

GARDENING LATEST

DIY GARDEN SHED BUILDING PLANS

Small, medium and large sheds

Plus a 10 x 12 ft reclaimed pallet-board build



MEASURED DRAWINGS • MATERIAL LISTS • BUILDING STEPS

Practical structures and clear space for your garden gear



START HERE

A shed you can actually use

A good shed gives the mower a home and leaves enough room for you to get it out again. These plans pair straightforward timber construction with useful interior arrangements. Choose a size, mark the layout on the ground and check your largest item before buying materials.

Build	Outside floor frame	Where to find it
Small	8 x 8 ft, with a 6 x 4 ft compact option	Pages 17-19
Medium	10 x 12 ft, with a 10 x 10 ft option	Pages 20-22
Large	12 x 16 ft workshop and storage shed	Pages 23-24
Pallet-board shed	10 x 12 ft, using reclaimed boards over a new frame	Pages 25-28

Use the shared details with your chosen plan

Pages	What they cover
3-5	Site checks, material choices and the order of work
6-9	Ground support, floor framing and floor cut lists
10-11	Wall framing and assembly
12-14	Roof trusses, roofing and weather protection
15-16	DIY doors, threshold and equipment access
29-32	Interior fittings, upkeep, final checks and source notes
33-34	Basic fastening details, base section and roof plan

Read dimensions, not the printed scale

All plan sizes measure the outside of the timber frame. Cladding and roof overhangs add to the footprint. Interior dimensions are between bare stud faces. Drawings are dimensioned schematics and are not intended to be measured with a ruler.

Cover: generated photo illustration of a finished self-built shed. The measured drawings govern construction. Prepared for Gardening Latest, September 2026.

BEFORE BUYING MATERIALS

Set the build conditions

These are DIY planning and assembly drawings for detached, single-storey, unheated garden storage sheds. They are not a site-engineered or permit-ready structural package. No build location, soil report or wind and snow loads were supplied. The dimensions can be set out now. The items below need a local check before construction.

Confirm locally	Why it changes the build
Permission and position	Check permits, boundaries, height, easements, buried services, drainage and separation from other buildings. Exemption from a permit does not establish structural suitability.
Ground and frost	The gravel-and-skid base needs firm, level, freely draining soil and local acceptance of a floating foundation. Soft ground, a slope, flooding or frost-sensitive sites need a designed foundation.
Wind, snow and earthquakes	Have a qualified local designer confirm wall bracing beside the doors, headers, anchorage and all load-path connections. Give local design loads to the truss supplier.
Floor and equipment loads	The short-span timber floor is a proposed storage floor, with no certified load rating. Have mower wheel loads, heavy shelving, benches and workshop machinery checked.
Use beyond garden storage	A gym, occupied hobby room, heated workshop or shed above 12 x 16 ft needs a separate review of structure, moisture control, ventilation, fire safety and services.

The standard build used in this guide

Use graded new timber for the frame, 2x4 wall studs at no more than 16 in centres, an 8 ft wall frame and a 4:12 gable roof. Buy site-designed timber trusses at 24 in centres. The drawings assume 6 in roof overhangs, full structural wall sheathing and an outward-opening door in the front gable.

Carry the roof load all the way to the ground

Roof-to-wall connectors, wall-to-floor straps and floor-to-foundation anchors form one connected system. A few ground stakes or the shed's weight are not an anchorage design. Keep the approved connection schedule with these pages.

MATERIALS AND TOOLS

Buy ordinary building materials

Part	Guide specification
Structural timber	Grade-stamped No. 2 or better framing timber, with species and grade confirmed for the local design. Do not replace graded members with fence boards or pallet wood.
Skids and floor	Ground-contact-treated 4x6 skids, installed on edge. Treated 2x6 joists and rims. Use floor-rated 23/32 in tongue-and-groove plywood with a treatment/exposure rating suited to the underfloor conditions.
Walls	2x4 framing. Nominal 1/2 in rated structural plywood or OSB sheathing, then a water-resistive barrier and exterior-rated siding. Sheathing is protected from weather.
Roof	Supplier-made timber trusses. 19/32 in rated roof sheathing suitable for 24 in supports, underlayment, asphalt shingles, drip edge and ridge caps.
Fixings	Hot-dip-galvanized or stainless fixings compatible with the timber treatment and environment. Use the exact nails or structural screws specified for each connector.
Finish	Exterior primer and paint or a suitable wood finish, end-grain treatment, flashings, insect mesh and two screened gable vents.

Nominal timber names and actual sizes

Name	Typical actual size	Name	Typical actual size
2x4	1-1/2 x 3-1/2 in	2x6	1-1/2 x 5-1/2 in
2x8	1-1/2 x 7-1/4 in	4x6	3-1/2 x 5-1/2 in

The cut lists use these North American dressed sizes and 4 x 8 ft sheets. Metric sizes are references. If your yard supplies 47 x 100 mm timber or 1,220 x 2,440 mm panels, recalculate the joints and sheet layout using the actual stock.

Tools: tape, framing square, long level, string lines, clamps, circular saw with a guide, drill/driver, hammer, nail puller, ladder and suitable work platforms. Wear eye and hearing protection. Use dust extraction and suitable respiratory protection for cutting. Get help lifting walls and trusses.

THE SHARED WORKFLOW

Build in a steady order

- 01.** Choose the footprint. Lay out the shelving and equipment shapes with tape or string. Open a full-size pretend door. Check you can move the mower without shifting a bicycle every time.
- 02.** Complete the site checks on page 3. Order the roof package, door hardware and structural connectors before cutting the frame. Have the foundation and bracing details ready.
- 03.** Prepare the base, set the skids and make the floor rectangle. Compare both diagonals. Fix the frame only when the sides are straight and the top is level.
- 04.** Lay the floor sheathing. Mark the wall lines, door opening and stud positions on the deck. Keep panels covered until the shell is weather-tight.
- 05.** Build and raise the walls with helpers. Brace each wall as it goes up. Fit the interlocking second top plates, structural sheathing and approved hold-down connections.
- 06.** Install the roof trusses from suitable platforms. Fit temporary restraint and permanent bracing to the supplier's drawings. Apply roof sheathing and the complete roofing system.
- 07.** Fit the wall membrane, flashings and cladding. Build the door leaves to suit the fitted jamb. Add vents and a threshold that sheds water outward.
- 08.** Fit shelving and the workbench after the structure is dry. Check drainage, door movement and all critical connections before loading the shed.

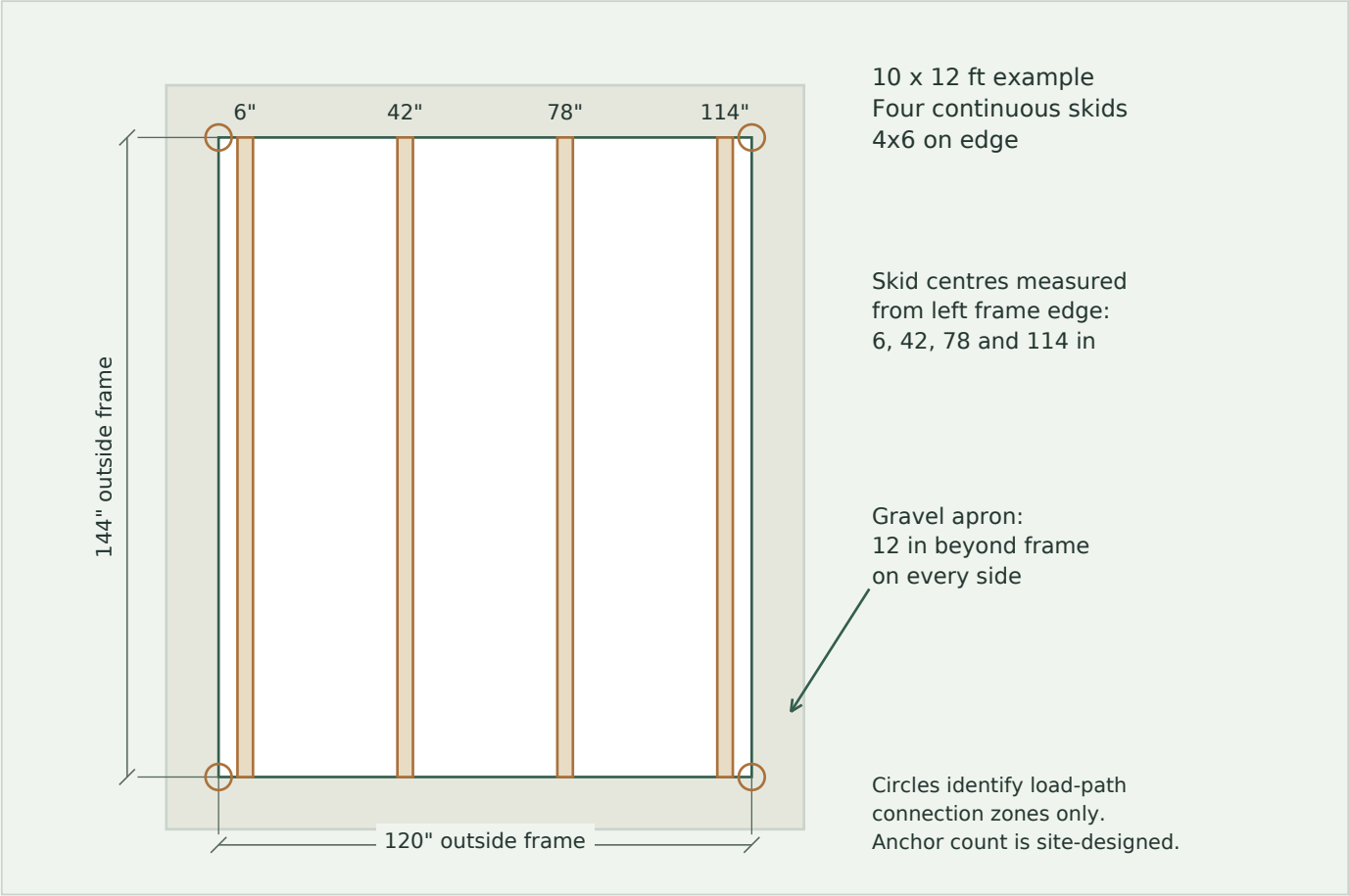
Stop at a stable stage each day

Keep the roofless wall frame braced. Anchor sheets and loose materials against wind. Support stored panels flat and off wet ground. Never leave a truss standing upright without the restraint specified for the erection stage.

A shed can be broken into base, frame, roof and fitting-out sessions. Ground repairs, wet weather, delivery and pallet preparation often take longer than the carpentry. Plan around those tasks instead of promising a one-weekend build.

FOUNDATION PLAN

A level base with short spans



F1. Skids support every floor joist along the building length. This is a continuous bearing arrangement, not a pier grid.

Frame size	Skid centres from left edge	Gravel pad
6 x 4 ft	6, 36 and 66 in	8 x 6 ft
8 x 8 ft	6, 48 and 90 in	10 x 10 ft
10 x 10 ft	6, 42, 78 and 114 in	12 x 12 ft
10 x 12 ft	6, 42, 78 and 114 in	12 x 14 ft
12 x 16 ft	6, 50, 94 and 138 in	14 x 18 ft

Each skid is the full shed length. Buy continuous lengths where available. A splice needs full support and a specified tie detail. Do not replace continuous gravel support with widely spaced paving blocks. The longest centre-to-centre joist support spacing shown is 44 in.

FOUNDATION STEPS

Prepare the ground and support

- 01.** Mark the outside frame and the wider gravel pad. Find buried services before digging or driving anchors. Remove turf, roots and soft organic soil until you reach firm mineral ground.
- 02.** Level the bearing area. Lay permeable geotextile to separate soil from stone. Place angular crushed aggregate in compacted layers. A 4-6 in compacted layer is a starting allowance on suitable firm ground, not a cure for soft soil.
- 03.** Keep the gravel pad above surrounding runoff and provide a route for water to leave the site. Compact until the base does not rut under the planned compaction check. Set all skids to the same top level with continuous bearing beneath them.
- 04.** Place the 4x6 skids on their narrow faces so they stand 5-1/2 in high. Set the centre lines from page 6. Treat fresh cuts with the preservative supplier's approved end-cut treatment. Ground-contact use requires the correct treatment tag [1].
- 05.** Install the locally specified anchors and connectors. Their type, number, embedment and spacing depend on soil and wind loads. Keep access to each fixing for inspection.
- 06.** After the floor is assembled, confirm level in both directions and across opposite corners. Correct a low area by rebuilding and compacting its bearing surface. Avoid stacks of loose offcuts as packing.

