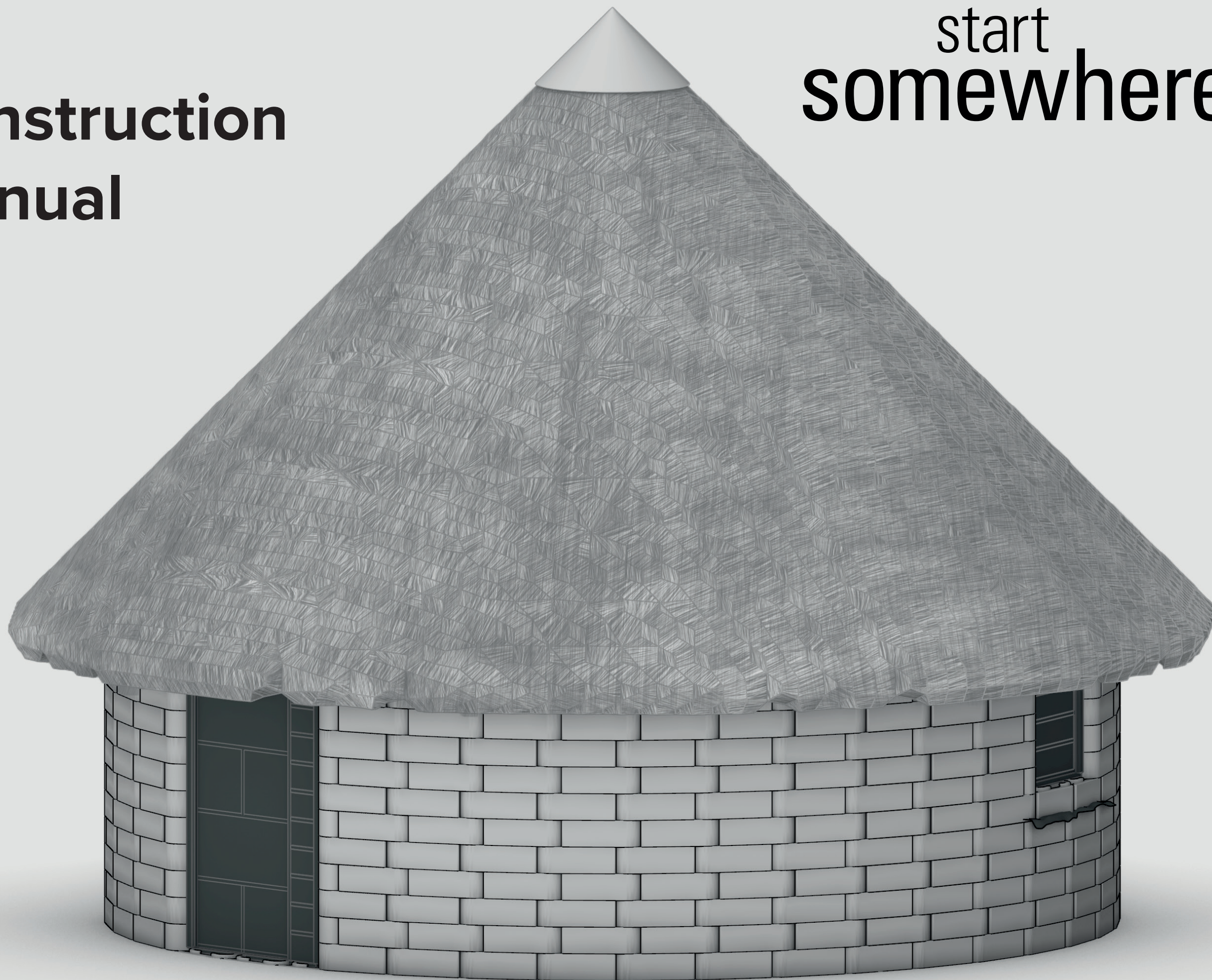


Construction Manual

start
somewhere



Introduction

TwistBlocks® are an affordable building solution that are produced in small scale factories in low-income areas. The blocks are interlocking, lightweight, fire-resistant and easy to use.

For more information visit: www.startsomewhere.eu


USING THIS MANUAL

This document is a manual for the construction of buildings using TwistBlocks®. The manual assumes that you have a basic understanding of general construction principals. Any detailed structural work should be designed and overseen by a structural engineer.

DISCLAIMER

TwistBlocks® are sold as standalone products and Start Somewhere takes no liability for improper structural use of them. It is the responsibility of the user to engage with qualified engineer for foundation, column, ring beam and roof design to ensure safety and compliance with local regulations. Start Somewhere offers design services for an additional fee.

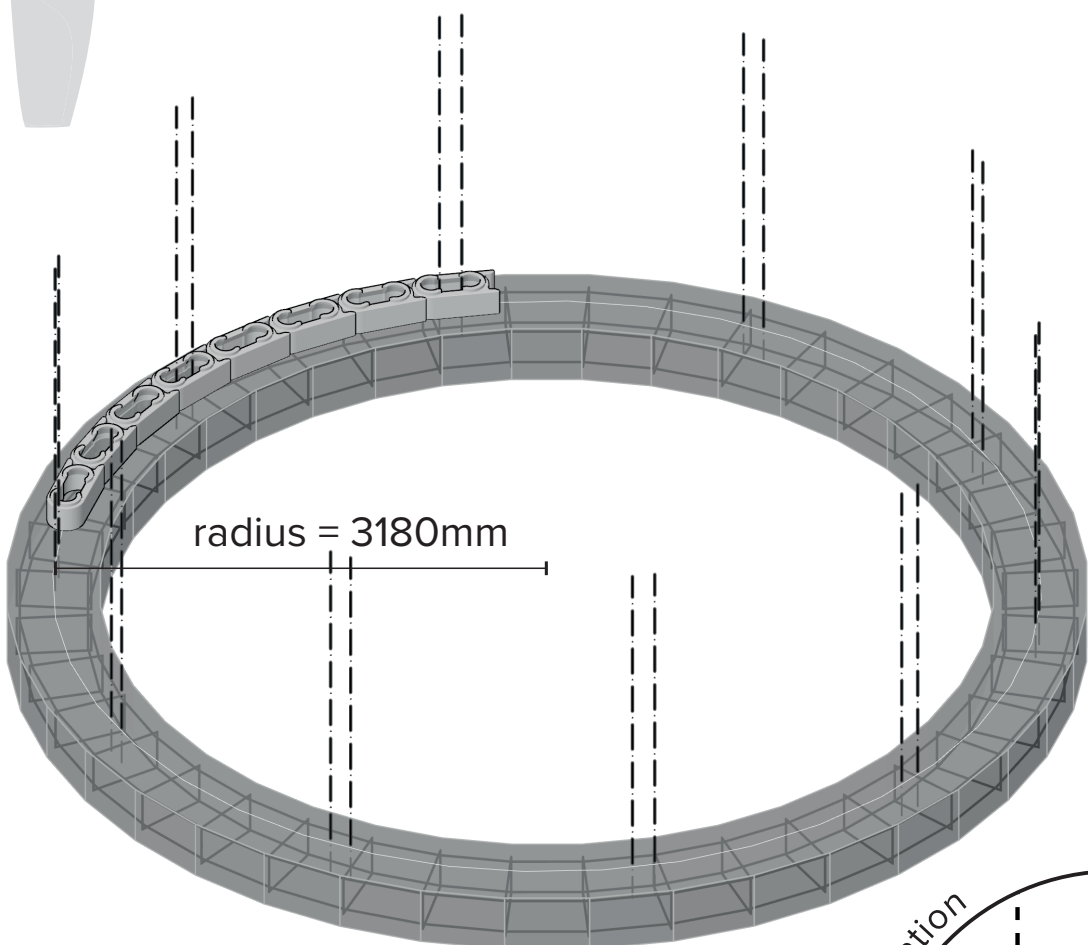
By purchasing these blocks, you agree to assume full responsibility for their correct and safe usage, including adherence to this building manual and all relevant building codes and standards. Start Somewhere shall not be held liable for any damages, losses or injuries.



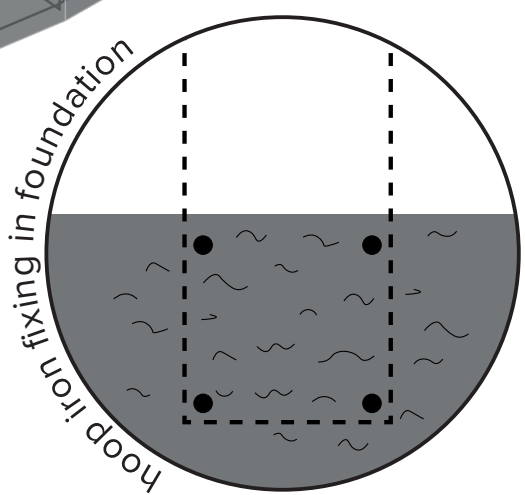
Foundation

Start Somewhere cannot provide exact plans for the foundation, as local subsoil conditions must be taken into account.

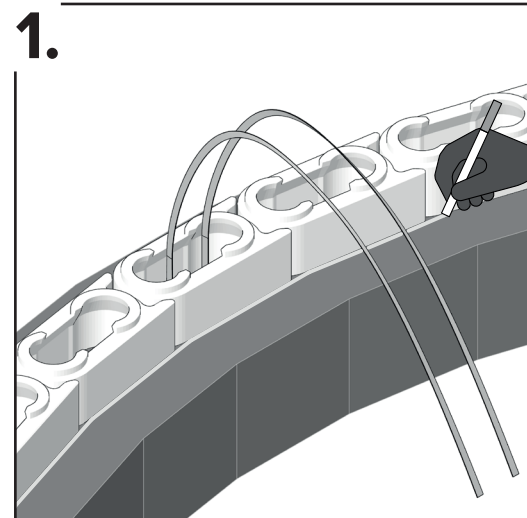
The dimensioning of the foundation as well as the size and positioning of the reinforcement must be discussed with a local structural engineer on a site-specific basis.



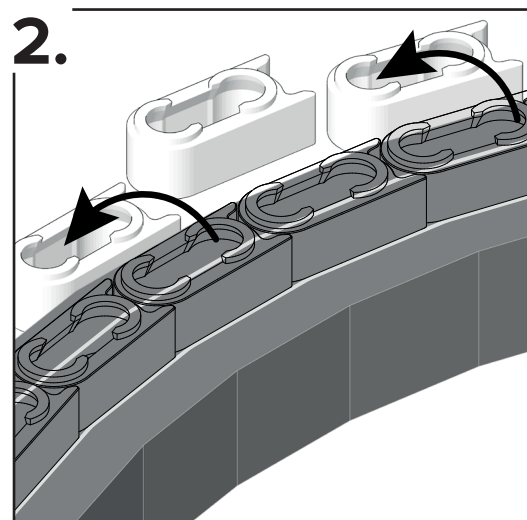
Engineering plans of a reference project can be provided by Start Somewhere.
Contact: info@startsomewhere.eu



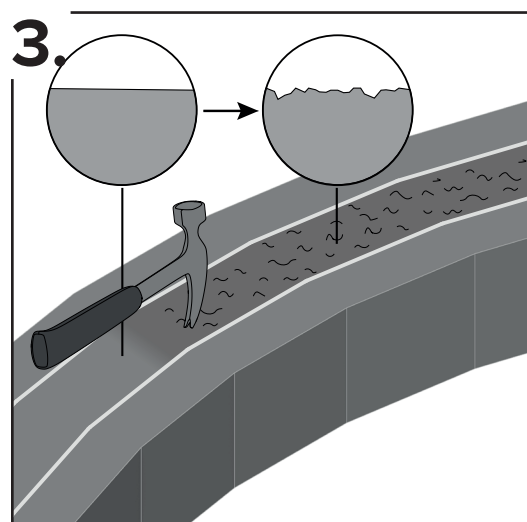
1st row



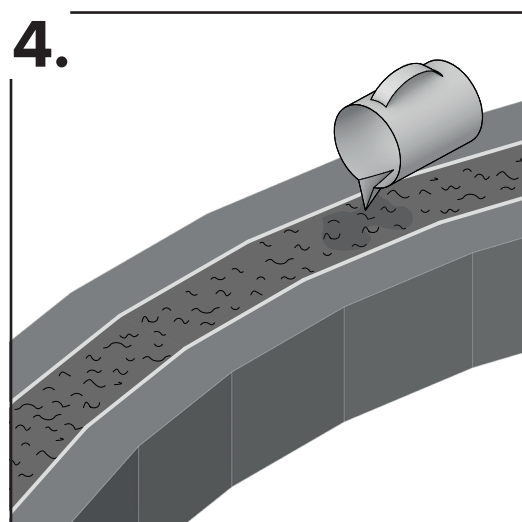
1. Make a test layout of the TBs and mark the outline with chalk.



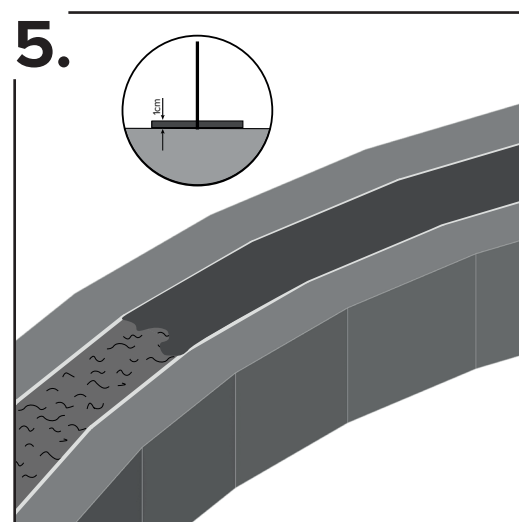
2. Remove the testlayout and put TBs aside.



