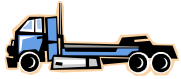


Chapter 3: Delivery and Storage Procedures

General

Confirm delivery trucks will have **clear access** to building site. This is important as “surprises” are disliked by truck drivers. We are also trying to prevent having to move heavy materials any more than necessary!



At least **10 feet width and up to 14 feet height** are required to deliver standard buildings. Large trusses can require 14 foot widths or more and ability to get truck (measuring approximately 32 feet) and trailer (48 feet or longer) combinations up to 100 feet in length near building site.



Delivery trucks and their payloads can reach up to 80,000# in weight! They generally have a wide turning radius and are designed for on-road use only. Because an RV, fifth-wheel, logging truck or a manufactured home has successfully navigated a road or driveway doesn't guarantee a truss or steel delivery truck can.

Again, keep in mind, closer delivery trucks can get to building site, less time will be spent moving materials.

Drivers will avoid endangering themselves, bystanders or their equipment in making a delivery. A driver will only go where they can drive safely in and out.

If adequate access is unavailable or material offloading at building site proves unsafe, have an alternate nearby location where they can be delivered. Should inadequate access prevent delivery you will be charged for re-delivery.

Common carrier deliveries

CAUTION

Your shipment(s) are being transported via freight truck, and we want you to be aware of your rights and responsibilities as end recipient (from here forward known as "consignee").

Many things can happen between us or manufacturer and your delivery location; therefore we are asking you to do a very small amount of work to protect yourself, and us.

When your item is ready to be delivered, freight carrier will contact you to arrange delivery. *If for any reason your shipment cannot be delivered* (including but not limited to an undeliverable address, no lift gate requested in advance, a responsible party is unavailable to sign for shipment, or carrier's inability to contact or otherwise arrange a delivery appointment with you), you are responsible for any return freight charges or storage fees incurred.

To ensure you are receiving what you ordered, and in acceptable condition, National Claims Council Regulations specify you must inspect, examine, and inventory your shipment as unloaded. Freight shipments cannot be just left at delivery location, therefore making and keeping your delivery appointment is highly important.

On arrival, inspect shipment immediately for obvious signs of damage.

Any and all shortages and damages must be written on Bill Of Lading or Freight Bill. Should you determine any items are damaged or missing, you MUST note item, discrepancy, and condition before you sign it! Then call freight company to report any problems.

You should open cartons and containers.

If slightest doubt merchandise may be damaged (concealed or otherwise) it must be noted on Bill Of Lading or Freight Bill, or liability to prove delivering carrier did damage becomes your responsibility.

Do not be intimidated by driver.

Driver must have Bill Of Lading or Freight Bill signed before leaving (regardless how much in a hurry or how late they are). Carrier's driver should help you receive your shipment and answer your questions. While your driver is there, compare freight pieces received to carrier's freight bill. When you've determined acceptable freight condition and quantity, only then sign delivery receipt. Driver will provide you with a copy, taking signed copy with them (as a delivery receipt). Request a copy, if not offered, as is your right. Bill Of Lading or Freight Bill is only shipment condition documentation when it arrives at your location, and without this document, we cannot hold others accountable for items damaged or missing.

Your signature on delivering carrier's freight Bill Of Lading (BOL) constitutes merchandise acceptance as is and in good order. If you neglect to inspect before signing you are, for all practical purposes, waiving right to collect on a damage claim even if damage is discovered later (known as *concealed* damage).

If there is concealed damage: although we strongly recommend inspecting shipment prior to signing delivery receipt, some still fail to do so. If consignee or their representative sign for shipment, and then at a later time discover there is some damage unnoticed at delivery (called "concealed damage"), then a claim will need to be filed by consignee against freight company - as a shipment is technically consignee's (your) property once loaded onto a freight truck, it is consignee's responsibility to pursue a damage claim for replacement or compensation.

In event of concealed damage, it is vital you immediately document and photograph packaging and damage. You must keep packaging. Leave item where delivered, call carrier and report damage. They will begin a concealed damage claim and ask for an inspection. You must also notify us so we are aware of situation and can be of assistance, if required. Inspector will determine if damage was possibly carrier caused.

Please note: If consignee has signed for shipment indicating there was no damage noted at receipt, consignee would then have to take up their claim with freight carrier if concealed damage becomes apparent after receipt. Many people order products in advance of need, and wait until installation to finally check product condition (sometimes weeks or even months later); in these situations, it is consignee's sole responsibility to contact freight carrier and pursue a claim.

Remember: in concealed damage cases, you signed a document saying everything was OK; a report and a concealed damage claim must be filed with carrier immediately.

