Building Guide

Single Family Residential Addition

How to Use this Guide

Provide two sets of the required documents 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. Show well and septic system locations.

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.

   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.

   Carbon monoxide alarms shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms in dwelling units within which fuel-fired appliances are installed and in dwelling units that have attached garages.

NAME:
ADDRESS:
PHONE NUMBER:
PERMIT NUMBER: DATE:
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2x__ rafters spaced ___" O.C. or
Manufactured Trusses spaced ___" O.C.
(example: 2 x 12 rafters spaced 24" O.C.)

Sheathing  
(example: 1/2" exterior plywood)

Minimum x ridge board  
(example: 2 x 12)

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"

Ext. Finish  
Examples: Stucco, T-111 siding

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

2x__ studs @ ___ O.C.  
(example: 2 x 6 @ 24" O.C.)

Cont. 2x__ P.T. 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: 6" x 16"

Note: For roofs with slopes between 1/4:12-4:12, follow manufacturer's instructions for low slope application of roofing material.

Building Section

Note: Attic ventilation and access may be required

Provide roof tie downs and solid 2x blocking between rafters (2x12 or greater)

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

Wind bracing required @ corners and every 25' of wall.
Use full height sheats or block and edge nail seams.
Bracewall panel lengths shall be 1/2 the wall height.

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

Access required

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

Finish grade is to start 6" minimum below top of slab or stemwall and slope away from structure 6" for 10'.

Pick Foundation to be used:
Detail (see page 3)
Use 2-#4 rebar continuous minimum

NAME: 
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Foundation examples, no reinforcement shown

DETAIL: A

3.5 IN. MIN.

DETAIL: B

BEARING WALL

MONOLITHIC SLAB WITH INTEGRAL FOOTING

DETAIL: C

3.5 IN. MIN.

GROUND SUPPORT SLAB WITH MASONRY WALL AND SPREAD FOOTING

DETAIL: D

INTERIOR

BASEMENT OR CRAWL SPACE WITH MASONRY WALL AND SPREAD FOOTING

DETAIL: E

INTERIOR

BASEMENT OR CRAWL SPACE WITH CONCRETE WALL AND SPREAD FOOTING

DETAIL: F

INTERIOR

BASEMENT OR CRAWL SPACE WITH FOUNDATION WALL BEARING DIRECTLY ON SOIL

For SI: 1 inch = 25.4 mm.

FIGURE R403.1(1)
CONCRETE AND MASONRY FOUNDATION DETAILS
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Site Plan

1. When drawing your plot plan be sure to show the location of electric, gas, sewer and water service lines. Call one dig at 1-800-321-2537 prior to digging or to help locate utilities.

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 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 egress windows.

3. Landings are required at exterior doors. The landing may be as much as eight inches lower than the floor of the room, but it must be at least 3' x 3'. There is no limit as to how large it can be.

4. 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.

5. 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

- 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.
- Bottom plate shall be treated wood or Foundation redwood
- Insulate with R-19 minimum
- Provide #4 rebar vert. @ 4'-0" O.C. insert rebar into concrete footing or key way
- 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.

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Sample Floor Plan

NOTES:
A. New 3'-0" x 6'-8" door in existing wall
B. Existing door removed, opening covered with drywall both sides
C. New 5'-0" x 4'-0" cased opening (replaces existing window)
D. New patio door with tempered glass
E. New 6'-4" wide 4'-8" casement windows

Example:

NAME:
ADDRESS:
PHONE:
PERMIT NUMBER: