

A Simple 'How To' Guide Sample For Building a Sanitation Superstructure

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INTRODUCTION

This document serves as a sample guide for building an external latrine superstructure. A superstructure is a facility that has the capacity to house a simple, improved toilet. In this sample guide, the superstructure houses the Wish for WASH modular SafiChoo toilet in its composting form. The superstructure ensures the privacy of the user as well as ventilation for the enclosure to remain sanitary and while reducing the prevalence of flies and smell. **This document contains a bill of materials, assembly instructions, and renderings of what a final latrine superstructure should look like and how it should operate if built correctly.** Additionally, the latrine superstructure must be built on level land. Instructions for preparing the area and intended use are not included in this document.



COST AND BILL OF MATERIALS

This is a cost and bill of materials for solely the superstructure and not the toilet. Materials listed in

Name	Description	Amount Needed	Quantity
12 Gauge Angle	For holding up 2x6 cross beams and attaching stairs (source)	14	14
18 Gauge Angle	For framing walls. <i>Not in CAD</i> (source)	62	62
Joist Hanger	For supporting 2x6 joists (source)	12	12
Deck Screws	For flooring, one 5lb bucket needed (source)	~300	1
Framing Nails	For framing walls, hanging joists, assembling roof. One 5lb bucket (source)	~200	1
Door Hinges	For hanging door, 3 pack (source)	3	1
Door Handle and Lock	Deadbolt locking system (source)	1	1

in the source links are based in USD prices and are largely sourced from the US Home Depot.

Cost per Part	Total Cost	Part Type
\$3.14	\$43.96	Hardware
\$0.61	\$37.82	Hardware
\$0.83	\$9.96	Hardware
\$17.98	\$17.98	Hardware
\$13.55	\$13.55	Hardware
\$9.98	\$9.98	Hardware
\$18.97	\$18.97	Hardware

Name	Description	Amount Needed	Quantity
Woodscrew	For attaching roof and sidings, 250 bag (source)	~75	1
2x4x96	General Lumber (source)	61	65
2x6x96	For Joists, siding (source)	16	18
2x12x96	For stairs (source)	3	3
1x12x48	For stairs (source)	5	5
Roof	Corrugated steel 36 in. x 26.5 in. x 0.5 in, comes in pack of three (source)	72x90 in	3
Concrete	Quikrete 80 lb bag (source)	4.5 ft³	8
Door	36x80in, steel exterior door without hardware (source)	1	1

Cost per Part	Total Cost	Part Type
\$37.90	\$37.90	Hardware
\$2.92	\$189.80	Lumber
\$6.25	\$112.50	Lumber
\$15.57	\$46.71	Lumber
\$7.82	\$39.10	Lumber
\$37.63	\$112.89	Miscellaneous
\$4.60	\$36.80	Miscellaneous
\$144.95	\$144.95	Miscellaneous

Name	Description	Amount Needed	Quantity
PVC Elbow	For gas pipe (source)	1	1
PVC Gas Pipe	4 inch diameter, 10 foot length. Might need extension (source)	1	1
Wall Panels	Made from recycled wood. sold in 48x96 inch panels (source)	Walls are 140x74 in. Back is 2/3 height. Front has large opening for door	10
Wood Garden Lattice	For hiding things underneath the structure (source)	4	4
Window	32x16 in (source)	1	1
Window Film	For frosting window (source)	1	1

Cost per Part	Total Cost	Part Type
\$5.21	\$5.21	Miscellaneous
\$15.76	\$15.76	Miscellaneous
\$30.98	\$309.80	Miscellaneous
\$15.98	\$63.92	Miscellaneous
\$109.48	\$109.48	Miscellaneous
\$7.99	\$7.99	Miscellaneous
Total		
\$1,385.03		

ASSEMBLY INSTRUCTIONS

- 1 Insert the supports**
 - Use Quikrete to form 9 inch diameter holes 3 feet deep into the ground.
 - Install the 66 inch 4x4 posts so that they are 3 feet above the ground
- 2 Create the deck**
 - Double up the 2x6 board to form 4x6 beams. Lay these across to form a square base. Secure these together.
 - Hang the joists across.
 - Install the floorboards just like any deck
- 3 Create the side frame**
 - Use the 2x4s, the 18 gauge angles and nails to create the frame
- 4 Create the back frame**
- 5 Create the front frame**
- 6 Create the roof assembly**
 - Same as other frames
 - Install window into roof and use window tint
 - Secure roof with screws
- 7 Install toilet, plumbing**
- 8 Install the walls, secure them together**
- 9 Install the roof**
- 10 Install ventilation pipe**
- 11 Secure wood to walls**
- 12 Fasten lattice structure around base**