Additional points to consider:

1. When signing for freight, always write "**SUBJECT TO INSPECTION**".
2. Inspect freight before you sign.
3. Note on freight bill any obvious delivery time damage (i.e. box corners crushed, tears, rips, slices, marks etc.); be specific.
4. If you suspect internal damage, open immediately.
5. Even if no suspected damage, open carton(s) within 24 hours and make a thorough inspection.
6. After noting freight damage on bill of lading, you must call carrier, and also notify us of a damaged shipment. We will ask you to scan and email or fax us a bill of lading copy noting freight damage.
7. Hold all damaged goods and their packaging materials, in original location, for inspection by carrier.

Further measures helping in claim process include:

- A. Taking digital photographs of damage. If possible, photograph product while still on truck to limit your liability.
- B. Report damage to carrier and request they start a claim. Preferably, call should be made before driver leaves site. Then, notify us.
- C. Request an inspector.
- D. Keep a Bill Of Lading copy or Freight Bill noting damage and driver's signature.

Person who signs for received items becomes responsible to inspect and note any and all problems before delivery person leaves. You have heard term "FOB" (Freight On Board) - this term simply means once carrier picks up material from factory/supplier, factory/supplier becomes no longer responsible for material.

If you have someone signing freight bill for you, for whatever reason, they are acting as your representative; you should inform them they should check for missing or damaged items. Freight signed for without notating damaged or missing pieces, becomes almost impossible to get freight companies to take responsibility.

We realize this can be a time-consuming process, but much hassle can be eliminated with prompt, well-documented action with carrier.

We cannot be held responsible for freight damage or missing pieces; we will help you deal with freight company, but you must call freight inspector and you must file claim. Ultimately, Freight Company has a responsibility to deliver shipment in good condition, and it becomes consignee's responsibility to inspect and sign for products and notate any missing or damaged pieces.

Please note: Recent changes have been made to National Motor Freight Classification (NMFC) rules regarding concealed damage notifications. National Motor Freight Traffic Association (NMFTA) has reduced time shippers are allowed to report concealed damage to carrier to 5 days. This applies to all LTL (Less Than truck Load) shipments. This means **if you fail to report concealed damage within 5 days, it will result in your inability to file a freight claim with carrier.**



INVENTORY - DAMAGE - SHORTAGE POLICY & PROCEDURES

READ, UNDERSTAND AND FOLLOW

IF DISCOVERING ANY SHORTAGE OR DAMAGE, IMMEDIATELY

report to **Hansen Buildings** at:

www.HansenPoleBuildings.com/material.htm

This is ONLY method to report damage or shortage.

INVENTORY BUILDING MATERIALS
WHEN THEY ARRIVE!

After receipt you are allowed **48 hours** and *48 hours only*, to report “hidden damage”, missing or damaged goods (including those arriving in sealed containers), as well as any “quality” issues. Sadly, job sites suffer a high theft incidence, especially when they are left unattended. Also, “incidental damage” probability increases over time. These warnings are repeated for *your* benefit.

Hansen Pole Buildings, LLC, along with our suppliers, endeavor to provide best available materials, in their entirety and in best possible condition. UNDER NO CIRCUMSTANCES are we responsible for damage or shortages reported days, weeks, or months after **48-hour guaranteed replacement time.**


Any materials reported as shipped damaged or unusable within first 48 hours after delivery can be exchanged at supplier’s location for a replacement with *no charge*. Any verifiable shortages reported within first 48 hours after delivery will be delivered as quickly as possible, again at *no charge*.



If choosing to either use damaged, errant or short shipped, or mis-ordered materials, or to purchase *any* replacement material *without* Hansen Buildings, or our suppliers, prior written authorization you take total responsibility for finished product outcome (both aesthetically and structurally) as well as any costs incurred. In simple terms – you buy it, you own it. There will be no reimbursement.

Under no circumstance can or will Hansen Buildings, or our vendors, assume liability or responsibility (or reimburse anyone) for any labor, storage, rental or equipment charges, or for any lost time or loss of use due to shortages, damages or delays regardless of cause or fault.

Most challenges we deal with are from failure to inventory. Again, we can’t stress often enough, **inventory materials!**

 If ready to begin construction and something is found to be missing, or an expected delivery is yet to be received, report it through website:

www.HansenPoleBuildings.com/material.htm

There are times, although rare, where orders to vendors have gone awry or been shipped by vendors, never to be seen again. **Notify us**, before the last minute, if this occurs.



If hiring a contractor, confirm all materials have been delivered in good order, prior to contractor arrival. As well, scheduling a vacation or “barn raising” before material arrival, can result in disappointment. In a perfect world, materials will be able to be delivered on time for an asked for construction start date, however unavoidable delays do occur.

In unlikely event an error or damage is discovered, resulting in other materials needing to be ordered and/or shipped, please allow sufficient time for order to be processed and prepared for pick up, or to be delivered. With some items, this may take several weeks.



