

the Backyard
ORGANIZER[®]
by *Suntrellis*[®]

Shenandoah Building Kit



Before you Begin

Read the instructions before you begin assembly. Assembly is easiest if the order of the instructions is maintained.

Required Tools

- Hammer
- Carpenters Level
- Measuring Tape
- Pencil
- Minimum 6' Step Ladder
- Phillips Screwdriver



Optional Tools

- Chalk Line
- Carpenters Square
- Electric Drill with Screw Bit

Additional Requirements/information

- Some of the components and subassemblies of your building kit are heavy and require the assistance of another individual to lift, stabilize, position or fasten together. This kit is designed to be assembled by at least two individuals.
- It is recommended that you wear safety glasses, heavy work boots, and gloves throughout the assembly process.
- Always ensure that you begin with a level surface and retain all corners and perpendiculars square and all walls plumb throughout the assembly process.
- Always check and double check squareness before finally securing a component. This will ensure that subsequent steps remain hassle free and that components fit properly.
- Please check municipal bylaws before constructing.

Shenandoah Building Kit

STEP
1

Site Preparation

- Site must be leveled. An improperly leveled site will result in an equally unlevel flooring system which in turn will hamper the assembly process and fit of your building kit. The use of crushed stone will allow for a gradeable surface on especially difficult sites.
- Take advantage of natural drainage, and avoid positioning building on the lowest part of your yard in order to prevent puddling and excessive moisture around your building. A moisture barrier such as plastic film or landscaping fabric may be used on the building site, to discourage grass and weed growth and reduce ground moisture.

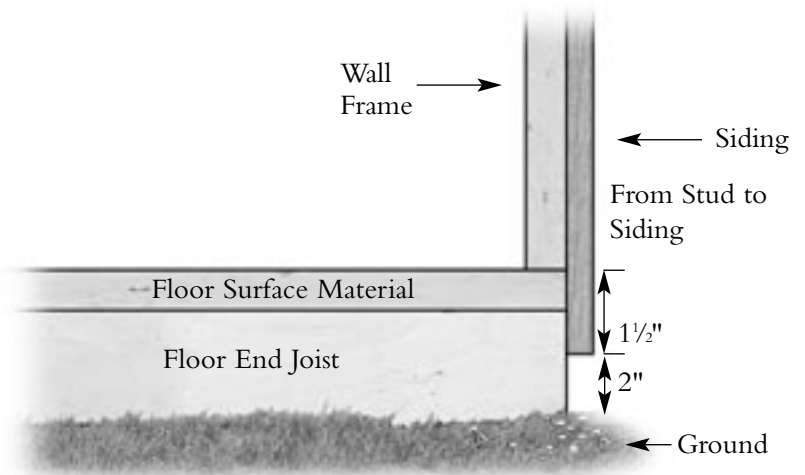
Floor System

STEP
2

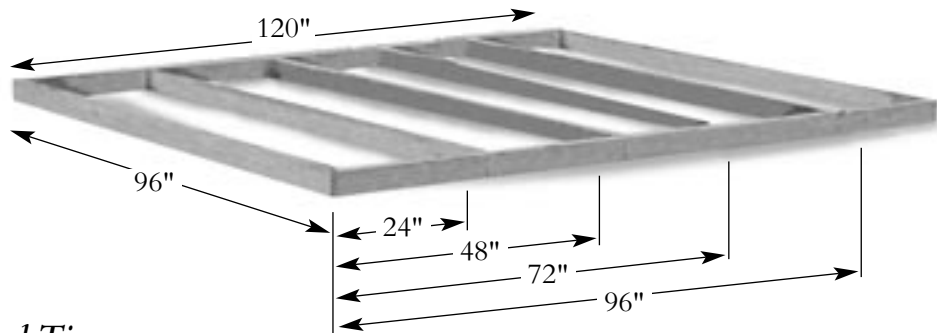
- Before assembling your building, you must choose and construct a flooring system. Recommended is the optional Sunitrellis pre-cut floor kit, which is custom designed to fit your building, and provides a lasting treated wood foundation. If a concrete slab or alternate wood foundation is used in place of the optional floor kit, then please note the following guidelines for a proper fit.

- Your Backyard Organizer is designed such that the wall frame sits on the edge of a floor surface or a sill plate while the siding overhangs the floor edge or sill plate by an additional 1 1/2".

Also the bottom siding edge must clear the ground by a minimum 2" such that the siding edges are not in direct contact with ground moisture. On a concrete slab, this may require a coupled 2" x 4" wooden sill plate to anchor the building.



