Public Library Space Needs: A Planning Outline

June 2025

Wisconsin Department of Public Instruction

Public Library Space Needs: A Planning Outline

Developed by

Anders C. Dahlgren

Library Planning Associates

Wisconsin Department of Public Instruction

Jill K. Underly, PhD, State Superintendent

Madison, Wisconsin

This report is available from:

Library Services Team
Teresa Schmidt, Public Library Administration Consultant
Wisconsin Department of Public Instruction
201 West Washington Avenue
Madison, WI 53703
https://dpi.wi.gov/libraries

Fourth edition
June 2025
Wisconsin Department of Public Instruction

The Wisconsin Department of Public Instruction does not discriminate on the basis of sex, race, color, religion, creed, age, national origin, ancestry, pregnancy, marital status or parental status, sexual orientation, or ability and provides equal access to the Boy Scouts of America and other designated youth groups.

Contents

Contents iii
Author's Note 1
Introduction 3
Preliminaries: Design Population 6
Step 1: Collection Space 9
Projecting Collection Size 10
Calculating Collection Space 12
Step 2: Technology Space 16
Projecting a Technology Inventory 16
Calculating Technology Space 17
Step 3: Reader Seating Space 19
Projecting a Reader Seating Inventory 19
Calculating Reader Seating Space 20
Step 4: Staff Work Space 22
Projecting a Workplace Inventory 22
Calculating Workstation Space 23
Step 5: Meeting Room Space 25
Projecting Meeting Space Needs 25
Calculating Meeting Room Space 28
Step 6: Special Use Space 30
Step 7: Nonassignable Space 32
Step 8: Dedicated Allowances 33
Bookmobiles 33
Makerspaces 33
Library of Things 34
Step 9: Putting It All Together 35
Step 10: The Next Steps 37
Developing the Building Program Statement 38
Appendix A: Selected Bibilography 43
Appendix B: Sample planning worksheet and summary 44

Author's Note

The original edition of *Public Library Space Needs: a Planning Outline* and its subsequent editions were an outgrowth of conversations, discussions, and debate among the active members of ALA's Building and Equipment Section regarding the adequacy or inadequacy of conventional space planning standards in effect at the time.

In the mid-1980s, to fashion an initial estimate of a public library's space needs, we used a standard that distilled an estimate into a simple formula of "X square feet per capita." The resulting calculation was abundantly easy to make, but there was a concern that the existing standards were dated. At the time, the most recent per capita standard for public library building size from ALA had been issued in the late 1960s.

Raymond M. Holt was then the chair of ALA's Architecture for Public Libraries Committee, and he encouraged the committee to examine the existing standard with the intent of updating it. I was a member of the committee and one of the facilitators of that conversation. After a year's study, the committee determined that the standard did not warrant an update. To the contrary, the committee determined that the then-current standard was fundamentally flawed. The existing standard did not (and could not) account for regional and local variations in service need. A single, uniform standard could not account for the wide range of variables that account for service needs at the local level – the ability (and willingness) of a community to provide meaningful funding, educational attainment levels, the local heritage of service, and more.

The committee recommended that a standard based on a per capita measure of floor space was an inadequate tool to assess a community's future space needs, and its use should be discouraged. Instead, space needs should be developed according to each community's locally-determined service goals. This was very much in the spirit of "A Planning Process for Public Libraries," then newly-published by the Public Library Association and ALA, which eschewed uniform standards in favor of locally-developed goals in response to locally-identified needs.

Unfortunately, the committee's work is not widely known, and in some circles measures of floor space per capita continue to be used as a way to estimate a public library's future space needs.

These conversations informed my work at the Wisconsin state library agency, and the *Outline* emerged as a means of showing local planners how to tailor a locally-determined inventory of resources and services to be housed by the library, derived in response to unique and specifically-identified local needs; and how that

inventory of local service goals would serve as the basis for an estimate of the library's space needs.

The goal of the *Outline* has always been simple: to replace those conventional, dated, and flawed measures of library space need by providing a more effective, more defensible initial estimate of a library's space need. Because so many aspects of a capital project flow from that initial estimate, it was essential to develop a better mechanism to start the planning process.

Even better to start a building planning process by considering the resources and services the library will seek to provide for the community, because that service inventory then forms a sound foundation for every subsequent step in the planning process, including development of a building program statement. You have to know what the library needs to do before a plan can be devised for a building to house the library.

Now the *Outline* is roughly as old as some of the "dated" standards it sought to replace. How can it still be useful? One part of an answer to that question involves the evolution of the *Outline* across its editions. Various aspects of the typical library's service menu have been treated differently over the years and over this publication's editions as service patterns have changed. More importantly, the *Outline* retains its relevance because the means by which we arrive at the service goals that underpin this assessment change. Today we create a different aggregation of local service goals than we did when the *Outline* first appeared.

Conceptually, the space needed for the collection, users, or technology takes into account the same fundamental factors as was the case thirty or forty years ago. Today we approach many of the underlying service goals differently than we did back then, and we arrive at different service goals than would have been the case in the beforetimes. That's what keeps the *Outline* vital today.

Thanks to Laurie Freund, Deb Haefner, Ben Miller, Teresa Schmidt, Shannon Schultz, and John Thompson for their review and edits to this latest edition of the *Outline*.

Anders C. Dahlgren
Library Planning Associates
Normal, Illinois
June 2025

Introduction

This outline is intended to help librarians and library trustees determine whether to initiate a facilities planning process. By completing the *Outline*, librarians and trustees can obtain a general estimate of their library's space needs based on their library's underlying service goals. With that estimate, planners can assess the adequacy of their library's existing square footage and determine if a more detailed study is called for.

The process described in the *Outline* evolved from a simple concept: that library space needs are based on what a library must house in order to serve its community. The things a library must house to meet its community's needs all have identifiable spatial requirements. Determine the library's inventory of service goals and its space needs follow.

This *Outline* defines seven broad types of library space: collection space, technology space, reader seating space, staff work space, meeting space, special use space, and nonassignable space (which includes mechanical space). An optional eighth category is included to accommodate dedicated space allowances. The *Outline* describes how library goals relating to each of these areas can be projected to meet future needs and provide a way to translate the resulting service assumptions into space needs.

In brief, the process involves the following steps:

- Identify the library's projected service population, known as the design population.
- Estimate the collection inventory the library will provide to meet future service requirements and calculate how much floor space is needed to house that projected collection.
- Estimate the number of technology stations the library will need to offer to provide sufficient access to e-resources and calculate how much floor space these stations will require.
- Estimate the number of seats the library will need to accommodate in-house use of library resources and how much floor space these seats will require.
- Estimate the number of staff work stations that will be necessary to support the staff's anticipated work routines and how much floor space those stations will require.

- Estimate the type and capacity of meeting rooms that the library will need and how much floor space they will require.
- Calculate an allocation for miscellaneous public- and staff-use space, or special use space.
- Calculate an allocation for vestibules, furnace rooms, rest rooms, and other similar types of space, or nonassignable space.
- Consider whether additional allocations of space may be needed to accommodate unique features, services, or collections in the form of dedicated allowances.
- Assemble the estimates for all of these types of space into an overall estimate of space need.

The results of this examination will inform subsequent facilities planning by library trustees and staff. Comparing the findings of this simplified assessment against the space available in the existing building will mark an initial indication of need. The space needs indicated here can be used to evaluate the adequacy of the present site or the amount of property that will be needed at a new location. It can also provide an early gauge of a prospective building project budget.

Library planners must also acknowledge that availability of space, or lack of it, is not the sole reason for examining physical facilities. The need to improve energy efficiency and the condition of heating, ventilating, and air conditioning systems; to insure accessibility; to adapt the electrical and telecommunications systems to meet the requirements of tomorrow's library technologies; and to assess the general effectiveness of the work flow are other reasons for examining the structure that houses a local library. Changes in community demographics, social trends and local economic factors may also infuse the discussion. What worked well for the community in the library's former plan of service may constrain the delivery of services today or into the future.

This *Outline* simplifies the mechanism for assessing a library's space need and provides local planners some traction, a ready place to start a larger and more complex process. It does not presume to produce an exhaustive estimate of space needs. It is intended to provide a quick, initial estimate of a library's space needs.

Many factors affecting service projections and space needs are beyond the scope of this short publication. The *Outline* assumes the library has a long range plan of service in place to guide the determination of the future service goals that in turn will shape the library's space needs.

The *Outline* requires use of data that should be readily available to local planners—annual circulation, total holdings, and so on. If a particular data element is not

available, it is well within the spirit of this process to make a reasonable estimate of the missing data. A special data-gathering effort could be undertaken, or a sampling exercise might provide useful information to incorporate within this process, but such efforts may involve more time and energy than this outline is meant to require.

Library planners should approach this effort realistically, but generously. The underlying service inventories defined in support of a space needs estimate should be realistic, justifiable, and supportable. They should not be over-blown and out of reach. At the same time, the underlying service goals should be ample or even aspirational. This is not the time to cut corners or assume that something needed and reasonable is wholly unattainable. The fact is, as your building planning process unfolds it will face continuing pressures to reduce or scale back. If your planning process starts with second-guessing and hedged bets, this initial estimate of space need will be understated and the end result will be even more so.

We acknowledge that the *Outline* is written for the Wisconsin library community but may be used by libraries beyond Wisconsin. This may require further adaptations to the methodology. Where the *Outline* refers to the Wisconsin public library standards, for example, a library in another state may need to refer instead to that state's standards.

The outline is also designed for a public library service environment, but with creative adaptation could be applied to other library types and settings. The essential concepts underlying this methodology can be applied broadly.