Reiterating above **DANGER**, specifically with entry doors, OPEN CARTON IMMEDIATELY. Inspect all door sides, edges and jambs for any damage, possibly including surface dents, scratches, bubbles, blemishes, de-lamination or panel warpage. Verify lockset, with keys, and an installation screw package are received. Failure to do so immediately constitutes door acceptance as complete and usable as received. We have no recourse against suppliers after delivery. Therefore, in no case can or will any damage claim or missing items be allowed after any door has been accepted.

Make certain manufacturer's installation instructions are with windows and doors.

Check windows for square by measuring diagonally from window upper right to lower left corner. Then measure from upper left to lower right corner. If these measurements are exactly same, window is square. Make certain all parts are there, including screen, and window opens easily, correctly and from specified side. If diagonal braces are attached to window, to keep square, leave these in place until window installation.

Notice to Owner

Some states require material suppliers to provide these to property owners. This notice advises property owners of materials providers being used for improvements on their property. Should a notice be received, *it is not a lien*. Please read and understand information included in notice. To learn more about lien laws and notices, property owners should discuss with their contractor (if one has been hired), material supplier, any appropriate state agency (usually specified on notice), firm who sent notice, improvement lender or an attorney.

Excess Materials

In event excess or wrong materials are shipped to site, notify us. These materials remain either Hansen Buildings or providing vendor(s) property. Unless instructions are received otherwise, avoid planning upon using, as they will most often be picked up and returned. These materials are often available for purchase at a reduced price. If advised excess or wrong materials were delivered to site, expect to be invoiced if they have been used. Should building be completed and usable materials of more than a board or two, or a handful of screws remain, contact Hansen Buildings prior to use or disposal.

Delivery Delays

You may want to postpone some deliveries to prevent possible jobsite damage.



Sometimes deliveries cannot be delayed without extra costs to you due to market price changes or delivery cost effectiveness.



If desiring delay in any material delivery, for any reason, contact your Hansen Buildings' Project Coordinator immediately.

In event you choose to delay a delivery, tied to a payment, payment becomes due and payable immediately.

Lumber Delivery

Lumber deliveries in some areas (primarily **Arizona, California** and **Nevada**; sometimes **Carolinas** and **Virginias**) **will need equipment to off-load**. Common industry practice is for lumber and truss suppliers to “dump” or “roll” materials off trucks or trailers designed for this type off-load. This process happens nationwide, safely thousands of times a day.





Compare material delivered against material takeoff list to verify lengths and quantities match on all material. Shorter lumber pieces (typically six feet or less in length) may be combined or added onto shorter pieces, including dog-ears for residential overhead door openings. A thorough quantity and length check will confirm this. Longer, larger, or higher grade materials may be substituted for those listed upon material takeoff or building plans.

Also at this time, sort all dimensional (2”) lumber by size, length and grade (e.g. 2850, 2400, 2250, 2100, 1950, SelStr (Select Structural), 1800 or 1650 msr; #1, #2, std & btr or stud). MSR stands for “Machine Stress Rated”.



While Hansen Buildings’ lumber suppliers make all efforts to send best available materials, there are times when one or more pieces do slip through quality control process cracks. Be thoroughly familiar with this segment’s allowable defects portion. Some lumber may not “look pretty” yet actually meet grading standards. “Looking pretty” is like “beauty is in beholder’s eyes” – highly subjective. Professional lumber graders are trained and certified to know what characteristics constitute “on grade”.

 If, within first **48 hours** after receipt, lumber is found with defects far *beyond* those listed below, report **immediately** via login.

 Lumber improperly cared for can deteriorate rapidly. Therefore, any defects unreported within first 48 hours after receipt will be considered to be beyond Hansen Buildings and providing vendors’ control. After 48 hour reporting period replacement lumber costs are client’s responsibility.

Allowable defects

Some discussion will be made here about “allowable defects” in lumber. Wood is an organic material. While produced in a “factory” environment (a sawmill), lumber is subjected to naturally occurring defects accounted for in grading rules. These characteristics are taken into account in strength values for allowable design.

Lumber used in trusses falls into this same discussion. Truss lumber is chosen for strength characteristics, rather than due to “pretty looks”. If an expectation exists trusses are fabricated from clear, vertical grain, knot and wane- free lumber, a severe disappointment will occur. Lumber “appearance” is NOT a reason to reject any truss.

All structural dimensional framing lumber used in Hansen Buildings will be at least graded as #2 (or “standard”) or better. For discussion’s sake, we will limit scope to this grade. Four inch and smaller (e.g. 4x6 and any two inch – 2x3 {in many instances, 2x4 will be supplied for 2x3 at no extra charge} through 2x12), are all graded under “joists and planks” rules. Characteristics listed below are unintended to be all-inclusive, but merely to be a frequently seen item overview.

