



HO Scale Structure **MAGIC PAN BAKERY** 933-2915

Thanks for purchasing this Cornerstone® Series kit. Please take a few minutes to read these instructions and study the drawings before starting. All parts are styrene plastic, so use compatible glue and paint to finish your model.

From at least Neolithic times to the present day, grain has been an essential ingredient of the human diet. Coarsely ground grain was mixed with water, shaped into cakes, left to dry in the sun or baked in crude ovens before serving. Many of these unleavened breads such as tortillas, focaccia and pita are still enjoyed today. The craft of baking leavened bread first began in ancient Egypt thousands of years ago. Almost from the beginning these lighter, more easily chewed breads were prepared outside the home. The Egyptians developed ovens that could bake several loaves at once, and by Roman times a sophisticated baking industry had emerged.

During the Middle Ages, baker's guilds were formed and the practice of baking bread through the night began. Since bread was such a vital food with no real substitute, government regulation was inevitable. The strict enforcement of weights and prices during the 11th century gave rise to the term "baker's dozen." Loaves of bread were sold by the dozen, so bakers simply added a 13th loaf to ensure the weight requirement was met.

During the Industrial Revolution, increases in grain harvests, improvements in mechanization and the advancement of railroads made it even cheaper to mass produce bread and other baked goods. While the millers stayed in rural areas close to the harvest, bakers moved to the city so they could get their products to market fresher and faster. The invention of the roller-milling system meant that for the first time white flour bread, formerly reserved only for the rich, was available to everyone.

In the 1900s the introduction of Joseph Weber's bread making machine and Otto Frederick Rohwedder's commercial bread slicer allowed bakeries to further increase production. Shortages of wheat during World War I prompted the government to urge consumers to buy commercially-prepared bread due the greater efficiency of

large-scale bakeries. During the 1940s sugar, wheat and even packaging materials were scarce. In addition to having to make do with existing equipment, bakers were obligated to enrich bakery products and increase efficiency. To hold down prices during World War II, the U.S. Agriculture Department banned the sale of sliced bread. Despite the difficulties, the number of bakers continued to rise and production economies grew. A loaf of bread cost less than 20 cents in the 1950s.

Consumption of white bread reached its height in the 1960s and today whole grain, honey wheat and other specialty breads are prevalent. Bakers responded to consumer demand and the social changes of the 1970s by adding more prepared cakes, doughnuts, rolls, cookies and other bakery to their lines. Today's commercial bakeries produce a wide range of products from angel food cake to zwieback crackers. Some also manufacture par-baked or frozen dough. Most commercial bakeries operate seven days a week and must comply with government regulations regarding weight, ingredients and labeling. With the exception of smaller, artisan bakeries, the baking process is highly mechanized and many baked goods don't come in contact with human hands until the consumer opens the package.

A bakery of the size of Magic Pan Bakeries most likely produces a branded bread line and variety of other products. Delivery and shipping goes on daily and almost around the clock. Bulk flour and sugar is pumped directly from arriving hoppers into the silos. Tankers pump liquid ingredients (such as corn syrup and vegetable oil) into storage tanks inside the plant. A host of other ingredients arrive and are unloaded from box cars and trucks.

The height of the baking process begins late in the day and continues throughout the night. Bulk ingredients such as flour, sugar, corn syrup and vegetable oil move through a maze of pipes from their silos and storage tanks, are weighed by automatic scales and dropped into mixers. Salt, spices and other minor ingredients are retrieved from storage areas by forklift or hand truck and fed into minor ingredient handling systems. Computers regulate the formulation, coordi-

nate changeover from one bakery item to the next and track ingredient use. After mixing, the dough is formed and fed to conveyor belts on a continuous production line that carries each item through tunnel ovens, proofing racks, cooling tunnels, metal detectors and packaging lines. Once packaged, the goods are loaded onto trucks and shipped out for predawn delivery to stores.

On Your Layout

Use this contemporary structure to add excitement to your modern-era layout. It's a great way to show off a variety of freight cars. Place tankers of corn syrup or vegetable oil on the siding (932-7200 series 16,000 Gallon Funnel-Flow Tank Cars) one day and an Airslide® hopper (932-3700 series) filled with sugar or flour the next. Box cars loaded with imported spices or bottled flavorings could arrive the next day. Semi-trucks and delivery vans placed street-side will add to the realism. Other great details include track bumpers (433-8628), figures, forklifts, pallets and interior and exterior lighting.

