

Building Phases

Phases, Activities, Resources and Estimates

Order of Operations

Site Setup		
➤ This phase includes preliminary work for getting the site ready.		
Activities	Performed By	Described In
<ul style="list-style-type: none"> Site clearing Permitting Surveying Set up temporary electric Port-a-John 	Contractor HFH Staff Contractor HFH/Contractor Contractor	3 – Foundation
Predecessors	Funding	
Duration	6 to 8 weeks	

House Foundation		
➤ This phase includes activities to create the house foundation.		
Activities	Performed By	Described In
<ul style="list-style-type: none"> Excavation Install the footers Install the Interior drainage Pour the basement walls Exterior insulation on basement walls Gas and water services Install/Repair/Replace the sewer Back-filling Install the safety fencing 	Contractor	3 – Foundation
Predecessors	Site Setup	
Duration	2 to 3 weeks	

First Floor Deck		
➤ This phase will include all work to build the first-floor deck		
Activities	Performed By	Described In
<ul style="list-style-type: none"> Install: 	Volunteers	5 – Decks

<ul style="list-style-type: none"> ○ sill plates ○ basement bearing walls ○ floor joist and LVLs ○ strong-backs ○ decking ○ guard rails ○ temporary stairs to the deck 		
Predecessors	Foundation	
Duration	2 – 3 weeks	

Concrete Porch Cap		
<ul style="list-style-type: none"> ➤ This phase includes activities associated with installing the concrete caps on the front and back porches. ➤ This phase will be schedule as soon as the 1st floor deck is complete. 		
Activities	Performed By	Described In
<ul style="list-style-type: none"> • Insulation foundation wall behind the porches 	Volunteers	5-Decks
<ul style="list-style-type: none"> • Forming and pouring the caps 	Contractor	
Predecessors	First Floor Deck	
Duration	3 days	

First Floor Framing		
<ul style="list-style-type: none"> ➤ This phase will include all activities to install the first floor wall panels. ➤ For one-story houses, this phase will include the interior stairway. ➤ This phase maybe delayed until the Adopt-A-House team or Project Lead is available. ➤ If pre-built walls will be used, this phase must be coordinated with delivery of the walls. 		
Activities	Performed By	Described In
<ul style="list-style-type: none"> • Install: <ul style="list-style-type: none"> ○ first-floor exterior walls ○ first-floor interior walls ○ basement stairs (1-story only) 	Volunteers	6 – Walls 4 – Framing Materials & Tools
Predecessors	House Foundation	
Duration	1 week	

Porch Framing		
<ul style="list-style-type: none"> ➤ This phase will include installing the post and beams for the front and back porches. ➤ These activities will be performed after the first floor exterior walls are complete. 		

Activities	Performed By	Described In
<ul style="list-style-type: none"> Install the porch posts and beams 	Volunteers	7 – Porch Framing
Predecessors	Concrete Porch Cap First-floor wall framing	
Duration	1 week	

Second Floor Deck

➤ For two-story houses, this phase will include all of the work to build the second floor deck and the interior stairways.

Activities	Performed By	Described In
<ul style="list-style-type: none"> Set up wall scaffolding Install: <ul style="list-style-type: none"> floor joist and LVLs strong-backs decking guard rails interior Stairs 	Volunteers	10 – Scaffolding 5 – Decks
Predecessors	First Floor Framing Porch Framing	
Duration	2 weeks	

Second Floor Framing

➤ For two-story houses, this phase will be performed to construct the second-floor walls.

Activities	Performed By	Described In
<ul style="list-style-type: none"> Install: <ul style="list-style-type: none"> second-floor exterior second-floor interior walls 	Volunteers	6 - Walls
Predecessors	Second Floor Deck	
Duration	1 -2 weeks	

Roof Framing

➤ This phase includes all activities to prep and install the roof framing for both the main roof and the porch roofs.

➤ At the Project Leaders discretion, this phase may also include prepping the gable end trusses with Styrofoam and siding.

