TIMBER TECHNOLOGIES POST FRAME HANDLING, INSTALLATION, RESTRAINT & BRACING RECOMMENDATIONS

DISCLAIMER:

Post Frame Building recommendations for handling, installing, restraining and bracing trusses and walls are based upon the collective experience of leading personnel involved with truss design, manufacture and installation, but must, due to the nature of responsibilities involved, be presented only as a GUIDE for use by a qualified building designer or contractor. It is not intended that these recommendations be interpreted as superior to the building designer's design specification for handling, installing, restraining
and bracing trusses and it does not preclude the use of other equivalent methods for restraining/bracing and providing stability for the walls, columns, floors, roofs and all the interrelated structural building components as determined by the contractor. Timber Technologies LLC expressly disclaim any responsibility for damages arising from the use, application, or reliance on the recommendations and information contained herein.

RECOMMENDATIONS AND LIMITS:

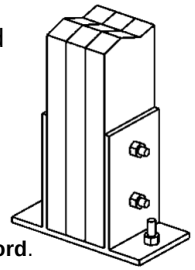
- Trusses are used in an engineered building system.
- Columns (laminated columns, posts) are embedded in the ground or attached to a foundation using the method specified by the building designer.
- Side-wall columns extend above the mid-height of the truss heel at the connection of the column and the truss.
- Truss heels are connected to columns or headers (i.e. beams, girders) to resist rollover at the heel.

CAUTION & WARNING:

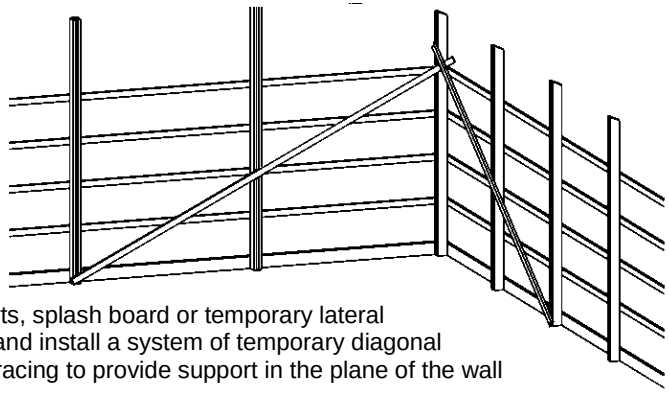
- Until the building is completely erected in accordance with the construction documents, the trusses are unstable and present a safety hazard. Truss and wall instability increases with increasing building width, height and length.
- Do not exceed header capacity when placing bundles of trusses as this can result in overstressing of the header, post and/or header-to-post connection.

TEMPORARY INSTALLATION RESTRAINT / BRACING:

- Ensure stable side wall and end wall columns.
- Embedded columns shall be backfilled with concrete or compacted fill utilizing proper uplift protection per engineer of record.
- Columns bearing on a concrete foundation shall be attached to prevent horizontal movement of column base as specified by the building designer in the construction documents.

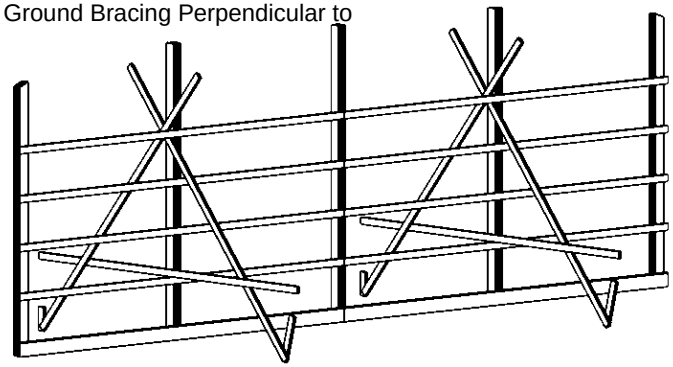


*****As Shown: Column connection to concrete Foundation per Engineer of record**.



- Attach girts, splash board or temporary lateral restraint and install a system of temporary diagonal ground bracing to provide support in the plane of the wall

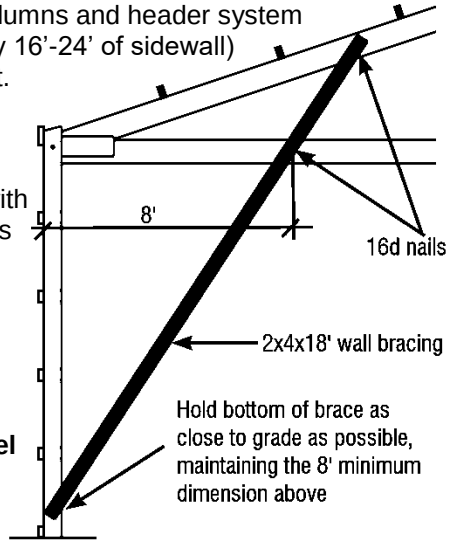
- Diagonal Wall – Ground Bracing in the plane of the wall
  A-Frame Ground Bracing Perpendicular to the Wall.



