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9.36. Project Summary

Compliance Submission Report

Requirements for ABC 2104 Division B 9.36. Compliance

| | | |
|--------------------|--|---|
| Project Name: | | Building Permit Number (Completed Internally) |
| Project Address: | | |
| Applicant: | | |
| Applicant Address: | | |

Please Indicate Compliance Path (Select one only)

| | | |
|---|---|--|
| PRESCRIPTIVE <input type="checkbox"/> (Complete Part A below) | TRADE-OFF <input type="checkbox"/> (Complete Parts A & B below) | PERFORMANCE COMPLIANCE <input type="checkbox"/> (Complete Parts A & C below or Appendix A) |
|---|---|--|

Part A - Basic Building Information (required for ALL compliance paths)

| | | | |
|---|--|---|--|
| Climate Zone : | 4/5/6/7A/7B/8 | Building Area (m ²): | |
| Heating equipment type and fuel: | | Efficiency of heating equipment (%) | |
| Heat-Recovery Ventilator included: | <input type="checkbox"/> Yes <input type="checkbox"/> No | (if included) Efficiency of HRV equipment (%) | |
| Domestic hot water eqpt. type and fuel: | | Efficiency of domestic hot water equipment: | |
| Hot water recirculation pump included: | <input type="checkbox"/> Yes <input type="checkbox"/> No | Primary air barrier system: | <input type="checkbox"/> poly <input type="checkbox"/> other |

In addition to the above, the accompanying drawings shall include:

- Identify location and extent of all wall and floor assemblies containing heating pipes, or electrical heating cables/membranes.
- Indicate effective RSI values for all building envelope opaque assemblies above and below ground, e.g. walls, floors, roofs, windows and doors.
- Provide the calculations used to determine these values; these may be hand calculations or from a software program.

Provide the following architectural details in the project drawings indicating continuity of insulation and air barrier:

- Attic hatch
- Eaves/top of wall transition
- Upper floor rim joist
- Top of basement wall/main floor rim joist
- Slab/footing junction
- Cantilevered floors
- Bonus room over attached garage (including ducts and insulation coverage of ducts)
- Typical electrical junction box detail
- Typical window/door jamb and sill detail

And if applicable,

- Party wall meeting outside wall, Electric meter/vent pipe/duct in insulated wall, Skylight shaft walls, Slab edges in walkouts & Heated slabs, Masonry Chimneys and Fireplaces.

Part B - Trade-Off Compliance Path

In addition to the information required in Part A, a trade-off calculation must be submitted to demonstrate compliance with 9.36.2.11

The **9.36. Trade-Off Calculator Form** is recommended.

The location and extent of assemblies used in the calculation shall be clearly identified on the drawings via hatch or dimensional note.

Part C - Performance Compliance Path (residential occupancies)

Information provided below sets input parameters used in the energy simulation used to demonstrate compliance with the ABC 2014 Division B 9.36.5. Performance Compliance path.

Which direction does the front of the house face as modelled (N, NE, E, SE, S, SW, W, NW):

Note 1: For purposes of modeling, information for secondary heating and service hot water efficiencies only apply in the event that the proposed building has included these systems

Note 2: Location, quantity, and orientation of fenestration must match the proposed drawing information of submitted drawings

| Reference Model | | Proposed Model | |
|---|-------------|---|--|
| Airtightness (ACH@50Pa): | 2.5 | Airtightness (ACH@50Pa) 3.2 / 2.5 / other: | |
| Solar Heat Gain Coefficient - Glazing (SHGC): | 0.26 | Solar Heat Gain Coefficient - Glazing (SHGC): | |
| Solar Absorbance: | 0.4 | Solar Absorbance: | |
| Thermal mass (MJ/m ² °C): | 0.06 | Thermal mass (MJ/m ² °C): | |
| Ventilation Rate (l/s): | | Ventilation Rate (l/s): | |
| Secondary HVAC System Efficiency: | | Secondary HVAC System Efficiency: | |
| Secondary Service Water Heater Efficiency: | | Secondary Service Water Heater Efficiency: | |
| Space Cooling Equipment Efficiency: | | Space Cooling Equipment Efficiency: | |
| FDWR - Reference(%) 17 / 22 / other: | | FDWR - Proposed (%): | |
| Window and Door Area Summary - Reference | | Window and Door Area Summary - Proposed | |
| North Elevation (m ²): | | North Elevation (m ²): | |
| South Elevation (m ²): | | South Elevation (m ²): | |
| East Elevation (m ²): | | East Elevation (m ²): | |
| West Elevation (m ²): | | West Elevation (m ²): | |
| Total Area of windows and doors - Reference: | | Total Area of windows and doors - Proposed: | |