Activities	Performed By	Described In
<ul style="list-style-type: none"> Prep the roof trusses <ul style="list-style-type: none"> Gable sheathing 	Volunteers	8 – Roof Framing

<ul style="list-style-type: none"> ○ Gable rakes ○ Gable strong-backs ○ Cornice returns ● Set the roof trusses ● Install: <ul style="list-style-type: none"> ○ sub-fascia ○ wind bracing ● Optional gable end prep <ul style="list-style-type: none"> ○ <i>Exterior Styrofoam</i> ○ <i>Frieze Board</i> ○ <i>Cornice Covering</i> ○ <i>Soffits and Siding</i> 		11 – Exterior Insulation 16 - Siding
Predecessors	1 st and 2 nd Floor Framing	
Duration	1 - 2 weeks	

Roofing		
➤ This phase includes all activities to install the roof sheathing and roofing.		
Activities	Performed By	Described In
<ul style="list-style-type: none"> ● Install: <ul style="list-style-type: none"> ○ roof sheathing ○ <i>drip edge</i> ○ <i>weather shield</i> ○ <i>shingles</i> 	Contractors	9 - Roofing
Predecessors	Roof Framing	
Duration	1 -2 days	

Finish Basement Framing		
<ul style="list-style-type: none"> ➤ If the house will have a finished basement, this phase will include all activities to install the finished basement walls. ➤ This phase should not be conducted until the house is dried in and the basement is dry. ➤ Installing the exterior basement wall insulation before installing the walls is preferred. 		
Activities	Performed By	Described In
<ul style="list-style-type: none"> ● Install: <ul style="list-style-type: none"> ○ Exterior wall insulation (walls to be covered) ○ Basement wall framing 	Volunteers	6-Walls
Predecessors	Roofing, Basement Stairs	
Duration	1 -2 days	

Walkways & Parking Pad		
<ul style="list-style-type: none"> ➤ This phase includes activities for installing the concrete flat work ➤ This phase will be scheduled as early as possible after the roof framing is complete, depending on the contractor’s availability. 		
Activities	Performed By	Described In
<ul style="list-style-type: none"> • Form and pour: <ul style="list-style-type: none"> ○ porch steps ○ sidewalks ○ parking pad 	Contractor	18 – Exterior Finishes
Predecessors	Porch caps Roof Framing	
Duration	3 – 5 days	

Finish Framing & Fire Rating		
<ul style="list-style-type: none"> ➤ This phase includes all activities to create framing for mechanicals and drywall. ➤ This phase also includes all activities required to create any fire-rated assemblies required. 		
Activities	Performed By	Described In
<ul style="list-style-type: none"> • Install: <ul style="list-style-type: none"> ○ interior soffits & chases ○ stair and cabinet blocking ○ communication termination board ○ plumbing termination board • Build Fire-rated wall assemblies • Build the basement shelving 	Volunteers	13 - Finish Framing 15 – Rough Mechanicals 6 – Walls
Predecessors	Second Floor Deck	
Duration	1 -2 weeks	

Water Plane, Windows & Doors		
Fire-Rated Wall assemblies must be inspected before installing Styrofoam over them		
<ul style="list-style-type: none"> ➤ This phase will include all activities to “weather-in” a house. ➤ Once the house is weather-proofed, the contractors will begin the Rough-In Mechanicals. 		
Activities	Performed By	Described In
<ul style="list-style-type: none"> • Install: <ul style="list-style-type: none"> ○ Exterior Styrofoam ○ Flashing 	Volunteers	11 – Exterior Insulation 12 – Windows & Doors

	<ul style="list-style-type: none"> ○ Windows ○ Exterior doors 		
Predecessors	Wall Framing (Styrofoam on gable end trusses may be included in the Roof Framing) Fire-rated Wall Assemblies Roof Framing		
Duration	2-3 Weeks		

Siding

<ul style="list-style-type: none"> ➤ This phase includes activities to install the exterior wall coverings. ➤ This phase will be performed in tandem with the Rough-In Mechanicals ➤ Siding on roof gables will likely have been completed with truss prep. 		
Activities	Performed By	Described In
<ul style="list-style-type: none"> ● Install: <ul style="list-style-type: none"> ○ Siding J-blocks ○ Meter mounting board ○ Cornice return covers ○ Soffits ○ Fascia ○ Frieze boards ○ Siding & siding trim 	Volunteers	15 – Rough Mechanicals 16 - Siding
Predecessors	Water Plane	
Duration	3 to 6 weeks (Volunteers)	

Exterior Trim

Porch Framing must be inspected before installing the porch trim		
<ul style="list-style-type: none"> ➤ This phase includes activities for installing porch, window and frieze board trim. 		
Activities	Performed By	Described In
<ul style="list-style-type: none"> ● Install the porch post and beam trim ● Build porch railings ● Install exterior stair railings and handrails (after porch steps are poured), 	Volunteers	17 – Exterior Trim
Predecessors	Porch Framing Roof Framing	
Duration	1-2 Weeks	