- Install trusses on side wall columns and header system in sufficient quantities (usually 16'-24' of sidewall) to establish a stable base unit.

- Resist movement of the base Unit parallel to the end-wall with Diagonal braces and/or chains or cables together with turn-buckles or come-a-longs of sufficient strength. (min. 2000lbs capacity)

Column-Truss Brace Parallel



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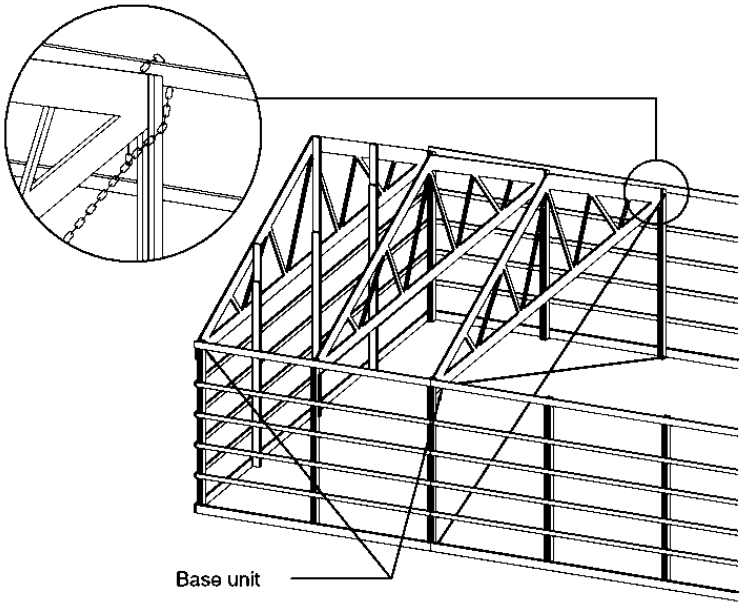
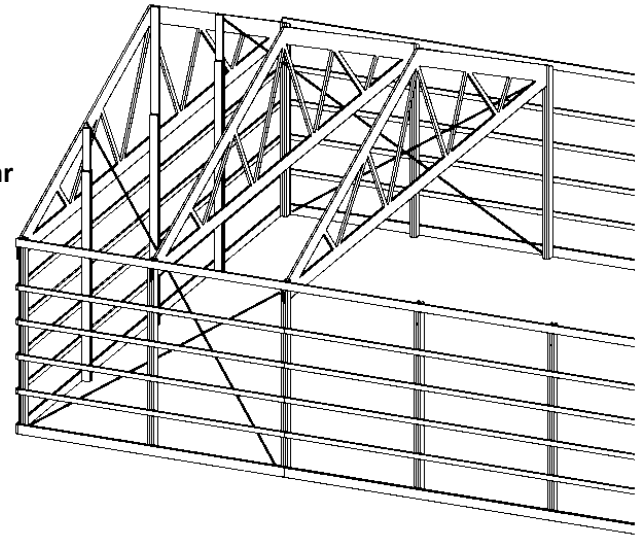


Note: Purlins, truss web restraint/bracing & some nailers omitted for clarity.

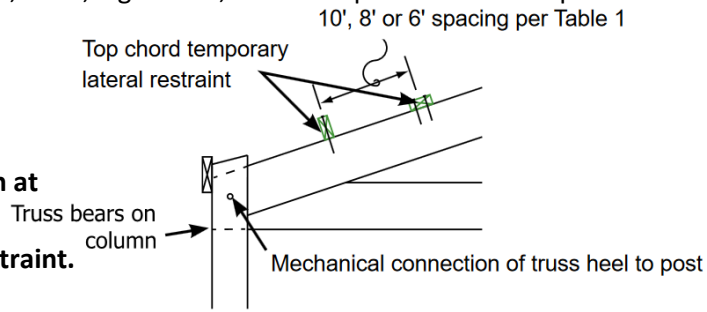
Resist movement of the base unit perpendicular to the end wall with temporary ground bracing and/or chains or cables together with turnbuckles, or come-a-longs of sufficient strength. (min 2ooolbs capacity)

