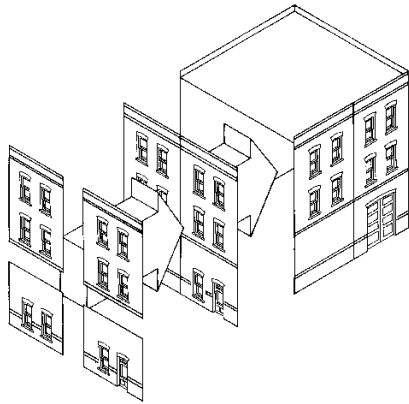




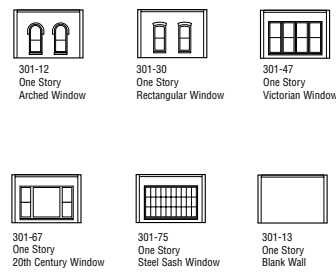
GENERAL INSTRUCTIONS HO SCALE MODULAR BUILDING SYSTEM STYRENE PLASTIC

PLANNING PACKET 301-91

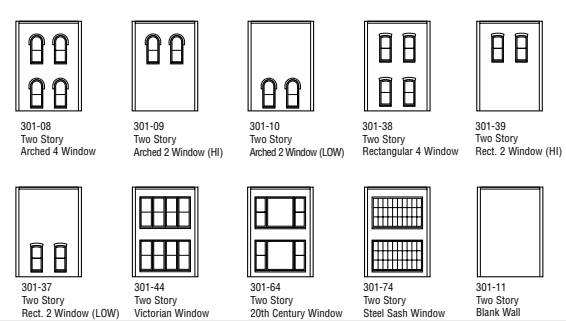


**WALL SECTIONS MAKE WALLS
WALLS MAKE BUILDINGS**

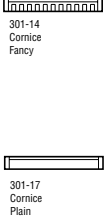
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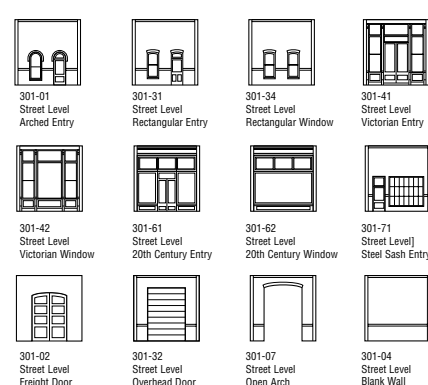
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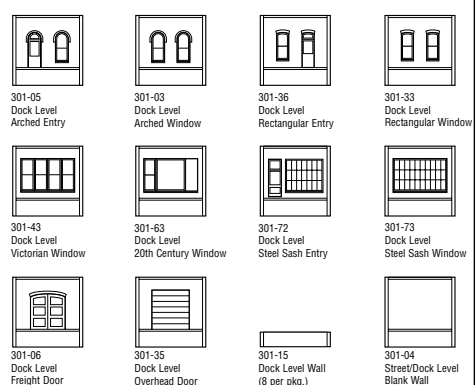
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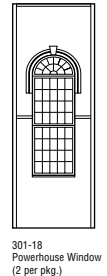
STREET LEVEL WALL SECTIONS 2 3/4" w x 2 3/4" h (4 per pkg.)



DOCK LEVEL WALL SECTIONS 2 3/4" w x 2 3/4" h (4 per pkg.)



POWERHOUSE WINDOW



Using the Modular Building System

*Over 40 Interchangeable Plastic Wall Sections Make Walls.
Walls Make Buildings Any Size or Shape.*

There are two ways to purchase modular parts. **Designer Bulk Packs:** contain all the modular parts to complete one of the three building designs included, plus roof and clear window material. Each Pack is based on one of the five architectural styles represented in the Modular System: Arched Window, Rectangular Window, Steel Sash Window, Victorian Storefront and 20th Century Storefront. Bulk Packs provide an economical way to purchase modular parts for your own designs.

Individual wall section packages: contain four identical wall sections and pilasters to join them - plus doors, windows, and clear window material when needed. Cornice packages and Dock Riser Wall packages each contain eight wall sections plus pilasters.

The Roof & Trim Kit (#301-90) includes materials to make a roof for your own building design and add details to it. The Learning Kit (#360) teaches modular techniques while you build a complete, small building.

If you are creating your own design, use the Planning Packet (#301-91). It contains full-sized drawings of all modular wall sections. Make several photocopies of drawings, cut out and arrange individual paper wall sections to mock up entire walls. Overlap the 1/4" pilasters along side edges of wall sections and tape together. Then tape or glue entire walls on cardboard, cut around entire walls and tape or glue together to form three-dimensional mock-up. Count quantity of each wall section style used to determine which modular parts to purchase.

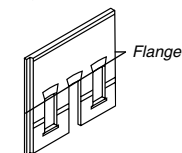
Overview of Procedures and Modeling Tips

If you are building a Designer Bulk Pack structure, refer to drawings in each kit for placement of individual wall sections as you follow the instructions on this sheet.

The general procedure is: using pilasters as joiners, glue individual wall sections together horizontally to form wall panels (Figs. 1 and 2). As a rule, you will glue street level wall sections, one-story wall sections to one-story wall sections and two-story wall sections to two-story wall sections. Glue these horizontal wall panels together vertically to form entire walls, making them as high as desired. Then glue entire walls together to form a building.

Prepare parts by removing excess plastic which may occur in the modeling process. Never sand edges of individual wall sections or pilasters. They should

Fig. 1 Wall Section



Flange: recessed edge found on both sides of wall section

be sanded only after being glued together as wall panels (Fig. 4).

When instructions say "cut," the general technique is to score with hobby knife - along a straightedge if a straight line is needed - and snap off. Some cutting may require more than one pass with the knife and pliers to snap off.

A sprue is excess plastic formed in the channel where plastic flows into parts during molding (Fig. 3). Leave parts attached to sprue until you're ready to use them. To remove parts from sprues, or to clean extra sprue material from parts, either cut with diagonal cutters or hobby knife (X-Acto) to score flush with edge of part. Snap off.

Glue with plastic cement or solvent. These work by actually dissolving the surface of plastic, so it's important to avoid contact with detail on parts and with clear window material. Always allow glue to dry thoroughly at each stage of construction before proceeding to next step.

We suggest using a "squaring block" to assure right angles when sanding wall panels or forming corners. Use a 2" x 2" x 10" block with 90° angles. When using, hold firmly in place and keep stationary (Figs. 12, 14 and 15).

Fig. 2 Wall Panel

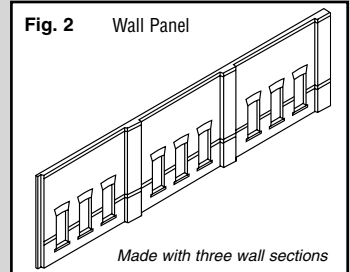
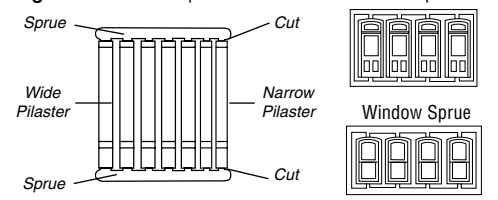


Fig. 3 Pilaster Sprue



Instructions

Modular Wall Building Techniques

Read through the techniques completely before beginning. Becoming familiar with these steps ahead of time makes the system even easier and more fun.

Wall Panel Assembly

1. Prepare wall sections and pilasters as described in Fig. 4.

2. Join wall sections horizontally by gluing backs of wide pilasters to flanges of adjacent wall sections (wall sections face up). Use straightedge as guide along top edges of parts being joined. It should be at least 1/8-inch thick so pilasters won't slip over it (Fig. 5). Apply glue along outer edge of flanges so it won't be squeezed onto brick detail of wall sections or pilaster (Fig. 5 inset). Fit pilasters snugly into recessed area between wall sections (Fig. 6).