In any given lumber “production run” typically 5% is allowed to be outside grading rules (to have more defects than expressly allowed) and still have sum total declared as “on grade”.

- **Checks** – seasoning checks are unlimited. Through checks at ends are limited as **splits**. Splits can be equal to 1-1/2 times board face width (e.g. 8-1/4” on a 2x6, 16-7/8” on a 2x12). Keep in mind, many times these boards will be trimmed off, especially when used as girts, purlins or rafters. A split portion may thus be removed when trimmed to be put into service.
- **Knots** – on a 2x6, up to 1-7/8” at wide face edge, 2-7/8” at wide face centerline; on a 2x12 up to 3-3/4” at wide face edge, 4-3/4” at wide face centerline.
- **Holes** – (from any cause) on a 2x6 1-1/2”; on a 2x12, 3”.
- **Wane** - up to 2/3 thickness and 1/2 width for 1/4 length. An example would be on a 12’ long 2x6, wane could be 2-3/4” on wide face, 1” in depth across 1-1/2” face and 3’ in length.
- **Bow (or Crook)** - a board size and length function. As an example: for a 2x6x12’ - 5/8” would be acceptable, with greater amounts allowable with longer lengths.
- **Twist** - for a 4x6x16’ would be allowable up to 1-1/2” and still be within grade.

Timbers

5” x 5” and larger are graded as “Posts and Timbers” and have their own characteristics. Again, addressing #2 grade, they include:

- **End splits** - up to twice post face are permitted: (Ex: 12” on a 6” face.)
- **Wane** - 1/3 of face.

Bow, crook and twist are *NOT* limiting factors under grading rules for posts and timbers.

Why might timbers check and split? Checks and splits in lumber and timbers, especially timbers, are often misunderstood when assessing a board’s condition. Checks and splits can form in wood by two means: during seasoning, or drying, and during manufacture.

Development of checks and splits after installation occurs after a timber has dried in place. Quite often these timbers were installed green. Due to their size, it's not practical for timbers to be kiln dried. Some are air dried for a period of time prior to installation, but usually they are installed green, and therefore, are allowed to dry in place.

During seasoning processes, stresses develop in wood as a result of differential shrinkage often leading to checking, splitting and even warping. Separation of wood fibers results in checking and splitting. Due to wood's innate characteristics, it shrinks and swells differently. This is best explained in image below. As a general rule of thumb wood shrinks (swells) approximately twice as much in tangential direction of annual rings as compared to radial direction. Additionally, during initial drying process outside of a timber inevitably dries quicker than interior, causing differential stresses to develop within a timber. Combined effects of these drying stresses in wood often, and sometimes inevitably, results in formation of checks or splits. Since wood's weakest strength property is tension perpendicular to grain (similar to how wood is split using an ax), drying stresses can result in a check or split forming in a radial direction across annual rings. However, while these seasoning characteristics may initially appear as problematic, they likely are not. It is important to remember as wood dries, it becomes stronger. Furthermore, development of these seasoning characteristics is, quite often, normal. Most importantly, **both are accounted for in derivation of design values for lumber and timbers and in applicable lumber grade rules.**

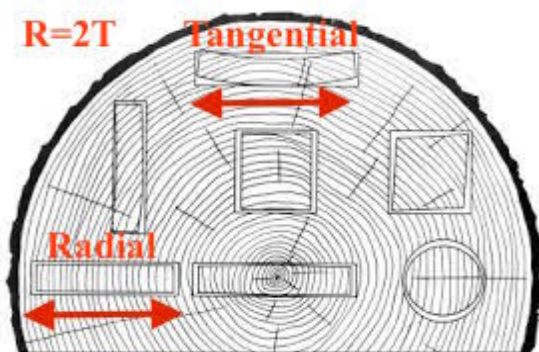


Figure 4-3 from the Wood Handbook, FPL-GTR-190

A check is separation in wood fibers across annual rings of a piece of wood and a split is a separation of wood fibers across annual rings but through a piece wood. A third type of fiber separation, known as a shake, occurs along annual rings and is generally a naturally occurring phenomenon in standing trees, not a result of seasoning. There are several types of checks and splits defined and handled in grade rules for dimension lumber and timbers.

Incidental damage from material handling equipment not adversely affecting lumber greater than allowable defects listed above, is an unallowable cause for rejection.



Building plans may specify "6x4" or "6x2" materials. This is due to material orientation rather than being a special board or item. As an example: a 2x6 and 6x2 are same board, rotated 90 degrees in use.