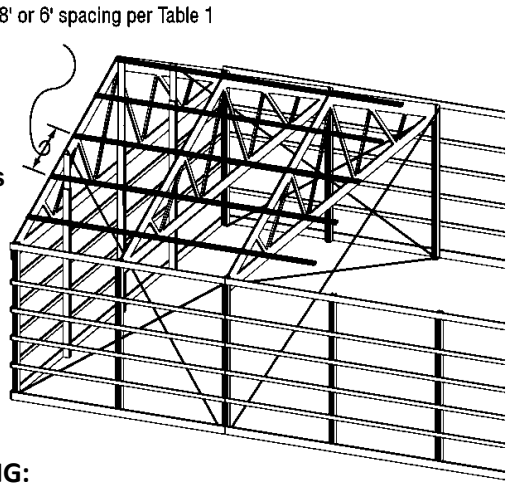
Chaining perpendicular to the end wall



Provide a mechanical connection to resist truss rollover at the heel. This includes the use of nails, bolts, lag screws, metal straps or connectors per engineer of record.

Mechanical connection at Heel and Top Chord Temporary Lateral Restraint.





Note: Purlins, truss web restraint/bracing & some nailers omitted for clarity.

PERMANENT RESTRAINT/BRACING:

Permanent restraint/bracing provides support to the trusses during the lifetime of the structure and resists the applied loads anticipated during that lifetime. If properly planned, much if not all of the temporary restraint/bracing installed during truss installation can be used to permanently restrain and brace the trusses

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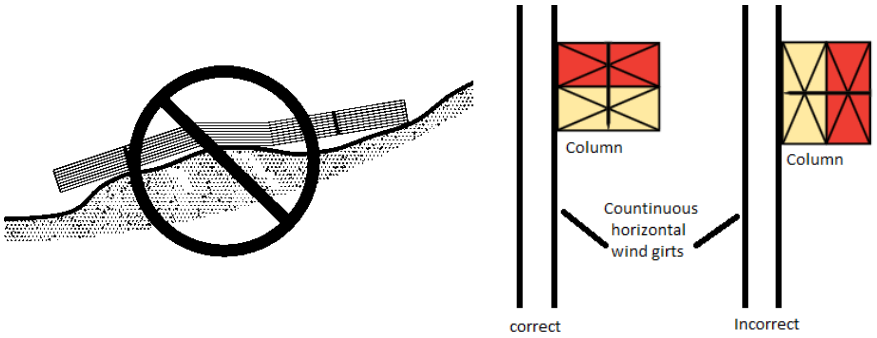
HANDLING & STORAGE

DO NOT unload columns on rough terrain or uneven surfaces that could cause damage to the product.

DO NOT walk on the product that is lying flat. It is extremely dangerous and could result in injury.

IF NOT USED IMMEDIATELY:

- Store in a dry place. Moisture may cause decay to the untreated portion of the columns over time.
- Avoid direct sunlight.
- Columns should be stored in a horizontal position. Use support boards of equal dimensions no more than 4' apart for support and to prevent them from sitting directly on the ground.
- If bunks or units of columns are stacked on top of each other, the support boards MUST line up vertically (i.e. no staggered placement)
- If outdoor storage cannot be avoided, protect with a waterproof barrier. Leave the bottom of the cover loose to allow air movement. Protect columns from weather, corrosion, bending, damage and deterioration when stored.



COLUMN ORIENTATION:

The 3ply columns MUST be turned in the proper orientation to the wind girts in order to function properly. For columns at building corners, ONLY the installer has the option of orientation. (provided wind girts are present in both directions). **Warning: improper orientation can result in diminished structural capacity.**

APPLICATION CONSIDERATION:

For in ground applications, only treated portions of the columns are designed for ground contact. A vast majority of structures contain Glu-Lam, upon which horizontal wind girts or purlins are placed. Sheathing material, such as light gauge metal or wood panels are then attached to the purlins.

WARNING: Continuous horizontal wind girts must be present throughout the height of the column on all 3plys to function properly.

A lack of temporary bracing during construction can result in the building becoming racked or possible collapse before completion.

SHIPPING & INSPECTION:

It is the responsibility of the installer and supplier to properly receive, unload, store, handle, install and brace to protect life and property. If improperly handled, installed or braced, columns can become dangerous and can cause property damage and/or bodily injury.

When inspecting the columns at the time of delivery and before installation you should inspect for:

- Quantities and lengths to correspond with shipping tickets and original order.
- Cracked, dislodged or broken members
- Any other damage that may impair the structural integrity of the columns.

If you discover damage that you believe would weaken the column, please contact Timber Technologies LLC.

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