When a slab is the better choice

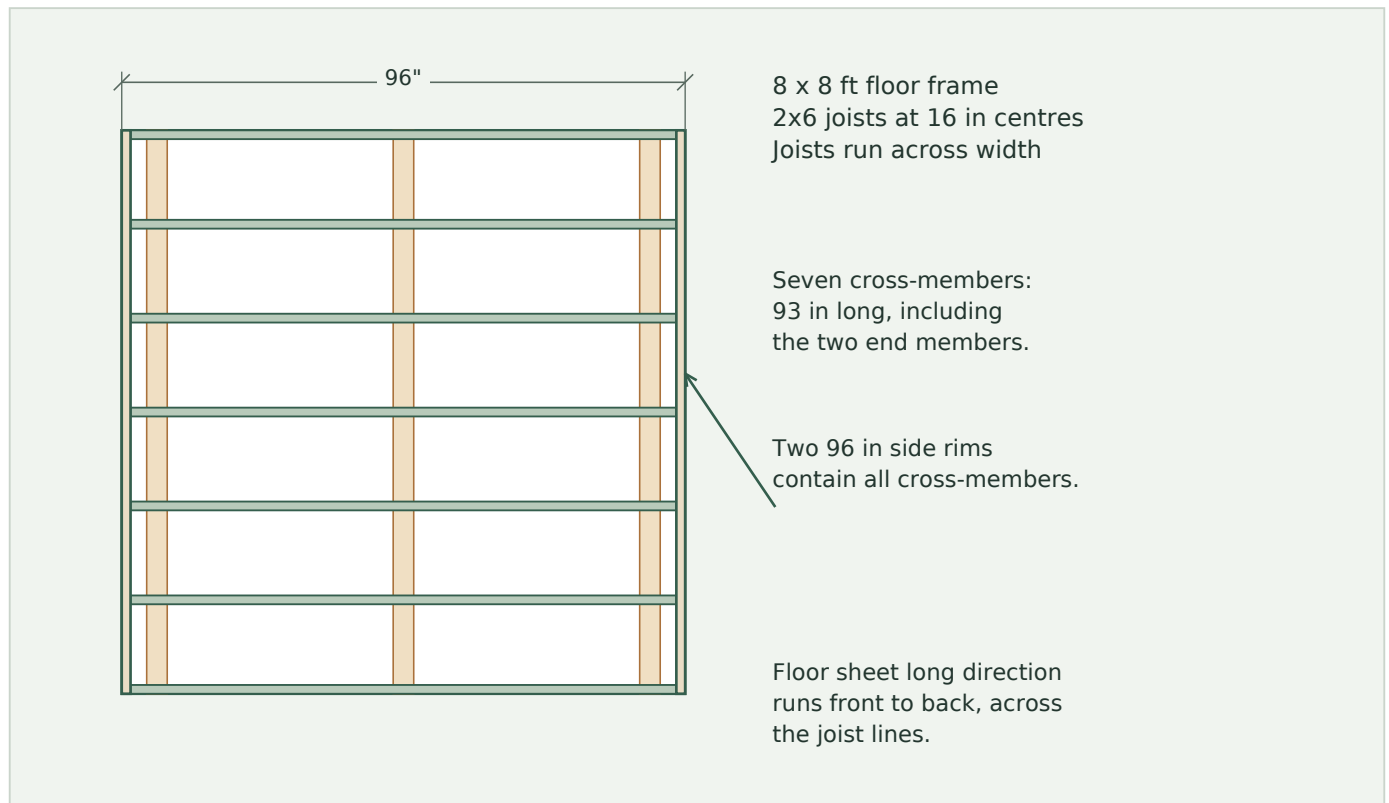
A riding mower, heavy workshop equipment or a loaded fitness area may suit a slab designed for the soil and loads. Ask for its thickness, reinforcement, edge detail, damp-proof layer, frost provisions and anchors. Place a treated sole plate on a sill gasket. The timber floor assembly is then omitted and the wall base and threshold need redetailing.

Estimate the stone before ordering

Compacted volume in cubic yards = pad width in feet x pad length in feet x depth in feet / 27. The 12 x 14 ft pad at 4 in depth needs about 2.07 cubic yards compacted. Ask the supplier for the loose quantity that will yield that volume.

FLOOR FRAMING

Make a square, stiff floor



F2. Green cross-members are the 2x6 joists. Tan strips below them are the ground-contact skids. Floor panels are omitted for clarity.

- 01.** Cut two full-length side rims and the cross-members in the table on page 9. Mark both rims together. Start with the first end member centred 3/4 in from the front. Set intermediate centres at 16, 32, 48 in and onward. Place the rear end member 3/4 in from the back.
- 02.** Assemble on the level skids. Check the diagonal target on page 9, then compare both diagonals with each other. Join joist ends to rims with the locally accepted framing connection. Secure the joists to the skids using the approved connector schedule.
- 03.** Install solid blocking where square panel edges need support and below the door threshold. All perimeter panel edges need a framing support. Add any load-specific blocking before covering the floor.
- 04.** Lay panels with their strength axis across the joists, normally with the long sheet direction front to back. Stagger end joints and land them on joists. Follow the panel label for joint spacing and tongue engagement. Fix to each support, then protect the deck.

CUT LIST F

Floor cuts and sheet allowances

Footprint	2x6 side rims	2x6 cross-members	4x6 skids
6 x 4 ft	2 at 48 in	4 at 69 in	3 at 48 in
8 x 8 ft	2 at 96 in	7 at 93 in	3 at 96 in
10 x 10 ft	2 at 120 in	9 at 117 in	4 at 120 in
10 x 12 ft	2 at 144 in	10 at 117 in	4 at 144 in
12 x 16 ft	2 at 192 in	13 at 141 in	4 at 192 in

Cross-member counts include the two end members. Each fits between the side rims, so its length is the shed width minus 3 in. Order extra 2x6 stock for blocking, imperfect pieces and the access detail. Do not shorten the outside frame to match a warped board.

Footprint	Matching diagonals	Floor panels to buy
6 x 4 ft	86.53 in / 2,198 mm	2 sheets
8 x 8 ft	135.76 in / 3,448 mm	3 sheets
10 x 10 ft	169.71 in / 4,311 mm	5 sheets
10 x 12 ft	187.45 in / 4,761 mm	5 sheets
12 x 16 ft	240.00 in / 6,096 mm	7 sheets

Lay out the sheet joints first

An 8 x 8 ft floor takes two 4 x 8 ft sheets before waste. The 12 x 16 ft floor takes six. On a 10 ft width, use two 4 ft columns and one 2 ft column. Alternate front and rear offcuts to stagger end joints. Short pieces still need their strength axis across the joists. The buy quantities above include a spare sheet or cutting allowance.

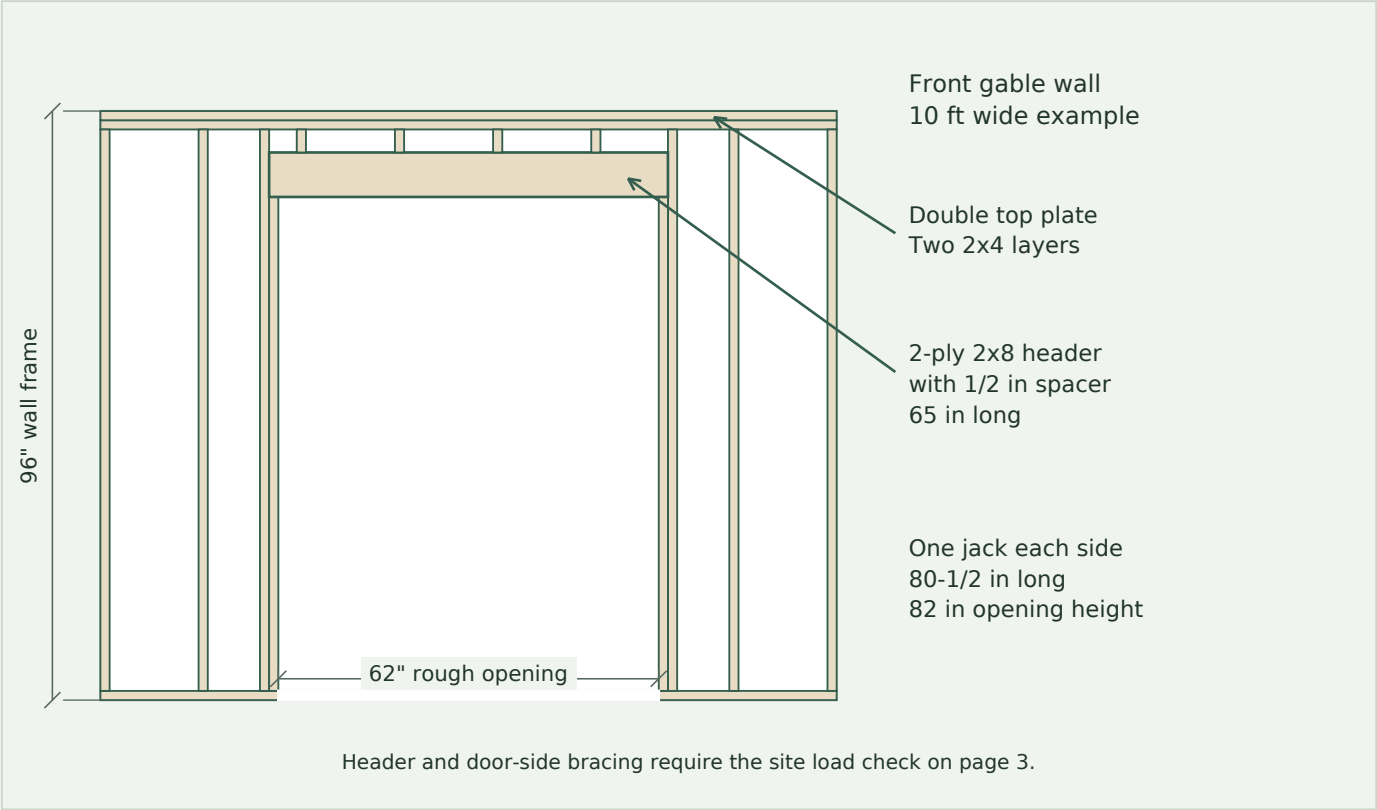
Use the actual panel coverage

Some tongue-and-groove panels cover less than a full 48 in. Measure the usable face width and tongue detail before setting edge blocking or trimming. Do not force panel joints tight to make a nominal sheet pattern fit.

Panel fastening and edge gaps: follow the panel product instructions and the local structural schedule. APA guidance recommends 1/8 in at panel edge and end joints unless the manufacturer says otherwise [2].

WALL ELEVATION

Frame the door wall on the deck



W1. Example front frame before gable truss and sheathing. Full-height king studs sit outside the shorter jack studs. The header bears on the jacks.

Part	Cut or position
Standard studs	91-1/2 in. One 1-1/2 in sole plate plus two 1-1/2 in top plates gives 96 in overall.
Door opening	82 in high from deck to underside of header. Width varies by plan.
Jack studs	80-1/2 in, sitting on the sole plate. Add full-height king studs outside them.
Proposed header	Two 2x8 pieces with a 1/2 in spacer. Length = opening width + 3 in. Confirm size and bearing locally.
Cripples above header	3-3/4 in with this header and wall height. Place above opening on the framing grid.

Keep the front sole plate continuous while assembling and raising the wall. Cut out only the doorway portion once the wall is anchored, plumb and braced. Do not cut the deck below it.

