

# Energy Efficiency Design Summary (for Part 3 Buildings)

Applications After December 31, 2017



Project Address: \_\_\_\_\_ Application Number: \_\_\_\_\_

This form and the documentation summarized in the table below must be submitted with the permit application for **all new Part 3 buildings and additions submitted after December 31, 2017**. All forms are to be completed and signed by the individual(s) who reviews and takes responsibility for the energy efficiency aspects of this project.

Select Path <sup>(1)</sup>	Compliance Path Description	Required Documentation <sup>(2)</sup>	Submission on Format <sup>(3)</sup>
-	<u>Applies to all projects</u>	<input type="checkbox"/> Air barrier section and detail drawings <input type="checkbox"/> Heat loss / gain calculations <input type="checkbox"/> Ventilation rate calculations	Electronic
A <input type="checkbox"/>	Exceed by not less than <u>17.5%</u> the energy efficiency levels attained by conforming to the <u>ASHRAE 90.1-2010</u> per 12.2.1.2.(2)(a) and Division 1 of SB-10 1.1.2.1.(1)(b)	<input type="checkbox"/> MMA "Form A" <input type="checkbox"/> ASHRAE 90.1 Mandatory Provision Checklists: MMA Form 5.4                      MMA Form 8.4 MMA Form 6.4                      MMA Form 9.4 MMA Form 7.4                      MMA Form 9.5 <input type="checkbox"/> Energy simulation output report including: a. Summary of design inputs b. Annual energy consumption summary for proposed and reference buildings <input type="checkbox"/> CO <sub>2</sub> e emission calculations <sup>(4)</sup> <input type="checkbox"/> Peak electric demand calculations <sup>(5)</sup>	Electronic
B <input type="checkbox"/>	Achieve the energy efficiency levels attained by conforming to <u>ASHRAE 90.1-2013 and Chapter 2 in Division 3 of SB-10</u>	<input type="checkbox"/> "Project Information" form <input type="checkbox"/> ASHRAE 90.1-2013 Mandatory Checklists: MMA Form 5.4                      MMA Form 8.4 MMA Form 6.4                      MMA Form 9.4 MMA Form 7.4                      MMA Form 9.5 <input type="checkbox"/> CO <sub>2</sub> e emission calculations <sup>(4)</sup> <input type="checkbox"/> Peak electric demand calculations <sup>(5)</sup>	Electronic
C-1 <input type="checkbox"/>	Exceed by not less than <u>13%</u> the energy efficiency levels attained by conforming to the <u>2011 NECB and Chapter 3 in Division 2 of SB-10</u> per 12.2.1.2.(2)(a) and Division 1 of SB-10 1.1.2.1.(1)(d)	<input type="checkbox"/> NECB forms <input type="checkbox"/> Energy simulation output report including: a. Summary of design inputs b. Annual energy consumption summary for proposed and reference buildings <input type="checkbox"/> CO <sub>2</sub> e emission calculations <sup>(4)</sup> <input type="checkbox"/> Peak electric demand calculations <sup>(5)</sup>	Electronic
C-2 <input type="checkbox"/>	Achieve the energy efficiency levels attained by conforming to the <u>2015 NECB and Chapter 3 in Division 3 of SB-10</u>	<input type="checkbox"/> "Project Information" form <input type="checkbox"/> 2015 NECB forms <input type="checkbox"/> CO <sub>2</sub> e emission calculations <sup>(4)</sup> <input type="checkbox"/> Peak electric demand calculations <sup>(5)</sup>	Electronic
D <input type="checkbox"/>	Achieve the energy efficiency levels attained by conforming to <u>Section 7 of ASHRAE 189.1-2014</u> , excluding Sections 7.2.b, 7.4.7.3, 7.4.8, & 7.5	<input type="checkbox"/> "Project Information" form <input type="checkbox"/> All Relevant MMA Forms <input type="checkbox"/> CO <sub>2</sub> e emission calculations <sup>(4)</sup> <input type="checkbox"/> Peak electric demand calculations <sup>(5)</sup>	Electronic

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If the building is exempt from the energy efficiency requirements of Part 12 and MMAH Supplementary Standard SB-10, please describe the reason and provide the relevant Ontario Building Code reference (see document "Buildings Exempt from Compliance with Supplementary Standard SB-10"):

## Notes:

1. Part 12 and MMA Supplementary Standard SB-10 (December 22, 2016) outline the compliance path options for Part 3 building permit applications made after December 31, 2017.
2. The MMA SB-10 compliance checklist forms for use after December 31, 2017 are available for download to [patrick.andres@guelph.ca](mailto:patrick.andres@guelph.ca) or via the link on the City of Guelph website: <http://guelph.ca/building>
3. All documents must include the permit application number and project address. Electronic copies of documentation must be submitted to [patrick.andres@guelph.ca](mailto:patrick.andres@guelph.ca) at the time of initial permit application. Please provide files as PDFs.
4. Annual CO<sub>2</sub>e emission requirements for paths B, C-2 and D are deemed to be satisfied if the prescriptive requirements set in 1.1.2.2.(2), (3), or (4) are met. If energy efficiency compliance is demonstrated using A-2, C-1, either the Energy Cost Budget Method of ASHRAE 90.1- 2013 or the Building Energy Performance Compliance Path of the 2015 NECB, calculations for annual CO<sub>2</sub>e emissions must be determined in accordance with good engineering practice and using the CO<sub>2</sub>e emission factors listed in Division 3, 1.1.2.2 of MMAH Supplementary Standard SB-10.
5. Peak electrical demand requirements for paths B, C-2 and D are deemed to be satisfied if the prescriptive requirements set in 1.1.2.3.(1), (2), or (3) are met. If energy efficiency compliance is demonstrated using A-2, C-1, either the Energy Cost Budget Method of ASHRAE 90.1- 2013 or the Building Energy Performance Compliance Path of the 2015 NECB, peak electrical demand must be calculated and shall not exceed the peak electric demand of the corresponding budget or reference building.

## **OR**

Demonstrate that the prescriptive requirements set in 1.1.2.1 have been met for energy efficiency of cooling equipment, fan power limitations for cooling and ventilation systems, and interior lighting power density, where the building's peak electric demand happens in summer or the space and water heating equipment, fans, pumps and interior lighting power density, where the building's peak electric demand happens in winter.