R.M. of Pense No. 160
Box 190, Pense, Saskatchewan S0G 3W0
Phone: (306)345-2303; Fax: (306)345-2583
Email: rm160@sasktel.net, Website: www.pense160.com

R.M. of Pense No. 160, Saskatchewan

APPLICATION FOR BUILDING PERMIT

I hereby make application for a permit to _____ construct / _____ alter / _____ reconstruct a building according to the information below and to the plans and documents attached to this application.

Civic address or location of work _____
Legal description - Lot _____ Block _____ Plan_____
Owner _____ **Address**_____
Telephone _____ **Fax** _____ **Email**_____
Designer _____ Address _____ Telephone_____
Contractor _____ Address _____ Telephone_____
Nature of work _____
Intended use of building_____
Size of building _____ Length _____ Width _____ Height_____
Number of storeys _____ Fire escapes_____
Number of stairways _____ Width of stairway_____
Number of exits _____ Width of exits_____

Foundation Soil Classification and Type _____
Footings _____ Material _____ Size_____
Foundations _____ Material _____ Size_____
Exterior Walls _____ Material _____ Size _____
Roof _____ Material _____ Size_____
Studs _____ Material _____ Spacing_____
Floor Joists _____ Material _____ Spacing_____
Girders _____ Material _____ Spacing_____
Rafters _____ Material _____ Spacing_____
Chimneys _____ Number _____ Size_____
Material _____ Thickness_____
Heating _____ Lighting _____ Plumbing_____

Estimated value of construction (excluding site) $_____
Building area (area of largest storey) _____ square metres
Fee for building permit $_____

I hereby agree to comply with the Building Bylaw of the local authority and acknowledge that it is my responsibility to ensure compliance with the Building Bylaw of the local authority and with any other applicable bylaws, acts and regulations regardless of any plan review or inspections that may or may not be carried out by the local authority or its authorized representative.

_____ _____

Date Signature of Owner or Owner's Agent

MUNICODE SERVICES LTD

SECTION 9.36 – ENERGY EFFICIENCY COMPLIANCE

PERFORMANCE PATH

Project Information

Address: _____ BPA Number (Office use only) _____

Occupancy Class: _____ Floor Area (m^2): _____ Climate Zone: _____

Energy performance compliance applies only to:

- Houses with or without a secondary suite;
- Buildings containing only dwelling units and common spaces whose floor area does not exceed 20% of the floor area of the building; and
- Additions where the total gross floor area of the proposed addition(s) is less than $10m^2$

Form to be completed by a *competent person*

Competent person is defined as a person who is familiar and fluent with building design under Section 9.36 of the NBC and acceptable to the Authority Having Jurisdiction.

*****The full modelling report generated by an ANSI/ASHRAE 140 compliant software package or Hot 2000 software is required to be submitted.**

Input parameters		Reference Model	Proposed Model
Airtightness (air exchanges per hour @ 50 Pa)			
Thermal mass (MJ/m^2•°C)			
Ventilation rate (l/s)			
HRV Efficiency			
Gross wall area of above grade walls			
Fenestration and door to wall ratio (FDWR) – reference (%)			
Direction of front elevation (clearly indicate one)		☐ N ☐ NE ☐ E ☐ SE ☐ S ☐ SW ☐ W ☐ NW	
Area of windows and doors	Front elevation (m^2)		
	Rear elevation (m^2)		
	Left elevation (m^2)		
	Right elevation (m^2)		
	Total area of windows (m^2)		
	Total area of opaque doors (m^2)		
Energy use (GJ)			

Software Information

Software title		Version	
Is software Hot2000 or ANSI/ASHRAE 140 compliant?	☐ Yes	☐ No	
Is the Hot2000 program in general mode or ERS mode?	☐ General	☐ ERS	☐ N/A
Confirm that the proposed house is at least 5% more efficient than the reference house when ERS mode is used in Hot2000 software	☐ Yes	☐ No	☐ N/A

Declaration

I hereby certify that the calculations submitted were prepared in full accordance with Subsection 9.36.5 of the 2015 NBC or the EnerGuide Rating System and the operation procedures of the software.

_____
Print Name

_____ _____
Business Name Address

_____ _____
Email Phone Number

_____ _____
Signature Date

MUNICODE SERVICES LTD

SECTION 9.36 – ENERGY EFFICIENCY COMPLIANCE

PRESCRIPTIVE PATH – ZONE 7A

Project Information		
Address: _____		_____ BPA Number (Office use only)
Occupancy Classification(s): _____	Floor Area(s) (m^2): _____	Climate Zone: 7A

Applies to the design and construction of all *buildings* and *additions* including:

- *Buildings* of *residential occupancy* to which Part 9 applies
- *Buildings* containing *business and personal services, mercantile or low hazard industrial* occupancies to which Part 9 applies to whose combined floor area does not exceed 300 m^2, excluding parking garages serving residential occupancies
- *Buildings* containing any mixture of the above two
- *Additions* where the total gross floor area of the proposed addition(s) is more than 10m^2

Form to be completed by a *competent person*

Competent person is defined as a person who is familiar and fluent with building design under Section 9.36 of the NBC and acceptable to the Authority Having Jurisdiction

***All calculations are required to be completed by a *competent person* and attached to this form.**

HRV / ERV: ☐ Yes ☐ No

Effective Thermal Resistance of Above-Ground Opaque Building Assemblies (RSI)			
Assembly	**w/ HRV**	**w/o HRV**	**Proposed**
Ceilings below attics	8.67	10.43	
Cathedral / Flat roofs	5.02	5.02	
Walls	2.97	3.08	
Rim joists	2.97	3.08	
Floors over unheated spaces	5.02		
Floors over garage	4.86		
Thermal Characteristics of Fenestration, Doors and Skylights (U)			
Assembly	**Efficiency**		**Proposed**
Windows & Doors	Maximum U-Value 1.60 or Minimum Energy Rating ≥ 25		
One door exception	Maximum U-Value 2.60		
Access hatches	Maximum U-Value 0.38		
Skylights	Maximum U-Value 2.70		
Effective Thermal Resistance of Building Assemblies Below-Grade or in Contact with the Ground (RSI)			
Assembly	**w/ HRV**	**w/o HRV**	**Proposed**
Foundation Walls	2.98	3.46	
Slab-on-Grade with an Integral Footing	2.84	3.72	
Unheated Floors Below Frost Line	uninsulated	uninsulated	
Unheated Floors Above Frost Line	1.96	1.96	
Heated Floors	2.84	2.84	