WALL ASSEMBLY

Join four walls into one frame

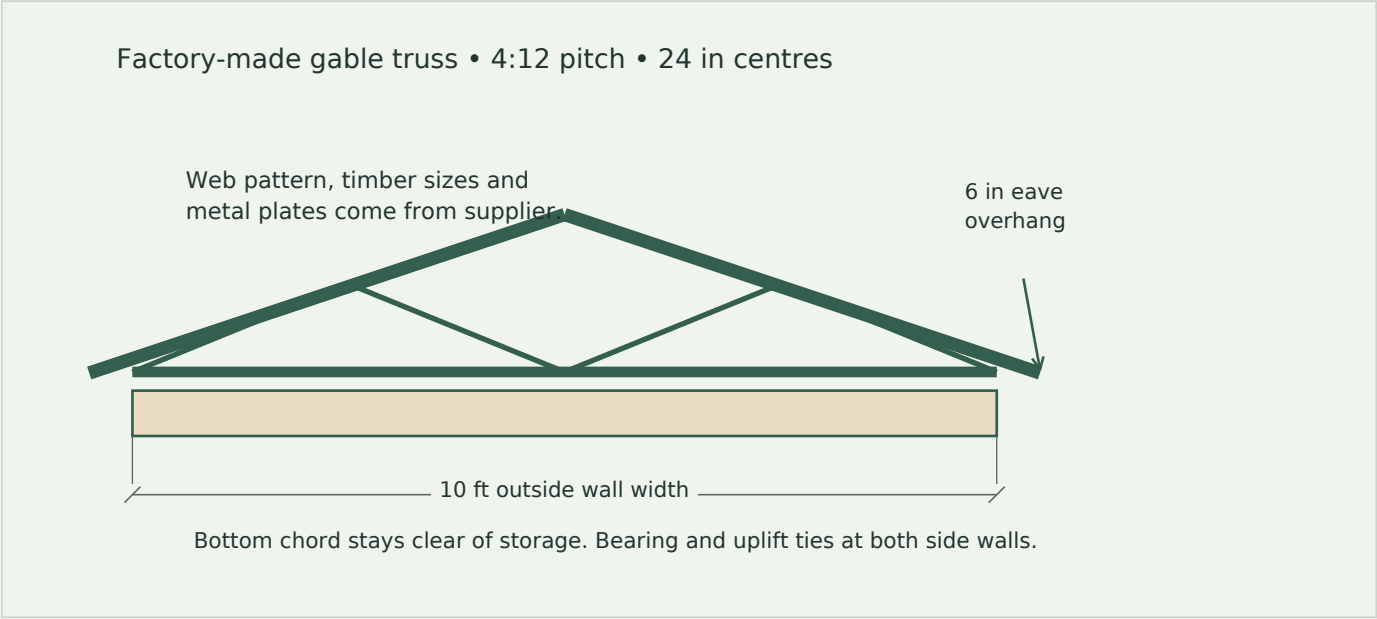
- 01.** Build the front and rear walls to the full shed width. Build the two side walls between them. Their sole plates and first top plates are the shed length minus 7 in. Keep the framing faces flush with the floor edges.
- 02.** Mark studs at a maximum of 16 in centres, with a stud at each panel end and corner. Mark the grid from a common outside corner so panel joints land on solid timber. Add king studs, jacks and corner backing where required, even if they fall off the regular grid.
- 03.** Fit the door header, its spacer and the short cripples. Assemble the built-up header with the locally specified nail or structural screw pattern. Provide backing for hinges, latches, shelves and vents before the walls are covered.
- 04.** With helpers, raise one wall, plumb it and secure diagonal temporary braces to stable points. Raise and connect the adjoining walls. Recheck the full rectangle and wall plumb before tightening the permanent connections.
- 05.** Install the second top plates so they overlap the corners. For this layout the side cap plates run the full shed length and the front/rear cap plates fit between them. Offset any plate splice from the splice below and follow the accepted lap and fixing detail.
- 06.** Fit full structural sheathing to the approved bracing arrangement [3]. Support sheet edges, leave the specified gaps and use the specified nail spacing. Fix sole plates into the floor framing, then install wall-to-floor straps and hold-downs. Do not rely on screws into plywood alone.

Plate layer	Front and rear, each	Side walls, each
Sole plate + first top plate	W	L minus 7 in
Second top plate	W minus 7 in	L

W = outside frame width. L = outside frame length. Use one sole, one first top and one second top plate per wall. Approved long-wall splices need support and a connection detail. The table gives finished runs, not permission to join loose offcuts.

ROOF PACKAGE AND SECTION

Keep the roof simple



R1. Roof geometry only. This is not a truss fabrication drawing. The supplier designs members, joints, bearing, bracing and uplift resistance for the site.

Shed	Trusses at 24 in centres*	Roof area with 6 in overhangs
6 x 4 ft	3 total, 6 ft span	37 sq ft
8 x 8 ft	5 total, 8 ft span	85 sq ft
10 x 10 ft	6 total, 10 ft span	128 sq ft
10 x 12 ft	7 total, 10 ft span	151 sq ft
12 x 16 ft	9 total, 12 ft span	233 sq ft

*Counts include two supplier-designed gable end units. End locations and the first/last spaces follow the supplier’s layout. Ask for the 6 in gable overhang framing detail, gable bracing and a flat bottom chord with no storage loading.

Give the supplier the exact outside wall width and length, 3-1/2 in wall bearing width, door opening, 96 in wall height, roof covering weight and local wind, snow and seismic criteria. Request the design drawings, lifting instructions, restraint plan and complete connection schedule [4].

Confirm the finished height

Ridge height above the deck = 96 in wall height + the supplier’s roof heel height + W/6 at a 4:12 pitch. Add sheathing, roofing and the floor/base height for the height above ground. Use the supplied truss drawing for the final planning measurement.

ROOF ASSEMBLY

Install the roof and keep it dry

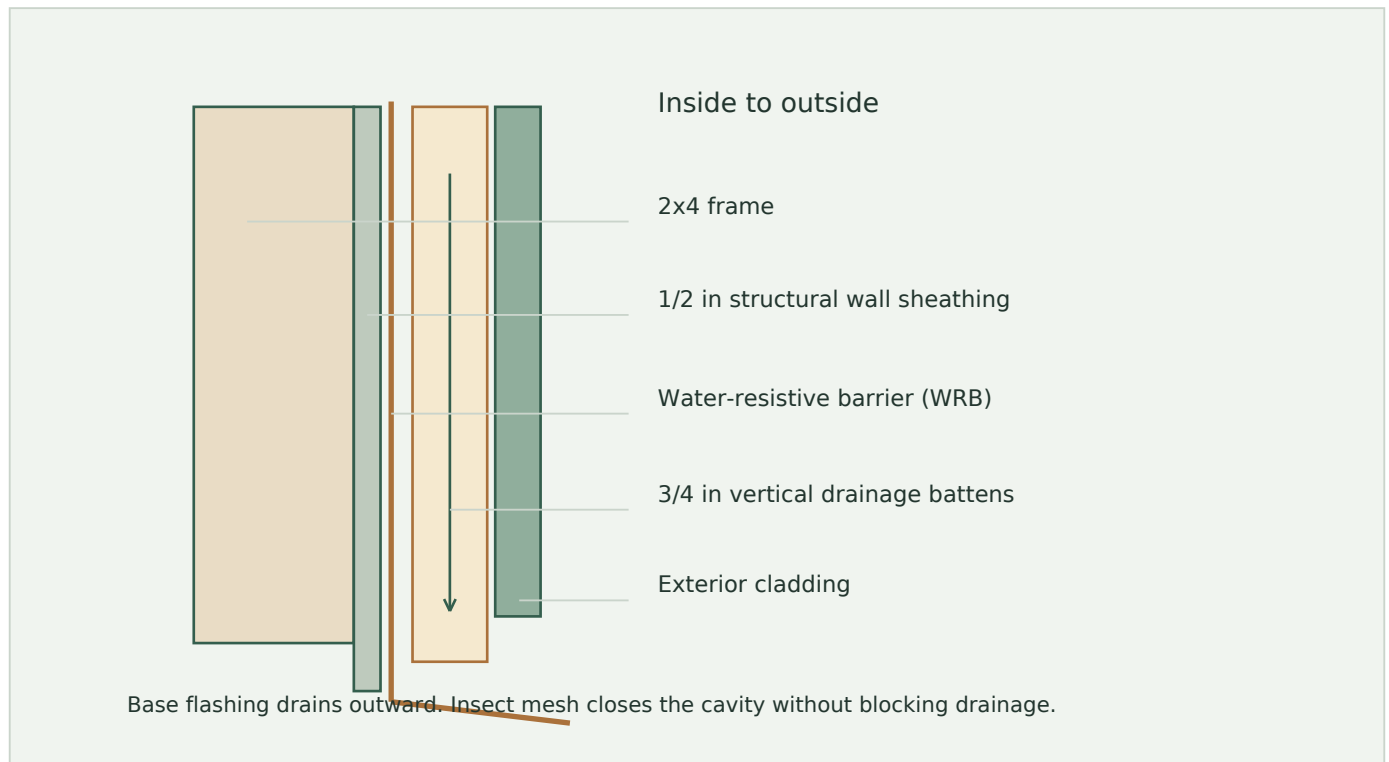
- 01.** Check the wall tops are level, parallel and the correct distance apart. Mark the truss positions on both side walls using the supplier's layout. Plan safe lifting and work platforms before bringing trusses upright.
- 02.** Brace the first gable unit as shown in the erection plan. Set the remaining trusses in order and fit each stage of temporary restraint immediately. Add the specified permanent lateral and diagonal bracing. Do not cut, drill or alter a truss [4].
- 03.** Fit the specified truss-to-wall connectors, gable restraint, eave blocking and overhang framing. Install the supplied fascia detail. Never use a guessed number of ordinary screws in a metal connector.
- 04.** Lay roof sheets with their strength axis across the trusses. Stagger end joints, support the sheet ends and fit edge clips or blocking where the panel specification requires it. Leave the manufacturer's gaps and fasten without driving heads through the panel face.
- 05.** Apply eave drip edge, underlayment and rake drip edge in the sequence required by the roof system. ARMA's general arrangement puts eave metal below the underlayment and rake metal above it. Ice-barrier details can change that sequence [5].
- 06.** Apply compatible starter strips, shingle courses and ridge caps. Follow the chosen shingle instructions for overhang, exposure, nail count, nail position and sealing. Finish all penetrations with the matching flashing system.

Shed	19/32 in roof sheets to buy	Shingle field area to order*
6 x 4 / 8 x 8 ft	2 / 4 sheets	43 / 99 sq ft
10 x 10 / 10 x 12 ft	5 / 6 sheets	148 / 174 sq ft
12 x 16 ft	9 sheets	268 sq ft

*Rounded roof surface area plus about 15% cutting allowance. Starter and ridge-cap products are separate. Add laps when ordering underlayment and drip edge. Roof sheet quantities allow for cuts and the two slopes.

WALL AND BASE DETAIL

Give rain a way out



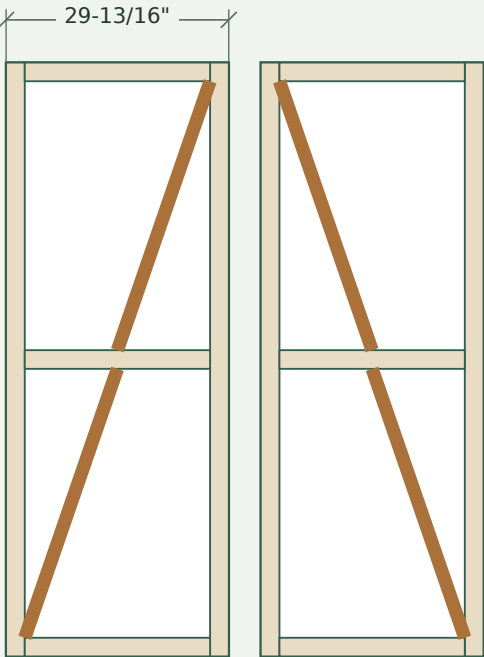
E1. General weather-protection section. Standard panel siding may attach directly over WRB and sheathing if its instructions permit. The pallet version uses a drained cavity and extra horizontal rails on page 27.