Continue joining wall sections until wall panel is the desired width. Do not glue pilasters to either end of wall panels, which is where building corners will occur. Remember to allow glue to dry before moving. Starting at street level, create all wall panels needed to make entire walls. As you glue wall sections together, compare wall panel you're working on with street level wall panel to be sure pilasters line up. Do not glue wall panels together to make entire walls until later, when doing Building Assembly.

3. Cornices are horizontal trim sections along the tops of buildings (Fig. 13). They have short pilasters. Construct cornice wall panels in same manner as other wall panels using procedures in Step 2. Check alignment of cornice pilasters with wall panel that will be just below cornice wall panel.

4. Actual corners will be formed later during Building Assembly. However, prepare for outside corners now. Note the difference between outside corners and inside corners (Fig. 7). Do not attach pilasters to wall panels where they will be part of inside corner. A wide and a narrow pilaster meet at outside corners so they will appear equal in width on both sides (Fig. 8). Ends of front

Fig. 4 Preparation of Parts

Never sand edges of individual wall sections or individual pilasters. Techniques for removing excess plastic:

- Tabs - cut off using diagonal cutters or hobby knife (X-Acto) to score flush with edge of part. Snap off.
- Nubs on flanges - file off so pilasters can lie flat.
- Flash - lightly scrape along back edge of part with hobby knife, holding knife at slight angle to the part. Keep cutting edge facing opposite to direction you scrape so it doesn't cut into part.

Do not cut into detail or alter edges of parts.

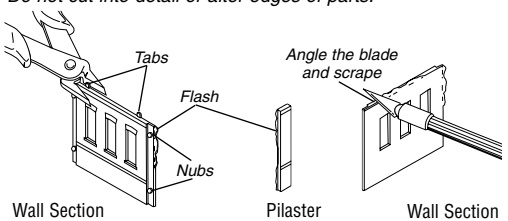


Fig. 5

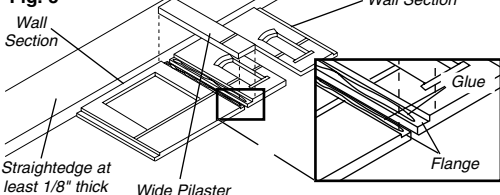


Fig. 6 GOOD FIT

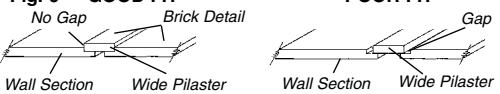


Fig. 7

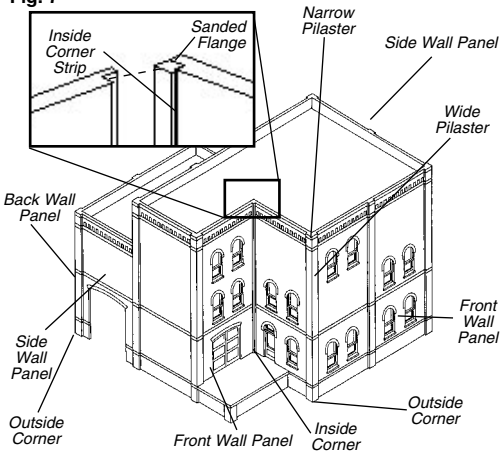


Fig. 8

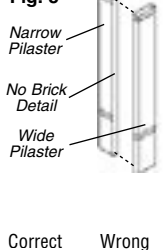


Fig. 9

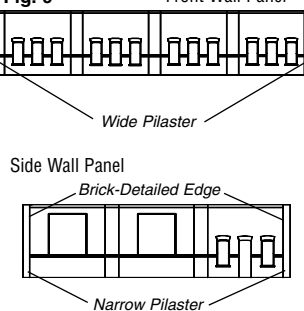


Fig. 10

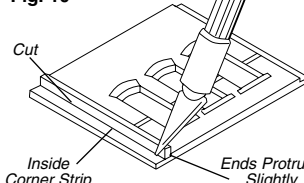
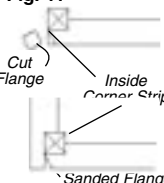


Fig. 11



and back wall panels get wide pilasters for outside corner. Ends of side wall panels get narrow pilasters for outside corner. Note that narrow pilasters are brick-detailed on one edge, smooth on the other. Smooth edge will glue to adjacent wall to form corner. Face brick edge toward panel (Fig. 9).

5. If your building has an inside corner, use inside corner strips provided in Designer Bulk Packs (or in Roof & Trim Kit). Or use .080" x .080" styrene plastic strips. Cut just enough off corner strips to remove rounded ends. Place corner strip on flange at end of wall panel where inside corner will occur. Extend corner strip very slightly beyond top of wall panel. Cut off other end of corner strip so it extends slightly past bottom of wall panel (Fig. 10). These protrusions will be sanded off later. Glue corner strip in place, making sure it is seated squarely on flange and flush along back face of wall section, as shown in Fig. 10. Repeat these steps on all wall panels that will be part of same larger wall. Do not attach corner strips to wall panels that will be part of adjacent wall at inside corner (Fig. 7 inset and Fig. 11). Let glue dry completely. On each wall panel, score flange flush along inside corner strip and snap with pliers along the score to remove extra flange (Fig. 10 and Fig. 11).

Wall Assembly

1. Tack 100 grit sandpaper to flat surface. Make sanding area longer than longest wall panel.

2. After glue on wall panels is dry, carefully drag every wall panel back and forth on sandpaper, top and bottom, to even out height variations and to remove bevels (slight angles needed to eject some parts from mold). Do not sand into detail. Keep edges flat on sandpaper and wall panels square so no rounding occurs. A squaring block helps (Fig. 12).

3. Glue wall panels together vertically to form entire walls. Line up pilasters (Fig. 13). Take care to apply glue as far back as possible from front of parts so glue won't be squeezed onto detail. Glue cornice wall panels to walls at top level, let dry.

4. Do not sand edges of wide pilasters on front and back walls. Do sand smooth edges of narrow pilasters on side walls just enough to remove bevels (Fig. 14).

5. Where inside corner strips have been glued, sand flange back to an angle so it won't touch adjacent wall at corner (Fig. 7 inset and Fig. 11).

Building Assembly

1. Glue entire walls together at corners to form 3-dimensional building (Fig. 15). Make sure corners are square.

2. When glue is thoroughly dry, and prior to installing parapet wall trim, turn building upside down on cardboard (to serve as patterns) or directly on styrene plastic roof sheets. Trace each roof opening along inside of walls. Save tracings for cutting roof pieces later. If roof opening can't be traced, measure and draw measurements on cardboard or plastic roof sheet.

3. A parapet wall is the part of a building wall that extends above the roof. Brick parapet wall trim strips from Roof & Trim Kit detail inside tops of building, serve as roof supports, and make installation of roof easier. Or .040-inch styrene plastic cut into strips 3/8-inch wide could be substituted for the brick parapet wall trim strips. Cut brick parapet wall trim strips to fit around inside top of building and lightly sand the cut ends without rounding. Glue in place flush with top edge (Fig. 16). Fill voids at top of wall sections with spackle or plastic putty such as Testor's (Fig. 16 inset).