Rough Sawn Lumber

Rough sawn timbers can vary greatly in dimension, even in one board. While building plans and this construction manual assume a 6 x 6 will be 5-1/2" exactly in dimension, in real life a rough sawn timber could be as small as 5-1/2" or as large as even 6-1/2". These millage variations are quite usual. By placing columns appropriately, according to instructions, no more than a minor inconvenience will be posed.

Truss Delivery



With larger truss spans (usually over 40' in width), contact truss manufacturer to determine if lifting equipment will be needed to help off-load trusses. In no case, does unloading include truss setting onto building columns, by crane or any other equipment.

Unload trusses carefully, in bundles, in a manner to minimize sideways strain. While unloading, check for broken or damaged members, noting any such damage on packing slip. At truss delivery, trusses may be delivered flat onto ground by driver. Move trusses into a proper position for storage or use.

Most metal plate connected wood trusses are fabricated from 1-1/2 inch lumber and 20 gauge steel plates, having tooth projections approximately 5/16 to 3/8 inch in length. Different plate manufacturers have slightly different plate designs, but same application.

While a rare instance – inspect both sides of each truss joint for missing or poorly aligned steel connector plates. In most instances, steel plates will be centered on joints (please refer to engineered truss drawings for exceptions).

In photo below left red circle depicts a misaligned plate.



When your trusses are delivered, if one bundle end is aligned and other end looks like this there is a problem:



[Truss Plate Institute's ANSI/TPI 1](#) (link is external) provides requirements regarding manufacturing tolerances. For example, Table 3.5-1 allows identical trusses to vary in span by as much as 1/2 inch and in height by as much as 1/4 inch. Complying with the erection tolerances specified in [SBCA's BCSI-B1 Summary Sheet](#) is critical to achieving an acceptable roof line.

STOP If you suspect any truss has been delivered damaged, has a missing, poorly placed or inadequately embedded steel connector plate, or overly varies in span or height please report immediately, with photos to Materials@HansenPoleBuildings.com. Do not attempt repairs on your own.

If improper truss handling causes bending forces perpendicular to truss plane, truss plate joints may become weakened by truss plate “teeth” withdrawal from lumber.

Handle trusses at job site to avoid excessive bending. Trusses are strong in vertical position but can be damaged at plate joints if loaded in lateral (flat) direction.

Report apparent damage to trusses, if any, prior to erection to both Truss Manufacturer and Hansen Buildings via website login.

At delivery, engineer sealed truss drawings are usually provided. If otherwise, ask driver to call truss company office and have drawings mailed. Sealed truss drawings are not sent with building plans.

Some Building Departments ask for engineer sealed truss drawings to be provided at permit application. If this particular case occurs, contact your Hansen Buildings Project Coordinator who can have them sent. Normally, truss manufacturers would rather provide drawings at actual truss fabrication time, as available lumber sizes and grades may change and chances are trusses delivered to building site, will be other than an exact match to drawings provided weeks or months previously.

Steel Roofing and Siding Delivery



IMPORTANT INFORMATION ABOUT STEEL DELIVERIES

Before Materials Arrive

Read “Deliveries and Storage Procedures” at this chapter’s beginning. This section gives important information on delivery arrangements, delivery truck size, clear area required at building site and how to mark unloading areas.

Steel company will normally call day before truck loading to give an ETA (Estimated Time of Arrival) and to make certain a responsible adult will be present to receive order. Ideally receiving person will be someone directly involved with building project, able to identify steel order components, and note any damage. Receipt includes counting materials received, checking for damage and signing paperwork.

If steel company fails to make contact prior to delivery, driver arrives, and **no one is there to receive**, delivery will be routed back to plant and shipped on next available truck, at no charge, after contact has been established.

If you have been contacted, but are unavailable to receive order, materials will be returned to plant and will be routed again on next truck available, BUT



There will be a \$500 minimum delivery fee for second trip.

Steel company delivery driver is not a Hansen Buildings employee. Therefore Hansen Buildings cannot dictate an exact delivery time. Your responsibility is to have adequate offloading equipment, if necessary, as well as an accessible and safe drop site for delivery equipment.

Steel Unloading

▶ Offloading is unavailable in most areas. This is your responsibility. ◀

DRIVERS ARE NOT REQUIRED TO UNLOAD.

Handle each steel bundle (or skid) carefully, to avoid damage. Take care to prevent bending panels or scratching finish. Use straps at least three to four inches wide.



Improper bundle loading and unloading may result in bodily harm and material damage. Under no circumstances are Hansen Pole Buildings, LLC or providing vendors responsible for bodily injuries and material damages resulting from improper loading or unloading. Again – any materials damaged while you are unloading, for any reason or cause, you and you alone are responsible.



Avoid, under any circumstance, using rope or chain to unload steel.

Whenever possible, keep bundle crated until placed at storage location. Then, break bands and - **AT A MINIMUM** – lift up cover sheet to inspect for any damage and correct color. If no damage present, re-bundle.