☐ **Calculations of RSI_{eff} for the above assemblies have been submitted as required.**

HVAC Equipment Performance Requirements				
Equipment	**Capacity KW**	**Standard**	**Min. Efficiency**	**Proposed**
Gas Fired Furnace w or w/o A/C	≤ 65.9	CSA P.2	AFUE ≥ 92%	
	> 65.9 & ≤ 117.23	CAN/CSA-P.8	E_t ≥ 78.5%	
Electric Boiler	≤ 88	(1)		
Gas Fired Boiler	≤ 88	CSA P.2	AFUE ≥ 90%	
	> 88 & ≤ 117.23	AHRI BTS	E_t ≥ 83%	
Other				
Heat Loss / Gain Calculations	Calculations were prepared in conformance with CSA F280-12			☐ Yes BTU:
Nomenclature	**AFUE**= annual fuel utilization efficiency, **E_t**= thermal efficiency			

Water Heaters Performance Requirements				
Equipment	**Capacity KW**	**Standard**	**Min. Efficiency**	**Proposed**
Tank Storage Electric	≤ 12 kW (50 L to 270 L capacity)	CAN/CSA-C191	SL ≤ 35 + 0.20V (top inlet)	
			SL ≤ 40 + 0.20V (bottom inlet)	
	≤ 12 kW (> 270 L and ≤ 454 L capacity)		SL ≤ (O.472V) - 38.5 (top inlet)	
			SL ≤ (0.472V) - 33.5 (bottom inlet)	
	>12 kW (>75 L capacity)	ANSI Z21.10.3/CSA 4.3 and DOE 10 CFR, Part 431, Subpart G	S = 0.30 + 27/V_m	
Tank Storage Gas Fired	< 22 kW	CAN/CSA-P.3	EF ≥ 0.67 - 0.0005V	
	≥ 22 kW	ANSI Z21.10.3/CSA 4.3	E_t ≥80% and standby loss ≤ rated Input/800 + 16.57√(V)	
Tankless Gas Fired	≤ 73.2 kW	CAN/CSA-P.7	EF ≥ 0.8	
	> 73.2 kW	ANSI Z21.10.3/CSA 4.3 and DOE 10 CFR, Part 431, Subpart G	E_t ≥ 80%	
Other				
Nomenclature	**EF** = energy factor in %/h, **E_t** = thermal efficiency **S** = standby loss in %h, **SL** = standby loss in W, **V**= volume **V_m** = measured storage volume in US gallons			

(1) Must be equipped with automatic water temperature control. No standard addresses the performance efficiency; however their efficiency typically approaches 100%

Declaration

I hereby certify that the calculations submitted were prepared in full accordance with Section 9.36.

_____

Print Name

_____ _____

Signature Date

MUNICODE SERVICES LTD

SECTION 9.36 – ENERGY EFFICIENCY COMPLIANCE

TRADE-OFF PATH

Project Information

Address: _____		_____ BPA Number (Office use only)
Occupancy Classification(s): _____	Floor Area(s) (m^2): _____	Climate Zone: _____

***** Note: In addition to the submission of trade-off calculations, the prescriptive form shall be completed and submitted *****

Applies to the design and construction of all *buildings* and *additions* including:

- *Buildings* of *residential occupancy* to which Part 9 applies;
- *Buildings* containing *business and personal services, mercantile or low hazard industrial* occupancies to which Part 9 applies to whose combined floor area does not exceed 300 m^2, excluding parking garages serving residential occupancies.;
- *Buildings* containing any mixture of the above two.
- *Additions* where the total gross floor area of the proposed addition(s) is more than 10 m^2.

Form to be completed by a *competent person*

Competent person is defined as a person who is familiar and fluent with building design under Section 9.36 of the NBC and acceptable to the Authority Having Jurisdiction.

Trade-off

Please check off all that apply.

☐ **Opaque to opaque** – One or more above-ground opaque building envelope assemblies are permitted to be less than required, provided one or more above-ground opaque building envelope assemblies are increased to more than required.

- Walls and joist type roofs must maintain minimum 55% of the required RSI_{eff}
- All other assemblies must be minimum 60% of the required RSI_{eff}
- The sum of the areas of all traded assemblies divided by their RSI_{eff} must be less than or equal to what it would have been if all assemblies had met 9.36.2.6

☐ **Transparent to transparent** – One or more windows are permitted to be less than required, provided one or more windows are increased to be more than required.

- The traded windows must have the same orientation.
- The sum of the areas of all traded windows divided by their RSI_{eff} must be less than or equal to what it would have been if all windows had met 9.36.2.7

☐ **Opaque to transparent** – This option is meant to allow reduced insulation for factory-constructed buildings with a low floor to ceiling height and a fenestration and door area to gross wall area ratio of 15% or less.

☐ **All calculations are attached with this form as required.**

☐ **The location and extent of assemblies used in the calculation are clearly identified on the drawings by hatch.**

Declaration

I hereby certify that the calculations submitted were prepared in full accordance with Section 9.36.

_____
Print Name

_____ _____
Signature Date

MUNICODE SERVICES LTD

NATIONAL ENERGY CODE FOR BUILDINGS

DRAWING REQUIREMENTS

NECB submissions require the following items listed below to be shown on drawings. For an extensive list of drawing details for NECB Compliance see Subsection 2.2.2 of Division C of the NECB. Note items can be shown on NBC drawings sets or a separate NECB drawing set.

