DOWNLOAD PDF FIRE SPREAD ALONG THE VERTICAL CORNER WALL

Chapter 1 : What is fire block? How do I install fire blocking for my basement?

*Fire spread along the vertical corner wall, (NIST GCR) [K Saito] on www.nxgvision.com *FREE* shipping on qualifying offers.*

Why do I need blocking when framing a basement wall? July 30, This guy is installing blocking, most likely so he can frame a wall underneath of it. Honestly, I had no freaking idea what the word "blocking" meant when talking about framing a wall. When I started my basement project my friend Tom was like, "how did the blocking go? But when I walked off I was thinking "what in the hell is he talking aboutâ€¦ blocking? The first wall was up and I as I rounded the corner to start on framing the second wall it hit me. I needed some blocking or this wall was not going up. Blocking for wall framing are short pieces of 2 by 4 that you install between two joists of the basement ceiling. If your brain is about to explode now, please stay calm, I do have a picture. Yea, I get that. Install your blocking before you start building your wall. You want them at 16" or 24" on center because the drywall guys will expect them to be the same distance apart as your joists. The main thing is the be sure that the blocking is flush with the bottom of the joist and straight and flat. See, not that bad, right? Next up - installing a firewall! Cheers - Jason Hey, dudes and dudettes, do you still have a question? Even after my redonkulous written explanation? I thought you might. Go ahead and ask it in the comments below. I hate spam, your email is safe. Unsubscribe whenever, no hard feelings.

Chapter 2 : Fire-Induced Flow Along The Vertical Corner Wall

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How to tile interior corners In order to tile an interior corner, you have two broad options: Either way the operation is straightforward, so it is up to you if you want to install the plastic corner trim. We will describe each of these 2 techniques separately, as to get a better grasp of the implied cost, time and work. Nevertheless, before tiling the corners, you have to use a large spirit level as to check if they are vertical. Using an inside corner trim would give a modern edge to your bathroom, therefore install it properly. As the walls cannot be perfectly vertical, you have to measure each tile before installing it into place. If it is a little too wide, you could adjust it wit tile nippers, as to fit perfectly. Use a spirit level to make sure the corner trim is perfectly plumb and adjust it if necessary. In order to secure the corner trim, you have to apply adhesive on the back of the tiles and fit them into place. In this way, the tiles will lock the plastic corner trim in place. In this image, you can have a better view on how to tile an interior corner. Therefore, you should notice the channel inside the plastic trim, where you should fit the tiles. Use spacers between the tiles as to get even joints, as in the image. After you finish tiling the internal corners, you should fill the gaps with a water-resistant grout. Nevertheless, we recommend you to use a bead of silicone to fill any gap between the trim and the tiles. Clean thoroughly the tile with a dry cloth, as to get the job done in a professional manner. Work with patience and with great care, as to avoid mistakes. As you can see, tiling an inside corner is not difficult if you use the right tools and material. Nevertheless, you can tile an inside corner without using a plastic trim. All you have to do is to start installing wall tile on one side of the corner. Spread the adhesive on the wall with a notched float and make sure the tiles are plumb use a spirit level to be sure. One of the biggest mistakes you could make it would be to leave no room for the tiles to expand, as in time they might create peaks. When you tile the other side of the corner, the tiles should overlap, but make sure you leave a clearance gap between them place a spacer. How to tile outside corners Tiling an outside corner is easy if you use tile trim and it would also give a professional look to your bathroom. Outside tile trims come in many shapes, sizes and colors, so it is easy to find the most suitable one for your needs and tastes. As you can see in the image, using a corner trim would enhance the appearance of your project, so make sure you install it properly as to fully benefit from its advantages. Tile the wall in a professional manner until you reach the outside corner. Then you have to adjust the length of the corner trim with a cutter, as to fit into place. Use a large spirit level to see if the corner is plumb from top to bottom. Next, spread tile adhesive on the wall corner and secure the plastic corner trim, making sure it is perfectly plumb. Use a spirit level or a plumb line to check if the outside corner trim is vertical and adjust it if necessary. Last but not least, you have to install the tiles in place on the whole surface of the wall. Make sure you leave a clearance space inside the trim, between the tiles and the plastic corner trim. Afterwards, you have to leave the adhesive to dry, before you apply the grout. On the other hand, you can tile a corner without using a plastic trim. As you can see in the image, the tile edges will be visible even though you grout the gap between them. Thank you for reading our article on how to tile corners and we recommend you to check out the rest of our tile projects.

