Building Guide
Colorado Chapter of the International Code Council

Single Family Residential One Story Detached Garage

How to Use this Guide
Check with your jurisdiction regarding type of submittal (paper or electronic) and for any additional requirements. Draw to scale or provide dimensions and complete the following (hint: use graph paper with ¼” squares. Example: ¼” = 1”).

1. Complete this Building Guide by filling in the blanks on page three and four and indicate which construction details will be used on page five.

2. Provide a Plot Plan (site plan) showing the dimensions of the proposed garage, its relationship to existing buildings/structures, the distances to adjacent property lines and the distance to any other structures existing on the lot.

3. Fill out 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.

The Colorado Chapter of The International Code Council is a professional organization seeking to promote the public health, safety, and welfare of building construction. We appreciate your feedback and suggestions. Please write to Colorado Chapter of the International Code Council, at P.O. Box 961, Arvada, CO 80001. This Building guide can be found on the Colorado Chapter of the International Code Council website at:
http://www.coloradochaptericc.org

This handout was developed by the Colorado Chapter of The International Code Council as a basic plan submittal under the 2021 International Residential Code. It is not intended to cover all circumstances. Check with your local authority having jurisdiction (AHJ) for any additional requirements.
Note: Provide a plot plan (site plan) showing the dimensions of the proposed garage, its relationship to existing buildings/structures, the distances to adjacent property lines and the distance to any other structures existing on the lot. Include a compass or north facing arrow.
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Directions:
1. Fill in the blanks on pages three and four. Please print legibly.
2. Indicate which detail on page five will be used for your project.

Note: Conditioned garages may be required to meet energy code requirements such as insulation requirements in the ceilings, exterior walls, and around the foundation. Check with your local AHJ for specific requirements.

Floor Plan

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Notes:
1. For roofs with slopes less than 4:12, follow manufacturer’s requirements for low slope application of roofing material.
2. Pre-engineered roof trusses with uplift connectors/hurricane ties may be used in lieu of roof structure shown. Provide stamped truss calculations and layouts.

Sheathing
(example: 1/2" exterior plywood)

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

Species and grade of rafters____
(example: hem fir #1, Doug fir #2, southern yellow pine SS, etc.)

Truss or 2 x__ rafters spaced ___O.C.
(example: check box OR "2 x 10 rafters spaced 24")

Roof covering____
(example: class A 3 tab shingles)

Underlayment____
(example: 1 layer #15 felt)

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

12 pitch____

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

Conditioned space ☐

Unconditioned space ☐

If yes, method of heating:

Ceiling insulation____
(example: R-49)

Wall insulation____
(example: R-20)

Span____
(example: 23’ 5”)

Ceiling height____
(example: 8’)

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

Siding____
(example: lap, stucco, etc.)

2x__ studs @ __O.C.
(example: 2 x 6 @ 16’ O.C.)

Cont. 2x__ sill plate
(example: 2 x 6 decay resistant)

Found. Insulation____
(example: R-10)

Footing size __x__
(example: 8” x 16”)

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Check with AHJ for frost depth requirements

**Foundation Detail A**

- Max. 10' wall height
- Lap siding over foundation a minimum of 1'
- 3 1/2' Minimum Concrete Slab
- #4 rebar min. contin top & bottom with 20' laps

*Note: Check with local building department for swelling soils. Caissons may be required.*

**Foundation Detail B**

- 20" O.C. insert rebar into concrete footing or key way

**Braced Wall Panel Detail** figure 602.10.6.2

- Extent of header with double portal frame (two braced wall panels)
- Extent of header with single portal frame (one braced wall panel)
- 2'-18' Finished width of opening for single or double portal

- Min. 3" x 11.25" Net Header
- 1,000 lb. strap opposite sheathing
- Fasten plate to header with two rows of 16D sinker nails at 3" O.C. typ.
- Fasten sheathing to header with 8D common or galvanized box nails in 3" grid pattern as shown and 3" O.C. in all framing (stud, blocking, and sill) typ.
- Min length of panel per table R602.10.5
- Min. double 2x4 framing Min. double 2x4 post
- 3/8" thickness wood structural panel sheathing with 8D common or galvanized box nails at 3" O.C. in all framing (stud, blocking, and sill) typ.
- Min (2) 3,500 lb. tie-down device (embedded into concrete and nailed into framing)
- Min (1) 5/8" diameter anchor bolts installed per section R403.1.6 with 2"x2" x3/16" plate washer
- Min reinforcing of foundation, one #4 bar top and bottom. Lap bars 15" min.

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