CORNERSTONE®

N Structure Kit
MACHINE SHOP
933-3264

Thanks for purchasing this Cornerstone Series® kit. Please study the instructions and drawings before starting. All parts are styrene plastic, so use compatible glue and paint to assemble your model.

Keeping engines running in the days of steam meant more than just filling the tender with fuel and water. Hundreds of moving parts had to be inspected daily and repaired or replaced as needed. This regular maintenance kept more engines available for service and helped prevent expensive future repairs.

While most railroads had a major backshop at a central location, less complex repairs were often done at outlying terminals. To provide space for the specialized tools and supplies required, and keep the work moving more efficiently, a machine shop was often added to the roundhouse. While early shops handled basic repairs, many gradually evolved into facilities capable of the same mechanical work as the backshop.

The process started with the engineer and fireman, who gave their loco a going-over after every trip. If any problems were found, or had developed during their run, a work report was filled out. After the engine was washed it was inspected once more, this time by a mechanic. Any additional problems were noted on the work report, which was then sent to the engine house foreman who scheduled jobs and assigned repair crews.

To determine how much work had to be done, some general categories were used. An engine coming off the road with a minor problem might be slated for "roundhouse repairs" where only the work requested was done. The next step up was a "light" or "running repair" which included basic adjustments and routine maintenance. General repairs included more complicated adjustments such as setting valve gear, bearing repairs and some boiler work. Jobs that required the most time and skilled workers were considered "heavy repairs." To determine exactly what was to be done, these were subdivided into five categories of "classified repairs." In addition, engine boilers had to be washed and inspected each month, and this was usually done at the roundhouse as well.

As engines became larger and more complex, so did the shops that served them. At these "maintaining" facilities, the machine shop was equipped with large lathes, grinders, presses and similar machine tools. While these facilities could make just about anything needed, many of the appliances used on later steam power were interchangeable. Stock of frequently needed items were kept on hand, and any defective or worn parts could be replaced fairly quickly. Rather then rebuild these parts at each facility, they were sent back to a central location.

Many of the parts were larger and heavier on newer engines, and the roundhouse itself became more specialized to assist the machine shop. Ideally, the shop was located at the rear of the roundhouse so track could run directly from the turntable and through both buildings if needed. This reduced the amount of extra switching required to move an engine inside for repairs. Alongside this through track, some stalls were equipped with heavy cranes, lifting jacks or drop tables to simplify removing and replacing parts.

As diesels began taking over the roundhouse, the machine shop began to change to meet the needs of the new technology. While steam was still in use, the shop was an important part of the facility. But diesels were much simpler machines, requiring far less adjustment and inspection. Where steam engines were essentially hand-built and each repair unique, the diesels' interchangeable parts meant they could be repaired quickly by simply changing out defective items instead of fabricating new ones. As costs rose in the 1950s and steam was retired, outlying shops were no longer needed. Repair work was typically transferred to one or two central shops, which were set up especially to service diesels.

ON YOUR LAYOUT

Your new model adds realistic detail to any engine terminal. Similar structures appeared in the 1920s and some are still standing. This model includes a boiler house, which would supply steam, electricity and compressed air to the entire engine terminal. Large roll-up doors can be built open or closed, and the baseplate has slots that accept popular rail sizes. To best fit your space or operating requirements, the kit can be built as a freestanding structure, or attached to the Modern Roundhouse (933-3260).