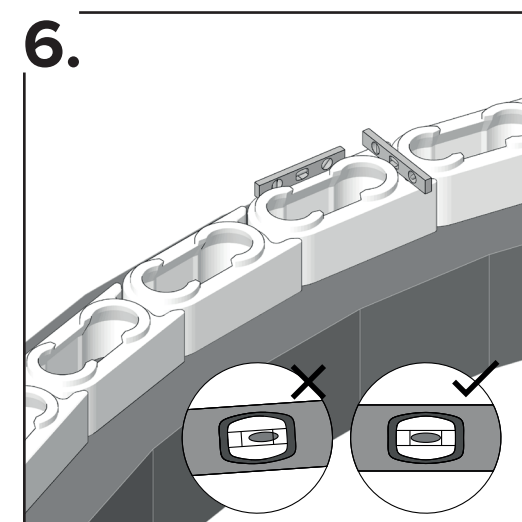
3. Hack the surface of the foundation concrete where the blocks will lie.



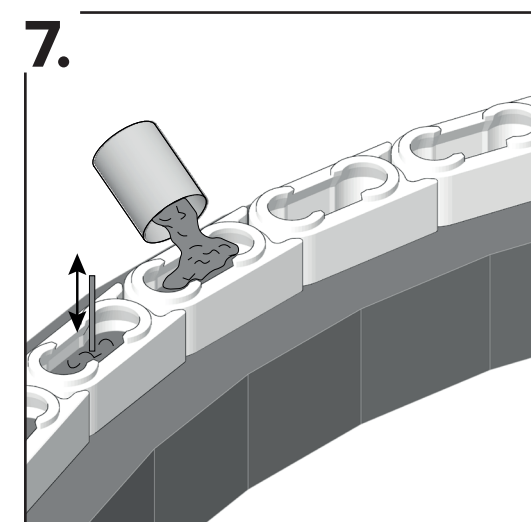
4. Wet the hacked surface with water to ensure better bonding.



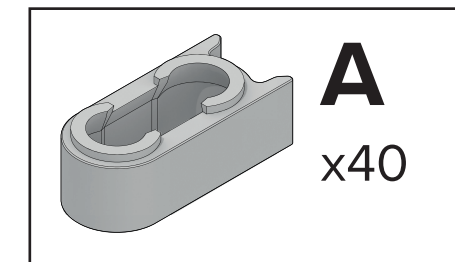
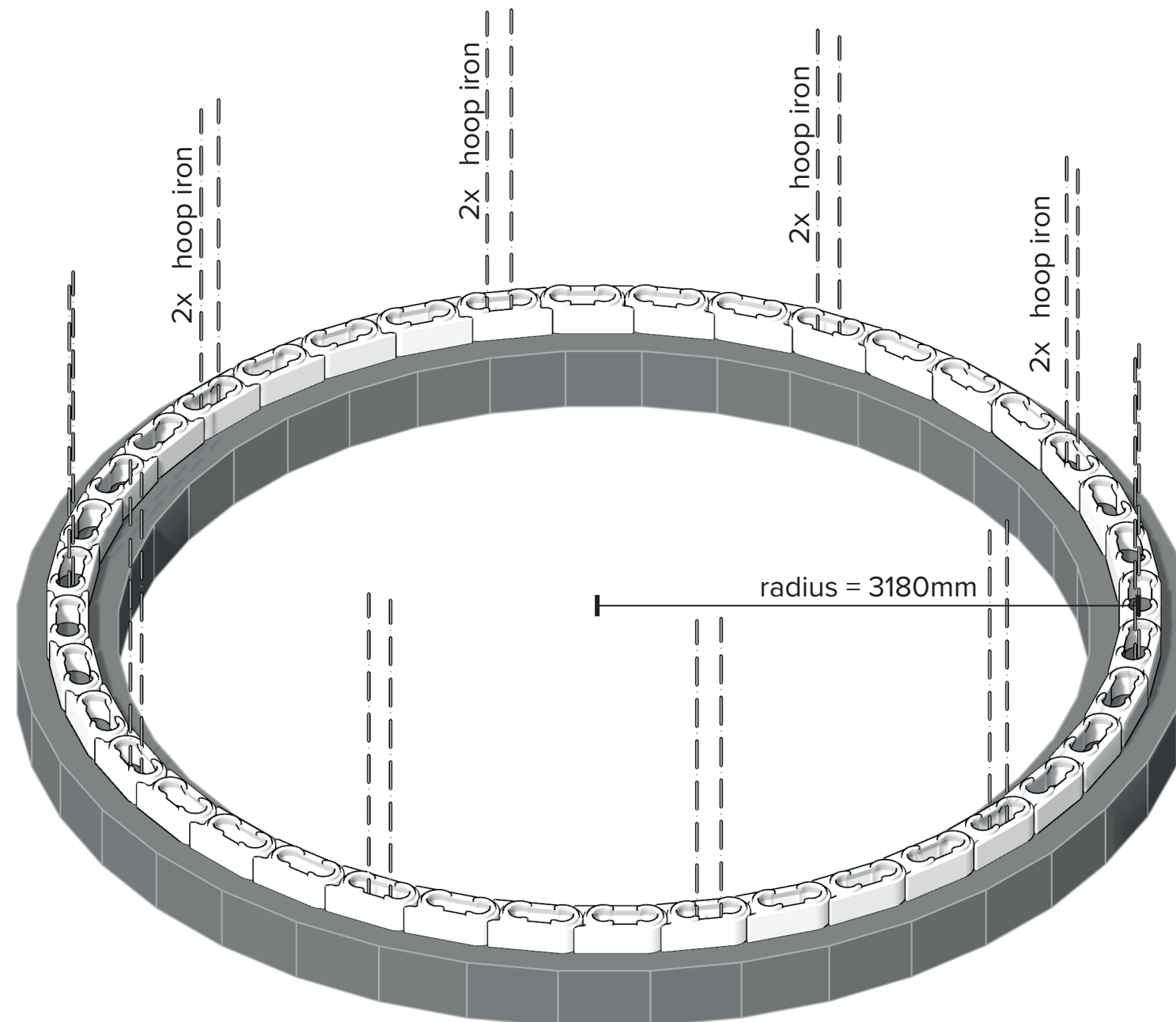
5. Put on a small layer of mortar for precision and proper leveling.



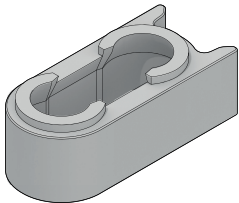
6. Place the first row of TBs and level them perfectly. This is very important for the stability of the whole building.



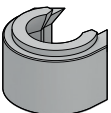
7. Pour concrete halfway into the TBs preventing movement during subsequent block laying. Use a stick to vibrate the concrete into the entire block.



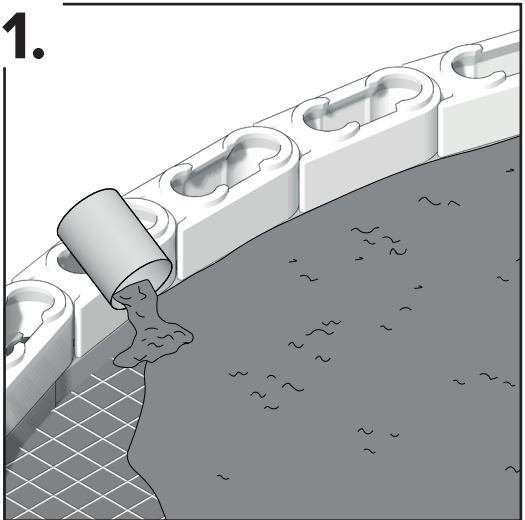
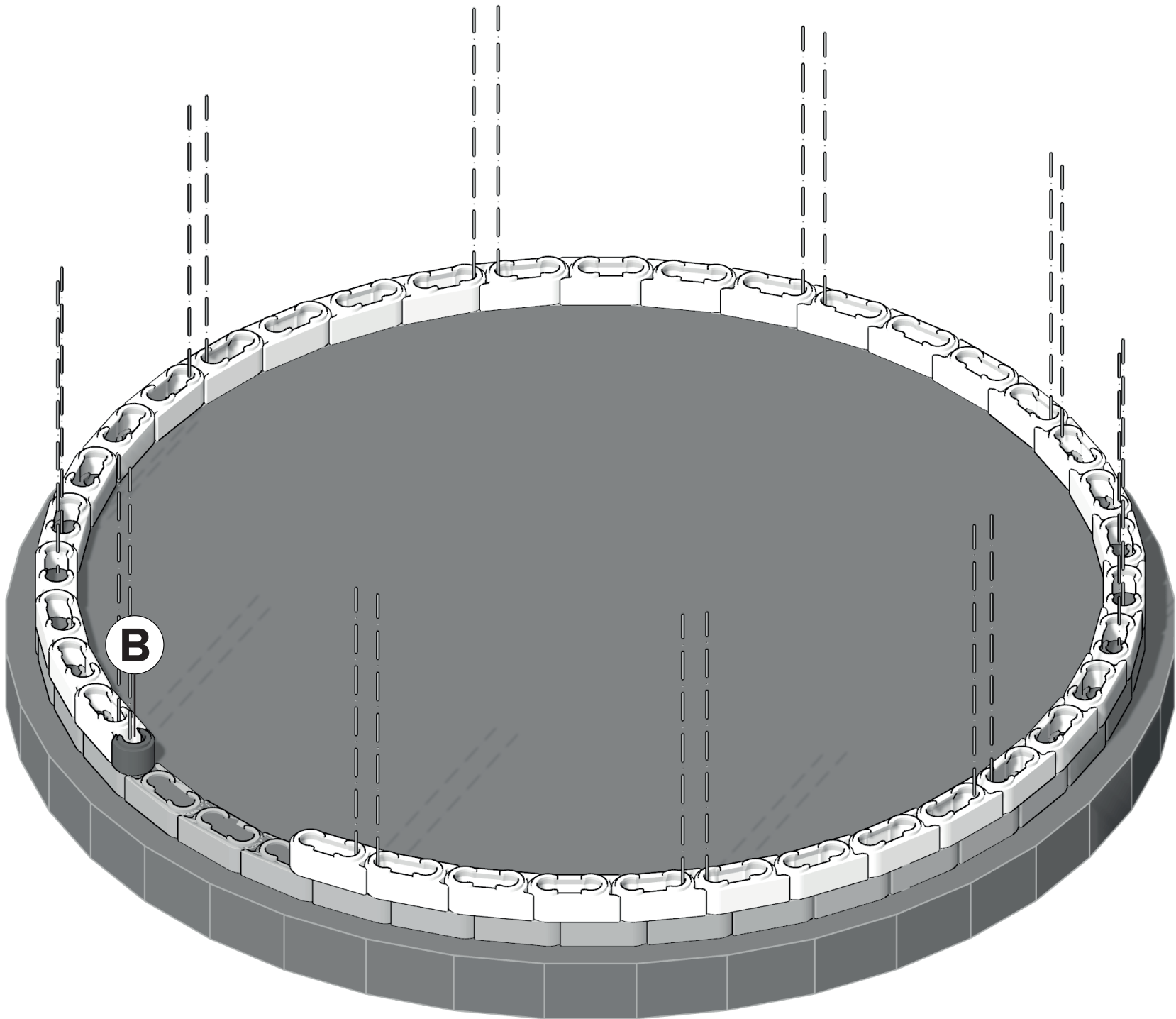
2nd row



