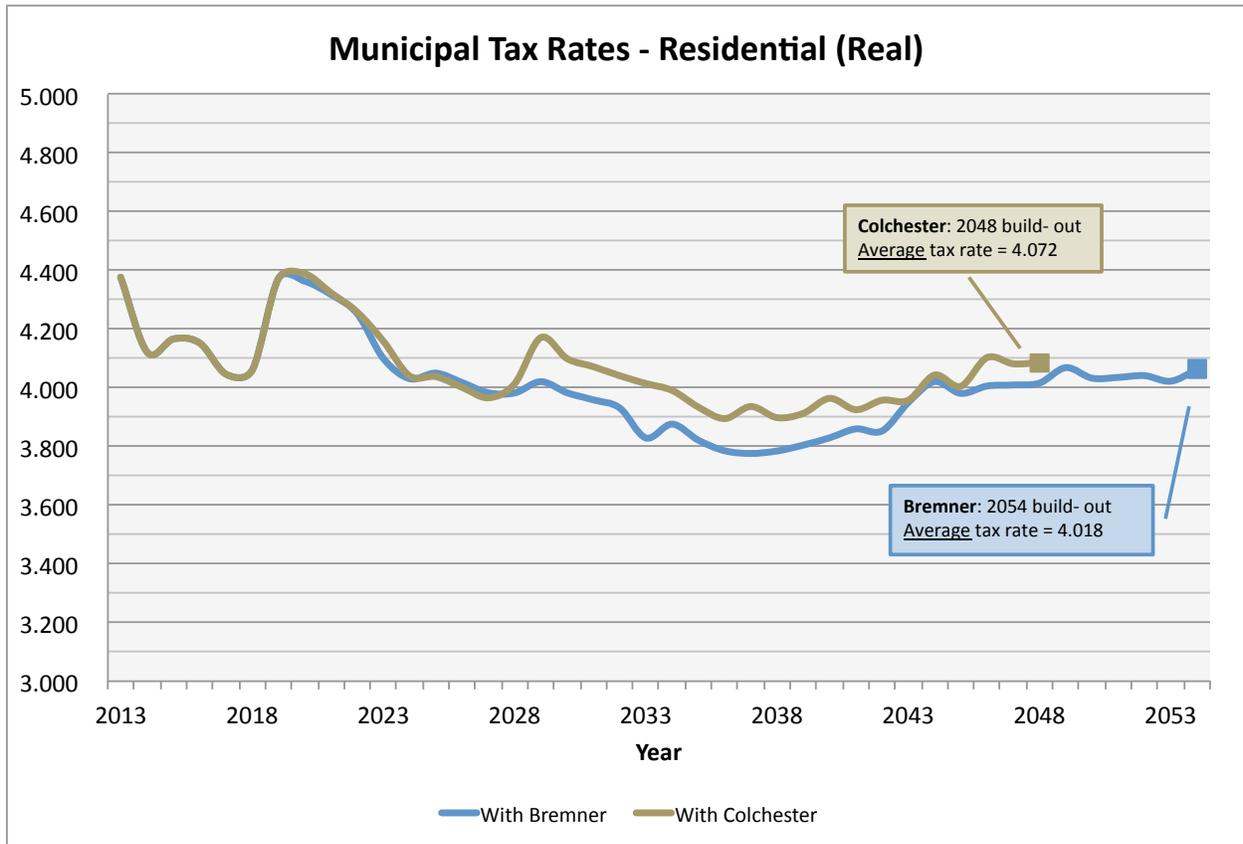
- ▶ Projected total operating budget expenditures to service Bremner and Colchester at build-out vary by 31%.
- ▶ Projected total operating budget revenues associated with Bremner and Colchester at build-out vary by 33%.
- ▶ Subsequently, the municipal property tax requirement to cover the net costs of servicing Bremner and Colchester varies by 30%.

4.3. OVERALL FISCAL IMPACT FINDINGS

- ▶ Based on the study assumptions and fiscal impact analysis, the Bremner and Colchester recommended community design concepts provide similar fiscal impacts, as measured by the projected municipal property tax rates over the build-out periods of each concept.
- ▶ Municipal property tax rates at the respective build-put periods are projected to vary by only 0.6% between Bremner and Colchester.
- ▶ For Bremner, the average municipal residential property tax rate over its build-put period is 4.018 mills, compared to the average tax rate of 4.072 for Colchester. Differences in tax rates between the two concepts are mainly due to assumptions regarding the capital requirements for each concept and the timing and funding of these costs.

Figure 8 illustrates the projected municipal residential tax rates for the County with the Bremner and Colchester recommended community design concepts to build-out. The impacts on non-residential tax rates will be similar as the Base Year municipal tax rate splits in the County are assumed to stay constant over the forecast period.

Figure 8: Municipal Tax Rates (Residential)





Appendix A: Bremner and Colchester Recommended Community Design Concepts - Detailed Development Statistics

Bremner & Colchester Recommended Community Design Concepts
Development Assumptions

		Bremner			Colchester			Variation
LAND USE								
	Residential	607.0	37%	457.0	36%	32.8%		
	Non-Residential	217.0	13%	165.0	13%	31.5%		
	Roads, Utilities, SWM facilities	381.0	23%	311.3	25%	22.4%		
	Other Public (Parkland, Institution)	453.0	27%	329.0	26%	37.7%		
	Gross Developable Area (GDA)	1,658.0		1,262.3		31.3%		
	Residential	607.0	74%	457.0	73%	32.8%		
	Non-Residential	217.0	26%	165.0	27%	31.5%		
	Net Developable Area	824.0		622.0		32.5%		
RESIDENTIAL								
Net Hectares		Land %		Land %				
	Low Density	72.7	441	79.6	364	21.2%		
	Medium Density	21.7	132	17.7	81	63.0%		
	Mixed Use	5.6	34	2.6	12	183.3%		
	Total	100.0	607	100.0	457	32.8%		
D. Units		Units / NRH		Units / NRH				
	Low Density	28.00	12,348	28.00	10,192	69%	21.2%	
	Medium Density	44.00	5,808	44.00	3,564	24%	63.0%	
	Mixed Use	90.00	3,060	90.00	1,080	7%	183.3%	
	Total	34.95	21,216	32.46	14,836	43.0%		
Population		HHS		HHS				
	Low Density	2.74	33,834	2.74	27,926	72%	21.2%	
	Medium Density	2.52	14,636	2.52	8,981	23%	63.0%	
	Mixed Use	1.80	5,508	1.80	1,944	5%	183.3%	
	Total	2.54	53,978	2.62	38,851	38.9%		
	Popn / nrha		89		85	4.6%		
Assessment (\$M, Real)		Assmt / Unit		Assmt / Unit				
	Low Density	430,000	5,310	430,000	4,383	73%	21.2%	
	Medium Density	362,500	2,105	362,500	1,292	22%	63.0%	
	Mixed Use	282,500	864	282,500	305	5%	183.3%	
	Total	390,247	8,279	403,047	5,980	38.5%		
NON-RESIDENTIAL								
Net Hectares		Land %		Land %				
	Mixed Use	18.0	39.0	8.5	14.0	8%	178.6%	
	Major Retail	15.7	34.0	6.7	11.0	7%	209.1%	
	Business Park	66.4	144.0	84.8	140.0	85%	2.9%	
	Total	100.0	217.0	100.0	165.0	31.5%		
Assessment (\$M, Real)		Assmt / Ha		Assmt / Ha				
	Mixed Use	11,964,900	467	12,130,700	170	12%	174.8%	
	Major Retail	5,330,700	181	5,433,600	60	4%	203.2%	
	Business Park	8,487,500	1,222	8,487,500	1,188	84%	2.9%	
	Total	8,617,857	1,870	8,593,027	1,418	31.9%		
ASSESSMENT YIELDS (Real)								
Total (\$M)		Residential	8,279	81.6%	5,980	80.8%	38.5%	
	Non-Residential	1,870	18.4%	1,418	19.2%	31.9%		
	Total	10,150		7,397		37.2%		
Assmt (\$M) Per Ha		Res Ha	13.6	13.1	4.2%			
	Non-Residential	Non-Res Ha	8.6	8.6	0.3%			
	Total	GDA	6.1	5.9	4.5%			
Assmt Per Capita		Residential	153,387	153,910	0.3%			
	Non-Residential	34,645	36,494	5.3%				
	Total	188,033	190,404	1.3%				
PROJECTED BUILD-OUT		2054		2048				

Figures may differ slightly from the Bremner and Colchester Growth Management Strategies due to rounding.

