

Cost of Site Plan Delays

A Report for the Ontario Association of Architects



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Key Findings

This is the third edition of a series of reports commissioned by the Ontario Association of Architects, to highlight the economic costs of a lengthy site plan application process in Ontario. The first edition was published by Bousfields and Altus Group in 2013, with the second report released in 2018 by Altus Group.

The analysis found in these reports aims to capture the indirect monthly and annual costs associated with the site plan approval process in Ontario and how those costs have changed over time. These costs include both lost economic activity that would have occurred had developments been built in a more timely manner and the additional costs borne by municipalities, landowners and developers, the general economy and final users such as homeowners and office tenants during this time.

The findings of this report include:

- **The delay in site plan application review costs the Ontario economy roughly \$3.5 billion dollars a year, up from an estimated \$300-\$900 million a year in 2018.**
- The cost of site plan delays is equivalent to the investment needed to build an additional 7,200 residential units per year and 3.7 million sq. ft. of non-residential space.
- It is estimated that it takes a municipality an average of 23 months to review a site plan application in Ontario, up from 6 months at the time of the 2018 edition of this Study.
- During that time, an example development of a 100-unit apartment building will accumulate \$5.8 million in economic costs, while a non-residential development will amass \$2.9 million in economic costs.

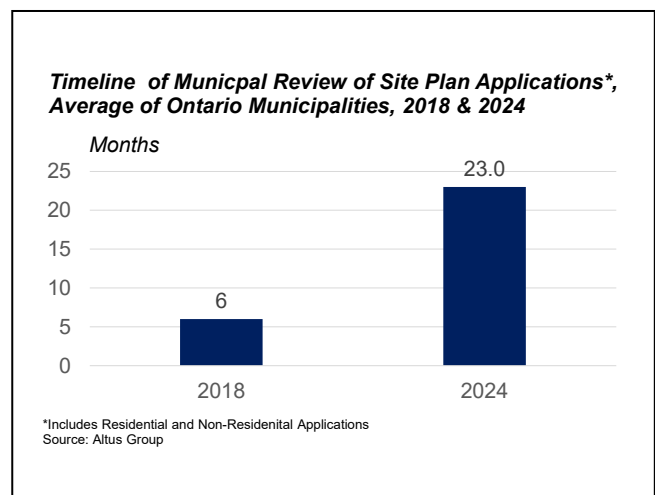
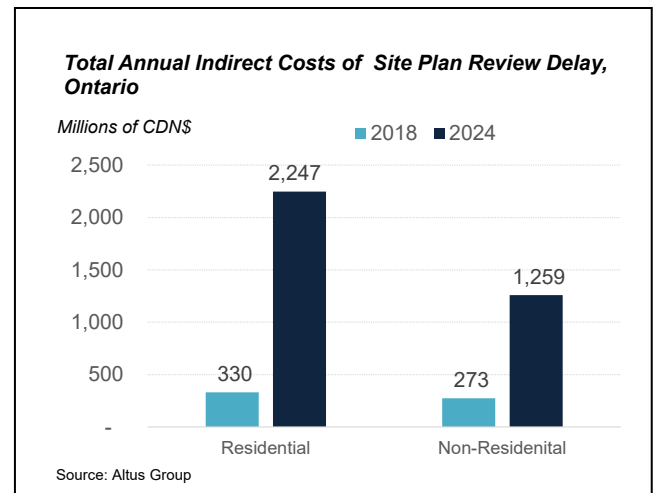


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INTRODUCTION

Before a new development can gain construction approvals in Ontario, it must go through a development application process. There are five types of major approvals needed in Ontario for new developments and an application may require multiple of them. In recent years, the time to review a single application has ballooned. A development requiring multiple applications can be in the approval (or rejection) process for years.

Site plan application is one of the five approvals needed before an application can proceed to the building permit stage. A site plan review is a technical process that deals with matters relating to building layout, massing, access, parking and landscaping, to ensure development proceeds in a safe, efficient and aesthetically pleasing manner.

The Ontario government legislates that municipalities should review a site plan application within 60 days (two months). However, a site plan approval can take close to two years from submission to decision.

This is the third edition of a series of reports commissioned by the Ontario Association of Architects, to highlight the economic costs of a lengthy site plan application process in Ontario. The first edition was published by Bousfields and Altus Group in 2013, with the second report released in 2018 by Altus Group.

The analysis in this report evaluates the indirect monthly and annual costs associated with the site plan approval process in Ontario and how those costs have changed over time. These costs include both lost economic activity that would have occurred had developments been built sooner and the additional carrying costs accrued by the landowner/developer during this time.

It is estimated that the total economic cost of the site plan application process is \$3.5 billion per year, up from \$300-\$900 million estimated in 2018.

The remainder of this report lays out how Altus Group reached this estimate, and how underlying inputs to the model have evolved since the time of the last edition in 2018.

Report Caveat

This analysis has been prepared on the basis of the information and assumptions set forth in the text. However, it is not possible to fully document all factors or account for all the changes that may occur in the future.

This report relies on information from a variety of secondary sources. While every effort is made to ensure the accuracy of the data, we cannot guarantee the complete accuracy of the information used in this report from these secondary sources.

This report has been prepared solely for the purposes outlined herein and is not to be relied upon or used for any other purposes or by any other party without the prior written authorization of Altus Group Limited.

TOTAL TIME IT TAKES TO GET A SITE PLAN APPROVAL

Section 41 of the *Planning Act, R.S.O. 1990*, sets out the regulatory framework for site plan review and provides municipalities with the power to approve development applications within site plan control areas.

Site plan review is a technical process that deals with approval matters relating to building layout, massing, access, parking and landscaping, to ensure development proceeds in a safe, efficient and aesthetically pleasing manner.

In Ontario, most developments with over 11 units require a site plan application.

A site plan application will be submitted to a municipality at two points:

- First, as a preliminary application, requiring municipal feedback on how an application can be made ready for a review. This is called a pre-application consultation (PAC).
- Second, as a complete application submitted to a municipality, in which the applicant has provided all the information required by the municipality before it will start reviewing it.

To estimate the length of time it takes for a municipality to review a site plan application, this study undertook a survey of OAA members and recent development submissions. Survey participants were asked the date of which an application was submitted and the date for which a decision was issued. The survey resulted in 31 responses on application timelines, most of which were for non-residential and mixed-use developments.

Figure 1: Estimated Length of Site Plan Approval Process, Survey Results

	Survey Results	
	Respondents/ Applications	Average Reported Months
Residential	4	16.1
Mixed-Use	19	27.8
Combined Residential/Mixed Use	23	23.1
Non-Residential	8	34.6

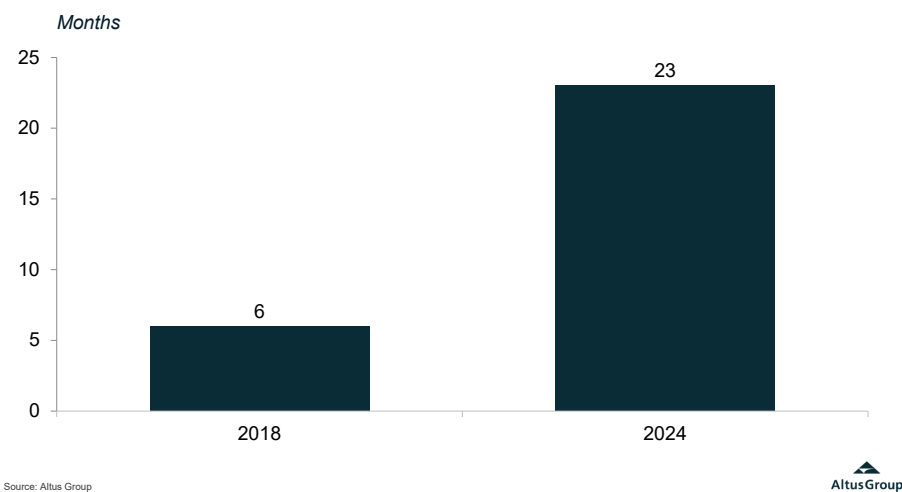
Source: Altus Group and OAA

The average reported timeline was 23 months for residential and mixed-use projects and 35 months for non-residential developments.

