



Single Family Residential Basement Finish Building Guide

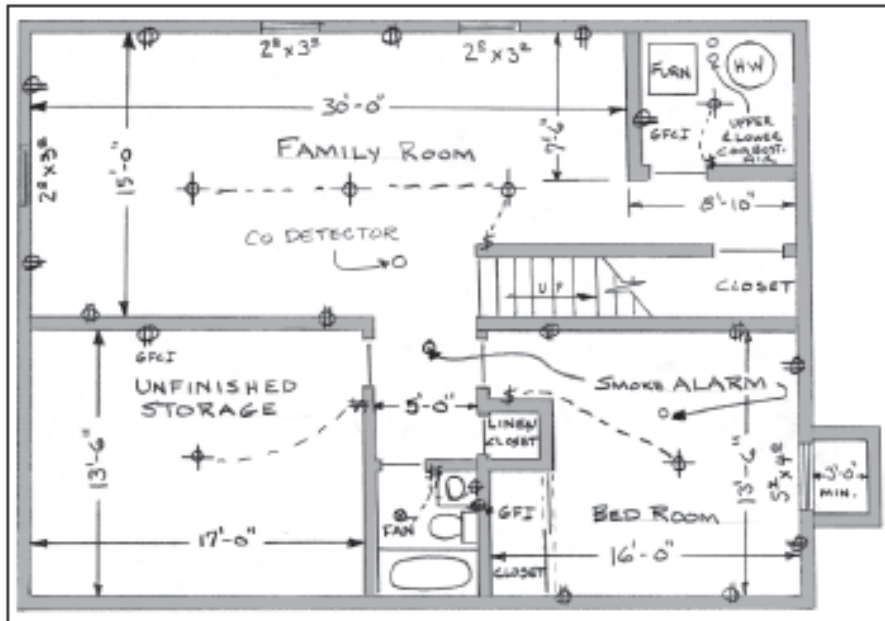


Requirements for Permit Submittal:

1. Review this Building Guide
2. Provide 1 floor plan, electronic or on 8.5 x 11in paper (example below)
3. Fill out Building Permit Application

The City of Loveland processes all permit submittals electronically. Submittals can be emailed in to eplan-res@cityofloveland.org. Once a full submittal is received and accepted through the check in process, the review time is 24 hours.

The documents submitted help determine if the project is compliant with the International Residential Code, City of Loveland Municipal Codes, zoning ordinances, and other applicable laws.



Using graph paper with 1/4 inch squares can be helpful when drawing floorplans, as they must be drawn to scale.

The floor plan must include:

1. Dimensions of each room, showing the layout of the **entire** basement. Label the use of each room.
2. Location of electrical outlets, smoke detectors, carbon monoxide detectors, lighting, fans, plumbing modifications, cleanouts, furnace, and water heater.
3. List window sizes and types, identify emergency escape and rescue windows, and egress window wells with ladder and clear dimensions of window well.
4. If modifications will be made to the existing structure, such as posts, beams, or floor joists, identify these modifications.
5. Show plumbing fixtures and clearances around each.
6. Specify insulation values.

Basement Finish General IRC Requirements

1. Ceiling Heights:

Minimum height of 7' as measured from the finished floor to the ceiling – if less, consult with Building Division. Beams, pipes, and ducts may project from the ceiling not less than 6'-4" from the finished floor.

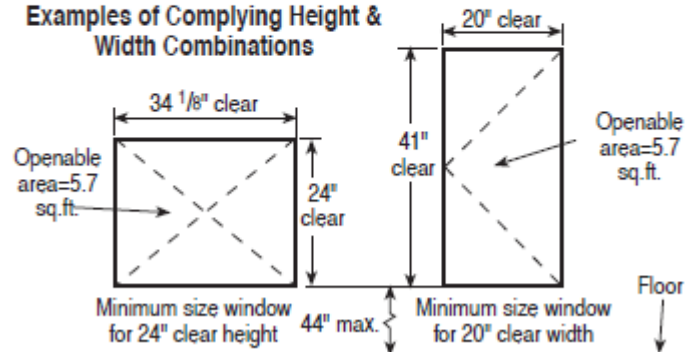
2. Emergency Escapes:

Every basement and sleeping room must have either an emergency escape window or exterior door. Emergency escape windows with a sill height below grade must be provided with an emergency escape window well and ladder, must open directly to the exterior, and must be operable from the inside without the use of special tools. See example for dimensional requirements.

