



## map library bulletin board

### COMMUNICATING MAP COLLECTION SPACE NEEDS TO ACADEMIC LIBRARY ADMINISTRATORS

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This column presents the methods used to assess the space needs in one medium-size map collection in an academic research library—the Map Section of the University of Illinois at Chicago (UIC). Librarians working with non-book formats have traditionally found it a challenge to communicate the space needs of their collections to non-specialists. Library administrators are familiar with the standards for books per shelf and can relate that figure to the annual number of volumes acquired. In addition, a quick tour of the bookstacks can provide visual confirmation of a supervisor's report of the need for additional shelving space. In contrast, non-book formats often require protective storage equipment that hide overcrowded conditions.

We recently conducted a survey modeled after one done in the departmental libraries at our sister library at the University of Illinois at Urbana-Champaign (UIUC). The UIUC survey was designed to measure traditional book collections housed on standard book shelving units. Its intent was to show the number of linear feet of material above the 'full' mark, i.e. above 80% shelving capacity or 29 inches of books per 36 inch shelf.

The challenge facing the UIC Map Librarian was the adaptation of a 'book' space survey technique into a methodology that could be applied to cartographic materials. Cartographic information is

produced in several formats—sheet maps, imagery, electronic, with book format limited to reference books and atlases. Even the latter are problematic because atlases are published in a greater variety of heights, widths, thickness and binding styles than found in the general book collection. When compared to books, cartographic materials follow the exception, not the norm, in the type of storage equipment required.

In developing a method for the measurement of cartographic materials, the following steps were taken. First, standards for map libraries, art libraries, and academic libraries were consulted. Second, basic types of storage used by the UIC Map Section were identified. Third, because no one survey technique could be applied to all storage types, a different methodology was applied to each. The basic storage types and the methods applied to each are discussed below.

#### Categories of Cartographic Materials Storage

##### HORIZONTAL MAP CASES

(4 feet x 3 feet x 2 inches,  
with 5 foot aisles)

- Single-stack, sheet maps
- Double-stack, sheet maps

##### VERTICAL FILE CABINETS

(4 drawer, legal size)

- Single sheets, maps folded in covers or envelopes and aerial photographs

##### BOOK SHELVING

- Standard (3 feet x 11 inches x 14 inches, shelved vertically, 13 inches of usable space)
- \*Oversize (3 feet x 11 inches x 16 inches, shelved vertically, 15 inches of usable space)
- \*\*Oversize (3 feet x 24 inches x 5 inches, shelved horizontally, 4 inches of usable space)

The UIC Map Section holds a minimal number of cartographic materials in electronic and micro formats. Their storage is shared with the adjacent government documents collection, and therefore, they were not included in the Map Section survey.

### HORIZONTAL MAP CASES

To estimate the volume of materials contained in the horizontal map cases every seventh drawer was counted. This sample was considered sufficient for measuring a medium size map collection. Smaller collections should decrease the size of their sample and larger collections should increase theirs. An adjustment in the application of standards was made for U.S. Geological Survey (USGS) 7.5' and 15' series topographic maps because they are double-stacked.

The standards for map libraries indicate that 200 sheets is the maximum capacity of a drawer 4 feet by 3 feet by 2 inches. The contents of each drawer should be divided into folders of no more than 50 sheets each. This division aids both map preservation and the filing and retrieval of sheets. Additional drawer space is consumed by oversize sheets that must be folded, the thickness of the map folders, and the dust covers that protect the contents of the drawer. When counting antiquarian material, this standard must be adjusted downward, and one must consider factors such as whether the maps are encapsulated or placed in individual folders. If the standards are not followed there are risks involved: (1) the weight of the map cases may exceed the building's floor load specifications, (2) the maps suffer increased damage, and (3) lifting overweight map folders may cause injury to the map collection's staff and patrons. One map folder containing 50 maps weighs approximately 17 pounds.



We considered the standard of 200 maps per drawer equal to one 36 inch bookshelf filled to 100% capacity. The number of sheets greater than 160, but less than 200, represented the amount of overcrowding in a drawer. If the number of maps per drawer exceeded 200 sheets those sheets were counted as 'not properly shelved.' Exceptions to the standard were as follows: (1) USGS 7.5' and 15' topographic series maps are double-stacked; a standard of 400 sheets per drawer equals 100% capacity was applied. (2) The thickness of sheets in some map series had been at least doubled because the sheets were mounted on cloth. These maps were counted as two rather than one sheet. (3) For map drawers containing 'other' cartographic materials, such as USGS Geologic Folios, the calculation was based on the height of the drawer's contents.

#### VERTICAL FILE CABINETS

We measured every seventh drawer to estimate the volume of material contained in the vertical file cabinets. The amount of space between the front edge of the cabinet and the interior front of the fully extended drawer was considered to be 100% of the capacity of the drawer.

Due to variations in the model of vertical file cabinet, the maximum usable drawer depth varied. A measurement was made of the total drawer capacity and the drawer contents to the nearest half inch. Twenty five inches represented the average 100% capacity of a drawer. Drawer contents that measured more than 20 inches, but less than 25 inches, represented the amount of overcrowding. Contents greater than 25 inches were counted as 'not properly stored.'

#### BOOK SHELVING

We included all shelves when counting the volume of maps contained in book shelves. Data for three different shelving configurations were collected. The UIUC 'book' method was used for standard and \*oversize books. Two inches of material per \*\*oversize shelf were considered equal to one 36 inch bookshelf filled to 100% capacity. If a shelf contained more than one volume, and if the volumes were stacked more than 1 and 1/2 inches, but less than 2 inches high, the 1/2 inch difference represented the amount of overcrowding on that shelf. If the height of the volumes per shelf exceeded 2 inches, the materials in excess of 2 inches were counted as 'not properly shelved.' Any \*\*oversize volumes in a public access area on a shelf higher than 5 feet 4 inches were counted as not properly shelved.

A significant number of titles, especially atlases, exceeded the height, width, and thickness of the books in the library's general book stacks. The UIC cartographic reference collection contains 95% standard size, 9% \*oversize, and 4% \*\*oversize books. The UIC atlas collection contains 64% standard size, 16% \*oversize, and 20% \*\*oversize volumes. These percentages are based on a title, rather than a physical, volume count.

The standards for \*\*oversize volumes assume that most have great thickness and should be placed one per shelf. This is not always the case with atlases; thus an exception to this standard was established by the Map Librarian after consultation with specialists in preservation and conservation. A shelf was considered to be at 100% capacity if it contained volumes stacked to a height of 2 inches. The juxtaposition of hard cover and paper bound atlases allows stacking to a greater height,

however, it increases the opportunity for damage when volumes are removed and reshelfed. If volume configurations permit, the volumes are double-stacked.

The UIUC Library space needs survey, from which this study was adapted, was designed to provide library administrators with statistics on the total number of linear feet of overcrowding in the library. To make a map collection's unique data more meaningful to non-map librarians, it is necessary to convert the data into their equipment equivalents, e.g., the number of five drawer horizontal map case units or vertical file cabinets that are needed to alleviate overcrowded conditions. This equivalent makes it easier to visualize and calculate the amount of additional space needed. Data gathering for this type of survey is more labor intensive for map collections when compared to book collections, but it must be done if map librarians are to present map collection needs with equal strength.

#### Selected References

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