Fig. 12

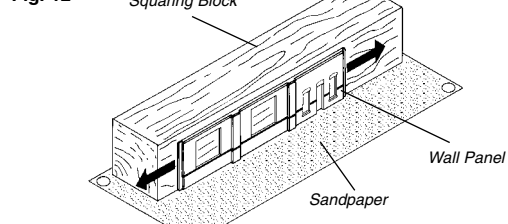


Fig. 13

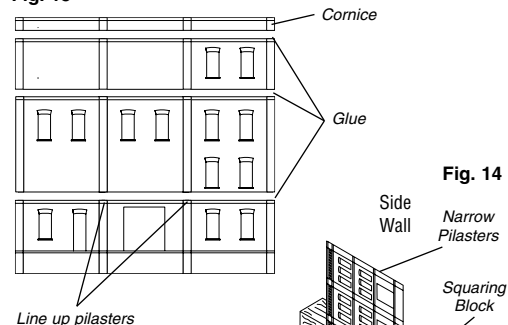


Fig. 14

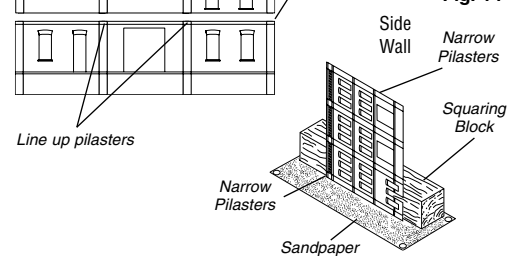


Fig. 15

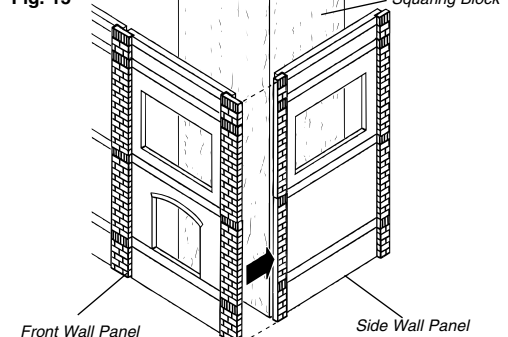
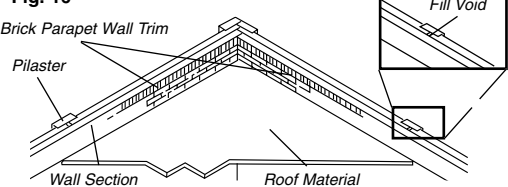
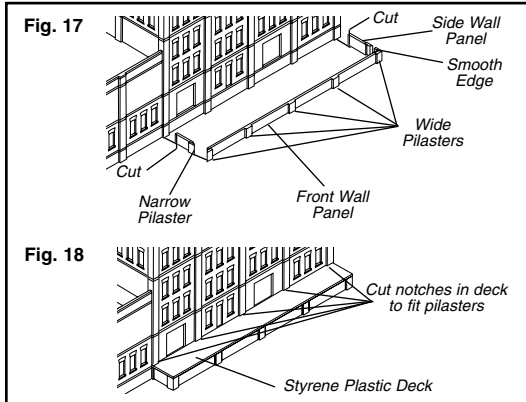


Fig. 16



Loading Dock Assembly

1. If your building has a loading dock, construct dock wall panels in same manner as wall panels (refer to Wall Panel Assembly Step 1). Use wide dock pilasters to join dock riser wall sections. Your building serves as back of dock, so only front and side dock wall panels are needed (Fig. 17).
2. Glue wide pilasters to both ends of front wall panel. Glue brick-detailed edge of a narrow pilaster to side wall panel. The smooth edge of narrow pilaster will join front wall panel at corner.
3. Cut off flanges where side wall panels will meet the building. For a narrow dock cut more off side wall panels, making sure they are cut to equal lengths (Fig. 17).
4. Glue side wall panel ends with pilasters to front wall panel. Glue assembled dock to building.
5. For decking, use .080-inch styrene sheet (enclosed in appropriate Designer Bulk Packs). Deck should overlap dock riser walls slightly, covering tops of dock pilasters. Draw deck measurements on styrene, including where to cut or file notches to clear building wall pilasters. Cut and fit. Use a flat finish paint such as Floquil "Concrete" for the deck. Glue on top of dock riser walls after painting building (Fig. 18).



Painting

Appearances of buildings are enhanced by painting. For airbrushing (our preferred method of application), we recommend solvent-based enamel paints in flat finish such as Floquil. Use water-soluble flat finish paint like Floquil Poly "S" for brushing. Aerosol spray paints in flat finish such as Floquil may also be used. Colors are your choice. We prefer natural brick colors such as rust or other earth tones for the building including cornices, brick parapet walls and loading dock riser walls. Windows and doors can be same or different from brick color.

1. Paint the building (walls, cornices, parapet walls, dock riser walls).
2. Paint window frames and doors while still on sprues.
3. To make building look used, "weather" with paint or other texturing material such as chalk. We use thinned flat black paint (Floquil "Grimy Black") airbrushed as a light mist over entire building, windows and doors. Add more where discoloration occurs (under windows, along tops of walls).
4. Scrape paint from any surface yet to be glued.
5. We recommend Woodland Scenics Dry Transfer Decals for signs on building sides. They adhere easily to all surfaces, no chemicals are needed for application and there's no unsightly film.

Windows and Doors

1. After paint has dried, remove window frames and doors from sprues. Touch up paint if needed and clean paint from surfaces to be glued. If window signs are desired, apply decals to clear window material before gluing plastic window frames to it. We recommend Woodland Scenics Dry Transfer Decals. To determine positioning of signs, place appropriate number of window frames on white paper, leaving 1/4-inch space between each frame. Trace around inside of frames. Remove frames and lay clear window material over tracings. Apply Dry Transfer Decals to clear window material where desired.
2. Glue window frames and doors to clear window material leaving 1/4-inch between window frames. If decals are used on clear window material, center window frame accordingly. After glue has dried cut windows apart.
3. Glue windows and doors to building, taking care to keep glue from squeezing onto detail. Insert from inside building.

Roofing

The Roof & Trim Kit includes roof material (styrene plastic sheet), brick parapet wall trim strips and inside corner strips for buildings of your design, plus assorted roof vents and hatches suitable for all buildings. These items are also in Designer Bulk Packs.

1. If cardboard roof patterns were made (refer to Building Assembly Step 2), cut out and fit in place under brick parapet wall strips. Adjust size and trace pattern to roof material.
 2. Cut out all roof pieces, test fit and adjust if needed. Do not glue.
 3. For a larger roof, join two pieces of roof material. Cut scrap styrene about 1/4-inch wide and length of joint. Glue to both roof pieces along joint on underside of roof.
 4. Paint roof flat black.
 5. Glue roof to bottom of brick parapet wall trim strips, flexing very slightly and pushing gently into place from bottom of building (Fig. 16).
 6. To finish the roof area, use flat paint on roof details included in Designer Bulk Packs, or purchased in Roof & Trim Kit (we suggest Floquil "Graphite" for vents and a shade lighter than roof color for hatches). Glue in place. You may want to apply very fine "gravel" texture as a final touch.
- If you have designed a building with exceptionally large walls, you may need to install internal bracing so walls don't bow. Insert and glue styrene plastic bracing as required.