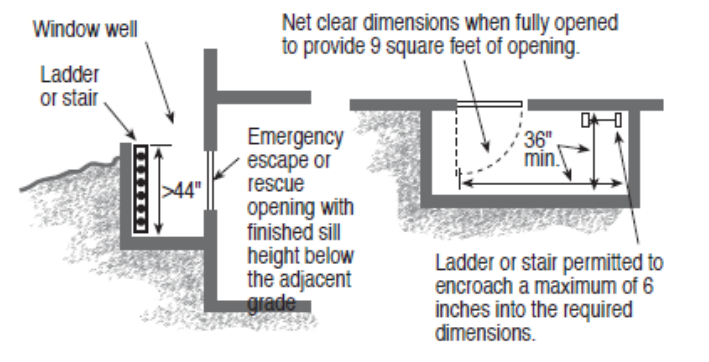
Emergency Escape And Rescue Windows must meet the following criteria:

- A minimum total openable area of not less than 5.7 square feet
- A minimum clear openable height of not less than 24 inches
- A minimum clear openable width of not less than 20 inches.
- A finished sill height of not more than 44 inches above the floor and the window should be operable from the inside with normal operation and without the use of tools, keys or special knowledge.

Examples of Complying Height & Width Combinations



Emergency Escape And Rescue window wells must provide a minimum area of 9 square feet with a minimum dimension of 36 inches and shall enable the window to open fully. If the depth of the window well exceeds 44 inches, a permanently affixed ladder must be provided. The ladder must not interfere with the operation of the window.



3. Smoke Detectors:

All basements require smoke detectors. If the finished basement contains a sleeping room, a smoke detector must be installed on the ceiling or wall in the sleeping room and in the hallway or area immediately outside of the sleeping room. Smoke detectors added to satisfy the above requirements must be hard-wired with battery backup and interconnected with existing smoke detectors. Smoke detectors 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 those cases, battery operated devices are acceptable. Listed wireless detectors are acceptable.

4. Carbon Monoxide Detectors:

Carbon monoxide detectors are required on each floor with bedrooms. It is required that the detectors not be located further than 15 ft. from any bedroom entrance and must not be installed

within 15 ft. of fuel burning appliances. Follow manufacturer's recommendations for location testing and replacement.

5. Fuel Burning Appliances:

Furnaces and hot water heaters cannot be located within or open into a bedroom or bathroom unless appliances are installed in a dedicated enclosing in which all combustion air is taken directly from outdoors, and a weather stripped solid door equipped with an approved self closing device is installed (see G2406 for other acceptable options). If the furnace and water heater are being enclosed, adequate combustion air must be provided to ensure the equipment functions properly.

For maintenance purposes, a minimum of 30 inches clear working space must be provided in front of furnaces and water heaters. Maintenance or removal of each appliance must be possible without removing the other or disturbing walls, piping, valves, ducts, vents, wiring, or junction boxes.