Chapter 3 : Fire spread along the vertical corner wall, (NIST GCR): K Saito: www.nxgvision.com: Books

Upward flame spread along the vertical corner wall is a severe phenomenon due to its rapid spread rate in building fires. We conducted this study to investigate what kind of flow will be developed along the vertical corner wall by fires using a room corner model and placing a square gas burner on the floor.

In the United states, timber framing was superseded by balloon framing beginning in the s. Balloon framing makes use of many lightweight wall members called studs rather than fewer, heavier supports called posts; balloon framing components are nailed together rather than fitted using joinery. The studs in a balloon frame extend two stories from sill to plate. Platform framing superseded balloon framing and is the standard wooden framing method today. The name comes from each floor level being framed as a separate unit or platform. Framed construction was rarely used in Scandinavia before the 20th century because of the abundant availability of wood, an abundance of cheap labour, and the superiority of the thermal insulation of logs; hence timber framing took off there first for unheated buildings such as farm buildings, outbuildings and summer villas, and for houses only with the development of wall insulation. These stick members, referred to as studs , wall plates and lintels sometimes called headers , serve as a nailing base for all covering material and support the upper floor platforms, which provide the lateral strength along a wall. The platforms may be the boxed structure of a ceiling and roof, or the ceiling and floor joists of the story above. The platform also provides the lateral support against wind and holds the stick walls true and square. Any lower platform supports the weight of the platforms and walls above the level of its component headers and joists. Post and beam , which is now used predominantly in barn construction. Balloon framing using a technique suspending floors from the walls was common until the late s, but since that time, platform framing has become the predominant form of house construction. The top and bottom plates are end-nailed to each stud with two nails at least 3. Studs are at least doubled creating posts at openings, the jack stud being cut to receive the lintels headers that are placed and end-nailed through the outer studs. Some types of exterior sheathing, such as asphalt-impregnated fiberboard , plywood , oriented strand board and waferboard , will provide adequate bracing to resist lateral loads and keep the wall square. Construction codes in most jurisdictions require a stiff plywood sheathing. Others, such as rigid glass-fiber, asphalt-coated fiberboard, polystyrene or polyurethane board, will not. Corners[edit] A multiple-stud post made up of at least three studs, or the equivalent, is generally used at exterior corners and intersections to secure a good tie between adjoining walls, and to provide nailing support for interior finishes and exterior sheathing. Corners and intersections, however, must be framed with at least two studs. This material is commonly referred to as dead wood or backing. These members, referred to as studs , wall plates and lintels, serve as a nailing base for all covering material and support the upper floors, ceiling and roof. Studs usually consist of 1. Insulation beyond that which can be accommodated within a 3. The studs are attached to horizontal top and bottom wall plates of 1. Interior loadbearing walls are framed in the same way as exterior walls. Studs are usually 1. Where a partition does not contain a swinging door, 1. This is usually done only for partitions enclosing clothes closets or cupboards to save space. Since there is no vertical load to be supported by partitions, single studs may be used at door openings. The top of the opening may be bridged with a single piece of 1. These members provide a nailing support for wall finish, door frames and trim. The preferable spacer material is rigid insulation. Wall sections[edit] The complete wall sections are then raised and put in place, temporary braces added and the bottom plates nailed through the subfloor to the floor framing members. The braces should have their larger dimension on the vertical and should permit adjustment of the vertical position of the wall. A strip of polyethylene is often placed between the interior walls and the exterior wall, and above the first top plate of interior walls before the second top plate is applied to attain continuity of the air barrier when polyethylene is serving this function. This second top plate usually laps the first plate at the corners and partition intersections and, when nailed in place, provides an additional tie to the framed walls. Where the second top plate does not lap the plate immediately underneath at corner and partition intersections, these may be tied with 0. It uses long continuous framing members studs that run from the sill plate to the top plate, with intermediate floor structures let into and nailed to them. Once popular when long