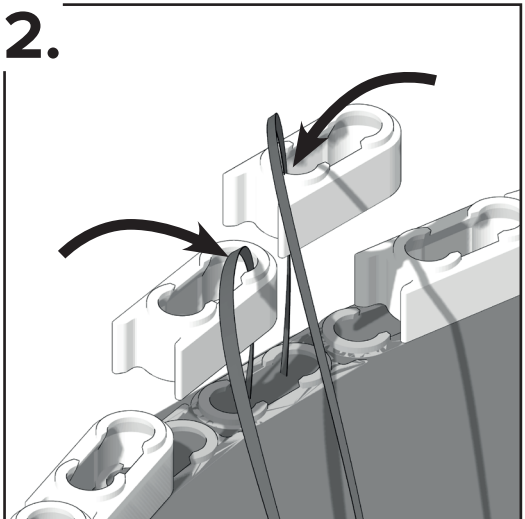
A
x37



B
x1

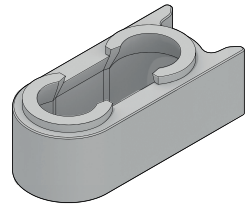


1. First lay a reinforcement mesh on the floor. Fill in the desired floor covering (max. 175mm) and spread it evenly.

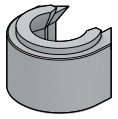


2. Thread the hoop iron strips through the blocks.

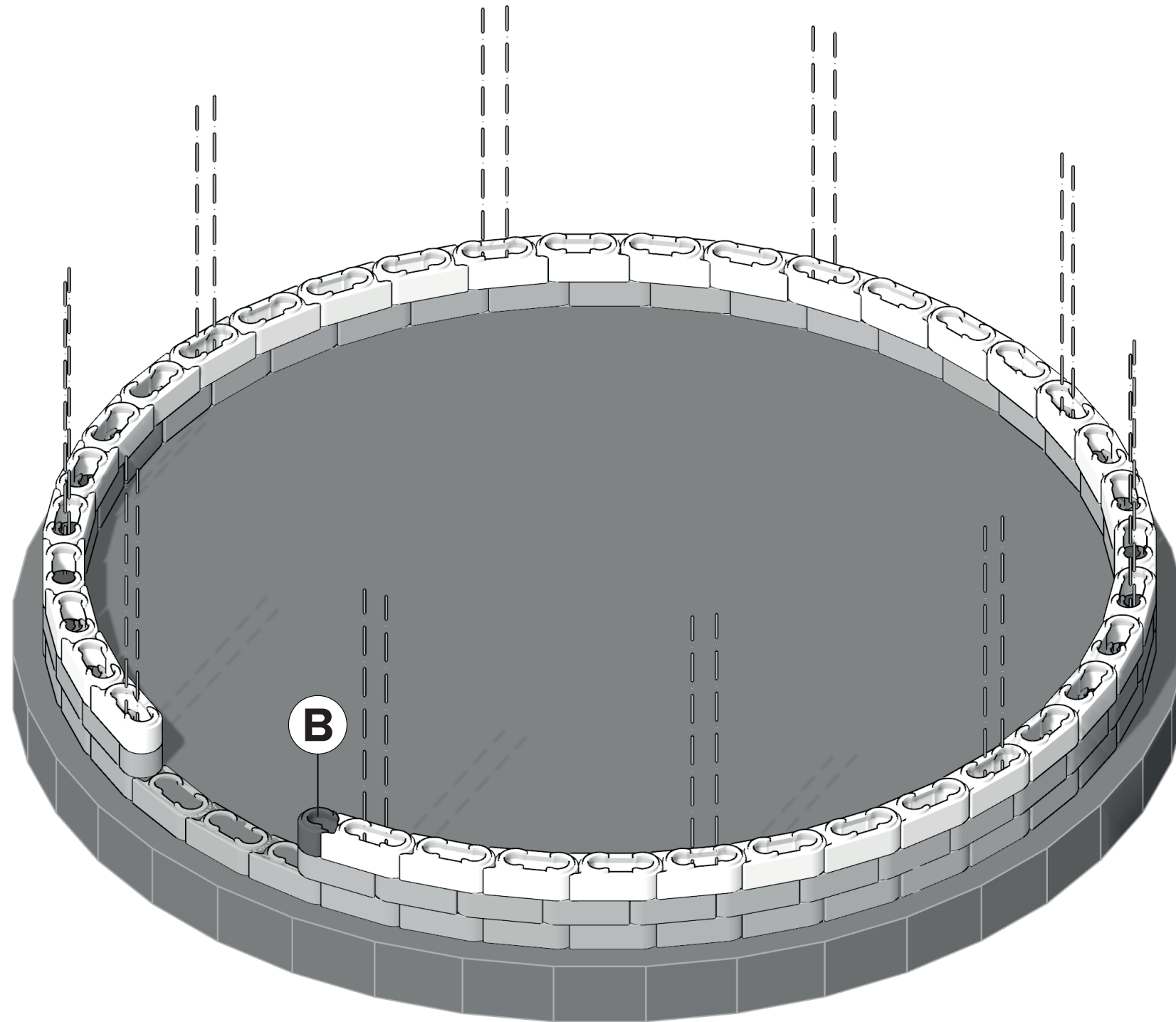
3rd row



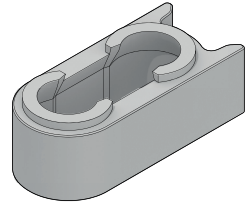
A
x37



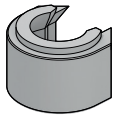
B
x1



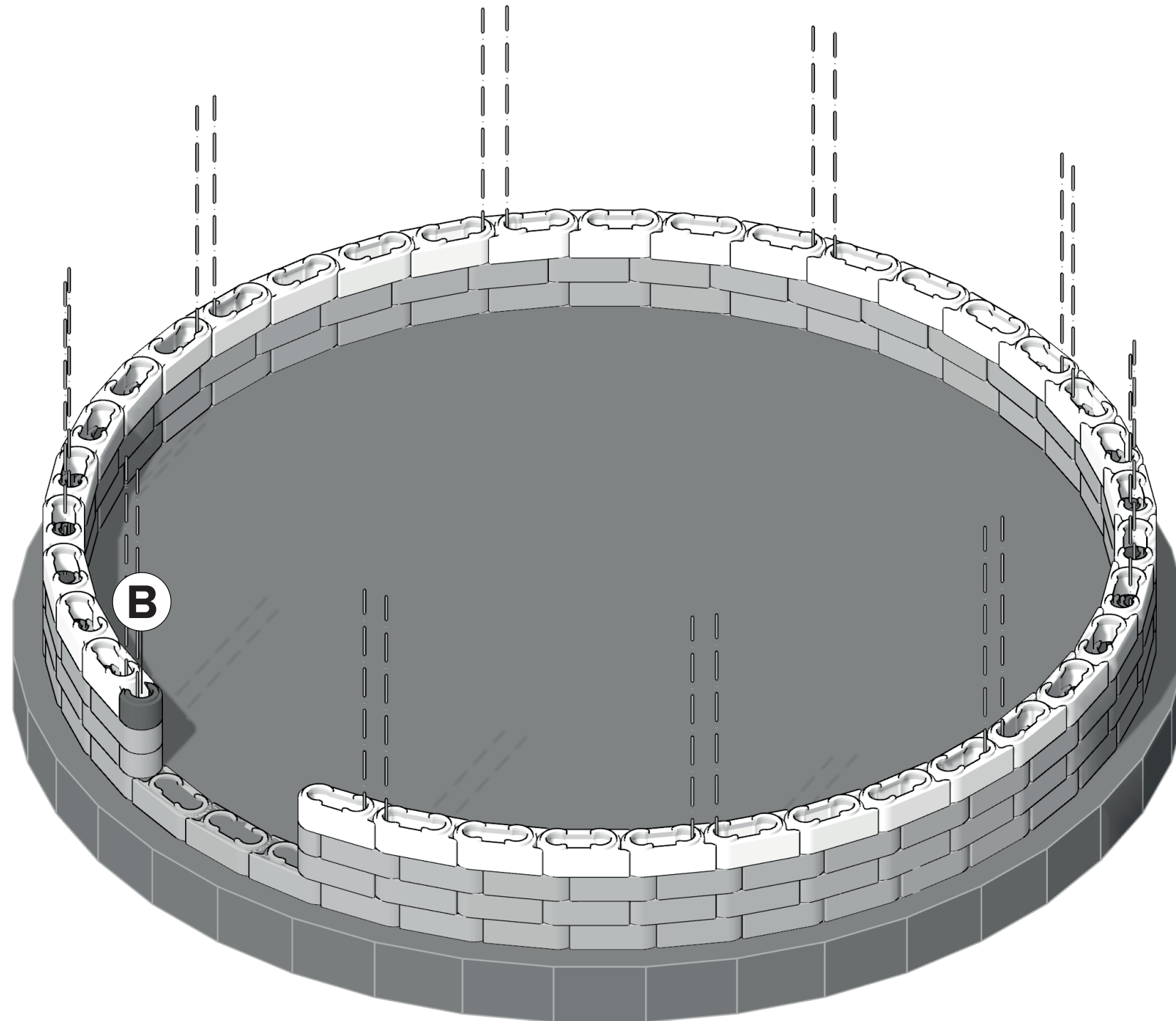
4th row



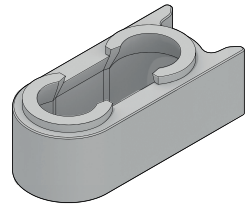
A
x37



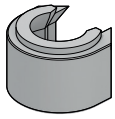
B
x1



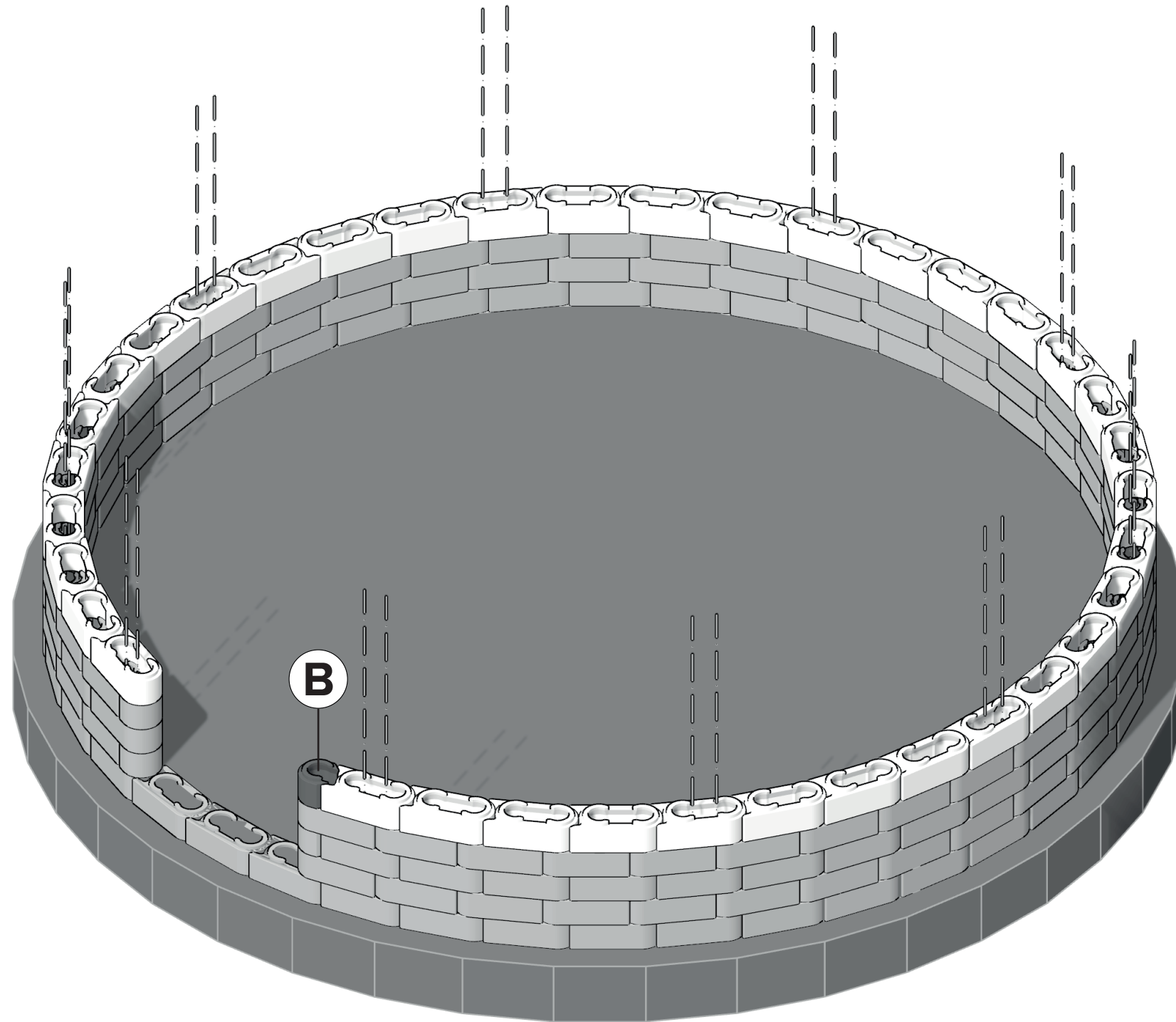
5th row



