



N Structure Kit
**VALLEY GROWERS ASSOCIATION
STEEL-SHEATHED GRAIN ELEVATOR
933-3251**

Thanks for purchasing this Cornerstone Series® kit. Please read all instructions and study the drawings before starting. All parts are molded in styrene plastic, so use glues and paints which are compatible.

Many of the Americans heading west in the late 19th century were farmers, drawn by the prospect of better land. As they settled on the frontier, wheat was one of their favorite crops. It grew well on newly cleared fields and could be sold for cash. Most of this grain was moved to market in winter months, when the ground froze enough to support heavy wagons. Over time, crop diseases, insects and other factors pushed the wheat growing regions further west, away from the eastern markets. Other cereal grains such as barley, flax and oats were also grown for a variety of uses. Differences in quality greatly influenced the market. This made it desirable to classify and store grain in the country, leading to the development of rural elevators and railroads to serve them.

Wood was the material of choice for elevators as it was affordable and easily transported by train. The main frame of the elevator was made of heavy timbers, which supported large wooden bins called cribs. Belt-driven lifting machinery, used to move the grain from the unloading area to the various cribs, was located in the center of the building. Outside, a scale was installed to determine how much grain had been purchased, along with a small shed to house the mechanism. So customers had some protection from winter weather, the unloading area was often enclosed. The exterior of the entire elevator was sided with lumber to strengthen and protect it. While this created a sufficiently tight structure, prolonged periods of hot or wet weather would cause the wood to shrink or swell. The structure also had to be painted regularly to keep the wood sealed. It was easily damaged by insects or chewed-through by rats and other small animals trying to get to the grain inside. All-wood construction helped make the building a fire hazard; wooden beams collected highly flammable grain dust in every nook and cranny and each passing train brought the possibility of a stray spark from a hotbox or the engine itself.

As supplies of suitable lumber became scarcer after World War I, prices went up and the cost of building a new wood elevator or residing an existing one increased dramatically. At the same time, the auto industry was booming which increased demand for sheet steel, lowering its cost. Corrugated, galvanized steel sheets (Iron sheets had been in use since the 1850s as a building material, but were heavy and expensive, limiting their use.) were introduced that were light, strong and cheap enough that large industrial buildings could be entirely covered. Elevator operators found the metal siding an ideal choice. It was easily nailed in place over the existing wooden structure, virtually weatherproof and greatly reduced the danger of fire from passing trains. Since it was galvanized, it could

be left in its natural metal color, although many owners opted to keep the building painted.

As the steel lasted a long time and protected the wooden interior of the structure, many of these small elevators are still standing. While many serve farm communities, others are now on the edges of suburbs and offer pet foods, birdseed, lawn & garden supplies and more, to both rural and urban populations.

ON YOUR LAYOUT

Found in small towns from the early 20th century to the present day, your new elevator is ideal for any layout.

Well into the 1970s 40' box cars fitted with grain doors (large wooden planks nailed across both door openings from the inside) moved corn, oats, wheat and more from elevators to markets. In 1964, Pullman-Standard unveiled a version of its PS2 4427 Covered Hoppers for grain service. Larger covered hoppers of various types are used today.

Given the seasonal nature of the grain business and having easy access to rail transportation, many elevator operators expanded their operations to provide other services. Using Walthers kits, you can easily add a feed mill (Sunrise Feed Mill 933-3239), farm supply store, lumberyard (Walton & Sons 933-3235), coal yard (Goldenflame Fuel Co. 933-3246), ice house (933-3245) or bulk oil dealer (Interstate Fuel & Oil 933-3200) to your elevator scene.

Many towns are home to several elevators, constructed at different times. They can be modeled using the ADM® Grain Elevator (933-3225) which represents a large, modern concrete style elevator or the earlier wooden Farmer's Cooperative Rural Grain Elevator (933-3238).

As better farming methods and technology created larger harvests, elevators often had to wait for freight cars. This meant that storage capacity had to be increased. Large steel grain bins became popular as a cheaper option than expanding the elevator itself. These could be built alongside the elevator, where space allowed, and connected to the existing machinery. Before being placed in storage, grain must be thoroughly dried to prevent spoilage. Crops used to be cut and allowed to air dry in the fields for several days or weeks, but with gas-fired grain dryers, elevators could purchase "wet" crops and dry them before storage. Large propane tanks are found nearby to insure a steady supply of fuel.

With appropriate railroad equipment, details and figures, your new elevator fits easily into all popular modeling eras. Check with your dealer for additional items, or visit Walthers Web-site at www.waltherscornerstone.com for more ideas.

