R402.4.4 Rooms Containing Fuel Burning Appliances
Where open combustion air ducts serve open combustion, fuel burning appliances:
• The open duct and appliance shall be located outside the building thermal envelope or enclosed in a sealed and insulated room, isolated from inside the thermal envelope.
• The door into the room shall be fully gasketed and any water lines and ducts in the room insulated in accordance with R403.
• Combustion air duct passing through conditioned space shall be insulated to a minimum R-8.
• Exceptions: Direct vent appliances with both intake and exhaust pipes installed continuous to the outside, Fireplaces and stoves installed per code.

R402.4.5 Recessed Lighting
• IC-rated and labeled, air leakage rate 2 cfm max.
• Gasketed or caulked at the ceiling.

R403.3.2 Duct Sealing
• Ducts, air handlers and filter boxes shall be sealed.
• Joints and seams shall comply with either the IMC or IRC.

R403.3.4 Duct Leakage
Total leakage shall be measured in accordance with R403.3.3 as follows:
• Rough-In: less than or equal to 4 cubic feet/min/100 ft² when installed at time of test.
• Less than or equal to 3 cubic feet/min/100 ft² when not installed at time of test.
• Post-Construction: Total leakage less than or equal to 4 cubic feet/min/100 ft².

R403.3.5 Building Cavities
Shall not be used as ducts or plenums.

R403.5.3 Hot Water Pipe Insulation
Insulation for hot water piping with a thermal resistance, R-value, of not less than R-3 shall be applied to the following:
1. Piping serving more than one dwelling unit.
2. Piping located outside the conditioned space.
3. Piping located under a floor slab.
4. Buried piping.
5. Supply and return piping in recirculation systems other than demand recirculation systems.

R403.6 Mechanical Ventilation
• In compliance with IRC or IMC, as applicable.
• Outdoor air intake and exhausts shall have automatic or gravity dampers that close when the ventilation system is not operating.

R403.7 Equipment Sizing Per ACCA Manual S, based on loads calculated per ACCA Manual J.

R403.9 Snowmelt Controls
Mandatory controls- Auto shutoff: no moisture, pavement T > 50°F and air T > 40°F.

R403.10 Pools and In-Ground Spas
Readily accessible shutoff switches for heaters (R403.10.2) and timers for pumps and heaters (R403.10.3), AND vapor-retardant covers for all pools.

R404.1 Lighting
A minimum of 75% of permanently installed fixtures must have high-efficacy lamps.

R405 Simulated Performance Alternative
Third Party Computer modeling, showing proposed home is more efficient than standard reference design home.

R406 Energy Rating Index (ERI) Compliance Alternative
ERI in accordance with RESNET/ICC 301. Third Party HERS rater uses modeling to generate an ERI or HERS score, equal to or lower than the required score for the applicable Climate Zone.
• Climate Zone 5 - 68
• Climate Zone 6 - 68
Idaho Amended Sections in Red text
Pending Legislative Approval in Spring of 2020

R103.2 Construction Documents
U-factors, R-value and other pertinent data
must be shown on plans, energy compliance
reports, and HVAC design documents.

R202 Definitions
CONTINUOUS AIR BARRIER. A
combination of materials and assemblies that
resist or prevent the passage of air through
the building thermal envelope.

CONTINUOUS INSULATION (ci).
Insulating material that is continuous across
all structural members without thermal
bridges other than fasteners and service
openings. It is installed on the interior or
exterior, or is integral to any opaque surface,
of the building envelope.

RESIDENTIAL BUILDING. One- and two-
family dwellings, townhouses, and Group R-2,
R-3 and R-4 buildings, 3 stories or less in
height above grade plane.

R401.2 Compliance Options
1. 2018 Prescriptive Table R402.1.2 and
   Total UA Alternative - R402.1.5
2. Simulated Performance Alternative – R405
3. ERI (Energy Rating Index)/HERS - R406

R401.3 Certificate
Permanent certificate listing performance
values, factors, and ratings for all building
thermal envelope components, shall be
posted in approved location.

R402.4.2.4 Access hatches and doors
- Must be weather stripped.
- Attic hatch must have insulation of required R-
  value attached to the panel.
- Insulation dam required around access opening
  in ceilings.
- Vertical access doors must meet fenestration
  requirements - Table R402.1.2.

R402.4 Air Leakage
The components of the Building Thermal Envelope
as listed in Table R402.1.1 shall be installed in
accordance with the manufacturer’s instructions.

R402.4.1.2 Building Thermal Envelope
Testing building envelope tightness and
insulation installation shall be considered
acceptable when tested air leakage is less
than five (5) air changes per hour (ACH)
when tested with a blower door at a
pressure of 33.5 psf (50Pa). Testing
shall occur after rough in and after
installation of penetrations of the
building envelope, including penetrations
for utilities, plumbing, electrical,
ventilation and combustion appliances.
- Effective July 1, 2021, twenty percent
  (20%) of new single-family home
construction shall be tested to establish air
leakage rates.