- 01.** Complete the structural sheathing before fitting the water-resistive barrier (WRB). Lap upper sheets of membrane over lower sheets so water drains outward. Tape penetrations and joints with compatible products.
- 02.** Flash the door sill and jambs, then fit head flashing with its upper leg behind the WRB. Leave its lower drip clear of the door trim. Fit the base flashing before cladding and keep its outlet open.
- 03.** Fit exterior-rated siding to its manufacturer's fixing, gap and clearance requirements. As a guide, keep wood cladding at least 6 in above soil and clear of splashback. Seal cut edges before installation.
- 04.** Fit a screened louvred vent high in each gable using a flashed opening designed around the truss framing. Do not cut a truss web to make a vent fit. For this unheated shed, keep cross-ventilation open and the inside unlined.

If the shed will be heated or insulated, use a climate-specific wall and roof moisture design. A sheet of polythene added to an unplanned wall build-up can trap moisture. Keep the storage version dry, ventilated and easy to inspect.

DOOR DETAIL

Build doors that stay square



Inside face of double doors

Example finished jamb:
60 in wide x 80 in high

Each leaf:
29-13/16 x 79-1/2 in

Braces rise from lower hinge corners toward the meeting stiles.

Measure the fitted jamb before cutting door leaves.

Door frame shown from inside. Plywood weather face is on the other side.

D1. Two framed plywood leaves. The compression braces bear against the rails. The centre cover strip attaches to the active leaf only.

Plan	Rough opening	Target clear width after jambs
6 x 4 and 8 x 8 ft	38 x 82 in	36 in, single leaf
10 x 10 and 10 x 12 ft	62 x 82 in	60 in, double leaf
12 x 16 ft	74 x 82 in	72 in, double leaf

Targets allow roughly 3/4 in jamb timber and 1/4 in shim space at each side. The example door height uses a fitted opening 80 in high between a 1 in threshold and the head jamb. Measure actual clearances after hardware and stops are fitted.

Cut the leaves from the real opening

For two leaves: each width = (finished opening width minus 3/8 in) / 2. For one leaf: width = finished opening width minus 1/4 in. Leaf height = finished opening height minus 1/2 in. These allow 1/8 in at the top and sides, 1/8 in between double leaves and 3/8 in at the bottom.

DOORS AND THRESHOLD

Hang the doors and plan access

01. Fit straight jambs over a flashed opening. Shim at hinges and fixing points. Check the two jamb diagonals match and the head is level. Screw through the jamb into the king/jack framing with exterior fixings suited to the hardware.

02. Use exterior 1/2 in plywood for each weather face and new 2x3 timber laid flat behind it. Cut two full-height stiles per leaf. Fit three rails between them, each the leaf width minus 5 in. Cut the diagonal brace as two pieces that bear between the rails, as shown on page 15.

03. Bond the plywood to the frame with exterior wood adhesive and fix through the plywood into the timber. A practical nonstructural door-face pattern is corrosion-resistant #8 x 1-1/4 in screws at 6 in around supported edges and 12 in on the middle rail. Keep screw tips contained.

04. Prime and finish both faces and every edge. Hang with three exterior hinges per leaf, rated for the finished leaf weight. Through-bolt strap hinges where the hardware requires it. Fit a latch, door stays and top/bottom bolts to the inactive leaf.

05. Add a weather strip at the jambs and a centre cover strip to the active door. Make sure it clears the inactive leaf when opening. Fit a bottom seal without blocking the outward-draining sill flashing.

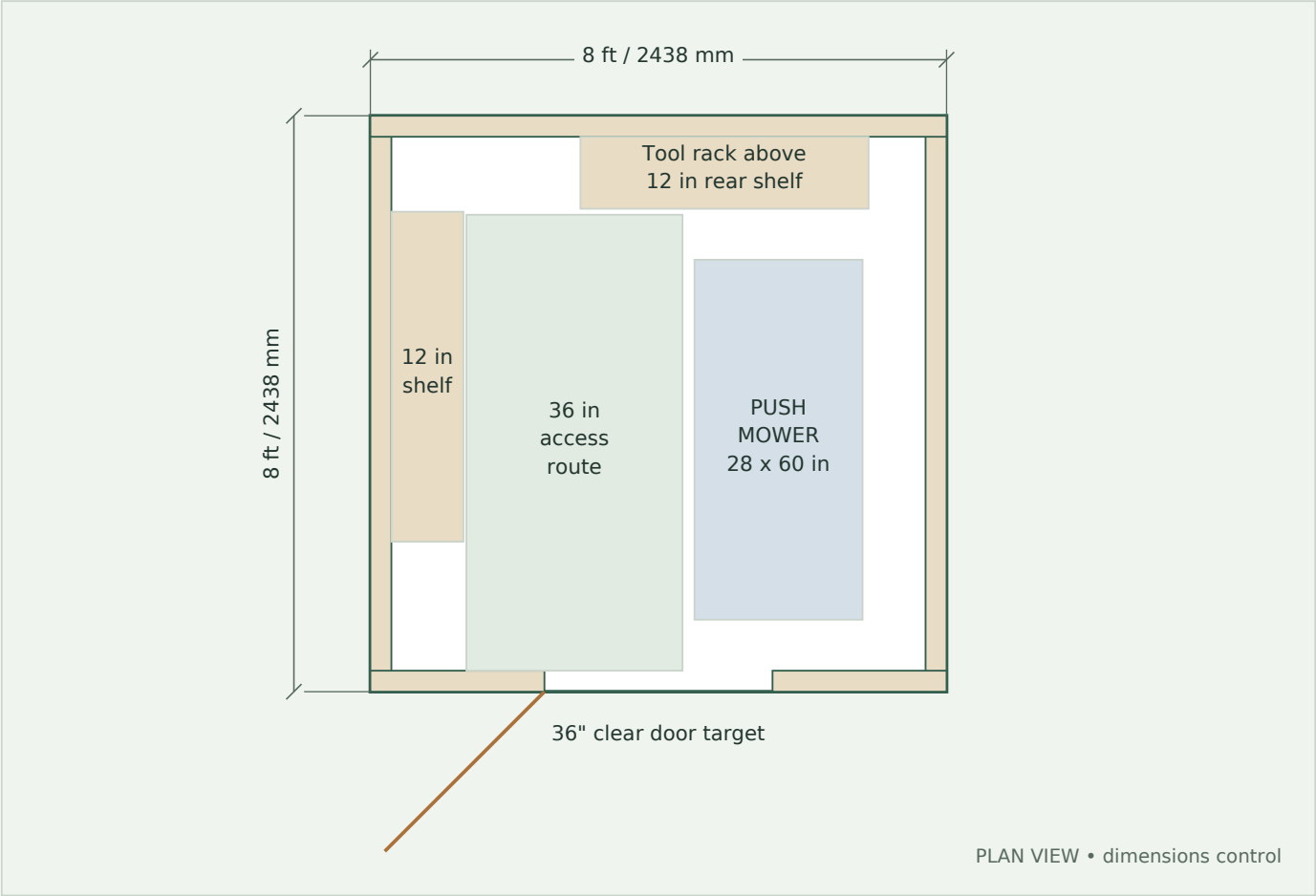
Give wheeled equipment a safe entrance

Measure the floor rise after the shed is built. A 1:8 equipment ramp would need 8 ft of horizontal run for a 12 in rise. The mower manufacturer's limit may require a shallower ramp. The cover photo shows the idea only. It is not a ramp specification.

For a push mower, a commercially rated ramp pair can be simpler than a timber ramp. Riding mowers need the correct rated width, traction, supports and positive attachment against slipping. Do not ride a machine onto a ramp or floor that has not been checked for its concentrated wheel loads. A permanent access ramp needs its own load and foundation detail.

Keep the outside landing clear across the full door width. Open the doors fully, secure them against wind and check handlebar or mower-deck width at the narrowest point.

Small shed: 8 x 8 ft



S1. Bare internal size: 89 x 89 in (2,261 x 2,261 mm). The equipment rectangle is a fit-check envelope, not a universal mower size.

Feature	Dimension or provision
Outside floor frame	96 x 96 in / 2,438 x 2,438 mm
Front door	38 x 82 in rough opening, centred. About 36 in clear width.
Storage	12 in-deep shelving with the mower parked alongside the access route.
Roof and vents	Five 8 ft-span trusses. Screened vent in each gable.

Choose this version if you want to walk inside and reach hand tools without pulling every item outside. Keep heavy bags low. Put long tools on a rail fixed to studs and leave the door-side bracing panels intact.

Before building, roll the actual mower through a 36 in opening and test the turn into its parking bay. Fold the handle only if the mower’s instructions allow it.

SMALL SHED MATERIALS

Build and stock the 8 x 8

Item	Planning quantity
Treated floor timber	3 x 4x6 at 8 ft. 9 x 2x6 at 8 ft for rims/cross-members, plus 2 x 2x6 at 8 ft for blocking.
Wall framing	40 x 2x4 at 8 ft for studs, jacks, corners, cripples and waste. Add 12 x 2x4 at 8 ft for wall plate runs.
Door header	2 x 2x8 at 41 in with 1/2 in spacer. Buy one 8 ft board. Confirm structural size and connections.
Sheet goods	3 floor sheets. 10 wall sheathing sheets. 4 roof sheets. All are 4 x 8 ft nominal.
Wall protection	About 305 sq ft of exterior siding and WRB coverage, including cuts and lower floor-band cover. Check product laps.
Roof package	Five 8 ft-span trusses, complete bracing/overhang package and connectors. About 99 sq ft of field shingles.
Door and finish	One plywood-faced door, rated hinges and latch. Two screened gable vents. Flashings, trim, roof underlayment, starter and ridge caps.

The small-shed building sequence

01. Set the three 8 ft skids at the page 6 positions. Assemble the floor using seven 93 in cross-members and two 96 in rims. Match both diagonals to about 135.76 in.

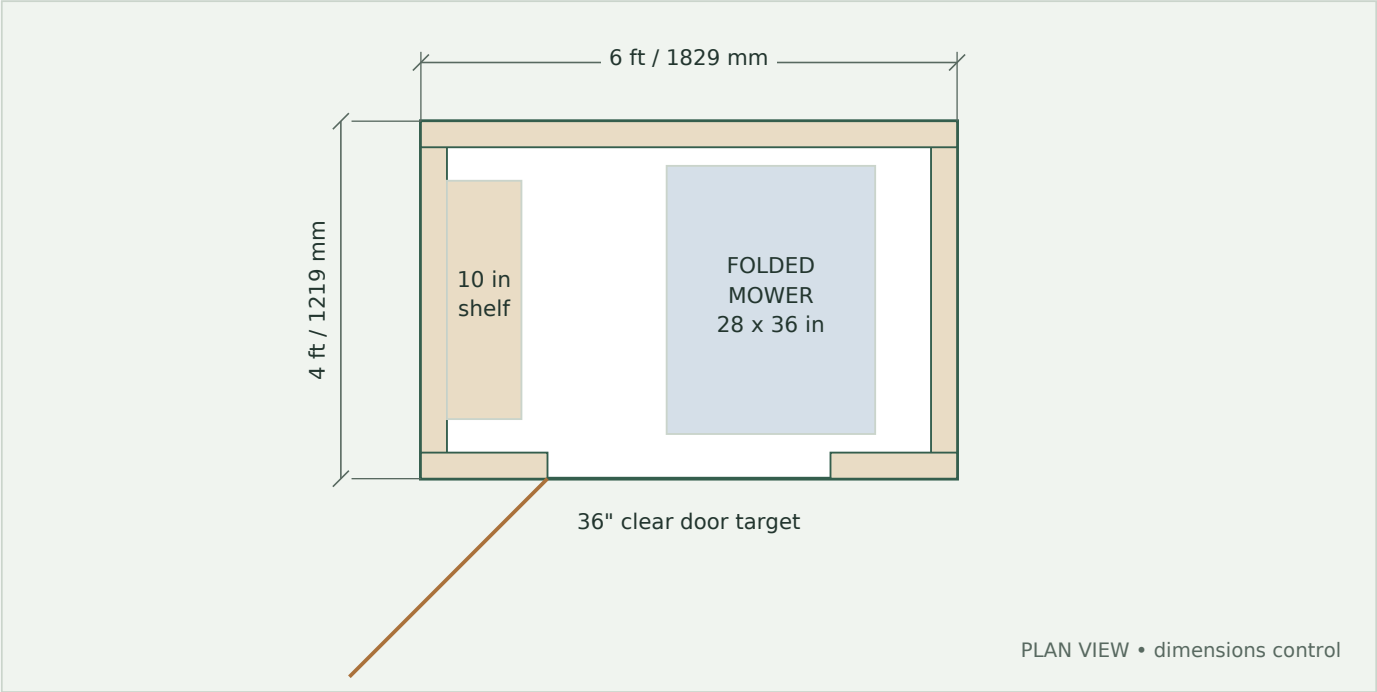
02. Build the two 96 in end walls and two 89 in side walls. Use a centred 38 in opening in front. Follow pages 10-11 for the 96 in wall height and overlapping top plates.