If you wish to paint your model, suggestions for each of the structures are given under the individual headings.

GRAIN ELEVATOR

Color suggestions :

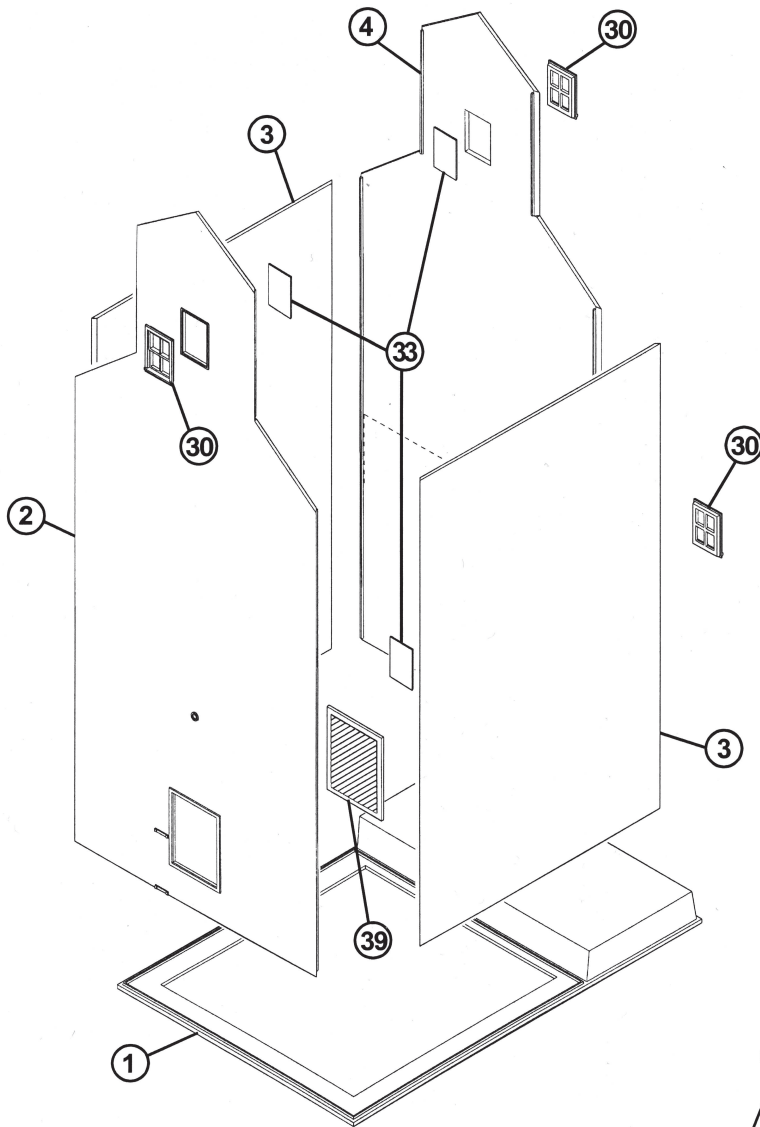
Bases and Ramp Tops - concrete

Walls and Spout - flat silver

Roofs - flat silver, weathered more than the walls

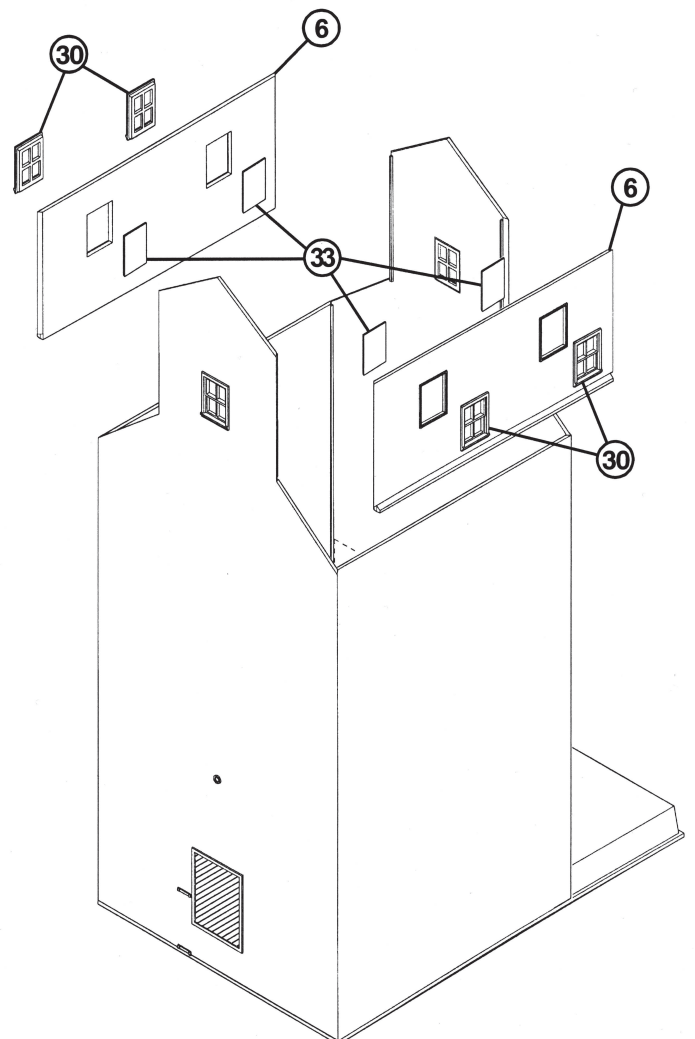