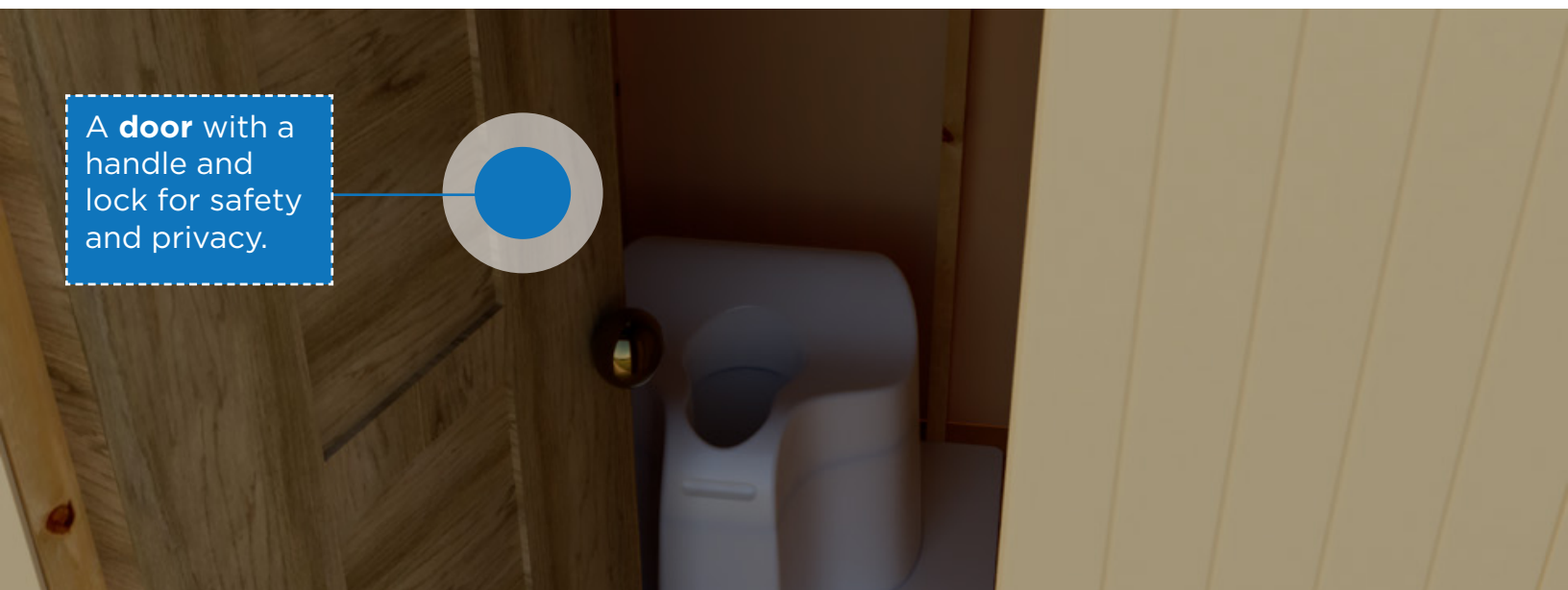


RENDERINGS

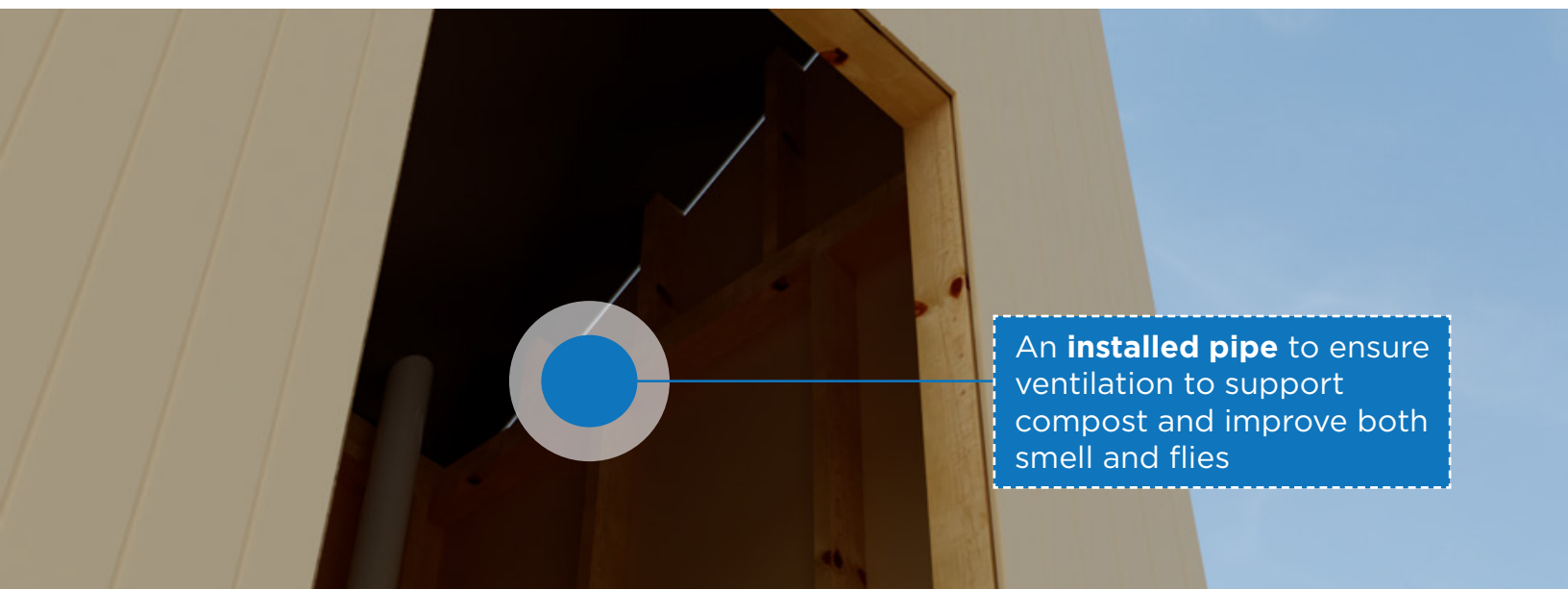
Below are some renderings of how this sample superstructure could appear.



A top installed **window** for lighting



A **door** with a handle and lock for safety and privacy.



An **installed pipe** to ensure ventilation to support compost and improve both smell and flies



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#everybodypoops