While there was a small survey response, the results were weighed against the timeline found in the BILD GTA Municipal Benchmarking Report results and the CHBA Canada-Wide Municipal Benchmarking Report¹ results. Both these reports provide data on the length of time it takes to review site plan applications in some of Ontario's major municipalities. The results in these reports show that a site plan application can take between 18 and 23 months to review, not including the pre-consultation period. Note, there are more municipalities covered in this report than in the Benchmarking Reports.

This study uses 23 months as the average length of time it takes to review a site plan application, as it represents a conservative estimate on timelines.

Figure 2: Length of Site Plan Approval Process, Ontario Municipalities, 2018-2024



For the purposes of this report, a site plan review delay is defined as the months of review in excess of a reasonable length of time. Through legislation, the Province of Ontario has deemed that reasonable length of time to review a site plan application is 60 days (2 month)². Therefore, of the 23 months it takes to review a site plan application, 21 of those months are considered a delay.

¹ BILD GTA Municipal Benchmarking Report and CHBA Canadian Municipal Benchmarking, Edition 2024 and 2025.

² Planning Act Section 41 (12) states that “ If the municipality fails to approve the plans or drawings referred to in subsection (4) within 60 days after they are received by the municipality, the owner may appeal the failure to approve the plans or drawings to the Tribunal”

MONTHLY COSTS OF SITE PLAN DELAY

This section provides an outline of what is included in the cost of site plan delay estimate. For the purposes of this report, costs were modelled on two example developments, including the following assumptions:

Residential Development

- 100-units apartment building;
- Built on 1 acre of land. The vacant land is assumed to be assessed at \$3.0 million per acre (based on 2016 assessment values³);
- A construction value of \$31.5 million at the start of the application process; and
- An expected average selling price of \$611,000 per apartment at the start of the application process and a 2016 assessment value of 321,000.

Non-Residential Land

- 50,000 sq. ft. of office space;
- Built on 1 acre of land. The vacant land is assumed to be assessed at 2016 values of \$574,000 per acre;
- A construction value of \$16.9 million at the start of the application process; and
- An expected average valuation of \$189 per sq. ft for office space at the start of the application process.

Every additional month a development application sits in the site plan review process represents a delay in the time the development would reach completion and come to market. These delays have the following costs:

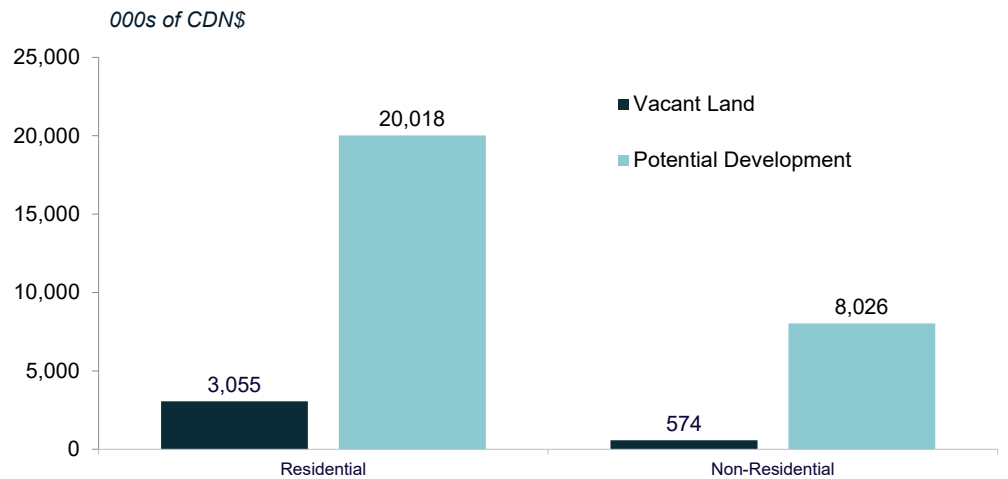
COSTS BORNE BY MUNICIPALITIES

The largest cost to a municipality is lost property tax revenue. While a development application is working its way through the review process, the underlying land will either remain vacant, or underutilized.

In the example residential development, the assessment value of the vacant land would be \$3.0 million, while a 100-unit apartment building would result in a \$20 million assessment value.

³ Property taxes are calculated on 2016 assessment values in Ontario.

Figure 3: Property Assessment Values, Average, Ontario Municipalities, as of 2024 based on 2016 Assessment Values



Source: Altus Group, based on Altus Data Suite and CREA Home Price Index



Municipalities, on average, would earn an additional **\$21,300** per month in tax revenues, if the land were developed sooner.

In the example non-residential development, the assessment value of the vacant land would be \$574,000, while a 50,000 sq. ft. office building would result in a \$8.0 million assessment value. Municipalities, on average, would earn an additional **\$24,000** per month in tax revenues, if the land were developed.

The full calculation can be found in Appendix Figures A1 and A2.

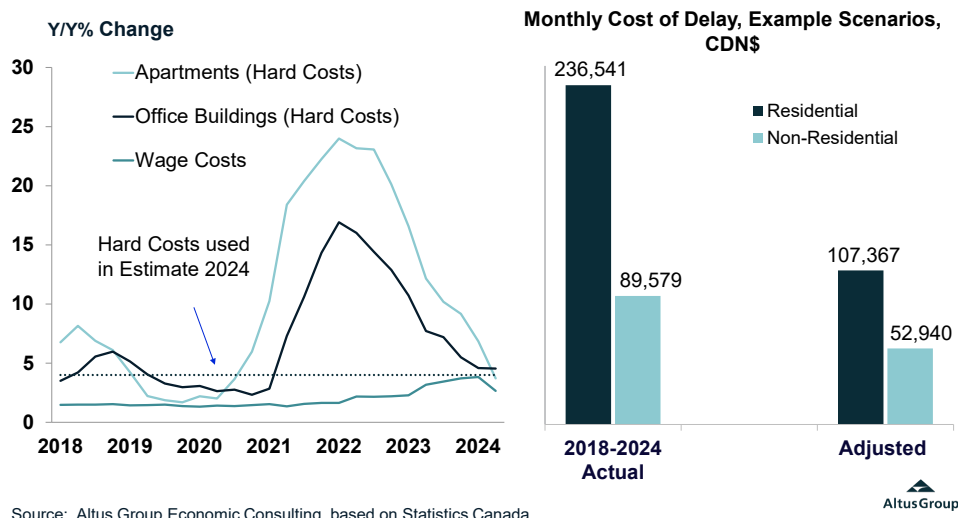
COSTS BORNE BY LANDOWNERS, HOMEBUILDERS, DEVELOPERS (THE APPLICANTS)

For applicants, each additional month spent in the site plan review process pushes back the time that the landowner can turn over the building or units to the eventual owner(s). While an application is going through the review process, the land is sitting vacant, or underutilized, resulting in carrying costs. When a development is in the site plan review process the costs associated with the construction of the building can increase. This includes the costs of both materials and labour.

For a residential development, these costs include:

- \$4,400 in additional property taxes paid each month the applicant must hold the land. By the time the development reaches the site plan review process, the land would be assessed at its highest and best use;
- \$14,700 in opportunity/financing costs per month. The land represents an upfront investment that will either be financed, or potentially sold. Interest rates on mortgage loans have gone up by 300 basis points since the time of the last report to reach 5.95% at time of writing this report. A lengthy application process has left the applicants vulnerable to these financial risks; and
- Construction cost inflation of:
 - \$107,400 in hard cost escalation per month. The cost of construction rose at an average rate of 10.4% between 2018 and 2024, resulting in cost escalation of \$230,000 per month over that time frame. The pace at which costs are rising has eased in 2024 and for the purposes of this study, these costs were modelled with a 4% increase. Figure 4 highlights the financial risks a lengthy application process imposes on developments during negative economic events.

