



# Conserve O Gram

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## Retrofitting A Moving Van To Transport Museum Collections

Occasionally a park must move its museum collection without the expense and complexity of contracting with a professional art moving company. These situations may involve moving a short distance, such as relocating to a new collection storage facility within the park or vicinity, or moving a small collection. There also may be situations when it is necessary to move the collection quickly to evacuate in the event of an impending emergency or disaster such as a hurricane, flood, wildfire, or chemical spill.

In situations with little time, funds, or need for professional movers, a relatively inexpensive method of transporting the collection is suggested. A covered truck or van, such as those available as moving van rentals (frequently listed in the telephone directory as one-way rentals), can be acquired relatively fast and inexpensively. The vans' cargo compartments, or *bays*, come in a variety of lengths and capacities.

To set up the van for carrying collections, a system of wooden racks is installed in the vehicle's cargo bay. The racks form a series of platforms that are stacked as illustrated in the diagram. The rack is simple to construct and can be erected quickly with commonly available materials and basic hand tools. The racks can be dismantled with equal ease and quickness. The components can be retained for future use.

### *Materials*

- 4" x 4" lumber cut to 4' lengths

- ¾" plywood sheets (**NOTE:** Truck cargo bays vary in width from 6'6" to 7'11". Standard-size 4' x 8' sheets of plywood will need to be cut to shorten the 8' dimension in order to fit the interior width of the bay.)
- Quilted furniture pads or plastic bubble wrap for cushioning and covering cabinet drawers of objects on the rack
- Circular saw(s) for cutting lumber and plywood
- Hand or electric-powered screw driver(s) for installing screws
- Flathead wood screws at least 1 ¼" long for securing plywood to lumber
- ½"-1" diameter rope for securing museum cabinets to the truck
- Shipping boxes for holding objects too large to be accommodated in the rack system
- Tissue paper, interleaving paper, bubble wrap, and tape for packing large objects in shipping boxes

### *Retrofitting the Van's Interior*

1. Construct the rack at the closed end of the cargo bay opposite the freight door.
2. Place three 4'-lengths of lumber on the bed of the truck, one parallel to each sidewall of the bay and one midway between the two, as illustrated in the drawing. These lengths of

lumber support the ends and midspan of a sheet of plywood.

Place a layer of furniture pads or bubble wrap on the truck bed between the lengths of lumber as cushioning for the drawers of objects.

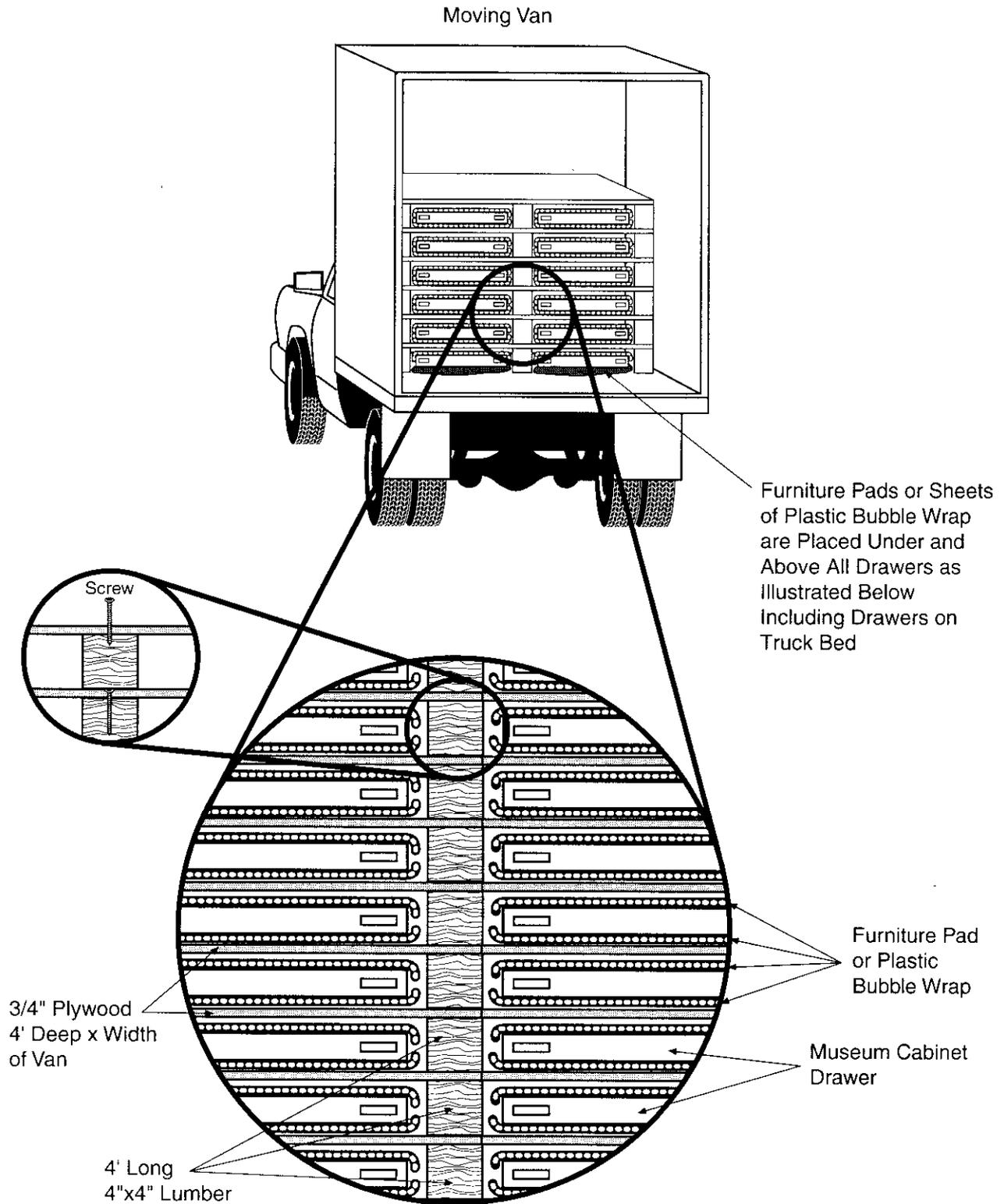
Remove drawers from the standard museum cabinets and carefully move and load them onto the van. Place the drawers on the cushion of furniture pads or bubble wrap between the lumber. Cover the drawers of objects with furniture pads or bubble wrap to hold the objects in place.

