



The Plastic Flamingo.

PLASTIC RECYCLERS

INTRODUCING THE TRANSITIONAL
SHELTER STARTER-KIT

CONSTRUCTION MATERIALS MADE FROM PLASTIC WASTE

July 2022



WHO IS THE PLASTIC FLAMINGO?

The Plastic Flamingo is a French Filipino social enterprise that recycles plastic waste in the Philippines. Through the process of collecting, sorting and shredding, their factory recycles plastic waste into durable new products that are implemented in projects like decking, fencing & outdoor furniture.



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PLAF PRODUCTS

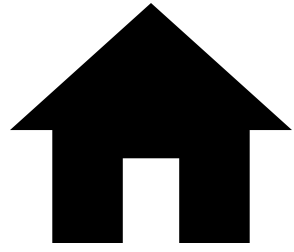
The Plaf has built their own shelter prototype to further test their products and see how plastic waste could potentially serve as a repair and rebuild material put to use in disaster struck areas where local material has become damaged and unusable. The Plaf offers a range of various construction materials that are highly durable, require low maintenance and are termite proof, thus making them suitable to rebuild after a storm and become part of the permanent housing over time.

PLAF'S MISSION

While focusing on their mission to tackle marine plastic pollution, they aim to do so through maximum social impact by hiring and training local forces from low income households. They are actively inspiring more changemakers to join their mission by giving countless webinars, numerous beach clean ups and children's workshops, spreading awareness & teaching our future generation on how to change our polluting habits.



Scan QR to visit our **website** or reach us at **hello@theplaf.com**



WHAT IS A TRANSITIONAL SHELTER ?

AN INCREMENTAL PROCESS

A transitional shelter is part of an incremental process which supports families affected by natural disasters. The local community is better able to recover, maintain, repair and extend their dwellings in the future when they fully take part in the process from the beginning. Locally appropriate solutions usually work best and therefore construction methods need to be familiar to those affected, requiring skills and tools that they have access to. (source: [global shelter cluster](#))

MADE FROM PLASTIC WASTE

The recycled Plaf construction materials can be implemented in this incremental process. Though it is a new material, it is workable like wood thus easy to work with by the local workforce. It's performance is more favorable however, providing a durable, termite-free and rot-proof product that can last longer compared to local traditionally used materials.



Transitional shelters can support disaster affected people between the emergency and the time when they are able to rebuild longer term housing. If well designed, the materials from the transitional shelters can be re-used for housing.

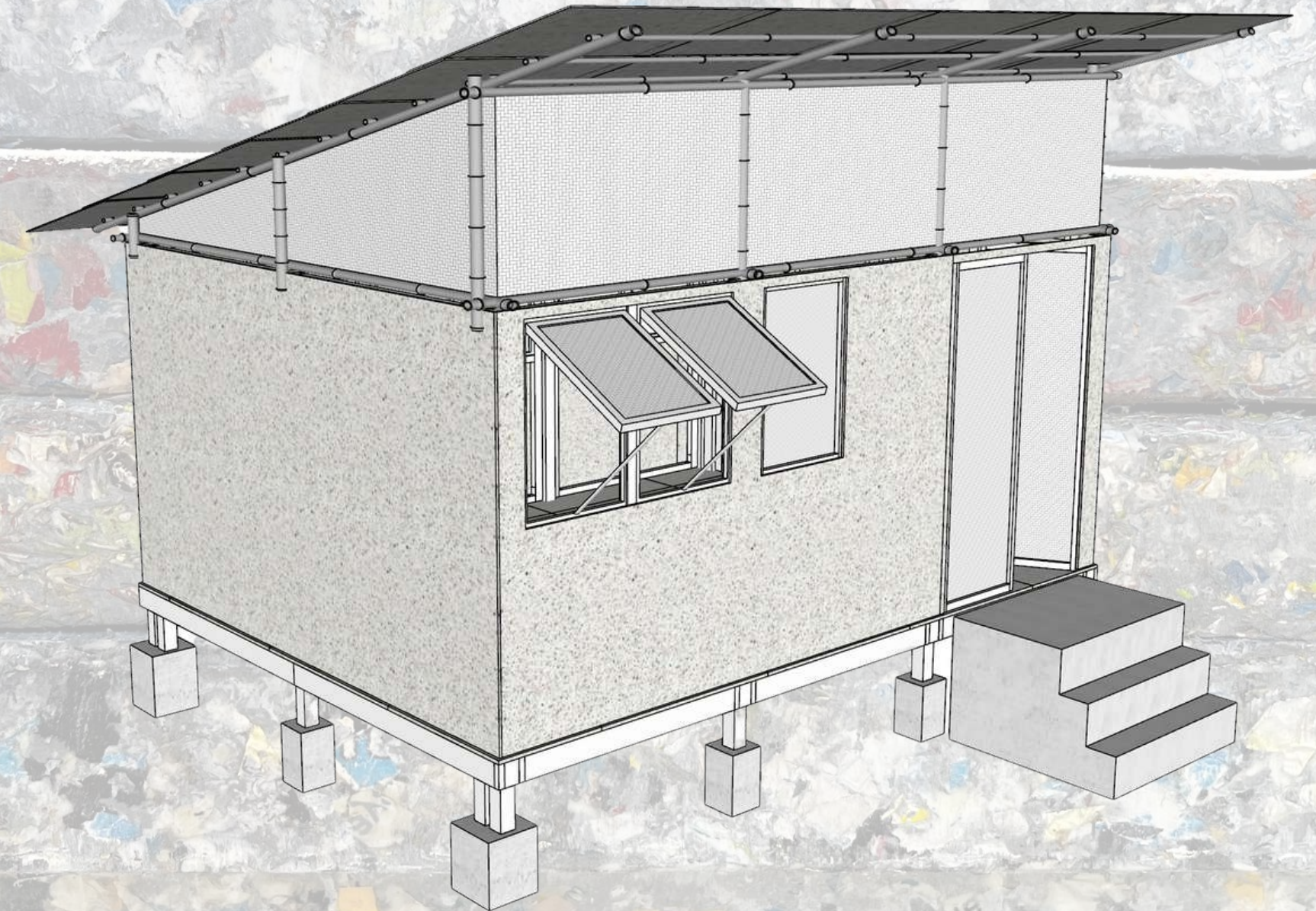
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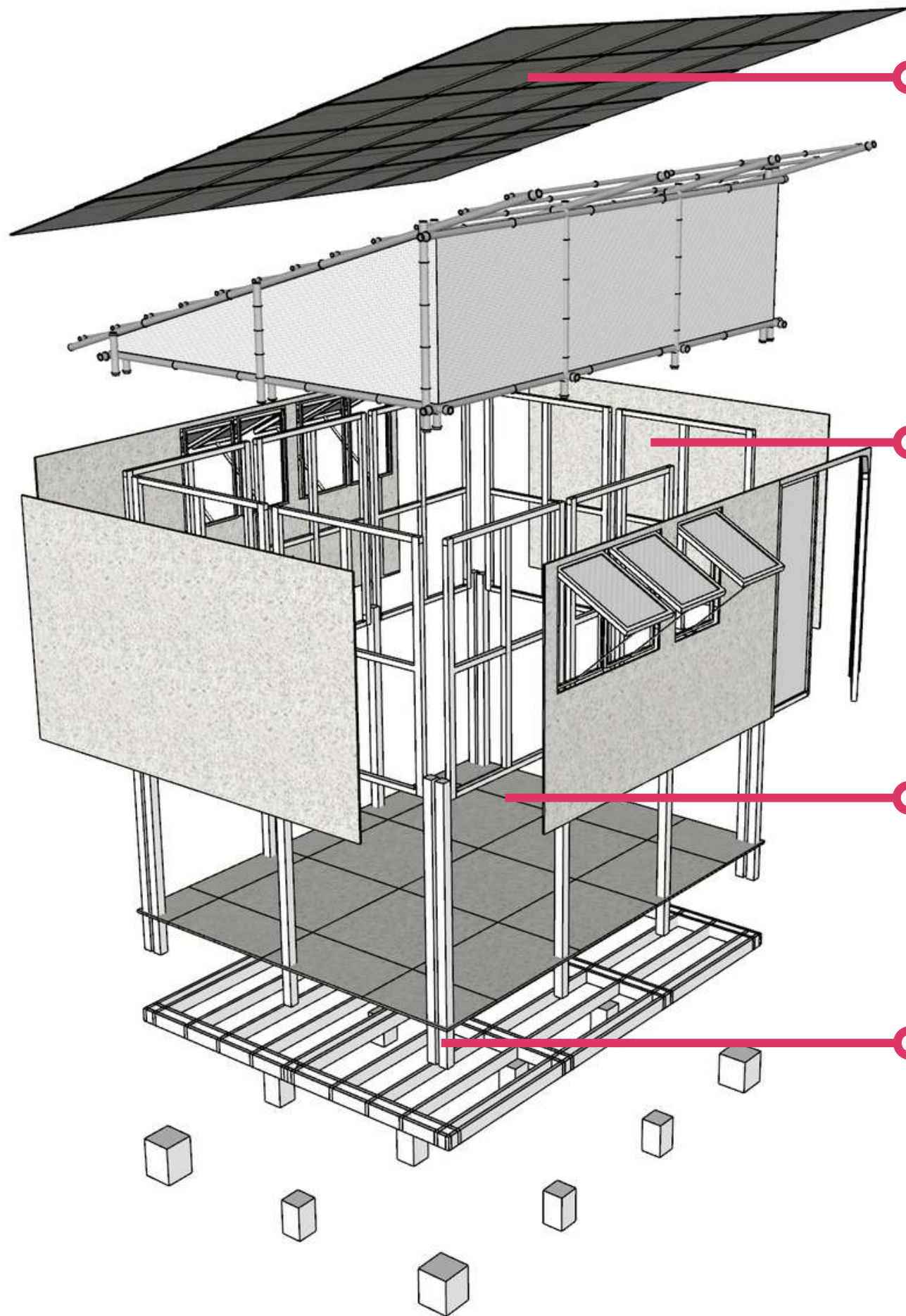




