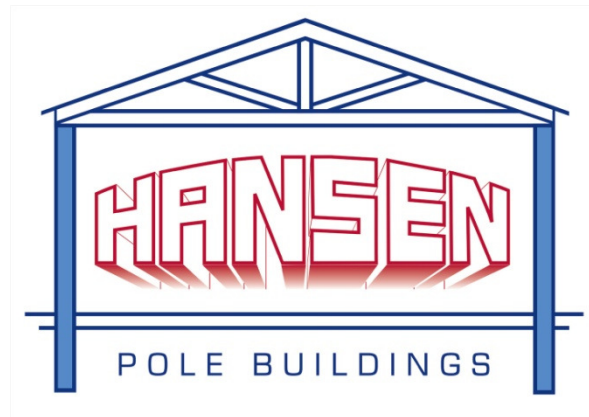


Hansen Pole Buildings Construction Manual

www.HansenPoleBuildings.com



Hansen Pole Buildings, LLC
Technical Support Department
12167 Lake Road
Browns Valley, MN 56219

June 2024

Important Contact Information:

▶ **If material takeoff list isn't received in your login within one week after receiving building plans, notify your Project Coordinator via online login** ◀

Please include your PROJECT# with any Email inquiry. Failure to do so may result in delayed or no response.

Plans/Drafting Department:

Engineer sealed building plans always take precedence over any other information or instructions. Should you find something you question, are unclear about, or feel may be contradictory, contact Hansen Pole Buildings' Plans Department immediately via online login or Email **Plans@HansenPoleBuildings.com**.

Technical Support:

Fastest way to get assistance:

For questions regarding **proper installation** or for any additional information other than as outlined on engineer sealed plans or in this manual, technical support is available at **NO CHARGE** via online login or Email **TechSupport@HansenPoleBuildings.com**.

Telephone technical support is available for a nominal fee and may be pre-purchased via online login.

Telephone technical support plan purchasers will receive a return call from a Technical Support Department Specialist, usually in 24 to 48 hours, depending upon call volume. Your Specialist will take information regarding your challenge and send an email asking to confirm his or her understanding of issue(s) at hand. Upon receipt of your confirmation – a return email will be sent with challenge solutions.

Keep in mind post frame buildings are highly complex structures, involving thousands of components. Solutions to a particular challenge may require further research by Hansen Pole Buildings' Technical Support team. However, they will respond with email answers as quickly as reasonably possible.



Please avoid contacting component manufacturers for Technical Support **as wrong information may be given.**

Calls or Emails to Engineer of Record **WILL** result in you being charged hundreds of dollars, even if question goes unanswered.

No technical support is available through Sales or Materials Departments.

Even if You ignore the rest of this manual - PLEASE READ THIS . .

CAUTION

Improper eave height measurement is most common and most expensive construction error!

Follow this procedure to properly measure eave height:

- 1.) Go to building eave side, other than at a corner.
- 2.) Hook a tape measure to **splash plank bottom** at a column.
- 3.) Measure up *column outside*, to **UNDERSIDE of roofing**.

POP QUIZ

You, and your builder (if one is hired), must pass this one question, open book quiz, before going further.

Question: Pick correct measurement of eave height:

- A) From bottom of splash plank to bottom of trusses.
- B) From top of concrete slab to bottom of trusses.
- C) From bottom of splash plank to underside of roofing at intersection with outside edge of columns
- D) Some other randomly determined distance.

Answer: C

New for 2024....

Certain lumber components of your new building will be spray painted on one end for ease of identification. If trimming, please cut unpainted ends. These include:

Wall Girts = **GREEN**

Field Roof Purlins = **PURPLE**

Drift Zone Roof Purlins = **PINK**

Ceiling Joists = **BLUE**

Floor Joists = **ORANGE**

Quick Answers

Q: When will my building plans arrive?

A: Most building plans are available by online login approximately five to seven working days after door and any stair locations are provided by you, all documents are signed and payment has been received according to terms on your invoice. More complex buildings will take additional time for plan production. Plans will be in .pdf format. Please review thoroughly and approve online, so they may be reviewed and sealed by Engineer of Record (E.O.R.), printed and sent to you. Online plans are unsuitable for structural building permit reviews or plan checks.

Q: Does everything show up at once?

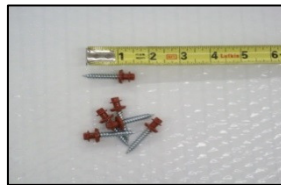
A: No. Usually there will be at least two major deliveries: lumber, trusses, entry doors, windows and hardware on one truck; and steel. Other minor deliveries may include: sheet goods and overhead doors, depending on features selected.

Q: What's difference between "stitch" and "diaphragm" screws?

