ProWood® Project Plan

OUTDOOR PLAY SET

With ProWood® Professional Grade pressure-treated wood, you can build this sturdy outdoor play set and expand your family’s backyard fun. This project plan includes instructions for building a tower with an attached swing set frame plus space to accommodate a slide.

Materials

- Two 4” x 4” x 10’ ProWood® pressure-treated posts
- Eight 4” x 4” x 8’ ProWood® pressure-treated posts
- Six 2” x 6” x 10’ ProWood® pressure-treated boards
- One 2” x 4” x 10’ ProWood® pressure-treated board
- Eight 2” x 4” x 8’ ProWood® pressure-treated boards
- Thirty four 2” x 2” x 3’ ProWood® pressure-treated balusters
- Four 1” x 6” x 12’ ProWood® pressure-treated boards
- Eight 1” x 6” x 10’ ProWood® pressure-treated boards
- Three Simpson Strong-Tie BC 4x ZMAX 18-Gauge Galvanized Post Caps
- Two EZ A-Frame Swing Brackets and fasteners
- Two outdoor swings, chains and fasteners
- One 4’ tall outdoor slide and fasteners
- Two swing leg ground stakes and fasteners
- One lb. of 3” #10 galvanized all-purpose screws
- Two lbs. of 2-1/2” #8 galvanized all-purpose screws
- One small box of 2” #8 galvanized all-purpose screws
- Five lbs. of 1-5/8” #8 galvanized all-purpose screws
- Exterior wood glue

Basic Tools

- Table saw or circular saw and straightedge
- Drill and 7/64” and 1/8” drill bits
- Countersink bit
- Screwdriver (or power drill with screwdriving bit)
- Tape measure
- Carpenter’s level
- Carpenter’s square

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.
Fig. 1

Two 4" x 4" x 10'
Center Posts

Four 4" x 4" x 8'
Corner Posts

Six 2" x 6" x 57''
Deck Joists

Eight 2" x 6" x 58-1/2''
Aprons

Fig. 2

Nine 1" x 6" x 60''
Deck Boards

Four 1" x 5" x 23-1/4''
Deck Boards

Four 2" x 4" x 30-1/4''
Ladder Steps
Fig. 3

One 4" x 4" x 60" Swing Beam Support

Two 2" x 4" x 30-1/4" Hand Rails

Two 2" x 4" x 30-1/4" Foot Rails

Four 2" x 4" x 3-1/2" Rail Cleats

Fig. 4

Thirty Four 2" x 2" x 3' Balusters
Fig. 5

Two EZ A-Frame Swing Brackets

One 4" x 4" x 8'
Swing Beam

Two 4" x 4" x 8'
Swing Legs

One 2" x 4" x 50-3/8"
Swing Frame Brace

Fig. 6

Four 2" x 4" x 41-3/8"
Roof Trusses

Two 2" x 4" x 60"
Bottom Roof Trim
Fig. 7

Fifteen 1" x 6" x 60" Roof Planks

One 1" x 4-3/8" x 60" Narrow Roof Plank

Fig. 8
Cut Lumber to Size

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

Using a table or circular saw with a straightedge on a clean, flat, level surface, and referring to the illustrations on pages four through seven, cut the wood for the components of the outdoor play set as follows.

*Actual size determined by measuring first. See assembly instructions.