Part	Prescriptive Path
3	• Floor plan of the building giving the floor area of conditioned spaces and gross lighted area of each storey • U-value overall thermal transmittance of all above-ground opaque building assemblies and assemblies in contact with the ground; provide assembly details and U-values in walls sections and assembly descriptions on drawings • U-value overall thermal transmittance of all fenestration and doors provide in window schedule. Framing type and spacing must be included in effective thermal transmittance calculation. Note centre of glass value unacceptable; provide overall heat transfer for entire unit considering frame, glass edge and centre of glass • Thermal bridging calculations to be detailed in table format including transmittance type (clear field, linear interface, point interface), transmittance description, transmittance area or length and transmittance values • Air leakage: detail air barrier on wall sections, details and/or specifications. Note building envelope shall be designed with a continuous air barrier system. Provide leakage for fixed fenestration, as well as for operable windows/skylights/doors • Indoor design temperatures for all spaces
4	• Lighting power density (LPD) requirements for interior and exterior; indicate space-by-space or building area method and a summary table of calculated wattages/LPD. Table indicating number of fixtures and wattages along with total Lighting Power to be included in drawings • Clearly indicate equipment to be excluded from interior calculation • Show interior primary & secondary side lighted areas. Also show day lighted areas under skylights • Details of required interior and exterior lighting controls and lighting power including exits, entrances and facades. Show controls/sensors on drawings with symbol for interior and exterior spaces
5	• HVAC equipment and efficiency; list individual components in equipment schedules, including any economizers • Damper locations to be indicated on drawings • Duct insulation to be included on drawing or specifications. Temperature difference and insulation thermal resistance values shown • Piping insulation, to be included on drawings or specifications. Design operating temperature and piping insulation thickness values required. • Show type(s) of fan systems and calculate power demand. Show commercial kitchen ventilation. • Show type(s) of hydronic systems and calculate power demand of pumps • Table of HVAC controls included • Exhaust air system calculations shown, and energy recovery system indicated
6	• Service Water Equipment and Efficiency; list in equipment schedules • Service water storage tank insulation value shown • Piping insulation to be included on drawings or specifications. Piping size and insulation thickness to be included for conditioned and unconditioned spaces on drawings or specifications. • Shower and lavatory flow rates indicated • Remote heater details provided, when required • Pressure booster system details provided when required • Pool heater, pump, and cover info included when applicable
7	• Monitoring installation to be described and indicated on drawings if applicable (ie > 250 kVA)
	Trade-off Path
3,4,5 & 6	• Prescriptive items **(as stated above)** • Trade-off calculations* Note Part 7 does not permit trade-offs to be used
	Performance Path
8	• Prescriptive items **(as stated above)** • Modelling Report

*The above drawing requirements are only for NECB review. All other NBC drawings requirements still apply.

As of January 1, 2019, the National Energy Code for Buildings (NECB) 2017 Edition is adopted within the Province of Saskatchewan.

Application to Buildings

As per Article 1.1.1.1 of NECB 2017, the code applies to the design and construction of all *new buildings* and *additions* including:

- Buildings classified under Part 3 of the National Building Code (NBC)
- Buildings classified under Part 9 of the NBC containing non-residential occupancies whose combined floor area exceeds 300 m^2 or medium-hazard industrial occupancies (Group F, Division 2)
- Any building to which Section 9.36 of the NBC applies but the owner/applicant proposed to design and construct to the NECB.

New Building means the base building and the initial tenant development(s).

Examples:

- If a building and development permit application (BPA) is submitted for an office building and the BPA includes the development of the floor areas, the BPA for the office building is considered the *new building* and will be required to address NECB compliance.
- If a BPA is submitted for strip mall that is designed without tenant development of the interior floor area, the BPA for the strip mall and the future BPA's for the initial tenant development will be considered the *new building* and will be required to address NECB compliance.

Addition means any conditioned space that is added to an existing building and that increases the building's floor surface area by more than 10m^2. (NECB 2017 defined term)

Application to Existing Buildings

Existing buildings for which the building permit application was made prior to January 1, 2019 are not required to address NECB compliance.

Design Professional Involvement for NECB Compliance

*Existing Design Professional requirements remain for NBC

A building designed to the NECB shall have a Design Professional, Architect or Engineer, licensed to practice in the province of Saskatchewan complete the design or design review of the building and building systems and inspections of construction to ensure compliance with the design.

A coordinating NECB design professional is required to be responsible for coordinating the design work associated with energy compliance and the building and development permit process. The coordinating NECB design professional is required to fill out and sign the NECB Project Summary and the associated compliance report. Other design professionals may be involved in specific parts of NECB; their information will be added to the NECB Project Summary.

Compliance Path	Design Professional Involvement	Documents to be sealed	Submission Requirements
Prescriptive	Design professional can either seal for entire compliance or Parts of compliance. Example: Project may have single design professional sealing for entire NECB or project may have architect seal for Part 3 and mechanical engineer seal for Part 5 & 6 and electrical engineer seal for Part 4 & 7.	Drawings that detail NECB compliance. *see NECB drawings handout	• Project Summary • Prescriptive Report • Commitment Letter for Field Review (Part 3-7)
Trade-off	Design professional can either seal for entire compliance or Parts of compliance (similar to prescriptive). Any Parts that do not use trade-off will have to comply with prescriptive. Note Part 7 does not permit trade-off.	Trade-off calculations and drawings that detail NECB compliance.	• Project Summary • Trade-off Report • Prescriptive Report • Commitment Letter for Field Review (Part 3-7)
Performance	A single design professional has to take responsibility for the model and compliance with NECB. Design professional can seal for parts of compliance (similar to prescriptive).	Performance modelling report that details NECB compliance for construction.	• Project Summary • Performance Report • Energy Model Report • Commitment Letter for Field Review (Part 3-7)

MUNICODE SERVICES LTD

NATIONAL ENERGY CODE FOR BUILDINGS

PERFORMANCE REPORT

Project Information

Project Address

BPA Number (Office use only)

Coordinating NECB Design Professional Name

Compliance Requirements

A performance model report is to be submitted as part of the building and development permit application (BPA). If construction on site differs significantly from the approved set of plans and model, a revised performance report and model report are required to be submitted for review.