Windows and Doors - light gray

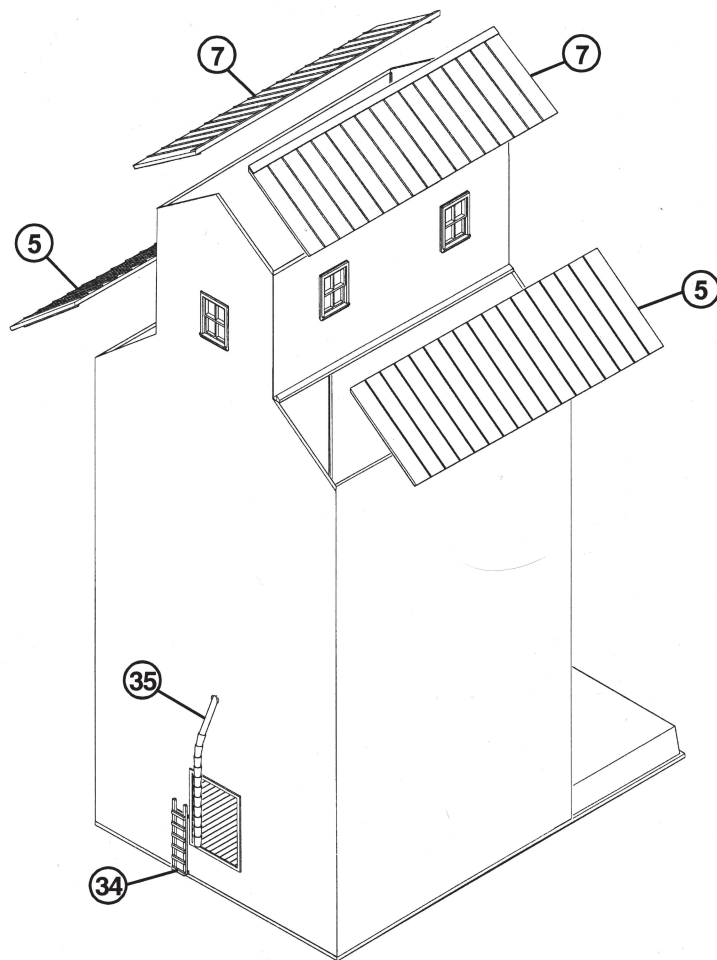
Railings on Ramps - weathered wood



1. Glue the windows (30) into the openings on wall #'s 2 & 4. Then glue the window "glass" (33) to the backs of the windows. Glue the door (39) into the opening on wall #2.
2. Glue the walls (2,3,4) together and to the base (1).

