

## Chapter 19 - Drywall

### Things to Consider

- The drywall is heavy and will require several volunteers to move and install it.
- Rules for Utility Knives:
  1. Keep them sharp. Drywall dust collects quickly in knives.
  2. Keep them closed when not in use. Drywall dust will make this difficult.
  3. Check area around you before cutting.
  4. Don't cut towards your hand.
- Wear dust masks and safety goggles when rasping drywall or using the Rotozip.
- Ensure all electrical boxes, light fixtures, detectors are marked on the floor prior to installing the drywall.

### Components

Drywall Stops Finishing	Hanging Ceilings Cleanup	Hanging Walls
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### Timing & Prerequisites

- The city and AWARE insulation inspections must be passed before drywall can be hung.
- The House/Project Lead will work with the Habitat Supervisor to co-ordinate resourcing optional activities.

### Materials Needed

#### Walls & Ceilings

1/2" Drywall  
 5/8" Drywall  
 1 1/4" Drywall Screws  
 Marble Sills  
 Construction Adhesive  
 1" Roofing Nails

### Phase Specific Tools Needed

Description:	Quantity:
<ul style="list-style-type: none"> <li>○ Drywall Lifts</li> <li>○ Re-chargeable Drills with Dimpler Bits or Drywall Screw Gun</li> </ul>	

- Drywall Tees
- Drywall Saws
- Drywall Foot Lifts
- Rasps
- Roto-zip (Drywall Router)
- Benches
- Metal Putty Knife 2" Wide or More
- Phillips Screw Drivers
- Work Lights
- Caulking Gun
- Goggles
- Dust Masks

## Activities

### Organizing Materials / Areas (Optional)

1. The drywall delivery company will stock drywall in several rooms of the house. The proper number of sheets for each floor should have been placed on that floor. Identify which sheets are 5/8" and which are 1/2" thick.
2. Plan to start with the ceilings which require 5/8" drywall. The drywall should be in place on the ceiling over a wall before applying drywall to the wall.
3. Start in a room containing a minimal number of sheets stocked in it to minimize carrying of sheets.
4. Setup a cutting area away from the installers. Keep this area clear of debris.
5. The rooms and closets will get dark as the drywall is installed, lighting will be required.
6. Setup several drywall benches for each crew. Keep them about 12" from and directly in front of the wall panel being installed or directly under the ceiling panel being installed.

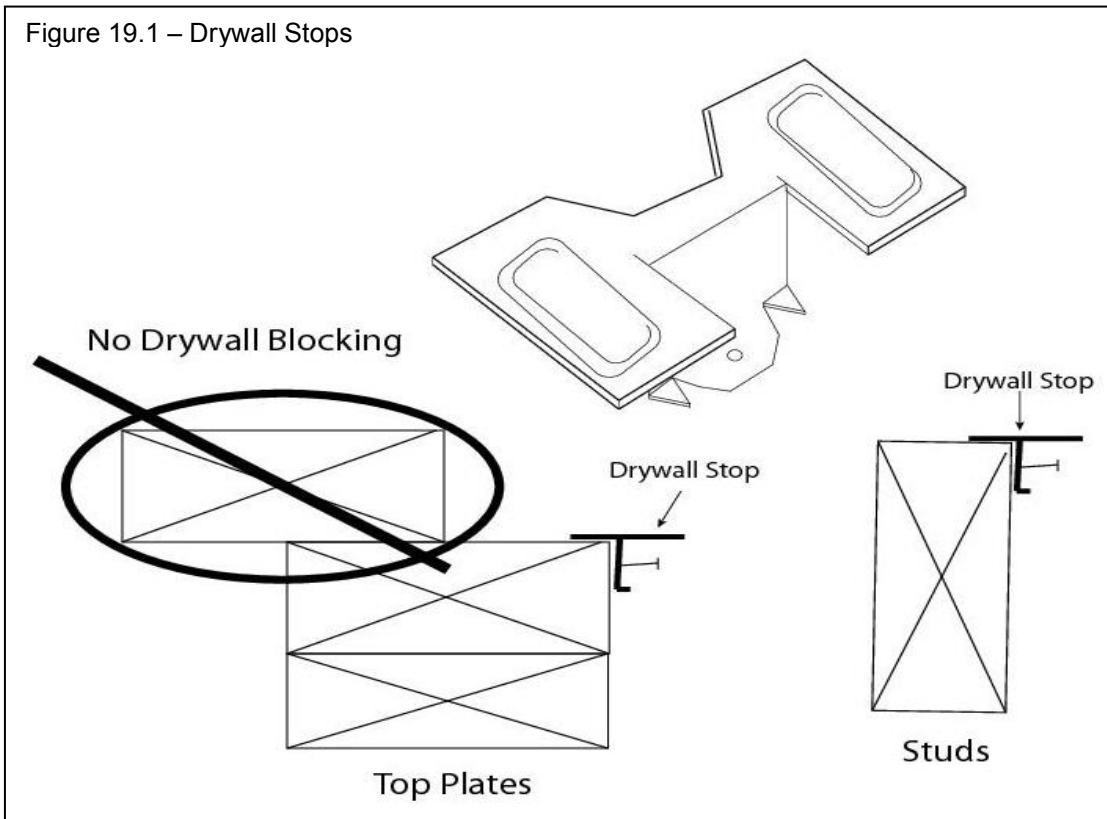
### Drywall Stops (Volunteers)

Install drywall stops along framing edges to provide support for the drywall. Drywall stops allow for better insulation of the wall. (See Figure 19.1).