Appendix B: Bremner and Colchester “Soft” Capital Projections

**Bremner Recommended Community Design Concept
 Capital Cost Projections (\$000s, Real \$)**

		% Total Cost to BREMNER	BREMNER - Total Cap Exp 2014-2054	FUNDING	Operating Impacts of Capital (Timing Varies)
Bldgs Buildings					
Bldgs - A Buildings Annual Program					
Annual Facility Capital Lifecycle	linked to popn		24,071	Reserve (PAYG)	
Annual Parking Lot Rehab Program	linked to popn		4,804	Reserve (PAYG)	
Total: Bldgs - A Buildings Annual Program			<u>28,875</u>		
Bldgs - G Buildings Growth					
Admin Building	(30K threshold, plus expansion)	50%	35,000	50% Grant / 50% Debt	10% of Cap Exp
Police Station	dept input	50%	15,000	50% Grant / 50% Debt	10% of Cap Exp * 2
Fire Station x4	(15K threshold)		60,000	50% Grant / 50% Debt	10% of Cap Exp * 2
Regional Recreation Facility (Millenium Place II)	(65K+ threshold)	50%	70,000	50% Grant / 50% Debt	10% of Cap Exp
Neighborhood Recreation Facilities & Parks (Sports Fields, Outdoor Rinks, Various Parks)	(10-20K threshold)	50%	7,500	50% Grant / 50% Debt	10% of Cap Exp
Community Recreation Facility (Swimming Pool)	(20-40K threshold)	50%	12,500	50% Grant / 50% Debt	10% of Cap Exp
Park'n'ride (land included)	(Multiple threshold triggers)		17,686	50% Grant / 50% Debt	10% of Cap Exp
Transit Bus Barn	(Multiple threshold triggers)	50%	21,281	50% Grant / 50% Debt	10% of Cap Exp + \$1900
Public Service Yard & Shop	(10K threshold)	50%	15,000	50% Grant / 50% Debt	10% of Cap Exp
Specialized Recreation / Civic Facility (Festival Place)	(50K+ threshold)	50%	20,000	50% Grant / 50% Debt	10% of Cap Exp
Enviroservice Station	dept input		4,000	Grant	10% of Cap Exp
Total: Bldgs - G Buildings Growth			<u>277,967</u>		
Bldgs - R Buildings Rehab/Replacement					
Generic Facility Rehab	(first 30 years of plan, no rehab, 10% replacement)		-		
Total: Bldgs - R Buildings Rehab/Replacement			<u>-</u>		
Total: Bldgs Buildings			<u>306,842</u>		
HwdSft Electronic Hardware/Software					
HwdSft - A Electronic Hardware/Software Annual Program					
CORP IT Infrastructure Replacement Program	linked to popn		7,716	Reserve (PAYG)	
UT IT Infrastructure Replacement Program	linked to popn		489	Reserve (PAYG)	
LIB IT Infrastructure Replacement Program	linked to popn		355	Reserve (PAYG)	
Total: HwdSft - A Electronic Hardware/Software Annual Program			<u>8,560</u>		
HwdSft - G Electronic Hardware/Software Growth					
Fiber Optic Loop (Initial & Backup)	dept input		5,000	Reserve (PAYG)	
Relocate Data Centre	dept input		500	Reserve (PAYG)	
Total: HwdSft - G Electronic Hardware/Software Growth			<u>5,500</u>		
HwdSft - R Electronic Hardware/Software Rehab/Replacement					
<blank>					
Total: HwdSft - R Electronic Hardware/Software Rehab/Replacement			<u>-</u>		
HwdSft - V Electronic Hardware/Software Value Added					
<blank>					
Total: HwdSft - V Electronic Hardware/Software Value Added			<u>-</u>		
Total: HwdSft Electronic Hardware/Software			<u>14,060</u>		
ME Machinery & Equipment					
ME - A Machinery & Equipment Annual Program					
LIB Annual Collection Replacement	linked to popn		5,406	Reserve (PAYG)	
UT Annual Water Meter / Radio Frequency Program	linked to popn		6,087	Reserve (PAYG)	
RPC Annual Recreation Equipment Replacement Progr	linked to popn		1,312	Reserve (PAYG)	
SCES Annual Equipment Replacement Program	linked to popn		1,733	Reserve (PAYG)	
Total: ME - A Machinery & Equipment Annual Program			<u>14,538</u>		
ME - G Machinery & Equipment Growth					
<blank>					
Total: ME - G Machinery & Equipment Growth			<u>-</u>		
ME - R Machinery & Equipment Rehab/Replacement					
Generic Replacement (Defibs/GIS/Radio Etc.)	dept input		15,000	Reserve (PAYG)	
Total: ME - R Machinery & Equipment Rehab/Replacement			<u>15,000</u>		
Total: ME Machinery & Equipment			<u>29,538</u>		

**Bremner Recommended Community Design Concept
 Capital Cost Projections (\$000s, Real \$)**

	% Total Cost to BREMNER	BREMNER - Total Cap Exp 2014-2054	FUNDING	Operating Impacts of Capital (Timing Varies)
POSD Program Parks & Open Space Development				
POSD - A Parks & Open Space Development Annual Program				
Annual Parks Infrastructure Lifecycle (Per Capita)		linked to popn	6,137	Reserve (PAYG)
<blank>				
Total: POSD - A Parks & Open Space Development Annual Program			<u>6,137</u>	
POSD - G Parks & Open Space Development Growth				
<blank>				
Total: POSD - G Parks & Open Space Development Growth			<u>-</u>	
POSD - R Parks & Open Space Development Rehab/Replacement				
<blank>				
Total: POSD - R Parks & Open Space Development Rehab/Replacement			<u>-</u>	
POSD - V Parks & Open Space Development Value Added				
<blank>				
Total: POSD - V Parks & Open Space Development Value Added			<u>-</u>	
Total: POSD Program Parks & Open Space Development			<u>6,137</u>	
RI Roadway Infrastructure				
RI - A Roadway Infrastructure Annual Program				
Annual Traffic & Pedestrian Safety Improvements		linked to popn	8,200	Reserve (PAYG)
Annual Traffic Signal / Intersection Replacements		based on ISL servicing assumptions		
Annual Residential Rehab Program		based on ISL servicing assumptions		
Annual Asphalt Trail Rehab Program		linked to popn	3,878	Reserve (PAYG)
Annual Arterial Road Rehab Program		based on ISL servicing assumptions		
Total: RI - A Roadway Infrastructure Annual Program			<u>12,078</u>	
RI - DL Roadway Infrastructure Developer Levy				
Total: RI - DL Roadway Infrastructure Developer Levy		based on ISL servicing assumptions	<u>-</u>	
RI - G Roadway Infrastructure Growth				
Total: RI - G Roadway Infrastructure Growth		based on ISL servicing assumptions	<u>-</u>	
RI - R Roadway Infrastructure Rehab/Replacement				
Total: RI - R Roadway Infrastructure Rehab/Replacement		based on ISL servicing assumptions	<u>-</u>	
RI - V Roadway Infrastructure Value Added				
Total: RI - V Roadway Infrastructure Value Added		based on ISL servicing assumptions	<u>-</u>	
Total: RI Roadway Infrastructure			<u>12,078</u>	
UI Utilities				
UI - A Utilities Infrastructure Annual Program				
Annual Corrosion Control Program		based on ISL servicing assumptions		
Annual Hydrant / Valve Replacement Program		based on ISL servicing assumptions		
Annual Sump Pump Collector Retrofit		based on ISL servicing assumptions		
Total: UI - A Utilities Infrastructure Annual Program				
UI - DL Utilities Infrastructure Developer Levy				
Total: UI - DL Utilities Infrastructure Developer Levy		based on ISL servicing assumptions		
UI - G Utilities Infrastructure Growth				
EnviroService			4,000	Reserve (PAYG)
Total: UI - G Utilities Infrastructure Growth			<u>4,000</u>	
UI - R Utilities Infrastructure Rehab/Replacement				
Total: UI - R Utilities Infrastructure Rehab/Replacement		based on ISL servicing assumptions	<u>-</u>	
UI - V Utilities Infrastructure Value Added				
Total: UI - V Utilities Infrastructure Value Added		based on ISL servicing assumptions	<u>-</u>	
Total: UI Utilities			<u>4,000</u>	