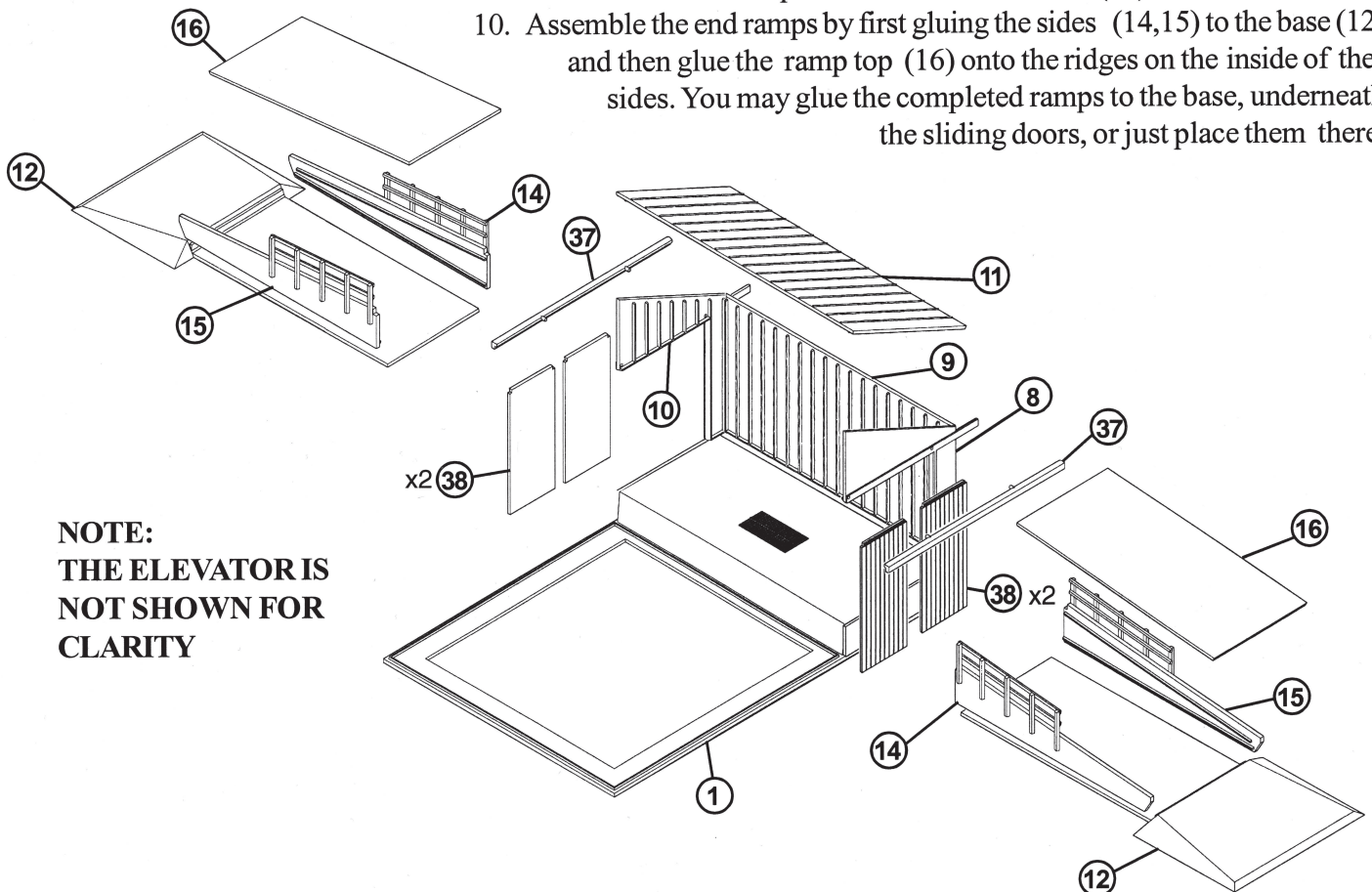
3. Glue the windows (30) in place on the head house walls (6). Glue the window "glass" (33) to the backs of the windows.
4. Glue the walls in place.





5. Glue the roofs (5,7) on as shown.
6. Glue the ladder (34) and spout (35) onto the wall.

7. Glue the side shed's walls (8,9,10) together and in place on the base (1).
8. Glue the roof (11) in position.
9. Position the sliding doors (38) in the groove of the door track (37) and carefully glue the track in the holes on the end wall (8). This will allow you to open or close the doors at will. Repeat this on other end wall (10).
10. Assemble the end ramps by first gluing the sides (14,15) to the base (12) and then glue the ramp top (16) onto the ridges on the inside of the sides. You may glue the completed ramps to the base, underneath the sliding doors, or just place them there.