Panels up to 20' in length: A forklift may be used to unload panels up to 20' long. Place forks at their maximum separation. Only transport unopened bundles. When transporting bundles across rough terrain, or over a longer distance, use some means to support panel load.

Panels greater than 20' in length: Use multiple forklifts or a crane. With a crane, use a spreader bar to ensure even weight distribution at pick up points.

As a rule, when lifting panels, leave no more than 1/3 panel length unsupported. **Never use wire rope or cables**, as this will damage panels.

It is essential to inventory each steel delivery item for damage, shortage, correct color, correct length, or any other defects! It would be a bad assumption, because material is bundled in a skid, shrink-wrapped or in a carton, all pieces are there, correct color or are in useable condition. Examine trim pieces for any "road wear" or scratches caused from shipping.



Steel trims may be delivered coated individually with a clear or colored plastic protective film. This film can "hide" a plethora of damage, typically scratches or dents. Look these pieces over carefully.



Note any item found incorrect for any reason (short shipped, damaged, wrong color or length), on driver's paperwork at delivery. Failure to list any issue – **makes you responsible for replacement item cost (including delivery charges)**. We suggest taking time prior to delivery, to become familiar with material take-off sheet, have it available and pay close attention at steel delivery.

Overhead Doors

Overhead door suppliers will replace, or repair merchandise found to be defective due to quality or manufacturing defects. When a door is received with missing or broken parts, these parts will be replaced at no cost provided Hansen Buildings and vendor are notified within **48 hours** after product receipt. Vendor's customer service manager will approve a part to be shipped via next truck or a next day small package carrier depending upon product installation urgency. No credit will be given for merchandise damaged due to improper handling or storage.

Minor scratches on pre-painted steel doors are not defects.

Overhead Garage Door Return Goods Policy: Goods are unreturnable except with prior consent of and subject to terms specified by overhead door supplier.

All returns are subject to a minimum 30% restocking charge.

"Special Order Doors" or any installed door or part is unreturnable for credit.

Hardware & Misc. Item Deliveries

All hardware shipped direct from Hansen Buildings (i.e. bolts, 40d nails, joist hangers, LSTA12s, closures) is usually sent by either FedEx, UPS and/or United States Postal Service. Tracking information for these items will be available through Hansen Buildings' login, following shipment. Hansen Buildings allows **10 days after shipment from Hansen Buildings** to report any missing or unreceived parcels. After this, tracking becomes almost impossible and replacement costs will be assumed by you. **Therefore, notify Hansen Buildings before 10th day, of any materials unreceived.**

Open ALL boxes and inventory all items – inspect for correct colors, verify all items noted on HARDWARE SHIPPING LIST have arrived. **Notify Hansen Buildings within 48 hours of any missing or damaged pieces for replacement. After 48 hours, replacement costs will be assumed by client.**

Windows and gable vents are usually direct shipped from manufacturer.

General Material Storage

Store off ground any materials not being used within construction's first few days (or more than a week after delivery) and cover with a tarp.

- Some materials will be delivered in cartons. Avoid storing cartons in stacks.
- Store cartons protected from falling materials or tools as they could damage enclosed contents.
- Keep cartons dry. Best place to store cartons is indoors.
- If cartons are stored outside, cover with a loose-fitting, light colored tarp, arranged to allow ventilation. This is critical, because some materials (especially vinyl) can be damaged if heat builds up around cartons.
- Take special care storing any screws,
- Bolts, nuts and washers in a location where they will stay dry to avoid rust.
- Windows, entry and overhead doors will frequently be delivered in cartons or crates.

Lumber Storage

Ideally, use lumber promptly. Otherwise store in a cool, dry location, avoiding direct sunlight and preferably indoors where humidity variations will be minimal.

Dry lumber

Unlike green lumber, keep kiln or air-dried lumber away from moisture, otherwise product may lose value added by careful seasoning. Dry lumber if saturated with water, such as from rain, melting snow or contact with wet ground, can lose dimensional stability, warp and otherwise deteriorate. Lumber exposed to alternate wetting and drying will check, split, warp and discolor.

If stored outdoors, keep dried lumber off ground and protected by paper, wrapping, tarpaulins, or canvas. Paper wrapping offers short-term protection and, if torn, repair immediately. Dilapidated wrapping holding rainwater may increase moisture regain more than if lumber had no protection.

Why use dry lumber? Lumber grade stamped at a 19% or less moisture content is termed “dry lumber”. Dry lumber is relatively dimensionally stable – meaning shrinkage probability is negligible. University research studies have shown an 8’ long 2x4 will lose approximately 1” in length, when naturally drying. Drying lumber also reduces chances mold or other fungi will attack wood. “Green” (20% or higher moisture content – not color) lumber is prone to warp, cup and split as part of natural drying process. Holding power of nails driven into green wood drying in place drops substantially over time.