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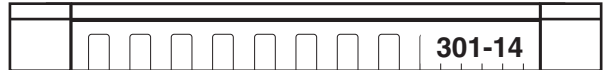
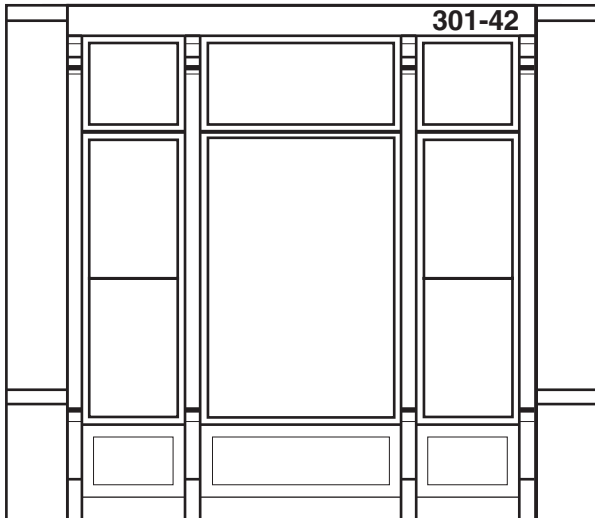
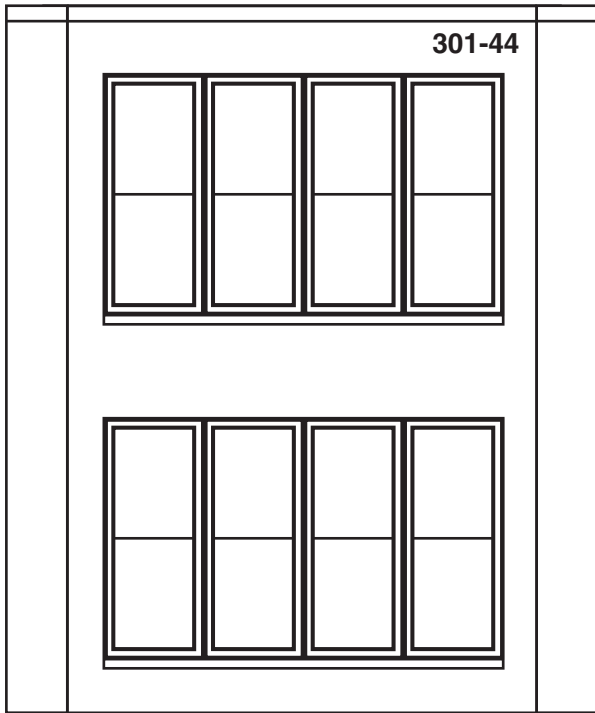
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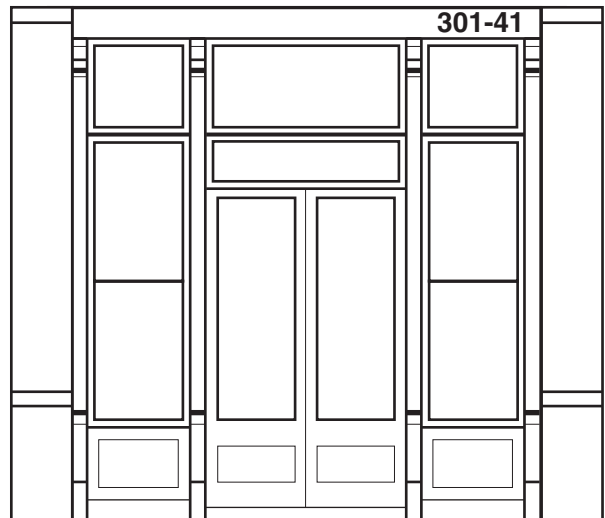
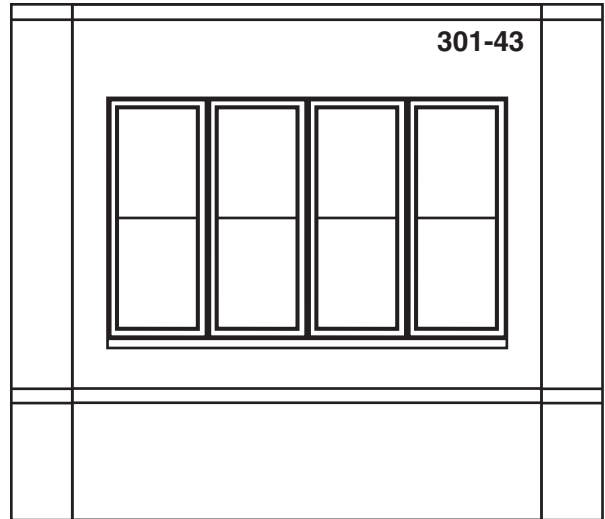
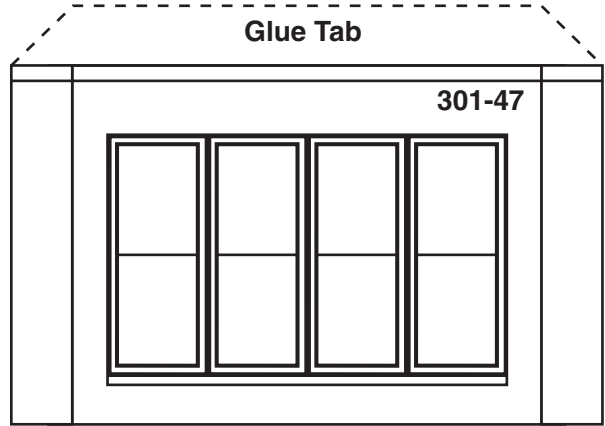


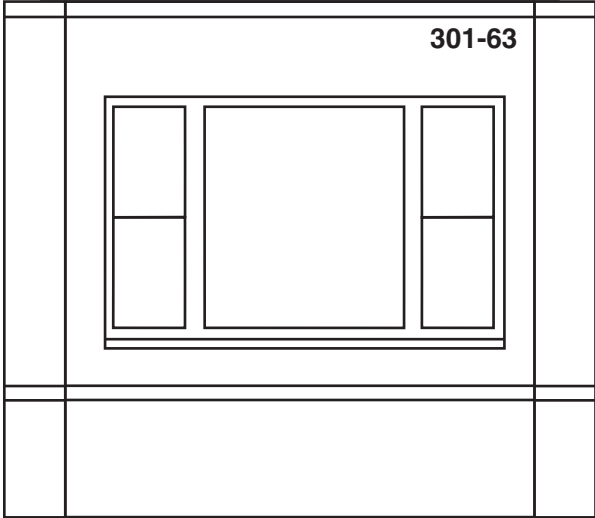
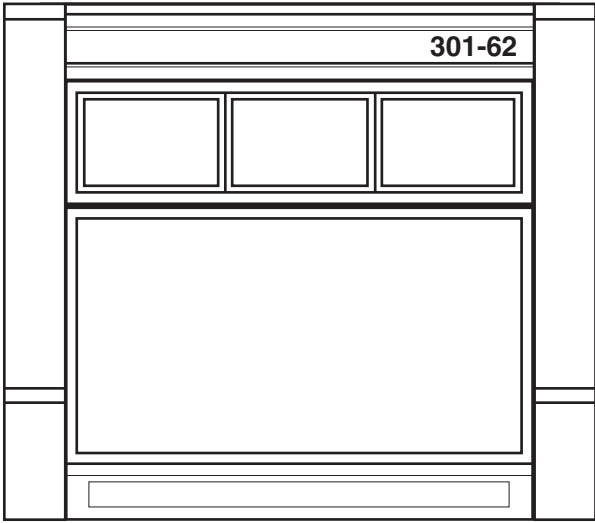
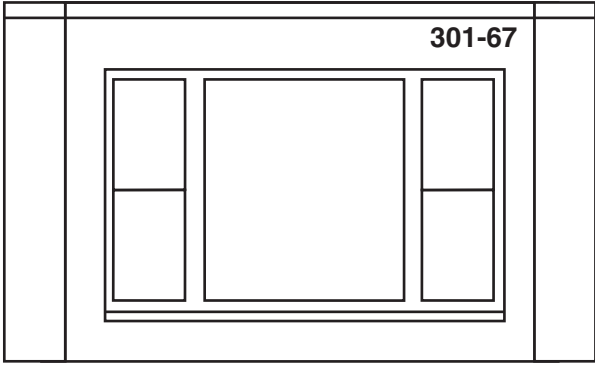
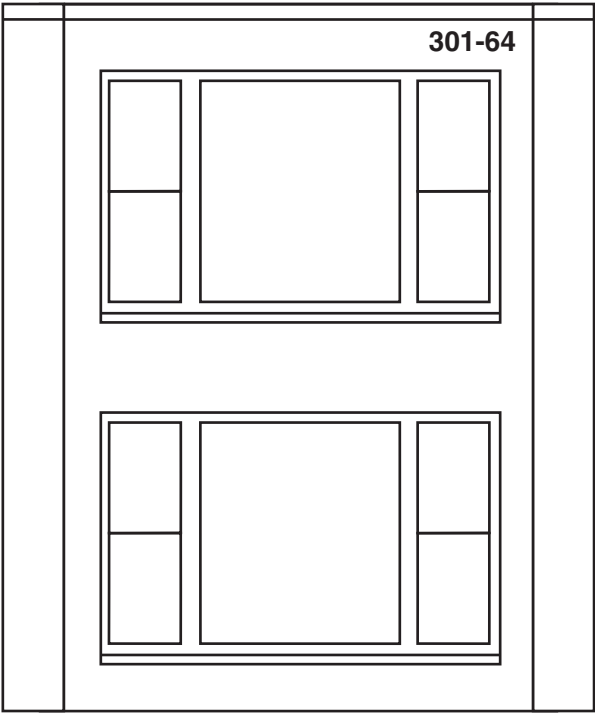
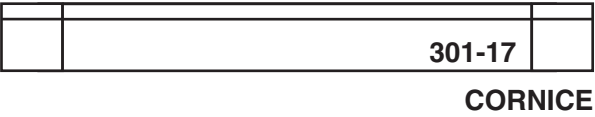
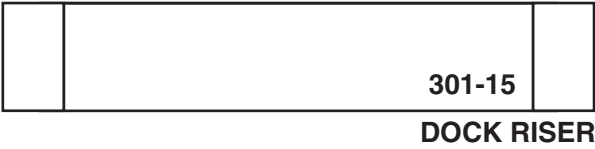
MODULAR WALL SYSTEM PLANNING PACKET