- In the case of a wooden floor structure a 2" x 4" floor truss with desired flooring on the surface should be sufficient for most applications. In either case the exterior dimensions of your floor or sill plates must be exactly 96" x 120".



A Backyard Tip:

“A backyard Organizer floor kit supplies floor joists of 2" x 4" lumber and spaces them on 24" centers. This should be sufficient for most applications, but if extremely heavy loads are to be stored in your Backyard Organizer, you may wish to adapt a floor kit or build your own as follows: Add two or three pieces of 2" x 4" as additional floor joists decreasing the joist span to 16" or 12" on center spacing. OR upgrade the joists to 2" x 6" lumber with desired spacing.”

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Floor System

A The wooden floor kit illustrated consists of 6 floor joists (93" in length) and 2 end joists (120" in length). Obtain the two end joists (front and rear) and mark spacing every 24" for joist placement. Arrange the floor joists and end joists such that the floor measures 96" x 120". Fasten 2 - 3/4" nails through each end joist into each floor joist. Ensure floor is square by measuring opposite corners. When these two measurements are identical - your floor is square.



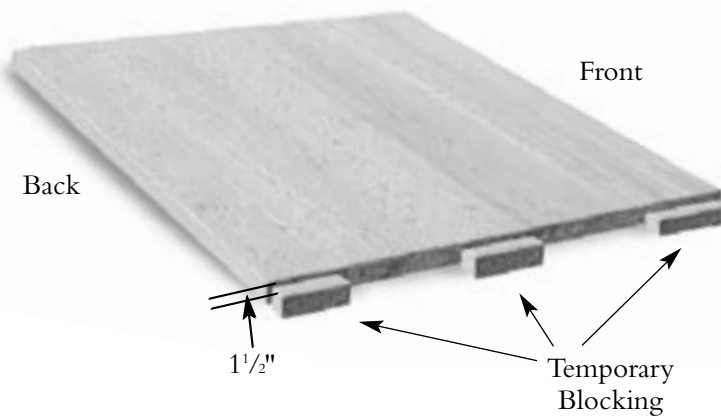
B Place floor surface material over the floor joists and fasten with 1 3/4" nails. Fasten first at corners, ensuring that the floor remains square and then every 8" into each joist.



C Once complete, floor should be adjusted to its final position and must be checked to ensure it is level and adjusted where necessary. Floor **MUST** be level prior to assembly of building.



D 2" x 3" temporary blocking is included in your building kit to help erect the walls. For the Shenandoah model they should be fastened to each side of the floor (left and right side) at the front corner, rear corner and the midpoint as illustrated. The top surface of the block must measure 1 1/2" from the top of the floor surface. Double check this measurement as it will determine proper alignment of the side walls when installed.



Finally, the floor should be marked on each side every 24" from front to rear to identify wall truss placement. Please note illustration

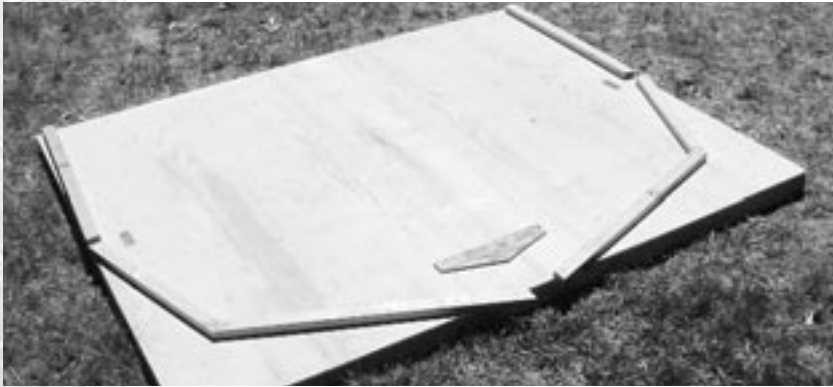
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Assembling Main Trusses

STEP

3

The building is assembled using 5 trusses. The front and rear trusses are pre-assembled into the front and rear wall assemblies, while the remaining three trusses will be assembled individually. Truss components are stamped as noted in the instructions for accurate assembly. In order to ensure proper assembly and fit of the trusses, they should be aligned and assembled laying on the floor system, such that the truss legs are in alignment along the sides of the floor. This will ensure that the truss legs are properly spaced when they are erected.



A On the floor surface lay out 4 components, 2 truss legs (C2) and 2 roof truss assemblies (C1), such that all joining ends are tight and even.