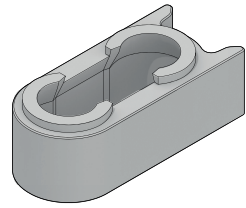
A
x37



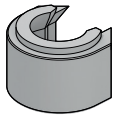
B
x1



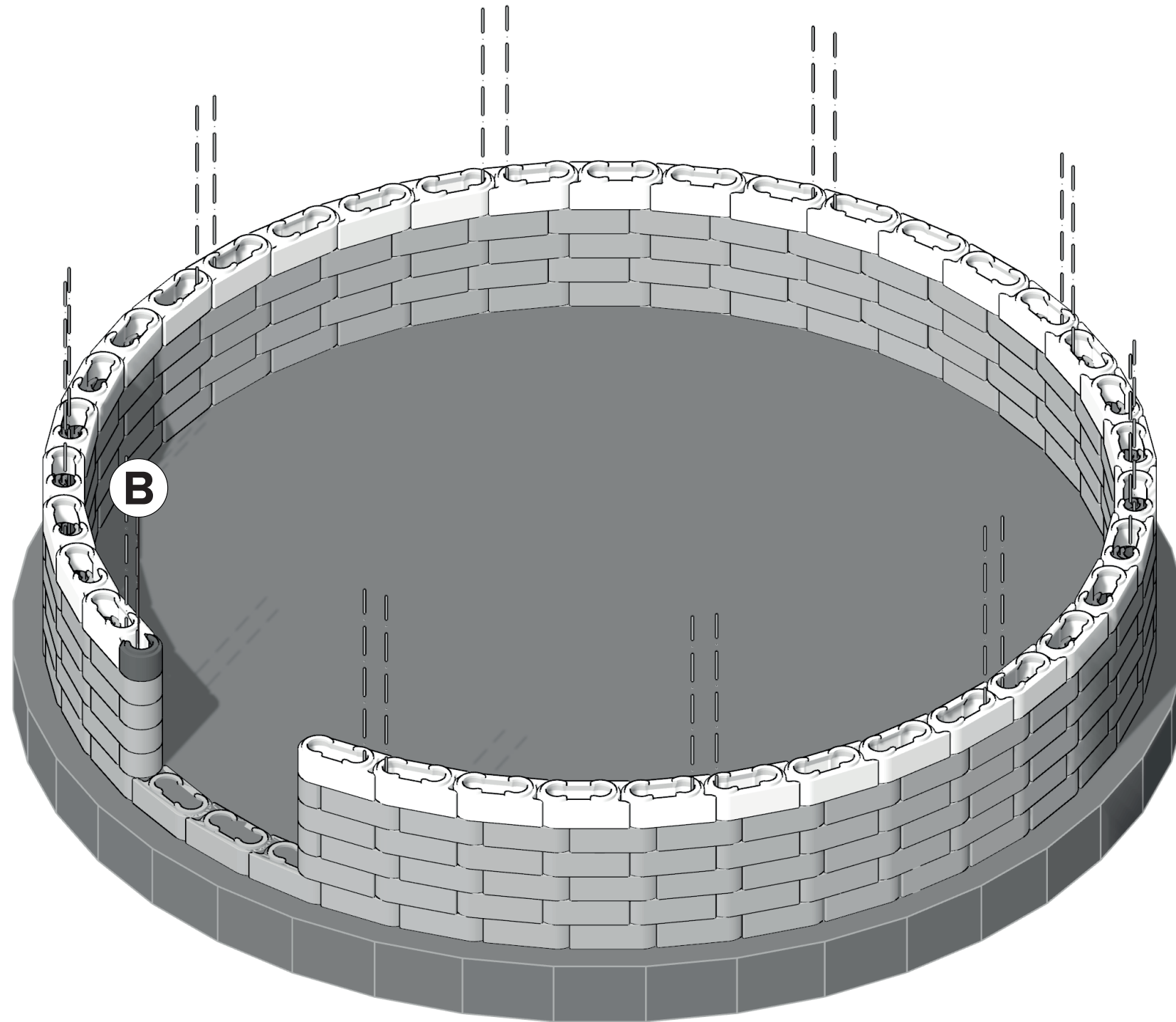
6th row



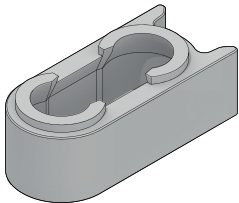
A
x37



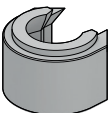
B
x1



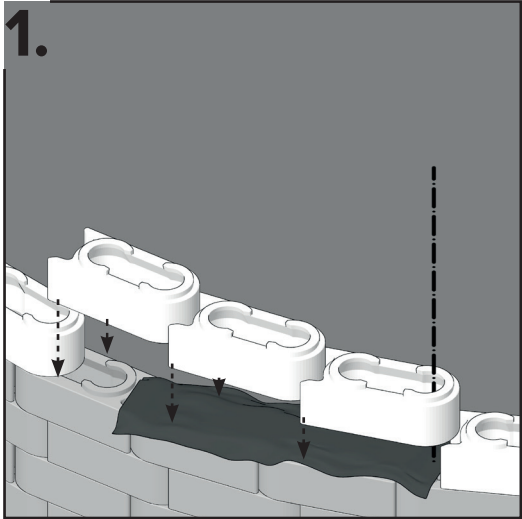
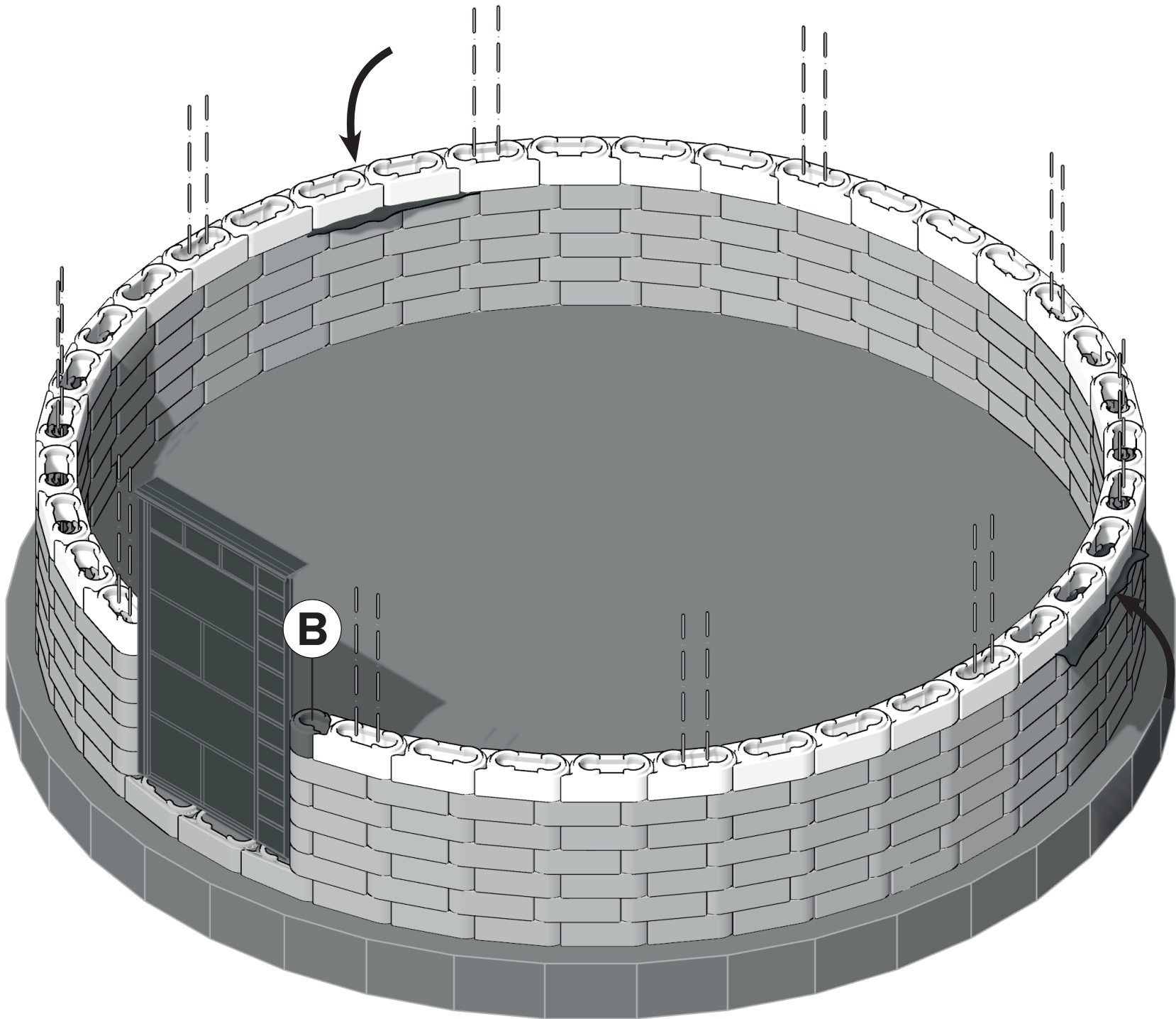
7th row



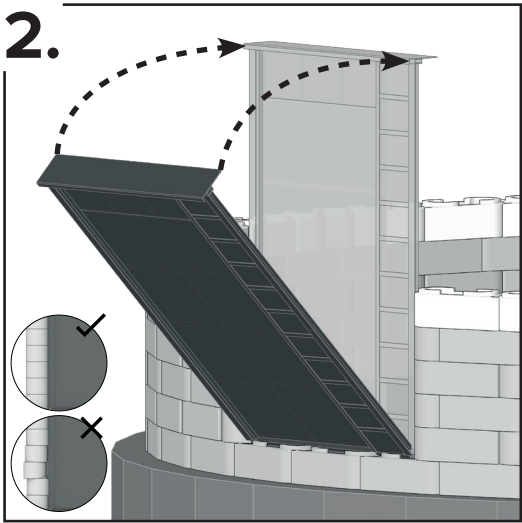
A
x37



B
x1

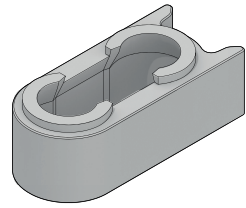


Use DPM foil to cover TBs of the 6th row underneath the window openings. Put TBs on top and clamp foil down.

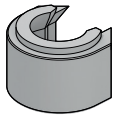


Fit door in and align with the TBs. Make sure to also align the following rows.