The Project Summary and Performance Report shall be accompanied by:

- Sealed energy model report that includes all relevant information as required by **NECB Division C – Article 2.2.2.8**
- Drawings/details that correspond to the model inputs as well as the NECB Drawing Requirements

Software and Model Information

Software used

Software version

Confirmation that software is ANSI/ASHRAE 140 compliant ☐ **Yes** ☐ **No**

Weather file

Climate zone

Exterior lighting design ☐ **Part 8** ☐ **Part 4 Prescriptive** **(Fill out Prescriptive Report for Exterior Lighting)**

Part 3 Modeled as:	**Part 4 Modeled as:**	**Part 5 Modeled as:**	**Part 6 Modeled as:**	**Part 7 Modeled as:**
☐ **Per design or**	☐ **Per design or**	☐ **Per design or**	☐ **Per design or**	☐ **Per design or**
☐ **Part 3 Prescriptive**	☐ **Part 4 Prescriptive**	☐ **Part 5 Prescriptive**	☐ **Part 6 Prescriptive**	☐ **Part 7 Prescriptive**
(Fill out prescriptive report for this Part)	**(Fill out prescriptive report for this Part)**	**(Fill out prescriptive report for this Part)**	**(Fill out prescriptive report for this Part)**	**(Fill out prescriptive report for this Part)**

Building Energy Summary

	Proposed	**Reference**
Electricity (MJ/yr)		
Fossil fuel (MJ/yr)		
Annual Energy Consumption (MJ)		

Compliance Confirmation

Reference building in model has been updated to NECB 2017	☐ Yes ☐ No
Building energy performance model is in compliance with Article 8.4.1.2.	☐ Yes ☐ No
Building energy performance model corresponds to permit application drawing set	☐ Yes ☐ No
Back-up HVAC and SWH systems have been designed to Section 5.2. and 6.2.	☐ Yes ☐ No ☐ N/A – no back-up
Protection of insulation materials is in compliance with Article 3.2.1.1.	☐ Yes ☐ No
Air leakage is in compliance with Subsection 3.2.4.	☐ Yes ☐ No
Effective Thermal Transmittance (including thermal bridging calculations) are in compliance with Article 3.1.1.5 and 3.1.1.7	☐ Yes ☐ No

Thermal Bridging - Design Professional to provide brief description of how thermal bridging was evaluated:

Declaration

Signature of Coordinating NECB Design Professional who has completed this form:

Signature

Date

MUNICODE SERVICES LTD

NATIONAL ENERGY CODE FOR BUILDINGS

PRESCRIPTIVE REPORT – ZONE 7A

Project Information

Project Address

BPA Number

Coordinating NECB Design Professional Name

Prescriptive compliance requires drawings that detail items referred to in the NECB Drawings Requirements handout.

Part 3 – Building Envelope

For Additions: fenestration is being calculated for (select one): ☐ **Addition only** ☐ **Addition & existing combined**

General		Proposed	NECB Limit	
	Gross wall area (m^2)		N/A	
	Total window area (m^2)		N/A	
	Total exterior door area (m^2)		N/A	
	Gross roof area (m^2)		N/A	
	Total skylight area (m^2)		< 2% of gross roof area	
	Exposed floor areas (m^2)		N/A	
			HDD @ 18°	HDD @ 15°
Overall Thermal Transmittance – U (W/(m^2·K))	FDWR (%)**		≤ ____	≤ ____
	Opaque walls (above ground)		≤ 0.210	≤ 0.247
	Opaque walls (in contact with ground)		≤ 0.284	≤ 0.284
	Roofs (above ground)		≤ 0.138	≤ 0.156
	Roofs (in contact with ground)		≤ 0.284	≤ 0.284
	Floors (above ground)		≤ 0.162	≤ 0.183
Air Leakage (L/(s·m^2))	Floors (in contact with ground)		≤ 0.757 for 1.2 m	≤ 0.757 for 1.2 m
	Fixed fenestration and curtain walls		≤ 0.20	
	Operable windows, skylights, and doors		≤ 0.5	
	Operable revolving and auto sliding doors		≤ 5.0	

Part 4 – Lighting

Proposed building IILP (Installed Interior Lighting Power) (kW) (not to exceed the ILPA below)

Interior Lighting Power Method: (Select One Below)

☐ ILPA (Interior Lighting Power Allowance - building area method)

Lighting power density (W/m^2)

Gross lighted Area (m^2)

OR

Proposed ILPA building area method (kW)

☐ ILPA (Interior Lighting Power Allowance – space-by-space method)*

*Provide a detailed line-by-line breakdown of spaces, their floor area (m^2), the associated lighting power densities (W/m^2) and the resulting lighting power allowances (kW)

Proposed ILPA space-by-space method (kW)

Exterior Lighting Power: (all values below to be in **Watts**)

Specific Lighting Allowance _____ + Portion of Basic Site Allowance _____ = {Table 4.2.3.1-C} (If multiple specific applications used in design, provide a table showing all}		Specific Total Exterior Allowance _____ ≥	Specific Installed Lighting _____
Sum of General Lighting Allowances _____ + Remaining Basic Allowance _____ = {Table 4.2.3.1-D}		General Total Exterior Allowance _____ ≥	General Installed Lighting _____
	Basic Site Allowance _____ {Table 4.2.3.1-B} (Sum of the portions of basic site allowance above are not to exceed this amount)		**Total Exterior Lighting Installed _____**

Interior lighting controls are designed in accordance with Subsection 4.2.2.	☐ Yes ☐ No
Exterior lighting controls are designed in accordance with Subsection 4.2.4.	☐ Yes ☐ No
Interior and exterior installed Lighting Power displayed in table format on the drawings	☐ Yes ☐ No
Interior and exterior lighting controls provided in a table format on the drawings	☐ Yes ☐ No

** FDWR to be determined by designer based on HDD for project municipality. Refer to **Municipality Data Information** for the permitted HDD.

