Single Family Residential Addition

How to Use this Guide
Provide two sets of plans and complete the following:

1. **Complete this Building Guide** by filling in the blanks on page two and indicating which construction details will be used, and the R value of insulation used.

2. **Provide 2 Plot Plans** showing dimensions of your project or addition and its relationship to existing buildings or structures on the property. Show all easements and the distance to existing property lines drawn to scale.

3. **Provide 2 Floorplans.**
   Drawn to scale. See example on page 4.

4. **Fill out a Building Permit Application.**
The majority of permit applications are processed with little delay. The submitted documents will help determine if the project is in compliance with building safety codes, zoning ordinances and other applicable laws.

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Smoke alarms are required to be hardwired and interconnected in new and existing bedrooms, halls and on each level unless removal of interior wall or ceiling finishes would be required. In this case, battery operated devices are acceptable.

The Colorado Chapter of the International Code Council is a professional organization seeking to promote the public health, safety and welfare to building construction. We appreciate your feedback and suggestions. To obtain a master copy of this building guide, please write to the Colorado Chapter of the International Code Council, P.O. Box 961, Arvada, CO 80001. http://www.coloradochaptericc.org

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Note: For roofs with slopes less than 4:12, follow manufacturer’s instructions for low slope application of roofing material.

2x___rafters spaced___" O.C. or Manufactured Trusses spaced___" O.C. (example: 2 x 12 Rafter Spaced 24" O.C.)

Minimum 1x__ ridge board (example: 1 x 12)

12__ pitch

Note: Pre-engineered roof trusses w/truss clips may be used in lieu of roof structure shown.

Diagonal wind bracing or braced wall panels @ corners and each 25’ of wall.

Note: Pre-engineered floor systems may be used and should be installed according to the manufacturers installation instructions.

18” minimum from the interior grade level to the bottom of the floor joists.

Engineered Design: Cassions may be required if your site has swelling soils. A foundation designed by a Colorado licensed architect or engineer may be required.

Note: Attic ventilation and access may be required.

Provide roof tie downs Solid 2x blocking between rafters that are 2x12 or greater.

Sheathing (example: 1/2” exterior plywood)

Roof covering (example: Class A 3 tab shingles)

Underlayment (example: 1 layer 15# felt)

Ceiling Insulation (example: R-38)

Wall Insulation (example: R-19 Fiberglass Batts)

2x__ ceiling joists @ ____ O.C. (example: 2 x 8 @ 24" O.C.)

Double 2x___ top plate (example: 2 x 6)

Span (example: 23’ 5”)

Ceiling height (example: 8’)

Siding (example: lap or T-111)

Wall sheathing (example: 1/2” exterior plywood)

2x__ studs @ ____ O.C. (example: 2 x 6 @ 24” O.C.)

Cont. 2x ____ sill plate (example: 2 x 4)

2x__ Joists @ ____ O.C. (example: 2 x 10 @ 24” O.C.)

Wall width ______ ” (example: 8”)

Footing size _____" x ____” (example: 8” X 16”)

Note: Attic ventilation and access may be required

Note: Pre-engineered floor systems may be used and should be installed according to the manufacturers installation instructions.

18” minimum from the interior grade level to the bottom of the floor joists.

Engineered Design: Cassions may be required if your site has swelling soils. A foundation designed by a Colorado licensed architect or engineer may be required.

Foundation: Engineered Design

Foundation: Detail A

(see page 3)

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Heads Up

Site Plan
1. When drawing your plot plan be sure to show the location of electric, gas, sewer and water service lines. If you don’t know where they are, call the Public Service Utility Notification Center of Colorado, 1-800-922-1987. They will come out and locate lines for you. Remember to ask them about the cost.

2. Show where the existing electric and gas meters are located on your home. These meters may have to be relocated and it is best to know this before you start construction.

Floor Plan
1. Smoke alarms. Smoke alarms are required to be hardwired and interconnected in new and existing bedrooms, halls and one on each level unless removal of interior wall or ceiling finishes would be required. In this case, battery operated devices are acceptable.

2. Additions not to enclose bedroom or basement egress windows.

3. Safety glass is required at specific locations. When you draw in the location of the new windows on the floor plan, the plan reviewer can identify which ones require safety glass.

4. Heat is required in all habitable rooms. Show how the addition will be heated on the plan.

Electric Code

Existing electric service may require an upgrade or relocation. Indicate the size of your electric service (the number on the main breaker) on your plan. This can help the plan reviewer determine if an upgrade is needed before you start construction.

Roof Overframe

When constructing a new valley, use a continuous board under the bottom cut of the new rafters to provide a solid nailing surface. The board should be at least 2” thick, nominal and should be at least as wide as the base of the new rafter.

Crawlspace Foundation Detail A

\[ \frac{1}{2} \times 10\] steel anchor bolts 6'-0" O.C. max., 7" min. penetration max. 12" from corner and 12" from each end of plate (min. 2 bolts per plate).

Concrete Encased Ground required for new service

Bottom plate shall be treated wood or Foundation redwood

Insulate per Chapter 11, I.R.C

Provide #4 rebar vert. @ 4'-0" O.C. insert rebar into concrete footing or key way

#4 rebar min. continuous top of stemwall & at footing

Sealed with 6 mil. polyethylene film

Interior grade

Note: Maintain at least 18" clear between the bottom of the floor joists to the grade level of the crawlspace, and at least 12" under a beam.

Ventilate the crawlspace with openings near the corners. The total area of the openings should be 1 square foot for each 150 square feet of crawlspace floor area.

The crawlspace access must be a minimum of 18" x 24" and be unobstructed.

Basement may require engineered design.

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