Air flow is most important factor in outside lumber storage. Allow large air volumes to circulate freely around stacked lumber in order to evaporate moisture from lumber. Provide an open storage area with no trees or buildings blocking air flow. Remove weeds, grasses and other vegetation around lumber as they harbor insects and fungal spores.

Good water drainage in storage area is important. Standing water adds to humidity increasing mold and stain possibilities on lumber.

When stacking lumber on stickers (also known as dunnage), place stickers in perfect vertical alignment with one another. Otherwise, sagging will occur. Solid stacked lumber is often stored in packaged units bound with tie straps (or banding) for easier handling. Separate stacked units by spacers, usually at least 4”, and aligned with lower stickers to prevent sagging.

Storing lumber under a roof offers better protection by keeping material dry and bright.

CAUTION

Lumber, especially **pressure preservative treated**, is particularly susceptible to warping and twisting while curing. These materials are best incorporated into building as quickly as possible. In event lumber will not be used immediately, keep bound tightly.

Bands placed by lumber company will rarely be adequate to maintain dimensional stability. Tight chains or cable restraints around lumber at frequent intervals, tightened as material dries, may help. Even these measures may be inadequate to prevent lumber warp, twist and bow.



In any case, prior to installation in building, protect pressure treated lumber from direct sunlight and rain.

Truss Storage



Trusses store best when standing upright.

Shore and brace standing trusses well to keep from toppling. Trusses stored other than in a vertical position can and will warp, and become difficult to use.



Store trusses with “tails” (overhangs) elevated so truss weight rests on bottom chord.

Unload trusses in bundles and store on level ground, but never in direct contact with ground (to avoid collecting moisture from ground). Allow for good drainage at truss storage location in event rain occurs before installation. Protect trusses from damage resulting from on-site activities, environmental conditions, insects or weather. Exercise care at all times to avoid damage to trusses due to careless handling during delivery, unloading, storage, and installation.

In warm, rainy weather, moisture regain in unprotected trusses can result in fungal staining. Wetting lumber also results in swelling. Subsequent shrinkage may contribute to structural distortions.

To store trusses for a long time period, cover with a water repellent tarp for protection. Plastic is an acceptable alternative, provided there are side openings to allow air flow. Below is what happens to trusses stored exposed to weather (these trusses should not be used):



Handle trusses in such a way as to prevent toppling when banding is removed from bundles. Trusses stored on black top or other impervious surfaces and continuously moved around construction site are subject to damage when they are slid along surface with equipment. As a result, galvanized coating on connector plates may be removed, allowing plates to rust and possibly reduce plate thickness.

Glulamined Column Jobsite Handlin & Storage

DO NOT unload columns on rough terrain or uneven surfaces as these could cause product damage.

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

If not used immediately:

Store in a dry place. Moisture may cause decay to untreated column portion over time.

Avoid direct sunlight.

Columns should be stored in a horizontal position. Use support boards of equal dimensions no more than four feet apart for support and to prevent them from sitting directly on ground.

If bunks or units of columns are stacked on top of each other, support boards **MUST** line up vertically (i.e. no staggered placement).

If outdoor storage cannot be avoided, protect with a waterproof barrier. Leave bottom of cover loose to allow air movement. Protect columns from weather, corrosion, bending, damage, insects and any other deterioration when stored.

It is your responsibility 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 columns at time of delivery and before installation, inspect for:

Quantities and lengths to correspond with shipping ticket and Material Takeoff.

Cracked, dislodged or broken members.

Any other damage possibly impairing columns' structural integrity.

Steel Roofing And Siding Jobsite Storage

All steel roofing and siding panel bundles are inspected and approved by manufacturer's quality control inspectors before shipment. Inspect panels for any moisture content or shipping damage upon delivery and advise carrier immediately.

Bare (non-painted) Galvalume sheet, like galvanized, is subject to wet storage staining and turns gray to black if moisture is trapped between coil laps, cut length sheets, or roll formed parts during shipping and storage. Steel mills treat Galvalume sheet to retard wet storage staining; however, take precautions to keep Galvalume sheeting dry at work site.

Jobsite storage of steel building panels (provided by Building Products Technical Committee of National Coil Coaters Association):

Two Rules to Live By:

- 1) Keep job site storage time to a minimum with proper scheduling**
- 2) Keep panels dry.**

"Moisture trapped within panel bundles can cause the finish to soften and become more susceptible to erection handling damage. Panels stored wet for extended periods in humid conditions will oxidize (rust). Such damage is avoidable with proper planning and practice.