**Bremner Recommended Community Design Concept
 Capital Cost Projections (\$000s, Real \$)**

		% Total Cost to BREMNER	BREMNER - Total Cap Exp 2014-2054	FUNDING	Operating Impacts of Capital (Timing Varies)
Veh Vehicles					
Veh - A Vehicles Annual Program					
Annual Fleet Replacement Program	linked to popn	✓	59,873	Reserve (PAYG)	
Annual Transit Coach Replacements Program	linked to popn	✓	20,398	Reserve (PAYG)	
Annual UT Fleet Replacement	linked to popn	✓	16,952	Reserve (PAYG)	
Total: Veh - A Vehicles Annual Program			97,223		
Veh - G Vehicles Growth					
Transit Coaches	dept input	✓	20,950	Grant	10% of Cap Exp
EDT	linked to popn growth	✓	-	Reserve (PAYG)	10% of Cap Exp
CPC	linked to popn growth	✓	111	Reserve (PAYG)	10% of Cap Exp
PDS	linked to popn growth	✓	154	Reserve (PAYG)	10% of Cap Exp
TAS	linked to popn growth	✓	12,588	Reserve (PAYG)	10% of Cap Exp
SCES	linked to popn growth	✓	-	Reserve (PAYG)	10% of Cap Exp
FCS	linked to popn growth	✓	-	Reserve (PAYG)	10% of Cap Exp
SCT	linked to popn growth	✓	-	Reserve (PAYG)	10% of Cap Exp
RPC	linked to popn growth	✓	4,533	Reserve (PAYG)	10% of Cap Exp
BPGC	linked to popn growth	✓	-	Reserve (PAYG)	10% of Cap Exp
RCMP	linked to popn growth	✓	828	Reserve (PAYG)	10% of Cap Exp
CORP	linked to popn growth	✓	1,076	Reserve (PAYG)	10% of Cap Exp
SEN ADMIN	linked to popn growth	✓	-	Reserve (PAYG)	10% of Cap Exp
ELECTED	linked to popn growth	✓	-	Reserve (PAYG)	10% of Cap Exp
FISCAL	linked to popn growth	✓	-	Reserve (PAYG)	10% of Cap Exp
UTILITIES	linked to popn growth	✓	3,135	Reserve (PAYG)	10% of Cap Exp
Total: Veh - G Vehicles Growth			43,374		
Veh - R Vehicles Rehab/Replacement					
<blank>		✓	-		
Total: Veh - R Vehicles Rehab/Replacement			-		
Veh - V Vehicles Value Added					
<blank>		✓	-		
Total: Veh - V Vehicles Value Added			-		
Total: Veh Vehicles			140,597		
Total Expense			513,253		