Part 5 – Heating, Ventilating and Air-Conditioning Systems

	Proposed		NECB Limit	
	Constant Volume	Variable Air Volume	Constant Volume	Variable Air Volume
Fan system power demand (W/L/s))			≤ 1.6	≤ 2.65
Commercial kitchen design ventilation rate (L/s)			☐ < 1410 L/s ☐ Demand control provided	

Economizer system required in conformance with Articles 5.2.2.7.	☐ Yes ☐ No
Air economizer has been designed to Article 5.2.2.8. or Article 5.2.2.9.(circle one)	☐ Yes ☐ No
Temperature controls been designed in conformance with Subsection 5.2.8.	☐ Yes ☐ No
Type of ventilation system operation	☐ Continuous ☐ Non-continuous
Percentage of outdoor air at design airflow conditions (%)	_____
Energy recovery system required	☐ Yes ☐ No
Energy recovery system efficiency (%)	_____

Please provide details of proposed HVAC equipment and component specifications for the building, using the table below:
(Please note if more space is needed, please submit a separate list using the same format) Table 5.2.12.1

Component or Equipment	Cooling or Heating Capacity, kW	Standard	Rating Conditions	Performance Rating

Part 6 – Service Water Systems

	Proposed	NECB Limit
Shower heads (L/min)		≤ 7.6 L/min
Lavatories (L/min)		≤ Private 5.7 L/min ≤ Public 1.9 L/min

Please provide details of the proposed service water heating equipment specifications for the building, using the table below:
(Please note if more space is needed, please submit a separate list using the same format) Table 6.2.2.1.

Component or Equipment	Input	Capacity (L)	V_t (L)	Input/V_t (W/L)	Standard	Rating Conditions	Rated Performance

Part 7 – Power Systems

	Proposed	NECB Limit
Load carrying capacity (kVA)		☐ < 250 kVA ☐ Monitoring system provided

Please provide a description of each system, detailing its function, design details, and performance characteristics.

Compliance Confirmation

Effective thermal transmittance including the effects of thermal bridging has been calculated as per Article 3.1.1.7	☐ Yes	☐ No
Building energy prescriptive compliance meets NECB 2017	☐ Yes	☐ No
Drawings submitted are in conformance with NECB Drawings Requirements	☐ Yes	☐ No

Declaration

Signature of Coordinating NECB Design Professional who has completed this form:

_____ _____

Signature Date

MUNICODE SERVICES LTD

NATIONAL ENERGY CODE FOR BUILDINGS

PROJECT SUMMARY

This document outlines project compliance with National Energy Code for Building (NECB). The project summary, including NECB contact information, and the compliance report for the chosen path are to be submitted as part of the building and development permit application for new buildings and additions that require NECB compliance. See NECB Energy Compliance Handout for application to buildings and NECB Drawing Requirements Handout for additional information.

Project Information

Project Address: _____

_____
BPA Number (Office use only)

Coordinating NECB Design Professional Information (The coordinating NECB design professional will be responsible for coordinating the design work associated with energy compliance and the building and development permit process. The coordinating NECB Design Professional is required to sign the project summary and the associated compliance report).

Name: _____

Registered Business Name: _____

Address: _____
Unit Number Street City Province Postal Code

Email: _____ Phone/Cell # : _____

Basic Building Information

Building use: _____

Type of construction: ☐ New ☐ Addition ☐ Tenant Interior Development

If addition, NECB compliance for: ☐ Addition only ☐ Addition & existing

Building information: ☐ Heated ☐ Semi – heated

Vestibule: ☐ Yes ☐ No

Fill out the following details, if applicable:

_____ Building area (m^2)
_____ Building area of addition (m^2)
_____ Conditioned floor area (m^2)
_____ Semi-heated floor area (m^2)
_____ Unconditioned space (m^2)
_____ FDWR (%)

***Note: The prescriptive path for Part 3 is not permitted if FDWR exceeds the values listed in the Municipality Data Information**

Climate Zone for _____ (HDD below 18ºC): _____
(HDD below 15ºC): _____

Compliance Path Summary

Please indicate the compliance path for each Part below. The chosen compliance path requires the associated reports to be completed and submitted. Only one means of compliance is possible per Part.

Part 3: Building Envelope: ☐ **Prescriptive** or ☐ **Trade-Off** or ☐ **Performance**
Part 4: Lighting: ☐ **Prescriptive** or ☐ **Trade-Off** or ☐ **Performance**
Part 5: Heating, Ventilation and Air Conditioning Systems: ☐ **Prescriptive** or ☐ **Trade-Off** or ☐ **Performance**
Part 6: Service Water Heating Systems: ☐ **Prescriptive** or ☐ **Trade-Off** or ☐ **Performance**
Part 7: Electrical Power Systems and Motors: ☐ **Prescriptive** or ☐ **Performance**

Part 8: Performance Energy Model: ☐ **Performance Only**

Drawing requirements are detailed on the NECB Drawing Requirements

Declaration

Signature of Coordinating NECB Design Professional who has completed this form:

_____ _____
Signature Date

NECB Contact Information

Part 3: Building Envelope

Name: _____

Registered Business Name: _____

Address: _____
Unit Number Street City Province Postal Code

Email: _____ Phone/Cell#: _____

Part 4: Lighting

Name: _____

Registered Business Name: _____

Address: _____
Unit Number Street City Province Postal Code

Email: _____ Phone/Cell#: _____

Part 5: Heating, Ventilation and Air-Conditioning Systems

Name: _____

Registered Business Name: _____

Address: _____
Unit Number Street City Province Postal Code

Email: _____ Phone/Cell#: _____

Part 6: Service Water Heating Systems

Name: _____

Registered Business Name: _____

Address: _____
Unit Number Street City Province Postal Code

Email: _____ Phone/Cell#: _____

Part 7: Electrical Power Systems and Motors

Name: _____

Registered Business Name: _____

Address: _____
Unit Number Street City Province Postal Code

Email: _____ Phone/Cell#: _____

Part 8: Building Energy Performance (if Performance Compliance selected)