THE PLAF TRANSITIONAL SHELTER DESIGN

The shelter design is a recycled plastic framed structure on a grid of 4.8 x 3.6m. The stability is provided by the corner columns made from reinforced plastic posts tied together by horizontal planks at ground level. Secondary non-structural elements include: posts, battens and boards made from plastic waste. The columns are embedded into concrete foundations that sit directly on the ground. The height of the elevation and the highest point of the ridge of the roof differs per site, since it is dependent on numerous specifications like flood levels, local architecture & expertise. The roof structure shall be built with locally available materials, like for instance bamboo. The cladding is made with 10mm recycled plastic boards, painted, with a slight overhang to provide for some outdoor shade.





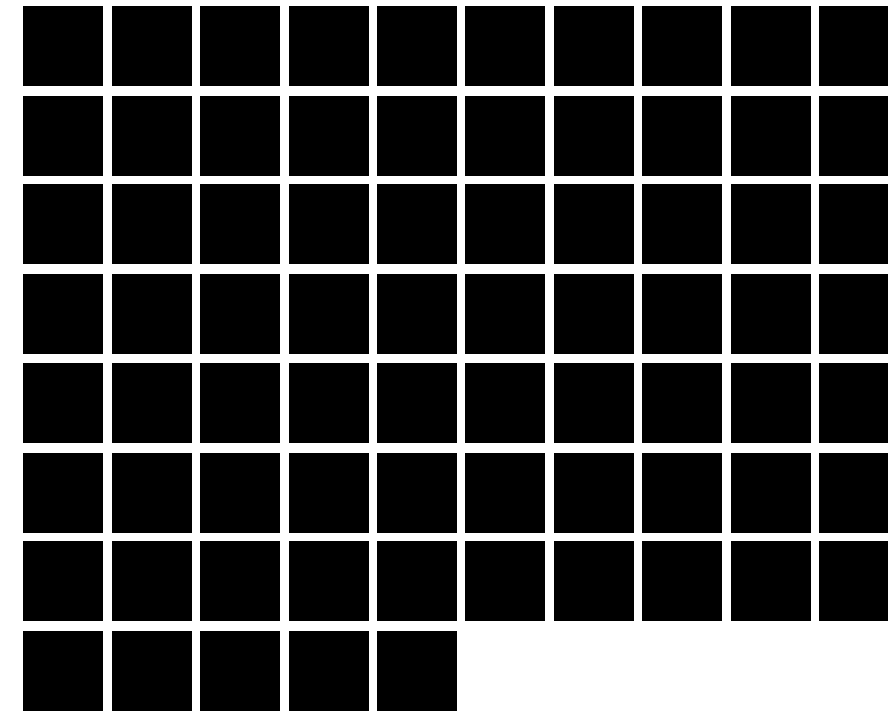
Roof cover
made from recycled plastic boards, 10mm edged & painted

Walls
panels made from recycled plastic battens, covered with 16mm thick boards

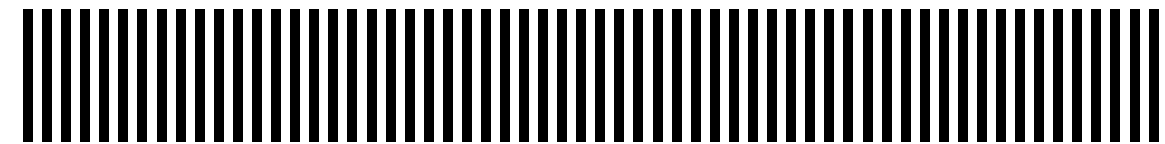
Floor
decking with 22mm boards on top of a floor frame made from recycled plastic planks

Grid
primary structure of columns made of posts & reinforced posts on a grid of 3.6 x 4.8m