03. Raise, brace and sheath the shell. Fit the five trusses and complete the roof, then the door flashings and exterior siding. Fit the single door to the measured jamb.

04. Fit the 12 in shelving and tool rail after the shell is dry. Test the mower parking position before screwing shelf feet or brackets into place.

Material counts are buying allowances, not pre-cut kits. Hardware, bracing and anchor quantities come from the site design. Sheet and cladding totals allow for gables, cuts and the floor band.

Compact option: 6 x 4 ft



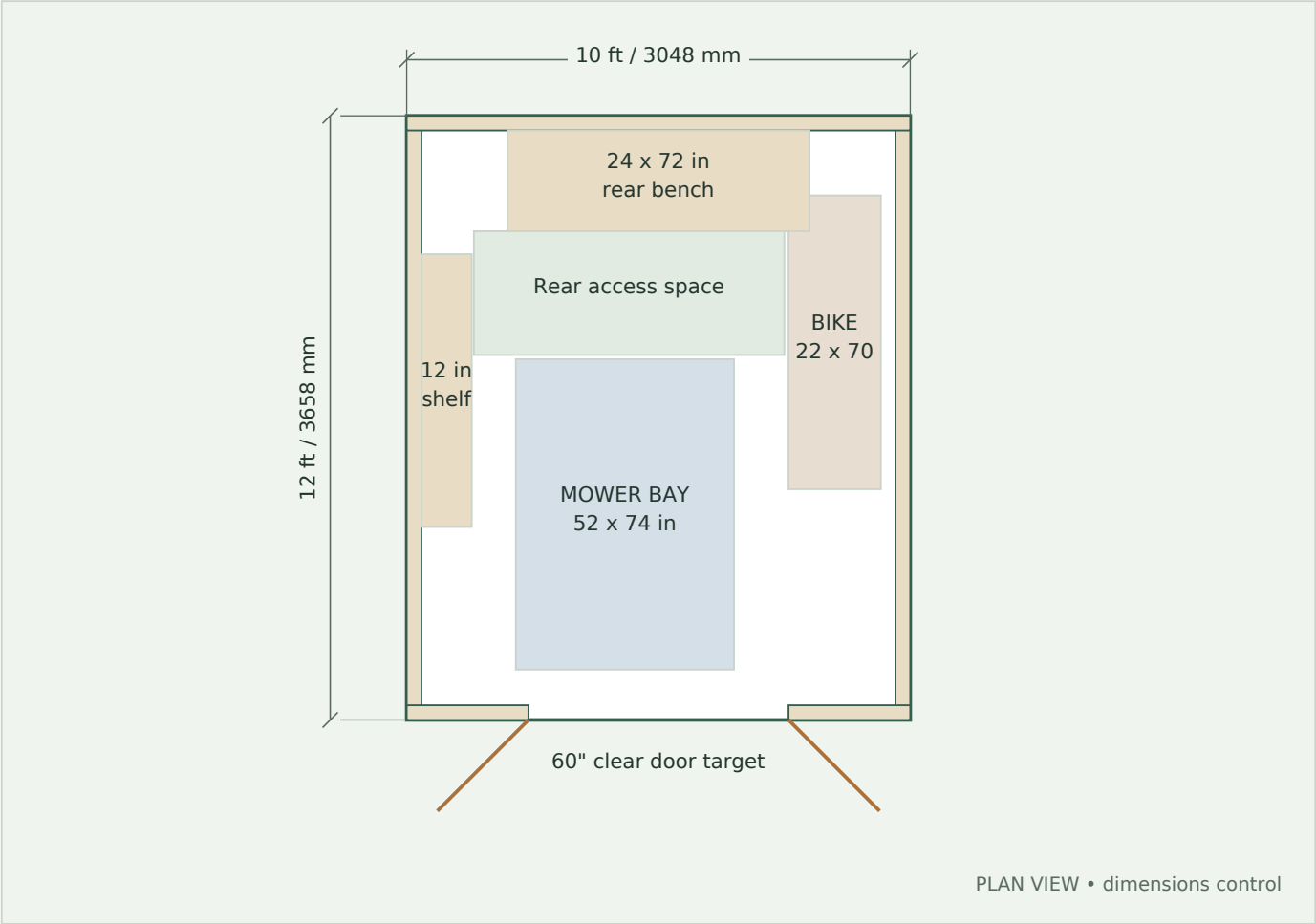
S2. Bare internal size: 65 x 41 in (1,651 x 1,041 mm). Treat this as front-access storage. There is limited standing room with a mower inside.

Part	Compact build schedule
Base and floor	8 x 6 ft gravel pad. 3 skids at 48 in. 2 rims at 48 in and 4 cross-members at 69 in. Buy 2 floor sheets.
Walls and opening	Front/rear walls 72 in long. Side walls 41 in. All 96 in high. Centred 38 x 82 in opening. Header pieces 41 in long.
Roof and shell	Three 6 ft-span trusses. 2 roof sheets and about 43 sq ft field shingles. 6 wall sheets and about 180 sq ft siding/WRB.
Framing purchase	Allow 30 x 2x4 at 8 ft for wall framing and waste. Add 10 x 2x4 at 8 ft for plate cuts. Buy one 8 ft 2x8 for header pieces.

Use the same base, wall and roof steps as the larger small shed. Cut plates to the lengths above before marking the studs. The 41 in side wall runs between the front and rear walls. Each wall still needs full end studs and supported sheathing edges.

A full-size push mower with its handle extended may not fit. Make a 65 x 41 in floor rectangle and test the folded machine, door sweep and tools together. Keep shelves shallow and locate the most-used tools within reach of the doorway.

Medium shed: 10 x 12 ft



M1. Bare internal size: 113 x 137 in (2,870 x 3,480 mm). The mower sits in the entrance bay. Roll it outside for full access to the rear bench.

Feature	Dimension or provision
Floor frame	120 x 144 in / 3,048 x 3,658 mm
Double door	62 x 82 in rough opening, centred. About 60 in clear width.
Bike storage	Example 22 x 70 in floor bay. Measure handlebars and pedals.
Roof	Seven 10 ft-span trusses. No attic storage.

This layout suits a push mower or a small riding mower whose width, length and wheel loads pass the checks. The illustrated 52 in mower envelope leaves only a narrow side gap. Move the machine out before working at the rear. A 36 in route through the entire shed requires a smaller parking envelope or fewer fittings.

MEDIUM SHED MATERIALS

Build and stock the 10 x 12

Item	Planning quantity
Treated floor timber	4 x 4x6 at 12 ft. 2 x 2x6 at 12 ft for rims and 10 x 2x6 at 10 ft for cross-members. Add 3 x 2x6 at 8 ft for blocking.
Wall framing	52 x 2x4 at 8 ft for vertical framing, corners and waste. Plate stock: 6 x 2x4 at 10 ft and 6 x 2x4 at 12 ft.
Door header	2 x 2x8 at 65 in with 1/2 in spacer. Buy two 6 ft boards or longer stock. Confirm header and bracing design.
Sheet goods	5 floor sheets. 13 wall sheathing sheets. 6 roof sheets. Add 2 exterior 1/2 in sheets for double doors.
Wall protection	About 415 sq ft siding and WRB coverage, including gables, the floor band and cutting allowance.
Roof package	Seven 10 ft-span trusses plus all specified restraints, bracing, overhangs and ties. About 174 sq ft field shingles.
Other parts	Door frames/hardware, two gable vents, flashings, trim, roof underlayment, starter, ridge caps and site-designed anchors.

01. Place the four 12 ft skids at 6, 42, 78 and 114 in from the left frame edge. Build the 120 x 144 in floor. Its diagonal is about 187.45 in. Lay out the deck joints before fixing.

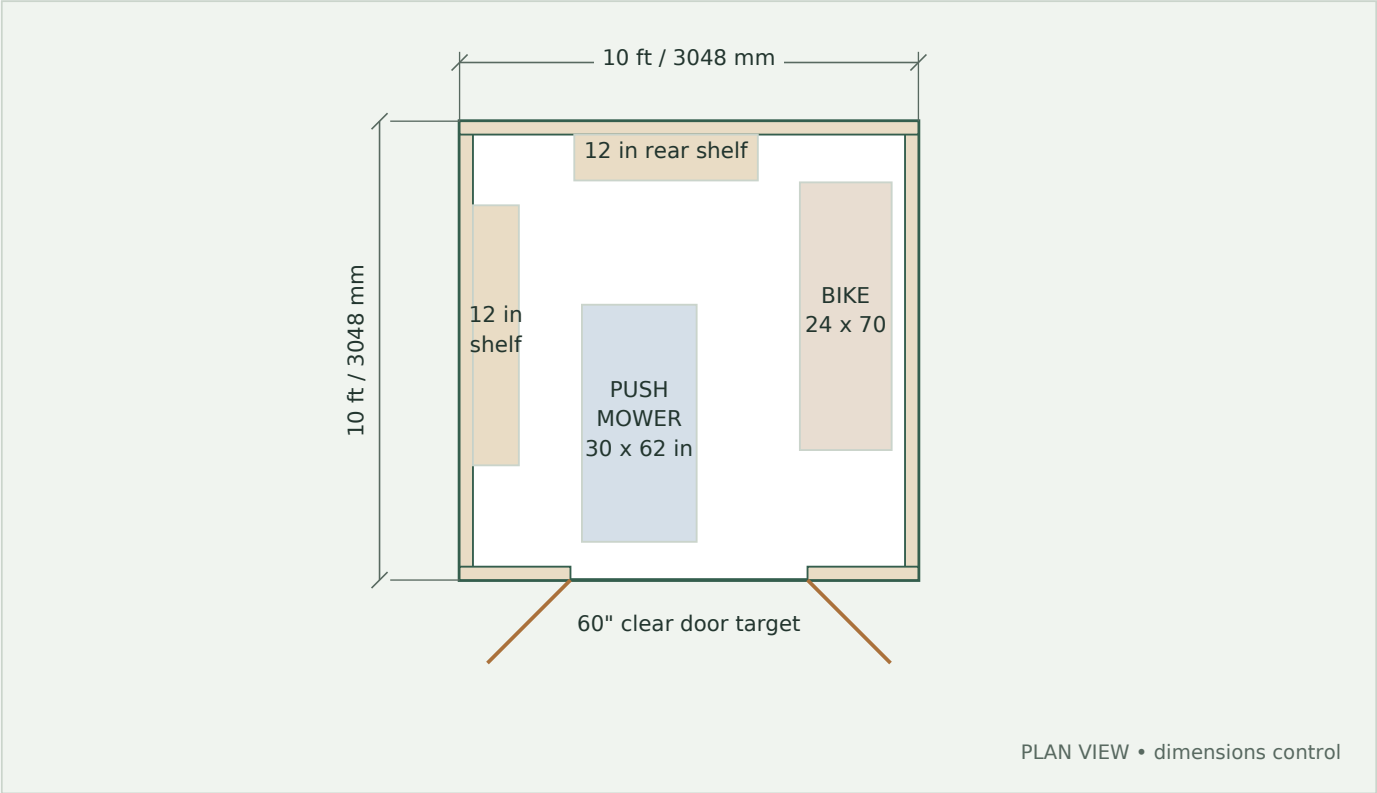
02. Build 120 in front/rear walls and 137 in side walls. Frame the front opening at 62 x 82 in. Install the specified door-side wall bracing before it is covered.