Exterior Painting		
➤ This phase includes all activities for caulking and painting the exterior trim and doors.		
Activities	Performed By	Described In
<ul style="list-style-type: none"> • Caulk & Paint: <ul style="list-style-type: none"> ○ exterior doors ○ porch trim ○ porch railings ○ other exterior trim 	Volunteers	20 - Painting
Predecessors	Exterior Trim	
Duration	3 – 4 weeks	

Pre-Mechanicals Air Sealing & Insulation		
➤ This phase includes activities to seal chases and other areas which may be covered by HVAC and plumbing systems.		
<ul style="list-style-type: none"> • Install bathtub enclosure sheathing • Insulate double walls and chases • Insulate basement exterior walls 	Volunteers	14 – Air Sealing & Insulation
Predecessors	Finish Framing	
Duration	1 – 2 days	

Rough-In Mechanicals		
➤ This phase includes activities to rough-in the HVAC, plumbing, gas and electrical systems.		
Activities	Performed By	Described In
<ul style="list-style-type: none"> • Mechanical Platform • Electrical wiring and boxes • Plumbing lines • Sump pump • Radon system • Water manifold • Gas lines • HVAC ductwork • Furnace • Electrical panel and service • Bathtub / shower (must be coordinated with the Pre-Mechanical Air Sealing) 	Volunteers Contractors	15 – Rough Mechanicals
Predecessors	Framing	

	Roof Framing Roofing Pre-Mechanical Air Sealing Water Plane
Duration	1 -2 weeks

Air Sealing

➤ This phase includes activities to seal exterior and plate penetrations.		
Activities	Performed By	Described In
<ul style="list-style-type: none"> • Seal: <ul style="list-style-type: none"> ○ windows & doors ○ plate penetrations ○ gaps, chases, and plates • Install: <ul style="list-style-type: none"> ○ insulation baffles ○ attic insulation markers 	Volunteers	14 – Air Sealing & Insulation
Predecessors	Rough Mechanicals	
Duration	1-2 Weeks	

Wall Insulation

Walls cannot be insulated until the Structural inspection is complete.		
➤ This phase includes activities to insulate the insides of the exterior walls		
Activities	Performed By	Described In
<ul style="list-style-type: none"> • Insulate the walls 	Volunteers	14 – Air Sealing & Insulation
<ul style="list-style-type: none"> • Insulate joist bays 	HFH Staff & Volunteers	
Predecessors	Air Sealing	
Duration	1-2 Weeks	

Drywall Prep

➤ This phase includes activities performed to prepare for the drywall installation.		
Activities	Performed By	Described In
<ul style="list-style-type: none"> • Clear work areas of materials and tools • Complete the Pre-Drywall Checklist 	Volunteers	19 - Drywall
Predecessors	Air Sealing	

	Air Sealing and Insulation Aware, Thermal Bypass and Insulation inspections
Duration	1 day

Drywall

<ul style="list-style-type: none"> • The drywall cannot be installed until AWARE Air Sealing, AWARE Insulation, City Insulation and Thermal Bypass inspections are complete. • If any walls are part of a fire-rated wall assembly, the drywall cannot be finished until the fire-rated wall assembly is inspected. 		
<p>➤ The drywall will be installed by either volunteers or contractors on a case by case basis. The drywall finishing will always be performed by contractors. Estimated time for this phase is 7 to 10 days if only using contractors and 3 to 5 weeks for both volunteers & contractors.</p>		
Activities	Performed By	Described In
<ul style="list-style-type: none"> • Hang the drywall • Finish the drywall • Texture the ceilings 	Contractors	19 - Drywall
Predecessors	Drywall Prep	
Duration	7 – 10 days	

Post Drywall Air Sealing and Insulation

<p>➤ This phase includes air sealing activities which are performed after drywall installation.</p>		
Activities	Performed By	Described In
<ul style="list-style-type: none"> • Caulk ceiling fixtures • Insulate the attic & attic accesses 	Volunteers	14 – Air Sealing & Insulation
Predecessors	Drywall	
Duration	1-2 Days	

Paint Prep

<p>➤ This phase includes activities to prepare for painting</p>		
Activities	Performed By	Described In
<ul style="list-style-type: none"> • Sand the floors • Cleanout HVAC ducts • Clean walls and floors • Clean the stairs 	Volunteers	20 - Painting
Predecessors	Drywall	
Duration	1 day	

Interior Painting		
➤ This phase includes activities for covering the interior walls and trim with paint.		
Activities	Performed By	Described In
<ul style="list-style-type: none"> • Paint: <ul style="list-style-type: none"> ○ Walls ○ interior trim ○ Interior doors ○ stairs stringers and treads 	Volunteers	20 - Painting
Predecessors	Post Drywall Air Sealing Paint Prep	
Duration	3 – 4 weeks	