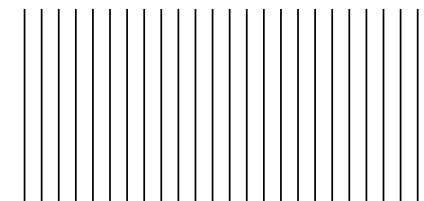
PLAF SHELTER STARTER-KIT



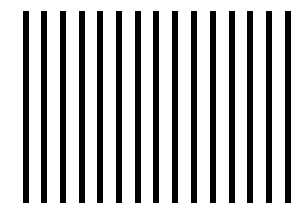
75 boards



60 planks



25 dos x dos



15 posts



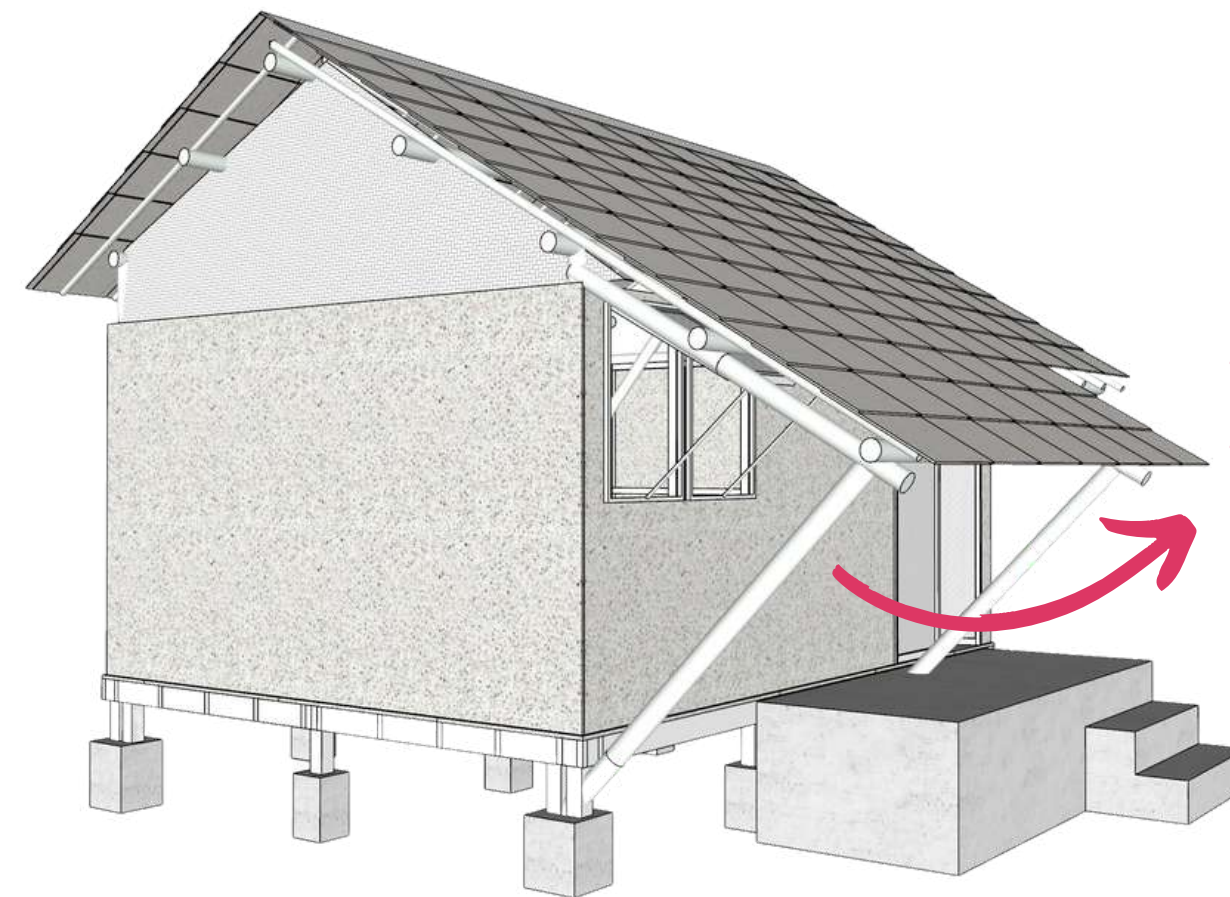
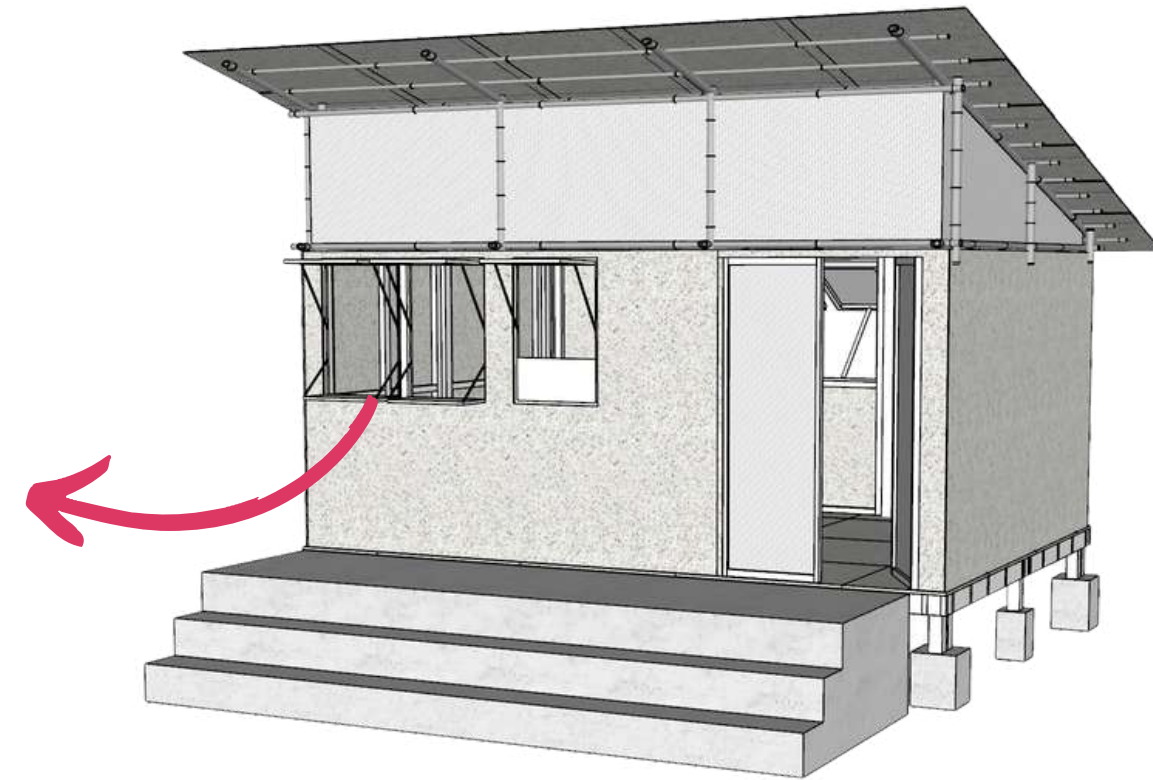
WHY BUY OUR SHELTER-KIT ?

The Plaf shelter-kit forms a starting base compiled of various construction materials made from plastic waste that are needed to build one shelter for a **family of 5**. Part of this transitional approach is to make sure everyone is involved in the process. Local governments, organizations and, above all, local communities can sit down and draw out their plans based on this existing grid.

Local building techniques and specifics of the site (like possible flood levels, wind & sun direction) need to be incorporated, to make sure this transitional shelter can eventually become a permanent and loving home. With this starter-kit, primary essential and durable building materials are provided, yet each home can have its own character, that has been **co-designed by each house owner**.

Design variation
This family had their own sari sari store so created their own windows.

They invested in a raised platform for their clients.



Design variation
this family wanted more outdoor shade so lowered the roof and created more overhang.

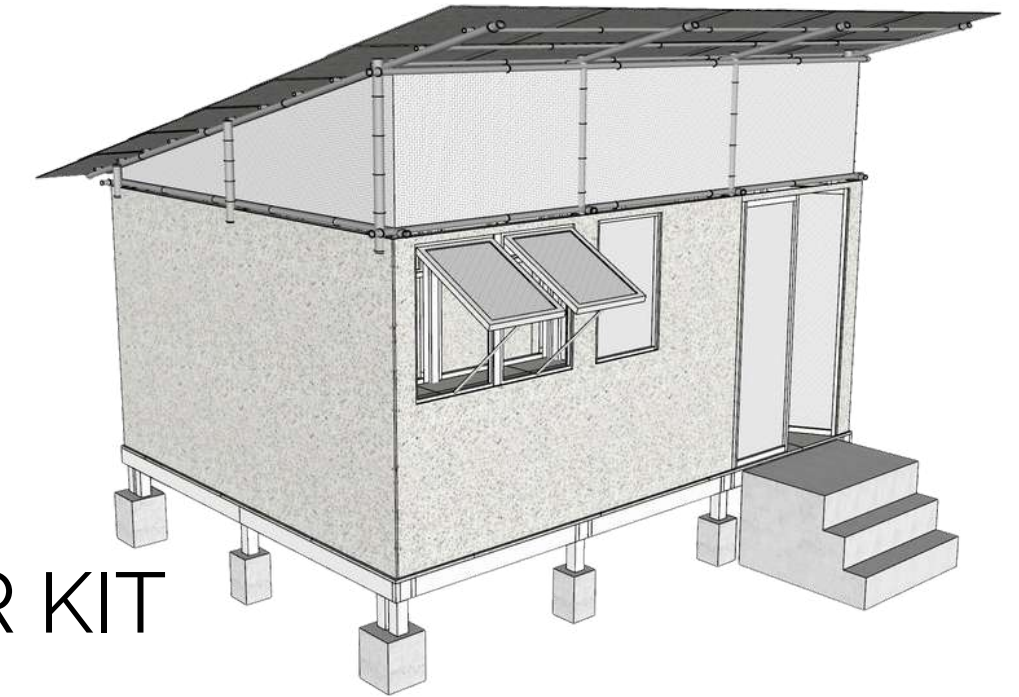
Here, they spent time cooking, washing and the children like to play games.



THE PLAF TRANSITIONAL SHELTER-KIT

SUMMARY

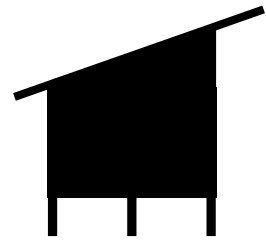
 Type	Transitional shelter of 3.6m x 4.8m for post disaster communities (for a 5 member household)
 What	Starter-kit with recycled plastic products
 Time to build	5 to 10 days with 5 people
 Life span	10+ years
 Price	3,000\$ per starter-kit
 Recycle Plastic	2.2 tons per starter-kit
 Included	primary structure, wall panels, floor frame with decking and roof cover
 Excluded	Locally procured materials (roof frame, footings, window- and door panels, equipment & workforce)
 Total costs	Approximately 5,000\$ per shelter (roughly 300\$/m ²)



