Important: Warranty Disclaimer for Plans

For the convenience of our clientele, this website makes available conceptual plans that can be helpful in planning buildings, facilities, or other structures. They were developed over many years by engineers at Land Grant universities through the former USDA Cooperative Farm Buildings Plan Exchange. *Regardless of the original intent, these are older plans that provide conceptual information only, and are not to be considered or used as construction plans.*

These plans do not claim to represent the most current technology or the most recent construction techniques, standards, or codes. For example, over the years there have been changes in the National Design Specifications for Wood Construction, changes in the strengths and types of building materials, and changes in fasteners, among other things. Those changes, along with variations in climate, building codes, and other factors, make it imperative that professional services be utilized for your specific project. Suggested services include, but are not limited to, structural design, assurance of compliance with codes and regulations, site selection, construction supervision, and provision for utilities, waste management, and access. *These plans do not replace the need for competent design assistance in developing safe, legal, and well-functioning agricultural buildings and systems.*

*Neither the University of Kentucky, the Midwest Plan Service, the United States Department of Agriculture, nor any of the cooperating Land Grant universities, warranty these plans. They are for conceptual use only and are not for use as construction plans.*
24'-FT SPAN, 3 IN 12 PITCH, NAILED TRUSSED RAFTER WITH 3½ FT. OVERHANG

LOAD AND STRESS DIAGRAMS

TRUSSED RAFTERS SPACED 4'-0" ON CENTER
LUMBER No. 1 SOUTHERN PINE OR DOUGLAS FIR
C = 1200 PSI COMPRESSION PARALLEL TO GRAIN
F = 1450 PSI MODULUS OF RUPTURE
E = 1500,000 PSI MODULUS OF ELASTICITY
CAMBER 3/4" AT CENTER SPlice

HEEL JOINT
REQUISITED 14, 12-J NAILS
USE 14 TO 18, 12-J N.

CENTER-SPlice JOINT
1' X 6" SPlice PLATES ON BOTH SIDES

OUTSIDE TO OUTSIDE OF PLATE

NOTES
USE HELICALLY THREADED NAILS FOR PERMANENTLY TIGHT, RIGID JOINTS THROUGHOUT STRUCTURE
USE HARDENED NAILS IN DRY SOUTHERN PINE
USE TEMPLET FOR ALL NAILS TO ASSURE MAXIMUM EFFICIENCY AND EFFECTIVENESS
DRIVE ALL NAILS FROM FRONT EXCEPT THOSE SHOWN AS (O)

BILL OF MATERIALS
RAFTERS 2 PCS 2" X 6" X 18'
CHORDS 2 PCS 2" X 4" X 12'
DIAGONALS 2 PCS 1" X 6" X 10'
1 PCS 2" X 4" X 6'
SPlices 4 PCS 1" X 4" X 3'
3 PCS 1" X 6" X 3'
NAILS BRIGHT HARDENED
140 PCS 12-J 3 1/4" X .148" 3 1/4" X .135"
38 PCS 8-J 2 1/2" X .135" 2 1/2" X .120"