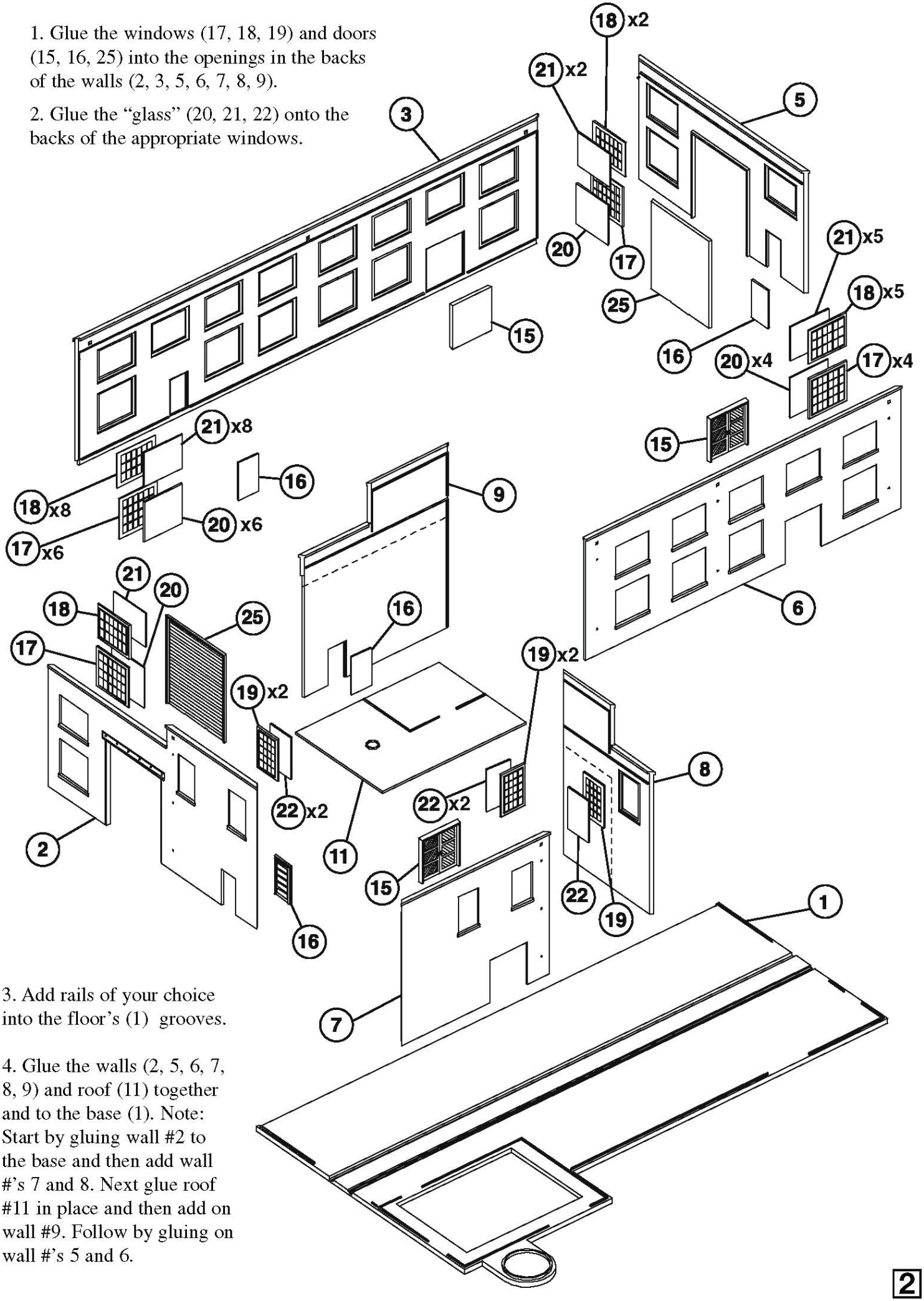
For a larger facility, you can expand the Roundhouse using the Add-On kit (933-3261) which includes matching roof panels, doors and interior truss work for three additional stalls. To put your new roundhouse in service, you'll need the Modern 130' Turntable (933-2613). Typical of equipment found where big steam was used, this is a completely assembled model, with motor drive, programmable indexing unit for fast and easy track alignment, one-piece pit and detailed bridge.

Roundhouses of this type were typically division point terminals, where engines were changed and serviced. A complete facility can be built with the Modern Coaling Tower (933-3262) and Built-Up Steel Water Tank (933-2601).

For more ideas on detailing your engine servicing facility scene, ask your dealer, check out the latest Walthers N&Z Scale Model Railroad Reference book or visit our Web-site at www.waltherscornerstone.com.

1. Glue the windows (17, 18, 19) and doors (15, 16, 25) into the openings in the backs of the walls (2, 3, 5, 6, 7, 8, 9).

