**Assembly of the HO-Scale WVP&P Co./ Mower Lumber Co./ Cass Scenic Railroad Locomotive Shop**



This kit contains 18 sheets of printed building sides, numbered for placement according to the attached diagram, and a sheet of generic siding for various optional uses. The builder needs to glue the cardstock sides to suitable construction material – black foam board is recommended. Foam board consists of a layer of semi-rigid plastic foam sandwiched between two sheets of card. The completed building is 36" X 14" and consists of three major components, the warehouse, locomotive shop, and machine shop, along with the acetylene generator shed.

**The upper (west on the prototype) end of a completed model.**

1. Decide whether the completed building will sit on top of your scenery or in it. The actual building was stepped, with two floor levels on sloping terrain. The west end was about six feet higher than the east and the floor of the machine shop was raised above ground level. The model's sides are printed with a dark-gray foundation so that when sitting on a level surface; each component is the correct elevation. If you leave the foundation on, the scenery on the train layout should be built up to cover it. Alternatively you can trim the foundation to suit your needs. If you completely remove the foundation at floor level, do not remove the lighter gray wedge at the bases of sheets 010a and 010b. Because the grade into the locomotive shop doors (north side diagram) was higher than warehouse floor level, a wedge of gray will remain visible on this wall of the model. It can be hidden with scenery, or you can attach the alternative, lower walls on sheets 010a and 010b. See also step 13.

2. First, referring to the diagram, match up the adjacent pieces for each side wall (for example 06a with 06b and 06c, etc.) and then carefully trim the cardstock along the mating edges so there is no visible seam. Trim the remaining outer edges to about a ¾" margin.

3. The end walls of the structures are each on a single piece of cardstock. Trim these to a ¾" margin all round. If you want any (or all) of the locomotive doors to be open, cut them out before mounting the wall on the foam board, and do not mount the doors on foam board.

4. With the printed face of the cardstock up, precisely align the adjacent pieces for each side and fasten them together temporarily using pieces of masking tape in the white margins. Then flip the side over and cellophane tape the whole length of the seams. Burnish along the seam with a blunt tool to make sure you have a really tight joint.

5. Now, you are ready to glue the printed sides and ends to the foam board backing. This is done with spray adhesive. It's best to glue only three or four pieces (i.e. the sides and ends for a single

component) in one operation. Note: Do not glue either the extra sheet of generic siding, or the alternative lower walls from sheets 10a and 10b onto foam board.

6. Lay the foam board on a large, flat surface. (When spraying glue, naturally you need to take suitable precautions.) Lay the cardstock pieces, printed face up, along one edge of the foam board, fastening only the left edge of each cardstock piece using masking tape. Then, lift the pieces by their right edges and flip them over as if turning a page, leaving only the backs of the cardstock pieces showing. Lightly spray the whole array evenly with the adhesive, keeping the spray perpendicular to the target area. This helps prevent the glue vapor from drifting onto the front (printed) side of the cardstock, the side facing away from you.

7. Then, after spraying (following the adhesive manufacturer's instructions), grasp the free end of each cardstock piece and gently turn it face up, so that its glued back surface meets the glued surface of the foam board. By moving carefully and holding a curve in the cardstock as you lay it down, you can control it so only a little at a time touches the foam board while rubbing along the printed side to expel any air bubbles that may get between the cardstock and the foam board. Do the same with each successive piece of cardstock. By doing only a few pieces as a single operation, you have time to move carefully, but quickly enough so that the glue on the last piece remains tacky.

8. With the cardstock sides and ends mounted on the foam board, the next step is to trim off the margins you left around the edges of the printed sides and ends. With a sharp utility knife, a heavy metal ruler, and a little care, the board separates cleanly after three or four light strokes. A dull blade will cause the plastic foam to disintegrate. After cutting, test fit all the pieces. Be sure that the side and end walls of each corner are the same height, and for a given component, both sides are the same length and both ends are the same width. It is a lot easier to trim individual pieces now than after they are glued together. Be aware that, true to the prototype, the north wall of the warehouse (010) is slightly higher than the south wall (002).