03. Raise and connect the walls, then install the seven-truss roof package. Weatherproof the shell using pages 13-14. Build the double doors using the fitted jamb dimensions.

04. Trial-park the mower and bike. Fit the rear bench only after checking the machine can turn and you can reach the bench safely with the mower outside.

Use a locally designed slab or a checked timber floor and ramp for a riding mower. The drawn floor arrangement does not certify machine, wheel or storage loads.

Medium option: 10 x 10 ft



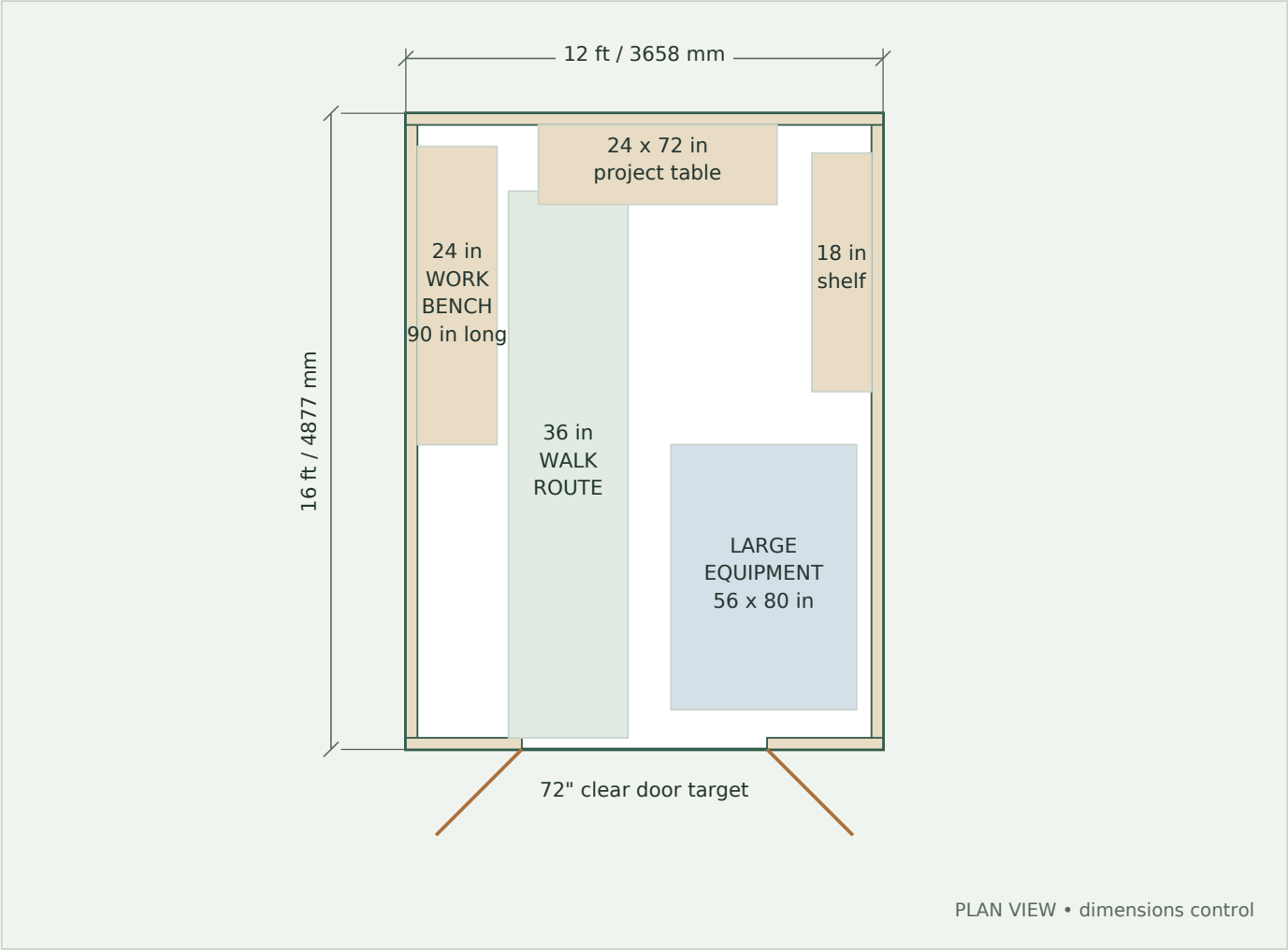
M2. Bare internal size: 113 x 113 in (2,870 x 2,870 mm). This example uses a push mower and shallow storage.

Change from M1	10 x 10 ft requirement
Base and floor	12 x 12 ft pad. Four 120 in skids. Two 120 in rims and nine 117 in cross-members. Diagonal: 169.71 in.
Wall runs	Front/rear walls remain 120 in. Side walls become 113 in. Door opening and height are unchanged.
Roof and panels	Six 10 ft-span trusses. Buy 5 floor, 12 wall and 5 roof sheets. About 148 sq ft field shingles and 375 sq ft siding/WRB.
Wall stock allowance	48 x 2x4 at 8 ft for vertical framing and waste. Add 12 x 2x4 at 10 ft for plate runs. Header: two 65 in 2x8 pieces.

Use M1’s assembly sequence with the revised lengths. Redraw the floor sheet joints for the 120 in depth and support cut edges. Order the shorter truss layout and roof coverings. Do not shorten a finished roof truss to reduce the shed length.

The lost 2 ft often removes the space for a useful rear workbench. A small fold-up surface may be a better fit, provided it is folded away before moving equipment.

Large shed: 12 x 16 ft



L1. Bare internal size: 137 x 185 in (3,480 x 4,699 mm). A 36 in route leads beside the equipment bay to the work area.

Feature	Dimension or provision
Floor frame	144 x 192 in / 3,658 x 4,877 mm
Double door	74 x 82 in rough opening, centred. About 72 in clear width.
Roof	Nine 12 ft-span trusses, designed for the actual site.
Work area	Bench legs carry loads to the floor. Keep stored items out of the route.

This is a storage and occasional-work layout. A fitness room, occupied hobby room or workshop with heavy machines needs a separate design for floor loads, ventilation, electrical work and any heating. Don't extend this frame beyond 12 x 16 ft by adding unsupported spans.

LARGE SHED MATERIALS

Build and stock the 12 x 16

Item	Planning quantity
Treated floor timber	4 x 4x6 at 16 ft. 2 x 2x6 at 16 ft for rims and 13 x 2x6 at 12 ft for cross-members. Add 4 x 2x6 at 8 ft for blocking.
Wall framing	68 x 2x4 at 8 ft for vertical framing, corners and waste. Plate stock: 6 x 2x4 at 12 ft and 6 x 2x4 at 16 ft.
Door header	2 x 2x8 at 77 in with 1/2 in spacer. Buy two 8 ft boards. Confirm header, jack bearing and door-side bracing locally.
Sheet goods	7 floor sheets. 17 wall sheathing sheets. 9 roof sheets. Add 2 exterior 1/2 in sheets for doors.
Wall protection	About 530 sq ft siding and WRB coverage, including cuts, gables and the lower floor band.
Roof package	Nine 12 ft-span trusses, specified bracing and overhang package. About 268 sq ft field shingles.
Fittings	Double door hardware, two screened gable vents, flashings, trims and roof accessories. Bench materials are on page 29.

01. Set the four full-length skids at 6, 50, 94 and 138 in. Check continuous ground bearing over all 16 ft. The floor has thirteen 141 in cross-members between two 192 in rims.

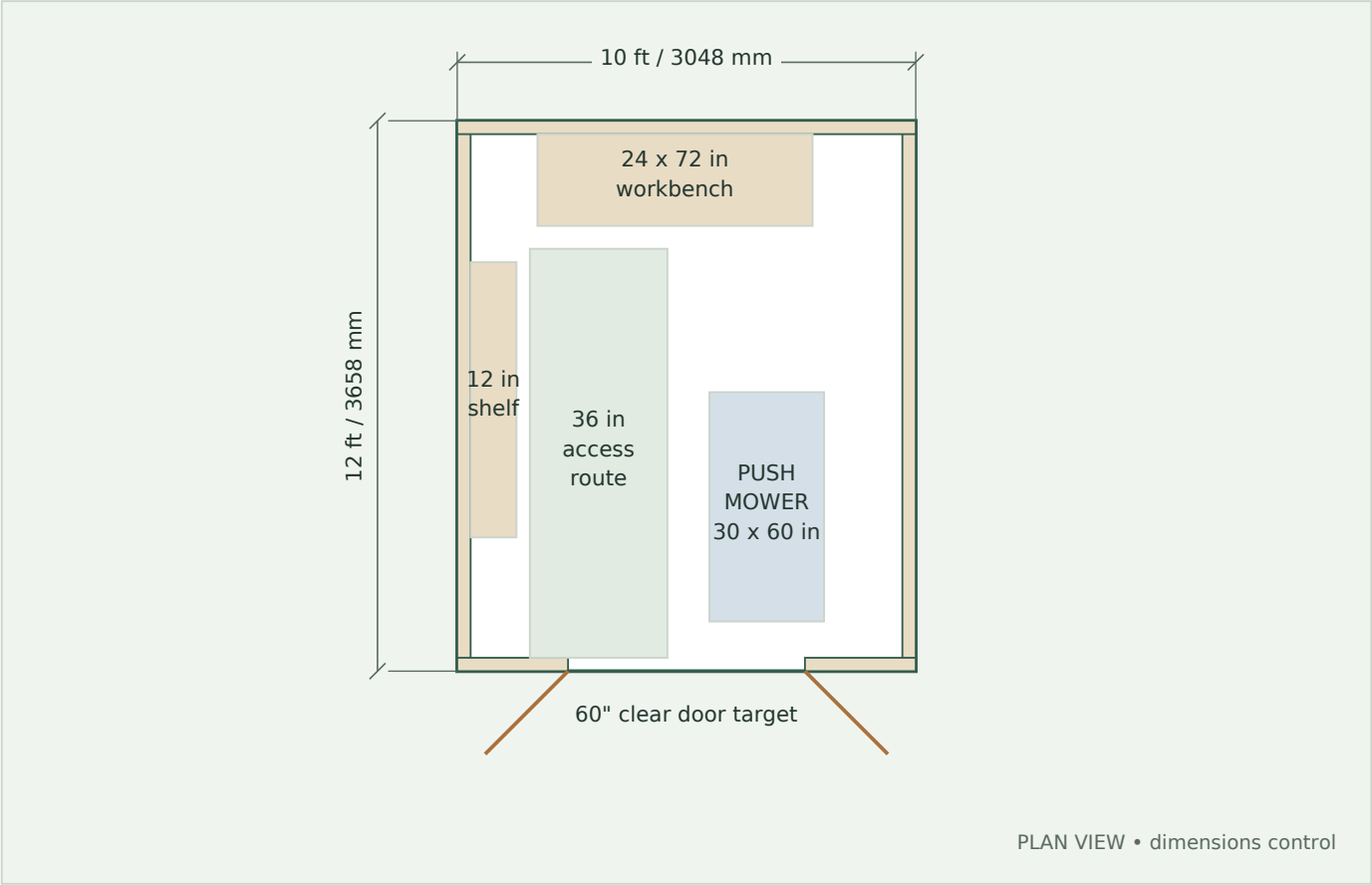
02. Match the floor diagonals to 240 in. Use a string line to check the long rims remain straight. Fit blocking required for sheet edges, threshold and any approved point loads.

03. Build 144 in end walls and 185 in side walls. Use helpers or divide long walls into designed sections with supported joints. Install all wall bracing and hold-down details before raising the roof.

04. Complete the nine-truss roof and weatherproof the shell. Fit doors, then the bench and shelves. Check the walking route with actual equipment in place.

Long wall panels and trusses need a lifting plan and enough helpers. For a larger building, a different roof span or frequent occupied use, have the whole design reviewed before ordering.

Pallet shed: 10 x 12 ft



P1. Use the M1 floor, wall and roof dimensions. Reclaimed pallet boards provide the visible outer wall and selected fittings. Bare interior: 113 x 137 in.

Old pallets can give a shed a warm, weathered exterior. The useful approach is to dismantle them and use sound boards as cladding. New graded timber, structural sheathing and a proper roof package carry the building loads. Pallet boards also work for light shelf surfaces and replaceable tool-rack faces.