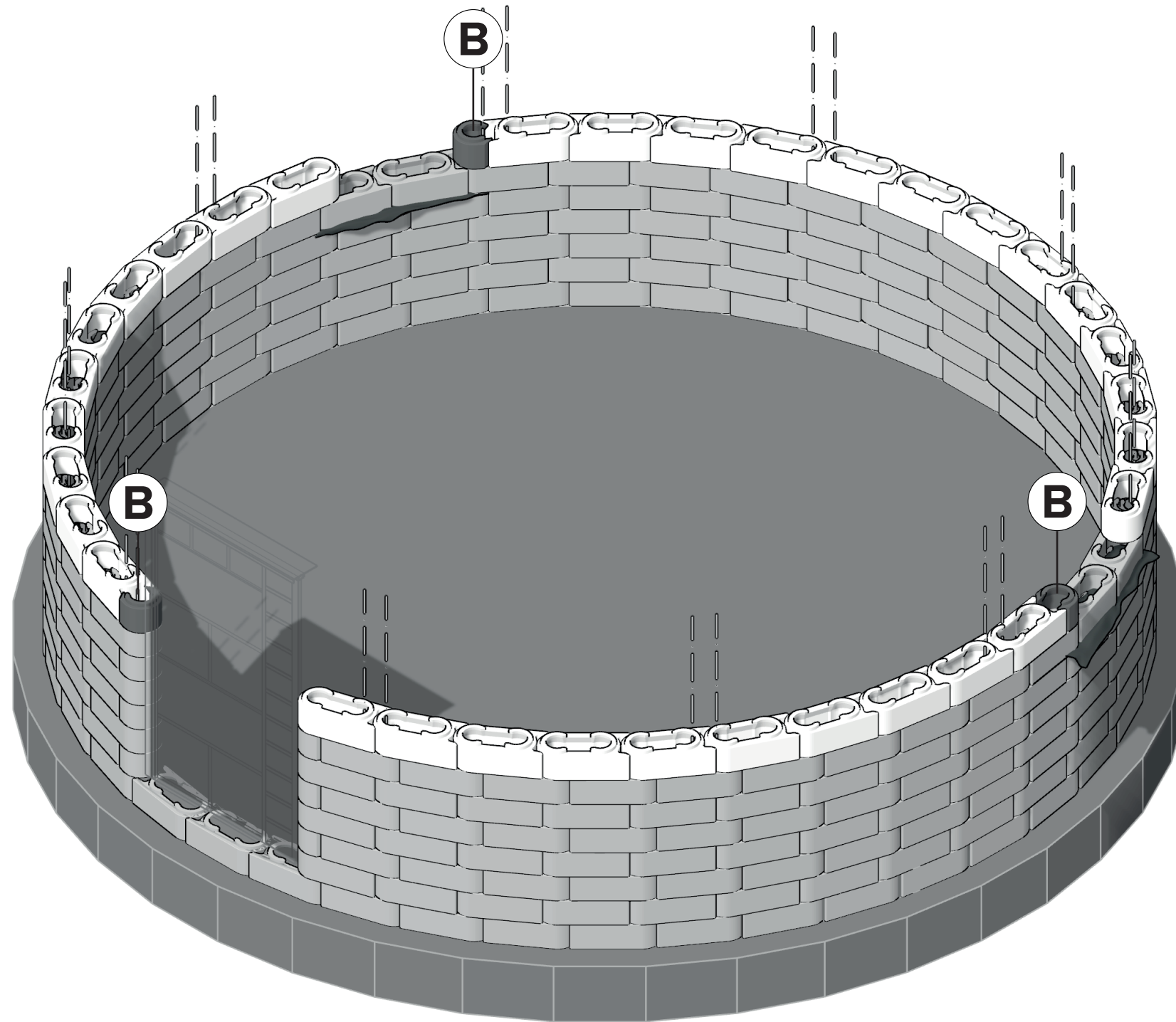
8th row



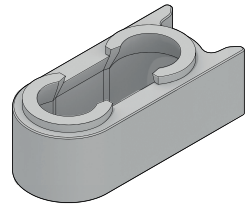
A
x33



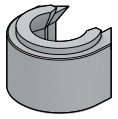
B
x3



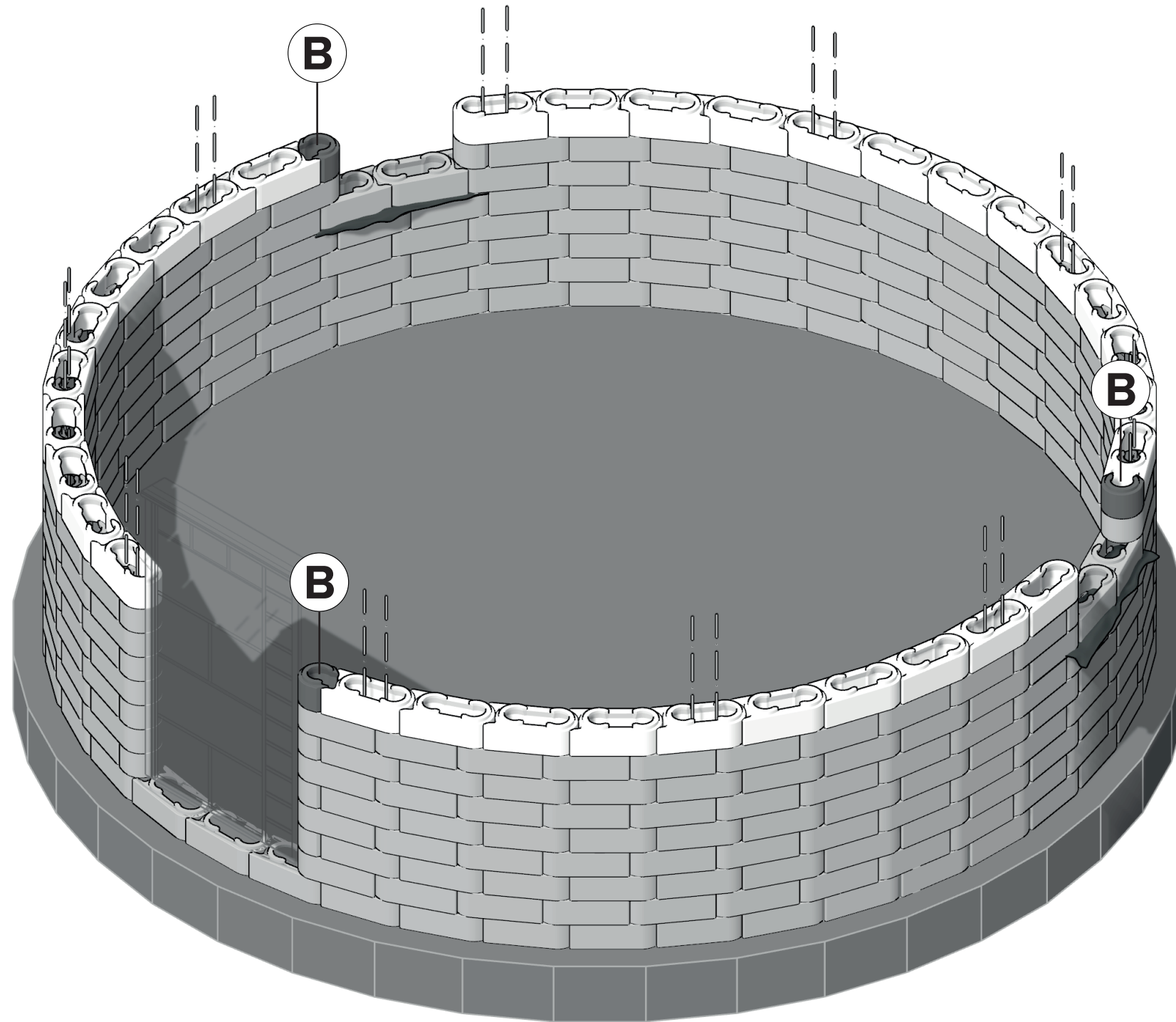
9th row



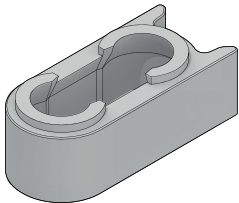
A
x33



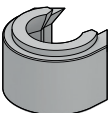
B
x3



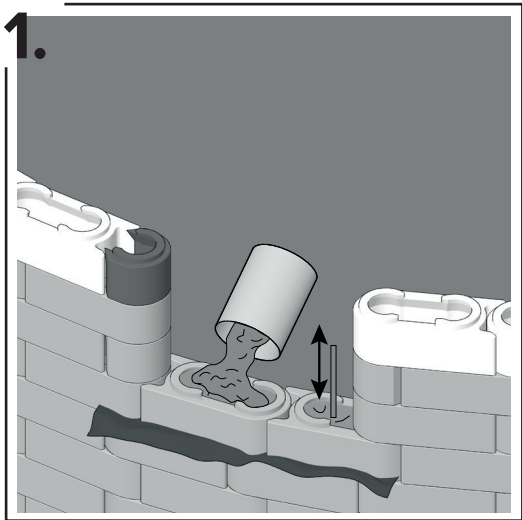
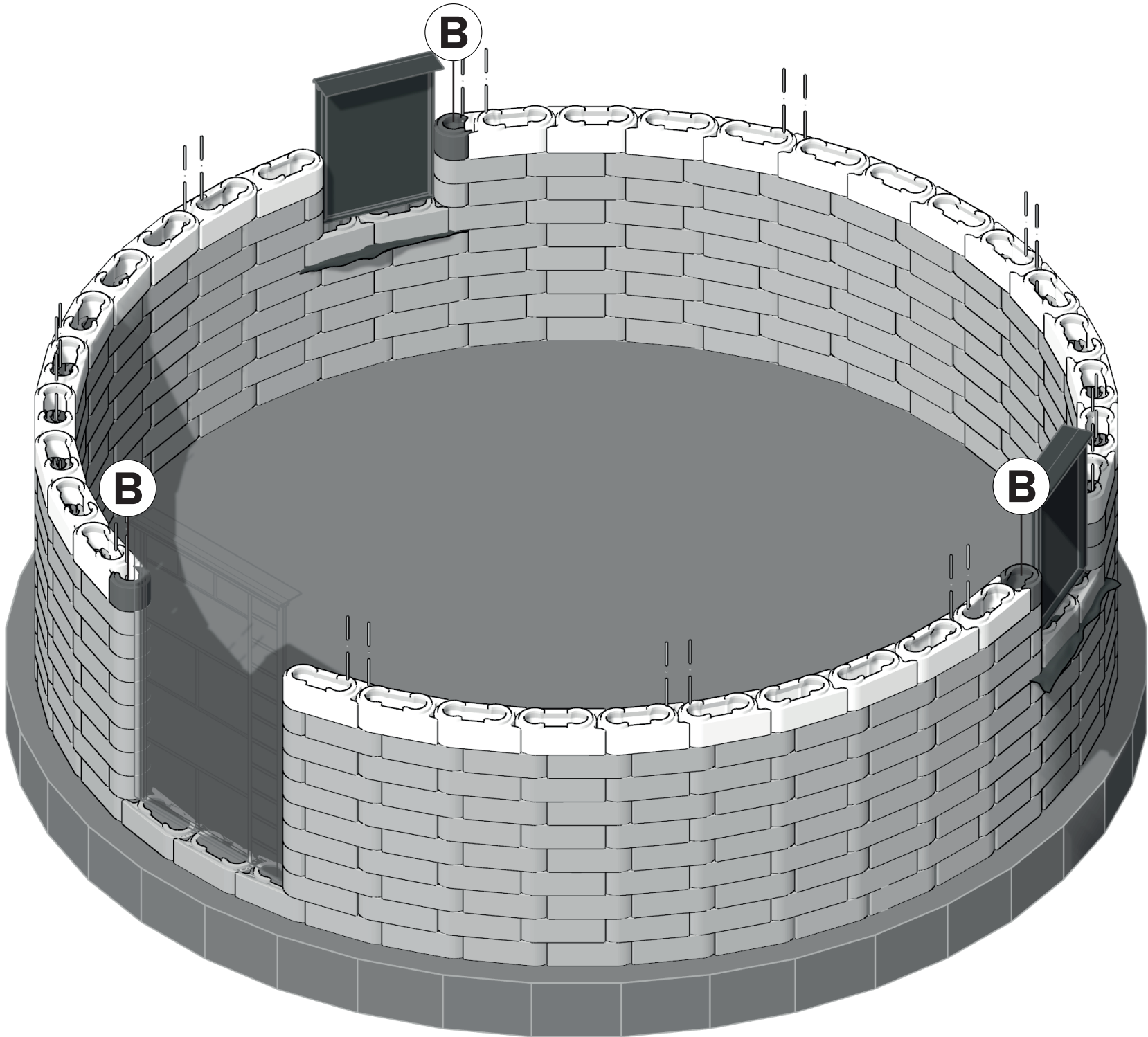
10th row



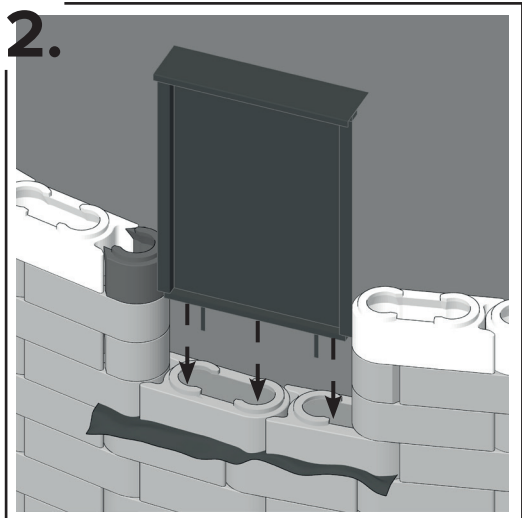
A
x33



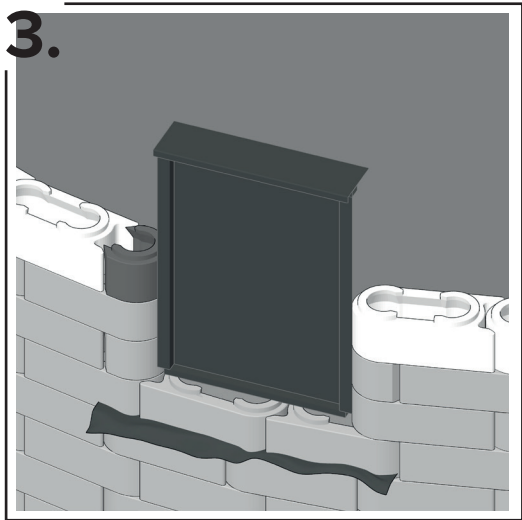
B
x3



Pour concrete in below the windows and poke with a stick. Be careful not to rip the DPM foil.

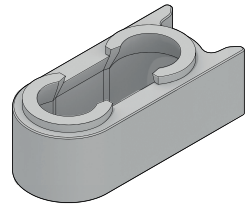


Slide window frames in. Hoop irons go in the concrete.

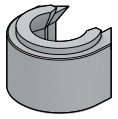


Align window frames with the wall.