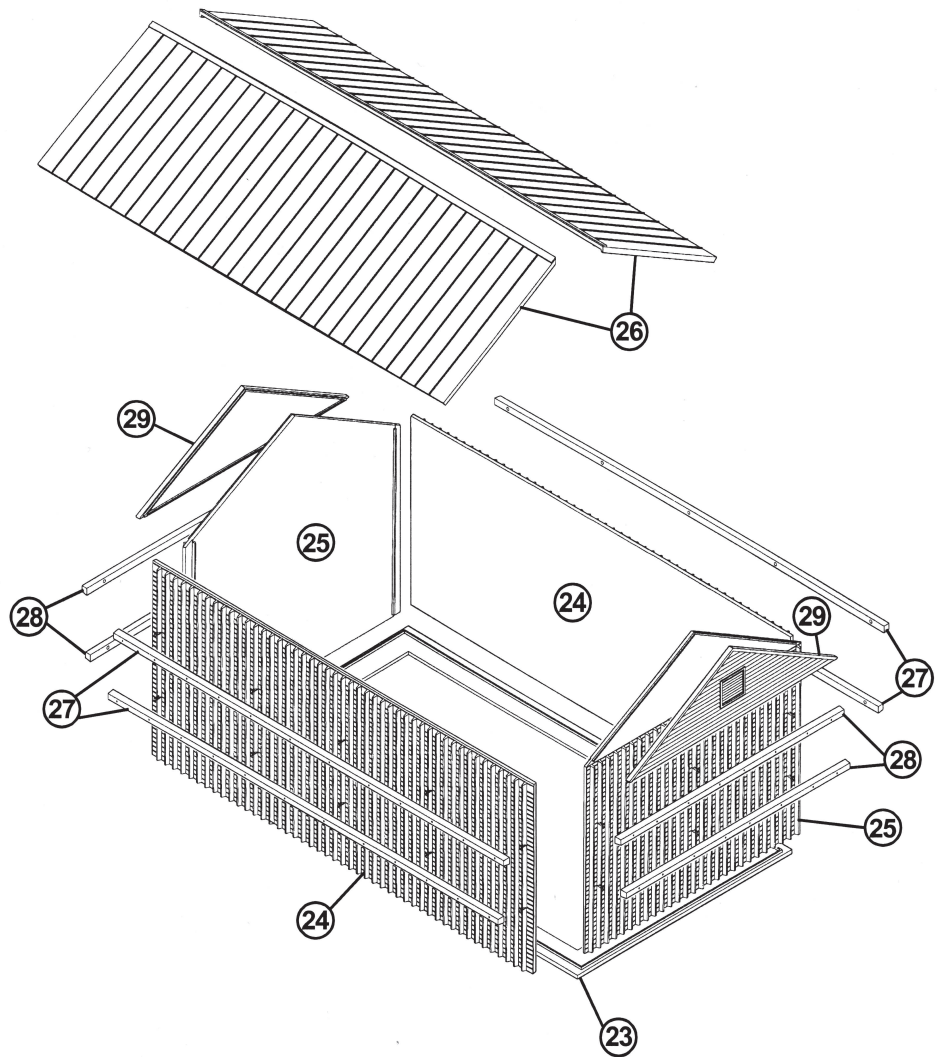
STORAGE BIN

Color Suggestions:

Walls and Timbers - light gray or
weathered wood

Roof - weathered silver

1. Glue the gable inserts (29) in place on the end walls (25).
2. Glue the walls (24,25) together and to the base (23).
3. Glue the long bracing timbers (27) onto the pegs on the side walls (24).
4. Glue the short bracing timbers (28) onto the pegs on the end walls (25).
5. Glue the roof halves (26) on.



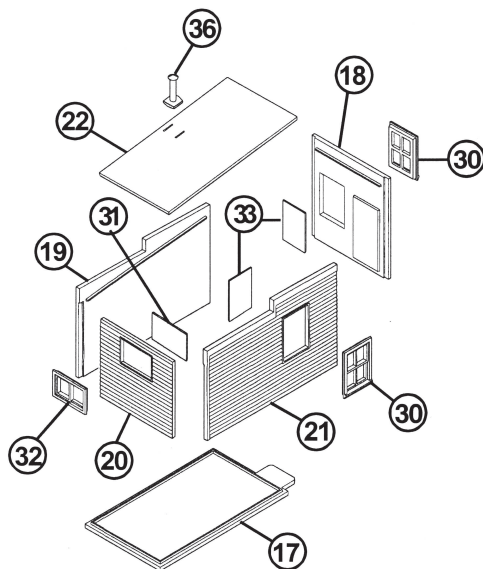
OFFICE

Color Suggestions:

Base - concrete

Walls, Windows and Door - light gray

Roof and Smoke Jack - grimy black



1. Glue the windows (30,32) into their respective openings in the walls (18,20,21). Glue the window "glass" (33, 31) in place on the backs of the windows.
2. Glue the walls (18,19,20,21) together and to the base (17).
3. Glue the roof (22) on and then glue the smoke jack (36) in place on the roof.

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 on 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®.