Appendix A contains drawings and specifications for four different cardboard systems: moving boxes, in two styles; high-density storage system; film/fiche trays; and side panels for move carts. These plans were provided to me by Tom Kelly of Kelly Box and Packaging Corporation in Fort Wayne, Indiana. Mr. Kelly graciously gave me permission to publish his proprietary designs. With these designs as a guide, a box manufacturer should be able to provide you with the boxes you need for almost any materials.

You can buy ready-made boxes from many sources including mail-order and Internet suppliers. In small quantities this may be the most cost-effective plan. You’ll have to take a standard size—and there are thousands to choose among—but you don’t have to pay a setup charge. Many of these suppliers do custom work as well. For a large move, it is almost certainly more cost-effective to have boxes made for you.

If you do buy ready-made boxes, make sure you order corrugated cardboard; there are some boxes advertised with the term “cardboard” that are light-duty, single-ply boxes not much stronger than a clothing store gift box. Pay particular attention to the crush weight of the box. This is a measure of the strength of the cardboard used. The overall strength and weight-carrying capacity of a box depend on the type of construction—glued, stapled, folded, and so forth. For a given construction, a box made with cardboard of a higher crush weight is stronger.

MOVING BOXES

Figure A.1 is a standard box with integral top and bottom flaps. The drawing is for the box used for oversize books. The same design is used for standard-size books but with the 14-inch dimension reduced to 10 inches. The recommended crush weigh is 275 lbs/sq. ft.

The manufacturer cuts the box to this pattern, then bends the right and left panels and glues the tab on the right panel to the left panel. To construct the box, you form it with pressure on the outside corners, then fold in and tape the bottom flaps.

Figure A.2 is a plan for a strong, no-tape box with an integral bottom and triple-wall end panels. This drawing is for the standard-size box; for oversize books, increase the 10-inch dimension to 14 inches. The crush weight is 275 lbs/sq. ft.

This is my preferred moving box. Building the box is quick and easy and requires no tape. Fold the sides up, then bend the ends over and lock the little tabs into place. The triple-wall end panels and handholds provide a safe, strong, almost comfortable way to handle the boxes. The downside is that this box requires a separate lid.
Figure A.1 is the lid for the folded box, called a “tray” in the box profession. This particular drawing is the lid for a midsize box we had built to move a large periodicals collection. Adjust the dimensions up or down to fit standard or oversize boxes. The lid should be made with a 275-lb/sq. ft. crush weight.

To build this lid, fold up the two long sides. Then fold up the ends, fold the tabs on the end panels, and tape them to the sides. Always put the short flap on the outside of the lid. It keeps the inside of the lid smooth and makes it much easier to fit the lid on the box.

HIGH-DENSITY STORAGE SYSTEMS

Figure A.4 is the box. The manufacturer glues the tab on the end panel to the side. When you make the box, you fold and tape the bottom flaps. The top is open. The crush weight is 275 lbs/sq. ft.

Figure A.5 is a plain sheet of cardboard. Put one sheet over a pallet to even out irregularities in the pallet boards. Center another one fairly exactly over each course of boxes. You want the cardboard to cover all of the sides and ends of the boxes. The crush weight is 200 lbs/sq. ft.

Figure A.6 is the top cover for the stack. It is another big tray. Build it by folding down the sides and ends and taping the tabs on the ends to the outside of the side panels. Tape in both directions along the side and over the side panel to the inside. Staple the flaps if you have a heavy-duty stapler. The strength of the sides of this top cap is what keeps the stacks of boxes from pulling apart at the top.

FILM/FICHE TRAYS

Figure A.7 is the tray we use to move microfilm or microfiche. The tray holds two rows of film in boxes or one of fiche. You can customize the tray for fiche by reducing the 8-inch dimension to 6½ inches and increasing the depth of the sides to 5 inches. Check the length of a drawer in your cabinets and adjust the 26½-inch dimension to hold one full row. The crush weight is 200 lbs/sq. ft.

Build the tray by folding up the sides and ends and tape the tabs on the end panels to the outside of the trays. If you have a suitable stapler, reinforce the tape with staples. These trays take a lot of abuse. Make them as strong as possible.

SIDE PANELS

Figure A.8 is the piece used to construct the side panels for move carts. Two pieces this size are used per panel, but cut with the corrugations running in opposite directions. The drawing shows the dimensions for a panel for a 32-inch cart. Adjust the 31-inch dimension so the panel makes a tight press fit into the sides of your book carts. The shelves and base on the cart are recessed inside the end panels to receive the cardboard sides. The crush weight of the cardboard is 275 lbs/sq. ft.

Corrugated cardboard is strong in one direction but bends easily in the other. The manufacturer glues two of these panels together with the grain running at right angles. The result is a light, strong side panel.
From MOVING YOUR LIBRARY, by Steven Carl Fortriede (Chicago: American Library Association, 2009)