Libris DESIGN and financing public library buildings

Richard B. Hall

Introduction

Ten years ago, I published the book Financing Public Library Buildings (Hall, 1994) which explored the various sources of funding for public library construction as well as project cost estimating for public library buildings. Recently, I was asked to make a presentation on the same topic at the Public Library Association’s Spring Symposium for the workshop “Building the perfect library”. This article is a summary of that presentation and is based on my original 1994 book along with updated public library construction cost data primarily from the annual architectural issue of Library Journal. It is also an introduction to the project budget module of Libris DESIGN, which is newly developed computer software available for library facility planning.

Library Journal’s architectural issue

To begin, let us look at what has been happening with funding for public library construction over the last 30+ years, beginning in 1968 when Hoyt Galvin first started collecting the data for Library Journal (Figure 1).

As Figure 1 shows, on average, funds expended for public library construction have doubled approximately every ten years. In the late 1960s, approximately $100m was expended nationwide, and by the late 1970s approximately $200m was expended. By the early 1990s, $400m was expended and by 2002, the figure was just short of $800m. While the actual dollars expended for public library construction have virtually exploded in recent years, it must be kept in mind that these figures are not adjusted for inflation.

Potential sources of funding

There are four potential sources of funding for public library construction:

(1) private funds;
(2) local public funds;
(3) state funds; and
(4) federal funds.
In the late 1800s and early 1900s private funds accounted for 90 per cent of the funding for public library construction, but at the turn of the current century, the ratio had reversed and public funding accounted for 90 per cent of public library construction funds. Further, as Table I shows, the majority of public funding came from local public funds.

There are some trends that have been seen in the funding patterns since the collection of the Library Journal data. There has been a significant decline in federal funding available for public library construction. This has been partially offset by an increase in state funds. In recent years, there has been a slight increase in private funding, but the primary increase has been in local public funding, which in recent years has approached 80 per cent of all funds.

**Federal funds**

The greatest decline in a single funding source resides with federal funds, which during the early years of data collection (1968-1979) averaged over 20 per cent of funding and reached an all-time high in 1979 of 42 per cent of the total funding for public library construction. However, in recent years, the share of federal funding has plunged to around 2 per cent!

While federal funding has come through many different departments and programs, the greatest loss was the demise of Title II of the Library Services and Construction Act (LSCA), when the federal program transitioned to the Library Services and Technology Act (LSTA). It was not that the amount of federal funding from LSCA was substantial; it was that these federal funds were often a significant stimulus for the expenditure of private as well as local and state public funds. In other words, the federal funds acted as “seed” money that triggered the release of matching funds from the other sources.

**State funding**

In recent years, however, state funding has begun to take over the role of seed money in some states. From 1968 to 1979, state funds accounted for approximately 4 per cent of all funding for public library construction, but in the last ten years the percentage has more than doubled to 9 per cent. The highest year was 1997 when state funds accounted for 20 per cent of all funding nationwide! A quick look at last year’s Library Journal architectural issue will show the reader that approximately 50 per cent of the states in the union had some funding for public library construction.

While many states allocate funds for public library construction on an occasional basis, only the states of California, Massachusetts and Georgia have had major ongoing programs over multiple years. California leads the pack with an original state Bond Act for $75m in 1988 and a subsequent one in 2000 for $350m. Recently, two new Bond Acts have been introduced into the California legislature, one for $2bn and another for $4.5bn. The later amount reflects the actual need based on a statewide needs assessment of public library facility needs in late 2002 to early 2003.

Statewide needs assessments are one of the major ways to start a state program. Not only do they give legislators an idea of the scale of the need, they also give them an idea of where the projects are located, and possibly most importantly, if there are any in their districts...
that need funding. Knowing the size, cost, location and district for each project allows for a strong and coordinated lobbying effort. Even so, it is important to find a strong political ally to carry the bill. There are many arguments for the benefits of state funding programs for public library construction, not the least of which is the ability of such a program to foster statewide library development as well as stimulate the local and state economy. Furthermore, because most state programs require a local match, the state funds subsequently stimulate local public and private funds just as the federal LSCLA program did.