This set of structures could be set up as an independent regional baker or a local plant of a larger food company. The small windowed structure holds offices, a retail outlet and possibly a test kitchen. The larger main plant is where all the mixing, baking, packaging and shipping takes place. The square structure houses the pumps and other operating machinery for the plant. Bulk dry goods get stored in the silos.

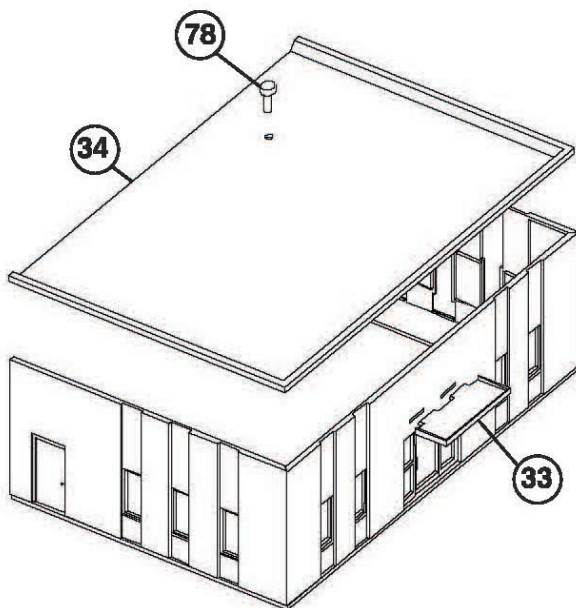
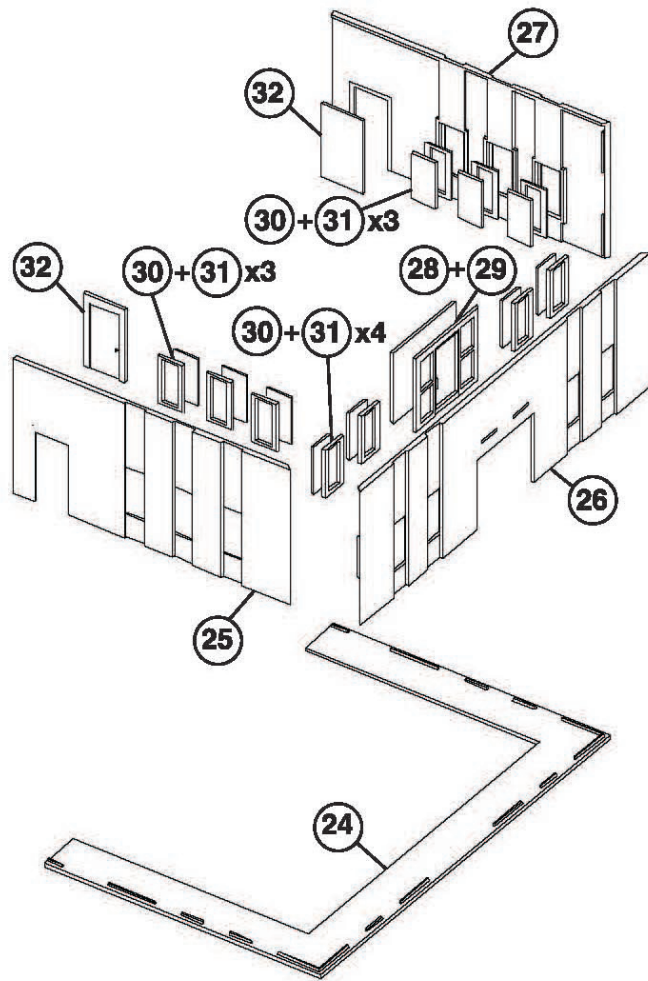
Magic Pan Bakeries is a typical post 1974 commercial bakery still in use today. The separate structures make it easy to fit into an existing layout. Together, the structures could be used as any type of food processing facility or they could be split up for use as parts of other industries.

For figures, vehicles and accessories to set the scene, see your dealer, check out the latest Walther's HO Scale Model Railroad Reference Book or visit our Web-site at walthercornerstone.com for more ideas.

Front Office:

1. Start construction of the front office by adding window frames (30), doors (32), and main entrance (28) to respective walls 25, 26 and 27. Add “glass” (29, 31) to the backs of the main entrance and all window frames as shown. Secure the “glass” with very small drops of glue at the corners to prevent crazing the clear plastic.

2. Glue walls 25, 26, and 27 together, then to base plate (24).



3. Attach the roof (34) making sure the cut out edge faces the rear of the structure. Finish up by gluing roof vent (78) into the recess on the roof, then add the canopy (33) above the front entrance on part 26.