Examples from the fictional Sampleville Public Library are provided throughout this text to illustrate how to make certain calculations, although the examples are not intended to recommend a specific library service level or planning assumption. A companion spreadsheet has been designed to accompany the *Outline* to help with calculating a library's projected space needs. Appendix B provides a copy of the worksheet and space needs summary using the Sampleville examples as an illustration of the spreadsheet's use.

Preliminaries: Design Population

Planning for an effective library facility begins with determining the library's design population—identifying the population the expanded library will be expected to serve. Knowing the design population provides a sound foundation for planning. It allows local planners to make informed forecasts regarding the library's projected resource and service inventories.

Two factors should be considered in establishing the design population.

First, the design population should be a *projection* of the population in the library's service area. Since library buildings are an important capital investment for most communities, it is crucial that they be planned to respond to current and future needs. The recommended time frame for planning is 20 years, although if the best available projection extends over a shorter period, adapt the planning horizon and use the available projection.

Second, the design population should take into account the fact that the typical Wisconsin library serves an area that extends beyond the boundaries of the municipality in which it is located. The municipality may be considered the library's primary service area, but most public libraries in Wisconsin serve individuals from beyond the municipality's boundaries by virtue of participation in a public library system or county library service or through reciprocal agreements with neighboring libraries and public library systems. To ignore the service implications of traffic generated by these individuals from outside the library's primary jurisdiction would mean planning a facility that would be outgrown too quickly.

Estimates of the projected population for a public library's primary service area—typically the municipality itself—can be obtained from the municipality, county, or from a regional planning commission. The Wisconsin Department of Administration Demographic Services Center updates its projections regularly. Local school districts may also be a source for such projections, although the school district's service area may not coincide with the public library's service area.

This projection of the library's primary service population should then be adapted to include an estimate of the library's nonresident service population.

One way to estimate the nonresident population is based on the simple notion that residents and nonresidents tend to borrow material at roughly the same rate per capita. With that assumption in mind, then the balance between resident and nonresident circulation should reflect the balance between the library's resident and nonresident populations. Local circulation records can be used to calculate the current-day balance between resident and nonresident borrowing, and this ratio can be applied to the projected resident population to make an estimate of the

library's future design population. In applying this balance, consider whether the current ratio is likely to increase, decrease, or hold steady over the coming generation.

> **Formula.** To calculate a design population, divide the projected resident population by the fraction of resident borrowing.
>
> $$Design\ population = \frac{Projected\ resident\ population}{Fraction\ of\ resident\ borrowing}$$
>
> **Example.** The current municipal population of Sampleville is 5,000. The Sampleville Public Library's annual circulation is 75,000 items, of which residents borrow 60,000 items (or 80 percent), and nonresidents borrow 15,000 items (20 percent).
>
> In the current setting, residents borrow 12 items per capita: 60,000 ÷ 5,000 = 12. If that same ratio is applied to the nonresident circulation, the library's 15,000 nonresident circulation transactions would be generated by 1,250 individuals (15,000 ÷ 12 = 1,250) and the current day design population would be 6,250 (5,000 + 1,250).
>
> A simpler way to arrive at the same result is to divide the resident population by the fraction of resident borrowing: 5,000 ÷ 0.80 = 6,250.
>
> Looking to the future, the population of Sampleville is projected to grow to 6,000. Local planners expect that the balance between resident and nonresident use will hold steady, with residents accounting for 80 percent of total circulation. Using the formula above, the estimated future design population is 7,500 (6,000 ÷ 0.80 = 7,500).

An alternate means of estimating the library's design population is more nuanced and potentially more accurate. This alternative is likewise based on an assumption that residents and nonresidents tend to borrow material at roughly the same rate per capita, but acknowledges that resident circulation is generated by resident cardholders, a subset of the library's full service population.

From the preceding example, assume that Sampleville currently has 3,000 resident cardholders, indicating that 60 percent of municipal residents are registered at the library (3,000 ÷ 5,000 = 60%). In the alternative mechanism, this adjusted figure becomes the base for an estimate of the nonresident service population. If residents currently account for 80 percent of Sampleville's circulation and nonresidents account for 20 percent, then the combined current-day borrower population is 3,750 (3,000 ÷ 0.80 = 3,750) and the nonresident population is equal to 750 (3,750 - 3,000 = 750). In this alternate example, the fact that nonresidents generate 20% of Sampleville's current-day circulation is as if the library serves 750

nonresident individuals, above and beyond the library's "official" municipal population.

Specific local conditions may suggest adjustments to these calculations. If there is reason to believe the balance between resident and nonresident use will shift during the 20-year planning time frame, planners could apply their estimate of the projected proportion of resident use to calculate the design population. Other local and regional factors may also come into play, such as whether rural bookmobile service is to be discontinued or whether a nearby community plans to establish or relocate a library or expand or reduce its hours of service.

Regardless of precisely how an estimate is made to reflect the library's nonresident service population, it is essential that the planning framework for an expanded, improved library building acknowledges that serving individuals from beyond the library's primary service jurisdiction impacts the library's optimum resource and service inventory goals.

The Wisconsin Public Library Service Data maintained by the Library ServicesTeam at the Wisconsin Division for Libraries and Technology (the Division) makes an estimate of the current-day extended service population for every library statewide. While this represents a useful reference point, the Division's estimates may or may not be wholly applicable for this particular purpose for every community in the state. The Division's service population calculation is also based on a library's current, not projected, population.

For another discussion of calculating an extended service population for a public library, see the current edition of the Wisconsin Public Library Standards.

Step 1: Collection Space

By projecting the size of the library's physical collection, planners can quantify the space needed to house that collection. A section of library shelving affords a specific amount of linear feet of shelving space, which in turn affords a certain capacity per shelving unit. Each shelving unit occupies a discrete amount of floor space, so one can estimate the number of volumes that can be housed per square foot of floor space. Given this direct link between the size of the collection and the floor space required to house it, projection of collection size is one key to determining a library's space needs.

This step of the Outline covers two components commonly found in public library collections:

- books
- audiovisual material (primarily audio recordings and video recordings)

This latest edition of the *Outline* no longer includes a discussion of space to house a physical magazine collection. Since the last edition of the Outline was published, magazines have continued their decline as a significant part of the typical public library's overall program of service. In many public libraries today, the space needed to house current issue display and backfiles for magazines has become negligible. Magazine inventories have become so modest that after 2019, the Institute for Museum and Library Services (IMLS) stopped gathering data on magazine subscriptions as part of the Public Library Survey, their comprehensive data-gathering effort coordinated with the state library agencies across the country. If local circumstances suggest a space allocation to support a magazine collection is needed, an accommodation can be made in the context of special use space (see Step 6) or dedicated allowances (see Step 8).

Still other kinds of materials might be found as part of the collection in many libraries. An "old-school" collection of microforms might still be found in some libraries. In others, a newer kind of collection—a library of things, for example—might be offered. In many cases, these less conventional, ancillary parts of the collection are relatively small, and conceptually they are accommodated here inasmuch as the calculations presented in Step 1 are designed to err on the generous side. If local planners believe that a particular local collection should be accommodated, that can also be addressed as special use space or dedicated allowances.

Projecting Collection Size

As with the projection of the library's service population, library planners should make a projection of the library's collection inventory needs over a 20-year period. Projections of collection inventory should consider at least two factors:

- application of current standards for public library service, such as the *Wisconsin Public Library Standards*; and
- calculation of the library's rate of addition to the collection extended over the planning time frame.

Taken together, these factors can guide library planners as they develop a projection of collection size based on their understanding of a community's library service patterns, priorities, and needs. Standards can be used to suggest a minimum collection size; the library's rate of addition can be used to temper or redirect the recommendation of the standard.

Other factors may come into play as well. A system or county resource library may be obligated to maintain a larger collection than is recommended by the standards. An individual library's unique service emphases may also have an effect on collection size.

Comparisons with peer libraries can inform a decision regarding future collection inventories. Broad statewide, regional, or national service trends can also inform these decisions. Nationally, for example, public library print holdings per capita peaked in 2003 and have been in steady decline ever since, as libraries are meeting local service needs with leaner and leaner print inventories. Many libraries are making less assertive projections regarding their future collection inventory today than might have been made ten or fifteen or twenty years ago.

Each library will also need to assess the impact of the growing availability of information by way of electronic and digital sources. Some libraries anticipate that access to electronic resources will further slow the rate of growth in traditional collections or even reduce the quantities that will be needed in those traditional collections. Other libraries may anticipate little effect.

The key to this step, as with every other step in the space needs assessment process, is the board and staff's understanding of local service needs. This process also assumes that the library has a current collection development policy, and that maintenance of the collection (weeding) is up to date.

The application of a standard is a simple way to project collection size. At the very least, it offers a starting point for a discussion. The *Wisconsin Public Library Standards* defines three levels of effort that a library may apply: Tier 1, Tier 2, and Tier 3. Local planners determine which level of effort is appropriate for the library

and the community for each service measure. Using the standards, an estimate of collection growth can be calculated based on the library's design population.

Formula. To calculate the recommended collection size using current standards, multiply the standard by the design population.

$$Recommended\ collection\ size = Design\ population * Relevant\ standard$$

Example. Planners in Sampleville determined that a Tier 2 level of effort regarding the book and audiovisual collections was appropriate. The following per capita collection standards are included in the *Wisconsin Public Library Standards*, 6th Edition, Appendix A – Quantitative Standards by Service Population:

	Standard Tier 2 *Population 6,500 – 8,999*
Print Volumes held per capita	4.2
Audio recordings held per capita	0.35
Video recordings held per capita	0.50

Table 1: Wisconsin Public Library Standards, 6th edition, Quantitative collection standards

Based on a design population of 7,500, the Sampleville Public Library should plan for a collection of 31,500 volumes (at 4.2 volumes per capita * 7500), 2,625 audio recordings (at 0.35 per capita), and 3,750 video recordings (at 0.50 per capita).

