

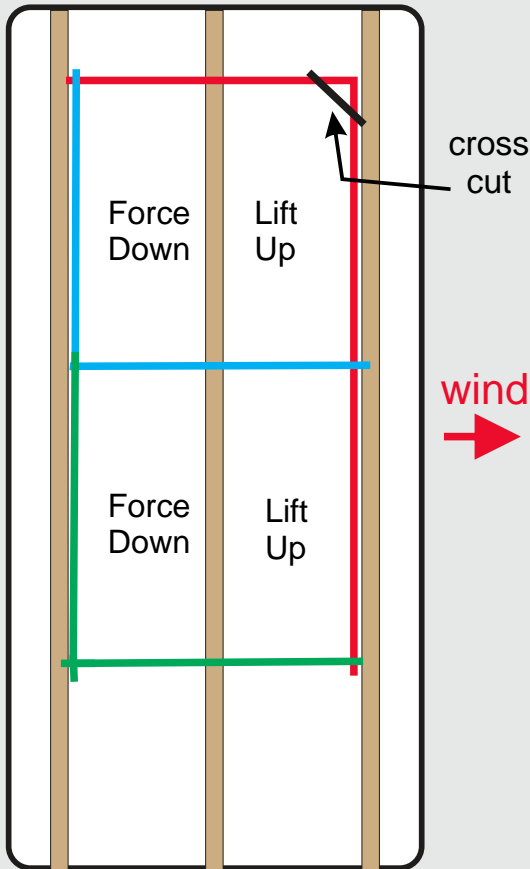


HOSE COMPANY 2 - WESTBURY FIRE DEPT.

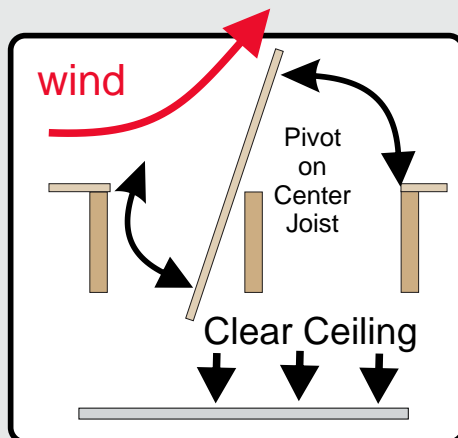
TRAINING EXERCISE

Cutting Roofs - Louver Cuts

Single Louver



(Top View)



(Side View)

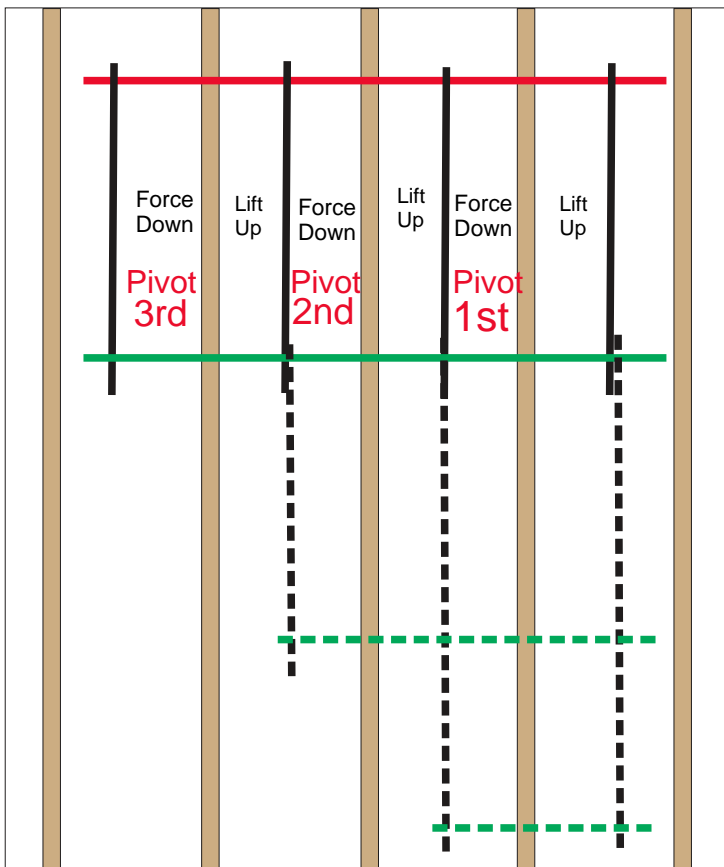
There is very little difference from making a Single Louver and our Standard 7,9,8 Cut.