A: **Stitch screws** are 1-1/4" long metal-to-metal and are used to install trim to siding and roofing. They also fasten steel sheeting onto sliding doors. No wood is required beneath point to fasten.



Stitch Screws



Diaphragm Screws

Diaphragm screws are 1-1/2" long and have an outward tapered shank directly below head. They are used to install roofing and siding with tip placed into a wood member beneath steel sheeting.

Q: I spent \$500 buying "extra" materials for my building. When does a check come?

A: Any materials purchased, without Emailing or calling to verify what was missing or damaged or for any "extra" materials used in building structure other than according to building plans and instructions contained in **Hansen Pole Buildings' Construction Manual**, are at your expense. Only with written pre-authorization from Hansen Pole Buildings may anyone purchase additional materials and be reimbursed.

Q: What if I run short of screws?

A: Without meaning to insult anyone...from experience, screw shortages in building construction most often happen when hiring a "professional builder". Reality: these are not their materials – they are YOURS. You, building owner, have paid for them. Screws dropped on ground are more likely to be picked up at day's end by person who paid for them!

Washers may become separated from screws during shipment. If neglecting reassembly, replacements for these discarded screws are at your expense.

If you or your builder runs short 100 screws or more in any color, you will be required to pay for additional. All screws are calculated with a 5% overage added to ensure plenty to complete building.

Q: Are materials off-loaded for me?

A: No. Lifting equipment will be required to help off-load lumber, hardware and trusses.

Unless steel offloading is available in your area and was purchased at building order, YOU provide equipment to unload steel roofing and siding.

Q: Can electrical be drilled through framing or columns?

A: Very little drilling, if any, will be needed for holes in order to run electrical wires. Wall framing (girts) extend or are placed so as to leave a 1-1/2 inch space between outside of wall columns and siding.

Think of a hole being drilled through as being an “open knot”. Lumber grading rules refer to these as being “Unsound or Loose Knots and Holes” due to any cause.

For #2 graded lumber holes may be no less than every two feet and up to 5/8” diameter in a 2” nominal face; 7/8” in a 3” nominal face; 1-1/4” for 4”; 1-1/2” for 6”; 2” for 8” and 2-12” for 10”.

For other grades holes may be no less than every three feet and up to 1/2” diameter in a 2” nominal face; 3/4” in a 3” nominal face; 1” for 4”; 1-1/4” for 6” and 1-1/2” for 8” and wider.

Any holes drilled through pressure preservative treated lumber or columns, especially near grade, should be treated with a Copper Naphthenate solution. Copper Naphthenate is available as a brush-on (Cuprinol No. 10 Copper-Green® Wood Preserver

<https://www.homedepot.com/p/Copper-Green-1-gal-Wood-Preservative-176223/300502829>)

or spray-on(

<https://www.homedepot.com/p/Copper-Green-Wood-Preservative-14-fl-oz-Aerosol-CopperSpr/100191444>).

For information on allowable holes in LVL (Laminated Veneer Lumber) beams, please see pages 4-6 here:

https://www.murphyplywood.com/pdfs/engineered/APA_LVL_Hole_Drilling.pdf

Q: Is touch up paint available for steel cladding?

A. Yes, please reach out to Materials@HansenPoleBuildings.com

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Readers - be aware building industry is an ever-changing entity. Bring any questions arising from this manual's use immediately to any Hansen Pole Buildings' team member's attention.

Hansen Pole Buildings, LLC Construction Manual June 2024: Mike Momb
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Icons Used in This Book



Key points to basic, but “open sesame” concepts to insure getting ***your dream building!***



Red push pin to get fired up and paying **close attention** to these details.



STOP! Take time to read and ***re-read*** before proceeding.



Follow directions and **money** stays in your pocket. If you or anyone building for you fails to follow directions in this manual, cost is ***yours!***



Warning of possible problems if ignoring this point.



A solution or fix to a common building error.



Check lumber for acceptable and allowable defects.

What icons should be followed? ***ALL of them!***

CONTENTS

Chapter 1:	Introduction.....	14
Chapter 2:	General Construction Procedures.....	18
Chapter 3:	Delivery and Storage Procedures.....	34
Chapter 4:	Beginning Building Construction.....	56
Chapter 5	Setting Columns.....	66
Chapter 6:	Screwing Right First Time.....	76
Chapter 7:	Splash Plank.....	78
Chapter 8:	Notching Columns With Trusses.....	86
Chapter 9	Truss Preparation.....	89
Chapter 10	Roof Truss Legalese.....	100
Chapter 11	Installing and Bracing Trusses.....	111
Chapter 12	Sidewall Eave Struts (Purlins)	126
Chapter 13	Square Roof.....	129
Chapter 14	Integral Condensation Control.....	131