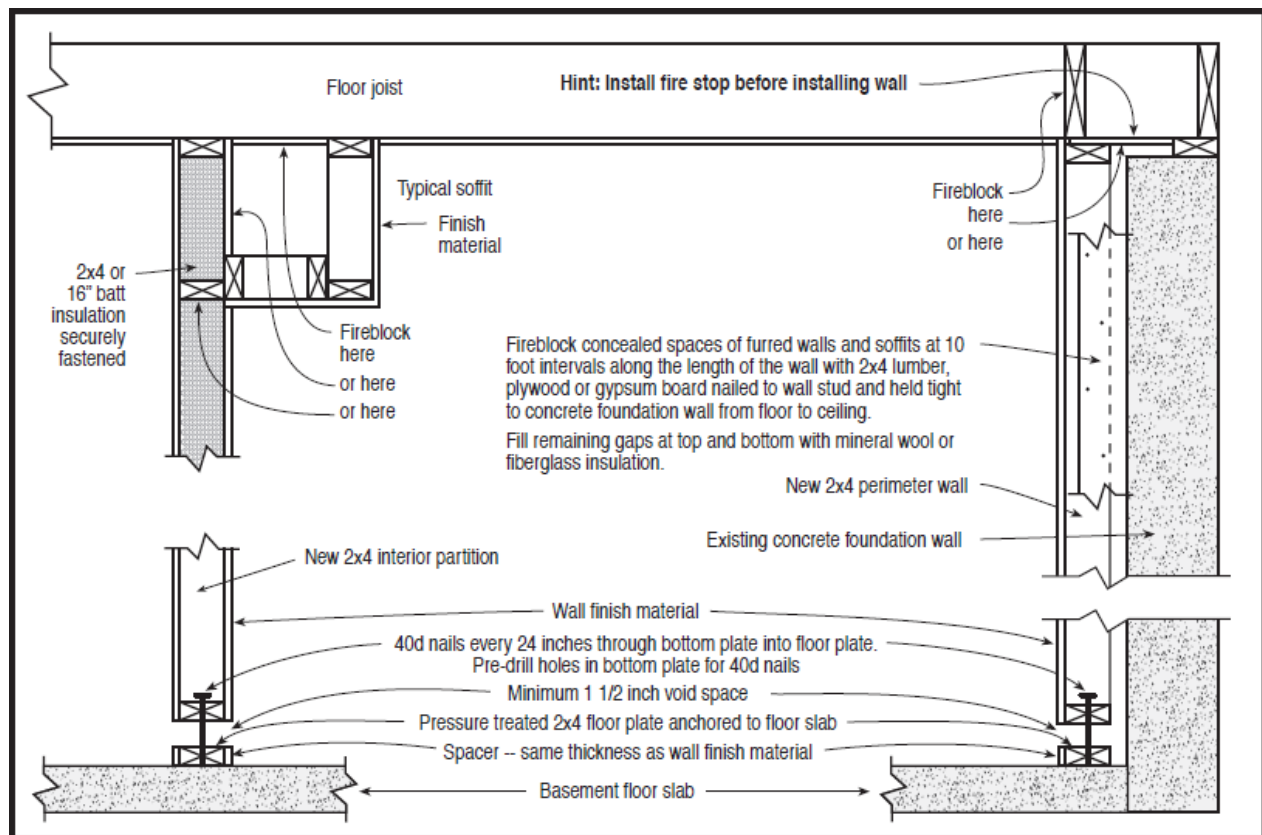
6. Floated Walls:

In areas subject to floor heaving, non-bearing walls on basement floor slabs should be built to accommodate not less than 1-1/2 inches of floor movement. A detail of a typical floated wall is included in this handout.

7. Fireblocking:

Fireblocking must be installed in concealed spaces of wood-furred walls at the ceiling level, at 10-foot intervals along the length of the wall and at all interconnections of concealed vertical and horizontal spaces such as intersection of stud walls and soffits or dropped ceilings. A detail of typical fireblocking is included in this handout. Fireblocks may be constructed of 1-1/2 inch lumber, 3/4 inch plywood, OSB or particle board, 1/2 inch gypsum board or fiberglass insulation 16 inches minimum in height, securing fastened.

Fireblocking and Floated Wall Detail



8. Insulation:

Minimum R-10 continuous insulation or R-13 cavity insulation is required for all perimeter walls below grade.