Name: _____

Registered Business Name: _____

Address: _____
Unit Number Street City Province Postal Code

Email: _____ Phone/Cell#: _____

Other:

_____

Name: _____

Registered Business Name: _____

Address: _____
Unit Number Street City Province Postal Code

Email: _____ Phone/Cell#: _____

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NATIONAL ENERGY CODE FOR BUILDINGS

TRADE-OFF REPORT – ZONE 7A

Project Information	
Project Address	BPA Number
Coordinating NECB Design Professional Name	

Trade-off compliance requires this report to be filled out for the Parts where trade-off compliance is used. Submit the Prescriptive Report if Prescriptive compliance is used for other Parts of the NECB.

Part 3 – Building Envelope *Not applicable to additions or semi-heated buildings as per Sentence 3.3.1.1.(2)			
General		**Proposed**	**NECB Limit**
	Gross wall area (m^2)		N/A
	Total window area (m^2)		N/A
	Total exterior door area (m^2)		N/A
	Gross roof area (m^2)		N/A
	Total skylight area (m^2)		N/A
	Exposed floor areas (m^2)		N/A
			HDD @ 18° / HDD @ 15°
Overall Thermal Transmittance – U ($W/(m^2 \cdot K)$)	FDWR (%)		N/A / N/A
	Opaque walls (above ground)		N/A / N/A
	Opaque walls (in contact with ground)		≤ 0.284 / ≤ 0.284
	Roofs (above ground)		N/A / N/A
	Roofs (in contact with ground)		≤ 0.284 / ≤ 0.284
	Floors (above ground)		N/A / N/A
Air Leakage ($L/(s \cdot m^2)$)	Floors (in contact with ground)		≤ 0.757 for 1.2 m / ≤ 0.757 for 1.2 m
	Fixed fenestration and curtain walls		≤ 0.20
	Operable windows, skylights, and doors		≤ 0.5
	Operable revolving and auto sliding doors		≤ 5
		Proposed ($U_{ip}*A_{ip}$)	**Reference** ($U_{ir}*A_{ir}$)
	Vertical (above ground portions)		
	Horizontal (above ground portions)		

Compliance Confirmation	
$U_{ip}A_{ip}$ is less than or equal to $U_{ir}A_{ir}$ in conformance with NECB Article 3.3.1.2	☐ Yes ☐ No
Effective thermal transmittance including the effects of thermal bridging has been calculated as per Article 3.1.1.7	☐ Yes ☐ No
Have you supplied the calculations determining the above values	☐ Yes ☐ No

Part 4 – Lighting

Exterior Lighting Power: (all values below to be in **Watts**)

Specific Lighting Allowance _____ + Portion of Basic Site Allowance _____ = {Table 4.2.3.1-C} (If multiple specific applications used in design, provide a table showing all}		Specific Total Exterior Allowance _____	≥ Specific Installed Lighting _____
Sum of General Lighting Allowances _____ + Remaining Basic Allowance _____ = {Table 4.2.3.1-D}		General Total Exterior Allowance _____	≥ General Installed Lighting _____
	Basic Site Allowance _____ {Table 4.2.3.1-B} (Sum of the portions of basic site allowance above are not to exceed this amount)		**Total Exterior Lighting Installed _____**

Interior Lighting Power: IILE - Installed Interior Light Energy (kW·h/a) (Proposed)	
ILEA -Interior Lighting Energy Allowance (kW·h/a) (Reference)	
Interior lighting controls are designed in accordance with Subsection 4.2.2.	☐ Yes ☐ No
Exterior lighting controls are designed in accordance with Subsection 4.2.4.	☐ Yes ☐ No
Interior and exterior Installed Lighting Power displayed in table format on the drawings	☐ Yes ☐ No
Interior and exterior lighting controls provided in table format on the drawings	☐ Yes ☐ No
Compliance Confirmation	
IILE is less than or equal to ILEA in conformance with NECB Article 4.3.1.3.	☐ Yes ☐ No
Have you supplied the calculations determining the above values	☐ Yes ☐ No

Part 5 – Heating, Ventilating and Air-Conditioning Systems

Overall $HVAC_{TOI}$	
Compliance Confirmation	
HVACTOI is greater than or equal to 0 in conformance with NECB Article 5.3.1.3.	☐ Yes ☐ No
Have you supplied the calculations determining the above values	☐ Yes ☐ No

Part 6 – Service Water Systems

Overall SWH_{TOI}	
Compliance Confirmation	
SWH-TOI is greater than or equal to 0 in conformance with NECB Article 6.3.1.3.	☐ Yes ☐ No
Have you supplied the calculations determining the above values	☐ Yes ☐ No

Compliance Confirmation

Building energy trade-off compliance meets NECB 2017	☐ Yes ☐ No
Drawings submitted are in conformance with NECB Drawings Requirements	☐ Yes ☐ No

Declaration

Signature of Coordinating NECB Design Professional who has completed this form:

_____ Signature

_____ Date

409 Central St. West
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S0K 4S0

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Assurance of Field Review and Compliance

This letter must be submitted upon substantial completion of the project, but prior to occupancy, for all buildings within the scope of Part 3 of the National Building Code of Canada and/or within the scope of the National Energy Code of Canada for Buildings

To: The Local Authority

_____
Municipality (Print)

Re: _____
Name of Project (Print)

_____
Address or Land Description of Project (Print)

This document is being provided for:
- ☐ Full Occupancy of the Building
- ☐ Partial Occupancy of the Building. A subsequent report must be submitted for occupancy of a building during construction.