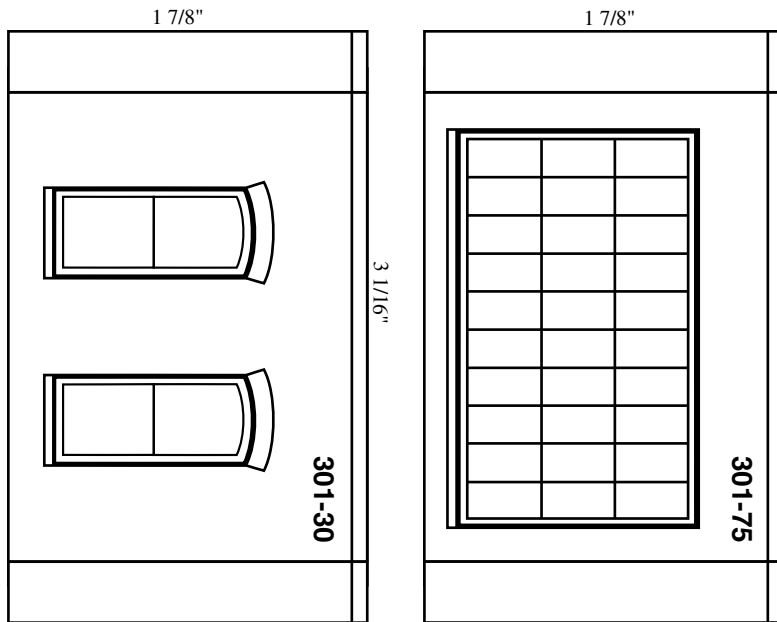
Refer to enclosed instruction sheet to familiarize yourself with the system. All wall sections are reproduced full size on both sides of this sheet. Make multiple copies on a photocopy machine, cut out wall sections, and glue onto cardstock. When cutting out wall sections, leave a "glue tab" above each piece that will be glued to an upper story or cornice. Glue pilasters over each other to make a single pilaster between walls. An entire structure can be built in this manner...you will know in advance exactly how it will look on your layout and which parts you will need to purchase.