B Steel truss plates will be installed overlapping the joint between the truss legs and the roof truss assembly. Wooden gusset plates will be used over the center joint between the roof trusses. The steel truss plates must be installed on both sides before the wooden gusset plates are installed.

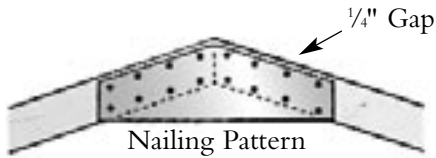


C Assemble steel truss plates for both the left and right side of the truss, using a hammer. Ensure that the edges of the plate do not extend outside of the exterior edges of the 2" x 3", as this will hamper siding installation. Hammer truss plate over its surface until entire plate is flush with wood. Ensure that the joint at each end of the roof truss remains tight and even and that the truss legs remain in alignment with the floor. The measurement to the outside bottom of the truss legs should remain at 120". Turn each right and left assembly over and repeat installation of the steel truss plates for the underside.

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Main Trusses

D Again ensuring proper truss leg spacing, attach center roof truss gusset to top of truss, allowing gap between gusset plate and the top of truss. Attach as per illustrated nailing pattern with 16 - 1³/₄" nails. Carefully turn assembly over and repeat for other side.



Place finished truss clear of work area, and repeat entire assembly process for the remaining two main truss assemblies.



STEP
4

Front Wall Assembly

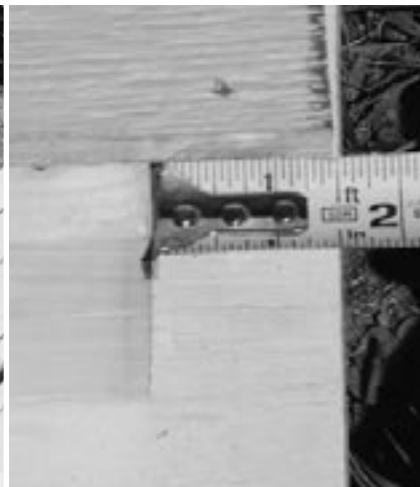
A Obtain the left hand wall/door assemblies, and place on a flat surface with the exterior siding facing up. This can best be built on the floor surface. Position component KP under left panel on its flat, leaving approx. 1¹/₄" exposed and 1¹/₄" under left panel. It should be positioned about 2" up from the top door opening.



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Front Wall Assembly

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B Lift bottom edge of door and place a temporary 2" x 3" block under door to keep it level.

Nail 3 or 4 nails through siding into vertical post.

C Obtain the component CD, and place over the door, ensuring a good fit. Fasten from pre-assembled trim into end of component.

Obtain two pieces of temporary blocking and fasten securely across the top and bottom of the two doors to secure the doors during assembly. Obtain the front wall wing braces marked SW and position underneath the left and right edges of the front wall assembly.

D The siding overlaps the lower edge of the brace by 1 1/2" and that 3/4" of the brace remains exposed outside of the siding edge to accept the additional siding panels. Fasten siding into wing braces top and bottom, ensuring alignment and then every 8" into wing brace.

Front Wall Assembly

E Obtain the front siding wing panel assemblies and position them on the wing braces, ensuring that the siding lines up on the lower and upper edges. Again, fasten siding into wing braces top and bottom, ensuring alignment, and then every 8". Repeat for each side of the front wall assembly.



F With the help of an assistant or two, the front assembly can then be carefully lifted from the top (end over end) over on its face on the ground to the front of the floor assembly.

Please Note: The front wall assembly is primarily secured by the temporary braces and is not yet secure until installed with restraining walls. Use care in moving assembly. It will not support its weight on a horizontal "flipover".



The door header just installed can then be completed by fastening through rear of siding into door header every 8".

