



Talking Points – Vertical Ventilation on Tile Roofs

By Capt. Jake Yake

Safety:

- Railing for fall protection, don't trust it.
- Stay 6' back off the edge of the roof.
- No crews are working below the roof we are on, tiles can get thrown back in your hole when you're done.

Building Construction:

- Tiles weigh 8-12 lbs, can be clay or concrete. Think of the total dead load on the roof with that additional weight, plus a four FF truck crew on the roof, plus structural member degradation.
- To compensate, some roof rafter or truss spacing may be 16" oc vs 24" oc. (This building has 24" oc).
- View from the street- is it a walkable roof (up to 6:12 pitch)?
 - Up to 6:12 - Anticipate first few courses on the bottom and the top being nailed. The rest is floating. (There is not one nail in this roof for tiles).
 - 6:12 to 8:12 every other course nailed.
 - 8:12 and greater every course nailed.
- On top of rafters or trusses will be a plywood deck (or OSB), roof paper, and a furring strip for nailing. Occasionally you may have older shake roofs that have had the cedar shake removed, covered the skip sheathing with OSB, and then tiled. A lot of material to try and feel the rafters through.
- Sounding will not be beneficial on this roof. Rely on fire/smoke reads from gable vents, soffit vents, roof vents. Roof sag.
- Inspection hole can be beneficial however don't put all your money on that. The roof construction can change at different points in a building. (This building has three different construction changes from one side of the roof to the next.) Inspection holes need to happen where you're wanting to cut.
- After the first evolution, take opportunity to view the types of construction and components in the attic space in the other holes created. Also make note of the over framing, roof over roof. Good discussion on what to do if this is discovered after cutting the hole. Where do you go now?

Performing the evolution:

- Walking the roof. Walk the same strong points of a roof as you would any other. If you're concerned about the roof holding your weight then consider if you should be there. Make an inspection hole or smoke indicator hole and see what's underneath you.
- Removing the tile from the workspace has taken anywhere from 30-60 seconds (4x8 hole).
- Advocate to not smash tiles to create space. Push tiles up with hook or axe head to expose the full tile. Exposing this first run will allow you to pull tiles off and stack them out of your way. Remember to get the stacked tiles either on the backside of the ridge, or far enough away they're not going to be in your way while working.

- Smashing tile creates a debris field that is difficult and slippery to walk on, and can turn the small pieces of tile into bullets when hit by the chainsaw during the cuts.
- Clay tiles are easy to break and often break under the weight of the FF walking on it. Be deliberate in your movements. We don't want to have to include a broom in the type of tools brought to the roof.
- Work from the top down on removing tiles. Exaggerate the area you clear of tile. Too often crews aren't removing enough tile, and it limits their hole size or makes it hard to work in.
- This is a commercial roof and great roof for 2-saw techniques. Whichever cut sequence used, it is a carefully choreographed evolution that should be smooth and fast.
- Be aware of 2x4 blocking that is perpendicular to the rafters or to truss top chords. This is there to support the joint of the plywood. The weight of the tile on the roof decking requires the blocking to support it. These are sacrificial. The rafters/trusses are carrying the load of the roof, cutting the blocking will have no impact to stability at this point.
- Be aware of what your saw is coming in contact with while in the roof. There are sprinkler pipes very close to the bottom of the top chords or rafters, conduit, and even large supporting beams. Hitting metal may cause you to lose your chain. Also, if you feel like you're cutting through a tree instead of 2x's, then take a look at what's under there. Investigate before just "letting the big dog eat." It could be as simple as moving up or down or to one side as little as 6" to make a difference.
- With things in the way in the attic space, it may cause louvering to be near impossible. Don't hesitate to use the chainsaw to rip the louvers instead. Don't waste time on forcing louvers while you have a perfectly good saw there!
- When sawyers are complete with the cuts, keep the saws running and watch the hooks. Be prepared to make additional cuts.