Building Permit Guides

The City of Louisville Design Criteria, Prescriptive Energy Code, and items listed below shall take precedence over requirements listed in the Building Guides of the Colorado Chapter of International Code Council.

- The City of Louisville has adopted the 2018 International Code series.

- Please reference the city’s design criteria and prescriptive energy code available on the City of Louisville website located at www.louisvilleco.gov/government/departments/planning-building-safety/building-permit-guides.

- All decks are required to be designed by a structural engineer and shall include and engineer stamp and signature.

Sec. 15.05.130. - Section R507.1 amended—Decks. https://library.municode.com/co/louisville/codes/code_of_ordinances
Section R507.1 of the 2018 International Residential Code is amended to read as follows:

R507.1 Decks. Wood-framed decks shall comply with the standards set forth in this section. For decks using materials and conditions not prescribed in this section, refer to Section R301. All decks that are structurally supported from an existing residential home shall be engineered by a structural engineer that is licensed with the State of Colorado.

- Flat roof and patio covers may be required to be designed by a registered design professional. Section R802.4.4 of the 2018 International Residential Code read as follows:

R802.4.4 Rafter supports. Where the roof pitch is less than 3:12 (25-percent slope), structural members that support rafters, such as ridges, hips and valleys, shall be designed as beams, and bearing shall be provided for rafters in accordance with section R802.6.
How to Use this Guide

Provide three sets of plans, drawn to scale and complete the following (hint: use graph paper with \( \frac{\text{1/4"}}{} \) squares. Example: \( \frac{\text{1/4"}}{\text{1'}} \)). Check with your jurisdiction for additional requirements.

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

2 **Provide 3 Plot Plans** (site plan) showing dimensions of your project and its relationship to existing buildings or structures on the property and the distance to existing property lines, drawn to scale. See page3.

3 **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.

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

This handout was developed by the Colorado Chapter of the International Code Council as a basic plan submittal under the 2012 International Residential Code. It is not intended to cover all circumstances. Check with your Department of Building Safety for additional requirements.
Single Family Residential One Story Detached Garage

Directions

1. Fill in the blanks on pages 2 and 4 with dimensions and materials which will be used to build the structure. Please print legibly.

2. Indicate in the check boxes on page 4 which details from page 5 will be used.

Note: Heated garages will require insulation, such as ceilings, walls, and foundation.

Floor Plan

Dimension

Locate and detail bracing

✓ Check one

☐ Garage is heated
☐ Garage is not heated

Show door and window header sizes and location and size of landing in front of door

3½" minimum concrete slab

(\(\_\_\_\times\_\_\_\) header

(example: (2) 2 x 12)

Note:

If roof trusses or rafters bear on header, special header design may be required

Double 2x4 or 2x6 trimmers each end of overhead door header

Garage door opening

Garage door opening width

Dimension*

* If less than 4' see Braced Wall Panel Detail on page 5 to comply with section R602.10.6.2 (IRC) (minimum width 16" with wall 10' high)

Dimension*

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Site Plan Example

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

- **Truss or 2x___ rafters spaced___" O.C.**
  (example: Put checkmark in box -or- 2 x 10 Rafters Spaced 24")

- **Minimum 1x___ ridge board**
  (example: 1 x 12)

- **Sheathing**
  (example: 1/8" exterior plywood)

- **Roof covering**
  (example: Class A 3 tab shingles)

- **Underlayment**
  (example: 1 layer #15 felt)

- **12 pitch ____**

- **Ceiling Insulation**
  (if heated - example: R-38)

- **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: 1/8" exterior plywood)

- **2x____ studs @ ____ O.C.**
  (example: 2 x 6 @ 24" O.C.)

- **Cont. 2x____ sill plate**
  (example: 2 x 6)

- **Wall Insulation**
  (if heated - example: R-20 Fiberglass Batts)

- **Foundation Insulation____**
  (if heated - example: R-10)

- **Footing size x**
  (example: 8" x 16")

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

Diagonal wind bracing or braced wall panels @ corners and each 20' of wall.

Max. 10' wall height

Concrete Encased Ground required for new service

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Foundation Detail A

- Max. 10' wall height
- Lap siding over foundation a minimum of 1".
- Finished grade
- 1/2" x 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).
- Bottom plate shall be treated or be separated from concrete by an impervious moisture barrier and be 8" above grade.
- 3 1/2" Minimum Concrete Slab
- #4 rebar min. cont. top & bottom with 18" laps

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

Foundation Detail B

- Lap siding over foundation a minimum of 1"
- Finished grade
- 6" min.
- 36" min.
- 1/4" x 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).
- Bottom plate shall be min. 8" above grade, or be treated wood or decay resistive wood
- 3 1/2" Minimum concrete slab
- Fiberboard expansion joint
- 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 with 18" laps

Braced Wall Panel Detail

- 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 top 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 (studs, blocking, and sills) typ.
- Min. length of panel per table R602.10.5
- Min. 2x4 framing
- 3/8" min. thickness wood structural panel sheathing
- Min. 4,200 lb. tie-down device (embedded into concrete and nailed into framing)
- Min. 1,000 lb. tie down device
- See Section R602.10.6.2
- Min. double 2x4 post
- Typical portal frame construction
- For a panel splice (if needed), panel edges shall be blocked, and be 1" of mid-height. One row of typ. sheathing-to-framing nailing is required. If 2x4 blocking is used, the 2x4's must be nailed together with 3 16D sinkers
- Fasten top plate to header with two rows of 16D sinker nails at 3" O.C. Typ.
- Min. 3/8" wood structural panel sheathing

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