

Home Fire Safety Tips – Fire-Stopping & Fire-Sealing Your Home

Most homes lack full fire-stopping and fire-sealing (even many brand new homes). Fires often spread quickly through buildings through their walls, ceilings and other voids in construction. Pipes, wires, ducts and other penetrations into the open voids in your home's construction allow fire to pass quickly into these voids and can allow fire to spread rapidly.

So, What is Fire-Stopping and Fire-Sealing?

- **Fire-Stopping:** Sealing large openings (or walls in garages and other areas) in the framing, open ducts or other openings which lead to open shafts in walls, ceilings, etc. with fire rated materials (fire rated sheetrock, sheet metal, 1 ½ inch thick wood, Fire rated fiberglass, or other 1 hour fire rated materials)
- **Fire-Sealing:** Sealing small openings or penetrations (such as pipes, wires, ducts, etc.) with fire rated caulk or foam - making them air-tight and fire resistant.

Where Do I Need To Fire-Stop?

- At all open framing shafts – ESPECIALLY in Balloon Framed buildings.
- At all open shafts around chimneys.
- At all open shafts around ductwork.
- At all open shafts in firewalls (such as garage walls and ceilings, between buildings, etc.)

Where Do I Need To Fire-Seal?

- Around all pipe penetrations (in basements, attics, and all living space walls – e.g under sinks)
- Around all wire penetrations (in basements, attics, and all living space walls – e.g under sinks)
- At open seams or gaps in framing (e.g. seams between walls/floors/ceilings, etc.)
- Around all firestopping (to make it air-tight and more fire resistant).

Web Links to Firestopping and Fire-Sealing Information: (including Videos)

[Firestop Through Penetrations Training Video](#) (*REAL in depth – GOOD source of information and “How-To” tips*)

[Fireblocking | Firestop a wall for inspection | DIY fireblocking and penetrations VIDEO](#)

International Firestop Counsel - [What is firestopping?](#) [FIRESTOPPING INSPECTION POCKET GUIDE \(PDF\)](#)

NOTE: This is a simple guide to help homeowners understand firestopping and fire-sealing and help them to make their homes more fire-resistant. ***This guide is NOT all inclusive, and cannot address every situation.***

Many states, cities and towns may require that such work be performed by licensed professionals

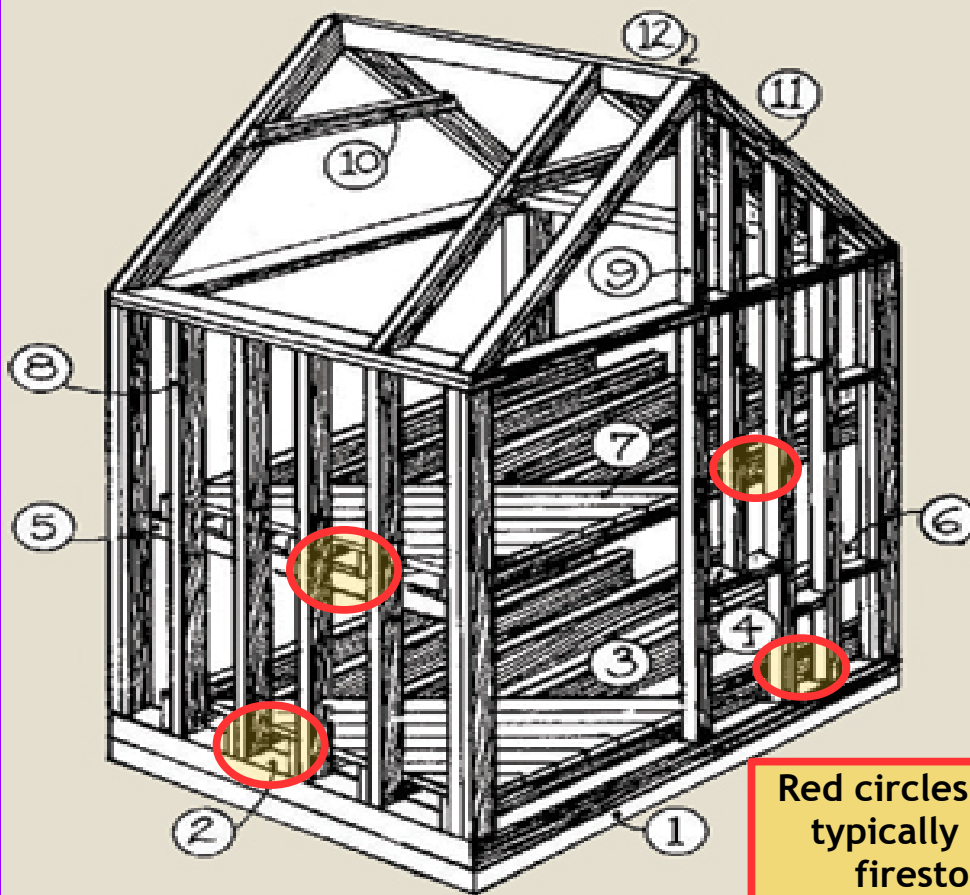
CHECK ALL LOCAL REGULATIONS BEFORE PERFORMING ANY WORK.