2. Glue the "glass" (20, 21, 22) onto the backs of the appropriate windows.

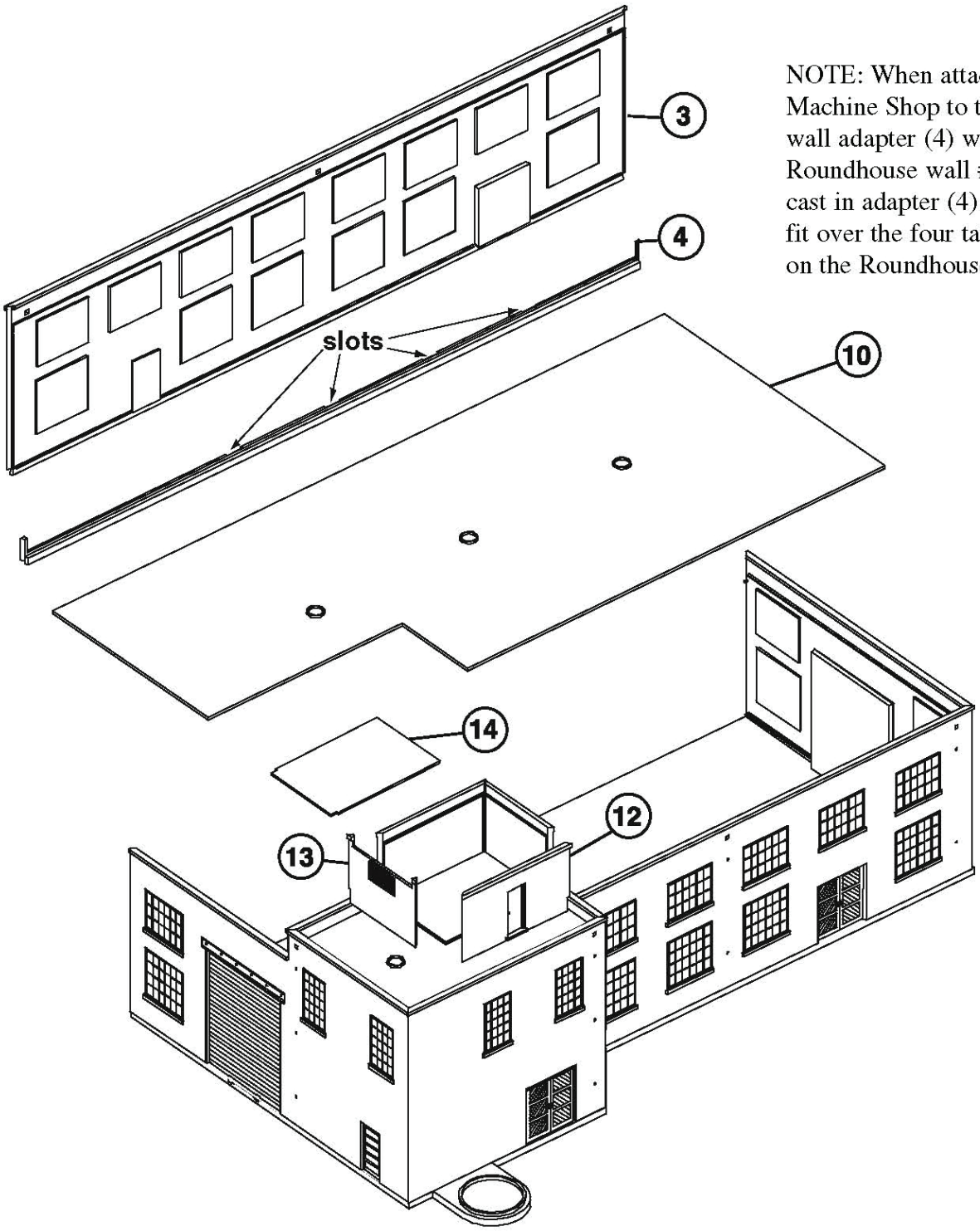


3. Add rails of your choice into the floor's (1) grooves.

4. Glue the walls (2, 5, 6, 7, 8, 9) and roof (11) together and to the base (1). Note: Start by gluing wall #2 to the base and then add wall #'s 7 and 8. Next glue roof #11 in place and then add on wall #9. Follow by gluing on wall #'s 5 and 6.

5. Glue the main roof (10) in place. If you wish to model a free standing building, glue the long side wall #3 in place. If you are adding the building to the Modern Roundhouse 933-3260 (sold separately), do not glue on wall #3. Instead glue the wall adapter (4) to the tops of wall #'s 2 and 5.