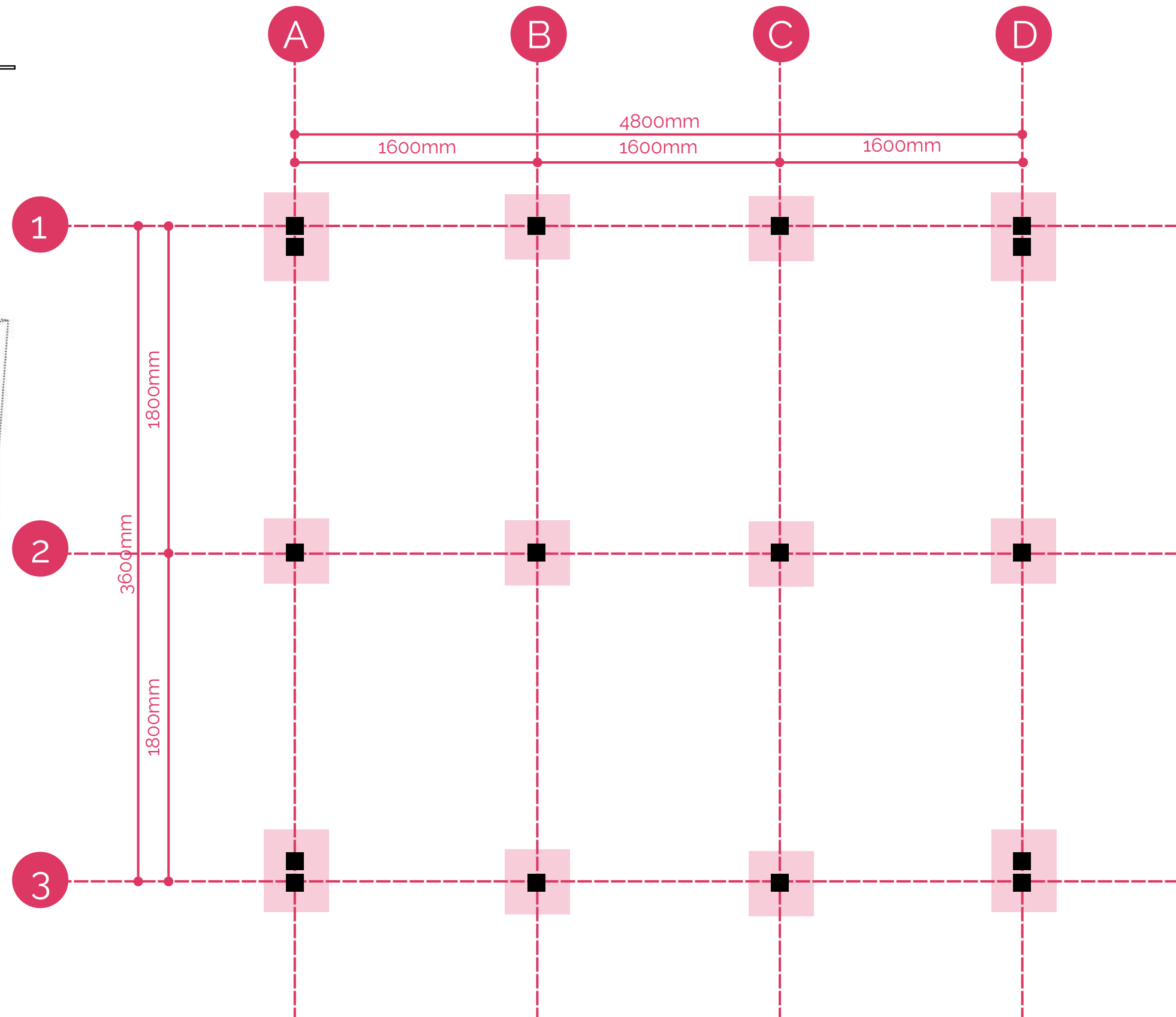
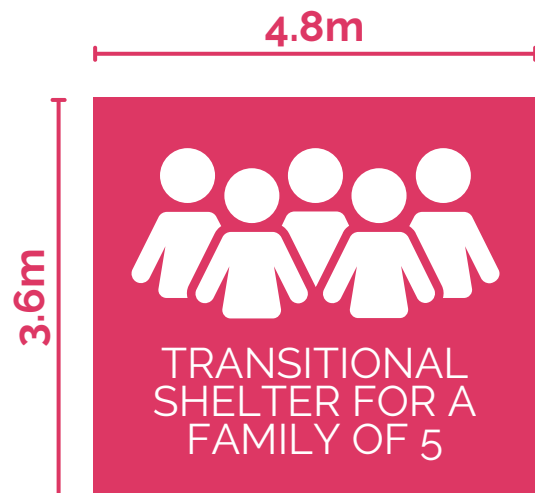
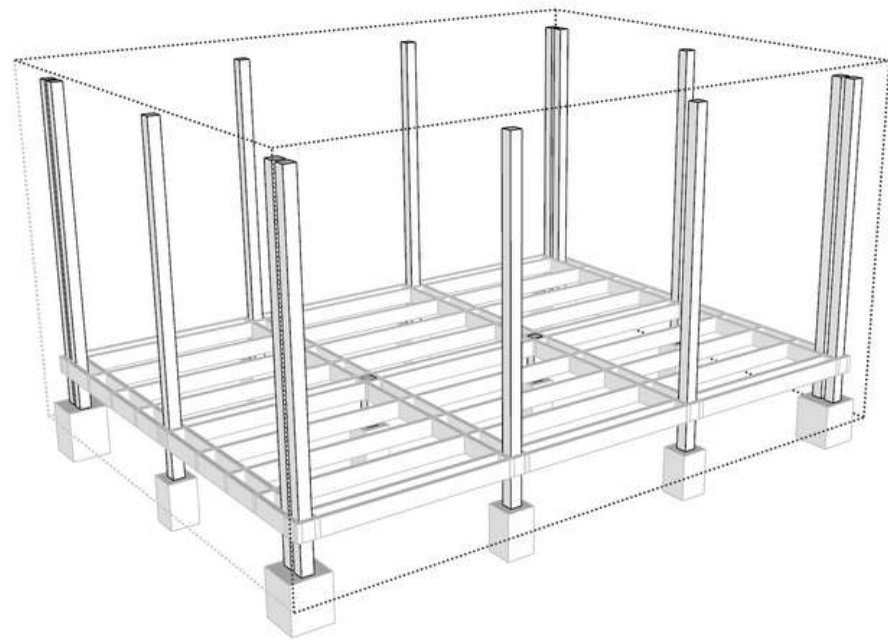
PRICE PER KIT

	Roof cover
30 pcs	boards, 10mm, interlocking, painted & edged
	Walls
25 pcs	dosxdos, 5x5x300cm
25 pcs	boards, 16mm, natural finish
	Structure
8 pcs	reinforced posts, 9x9x300cm
7 pcs	posts, 9x9x300cm
	Flooring
20 pcs	boards, 22mm
60 pcs	planks, 3.5x13x200cm

3,000 \$



THE PLAF TRANSITIONAL SHELTER-KIT



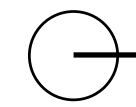
Plaf Shelter Kit

Project

July 2022

Date

Client



N.T.S

Foundation plan

Title

04-RF

Drawing No.