The Wisconsin Public Library Standards represents one tool for determining future collection size. Sometimes a library may need to apply other measures to define a suitable collection development goal. It may benefit the library to explore additional techniques for projecting collection size as a means of testing and validating the recommendations made using the standards, such as an evaluation of data from comparable libraries in similar communities.

Planners may wish to use the library's recent rate of addition as a check against the recommendation of a standard. Consider both the library's gross rate of addition (annual additions only) and the library's net rate of addition (additions less withdrawals). By the time a library undertakes an assessment of its space needs, available shelf space may be at a premium, which may prompt an unusually high rate of withdrawals. That in turn would produce an artificially low—and potentially misleading—net rate of addition. The previous year's tally of gross and net additions can provide an indication of the library's acquisitions rates, but the preferred approach is to calculate an average rate over a longer period of five to seven years or more. This will mitigate the effect of any unusually generous or restrictive years for acquisitions.

These rates of addition can be extended through the library's planning time frame, creating a method to evaluate the application of a standard. The result may validate the standard, or it may lead staff and board to reexamine their forecasts for collection growth.

> **Formula.** To project collection growth based on the library's rate of addition, multiply the average annual number of additions by the duration of the planning time frame (typically 20 years); then add the result to the current collection size.
>
> $$Projected\ collection = (Average\ additions * Planning\ period) + Current\ collection$$
>
> **Example.** The Sampleville Public Library's print collection includes 24,000 books. Over the last five years the library has added 2,650 volumes and withdrawn 900 volumes, for a net addition of 1,750 volumes. Net additions have averaged 350 volumes per year (1,750 ÷ 5); gross additions have averaged 530 volumes per year (2,650 ÷ 5).
>
> If the library sustains a rate of addition of 350 volumes per year over the next 20 years, it will add 7,000 volumes, bringing its total holdings to 31,000 volumes – very nearly reaching its book collection inventory goal of 31,500 volumes based on the *Wisconsin Public Library Standards*. If the library extends its recent gross rate of addition over the next 20 years, it will add 10,600 volumes, bringing its total holdings to 34,600 volumes. This tells staff and board that recent activity patterns confirm the library's ability to reach its print collection inventory goal within the twenty-year planning horizon. Similar calculations could be performed for the audio and video collections.

Calculating Collection Space

Once the size of the collection has been determined, the amount of space necessary to house that collection can be estimated.

Books

Collection density—the number of volumes that can be housed per square foot—is the byproduct of several factors, including:

- the height of the shelving unit, impacting the number of shelves the unit can support
- the type of material being housed, such as reference material versus children's picture books
- the width and depth of the shelving unit
- the width of the aisle

With these factors in play, the number of volumes that can actually be stored in a given space may vary from five to 30 volumes per square foot.

For many years, library planners have used ten volumes per square foot as a broad, general allowance for collection density. This measure served its purpose well, inasmuch as libraries tended to deploy shelving in similar configurations: full-height shelving for adult material; mid-height shelving for materials for teens, grade schoolers, and media; and low shelving for preschool materials. Ten volumes per square foot was predicated on housing a normal variety of trade books using a conventional configuration of full-height, mid-height, and low shelving installed with a three-foot aisle—and leaving the top and bottom shelves vacant for future expansion. As an added benefit, an allocation of ten volumes per square foot was easy to figure.

Full-height shelving—84" to 90" tall—was the common and consistent choice in most public libraries for decades, especially for adult materials. Even though practical experience told us that users tended to not reach for the uppermost and lowermost shelves, libraries typically used the top and bottom shelves as their staff and boards sought to optimize collection density. For generations, most public libraries housed the print collection at a higher number of volumes per square foot, even though librarians knew doing so made the collections harder to access and reduced usage.

In recent years, many libraries have moved away from using full-height shelving in favor of lower, more user-friendly, reachable shelving. A maximum shelf height of 72" has quickly become common, and more and more libraries are setting a maximum height as low as 60". As the height of shelving is reduced, the number of volumes that can be housed per unit is reduced, affecting collection density.

The width of the aisle also affects the library's collection capacity per square foot. The Americans with Disabilities Act specifies that the aisles in a library bookstack should be no narrower than 36," but a 42" aisle is strongly recommended. Some libraries today choose to install shelving with an even wider aisle. Obviously, with a wider aisle the collection is spread out over a broader area, and the library achieves a lower capacity per square foot.

Recognizing that all these variables are in play, a library should consider whether it prefers to apply a minimum recommendation for collection capacity per square foot, a moderate recommendation, or an optimum recommendation.

		Shelf height		
		84”	72”	60”
Aisle width	36”	13.50	12.00	10.50
	42”	12.50	10.00	9.50
	48”	11.00	9.50	8.50

Table 2: Print collection density estimate by shelving height and aisle width, in volumes per square foot

Table 2 shows how collection density varies depending on the maximum height of the shelving and the width of the aisle. This chart acknowledges that a lower shelf height will mostly impact shelving capacities and collection densities in the adult collection. It is only practical that grade school and preschool collections be housed on lower shelving, something this table takes into account.

To calculate an estimate of the book collection space needs, determine the preferred shelving configuration for your library and apply the corresponding measure of collection density. The allowances cited here anticipate not using the bottom-most shelf in each shelving unit, in order to create a more user-friendly shelving environment.

> **Formula.** To estimate the space needed to house the library’s book collection, divide the number of items in the total projected collection by the appropriate collection density measure.
>
> $$Collection\ space = \frac{Projected\ collection\ size}{Collection\ density\ estimate\ (Table\ 2)}$$
>
> **Example.** According to Sampleville Public Library’s application of the standards, a print collection of roughly 31,500 volumes is recommended. Local planners prefer a maximum shelf height of 72" on a 42" aisle, with an estimated collection density of 10.00 volumes per square foot. A space allocation of roughly 3,150 square feet will be needed for this collection. (31,500 volumes ÷ 10.00 volumes per square foot = 3,150 square feet)

As a variation on this formula, libraries that need to house a sizable print collection may wish to acknowledge the fact that a portion of the collection will be in circulation at any given time. If 10% of the collection is typically in circulation, the library strictly speaking needs to provide shelf space for only 90% of its entire collection. At the library’s option, a “percent in circulation” adjustment may be factored in, and the space planning model adjusted with a reduced collection inventory to be housed. The trade-off, of course, leaves the library with less shelf space to manage its collection during the normal seasonal cycles of use.

Audiovisual material

For audiovisual material, planners should project the inventory the library will

need to house 20 years hence using the methods described above. Note any recommendations that may be included in applicable public library standards and comparisons with peer libraries. Be aware of broad trends regarding the balance within the collection between print and audiovisual material. Between 2000 and 2022, the ratio of audio and video recordings to total physical collection inventory in U.S. public libraries has increased steadily, decreasing just twice, from 2009 to 2010 and again between 2020 and 2021. The number of print volumes held per population served in all U.S. public libraries peaked in 2003; audio recordings peaked in 2009; and video recordings per population served peaked in 2019.

As with the book collection, once the size of the audio and video collection has been determined, the amount of space necessary to house that collection can be estimated. Traditionally, the same collection density estimate that applied to the book collection has applied to the audiovisual collection as well—ten items per square foot. But the same variables are in play here as in the book collection: taller or lower shelf heights, wider or narrower aisles, more or less marketing and display.

Table 3 provides a more nuanced estimate of items per square foot for a minimum, moderate, or optimum allocation of space.The minimum allocation will put the audiovisual collection on taller shelves with narrower aisles and fewer opportunities for marketing and display. The optimum allocation will result in audiovisual displays with lower shelves, wider aisles, and more marketing options.

	Audiovisual items per square foot
Minimum allocation	15
Moderate allocation	13
Optimum allocation	10

Table 3: Audiovisual collection density estimates in items per square foot

Formula. To estimate the space needed to house the library's audiovisual collection, divide the number of items in the total audiovisual collection by the density recommendation from Table 3.

$$A/V\ Collection\ space = \frac{Projected\ audiovisual\ collection\ size}{Collection\ density\ estimate\ (Table\ 3)}$$

Example. According to Sampleville Public Library's application of the standards, an audiovisual collection of roughly 6,375 items is recommended, including 2,625 audio recordings and 3,750 video recordings. Local planners agree that an optimum shelving environment is most appropriate because they want to be sure to accommodate marketing and display opportunities for the collection. A space allocation of roughly 637 square feet will be needed for the collection (6,375 items ÷ 10 items per square foot = ±637 square feet).

Step 2: Technology Space

Electronic resources impact a library's space needs in two significant ways: indirectly, by reducing the space required for physical collections; and directly, by increasing the need for additional space for the technology and equipment users need to access e-content and online resources. In-house access to e-resources will be conditioned by the number of technology stations the library provides for patron use. The number of technology stations in turn determines how much space the library will need in support of this function.

This section of the *Outline* serves as an example of how the *Outline* methodology has adapted over time: In the first edition of the *Outline*, technology stations were rather new to the library environment, and they were accommodated as part of special use space. In later editions, technology stations became increasingly mainstream, and the space to support the stations was accommodated as part of collection space, reflecting the role technology stations play in support of content access. In this edition, technology stations are discussed as a distinct category of space, all their own.