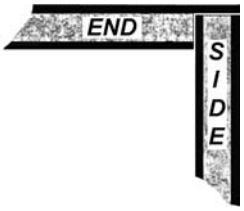
Take extra care with the narrow upper (clerestory) wall printed on sheets 008a, 008b, and 008c. On the diagram it is between the two roof levels on the north side of the locomotive shop.

9. If the buildings were to be assembled at this point, foam board would show at the corners where the side and end walls meet. There are a couple of solutions:

a. Shorten each side wall by taking a slice equivalent to the thickness of the foam board off each end. Then, glue the end walls to the side walls, and cover the exposed foam board edges of the end walls with strips cut from the sheet of generic siding that was provided in the kit.

b. Miter the vertical edges of the side and end walls at a 45-degree angle. This would require a jig or a mat-cutting tool, along with considerable care.

c. Cut a recess in the sides of each end wall. This is the preferred solution. Scribe a line parallel to each vertical side of the end walls, at a distance from the edge equal to the thickness of the foam board. Slice along the line through the inner card layer and the plastic foam, but NOT cutting the outer card layer (the one with the printed wall detail stuck to it). You can easily feel the difference between the soft foam and the tough card with the point of the knife. Then simply peel the resulting strip of foam off the intact outer card layer. This leaves a groove (a mortise) in which to fit the vertical edge of the side wall for a tight, strong corner as in the cross-section diagram shown here.




10. Assemble the component buildings, the skylights and the acetylene generator shed (the machine shop and the shed have one open side). White glue works just fine. After gluing, leave

the structures on a flat surface, and use a square and weights to keep the corners at 90 degrees while the glue sets up.

11. The skylight cupolas sit on a sloping roof, therefore the front long walls are slightly taller than the back walls. To get the walls right-side up, look at the windows; the shadow of the siding should be at the top of the window frame.

12. When the glue is dry, fasten the machine shop to the blank area on the south wall (sheet 008) of the locomotive shop. The bond between the locomotive shop and the machine shop needs to be really strong; using something like Walthers Goo© is recommended. Glue two 3/16 square stripwood roof rafters down the length of the machine shop; one adjacent to the locomotive shop wall and the other on the machine shop roof center line. Be sure the top surfaces of both are flush with the tops of the machine shop walls. Fasten the acetylene generator shed to the blank spot on the west wall of the locomotive shop (piece 007) using Goo©.

13. The warehouse and machine shop may be permanently joined if you choose; however leaving them unattached makes the model easier to handle. If the model has been built with the foundation removed (step 1), remember that in the real building the floor level of the machine and locomotive shops was about four and a half feet above the ground level floor of the warehouse; however, the model will work with both buildings at the same floor level, or with greater/lesser differences in floor levels.

14. Fasten a piece of square stripwood along the base of the clerestory wall on the north side of the locomotive shop. Make the top surface of the stripwood flush with the tops of the side walls so it will keep the clerestory wall rigid and provide a surface upon which to fasten the edge of the lower roof. Install another stripwood rafter on the centerline of the lower roof with its upper surface flush with the tops of the side walls.

15. Black mat board (used for framing pictures) is excellent material for the roofs. It is sturdy, easy to work with, and simulates roofing very well. Cut the mat to the dimensions of the particular roof section, plus a ¼" overhang on the outer edges. There is no roof overhang where the warehouse adjoins the machine shop. The narrow portion of the machine shop wall (009a) visible between the warehouse and the locomotive shop does have a roof overhang. Groove the center line of the underside of the peaked roofs through about half the thickness of the mat and bend them to shape. Black mat board often has a white center layer. If so, run a black marker pen around the edges. After adjusting the fit, set all the roofs in place with white glue.