9. Space Under Stairs:

If access to the area or space under the basement stairs is provided for storage or other uses, the walls and ceiling of this enclosed space must be protected on the inside with ½ inch gypsum board.

10. Bathrooms:

Toilets must be provided with a minimum of 21 inches in front of the toilet and 15 inches from the center of the toilet and any sidewall or other obstruction. Showers shall have a minimum inside dimension of 900 square inches, capable of encompassing a 30 inch circle and be finished 72 inches above the floor with non-absorbent materials. Shower door minimum clear opening width is 22 inches. See Exception 2, P2708.1.

A ventilation fan is required in toilet rooms and bathrooms with un-openable windows. The fan must be vented to the exterior of the building and not to terminate within 3 feet of an opening.

11. Lighting & Ventilation:

Lighting and ventilation are required for any finished portion of the basement. All habitable rooms (rooms used for living, eating, sleeping, or cooking) must have natural light by means of exterior glazed openings with an area of not less than 8% of the floor area or artificial light as approved by the building official. Habitable rooms must also have natural ventilation with a minimum openable area of 4% of the floor area being ventilated.

*This handout is based on the Building Guides developed by the Colorado Chapter of the International Code Council.



City of Loveland

Application for Basement Finish

Building Division * 410 E 5th Street * Loveland, CO 80537
 General Information (970) 962-2505
 Inspection Line (970) 962-2100



Address: _____				
Owner Name: _____			Owner Phone: _____	
Owner Email: _____				
Owner Address: _____				
(Street)		(City)		(State)
(Zip)				
Contractor Name: _____			License Number: _____	Phone: _____
Project Contact Name: _____			Preferred Phone: _____	
Project Contact e-mail: _____				
		Number of Bedrooms:	Number of Bathrooms: Full- 3/4- 1/2-	
Fireplace N Y # _____ Fuel Type _____	Fire Pits N Y # _____ Fuel Type _____	Type of Heat: Gas Electric	Electric Service Size: Amps: _____	Storage Shed (sf)
Basement (sf): Fin _____ Unfin _____	Garden Level (sf)	1st Floor (sf)	2nd Floor (sf)	3rd Floor (sf)
Garage: Detached Attached _____ sf - Car garage	Carport: Detached Attached _____ sf	Porch sf _____ (Roof? Y N)	Deck sf _____ (Roof? Y N)	Patio sf _____ (Roof? Y N)
Basement ceiling height: _____	A/C: Yes No	City Calculated Valuation \$		
Historical Eligibility: N Y	Residential Fire Sprinkler System Y N	Client Total Valuation \$		
Historical Register: N Y	Submit to Loveland Fire Prevention: 970-962-2536			
Describe Work/List Options:			Electrical Subcontractor _____ Valuation \$ _____ Mechanical Subcontractor _____ Valuation \$ _____ Plumbing Subcontractor _____ Valuation \$ _____	
I certify this application is correct. I agree to perform the work described according to plans and specifications submitted and approved. I agree to comply with all city ordinances, state laws and building codes. Additionally, I UNDERSTAND THAT I AM RESPONSIBLE FOR ANY FEES OR EXPENSES INCURRED FOR PLAN REVIEW, PERMITS, INSPECTIONS AND OTHER FEES ASSOCIATED WITH THIS APPLICATION. FAILURE TO PICK UP AND PAY FOR THIS PERMIT WITHIN 90 DAYS OF APPROVAL WILL RESULT IN THE APPLICATION BEING CLOSED AND THE PLAN CHECK FEES BEING ASSESSED. ALL FEES UNDER THIS APPLICATION THEN BECOME NULL AND VOID. This application does not authorize any work within the right-of-way or curb cuts, contact Public Works at 970-962-2516.				
Signature: _____		Date: _____	Received By: _____	Date: _____
Building Division Comments		Client notification:		
Planning Division Comments		Application Number:		

Only enter the information as it pertains to the specific work performed under this application.