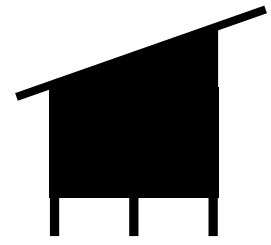


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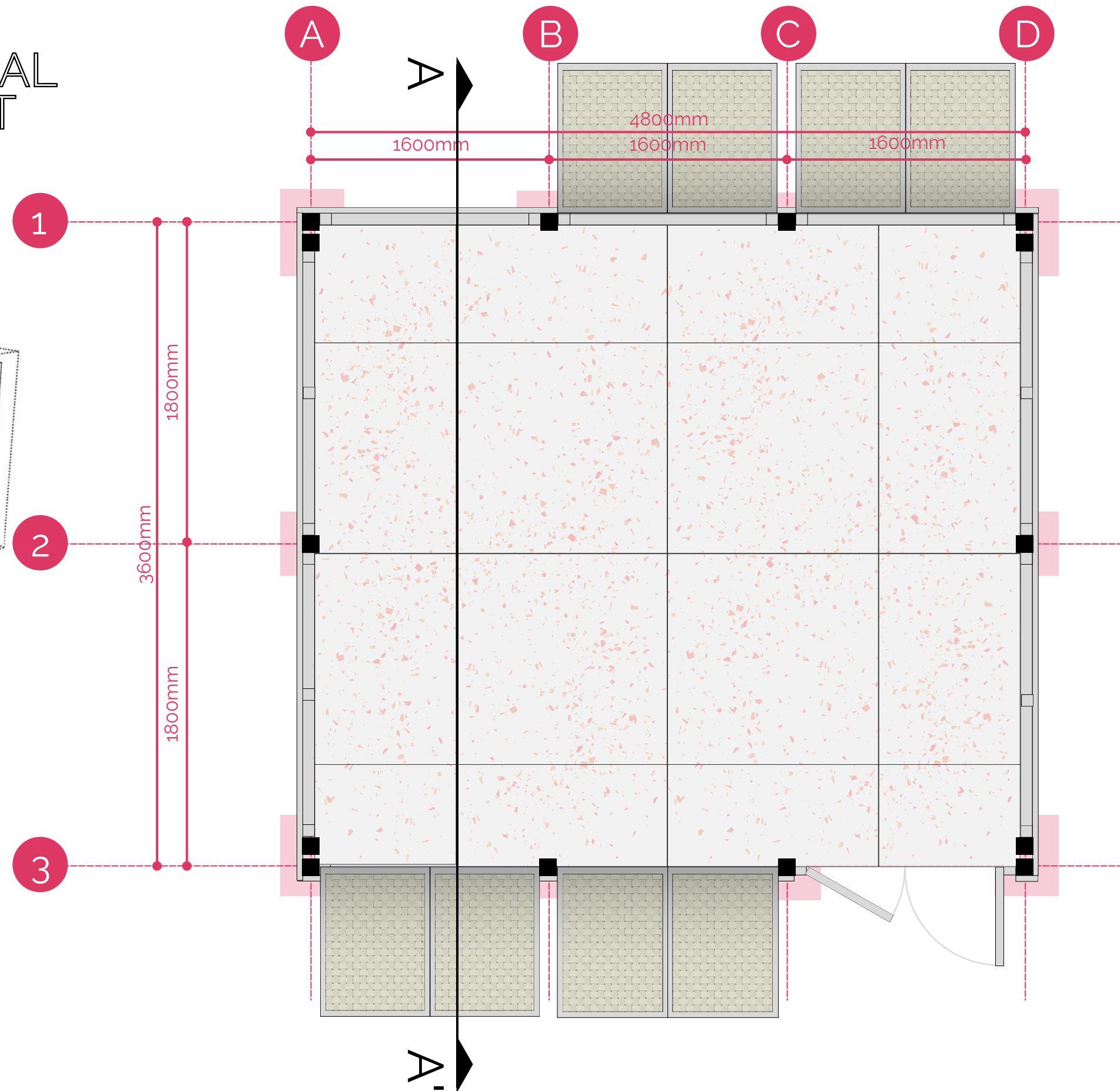
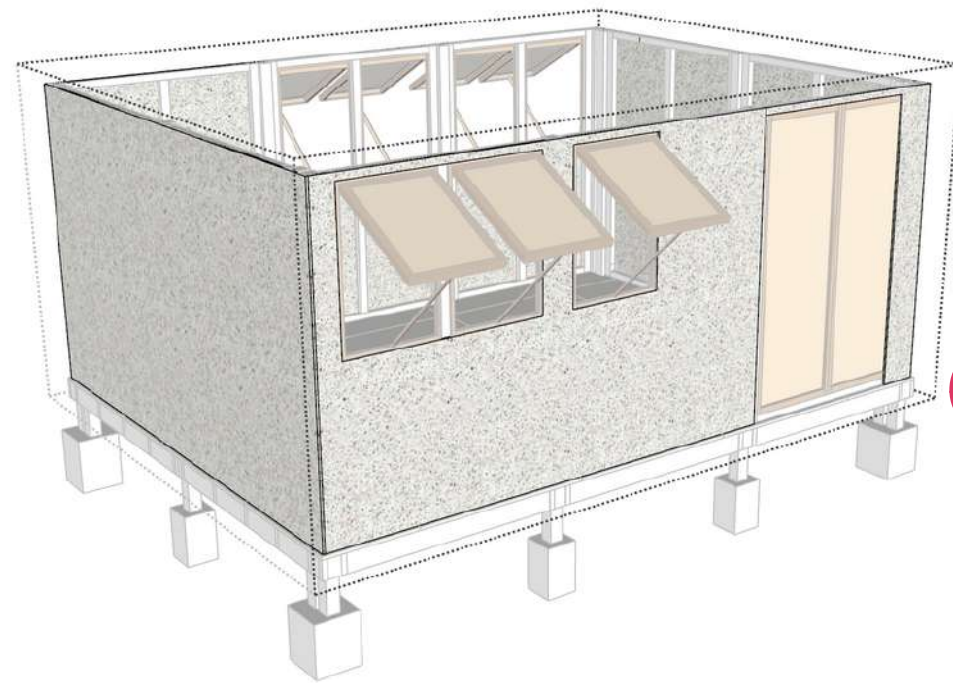
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THE PLAF TRANSITIONAL SHELTER-KIT



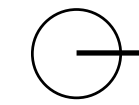
Plaf Shelter Kit

Project

July 2022

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Floor plan

Title

04-RF

Drawing No.



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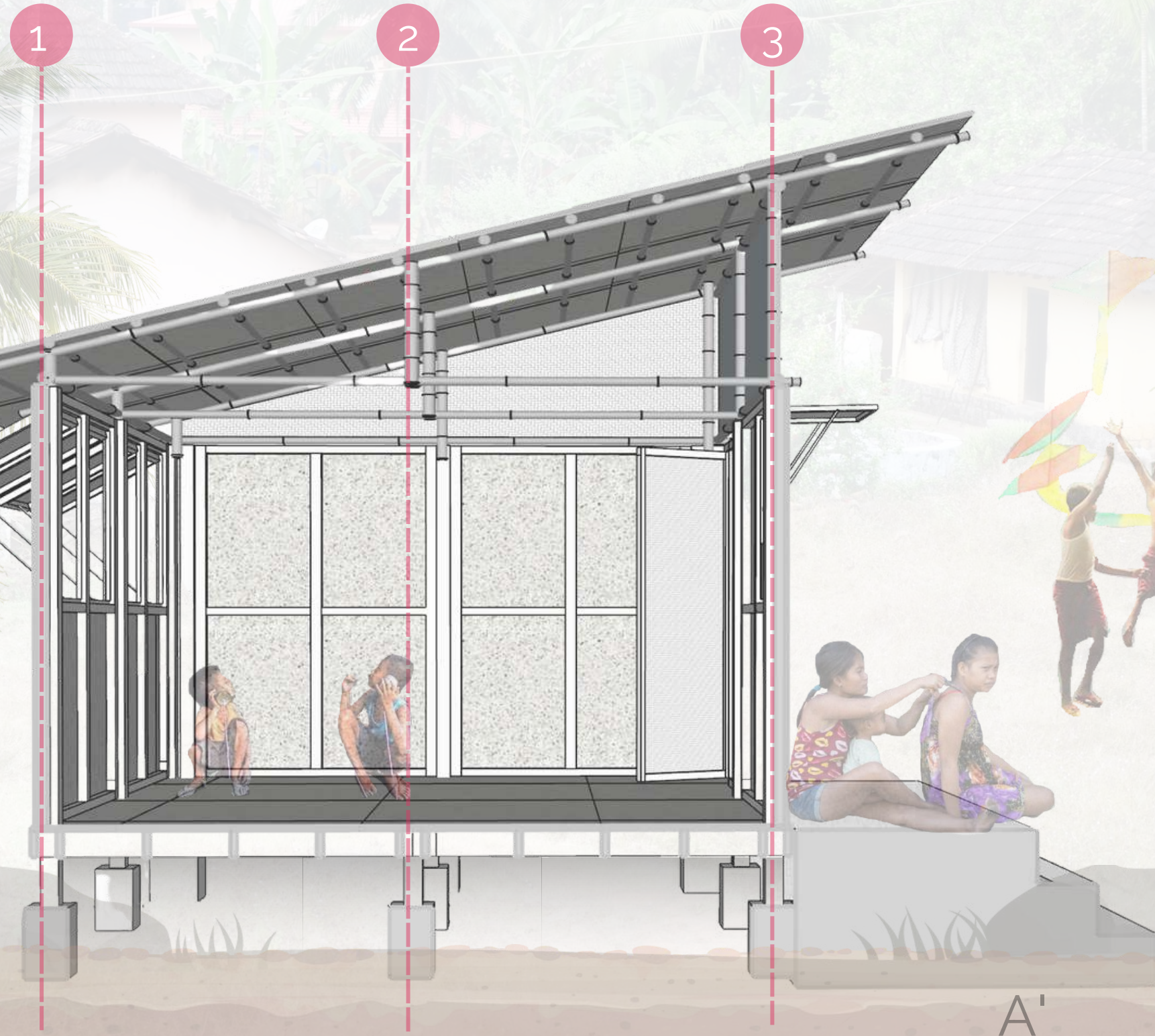
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THE PLAF TRANSITIONAL SHELTER-KIT



Plaf Shelter Kit

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Section AA'

Title

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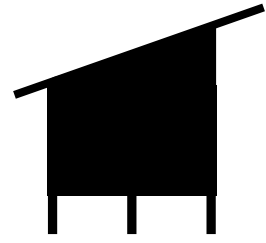