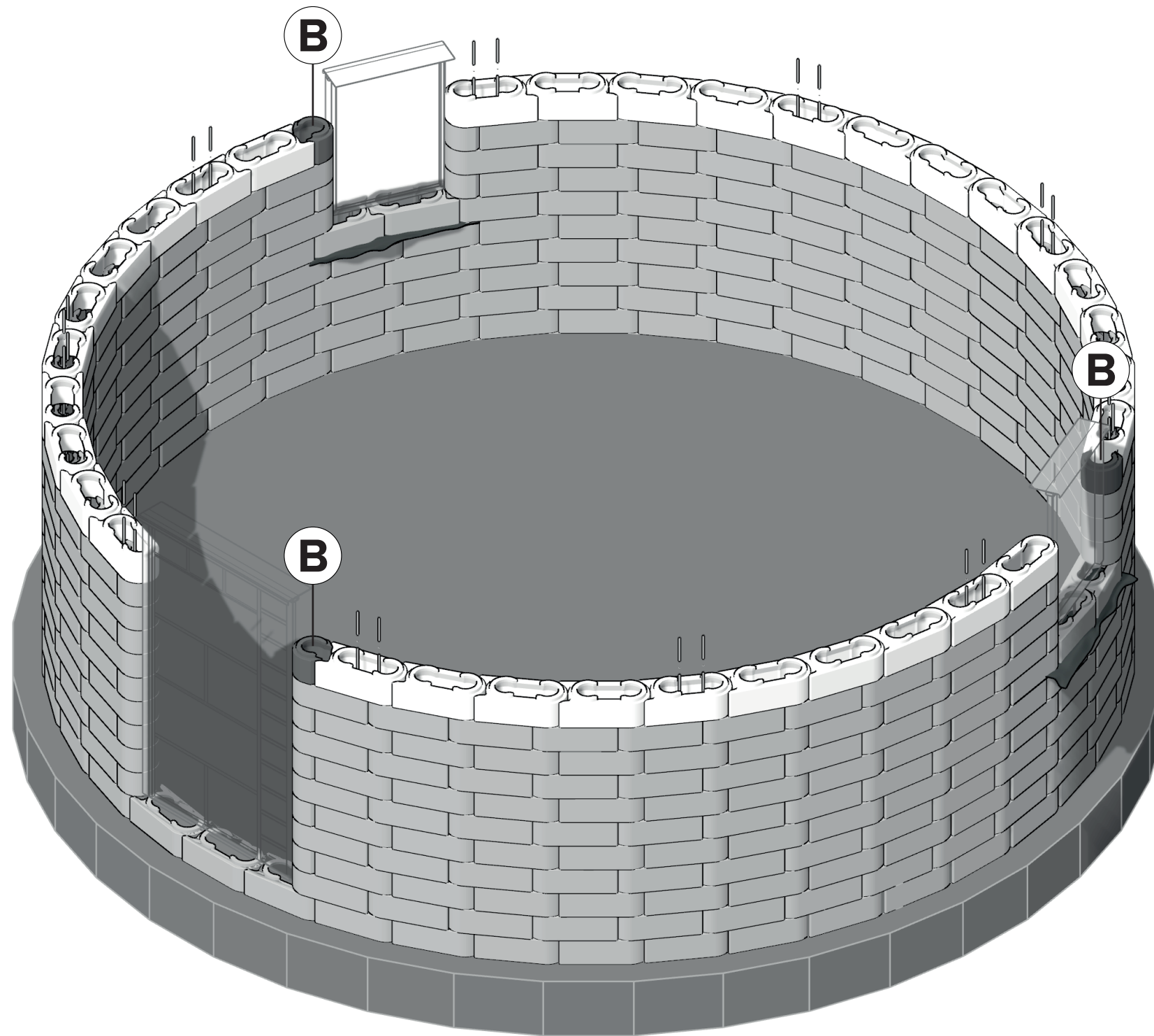
11th row



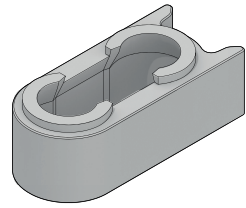
A
x33



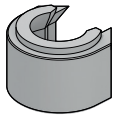
B
x3



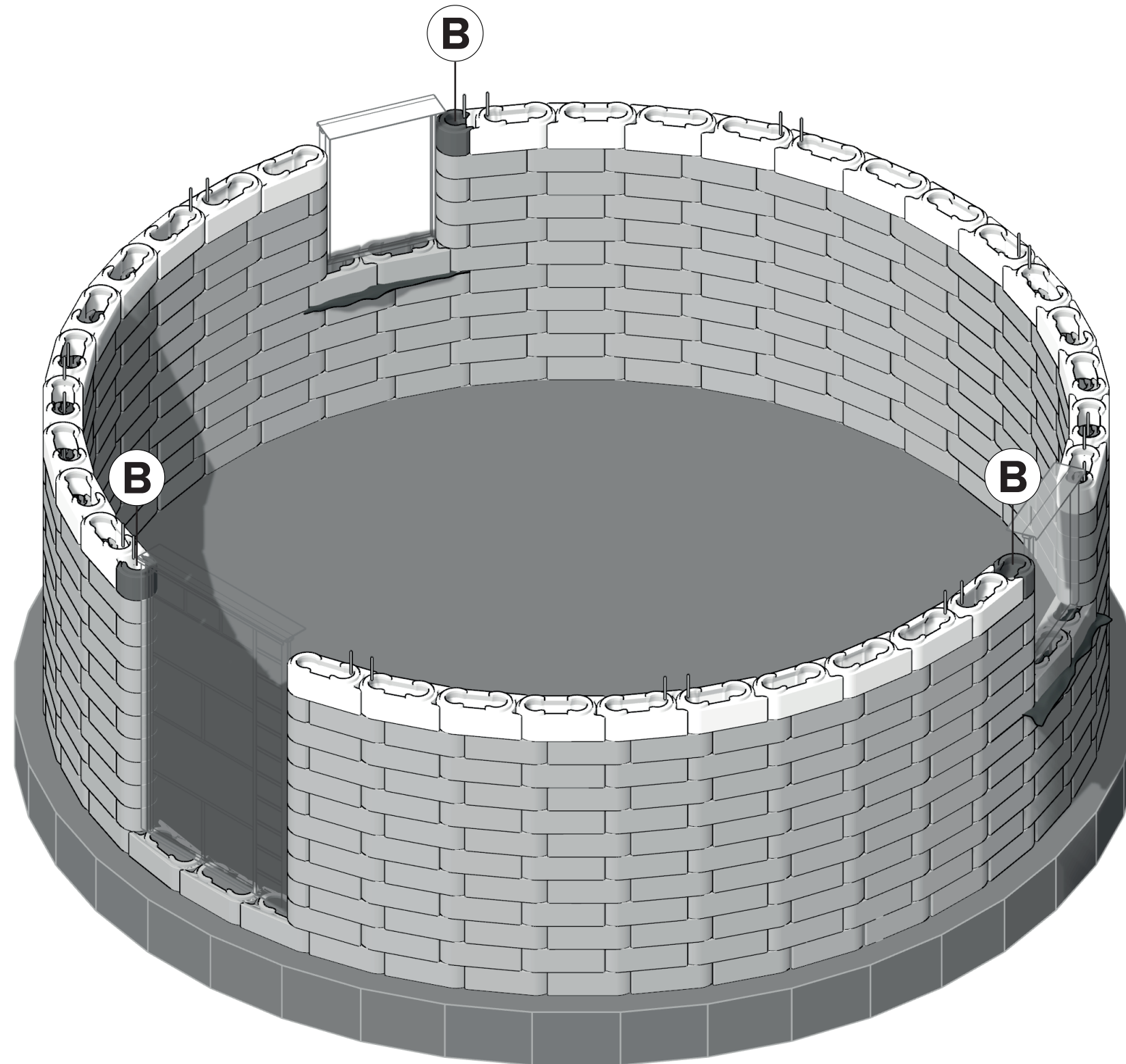
12th row



A
x33



B
x3

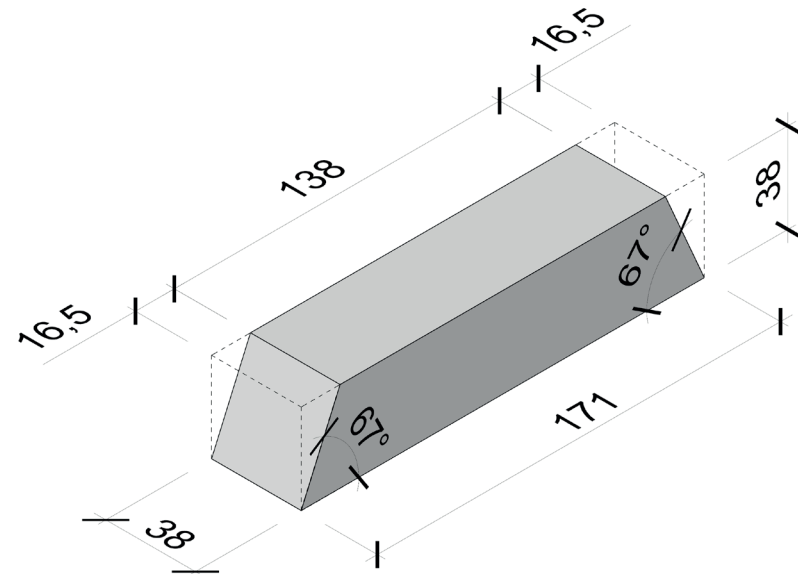


Cutting template

RINGBEAM TIMBER ELEMENTS AND HOOP IRONS FOR THE ROOF STRUCTURE

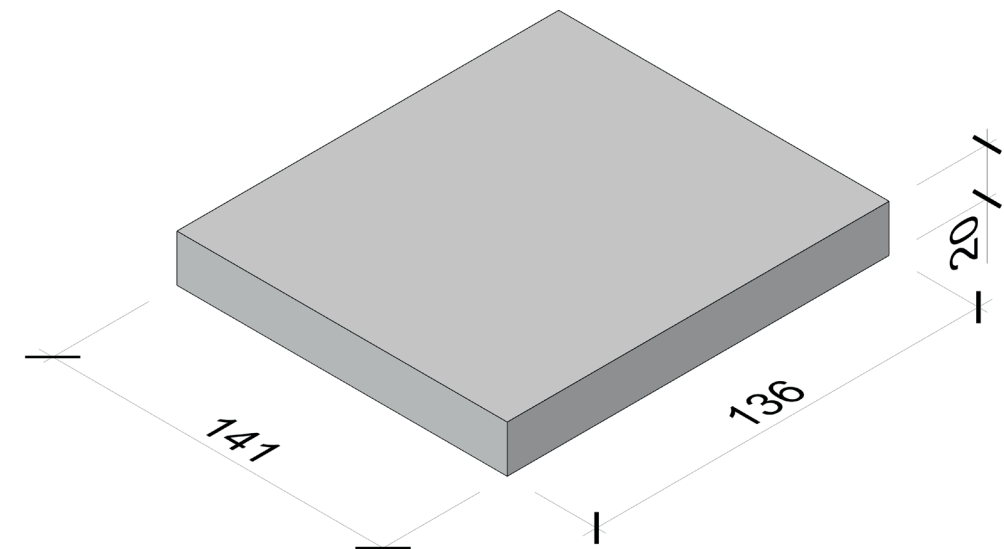
C

x66



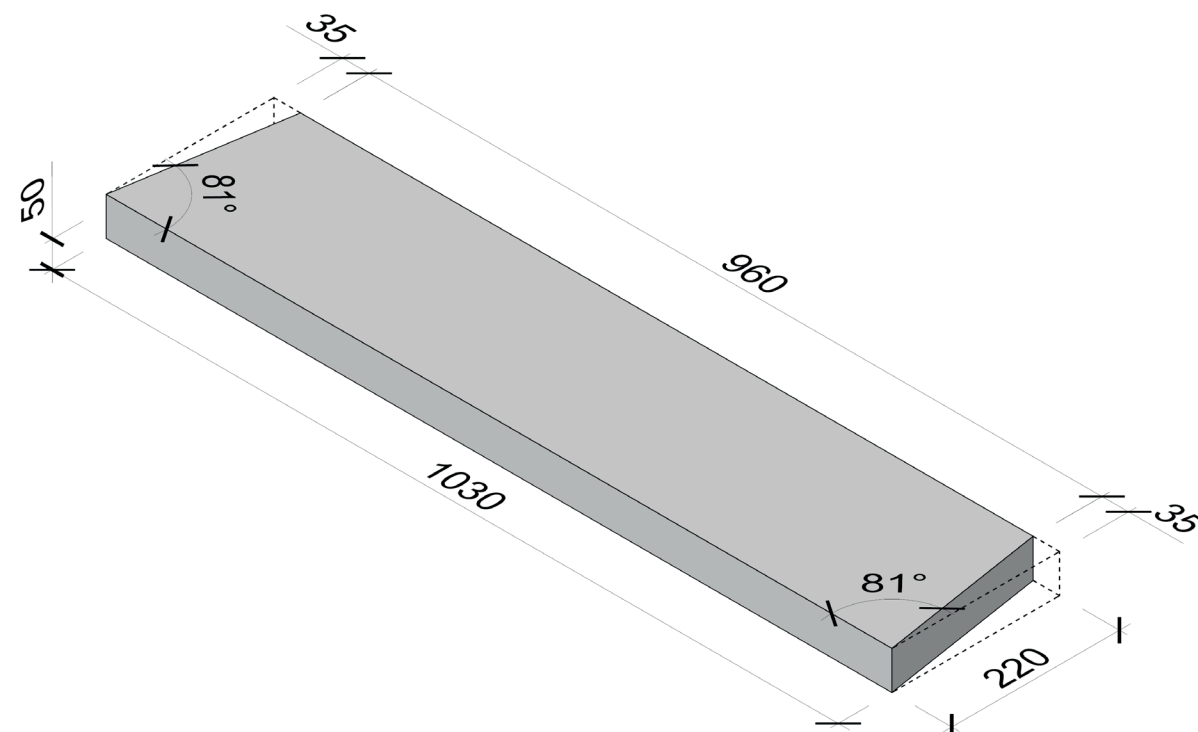
D

x33



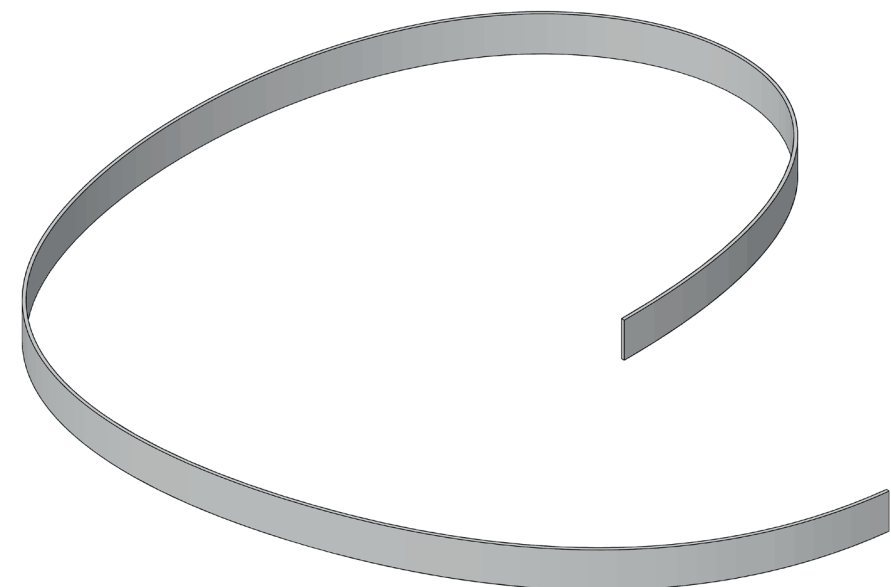
E

x20



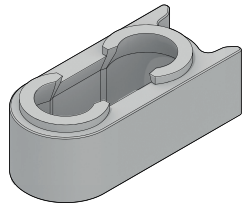
F

x16

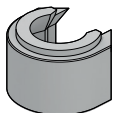


Hoop irons, **each 1200 mm** in length

