With ProWood® Professional Grade pressure-treated wood, you can easily build this sturdy 8’ x 2’ x 69” storage shelf unit for your barn, shed, basement or garage. It features four full-length shelves and includes a larger bottom shelf area for storing oversized items. This project plan is unique and adaptable: it also includes an alternate plan to show how shelves can be rearranged to suit your personal storage needs.

Materials
- Fifteen 2” x 4” x 8’ ProWood® pressure-treated boards
- Two 1/2” x 4” x 8’ plywood or OSB panels
- One box of 2-1/2” #8 galvanized all-purpose screws
- One box of 1-1/4” #6 galvanized all-purpose screws
- Exterior wood glue

Basic Tools
- Circular or table saw
- Jigsaw
- Drill and 3/32” drill bit
- Countersink bit
- Screwdriver (or power drill with screwdriving bit)
- Tape measure
- Carpenter’s square
- Carpenter’s level

Optional:
- Putty knife
- Assorted sandpaper (course, medium and fine grit)
- Quality exterior primer and paint or stain and sealer
- Paint or stain brush

If your wood project touches the ground, use pressure-treated lumber that is rated for ground contact to ensure long-term performance.
Cut Lumber to Size

Caution: Always wear gloves, a dust mask and eye protection when sawing, sanding or machining wood.

Using a circular or table saw on a clean, flat, level surface, and referring to the illustrations on page two, cut the wood for the components of the storage shelf unit as follows.

From each of eight 2" x 4" x 8' boards:
(1) Side Rail at 2" x 4" x 93"

From each of six 2" x 4" x 8' boards:
(1) Post at 2" x 4" x 69"
(1) End Rail at 2" x 4" x 27"

From one 2" x 4" x 8' board:
(2) End Rails at 2" x 4" x 27"

From each of two 1/2" x 4' x 8' plywood or OSB panels:
(2) Shelves at 1/2" x 2' x 8'

General Assembly Advice

• Periodically use a carpenter's square and level to insure the integrity of the final assembled project.
• Establish a screw pattern to enhance the overall look and feel of this final assembled project.
• Apply exterior wood glue to joining-material surfaces before attaching the pieces together with screws.
• Predrill all screw holes to ease the insertion of screws into the wood and prevent splitting.
• Countersink all screws so the head of a countersunk screw, when screwed into the hole, will sit flush with or below the surface of the surrounding material.

Finishing Advice

After this project has been assembled, consider sanding and preserving it with either paint or stain.

• Use a putty knife and apply exterior wood putty to all countersunk holes.
• When putty has dried, use coarse, medium and fine grit sandpaper to smooth and debur all surfaces.
• Wipe all surfaces clean of dust and particles.
• Apply a quality exterior stain and sealer or primer and paint.

Assemble Ladders

Refer to Side Elevation illustration on page 2.
Starting from the bottom and working upwards, measure and mark the following increments along the sides of two Posts: 7-1/2", 36-1/2", 52-1/2", and 68-1/2".
Align the top edge of one End Rail along the 7-1/2" marks while making sure its outside edges are flush with the outside edges of the Posts.
Attach the End Rail to the two Posts using two 2-1/2" screws on each side.
Repeat this process for aligning and attaching three more End Rail components to the same two Posts in order to complete one Ladder. Repeat the above process for assembling the second Ladder.

Attach Front and Back Side Rails

Refer to Front Elevation illustration on page 2.
Place the two assembled ladders on their sides on a level surface approximately 8' apart and with the End Rails facing outwards.
Starting at the bottom, place and align a Side Rail to the inside of the two ladders. Make sure the left and right ends of the Side Rail are flush with the inside and along the top of the bottom End Rails.
Attach the Side Rail to the inside Posts of the two ladders using two 2-1/2" screws on each side. Screws may be applied on either the inside or the outside of the ladders.
Repeat this process for aligning and attaching three more Side Rail components to the same two Posts in order to complete one Side. Carefully stand the partially-assembled shelf frame up.
Repeat the above process for aligning and attaching the four remaining Side Rail components to the opposite side of the ladders in order to complete the second side of the shelf unit.

Attach Shelves

Refer to Front and Side Elevation illustrations on page 2.
Slide a 2' x 8' Shelf inside the bottom part of the assembled frame, resting flush along the top of the End Rails. Make sure the left and right ends of the Shelf are also flush with the outside edges of the End Rails.
Repeat this process for inserting the three remaining Shelves along the other pairs of Rails.
Attach the Shelves to the Rails using 1-1/4" screws approximately 12" apart.