**Colchester Recommended Community Design Concept
 Capital Cost Projections (\$000s, Real \$)**

		% Total Cost to COLCHESTER	COLCHESTER - Total Cap Exp 2014-2048	FUNDING	Operating Impacts of Capital (Timing Varies)
Bldgs Buildings					
Bldgs - A Buildings Annual Program					
Annual Facility Capital Lifecycle	linked to popn		14,827	Reserve (PAYG)	
Annual Parking Lot Rehab Program	linked to popn		3,092	Reserve (PAYG)	
Total: Bldgs - A Buildings Annual Program			<u>17,919</u>		
Bldgs - G Buildings Growth					
Admin Building	(30K threshold)		25,000	50% Grant / 50% Debt	10% of Cap Exp
Police Station	dept input		20,000	50% Grant / 50% Debt	10% of Cap Exp * 2
Fire Station x2	(15K threshold)		30,000	50% Grant / 50% Debt	10% of Cap Exp * 2
Regional Recreation Facility (Millenium Place II)	(65K+ threshold)	50%	60,000	50% Grant / 50% Debt	10% of Cap Exp
Neighborhood Recreation Facilities & Parks (Sports Fields, Outdoor Rinks, Various Parks)	(10-20K threshold)	50%	7,500	50% Grant / 50% Debt	10% of Cap Exp
Community Recreation Facility (Swimming Pool)	(20-40K threshold)	50%	12,500	50% Grant / 50% Debt	10% of Cap Exp
Park'n'ride (land included)	(Multiple threshold triggers)		11,401	50% Grant / 50% Debt	10% of Cap Exp
Transit Bus Barn	(Multiple threshold triggers)		36,712	50% Grant / 50% Debt	10% of Cap Exp + \$3800
Public Service Yard & Shop	(10K threshold)		30,000	50% Grant / 50% Debt	10% of Cap Exp
Specialized Recreation / Civic Facility (Festival Place)	(50K+ threshold)	50%	20,000	50% Grant / 50% Debt	10% of Cap Exp
Enviroservice Station	dept input		-	Grant	10% of Cap Exp
Total: Bldgs - G Buildings Growth			<u>253,113</u>		
Bldgs - R Buildings Rehab/Replacement					
Generic Facility Rehab	(first 30 years of plan, no rehab, 10% replacement)		-		
Total: Bldgs - R Buildings Rehab/Replacement			<u>-</u>		
Total: Bldgs Buildings			<u>271,032</u>		
HwdSft Electronic Hardware/Software					
HwdSft - A Electronic Hardware/Software Annual Program					
CORP IT Infrastructure Replacement Program	linked to popn		4,753	Reserve (PAYG)	
UT IT Infrastructure Replacement Program	linked to popn		301	Reserve (PAYG)	
LIB IT Infrastructure Replacement Program	linked to popn		184	Reserve (PAYG)	
Total: HwdSft - A Electronic Hardware/Software Annual Program			<u>5,239</u>		
HwdSft - G Electronic Hardware/Software Growth					
Fiber Optic Loop (Initial & Backup)	dept input		5,000	Reserve (PAYG)	
Relocate Data Centre	dept input		500	Reserve (PAYG)	
Total: HwdSft - G Electronic Hardware/Software Growth			<u>5,500</u>		
HwdSft - R Electronic Hardware/Software Rehab/Replacement					
<blank>			-		
Total: HwdSft - R Electronic Hardware/Software Rehab/Replacement			<u>-</u>		
HwdSft - V Electronic Hardware/Software Value Added					
<blank>			-		
Total: HwdSft - V Electronic Hardware/Software Value Added			<u>-</u>		
Total: HwdSft Electronic Hardware/Software			<u>10,739</u>		
ME Machinery & Equipment					
ME - A Machinery & Equipment Annual Program					
LIB Annual Collection Replacement	linked to popn		2,699	Reserve (PAYG)	
UT Annual Water Meter / Radio Frequency Program	linked to popn		3,922	Reserve (PAYG)	
RPC Annual Recreation Equipment Replacement Progr	linked to popn		808	Reserve (PAYG)	
SCES Annual Equipment Replacement Program	linked to popn		1,016	Reserve (PAYG)	
Total: ME - A Machinery & Equipment Annual Program			<u>8,445</u>		
ME - G Machinery & Equipment Growth					
<blank>			-		
Total: ME - G Machinery & Equipment Growth			<u>-</u>		
ME - R Machinery & Equipment Rehab/Replacement					
Generic Replacement (Defibs/GIS/Radio Etc.)	dept input		10,000	Reserve (PAYG)	
Total: ME - R Machinery & Equipment Rehab/Replacement			<u>10,000</u>		
Total: ME Machinery & Equipment			<u>18,445</u>		

**Colchester Recommended Community Design Concept
 Capital Cost Projections (\$000s, Real \$)**

	% Total Cost to COLCHESTER	COLCHESTER - Total Cap Exp 2014-2048	FUNDING	Operating Impacts of Capital (Timing Varies)
POSD Program Parks & Open Space Development				
POSD - A Parks & Open Space Development Annual Program				
Annual Parks Infrastructure Lifecycle (Per Capita)		linked to popn	3,780	Reserve (PAYG)
<blank>				
Total: POSD - A Parks & Open Space Development Annual Program			<u>3,780</u>	
POSD - G Parks & Open Space Development Growth				
<blank>				
Total: POSD - G Parks & Open Space Development Growth			<u>-</u>	
POSD - R Parks & Open Space Development Rehab/Replacement				
<blank>				
Total: POSD - R Parks & Open Space Development Rehab/Replacement			<u>-</u>	
POSD - V Parks & Open Space Development Value Added				
<blank>				
Total: POSD - V Parks & Open Space Development Value Added			<u>-</u>	
Total: POSD Program Parks & Open Space Development			<u>3,780</u>	
RI Roadway Infrastructure				
RI - A Roadway Infrastructure Annual Program				
Annual Traffic & Pedestrian Safety Improvements		linked to popn	5,284	Reserve (PAYG)
Annual Traffic Signal / Intersection Replacements		based on ISL servicing assumptions		
Annual Residential Rehab Program		based on ISL servicing assumptions		
Annual Asphalt Trail Rehab Program		linked to popn	2,499	Reserve (PAYG)
Annual Arterial Road Rehab Program		based on ISL servicing assumptions		
Total: RI - A Roadway Infrastructure Annual Program			<u>7,783</u>	
RI - DL Roadway Infrastructure Developer Levy				
		based on ISL servicing assumptions		
Total: RI - DL Roadway Infrastructure Developer Levy			<u>-</u>	
RI - G Roadway Infrastructure Growth				
		based on ISL servicing assumptions		
Total: RI - G Roadway Infrastructure Growth			<u>-</u>	
RI - R Roadway Infrastructure Rehab/Replacement				
		based on ISL servicing assumptions		
Total: RI - R Roadway Infrastructure Rehab/Replacement			<u>-</u>	
RI - V Roadway Infrastructure Value Added				
		based on ISL servicing assumptions		
Total: RI - V Roadway Infrastructure Value Added			<u>-</u>	
Total: RI Roadway Infrastructure			<u>7,783</u>	
UI Utilities				
UI - A Utilities Infrastructure Annual Program				
Annual Corrosion Control Program		based on ISL servicing assumptions		
Annual Hydrant / Valve Replacement Program		based on ISL servicing assumptions		
Annual Sump Pump Collector Retrofit		based on ISL servicing assumptions		
Total: UI - A Utilities Infrastructure Annual Program				
UI - DL Utilities Infrastructure Developer Levy				
		based on ISL servicing assumptions		
Total: UI - DL Utilities Infrastructure Developer Levy				
UI - G Utilities Infrastructure Growth				
0				
Total: UI - G Utilities Infrastructure Growth			<u>-</u>	Reserve (PAYG)
UI - R Utilities Infrastructure Rehab/Replacement				
		based on ISL servicing assumptions		
Total: UI - R Utilities Infrastructure Rehab/Replacement			<u>-</u>	
UI - V Utilities Infrastructure Value Added				
		based on ISL servicing assumptions		
Total: UI - V Utilities Infrastructure Value Added			<u>-</u>	
Total: UI Utilities			<u>-</u>	