CORNICE



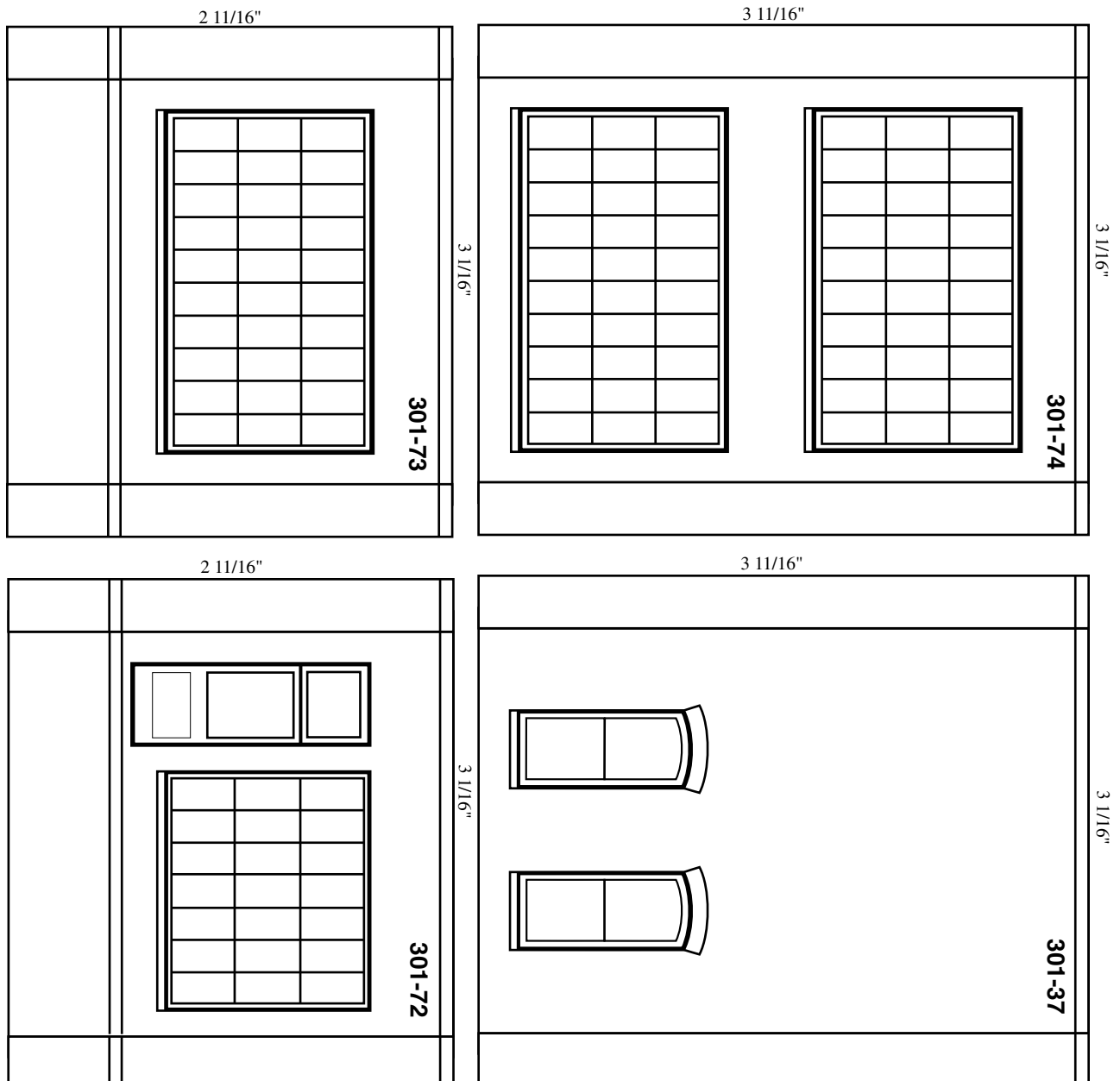


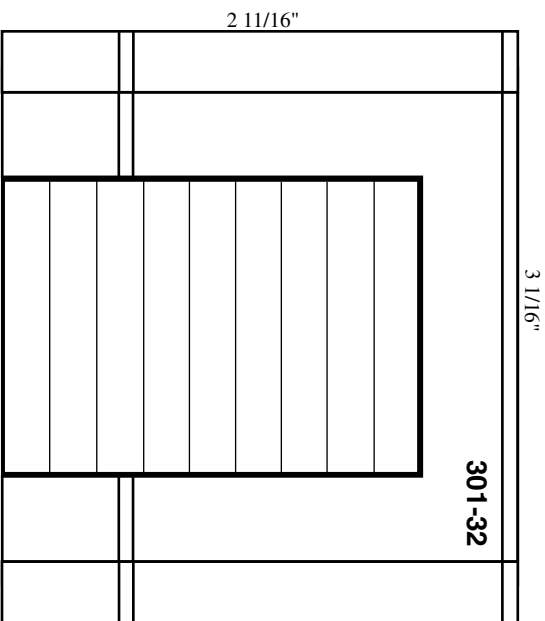
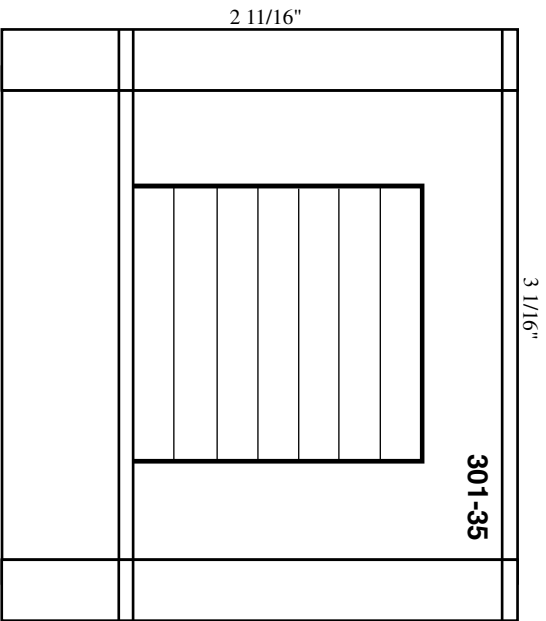
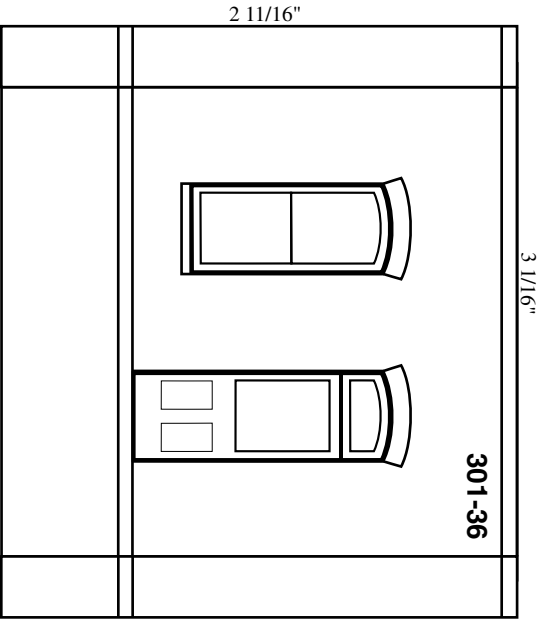
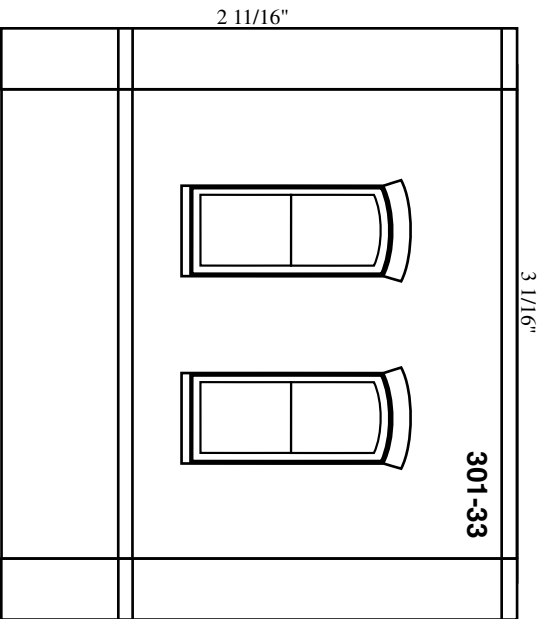
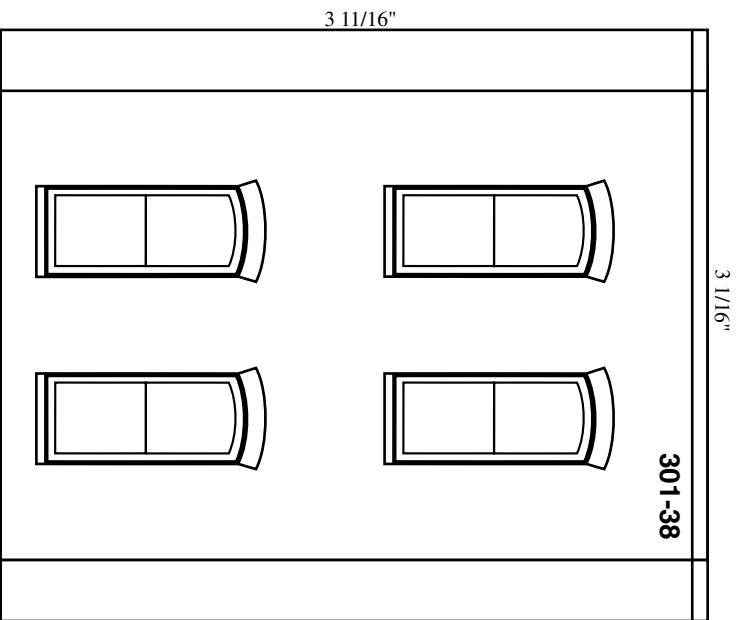
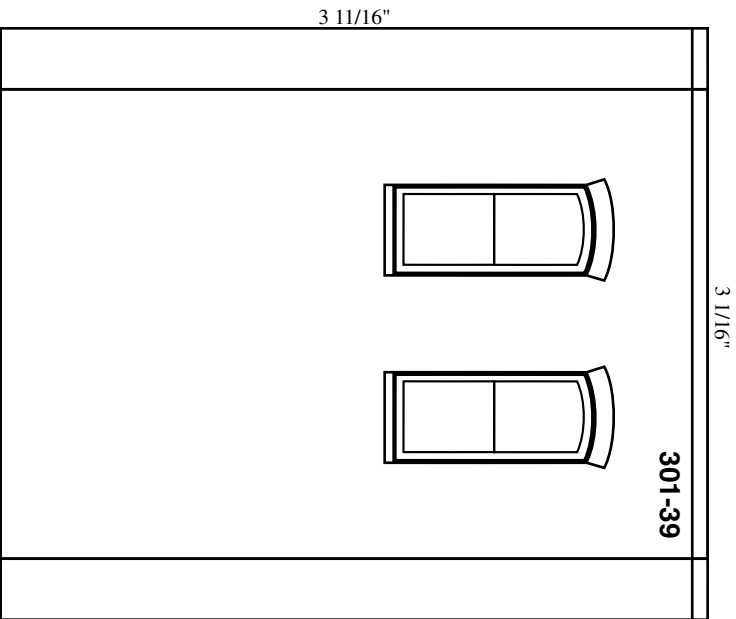