Note: The office can be put in front of any part of the walls of the main plant (see next step) that does not have doors.

DECALING

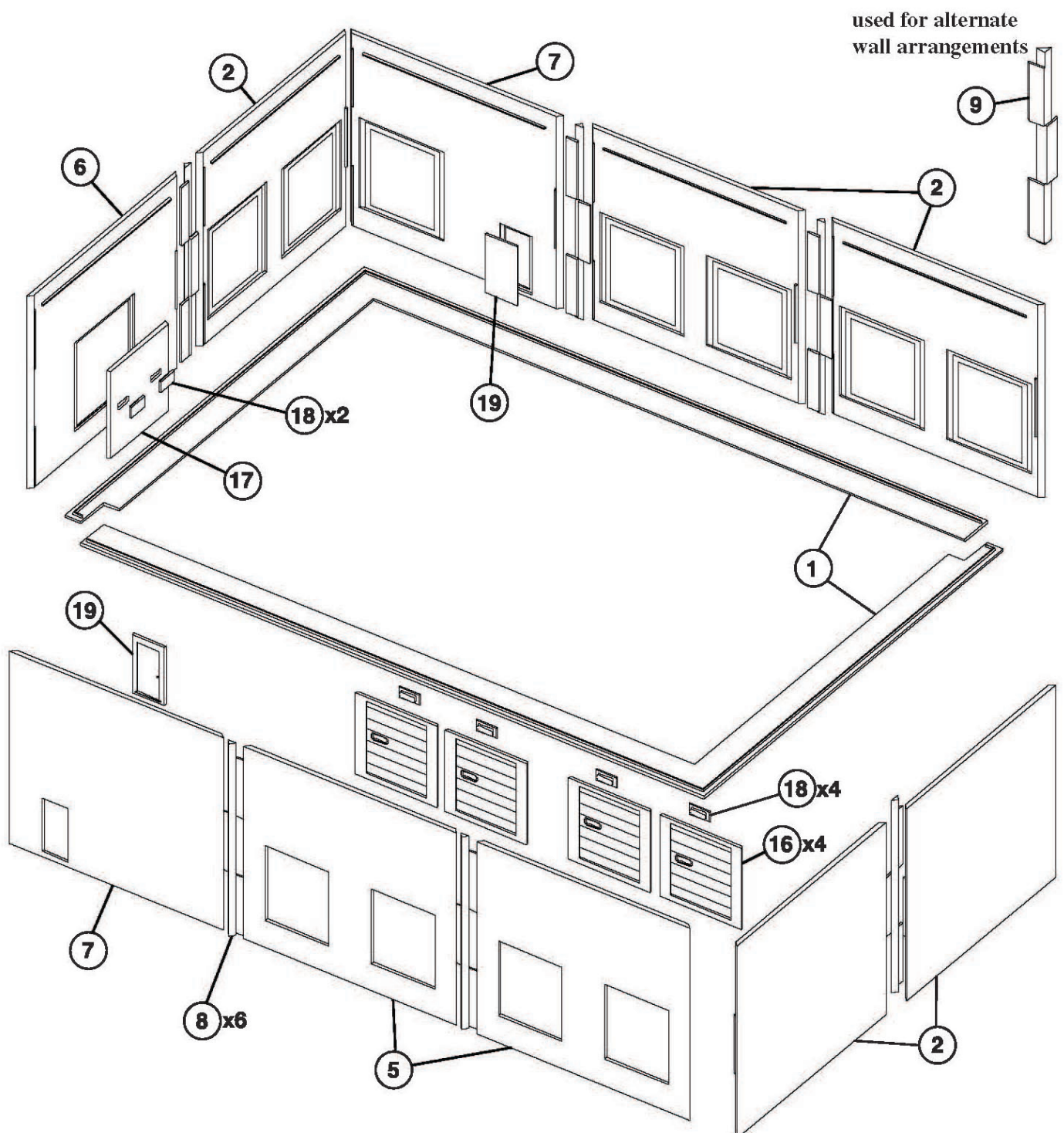
1. After cutting out the decal, dip in water for 10 seconds, remove and let stand for 1 minute. Slide decal onto surface, position and then blot off any excess water.
2. Lightly brush Micro Sol® on top. This will soften the decal allowing it to conform to irregular surfaces. **DO NOT TOUCH DECAL while wet!**
3. When the decal is thoroughly dry, check for any trapped air bubbles. Prick them with the point of a small pin or hobby knife blade and apply more Micro Sol®.