Chapter 15	Important Steel Roofing and Siding Information.....	132
Chapter 16	Roof Steel.....	135
Chapter 17	Ridge Cap.....	144
Chapter 18	Plywood or Concrete Slabs.....	147
Chapter 19	Girts...GREEN.....	156
Chapter 20	Meet Steel Trims.....	161
Chapter 21	Wall Steel.....	170
Chapter 22	Corner & Rake Trim.....	174
Chapter 23	Entry Door Installation	181
Chapter 24	Overhead Door Openings.....	188
Chapter 25	Sliding Door Opening Framing.....	202
Chapter 26	Sliding Door Hardware.....	207
Chapter 27	Plyco Door Assembly.....	213
Chapter 28	Installing Windows.....	223
Chapter 29	Commercial Girts...GREEN.....	233
Chapter 30	Endwall Braced Wall Panels.....	238
Chapter 31:	Polycarbonate Eave Lights.....	243

Chapter 32: Wainscot.....	249
Chapter 33: Elevated Wood Floors (lofts, mezzanines and second floors.....	255
Chapter 34: Stairs.....	263
Chapter 35: Bearing Blocks.....	268
Chapter 36: Ceiling Joists...BLUE.....	271
Chapter 37: Gable Vents	274
Chapter 38: Weather Resistant Barrier.....	275
Chapter 39: Column Layout with Interior Columns or Sheds.....	276
Chapter 40: Cutting Rafters.....	279
Chapter 41: Grid Barn/Rafted Buildings.....	283
Chapter 42: Shed/Monitor Wing Rafters (Other Than Notched).....	287
Chapter 43: Monitor Building Vertical Knee Walls.....	297
Chapter 44: Pitch Breaks - Steeper to Flatter.....	302
Chapter 45: Pitch Breaks - Flatter to Steeper (Upper Gambrel).....	308
Chapter 46: Framing at an Open Corner.....	314
Chapter 47: Vented Ridge Cap.....	315
Chapter 48: Translucent Ridge Cap.....	318

Chapter 49: Adding Rafter Extensions (Tails) for Sidewall Overhangs	321
Chapter 50: Sidewall Overhang(s) Only - Open.....	323
Chapter 51: Sidewall Overhang(s) Only - Enclosed.....	335
Chapter 52: Endwall Overhang(s) Only - Open.....	348
Chapter 53: Endwall Overhang(s) Only - Enclosed.....	365
Chapter 54: Sidewall and Endwall Overhangs - Open.....	384
Chapter 55: Sidewall and Endwall Overhangs - Enclosed.....	409
Chapter 56: Self Supported Entry Door Reverse Gable Porch.....	441
Chapter 57: Bay Windows.....	458
Chapter 58: Valleys.....	466
Chapter 59: Gable Dormers	475
Chapter 60: Standing Seam Steel Roofing.....	481

Appendix


I.	Amarr Overhead Door Installation.....	491
II.	Genie Door Opener Installation.....	502
III.	Direct Drive Chain Hoist Mounting Instructions.....	532
IV.	Applying Roofing Shingles.....	533
V.	Applying Alternate Sidings.....	537
VI.	Cupolas.....	539
VII.	Plasti-Skirt.....	547
VIII.	Using Transits, Laser Levels and Optical Builder’s Level.....	549
IX.	How to Have Straight Roof Steel Overhangs	550
X.	Flying Gable and Widow’s Peaks.....	552
XI.	Plyco Stall Kits.....	554
XII.	Hardware Pictures.....	560


Chapter 1: Introduction



Due to client and builder input, this latest Hansen Pole Buildings' Construction Manual edition covers features common to most installations first, followed by chapters individually addressing popular options.

There are two keys to successful post frame building installation.

 First is quality products – products professional builders and contractors have come to expect from Hansen Pole Buildings, pioneer in easy-care, easy-to-install post frame (pole) building products. If using Hansen Pole Buildings' products for this building project, then an important first step has been taken to an outstanding installation.

 Second key is quality workmanship - an installation carefully planned and completed with attention to detail. This is where knowledge and know-how come into play.

Maybe you are an experienced installer, or perhaps preparing for your first post frame building installation. Whatever your situation, this Construction Manual will help you follow all necessary steps involved in outstanding post frame building installation. This manual also will help master skills and techniques required for each step. With products such as pre-manufactured metal plate connected wood trusses, even a beginner can successfully construct their own building. A building should be considered as many, small, easily accomplished steps.

We truly mean ***EACH*** step. This manual begins with site preparation. Then it moves to laying out a building, digging holes and setting building columns. Next, building framing. Finally there are techniques for installing steel roofing, siding, and trims.

Techniques and helpful hints in this manual are based on over four decades' actual field experience. These instructions come from builders and individuals who have collectively successfully constructed over 100,000 post frame buildings. Be assured these are time-proven techniques. A good idea is to review local building codes to be aware of any special requirements for post frame (pole) building installation. Local building departments may have prescriptive structural requirements for "non-engineered" pole buildings. These prescriptive requirements are non-applicable to an engineered building except for loading and climatic conditions (snow, wind, soil and seismic), those you verified prior to placing your order.