Install drywall stops:

1. Where top plates run parallel to the ceiling joists.
2. To top plates on center walls between trusses
3. Where wall panels intersect and there is not a stud at the intersection.

Install the stops with the large support edge behind the area where the drywall will rest. Install the stops with 1" roofing nails.



### Apply Drywall (Optional)

#### Apply Drywall to Ceilings

1. Plan your work:

- Ceiling drywall is hung before walls.
- Use 5/8" drywall.
- Drywall will be installed with its long edge perpendicular to the trusses or ceiling joists.
- Stagger joints on adjoining rows on different trusses or joists by at least 24".
- Boards which run parallel to interior walls should be 48" wide, if possible.
- Boards must span 2 or more trusses or joists.

2. If you will be using a drywall lift, setup it up. You can install the ceilings with a lift or with 5 -6 volunteers and benches.

3. Determine measurements of ceiling area to be covered and cut a sheet to fit. Cut the sheet  $\frac{1}{2}$ " smaller than the opening to be covered. Be sure to use  $\frac{5}{8}$ " drywall for trusses.
4. Note any cut-outs that will be required for electric boxes, etc. and mark the location of any cut-outs on the drywall. Double check with the marks on the floor.
5. Mark the top plate where the trusses or joists cross over. These marks will be used to align the drywall screws.
6. Set the prepared drywall onto the lift with the outer side facing down.
7. Elevate the lift placing the panel into its correct location. Have several volunteers guide the panel to prevent it from getting caught and broken.
8. Attach the drywall to the truss using  $1 \frac{1}{4}$ " drywall screws installed with a drill with a drywall Dimpler bit

Screw the drywall screws every 12" across the width of the sheet into the trusses or ceiling joists. Note exceptions:

Don't screw drywall to the trusses within 16" of an interior wall.

Do screw the drywall to the trusses along the exterior walls.

Areas within 12" of cut-outs will be screwed-in after the cut-outs are made.

9. Once enough screws have been installed to hold the sheet, remove the drywall lift.
10. Draw a pencil line using a tee to denote the locations of the trusses / joists.
11. Apply hand pressure to the sheet next to the fastener being driven to hold it tight to the truss.
12. Finish installing the drywall screws except within 12" of any cut outs.
13. Using a roto-zip make any cut-outs.
14. Screw in the remaining drywall screws into the sheet near cut-outs.
15. Succeeding sheets should be butted together.

### **Apply Drywall to Walls**

1. Plan your work.
  - Use  $\frac{1}{2}$ " drywall. Exceptions:
    - Adjoining walls in attached garages require  $\frac{5}{8}$ " fire rated drywall.
    - Walls of the structure which are within 3" of the property line require  $\frac{5}{8}$ " fire rated drywall.
  - Begin installing the drywall with the sheets at the top of the wall.

- The sheets will be applied horizontally.
  - Plan for drywall seams over or under windows and doors; they are less noticeable.
  - If the seams are not over or under windows and doors, stagger the top and bottom seams by at least 24”.
  - Install drywall on walls where the drywall will be supported by drywall stops before the adjoining walls.
  - Install drywall to long interior walls of closets before the exterior walls. The drywall will not fit through the door.
2. Prepare sheets for top of wall.
  3. Lift the sheets into place. Lift the sheets until they are flush to the ceiling.
  4. Drywall over windows and doors and then cut them out.
  5. Screw into place using 1 ¼” drywall screws installed with a drywall Dimpler bit
    - Starting with the bottom edge, screw 1 screw in each end.
    - Screw 1 screw at the bottom edge into each of the middle studs.
    - Draw a pencil line using a tee to denote the locations of the studs.
    - Apply hand pressure to the sheet next to the fastener being driven to hold it tight to the stud.
    - Finish screwing the sheet to the studs with a screw every 12”. The best sequence is top; middle; halfway between the top and middle; and halfway between the bottom and the middle.
    - Do not place any screws within 12” of any cut-outs.
  6. Make any cut-outs using a roto-zip.
  7. Insert screws around the cut-outs.
  8. Prepare lower sheets.
  9. Set the sheets in place and use a toe-lift to raise them into place. Set one at each end of the sheet to be lifted. Step on the foot lifter to elevate the sheet into position. It should be snug against the top sheet.
  10. Screw into place with 1 ¼” drywall screws installed with a drywall Dimpler bit. Marks on the floor and the screws in the top sheet will help locate the studs. Follow the same screw pattern as the top sheet.
  11. Make any cut outs as noted previously. Check for markings on the floor.
  12. Insert drywall screws near cut-outs

### **Apply Drywall on Inside Corners**

1. Boards being supported by drywall clips will not be screwed in the corner.
2. Do not angle screws. They will not recess into the drywall. If the screws do not recess, tap them in with a hammer.

