



## NFBA Technical and Research Committee

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## Technical and Research Committee Chair:

Tim Royer, PE  
Timber Tech  
Engineering Inc.  
Denver, PA

# Post Frame Construction and Best Practices

## Safely Installing Edge Mounted Purlins

### INTRODUCTION

Purlins are commonly installed between the trusses the roof deck. Purlins can either be installed flat or on edge depending upon the span and the amount of load the purlin is required to carry. Certain safety precautions need to be considered when choosing to set the purlins in an edge mounted orientation.

### DISCUSSION

Sizing and orientation of wood purlins are typically determined based upon the span between trusses and the design load of the roof deck and any snow load that would be applied. When setting purlins on edge, there is concern that due to the loading or overturn, the purlins would rotate and not be stable. This could cause major roof damage and potentially building failure if the problem were to roll while under load.

The decision to put purlins in an edge mounted configuration may be required based on the design, however steps can be taken to make sure that the purlins do not roll. 2 x 4 blocking between the purlins on the top of the trusses should be successful to keep the purlins from rolling. There is also a concern for the purlins rolling due to loading. Another concern is for the safety of the workers as they are walking on the purlins during construction. This concern is with all roofs, but especially for steep roofs such as 6/12 or 8/12 pitch.

Another solution to this problem would be to use something called a "T purlin" where the wood blocking between purlins is pre-connected to the purlin prior to installation. Another method of installation would be to mount the purlin using joist hangers and nest the purlin between each truss. In some cases nesting the purlins may be the best option, however, it is also more costly than blocking the purlins.

### Summary

Regardless of the method used, to edge mount purlins with blocking, using T purlins or joint hangers and vested purlins, it is critical that the purlins are not allowed to roll for both load carrying and safety reasons. Each construction company will have its own preferential method but all should accomplish the same goal in a safe manner for both the construction worker and the building owner.



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