Figure 4: Construction Cost Inflation, Hard Costs and Wages, Ontario, 2018-2024



- Wage inflation adds some \$46,200 in construction wage cost escalation per month. It is estimated that a development of this size would require 236 full-time employees. Wage inflation is calculated as the estimated monthly increase in hourly wage, multiplied by the hours worked in that month by the 236 employees.

- While the pace at which construction hard costs and wages are rising has eased, the average cost per sq. ft. has risen by 72% since before the pandemic.

For a non-residential development, these costs include:

- \$979 in additional property taxes paid each month the applicant must hold the land;
- \$3,000 in opportunity/financing costs per month; and
- Construction cost escalation of:
 - \$52,940 in construction hard cost escalation per month. The cost of construction had been rising at an average rate of 6.4% per year between the 2018-2024 period, resulting in cost escalation of \$90,000 per year over that time frame. The cost of construction inflation was modelled with 3.8% increase (Figure 4).
 - Wage inflation adds some \$28,000 in construction wage cost escalation per month. It is estimated that a development of this size would require 144 full-time employees. Wage inflation is calculated as the estimated monthly increase in hourly wage, multiplied by the hours worked in that month by the 144 employees.
 - While the pace at which construction hard costs and wages are rising has eased, the average cost per sq. ft. is up 42% since before the pandemic.

In total, the site plan delay on a residential investment adds \$173,000 in costs per month of delay for a landowner/developer, and \$85,000 in costs per month for a non-residential development.

Appendix A3 -A6 present the calculation on additional taxes paid, financing and cost escalation.

COSTS BORNE BY THE GENERAL ECONOMY AND FINAL USERS

Higher development charges for homeowners and office investors

A significant risk to potential homeowners and office investors is the cost associated with higher development charges (DCs).

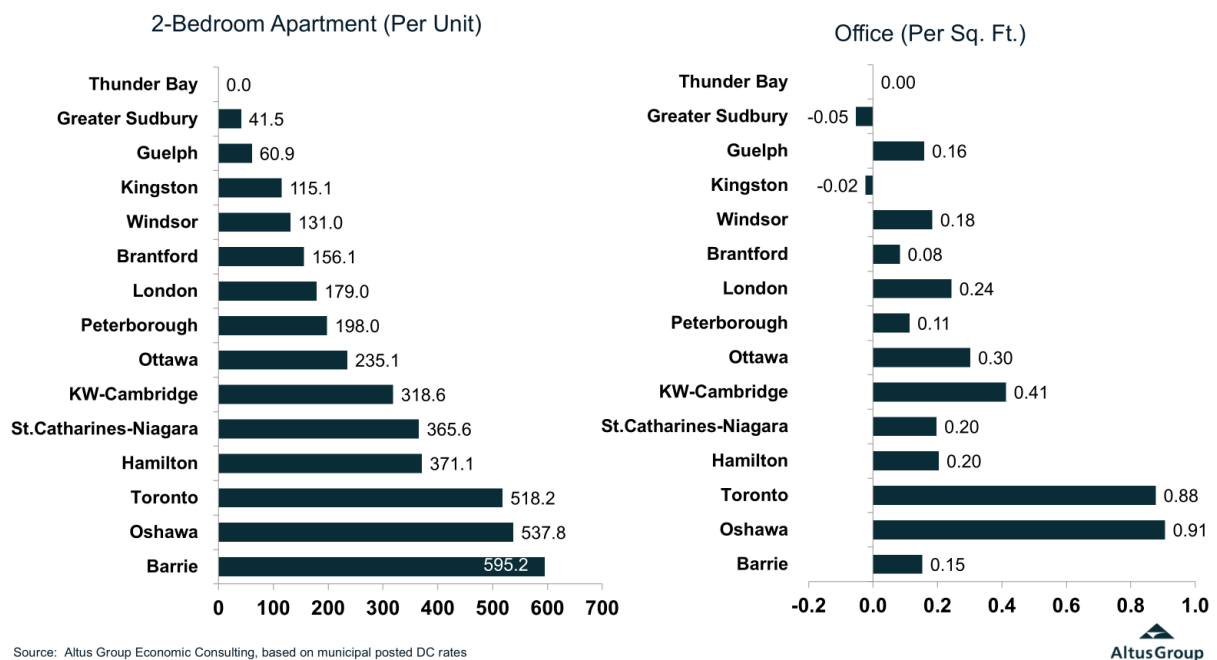
Development charge (DC) by-laws expire every five years. Before a DC by-law expires, a municipality calculates new DC rates based on the capital needs associated with the new residential and non-residential growth over a certain planning horizon.

Delaying a development at the site plan approval stage, exposes those homes or non-residential space to 20 and 24 months of DC escalation, respectively.

The increase in DC rates as a result of a by-law review can be significant. For example, average DC rates for a 2-bedroom apartment rose by \$34,000 across Ontario (on a weighted average basis) since the time of the last edition of this report.

The average monthly increase in apartment development charges over the past seven years was \$405 per unit per month in Ontario between 2017 and 2024, on a weighted average basis. The increase in development charges per month and unit ranged from a low of \$0 in Thunder Bay where there are no development charges, to a high of \$595 per month in Barrie.

Figure 5: Average Monthly Increase in Development Charge Rates, 2-Bedroom Apartments and Office Space, by CMA in Ontario, 2017-2024



For office buildings, the average DC rates increased by \$0.52 per sq. ft per month between 2017 and 2024. The increase in development charges per sq. ft. per month ranged from a low of a \$0.05 per sq. ft. drop in Greater Sudbury to a high of \$0.91 in Oshawa. Thunder Bay also does not charge development charges on non-residential developments.

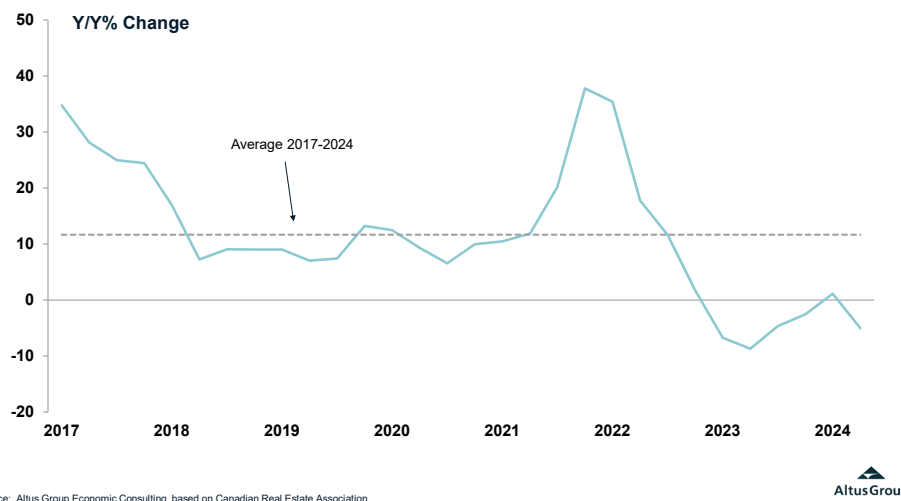
It should be noted that since DC rate increases tend to occur in either small amounts each year (via annual or semi-annual indexing), or in large amounts at each DC by-law review prior to expiry every five years, meaning that for some end users, the impact will be greater than others.

Lost mortgage equity for first time home buyers

Delays in development application reviews impact how supply can respond to new demand. These delays mean that the residential and non-residential spaces will not be on the market in time to meet prospective demand.

In a market with limited supply, additional months of site plan review time are costly to first-time homebuyers due to the inability to purchase a home and begin building equity sooner. For each month an application spends in the site plan review process, these prospective new home buyers are not paying a mortgage and are not building equity in a new home and may be continuing to rent their existing home.