Private funding

This is the funding source that has been the most stable in recent years. Private funds averaged 9 per cent of all funding for public library construction from 1968 to 1979, and then averaged 10 per cent in the last ten years. Its highest year was in 1996 when it reached 21 per cent of all funds for construction. Overall, many public library building projects have a small amount of private funding, usually for furnishings and equipment and the like, but relatively few have large amounts of private funds. Only 23 projects reported in Library Journal over the last 34 years had over $4m of private funds in them.

There are many reasons for a private fund raising effort other than just to raise funds from the private sector. The campaign often creates a broad base of support for the project and may even convince public funding officials of the feasibility of the project so that they will commit essential public funding. Private funds can often be spent on “upgrades” for the project that might not normally be acquired with public funds, such as an upgrade in quality of finishes for furniture and equipment or the building itself. Finally, a private effort often results in a vested interest on the part of the donors in the library building that can be used effectively in coming years to support the ongoing operational budget when budget cutters try to trim the library’s budget. If donors perceive the library as “my library”, they will tend to come out to support the library and help diminish the impact of any potential budget cuts.

Local public funding

Currently, local public funding is the single most important source of funds for public library construction. From 1968 to 1979, local public funds accounted for approximately 67 per cent of all funds for public library construction. In the last ten years, that figure has risen to 79 per cent on average and was at its highest in 2002 when it peaked at 87 per cent of all funds! Of all public library projects in the nation, 30 per cent receive 100 per cent of their funds from local public funding.

The most common method of obtaining local public funding for library buildings is holding a ballot measure and letting the voters decide on the library measure. General obligation (GO) bonding is the most common, but other types of measures are also possible such as sales tax measures or special parcel tax measures. On average, nationwide, library ballot measures for public library facilities pass 80 per cent of the time and engender 63 per cent of the vote. There are a number of information sources available regarding library ballot measures. In addition to the book Winning Library Referenda Campaigns (Hall, 1994), information about library ballot measures can be found in the nationwide referenda survey published in Library Journal each year. This survey reports the state and location of each ballot measure as well as the amount of funds raised and the percentage of “Yes” votes for each measure.

How do I know how much money is needed for my project?

Now that we know where the money comes from to fund public library construction, it is important to turn our attention to the step before fundraising. This step is the process of estimating the total cost of the project. This is not just an estimate for the cost of construction of the building, but all of the associated costs such as site acquisition and development as well as furnishing and equipment costs, professional
fees and other planning and administrative costs.

One of the major pitfalls in this process is underestimating the project costs early in the process and then losing credibility when the costs must be revised upward several times during the development of the project. It is safer to be accurate or estimate slighty high and then bring the project cost estimate down as it is refined over time.

This cost estimating process can take a considerable amount of time and effort. It also often requires professional and technical expertise that the planner will have to develop. So where does one start? There are many sources of information, but a good starting point is a library facility planning system that has been recently developed called Libris DESIGN.

Introducing Libris DESIGN: computer software for library facility planning

Libris DESIGN is a database that allows users to create building programs and project cost estimates for public library buildings. This can be done for new building projects as well as for remodeling and expansion projects. The database runs on MS Access and is available for download at the Libris DESIGN Web site (www.libr deselect.org).

The Web site also has downloadable documents on facility planning topics such as library lighting, power and data management, cost estimating simplified and many other topics. There is also access to a database of recently constructed public library facilities in California that provides not only basic project information, but also pictures of the exterior and interior of the buildings. The database and Web site development has been supported by the US Institute of Museum and Library Services (IMLS) under the provisions of LSTA.

The database is an expert system that incorporates years of library facility planning experience into a planning tool that saves library planners both time and money while creating comprehensive and highly organized planning documents. Libris DESIGN allows library professionals to become more active participants in the planning of their facilities. For a full description of the capability and power of the system, see the 15 February 2003 article in Library Journal titled “Magical models” (Campbell, 2003).