lumber was plentiful, balloon framing has been largely replaced by platform framing. It is not certain who introduced balloon framing in the United States. However, the first building using balloon framing was possibly a warehouse constructed in in Chicago , Illinois , by George Washington Snow. In the s, Hoosier Solon Robinson published articles about a revolutionary new framing system, called "balloon framing" by later builders. Builders were reluctant to adopt the new technology, however, by the s, some form of 2x4 framing was standard. Historians have also fabricated the following story: It would surely blow over in the next wind! Though the criticism proved baseless, the name stuck. The advent of cheap machine-made nails, along with water-powered sawmills in the early 19th century made balloon framing highly attractive, because it did not require highly skilled carpenters, as did the dovetail joints , mortises and tenons required by post-and-beam construction. For the first time, any farmer could build his own buildings without a time-consuming learning curve. Without it, western boomtowns certainly could not have blossomed overnight. However, balloon framing did require very long studs and as tall trees were exhausted in the s, platform framing became prevalent. The main difference between platform and balloon framing is at the floor lines. The balloon wall studs extend from the sill of the first story all the way to the top plate or end rafter of the second story. The platform-framed wall, on the other hand, is independent for each floor. Wood pieces are typically connected with nail fastener nails or screws; steel pieces are connected with nuts and bolts. Preferred species for linear structural members are softwoods such as spruce, pine and fir. Recently, architects have begun experimenting with pre-cut modular aluminum framing to reduce on-site construction costs. Wall panels built of studs are interrupted by sections that provide rough openings for doors and windows. Openings are typically spanned by a header or lintel that bears the weight of structure above the opening. Headers are usually built to rest on trimmers , also called jacks. Areas around windows are defined by a sill beneath the window, and cripples, which are shorter studs that span the area from the bottom plate to the sill and sometimes from the top of the window to a header, or from a header to a top plate. Diagonal bracings made of wood or steel provide shear horizontal strength as do panels of sheeting nailed to studs, sills and headers. Wood or steel floor frames usually include a rim joist around the perimeter of a system of floor joists, and often include bridging material near the center of a span to prevent lateral buckling of the spanning members. In two-story construction, openings are left in the floor system for a stairwell, in which stair risers and treads are most often attached to squared faces cut into sloping stair stringers. The part of a structural building that goes diagonally across a wall is called a T-bar. It stops the walls from collapsing in gusty winds.

Chapter 4 : Do Cracks in Walls Indicate a Structural Problem? | Today's Homeowner

Flame spread behavior and the pyrolysis region spread characteristics along polymethylmethacrylate (PMMA) vertical corner walls were studied in detail with an automated infrared (IR) imaging temperature measurement technique.

For example, a smoldering cigarette starts a fire in a stuffed chair or mattress. But if the flames are not quickly extinguished while in the content phase; they will extend to, and throughout the structure. It spreads throughout concealed spaces, poke through walls, common roof or attic spaces. Sometimes even along the outside of the building. Extinguishing a structure fire, is much more complex than quenching a content fire. The concealed flames must be located and cut off, in addition to extinguishing the original content fire. To do this effectively fire officers must know the various ways fire can spread throughout a structure. We study our local building codes and construction techniques. But at the scene of a fire we cannot expect to know every construction detail of a building. However, we should know the basic construction types in our community, and we should be able to associate the burning building with one of the basic construction types. If we can do this, we can determine approximately how a fire may spread. Five types of construction and Fire Spread There are five basic groups of building construction used throughout the United States. We should know them. Each one has a fire-resistive weakness, which results in a reoccurring fire spread throughout its structure. By knowing how a fire can spread, it helps us extinguish the fire quickly and most important protects firefighters from becoming trapped by fire, killed or injured. All buildings in America can be associated with one of five basic types of construction, identified by Roman numerals in building codes and by engineering schools throughout the nation: All buildings are not created equal. Some building construction types burn much more readily than others do. Both the materials stored inside a building and the material the structure was built with add fuel to a fire. However, when the building is vacant or the contents are non-combustible, then the structure presents the main fire hazard. The five basic construction types are arranged in a scale based on the amount of combustible material used in their construction. For example, a type I fire-resistive building has the least amount of combustible material in its structure; a type V wood-frame building has the most. In addition to the relative combustibility of the five types of construction, fire officers should know specific fire spread problems inherent in each type. These recurring fire spread hazards increase our firefighting problems. The following are recurring problems which allow fire to grow in each one of the five basic types of building construction: This concrete and steel structure, called fire resistive when first built at the turn of the century, was supposed to confine a fire by its construction. Today, that is no longer true. Fire does spread several floors in a modem fire-resistive building, despite its steel and concrete structure. Two avenues by which fire and smoke can spread throughout a fire-resistive building are by central air conditioning ducts and by auto-exposure, a term used by the fire service to describe flames extending vertically from window to window. Central air conditioning systems are used in fire-resistive buildings occupied as high rise office buildings and hotels. These systems may serve the entire building with cool air in the summer and heat in the winter. A system of ducts acts as a network to supply this conditioned air. These ducts, unfortunately, allow fire and smoke to spread throughout a so-called fire-resistive, type I constructed building. Fire or smoke in a room near a fresh air intake or return air duct will be sucked into the air conditioning system and be pumped throughout the structure. Air ducts of a central air conditioning system penetrate every fire barrier in the type I building. Ducts pierce the walls, floors, partitions and ceilings. One such fire in a Nevada hotel resulted in the deaths of 85 people because the central air conditioning system pumped deadly smoke throughout the burning building. There was no smoke detector inside the air conditioning system designed to shut down the system when a fire occurred. So, the first action taken by fire officer in command of a fire inside a fire-resistive building should be to order the air system shut down. Auto-exposure, the vertical spread of flames from windows below to windows above, is another way fire spreads throughout a type I building. Flames erupting out of a heat-shattered window can melt and break the glass window directly above. Once the window above is broken and falls away, flames can enter and ignite ceiling tile, curtains or furnishings. Even if the windows do not melt or break from heat, a small-concealed space between the exterior wall and the end of the floor slab can