6. Glue the headhouse walls (12, 13) in place on roof #11. Then glue on the headhouse roof (14).

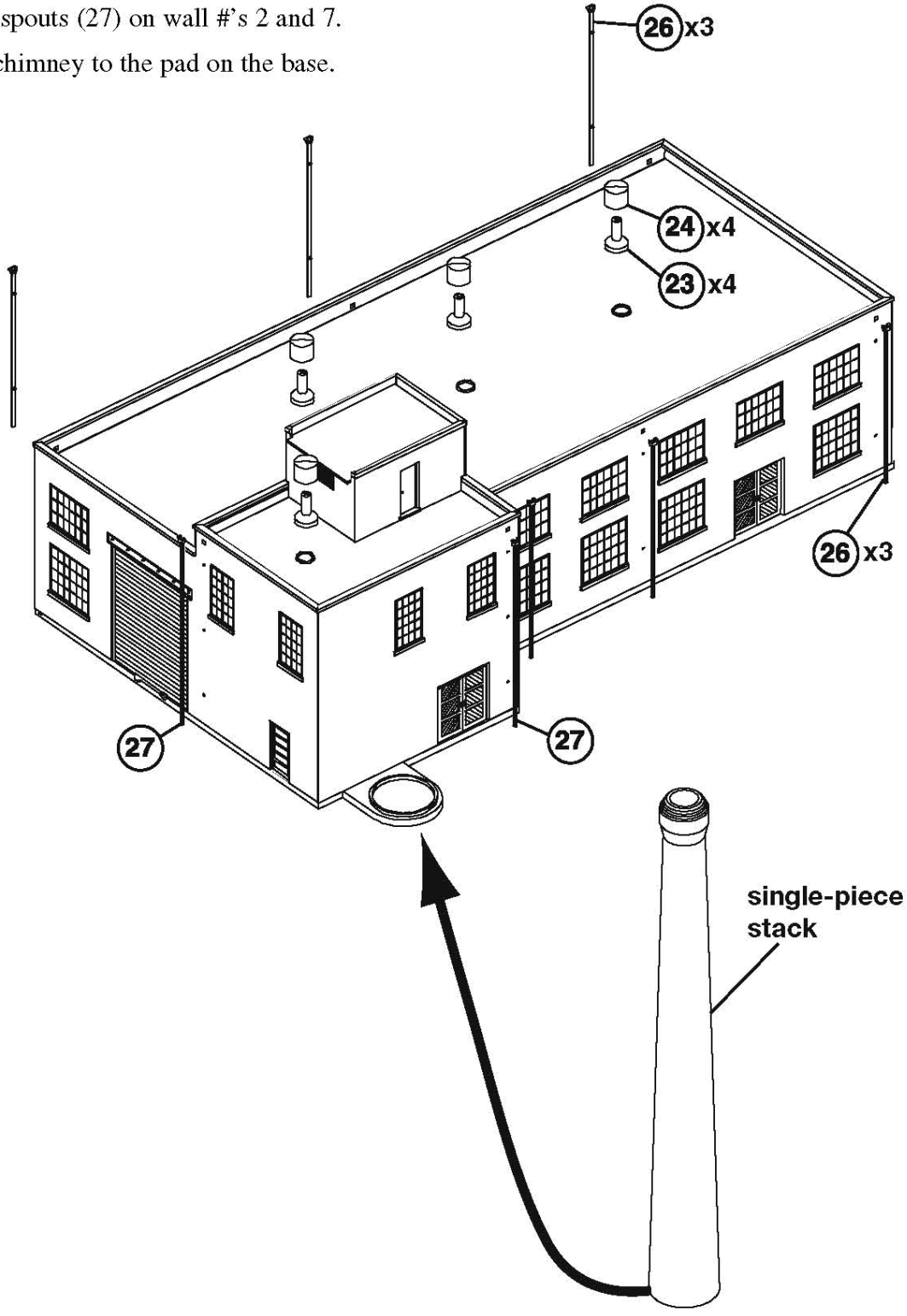


NOTE: When attaching the Machine Shop to the Roundhouse, wall adapter (4) will butt against Roundhouse wall #2. The four slots cast in adapter (4) are designed to fit over the four tall middle pilasters on the Roundhouse side wall.

7. Glue the vents (23, 24) together and in place on the roofs.

8. Glue the short downspouts (26) into the holes in the outer surface of wall #'s 3 and 6. Glue the longer downspouts (27) on wall #'s 2 and 7.

9. Glue the chimney to the pad on the base.



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 comform to irregular surfaces. DO NOT TOUCH DECAL while wet!

3. When 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®.