

## High Intensity Residential Fire (HIRF) Requirements Are Applicable To All Residential Construction On Any Lot Within Leduc County.

Fire department response time as a condition of building construction requirements has existed in Alberta since the introduction of the Alberta Building Code 1981. The intent behind the requirements has always been that where the fire department in a municipality cannot respond to a fire in less than 10 minutes, buildings must be located farther away from property lines or provided with additional fire protection, such as non-combustible siding, no side-yard windows and/or sprinkler systems.

Additional fire protection measures slow the spread of fire by containing or suppressing it and giving the fire department vital extra minutes to arrive before the fire spreads out of control or becomes a high intensity residential fire.

Leduc County fire fighting services are provided through a combination of paid and volunteer firefighters in seven fire districts and mutual aid agreements with other municipalities.

**At this time, the Leduc County fire department response time exceeds 10 minutes in all areas of the County.**

Setback	Glazed Openings (Windows)	Cladding	Soffits	Projections
Greater than 4.0 metres	No special requirements, standard construction	No special requirements, standard construction	No special requirements, standard construction	No special requirements, standard construction
2.4 to 4.0 metres	A	No special requirements, standard construction	requirements, No special standard construction	requirements, No special standard construction
0.45 to 2.4 metres	No unprotected glazed openings	C	B	D
Less than 0.45 metres	No unprotected glazed openings	C	Not permitted	Not permitted

See back for letter explanations

- **Owners and designers are strongly advised to review HIRF/Building Code requirements prior to starting a design.**
- This handout is for convenience only. Please refer to the Alberta Building Code to review the complete HIRF requirements.
- For more information please contact a Leduc County Building Safety Codes Officer at 780-770-9322

<b>Box A</b>	<ul style="list-style-type: none"> <li>No individual window can be more than 50% in size of the gross allowable glazed area allowed from Table 9.10.15.4 of the Alberta Building Code. <b>See table below for gross allowable glazed area.</b></li> <li>Windows within the same <i>fire compartment</i> are to be separated by 2 meters vertically or horizontally from each other.</li> </ul>
<b>Box B</b>	<p>Soffits</p> <ol style="list-style-type: none"> <li>Roof soffits are permitted up to 0.45 meters to property line, and must be protected by a material listed in clause 3.2.3.6.(5)(b) and have no openings.</li> <li>Soffits are not permitted closer than .45m from property line.</li> </ol> <p>3.2.3.6.(5)(b) States:</p> <ul style="list-style-type: none"> <li>not less than .38mm thick steel conforming to CAN/CGSB-93.4</li> <li>unvented aluminum conforming to CAN/CGSB-93.2-M</li> <li>Not less than 12.7 mm thick gypsum</li> <li>Not less than 11 mm thick plywood</li> <li>Not less than 12.5 mm thick OSB or waferboard</li> <li>Not less than 11 mm thick lumber conforming to 9.27.6.1.(1)</li> </ul>
<b>Box C</b>	<p>Construction of exposed wall - 45 minute fire resistance rating required</p> <p>Cladding is to be:</p> <ul style="list-style-type: none"> <li>Non-combustible or</li> <li>Combustible installed over exterior grade gypsum sheathing or over masonry or</li> <li>Wall assembly tested and approved to the ULCS314 standard</li> </ul>
<b>Box D</b>	<p>Combustible enclosed projections (eg. Chimney chases)</p> <ol style="list-style-type: none"> <li>Same construction requirements for exterior walls (45 minute fire rated)</li> <li>Sides are to be constructed the same as the face, no openings</li> <li>If underside of projection exceeds .6m (24 inches) to finished ground level then protection is required as per 3.2.3.6.(5)(b)</li> </ol>

*Closure* means a device or assembly for closing an opening through a [fire separation](#) or an exterior wall, such as a door, a shutter, wired glass or glass block, and includes all components such as hardware, closing devices, frames and anchors.

Doors must have 45 minute fire resistance rating  
Windows could be protected by fire shutters

*Fire compartment* means space in a [building](#) that is enclosed by exterior walls or is separated from all other parts of the [building](#) by enclosing construction providing a [fire separation](#) having a required [fire-resistance rating](#).

**Table 9.10.15.4.**  
**Maximum Area of Glazed Openings in Exterior Walls**  
Forming part of Sentence 9.10.15.4.(1)

Maximum Total Area of <a href="#">Exposing Building Face</a> , m <sup>2</sup>	Maximum Aggregate Area of Glazed Openings, % of <a href="#">Exposing Building Face</a> Area <a href="#">Limiting Distance</a> , m											
	Less than 1.2	1.2	1.5	2.0	4.0	6.0	8.0	10.0	12.0	16.0	20.0	25.0
	<b>HIRF Limiting Distances</b>	<b>2.4</b>	<b>3.0</b>	<b>4.0</b>	<b>8.0</b>	<b>12.0</b>	<b>16.0</b>	<b>20.0</b>	<b>24.0</b>	<b>32.0</b>	<b>40.0</b>	
30	0	7	9	12	39	88	100	—	—	—	—	—
40	0	7	8	11	32	69	100	—	—	—	—	—
50	0	7	8	10	28	57	100	—	—	—	—	—
100	0	7	8	9	18	34	56	84	100	—	—	—
Over 100	0	7	7	8	12	19	28	40	55	92	100	—

Sprinklers or other options may allow increased glazed openings (windows). Please discuss with a building inspector.