allow vertical spread of fire and smoke from floor to floor above and near a window. To combat fire spread by auto-exposure, the officer in command should order an aerial master stream into operation. A water stream can slow down auto-exposure fire if it is within the reach of the aerial ladder. A water stream directed against the spandrel wall the exterior wall between the top of one window opening and the bottom of the window above can slow down fire spread. An aerial stream should not be directed into the flaming window if firefighters are inside. The stream should be directed against the exterior spandrel wall. A foot aerial ladder may be effective extinguishing a fire deep inside a burning floor up to feet from street level. Depending on the height of each floor in the building, this fire extinguishing ability may be the I0th floor if the height of each floor is 12 feet; or the 12th floor if each level is 10 feet; or up to the 15th floor if each level is eight feet. An aerial ladder master stream may stop vertical fire spread from auto-exposure at much higher levels. The stream does not have to penetrate the floor interior; it simply must reach the spandrel wall and spray the exterior surface of the building. An aerial stream nozzle I00 feet above ground level directed at a degree angle could reach to the 15th floor of a modem high-rise fire resistive building. Non-combustible type II constructed building has a different recurring fire spread problem: A type II building has steel or concrete walls, floors and structural framework; however, the roof covering is combustible, it burns and spreads fire. The roof covering of a type II building can be a layer of asphalt water proofing, with a combustible felt paper covering. Another layer of asphalt may be mopped over the felt paper. A combustible foam insulation may be placed on top of the asphalt, and another layer of asphalt mopped over the foam insulation. When a fire occurs inside a type II building, flames rising to the underside of the steel roof deck may conduct heat through the metal and ignite the combustible roof covering above. Conduction is the transfer of heat through a solid. The asphalt, felt paper and foam insulation may bum and spread fire along the roof covering. After a fire has been extinguished inside a type II building, the officer should go to the roof and examine the roof covering directly above for extension. If necessary, a hoseline should be stretched to the roof for extinguishment. Ordinary constructed type III building is also called a brick-and joist structure. It has masonry-bearing walls but the floors, structural framework and roof are made of wood or other combustible material. Ordinary construction has been described by some firefighters as a "lumberyard enclosed by four brick walls. These small voids, crevices and openings through which smoke and fire can spread are found behind the partition walls, floors and ceilings. Concealed spaces are created by wood studs, floor joists and suspended ceilings. Poke-through holes are created by small openings for utilities. These small openings around pipes and wires allow fire to spread into concealed spaces. Flames can spread vertically several stories or horizontally to adjoining occupancies inside concealed spaces. The largest concealed space is the cockloft. This roof space, above a top floor ceiling and below the roof deck, is large and can sometimes extend over several buildings. A fire in a cockloft or roof space extending over a row of three or four houses or stories can destroy the entire row of structures. Fire spreads inside concealed spaces of a type III building by convection. Convection is the transfer of heat by fluid motion, such as by a liquid or gas. Heated fire gases and flame in a concealed space can travel upwards several floors and break out in a cockloft. When firefighters search for hidden fire, and must open walls and ceilings to find it and extinguish it, they should remember this fact and try to cut off the rising fire. For example, if you discover fire in a floor, open up the wall above it. If you discover fire in a wall, open up the ceiling. If you discover fire in a ceiling, open up the baseboards on the floor above it. By doing this, convection currents of flame and heat can be cut off and revealed so they can be extinguished. Heavy-timber type IV construction is sometimes called "mill construction" because it was the type of structure used at the turn of the century to house textile mills. These buildings have masonry walls like type III buildings but the interior wood consists of large timbers. The floor and roof are plank board. In a heavy-timber building a wood column cannot be less than eight inches thick in any dimension and a wood girder cannot be less than six inches thick. One difference between a heavy timber building and ordinary construction is that a heavy-timber building does not have plaster walls and ceilings covering the interior wood framework. The exposed wood timber girders, columns, floor beams and decks, if ignited in a fire, create large radiated heat waves after the windows break during a blaze. If a fire in a heavy-timber building is not extinguished by the initial attack, a tremendous conflagration with flames coming out of the windows will spread fire to adjoining buildings by radiated heat.