Projecting a Technology Inventory

The *Wisconsin Public Library Standards* offer guidelines for the number of public-use internet computers a library should provide, defining a recommended number of computers per 1,000 population using the same three-level approach that applies to collections: Tier 1, Tier 2, and Tier 3. Other factors that may be useful to consider in determining a suitable inventory of public access computer stations can include:

- the number of people entering the building daily, weekly, monthly or yearly. The latest data released by IMLS suggests that nationally, U.S. libraries provide an average of one technology station for every 2,453 annual visits. This is drawn from the data set for 2022, when many statistical measures were recovering from the impact of the pandemic and overall library visits were still lower than pre-pandemic levels. The corresponding data from 2019, the last full reporting year prior to the pandemic, measured 4,175 visits per technology station.
- the kinds of environments that the library intends to create around its public computer stations. If the setting is intended to foster extended periods of patron use, additional terminals will be needed.
- the number of users bringing their own devices—laptops, tablets, and other Internet-connected devices—to access e-content and utilize the library's

internet access. According to IMLS Public Libraries Survey data, the aggregate number of technology stations for public use peaked in 2018, decreasing in the next three reporting cycles, with a modest rebound reported in the latest cycle, 2022. Individuals bringing their own devices to the library likely contribute to this ongoing pattern.

- the library's observation of patron queues waiting for access to terminals presently on-site.

In consideration of these factors, planners can make an estimate of the number of public computer stations or terminals needed.

If a computer training lab is included as part of the library's plans, any terminals there will be tallied in Step 5, as part of "classroom / training room" space. Technology stations that may be deployed as part of a makerspace may be accounted for here, or as part of the discussion of dedicated allowances in Step 8.

Formula. To calculate the recommended inventory of technology stations using current standards, multiply the "Public Use Internet Computers" standard for the library's chosen Tier by the design population.

$$Number\ of\ technology\ stations = Standard * Design\ population$$

Example. Planners in Sampleville use the *Wisconsin Public Library Standards* to calculate a Tier 1 recommended technology station inventory of nine (at 1.13 stations per 1,000 population, or 1.13 x 7.5 = 8.475, rounded up to 9); eleven at the Tier 2 level (1.42 x 7.5 = 10.65, rounded up); and fifteen at the Tier 3 level (2.00 x 7.5 = 15.0).

Local planners elect to test this result against how many people come to the library. Sampleville reports just over 50,000 visits per year, or about eight visits per capita. If the library maintains that rate as the service area grows to a population of 7,500, the library can expect to tally 60,000 annual visits. Noting that U.S. libraries offer one technology station for roughly every 4,000 visits, a library that expects 60,000 visits should provide 15 technology stations.

Amid these varying recommendations, planners set a technology station inventory goal of ten, with the thought that more and more people will use their own devices at the library in the future.

Calculating Technology Space

A specific space allocation for a technology station depends in part on the type of use the library wishes to encourage at each station. For example, the library may want to encourage a higher degree of turnover at a computer dedicated for use as

an online catalog, or OPAC, and might present that station at an access point with a minimum of adjacent counter space. At a public access computer station where the library anticipates encouraging longer-term use, a larger space allocation might accommodate seating for the user and additional workspace. At a station where a patron can do media production, an even larger allocation could be appropriate to accommodate scanners and other peripherals.

The space allocation needed for public access computer stations will also be affected by the number of computers the library provides. A library that provides a large inventory of public access computers is more likely to achieve economies of scale as the stations are deployed across the floor, and those economies of scale can lead to a smaller space allocation per station. A library with a smaller inventory of public access computers will often need a larger allocation of space per station.

Another factor that affects the space needs of public access computer stations is whether the stations are co-located or distributed throughout the library. If the library concentrates its public access computer stations in a small number of areas, the layout of this equipment will be more likely to achieve economies of scale through higher density and a smaller allocation per station will be needed. If the stations are distributed throughout the library, the layout will be less likely to benefit from economies of scale, and a larger allocation will be needed per station.

Taking all of these factors into account, Table 4 provides an estimate of the amount of space needed per public access computer station.

	Area needed for public access computer stations
Minimum allocation	35
Moderate allocation	45
Optimum allocation	50

Table 4: Space allocation for public access computer workstations, in square feet

Formula. To estimate the space needed to house the library's public access computer work stations, multiply the number of computers by the area required per station.

$$Technology\ station\ area = \ Number\ of\ stations * Allocation\ (Table\ 4)$$

Example. Sampleville planners determine that a moderate allocation of 45 square feet per station is appropriate, given their intent to cluster the stations within the library. An allocation of 450 square feet is made for ten technology stations.

Step 3: Reader Seating Space

The library must plan for adequate reader seating needs. Step 3 provides space for the library's general reader seating. Typically this will include seating at tables, carrels, lounge chairs, and the like. It can also include other types of settings, such as a diner booth that may be provided in a young adult area, or parent/child seating in the children's area. The library may provide additional spaces where a patron may sit—at some of the technology stations discussed in the previous step, or in small group study rooms which will be discussed in Step 6—but those examples represent seating provided for a specific, designated purpose or activity. The seating inventory discussed here includes general, undesignated reader seating.

Projecting a Reader Seating Inventory

One common, broad recommendation is that a public library should provide five reader seats for every 1,000 people in its service area. More detailed guidelines in other planning manuals usually suggest allocating reader seating on a sliding scale, decreasing the number of seats provided per 1,000 population as the total population increases.

Table 5 provides a reader seating schedule based on a library's design population, recommended for use with this space planning outline.

Population	Seats per 1,000 population
1,000	22.50
2,500	14.25
5,000	10.00
10,000	7.00
25,000	4.50
50,000	3.00
100,000	2.25

Table 5: Seating schedule based on population

Conceptually, this pattern should continue for libraries serving larger populations. The corresponding benchmark at 250,000 population would be 1.50 seats per 1,000 population, and the benchmark at 500,000 population would be 1.00. But as a library's service population grows above 50,000, the library is increasingly likely to operate multiple facilities, which introduces an element of complexity that is beyond the scope of this simple seating schedule. Reader seating needs in a multi-

facility service setting should be assessed on a case-by-case, facility-by-facility basis.

Strictly speaking, for a library with a design population that falls between these benchmarks, the recommended number of seats per 1,000 would be calculated somewhere between the respective seating recommendations. A library serving 22,000 people falls between the 10,000 and 25,000 benchmarks, and its recommended seating level should fall somewhere in the range of 7.00 and 4.50 seats per 1,000 population, say 4.90 seats per 1,000 population.

This recommendation establishes a starting point for further consideration. Depending on a library's mission and service emphases, it may be appropriate to adjust the recommendation up or down. For instance, if a library's service profile emphasizes delivering popular materials, it may encourage patrons to browse through the collections and select material to be charged out and used at home; long-term in-house use may not be encouraged, and fewer seats may be required. Alternately, a public library that emphasizes a close collaboration with local schools may specifically encourage long-term in-house use to support students working on assignments, and extra seating may be advantageous.

> **Formula.** To estimate the number of reader seats to provide, apply the appropriate benchmark measure from the reader seating table (Table 5).
>
> $$Reader\ seats = (Design\ population/1000) * Seating\ benchmark\ (Table\ 5)$$
>
> **Example.** With a design population of 7,500, Sampleville Public Library falls between two of the benchmarks in Table 5: 10.00 seats per 1,000 at a population of 5,000, and 7.00 seats per 1,000 at a population of 10,000. Based on these recommendations, planners in Sampleville might opt for a goal of 8.00 seats per 1,000 population, or 60 reader seats (8 x 7.5 = 60).

Calculating Reader Seating Space

Just as the specific space required to house a library collection depends on the type of shelving used and the type of material stored there, the exact amount of space needed for reader seating will vary depending on the type of seating. Seating at tables, for example, requires 25 square feet per seat, while seating in a lounge setting requires 40 square feet per seat. Seating at carrels is often calculated at 35 square feet per seat. Seating in a diner's booth will require an allocation toward the upper end of this range. Individual seats that support a folding table to support a patron's use of a laptop will also likely need a somewhat larger allocation.

A library serving a larger jurisdiction with a larger inventory of seats will experience economies of scale in the installation of those seats, which may be reflected in a smaller allocation per seat. A library with a small inventory of reader

seats will be more likely to require a higher space allocation per seat. Table 6 provides an estimate of the area needed per seat for a range of planning goals.

	Area needed per reader seat
Minimum allocation	30
Moderate allocation	35
Optimum allocation	40

Table 6: Space allocation for reader seating, in square feet per seat

Libraries at the lower end of this range will tend to be larger libraries with larger seating inventories or libraries that expect to deploy most of their seating in settings that require less space, such as reading tables. Libraries at the upper end of this range will be libraries with smaller seating inventories or libraries that expect to deploy most of their seating in settings that require more space.

Formula. For a general estimate of the space needed to provide adequate reader seating, multiply the number of projected seats by the estimated area needed per seat according to Table 6.

$$Reader\ seating\ space = Number\ of\ seats * Per\ seat\ area\ (Table\ 6)$$

Example. Sampleville planners opt for a moderate unit space allocation for reader seating. At 35 square feet per seat, an inventory of 60 reader seats requires 2,100 square feet (60 x 35 = 2,100).

Step 4: Staff Work Space

Building or expanding a facility offers opportunities to reorganize relationships among existing work stations and to add new stations to improve service to the community. Calculating the space needed to support staff work routines involves identifying how many places are needed to support specific activities. These places can include a public service desk, the director's office, a paging station where materials are organized for reshelving, staff computer stations, and space for holding and processing materials for interlibrary delivery. These places can take the form of a desk, work bench, or office cube, among other variations.

Compiling this inventory of work spaces can be challenging because work routines in a new, optimally-planned space might be significantly different from what the library experiences in the present building. Workspace in the existing building is often inadequate and poorly configured, offering a poor basis for assessing what should be available for library staff. In an existing building, work stations may have been located where there happens to be free space and not where they ought to be according to function.