I hereby give assurance that

(a) I have fulfilled my obligations for field review as outlined in the "Commitment for Field Review" document previously submitted, and

(b) those components of the project that I have initialed on the "Commitment for Field Review" document substantially comply in all material respects with

(i) the applicable requirements of the National Building Code of Canada and the Uniform Building and Accessibility Standards Act, and

(ii) the plans and supporting documents submitted in support of the application for a building permit and any subsequent submissions,

(c) I am a registered professional required by the Uniform Building and Accessibility Standards Act.

(Affix Professional Seal Below)

_____
Registered Professional's Name (Print)

_____
Discipline (Print)

_____
Address (Print)

_____
Phone (Print)

WMBEXA 2017
BUSINESS OF THE YEAR
FINALIST

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S0K 4S0

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Commitment for Field Review

This letter must be submitted with the Building Permit Application for all buildings within the scope of Part 3 of the National Building Code of Canada, and/or within the scope of the National Energy Code of Canada for Buildings

To: The Local Authority

_____
Municipality (Print)

Re: _____
Name of Project (Print)

_____
Address or Land Description of Project (Print)

The undersigned hereby gives assurance that the design of the components of the design and supporting documents prepared by this registered professional, substantially comply with the applicable edition of the National Building Code of Canada, National Energy Code for Buildings and the *Uniform Building & Accessibility Standards Act and Regulations*:

(Note: initial all design components that apply to this registered professional. A separate commitment for field review must be completed by each separate registered professional. Please note that all of the disciplines may not be necessary on all projects)

_____ Architectural
_____ Structural
_____ Mechanical
_____ Electrical
_____ Fire Suppression
_____ Energy Efficiency
_____ Other (specify)

The undersigned hereby undertakes to be responsible for the field reviews of the above referenced components during construction.

The undersigned also undertakes to notify the Authority Having Jurisdiction in writing as soon as possible if the undersigned's contract for field review is terminated at any time during construction.

I certify that I am a registered professional as required by the *Uniform Building and Accessibility Standards Act*.

(Affix Professional Seal Below)

_____
Registered Professional's Name (Print)

_____
Discipline (Print)

_____
Address (Print)

_____
Phone (Print)

Updated 2/7/19

WMBEXA 2017 BUSINESS OF THE YEAR FINALIST

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Municipality	ZONE	HDD 18	HDD 15	FDWR 18	FDWR 15	FDD	Frost Depth (m)	Frost Depth (in)	Meet Fire Response Time?
City of Estevan	7A	5380	4450	30.8	37.0	1448	2.35	93	Yes
City of Humboldt	7B	6000	5080	26.7	32.8	1841	2.85	112	Yes
City of Melfort	7B	6050	5130	26.3	32.5	1866	2.85	112	Yes
City of Melville	7A	5880	4970	27.5	33.5	1713	2.60	102	Yes
City of Moose Jaw	7A	5270	4390	31.5	37.4	1333	2.25	89	Yes
City of Warman	7A	5700	4800	28.7	34.7	1525	2.35	93	No
District of Lakeland	7B	6100	5180	26.0	32.1	1898	2.90	114	No
R.M. of Cana No. 214	7A	5840	4929	27.7	33.8	1714	2.60	102	No
R.M. of Corman Park No. 344	7A	5700	4800	28.7	34.7	1525	2.35	93	No - Some Areas Yes
R.M. of Coteau No. 255	7A	5311	4432	31.3	37.1	1379	2.30	91	No - Some Areas Yes
R.M. of Enniskillen No. 3	7A	5431	4542	30.5	36.4	1503	2.35	93	Yes
R.M. of Estevan No. 5	7A	5380	4450	30.8	37.0	1448	2.35	93	No
R.M. of Grassy Creek No. 78	6	4846	3967	34.4	40.2	1065	2.35	93	No
R.M. of Humboldt No. 370	7B	6000	5080	26.7	32.8	1841	2.85	112	No
R.M. of LeRoy No. 339	7A	5941	5025	27.1	33.2	1811	2.75	108	No
R.M. of Loreburn No. 254	7A	5311	4432	31.3	37.1	1379	2.30	91	No - Some Areas Yes
R.M. of Moose Jaw No. 161	7A	5270	4390	31.5	37.4	1333	2.25	89	No
R.M. of Moosomin No. 121	7A	5690	4490	28.7	36.7	1593	2.40	94	Yes
R.M. of Pense No. 160	7A	5440	4550	30.4	36.3	1453	2.35	93	No
R.M. of Prairie Rose No. 309	7A	5851	4941	27.7	33.7	1743	2.70	106	No
R.M. of Redburn No. 130	7A	5270	4390	31.5	37.4	1333	2.25	89	Yes
R.M. of Rosthern No. 403	7A	5857	4943	27.6	33.7	1714	2.60	102	No
R.M. of St. Andrews No. 287	7A	5620	4720	29.2	35.2	1607	2.40	94	No
R.M. of Swift Current No. 137	7A	5150	4270	32.3	38.2	1205	2.10	83	No
R.M. of Vanscoy No. 345	7A	5710	4630	28.6	35.8	1519	2.35	93	No
R.M. of Webb No. 138	6	4970	3990	33.5	40.1	1026	1.88	74	No
Town of Aberdeen	7A	5700	4800	28.7	34.7	1525	2.35	93	Yes
Town of Arborfield	7B	6166	5250	25.6	31.7	1993	3.05	120	Yes
Town of Biggar	7A	5720	4280	28.5	38.1	1597	2.40	94	Yes
Town of Bruno	7A	5914	4997	27.2	33.4	1797	2.75	108	Yes
Town of Carlyle	7A	5570	4676	29.5	35.5	1561	2.40	94	Yes
Town of Central Butte	7A	5335	4455	31.1	37.0	1390	2.30	91	Yes