A fully involved type IV building can create a conflagration. As the fire grows, apparatus will have to be repositioned away from the radiated heat waves. Large water supply sources must be located and master streams set up to protect nearby buildings. A collapse danger zone must be designated to protect against a building collapse. Expect the floors to collapse first and then the walls to push outward falling into the street. Wood-frame type V construction is the most combustible of the five building types. The interior framing and exterior walls may be wood. A wood-frame building is the only one of the five types of construction that has combustible exterior walls. When sizing up a fire in a wood building, the outside walls must be considered for the fire spread. Flames can spread out a window and then along the outside wood walls in addition to the interior fire spread.

Chapter 5 : Framing (construction) - Wikipedia

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Fire Blocking How to install fire blocking in basement walls, stairways and other home framing. Fire blocking is necessary to restrict the passage of fire flames inside concealed spaces, like the walls of a house. Fire blocking is needed when wood and steel stud walls only have drywall on one side because the fire is now able to go around the top plate and up into the framing above. Sometimes it is hard to see where you need fire blocking. Think of like this, if fire got inside the wall would it be able to get out? Are there any openings, holes or other spaces that fire could travel out of the space into? Walls with drywall on both sides are simple. Fire blocking questions arise when framing things like soffits, columns that are more than 1 stud wide, furdowns around hvac and plumbing and the most common one, framing against a concrete wall so you can insulate and install drywall. This article will show you how to install fire blocking at basement walls, stairways, furdowns, and architectural framing. Anytime this article talks about building codes it is refering to 09 IRC Vertical Basement Wall Fire Blocking Fire blocking basement walls is installed by nailing on strips of 5x8" or thicker O. This means that every 10 feet along a wall you will need to close the gap between the wall stud and the concrete wall, from floor to ceiling. Ask your building inspector step 2 Fire Blocking Soffits, Cove Ceilings and Drop Ceilings Fire blocking is required inside concealed spaces both horizontally and vertically just like basement walls. When framing soffits or columns that will have drywall installed on them or any other architectural feature like an arch it seems that fire blocking is necessary because there is almost always a cavity on the top side that goes up into the ceiling or floor above. These passage ways are sometimes hard to see when the drywall is not yet installed. To figure out where to install the fireblocking just imagine a fire inside of the framed space and then look for ways that it can get out after the drywall is installed. The main reason for fire blocking at stairways is to protect the strength of the stairway so it will remain strong as long as possible during a fire so people can get out of the basement or down from up stairs. There are two main steps to fire blocking a stairway: Any time a duct, plumbing pipe or electrical wire goes through a floor or ceiling it must be sealed around it with some type of fire stop. The most often used product is a expanding foam but regular caulking or unfaced batt insulation works as well. The horizontal holes drilled for electrical wiring do not need to be fire blocked. The caulk at these openings does not need to be fire rated IRC But if you use expandable foam it should be.

Chapter 6 : How to Mud and Tape Drywall Corners | This Old House

The corner wall flame spread phenomenon differs from that for a plain vertical wall primarily because of the radiative and flow interaction between the walls. An.

