

*Specifier Note: This version of the following document is current as of the indicated date. Please feel free to use it as wish with the understanding that you are wholly responsible for the entire text. If you find any items that are not consistent with your own practice or you have suggested revisions, please notify David Hourdequin at [drh@dremy.com](mailto:drh@dremy.com) or any member of the TFEC Executive Committee.*

## GENERAL NOTES (Version as of 06Sep11)

### TIMBER FRAME SYSTEM (HEAVY TIMBERS)

*TIMBER SYSTEM: (There are typically three types of TF conditions/projects; Load Bearing; Non-Load Bearing-Self Supporting; and Non-Load Bearing-Suspended. Each area of the project is named and classified in this section. See descriptions of the latter two at the end of the General Notes. And , for example:)*

ROOF AND INTERIOR BALCONY: This is a load bearing heavy timber frame system

DINING ROOM CEILING: Non-Load Bearing, Suspended - Loose timber trim pieces suspended from framing by others

GARAGE APARTMENT: Non-Load Bearing – Self Supporting – Faux Trusses

APPLICABLE STRUCTURAL CODES: ASCE 7-05, AF&PA NDS 2005, TFEC 1-2010 (*Edit for editions and any other codes deemed applicable*)

### DESIGN CRITERIA:

#### WIND LOADS:

Design Wind Speed:

Exposure Category:

Building Classification:

Wind Importance Factor:

Enclosure Classification

Internal Pressure Coefficients (*optional*)

Design Wind Pressures for Components and Cladding (*optional*)

#### SEISMIC LOADS:

List Design Parameters Required

ROOF SNOW LOAD: \_\_\_\_psf on horizontal projected area, after incorporating all factors.

Ground Snow Load: \_\_\_\_psf

Exposure Factor, Ce:

Thermal Factor, Ct:

Roof Slope Factor, Cs:

Importance Factor:

No unbalanced snow considerations since slope exceeds 30 degrees.

Importance Factor, I:

ROOF LIVE LOAD: (XX) PSF Adjusted For Slope And Tributary Area

ROOF DEAD LOAD: (XX) PSF Horizontal Projection Plus Weight Of Timber

FLOOR LIVE LOAD: (XX) PSF Adjusted For Tributary Area  
FLOOR DEAD LOAD: (XX) PSF Plus Weight Of Timber  
(other design loads as applicable)

NOTE: Concentrated Loads and Construction Loads must not exceed design loads above.

*(The following paragraph and its wording has significant legal implications. The intent is to flag the level of design of a timber frame system that does not include the design of the lateral force resisting system and supporting elements. Every reasonable effort should be made to identify what constitutes each system and to determine who has the professional responsibility for their design. The objective is to avoid any inferred responsibility/liability for the lateral force resisting system and supporting elements on the part of the timber frame system specialty engineer and to insure, to the most reasonable extent possible, that these elements are being appropriately addressed by others. Modify the following to be consistent with the contract language of the project.*

#### DESIGN ASSUMPTIONS:

The load bearing timber system as described in these documents and being supplied by this manufacturer is designed to resist vertical, in-plane loads only, as specified above. It is the responsibility of the engineer of record to design all supporting elements including but not limited to the foundation, the permanent lateral force resisting system, permanent bridging and connections thereto. Nothing contained herein or indicated hereon shall infer or imply any responsibility on the part of the timber frame manufacturer or supplier or their component/system engineer for such design or for the analysis of those supporting elements which have been prepared by others.

OWNER/GC NOTES:       The timber knee braces *(if any, will/will not)* provide sufficient lateral stability during erection. The exterior wall and roof framing and sheathing systems and connections between them and the timber frame system shall be designed by the Engineer of Record to transfer lateral loads due to wind or seismic forces thru the roof and timber frame system to the wall system and the foundation.

Any required spacers between the timber frame and the wall system to tuck dry wall sheathing behind the timber frame must be structural plywood or oriented strand board. Drywall/gypsum board spacers are not permitted for the transfer of lateral loading between the timber frame and stud framed or SIP wall systems.

TIMBER: *(For each species, grade, applicable grading rules: moisture content at time of fabrication, box heart/FOHC, dressing, eased edges?, finishes, etc. And for example:)*

Douglas fir, no. 1 and better, WCLIB, 19% max. Moisture Content, FOHC (free of heart center), S4S then adze-hewn. *(And, the following note is optional and could possibly be incorporated in the initial contract for the frame)* Some warping, twisting, checking, and splitting of timbers as they reach equilibrium moisture content can be expected.

SIZES: As noted on the following sheets. *(Insert standard for dressed sizes at time of fabrication, or ALS Standard)*

JOINERY: As noted below and on the drawings and details

#### CONNECTORS:

1. SCREWS: *(List all types acceptable, or equal, here. Indicate the number and sizes in the details. Some are: Timberfast by Trufast, OlyLog or Timberlok by Fastenmaster, RSS by GRK, etc And, for example: )* 'RSS' (Rugged Structural Screws) high tensile/bending yield strength by GRK FASTENERS, or equal. Screws shall be washer-headed. Shaft diameters shall be 5/16" diameter up to 7 1/4" long and 3/8" diameter from 8" long and above. Screws shall penetrate a minimum of 5" in receiving timber. Where heads would be visible, screws shall be installed in counter-bored holes to clear the head and allow approximately 5/8" for plugging. See [www.grkfasteners.com](http://www.grkfasteners.com) for additional information.