Another challenge involved with assessing staff work space is that it is a tally of places, not people. Although a library with many individual employees or full-time equivalents (FTEs) is likely to need more work places, this step is not about counting individuals or FTEs. In some situations, several different individuals can occupy a single work station at different times during the week. In others, it may be desirable to provide two or more work stations for certain employees: a children's librarian, for instance, may work at a public service desk part of the time and have a separate station or office away from that desk. In a small public library, technical services may be the responsibility of a single staff member, who may nevertheless benefit from having separate work spaces for cataloging and processing operations because those operations are so distinct and different. By concentrating on an inventory of work stations, planners focus on the tasks to be performed in a given area and how those tasks relate to other library operations.

Projecting a Workplace Inventory

Start with public service points. To determine the appropriate number of service points and appropriate staffing levels at each service point, examine present staff assignments and workloads. Examine trends in service patterns—increasing reference use or young adult use, for example. Compare local staffing patterns with those of neighboring libraries and other libraries of comparable size.

As libraries embrace more self-service strategies, the circulation desk may evolve into a customer service desk. As part of this inventory of staff work stations, a library that anticipates shifting the bulk of its circulation transactions to a self-

service configuration with automated materials handling may need fewer staff work places to attend to the mechanics of checking out and checking in. Note, however, that any space savings achieved from fewer work places for these routines will likely be offset by increases to special use space (see Step 6) or dedicated allowances (see Step 8) to support self-checkout stations or automated material handling (AMH) equipment.

Examine each existing and prospective department or service area—circulation, adult services, children's services, and so on. Determine if a service point is appropriate given present or anticipated workloads; if so, identify how many staff members are needed at the desk to meet the projected service need.

Move on to office and workroom space. Most of the public service points will benefit from having back-of-house space as well, where individual staff can concentrate on non-public service responsibilities. Some back of house space may be very process-oriented. A technical services operation often prefers specific spaces for the work functions that comprise the overall process of receiving new material, cataloging, and preparing it for the collection. Administrative and managerial staff typically require an office.

Does work space need to be reorganized? Do new functions need to be supported? Over the last generation, many larger and medium-sized libraries have created an information technology department to provide staff support to maintain an ever-expanding in-house network. Some smaller libraries have found an advantage in providing a modest space where network maintenance and simple hardware repairs can be made.

Trends toward shared work spaces, or "hoteling," combined with changing attitudes toward dedicated or assigned desks can also affect how many staff work places are needed. As one's work space migrates into a laptop, the nature of the physical workplace changes.

Calculating Workstation Space

The space needed for an individual staff work place will vary depending on the function involved. Space allocations at a public service point usually need to be more generous to support a staff member, the desk, the user being served, and queuing space for other users waiting a turn. A public service point may also benefit from additional surrounding space to set it apart and make it more easily identified.

The particular furnishings and layout for each staff work place will vary depending on the work routine the station supports and will impact the space needs of that station. Many work places in a staff workroom will be a variation on a cubicle or desk setting. A work station that supports processing in a technical services department may prefer a setting more akin to a workbench and may be configured

quite differently from a conventional desk; it may benefit from a larger space allocation with associated space where materials in process can be spread out and organized. Likewise, a work station for sorting recently returned materials and preparing them for reshelving will have its own specific requirements, as will a workstation for receiving and sorting items for delivery.

At the same time, many work spaces are taking on a more compact form. Some public libraries have replaced the traditional monumental service desk with a compact kiosk. The smaller profile of a kiosk is seen as more approachable, offering better opportunities to engage with the user. Office furnishings are becoming more space efficient. As desktop computers are supplanted by portable technologies such as laptops and tablets, the conventional work space grows smaller. A generation ago, a "standard" office cube at the measured 8' x 12'—almost 100 square feet. Today an 8' x 8' space is more common.

For purposes of making an initial calculation of the library's space need, Table 7 summarizes the recommended allocations per staff work station.

	Area needed per work station
Minimum allocation	100
Moderate allocation	110
Optimum allocation	125

Table 7: Space needs for staff workstations, in square feet per station

Larger libraries may find that the number of staff work stations needed to meet future service demands produces an economy of scale that permits efficiencies in the layout and design of staff work space, which in turn allows them to apply a space allocation at the lower end of this range. A smaller library will likely need a larger per unit space allowance.

> **Formula.** To estimate the area needed for staff work space, multiply the number of work stations by the area needed per work station according to Table 7.
>
> $$Staff\ workstation\ space = Number\ of\ stations * Per\ station\ area\ (Table\ 7)$$
>
> **Example.** Planners in Sampleville identified eight work stations for an expanded facility: three in circulation (check-in/registration, check-out, book sorting); three in technical services (cataloging, typing, processing and mending); one for a future children's public service desk; and one for the director's office. Because Sampleville will likely be a smaller facility, planners also opted to apply the more generous space allocation for work stations. At 125 square feet per work place, these eight stations require 1,000 square feet.

Step 5: Meeting Room Space

Most public libraries provide meeting rooms to accommodate library-sponsored programs and other meetings. As libraries become more of a focal point for community activities, this component takes on greater prominence in the library's full range of services. The number and size of meeting rooms should be determined by the library's anticipated programming activities and by the availability of similar rooms elsewhere in the community for use by other local groups.

The *Outline* considers four broad types of meeting room space commonly found in public libraries:

- multipurpose rooms
- conference rooms
- children's storytime spaces
- classroom / training spaces

This is not an exhaustive list of the types of meeting space a library might include in its plans. Some libraries, for example, might opt to include a formal auditorium. An auditorium would have a sloped or tiered floor with fixed seating. It would have a larger, raised stage and a more elaborate back stage area. This kind of space may have more finely tuned acoustics and more robust, built-in media and presentation support. But relatively few public libraries invest in such a specialized space, preferring instead the more flexible space in a flat-floor multipurpose room, so the *Outline* does not directly address space needs in an auditorium setting. If your vision of the library includes a formal auditorium, freely adapt this step as needed or specify dedicated space in Step 8.

Projecting Meeting Space Needs

Start by thinking about which of the four types of meeting space will be appropriate for the library's community. A multipurpose room is usually the first kind of meeting space public library planners will consider. Because it is designed as a flexible, adaptable space, a multipurpose room can support lectures and programs, children's storytimes, library board and committee meetings, and a host of other activities. As a library grows and its schedule of meetings and events becomes more demanding, it reaches a point where it makes sense to complement the multipurpose room with other kinds of meeting space. As the number of children's program events increases, a dedicated space for children's programming becomes warranted, which frees the larger multipurpose room for other activities. A library with an active board or community demand for meeting space may choose to include a dedicated conference or board room in the mix.

Many libraries will find their meeting space needs addressed with a single multipurpose room. Some libraries' meeting space needs will be met with various types of meeting space. Some libraries' meeting space needs will be met by having more than one version of one or more of the following meeting space types.

Multipurpose room

A multipurpose meeting space is the most common kind of program space provided in a public library. Almost every public library planned today includes some kind of multipurpose room. This room will have a flat floor and support moveable, stackable chairs and folding or nesting tables that can be configured in an endless variety. Depending on the size of the room, it may be divisible into two or more parts with the use of a demountable partition. Ideally, the room will support internet connectivity, media projection, and sound reinforcement according to the needs of the programs and events the library expects to sponsor. At the library's option, it can be configured to allow for after-hours egress from the room.

The size of a multipurpose room is largely determined by the audience capacity the library expects to support. That capacity is typically measured in terms of theater or lecture seating—rows of individual seats placed side by side. Be aware that alternate seating configurations (seating with tables, for example) often require a larger unit space allocation per seat, which will have the impact of decreasing the capacity of the room when the room is configured in an alternate manner.

Think of the kinds of programs the library has sponsored in the past. What's the range of audience size at a typical program? Consider the degree to which the library's existing facility might be limiting attendance. Does the library ever need to move a program off site in order to accommodate the audience? If so, how often? What other community demands for meeting space should the public library seek to address?

Is there a rationale for providing a second multipurpose room? Does the library anticipate sponsoring enough programming that a second multipurpose room is warranted? Does the library expect enough demand from community groups seeking to use the library's meeting space that a second or even third room should be provided? If more than one multipurpose space is warranted, how should the capacity of that added space relate to the capacity of the first space?

These are among the factors to consider in establishing the scale of a multipurpose room.

Conference room

A conference room can alleviate the scheduling demands on the library's larger multipurpose room, freeing that room for other uses when the library board meets or another smaller group is scheduled to meet. A conference room will often

become the library board's dedicated monthly meeting space. It can be the venue for board committee meetings, serve as a meeting space for staff, or be available for use by smaller community groups.

A large conference table is the highlight of this space, although in lieu of a single, large table, some planners favor multiple smaller tables that can be reconfigured into a larger table, asserting that a reconfigurable arrangement supports a wider variety of uses. The conference room should support internet connectivity and media projection.

The size of this room will be determined by the capacity the library wishes to seat at the conference table. For most libraries, a good place to start is with the library board. Consider the number of trustees, add the library director, and make an allowance for two or three additional places for individuals who have been invited to attend the meeting or who are there to make a presentation to the board. With this as a starting point, is there cause to adjust that capacity in any way?

Storytime room

A storytime room likewise can alleviate the scheduling demands on the library's larger meeting room. Depending on the frequency of children's programming activities, a separate room for storytimes can be advantageous. Having a dedicated children's storytime room also saves staff time, since staff will have to "reset" the meeting space less often. A separate room creates a chance to locate the room within the children's library, close to the material that the programming activity is meant to promote.