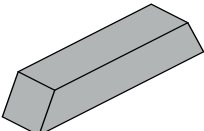
13th row



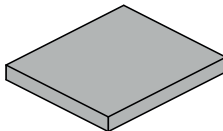
A
x33



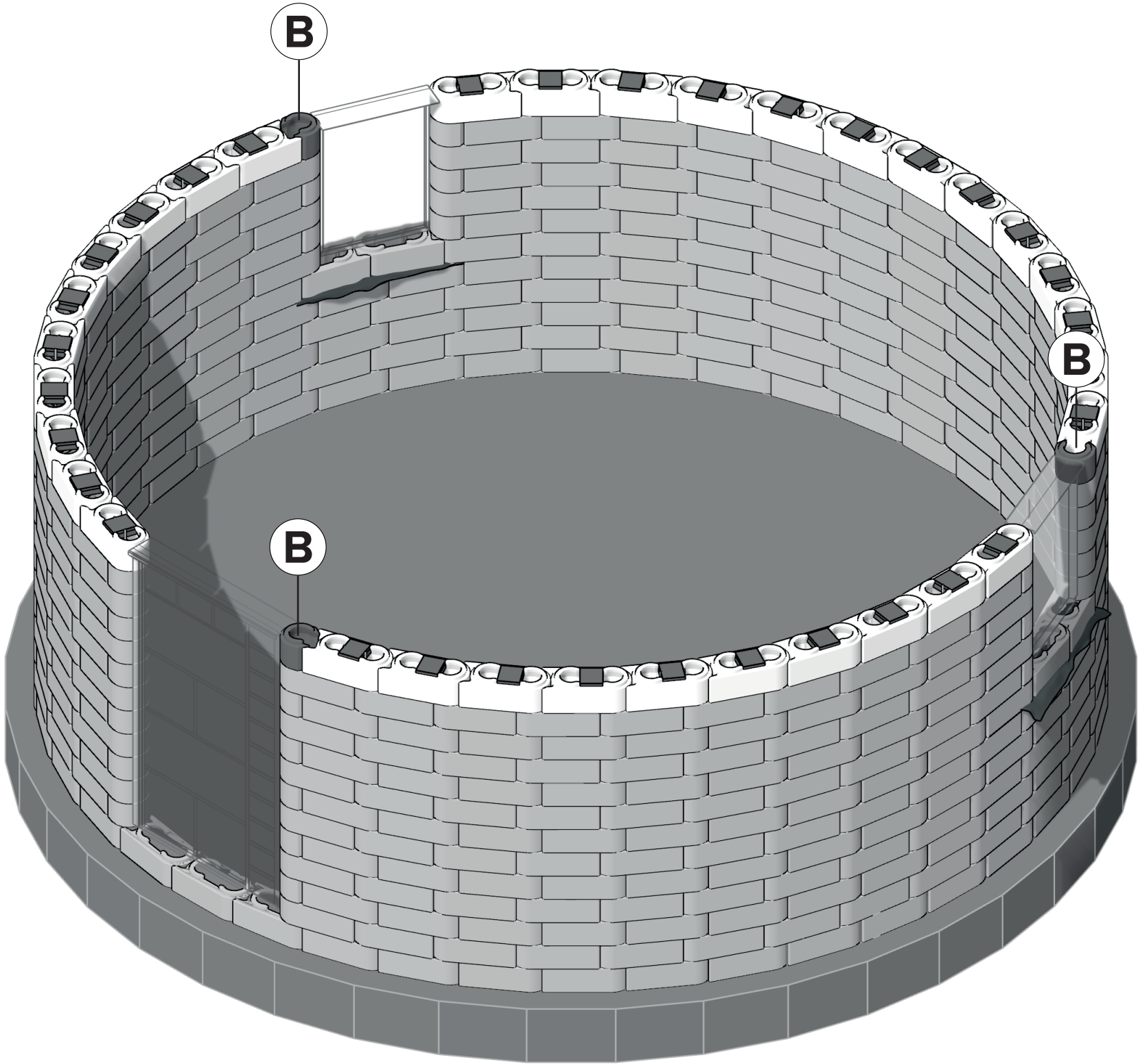
B
x3



C
x66



D
x33



1.

Guide the filler plate from above and the clamps from below into the TBs.

2.

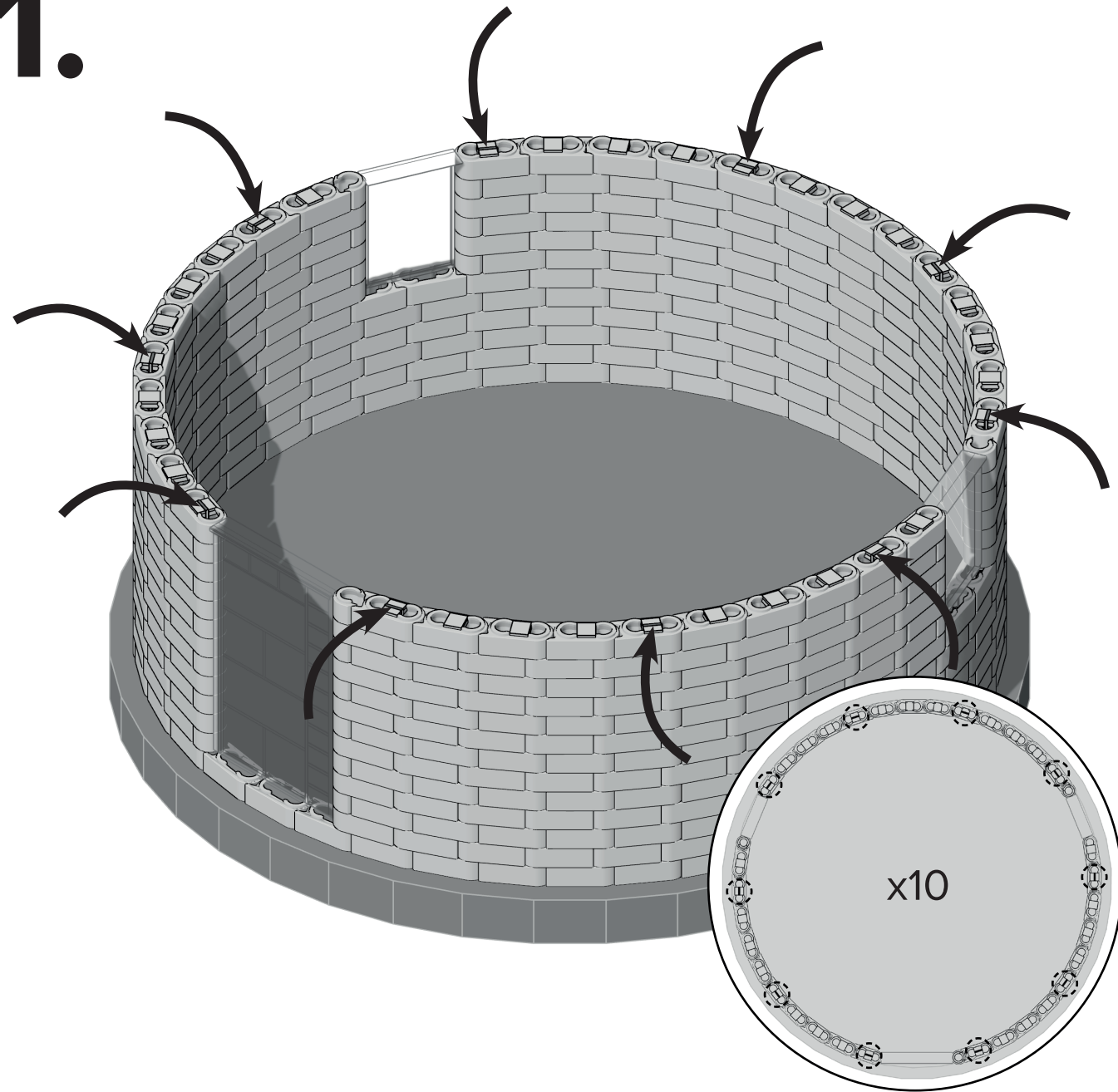
Nail the construction together at a slightly oblique angle.

3.

Place the TBs with the filler plate as last row.

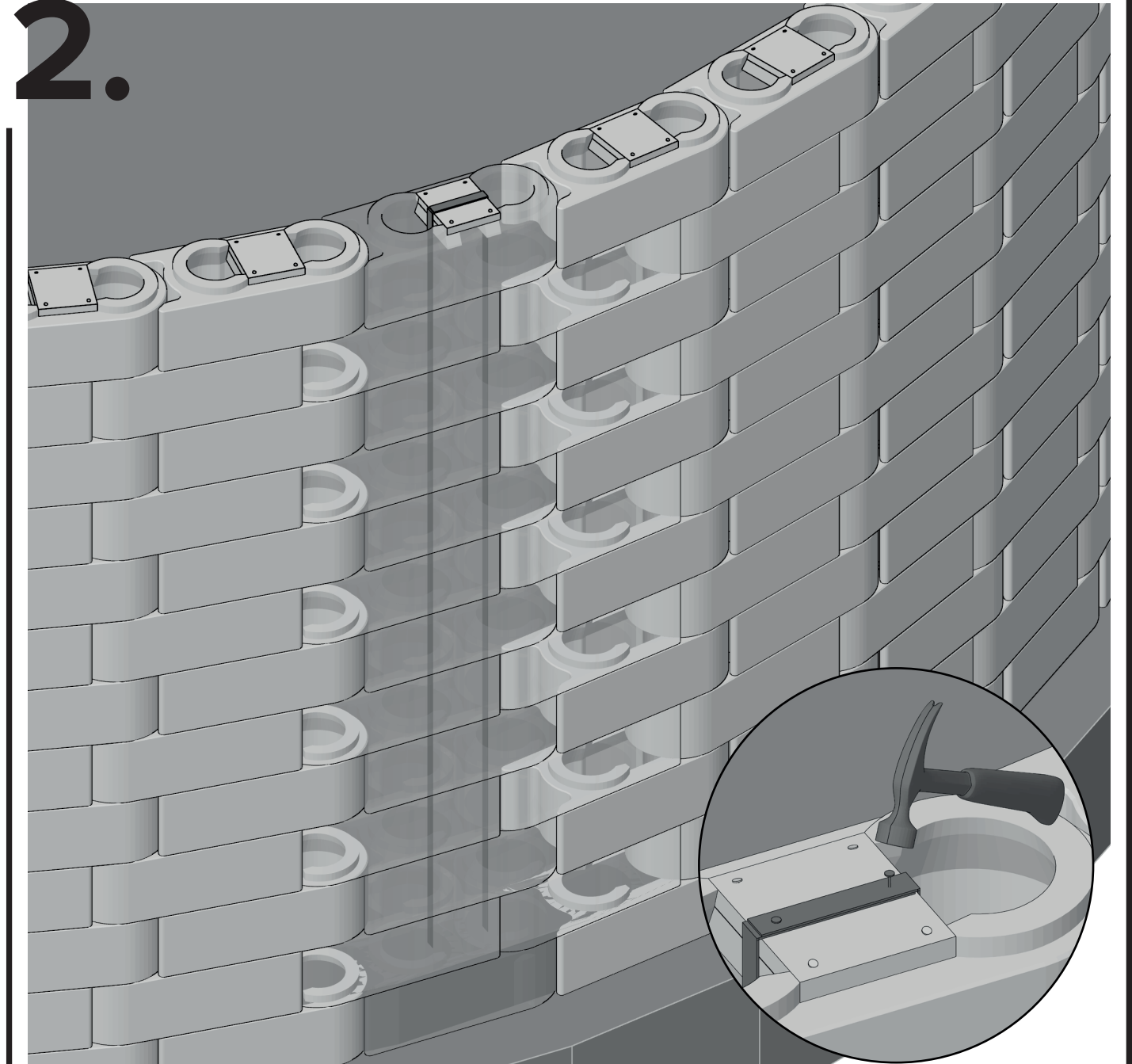
Ring beam construction

1.



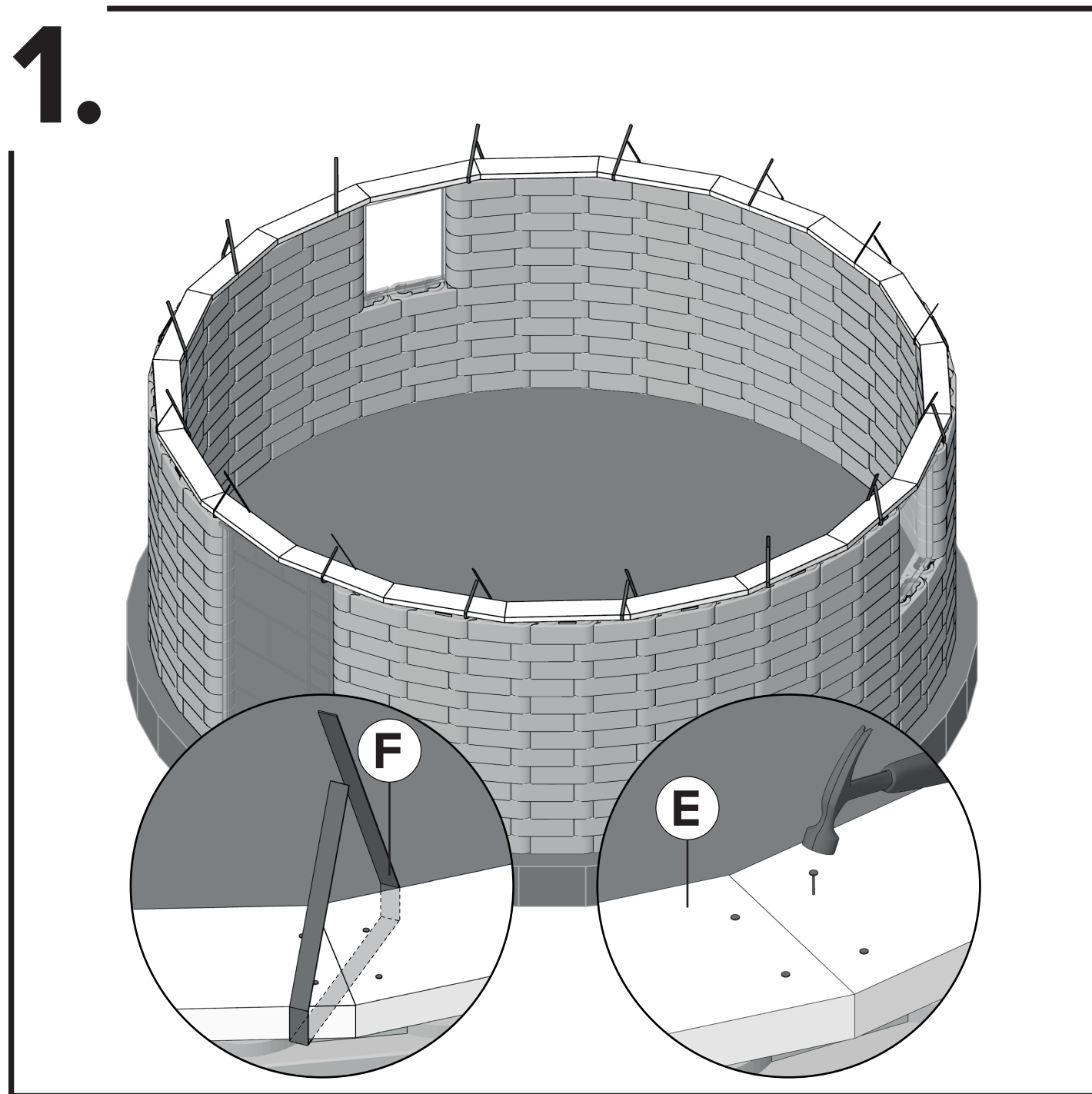
Anchor top-row to foundation to hold them down securely, preventing displacement due to wind, seismic activity, or other external loads.