What is fire blocking? How do I fire block when framing my finished basement? October 18, Not sure how to install fire block? Someone who plans way ahead kudos to you! Someone who is presently freaking out. Perhaps because you missed a major step in your basement finishing project. Either way, I know I can help you. During my basement finishing project I was the latter. The guy freaking out. I remember, it was a Monday. I mentioned to my friend Tom that I was done framing my basement walls and had scheduled my framing inspection for Thursday. You are really doing it. What the hell is fire blocking? Can I do it in 3 days? The purpose of fire blocking is two fold. Starve a fire of oxygen and prevent it from spreading. Ironically, fire blocking material does not have to be fire-proof. In this example there is NO fire block. The fire can get air and move freely. Ok, same diagram but with fire blocking installed right near the top plate of the wall. Read these other sections and it will make more sense. I recommend using drywall as a fire stopping material. You can also use 2x4s, plywood, rigidly packed insulation, fire foam and sometimes sheet metal. I used drywall for my basement. I was a bit short on time so drywall was easiest to cut to the right width and length. It passed inspection without any issues. How do I "install" fire block? Then push that strip of drywall up into that space. If you have small enough gap just use some fire foam and it will expand to fill the space. Plus, it fun to squirt. If you drill a hole in the top plate of a wall so you can run plumbing pipes or wiring you need to stuff some rock wool or insulation in the remaining space. Yes, even a little tiny space. If a fire is burning behind your wall and that space is open the fire will suck air into the gap and go burn crazy. Giving you, your family and your fire department time to react. Not sure what you can use to fire block? I wrote it down for you. Fred is a little hard of hearing, due to that one air show he went to where he stood right next to the engine while it "warmed up". Is it okay to use drywall? He even said thanks for checking, so you know you are good to go. Do I install fire blocking before or after wall framing? You can also do it as you go along. You will fail your framing inspection. Well, you "should" fail. What is horizontal fire blocking? Do I need to worry about it. It stops fire from moving up. Horizontal fire block stops fire from moving sideways. My county did not require horizontal fire blocking. I hope that helps. I know for me fire blocking was a tricky topic to grasp at first. Keep going with your basement finishing!

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Chapter 7 : Structural Fire Spread

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This research project increased firefighter safety by providing the fire service with scientific knowledge on the dynamics of attic and exterior fires. These attic fires are very challenging for the fire service to mitigate and have led to line of duty deaths and injuries. Further complicating attic fires, current building practices include new products to achieve better energy performance to meet newer code requirements with little understanding of fire performance or the impact on firefighter safety. This study provides the fire service with the science necessary to examine their standard operating procedures utilized during fires that start on the outside of the structure and during attic fires. Read moreâ€¦ To evaluate the exterior fire hazards of various wall construction types, medium scale testing was performed on 8ft x 8ft wall sections looking at ignition, flame spread, peak heat release rate and exposure potential. The results of the medium scale testing was used to establish parameters for eave experiments to further evaluate flame spread along with increasing the understanding of the dynamics of how fires transition from exterior to attic fires. Following the eave experiments full scale attics were constructed and instrumented to evaluate the effectiveness of four fire service suppression tactics on attic fires. Each tactic was evaluated both with and without vertical ventilation or simulated attic burn through to understand the fire dynamics during attic fires. Finally field experiments were conducted to investigate the fire dynamics of knee wall fires and the effectiveness of current mitigation tactics for knee wall and half attic space fires. Tactical Considerations The results of the experiments were then examined with the fire service technical panel and utilized to develop 12 fire service tactical considerations for use in the mitigation of attic, knee wall and exterior fires. For more information on these tactical considerations download the full project report in the resources section above. These tactical considerations include: Increased use of plastics in exterior walls will change what you arrive to. If the fire starts on the outside, start fighting it from the outside. Learn to anticipate where and how an exterior fire will migrate to the interior. Attic fires are commonly ventilation limited fires. Closely time or limit vertical ventilation until water is in the attic. Plastic ridge vents can affect size-up and fire dynamics. Wetting sheathing with an eave attack slows attic fire growth. Attic construction affects hose stream penetration. Consider flowing up instead of down with a master stream. Knee wall fire dynamics. Apply water on a knee wall fire at the source and toward the direction of spread before committing to the attic. Interior operations on knee wall fires.

Chapter 8 : How to tile corners | HowToSpecialist - How to Build, Step by Step DIY Plans

As stated earlier, the structural stability of the fire wall is paramount and the double-wall fire wall allows each wall within the assembly to support the floors and roof of its respective "building," allowing either building to collapse along with its side of the fire wall, leaving the other wall intact.

Chapter 9 : What is blocking? Why do I need blocking when framing a basement wall? - I Finished My Bas

CORNER WALL-FIRE EXPERIMENT A schematic of the corner wall flame spread test apparatus is shown in Figure 1. The room corner scale-model with ceiling and floor is made of Marinite boards fixed on a steel frame.