**Colchester Recommended Community Design Concept
 Capital Cost Projections (\$000s, Real \$)**

		% Total Cost to COLCHESTER	COLCHESTER - Total Cap Exp 2014-2048	FUNDING	Operating Impacts of Capital (Timing Varies)
Veh Vehicles					
Veh - A Vehicles Annual Program					
Annual Fleet Replacement Program	linked to popn	✔	38,580	Reserve (PAYG)	
Annual Transit Coach Replacements Program	linked to popn	✔	13,144	Reserve (PAYG)	
Annual UT Fleet Replacement	linked to popn	✔	10,924	Reserve (PAYG)	
Total: Veh - A Vehicles Annual Program			62,648		
Veh - G Vehicles Growth					
Transit Coaches	dept input	✔	20,950	Grant	10% of Cap Exp
EDT	linked to popn growth	✔	-	Reserve (PAYG)	10% of Cap Exp
CPC	linked to popn growth	✔	80	Reserve (PAYG)	10% of Cap Exp
PDS	linked to popn growth	✔	111	Reserve (PAYG)	10% of Cap Exp
TAS	linked to popn growth	✔	9,056	Reserve (PAYG)	10% of Cap Exp
SCES	linked to popn growth	✔	-	Reserve (PAYG)	10% of Cap Exp
FCS	linked to popn growth	✔	-	Reserve (PAYG)	10% of Cap Exp
SCT	linked to popn growth	✔	24,450	Reserve (PAYG)	10% of Cap Exp
RPC	linked to popn growth	✔	3,261	Reserve (PAYG)	10% of Cap Exp
BPGC	linked to popn growth	✔	-	Reserve (PAYG)	10% of Cap Exp
RCMP	linked to popn growth	✔	595	Reserve (PAYG)	10% of Cap Exp
CORP	linked to popn growth	✔	774	Reserve (PAYG)	10% of Cap Exp
SEN ADMIN	linked to popn growth	✔	-	Reserve (PAYG)	10% of Cap Exp
ELECTED	linked to popn growth	✔	-	Reserve (PAYG)	10% of Cap Exp
FISCAL	linked to popn growth	✔	-	Reserve (PAYG)	10% of Cap Exp
UTILITIES	linked to popn growth	✔	2,255	Reserve (PAYG)	10% of Cap Exp
Total: Veh - G Vehicles Growth			61,533		
Veh - R Vehicles Rehab/Replacement					
<blank>		✔	-		
Total: Veh - R Vehicles Rehab/Replacement			-		
Veh - V Vehicles Value Added					
<blank>		✔	-		
Total: Veh - V Vehicles Value Added			-		
Total: Veh Vehicles			124,180		
Total Expense			435,960		

Appendix C: Bremner and Colchester “Hard” Capital Projections: Off-Site and On- Site Road & Utility Infrastructure

Bremner Growth Management Strategy
Future Capital - Road and Utility Servicing

Based on ISL Utility and Road Infrastructure Projections

Recommended Concept (Real \$)

