



WESTERN WOOD STRUCTURES, INC.

20675 S.W. 105th Ave.
Post Office Box 130
Tualatin, OR 97062-0130

Telephone: (503) 692-6900
Fax: (503) 692-6434

wwsi@westernwoodstructures.com
www.westernwoodstructures.com

January 3, 2013

Port of Moses Lake
Attn: Rich Mueller
7810 Andrews St. N.E., Suite 200
Moses Lake, Washington 98837-3204

Rich,

Western Wood Structures was on site to inspect the roof trusses on Hangar Buildings 401 and 408 on November 7th and 8th, 2012. During this inspection the condition of the horizontal wind trusses was observed as well. The horizontal wind trusses reside between the first and second roof trusses at each end of each building, four in all. These wind trusses are held up in place by double 3x14 sawn beams at 10'-0" on center (15 double beams per location, 60 total in both buildings).

According to the original drawings provided by the Port of Moses Lake these 3x14 beams would have to be notched to install the system as drawn. The notches are on the bottom of the beams (tension side) one notch at each end. The drawings do not detail how the beams were to be notched and so the notches appear oversized for easier installation.

Notching beams in general reduces the section thus reducing the capacity. It is highly recommended that beams not be notched on the tension side of beams. This condition results in a stress concentration at the corners of the notches which creates a tendency to split. It was found during the inspection referenced above that approximately 25% of the total notched beams, both buildings combined, have split with six double beams being split at the wind truss opposite the door side of 408 building. This side of 408 currently holds occupied office space below the affected truss.

It is recommended that a temporary clamping system be installed on all beams whether they are split or not. This will prevent further splits from occurring and the existing split beams from completely fracturing and the horizontal wind trusses collapsing. The proposed clamp system will extend the stresses past the notches to the bearing of the beams. Western Wood Structures will design, supply and install this clamping system.

Upon completion of the repairs, Brentley A. Matthias, P.E. of Western Wood Structures will perform a final inspection and issue a letter certifying the quality of the repairs.

- 1) The total costs for the inspection and analysis referenced above are: **\$7,825.00 plus applicable state tax**
- 2) The total construction costs including design, labor, and materials are: **See Attached**

Sincerely,
Western Wood Structures, Inc.

Brentley A Matthias, P.E.
Project Engineer

Accepted by: _____ Date: _____

Position: _____

You may accept this proposal by signing and faxing this form back to Western Wood Structures, Inc., at the number above, or you may send us a purchase order for this work.