Carefully place a sheet of the appropriately-sized plywood on the lumber as illustrated. Fasten the plywood to the three pieces of lumber with two 1 ¼" screws in each length of lumber. (See illustration.) The plywood and lumber form a platform that serves as the next level for the drawers.

3. Continue constructing platforms one on top of the other as described in step 2 to create a shelving unit with a maximum working height of four feet.
4. Position a sheet of plywood on end against the unit to form a cover to prevent drawers and objects from sliding out. If additional units will be fabricated, the plywood can be held in place by the next unit of platforms to be constructed. Otherwise, fasten the plywood cover in place with 1 ¼" screws.
5. Continue constructing racks in 4'-deep increments (the width of a sheet of plywood) until the collection is accommodated or an appropriate load is attained.
6. Ensure that the plywood cover for the last unit of platforms is securely fastened with screws.
7. Plan to provide space in the cargo bay during each shipment for the museum cabinets that were emptied of their drawers. The space for the cabinets should be nearest the freight door so that the empty cabinets can be the last items loaded and the first to be unloaded. In this way, the cabinets can be put into position immediately upon unloading to receive the drawers as they are moved from the truck into the storage area. Secure the cabinets in place to prevent them from shifting during transit. Use rope to attach the cabinets to the padded rails along the sidewalls of the cargo bay.

### Cautions

- Objects extending above the height of the lumber forming the platform supports should be removed from the drawers, wrapped for safe shipment, and packed in a shipping box. Keep careful records that detail the object, the cabinet and drawer from which the object is removed, and the box number where the object is placed.
- Doublewide cabinet drawers may be accommodated in similar platform units. Construct doublewide units without the lumber supporting the midspan. Do not construct units with a midspan support for holding standard museum cabinet drawers above platform shelves holding doublewide drawers; heavily-laden shelves holding standard cabinet drawers may sag thereby damaging the objects on lower shelves holding the doublewide cabinets drawers.
- It is extremely important not to move the cabinets with the drawers and objects left in them. *Always remove drawers with objects from cabinets and move separately.* The cabinets are not designed to withstand the stress caused by the shifting weight of objects and drawers. When jostled, drawers can slip down through the drawer supports of the cabinet and seriously damage the objects.



*Sources*

Plywood, lumber, rope, screws, and hand tools can be purchased from local hardware or building materials stores.

Furniture pads can be rented from the truck rental company or local moving or transit companies.

Bubblewrap, shipping boxes, tissues, interleaving paper and tape can be purchased from local moving or transit companies.

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