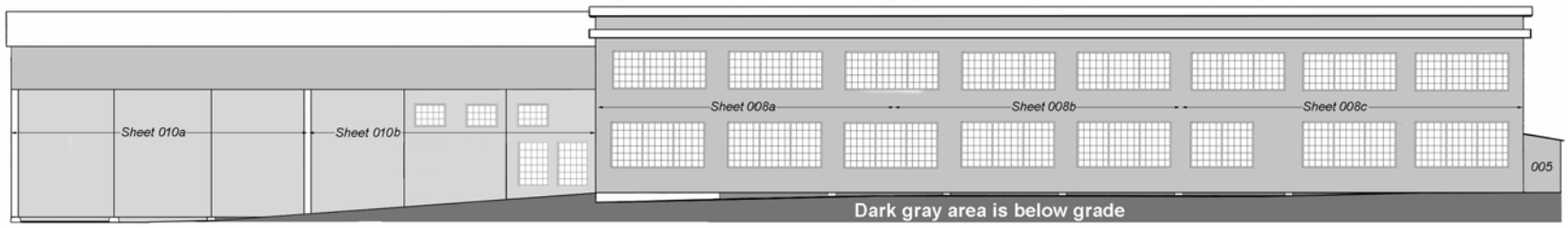
16. Space the skylight cupolas evenly along the length of the machine shop and along the centerline of the roof. Temporarily tape them with a piece of masking tape on one long edge, flip them over, put a little white glue on the bottom edges of the walls then turn the back upright.

17. If you cut out locomotive doors, mount the printed cardstock on mat board or sheet styrene and trim to size. Fasten the printed door detail to the side of the door that will be seen most frequently. If it is the inside, the printed details are not exact, but close enough. Obtain and use operating hinges if you like; otherwise cement the doors in place in the position that appeals to you. If the non-detailed surface of the door can be seen, you should paint it barn red.

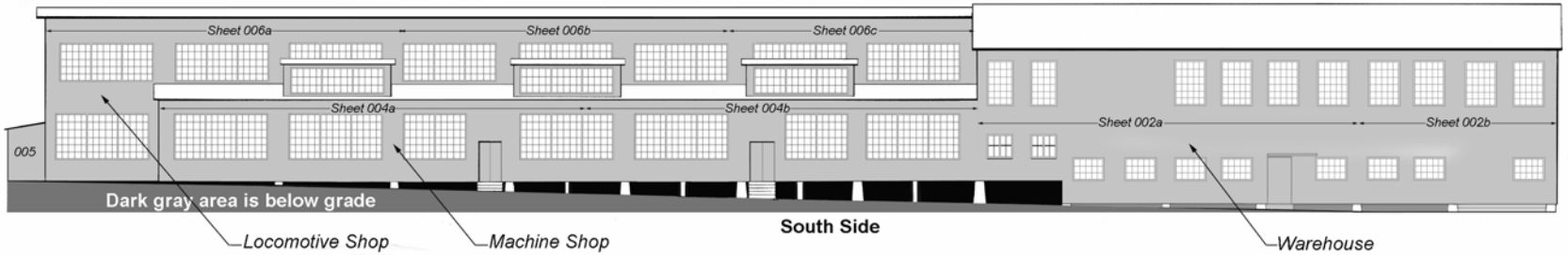
18. The location of the steps to each of the personnel doors into the machine shop are indicated, but no parts are provided to model them. These were simple wooden stairs with stair treads about 14 inches wide. The set to the west had four steps; the set to the east had six.

# Old Cass Shop 1922-1972

**Built by the West Virginia Pulp & Paper Co. Owned by the Mower Lumber Co. 1942 -1960**
**Purchased by the State of West Virginia, Cass Scenic Railroad and used until destroyed by fire**

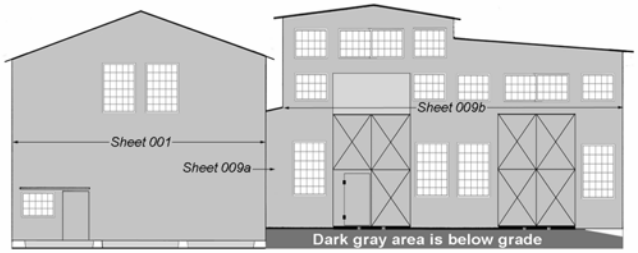



**North Side**




**South Side**

The south side is the front of the building. The main line track from Cass to Cheat Mountain runs parallel, about eight feet from the wall.




**East Side**


**West Side**

Cass shop, west end, 1969.

Cass shop, east end, 1972, after the building had been recently painted. The left track is the engine service track; the coal dock is visible to the left of the locomotive. The next track is the main line to Cheat Mountain. The shop tracks are to the right; their steep grade is apparent. The small building is the shop privy. (Both photos Richard Sparks)