Figure 6: Average Apartment Price Growth, Ontario, 2017-2024



Home prices have risen at an average pace of roughly 10% per year between 2018 and 2024. That means that would be home buyers have missed out on over 60% in home price appreciations over this period. Therefore, every month of delay results in an average loss of roughly \$300 in home equity per apartment. For a 100-unit building, total lost equity is roughly \$30,000.

Increased rents for office tenants

Over the 2016-2024 period, gross office rents for Class A office space (including net rent and operating costs) in Ontario increased by an average of 1.2% per year, from \$30.43 per sq. ft. to \$33.48 per sq. ft. This equates to an average increase of \$0.38 per sq. ft. per year. On a per month basis, rents increased by approximately \$0.032 per sq. ft. For the 50,000 sq. ft. office building, each additional month spent in the site plan process increases total gross rents payable by tenants by \$1,589 per month.

SUMMARY OF COSTS

The total estimated monthly costs by category of a site plan delay are shown in Figure 7.

Figure 7: Summary of the Monthly Costs of Site Plan Delay, Ontario

	Residential		Non-Residential	
<u>Municipalities</u>	CDN\$/Project	CDN\$/Per Unit	CDN\$/Project	CDN\$/Sq. Ft.
Delayed Tax Revenue	21,278	213	24,060	0.48
<u>Landowners/Developers/Builders</u>				
Additional Taxes	4,448	44	979	0.02
Carrying Costs of Financing	14,753	148	3,012	0.06
Cost Inflation - Construction	107,367	1,074	52,940	1.06
Cost Inflation - Wages	46,217	462	28,051	0.56
Total	172,785	1,728	84,983	1.70
<u>General Economy, Homeowners and Final Users</u>				
Development Charges	51,134	511	25,762	0.52
Lost Equity ¹	29,684	297	0	0.00
Increased Rents	0	0	1,589	0.03
Total	80,818	808	27,351	0.55
Total Costs	274,881	2,749	136,393	2.73

*Based on weighted averages of CMAs in Canada

Assuming 50% of occupants of condominium apartments are first-time home buyers that
¹ are currently renting their dwelling

Source: Altus Group Economic Consulting

Details of these findings are found in the Appendix.

In total, the indirect costs of site plan delay on a monthly basis for a 100-unit apartment building are \$275,000, or roughly 0.88% of the building's construction cost. Over half of these costs are borne by the landowner/developer, while costs to the general economy and future homeowners totals \$81,000. The total 21-month delay in site plan application review adds **\$5.7 million in costs** to this development scenario.

For a 50,000 sq. ft. office building, the indirect costs of site plan delay average \$136,000 a month, or roughly 0.81% of the construction cost. Over half of these costs are borne by the landowner/developer, while costs to municipalities total almost \$27,300. The total 21-month delay in site plan application review adds **\$2.9 million** in costs to this development scenario.

Please refer to the appendix (A9) for a more detailed explanation of the monthly costs and changes relative to 2018.

Figure 8: Total Monthly Indirect Costs of Site Plan Delay, Ontario, CDN\$

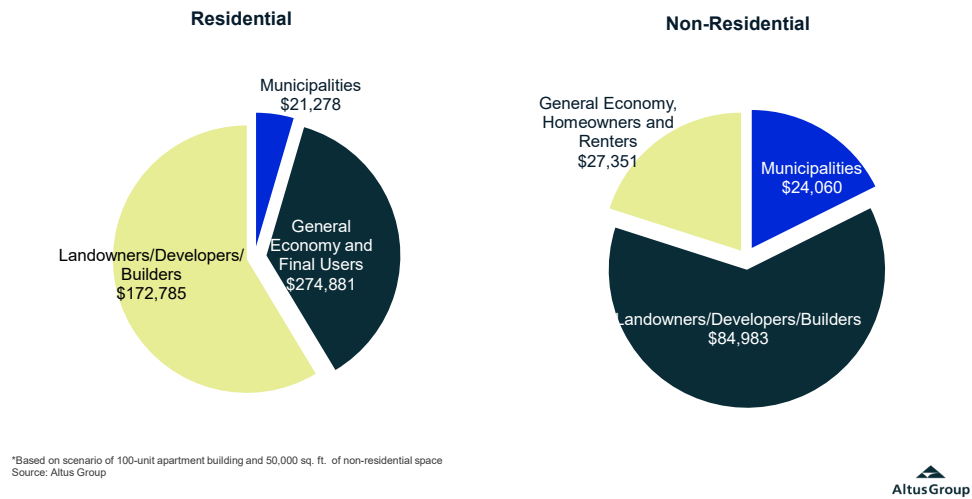
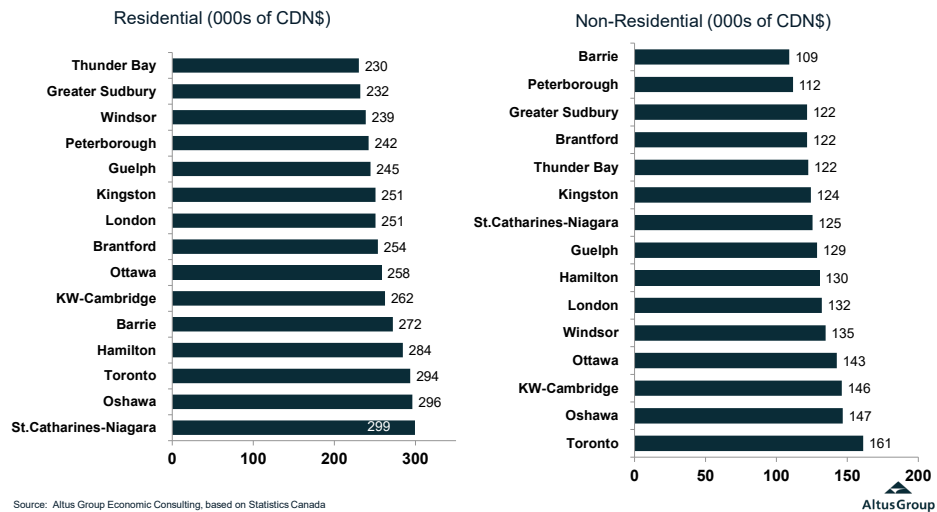


Figure 9 shows the monthly costs by major CMA in Ontario. A detailed calculation of these costs can be found in the appendix (Figure A7).

Figure 9: Monthly Costs, Example Scenario, by CMA



The figure shows that the monthly costs of site plan delay on an example development scenario range from:

- A high of \$299,000 in St. Catharine's-Niagara to a low of \$230,000 in Thunder Bay for a residential development scenario; and
- A high of \$161,000 in Toronto to a low of \$109,000 in the Barrie CMA for non-residential.

TOTAL COSTS TO THE ECONOMY

This section assesses these costs as a total annual cost for the Ontario economy.

TOTAL ANNUAL COSTS

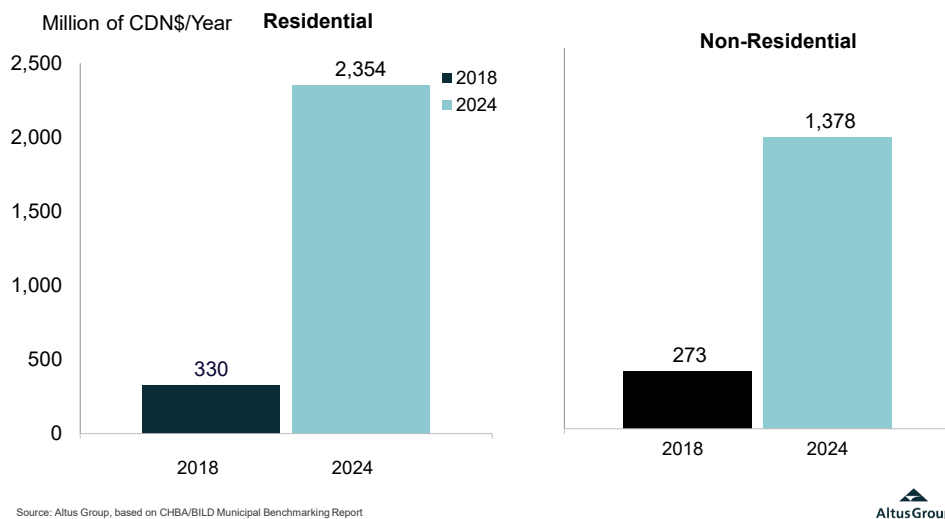
It is estimated that there were roughly \$19.5 billion⁴ worth of building permits per year subject to a site plan approval in the 2018-2024 period, up from \$10.6 billion in the 2018 edition of this study. This breaks down as \$12.2 billion in residential buildings and \$7.4 billion in non-residential space.