Keep new and specified	Can use accepted pallet boards
Skids, floor frame, deck and wall frame	Exterior board-and-batten cladding
Headers, roof trusses and bracing	Thin decorative door facing, within hinge rating
Roof sheathing, roofing, membrane and flashings	Light shelf decking over new supports
Anchors, straps and structural connectors	Tool boards fixed back to the new frame

Whole pallets are not used as load-bearing walls, stacked foundations or roof trusses. The finished wall is thicker than the standard siding wall, so allow for it at the door jambs, corners and roof edge.

PALLET MATERIALS AND YIELD

Choose and measure the pallets

- 01.** Get the owner’s permission to take the pallets. Choose dry, unpainted pallets with a known clean use history. Reject oily, stained, odorous, rotten or heavily split wood. Avoid unknown spills and coated boards that may carry old hazardous finishes.
- 02.** For this project, select pallets marked HT and with a known clean history. Reject MB-marked or unknown-treatment pallets. The treatment stamp concerns pest control. It does not prove the pallet is free of contamination or structurally graded [6].
- 03.** Dismantle with a pallet bar or remove individual nails without splitting the board ends. Wear gloves for handling. Scan for hidden metal before sawing, planing or sanding. Do not burn pallet offcuts or treated timber.
- 04.** Stack sound boards with spacers under cover and let them dry to local exterior-service conditions. Sort by thickness and width. Trim damaged ends, then measure the actual usable yield from several pallets.

A worked cladding estimate

For M1, the wall faces, gables and floor band need about 356 sq ft before waste, after subtracting the door. With 3-1/2 in-wide vertical base boards, 1/4 in gaps and 1-1/2 in cover battens, allow about 475 sq ft of board face area. Add trimming, splits and spare stock, then round to about 600 sq ft of accepted usable boards.

Measured usable yield	Pallets for a 600 sq ft target
6 sq ft per pallet	About 100 pallets
8 sq ft per pallet	About 75 pallets
10 sq ft per pallet	About 60 pallets

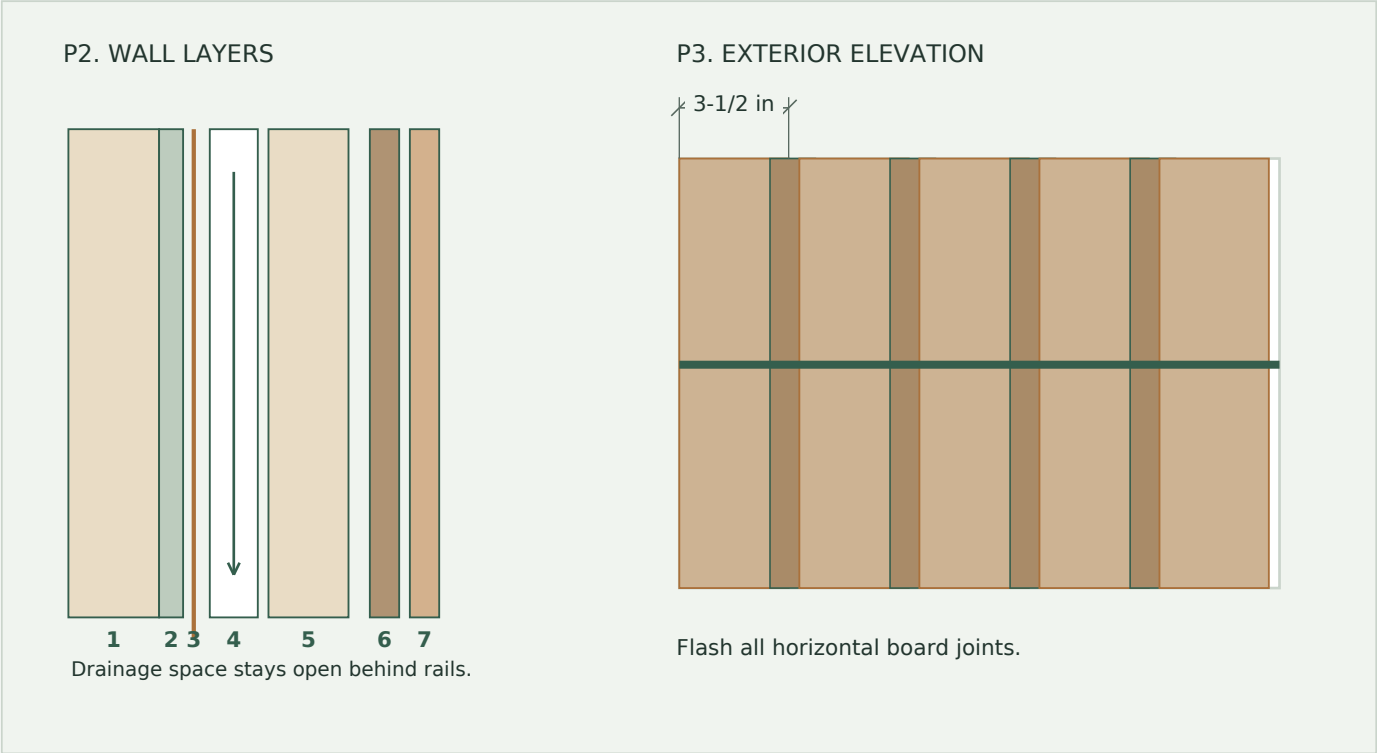
These are sample estimates, not a promised pallet count. A sound 3-1/2 x 40 in board supplies about 0.97 sq ft. Count usable boards after removing defects. Short pallets can create many horizontal joints, so save the longest matching boards for door edges and corners.

Add the new wall support materials

Use M1’s new frame, deck, sheathing and roof list. Replace its bought siding with pallet cladding. Allow about 360 linear ft of treated 1x3 vertical drainage battens and 360 linear ft of treated 2x2 horizontal fixing rails, then verify against your marked wall grid.

PALLET WALL DETAILS

Build a drained pallet wall



P2-P3. Exploded wall layers and outside face. Numbers match the table below. Horizontal rails support short boards while the vertical cavity behind them drains to the base.

Layer, inside to outside	Detail
1-3. Frame, sheathing, WRB	2x4 studs at 16 in centres, 1/2 in structural sheathing and continuous WRB.
4. Vertical drainage battens	Treated 1x3, 3/4 in thick, over studs. Add mesh at top and bottom of cavity.
5. Horizontal fixing rails	Treated 2x2, 1-1/2 in thick, at no more than 16 in vertical centres. Rails sit outside the drainage battens.
6. Vertical base boards	Sound pallet boards, at least 1/2 in thick. Example 3-1/2 in width with 1/4 in gaps. Each end lands on a rail.
7. Cover battens	About 1-1/2 in wide x 1/2 in thick, centred over gaps. Overlap each base-board edge by at least 1/2 in.

This example projects about 3-3/4 in beyond the frame. Outside cladding size is about 127-1/2 x 151-1/2 in before corner trims. The 6 in roof overhang leaves about 2-1/4 in beyond the outer battens. Confirm fascia clearance and provide full flashings.

PALLET SHED BUILDING STEPS

Fit the reclaimed boards

- 01.** Build the M1 foundation, floor, walls and truss roof with the new materials. Finish the structural shell, membrane and opening flashings before hanging any pallet boards. The shed must already have its approved bracing and anchors.
- 02.** Fix vertical 1x3 battens through the sheathing into studs. Fit horizontal 2x2 rails at 16 in maximum vertical centres, plus rails at board ends and around openings. Use a locally checked screw schedule for cladding weight and wind suction. Length must include all intervening layers and the required penetration into the framing.
- 03.** Start at a straight corner. Fit base boards vertically with a 1/4 in gap. Predrill near ends. For narrow 3-1/2 in boards, one centred corrosion-resistant siding screw into each rail allows movement. Confirm screw size and withdrawal resistance for the wood and wind load.
- 04.** Use sound cover battens over the gaps. Fasten each batten through the gap into the rail so it does not pin both base-board edges together. Keep at least 1/2 in overlap on each side. Choose screw lengths that reach the fixing rail without unnecessary protrusion.
- 05.** For short boards, plan horizontal joints at fixing rails. Before covering each joint, lift a prepared WRB flap, tuck metal Z-flashing behind it and tape the flap back over the upper leg. Project the drip beyond the finished face. Leave a small gap above the flashing. Exposed butt joints will admit water.
- 06.** Fit corner covers and extended jamb trims to suit the thicker wall. Flash the door head beyond the cladding face. Keep base drainage, insect mesh and gable vents open. Prime cut ends and finish all accessible faces before final fixing.
- 07.** Fit the new framed doors. Add a light pallet-board facing only if the hinges and frame suit the final weight. Use reclaimed boards on the bench surface or tool rack after removing splinters and hidden metal.

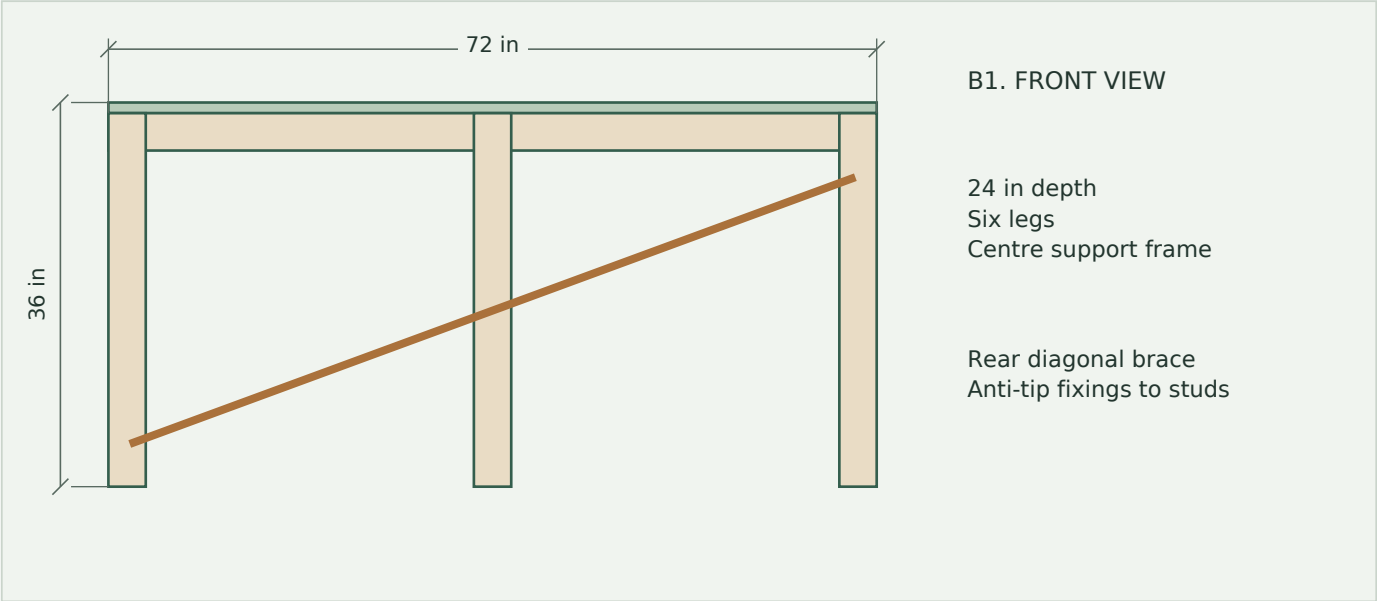
Inspect a test section first

Build a small wall sample with a board joint, cover batten and flashing. Check that water sheds outward, the base board can move and the screws hold without splitting the timber. Replace weak boards before fitting the rest of the wall.

Pallet cladding saves bought siding but adds sorting, de-nailing and fitting time. The new structure, membrane, roof and fixings remain a large part of the budget.

INTERIOR BENCH AND SHELF DETAIL

Add storage you can reach



B1. Light potting bench, 72 x 24 x 36 in. The six legs reduce the shelf and top spans. No vice, heavy machine or climbing load rating is assigned.