Note: If the ACH rate entered above for the Proposed House above is less than **2.5 ACH** a blower door test will be required

Performance Data Summary

| Target Energy Use (reference) | Calculated Energy Use (proposed) |
|-------------------------------|----------------------------------|
| | |

Software

| | |
|----------------------------|----------|
| Software Title: | Version: |
| Software Adaptations Made: | |

Declaration - only applicable to Performance Compliance path

Please indicate the person responsible for preparing the calculations used to show compliance with ABC 2014 9.36.5.

| | | | |
|----------------------|--------|------|--|
| Name: | | | |
| Representing Firm: | | | |
| Contact Information: | email: | tel: | |
| Address: | | | |

Please attach the full modelling report generated by an ANSI/ASHRAE 140 compliant software package to this form:

I hereby certify that the calculations submitted were prepared in full accordance with Subsection 9.36.5. of ABC 2014 and the operating procedures of the software

Signature

Nothing in this form or the attached calculations shall preclude the Safety Codes Officer reviewing this file form requesting an appropriate professional to stamp and sign the submission.



9.36: Trade-off Calculator

9.36.2.11 Worksheet
(2016/06)

Alberta Building Code 2014 Article 9.36.2.11 Worksheet for Building Envelope Trade-Off

| | | |
|--------------------|--|---|
| Project Name: | | Building Permit Number (Completed Internally) |
| Project Address: | | |
| Applicant Name: | | |
| Applicant Address: | | |

Trade-off Calculations for Above-ground Building Envelope Assemblies

| Description or Identification of Building Envelope Assembly | Opaque Portions | | | Fenestration Portions | | | Area of Assembly in Reference Building: A_{ir} (m ²) | Area of Assembly in Proposed Building: A_{ip} (m ²) | Minimum Allowable Thermal Resistance of Assembly in Reference Building (prescriptive values): R_{ir} (m ² •K)/W | Thermal Resistance of Assembly in Proposed Building: R_{ip} (m ² •K)/W | A_{ir} / R_{ir} (W/K) | A_{ip} / R_{ip} (W/K) | | | | |
|---|-----------------|------|-------|-----------------------|------|----------|--|---|--|---|-------------------------|--------------------------|------|--------------------------|------|--------------------------|
| | Wall | Roof | Floor | Fenestration | Door | Skylight | | | | | | | | | | |
| Fenestration Trade offs are limited to fenestration on the same elevation. Please indicate which elevation contains the fenestration being calculated | | | | | | | | | | | | | | | | |
| | | | | | | | | | North | <input type="checkbox"/> | South | <input type="checkbox"/> | East | <input type="checkbox"/> | West | <input type="checkbox"/> |
| | | | | | | | | | | | 0 | 0 | | | | |
| | | | | | | | | | | | 0 | 0 | | | | |
| | | | | | | | | | | | 0 | 0 | | | | |
| | | | | | | | | | | | 0 | 0 | | | | |
| | | | | | | | | | | | 0 | 0 | | | | |
| | | | | | | | | | | | 0 | 0 | | | | |
| | | | | | | | | | | | 0 | 0 | | | | |
| | | | | | | | | | | | 0 | 0 | | | | |
| | | | | | | | | | | | 0 | 0 | | | | |
| | | | | | | | | | | | 0 | 0 | | | | |
| | | | | | | | | | | | 0 | 0 | | | | |
| | | | | | | | | | | | 0 | 0 | | | | |
| TOTALS: | | | | | | | 0 | 0 | | | 0 | 0 | | | | |

Is building envelope compliant with simple trade-off path? ($A_{ip} / R_{ip} \leq \text{total } A_{ir} / R_{ir}$ and $A_{ip} = A_{ir}$)

Yes

The areas used in the above calculation shall be clearly indicated on the accompanying drawings.