2.



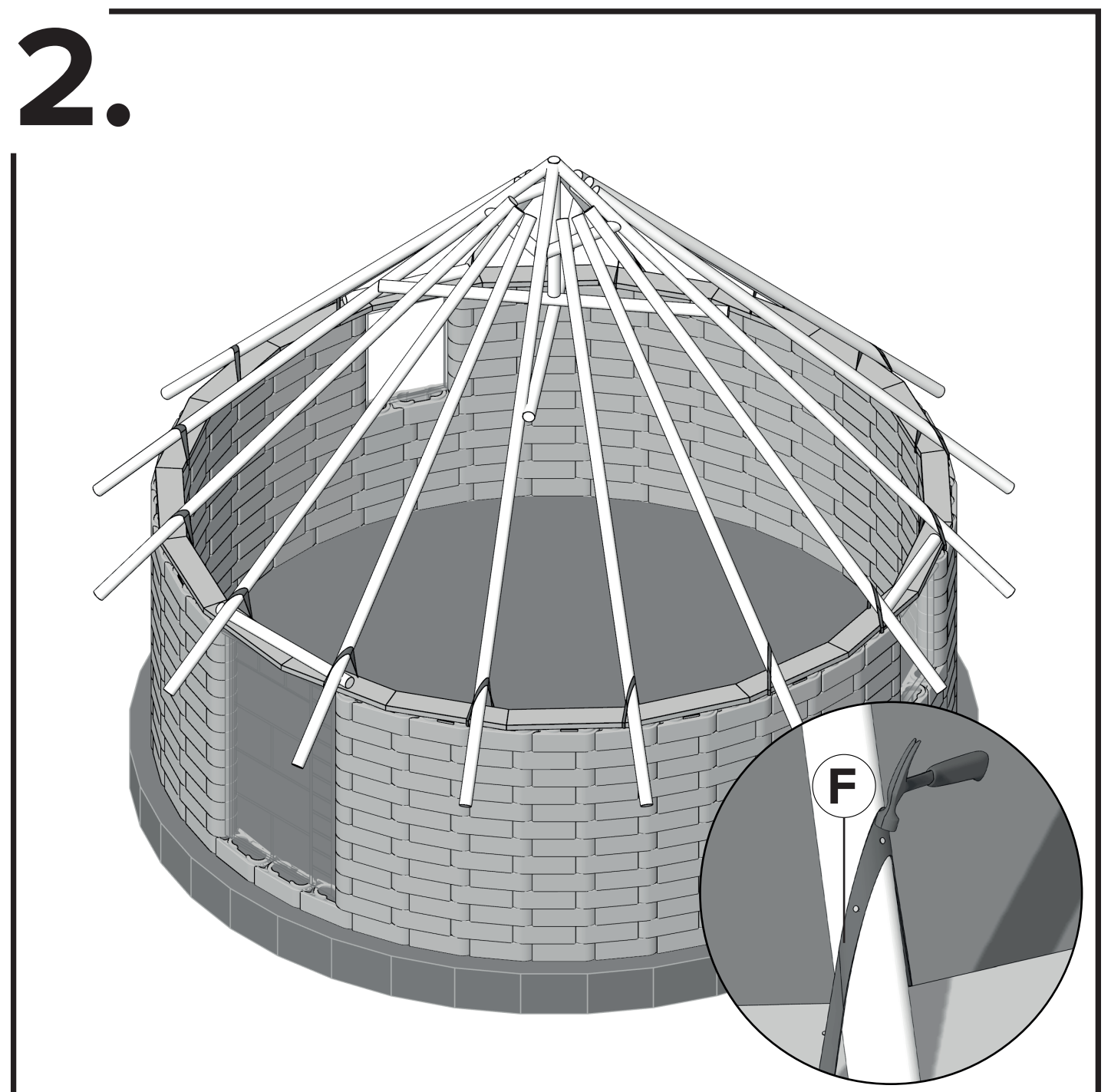
Do this by pulling the hoop irons—connected to the foundation—tight over the anchor element and nailing them down securely.

1.



Prepare a hoop iron for each rafter and clamp it under the stiffening beam, then nail the stiffening beam securely to each anchor element.

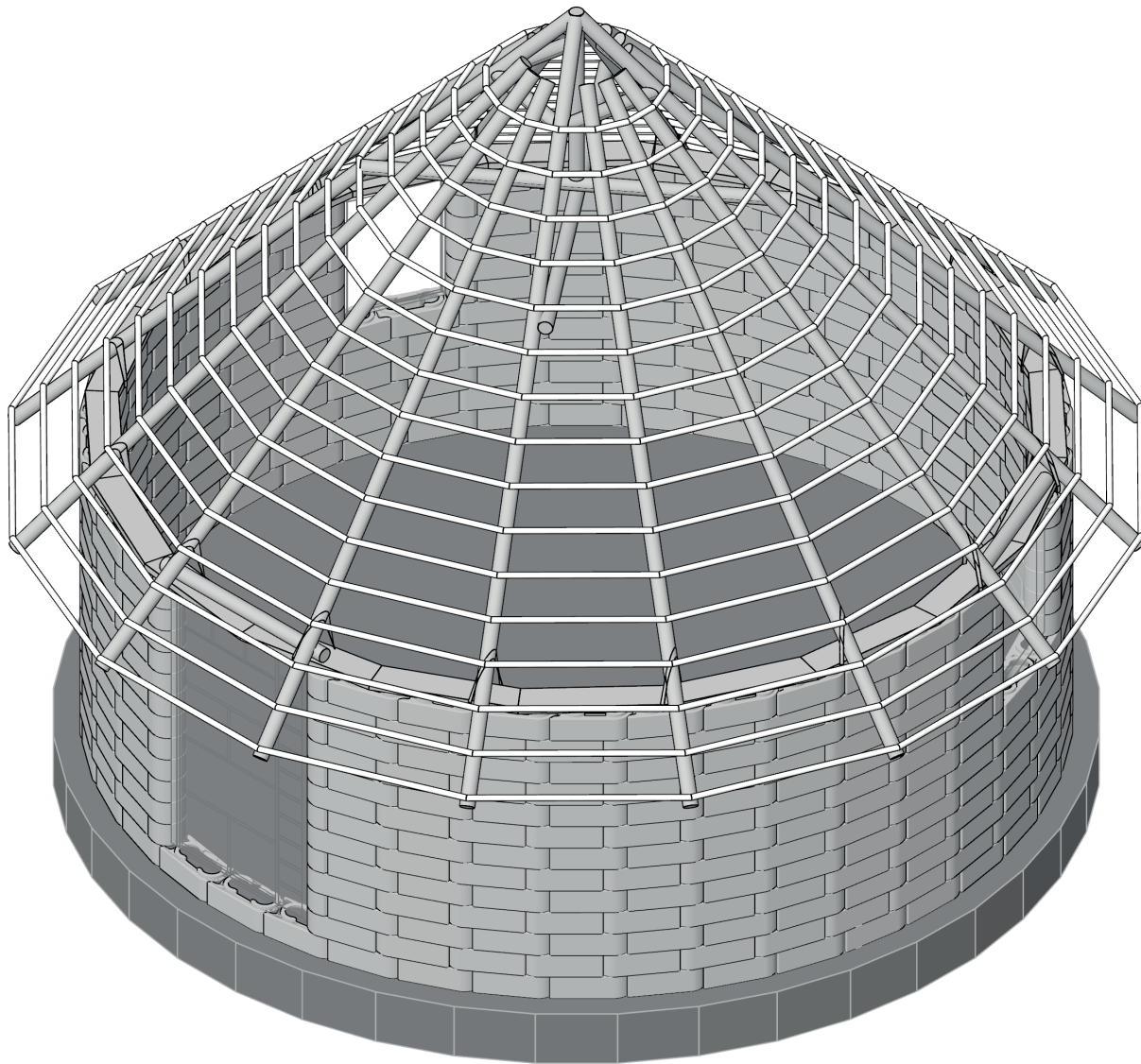
2.



Assemble the roof following local standards and recommended practices. The illustrated structure serves as a suggestion only. Use hoop irons to secure the rafters.

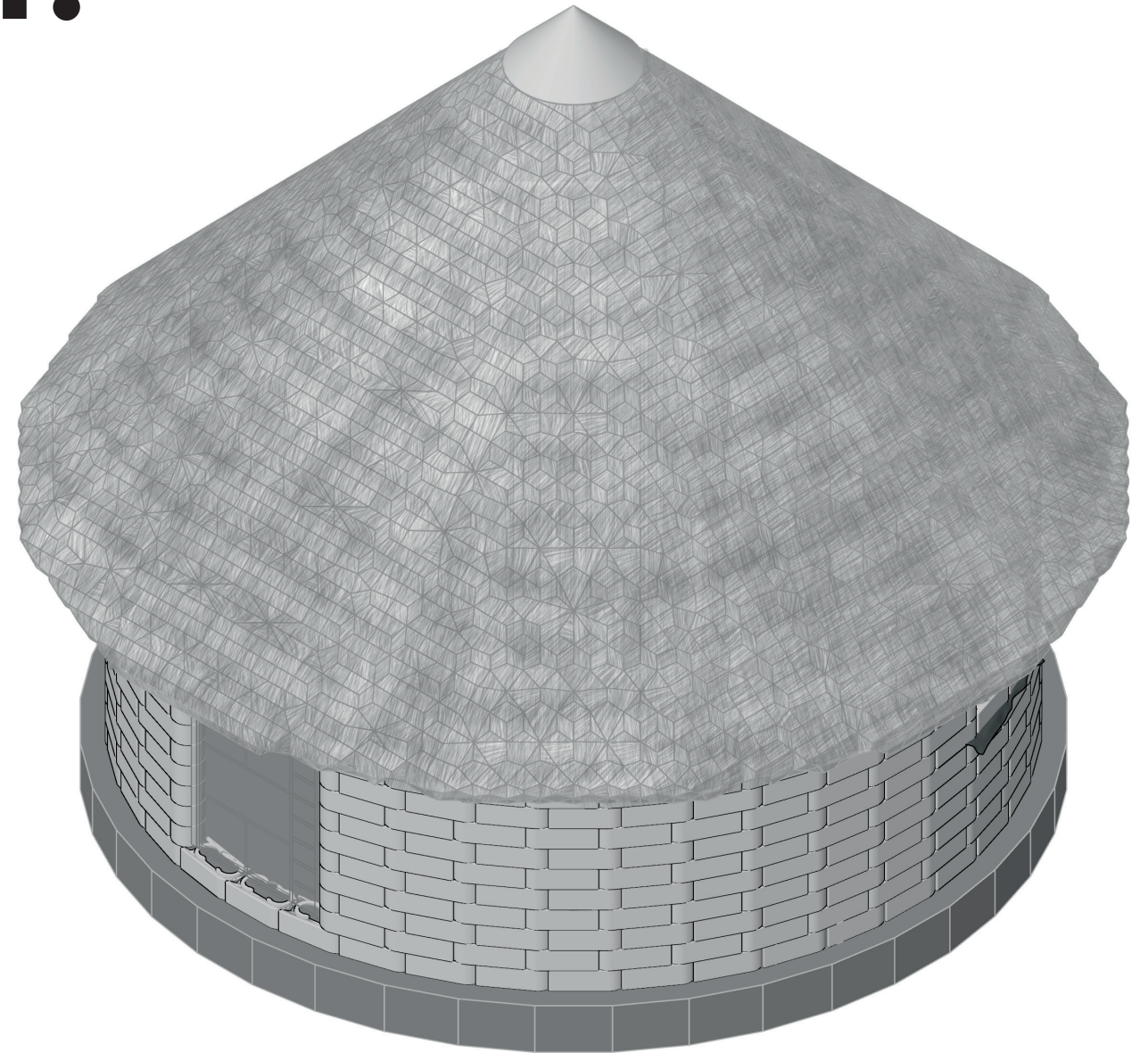


3.



Fasten the purlins with a maximum center distance of 30cm to the rafters.

4.



Thatch the structure to local standards and techniques, or use corrugated sheet metal if desired.