Contact us if you would like an inspection of your home for fire safety. Call 781-334-3830 - Email spreiinc@gmail.com

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Balloon Framing

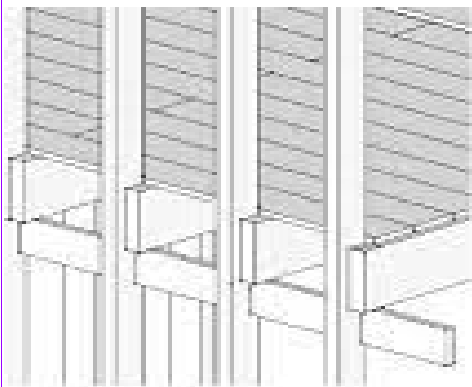
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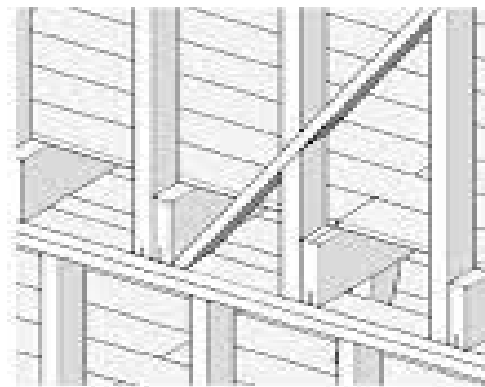
1. Foundation
2. Sole Plate
3. Joist
4. Door Header
5. Ledger Board
6. Fire Stop
7. Sub floor
8. Stud
9. Gable Stud
10. Collar Tie
11. Rafter
12. Ridge Beam

Red circles are areas typically needing firestopping

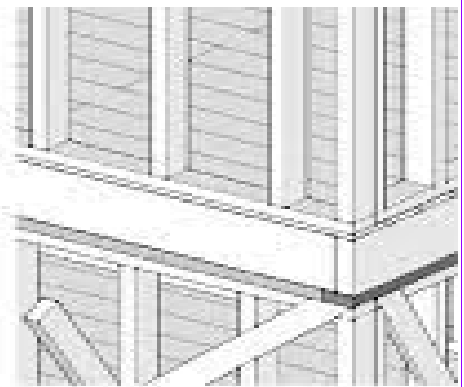
Firestopping in balloon framed houses is typically needed on ALL perimeter walls at the basement, attic, and at each floor – due to the open design of the framing system. In some houses (*and in the living areas*) these areas will typically be finished and difficult to access for firestopping without opening up wall areas.



Balloon Frame



Hybrid "Blacksburg" Frame



Platform Frame

(some clients have attempted such methods as – drilling a small hole – the size of a fire-sealing foam spray can plastic nozzle at the center of the wall's baseboard between each wall stud shaft – and then filling the void with a whole can of fire-rated foam, but this only works on some types of balloon framing (such as the center "Hybrid Blacksburg Framed" homes)– where the sub-floor extends into the wall stud shaft (center image above) – otherwise the foam will tend to just fall down the shaft)

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Behind the finish in living areas – there are open shafts which extend up and down the stud walls (*often open from basement to attic*) AND across ceiling/floor joists (*extending wall to wall*) which can allow fire to spread fast. This picture is of a balloon framed house outside wall with the wall and ceiling finishes removed. Firestopping these areas without opening up walls/ceilings is VERY difficult.



A view of open balloon framing from a living area floor (*again with wall finish removed*). These open shafts should be firestopped (e.g. a horizontal stud cut and fastened at floor level with it's edges sealed with fire rated caulk, sheet metal, or fire rated fiberglass insulation filling the shaft).

Again – this is difficult to fire-stop without opening up finished walls. If you do not open and fire-stop these areas, be sure to FULLY fire-seal and fire-stop basement, attic, and all accessible openings at minimum.

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Firestop all open shafts through firewalls (e.g. between buildings, in garages, hallways, etc.)



Firestop all open shafts around chimneys and ducts.



Firestop all open Laundry Chutes (laundry chutes should have a fire rated or metal self closing cover on BOTH ends to help prevent the spread of fire)



Firestop all open shafts for pipes and plumbing (e.g. under tubs, at water and heat pipe openings, etc.) These areas should ideally be sealed with REMOVABLE firestopping (screwed in) for plumbing access.

Firestop:

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Example of Fire-Sealing with Fire Rated Caulk

**ALL PENETRATIONS SHOULD
BE FIRE-SEALED FOR SAFETY**