TOWER
From each of four 2" x 6" x 10' boards:
(2) Aprons at 2" x 6" x 58-1/2"

From each of two 2" x 6" x 10' boards:
(2) Floor Joists at 2" x 6" x 57"

From one 2" x 6" x 10' board:
(2) Floor Joists at 2" x 6" x 57"

From each of three 2" x 4" x 8' boards:
(1) Hand or Foot Rail at 2" x 4" x 60" *
(1) Hand or Foot Rail at 2" x 4" x 30-1/4" *

From one 2" x 4" x 8' board:
(1) Hand or Foot Rail at 2" x 4" x 30-1/4" *
(4) Rail Cleats at 2" x 4" x 3-1/2" (51-3/4" scrap board)

From one 4" x 4" x 8' pressure-treated post:
(1) Swing Beam Support at 4" x 4" x 60" (36" scrap post)

LADDER
From one 2" x 4" x 8' board:
(3) Ladder Steps at 2" x 4" x 30-1/4" *

From one 2" x 4" x 8' board:
(1) Ladder Step at 2" x 4" x 30-1/4" *
(save 65-3/4" scrap board for Swing Frame Brace)

SWING SET
From one 2" x 4" x 65-3/4" scrap board:
(1) Swing Frame Brace at 2" x 4" x 50-3/8" *
Then angle cut both ends 1-3/4" in from outside edges
Refer to Fig. 9 on this page

DECK
From each of four 1" x 6" x 12' boards:
(2) Deck Boards at 1" x 6" x 60"
(1) Narrow Deck Board at 1" x 6" x 23-1/4" *
Then rip lengthwise to 1" x 5" x 23-1/4" *

ROOF
From each of two 2" x 4" x 8' boards:
(2) Roof Trusses at 2" x 4" x 41-1/2" *
Then angle cut one end on each board 3-1/8" in from outside edge
Refer to Fig. 10 on this page

From one 2" x 4" x 10' board:
(2) Bottom Roof Trim at 2" x 4" x 60"

From each of eight 1" x 6" x 10' boards:
(8) Roof Planks at 1" x 6" x 60"
Then rip one 1" x 6" x 60" plank lengthwise to 1" x 4-3/8" x 60" *

General Assembly Advice

• Periodically use a carpenter’s level and square 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. Use a 7/64” drill bit for #8 screws and a 1/8” drill bit for #10 screws.
• 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 exterior 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.

Tip: Double-coat all exposed end grain and triple-coat the bottoms of legs and/or posts.

Fig. 9

Fig. 10
Assemble Tower

Attach Aprons to Corner Posts
See Fig. 1 on page 4.
Start with two outside 4" x 4" x 8' posts and build one side of the tower first, then add the other sides one at a time until the frame is completely built. Place and position the apron components in a "pinwheel" orientation (one end of an apron butted against the mating apron and the other end overlapping the end of the next mating apron). Attach the 2" x 6" x 58-1/2" aprons to the posts and mating aprons using four 3" #10 galvanized all-purpose screws for each joint (two screws for each post and two screws for each mating apron).

Tip: Where the screw holes are very close to the ends of the parts—about 3/4" in this step—drill countersunk pilot holes to prevent splitting when driving the screws. When drilling the pilot holes, only drill through the face of the overlapping apron and not into the end of the mating one. The screws will drive easily into the end grain without a pilot hole and will hold more securely.

Attach Center Posts
See Fig. 1 on page 4.
Measure and mark a center line along the length of a bottom and top apron of the tower frame. Place and align one 4" x 4" x 10' center post making sure it is level and square with the frame. Attach the center post to the two aprons using two 3" #10 galvanized all-purpose screws for each joint. Repeat the above process and attach the remaining 4" x 4" x 10' center post on the opposite side of the tower frame. Make sure both center posts are aligned with each other as well as square and level with the tower frame.

Attach Floor Joists
See Fig. 1 on page 4.
Place four 2" x 6" x 57" floor joists in between the upper aprons and attach them to the aprons and posts using two 3" #10 galvanized all-purpose screws for each joint. Make sure the top of the joists are flush with the top of their adjacent aprons. Measure and mark center lines on the top aprons that are in between the two joists that are attached to the inside of the corner and center posts. Place and attach two 2" x 6" x 57" floor joists to the aprons using two 3" #10 galvanized all-purpose screws for each joint.