If the monthly costs of site plan delay account for 0.88% of residential construction spending⁵, this implies that costs would total almost \$2.2 billion per year for the Ontario economy.

If the monthly costs of site plan delay account for 0.80% of non-residential construction spending, this implies that costs would total almost \$1.3 billion per year for the Ontario economy.

The delay in the site plan review process costs the Ontario economy \$3.5 billion dollars per year, up from \$300-\$900 million estimated in the 2018 study.

Figure 10: Annual Indirect Costs of Site Plan Delay, Ontario, 2018 and 2024



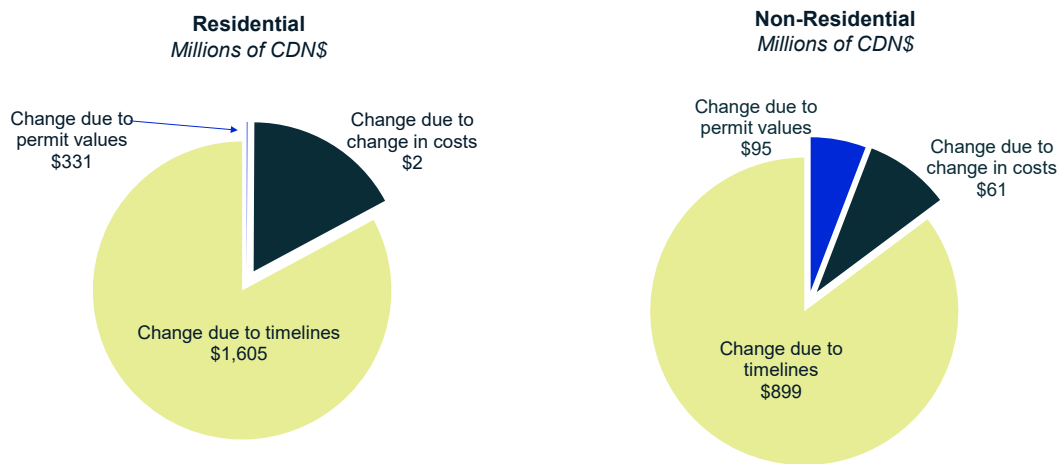
⁴ Based on Statistics Canada building permit data on new units created. Assumes site plan applies to 5% of all new single-detached homes, 20% of rows and 100% of apartments; 100% of all new major commercial, industrial and institutional.

⁵ 22 months of costs accumulate over a year. Recent development projects will have 12 months of delay, while applications started in the prior year would occur an additional 10 months of delay

The total costs to the economy have gone up by over \$3.0 billion. The drivers of the increase in costs to the whole economy, relative to those estimated in the 2018 report, are shown in Figure 11. The increase in costs is driven by the following:

- Increase in monthly costs – estimated monthly costs have gone up by \$1,000 per year for residential developments and \$36,000 per year for non-residential development accounting for \$63 million of the total change;
- An increase in construction activity. The estimate of building permits subject to site plan control have doubled. More construction projects waiting for site plan approval will result in more costs accumulating. The rise in construction activity accounts for \$425 million of the change in economic costs; and
- The biggest and most important driver is the months of delay increase. Every year recent development projects will have 11 months of delay, while applications started in the prior year would incur an additional 10 months of delay. The change in the timeline added \$2.5 billion to costs.

Figure 12: Change in Annual Indirect Costs of Site Plan Delay, by Driver, Ontario, 2018 2024



Source: Altus Group

The results of the monthly costs to the Ontario economy are shown by major CMA in Figure 13. The figure shows that the costs from residential developments range from a low of \$191,000 in Greater Sudbury, to a high of \$68 million in the Toronto CMA. The costs from

non-residential developments range from a low of \$241,000 in Greater Sudbury, to a high of \$33 million in the City of Toronto.

Figure 2: Annual Costs of Site Plan Delay, Residential Investments, by CMA, 2024

Census Metropolitan Area	A	B	C	D
	Value of Construction Investment Subject to Site Plan (CDN\$, 000s)	Monthly Costs as a % of Construction Costs %	Monthly Indirect Costs of Site Plan Delay (CDN\$, 000s)	Total Cost/Year (CDN\$, 000s)
			$= (A \times B)$	$= C \times 12$
Barrie	204,183,459	0.87%	1,778,208	
Brantford	68,348,276	0.81%	554,733	
Greater Sudbury	25,740,633	0.74%	191,135	
Guelph	125,391,513	0.78%	981,202	
Hamilton	574,731,023	0.91%	5,231,991	
Kingston	136,130,067	0.80%	1,091,362	
KW-Cambridge	641,750,279	0.84%	5,388,191	
London	466,114,902	0.80%	3,738,976	
Oshawa	306,517,573	0.95%	2,905,922	
Ottawa	947,705,455	0.83%	7,821,569	
Peterborough	42,729,923	0.78%	331,295	
St. Catharines-Niagara	263,775,898	0.96%	2,526,403	
Thunder Bay	30,160,378	0.74%	222,249	
Toronto	7,251,457,458	0.94%	68,135,978	
Windsor	155,648,611	0.76%	1,188,288	
Totals				
Total CMAs	11,240,385,447	0.91%	102,087,502	
Non-CMAs	925,288,533	0.53%	4,924,167	
Ontario	12,165,673,979	0.88%	107,011,669	2,247,245,056

Source: Altus Group Economic Consulting based on Statistics Canada

Figure 14: Annual Costs of Site Plan Delay, Non-Residential Investments, by CMA, 2024

Census Metropolitan Area	A	B	C	D
	Value of Construction Investment Subject to Site Plan (CDN\$, 000s)	Monthly Costs as a % of Construction Costs %	Monthly Indirect Costs of Site Plan Delay (CDN\$, 000s)	Total (CDN\$, 000s)
			$= (A \times B)$	$= C \times 12$
Barrie	88,815,060	0.65%	574,130	
Brantford	92,478,515	0.72%	666,437	
Greater Sudbury	33,549,958	0.72%	241,631	
Guelph	136,574,285	0.76%	1,041,430	
Hamilton	465,125,016	0.77%	3,593,454	
Kingston	77,980,031	0.74%	574,239	
KW-Cambridge	336,090,689	0.87%	2,909,579	
London	266,861,752	0.78%	2,088,392	
Oshawa	229,675,115	0.87%	1,997,740	
Ottawa	481,233,672	0.84%	4,065,712	
Peterborough	53,058,880	0.66%	351,065	
St. Catharines-Niagara	224,955,142	0.74%	1,672,315	
Thunder Bay	73,963,622	0.73%	536,277	
Toronto	3,508,242,149	0.95%	33,494,567	
Windsor	213,823,349	0.80%	1,705,474	
Totals				
Total CMAs	6,282,427,237	0.88%	55,512,440	
Non-CMAs	1,132,223,881	0.39%	4,417,009	
Ontario	7,414,651,118	0.81%	59,929,449	1,258,518,439

Source: Altus Group Economic Consulting based on Statistics Canada

Costs in terms of housing and non-residential space

Figure 15 puts the annual indirect costs of site plan delay into perspective. The total costs associated with a lengthy site plan application process equals the equivalent investment needed to build 7,200 large apartments per year and over 3.7 million in non-residential space.