Rear Wall Assembly

STEP

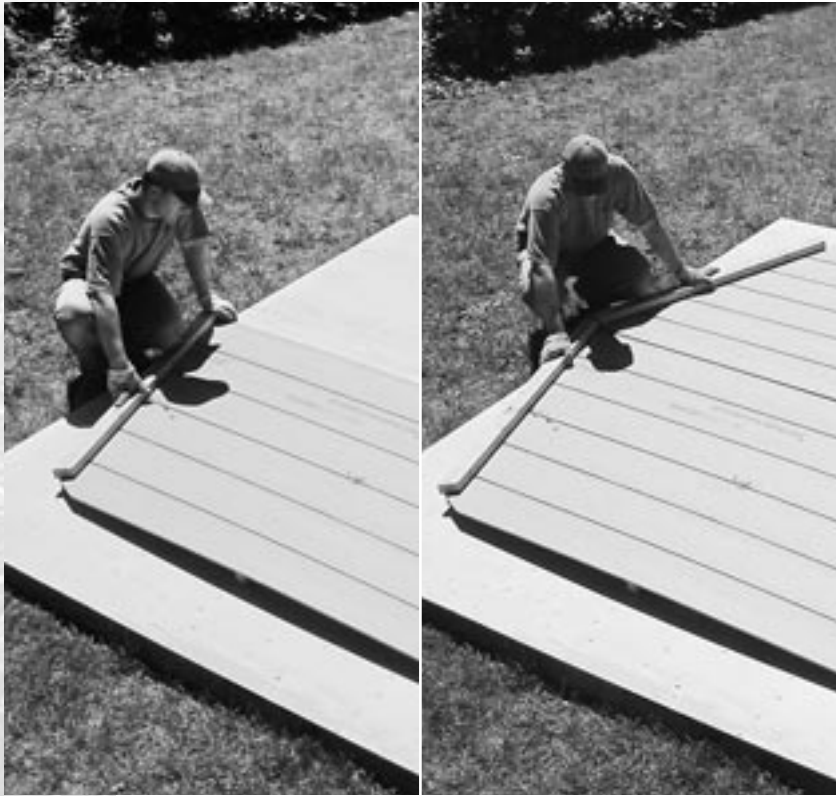
5



A On a flat surface, obtain the two rear wall notched cross braces and fasten at center notch with a 1³/₄" nail. The 90¹/₄" brace will become your vertical brace, while the 94¹/₂" brace will become the horizontal brace.

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Rear Wall Assembly



B Assemble and position the wall with edge running along cross brace leaving approx. $\frac{3}{8}$ " of the vertical cross brace exposed.

C Ensure that the bottom of the cross brace is positioned $1\frac{1}{2}$ " from the bottom edge of the siding panel.

D Tack a $1\frac{3}{4}$ " nail in the top, bottom and middle through siding into vertical brace maintaining alignment along vertical brace.



E Obtain right rear wall and position it tight along left rear panel. Ensure that top and bottom are aligned and the seam between panels remain tight. With $1\frac{3}{4}$ " nails, tack at the top and bottom, recheck alignment, and then nail every 8" from top to bottom along edge of both left and right side panel into vertical cross brace.

Ensure the trim at the peak is aligned and tight and the $\frac{3}{8}$ " siding profile remains even from top to bottom before nailing right side panel.

Rear Wall Assembly

- F** The rear wall panels can then be nailed to the horizontal cross brace. First adjust the brace to a level position such that it measures the same distance from the bottom on both the left and right side of the rear wall. Mark this position on the exterior of the rear wall with either a chalk line or a pencil. Nail at each end, double-check position and then nail every 8" through the siding into the horizontal brace.

Obtain the rear wall wing braces marked SW and position underneath the left and right edges of the rear wall assembly, such that the siding overlaps the lower edge of the brace by 1½" and that ¾" of the brace remains exposed outside of the siding edge to accept the additional siding panels.

- G** The wing braces should position themselves against the horizontal cross brace installed above. When positioned use a 1¾" nail to fasten the wing braces to the horizontal cross brace. Fasten siding into wing braces top and bottom, ensuring alignment and then every 8". Obtain the rear siding wing panel assemblies and position them on the wing braces, ensuring that the siding lines up on the lower and upper edges. Again, fasten siding into wing braces top and bottom, ensuring alignment, and then every 8". Repeat for both sides of the rear wall assembly.



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Rear Wall Assembly



H Erect rear wall up into upright position.

STEP

6

Installing Walls and Trusses

The assembly of the wall and trusses will begin at the rear and move forward, with the front wall being erected last. It is very important that panels line up, siding fits snug to grooves and walls remain square and level during the assembly process, as any deviation will result in difficulties as you proceed through the subsequent steps. At each Step always fasten one or two nails and double check for alignment and squareness to ensure a proper fit before completing the nailing.



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Main Truss/Side Wall Installation

- A** With the help of an assistant, erect rear wall assembly in place such that the vertical brace and the rear wall truss rests on the floor assembly or sill plates depending on your chosen floor surface. Ensure that wall is level and centered horizontally on floor.

The siding surface should overhang floor or sill plates by 1½", and the interior rear wall truss should align with the side edges of your floor.