Best way to use this construction manual will be as an addition to your own experience. If you are an old pro at post frame building installations, skim table of contents and inside pages looking for tips and techniques you can add to your current skill sets.

Chances are this post frame building will be different from any prior post frame building you have installed. Avoid making assumptions. Review this manual to be familiar with differences.

If new to post frame building installations, read book from cover to cover. You will quickly understand what has to be done, and in what order, to complete a successful post frame building installation.



If hiring a contractor to construct your new building, even one who has built Hansen Pole Buildings before, provide to them this Construction Manual, building plans and all material takeoff lists, as well as your client portal login information.

Failure to provide these resources to builder will exponentially decrease chances things will be done correctly and will increase probability of disappointment with outcome. We frequently update this Construction Manual, as new products are introduced and Building Code changes are made, so we would encourage builders to read thoroughly, even if they have read a prior version. Also, **in your best interest**, is to read this manual, as even a most experienced builder will miss an important aspect from time to time. Only direct personal involvement will guarantee a satisfactory installation.

Construction manual creation custom tailored to any specific building is neither economically practical nor feasible. While one or more of these sections may be non-applicable to your building, it could prove helpful to read through them anyway. They may occasionally contain vital information proving helpful in other project areas.



IMPORTANT INFORMATION

Application and detail drawings in this manual are strictly for illustration purposes and may be non-applicable to all building designs or product installations. It is impossible for this manual, or any other resource, to cover all circumstances. In some cases, generally accepted construction practices and common sense may have to be used. Conform all projects to applicable building codes for their particular area.

Hansen Pole Buildings, LLC cannot be responsible for building performance, or portion thereof, if installed other than in accordance with suggested instructions referenced in this manual and according to building plans and erection drawings. **If a conflict exists between this manual and actual erection drawings, erection drawings take precedence.**

CAUTION

In event any difference exists between plans, material takeoffs, this manual, or any other furnished documents, contact Hansen Pole Buildings immediately for clarification or resolution prior to moving forward.

Hansen Pole Buildings, LLC reserves right to modify, without notice, any details, recommendations, or suggestions.

SOME WORDS ABOUT SAFETY: STUDY APPLICABLE OSHA AND OTHER SAFETY REQUIREMENTS BEFORE FOLLOWING THESE INSTRUCTIONS.

During construction many potential hazards exist. Construction is a dangerous procedure and some work portions may be advisable to have supervised or done by trained knowledgeable erectors. Hansen Pole Buildings, LLC cannot be aware of all possible job site situations causing unsafe conditions to exist. Building erector is responsible for reading these instructions and determining safest way to install materials.

CAUTION

Actual photos in this manual have been provided by clients and/or their builders. They are for illustrative purposes only, and may portray unsafe construction practices.

These instructions are provided as a guide to show correct parts placement, one to another. **IF** following any installation steps would endanger a worker or bystander, building erector must stop work and decide upon a corrective action.

As you exercise your do-it-yourself skills, develop and stick to safe work habits.

- Work patiently. If becoming confused, frustrated or hurried, chances are greater mistakes will be made or accidents will happen.
- Read and follow recommended safety procedures from tool manufacturers or products used.
- Turn off and unplug tools when changing blades or making adjustments.
- Use tools or equipment for their intended purposes; keep cutting tools sharp and all tools in good working condition.
- Adequately protect eyes and ears at all times.
- Wear appropriate protective clothing and heavy soled boots (with rubber soles when working on roof), gloves when handling lumber.
- Tie back long hair to avoid catching accidentally in power tools.
- Keep work surfaces and traffic areas free from materials, cords, tools, scraps and debris.
- Too heavy or awkward an object? Get assistance in moving; bend from knees when picking up large or heavy items.
- Wear safety helmets when working under or around overhead construction.
- Use scaffolding when working on high places. Manipulating heavy and unwieldy trusses, rafters, beams and sheathing can cause balance loss. Be careful where stepping; move slowly and with caution. Avoid anyone standing below.
- Be extra careful working around glass – one wrong move can cause injury or replacing a costly item.
- Avoid working under or near overhead power lines.
- Provide required safety railing, netting, or safety lines for persons working on roof.
- Avoid using roof panels or sheathing as a walking platform. They won't withstand a person's weight standing at a panel or sheet edge.

- Sufficiently attach any construction materials placed on a sloped surface, prior to walking on them.
- Avoid working on damp or frosty steel surfaces, or with inadequate lighting.
- Use proper protection, take precautions and plan ahead. Never bypass safety to save money or rush a project.
- For detailed specifics on construction jobsite safety contact:

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