Main Plant Construction:

The main plant is offered as a modular structure where wall panels in different styles can be arranged according to your layout's needs. Inside brace (9), is not used when building the structure as illustrated. It's provided in the event you choose to be creative in the design of the plant, or expand.

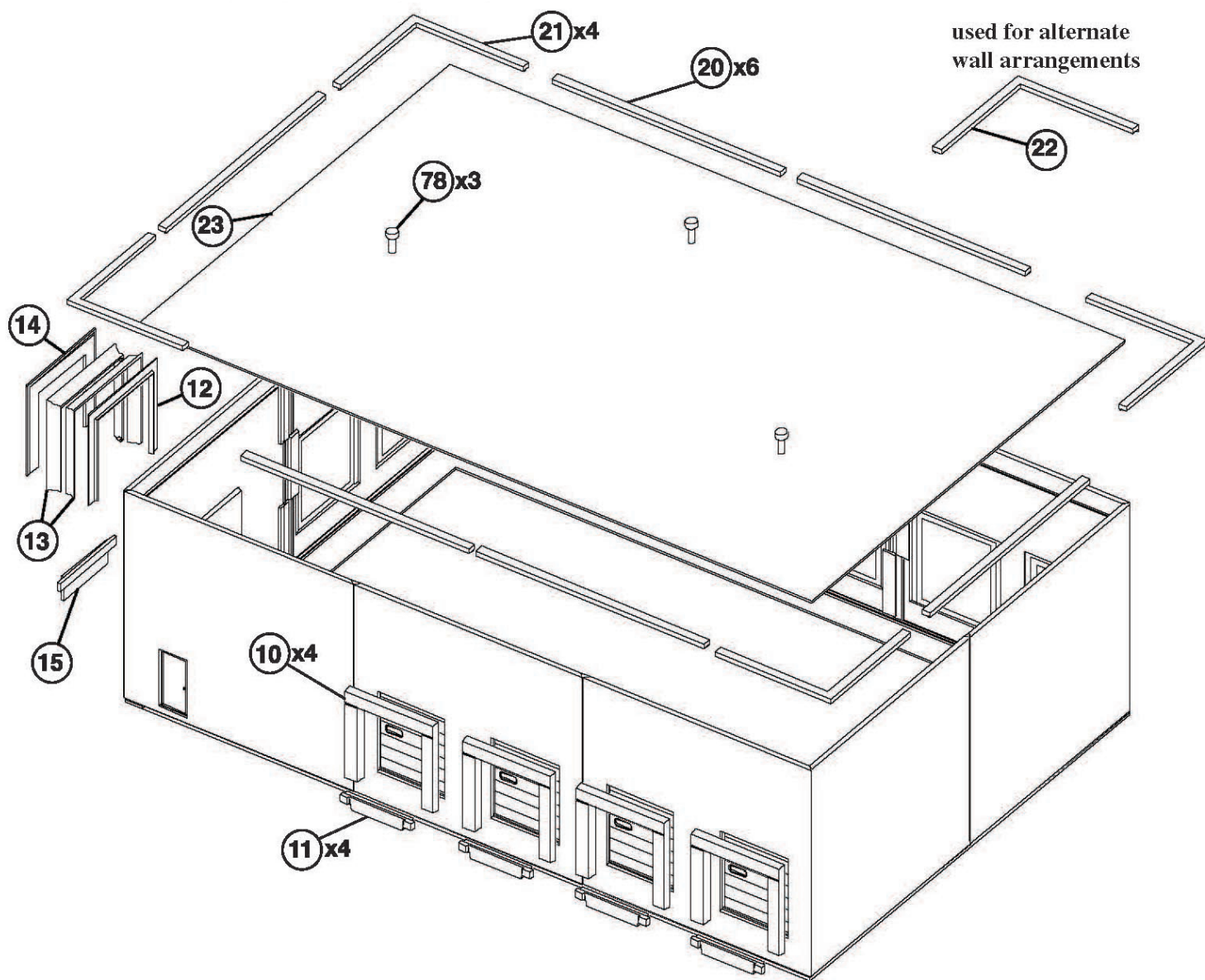
1. Start by gluing the base halves together (1) to form the foundation. If built as illustrated, assemble the walls by connecting each panel with a splice plate (8), except at the corners. Add "steel" entry doors (19) to the back side of each panel 7. Next, glue rail loading door (17) to the back of panel 6 and truck doors (16) to the back of panel 5. Next, install the "glass" (18), to the backs of doors 16 and 17. Further flexibility allows optional installation of either truck (16), or rail (17) doors in wall panel 2. Simply use the engraved cut lines on the back to open the wall for the desired door.