While your assistant holds the wall, fasten wall to floor using 1¾" nails at each end by nailing through siding overhang into floor. Double check alignment and then nail every 8" along bottom of siding into floor.

Wing braces and vertical cross brace can be toe-nailed to floor.

Your assistant should continue to support the rear wall through the following step.

- B** With your assistant(s) continuing to support the rear wall, obtain one of the side wall panels and position it along the groove at the edge of the rear wall. Ensure the top is even with back wall truss seam and bottom overhangs the floor by 1½". It should sit properly on the temporary blocking you installed on the floor system in Step 2.



Main Truss/Side Wall Installation



C Fit wall panel tightly against back wall trim and ensure alignment at top and bottom.

Tack a nail through siding into back wall truss at top and bottom.

The front bottom corner of the side wall must now be measured to overhang the floor by $1\frac{1}{2}$ ". It should sit squarely on the temporary blocking placed on the floor in Step 2. This should allow the rear wall to become plumb. This can be double checked with a square or a level.

Tack a nail on the lower front corner of the wall panel into the floor. Double check all alignments, ensure that the rear wall is square and level and that the siding overhang is consistent at $1\frac{1}{2}$ ". The side wall panel can now be secured with nails every 8" along floor, and into rear wall truss.

Repeat for other side using a second side wall section. Remember to tack corners first, check for alignment and squareness and then fasten with $1\frac{3}{4}$ " nails every 8".



D Using the measurements placed on the floor in Step 2, position one of the main truss assembly 24" from the rear wall assembly, and fasten to floor using 2 - $1\frac{3}{4}$ " nails (toe nailed) on each side of truss. Ensure the bottom of the truss does not extend beyond the edge of the floor surface. Make sure that the truss is plumb with rear wall by measurement or by using a level. Fasten truss by using $1\frac{3}{4}$ " nails every 8" from exterior of side wall into truss. The siding profile seams should line up with truss and allow a nailing pattern to follow. Repeat alignment and nailing for the other side of building.



Main Truss/Side Wall Installation

- E** Repeat with a second truss assembly, positioning the truss such that $\frac{3}{8}$ " of the truss remains exposed. This will put the center of your siding joint at the center of the truss. Ensure the truss is plumb and in alignment with the siding edge. Tack a nail at top and bottom of siding, and then toe nail bottom edge of truss into floor with a $1\frac{3}{4}$ " nail.

Repeat for other side of building.



- F** Obtain remaining side wall panels and position them such that they line up with existing side wall panels on top and bottom edge and remain with a $1\frac{1}{2}$ " overlap over the floor edge on both bottom corners. Your temporary blocking should aid in this positioning.

Tack on corners, then double check alignment. Fasten with $1\frac{3}{4}$ " nails every 8", starting at the main truss last installed and completing with fastening along floor. Repeat for both sides of building.



- G** Obtain remaining main truss assembly and position it at the next 24" interval. This should again line up with a siding profile seam to allow a nailing pattern and 24" should remain as the spacing to the front edge of the floor. Truss should be fastened through siding and toe-nailed into floor.

Repeat nailing for both sides.



Front Wall Assembly Installation



H With the help of your assistants, position the front wall in an upright position and then position on front of floor assembly with frame on floor and siding overhanging the floor assembly. Make sure the front wall is centered and square on the floor. While your assistant continues to support the wall, it should be secured by fastening from side wall into front wall frame using $1\frac{3}{4}$ " nails. Tack first at the top and then every 8" along front of side wall into front wall frame.

Repeat for each side and then using $1\frac{3}{4}$ " screws every 4", secure on lower edge of siding into floor assembly on each side of the door to the floor assembly. (Note: Be sure to use $1\frac{3}{4}$ " screws in place of nails to secure the lower edge of the front wall siding to the floor).

The temporary door braces can now be removed and interior frame can be toe-nailed into floor. Exterior door frame can be secured into the floor with a $3\frac{1}{4}$ " nail on each side.

A Position one of the large sheathing panels on the lower portion of the roof with long edge along the top of the side wall and short edges facing front and rear. There should be a $\frac{3}{8}$ " gap between the roof sheathing and the front and rear wall trim, therefore ensure the sheathing is centered to allow this.

B Using $1\frac{3}{4}$ " nails, and ensuring the panel remains square, fasten a nail in each of the four corners into front and rear wall frame. Position the next piece of sheathing on the upper portion of the roof, again fitting into grooves and against edge of existing sheathing. Bottom edge should now line up with top of roof sheathing. Again fasten a nail in each of the four corners. Repeat for other side of building.