Part	Cut list for one bench
Top	One 3/4 in plywood piece, 72 x 24 in, with a replaceable protective surface.
Legs	Six 2x4 pieces at 35-1/4 in. Top of legs flush with top of rail frame.
Top frame	Two 2x4 rails at 72 in. Three cross-rails at 21 in, between front and rear rails.
Stability	A rear diagonal brace, side braces and anti-tip ties into shed studs. Use rated structural screws for the frame.

Assemble the 72 x 24 in top frame with a cross-rail at each end and one at the centre. Fit a front and rear leg at each of the three frame positions. Brace the back and both ends. Fix the top, then anchor against tipping. Fit joints so the rails bear on supports where possible and use a checked connection detail for applied loads.

For a 12 in-deep shelf, use 3/4 in plywood on rated brackets fixed into studs, or a freestanding rack with its own legs. Keep support spacing within the bracket and panel limits. Store heavy items at floor level. Pallet boards may form the surface but do not replace the supports.

FINISHING AND UPKEEP

Keep the shed dry and useful

Before the first load goes inside

Finish exposed wood with the chosen exterior coating and coat vulnerable cut edges. Keep roof runoff away from the gravel pad. A gutter can help if its outlet drains to a suitable place. Confirm that the doors stay open without catching the cladding and that every tool rail fixes to sound framing.

Look at	What to check
After the first heavy rain	Check the door head, threshold, wall base and horizontal pallet-board joints for water tracks. Correct flashings before covering leaks with sealant.
After the first few months	Check foundation level, door gaps and loose fixings. Settlement usually shows up as a dragging door or a frame that no longer sits level.
Each spring and autumn	Clear leaves from roof edges. Inspect shingles, ridge caps, vents and flashing. Keep vegetation and soil away from the lower wall.
Each year	Check the anchor connections, floor edges, bench fixings and any split cladding. Touch up the finish and replace damaged boards.
Before changing the use	Review added storage weight, machines, heating or electrical equipment. A hobby room or gym may need changes beyond furniture.

A few storage rules worth following

- Keep the marked access route open. Put hooks where sharp tools cannot fall into the doorway.
- Store chemicals and fuel according to their labels and local requirements. Keep them secured away from heat and ignition sources.
- Never run a petrol mower, engine or generator inside the shed. Move it outside before starting.
- Use a qualified electrician for permanent wiring. Keep charging equipment dry and follow its manufacturer's ventilation and fire-clearance instructions.
- Do not hang bicycles, shelves or bags from truss webs or bottom chords unless the roof package was designed for those loads.

The useful shed is the one that still has floor space after everything goes in. If a new item blocks the route, rearrange the storage before the habit becomes permanent.

PROJECT RECORD

Check the job before loading

Keep this page with the supplier drawings and your material receipts. Complete the design checks before the build and the finish checks before the shed is used.

Project information	Record
Site / chosen plan	_____
Required local approval	_____
Wind / snow / soil criteria	_____
Foundation and anchor design	_____
Wall bracing and header review	_____
Truss drawing / supplier	_____
Maximum equipment / wheel loads checked	_____

Finish check	Done
Base level, frame square and continuous skid bearing confirmed	_____
Anchors, straps and connectors match the accepted schedule	_____
Wall sheathing edges supported and required fixings installed	_____
Truss restraints, permanent bracing and roof fixings complete	_____
Membrane laps, door flashings and base drainage checked	_____
Door clear opening and actual equipment movement tested	_____
Shelf/bench attachments checked and walking route clear	_____
Rain inspection completed and any leaks corrected	_____

Completed by: _____ Date: _____

REFERENCE

Measurements and source notes

Imperial measure	Metric reference	Imperial measure	Metric reference
1 in	25.4 mm	1 ft	304.8 mm
12 in	305 mm	16 in	406 mm
24 in	610 mm	36 in	914 mm
60 in	1,524 mm	72 in	1,829 mm
96 in	2,438 mm	4 x 8 ft panel	1,219 x 2,438 mm

Cut dimensions are in inches and control the drawings. Rounded metric figures help with space planning. The roof is 4:12, meaning 4 in of rise for every 12 in of horizontal run, about 18.4 degrees. Quantities are estimates for the specified geometry and must be reconciled with local products and the accepted site design.

Construction references

[1] American Wood Protection Association

Treatment categories and ground-contact timber selection. [Read the source](#)

[2] APA - The Engineered Wood Association

Panel installation guidance and Builder Tips. Check the selected panel’s edge spacing, support and fastening requirements. [Read the source](#)

[3] APA wall bracing guidance

Fully sheathed walls and the need to design the bracing around openings. [Read the source](#)

[4] Structural Building Components Association

BCSI guidance for truss handling, installation, temporary restraint and permanent bracing. Use it with the supplier’s drawings. [Read the source](#)

[5] Asphalt Roofing Manufacturers Association

Drip-edge and underlayment sequence at eaves and rakes. Product instructions govern exceptions. [Read the source](#)

[6] USDA Animal and Plant Health Inspection Service

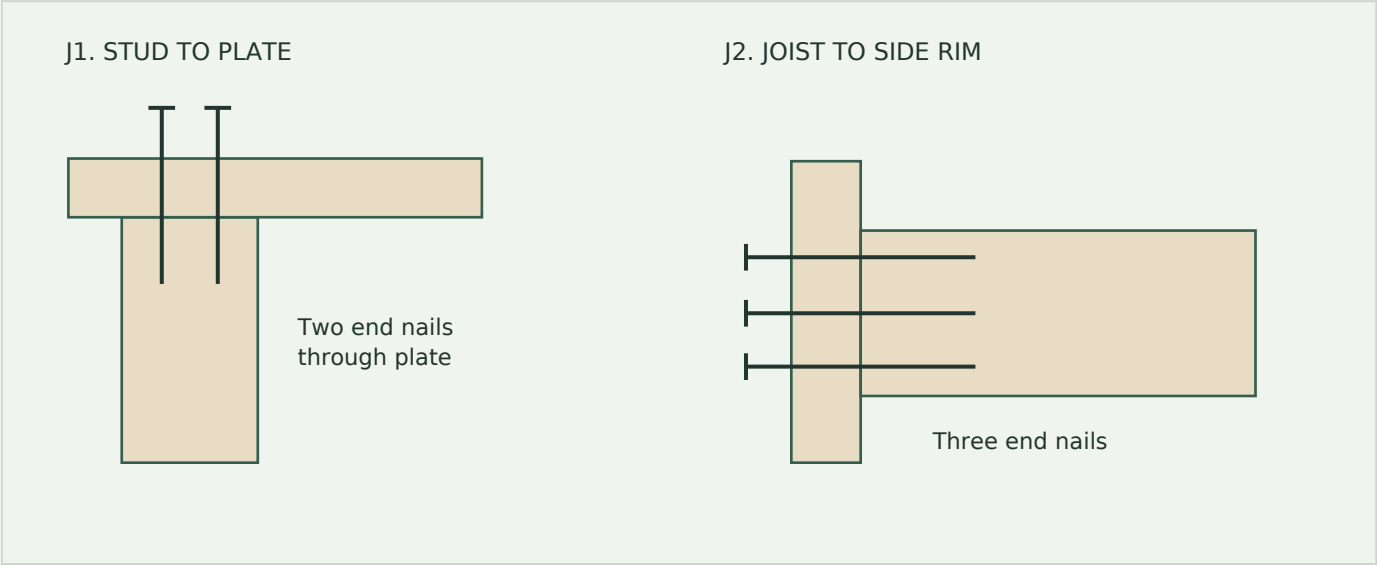
ISPM 15 wood packaging treatment and marking context. A pest-treatment mark is not a building-timber grade. [Read the source](#)

Sources checked 14 September 2026. The layouts, dimensions, cut schedules and assembly sequence were developed for this guide. Reference organisations have not approved these shed designs.

Ready for the next step

Choose the layout, test it with your equipment and take these drawings to your local timber supplier and building designer. Once the site details are confirmed, keep the accepted specifications beside the cut lists while you build.

Make the basic timber joints



J1-J2. Section sketches show the direction of end-nailing. Nail symbols are enlarged. Do not use these nails in place of specified uplift ties or hold-downs.

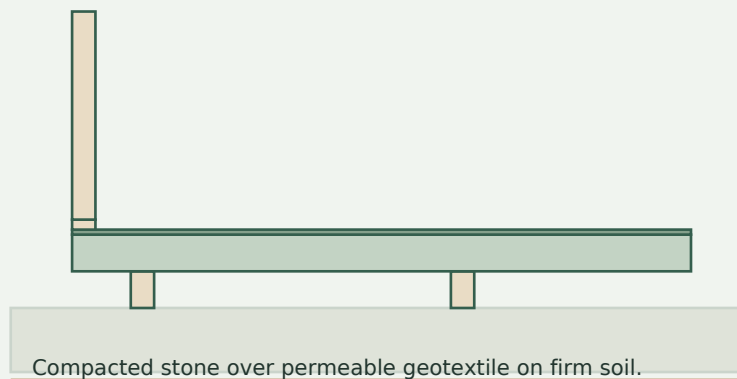
Connection	Common framing detail for local confirmation
Stud to sole or first top plate	Two 16d common nails, 3-1/2 in long x 0.162 in diameter, end-nailed through plate into each stud [7].
2x6 side rim to cross-member	Three 16d common nails, 3-1/2 in x 0.162 in, end-nailed through the rim [8].
Sheathing to supports	For estimating, allow 8d common nails at 6 in on supported panel edges and 12 in at intermediate supports. Confirm nail type and spacing for the panel and site. Bracing or high wind can require closer fixing [2].
Plate laps, corners and headers	Use the locally accepted connection schedule. Nail size alone does not define a plate-splice or header detail.
Metal connectors and anchors	Use the manufacturer’s exact fasteners, holes and embedment. Record the approved parts on page 31.

Predrill where needed to avoid splitting, stagger nails and keep heads flush. Common, box and gun nails of the same length can have different diameters and capacities. Substitute structural screws only with a rated connection detail. Ordinary drywall screws are unsuitable.

[7] [ICC 2024 IBC, fastening requirements](#). [8] [ICC 1300-2024, minimum fastening](#). These are reference details, not a claim that these codes govern your site.

See the base and roof together

F3. BASE SECTION



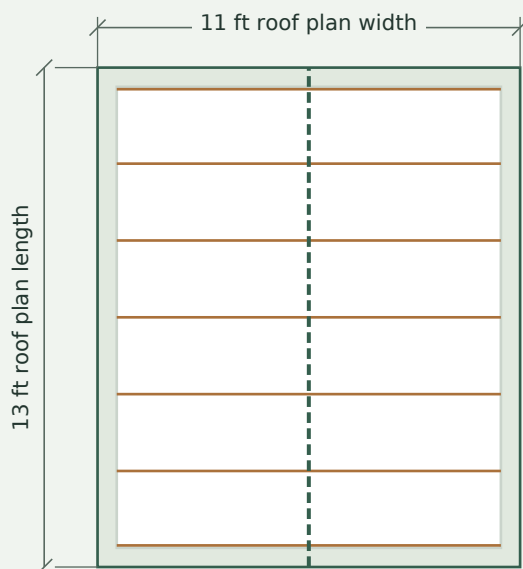
Floor build-up above gravel:
23/32 in plywood deck
5-1/2 in-deep floor joists
5-1/2 in-high 4x6 skids

About 11-3/4 in to deck top
Final height sets the ramp rise.

Compacted stone over permeable geotextile on firm soil.

F3. Cross-section across the shed width. Skid spacing is on page 6. Aggregate depth and anchorage follow the site design. The drawing omits cladding for clarity.

R2. 10 x 12 ft ROOF PLAN



Solid gold lines: truss positions
Dashed green line: ridge
6 in overhang on four sides

Each slope is about 69.6 in long
from ridge to eave edge.
Roof surface area: about 151 sq ft.

Panel strength axis crosses trusses.
Keep end joints on framing.

R2. Plan width differs from sloping roof length. Supplier drawings govern truss end positions, heel height and overhang framing. Roof panels and joints are not shown.

Use the floor section and roof plan with the wall elevation on page 10. Verify roof and base dimensions before cutting flashings or ordering a ramp. Once the structure is complete, retain these pages with the local design and truss package.