Panel bundles should be stored under a roof or, at least, out of direct sunlight. Bundles should be slanted at an angle [from end to end] sufficient to facilitate drainage and high enough off the ground for good air movement all around. Do not use tight-fitting plastic-type tarpaulins as panel bundle covers. While they may provide protection from heavy downpours, they can also retard necessary ventilation and trap heat and moisture causing the so-called "greenhouse effect" that accelerates corrosion. Long panels must have additional support to prevent sagging and potential water accumulation in the sag.

If panel bundles arrive wet or become wet at the jobsite, break them open and allow them to dry completely."

When moisture is found, besides breaking apart bundles, drain each panel and wipe dry. After dried, carefully restack panels and loosely recover allowing for ample air circulation.

Extended panel storage in a bundle is not recommended. Prevent bundled sheets from being in contact with accumulating water. Under no circumstance store sheets near or in contact with salt water, corrosive chemicals, ash, or fumes generated or released inside building or nearby plants, foundries, plating works, kilns, fertilizer, and wet or green lumber.

Following three photos show results from improperly stored steel. Moisture became trapped between panels in a bundle, softening paint.



Steel Roofing with Condenstop or Dripstop And Jobsite Storage

CAUTION

Warning: Storing panel bundles prior to installation could allow moisture to become trapped between panels and may cause damage to panels. This moisture can originate from a variety of sources such as rain, high humidity or condensation. Panels should be stored in a dry location and installed as quickly as possible when arriving at job site to prevent damage. If this is impossible, proper consideration should be given to separate panels to allow for air circulation prior to installation. Allowing moisture to become trapped within panel bundles can void all panel warranties.

Polycarbonate Panel Jobsite Storage

Recommended storage procedure for Polycarbonate panels (eave lights):

Store panels horizontally, on flat sturdy pallets, equal or longer than longest panels. Stack short panels on top.

Store polycarbonate panels in a cool and shaded place, avoiding direct sunlight, ideally indoors in a cool, dry, well-ventilated area. Avoid covering panel stack with dark or heat-absorbing materials or objects, to prevent solar heat buildup. When stored on skids, stack panels no more than 250 pieces on a skid. Avoid double stacked skids, or stacking anything atop panels. Prevent moisture from collecting on or between panels.

When necessary to store panels outdoors, cover stack with a white opaque polyethylene sheet, corrugated cardboard or other materials not absorbing or conducting heat. Verify entire stack is covered.

Polycarbonate panels are tough, requiring no special care. We recommend some cautionary steps: avoid stepping on or driving over panel while on ground, or folding during handling and installation. Avoid dragging panel on ground, scraping against structural elements or any other sharp or rough objects, to keep from getting scratched.

Polycarbonate panels are resistant to a variety of chemicals and exhibit limited resistance to a second chemical group. A third chemical group may attack and damage panels. Damage degree and severity depend upon chemical type and exposure duration. Polycarbonate panels will melt down at approximately 400 degrees F.

To follow is a brief construction order outline. Individual buildings may have more or fewer features than this standardized outline.

1. Obtain planning, zoning and building permits (where required)
2. Stake out lot (may require a surveyor)
3. Temporary utilities (water, electric, port-a-potty)
4. Grade site - properly compacting all fill materials
5. Lay out building
6. Dig holes
7. Call for hole inspection (where required)
8. Set columns in holes, backfill per plans
9. Splash Plank
10. Install trusses and/or rafters
11. Purlins and all other roof framing (including ceiling joists and bracing)
12. Apply roof steel and ridge cap (or sheathing, felt and roofing)
13. Install any raised wood floor framing and floor sheathing
14. Girts and all other wall framing
15. Call for framing inspection (where required)
16. Weather Resistant Barrier over wall framing
17. Entry doors, sliding doors and windows
18. All steel wall trims except corners
19. Wall steel and corner trim
20. Under slab utilities
21. Under slab vapor barrier and insulation, slab perimeter insulation, pex for floor heat
22. Concrete floor
23. Any stairs resting upon concrete floors
24. Overhead doors

- 25.** Rough in HVAC, Plumbing and Electrical (in this order)
- 26.** Gutters and Downspouts
- 27.** Wall Insulation
- 28.** Temporary heat
- 29.** Drywall or other interior finishes
- 30.** Attic insulation
- 31.** Cabinets, countertops, interior doors and trim
- 32.** Hard floor coverings
- 33.** Appliances
- 34.** Finish Electrical, Plumbing and HVAC
- 35.** Shower doors, mirrors, hardware
- 36.** Carpet
- 37.** Septic tank and drainfield
- 38.** Concrete sidewalks, driveways and patios
- 39.** Call for final inspection (where required)
- 40.** Finish grading and Landscaping
- 41.** Take multiple completed building photos and Email to Hansen Buildings
- 42.** Enjoy new building