IRC-R806.5 Unvented attic and unvented
enclosed rafter assemblies
Air-impermeable insulation, closed cell spray
foam or rigid foam board, must be installed on
the cold side of the roof assembly for
condensation control.

Insulation for Condensation Control
IRC R806.5

<table>
<thead>
<tr>
<th>Climate Zone</th>
<th>R-20</th>
<th>R-25</th>
</tr>
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<tbody>
<tr>
<td>Minimum Rigid Board on Air-Impermeable Insulation R-Value</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

R402.4.2 Fireplaces
New wood-burning fireplaces shall have tight-
fitting flue dampers or doors, and outdoor
combustion air. Where using tight-fitting doors
on factory-built fireplaces listed and labeled in
accordance with UL 127, the doors shall be
tested and listed for the fireplace.

For more additional copies contact:
tukarcia@gmail.com
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Key Changes to the 2018 International Residential Code for One-and Two-Family Dwellings

- An updated seismic map reflects the most conservative Seismic Design Category (SDC) based on any soil type and a new map reflects less conservative SDCs when Site Class A, B or C is applicable.
- The townhouse separation provisions now include options for using two separate fire-resistant-rated walls or a common wall.
- An emergency escape and rescue opening is no longer required in basement sleeping rooms where the dwelling has an automatic fire sprinkler system and the basement has a second means of egress or an emergency escape opening.
- The exemption for interconnection of smoke alarms in existing areas has been deleted.
- New girder/header tables have been revised to incorporate the use of #2 Southern Pine in lieu of #1 Southern Pine.
- New tables address alternative wood stud heights and the required number of full height studs in high wind areas.

Recommendation of adoption by the Idaho Building Code Board with the following amendments:
- Correlated language with the IBC code on personal care, custodial care and child care
- More options to address protection of roof eaves close to property lines
- Elimination of requirement to protect floors of unfinished basements
- Exceptions from smoke detectors for exterior work or trade permits
- Replacement of footing section and Table 10 of former edition of code

Key Changes in the 2018 International Building Code (IBC)

- Accessory storage spaces of any size are now permitted to be classified as part of the occupancy to which they are accessory.
- New code sections have been introduced addressing medical gas systems and higher education laboratories.
- Use of fire walls to create separate buildings is now limited to only the determination of permissible types of construction based on allowable building area and height.
- Where an elevator hoistway door opens into a fire-resistance-rated corridor, the opening must be protected in a manner to address smoke intrusion into the hoistway.
- The occupant load factor for business uses has been revised to one occupant per 150 square feet.
- Live loads on decks and balconies increase the deck live load to one and one-half times the live load of the area served.
- The minimum lateral load that fire walls are required to resist is five pounds per square foot.
- Wind speed maps updated, including maps for the state of Hawaii. Terminology describing wind speeds has changed again with ultimate design wind speeds now called basic design wind speeds.
- Site soil coefficients now correspond to the newest generation of ground motion attenuation equations (seismic values).
- Five-foot tall wood trusses requiring permanent bracing must have a periodic special inspection to verify that the required bracing has been installed.
- New alternative fastener schedule for construction of mechanically laminated decking is added giving equivalent power-driven fasteners for the 20-penny nail provisions.

All above items can be found at this location on-line:
https://codes.iccsafe.org/

Elmore County web site
https://elmorecounty.org/

Idaho Department of Building Safety:
https://dbs.idaho.gov/

Idaho Department of Building Officials:
https://www.idaho.org/code-updates
2018 International Building Code (IBC) – Recommendation of adoption by the Idaho Building Code Board with following amendments:
- Correlated language with the residential code on personal care, custodial care and child care
- Clarification language to use commercial IBC code for medical care
- Less restrictive threshold of when a drinking fountain is required
- Correlated language on relocatable modular buildings referencing state statute

2018 Residential and Commercial Energy Codes

- Air leakage for Idaho is 5 air changes per hour vs. 3 ACH for national code
- **Blower door test required on 20% of homes built by a contractor** (this requirement is a reduction and has an implementation schedule of an additional 6 months after code adoption for soft implementation for education period for contractors)
- Reduction of requirements in hot water pipe insulation
- Lighting requires a minimum of 75% of permanently installed fixtures must have high-efficacy lamps
- Energy Rating Index (ERI) (compliance alternative) required score is 68 or less in Climate Zones 5 & 6
  *(relaxed to a figure currently being met in Idaho)*

**Additional changes are available at our office or email listing available.**