Figure 3: Annual Cost of Site Plan Delay in Terms of Residential Units and Non-Residential Sq. Ft., Ontario, as of 2024

	A	B	C	D
	Total Annual Costs of Site Plan Delay	Average Construction Costs	Amount of Space that could be Built	Number of Units that could be Built
	(CDN\$,000s)	\$ Per Sq. Ft	Sq. Ft.	Units
			= (A/B)	= $C/1000$
Residential	2,247,245,056	313	7,191,184	7,191
Non-Residential	1,258,518,439	338	3,728,944	--

Source: Altus Group Economic Consulting

CONCLUSION AND IMPLICATIONS

This report reviewed the indirect costs to the Ontario economy associated with a lengthy site plan process. The results show that:

- **The delay in site plan application review costs the Ontario economy \$3.5 billion dollars a year, up from \$300-\$900 million a year in 2018.**
- The cost of site plan delays is equivalent to the investment needed to build an additional 7,200 residential units per year and 3.7 million sq. ft. of non-residential space.
- It is estimated that it takes a municipality an average of 23 months to review a site plan application in Ontario, up from 6 months at the time of the 2018 edition of this Study.
- During that time, an example development of a 100-unit apartment building will accumulate \$5.7 million in economic costs, while a non-residential development will accumulate \$2.9 million in economic costs.

APPENDIX A – ADDITIONAL INFORMATION

FIGURE A1: CALCULATION IN MUNICIPAL LOST TAX REVENUE, RESIDENTIAL DEVELOPMENT, ONTARIO CMAS, 2024

	A	B	C	D	E	F	G	H	I	J	K
	Value of Construction Investment Subject to Site Plan	Average Price of Land/acre	Average Annual Property Tax Rate	Monthly Tax Rate	Monthly Taxes on Vacant Land	Average Price of Apartments	Estimated Value of 100-Unit Apartment Unit	Average Annual Property Tax Rate	Monthly Tax Rate	Monthly Taxes	Difference in Monthly Tax Revenue
<u>Census Metropolitan Area</u>	(\$,000s)	\$	%	=C/12	=DxB	\$	\$, = Fx100	%	%, =H/12	\$, =G*I	\$, =J-E
Barrie	204,183,459	824,627.8	2.2%	0.2%	1,529.63	217,138	21,713,750	1.1%	0.1%	19,252	17,722
Brantford	68,348,276	458,692	3.2%	0.3%	1,205.72	155,325	15,532,500	1.6%	0.1%	20,530	19,324
Greater Sudbury	25,740,633	458,692	3.9%	0.3%	1,498.09	171,825	17,182,500	1.7%	0.1%	24,951	23,453
Guelph	125,391,513	227,068	3.0%	0.3%	572.71	257,600	25,760,000	1.3%	0.1%	28,328	27,756
Hamilton	574,731,023	967,625	2.6%	0.2%	2,107.61	265,775	26,577,500	1.3%	0.1%	29,833	27,726
Kingston	136,130,067	227,068	3.5%	0.3%	657.39	219,500	21,950,000	1.5%	0.1%	26,764	26,107
KW-Cambridge	641,750,279	524,136	3.1%	0.3%	1,338.01	204,125	20,412,500	1.3%	0.1%	21,649	20,311
London	466,114,902	227,068	3.6%	0.3%	679.77	134,925	13,492,500	2.6%	0.2%	28,925	28,245
Oshawa	306,517,573	462,065	2.4%	0.2%	921.57	343,525	34,352,500	1.7%	0.1%	48,899	47,977
Ottawa	947,705,455	4,968,613	2.0%	0.2%	8,115.40	243,650	24,365,000	1.0%	0.1%	20,304	12,189
Peterborough	42,729,923	359,807	3.1%	0.3%	938.15	230,550	23,055,000	1.7%	0.1%	31,743	30,805
St. Catharines-Niagara	263,775,898	531,050	3.4%	0.3%	1,513.56	192,075	19,207,500	2.3%	0.2%	36,745	35,232
Thunder Bay	30,160,378	464,730	4.0%	0.3%	1,533.89	171,825	17,182,500	1.7%	0.1%	24,470	22,936
Toronto	7,251,457,458	4,247,331	1.7%	0.1%	5,845.17	341,756	34,175,625	0.9%	0.1%	25,683	19,838
Windsor	155,648,611	464,730	4.7%	0.4%	1,806.99	126,450	12,645,000	2.0%	0.2%	21,421	19,614
Total CMAs	11,240,385,447	3,306,008	2.1%	0.2%	5,690	299,635	29,963,468	1.12%	0.09%	26,092	21,278

Source: Altus Group, based on Altus Data Studio, Municipal property tax rates as of December 2024

FIGURE A2: CALCULATION IN MUNICIPAL LOST TAX REVENUE, NON-RESIDENTIAL DEVELOPMENT, ONTARIO CMAS, 2024

	A	B	C	D	E	F	G	H	I	J	K
	Value of Construction Investment Subject to Site Plan	Average Price of Land/acre	Average Annual Property Tax Rate	Monthly Tax Rate	Monthly Taxes on Vacant Land	Average Price of Office Space/Sq Ft.	Estimated Value of 50,000 Sq. ft. of Office Space	Average Annual Property Tax Rate	Monthly Tax Rate	Monthly Taxes	Difference in Monthly Tax Revenue
Census Metropolitan Area	(\$,000s)	\$	%	=C/12	=DxB	\$	\$, = Fx50,000	%	%, =H/12	\$, =G*I	\$, =J-E
Barrie	88,815,060	202,407	2.2%	0.002	375.45	201.03	10,051,389	1.8%	0.15%	14,678	14,302.60
Brantford	92,478,515	397,853	3.2%	0.003	1,045.80	158.42	7,920,750	3.2%	0.26%	20,820	19,774.70
Greater Sudbury	33,549,958	397,853	3.9%	0.003	1,299.39	148.67	7,433,333	3.9%	0.33%	24,277	22,977.90
Guelph	136,574,285	1,091,952	3.0%	0.003	2,754.10	212.75	10,637,500	3.0%	0.25%	26,830	24,075.61
Hamilton	465,125,016	317,818	2.6%	0.002	692.25	204.72	10,236,043	2.6%	0.22%	22,295	21,603.15
Kingston	77,980,031	317,818	3.5%	0.003	920.13	148.67	7,433,333	3.5%	0.29%	21,521	20,600.40
KW-Cambridge	336,090,689	350,200	3.1%	0.003	893.99	226.55	11,327,702	3.1%	0.26%	28,917	28,023.25
London	266,861,752	317,818	3.6%	0.003	951.45	148.67	7,433,333	3.6%	0.30%	22,253	21,301.72
Oshawa	229,675,115	169,319	2.4%	0.002	337.70	178.34	8,917,125	2.1%	0.17%	15,288	14,949.88
Ottawa	481,233,672	317,818	2.0%	0.002	519.10	297.90	14,894,813	2.0%	0.16%	24,328	23,809.09
Peterborough	53,058,880	164,430	3.1%	0.003	428.73	148.67	7,433,333	3.1%	0.26%	19,381	18,952.65
St.Catharines-Niagara	224,955,142	399,133	3.4%	0.003	1,137.58	121.76	6,088,095	3.4%	0.29%	17,352	16,214.29
Thunder Bay	73,963,622	753,258	4.0%	0.003	2,486.20	148.67	7,433,333	4.0%	0.33%	24,534	22,048.27
Toronto	3,508,242,149	900,585	1.7%	0.001	1,239.38	351.76	17,587,794	1.8%	0.15%	27,039	25,799.17
Windsor	213,823,349	753,258	4.7%	0.004	2,928.86	148.67	7,433,333	4.7%	0.39%	28,903	25,973.89
Total CMAs	6,282,427,237	677,917	2.2%	0.2%	1,156	284	14,211,107	2.3%	0.2%	25,216	24,060