Attach Deck Boards
See Fig. 2 on page 4.
Place and attach the 1" x 6" x 60" deck boards to the floor joists using 1-5/8" #8 galvanized all-purpose screws. Make sure the outside edges of the deck boards are flush with the outside edges of the aprons.

Tip: Start on one end with two 1" x 5" x 23-1/4" narrow deck boards and work to the opposite end, finishing with the two remaining narrow deck boards.

Attach Ladder Steps
See Fig. 2 on page 4.
Starting from the bottom of the top apron and working downwards, attach the ladder steps 4-3/8" apart to a center and right corner post using 2-1/2" #8 galvanized all-purpose screws. Make sure the outside edges of the ladder steps are flush with the outside edges of both posts.

Attach Foot Rails
See Fig. 3 on page 5.
Start on the ladder side of the tower and work clockwise around the tower. Lay a scrap piece of 2" x 4" lumber on its side and on top of the deck boards to help make sure the foot rails are evenly-spaced 1-1/2" above the deck boards. Place and attach a 2" x 4" x 30-1/4" foot rail to the center post and its adjacent outside post using two 2-1/2" #8 galvanized all-purpose screws for each joint. Make sure the outside edges of the foot rail are flush with the outside edges of both posts.
Place and attach a 2" x 4" x 60" foot rail on the swing set side of the tower using two 2-1/2" #8 galvanized all-purpose screws for each joint. Make sure its right outside edge overlaps the previously-attached foot rail and is flush with its outside surface.
Place and attach a 2" x 4" x 30-1/4" foot rail to the outside post and the center post on the slide side using two 2-1/2" #8 galvanized all-purpose screws for each joint. Make sure its right outside edge is overlapped by the previously-attached 60" foot rail and its left outside edge is flush with the left edge of the center post.
Finally, place and attach a 2" x 4" x 60" foot rail to the two outside posts on the side opposite the swing set using two 2-1/2" #8 galvanized all-purpose screws for each joint. Make sure both outside edges overlap the previously attached foot rails and are flush with their respective outside surface.

Attach Swing Beam Support
See Fig. 3 on page 5.
On the swing set side of the tower, and starting from the bottom of the foot rail, measure and mark a distance of 36" up on the left and right posts. These will indicate the height of the 4" x 4" x 60" swing beam support. Measure and mark a distance of 1-1/2" in from both outside edges of the swing beam support. These will indicate the outside edges of the left and right posts (e.g., both outside edges of the swing beam support will extend 1-1/2" beyond the two posts). Attach the swing beam support to the two posts using one Simpson Strong-Tie BC 4x ZMAX 18-Gauge Galvanized Post Cap for each post using 2" #8 galvanized all-purpose screws.

Attach Hand Rails
See Fig. 3 on page 5.
On the remaining three sides of the tower, follow the above measuring process and measure and mark a distance of 36" up from the bottom of the foot rails. These will indicate the height of the three hand rails. Attach the two 2" x 4" x 30-1/4" hand rails above their respective 30-1/4" foot rails using two 2-1/2" #8 galvanized all-purpose screws for each joint. Make sure the outside edges of the hand rails are flush with the outside edges of their respective posts. Attach the remaining 2" x 4" x 60" hand rail above its respective 60" foot rail using two 2-1/2" #8 galvanized all-purpose screws for each joint.
Place and attach two 2" x 4" x 3-1/2" rail cleats to the outside post on the ladder side of the tower using two 2-1/2" #8 galvanized all-purpose screws for each joint. Make sure the cleats are aligned and parallel to their respective hand and foot rails. Repeat this process and place and attach two 2" x 4" x 3-1/2" rail cleats to the outside post on the slide side of the tower using two 2-1/2" #8 galvanized all-purpose screws for each joint. Make sure the cleats are aligned and parallel to their respective hand and foot rails.
Attach Balusters