Roof Sheathing Installation

STEP

7



Roof Sheathing Installation

- C** Measure and mark on sheathing the position of the underlying trusses in order to draw a nailing guide. Every 24" on center. (A chalk line is useful as a nailing guide). Nail every 8" and/or at every sheathing seam along each truss and at each of the front and rear wall frame using 1³/₄" nails.

Repeat this for the entire roof area.



STEP

Trim/Hardware Installation

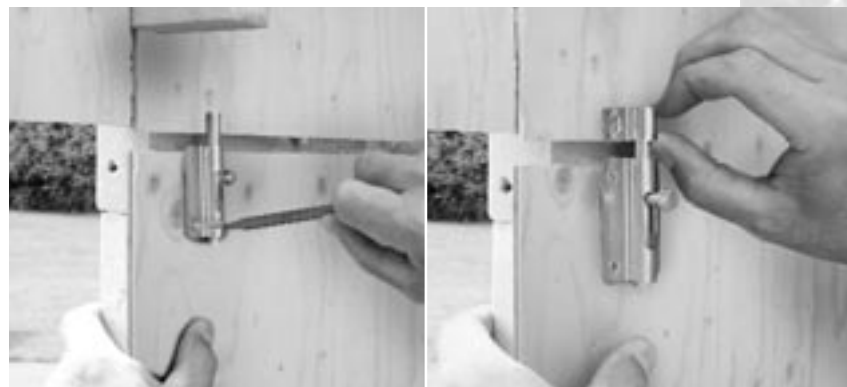
8

- A** Position Components RT along edge of roof such that the roof slope remains consistent and sheathing edge is covered. Ensure the joint between front and rear components is tight and even. Fasten with 3¹/₄" nails into each truss along each wall.



- B** Obtain vertical weather-strip and position on inside of left door, leaving approx. 1" to overlap the existing door edge. This will close the gap between the two doors when they are closed. Fasten with 1³/₄" screws every 16"

(no picture available)



- C** From the inside of building and using screws, attach barrel bolt to inside of left door on the vertical weather-strip and align the loop to the horizontal strip above the door.



- D** Again using enclosed screws, attach latch to outside of right door at the center cross brace, and align loop to the left door.

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Front Eave Extension Installation



A Using a sturdy ladder and with the help from an assistant, position component SF at the peak of the roof. Fit the panel snugly into the groove in the outside trim. Ensure the end of the eave trim is flush at the angles of the 2" x 3" outside trim.



B Once the eave extension is firmly in the groove and equally centered it can be fastened using 3¹/₄" nails through the front eave trim into the outside trim of the shed (about 1/4" up from the end).



C Using 1³/₄" nails, nail every 8" through the roof panel into the groove on the outside trim.

Installing Shingles and Paint

STEP

9

Your Shenandoah Outdoor Building now requires the finishing touches to be complete. You should require 4 bundles of shingles to complete the roof. Install as per manufacturer's instructions. It is recommended that a minimum 1/2" overhang is retained on each edge of the roof to ensure proper drainage.



Before painting, all seams in the siding and trim must be caulked for a proper seal. The siding of your building is pre-primed and is ready to accept an exterior grade oil or latex based paint. Any trim or bare wood should be treated with a primer coat before final paint is applied. Two coats of final paint should be applied. Your siding will require a half to a full gallon of paint, while 1 quart should be sufficient to complete the trim.

Congratulations

Your
Backyard ORGANIZER[®]
by *Suntrellis*[®]
is Now
Complete!



Shenandoah Building Kit

Quality Options and Accessories



Floor Kits

Available to custom fit each of The Backyard Organizer building sizes. Floor kits consist of 2" x 4" treated select SPF lumber, and 5/8" plywood flooring.

Shelf Kits

12" x 48" shelf kits attach easily to the interior of any Backyard Organizer building providing convenient additional storage solutions.

Ramp Kits

Treated ramp kits allow easy access to any Backyard Organizer building.

Shutter Kits and Flower Box Kits

Provide decorative finishing touch to any of The Backyard Organizer buildings window kits.

Windows

Fit any of The Backyard Organizer building styles (except the Acadia), windows are available in either a double hung format with a screen or as fixed decorative window. Window kits come with all necessary materials to install your window.

Packaging

Each Backyard Organizer comes pre-wrapped with a water proof polytarp cover for easy transport and storage.



Store it in Style

www.backyard-organizer.com