Attach Front and Back Center Support

Refer to Front and Side Elevation illustration on page 2.
Measure and mark the vertical center of the Side Rails on the front side of the assembled shelf unit (48" in from the outer edge of the End Rails).
Place and center align one Post to those marks.
Attach the Post to the Side Rails of the shelf unit using two 2-1/2" screws per Rail.
Repeat the above process and attach the remaining Post to the back side of the assembled shelf unit.
**Front Elevation**
*Option B*
(taller shelves)

- Shelf (x4)
- Post (x6)
- Side Rail (x8)
- End Rail (x8)

**Side Elevation**
*Option B*
(taller shelves)

- Shelf
- Post
- End Rail

Dimensions:
- Front Elevation: 93" (height), 48" (width), 41" (depth)
- Side Elevation: 68-1/2" (height), 48-3/16" (width), 27-13/16" (depth)
Cut Lumber to Size

**Caution:** Always wear gloves, a dust mask and eye protection when sawing, sanding or machining wood.

Using a circular or table saw on a clean, flat, level surface, and referring to the illustrations on page two, cut the wood for the components of the storage shelf unit as follows:

- **From each of eight 2" x 4" x 8’ boards:**
  - (1) Side Rail at 2” x 4” x 93”

- **From each of six 2" x 4" x 8’ boards:**
  - (1) Post at 2” x 4” x 69”
  - (1) End Rail at 2” x 4” x 27”

- **From one 2" x 4" x 8’ board:**
  - (2) End Rails at 2” x 4” x 27”

- **From each of two 1/2” x 4’ x 8’ plywood or OSB panels:**
  - (2) Shelves at 1/2” x 2” x 8’

General Assembly Advice

- Periodically use a carpenter’s square and level to insure the integrity of the final assembled project.
- Establish a screw pattern to enhance the overall look and feel of this final assembled project.
- Apply exterior wood glue to joining-material surfaces before attaching the pieces together with screws.
- Predrill all screw holes to ease the insertion of screws into the wood and prevent splitting.
- Countersink all screws so the head of a countersunk screw, when screwed into the hole, will sit flush with or below the surface of the surrounding material.

Finishing Advice

After this project has been assembled, consider sanding and preserving it with either paint or stain.

- Use a putty knife and apply exterior wood putty to all countersunk holes.
- When putty has dried, use coarse, medium and fine grit sandpaper to smooth and debur all surfaces.
- Wipe all surfaces clean of dust and particles.
- Apply a quality exterior stain and sealer or primer and paint.

Assemble Ladders

**Refer to Side Elevation illustration on page 4.**

Starting from the bottom and working upwards, measure and mark the following increments along the sides of two Posts: 7-1/2”, 27-13/16”, 48-3/16”, and 68-1/2”.

Align the top edge of one End Rail along the 7-1/2” marks while making sure its outside edges are flush with the outside edges of the Posts.

Attach the End Rail to the two Posts using two 2-1/2” screws on each side.

Repeat this process for aligning and attaching three more End Rail components to the same two Posts in order to complete one Ladder. Repeat the above process for assembling the second Ladder.

Attach Front and Back Side Rails

**Refer to Front Elevation illustration on page 4.**

Place the two assembled ladders on their sides on a level surface approximately 8” apart and with the End Rails facing outwards. Starting at the bottom, place and align a Side Rail to the inside of the two ladders. Make sure the left and right ends of the Side Rail are flush with the inside and along the top of the bottom End Rails. Attach the Side Rail to the inside Posts of the two ladders using two 2-1/2” screws on each side. Screws may be applied on either the inside or the outside of the ladders.

Repeat this process for aligning and attaching three more Side Rail components to the same two ladders in order to complete one side. Carefully stand the partially-assembled shelf frame up. Repeat the above process for aligning and attaching the four remaining Side Rail components to the opposite side of the ladders in order to complete the second side of the shelf unit.

Attach Shelves

**Refer to Front and Side Elevation illustrations on page 4.**

Slide a 2” x 8’ Shelf inside the bottom part of the assembled frame, resting flush along the top of the End Rails. Make sure the left and right ends of the Shelf are also flush with the outside edges of the End Rails.

Repeat this process for inserting the three remaining Shelves along the other pairs of Rails.

Attach the Shelves to the Rails using 1-1/4” screws approximately 12” apart.

Attach Front and Back Center Support

**Refer to Front Elevation illustration on page 4.**

Measure and mark the vertical center of the Side Rails on the front side of the assembled shelf unit (48” in from the outer edge of the End Rails).

Place and center align one Post to those marks. Attach the Post to the Side Rails of the shelf unit using two 2-1/2” screws per Rail.

Repeat the above process and attach the remaining Post to the back side of the assembled shelf unit.