2. Glue the 4 wall assemblies to the base (1).



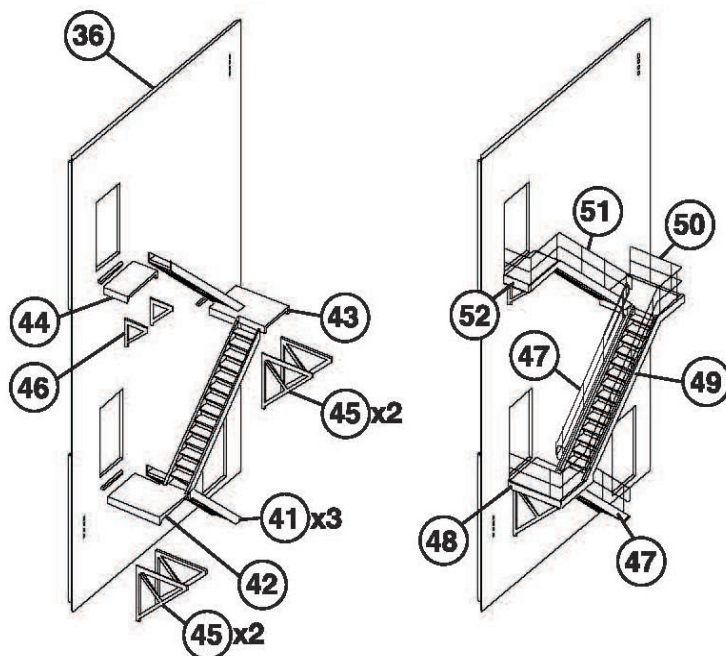
3. Assemble the weather bellows for rail door 17 as follows. Glue adapter plate (12) to panel 6 with the flange facing inward. Glue the draft seals (13) edge to edge as shown and then to 12. Finish up by adding striker plate (14) to the front of the seals, and drop plate/sill (15) to the front of wall 6. For truck doors (16), attach drop plate/sill (11), and weather seals (10) on the front of wall 5. Note: Make sure that 10 and 12 are glued all the way to the top of the door openings to allow space for the striker/drop plates to fit.

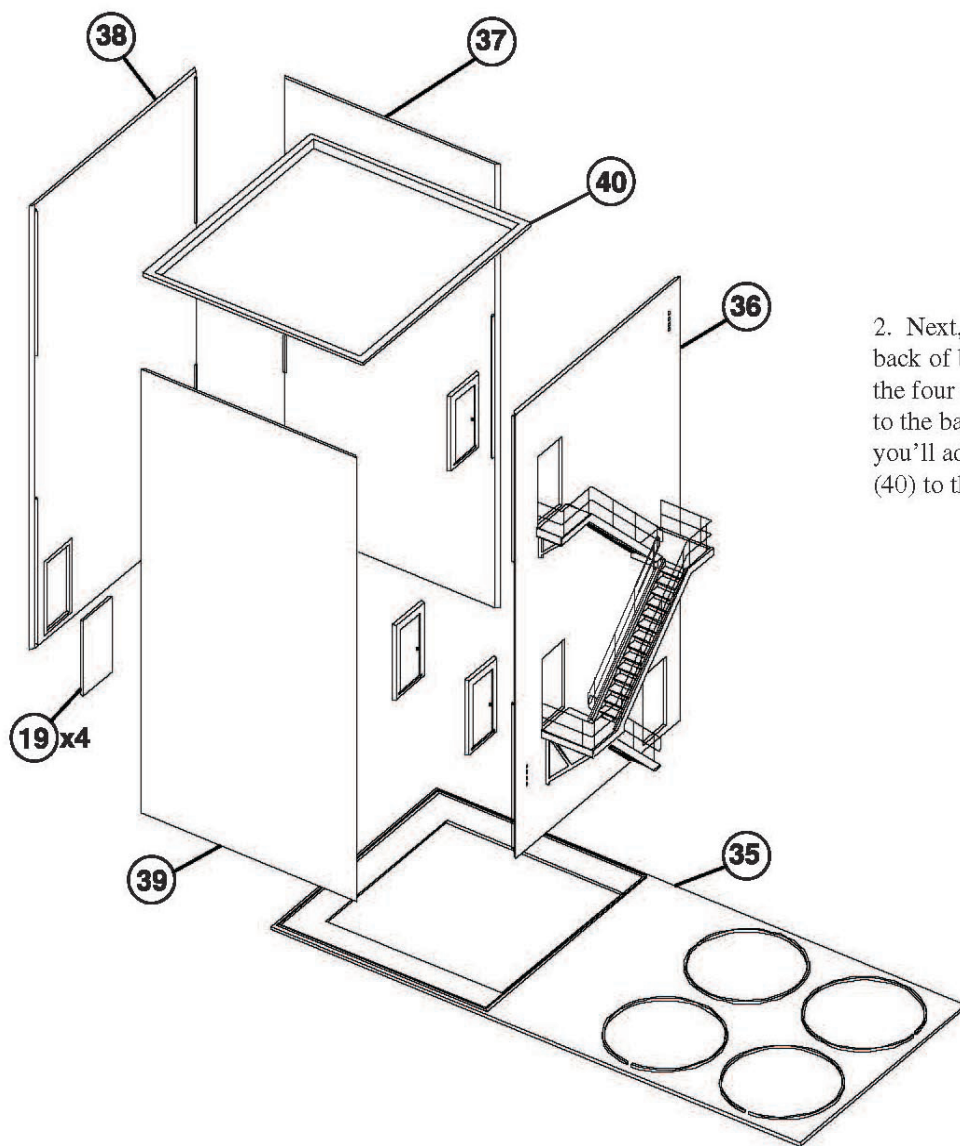
4. Install the roof (23) first, then add the "concrete" caps to the wall tops. Angled cap (21) installs at each corner. Straight cap (20) uses 1 piece on each short wall, and 2 for each long wall. Vents (78) can be added anywhere to the roof. Inside corner wall cap (22) is not used when building the structure as illustrated. It's provided in the event you choose to modify or expand the design of the plant.



