260 - Roof Truss Prepare

Materials and Tools Needed:

1. Nail gun(s) with 16D sinker and 10D galvanized nails
2. Cap nail gun for foam
3. Subfascia, fascia, soffit and siding lumber
4. Paint and paint brushes
5. Truss design book supplied by truss shop

Most Common Mistakes:

1. Sheeted the wrong side of a gable

Construction:

Work done from roof top or from high ladders is risky and more difficult than work done on the ground. Since a crane is used to lift rafters, it is prudent that we do as much work as possible on the ground, before lifting the rafters.

1. **Evaluate and unstack**
   The truss drawing "orange book" illustrates each truss and how the trusses are assembled to make the complete roof. Typically, there are a large number of trusses for the main roof, a gable truss for each end of the roof, porch roof trusses and garage roof trusses. A more complex roof may have girder trusses and a 2nd type of roof truss for some transition in the main roof.

   The trusses are typically identified by an adhesive label applied to the bottom chord. Identify the commons, the gables and other specialty trusses. Sometimes, the gables are symmetrical and sometimes there is a specific orientation of which side is outside. It is critical that the correct side be identified and that side sheeted.

   Typically, piles are made of the 1) main roof common rafters, 2) each gable, outside surface facing up., 3) garage or other common rafters and 4) small rafters (such a porch rafters). Level and flatten by stacking scrap under the piles.
2. **If necessary, cut rafter tails**
   Rafter almost always arrive with all rafter tails at the same length. Check. If they are not the same length, correct the problems by cutting the long ones or extending the short ones.
3. **Evaluate nested gables**
   On some houses, there is a smaller roof that extends beyond the main roof. This might be for a rear bedroom or a garage that extends beyond the main rectangle of the house. Or, it might be for a front porch. In this case, the smaller commons and gables will align with one side of the larger gable. Lay the smaller truss on top of the larger gable and mark this intersection line. Nail a 2x4 to the larger gable to support the roof sheeting for this smaller roof section. Mark a line 2 inches up from that 2x4 so that sheeting and siding on that larger gable is adequately separated from the shingles on the lower roof. Sheeting and siding stops at this 2 inch line.
4. **Attach gable strongbacks**
   When raising gables using the crane, t is easier to toenail the gables to the wall top plates from the inside. But, a toenail through the bottom chord will typically miss the wall top plate. To handle this, we typically nail a 2nd 2x4 to the bottom chord. Toenailing through this 2nd 2x4 will reasonably hit the top plate.

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On the interior gables on a n-plex after the roof is up and sheeted, we typically build a short parapet wall covering the intersection of a lower roof segment with its neighboring higher roof segment. To make it easier to attach this parapet wall, a 2x4 is nailed on the flat to the top chord of the gable.

5. **Evaluate if gables get overhang and sheeting**
   In n-plex multi-family homes, only the gables at the extreme ends of the building get overhangs, sheeting and siding. Those gables in the middle of the building are not visible and are not sheeted or sided. If the gables you are working on will be visible, follow the steps below.
6. **Build gable overhang**
   The gable overhang is built by building a short wall that is attached to the top of the gables. This wall has a 2x6 top and bottom plate and short studs. The ends of the plates are cut to the angle on the top chord. The overhang is built to the same length as the rafter tails where cut in the above step. Nail this overhang "wall" to the top chord of the gable.
7. **Sheet & Side Gable**
   a. Attach soffit to the vertical face of the overhang built in the above step. **If the house has will have flat soffit, run the soffit as long as the rafter tail. If the house will have sloping soffit, run the soffit 1 ½ inch longer than the rafter tail.** Rip the soffit as necessary to match the width established in the prior step.
   b. Attach finish fascia to the 2x6 subfascia built in the above step. Do all of this using 10D galvanized nails. Set this finish fascia at the same height as the sub fascia. **Run the gable finish fascia 2 /14 inch longer than the subfascia.** This is so that when the gable finish fascia meets the eave subfascia, the perpendicular pieces match up perfectly and no other trim is required to make a proper looking finish. Cut and attach rosette to cover the joint at peak
   c. Consult with the site supervisor on how far down toward the bottom chord is to be sheeted. It is important to preplan how the gable sheeting will intersect with the wall sheeting. Using the cap nailgun, apply foam sheeting to that point. On garage gables, sheet with OSB and 8d nails.
   d. In most cases, we cut and attach siding over the top of the sheeting. There are some special cases where we do not (such as shingle style siding that starts lower on the wall) Using 10D ring shank galvanized nails. Leave the top 2 rows detached so that the crane strap can be passed through that area.
8. **Paint Gable**
   Caulk all the gaps between lengths of fascia and soffit, between fascia and soffit and between soffit and siding.

   Paint the overhang and the siding. Consult with the site supervisor for the color on each. Ensure sufficient paint is used for good coverage.

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Safety

44	Struck By	Nail gun	Safety Glasses Required All guns must be in single shot mode. No bump fire guns Air hose must be disconnected during any servicing, unjamming, etc Never shoot toward yourself or anyone else. If you must hold one of the pieces of wood being nailed together, be sure your hand is at least 1 ft from the shooting tip of the gun
18	Electrocution	Bad cord on power tool	Inspect a tool's cord before using the tool. As necessary, red tag and remove from service
19	Electrocution	Cut cord on power tool while using tool	Drape the power cord away from the area of the cut. When finishing a cut, insure the blade guard is down before setting the tool down (on top of its own cord).
46	Struck By	Power tools sawdust or other objects shot toward eyes	Safety Glasses required with any power tools
47	Tools - Hand and Power	Circular Saw - wood propped between 2 supports, cut in the middle, blade is pinched, kickback causes injury	When using a circular saw, short end of the cut is left to fall away. Do not make a cut in-between 2 supported ends. If someone is holding the drop-away end, he/she must lightly support it, letting it sag as the cut is made No cutting with wood propped over a worker's foot or supported by hand.

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48	Tools - Hand and Power	Circular Saw - arms, legs etc too close to cut	Common practice among carpenters is to support the cut with their foot. This is not accepted practice at Habitat. Cut to be done on saw horses or otherwise supported away from body
51	Tools - Hand and Power	Defective or dull power tool	Red tag defective or dull tools. Do not put back such tools back in the POD exposing some other worker to the same risk.

I have heard and understood the briefings on how to use the tools required for this activity. I have heard and understood the methods we use to do this activity

Date _____

_____ Instructor Name _____ Signature

_____ Name _____ Signature