Project budget module

Resident within the database is a module dedicated to the creation of project cost estimates based on default cost figures, which the user can modify. The first choice that the user has to make is the type of budget to select based on the type of project. There are three types of budgets that a user can choose from: one for new construction, one for remodeling or conversion projects, and one for combination remodeling and expansion projects.

Figure 2 shows a sample budget screen for a new construction project. The user selects from default “Cost” levels of low, moderate and high as well as “Areas” such as rural, statewide and metropolitan. Each combination of cost and area provides default cost figures appropriate to the selection – in this case, for the State of California. A future enhancement of the database may be to add the ability to select cost levels for other states or even other areas of the world.

Budget line items

There are 21 individual line items in the budget screen starting with “New construction” which, in this case, is $202 per square foot and is currently considered a moderate statewide cost for public library construction in California. The individual line items are:

(1) New construction;
(2) Site development;
(3) Site demolition;
(4) Site acquisition;
(5) Furniture and equipment;
(6) Computer software;
(7) Technology installation;
(8) Technology cabling;
(9) Signage;
(10) Works of art;
(11) Architect and engineers;
(12) Cost estimator;
(13) Construction management;
(14) Interior design;
(15) Planning and administration;
(16) Relocation;
(17) Collection moving;
(18) New materials acquisition;
(19) Miscellaneous;
(20) Contingency; and
(21) Inflation calculator.

The Libris DESIGN budget screen serves as an interactive, electronic checklist of project costs, which users can modify. The user can override the figures for any line item and change the cost per square foot or the lump sum figure, thus building a project budget or refining one they have previously worked on.

The “Project cost estimate total” figure is always displayed at the bottom right corner of the screen in red and changes as the user works with the line items above. As the user makes changes to the budget, the recalculations are done automatically and accurately. Because of this, if necessary, users can make changes in a project budget without fear of error, right up to the last minute before presenting in a funding agency presentation.
Help and pop-up screens

The budget screen is extremely user friendly in that it provides a significant amount of user help. The “?” icons produce pop-up screens with contextual “help” information about each line item.

Furthermore, each line item is itself a button that produces a pop-up screen that allows the user to create even more budget detail for each line item, such as is shown in Figure 3 for the “Planning and administration” line item.

Users can enter cost figures for each line item in this screen as well as add additional lines to the screen. Once all of the cost estimates are added, the total figure can be added to the budget estimate by clicking on the “Apply user values” button on the budget screen.

Getting started: creating a project cost estimate using the budget screen

In order to create a budget for a specific project, a user would usually start at the top of the screen and select the cost and area values that are close to the local situation. Since the construction cost of the building is the single largest line item cost in most project budgets, this factor usually gets the most attention. So how does one determine what the cost per square foot for construction should be?

There are a number of sources available that might be helpful including construction cost indexes such as R.S. Means (www.rsmeans.com) and Marshall & Swift (www.marshallswift.com). State libraries often have contractors who are knowledgeable about library construction costs in the state, particularly if there is a state matching grants construction program in place. Design and construction professionals in the area are usually aware of local construction costs. If a similar building type such as a museum, bank, community college library or post office has been recently bid or constructed in the area, the cost figures may provide a good starting point.

Public libraries are usually more expensive to construct per square foot than many other buildings because they are expected to be civic landmarks and last for 40 years or more. Often design quality expectations are quite high for these public buildings and because the taxpayer pays for their operational costs, it is generally desirable to reduce the building’s life cycle energy and maintenance costs. Using higher quality materials, structural elements, HVAC and lighting systems, life safety, electrical and telecommunications infrastructure drives up the initial construction costs.