Transfer Building:

1. Attach the stairways to part 36 while it's flat on the workbench. Begin by gluing the short "A" braces (46) to the bottom of landing 44, and the longer "A" braces (45) to the bottoms of 42 and 43. Be sure that the thicker part of each "A" brace attaches to the underside of the landing. Glue the platforms in place on the wall. Glue stair stringers (41) to the landings and walls where applicable. Using the illustration as a guide, add railing sets 52, 51, 50, 49, 48, and 47 to the edges of the landings and stair stringers.

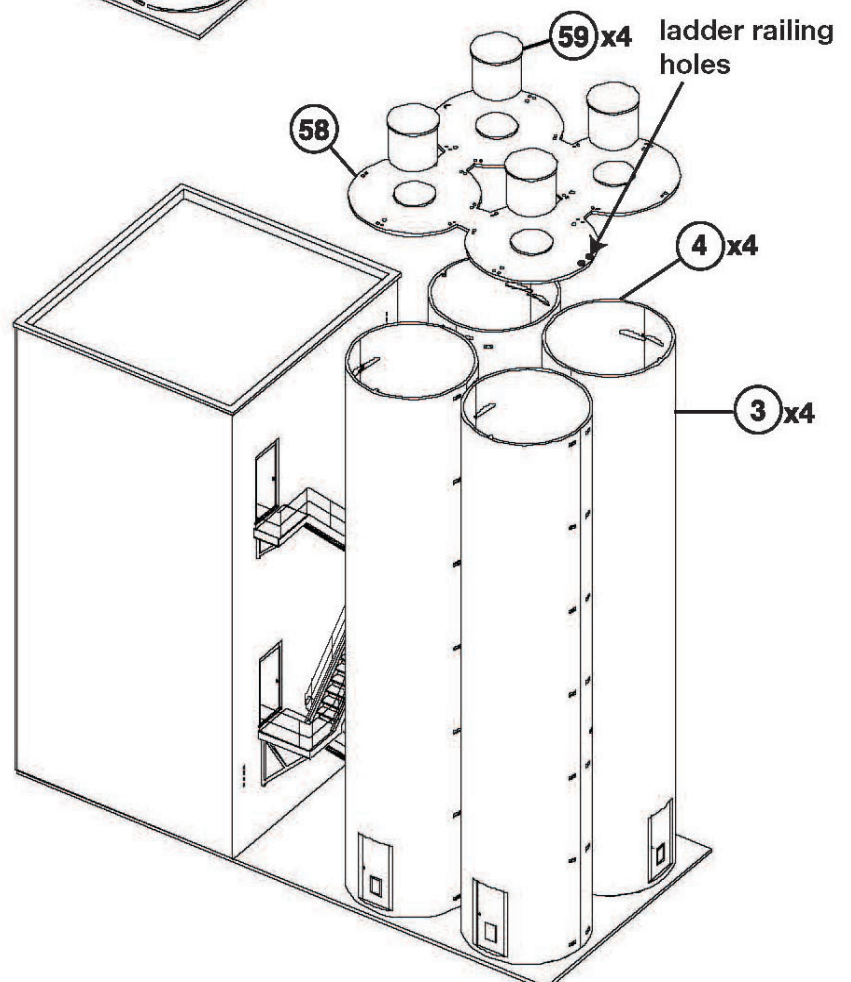


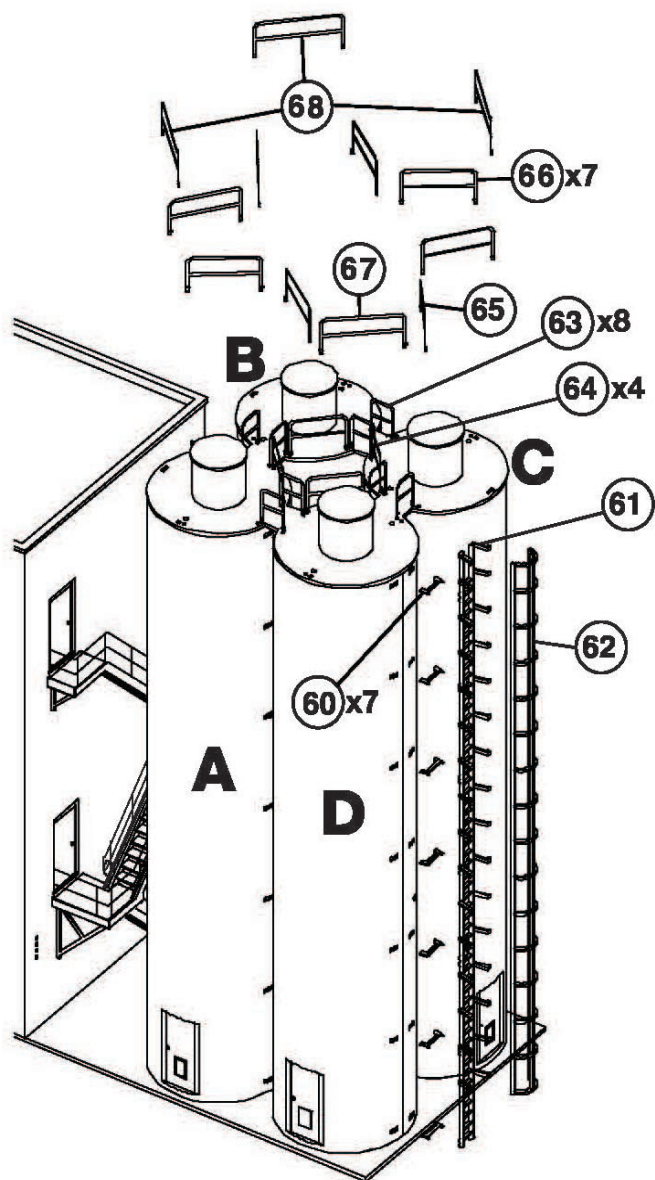


2. Next, add “steel” entrance doors (19) to the back of brick wall sections 36 and 38, then glue the four walls (36, 37, 38, and 39) together and to the base (35). The stairs should face the silos you’ll add in the next step. To finish, glue roof (40) to the top of the structure.

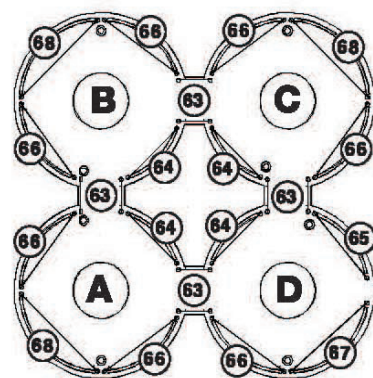
Silo Construction:

1. Glue the silo halves together (3, 4) as shown. The silos are indexed and will only fit one way on the base (35). Test fit each unit and when satisfied, glue all into position. Study silo roof (58) closely before gluing. The ladder railing holes must face the ladder on the side of the silo as shown. Once oriented properly, glue roof (58) in place, then add vents (59).