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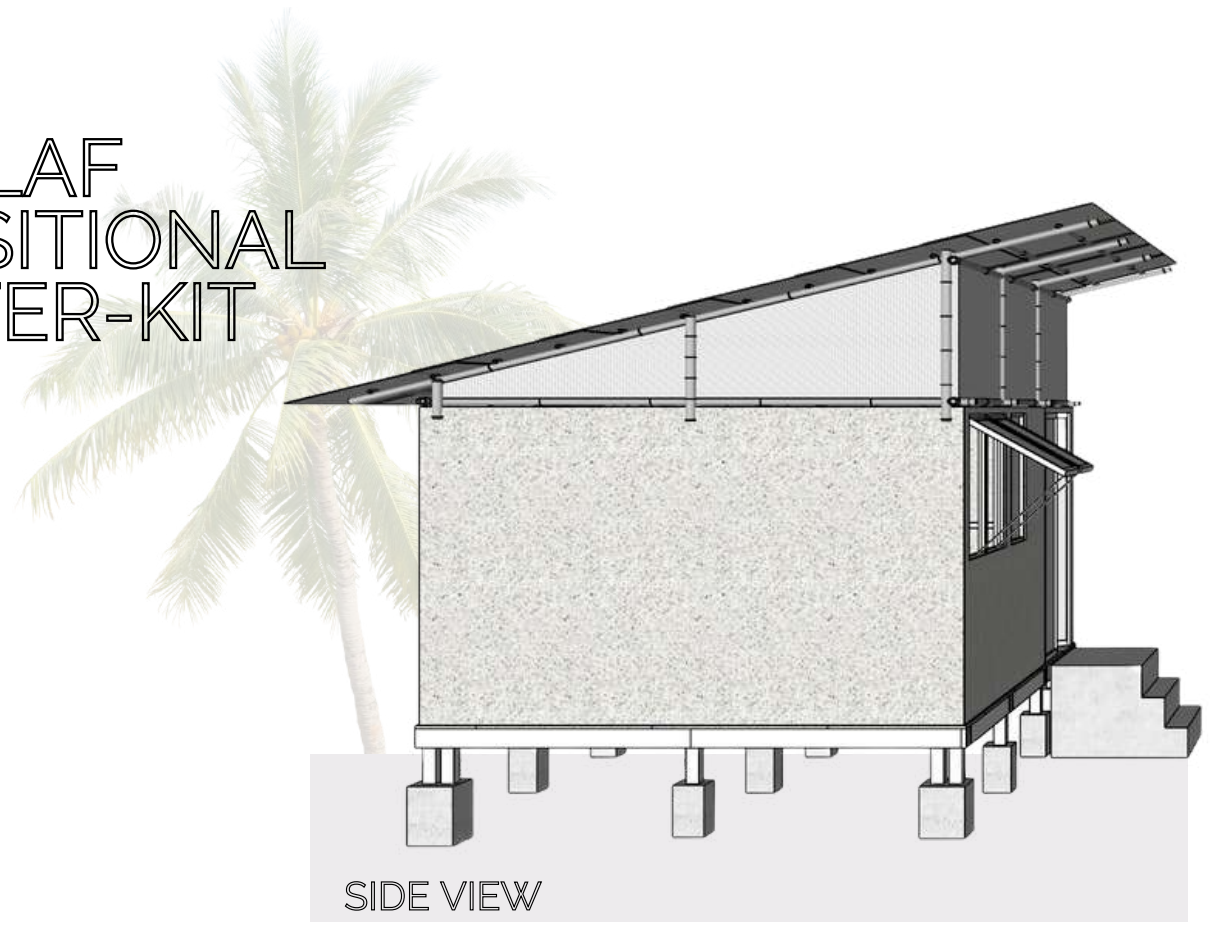
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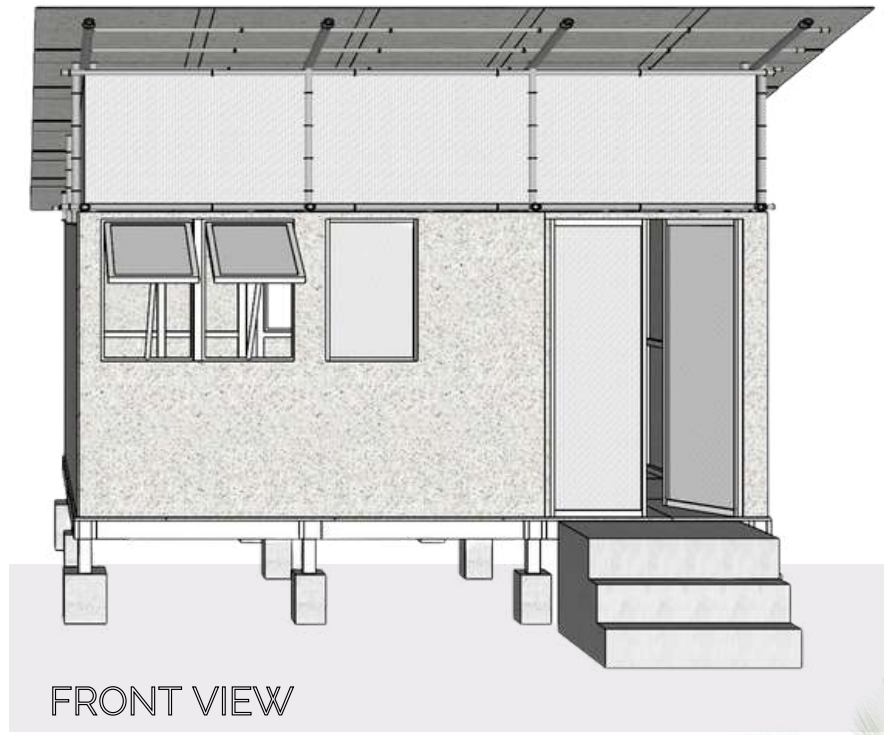
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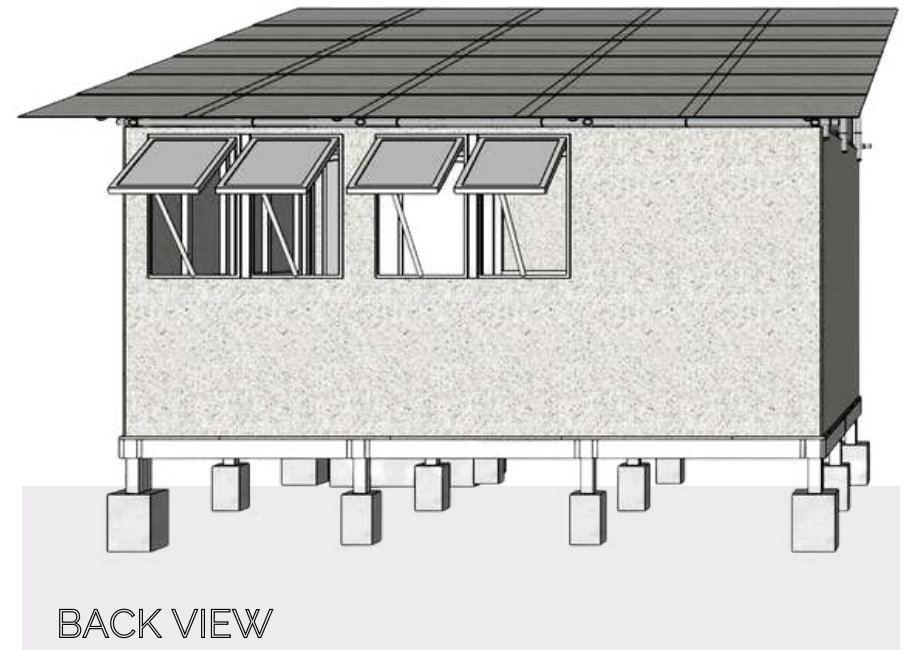
THE PLAF TRANSITIONAL SHELTER-KIT



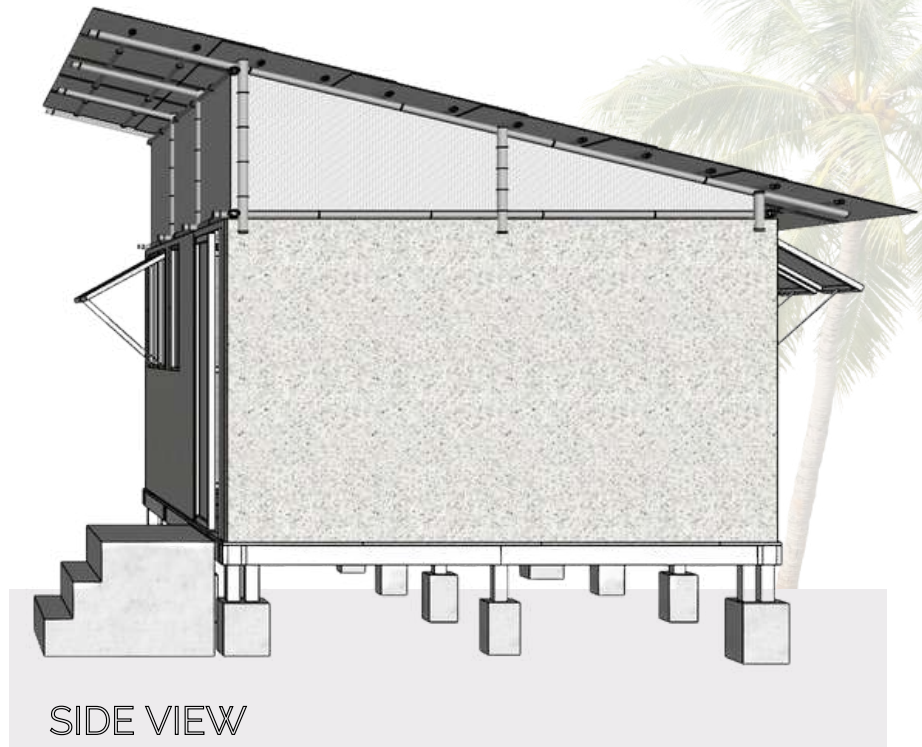
SIDE VIEW



FRONT VIEW



BACK VIEW



SIDE VIEW

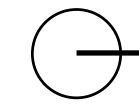
Plaf Shelter Kit

Project

July 2022

Date

Client



N.T.S

Elevations

Title

04-RF

Drawing No.