Off-Site	Units	Unit Cost	Cost	Construction Funding			Maintenance / Future Replacement			Total County Costs		
				% Province	% County	% Off-Site Levies	Responsibility	Annual LCC Rate (Rehab)	Useful Life (Yrs) (Replacement)	Construction (Debt) 2014-2054	LCC/Repl (PAYG) 2014-2054	
Water	Off-Site	Note 1	\$45,000,000	0.0%	0.0%	100.0%	County	2.0%	incl. in LCC	\$ -	\$ 24,750,000	
Wastewater	Off-Site	Note 1	\$24,000,000	0.0%	0.0%	100.0%	County	2.0%	incl. in LCC	\$ -	\$ 13,200,000	
Roads	At-Grade Intersections	3 each	\$3,000,000	0.0%	0.0%	100.0%	Province			\$ -	\$ -	
	Service Interchange (Hwy 16/RR 224 & 223)	2 each	\$60,000,000	25.0%	0.0%	75.0%	Province			\$ -	\$ -	
	Service Interchange (Hwy 21/Twp Rd 534)	1 each	\$85,000,000	25.0%	0.0%	75.0%	Province			\$ -	\$ -	
	Systems Interchange (Hwy 16/Hwy 21)	1 each	\$175,000,000	50.0%	0.0%	50.0%	Province			\$ -	\$ -	
	Overpass	2 each	\$25,000,000	0.0%	0.0%	100.0%	County	1.0%	30	\$ -	\$ 65,000,000	
	Additional Hwy Lanes	Note 2	\$134,100,000	25.0%	0.0%	75.0%	Province			\$ -	\$ 65,000,000	
			\$573,100,000							\$ -	\$ 65,000,000	
Total Off-Site			\$642,100,000	<i>Phasing of construction subject to review.</i>							\$ -	\$ 102,950,000
On-Site												
Water	Distribution Mains	304 km	\$1,317,414			100.0%	County			Construction (Debt) 2014-2054	LCC/Repl (PAYG) 2014-2054	
Water	Reservoir	64,867 m3	\$1,200			100.0%	County			\$ -	\$ -	
			\$478,334,321							\$ -	\$ -	
Wastewater	Gravity Sewers	304 km	\$1,236,158			100.0%	County			\$ -	\$ -	
			\$375,792,000							\$ -	\$ -	
Storm	Storm Sewers	304 km	\$1,950,000			100.0%	County			\$ -	\$ -	
Storm	Storm Pond Area (PUL)	102 ha	\$4,246,331			100.0%	County			\$ -	\$ -	
Storm	Storm Ponds Construction	13 # ponds	\$55,202,297			100.0%	County			\$ -	\$ -	
Storm	Storm Ponds Earthworks		(\$47,729,402)			100.0%	County			\$ -	\$ -	
Storm	Storm Ponds Construction - NET		\$7,472,895			100.0%	County			\$ -	\$ -	
Storm	Outfall Structure & Pipe	13 # ponds	\$341,314			100.0%	County			\$ -	\$ -	
			\$4,437,077							\$ -	\$ -	
			\$604,709,972							\$ -	\$ -	
Total Utilities			\$1,458,836,293	<i>Phasing of construction subject to review.</i>							\$ -	\$ 432,071,630
			\$1,506,565,695							\$ -	\$ -	
Roads	Arterial Roads (6 lane, Divided)	6 lanes	\$13,500,000			100.0%	County			\$ -	\$ -	
	Arterial Roads (4 lane, Divided)	4 lanes	\$11,500,000			100.0%	County			\$ -	\$ -	
	Collector Roads (Undivided)	4 lanes	\$6,700,000			100.0%	County			\$ -	\$ -	
	Local Roads (Undivided)	3 lanes	\$5,000,000			100.0%	County			\$ -	\$ -	
	Traffic Signals	29 each	\$300,000			100.0%	County			\$ -	\$ -	
	Creek Crossings	3 each	\$2,000,000			100.0%	County			\$ -	\$ -	
			\$6,000,000							\$ -	\$ -	
			\$1,832,800,000							\$ -	\$ -	
			\$30,000,000							\$ -	\$ -	
			\$1,862,800,000							\$ -	\$ -	
Total On-Site (FIA)			\$3,291,636,293							\$ -	\$ -	

Notes:

- Off-Site Utilities - Costs include 75% contingency. Land costs included in contingency. Water Option 1 assumed (various options provided). Option 1 deemed most likely)
- Highway 16 Widening (from 4 to 8 lanes); RR 225 to Hwy 216 (lane-km) 34.1 lane km
 Highway 16 Widening (from 4 to 6 lanes); RR 223 to RR 225 (lane-km) 4.2 lane km
 Highway 21 Widening (from 4 to 6 lanes); Hwy 16 to Twp 534 (lane km) 6.4 lane km
- On-Site Utilities - 2014 \$\$. Costs include 30% contingency. Land costs included in contingency. In FIA, storm earthworks costs excluded from lifecycle cost and replacement cost projections.
- On-Site Roads - ISL also included on-site costs of 1 transit center (\$10 M) and 2 Park'n Ride lots (\$20 M). Assume these costs already captured in County's soft capital forecasts.

Colchester Growth Management Strategy
Future Capital - Road and Utility Servicing

Based on ISL Utility and Road Infrastructure Projections

Recommended Concept (Real \$)