Source: Altus Group, based on Altus Data Studio, Municipal property tax rates as of December 2024

FIGURE A3: CALCULATION OF LANDOWNER/DEVELOPER CARRYING COSTS, RESIDENTIAL DEVELOPMENT, ONTARIO CMA, 2024

	A	B	C	D	E	F	G	H
	Value of Construction Investment Subject to Site Plan	Average Price of Land/acre	Average Annual Property Tax Rate Tax Rate	Monthly Tax Rate	Monthly Taxes on Vacant Land	Interest Rate	Interest on Land Financing	Total Carrying Costs
Census Metropolitan Area	(\$,000s)	\$	%	=C/12	=DxB	%	\$, =F*B	\$, =G+E
Barrie	204,183,459	824,627.80	2.2%	0.2%	1,529.63	5.95	3,680	5,210
Brantford	68,348,276	458,692	3.2%	0.3%	1,205.72	5.95	2,047	3,253
Greater Sudbury	25,740,633	458,692	3.9%	0.3%	1,498.09	5.95	2,047	3,545
Guelph	125,391,513	227,068	3.0%	0.3%	572.71	5.95	1,013	1,586
Hamilton	574,731,023	967,625	2.6%	0.2%	2,107.61	5.95	4,318	6,426
Kingston	136,130,067	227,068	3.5%	0.3%	657.39	5.95	1,013	1,671
KW-Cambridge	641,750,279	524,136	3.1%	0.3%	1,338.01	5.95	2,339	3,677
London	466,114,902	227,068	3.6%	0.3%	679.77	5.95	1,013	1,693
Oshawa	306,517,573	462,065	2.4%	0.2%	921.57	5.95	2,062	2,984
Ottawa	947,705,455	4,968,613	2.0%	0.2%	8,115.40	5.95	22,172	30,288
Peterborough	42,729,923	359,807	3.1%	0.3%	938.15	5.95	1,606	2,544
St. Catharines-Niagara	263,775,898	531,050	3.4%	0.3%	1,513.56	5.95	2,370	3,883
Thunder Bay	30,160,378	464,730	4.0%	0.3%	1,533.89	5.95	2,074	3,608
Toronto	7,251,457,458	4,247,331	1.7%	0.1%	5,845.17	5.95	18,954	24,799
Windsor	155,648,611	464,730	4.7%	0.4%	1,806.99	5.95	2,074	3,881
Total CMAs	11,240,385,447	3,306,008	2.1%	0.2%	5,690	5.95	14,753	19,567

Source: Altus Group, based on Altus Data Studio, Municipal property tax rates as of December 2024

FIGURE A4: CALCULATION OF LANDOWNER/DEVELOPER CARRYING COSTS, NON-RESIDENTIAL DEVELOPMENT, ONTARIO CMA, 2024

	A	B	C	D	E	F	G	H
	Value of Construction Investment Subject to Site Plan	Average Price of Land/acre	Average Annual Property Tax Rate Tax Rate	Monthly Tax Rate	Monthly Taxes on Vacant Land	Interest Rate	Interest on Land Financing	Total Carrying Costs
Census Metropolitan Area	(\$,000s)	\$	%	=C/12	=DxB	%	\$, =F*B	\$, =G+E
Barrie	88,815,060	202,407	2.2%	0.002	375.45			
Brantford	92,478,515	397,853	3.2%	0.003	1,045.80	5.95	1,775	2,821
Greater Sudbury	33,549,958	397,853	3.9%	0.003	1,299.39	5.95	1,775	3,075
Guelph	136,574,285	1,091,952	3.0%	0.003	2,754.10	5.95	4,873	7,627
Hamilton	465,125,016	317,818	2.6%	0.002	692.25	5.95	1,418	2,111
Kingston	77,980,031	317,818	3.5%	0.003	920.13	5.95	1,418	2,338
KW-Cambridge	336,090,689	350,200	3.1%	0.003	893.99	5.95	1,563	2,457
London	266,861,752	317,818	3.6%	0.003	951.45	5.95	1,418	2,370
Oshawa	229,675,115	169,319	2.4%	0.002	337.70	5.95	756	1,093
Ottawa	481,233,672	317,818	2.0%	0.002	519.10	5.95	1,418	1,937
Peterborough	53,058,880	164,430	3.1%	0.003	428.73	5.95	734	1,162
St. Catharines-Niagara	224,955,142	399,133	3.4%	0.003	1,137.58	5.95	1,781	2,919
Thunder Bay	73,963,622	753,258	4.0%	0.003	2,486.20	5.95	3,361	5,848
Toronto	3,508,242,149	900,585	1.7%	0.001	1,239.38	5.95	4,019	5,258
Windsor	213,823,349	753,258	4.7%	0.004	2,928.86	5.95	3,361	6,290
Total CMAs	6,282,427,237	677,917	2.2%	0.2%	1,156	5.95	3,012	4,163

Source: Altus Group, based on Altus Data Studio, Municipal property tax rates as of December 2024

FIGURE A5: CALCULATION OF CONSTRUCTION HARD COST INFLATION, RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT, ONTARIO MUNICIPALITIES, 2024

Adjusted

Year	Apartment Building	Office Building
	Index (2023=100)	
Q3 2017	55.2	66.6
Q3 2024	104.0	103.9
<i>Percent</i>		
% Increase (Q32017-Q32014)	88.4%	56.0%
Average Annual Cost	4.4%	4.4%
Average Monthly % Increase	0.37%	0.37%

Actual, 2017-2024

Year	Apartment Building	Office Building
	Index (2023=100)	
Q3 2017	55.2	66.6
Q3 2024	104.0	103.9
<i>Percent</i>		
% Increase (Q32017-Q32014)	88.4%	56.0%
Average Monthly % Increase	0.76%	0.53%

Estimate of Monthly Construction Cost Escalation

	Apartment Building (100- units)	Office Building (50,000 SF)
	Dollars	
Construction Costs	31,250,000	16,875,000
<i>Percent / Month</i>		
Average Monthly Construction Cost Escalation	0.34%	0.31%
<i>Dollars / Month</i>		
Construction Cost Escalation / Month	107,367	52,940

Estimate of Monthly Construction Cost Escalation

	Apartment Building (100- units)	Office Building (50,000 SF)
	Dollars	
Construction Costs	31,250,000	16,875,000
<i>Percent / Month</i>		
Average Monthly Construction Cost Escalation	0.76%	0.53%
<i>Dollars / Month</i>		
Construction Cost Escalation / Month	236,541	89,579

Source: Altus Group Economic Consulting based on Statistics Canada

FIGURE A6: CALCULATION OF CONSTRUCTION WAGE COST INFLATION, RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT, ONTARIO, 2024

Average Hourly Wage, Select Construction Trades, 2011-2017

Year	Carpenter	Crane Operator	Cement Finisher	Electrician	Plumber	Total / Average
<i>Dollars per Hour</i>						
Average - Ontario CMAs						
Q2 2014	50.44	52.78	45.83	58.95	56.50	52.90
Q2 2024	62.85	62.22	57.15	76.07	73.85	66.43
Increase: 2015-2024	12.42	9.44	11.32	17.12	17.35	13.53
Average Monthly \$ Increase	0.10	0.08	0.09	0.14	0.14	0.11
Average Monthly % Increase	0.18%	0.14%	0.18%	0.21%	0.22%	0.19%