We need to know our wind direction,
(typically top of our 7 is the top of the wind direction - wind at our backs)

- But if we're doing a louver cut, it is more important that the top of the 7 be at the highest point (if peaked) and perpendicular (opposite direction) to the roof rafters, so having wind at our backs is not always feasible. If this is the cases, the side of the 7 should be the windward direction. This top of 7 cut should cross over 3 Roof Rafter.
- Another difference is our side cuts or cuts that are parallel (same direction) to our roof rafter, these must be made to the inside of the rafter. If these cuts cross over the rafter, they will prevent center cut out from pivoting.
- Our top of 7 cut will locate our roof rafters. (feel for joist/ listen for saw slow down) making a cross cut before making the side of the 7 will also help locate the roof joist. (if met with resistance/hear saw bog down you are most likely cutting the rafter)
- Once you finish the side of the 7, you want to start the side of the 9, again this cut is made to the inside of the roof rafter. This cut is $\frac{1}{2}$ the distance of the 7 side, then a cut is made perpendicular competing the bottom of 9.
- Once the 9 is complete, we start the 8, by continuing the side of the 9 to the length of the side of the 7 and then cut across the bottom perpendicular completing the 8.
- All cuts must be crossed (remembering a saw blade is round, so if not crossed, they may not be completely cut through.
- Once all the cuts are made, all that remains is pivoting the inside cut sections on the center joist we crossed over. The section we force down should be opposite side of the 7. Forcing the 7 side down could actually stop air, forcing it into the hole, going against what we are looking to accomplish.
- We can then clear the ceiling(s) below
- Once our vent is complete, we're off the roof !

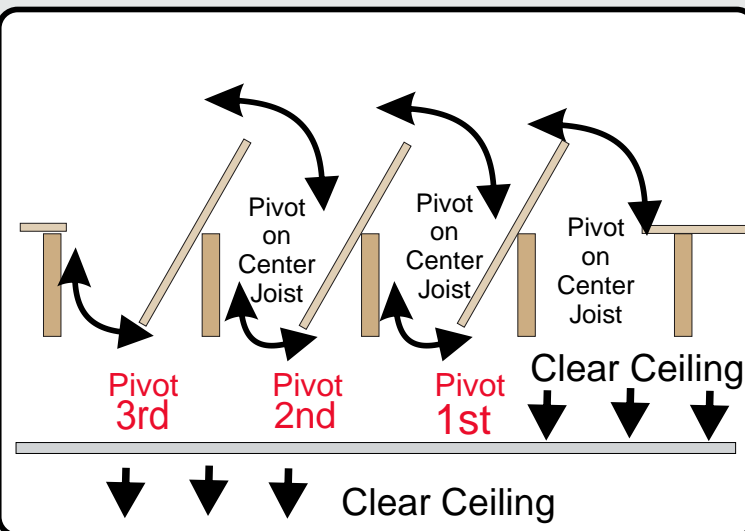
Multiple Louvers

wind
→



(Top View)

wind
→



(Side View)

The technique for cutting multiple louver is basically the same as a single louver.

- Our top cut needs to be perpendicular (opposite our roof rafters) but instead of only crossing 1, this time it can be as many as we need. Our top cut will also mark our roof rafters, by feel and sound. We can make a cross cut noting them, especially if smokey conditions ...
- Once our top cut is complete, unlike the single louver were we cut to the inside of each adjacent roof rafter, here we need to make our down or parallel cuts in the center between each roof rafter we crossed over. A good reference length of these down cuts = $\frac{1}{2}$ distance of the top cut. (if top was 8' across then down cuts should be approx 4')
- Once all our down cuts are made, we then make a bottom cut, parallel and mimicking the top cut, assuring we cross over all the down cuts, as the down cuts crossed over the top cut.
- Once the bottom cut is made, we then can pivot each cut out starting at the wind direction working into the wind, forcing down the side we are working towards.
- If we feel a need to extend the holes, we can continue our down cuts starting from our previous bottom cutting down and once they are complete, make a new bottom cut and pivot the sections.
- If we started with 3 louver sections, and feel the need to extend our hole, it doesn't mean we need to continue each louver area, but only what we need, remember time is not always on our side.
- Depending on size of hole, you may want to clear the ceiling below before extending the hole, 1st it will make conditions better inside for operating personnel quicker, 2nd you may not be able to reach these area again and lastly you may not get another chance.

This and all roof actions need to be done quickly and with expertise, again time is not on our side, ever second you are on that roof it's stability is potentially being compromises. Be a student of your profession, by mastering these techniques you could save lives and this includes your own!

Instructors - Cutting Diagram