The size of a storytime room will also be determined by the capacity the library wishes to accommodate. Some questions to ask when sizing a storytime room include:

- How large is the audience for the library's current storytimes?
- Does the library's storytime protocol include a parent or caregiver attending the program, or do children attend alone?
- Is the demand for children's programs expected to increase?
- Is there a point at which it would be preferable to run a second session of a program rather than present to a larger group? Some children's librarians prefer smaller groups to foster a more individual engagement.
- Does the library ask that program participants register in advance, or are drop-ins welcome? It is easier to control for audience size if participants register in advance.

- Do you expect to accommodate all children's programming in the children's program room, or will high-demand children's programs move to a larger multipurpose room?
- Is the library's children's programming schedule sufficiently active as to warrant a second storytime room for concurrent events?

Classroom / training room

Another kind of meeting space a public library may offer is a classroom space for formal training. Oftentimes, a classroom or training space is specifically dedicated for computer training. Seating in this kind of space will be organized around tables or counters. The seating may be arranged in rows or around the perimeter of the room, and space is reserved for an instructor's station. Projection capabilities may be provided in the room.

The size of a classroom will be dictated by the preferred audience capacity. Consider the kinds of training the library expects to accommodate. Note that many trainers prefer smaller group settings, allowing for more interactive, hands-on training. This is especially common with regard to computer training settings.

Additional meeting room support

Meeting spaces are often accompanied by ancillary support spaces. These can include storage rooms for chairs and tables and other equipment, as well as kitchens or other modest spaces to support food prep and after-meeting clean-up. The *Outline* acknowledges these accompanying meeting space needs with a formulaic calculation.

Calculating Meeting Room Space

The space required for each type of meeting room space can be calculated using the data in Table 8.

Meeting room type	Sq. feet/ occupant	Additional adjustments
Multipurpose Room	10	Add a minimum of 100 square feet for a speaker's podium / presentation area at the front of the room. Consider a larger presentation area for a multipurpose room with an audience capacity of more than 100.
Conference Room	30	Allow an additional 10 square feet per seat for additional audience seating, as desired. If the room is used for library board meetings, open meetings law requirements may obligate accommodation for observers.
Storytime Room	10	Add 75 square feet at the front of the room for the program leader. If the library's children's programs typically include a craft activity, add 5 square feet per occupant.
Classroom or Training space	25	Add 100 square feet at the front of the room for the trainer.
Additional meeting room support	n/a	To allow for storage and other ancillary spaces relating to meeting room activities, add the allocations for all four meeting room types and allocate an additional 10% for support areas.

Table 8: Space allocation instructions for various meeting room types

Example. In Sampleville, planners reviewed the library's programming activities and assessed the availability of other meeting facilities in the community. They determined that the library should provide a multipurpose room to seat 75 and a separate children's storytime room to seat 25. The library's typical storytime program includes a craft activity.

The area needed for the meeting room is 850 square feet: 75 * 10, plus 100 square feet for a presentation space at the front of the room. The area needed for the storytime room is 450 square feet: 25 * 15, plus 75 square feet for the storyteller.

The combined area needed for meeting and programming functions in Sampleville is 1,300 square feet. An additional allowance of 130 square feet is made to accommodate associated meeting room storage space, bringing Sampleville's total allocation for meeting space to 1,430 square feet.

Step 6: Special Use Space

Special use space supports elements of a library's program of service that have not been accounted for sufficiently or directly in earlier sections of this outline. For example, none of the preceding types of space specifically accommodates space for small group study rooms, an increasingly common feature in public libraries. An allocation for special use space can be fashioned so as to support the area needed for small group study rooms, among other uses.

Other uses that can fall within this space-use category include photocopiers and scanners in a copy center, marketing display kiosks, or space for a corral where the library might stow a wheelchair, scooter, or other mobility aids for patron use. Likewise, a makerspace could be deemed part of the special use space allocation, as well as self-service checkout stations or a public refreshment area. On the staff side, a staff break room or automated material handling equipment may be part of this space-use category.

Because more and more public libraries have interest in housing features such as small group study rooms, a refreshment corner, or a library cafe, special use space occupies a growing share of the overall area of a typical public library. Table 9 expresses a representative percentage of gross area allocated for special use space in a modern public library.

	Special Use Space as a percentage of gross area
Minimum allocation	12%
Moderate allocation	15%
Optimum allocation	17%

Table 9: Special Use Space as a percentage of gross area

Planners should consider whether a minimum, moderate, or optimum allocation is most suitable based on how many of these kinds of activities, services, and furnishings the library expects to support and how assertively the library means to pursue these activities.

A calculation in Step 9, "Putting It All Together," includes an allocation for special use space.

Be aware of a connection between library activities, services, and furnishings that might be captured as part of special use space and the activities, services and furnishings that can be captured as part of dedicated allowances in Step 8. In many cases, a feature that can be accommodated as part of special use space can just as easily be accommodated as part of any dedicated allowances the library chooses to

list. The primary difference is that special use space provides a generic, blanket allowance to support these activities, services and furnishings, while dedicated allowances identify specific activities the library means to include in an expanded or improved building and makes a specific allowance for each. Listing an activity or service as a dedicated allowance highlights and draws specific attention to that feature, but a right-sized allowance for special use space can also serve to capture the space needed for the activity or service in question.

A special use space allowance and a dedicated allowance can represent alternate means to a similar end. If the library intends to list several dedicated allowances as part of Step 8, those allowances will offset any allowance for special use space, and the planners may opt to specify a slightly lower allocation for special use space than might have been provided otherwise.

Step 7: Nonassignable Space

Nonassignable space is that portion of a building's floor space that cannot be applied or assigned directly in support of library service. Nonassignable space can include furnace rooms, janitor's closets, telecommunications closets, storage rooms, vestibules, corridors, stairwells, elevator shafts, and rest rooms. Such space is necessary to support the operation of the building, but it cannot be used or assigned directly for library service. Nonassignable space often comprises about 25 to 30 percent of the gross square footage of the finished building.

	Nonassignable Space as a percentage of gross area
Minimum allocation	25.0%
Moderate allocation	27.5%
Optimum allocation	30.0%

Table 10: Nonassignable space as a percentage of the library's gross square footage

Ultimately, the allocation of nonassignable space will depend on the efficiency of the library design, the size of the project, whether the project involves new construction or alterations of an existing building, and possible site constraints, among other factors. A smaller building is more likely to have a larger proportion of nonassignable space, while a larger building will likely have a smaller proportionate allocation. A new library building usually results in a more efficient design, and a lower allocation for nonassignable space may be appropriate. Projects that involve the expansion or adaptation of an existing structure are more likely to have a larger proportionate nonassignable space allocation.

A calculation in Step 9, "Putting It All Together," includes an allocation for nonassignable space.

Step 8: Dedicated Allowances

Consider whether the library should make additional accommodations for services or functions that may not have been sufficiently accounted for in the preceding calculations. These services or functions can be captured with a specific dedicated allowance as part of Step 8.

A useful byproduct of a dedicated allowance to reserve space for a given function is that it draws attention to the library's intent to include that function in the context of its renovation or expansion project. It highlights this element and lays down a marker early in the planning process as a reminder of this important feature. Some examples of function-specific spaces that can be accounted for in this step include bookmobiles, makerspaces, and "Libraries of Things."

Bookmobiles

A good example of the type of service that a dedicated allowance can and should accommodate is a garage to support a bookmobile. Ordinarily, space for a garage would be considered as part of nonassignable space, but operating a bookmobile is not an ordinary library operation. Relatively few public libraries operate a bookmobile. According to the IMLS 2022 Public Library Service data, 553 out of 9,158 public libraries in the U.S. report operating a bookmobile, or just 6.03%. Because this is not a routine or customary library service operation, the space for a garage has not been accounted for in the preceding steps.

At the same time, certain aspects that support a bookmobile operation will have been accommodated in other parts of this space needs assessment process. If the library maintains a bookmobile collection as a discrete, separate collection from which to pull items to be put on the bookmobile, that collection is included as part of the overall collection inventory considered as part of Step 1 and the space to support that collection has been built into the allocation there. If the listing of staff work stations developed in Step 4 includes workroom stations for bookmobile staff, the space to support those stations has been built into the allocation there. But the space for a bookmobile garage warrants a dedicated allowance.

Makerspaces

Another example of a function that could be addressed by way of a dedicated allowance is a makerspace. Ordinarily, in the construct of this planning model, a makerspace would be classified within special use space, and a library could insure it is accommodating the area needed for its makerspace by setting aside a more generous allowance for special use space in Step 6. Alternately, if the library anticipates a largely tech-based makerspace, a case could be made for including the makerspace technology stations in the overall tally of those stations discussed in Step 2 as a means of capturing the area needed for a makerspace.

However, using a dedicated allowance is another good strategy to insure the space needs for this function are accommodated. Consider how large an area to reserve for the makerspace, and include it as a dedicated allowance. For example, if the makerspace will need 750 square feet, set aside a dedicated allowance in that amount. It can be challenging to visualize how big a measure of square footage actually is, so consider measuring various spaces within the existing building to identify a space that's roughly the same size—or use tape on the floor to mark out an area that corresponds to the intended area and measure to calculate the square footage.

Library of Things

Another example of a possible dedicated allowance is space reserved for housing a Library of Things. More and more public libraries have introduced some variation on a Library of Things into the collection, but a Library of Things is not yet a commonplace enough element to be treated in the context of Step 1. Cover that component here with a dedicated allowance of the estimated space required to house and display the unique items contained in the library's Library of Things collection.

Step 9: Putting It All Together

The space needs estimates developed in Steps 1 through 5 for collection space, technology space, reader seating space, staff work space, and meeting room space can be added together to derive a subtotal of five of the seven kinds of space needed in a library.