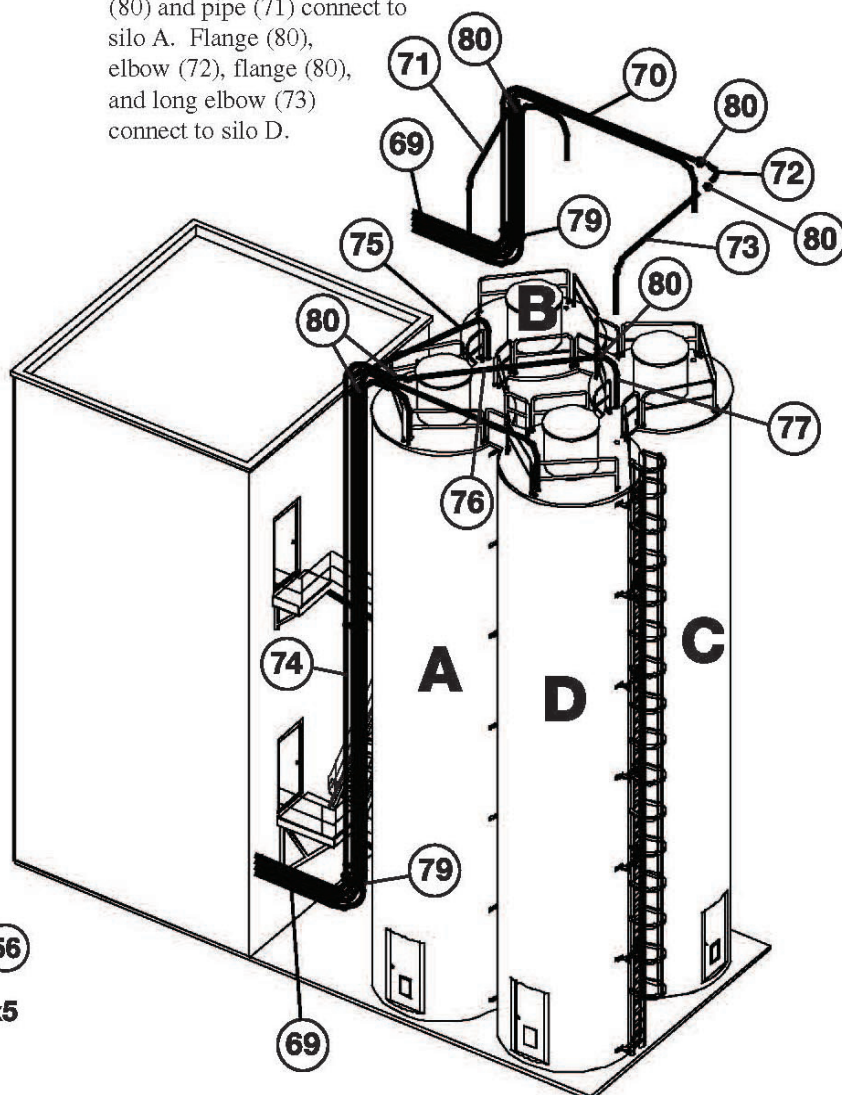


2. Glue the ladder brackets (60), wide end facing the silo, into the indents left open from step 1. Glue caged ladder (61, 62) together, and to the brackets. Use the illustration to aid in the placement of railings on top of the silo. Short railing (63) spans the walkways that connect the silos. Inner railing (64) installs between each 63. Railings (65, 67) are specific length, and make an opening for the caged ladder. Finish with the perimeter railings (66, 68) along the outside edge.



Piping:

1. Glue the four-pipe elbow assembly (69) into the upper right and lower left holes in elevator wall, short leg facing upward. Glue pipe flange set (79) to the ends of each elbow. Attach upper pipe set (70) and lower pipe set (74) to these flanges. Two pipes from each set will immediately reach holes on top of the silos, with the 4 remaining connections to be fabricated. Use the diagram to complete the pipe connections and follow this sequence so everything fits. Start with lower (longer) pipe set 74. Flange (80) and pipe (75) connect to silo B. Flange (80), intermediate pipe (76), flange (80), and elbow (77) connect to silo C. Finish with the upper (shorter) pipe set 70. Flange (80) and pipe (71) connect to silo A. Flange (80), elbow (72), flange (80), and long elbow (73) connect to silo D.



2. Trackside unloading pipes can be built as right or left hand pieces by choosing which side the elbow is on. Glue pipe supports (54) to base (53). Attach upper pipe (55) and lower (56) to the supports. Finish by gluing flange 57 to the pipe ends. Attach to the transfer building or main plant as desired.