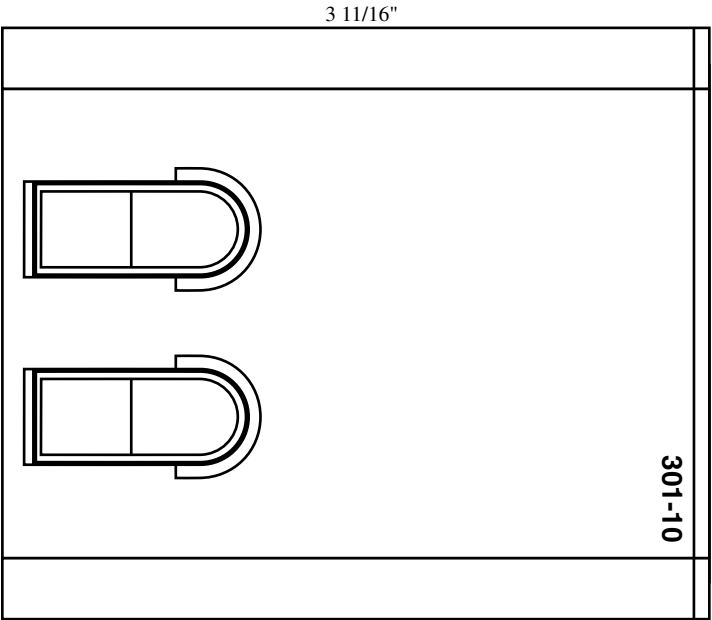
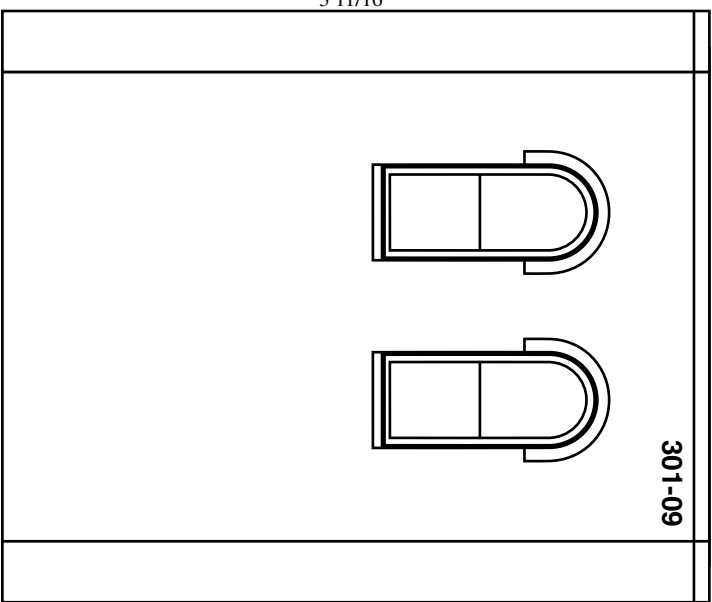
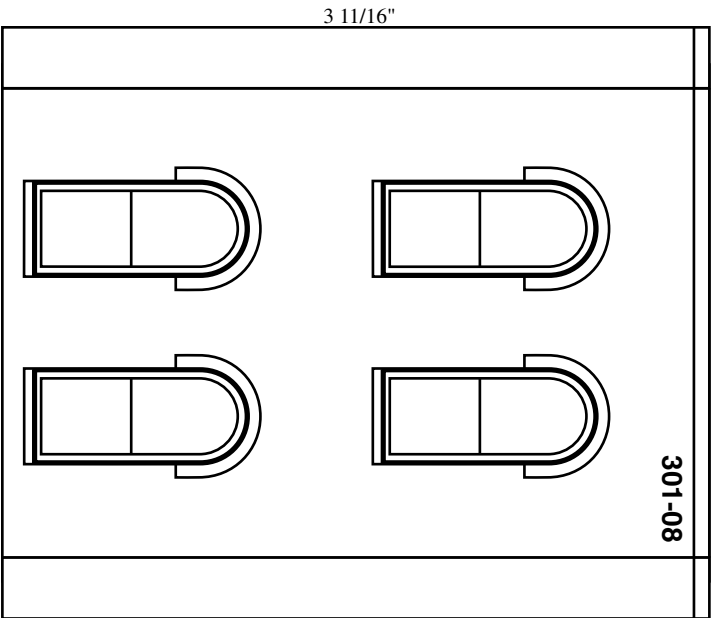
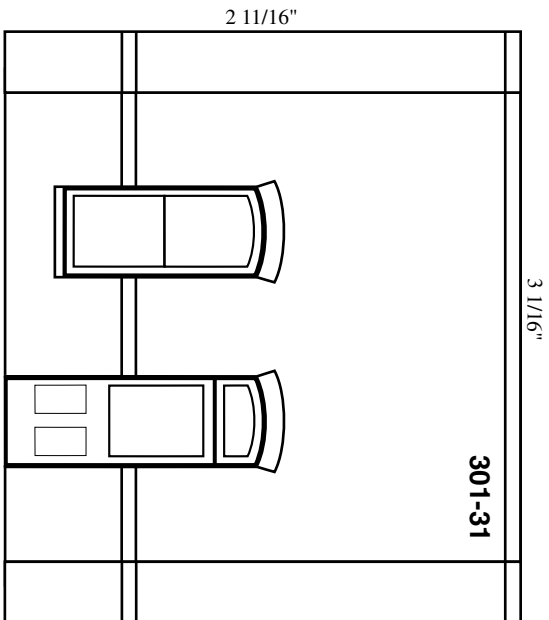
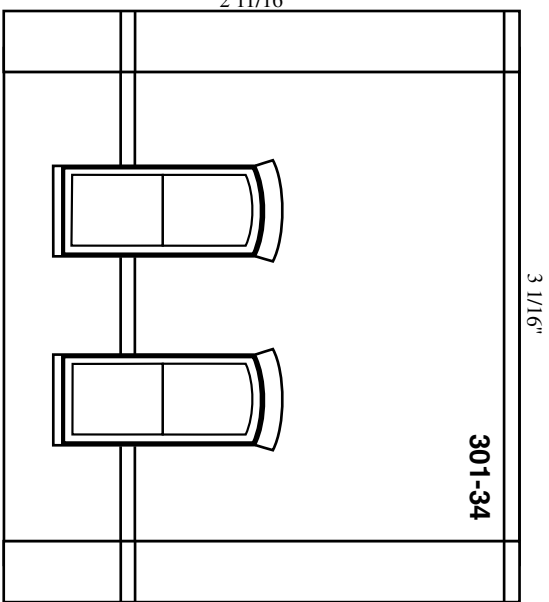
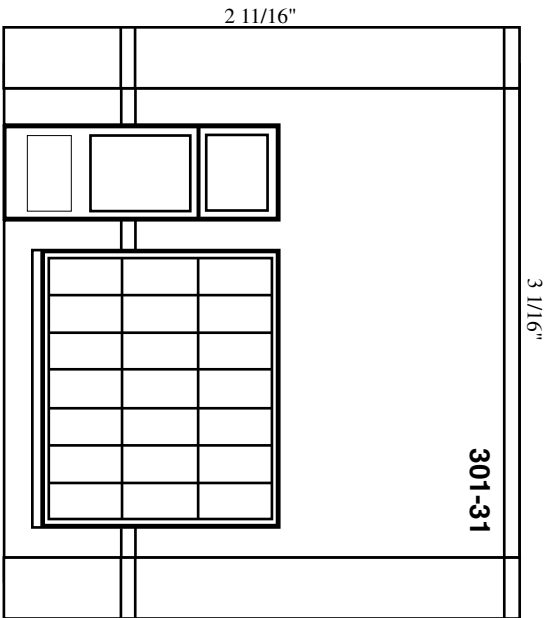
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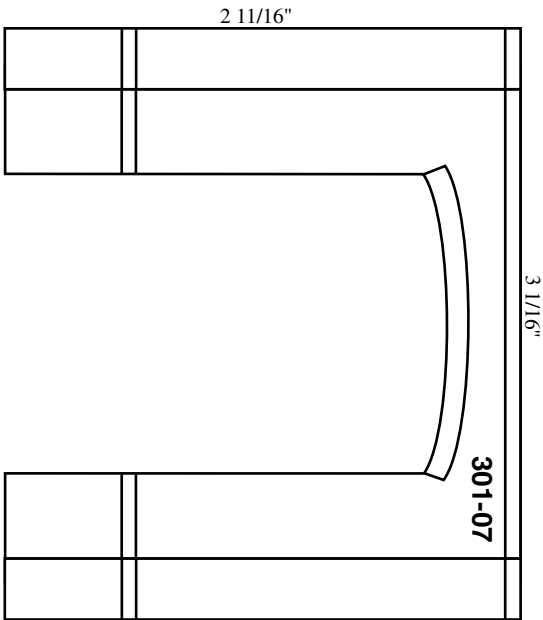
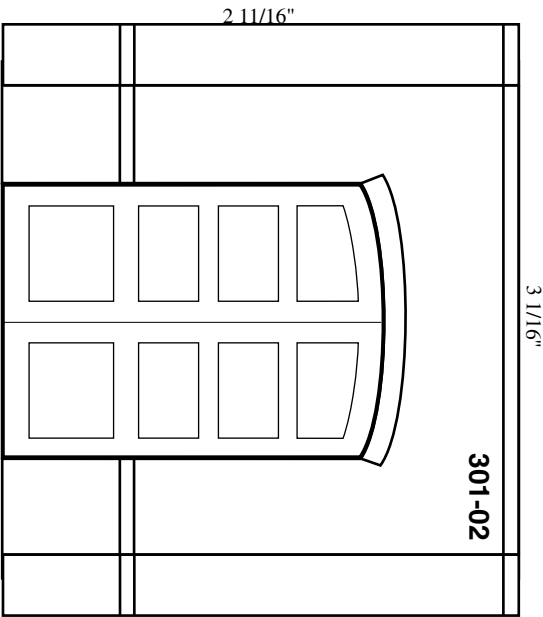
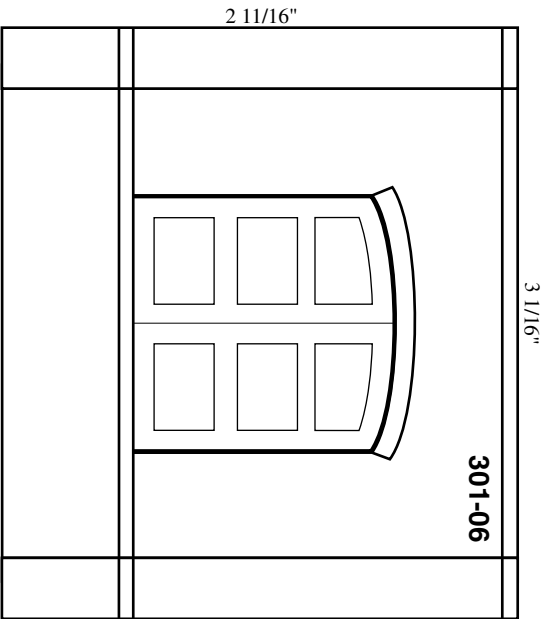
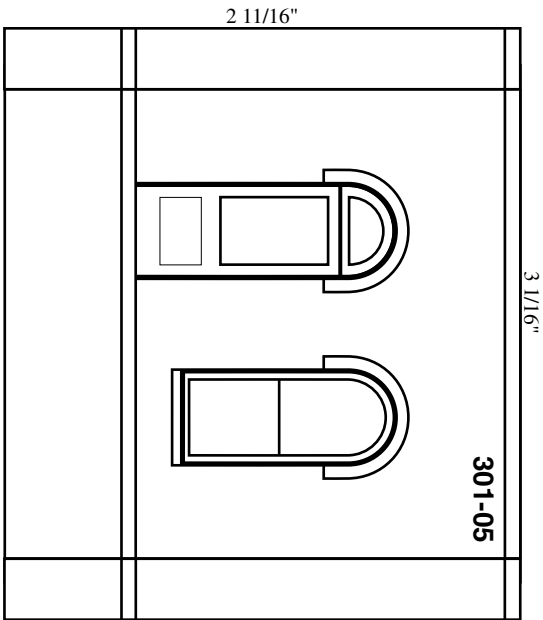
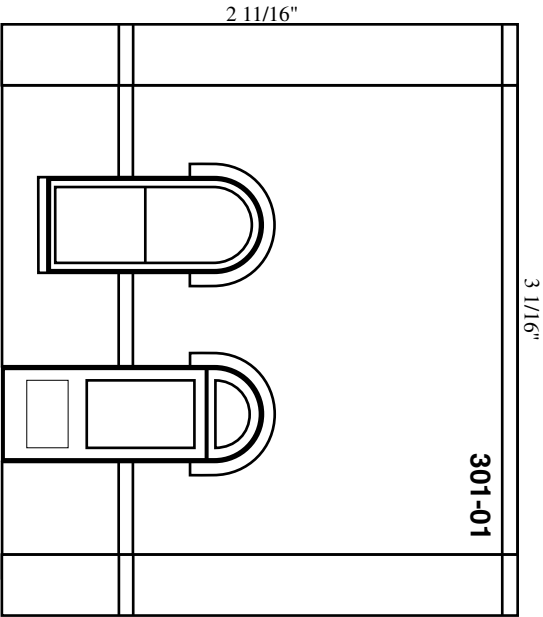
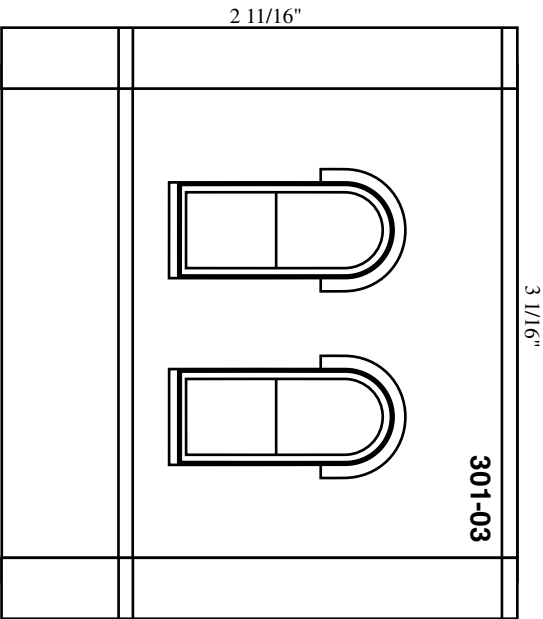
MODULAR WALL SYSTEM PLANNING PACKET

