

Chapter 23 - Finishing Mechanicals

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Timing & Prerequisites

- This phase of the project cannot begin until the cabinets and countertops are installed, and the bathroom flooring is complete.
- The House/Project Lead will work with the Construction Superintendent to coordinate these volunteer activities.

Finish Electrical

The electrician will install:

- All outlets, switches, Cat-5e and COAX connections, cover plates, fans and fixtures.
- The A/C disconnect
- All electrical runs into the service panel.

Finish HVAC

The contractor will:

- Install the thermostat and test the furnace
- Replace the furnace filter. This filter should be checked again during the final walk-through.
- Install the A/C condenser and test the A/C.
- Install the final supply lines and cold air returns.
- Install the cold-air vent covers.
- Provide the floor vent covers, to be installed after the flooring.

Install Dehumidifier (Volunteers)

- Follow the manufacturer's directions.
- Drill a ¾" hole through the lid of the sump pit.
- Attach the hose supplied by Habitat to the drain on the dehumidifier.
- Insert the hose down through the hole in the sump pit.
- Reseal the gap between the hose and the sump pump pit lid with silicone caulk.
- Plug the dehumidifier in.
- Set the controls.

Microwave

Safety Issues

- Using an electrical tester, ensure the electrical breaker to the microwave is turn off when installing the microwave.

After the kitchen cabinets have been installed, the electrician will install an outlet in the cabinet above the range. This will be the outlet for the microwave.

Install the Venting Ductwork (Volunteers)

- The microwave will be installed below the upper cabinet and above the range.
- The microwave must be vented to the outside; therefore, ductwork must be installed behind the microwave.
- There are two pieces to the ductwork.
 - One part (Starting Collar) extends through the wall and fits into the back of the exterior range hood vent which was installed with the siding J-Blocks. This piece is sent out from Habitat.
 - The other piece is a flapper to keep wind from blowing back inside. It is installed inside the house; over the starting collar. Attach it to the framing with 1 1/2" drywall screws. This piece comes attached to the microwave.

Figure 24.2 – Starting Collar



- Follow these steps to install the starting collar:
 1. Cut a 3 1/4" x 10" hole in the drywall for the vent.
 - a. The hole will be 1/2" below and centered on the cabinet above the range.
 - b. Use a utility knife to cut and remove the drywall.
 2. Remove enough of the insulation behind the drywall to allow installation of the starting collar.
 3. Once the hole for the starting collar is open, insert the starting collar through the hole from the inside.
 4. Bend over the tabs on the front of the starting collar. They will not be used.
- Follow these steps to install the flapper:
 1. Remove the flapper from the top of the microwave.
 2. Insert the flapper into the starting collar. Ensure the flapper opens into the collar.
 3. Attach the flapper with 1 1/2" drywall screws through the corners of the flapper.

Install the Microwave (Volunteers)

Once the ductwork is in place, install the microwave under the cabinet above the range. Follow the manufacturer's instructions.

1. Unpack the unit, inspect it for damage, and ensure the hardware and components are all there.
2. Use the template on the box to locate the drill holes in the bottom of the cabinet using a hole saw and twisted bits.
3. Follow the manufacturer's instructions to change the microwave's blower to vent out the rear.
4. Install the unit with the hardware provided. As the unit is raised into position, feed the power cord up into the cabinet through the hole made above.
5. After the unit is secured to the cabinet, plug the unit into the outlet and test it.
6. Set the time using the instruction manual.

Finish Plumbing

The plumber will install:

- The kitchen sink; trap and faucets, after the sink cut out has been made.
- The disposal.
- The toilets, after the bath flooring has been installed.
- The bathtub fixtures.
- The traps and faucets for the vanities, after the vanities have been installed.
- The hose bibs.
- The hot water heater.
- The water manifold and supply lines.

Kitchen Sink Cut Out (Volunteer)

- Use a jig saw to cut the front and sides of the hole in the counter top for the kitchen sink. An oscillating tool will be required to cut the back edge, as the jig saw will not clear the back lip.
1. Position the sink in the center of the sink base cabinet and use a pencil to trace around the sink.
 2. Measure in from the sink outline and mark the location for the sink cut out.
 3. Drill a hole in the counter top near the center of the front edge.
 4. Use a jig saw to cut the front and side edges of the hole. Be sure to round the corners to match the sink.
 5. Drill a 3" hole in the center of the area to be cut out. This hole will be used to hold the cutout while it is being cut.

6. After the front edge is cut, ensure someone is holding the cutout. Do not let it drop into the cabinet.
7. Finish cutting out the hole with the oscillating tool.

Finish Gas

The plumber will install:

- The piping to the hot water tank
- The piping to the range (if gas range will be installed).