Based on the allocations selected for special use space and nonassignable space (minimum, moderate, or optimum) a calculation is made to translate the subtotal into an estimate of the gross area needed for the building. For example, If a library chooses to apply the minimum level for both special use space and nonassignable space, the combined allocation for these purposes will represent 37.5% of the gross area of the building. This means that the allocation for the remaining types of space – those calculated in Steps 1 through 5 – will constitute 62.5% of the building's area, and the gross area can be calculated by dividing the subtotal derived from Steps 1 through 5 by 62.5%. These ratios are used to make the estimate of the library's total space need.

> **Formula.** To calculate an estimate of the recommended gross area or square footage of the building, start by adding the allocations derived for the first five types of space to create a subtotal (S1). Divide the subtotal by one minus the proportionate share chosen for special use space (*sp%)* and the proportionate share chosen for nonassignable space (*no%*).
>
> $$Gross\ Square\ Footage = \frac{S1}{100\% - sp\% - no\%}$$
>
> **Example.** Library planners at Sampleville have arrived at a subtotal of 8,768 square feet from the first five types pf space: 3,788 square feet for collections, 450 for technology, 2,100 for reader seating, 1,000 for staff work space, and 1,430 for meeting facilities. They decide to make a moderate allocation for special use space (sp = 15% or 0.15) and a moderate allocation for nonassignable space (no = 27.5% or 0.275), which combine to represent 42.5% of the gross area of the building. This means that the subtotal of the first five types of space represents 57.5% of the gross area. The gross area of the building for the Sampleville Public Library is calculated by dividing 8,768 by 0.575, or roughly 15,250 square feet (8,767 ÷ 0.575 = 15,248).
>
> From this estimate of the gross area needed by the library, one can backtrack and calculate specific allocations for special use space and nonassignable space, although it's not strictly necessary to do so since the bottom line estimate of the library's space need is in hand. In Sampleville's

case, if the gross area recommended for the building is 15,248 and special use space represents a moderate allocation of 15.0% of the gross area, then the allocation for special use space is about 2,287 square feet (15,246 x 0.15 = 2,287). A moderate allocation for nonassignable space as 27.5% of the gross area estimates 4,193 square feet (15,246 x 0.275 = 4,193) for nonassignable space. Given the preliminary nature of these initial calculations, it is entirely fair to round the results to simplify their presentation.

Finally, add any additional allocations that have been made for dedicated allowances to arrive at the final estimate of the required building space needs.

Step 10: The Next Steps

This outline should be completed from time to time, as changing estimates of the community's population and demographics warrant, but no less frequently than every five years. With the broad scope of the library's space need defined using the methodology described here, the library staff, board, and community supporters can examine related early planning issues from an informed perspective:

- How does the existing space measure up against the long-term space need? Is the existing space sufficient, or is expansion warranted?
- If expansion is needed, is there enough room on the existing site to support the expansion? Does the library need to acquire additional, adjacent properties?
- If an existing structure is suggested for use as a new library, how does that structure measure up with regard to the library's space need? A host of additional structural and engineering parameters must also be met in order for any existing building to be a candidate for a successful conversion to a new use as a public library, but the basic question "Is it big enough?" is plainly a fundamental concern.
- What does the space need say about the prospect of single-level versus multi-level design? For a variety of reasons too numerous to detail here, it has long been understood by librarians familiar with facilities planning that a public library of less than 20,000 square feet will prefer a single-level design, while a public library of more than 30,000 can readily support and will most likely prefer a multi-level design configuration; a library building of 20,000 square feet to 30,000 square feet occupies a kind of "transition zone" and could be one or the other. A closer, more detailed examination than is possible within the scope of this initial needs assessment will provide greater clarity.
- If new construction is needed, how large a site should the library consider? The question of single-level versus multi-level design plays into this concern, because a multi-level building will reduce the footprint the building will need to occupy on the site.

Developing the Building Program Statement

If the findings of this initial examination point toward a building expansion or renovation project, developing a building program should be the next formal step in that effort. The initial space needs calculations provided by this *Outline* are valuable in understanding the scale of a library's needs early on in the planning process, but as you prepare to start working with an architect to design the space, the essential service and design parameters identified through the *Outline* process need to be developed more fully. The information gleaned from an initial needs assessment does not provide enough detail to guide an architect in the design of the building. A building program statement does.

A building program statement is a planning report that describes the spatial and environmental parameters to be met in the design for an expanded and improved library building. The purpose of the needs assessment process described here in the *Outline* is to provide a high-level, big-picture view of the library's space needs. The building program statement will provide a more granular, department-by-department, room-by-room, area-by-area view of the same space needs.

Simply put: the building program constitutes the library's instructions to the architect. Those instructions are firmly rooted in and grow out of the services the library seeks to provide for its community; the building program statement is necessarily and directly driven by the library's service goals. For this reason—because at its heart the building program statement is service-driven—it is essential that the program be developed from a librarian's point of view.

At the local level, the responsibility to develop the program almost certainly will be delegated to the library director. The library may choose to engage a consulting librarian to develop the program. In this instance, the consulting librarian is a librarian with substantial prior experience with library facilities planning. A consulting librarian is trained in assessing library service needs and has ample direct, practical experience so as to be able to translate service needs into space needs and express those space needs in language that resonates with an architect. Your regional library system or your state library agency may offer assistance in identifying and selecting a consulting librarian.

If retaining a consulting librarian is not an option, it usually falls to the library director and the library staff to develop the building program statement, and the initial space needs assessment developed through this *Outline* can be the foundation for that effort. Support for this effort can often be garnered from the staff at your regional library system and the state library agency.

The building program is an elaboration on the initial service and space needs assessment study and a refinement of the core service concepts established via the *Outline*. This refinement is accomplished by way of:

- VERIFYING the essential resource and service inventory developed during the needs assessment, adjusting it as may be needed after taking time to assimilate and reflect
- QUANTIFYING additional resources and services that may be needed
- CLASSIFYING the resources and services into departmental groupings that will be found in the actual building
- SPECIFYING the particular environments housing the various components of the library's service program
- IDENTIFYING the preferred adjacencies among the various departments and functional areas

Start by confirming the resource and service inventory goals defined using the *Outline*. Verify the collection targets, the number of technology stations to provide, the number of reader seats, the number of staff work stations, the audience capacities for the meeting rooms, and so on.

Continue by filling in gaps in the *Outline*. Quantify collections or services that were not covered directly or adequately using the outline. In the interest of brevity, simplicity, and ease of completion, the assessment process described in the *Outline* focuses on selected key components of a public library's resource and service inventory—elements that are found in most libraries—and makes a space allocation that tends toward the generous side. That more generous allocation is meant to accommodate resources and services that may have been glossed over in the initial assessment. The space needs estimate should be transformed into a building program by quantifying those "missing" elements.

On the collection side, for example, there may be unique collections at the library that are not captured through the service and space needs assessment process. The library may hold boxes of archival documents or a large photograph collection as part of a local history collection, for example. Special holdings like these should be identified and worked into the library's outline of space needs.

This is also the time to spell out exactly what needs to be part of the special use space allocation. The allocation for special use space in the *Outline* was made by way of a simple formula. Flesh out those particulars now. If the special use space allocation should include a photocopier (or two?), make note of that as the program is developed. If the allocation includes small group study rooms, specify the number or rooms and how many users each is to seat. If the allocation includes other elements such a staff break room, a public refreshment area, café, vending area, and so on, note it down.

Next, classify these general space needs into departments and functional areas.

While the *Outline* organizes a library's space into seven broad types, in real life the library will be organized differently. Most likely the space within the library will be organized into departments, and the departments will be organized into functional areas, all determined in support of the library's mission and service goals. In the presentation of the Outline, for example, the collection inventory is considered as a single block of space, but in real life it will be distributed into various subcollections: adult, teen, children's; fiction, nonfiction, audiovisual; etc. Reader seating will not be deployed into a single block, but will be allocated into seating for adults, teens, and children, and seating for children may be allocated into separate areas for preschooler and grade schoolers. And so on.

Define the departments and functional areas that need to be created within the library to support its mission and to support its effective operation. This list of departments and functional areas becomes an outline for the building program. To complete the classification portion of this transition to the program, allocate the service resources defined using the *Outline* into the departments and functional areas.

> **Example.** Sampleville's book collection is projected to grow to 31,500 volumes. The collection is presently organized into several categories, and distributed as follows:
>
> 36% adult fiction
> 24% adult nonfiction
> 10% teens
> 15% children's preschool
> 15% children's grade school
>
> Local planners determine that the existing distribution of inventory is mostly on target, but looking ahead, decide that more of the total collection inventory should be allocated to children's. The following distribution of collections is recommended for the expanded building:
>
> 33% adult fiction
> 22% adult nonfiction
> 10% teens
> 18% children's preschool
> 18% children's grade school
>
> Based on a projected collection inventory of 31,500 volumes, the adult fiction will include 10,395 volumes (31,500 * 33%), adult nonfiction 6,930 volumes (31,500 * 22%), and so on.

With the library's service resources distributed into the various departments and functional areas, the library can further refine the space needs for each individual element using the concepts in Steps 1-6 of the *Outline*. Specify the individual

settings to be applied in each functional area, to provide a specific, suitable space allocation for each individual element found in that area.

The *Outline* called out a single, broad estimate of how much space the various components of the library's service program will need, but a closer examination reveals the reader seating allocations vary depending on the specific environment and use. In Step 3, the *Outline* recommends allowing 30, 35, or 40 square feet per reader seat. But a seat scaled for a child's use is smaller than one scaled for an adult's use and needs less space. A seat provided at a study carrel needs more space per seat than a larger, four-place reading table where a portion of the tabletop work surface winds up being shared among the four seats at the table. Allocations will vary slightly from one setting to another, and this is the time to acknowledge those variations.