Refer to enclosed instruction sheet to familiarize yourself with the system. All wall sections are reproduced full size on both sides of this sheet. Make multiple copies on a photocopy machine, cut out wall sections, and glue onto cardstock. When cutting out wall sections, leave a "glue tab" above each piece that will be glued to an upper story or cornice. Glue pilasters over each other to make a single pilaster between walls. An entire structure can be built in this manner...you will know in advance exactly how it will look on your layout and which parts you will need to purchase.









3 1/16"

301-11

3 11/16"

3 1/16"

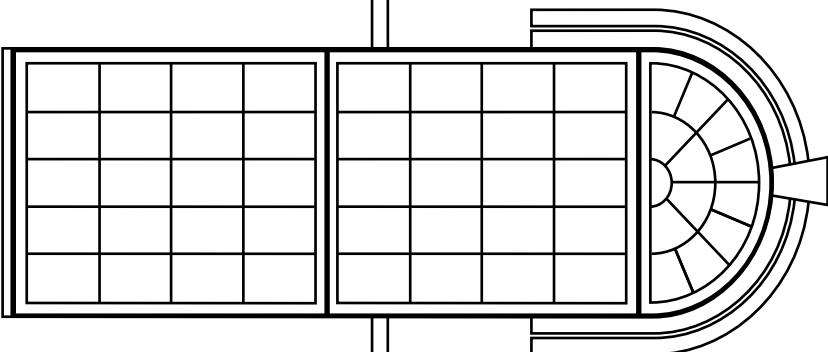
301-04

2 11/16"

3 1/16"

301-18

7 3/8"



3 1/16"

301-13

1 7/8"

3 1/16"

301-12

1 7/8"