Off-Site	Units	Unit Cost	Cost	Construction Funding			Maintenance / Future Replacement			Total County Costs		
				% Province	% County	% Off-Site Leavies	Total	Responsibility	Annual LCC Rate (Rehab)	Useful Life (Yrs) (Replacement)	Construction (Debt) 2014-2048	LCC/Repl (PAYG) 2014-2048
Water	Note 1	10.4 km	\$2,153,846	\$22,400,000	0.0%	0.0%	100.0%	County	2.0%	incl. in LCC	\$ -	\$ 9,632,000
Wastewater	Note 1	10.4 km	\$8,871,154	\$92,260,000	0.0%	0.0%	100.0%	County	2.0%	incl. in LCC	\$ -	\$ 39,671,800
Roads	Note 2	5 each	\$3,000,000	\$15,000,000	0.0%	0.0%	100.0%	Province	0.0%		\$ -	\$ -
	Note 3	1.1 each	\$60,000,000	\$66,000,000	25.0%	0.0%	100.0%	Province	0.0%		\$ -	\$ -
		0 each	\$250,000,000	\$0	50.0%	0.0%	100.0%	Province	1.0%	30	\$ -	\$ 31,416,667
	Note 4	1 each	\$25,000,000	\$25,000,000	0.0%	0.0%	100.0%	County	1.0%		\$ -	\$ -
		8.2 km	\$6,000,000	\$49,200,000	25.0%	0.0%	100.0%	Province	1.0%	30	\$ -	\$ 34,658,000
		6.2 km	\$6,000,000	\$37,200,000	0.0%	0.0%	100.0%	County	1.0%		\$ -	\$ 66,074,667
Total Off-Site			Roads	\$192,400,000							\$ -	\$ 115,378,467
				\$307,060,000							\$ -	\$ 115,378,467
On-Site												
Water		194.0 km	\$1,343,577	\$260,654,025	100.0%	100.0%	100.0%	County	2.0%	incl. in LCC	\$ -	\$ 255,040,213
Water		49.310 m3	\$1,200	\$59,172,430	100.0%	100.0%	100.0%	County	2.0%	incl. in LCC	\$ -	\$ 255,040,213
				\$319,826,455							\$ -	\$ -
Wastewater		194.0 km	\$1,285,499	\$249,386,730	100.0%	100.0%	100.0%	County	2.0%	incl. in LCC	\$ -	\$ 255,040,213
				\$249,386,730							\$ -	\$ -
Storm		194.0 km	\$1,953,789	\$379,035,150	100.0%	100.0%	100.0%	County	2.0%	incl. in LCC	\$ -	\$ 255,040,213
Storm		82 ha		\$379,035,150	100.0%	100.0%	100.0%	County	2.0%	incl. in LCC	\$ -	\$ 255,040,213
Storm		11 # ponds	\$178,123,393	\$178,123,393	100.0%	100.0%	100.0%	County	2.0%	incl. in LCC	\$ -	\$ 255,040,213
Storm				(\$171,966,122)	100.0%	100.0%	100.0%	County	2.0%	incl. in LCC	\$ -	\$ 255,040,213
Storm		11 # ponds	\$6,157,271	\$6,157,271	100.0%	100.0%	100.0%	County	2.0%	incl. in LCC	\$ -	\$ 255,040,213
Storm			\$639,485	\$7,034,338	100.0%	100.0%	100.0%	County	2.0%	incl. in LCC	\$ -	\$ 255,040,213
				\$392,226,759							\$ -	\$ -
Total Utilities			Net of Earthworks	\$961,439,944							\$ -	\$ 255,040,213
			FIA: Without Storm Earthworks	\$1,133,406,066							\$ -	\$ -
			ISL Total: With Storm Earthworks	\$1,133,406,066							\$ -	\$ -
Roads		6	1.2 km	\$13,500,000	\$16,200,000	100.0%	100.0%	County	2.0%	incl. in LCC	\$ -	\$ 255,040,213
		4	28.8 km	\$11,500,000	\$31,200,000	100.0%	100.0%	County	2.0%	incl. in LCC	\$ -	\$ 255,040,213
		4	36.0 km	\$6,700,000	\$241,200,000	100.0%	100.0%	County	2.0%	incl. in LCC	\$ -	\$ 255,040,213
		3	128.0 km	\$5,000,000	\$640,000,000	100.0%	100.0%	County	2.0%	incl. in LCC	\$ -	\$ 255,040,213
			Traffic Signals	\$300,000	\$4,800,000	100.0%	100.0%	County	2.0%	incl. in LCC	\$ -	\$ 255,040,213
			Pipeline crossings	\$10,000,000	\$10,000,000	100.0%	100.0%	County	2.0%	incl. in LCC	\$ -	\$ 255,040,213
Total Roads				\$1,243,400,000							\$ -	\$ 714,643,530
			Other	\$20,000,000							\$ -	\$ -
			ISL Total	\$1,263,400,000							\$ -	\$ 969,683,743
Total On-Site (FIA)				\$2,204,839,944							\$ -	\$ 969,683,743

Notes:

- Off-Site Utilities - Costs include 75% contingency. Land costs included in contingency.
- Along Hwy 628 and: (1) RR233, (2) midblock RR233 & RR232, (3) RR232, (4) midblock RR232 & RR231, (5) RR231, Hwy 628 / Hwy 21 intersection already exists.
- Hwy 14 / RR232 (100%) and Hwy 628 / Hwy 31 (allocate 10% to Colchester based on traffic)
- Hwy road widening based on \$6M per road km (equivalent to \$3M per lane km identified in Bremner FIA).
- On-Site Utilities - 2014 \$. Costs include 50% contingency. Land costs included in contingency. In FIA, storm earthworks costs excluded from lifecycle cost and replacement cost projections.
- On-Site Roads - ISL also included on-site costs of 1 transit center (\$10 M) and 1 Park'n Ride lot (\$10 M). Assume these costs already captured in County's soft capital forecasts.