Scan QR to visit our **website** and check out our first prototype!

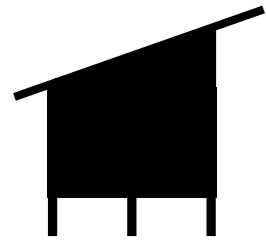


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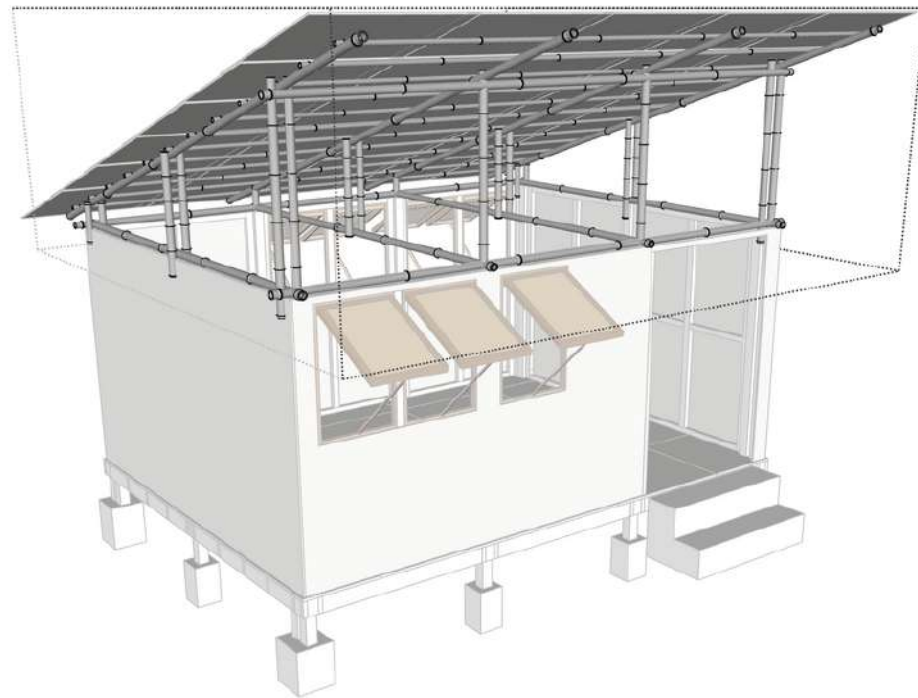
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THE PLAF TRANSITIONAL SHELTER-KIT



01 06 11 16 21 26

LEFT ROOF PANEL

03 08 13 18 23 28

CENTER PANEL

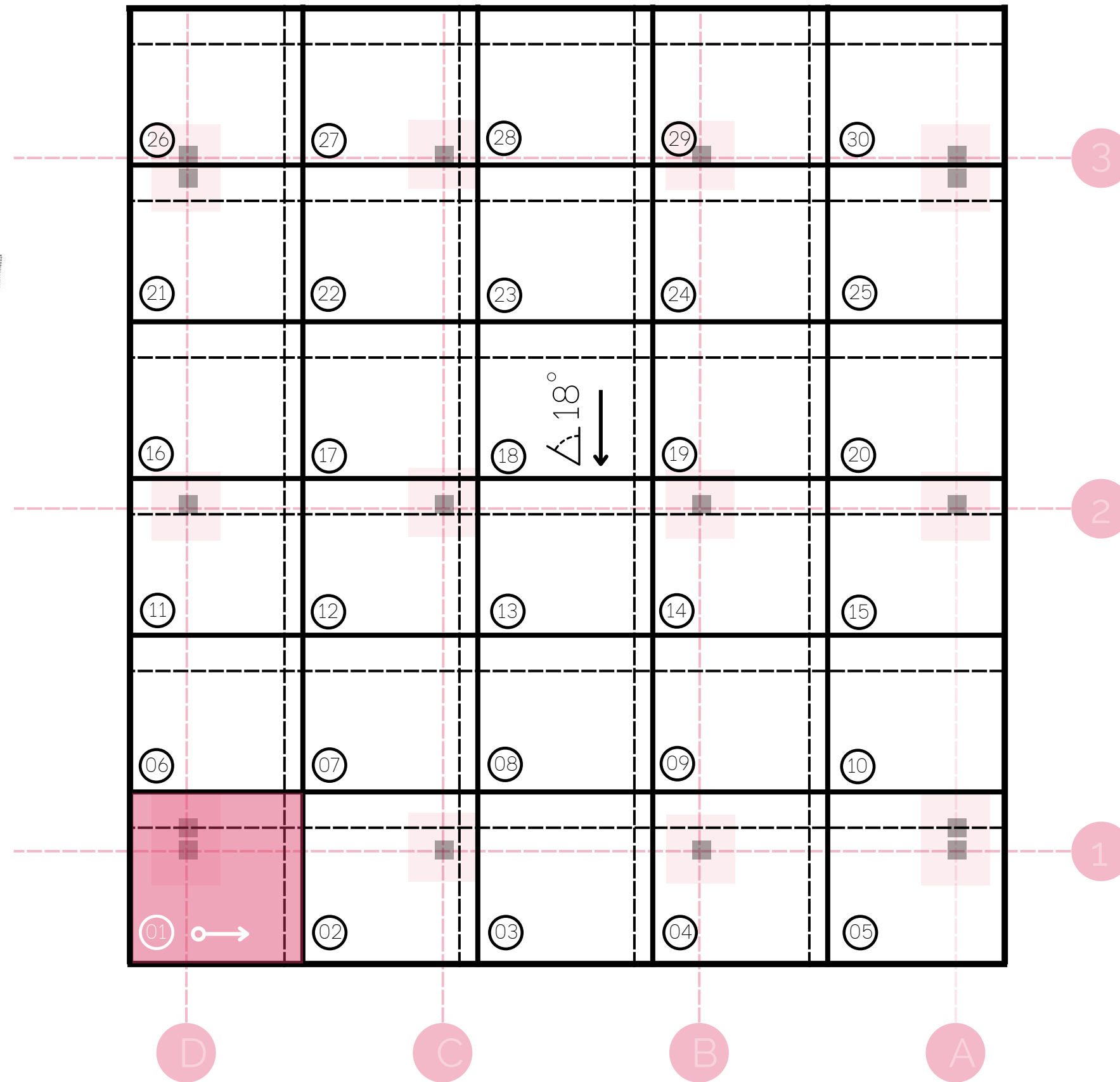
02 07 12 17 22 27

04 09 14 19 24 29

MID PANEL

05 10 15 20 25 30

RIGHT ROOF PANEL



Plaf Shelter Kit

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Roof plan

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THE PLAF
TRANSITIONAL
SHELTER-KIT

Plaf Shelter Kit

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Material overview

Title

05-MO

Drawing No.