The variations can become even more nuanced with regard to how the collection will ultimately be housed. Remember that the estimates of collection density cited in Step 2 are intended as ballpark estimates. The actual number of volumes that can be housed per square foot will vary based on factors such as:

- the height of a typical shelving unit and the number of shelves it can house;
- the length of a typical shelf and how much of each shelf should be used under ordinary circumstances, considering that the "working capacity" of a shelf ranges between 65 percent and 80 percent of its actual length;
- the type of material being shelved and how many volumes can typically be shelved per linear foot of shelf space; and
- how wide the aisles are and how deep the base shelf is, with both factors helping determine how much floor space a representative shelving unit occupies.

These factors can vary across different parts of a collection. Children's materials–especially collections for preschoolers–are often housed on lower shelves than adult material. Graphic novels can usually be housed with fewer volumes per linear foot than, say, adult fiction. By working through these variations, planners can establish a more accurate estimate of how many volumes per square foot will actually be housed in different parts of the collection, and that in turn sharpens the estimate of space need for the building program statement.

After all the verifying, quantifying, classifying and specifying, the last major task in refining the library's service and space needs assessment is to identify the preferred inter-relationships among the departments and functional areas in the building, the optimum proximities that will make the library work effectively for users and staff alike.

At its core, to give an architect the necessary information to start the design process, a program needs to answer four simple, fundamental questions:

- How big does the library need to be?
- How should the library be organized into departments and the departments into discrete functional areas and space?
- How big does each one of those need to be?
- What needs to be next to what?

A building program can (and should) include details and instructions regarding a variety of additional aspects of the building's design, but these four questions get at the essence of what the architect needs to know to give it a go.

Much of the preceding discussion has focused on how to recombine the elements of the service and space needs assessment into answers to the first three questions. It remains to answer the last, and that you do by simply describing what needs to be next to what. Also keep in mind that while some functional areas need to be close to certain other functional areas, some may want to be separated. Think in terms of areas that need to be close to one another or far from one another physically or acoustically. Think in terms of areas that need to be have a visual connection–a clear sight line–but may not need a direct, close physical proximity.

With this refinement of the initial space needs assessment, local planners will have completed much of the foundation work associated with developing a building program statement. Many years ago, Lance Finney wrote an article in *Public Libraries* titled, "Library Building Program: Key to Success." Finney's title accurately describes the importance of developing a building program from the framework established by an initial needs assessment.

Wisconsin public library systems and the Division for Libraries and Technology provide support or assistance with the facilities planning process. Planners can also benefit from a review of the literature on library design and construction. A brief, highly selective bibliography is found in Appendix A.

If this assessment demonstrates that an expansion project is recommended, library planners must be ready to embark on a most important mission—a building project. Few projects are as complex and rewarding as a building project, and few offer such an opportunity to shape a community's library services for years to come. Local planners across the country have met this challenge time and again. With conscientious effort, every library building planning team can respond successfully to the unique needs of its community for a facility to house library collections and services adequately and effectively.

Appendix A: Selected Bibilography

Brawner, Lee B. and Donald K. Beck, Jr. *Determining Your Public Library's Future Size: A Needs Assessment & Planning Model*. Chicago: American Library Association, 1996.

Building Blocks for Planning Functional Library Space. Library Leadership and Management Association American Library Association. 3rd ed. Lanham, MD: Scarecrow Press, 2011.

Deyrup, Marta Mestrovic, ed. *Creating the High-Functioning Library Space: Expert Advice from Librarians, Architects and Designers*. Santa Barbara, CA: Libraries Unlimited, 2016.

Holt, Raymond M. *Wisconsin Library Building Project Handbook*. Second revised edition by Anders C. Dahlgren. Madison, WI: Department of Public Instruction, 1990. (Note especially Chapter II: "Needs Assessment - The Starting Point.")

Latimer, Karen and Hellen Niegaard, eds. *IFLA Library Building Guidelines: Developments and Reflections*. Munich: K.G. Saur, 2007.

Lushington, Nolan, Wolfgang Rudorf and Lilliane Wong. *Libraries: A Design Manual*. Basel: Birkhäuser, 2016.

Miller, Rebecca and Barbara A. Genco, eds. *Better Library Design: Ideas from Library Journal*. Lanham, MD: Rowman & Littlefield, 2015.

Sannwald, William W. *Checklist of Library Building Design Considerations*. 7th ed. Chicago: American Library Association, 2024.

Schmidt, Aaron and Amanda Etches. *Useful, Usable, Desirable: Applying User Experience Design to Your Library*. Chicago: ALA Editions, 2014.

Wisconsin Department of Public Instruction. *Wisconsin Public Library Standards, 6th Edition*. Developed by Public Library Development Team. Madison, WI: Department of Public Instruction, 2018.

Appendix B: Sampleville Public Library planning worksheet and summary

SPACE NEEDS WORKSHEET

INSTRUCTIONS: This worksheet is designed as a companion to
Public Library Space Planning Needs: a planning outline , 4th ed., 2025.
Consult the *Outline* for detailed instructions.

Library Name: Sampleville Public Library **Date:** May 27, 2025

DESIGN POPULATION

Projected resident population	6,000
Projected nonresident service population	1,500
Design population	7,500

STEP 1: COLLECTION SPACE

Books

How many volumes will be in the library's print collection? 31,500

What is the library's preferred collection density?
(Select from the chart to the right.)

Aisle width	Shelf height: 84"	72"	60"
36"	☐ 13.50	☐ 12.00	☐ 10.50
42"	☐ 12.50	☑ 10.00	☐ 9.50
48"	☐ 11.00	☐ 9.50	☐ 8.50

Audiovisual collections

How many nonnprint items will the library house? 6,375

What is the library's preferred collection density?

Minimal:	☐ 15	items/sq. ft
Moderate:	☐ 13	items/sq. ft
Optimal:	☑ 10	items/sq. ft

Percent in circulation adjustment

Reduce collection space for a "percent in circulation" adjustment? ☐ Yes

If yes, what percent of the collection is typically in circulation?

STEP 2: TECHNOLOGY SPACE

How many public access computers will the library provide? 10

What is the preferred space allocation for each?

Minimal:	☐ 35	sq.ft./station
Moderate:	☑ 45	sq.ft./station
Optimal:	☐ 50	sq.ft./station

STEP 3: READER SEATING SPACE

How many reader seats will the library provide? 60

What is the preferred space allocation for each?

Minimal:	☐ 30	sq.ft./station
Moderate:	☑ 35	sq.ft./station
Optimal:	☐ 40	sq.ft./station

STEP 4: STAFF WORK SPACE

How many staff work stations are needed? 8

What is the preferred space allocation for each?

- Minimal: ☐ 100 sq.ft./station
- Moderate: ☐ 110 sq.ft./station
- Optimal: ☑ 125 sq.ft./station

STEP 5: MEETING ROOM SPACE

Multi-purpose:	How many seats will the multi-purpose room accommodate?	75
Conference:	How many seats will the conference table accommodate?	
	How many additional audience seats are needed?	
Storytime:	What is the maximum audience for a typical storytime?	25
	Do your storytimes frequently include a craft or activity?	☑ Yes
Computer lab:	How many trainees should be accommodated?	

STEP 6: SPECIAL USE SPACE

What is the preferred allocation for special use space?

- Minimal: ☐ 12% of gross area
- Moderate: ☑ 15% of gross area
- Optimal: ☐ 17% of gross area

STEP 7: NONASSIGNABLE SPACE

What is the preferred allocation for nonassignable space?

- Minimal: ☐ 25% of gross area
- Moderate: ☑ 27.5% of gross area
- Optimal: ☐ 30% of gross area

STEP 8: DEDICATED ALLOWANCES

Additional space name/description	Allowance
	sq.ft.
	sq.ft.
	sq.ft.
	sq.ft.

Sampleville Public Library
SPACE NEEDS SUMMARY

May 27, 2025

STEP 1: COLLECTION SPACE (See note 1)				
31,500	print volumes at	10.0	volumes per sq.ft.	3,150 sq.ft.
6,375	nonprint items at	10	items per sq.ft.	638 sq.ft.
☐	Includes a "percent in circulation" adjustment. (See worksheet)			
STEP 2: TECHNOLOGY SPACE				
10	public access computers at	45	sq.ft. per station	450 sq.ft.
STEP 3: READER SEATING SPACE				
60	reader seats at	35	sq.ft. per seat	2,100 sq.ft.
STEP 4: STAFF WORK SPACE				
8	staff work stations at	125	sq.ft. per station	1,000 sq.ft.
STEP 5: MEETING ROOM SPACE (See notes 2-5)				
75	multi-purpose seats	10	sq.ft. per seat	850 sq.ft.
0	conference room seats	30	sq.ft. per seat	0 sq.ft.
25	storytime seats	15	sq.ft. per seat	450 sq.ft.
0	computer lab seats	25	sq.ft. per seat	0 sq.ft.
Additional meeting room support		10%	of meeting area	130 sq.ft.
STEP 6: SPECIAL USE SPACE				
calculated at	15%	of gross building area		2,287 sq.ft.
STEP 7: NONASSIGNABLE SPACE				
calculated at	27.5%	of gross building area		4,193 sq.ft.
STEP 8: DEDICATED ALLOWANCES				
				sq.ft.
				sq.ft.
				sq.ft.
				sq.ft.
GROSS AREA NEEDED				**15,248 sq.ft.**

NOTES:

1 The collection space allocation includes a "percent in circulation" adjustment, if so designated.

2 Multi-purpose area includes a modest allocation for a speaker's podium.

3 Conference room area includes an allocation for audience seating, if so designated.

4 Storytime area includes a modest allocation for storytime prestener.

5 Computer training lab area includes a modest allocation for a trainer podium.