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Municipality	ZONE	HDD 18	HDD 15	FDWR 18	FDWR 15	FDD	Frost Depth (m)	Frost Depth (in)	Meet Fire Response Time?
Town of Coronach	7A	5127	4235	32.5	38.4	1266	2.20	87	No
Town of Dalmeny	7A	5700	4800	28.7	34.7	1525	2.35	93	Yes
Town of Dodsland	7A	5550	4650	29.7	35.7	1574	2.40	94	No
Town of Elrose	7A	5590	4690	29.4	35.4	1300	2.25	89	No
Town of Grenfell	7A	5746	4436	28.4	37.1	1635	2.45	96	Yes
Town of Gull Lake	6	4970	3990	33.5	40.1	1026	2.45	96	Yes
Town of Imperial	7A	5600	4700	29.3	35.3	1660	2.50	98	Yes
Town of La Ronge	7B	6360	5430	24.3	30.5	2149	3.15	124	Yes
Town of Langham	7A	5700	4800	28.7	34.7	1525	2.35	93	Yes
Town of Lanigan	7A	5851	4941	27.7	33.7	1743	2.70	106	Yes
Town of LeRoy	7A	5941	5025	27.1	33.2	1811	2.75	108	Yes
Town of Maple Creek	6	4780	3920	34.8	40.5	951	1.75	69	Yes
Town of Moosomin	7A	5690	4490	28.7	36.7	1593	2.40	94	Yes
Town of Mossbank	7A	5339	4444	31.1	37.0	1367	2.30	91	Yes
Town of Nipawin	7B	6300	5370	24.7	30.9	2075	3.10	122	Yes
Town of Rocanville	7A	5549	4662	29.7	35.6	1571	2.40	94	Yes
Town of Rockglen	7A	5227	4327	31.8	37.8	1297	2.25	89	Yes
Town of Rosetown	7A	5620	4720	29.2	35.2	1607	2.40	94	Yes
Town of Shaunavon	6	4846	3967	34.4	40.2	1065	2.40	94	Yes
Town of Shellbrook	7B	6100	5180	26.0	32.1	1898	2.90	114	Yes
Town of Watrous	7A	5701	4794	28.7	34.7	1637	2.45	96	Yes
Town of Watson	7B	6044	5119	26.4	32.5	1865	2.85	112	Yes
Town of Wynyard	7A	5860	4950	27.6	33.7	1738	2.70	106	Yes
Village of Air Ronge	7B	6360	5430	24.3	30.5	2150	3.15	124	Yes
Village of Grayson	7A	5840	4929	27.7	33.8	1714	2.60	102	Yes
Village of Muenster	7B	6050	5130	26.3	32.5	1866	2.85	112	Yes
Village of Perdue	7A	5720	4450	28.5	37.0	1519	2.35	93	No
Village of Plenty	7A	5550	4650	29.7	35.7	1574	2.40	94	No
Village of Rama	7B	6088	5162	26.1	32.3	1896	2.90	114	No
Village of Riverhurst	7A	5335	4455	31.1	37.0	1390	2.30	91	No
Village of St. Gregor	7B	6022	5100	26.5	32.7	1852	2.85	112	No

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Applicable Forms for Energy Compliance

Occupancy Classification	9.36 Trade-off Path and/or 9.36 Prescriptive Path	9.36 Performance Path	NECB Project Summary	NECB Trade-off Report and/or NECB Prescriptive Report	NECB Performance Report	Commitment for Field Review and Letter of Assurance
Assembly Occupancy Group A, Division 2 and Division 3 (Rink, church, auditorium, courtroom, etc.)			x	x	x	x
Detention/Treatment/Care Occupancy Group B, Division 1/2/3 (Jails, prisons, hospitals, group homes, etc.)			x	x	x	x
Residential Occupancy Group C (Dwelling, duplex, 4-plex, multi family, apartment, etc.)						
< 600 m^2 building area	x	x				
Dwelling (with or without secondary suite)	x	x				
Dwelling Addition	x					
Attached Garage (Unheated or Heated)	**No Energy Requirements**					
Detached Garage (Unheated or Heated)	**No Energy Requirements**					
Basement Development* **	x	x				
Dwelling Renovation* **	x	x				
Alternative Family Care Home Within the application of Part 9	x					
Alternative Family Care Home Within the application of Part 3			x	x	x	x
> 600 m^2 building area			x	x	x	x
Business and Personal Services Occupancy Group D (Offices, etc.)						
< 600 m^2 building area AND **< 300 m^2 floor area**	x		x	x	x	x
< 600 m^2 building area AND **> 300 m^2 floor area**			x	x	x	x
> 600 m^2 building area			x	x	x	x

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Occupancy Classification	9.36 Trade-off Path and/or 9.36 Prescriptive Path	9.36 Performance Path	NECB Project Summary	NECB Trade-off Report and/or NECB Prescriptive Report	NECB Performance Report	Commitment for Field Review
Mercantile Occupancy Group E (Sales, shops, stores, etc.)						
< 600 m^2 building area AND < 300 m^2 floor area	x		x	x	x	x
< 600 m^2 building area AND > 300 m^2 floor area			x	x	x	x
> 600 m^2 building area			x	x	x	x
High-Hazard Industrial Occupancy Group F, Division 1 (Grain elevators, flour mills, manufacturing plants, etc.)			x	x	x	x
Medium-Hazard Industrial Occupancy Group F, Division 2 (Laboratories, repair garages, etc.)			x	x	x	x
Low-Hazard Industrial Occupancy Group F, Division 3 (Storage garages, warehouses, etc.)						
< 600 m^2 building area AND < 300 m^2 floor area	x		x	x	x	x
< 600 m^2 building area AND > 300 m^2 floor area			x	x	x	x
> 600 m^2 building area			x	x	x	x

*** Only applicable for buildings that were originally constructed in conformance with energy compliance (ie. building permit for dwelling issued after January 1, 2019)

Note: It is the designers responsibility to determine the compliance path for when multiple options are available.

Note: All projects are permitted to comply with the NECB. It is the designers responsibility to determine the appropriate compliance path.