See Fig. 4 on page 6.
Place and attach five 2" x 2" x 36" balusters each on the inside of the 30-1/4" hand and foot rails that are on the ladder and slide side of the tower using 2" #8 galvanized all-purpose screws for each joint. Use a scrap piece of 2" x 4" to make sure the balusters are evenly spaced 3-1/2" apart. Make sure the entry and exit points into and out of the tower by ladder and slide are not concealed by balusters. Repeat the above process and place and attach ten 2" x 2" x 36" balusters each on the inside of the 60" hand and foot rails and evenly spaced 3-1/2" apart. Place and attach two 2" x 2" x 36" balusters each on the outside of the two posts that are on the left and right side of the ladder and slide openings using 2" #8 galvanized all-purpose screws for each joint. These balusters will function as vertical hand rails and provide assistance in climbing the ladder and preparing to slide.

Assemble Swing Set

Assemble Swing Set Legs

See Fig. 5 on page 6.
Place and attach the two EZ A-Frame Swing Brackets to two 4" x 4" x 8" posts following manufacturer's installation instructions. From the bottom of the outside surface of both swing set legs, measure and mark a vertical distance of 41-1/2" up (or 46-1/2" diagonally) and place and attach the 2" x 4" x 50-3/8" swing leg brace to both legs using 2-1/2" #8 galvanized all-purpose screws for each joint. Make sure the diagonal edges are flush with the outside edges of their respective legs.

Attach Swing Beam

See Fig. 5 on page 6.
Place the 4" x 4" x 8" swing beam on the top side of the assembled legs, extending it 6" beyond the EZ A-Frame Swing Brackets. Attach it to the brackets following manufacturer's installation instructions. Place and attach the swing beam centered on top of the swing beam support on the tower using the remaining Simpson Strong-Tie BC 4xZMAX 18-Gauge Galvanized Post Cap and 2" #8 galvanized all-purpose screws. Make sure the swing beam is centered on top of the swing beam support and their surfaces are flush.

Assemble Roof

Attach Roof Trusses

See Side A Elevation on page 2, Side C Elevation on page 3 and Fig. 6 on page 6.
Place and attach two 2" x 4" x 41-1/2" roof trusses on the ladder side of the tower using two 2-1/2" #8 galvanized all-purpose screws for each joint. Make sure the angled cuts are flush with each other and the height of the three posts do not extend above the trusses. Repeat the above process and attach the remaining two 2" x 4" x 41-1/2" roof trusses on the slide side of the tower.

Attach Bottom Roof Trim

See Side A Elevation on page 2, Side C Elevation on page 3 and Fig. 6 on page 6.
Place and attach one 2" x 4" x 60" bottom roof trim to the two roof trusses on the swing set side of the tower using two 2-1/2" #8 galvanized all-purpose screws for each joint. Make sure both outside edges of the trim board overlap the exposed ends of the roof trusses and their corners are flush. Repeat the above process and attach the remaining 2" x 4" x 60" bottom roof trim on the opposite side of the tower.

Attach Roof Planks

See Side A Elevation on page 2, Side C Elevation on page 3 and Fig. 7 on page 7.
Place and attach seven 1" x 6" x 60" and one narrow 1" x 4-3/16" x 60" roof plank on the swing set side of the tower using two 1-5/8" #8 galvanized all-purpose screws for each joint.
Tip: Start at the bottom of the roof and work upwards. Attach the narrow roof plank last, making sure it does not extend beyond the peak of the roof trusses. Repeat the above process and attach eight remaining 1" x 6" x 60" roof planks on the opposite side of the tower. Make sure the last plank is sized and cut to complete the peak of the roof and it’s outside edge doesn’t extend beyond the outer surface of the narrow plank on the opposite side of the roof.

Assemble Swings and Slide

Attach Swings

See Fig. 8 on page 7.
Following manufacturer’s installation information, attach a pair of swings to the swing beam.

Attach Slide

See Fig. 8 on page 8.
Following manufacturer’s installation information, attach a 4' slide to the side of the tower with the slide opening.