Another excellent source for construction cost information for public libraries is the Library Journal architectural issue which comes out every December. In addition to providing information on the sources of funding for the projects, Library Journal also provides basic cost breakout information for: construction, site acquisition, architectural and engineering fees and other costs.
National average construction costs for public library buildings

Figure 4 shows the national average construction costs of public library buildings. The average has risen from $20 per square foot in the late 1960s to over $140 per square foot in recent years. This national average is created from figures that vary widely throughout the country and even within states or regions. Another major reason these figures vary is that the overall construction cost is highly dependent upon the site development costs, which vary widely from project to project.

Just as the amount of funding available for public library construction has been doubling every ten years, the national average cost per square foot for public library construction has been doubling roughly every decade. Obviously, keeping in mind the impact of inflation on the cost of construction, even over a few years, is important when arriving at a reasonable and accurate construction cost estimate.

Since the library construction projects that are reported in Library Journal are listed by state as well as city, readers can easily create a list of recently constructed public library buildings in their area. From the average costs of the projects on this list and local information, along with any other sources of information available regarding construction costs, a reasonable construction cost ballpark estimate can be developed. Construction costs are already a couple of years old when they are reported in Library Journal. The economy can also have a direct impact on the bidding climate and ultimately the cost of construction. If the economy is booming when the building is bid, the cost per square foot will probably be higher than if the economy is depressed and contractors are looking for work just to keep their crews together.

Once the construction cost estimate figure is determined, users continue down the list of individual line items on the budget screen creating estimates based on whatever information they have available. Once users create a preliminary draft budget, they can return to the budget screen at any time to update and refine their figures throughout the project. There will be many budget estimates for a project, and they will change along the way. The actual cost of a library construction project will not be known until the end of the project. Up until that time, all budgets are just estimates, although hopefully accurate ones.

For an in-depth overview of the entire cost estimating process, see Chapter 2 – “The project cost estimate” – in Hall (1994), which also includes a hypothetical library project cost estimate for “Anytown, USA”.

“What if” scenarios in Libris DESIGN

One of the major advantages to using Libris DESIGN is that it allows for the quick and easy creation of “What if” alternate scenarios. What if we were to have to pay $20 per square foot more for construction? What if we had no land acquisition costs because a private benefactor might donate the site? What if we discover toxic materials under the site? What if we hire an internationally renowned architect who wants a 12 per cent fee?

Users can create a duplicate of any budget, rename it, describe how it is different, and then modify this new budget to meet the parameters of the alternate scenario to see what the impact is on the bottom line – the total project cost estimate. This process can be done literally as many times as desired since there is no limit in the database to how many budgets may be created for a project. Each of these budgets may be stored and retrieved later for continued editing or printing.
If a budget scenario is no longer useful, it can be deleted.

**Budget reports**

Out of the 50 preformatted reports that are available in Libris DESIGN, there are two reports that display the project cost estimate. One is a summary report that displays simple line items with cost figures and a total cost figure at the bottom. The second report is a more detailed project cost estimate (see Figure 5) that not only displays the cost figure for each line item, but also a cost per square foot and a percentage of the total project figure, along with any detailed information that was in the pop-up boxes as well as the total cost information at the bottom.

There are over a dozen additional cost summary reports in Libris DESIGN that display cost information for furniture, equipment and shelving based upon a user created building program in the database. This information can be displayed by space, supplier or category of equipment, e.g. technology, readers seating, staff workstations, shelving, etc. There are approximately 1,800 inventory items of library furnishings and equipment in the database, which have costs associated with them that are updated every few years. This database places a wealth of management information at the user’s fingertips heretofore unavailable.

![Figure 5](image)

**Project Cost Estimate with Details**

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**Training**

Currently, training for the database is available in California on a fairly regular basis through the Infopeople project. Potential users may register for training via the Web site at www.librisdesign.org/train.html. Recently, training has been provided outside of California (Florida and Utah) when the demand has been great enough to fill a 20-station computer lab. The training is a hands-on two-day workshop. For those interested in bringing training to a location outside of California, the Libris DESIGN project director may be contacted via the Web site’s “User feedback” link.

**References**