reinforced posts
90x90x300cm

posts
90x90x300cm

planks
35x130x200cm



dos x dos
5x50x300cm

boards | 10mm | 16mm | 22mm
120x120cm

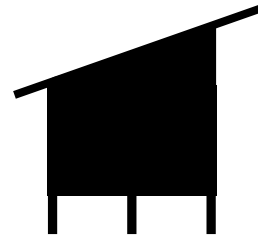


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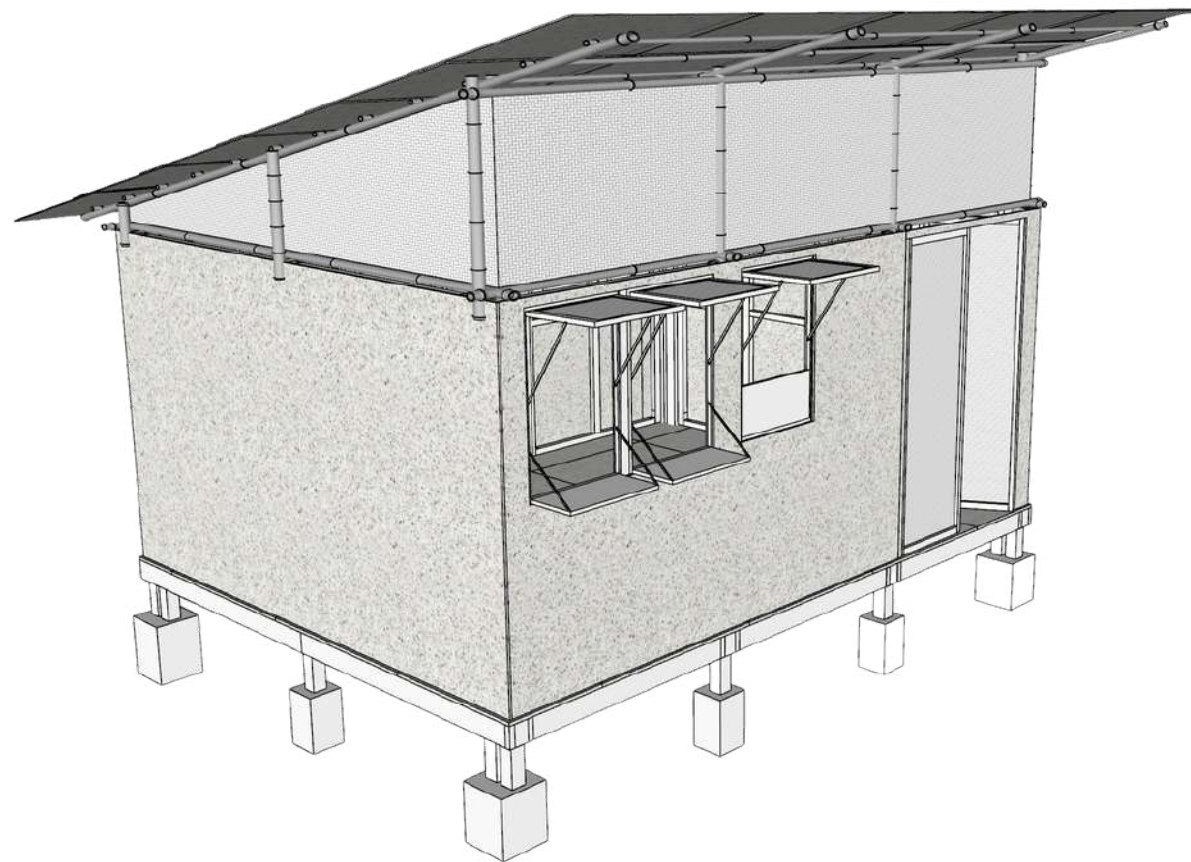
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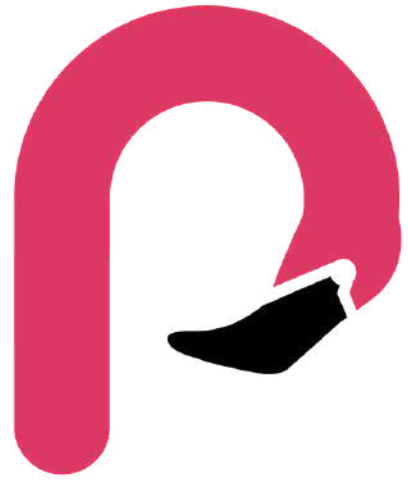


THE PLAF TRANSITIONAL SHELTER-KIT



*Unit prices of the PLAF products are as of July 2022 and are subject to change. Unit prices for the items not included in the kit are rough estimates only.

PLAF Starter-Kit*		Product type	Units	Unit price	Price (PHP)	Price (USD)
1	Columns 9x9cm, reinforced*	Post 9x9x300cm	8	₱3,000.00	₱24,000.00	
2	Floor frame	Plank 13x3.5x200cm	60	₱1,000.00	₱60,000.00	
3	Columns 9x9cm, stiffening structure	Post 9x9x300cm	7	₱2,000.00	₱14,000.00	
4	Fassade 16mm	Board 10mm 120x120cm	25	₱500.00	₱12,500.00	
5	Wall panels to support fassade	dos x dos 5x5x300cm	25	₱1,000.00	₱25,000.00	
6	Decking 22mm	Board 22mm 120x120cm	20	₱600.00	₱12,000.00	
7	Roof tiles	Board 16mm 120x120cm	30	₱400.00	₱12,000.00	
8	Treatments & Finishing (rooftiles)	n.a.*	30	₱250.00	₱7,500.00	
Subtotal starter kit					₱167,000.00	\$3,006.00
Items not included in the PLAF starter-kit*						
9	reinforced concrete footings		1	₱12,000.00	₱12,000.00	
10	concrete entry steps		1	₱2,500.00	₱2,500.00	
11	Miscellaneous (bolts, metal brackets)		1	₱7,000.00	₱7,000.00	
12	Bamboo/wood for roof structure		1	₱15,500.00	₱15,500.00	
13	Doors & windows (woven bamboo)		1	₱5,500.00	₱5,500.00	
14	mosquito nets & cover roof frame		1	₱3,000.00	₱3,000.00	
15	Scaffolding		1	₱3,000.00	₱3,000.00	
16	Labour		1	₱50,000.00	₱50,000.00	
17	Equipment / tools		1	₱13,000.00	₱13,000.00	
Sub total others					₱111,500.00	\$2,007.00
Total costs per transitional shelter					\$5,013.00	



The
**Plastic
Flamingo.**
PLASTIC RECYCLERS

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Hours: Mon - Sat, 8am - 5pm

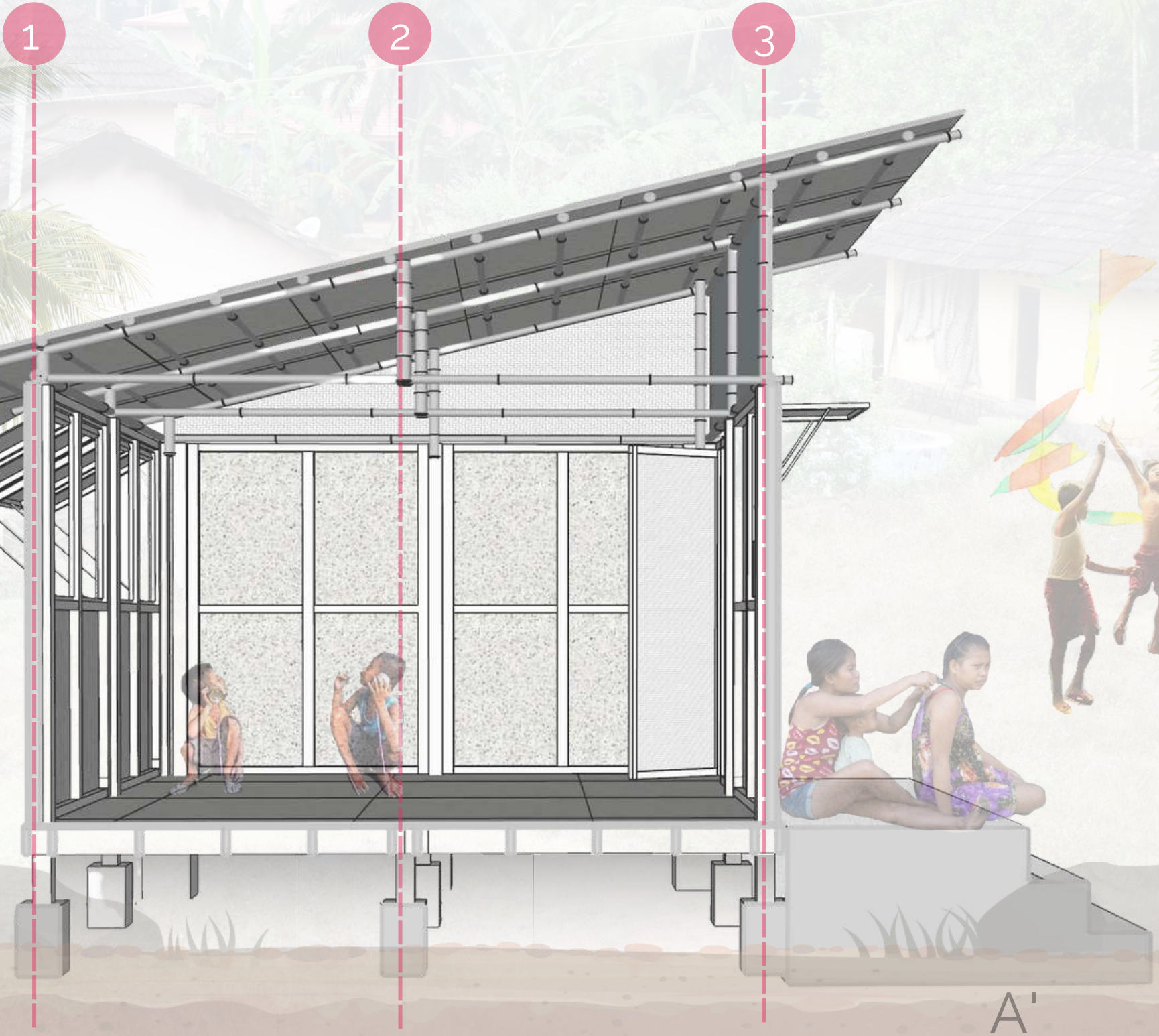
The Plastic Flamingo Inc. strictly abides by IATF Guidelines.
We do not accept any walk-in visits and we require all our clients
to schedule an appointment ahead of time.



Plaf Prototype 1.0 (2021)



THE PLAF TRANSITIONAL SHELTER-KIT



Plaf Shelter Kit

Project

July 2022

Date

Client



N.T.S

Section AA'

Title

04-RF

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