2. PEGS: 1" Thick Diameter, Structural, Straight Grained, Oak treated with paraffin, linseed oil or similar sealing substance.

3. TENONS: *(can be explained here including minimum end distance, edge distance and spacing. And, for example:)*

STUB TENONS: 2" Thick By 3/4" Long

FULL TENONS: 2" Thick By 4-1/2" Long (Unless Otherwise Noted Or Shortened To Accommodate Timber Size)

SPACING: End Distance: 2 1/2", Edge Distance: 2"; Spacing: 2 1/2" *(or whatever)*

4. BOLTS: ASTM Grade A307

5. DOWELS AND THREADED ROD: ASTM Grade A36

6. STEEL ANGLES, PLATES AND FABRICATED CONNECTIONS: ASTM Grade A36

7. KNIFE PLATE CONNECTIONS:

Holes shall be drilled no more than 1/16" larger in the knife plate and the actual size of the bolt in the timber. If bolts are to be countersunk, provide an embedment on both sides of timber of 1/2" min. To 5/8" max. Fill holes with plugs set in epoxy with grain aligned with timber.

8. *(List any proprietary connections used and, if desirable, a description of the connection/s. If the description is simple enough, it can easily take the place of a detail. And, for example:)*

POST BASE ANCHORS: A475 'TLX' with 6" min. end distance to 4" pin with

7/8" all thread set 6" deep in 1" dia. hole with Simpson Epoxy-Tie™ or equal and ½" x 4 x 4 plate washer and nut to support gravity load and elevate post base as required. ("TLX = Timberlinx™, See [www.timberlinx.com](http://www.timberlinx.com)).

9. FINISHES: All steel connections and hardware exposed to weather or in unconditioned space to be (*hot-dip galvanized, Simpson Z-Max™ or stainless steel*) unless otherwise noted.

#### NON LOAD-BEARING AND SELF SUPPORTING TIMBER SYSTEMS:

The timber trusses and/or components shown herein and designed "non load-bearing and self supporting timber system" are not designed to support any superimposed loads from any other materials or resist any forces from other elements of the structure. Structural elements to support these systems must be designed and installed by others to support the weight of these components and reactions indicated. (*If the contract includes installation, details of the connections should be included in the shop drawings or as otherwise agreed with the client.*)

#### NON LOAD-BEARING AND SUSPENDED TIMBER SYSTEMS:

The timber trusses and/or components shown herein and designed "non load-bearing and suspended timber system" are not designed to support any superimposed loads from any other materials or forces in or on the structure. Structural elements to support these systems must be designed and installed by others to support the weight of these components and reactions indicated. (*If the contract includes installation, details of the connections should be included in the shop drawings or as otherwise agreed with the client.*)

#### TEMPORARY SUPPORT OF THE HEAVY TIMBER SYSTEM/S

It is the responsibility of the erector of the timber system to provide and maintain any required temporary support of the heavy timber system's including but not limited to lateral bracing, bridging, blocking, strong-backs on frames and trusses to prevent hinging of the timber system, and or other devices as required until erection is completed.

It is the responsibility of others (*not the erector unless specifically required*) to provide and maintain any required temporary support while the remainder of construction is completed and the permanent connections from the timber frame system to the lateral force resisting system have been completed. Once all construction is completed, the temporary support may be removed and shall be returned to the supplier of that material.

*(Insert any special provisions regarding ownership and pick-up of temporary bridging and bracing, etc. Also, refer to AISC Specification, Section 7.9 Temporary Support of Structural Steel Frames for other possible provisions.)*

### RESPONSIBILITY FOR DIMENSIONS

The engineering design is based on drawings provided by others. These drawings are FOR DESIGN REVIEW ONLY and NOT FOR CONSTRUCTION. It is the responsibility of the timber frame system purchaser (owner and/or contractor) to verify all dimensions indicated on the timber frame system drawings unless otherwise noted. *(or provided for in the original agreement)*

### OWNERSHIP AND APPLICABILITY OF THIS ENGINEERING DESIGN

The design as depicted and the information on these drawings remain the property of the Heavy Timber System Engineer ("Engineer") who has signed and sealed the drawings *(or, insert the name of the engineer and/or his/her firm)* and shall not be used for any other project or works without the signature and seal of the Engineer. The information on these drawings applies solely to this project.

### GENERAL PROVISIONS

The engineering design is based on drawings provided by others. These drawings are FOR DESIGN REVIEW ONLY and NOT FOR CONSTRUCTION. It is the responsibility of the timber frame system purchaser (owner and/or contractor) to verify all dimensions indicated on the timber frame system drawings unless otherwise noted. *(or as provided for in the original agreement)*

The design as depicted and the information on these drawings remain the property of the Heavy Timber System Engineer ("Engineer") who has signed and sealed the drawings *(or, insert the name of the engineer and/or his/her firm)* and shall not be used for any other project or works without the signature and seal of the Engineer.

The information on these drawings applies solely to this project.

Do not scale the drawings. If a required dimension is not indicated, please request the missing information.

For timbers that have more than 15% average moisture content by volume, shrinkage of timbers may result in the loosening of bolts and all-thread connectors. Periodic tightening of these connections during the first several years of the structure's service life is required.

Normal construction tolerances/dimensional variations can be expected in the completed structure as well as dimensional changes due to shrinkage and swelling throughout the life of the structure. For these reasons, details of adjoining surfaces and materials must be able to accommodate these variations and changes.