Cabinets		
➤ This phase includes activities for installing the kitchen and bath cabinetry.		
Activities	Performed By	Described In
<ul style="list-style-type: none"> • Install: <ul style="list-style-type: none"> ○ kitchen cabinets ○ kitchen countertops ○ bathroom vanities & sink tops • Cut opening for kitchen sink • Caulk counter and sink tops 	Volunteers	21 - Cabinets
Predecessors	Painting	
Duration	1 to 2 weeks	

Vinyl Flooring		
➤ This phase includes activities for installing vinyl plank flooring.		
Activities	Performed By	Described In
<ul style="list-style-type: none"> • Install: <ul style="list-style-type: none"> ○ vinyl plank flooring ○ transition strips 	Volunteers	24 - Flooring
Predecessors	Cabinets	
Duration	2 – 3 weeks	

Interior Doors and Trim		
➤ This phase includes activities for installing the interior doors, door casing, window trim, baseboards, knee wall caps and handrails.		

Activities	Performed By	Described In
<ul style="list-style-type: none"> • Install: <ul style="list-style-type: none"> ○ pre-hung doors ○ casing ○ window trim ○ kick plates ○ cabinet trim ○ baseboards ○ quarter round ○ knee wall caps ○ handrailing ○ shoe molding (If needed) 	Volunteers	22 – Interior Doors and Trim 21 - Cabinets
Predecessors	Vinyl Flooring	
Duration	2-3 weeks	

Finished Mechanicals		
➤ This phase includes activities for completing the HVAC, plumbing, gas and electric systems.		
Activities	Performed By	Described In
<ul style="list-style-type: none"> • Electrical fixtures • Toilets • Sinks • Hot water tank • A/C Condenser • All remaining mechanical items 	Contractors	23 – Finish Mechanicals
Predecessors	Painting, Cabinets	
Duration	1 to 2 weeks	

Interior Finishes		
➤ This phase includes activities for installing the interior final items.		
Activities	Performed By	Described In
<ul style="list-style-type: none"> • Install: <ul style="list-style-type: none"> ○ door hardware ○ closet shelving ○ bathroom accessories & mirrors ○ stairway handrails ○ window blinds ○ door viewers ○ Home Owner Fire Extinguishers 	Volunteers	25 – Interior Finishes
○ Predecessors	Interior doors and interior trim	

Duration	1 week
----------	--------

Gutters & Downspouts		
➤ This phase includes the activities for installing the gutters.		
Activities	Performed By	Described In
<ul style="list-style-type: none"> • Drop Eves/Gutters • Downspouts 	Contractor	18 – Exterior Finishes
Predecessors	Siding Exterior Painting Conductor Lines	
Duration	1 day	

Landscaping and Exterior Finishes		
➤ This phase includes the activities for installing the landscaping materials and exterior final items.		
Activities	Performed By	Described In
<ul style="list-style-type: none"> • Install: <ul style="list-style-type: none"> ○ Mailbox ○ house numbers ○ splash blocks ○ bushes and trees ○ other landscaping materials • Plant the grass seed 	Volunteers	18 – Exterior Finishes
Predecessors	Walkways and parking pad Conductor lines Gutters and Downspouts	
Duration	1 to 2 weeks	

Carpeting		
➤ This phase includes the activities for installing the carpeting		
Activities	Performed By	Described In
<ul style="list-style-type: none"> • Carpeting • Transition strips 	Contractor	24 - Flooring
Predecessors	Interior trim Interior finishes	
Duration	1-2 days	

Clean-up and Final Inspections		
<ul style="list-style-type: none"> ➤ This phase includes the activities for ensuring the house is clean and the work is complete. 		
Activities	Performed By	Described In
<ul style="list-style-type: none"> • Clean the house • Certificate of Occupancy • Perform Final Walkthrough Inspection • Correct Walkthrough items 	Volunteers Habitat	26 – Clean Up
Predecessors	Everything except carpeting and landscaping (during winter months),	
Duration	1-2 weeks	

Appliances		
<ul style="list-style-type: none"> ➤ This phase includes activities for installing the appliances. ➤ The microwave normally is installed with the finish mechanicals. ➤ The remaining items will be installed just prior to closing 		
Activities	Performed By	Described In
<ul style="list-style-type: none"> • Install: <ul style="list-style-type: none"> ○ Microwave ○ Refrigerator ○ Range ○ dishwasher 	Volunteers	23- Finish Mechanicals 27 - Appliances
Predecessors	Closing	
Duration	1 to 2 weeks	