Source: Altus Group Economic Consulting based on CANSIM, Table 327-0003

FIGURE A7: CALCULATION OF OFFICE RENT INFLATION, NON-RESIDENTIAL DEVELOPMENT, ONTARIO CMAS, 2013-2023

Rental	<u>Toronto</u>	<u>Barrie</u>	<u>Brantford</u>	<u>Sudbury</u>	<u>Guelph</u>	<u>Hamilton</u>	<u>Kingston</u>	<u>Kitchener- Waterloo</u>	<u>London</u>	<u>Oshawa</u>	<u>Ottawa</u>	<u>Peterboro- ugh</u>	<u>St. Catharines- Niagara</u>	<u>Thunder Bay</u>	<u>Windsor</u>
2013	1131	1004	814	841	916	854	994	906	848	955	939	873	822	787	699
2023	1826	1540	1348	1232	1588	1493	1519	1574	1358	1566	1442	1325	1330	1221	1128
% Chg	61.5%	53.4%	65.6%	46.5%	73.4%	74.8%	52.8%	73.7%	60.1%	64.0%	53.6%	51.8%	61.8%	55.1%	61.4%
Annual % Chg	4.9%	4.4%	5.2%	3.9%	5.7%	5.7%	4.3%	5.7%	4.8%	5.1%	4.4%	4.3%	4.9%	4.5%	4.9%
Chg	695.00	536.00	534.00	391.00	672.00	639.00	525.00	668.00	510.00	611.00	503.00	452.00	508.00	434.00	429.00
Annual Chg	69.50	53.60	53.40	39.10	67.20	63.90	52.50	66.80	51.00	61.10	50.30	45.20	50.80	43.40	42.90
Monthly Chg	5.79	4.47	4.45	3.26	5.60	5.33	4.38	5.57	4.25	5.09	4.19	3.77	4.23	3.62	3.58

Source: Altus Group, based on Altus Data Studio

FIGURE A8: CALCULATION OF MONTHLY COST OF SITE PLAN DELAY, RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT, ONTARIO CMAS, 2024

	Monthly Cost of Time Associated with Site Plan Review									Total as % of Construction Costs
	Municipalities	Applicants				End Users				
	Delayed Tax Revenue	Additional Taxes	Carrying Costs of Financing	Cost Inflation - Construction	Cost Inflation - Wages	Development Charges	Lost Equity	Increased Rents	Total	
Residential Apartment Building										
Toronto	27,805	3,426	9,428	107,367	46,217	26,897	29,684	290	251,114	0.80%
Barrie	18,257	1,530	9,428	107,367	46,217	14,288	24,821	223	222,131	0.71%
Brantford	19,643	1,206	9,428	107,367	64,127	5,086	31,026	223	238,106	0.76%
Greater Sudbury	22,790	1,402	9,428	107,367	65,214	617	15,513	163	222,494	0.71%
Guelph	27,691	573	9,428	107,367	63,514	724	24,201	280	233,777	0.75%
Hamilton	28,338	2,108	9,428	107,367	64,127	10,501	31,026	266	253,162	0.81%
Kingston	24,446	1,402	9,428	107,367	73,630	3,122	15,513	219	235,127	0.75%
KW-Cambridge	20,764	1,338	9,428	107,367	63,514	4,922	22,960	278	230,571	0.74%
London	26,420	1,402	9,428	107,367	65,249	1,482	15,513	213	227,073	0.73%
Oshawa	42,920	718	9,428	107,367	46,217	29,031	24,821	255	260,757	0.83%
Ottawa	18,546	1,402	9,428	107,367	73,630	6,126	24,821	210	241,529	0.77%
Peterborough	30,813	1,402	9,428	107,367	46,217	7,735	21,719	188	224,870	0.72%
St. Catharines-Niagara	35,226	1,514	9,428	107,367	66,439	37,232	37,232	212	265,236	0.85%
Thunder Bay	22,350	1,402	9,428	107,367	68,092	-	15,513	181	224,334	0.72%
Windsor	19,565	1,402	9,428	107,367	66,613	4,487	15,513	179	224,554	0.72%
Office Building										
Toronto	21,597	3,426	2,485	52,940	28,051	43,876	n.a.	1,589	153,963	0.91%
Barrie	13,273	1,530	2,485	52,940	28,051	7,661	n.a.	1,589	107,528	0.64%
Brantford	19,330	1,206	2,485	52,940	38,921	4,165	n.a.	1,589	120,635	0.71%
Greater Sudbury	20,341	1,402	2,485	52,940	39,581	-	n.a.	1,589	118,337	0.70%
Guelph	25,889	573	2,485	52,940	38,549	7,940	n.a.	1,589	129,964	0.77%
Hamilton	19,882	2,108	2,485	52,940	38,921	10,200	n.a.	1,589	128,124	0.76%
Kingston	18,032	1,402	2,485	52,940	44,689	-	n.a.	1,589	121,136	0.72%
KW-Cambridge	27,183	1,338	2,485	52,940	38,549	20,637	n.a.	1,589	144,721	0.86%
London	18,645	1,402	2,485	52,940	39,602	12,179	n.a.	1,589	128,841	0.76%
Oshawa	12,778	718	2,485	52,940	28,051	45,317	n.a.	1,589	143,878	0.85%
Ottawa	20,384	1,402	2,485	52,940	44,689	15,094	n.a.	1,589	138,582	0.82%
Peterborough	18,178	1,402	2,485	52,940	28,051	5,673	n.a.	1,589	110,317	0.65%
St. Catharines-Niagara	15,601	1,514	2,485	52,940	40,325	9,855	n.a.	1,589	124,307	0.74%
Thunder Bay	20,557	1,402	2,485	52,940	41,328	-	n.a.	1,589	120,300	0.71%
Windsor	24,217	1,402	2,485	52,940	40,430	9,216	n.a.	1,589	132,278	0.78%

Source: Altus Group Economic Consulting

FIGURE A9: CHANGE IN MONTHLY COSTS, ITEMIZED, ONTARIO, 2024

	<i>Residential</i>					<i>Non-Residential</i>				
	2018*	2024 at prior methodology	2024 Actual	Change 2018-2024 Actual	Change 2018-2024 Actual	2018*	2024 at prior methodology	2024 Actual	Change 2018-2024 Actual	Change 2018-2024 Actual
Municipalities	\$	\$	\$	\$	%	\$	\$	\$	\$	%
Delayed Tax Revenue	32,587	21,278	21,278	(11,309)	(35)	16,833	24,060	24,060	7,227	43
Applicants										
Additional Taxes	5,589	4,448	4,448	(1,142)	(20)	5,589	4,448	979	(4,610)	(82)
Carrying Costs of Financing	91,175	137,617	14,753	(76,422)	(84)	34,191	74,313	3,012	(31,178)	(91)
Cost Inflation - Construction	40,049	107,367	107,367	67,318	168	16,365	52,940	52,940	36,575	224
Cost Inflation - Wages	54,035	57,828	46,217	(7,818)	(14)	22,284	23,800	28,051	5,768	26
Total Applicants	190,848	307,260	172,785	(18,064)	(9)	78,428	155,501	84,983	6,555	8
End Users										
Development Charges	12,573	51,134	51,134	38,561	307	3,036	25,762	25,762	22,726	748
Lost Equity	36,496	29,684	29,684	(6,812)	(19)	--	0	--	--	--
Increased Rents	1,026	1,026	0	(1,026.0)	(100.0)	1,875	1,589	1,589	(286.5)	(15.3)
Total End Users	50,095	81,844	80,818	30,724	61	4,911	27,351	27,351	22,439	457
Total Costs	273,530	410,382	274,881	1,351	0	100,172	182,852	136,393	36,221	36

*Based on average of a high and low scenario

¹ Assuming 50% of occupants of condominium apartments are first-time home buyers that are currently renting their dwelling

Source: Altus Group Economic Consulting

Two major methodology changes were made:

- Cost of financing. The prior edition calculated financing costs off the estimated total construction costs of the project. This report calculates financing cost off the cost of land only.
- Labour wage inflation – the structure of the Canadian economy has changed since the time of the last report. It is now estimated that fewer hours of labour are needed to build each development than was previously assumed for both scenarios. In 2018, it was assumed that the investment to build 100-units would require 295 full-time equivalent jobs (FTEs). It is now estimated that 236 FTEs would be required.