### **Apply Drywall on Outside Corners**

1. Cut the board flush with the corner.
2. After the board is hung, use a rasp to ensure the edge is flush with the corner.

### **Apply Drywall at Windows and Doors**

Note: Do not apply drywall on the sides and top of the door frames unless marked as a pass-through door. This is the area where the door jambs will be attached.

1. When preparing the upper sheets make a score that is even with the top of the windows or door on the inside of the sheet.
2. After installing the sheet – use the sides of the windows or door as a guide to cut up to the score. Use a roto zip or a drywall saw.
3. After cuts have been made on both sides, lift the panel to be removed. It will bend nicely at the score. Use a utility knife to trim along the crease the bend makes.
4. Snap the panel loose.
5. Clean-up the tear if needed with a light rasping.

### **Apply Drywall in Closet Areas**

1. Install the ceiling sheet first.
2. Short walls can be installed using vertical sheets to reduce cutting; to reduce finishing time; and better use of materials.
3. Refer to previous text for techniques.

### **Apply Drywall on Edges of Walkway Openings**

1. Cut ½” drywall to fit across the top and down the sides of the door frame.
2. Cover the top first then both sides; placing screws every 12” not too close to the edge.

### **Apply Drywall on the Window Frames**

1. Rip pieces of drywall to a fit across the top of the window frame and down the sides.
2. Attach the drywall; placing screw every 12” in a zigzag pattern not too close to the edges.

### **Prepare an Attic Access Cover (Volunteers)**

1. Cut a piece of 5/8”, Type “X” fire-rated drywall to create the attic access door.

2. Trim the opening with 3" wide ½" drywall to support the attic access door.
3. Install 4 pieces of 2" Dow board to the back of the attic access door to provide an R-40 insulation value.
4. Install self adhering weather-stripping to the front of the door to seal the opening at the supporting drywall.
5. Set the cover in place. The drywall contractor will stomp this at the same time as the ceiling.

### **Prepare for the Finishers (Optional)**

1. Remove all full or half sheets of drywall from the house.
2. Throw any other cut pieces of drywall in the dumpster.
3. Sweep out the dust and trash
4. Perform the Quality assurance checklist with a special emphasis on:
  - Inspecting all joints to ensure they are secure.
  - Inspecting screws to ensure they are recessed.
  - Inspecting outside corners to ensure they are rasped smooth.
5. Tape off the stair stringers to protect the unfinished wood. This area will later be stained.

### **Finish the Drywall (Contractor)**

1. The finishing of the drywall will be contracted out. Once all of the drywall is hung, the drywall contractor will take over. They will install the corner bead, mud and tape the joints, mud the nail holes, stomp the ceiling, and sand the walls.

### **Cleanup after the Finishers (Volunteers)**

1. Using a utility knife, remove drywall mud from inside of outlet boxes. Be sure to cut around the inside edges of the box to prevent breaking the drywall joint outside the box.
2. Using a shop-vac with a drywall dust filter, vacuum all of the floors, window sills, outlet boxes, bathtub, and any other edges where dust has collected.

## **Tips & Techniques**

### **Installing Drywall Screws**

- Drywall screws must be installed perpendicular to the drywall; not at an angle.
- Drywall screws should be dimpled; but not deep enough to tear the paper. If the paper is torn, install additional screws.

### **Cutting Drywall**

- Using a drywall tee as a guide, score the sheet on the front, which is the side facing out. This side is usually white.
- Snap the section to be cut away from the cut side.
- Use a utility knife to score along the crease on its back side
- Snap the piece forward for a clean break.
- Clean up the cut edge with a dry wall rasp.

### **Moving Drywall**

- When carrying sheets a recommended method is to have 2 people; each 1 foot or more from an end-on the same side of the panel with the same hand under the panel.
- Allow the panel to lean against your shoulders.

### **Making Cut Outs in the Drywall**

- Goggles and a dust mask must be worn to keep the drywall dust and particles out of your eyes and mouth.
- Use a roto-zip with a drywall cutting bit to make any cut-outs
- Insert the bit into the center of the area to be cut out.
- Cut to the edge of the box then “hop” the bit over the outside edge.
- Follow the outer edge in a counter-clockwise direction.

### **Quality Assurance Checklist**

- Run a metal putty knife over each screw head – they should be deep enough so that no “ting” sound is heard. Screws can be set deeper using a Phillips head screw driver. Any screws that missed the studs should be removed.
- Verify all outside corners have been rasped flush.
- Verify the paper was not broken.
- Verify any cut-outs were made.
- Verify all electrical outlets have been cut out.